# **A807**

# **OPERATING AND SERVICE INSTRUCTIONS**



A807

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### SICHERHEIT UND ERSTE HILFE

### SICHERHEIT

Durch Entfernen von Gehäuseteilen, Abschirmungen etc. werden stromführende Teile freigelegt. Aus diesem Grunde müssen die folgenden Sicherheitsvorschriften unbedingt beachtet werden:

### 1. Eingriffe in ein Gerät

dürfen nur von Fachpersonal vorgenommen werden.

 Vor Entfernen von Gehäuseteilen: Gerät ausschalten und vom Netz trennen.

### 3. Bei geöffnetem Gerät:

- Netzteil- oder Motorkondensatoren mit einem passenden Widerstand entladen
- Bauteile grosser Leistung, wie Leistungstransistoren und -widerstände sowie Magnetspulen und Wickelmotoren erst nach dem Abkühlen berühren.
- Servicearbeiten bei geöffnetem, unter Spannung stehendem Gerät:
- Keine blanken Schaltungsteile berühren
- Isolierte Werkzeuge verwenden
- Metallene Halbleitergehäuse nicht berühren, da sie hohe Spannungen aufweisen können.

### ERSTE HILFE (bei Stromunfällen)

### Bei einem Stromunfall die betroffene Person raschmöglichst vom Strom trennen:

- Durch Ausschalten des Gerätes
- Ausziehen oder Unterbrechen der Netzzuleitung
- Betroffene Personen mit isoliertem Material (Holz, Kunstoff) von der Gefahrenquelle wegstossen
- Nach einem Stromunfall sollte immer ein Arzt aufgesucht werden.

### **ACHTUNG**

EINE UNTER SPANNUNG STE-HENDE PERSON DARF NICHT BERÜHRT WERDEN, SIE KÖNNEN DABEI SELBST ELEKTRISIERT WERDEN!

### 2. Bei Bewusstlosigkeit des Verunfallten:

- Puls kontrollieren,
- bei ausgesetzter Atmung künstlich beatmen.
- Seitenlagerung des Verunfallten und Arzt verständigen.

### SAFETY AND FIRST AID

### SAFETY

There are no user serviceable components inside the equipment, live parts are laid open when removing protective covers and shieldings. It is essential therefore to ensure that the subsequent safety rules are strictly observed when performing service work or repairs.

 Servicing of electronic equipment must be performed by qualified personnel only.

### 2. Before removing covers:

Switch off the equipment and unplug the mains cable.

### 3. When the equipment is open:

- Discharge power supply- and motor capacitors through a suitable resistor.
- Components, that carry heavy electrical loads, such as power transistors and resistors as well as solenoid coils and motors should not be touched before a cooling off interval, as a precaution to avoid burns.

### Servicing unprotected and operating equipment:

- Never touch bare wires or circuitry
- Use insulated tools only
- Never touch metal semiconductor cases because they may carry high voltages.

### FIRST AID (in case of electric shock)

### Separate the person as quickly as possible from the electric power source:

- by switching off the equipment,
- unplugging or disconnecting the mains cable,
- pushing the person away from the power source by using dry insulating material (such as wood or plastic).
- After having sustained an electric shock, always consult a doctor.

### WARNING:

DO NOT TOUCH THE PERSON OR HIS CLOTHING BEFORE POWER IS TURNED OFF, OTHERWISE YOU STAND THE RISK OF SUSTAINING AN ELECTRIC SHOCK AS WELL!

### 2. If the person is unconscious

- Check the pulse,
- reanimate the person if respiration is poor,
- lay the body down and turn it to one side, call for a doctor immediately.

### SÉCURITÉ ET PREMIERS SECOURS

### SÉCURITÉ

Si les couvercles de protection sont enlevés, les parties de l'appareil qui sont sous tension ne sont plus protégées. Il est donc d'une nécessitée absolue de suivre les instructions suivantes:

# 1. Les interventions dans les appareils électriques

doivent être faites uniquement que par du personnel qualifié

### Avant d'enlever les couvercles de protection:

Couper l'interrupteur principal et débrancher le câble secteur.

# 3. Après avoir enlevé les couvercles de protection:

- Les condensateurs de l'alimentation et des moteurs doivent être déchargés à l'aide d'une résistance appropriée.
- İl est prudent de laisser refroidir les composants de haute puissance, par ex.: transistors de puissance, résistances de puissances de même que des électroaimants et les moteurs de bobinage.

### S'il faut que l'appareil soit sous tension pendent les réglages internes:

- Ne jamais toucher les circuits non isolés
- Travailler seulement avec des outils isolés

# **PREMIERS SECOURS** (en cas d'électrocution)

# 1. Si la personne est dans l'impossibilité de se libérer:

- Couper l'interrupteur principal
- Couper le courant
- Repousser la personne de l'appareil à l'aide d'un objet en matière non conductrice (matière plastique ou boîs)
- Après une électrocution, consulter un médecin.

### **ATTENTION**

NE JAMAIS TOUCHER UNE PER-SONNE QUI EST SOUS TENSION, SOUS PEINE DE SUBIR ÉGALE-MENT UNE ÉLECTROCUTION

### En cas de perte de connaissance de la personne électrocutée:

- Controller le pouls
- Si nécessaire, pratiquer la respiration artificielle
- Mettre l'accidenté sur le coté latérale et consulter un médecin.

### **Preliminary information**

This document describes the standard STUDER A 807. The information concerning the new 1000 m version, the 1/2" version, or one of the timecode versions is in the process of being completed.

In the meantime the following pages (together with the standard A 807 manual) will certainly serve you as preliminary information for the new versions.

EDITION: 6. Februar 1990

48

INSERT KEY S 48

Software number:	26/89			
Hardware jumpers:	[		<b></b>	
	JUMPER		H L	(H = ON, L = OFF)
	06	ADJUST KEY	(8)	H = DISABLED L = ENABLED
	L		<u> </u>	
	JUMPER		H L	(H = ON, L = OFF)
	10	CHANNEL VEDOTON		H = 4 CHANNEL
	10	CHANNEL VERSION		L = 2 CHANNEL
	11	SPEED VERSION		H = 7.5, 15, 30 ips
		SPEED VERSION		L = 3.75, 7.5, 15 ips
	12	PLAYBACK ONLY VERSION		H = STANDARD (REC/REPRO)
	12	PLATBACK UNLT VERSION		L = PLAYBACK ONLY
	13	READY-KEY VERSION		H = WITHOUT READY KEY
	15	READT-RET VERSION		L = WITH READY KEY
	14	ERASE HEAD GAP		H = INLINE
	14	ERASE HEAD GAP		L = STAGGERED
	15	MICROPHONE INPUT(S)		H = WITH MIC INPUT
	13	MICROPHONE INPUT(3)		L = WITHOUT MIC INPUT
	16	TIME CODE VERSION		H = WITH TC CHANNEL
	10	TIME CODE VERSION		L = WITHOUT TC CHANNEL
	17	Not yet assigned		
	<u> </u>			
	JUMPER		H L	(H = ON, L = OFF)
	46		hard wired	

The shown jumper settings correspond to the standard settings of a A 807 1/4" VUK version and should normally not be changed.

.

H = KEY 48 NOT ACTIVE

L = KEY 48 ACTIVE

**E/2** EDITION: 6. Februar 1990

### New 1/2" - 4 Channel program jumpers

Software number:	26/89			
Hardware jumpers:				
raid wai o jaiiipoi o.	JUMPER	Н	L	(H = ON, L = OFF)

06	ADJUST KEY		H = DISABLED
	ABOOCI RET		L = ENABLED
JUMPER		H L	(H = ON, L = OFF)
10	CHANNEL VERSION		H = 4 CHANNEL
10	CHANNEL VERSION		L = 2 CHANNEL
11	SPEED VERSION		H = 7.5, 15, 30 ips
''	SPEED VERSION		L = 3.75, 7.5, 15 ips
10	DI AVDACIZ ONI VI VEDETONI		H = STANDARD (REC/REPRO)
12	PLAYBACK ONLY VERSION		L = PLAYBACK ONLY
12	DEADY MEN MEDITON		H = WITHOUT READY KEY
13	READY-KEY VERSION		L = WITH READY KEY
14	ERASE HEAD GAP		H = INLINE
14	ERASE HEAD GAP		L = STAGGERED
15	MTODODUONE TAIDUT(C)		H = WITH MIC INPUT
15	MICROPHONE INPUT(S)		L = WITHOUT MIC INPUT
16	TIME CODE VERSION		H = WITH TC CHANNEL
10	TIME CODE VERSION		L = WITHOUT TC CHANNEL
17	Not yet assigned		
	L		
	r	<b></b>	

JUMPER		Н	L	(H = ON, L = OFF)	
46	INSERT KEY S 46		2	H = KEY 46 NOT ACTIVE L = KEY 46 ACTIVE	

The shown jumper settings correspond to the standard settings of a A 807-4-1/2" VUK version and should normally not be changed.

E/3 EDITION: 6. Februar 1990

### New timecode versions program jumpers Software number: 26/89 Hardware jumpers: JUMPER Н L (H = ON, L = OFF)H = DISABLED 06 ADJUST KEY L = ENABLEDJUMPER Н L (H = ON, L = OFF)H = 4 CHANNEL 10 CHANNEL VERSION L = 2 CHANNEL H = 7.5, 15, 30 ips11 SPEED VERSION L = 3.75, 7.5, 15 ipsH = STANDARD (REC/REPRO)PLAYBACK ONLY VERSION 12 L = PLAYBACK ONLY H = WITHOUT READY KEYREADY-KEY VERSION 13 L = WITH READY KEY H = INLINE 14 ERASE HEAD GAP L = STAGGERED H = WITH MIC INPUT MICROPHONE INPUT(S) 15 L = WITHOUT MIC INPUT H = WITH TC CHANNEL 16 TIMECODE VERSION L = WITHOUT TC CHANNEL 17 Not yet assigned (H = ON, L = OFF)JUMPER L 46 hard wired

INSERT KEY S 48

48

The shown jumper settings correspond to the standard settings of a A 807 1/4" Timecode version and should normally not be changed.

E/4

H = KEY 48 NOT ACTIVE

L = KEY 48 ACTIVE

## Software jumpers (all versions)

JUMPER		STATUS
00	MUTE TIME FOR FACIL ORFER	<u>000</u> - 950 milliseconds
00	MUTE TIME FOR EACH SPEED	in steps of 50 millisec.
01	DC 020 DAUD DATE	12 = 1200 BAUD
01	RS 232 BAUD RATE	<u>96</u> = 9600 BAUD
00	RS 232 ECHO MODE	<u>0</u> = OFF
02	RS 232 ECHO PRODE	1 = ON
03	TADE STOD LITTLE TRANSPARENT TADE	<u>0</u> = OFF
03	TAPE STOP WITH TRANSPARENT TAPE	1 = ON
04	MONO/STEREO CHANGEOVER	<u>0</u> = OFF
04	switches automatically to mono at speed 3.75 and 7.5 ips	1 = ON
05	COUNTED CTOD IN DUMP MODE	<u>0</u> = OFF
05	COUNTER STOP IN DUMP MODE	1 = ON
06	RETURN OF PINCH ROLLER	<u>0</u> = OFF
06	(when no tape is loaded)	1 = ON
07	SPEED CHANGE	0 = DIRECT SPEED CHANGE 1 = SPEED CHANGE WITH SHIFT ONLY
08	TAPE DUMP MODE	<pre>     O = KEY "TAPE DUMP" PRE- SELECTS FUNCTION, ACTIVATION WITH "PLAY"  1 = DIRECT ACTIVATION </pre>
09	MODE ASSIGNMENT SOFTKEY 1 (Default status = 1)	0 = LOOP 1 = LOC START 2 = LOC 2 3 = LOC 3
10	MODE ASSIGNMENT SOFTKEY 2 (Default status = 4)	4 = BACKSPACE 5 = FADER READY 6 = LIFTER AS MOMENTARY KEY 7 = LIFTER FLIP-FLOP KEY 8 = REHEARSE
11	RECORD COMMAND DEFINITION	<pre>0 = KEY "REC" AND "PLAY"     TO BE PRESSED     TOGETHER 1 = IF MACHINE IN PLAY,     PRESS "REC" ONLY</pre>
12	FADER START DEFINITION	$\frac{0}{1} = A$ $\frac{1}{1} = B$ (see truth table $\frac{2}{1} = C$ on following page) $\frac{3}{1} = D$

The underlined settings in the status field are the default values.

EDITION: 6. Februar 1990

### Software jumpers:

(cont.)

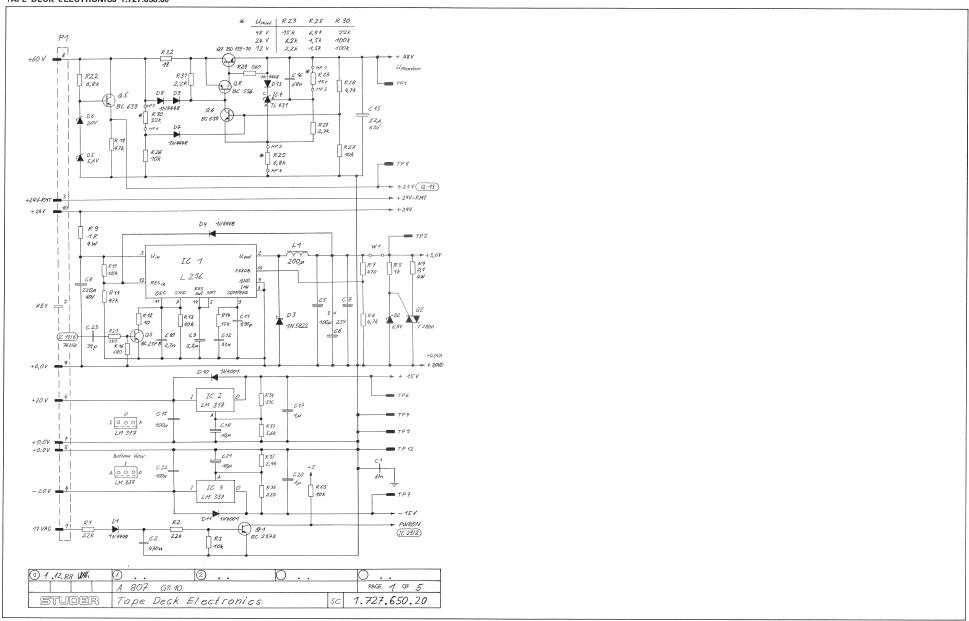
JUMPER			STATUS			
13	MODE ASSIGNMENT OF	2 CHANNEL VERSION	O = TAPE A/B CCIR 1 - TAPE A/B NAB 2 = REPRO HEAD A/B CCIR 3 = REPRO HEAD A/B NAB 4 = CHANGE EQUALIZATION CCIR/NAB			
13	AUDIO SOFT KEY	4 CHANNEL VERSION	0 = CCIR 1 = NAB			
		TC 1/4" VERSION	0 = TAPE A/B CCIR 1 = TAPE A/B NAB 4 = CHANGE EQUALIZATION CCIR/NAB			
14	CHANNEL CONTROL		not yet implemented			
15	LOCAL TIME CODE UNIT ELECTRONICS		0 = ACTIVE 1 = BYPASSED			
16	TIME CODE REFERENCE IN REPRO/SYNC MODE  * not available in 2-channel	0 = NO REFERENCE 1 = CHANNEL 1 2 = CHANNEL 2* 3 = CHANNEL 3* 4 = CHANNEL 4				

### FADER MODE TRUTH TABLE:

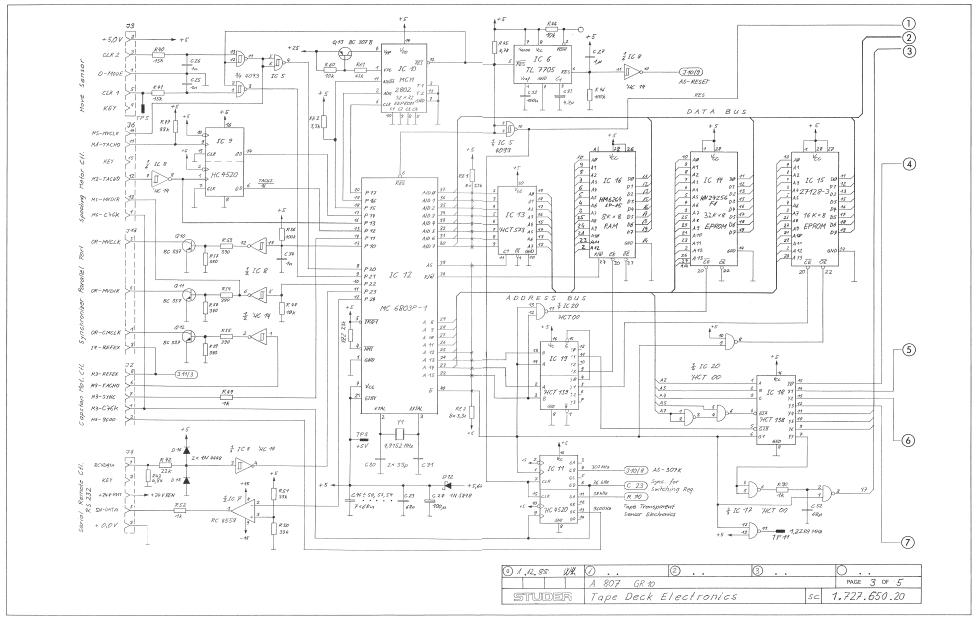
		AND THE PERSON NAMED IN COLUMN		
FADER MODE	Α	В	С	D
FADER READY KEY REQUIRED				
FADER READY KEY NOT REQUIRED				
INTERNAL MONITOR MUTED			8	
FADER CLOSED: TRANSPORT DECK KEYS ENABLED: TRANSPORT DECK KEYS DISABLED		88		69
FADER OPEN: TRANSPORT DECK KEYS ENABLED: TRANSPORT DECK KEYS DISABLED		•	•	

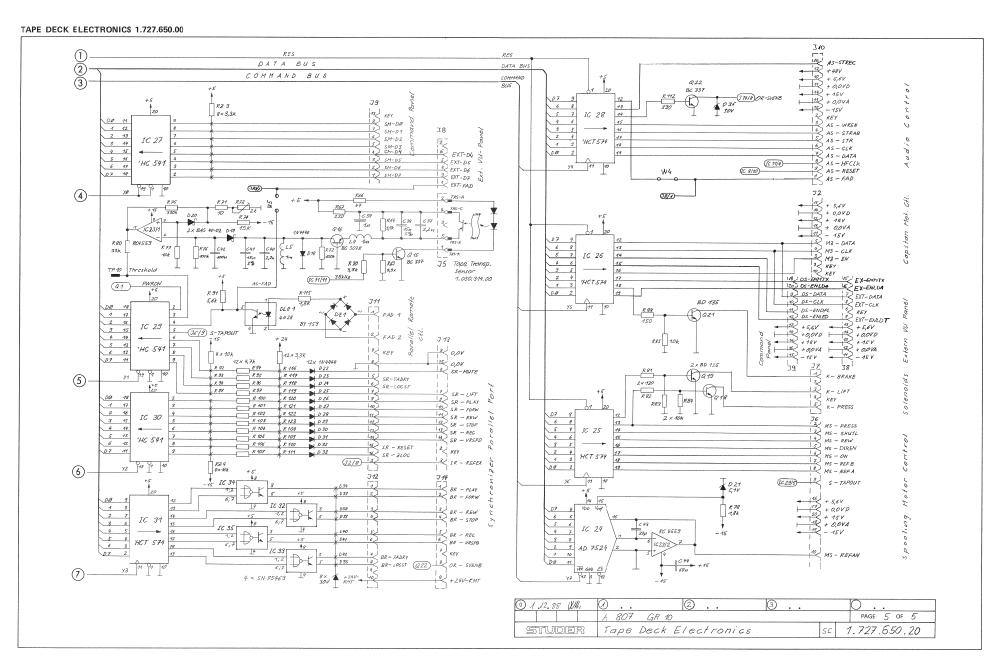
E/6

#### TAPE DECK ELECTRONICS 1.727.650.00

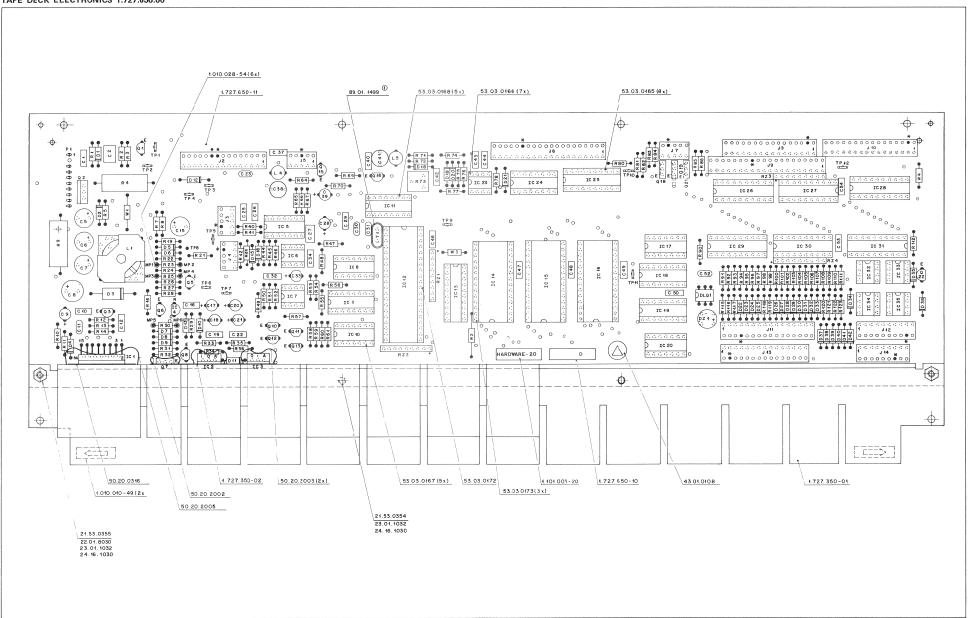


### TAPE DECK ELECTRONICS 1.727.650.00





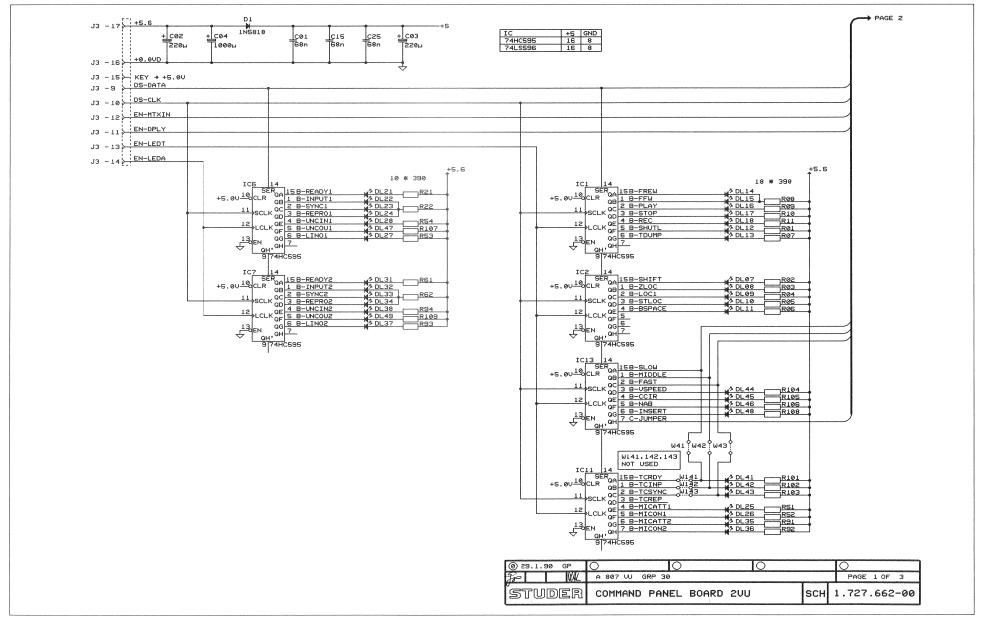
#### TAPE DECK ELECTRONICS 1.727.650.00

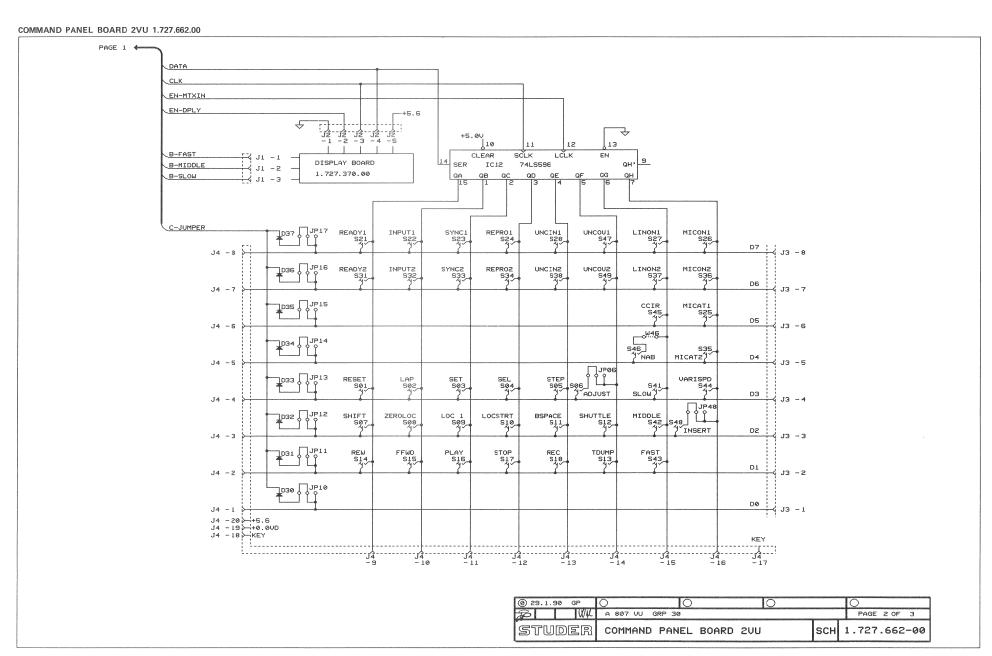


TAPE DECK ELECTRONICS 1.727.650.00

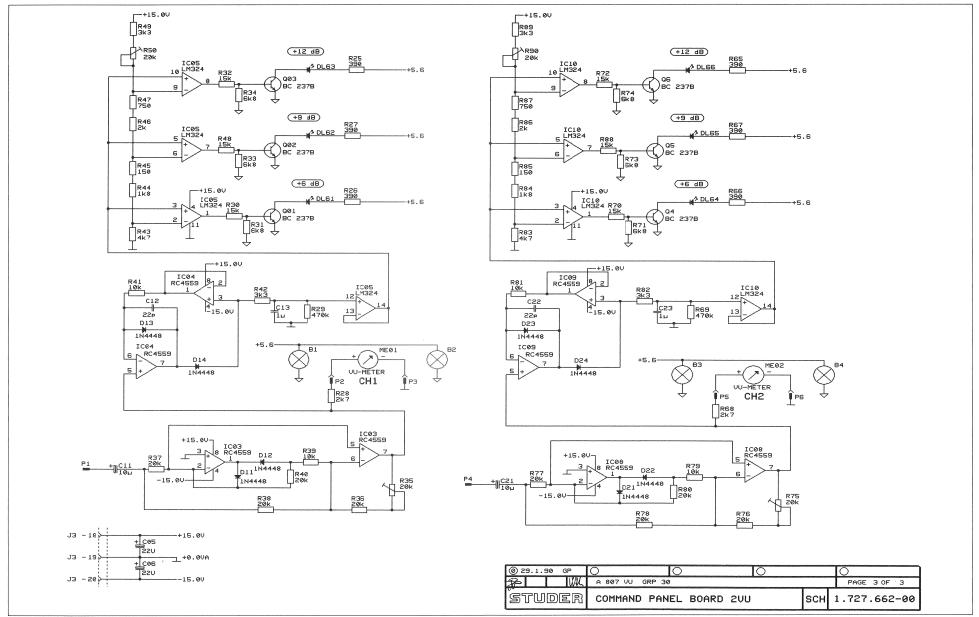
FOS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT NA
1	Cl29	R40	XIC17 33.00.0167 14 Fole IC Secket XIC18 35.00.0167 14 Fole IC Secket XIC20 35.00.0167 14 Fole IC Secket XIC20 35.00.0167 14 Fole IC Secket XIC20 35.00.0167 14 Fole IC Secket XIC24 33.00.0167 14 Fole IC Secket XIC24 33.00.0168 15 Fole IC Secket XIC27 33.00.0168 20 Fole IC Secket XIC37 33.00.0168 20 Fole IC Secket XIC39 33.00.0168 20 Fole IC Secket XIC30 33.
POS.NO. PART NO. VALUE SECCIFICATIONS / EDITVALENT MANUF.	IBD. POS.IO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT HAMUF.	IND. PGS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. FOS.80. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA
C.	MF6 1.010.020.54   1 Pela   Heep Fin   5t   1.777.380.01   1 Pela   Heep Fin   1 Pe	B85   \$7.11.2121   120 Cha   13. 0.229. NT   \$1. 0.229. NT	Sole   Variable Phasted Supply
FOS.NO. FART NO. VALUE SPECIFICATIONS / EDIVALENT NAMED.  531 55.04.0.025 184448 20 V 522 55.04.0.025 184448 30 V 532 55.04.0.025 184448 30 V 532 55.04.0.025 184448 40 50 V 532 50.04.0.025 184448	180. FOS.10.   PART NO.   Value   SPECIFICATIONS / NONVALENT   MANUT.	Table   Part No.   VALUE   SPECIFICATIONS   EQUIVALENT   MANUE	

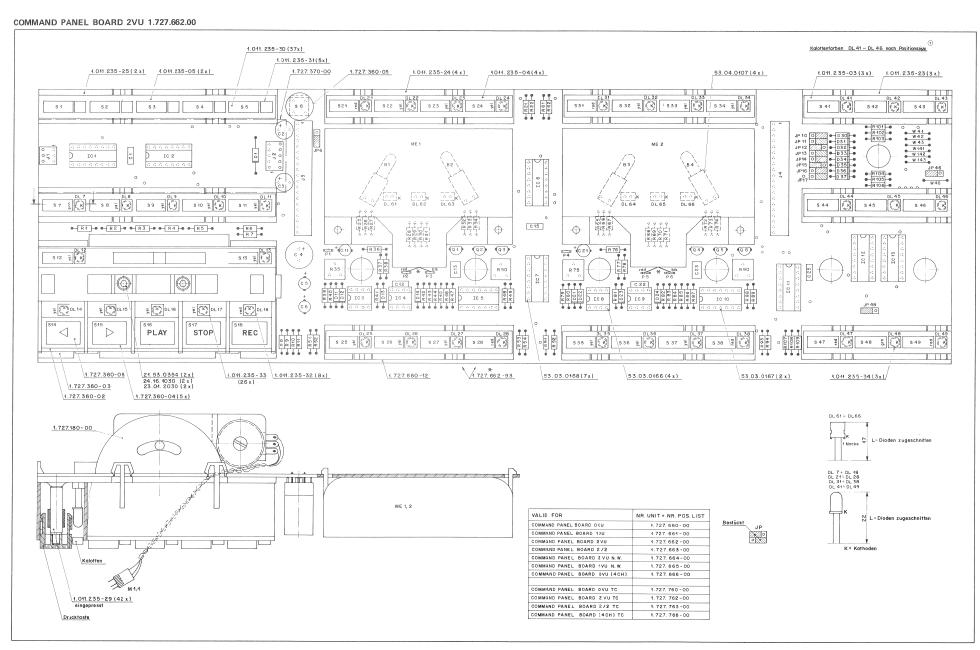
#### COMMAND PANEL BOARD 2VU 1.727.662.00





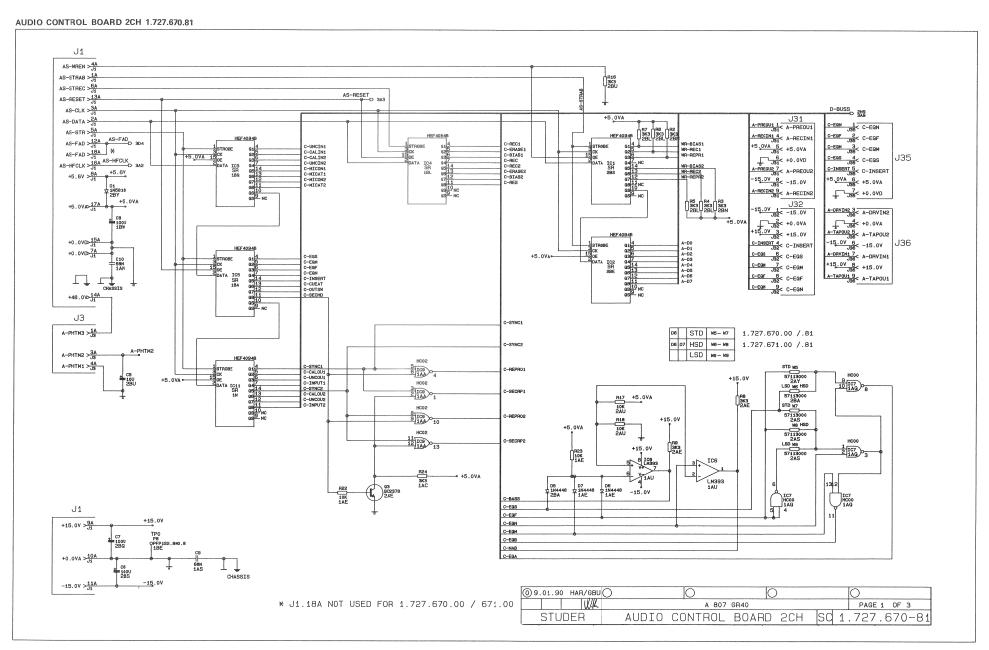
### COMMAND PANEL BOARD 2VU 1.727.662.00





### COMMAND PANEL BOARD 2VU 1.727.662.00

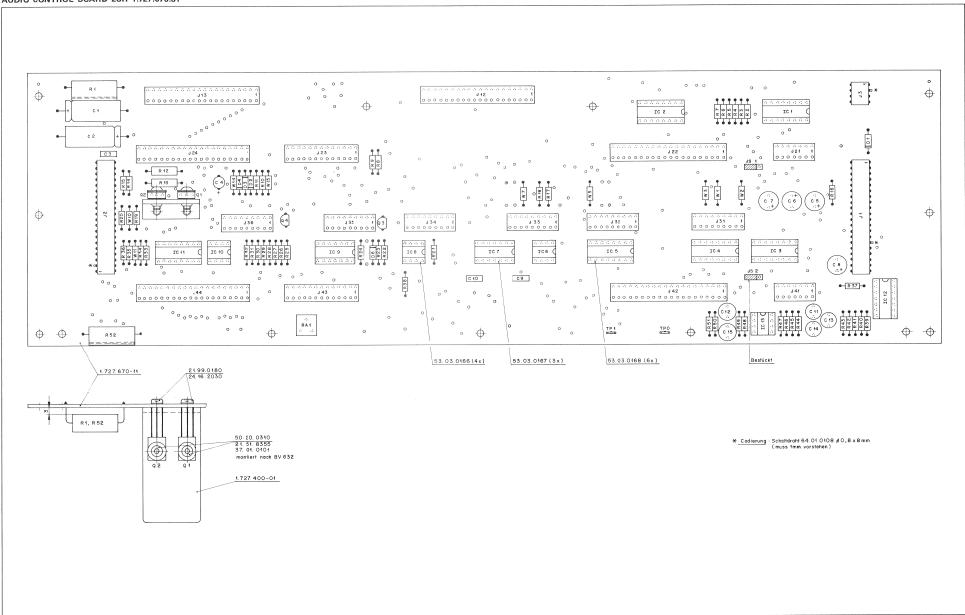
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A1 1.727.370.00 Display Beard A2 1.727.180.00 Shuttle Centrol B1 51.02.0144 6.V 0.03 A Lamp	JP16 54.01.0021 Fridge JP17 54.01.0021 Fridge JP46 to used JP48 54.01.0021 Fridge	R
B2 51.02.0144 6 V 0.03 A Lasp B3 51.02.0144 6 V 0.03 A Lasp B4 51.02.0144 6 V 0.03 A Lasp	ME1 1.727.360.01	886 57.11.5202 2 203m 12v.0.739w HF 887 57.11.3751 750 bm 12v.0.739w HF 888 57.11.3153 15 k0hm 12v.0.739w HF 889 57.11.3352 3 3 k0hm 12v.0.739w HF
C1 99.06.0093 68 NT 100 50 V FTTF  C2 79.72.3202 220 NT -2001 10 V EL  C2 79.72.3202 220 NT -2001 10 V EL  C3 97.72.3202 220 NT -2001 10 V EL  C5 59.72.3202 22 NT -2001 25 V EL  C5 59.72.3202 22 NT -2001 25 V EL  C12 99.34.2202 22 NT -2002 25 V EL  C13 59.06.0105 1 NT -2002 25 V FTTF  C13 59.06.0105 1 NT -2002 25 V FTTF  C2 99.34.2202 22 NT -2002 25 V FTTF  C2 99.34.2202 22 NT -2002 25 V EL  C2 99.34.2203 68 NT -2002 50 V ETTF	MF1 54.01.0000 30 pec Contact Fin MF2 1.011.250.03 3 pec Fush button case 34 MF3 1.011.255.04 4 pec Fush button case 4- MF4 1.011.255.05 2 pec Fush button case 5-	R68 37.11.3153 15 kDha 10.2354 MF F F F F F F F F F F F F F F F F F F
C5 59.22.5220 22 uF -200 25 V EL C6 59.22.5220 22 uF -200 25 V EL C11 59.22.6100 10 uF -200 25 V EL	MP5 1.011.235.23 3 pos Conductive rubbar 3a MP5 1.011.235.24 4 pos Conductive rubbar 4a MP7 1.011.235.25 2 pos Conductive rubbar 5a	R94 57.11.391 390 than 17.02.284 RF R101 57.11.391 390 than 17.02.284 RF R102 57.11.391 390 than 18.02.284 RF
C1 97-06-0603 68 pt 103 50 V FTT  C2 37-22-22-22 20 vt -	Mr 2 1.011.25.03 3 per Pub button case 34  Mr	R
	MF12 1.011.235.34 2b pes Calotte yea MF13 1.011.235.34 3 pes Calotte grn MF14 1.727.360.02 1 pec Fush button case with Shuttle MF15 1.727.360.03 1 pec Conductive rubber with Shuttle	R106 57.11.3591 390 Unh 17.7284 MF R108 57.11.3591 390 Unh 17.7284 MF R109 57.11.3591 390 Unh 17.7284 MF S6 55.15.0130 Paub batton Switch 1TT
1	Mr9 1.001.295.30 37 per Fush button 14-5 Br10 1.001.295.30 37 per Fush button 14-5 Br12 1.001.295.33 20 per Calette yel Br12 1.001.295.33 20 per Calette yel Br12 1.727.300.03 21 per Calette yel Br13 1.727.300.03 21 per Candactive rabbet with Shattle Br15 1.727.300.03 21 per Candactive rabbet with Shattle Br10 1.727.300.03 21 per Candactive rabbet with Shattle Br10 1.727.300.03 21 per Candactive rabbet with Shattle Br10 1.727.300.03 21 per Candactive rabbet with Shattle Br20 37.000.03 21 per Candactive rabbet with Shattle Br20 37.000.03 22 per Candactive rabbet with Shattle Br20 49.000.03 22 per Candactive rabbet with Shattle Br20 49.000.03 22 per Candactive rabbet with Shattle Br20 49.000.03 22 per Candactive rabbet r	
D14 50.04.0125 1844448 50 V SI D21 50.04.0125 184448 50 V SI D22 50.04.0125 184448 50 V SI D23 50.04.0125 184448 50 V SI	MP20 53.03.0221 43 pcs 2-pole LED Socket MP21 1.727.362.93 2 pcs 1-L57 Command Panel Board MP22 21.53.0354 2 pcs Enwagon socket head cap screw M346 MP23 23.01.2032 2 pcs Washer	M42 64.01.0106 Mira Bridge M42 64.01.0106 Mira Bridge M43 64.01.0106 Mira Bridge M46 64.01.0105 Mira Bridge M46 64.01.0105 Mira Bridge M46 64.01.0105 Mira Bridge M142 not used M142 not used
D24 50.04.0125 1M4448 50 V S1 D30 50.04.0125 1M4448 50 V S1 D31 50.04.0125 1M4448 50 V S1 D32 50.04.0125 1M4448 50 V S1		X81 53.04.0107 Lamp helder X82 53.04.0107 Lamp helder X82 53.04.0107 Lamp helder X84 53.04.0107 Lamp helder
D34 50.04.0125 184440 50 V SI D34 50.04.0125 184440 50 V SI STUDER (OO) 89/03/16 GF COMMAND PAREL BOARD 2V0 PL 1.727.662.00 PAGE 1	P1 54.02.0320 Plug 2.800.8 ANP P2 54.02.0320 Plug 2.800.8 ANP S T U D E R (00) 09/03/16 GP COMMAND PAREL BOARD 2VU FL 1.727.662.00 PAGE 4	XB3 53.04.0107 Luap helder XB4 53.04.0107 Luap helder STUDER (00) 89/03/16 GP COMMAND PAMEL BOARD 20'U PL 1.727.662.00 PAGE 7
IND, FOS.BO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE STECTFICATIONS / EQUIVALENT HANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
D35 50.04.0125 184448 50 V SI	P 3 54 02 0320 Flug 2 8e0 8 MP	
D36 50.04.0125 184448 50 V 51 D37 50.04.0125 184448 50 V 51  267 50.04.2501 KV5452 LEB grn lb-5 as 01 NC8 50.04.2501 KV5452 LEB grn lb-5 as 01	P5 54.02.0320 Ilug 2.8*0.8 AMP P6 54.02.0320 Ilug 2.8*0.8 AMP	XIC3 53.03.0165
10	Q2 50.03.0436 BC237B IC547B BC550B NPN Q3 50.03.0436 BC237B IC547B BC550B NPN Q4 50.03.0436 BC237B IC547B BC550B NPN	XIC6 St.03.0405 in-Pale IC Socket XIC7 St.03.0405 in-Pale IC Socket XIC9 St.03.0405 in-Pale IC Socket XIC9 St.03.0405 in-Pale IC Socket XIC9 St.03.0405 in-Pale IC Socket XIC10 St.03.0405 in-Pale IC Socket XIC12 St.03.0405 in-Pale IC Socket XIC13 St.03.0405 in-Pale IC Socket
DC. 13 50.04.2500 NV5582 LED vel D=5 nn CI DC. 14 50.04.2500 NV5582 LED vel D=5 nn CI DC. 15 50.04.2500 NV5582 LED vel D=5 nn CI DC. 15 50.04.2500 NV5582 LED vel D=5 nn CI	Q5 50.03.0436 BC2378 IC547B, BC5508 RPR Q6 50.03.0436 BC2378 IC547B, BC5508 RPR R1 57.11.3391 390 Ohn 12.0.2344 RP	XIC11 53.03.0109 15-Pole IC Socket XIC12 53.03.0109 15-Pole IC Socket XIC13 53.03.0109 15-Pole IC Socket
DL16 50.04.2500 NV5552 LED yel D-5 mm 61 DL17 50.04.2500 NV5552 LED yel D-5 mm 61 DL18 50.04.2515 NV5752 LED red D-5 mm 61 DL21 50.04.2115 NV5752 LED red D-5 mm 61	R. 3 57.11.3991 390 0hm 120.0.25H MF R. 4 57.11.3991 390 0hm 120.0.25H MF R. 5 57.11.3991 390 0hm 120.0.25H MF	
DL	R	
10	R	
1033 30.04.2500 NYS382 LED yas 10.5 ms 01 1034 50.42500 NYS382 LED yas 10.5 ms 01 1035 50.04.2500 NYS382 LED yas 10.5 ms 01 1035 50.04.2500 NYS382 LED yas 10.5 ms 01 1036 50.04.2500 NYS382 LED yas 10.5 ms 01	826 57.11.3391 390 0hn 1% 0.2364 MF 827 37.11.3391 390 0hn 1% 0.2364 MF 828 57.11.3392 2,7 kOhn 1% 0.2364 MF 829 57.11.3272 2,7 kOhn 1% 0.2364 MF	
EL.   13   50.04   250.0   NY55522   LED yrd   10.5 sa   11   12   12   13   13   14   14   14   14   14   14	R	CEM-Cacair, Mc-Histophyle, Eff-Polyater, Si-Ghilson H-M-th Flin Pica-Pic. Creat HANVA-TUREN: MNy Jul-General Internant, ITT, Non-Charles HANVA-TUREN: MNy Jul-General Internants. The Company of the Company TI-T-raw Internants.
DL. 42 50.04.2501 NYSSE2 LED grn Dr5 ma 01 DL. 43 50.04.2500 NYSSE2 LED yel Dr5 ma 61 DL. 44 50.04.2115 NYSSE2 LED red Dr5 ma 61 DL. 45 50.04.2500 NYSSE2 LED red Dr5 ma 61	O6 50.03.0436 EC2739 IC56739 IC55709 IFF1  R2 57.11.3591 390 Ohm 12.0.0344 IFF  R2 57.11.3591 390 Ohm 12.0.0344 IFF  R2 57.11.3591 390 Ohm 12.0.0345 IFF  R2 57.11.3591 390 Ohm 12.0.0	RS-Matical deliconductor / re-rollige/ na-maytreon/ TI-Texas Instruents ORIG 89/03/16
S T U D E R (00) 89/03/16 GP COMMAND PANEL BOARD 2VV PL 1.727.662.00 PAGE 2	S 7 U D E R (OO) 89/03/16 GP COMMAND FAMEL BOARD 2VU PL 1.727.662.00 PAGE 5	S T U D E R (00) 89/03/16 SP COMMAND PAREL BOARD 20U FL 1.727.662.00 FAGE 8
IND. POS. 80. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.HO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
RL. +46	5 37	
Bit. 40   30.04.200   WY3525   LED yet   be an   G1     Bit. 40   30.04.201   WY3525   LED yet   be an   G1     Bit. 40   30.04.201   WY3525   LED yet   be an   G1     Bit. 61   30.04.201   WY3524   LED yet   be an   G1     Bit. 61   30.04.201   WY3524   LED yet   be an   G1     Bit. 61   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 62   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 63   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   LED yet   be 30.04.201   G1     Bit. 60   30.04.201   WY3524   WY352	841 57.11.3103 10 k0hs 1%, 0.25% MF 842 57.11.3332 3.3 k0hs 1%, 0.25% MF 843 57.11.3472 4.7 k0hs 1%, 0.25% MF 844 57.11.3102 1.8 k0hs 1%, 0.25% MF	
DL05 30.04.2119 MV57124 LED red 6.3543.81 GI DL06 30.04.2119 MV57124 LED red 6.3543.81 GI IC1 30.17.1995 '4MC095 B-Bit Shift Register TI IC2 50.17.1995 '4MC099 B-Bit Shift Register TI	R45 57.11.3151 150 Dha 1% 0.259 MF R46 57.11.3202 2 Mbha 1% 0.259 MF R47 57.11.3751 750 Dha 1% 0.259 MF R48 57.11.3153 15 Mbha 1% 0.259 MF	
IC  50.17.1598	R48 57.11.3153 15 MOhm 72 0.2594 MF R49 57.11.3332 3.3 Mohm : 22 0.2594 MF R50 58.01.8203 20 MOhm 102 0.594 MF R52 57.11.3391 39 00 Mohm 27 0.2594 MF	
	850 39.01.8203 20.00hs 127.05.95 W Pers 851 37.11.3391 390 0hs 127.01.25W WT 853 57.11.3391 390 0hs 127.01.25W WT 854 57.11.3391 390 0hs 127.01.25W WT 854 57.11.3391 390 0hs 127.01.25W WT 855 57.11.3391 390 0hs 127.01.25W WT	
10	R	
J 1 54.01.0207 3-Pole CIS Secket Strip AMF J 2 54.01.0208 3-Pole CIS Secket Strip AMF J 2 54.01.0208 3-Pole CIS Secket Strip AMF J 4 54.01.0237 20-Pole CIS Secket Strip AMF AMF	R66 97.11.3991 390 Ohs X. 0.2594 M7 R67 97.11.3992 390 Ohs X. 0.2594 M7 R68 97.11.3722 2.7 (bbs Z. 0.2594 M7 R69 97.11.3724 470 k0hs Z. 0.2594 M7 R69 107.11.3725 2.7 (bbs Z. 0.2594 M7 R71 97.11.3725 6.0 k0hs Z. 0.2594 M7 R71 97.11.3625 6.0 k0hs Z. 0.2594 M7 R72 97.11.31363 15 k0hs Z. 0.2594 M7	
	873 57.11.3682 6.8 kOha Xv 0.25W MF 874 57.11.3682 6.8 kOha Xv 0.25W MF 875 58.01.8223 20 kOha 107.0.5W Figure 877 57.11.3223 20 kOha 107.0.5W Figure 877 57.11.3223 20 kOha 107.0.5W Figure	
796 95.01.0021 Bridge 7910 94.01.0022 Bridge 7911 94.01.0022 Bridge 7912 95.01.0021 Bridge 7912 95.01.0021 Bridge 7913 95.01.0021 Bridge 7914 9714 Bridge 7915 95.01.0021 Bridge	R	
STUDER (00) 89/03/16 GP COMMAND PANEL BOARD 2V# PL 1.727.662.00 PAGE 3	R81 57.11.3103 10 kOha 1%, 0.25%, MF S T U D E R (00) 89/03/16 GP COHMAND FANEL BOARD 2VU PL 1.727.662.00 PAGE 6	



#### AUDIO CONTROL BOARD 2CH 1.727.670.81 D-BUSS 109 CH2 CH2 CH1 CH1 OPTION 1 +0.0VD +5.0VA 2 +5.0VA A-PHTM2 1 A-PHTM2 A-PHTM2 1 A-PHTM2 +15.0V 1 +15.0V +15.0V 1 +15.0V -15.0V 2 -15.0V -15,0V 2 -15.0V 2 C-NAB C-NAB 2 C-NAB 3 C-MICATE ---3< C-BASS C-MICATS 3 C-MICATS C-RES 4 C-RES J23< C-BASS A-SECRP2 4 A-SECRP2 A-PREOUZ 4 A-PREOUZ J41 A-PREOU1 4 A-PREOU1 A-SECRP1 4 A-SECRP1 C-REC 5 C-REC 5 C-CALINZ \_\_\_\_<u>5</u>< C-EQB C-CALINS 5 C-CALINS C-EGB \_\_\_\_\_5< C-EQB C-EQM 6 C-EQM C-EQS 7 C-EGS C-EQF 8 C-EGF C-UNCIN2 6 C-EQA C-UNCIN1 6 C-UNCIN1 C-EQA 6 C-UNCIN2 6 C-EQA C-MICONS C-SYNC2 7 J43 C-SYNC2 C-HICONS 7 C-MICONS C-SYNC1 7 C-MICON J23 C-SYNC1 C-REPRO2 8 C-REPRO2 +5,6V 9 +5.6V C-REPRO1 8 C-REPR01 C-SECRP2 9 C-SECRP2 C-SECRP1 9 C-SECRP1 +15.0V 18 J12< +15.0V JS2 A-CTALK2 10 A-CTALK2 -15.0V 19 J12< -15.0V A-CTALK1 10 A-CTALK1 P5 PSS1S 0 1BN P7 PSS1S 0 1BN P3 PSS1S 2BN P6 PSS1S 11 +0.0VA 20 0.0VA 11 +0.0VA ₩3 57113000 2BJ +5 0VA 12 +5.0VA +5.0VA 12 +5.0VA 57113000 P4 PSS1S 1BN P2 PSS1S 2BN 13 +0.0VD 13 +0.0VD C-REC1 1 C-REC1 C-REC2 1 J44 A-D0 1 J24 A-D0 J42 A-RECIN2 A-RECINI 1 A-RECINI C-SYNC1 5 C-SYNC1 2 J44< A-D1 2 J42 C-ERASE2 2< A-D1 J22 C-ERASE1 C-REPRO1 6 C-REPRO1 3< A-D2 C-BIAS1 3 C-BIAS1 A-D2 3 C-BIAS2 3< A-D2 4 A-D3 C-EGA 4 C-EGA A-D3 4 × A-D3 -142 C-EQA C-EGB 5 J22< C-EGB WR-REPRI C-EGB 5 VR-REPR2 5< C-EQB 5 VR-REPR1 C-SYNC2 9 C-SYNC2 +5.0VA 6 J22 +5.0VA +5 <u>6 0VA 6 +5.0VA</u> AS-STRAB 6 J24< AS-STRAB 5 AS-STRAB C-REPRO2 10 C-REPRO2 - 7 J42 WR-BIAS2 WR-BIAS1 7 J22 WR-BIAS1 7 J44 A-D4 7 J24 A-D4 8 × A-D5 \_\_\_\_8< A−D0 A-D0 B J22 A-D0 A--D6 A-D1 9 A-D1 9 J44 A-D6 A-D1 9 A-D1 \_\_\_\_\_\_\_\_\_\_ A--D6 J44 J42 J22 A--D7 10 A-D2 A-D7 10 J44 A-D7 A-D2 10 J22 A-D2 10 A-D7 C-INPUT1 17 C-INPUT1 11 C-NAB C-NAB 11 C-NAB 11 A-D3 A-D3 11 A-D3 C-INPUT2 18 C-INPUT2 A-DRVIN2 12 A-DRVIN2 12 +0.0VD A-DRVIN1 12 A-DRVIN1 12< +0.0VD SOURCE2 13 SOURCE2 WR-REC1 13 WR-REC1 SOURCE1 13 SOURCE1 57113 WR-REC2 13 WR-REC2 A-TAPOU1 124 A-TAPOU1 C-INPUT1 15 C-INPUT1 A-TAPOU2 14 A-TAPOU2 AS-STRAB 14 AS-STRAB AS-STRAB 14 AS-STRAE 15 A-D4 C-INPUT2 15 C-INPUT2 CROSSTALK COMP. A-D4 15 J22 A-D4 C-CALOU2 16 C-CALOU2 C-CALOU1 16 C-CALOU1 16 A-D5 A-D5 16 J22 A-D5 A-CTALK2 2K C-UNCOU2 17 J44 C-UNCOU2 A-D6 17 J42 A-D6 A-D6 17 A-D6 C-UNCOU1 17 J24 C-UNCOU1 C-CUEAT 18 C-CUEAT A-D7 A-D7 18 A-D7 C-CUEAT \_\_\_\_\_\_\_\_\_ C-CUEAT 18 A-D7 C-OUTSW 19 C-OUTSW 19 C-OUTSW C-REC2 19 < C-REC2 C-REC1 19 C-REC1 A-MONIT2 20 A-MONIT2 A-HFIN 20< A-HFIN A-MONIT1 20 A-MONIT1 A-HFIN 20 A-HFIN J22 A-HFIN @ 9.01.90 HAR/GBU PAGE 2 OF 3 A 807 GR40 AUDIO CONTROL BOARD 2CH SC 1.727.670-81 STUDER

### AUDIO CONTROL BOARD 2CH 1.727.670.81 13A A-LSAMP1 +15.0V R33 -15.0V 1 -15.0V 2 0.0VA +15.0V 3 +15.0V J33 BA A-PHIN1 A-SECRP1 7 A-SECRP1 8 J34<0.0VA A-SECRP2 J34<A-SECRP2 J34 9A J2 A-PHSW1A 8 RC4559 IC8 +15.0V C3 100N 26 A-MONIT2 1A A-MONIT2 SOURCE2 3A SOURCE2 SOURCE1 19A SOURCE1 J2 95 SF SF A-MONIT1 20A A-MONIT1 A-DRVIN2 2A A-DRVIN2 A-DRVINI 18A J2< A-DRVIN1 11A A-PHOUT1 -15.0V 17A J2< A-LSB 16A < A-LSA +5.0VA J2 12A A-LSAMP2 15A J2< +0.0VA 14A +0.0VA AS-FAD 7A A-PHOUT2 TP1 P1 OPFP1S2.8#0.8 [1BA A-HFIN R48 560E 1BN +15.00 +15.0V +15.0V AS-RESET 5A A-PHSW2A C13 2N2 1BU -15.00 AS-HFCLK -15.0V -15.0V 4A A-PHIN2 R45 470E 18S R47 4K7 1BQ 18L @ 9.01.90 HAR/GBU TWL A 807 GR40 PAGE 3 OF 3 AUDIO CONTROL BOARD 2CH SC 1.727.670-81 STUDER

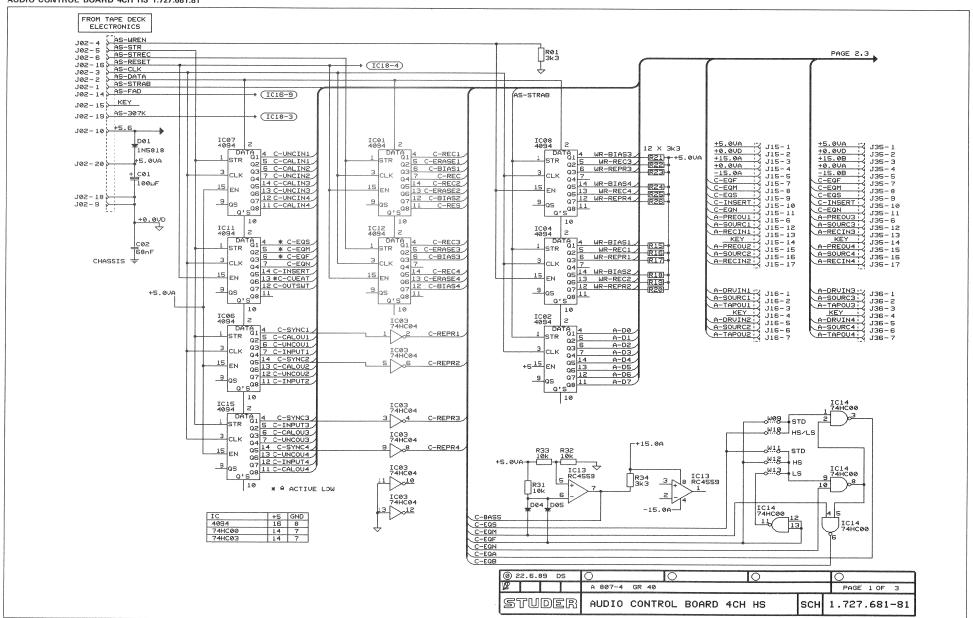
### AUDIO CONTROL BOARD 2CH 1.727.670.81



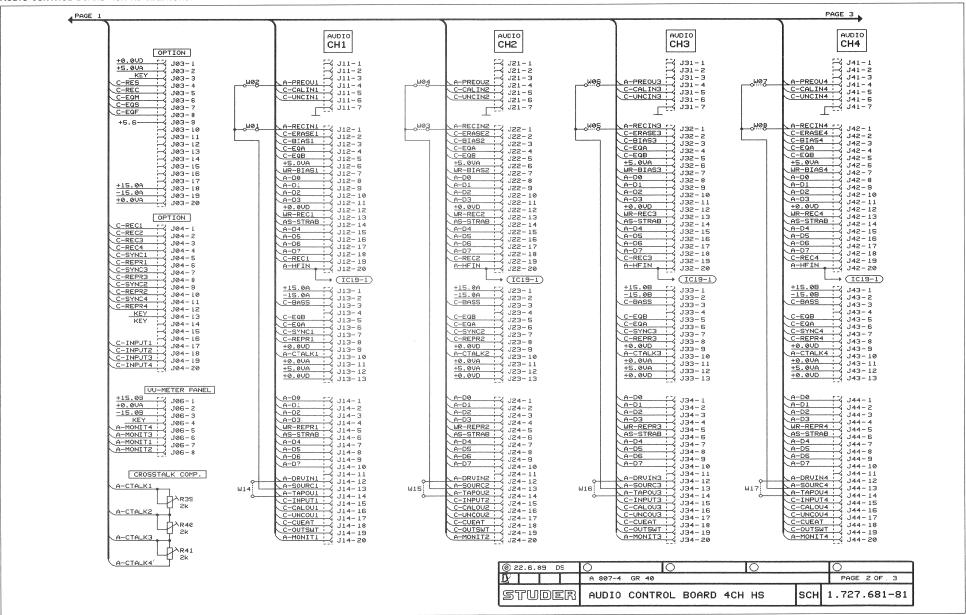
### AUDIO CONTROL BOARD 2CH 1.727.670.81

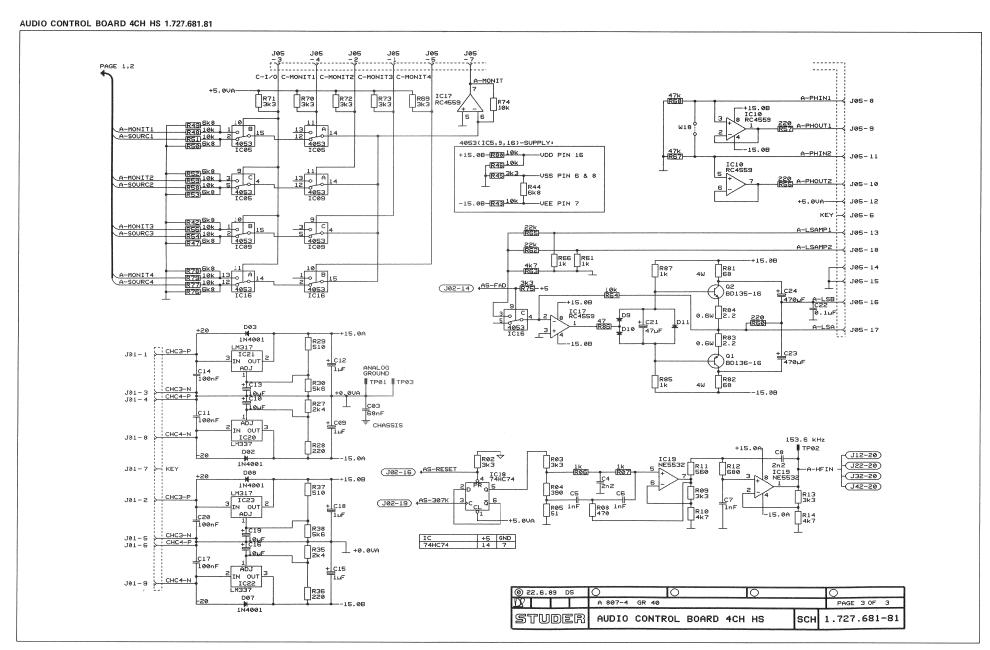
ND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS .	/ EQUIVALENT	HA
	C1 C2 C3	59.25.3471 59.25.3471 59.06.0104	470 uF 470 uF 0.1 uF	-20% 16 V EL -20% 16 V EL 10% 63 V PETP			R36 R37 R38	57.11.3221 57.11.3332 57.11.3104	220 Ohm 3.3 kOhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C4 C5 C6	59.22.3470 59.22.8100 59.22.5101	47 uF 10 uF 100 uF	-20% 10 V EL -20% 63 V EL -20% 25 V EL			R39 R40 R41	57.11.3332 57.11.3332 57.11.3102	3.3 kOhm 3.3 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, Mf		
	C7 C8 C9	59.22.5101 59.22.5101 59.06.0683	100 uF 100 uF 68 nF	-20% 25 V EL -20% 25 V EL 10% 63 V PETP			R42 R43 R44	57.11.3391 57.11.3510 57.11.3102	390 Ohm 51 Ohm 1 kOhm	2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF		
	C10 C11 C12	59.06.0683 59.05.1102 59.05.1222	68 nF 1 nF 2.2 nF	10% 63 V PETP 1% 160 V PP 1% 160 V PP			R45 R46 R47	57.11.3471 57.11.3332 57.11.3472	470 Ohm 3.3 kOhm 4.7 kOhm	2%, 0.25W, NF 2%, 0.25W, NF 2%, 0.25W, NF		
	C13 C14 C15	59.05.1222 59.05.1102 59.05.1102	2.2 nF 1 nF 1 nF	1% 160 V PP 1% 160 V PP 1% 160 V PP			R48 R49 R50	57.11.3561 57.11.3681 57.11.3332	560 Ohm 680 Ohm 3.3 kOhm	2%, 0.25W, NF 2%, 0.25W, NF 2%, 0.25W, NF		
	D1 D2	50.04.0512 50.04.0125	1N5819 1N4448	30V 50V	Mot		R51 R52	57.11.3472 57.56.5680	4.7 kOhm 68 Ohm	2%, 0.25%, NF 2%, 4 W, DR		
	D3 D4 D5	50.04.0125 50.04.0125	1N4448 1N4448	50V 50V not used			RA1 TP0	58.01.8202 54.02.0320	2 kOhm	Potmeter PMG PLUG 2.8*0.8		
	D6 D7	50.04.0125	1N4448	50V not used			TP1	54.02.0320 57.11.3000		PLUG 2.8*0.8 Wire Bridge		
	IC1 IC2 IC3	50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094	CHOS CHOS CHOS	Mot Mot Mot		W2 W3 W5	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge		
	IC4 IC5 IC6	50.07.0018 50.07.0018 50.05.0283	MC14094 MC14094 LM393	CMOS CMOS Dual Comparator	Mot Mot		W6 W7 W8	57.11.3000		not used Wire Bridge not used		
	IC7 IC8 IC9	50.17.1000 50.09.0107 50.17.1002	74HC00 RC4559 74HC02	HCMOS Dual Op. Amp. HCMOS			W9 W10 W11	57.11.3000 57.11.3000		not used Wire Bridge Wire Bridge		
	IC10 IC11 IC12	50.09.0107 50.07.0018 50.17.1074	RC4559 MC14094 74HC74	Dual Op. Amp. CMOS HCMOS	Mot		W14 W15	57.11.3000 57.11.3000		Wire Bridge Wire Bridge		
T U	IC13	50.09.0105 ) 89/03/21 Wth	NE5532 AUDIO CONT	Dual Op. Amp.  ROL BOARD PL 1.7	27.670.00 PAGE 1	STU	XIC1 DER (0	53.03.0168 0) 89/03/21 Wth	16 pol AUDIO CONTI	IC Socket ROL BOARD	PL 1.727.670.0	OO PAGI
D.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	equivalent	на
	J1 J2	54.01.0248 54.01.0248	20-POLE 20-POLE	CIS Socket Strip CIS Socket Strip	AMP AMP		XIC2 XIC3	53.03.0168 53.03.0168	16 pol 16 pol	IC Socket IC Socket		
	J3 J11 J12	54.01.0304 54.01.0226	4-POLE 20-POLE	CIS Socket Strip not used CIS Socket Strip	AMP		XIC4 XIC5 XIC6	53.03.0168 53.03.0168 53.03.0166	16 pol 16 pol 8 pol	IC Socket IC Socket IC Socket		
	J13 J21 J22	54.01.0226 54.01.0218 54.01.0226	20-POLE 7-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		XIC7 XIC8 XIC9	53.03.0167 53.03.0166 53.03.0167	14 pol 8 pol 14 pol	IC Socket IC Socket IC Socket		
	J23 J24 J31	54.01.0292 54.01.0226 54.01.0217	13-POLE 20-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		XIC10 XIC11 XIC12	53.03.0166 53.03.0168 53.03.0167	8 pol 16 pol 14 pol	IC Socket IC Socket IC Socket		
	J32 J33 J34	54.01.0217 54.01.0217 54.01.0217	9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		XIC13	53.03.0166	8 pol	IC Socket		
	J35 J36 J41	54.01.0217 54.01.0217 54.01.0218	9-POLE 9-POLE 7-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP							
	J42 J43 J44	54.01.0226 54.01.0292 54.01.0226	20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP							
	JS1 JS2	54.01.0021 54.01.0021		Bridge Bridge								
	MP2	1.727.670.11 1.727.400.01 1.727.670.10	1 pce 1 pce 1 pce	Audio Control PCB Headsink No. label	St St St							
	MP5 MP6	21.99.0180 21.53.0355 24.16.2030	2 pcs 2 pcs 2 pcs	Screw M3 * 5 Screw M3 * 8 Lock wacher								
	MP7 MP8 MP9	37.01.0101 43.01.0108 54.01.0020	4 pcs 1 pcs 6 pcs	Lock wacher ESE warning label Contact pin	St St	EL=Ele PETP=P	ctrolytic,	PP=Polypropylen	, SI=Silicor	, MF=Metal Film		
	Q1 Q2	50.03.0495 50.03.0510	BD135-16 BD136-16	NPN PNP				=Motorola, St=St	uder, Six=Si	liconix		
T U	Q3 DER (00	50.03.0436 )) 89/03/21 Wth	BC237B AUDIO CONT	BC547B, BC550B NPN ROL BOARD PL 1.7	27.670.00 PAGE 2		9/03/21 DER (00	0) 89/03/21 Wth	AUDIO CONTE	OI. BOARD	PL 1.727.670.0	OO PAGE
). 	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	r MANUF.							
	Q4 R1	50.03.0350 57.56.5680	MPF4392 68 Ohm	J112 FET	Mot/Six							
	R2 R3 R4	57.56.5680 57.11.3332 57.11.3332 57.11.3332	68 Uhm 3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 4 W, DR 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R5 R6 R7	57.11.3332 57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R8 R9 R10	57.11.3332 57.11.3332 57.11.3332 57.11.3102	3.3 kOhm 3.3 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R12 R13	57.11.3102 57.11.3102 57.13.4229 57.13.4229	1 kOhn 2.2 Ohn 2.2 Ohn	2%, 0.25W, MF 2%, 0.5 W, MF 2%, 0.5 W, MF								
	R15 R16	57.11.3221 57.11.3333 57.11.3332	220 Ohm 33 kUhm 3.3 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R17 R18 R19	57.11.3103 57.11.3103 57.11.3223	10 kOhm 10 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R20 R21	57.11.3221 57.11.3104 57.11.3103	220 Ohm 100 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R22	57.11.3103 57.11.3332	10 kOhm 3.3 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R23 R24 R25	57.11.3223	4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R23 R24 R25 R26 R27 R28	57.11.3472 57.11.3102 57.11.3103	1 kOhm 10 kOhm	2%, 0.25W, MF								
	R23 R24 R25 R26 R27 R28 R29 R30 R31	57.11.3472 57.11.3102 57.11.3103 57.11.3103 57.11.3103 57.11.3470	1 kOhn 10 kOhn 10 kOhn 10 kOhn 47 Ohn	2%, 0.25%, MF 2%, 0.25%, MF 2% 0.25%, MF 2%, 0.25%, MF								
	R23 R24 R25 R26 R27 R28 R29 R30	57.11.3472 57.11.3102 57.11.3103 57.11.3103 57.11.3103	1 kOhn 10 kOhn 10 kOhn 10 kOhn	2%, 0.25%, MF 2%, 0.25%, MF 2% 0.25%, MF								

#### AUDIO CONTROL BOARD 4CH HS 1.727.681.81





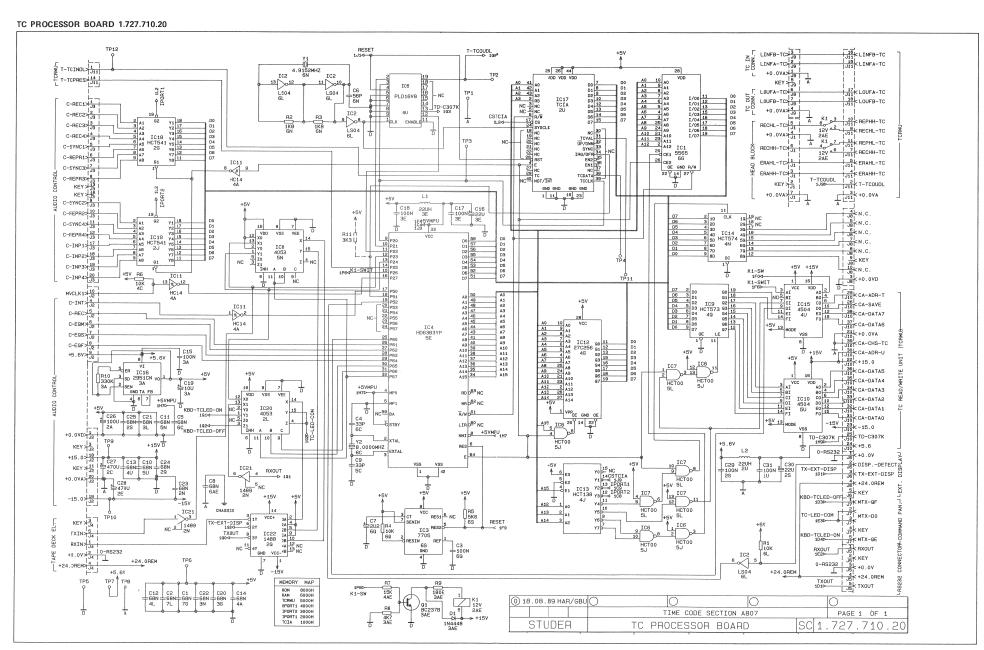




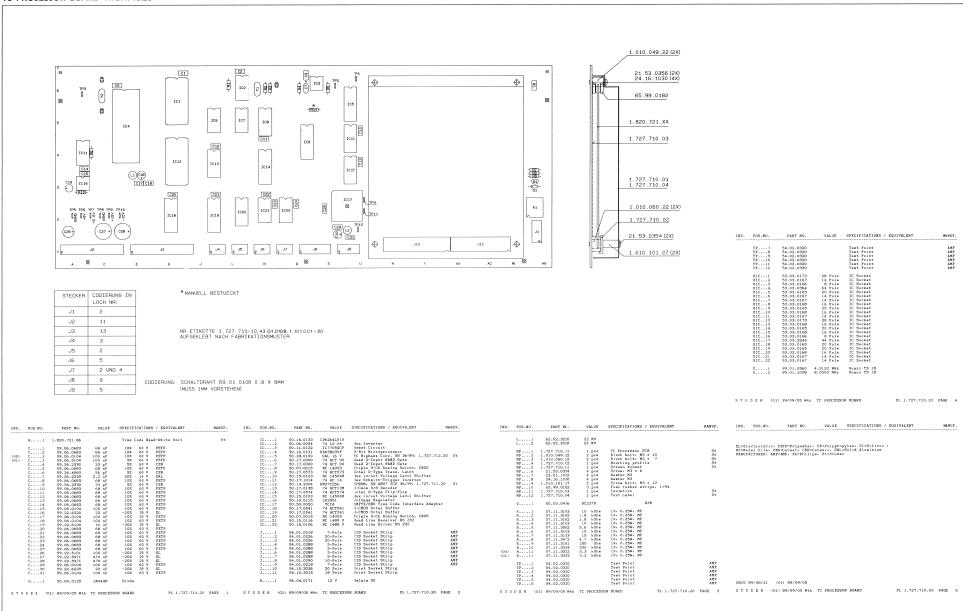
#### AUDIO CONTROL BOARD 4CH HS 1.727.681.81 ● R60 ● Фφ--0 0-C 22 023 IC 3 IC 2 IC 1 Ø. C 24 e-W14-e 00000000000000000000 ● R 48 ● R49 R50 R51 R52 R53 R53 IC 6 R 39 e-[R67]-e IC 4 -6 0 000000000000000000 • R68 • 00000000000000 J22 J24 0000000000000 € R47 € C I R 40 IC7 IC 8 Ф. C 2 ° • W 16 C 3 J34 J33 J32 0 -0-IC 14 IC 15 IC47 (0 IC 46 IC 43 IC42 ● R74 ● ● W12 ● W10 ● ○ J35 0 0 0 0 0 0 0 0 0 00000000000000000 R 77 R 78 R 77 R 78 R 80 J44 J43 • R2 • 0 C47 (C16) 02 R28 127 C 20 C 14 D 9 D 10 R 84 © 19 + (C19) ¢C10 R 82 0 0 Ф (Pin) 53.03.0167. 1.727.680-04 53.03.0166 (4x) 53.03.0468 (42 x) 50. 20. 0305 (4x) 50. 20. 2003 (4x) 50. 20. 0314 (2 x) 50. 20. 2002 (2 x) 1.727.680-12 21,53,0354 (3x) 23.01.1032 (3x) 24.16.1030 (3x) VALUE SPECIFICATIONS / EQUIVALENT PART NO. 59.22.51.01 59.06.0683 59.06.0683 59.06.0682 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1022 59.22.8109 HOT S T U D E R (00) 88/08/11 DS AUDIO CONTROL BOARD 4CH HS PL 1.727.681.00 FAGE 1

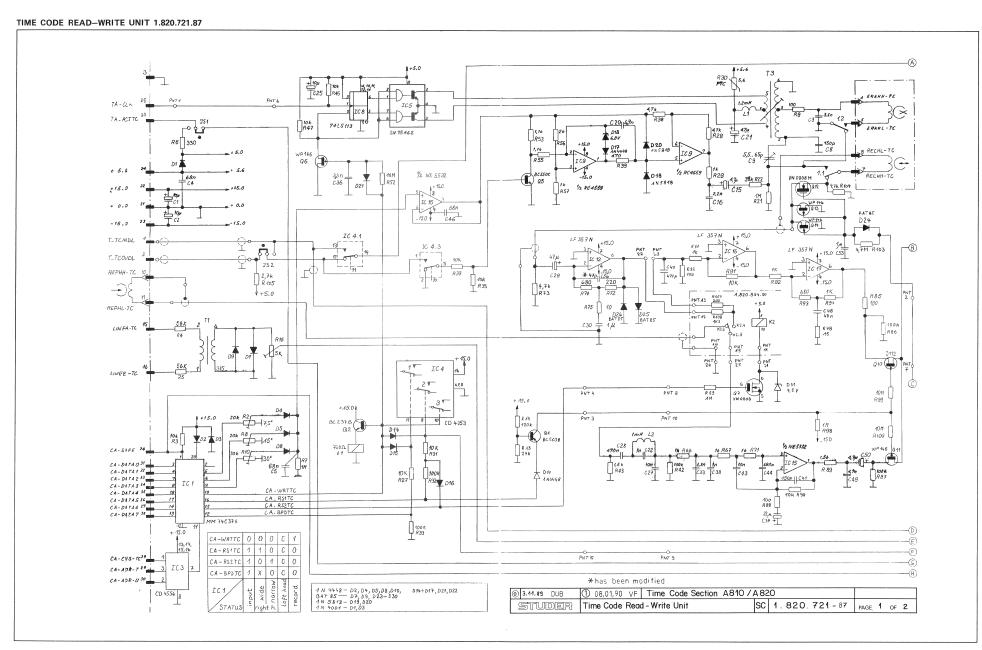
### AUDIO CONTROL BOARD 4CH HS 1.727.681.81

	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / I	CQUIVALENT	MANU
	IC1 IC2	50.07.0018 50.07.0018	NC14094 NC14094	8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS Hex Inverter HCMOS	NOT TON		R47 R48	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC4	50.17.1004 50.07.0018 50.07.0015	74HC04 MC14094 MC14053	8-Bit Shift/Store Register CMOS Triple 2-Ch Analog Multiplexer	HOT HOT		R50 R51	57.11.3682 57.11.3103	6.8 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC6 IC7 IC8	50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094	8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS	HOT HOT HOT		R52 R53 R54	57.11.3682 57.11.3682 57.11.3103	6.8 kOhm 6.8 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	IC9 IC10 IC11	50.07.0015 50.09.0107 50.07.0018	MC14053 RC4559 MC14094	Triple 2-Ch Analog Multiplexer Dual OpAmp 8-Bit Shift/Store Register CMOS	NOT RCA NOT		R55 R56 R57	57.11.3221 57.11.3103 57.11.3221	220 Ohm 10 kGhm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC12 IC13 IC14	50.07.0018 50.09.0107 50.17.1000	MC14094 RC4559 74HC00	8-Bit Shift/Store Register CMOS Dual OpAmp Quad NAND-Gate HCMOS	MOT RCA		R58 R59 R60	57.11.3103 57.11.3103 57.11.3221	10 k0hm 10 k0hm 220 Ohm 1 kUhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC15 IC16 IC17	50.07.0018 50.07.0015 50.09.0107	MC14094 MC14053 RC4559	8-Bit Shift/Store Register CMOS Triple 2-Ch Analog Multiplexer Dual Opamp	MOT MOT RCA		R61 R62 R63	57.11.3102 57.11.3223 57.11.3472	22 kOhn 4.7 kOhn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC18 IC19 IC20	50.17.1074 50.09.0105 50.10.0105	74HC74 NE 5532 LM 337	Dual D-Flip-Flop Dual OpAmp Low Noise Negative Voltage Regulator	NS		R64 R65 R66	57.11.3103 57.11.3223 57.11.3102	10 kOhn 22 kOhn 1 kOhn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC21 IC22 IC23	50.10.0104 50.10.0105 50.10.0104	LM 317 LM 337 LM 317	Positive Voltage Regulator Negative Voltage Regulator Positive Voltage Regulator			R67 R68 R69	57.11.3473 57.11.3473 57.11.3332	47 kOhm 47 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	J1 J2	54.01.0212 54.01.0248	9-Pole 20-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP		R70 R71 R72	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	J3 J4 J5	54.01.0226 54.01.0226 54.01.0247	20-Pole 20-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R73 R74 R75	57.11.3332 57.11.3103 57.11.3332	3.3 kOhm 10 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	J6 J11 J12	54.01.0306 54.01.0218 54.01.0226	8-Pole 7-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R76 R77 R78	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	J13 J14 J15	54.01.0292 54.01.0226 54.01.0295	13-Pole 20-Pole 17-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R79 R80 R81	57.11.3103 57.11.3103 57.56.5680	10 kOhm 10 kOhm 68 Ohm	1%, 0.25W, MF 1%, 4 W DR		
	J16 J21	54.01.0218 54.01.0218	7-Pole 7-Pole	CIS Socket Strip CIS Socket Strip	AMP		R82 R83	57.56.5680 57.13.4229	68 Ohm 2.2 Ohm	1%, 0.5 W, MF	PL 1.727.681.00	nian
U	DER (OC	) 88/08/11 DS	AUDIO CONTR	OL BOARD 4CH HS PL 1.727.681.00	PAGE 2	STU	DER (O	D) 88/08/11 DS	AUDIO CONT	ROL BOARD 4CH HS	PL 1.727.681.00	PAGE
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANU
	J22 J23 J24 J31	54.01.0226 54.01.0292 54.01.0226 54.01.0218	20-Pole 13-Pole 20-Pole 7-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP AMP		R84 R85 R86 R87	57.13.4229 57.11.3102 57.11.3470 57.11.3102	2.2 Ohm 1 kOhm 47 Ohm 1 kOhm	1%, 0.5 W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	J32 J33 J34	54.01.0226 54.01.0292 54.01.0226	20-Pole 13-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AHP AHP AHP		TP1 TP2	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8		
	J35 J36 J41	54.01.0295 54.01.0218 54.01.0218	17-Pole 7-Pole 7-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		TP3	54.02.0320 57.11.3000		Plug 2.8*0.8 Wire Bridge		
	J42 J43 J44	54.01.0226 54.01.0292 54.01.0226	20-Pole 13-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		W2 W3 W4	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge		
	MP1 MP2	21.53.0354 23.01.1032	3 рсв 3 рсв	Screw IS M3*6 Washer D 3.2/6*0.5	2		W5 W6 W7	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge		
	MP3 MP4 MP1	24.16.1030 43.01.0108 50.20.0305	3 pcs 1 pcs 4 pcs	Washer D 3.2/5.5 ESE-Warning Label Thermoplastic TO220			W8 W9 W10	57.11.3000 57.11.3000		Wire Bridge not used Wire Bridge		
	MP2 MP3 MP4	50.20.0314 50.20.2002 50.20.2003	2 pcs 2 pcs 4 pcs	Thermoplastic T0126 Mounting clip T0126 Mounting clip T0220			W11 W12 W13	57.11.3000		not used Wire Bridge not used		
	MP5	1.727.680.11 1.727.680.10	1 pce 1 pce	AUDIO CÓNTROL PCB 4CH Nr. Label	ST ST		W14 W15 W16	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge		
	91 92	50.03.0510 50.03.0495	BD136-16 BD135-16	PNP NPN			W17 W18	57.11.3000 57.11.3000		Wire Bridge Wire Bridge		
	R1 R2 R3	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC1 XIC2 XIC3	53.03.0168 53.03.0168 53.03.0167		16-Pole IC Socket 16-Pole IC Socket 14-Pole IC Socket 16-Pole IC Socket		
	R5 R6	57.11.3391 57.11.3510 57.11.3102	390 Ohm 51 Ohm 1 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC4 XIC5 XIC6 XIC7	53.03.0168 53.03.0168 53.03.0168 53.03.0168		16-Pole IC Socket 16-Pole IC Socket 16-Pole IC Socket		
	R7 R8 R9	57.11.3102 57.11.3471 57.11.3332	1 kOhm 470 Ohm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC8 XIC9	53.03.0168 53.03.0168		16-Pole IC Socket 16-Pole IC Socket		
U	DER (OC	0) 88/08/11 DS	AUDIO CONTE	OL BOARD 4CH HS PL 1.727.691.00	O PAGE 3	STU	DER (OC	) 88/08/11 DS	AUDIO CONTE	OL BOARD 4CH HS	PL 1.727.681.00	PAGE
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MAN
	R10 R11 R12	57.11.3472 57.11.3561 57.11.3681	4.7 kOhm 560 Ohm 680 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC10 XIC11 XIC12	53.03.0166 53.03.0168 53.03.0168		8-Pole IC Socket 16-Pole IC Socket 16-Pole IC Socket		
	R13 R14 R15	57.11.3332 57.11.3472 57.11.3332	3.3 kOhm 4.7 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC13 XIC14 XIC15	53.03.0166 53.03.0167 53.03.0168		8-Pole IC Socket 14-Pole IC Socket 16-Pole IC Socket		
	R16 R17 R18	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC16 XIC17 XIC18	53.03.0168 53.03.0166 53.03.0167		16-Pole IC Socket 8-Pole IC Socket 14-Pole IC Socket		
	R19 R20 R21	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC19	53.03.0166		8-Pole IC Socket		
	R23 R24	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF								
	R25 R26 R27	57.11.3332 57.11.3332 57.11.3242 57.11.3221	3.3 kOhm 3.3 kOhm 2.4 kOhm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF								
	R29 R30	57.11.3511 57.11.3562 57.11.3103	510 Ohm 5.6 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF								
	R31 R32 R33	57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF								
	R34 R35 R36 R37	57.11.3332 57.11.3242 57.11.3221 57.11.3511	3.3 kOhm 2.4 kOhm 220 Ohm 510 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF								
	R38 R39 R40	57.11.3562 58.01.8202 58.01.8202	5.6 kOhm 2 kOhm 2 kOhm	1%, 0.25W, MF Potneter PMG Potneter PMG		PP= P	olypropylen	SI= Silicon	MF= Metal	Film		
	R41 R42 R43	58.01.8202 57.11.3682 57.11.3103	2 kOhm 6.8 kOhm 10 kOhm	Potneter PMG 1%, 0.25W, MF 1%, 0.25W, MF		PETF=	Polyester, ACTURER: MC	EL= Electrolyt: T= MOTOROLA, E	c A= RAYTHEON.			
	R44 R45 R46	57.11.3682 57.11.3332 57.11.3103	6.8 kOhm 3.3 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			NS: 88/08/11	NATIONAL SEMIC	CONDUCTOR			
		0) 88/08/11 DS								ROL BOARD 4CH HS	PL 1.727.681.00	DAGE

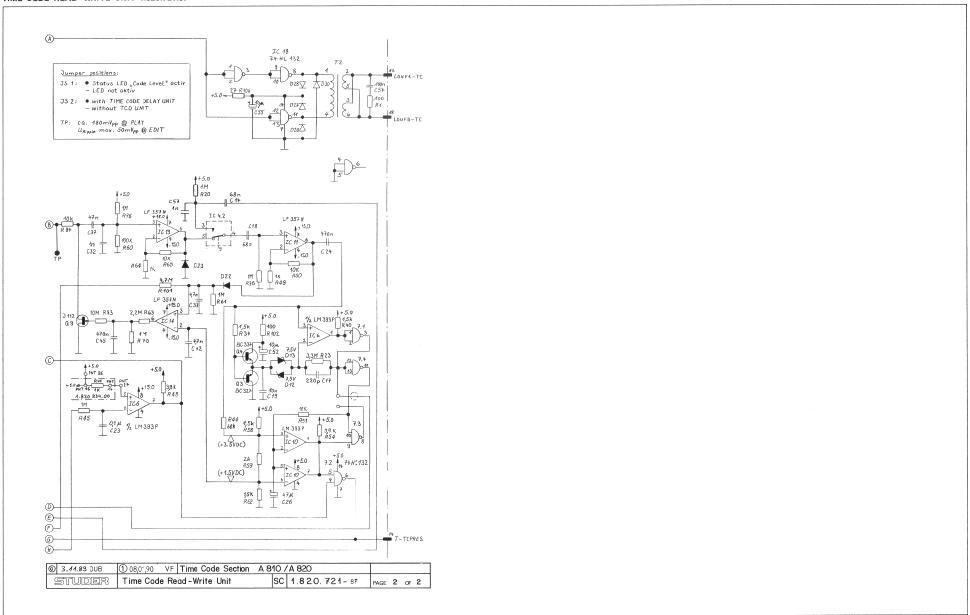


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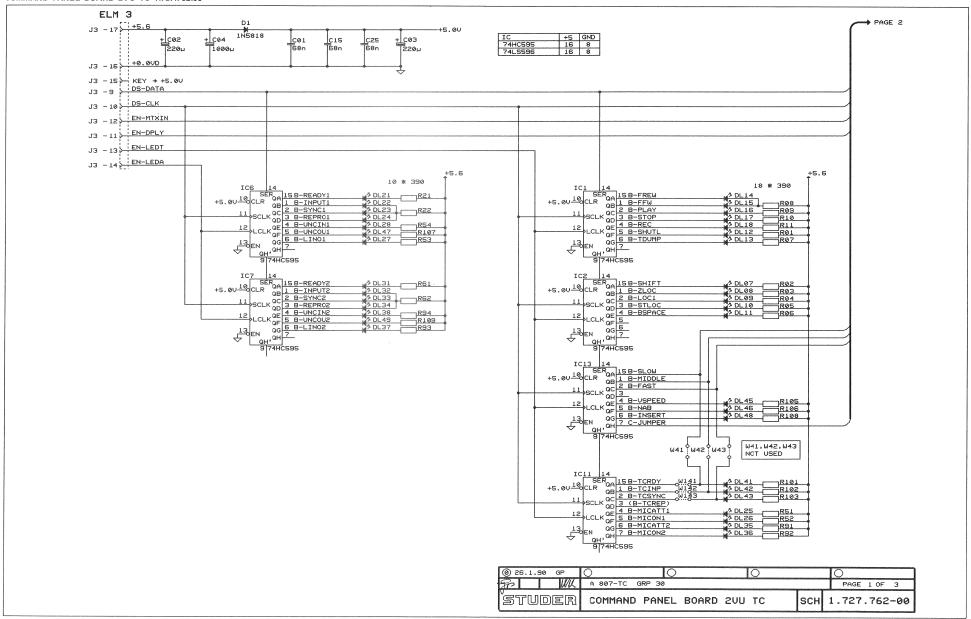




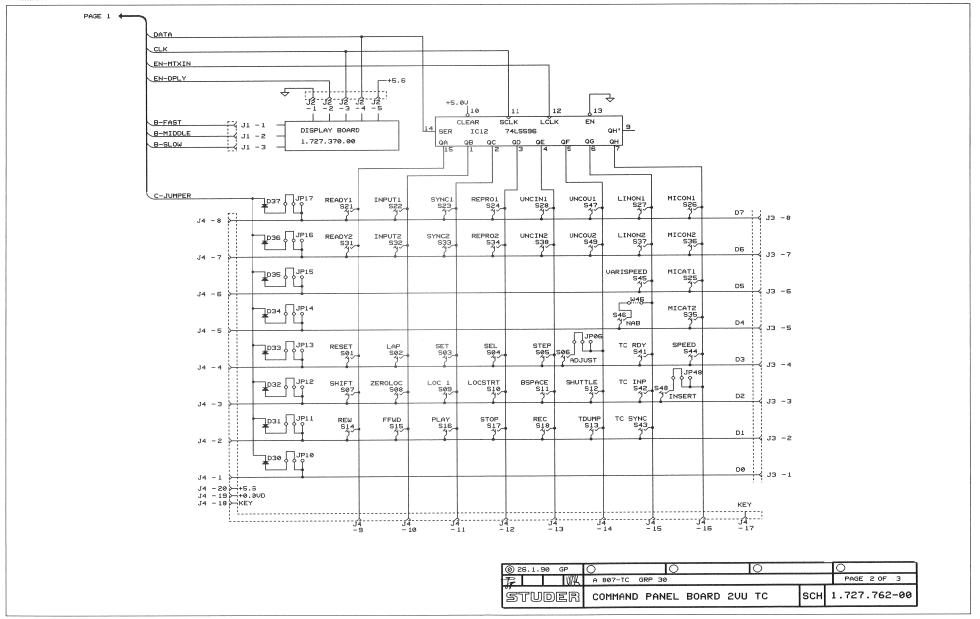
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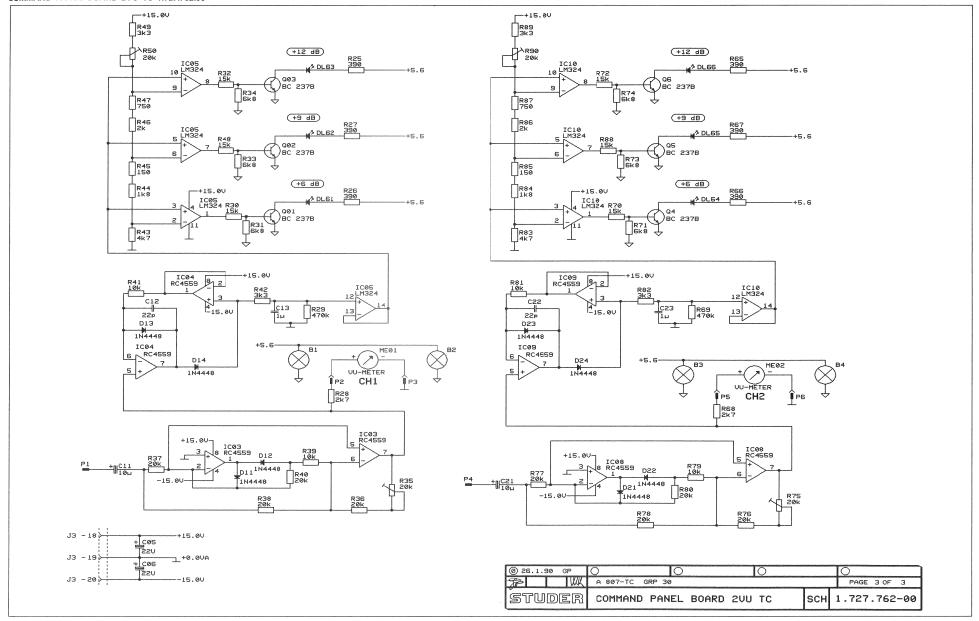
#### COMMAND PANEL BOARD 2VU TC 1.727.762.00



### COMMAND PANEL BOARD 2VU TC 1.727.762.00



#### COMMAND PANEL BOARD 2VU TC 1.727.762.00



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#### GENERAL INFORMATION

#### 1.1 QUICK REFERENCE DESCRIPTION

With its compact and rugged design, its system flexibility, and the high operating convenience afforded by its microprocessor, the STUDER A807 tape recorder satisfies all requirements of a universal studio machine, be it radio or television studios, recording studios, theater, film, auditoriums, or scientific institutes.

#### Its salient features are:

- Highly stable die-cast aluminum alloy chassis for the tape transport, the headblock, and other assemblies.
- Hall-commutated brushless DC capstan motor with capacitative tacho sensor for highly accurate tape speed and outstanding acceleration and deceleration rates.
- Fast tape deck with high tape spooling speeds and gentle handling of the tapes by electronically controlled tape tension, 2 controlled AC spooling motors with photoelectric tacho sensors and noncontacting tape tension sensor.
- Precision electronic tape counter with real-time indication. Photoelectric scanning of the guide roller rotation.
- Easy editing: motor-assisted with variable spooling speed (SHUTTLE mode) or manually by turning the right-hand reel (one-handed editing). For cueing in spooling mode, the high end of the frequency response is lowered.
- Monitor speaker below the tape deck cover or in the penthouse.
- Manually operable shield above the reproduce head; can remain closed in spooling mode.

Due to the enormous system flexibility, a suitable A807 version is available for any type of application:

- The basic version is available as a mono, 2channel or stereo machine with or without external instrument panel.
- Can be operated in horizontal, inclined, or vertical position.
- Three of four available tape speeds can be selected: 3.75 / 7.5 / 15 / 30 ips. Depending on the configuration either the slowest or the fastest speed is not available.
- The inputs and outputs are balanced and floating, with input/output transformers.
- Either with selector switch for two tape types with different calibration data, or with selector switch for NAB/CCIR equalization.
- Zero locator and transfer locator for up to 3 addresses as standard features.
- Dolby HX PRO noise reduction system as standard feature.
- Equipped with varispeed (variable tape speed).
- Keys for input and output selection on models equipped with VU meters:

Input selection: MIC ON (microphone input; this input does not exist on units equipped with external instrument panel); LINE ON (line input). The microphone inputs are always equipped with a 48 V phantom power (changeover to 24 or 12 V possible. Output selections INPUT, REPRO, and SYNC (reproduction via record head).

- VU-meter panel with input and output selection keys, level potentiometer for recording.
- Adjustable for line voltages of 100 to 140 V / 200 to 240 VAC, ±10%, 50...60 Hz.
- Can be remote controlled from a terminal or personal computer via an RS232 interface.
- Connection facilities for fader start circuit, parallel and serial remote control.

High operating convenience afforded by microprocessor control:

- The last operating state is saved when the machine is switched off: tape counter, locator addresses, tape speed, setting of the input and output selectors. The STOP mode is automatically activated when the machine is powered on again.
- Drop in by pressing only the REC key in play mode (internally programmable)
- Drop out by pressing PLAY during a recording.
- Reduced spooling speed (LIBRARY WIND):
   A lower spooling speed can be selected for producing pancakes that are to be saved in the library.
- REVERSE PLAY
- TAPE DUMP (waste basket mode with disabled take-up motor).
- LAP TIME (second time level for measuring individual tape segments without influencing the main tape counter).
- Adjustment of the audio parameters and setting of "soft jumpers" via the keyboard.
- LOC START positions the magnetic tape automatically at the address at which the last play or record command (for standstill) was entered.

# The following options are available:

- Mono/stereo switch with or without test generator (60, 125 Hz, 1, 10, 16 kHz).
- Tape scissors and tape marker as well as a headblock cover plate with integrated scissors/splicing block.
- Additional splicing block for units without VUmeter.
- Synchronizer interface.

#### STANDARD VERSIONS

# 1.2.1 Full-track versions

#### A807-1

#### A807-1

#### Order No. 60.116.07011

- Machine for 1/4" tape
- Mono with full-track erase head.
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-1 VU

#### Order No. 60.116.07012

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Microphone input with phantom power
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer integrated in the operator panel
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-1 VUK \*

### Order No. 60.116.07013

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Monitor speaker and VU-meter with an input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

### A807-1 VUK HS \*

# Order No. 60.116.07015

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (7.5 / 15 / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-1 VU PB0

#### Order No. 60,116,07017

- Machine for 1/4" tape.
- Mono, reproduce-only (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter and output level potentiometer intein operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# 1.2.2 Stereo versions A807-0.75

#### A807-0.75

#### Order No. 60.116.07021

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, fulltrack erase head.
- Without channel control.
- Monitor speaker built into tape deck cover. Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

### A807-0.75 VU

# Order No. 60.116.07022

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, overlapping erasure.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer channel control as well as output level potentiometer built into the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-0.75 VUK \*

### Order No. 60.116.07024

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-0.75 VUK HS \*

#### Order No. 60.116.07025

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (7.5 / 15 / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-0.75 PBO

#### Order No. 60.116.07026

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, reproduceonly (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-0.75 VU PBO

# Order No. 60.116.07027

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, reproduceonly (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter with output level potentiometer integrated in operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-0.75/4 VU

# Order No. 60,116,07054

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Second reproduce head for 1/4 track format.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer and channel control as well as output level potentiometer built into operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version

#### A807-0.75/4 VUK \*

#### Order No. 60.116.07052

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Second reproduce head for 1/4 track format.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### 1.2.3 Two-track versions

A807-2

#### A807-2 F

#### Order No. 60.116.07030

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, fulltrack erase head.
- Without channel control.
- Monitor speaker built into tape deck cover. Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/2

# Order No. 60.116.07031

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- With channel control, without VU-meter and input/output level potentiometers.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/2 VU

# Order No. 60.116.07032

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometers and channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-2/2 VUK \*

#### Order No. 60.116.07034

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-2/2 VUK HS \*

#### Order No. 60.116.07065

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (7.5 / 15 ips / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-2

#### Order No. 60.116.07033

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, overlapping erasure.
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

### A807-2 PB0

# Order No. 60.116.07036

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, reproduceonly (recording electronics not retrofittable)
- Without channel control.
- Monitor speaker built into tape deck cover. Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-2 VU PBO

#### Order No. 60.116.07037

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, reproduceonly (recording electronics not retrofittable)
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter with output level potentiometer built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/4 VU

#### Order No. 60,116,07053

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, overlapping erasure.
- Second reproduce head for 1/4-track format.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover. VU-Meter with input level potentiometers channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/4 VUK \*

### Order No. 60,116,07051

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Second reproduce head for 1/4-track format.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

# 1.2.4 1/4-Track, 2-channel versions A807-4/2

# A807-4/2 VU

# Order No. 60.116.07038

- Machine for 1/4" tape.
- 1/4-Track format, 2-track/stereo, with 1/4-track erasure.
- Microphone input with phantom power. Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer and channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-4/2 VUK

#### Order No. 60.116.07039

- Machine for 1/4" tape.
- 1/4-Track format, 2-track/stereo, with 1/4-track erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

# \* Notes

On request, special instrument panels for 19" rack mounting (in place of the wooden side panels) are available for all VUK versions. The rack mounting brackets 1.727.071.00 must be ordered in this case.

### 1.3 OPTIONS

#### Tape scissors

Order No. 20.807.894.00

Kit for all versions except: A807-2/4; A807-2/4 VUK; A807-0.75/4 VU; A807-0.75/4 VUK.

#### Tape marker

Order No. 20.807.896.00

Kit for all versions.

#### Tape scissors and tape marker

Order No. 20.807.895.00

 Kit for all versions except: A807-2/4; A807-2/4 VUK; A807-0.75/4 VU; A807-0.75/4 VUK.

#### cutting/splicing block

Order No. 20.807,173.00

- For installation on the operator panel.
- For versions with VU-meters installed in the instrument panel or for versions without VU-meter.

# Cutting/splicing block

Order No. 20.807.172.00

 Headblock cover designed as a cutting/splicing block. For all versions.

### Mono/stereo switch

Order No. 20.807.176.00

For all record/reproduce versions.

# Mono/stereo switch with test generator

Order No. 20.807.174.00

 For all versions. With built-in booster amplifier for 10 and 20 dB and test generator (60, 125 Hz; 1, 10, 6 kHz).

# Mono/stereo switch for (PBO) reproduce-only versions

Order No. 20.807.168.00

For all (PBO) reproduce only versions.

# 12 V Phantom power conversion kit (instead of 48V)

Order No. 20.807.175.00

For all versions with balanced microphone input.

#### Synchronizer control port

Order No. 20.807.177.00

Kit for all versions.

#### Penthouse with stereo monitor

Order No. 20.807.171.00

- For all versions without instrument panel.
- Contains: Stereo monitor speaker, volume control and source selector for input, reproduce, and auxiliary input signal. Including wiring and connection components. Only installable on consoles with penthouse (20.020.205.05/.15).

# Reel shelf

Order No. 21.811.560.00

 Serves as a storage area; in place of the penthouse. Only installable on consoles suitable for penthouse (20.020.205.05/.15).

# ACCESSORIES AND SERVICE AIDS

# 1.4.1 Standard accessories

#### Order No. 20.020.302.32

Power cord 2.5 m, EURO connector10.223.001.01

Set of audio connectors, XLR (per channel)

20.020.302.02 26.06.1020 Allen screwdriver 2.0 mm Allen screwdriver 2.5 mm 10.258.003.09 10.258.003.10 Allen screwdriver 3.0 mm 26.06.1040 Allen screwdriver 4.0 mm Fuses 5x20 mm, 1.0 A SLOW Fuses 5x20 mm, 2 A SLOW Fuses 5x20 mm, 2 A SLOW 51.01.0117 51.01.0119 51.01.0120 Fuses 5x20 mm, 3.15 A SLOW Fuses 5x20 mm, 4 A SLOW 51.01.0122 51.01.0123 51.02.0144 VU-meter bulbs 6 V/30 mA 1,727,100,58 Label set

# 1.4.2 Consoles

A807 consoles are supplied assembled with wooden side panels, tilt mechanism, and lockable casters. Working height: 840 mm

#### Consoles with penthouse

Order No. 20.020.205.05 With traverse

With 19" rack base Order No. 20.020.205.15 for three 19" modules with a height of 40.58 mm each.

### Consoles without penthouse

- With traverse Order No. 20.020.205.25
- With 19" rack base Order No. 20.020.205.35 for three 19" modules with a height of 40.58 mm each.

# 19" Rack base

Retrofit kit Order No. 1.058.057.00 For three 19" modules with a height of 40.58 mm each.

# Blanking panels for rack base

Aluminum, transparent anodization:

Order No. 1.918.001.00 ■ 1 Unit high Order No. 1.918.002.00 Order No. 1.918.003.00 2 Units high 3 Units high

1 Height unit = 40.58 mm

Aluminum, grey lacquering:

1 Unit high Order No. 1.918.011.00 Order No. 1.918.012.00 2 Units high 3 Units high Order No. 1.918.013.00

1 Height unit = 40.58 mm

Screws for rack mounting:

Order No. 21.99.0164 M6 x 12 Order No. 21.99.0167 M6 x 16 Order No. 23.99.0121 M6 washers

#### 1.4.3 Remote controls

Parallel tape deck control in desktop housing, with 15 m cable.

Order No. 20.820.366.00

Varispeed kit for installation in desktop housing of the parallel tape deck remote control, with connection cable

Order No. 21.328.253.00

<u>25-Pin connector</u>, type D, for installation in desktop housing of the parallel remote control. (Through-connection of the remote control signals for a second remote control terminal).

Order No. 21.328.254.00

Parallel tape deck control in STUDER standard module, 1 unit wide, with 15 m cable.

Order No. 20.820.367.00

varispeed remote control in STUDER Parallel standard module, 1 unit wide, without connection cable.

Order No. 21.328.290.00

 Connection cable 0.3 m for connecting the parallel varispeed remote control module to the remote parallel tape deck control (20.820.367.00)

Order No. 1.023.102.03

 Connection cable 15 m
 for direct connection of the parallel varispeed remote control module to the A807 tape recorder.

Order No. 1.328.292.00

Parallel varispeed remote control in STUDER standard module, 1 unit wide, with digital input of the speed deviation and real-time indication in percent or semitones. Without connection cable.

Order No. 10.403.050.00

Connection cable 0.3 m for connecting the parallel varispeed remote control module (10.403.050.00) to the parallel tape deck remote control (20.820.367.00)

Order No. 1.023.730.00

 Connection cable 15 m for direct connection of the parallel varispeed remote control module (10.403.050.00) to the A807 tape recorder. Order No. 1.023.731.00

Desktop housing for Studer standard-module remote controls, for installation of up to 6 standard-module STUDER remote controls.

Order No. 1.328.095.00

# Blanking panels for desktop housing

Aluminum, transparent anodization:

Order No. 1.038.341.00 Order No. 1.038.342.00 Order No. 1.038.343.00 1 Module wide 2 Modules wide 3 Modules wide

Aluminum, grey lacquering:

Order No. 1.328.185.00 1 Module wide Order No. 1.328.186.00 Order No. 1.328.187.00 2 Modules wide 3 Modules wide Order No. 1.328.189.00 5 Modules wide

#### 1.4.4 Remote counters

 Chassis/desktop model incl. 15 m connection cable (for connection to the RS232 interface of the tape recorder).

Order No. 20,020,100,30

Masks, standard module 5 units (190 x 202.9 mm):

- for one remote counter Order No. 1.328.275.31
- for two remote countersOrder No. 1.328.275.32

for three remote counters

Order No.1.328.275.33

### Connectors for remote Control ports

No connectors are needed for STUDER remote controls.

Serial
 Parallel
 Synchronizer
 Order No. 20.020.303.07
 0rder No. 20.020.303.16
 20.020.303.15

#### 1.4.5 Adapters and tape reels

NAB reel adapter with control grip

Order No. 1.013.332.00

NAB reel adapter, standard

Order No. 89.01.0354

NAB metal reel, 1/4", without tape

Order No. 10.213.001.01

DIN open-reel hub

Order No. 10.200.003.01

DIN open-reel pancake platter

Order No. 1.013.046.00

### 1.4.6 Aids

# STUDER tape splicing kit

Comprising a cutting and editing block, one antimagnetic cutting blade, splicing tabs, and a grease pen for marking the tape.

Order No. 10.030.452.40

# STUDER cleaning kit in carrying case

Contains 1 bottle of head cleaner, 1 bottle of aluminite cleaner, lint-free nonwoven fleece squares, and a piece of buckskin.

Order No. 10.496.010.00

Head cleaner:

Replacement bottle
 1 litre
 Order No. 10.496.021.00
 Order No. 10.496.022.00

Aluminite cleaner:

Replacement bottle
 1 litre
 Order No. 10.496.025.00
 Order No. 10.496.026.00

# Service aids

Tool case (basic kit) with soldering iron and demagnetizing choke for 110 V.

Order No. 20.020.001.20

Tool case (basic kit) with soldering iron and demagnetizing choke for  $220\ \text{V.}$ 

Order No. 20.020.001.21

Supplementary tool kit for ABO7 tape recorder, including extension cord for the capstan motor (1.727.216.00) and the spooling motors (1.727.217.00)

Order No. 20.020.001.38

#### Additional manuals

Operating and service instructions:

 English
 Order No. 10.27.0452

 German
 Order No. 10.27.1280

 French
 Order No. 10.27.1290

#### 1.4.7 Accessories

#### Wooden side panels, transport cover

Wooden side panels with recessed carrying grips.
Order No. 1.727.070.00

Transport cover, also offers space for two tape reels and the connection cables. (Wooden side panels 1.727.070.00 are required).

Order No. 1.727.074.00

#### Carrying case

Made of aluminum, extremely sturdy, requires rack mounting kit (1.727.071.00). The tape recorder can be operated directly when the lid is opened.

Order No. 10.386.001.01

# Rack mounting kit

Contains two mounting brackets and mounting accessories for installing an A807 into a 19" rack. This kit is not required for STUDER consoles.

Order No. 1.727.071.00

# Handrest and wooden side panels

Wooden side panels with handrest made of leather, for operating the tape recorder on a desk top.

Order No. 1.727.072.00

#### 1.5 TECHNICAL DATA

#### Spooling motors:

Two direct driving external-rotor AC asynchronous motors with active 3-phase control, controlled frequency correction, and switched motor output stages.

#### Capstan motor:

Brushless DC motor with Hall element commutation

#### Tape deck control:

Via microprocessor, for all functions and function transitions.

#### Tape counter:

5-Position LED indication in hours, minutes, and seconds at all tape speeds, from zero in reverse direction with negative sign, decrementing. -9 h 59 min 59 s ... 29 h 59 min 59 s Range:

#### Starting time:

At 15 ips tape speed, 1000 m tape with DIN hub or 762 m (2500 ft) tape with NAB reel (for reaching 200% of the specified wow-and-flutter ratina)

approx. 0.8 s

# Winding time:

for 760 m tape <90 s for 1000 m tape  $\langle 120 \ \, s \ \, \rangle$ 

### Braking time:

from winding speed approx. 3 s

### Winding at reduced speed:

LIBRARY WIND mode approx. 5 m/s

### Tape reels:

11,1" / 282 mm Max. reel diameter 1.8" / 45 mm 2.4" / 60 mm Min. hub diameter, left Min. hub diameter, right NAB/DIN, Ciné, 3-prong Reel adapter The maximum pancake capacity with professional magnetic tape (thickness 50 μm) is

3280 ft / 1000 m

Tape width: 1/4" / 6.3 mm

#### Tape speeds:

A807

Normal versions:

cm/s 38.1 19.05 9.525 Switch-selectable:

7.5 ios 15 3.75

HS versions:

cm/s 76.2 38.1 19.05 Switch-selectable: ips 30 15

## Tape speed deviation:

max. ±0.2%

#### Varispeed:

Variable tape speed in semitones (ST)

3.75 ips +7...-1.5 ST 7.5 ips +7...-7 15 ips +7...-7 30 ips +7...-7

#### Wow and flutter:

Peak value weighted, according to DIN 45507 or IEC publ. 386. Ambient air temperature 0...+40°C Nominal tape speeds. 3.75 ips ±0.10%

7.5 ips: 0.07% 15 ips: 0.05% 30 ips: 0.05%

Tape slip:

Max. 0.1%

# Tape tension:

Controlled in all tape transport functions, measured with spring dynamometer, in record and play mode. Factory setting based on horizontal operating position. Nominal: 0.7 N (70 p)

Adjustable:

0.5...1.8 N

# Line inputs:

Via transformer, balanced, floating Input impedance 30 Hz ... 20 kHz

≥10 kg

## Input levels:

NAB:

For operating level (O VU) +4 dBu Internally adjustable -30 ... +12 dBu

CCIR:

For peak level (0 VU + 6 dB) +6 dBu Internally adjustable -24 ... +18 dBu

UNCAL: (for versions with VU meters and input/output level potentiometers) Max. increase of the input sensitivity 10 dB +24 dBu Max. admissible input level

Internal adjustment range of the working magnetic flux with the above input levels:

100 ... 1000 nWb/m

# Microphone inputs:

Via transformer, balanced, floating Input impedance:

>1.2 kΩ

#### Input level:

Without attenuator (max. -26 dBu) -82 dBu With attenuator (max. 2.6 dBu/1 kHz -54 dBu 0 dBu/40 Hz)

#### Noise factor:

 $Rq = 200 \Omega$ <5 dB

Phantom power: (convertible to +12 V) +48 V

#### Output meters:

VU versions: VU-meter LED peak program meter: O VU +6 / +9 / +12 dBu 0 VU Indication O dB at:

# Line outputs:

Via transformer, balanced, floating

Source impedance: <50 Ω

# Output level:

NAB

For operating level (O VU, into  $600 \Omega$  load + 4 dBu Internally adjustable −17 ... +12 dBu

CCIR:

For peak level (+ 6 dB) into  $600 \Omega$ load + 6 dBu -11 ... + 18 dB Internally adjustable

UNCAL: (for versions with VU meters and input/output level potentiometers). Max. increase of the reproduce gain 10 dB Max. output level into 600 Ω load +24 dBu into 200 Ω load +22 dBu

Internal adjustment range of the reproduce gain for working magnetic flux of 100 ... 1000 nWb/m

# Headphones output:

Short-circuit-proof, RL > 600  $\Omega$  / Ri = 220  $\Omega$ max. 5.0 V

max. 0.7 W Monitor speaker:

# Equalizations:

CCIR / NAB Switch-selectable

#### Equalization time constants:

	9.5 cm/s 3.75 ips	1 1		76 cm/s 30 ips		
CCIR	90/3180 µs	70/ © µs	35/ œ µs	17.5/ Φ μs		
NAB	90/3180 µs	50/3180 μs	50/3180 μs	17.5/ œ μs		

# Frequency response, record/reproduce mode:

	9.5 cm/s 3.75 ips	19 cm/s 7.5 ips	38 cm/s 15 ips	76 cm/s 30 ips
±2dB	30Hz12kHz	30Hz16kHz	30Hz 20kHz	
±1dB	30Hz 8kHz	30Hz12kHz	<b>50</b> Hz18kHz	

#### Frequency response, clock track reproduction

	9.5 cm/s	19 cm/s	38 cm/s	76 cm/s
	3.75 ips	7.5 ips	15 ips	30 ips
±2dB	40Hz6kHz	40Hz10kHz	40Hz12kHz	40Hz12kHz

# Signal-to-noise ratio, record/reproduce mode:

Equalization according to CCIR, measured with PER528, BASF tape type AGFA LGR50 equivalent tape.

# Full track, 6.3 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	250	320	320	320
unweighted according to CCIR468-II	57 dB	61 dB	.61 dB	
weighted according to CCIR468-II	49 dB	51 dB	52 dB	
weighted according to ASA-A (IEC179)	62 dB	64 dB	65 dB	

# Stereo 2.75 mm track width:

	9.5 cm/s 3.75 ips		l .	76 cm/s 30 ips
nWb/m	400	510	510	510
unweighted according to CCIR468-II	57 dB	61 dB	62 dB	
weighted according to CCIR468-II	49 dB	51 dB	53 dB	
weighted according to ASA-A (IEC179)	62 dB	65 dB	66 dB	

#### 2-Track, 2 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	400	510	510	510
unweighted according to CCIR468-II	56 dB ,	60 dB	61 dB	
weighted according to CCIR468-II	48 dB	50 dB	52 dB	
weighted according to ASA-A (IEC179)	61 dB	64 dB	65 dB	

#### NAB:

Equalization according to NAB, measured with magnetic tape SCOTCH 3M 226 or equivalent type.

#### Full track, 6.3 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	62 dB	72 dB	71 dB	
RMS value ASA-A weighted according to DIN 45633; IEC 179	66 dB	76 dB	74 dB	

### Stereo, 2.75 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	57 dB	69 dB	67 dB	
RMS value, ASA-A weighted, according to DIN 45633; IEC 179	62 dB	72 dB	71 dB	

# 2-Track, 2 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	56 dB	68 dB	66 dB	
RMS value, ASA-A weighted, according to DIN 45633; IEC 179	61 dB	72 dB	70 dB	

#### SYNC:

All versions:

RMS value, ASA-A (IEC179 / DIN 45633): Same values as measured with tape Record – sync – play mode

Harmonic distortion K3: (RL =  $600 \Omega$ )

#### CCIR:

Peak level, record/reproduce, measured with tape type PER528.

3.	75 ip	s	/	315	Hz (4	100 nWb/m)	≤1.	5	%
7.	5 ips	5 /	′ 1	kHz	(510	) nWb/m)	≤1.	5	7.
15	ips	/	1	kHz	(510	nWb/m)	≤1.	0	7.
30	ips	/	1	kHz	(510	nWb/m)	≤1.	0	%

#### NAB:

Peak level, record/reproduce, measured with tape type 3M226.

3.75 ips / 315 Hz (400 nWb/m)	≤1.0	%
7.5 ips / 1 kHz (5100 nWb/m)	≤1.0	%
15 ips / 1 kHz (510 nWb/m)	≤1.0	%
30 ips / 1 kHz (510 nWb/m)	≤1.0	7.

# Channel separation:

According to DIN 45521, at 15 ips/1 kHz 255 dB

# Erase depth:

With 2-track erase head, at 15 ips/1 kHz ≥75 dB With full track erase head,

at 15 ips / 1 kHz 278 dB

# Erase and bias frequency:

At all tape speeds 153.60 kHz

# Power requirements:

Switch-selectable: 100/120/140/200/220/240 V ±10% 50...60 Hz

# Power fuse:

100...140 V 3.15 A / 250 V slow 200...240 V 1.60 A / 250 V slow

# Power consumption:

Idle approx. 70 VA
Recording (2 CH) approx. 150 VA
Fast forward/rewind approx. 180 VA
Maximum connected load 300 VA

### Admissible power failure:

For retaining the operational state max. 100 ms

#### Parallel interface:

For controlling the tape transport functions, the variable tape speed (varispeed), and the fader start input.

# Serial interface:

(RS232) for remote control of all functions.

# Ambient temperature range:

Operation:

(32...104°F) 0...40°C

# Relative humidity:

Noncondensing

20...90%

Oerating position:

From horizontal to vertical

# Safety standards:

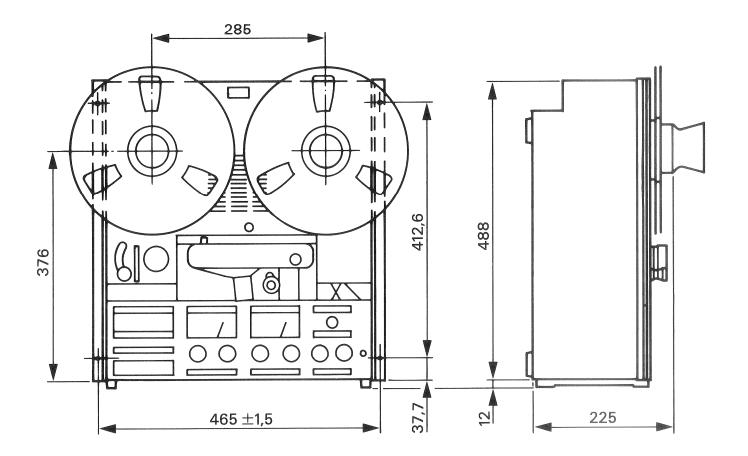
According to IEC recommendation, publication 65, protection category (power filter, power switch, power fuse, power transformer, and voltage selector according to categories I and II).

# Weight:

Chassis version

approx. 30 kg

# 1.5.1 Dimensions (in mm)



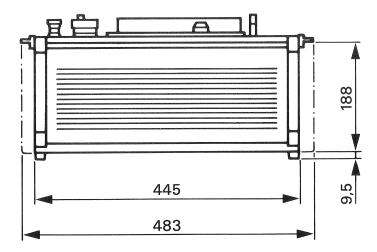
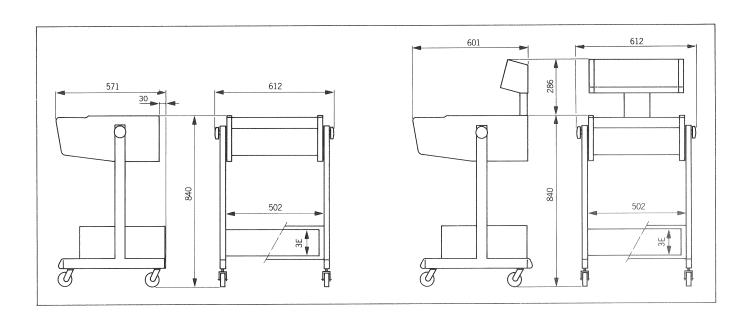


Fig. 1.5.1



# 1.5.2 Packing

# A807 tape recorders with monitor overbridge and "ECO" console

Box for tape recorder: 64x62x46
Box for "ECO" console: 87x67x17
Box for monitor overbridge: 55x25x21

# A807-VUK with "ECO" console

Box for tape recorder: 64x62x46
Box for "ECO" console: 87x67x17
Box for VU-meter overbridge: 55x25x21

# Gross weight:

Depending on configuration: 32.5 kg - 63.5 kg.

# 1.6 INSTRUCTIONS FOR SERVICE PERSONNEL

# 1.6.1 Abbreviations

A AN B BAR C D DLDLD DD E EF FH HELD JSK L SMEIP OF QORRET RSTITEW	Assembly Antenna Bulb Battery Optocoupler (bulb> LDR) Capacitor Diode, DIAC LED Optocoupler (LED> phototransistor) Optocoupler (LED> LDR) LED-Array, 7-segment display Photodiode Rectifier Electronic component Headphones Fuse Filter Head (audio, erase) Hybrid circuit (thick/thin film) Hall element Integrated circuit Socket (female) Jumper Relay, contactor Inductor Loudspeaker Motor Meter Microphone Mechanical part Connector (male) pickup Transistor, FET, Thyristor, TRIAC Phototransistor Phototransistor array Resistor Light-sensitive resistor, LDR Temperature-dependent resistor Resistor network Switch Transformer Delay line Test point, test socket Wire, stranded wire
S T	Switch Transformer
TP	Test point, test socket
X	Base, holder Lamp base
XF XIC	Fuse holder IC socket
Y	Crystal, Piezo-Element Network, Array
L	

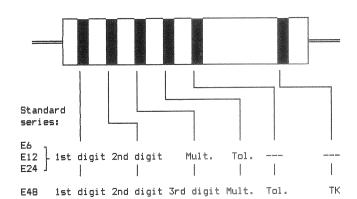
# 1.6.2 Powers of ten

Designation	Abbreviaton	Value
Tera-	T	10 <sup>12</sup>
Giga-	G	10 <sup>9</sup>
Mega-	M	10 <sup>6</sup>
Kilo-	k	10 <sup>3</sup>
Milli-	m	10 <sup>-3</sup>
Mikro-	μ	10 <sup>-6</sup>
Nano-	π (mμ)	10 <sup>-9</sup>
Pico-	p (μμ)	10 <sup>-12</sup>
Femto-	f	10 <sup>-15</sup>

() = Abbreviation used in the USA

# 1.6.3 Letters and color codes

# Resistors



Color	Digit	Multiplier	Tolerance	тк
Gold		0.01	5 %	90004
Silver	-	0.1	10 %	****
Black	0	1	mos	4000
Brown	1	10	1 %	100 · 10 <sup>-6</sup> /K
Red	2	100	2 %	50·10 <sup>-6</sup> /K
Orange	3	1 k	WANT .	15·10 <sup>-6</sup> /K
Yellow	4	10 k		25 · 10 - 6 / K
Green	5	100 k	0.5 %	-
Blue	6	1 M	0.25 %	-
Violet	7	10 M	0.1 %	
Grey	8	****	-	-
White	9	1964	_	etinia

No TK designation =  $50 \cdot 10^{-6}$ /K Only 1 black ring =  $0 \Omega$  (jumper)

# Capacitors:

Frequently, the tolerance is specified by a letter after the printed capacitance:

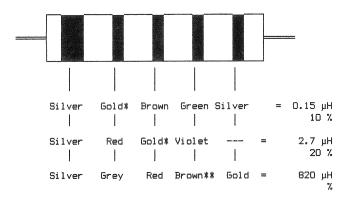
D	-	!	ø,5	%
F	=		1	7.
6	=		2	7.
J			5	7.
K			1Ø	7.
bd			20	7

#### Mould RF coils:

For identifying mould RF coils, a wide silver ring and four narrow rings of different colors are used. The wide silver ring marks the start of the counting direction. The second, third, and fourth ring specify the inductance in Microhenry (µH). The second and the third ring designate the numeric value and the fourth ring is either a multiplier, or if its color is gold, the decimal point. The fifth ring designates the tolerance in percent (±).

Color	Digit	Multiplier	Tolerance
Gold Silver Black Brown Red Orange Yellow Green Blue Violet Grey White	, - 0 1 2 3 4 5 6 7 8 9	- 1 10 100 103 104 105 106 107 108	5 % 10 % - 1 % 2 % - 0.5 %
any			20 %

#### Example:



- \* Decimal point
- \*\* Multiplier

### Inductors, transformers on ferrite cores:

Inductors and transformers on ferrite cores are marked with three colored dots (color coding same as in the two left-hand columns of the Section "Resistors"). These dots designate the last three digits of the STUDER standard number. The large dot marks the start. The first digits of the Standard-number (10.022.---)

E.g. Driver transformer, 150 kHz. Standard number: 1.022.211 Color code: red (large dot), brown, brown

Terminal 1 of the winding form is usually identified with a lobe; if not, the winding form is marked with a yellow dot near terminal 1.

# 1.6.4 Electrostatically sensitive components



MOS (metal oxide semiconductor) devices are highly sensitive to electrostatic charges. The following precautions should be followed:

- Electrostatically sensitive components and assemblies ("ESE" are stored and transported in protective packing material. The label shown above is affixed to this protective packing.
- It is important to avoid any contact of the terminals with plastic bags and foils and other statically chargeable material.
- Touch the terminals only when your wrist is connected to ground.
- As a work surface, use a special conductive plastic mat.
- 5. Never install or unplug printed circuit boards when the tape recorder is switched on! The tape recorder should be switched off for at least 5 seconds before any circuit boards are installed or removed!

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# START-UP PROCEDURE, OPERATING

# 2.1 UNPACKING AND CHECKING

The A807 tape recorder is shipped in a special packing that protects the machine from damage in transit. Care should be exercised when unpacking the machine so that its surfaces do not become marred.

Check that the material is complete by comparing the packing content with the shipping list. Save the original packing material because it provides the best protection in case your tape recorder needs to be transported again.

Check all items for possible damage in transit. If you discover any damage, immediately notify the forwarding agent as well as the nearest STUDER dealer.

# 2.2 INSTALLATION AND SETUP

The A807 should be installed in a dust-free and an adequately ventilated environment. The performance data of the tape recorder are guaranteed for an ambient temperature range of 0°C to +40°C with a relative humidity of 20% to 90% (noncondensing). Install the tape recorder in such a way that sufficient space is available all around the machine for unobstructed cooling. Particularly in recessed locations there is a possibility of heat accumulation. When the machine is in operation, the air circulation zone should neither be misused as a storage area nor be obstructed with manuals etc.

The tape recorder must not be installed in the vicinity of strong electromagnetic fields. General sources of interference are: strong load fluctuations on adjacent power circuits, high-power transformers, elevator motors, electrical welding plants, as well as nearby radio and television transmitters.

The rear of the unit should remain readily accessible for service work. When the recorder is installed in a niche, sufficient space should be available for shifting the machine even when the cables are attached.

### 2.2.1 Assembling the console

The console is shipped in disassembled condition. First the side panels of the console are to be fastened to the traverse (or the base rack) by means of the four large, nickel-plated screws (yellowish) with 5.0 mm heaxagon socket heads. The mounting holes are to be covered with the four plastic caps.

Subsequently insert the casters into the holes of the side panels. The two lockable caster wheels should be installed on the longer, front pieces. The height of the caster wheels can be adjusted with the four hexagon—socket (2.5 mm) headless screws. Remove any rack mounting brackets or side panels that may possibly be attached to the recorder. Also remove the skirting on the underside of the recorder.

Install the leather handrest by means of the four smaller, nickel-plated screws (lock washers are installed only with the upper 2 screws).

Fasten each wooden side panel to the recorder by means of four of the shorter burnished screws (hexagon-socket head 4.0 mm). Then suspend the tape recorder in the console and secure it on each side with two long screws.

After the special pan head screws have been unfastened by means of the hexagon socket screw key (5,0 mm), the tape recorder can be tilted around its suspension axis. If frequent adjustment is necessary, the two pan head screws can be replaced with the screws that are fitted with a knob. Ensure that the disc spring washer and the plain washer are reinstalled and aligned in exactly the same sequence (the pin must engage in the hole of the brass disc).

#### 2.3 CONNECTORS

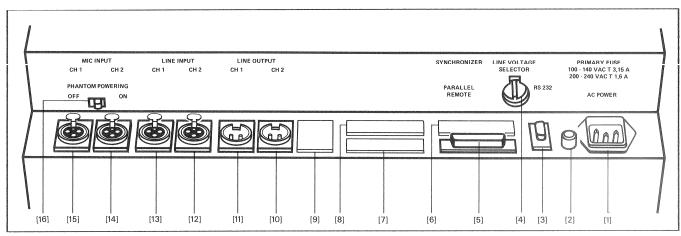


Fig. 2.3.1

[1]	AC POWER	Power inlet with primary fuse
[2]	Т	Ground socket
1.2.3		or outly socket
[3]	RS 232	Serial interface
[4]	Volt. sel.	Line voltage selector
[5]	PREMOTE	Connector for parallel remote control
[6]	SYNCHRON.	Connector for optional synchro- nizer
[7]	VU PANEL CONTROL	Connector for instrument panel (only VUK versions)
(8)	VU PANEL AUDIO	Connector for instrument panel (only VUK versions)
[8]	MONITOR PANEL	Connector for external monitor for units equipped with monitor panel
[9]	AUX INPUT	For units with stereo monitor penthouse an additional auxiliary input (stereo) is available for listening via the monitor speaker.
[10]	LINE OUT	Output channel 2
[11]	LINE OUT	Output channel 1
[12]	LINE IN	Input channel 2
[13]	LINE IN	Input channel 1
[14]	MIC IN	Microphone input channel 2
[15]	MIC IN	Microphone input channel 1
[16]	PHAN.POW.	Switches the phantom power on and

off.

2.3.1 Power connection, voltage selector

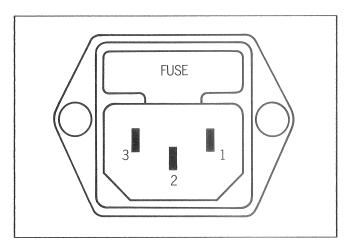


Fig. 2.3.2

No. 1 Phase ("hot") No. 2 Protective ground No. 3 Neutral

# Important:

Before you connect the recorder to the AC power source for the first time, check that the setting of the line voltage selector [4] agrees with your local line voltage.

The following voltages can be set: 100, 120, 140, 200, 220, 240 VAC, ±10%; 50 to 60 Hz.

Disconnect the recorder from the AC outlet before you make any changes! Adjust the line voltage selector [4] with a screwdriver so that the required voltage rating becomes visible through the cutout in the housing.

After the line voltage has been adjusted, the power fuse in the power inlet may possibly have to be replaced with a correctly rated fuse. Lift the cap with the aid of a screw driver. The upper of the two fuses is the spare fuse.

100 V ... 140 VAC: 3.15 A / 250 V (SLOW) 200 V ... 240 VAC: 1.60 A / 250 V (SLOW)

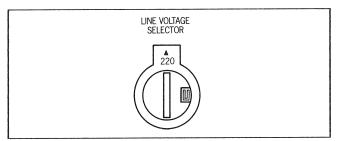


Fig. 2.3.3

# 2.3.2 Line inputs and outputs

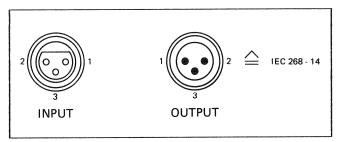


Fig. 2.3.4

The balanced inputs and outputs are terminated on XLR sockets or connectors (described in the IEC recommendation 268-14).

No. 1 Audio ground No. 2 A-line ("hot") No. 3 B-line ("cold") \*

\* For assymetrical wiring conductor 3 and 1 must

be linked.

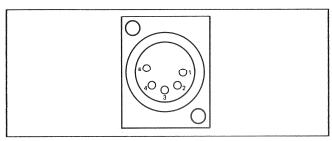


Fig. 2.3.5

The unbalanced AUX INPUT on tape recorders equipped with a stereo monitor penthouse is terminated on a 5-pin XLR connector.

No. 1 Audio ground

No. 2 CH1; A-line ("hot")

No. 3 CH1; B-line ("cold") No. 4 CH2; A-line ("hot")

No. 5 CH2; B-line ("cold")

### 2.3.3 Microphone inputs

The balanced MIC inputs are terminated on XLR sokkets (described in the IEC recommendation 268-14).

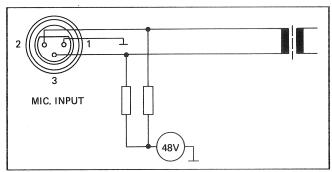


Fig. 2.3.6

No. 1 Audio ground

No. 2 A-line ("hot") NO. 3 B-line ("cold")\*

\* For assymetrical wiring conductor 3 and 1 must be linked.

The microphone phantom power (48 V or optionally 12V) can be enabled or disabled with switch [16].

#### 2.3.4 Remote control socket

Parallel remote control connector

A parallel remote control with the following capabilities can be connected to this 25-pin connector (female, type D):

- Remote control of the tape transport functions with feedback (<, >, PLAY, STOP, REC).
- RESET TIMER (resets the tape timer to 00.00.00).
- ZERO LOC (automatically searches the tape timer address 00.00.00).
- LOC START (automatically searches the tape address at which the last PLAY or RECORD command was entered).
- LIFTER (disables the tape lifter in spooling mode).
- FADER (enables the fader start circuit).
- VARISPEED (variable tape speed).

Connector set Part No. 20.020.303.16 Connector housing, 25-pin Part No. 54.13.7022 Connector, 25-pin, coded Part No. 10.217.001.06

#### Pin assignment of the PARALLEL REMOTE connector:

promotonesses		
Pin	Signal name	Designation
01 02	+ 0.0 BR-REW *	Ground (GND, O V)
03		Status indicator lamp REWIND
03	BR-VRSPD *	Status indicator lamp FORWARD Status indicator lamp VARISPEED (al-
U-7	DK-AKOLD #	ternatingly LOW and HIGH, when active)
05	SR-VRSPD -	Switch for VARISPEED command
06	SR-FADRY -	Switch for FADER START READY command
07	BR-LOCST *	Status indicator lamp LOC START
08	BR-FADRY *	Status indicator lamp FADER START
		READY
09	BR-REC *	Status indicator lamp RECORD
10	ST-RESET -	Switch for RESET TIMER command
11	FAD1	Input FADER START command, line A
12	FAD2	Input FADER START command, line B
		(FADER START is active when 5V to 24V
		DC or AC are applied across pins 11
13	IR-REFEX	and 12)
13	IL-UELEY	Input for external capstan PLL-refe- rence (nominal: 9,6 kHz, TTL level
		rence (nominal: 7,0 kmz, fic level recommended; max. input voltage +10V)
14	SR-OLOC -	Switch for ZERO LOC command
15	BR-PLAY *	Status indicator lamp PLAY
16	BR-STOP *	Status indicator lamp STOP
17	SR-LIFT -	Switch for LIFTER command
18	SR-LOCST -	Switch for LOC START command
19	SR-REC -	Switch for RECORD command
20	SR-REW -	Switch for REWIND command
21 22	SR-FORW -	Switch for forward COMMAND
23	SR-PLAY -   SR-STOP -	Switch for PLAY command Switch for STOP command
24	KEY	Connector coding
25	+ 24VRMT	+24V supply (max. 300 mA)

- \* Open collector output, active LOW. No internal pull-up resistor. Maximum HIGH level +30 V, maximum current 200 mA.
- Switch input. LOW level activates the command. Internal pull-up resistor, 3.3 kΩ to +24 V. Maximum HI6H level = +30 V.

Logical levels: LOW = 0 V to +7,5 V; HIGH = +12 V to +30 V.

### Connector for external synchronizer

A 25-pin connector (female, type D) is available for connecting an external synchronizer.

Connector set Part No. 20.020.303.15 Connector housing, 25-pin Part No. 54.13.7022 Connector 25-pin, coded Part No. 10.217.001.05

#### Pin assignment of the SYNCHRONIZER connector:

Pin	Signal na	ame	Designation
01	+ 0.0		Ground (GND, O V)
02		*	Status indicator lamp REWIND
03	BR-FORW		Status indicator lamp FDRWARD
04	BR-VRSPD	*	Status indicator VARISPEED (alterna- tingely LOW ang HIGH when active)
05 06	SR-VRSPD	-	Switch for VARISPEED command
07	OR-MVCLK	*	Output for TAPE MOVE CLOCK signal (16 pulses/s at 7.5 ips, pulse duty factor 50%)
08	KEY	1	Connector coding
09	BR-REC	*	Status indicator lamp RECORD
10	OR-MVDIR	*	Output for TAPE MOVE DIRECTION signal (REW. = LOW, FORW. = HIGH).
11	OR-CMCLK	*	Output for CAPSTAN MOTOR MOVE CLOCK signal (1200 pulses/s at 7.5 ips)
12	OR-SYENB	*	Output for SYNCHRONIZER ENABLE signal (LOW when tape is tensioned and the recorder is operational, HIGH when the tape is not tensioned).  Input for external capstan PLL refe-
14	+ 0.0		rence (nominal: 9.6 kHz, TTL level re- commended; max. input voltage +30 V). Ground (GND, 0 V)
15		*	Status indicator lamp PLAY
16	BR-STOP		Status indicator lamp STOP
17		_	Switch for LIFTER command
18		-	Switch for MUTE command (no influence on time code channel)
19	SR-REC	-	Switch for RECORD command
20		-	Switch for REWIND command
21		-	Switch for FORWARD command
22	SR-PLAY	-	Switch for PLAY command
23	SR-STOP	-	Switch for STOP command
24 25	KEY + 24VRMT	İ	Connector coding +24V supply (max. 300 mA)

- \* Open collector output, active LOW. No internal pull-up resistor. Maximum HIGH level +30 V, maximum current 200 mA.
- Switch input. LOW level activates the command. Internal pull-up resistor, 3.3 k $\Omega$  to +24 V. Maximum HIGH level = +30 V.

Logical levels: LOW = 0 V to +7.5 V; HIGH = +12 V to +30 V.

#### Connector for RS232 serial interface

A terminal with RS232 interface or a serial remote control unit can be interfaced to this connector.

Connector set

Part No. 20.020.303.07

Pin assignment of the RS 232 connector

Pin	Signal name	Designation
01		
02	SN-DATA	DATA signal output from transp.
03		
04		
05	+24VRMT	+24V supply (max. 300 mA)
06		
07		i
08	RCVDATA	Data signal input to transp.
09	0,0 V	GROUND

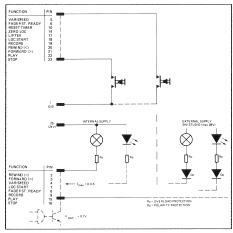


Fig. 2.3.7 Connection diagram, parallel remote control

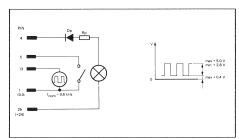


Fig. 2.3.8 Connection diagram, varispeed control

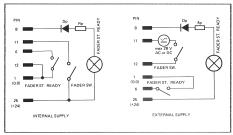


Fig. 2.3.9 Connection diagram, fader start circuit

#### Important:

When incandescent bulbs are used as status indicator lamps, their surge current must not exceed 0.3 A!

#### 2.3.5 Headphones socket

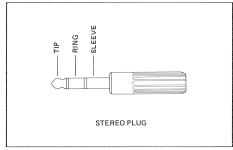
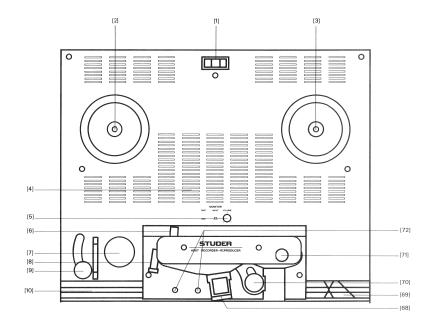


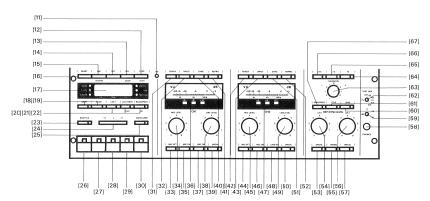
Fig. 2.3.10

TIP = Left-hand channel RING = Right-hand channel SLEEVE = Ground

STUDER REVOX A807 Section 2/6

#### 2.4 OPERATING INSTRUCTIONS





#### 2.4.1 Machine handling

Power switch, switches the tape recorder on and off.

Left-hand reel support, supply motor.

[3]

Right-hand reel support, take-up motor.

Monitor speaker (only in versions without instrument panel).

F51 VOLUME

Volume control for the monitor speaker [4] or for the headphone [58]. When this button is pressed, the tape reproduce signal is selected; when the button is out, the input signal is selected.

Tape lift slide.

Tacho roller, tape move sensor.

Light barrier for detecting the transparent leader or a torn tape. Also stops the tape timer.

Tape sensor lever, monitors the tape tension.

Splicing block.

Microswitch, switches the tape recorder to alignment mode for programming the audio parameters or, when pressed together with the SHIFT [18] key, switches to the soft jumper program (refer to paragraph 2.5.3

Use a pencil or an other pointed tool to operate the microswitch "adj.". Press microswitch adj again to go back to the normal operating status.

Some of the keys change there function after pressing the microswitch "adj.", the yellow printed function of those keys are now valid.

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
I123 STEP In SET mode [14] increases by one the number selected by key [13].  I133 SEL Selects in SET-mode [14] a digit to be changed. The selected digit flashes.  I143 SET In STOP mode changes between normal time indication and the SET - (input) mode (first digit flashes). In play - or wind mode it freezes time display to be transfered into Locatememory (time freeze). It works in LAP - mode [15] as well.	store Stores the adjusted audio Parameter.  param Selects in the audio — alignment mode the next parameter (level, treble, bias).	store Stores the selected con- dition of the desired Softjumper – function.

for recording).

Key function in "SHIFT" Key function in "adj" mode: Normal key function: "adj" mode: [15] LAP channel Second independent counter, allows e.g. to Selects an audio channel Selects a softjumper measure the duration of a for adjustment. A1=channel 1 Example: piece of music without interfearing with the counting of the main 150 A2=channel 2 00 main Function or status counter. of selected soft-The second counter is not influenced by the SETjumper mode keys [12-14] but can be set to zero by pres--softjumper sing the RESET [16] key at any time. The active LAP-function is shown by the red LED LAP in the display window [17]. [16] RESET Reset key. Sets the tape timer or the LAP timer to zero (00.00.00). [17] DISPLAY Softjumper status indication Audio parameter adjustment Real-time Real-time tape counter with indication of the tape counter indication. The three LED's indicate the actual playing time for all tape speeds, in hours, minutes, and seconds. Can A flashing decimal point infollowing: dicates that the softjumper be changed over for dis-playing a second timer (LAP [15] key) for relative status or value has not been In reproduce mode: lvl = repro level stored. adjustment active trbl= repro treble time measurement with operator selectable readjustment active bias= (not possible) Indicator LED for selected tape speed, second timer (LAP), and FADER READY In sync mode: lvl = Sync level adjustment active (FAD). trbl= Sync treble adjustment active bias= (not possible) Flashing dots: A locate address is dis-In record mode: played lvl = record level adjustment active trbl= record treble adiustment active bias= bias adjustment active A flashing decimal point in the display indicates the active adjustment has not been stored. [18] SHIFT Setup key for alternate functions (reverse play, library wind, soft jumper programming), and functions that need to be activated by pressing two keys for safety reasons (tape type or equalization standard, varispeed, tape speed, mono/insert, fader ready

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
When the SHIFT [18] key and subsequently a locator key is pressed, the stored address is displayed for approx. 4 seconds, without the locate function being performed.		
Zero locator. Positions the tape at the tape address 00.00.00. When this key is pressed in LAP mode [15], the LAP function is switched off and the tape is positioned at the actual zero address of the main timer. The reproduce mode as well as the record mode can be preselected while the tape is positioning. The LEDs of the preselected functions flash.		
Address locator 1. Positions the tape at the address stored with the key combination SET [14] and LOC 1 [20]. The reproduce mode as well as the record mode can be preselected while the tape is positioning; the LEDs of the preselected functions flash. The locator address is displayed for as long as this key is held down, and the two decimal points flash. If this key is pressed in LAP mode [15], the LAP function is switched off and the tape is positioned at the actual LOC 1 address of the main timer. The stored address always relates to the actual tape address i.e. when the tape timer is set to zero with RESET [16], the locator address is automatically converted.		
When the key combination SHIFT [18] and accordingly LOC 1 [20] is pressed, the stored locator address is displayed briefly without causing the tape to be positioned at the displayed address.		

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
[21] LOC START  LOC 2  LOOP  In the LOC START setting, the programmable key [21] positions the tape automatically at the address at which the last PLAY or record command was entered (from standstill of the tape). The reproduce mode as well as the record mode can be preselected while the tape is positioning (provided a channel has been switched to READY); the LEDs of the preselected functions flash.	down  Decreases the value of the active alignment parameter (level, treble, bias) selected with key [13] (param) of the corresponding channel choosen by key [15].	down  Decreases the value of the softjumper status selected with key [15] or switches the corresponding function off.
When LOC 2 is programmed, a second address locator is available as for LOC 1 [20].		
When LOOP is programmed, a loop between the tape address OO.OO.OO and the address stored in LOC 1 is executed. The loop always starts at the lower of the two tape addresses.  When the key combination SHIFT [18] and accordingly LOC START / LOC 2 [21] is pressed, the stored address is briefly displayed without causing the tape to be positioned at this address.		
[22] BACKSPACE LOC 3 FADER READY LIFTER		
LOC START  In the BACKSPACE setting the programmable key [22] activates the rewind function at approx. the 4-time reproduce speed for as long as this key is held down. The tape will not be lifted off the soundheads. The machine switches to PLAY mode as soon as this key is released.	up Increases the value of the active alignment parameter (level, treble, bias) selected with key [13] (param) of the corresponding channel choosen by key [15].	up Increases the value of the softjumper status selected with key [15] or switches the corresponding function off.
In the LOC 3 programming setting a third address locator is available that functions analogously to LOC 1 [20].		
In the FADER READY setting the key can be used to ready the fader start. This function is acknowledged by the red FAD LED in the display window [17].		

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
If at least one channel is switched to READY [31/42], the machine can be readied for recording by simultaneously pressing SHIFT [18] and FADER READY [22] (the yellow LED next to the FADER READY key flashes). When the fader potentiometer is opened, the machine starts immediately in record mode.		
The LIFTER function defeats the tape lift in spooling mode. This key can either be programmed as an on/off switch or as a momentary action push button.		
When LOC START is programmed, this key performs the same functions as LOC START [21].		
[23] SHUTTLE  Editing mode, tape tension control is enabled and the audio path is active. The tape can be moved forward or backward to the desired position by manually turning the righthand tape reel [3]. When the SHUTTLE key is pressed a second time, the editing mode is cancelled.		
[24] SHUTTLE CONTROL Rotary wheel for motor-assi- sted editing mode with acti- vated SHUTTLE function [23].		
[25] TAPE DUMP  Switches the "waste basket mode" on and off. The right-hand spooling motor is disabled. Mode A or B can be selected by changing over the programming switch (jumper JS4) below the cover.	input In models without output selector, the input signal is connected directly to the output for setting the internal audio level when this key is pressed.	
Mode A:  The TAPE DUMP [25] key functions as a preselector switch. The "waste basket" mode is activated with the PLAY [28] key. The tape is played but not wind up. The loose tape can be rewound onto the left-hand tape reel [2] by pressing the < [26] key. In this mode it is possible to play a loose piece of tape without winding the tape onto the reel (described in paragraph 2.4.25).		
Mode B: The "waste basket" mode is activated directly with the TAPE DUMP [25] key. The machine stops when this key is pressed a second time.		

Key for rewinding of the tape at high speed. The tape is wound on the left-hand reel. Rewinding at reduced speed (librarywind) is possible by simultaneously pressing SHIFT [18] and < [26].

Key for spooling the tape forward at high speed. The tape is wound on the right-hand reel. Spooling forward at reduced speed is possible by simultaneously pressing SHIFT [18] and > [27].

Key for replaying the tape. This key is pressed together with the REC [30] key for activating the recording mode. REVERSE PLAY is activated by pressing SHIFT [18] and PLAY [28] simultaneously. If no tape is inserted (tape tension sensor in idle position, light barrier not covered), the capstan motor can be switched on with the PLAY key [28] for cleaning the capstan shaft.

This key cancels all tape transport functions and all selected operating modes except the preselection of the TAPE DUMP [25] mode A.

C301 REC

Record key. Depending on the programming it may only be effective in conjunction with the PLAY [28] key. Recordings can only be made on the enabled channel(s) (READY [31/42]). If no channel is switched to READY, the record command will be ignored. Mode A or B can be selected by changing over the programming switch (jumper JS3) below the cover.

Mode A:

Both keys, PLAY [28] and REC [30] must be pressed for activating the record mode.

Mode B:

To switch from reproduce to record mode, only the REC [30] key needs to be pressed; but for activating the record function from STOP mode, the PLAY [28] and the REC [30] key have to be pressed.

The operating controls 31-57 are not equipped on all tape recorder versions

[31] READY

Readies channel 1 (left) for recording. The red LED next to the key flashes. While a recording is in progress, this LED is continuously lit.

[32] INPUT

Output selector channel 1. The level of the input signal is indicated on the VU-meter [36]. This signal can also be heard via the XLR output, the monitor speaker [4], and the headphones [58].

Microphone attenuator channel 1. The input signal on the MIC INPUT CH1 socket is attenuated by approx. -28 dB.

(34) MIC LEVEL

Input volume potentiometer channel 1 for adjusting the sensitivity of the microphone input MIC INPUT CH1.

Switches the microphone input channel 1 on and off. When the line input is simultaneously activated with the LINE ON [37] key, the two signals will be mixed.

C3A1 VU-METER

Output meter for channel 1 with three peak indicator LEDs for +6, +9, and +12 dB relative to O VU.

[37] LINE ON

Switches the LINE INPUT CH1 on and off. When the microphone input is simultaneously activated with the MIC ON [35] key, the two signals will be mixed.

[38] LINE LEVEL

Input level potentiometer for the LINE INPUT CH1. Only enabled when the UNCAL [39] key has been selected for uncalibrated record mode.

Activates the uncalibrated record mode for channel 1. The record level can be adjusted with the LINE LEVEL [38] potentiometer.

[40] SYNC

Output selector channel 1. The audio signal is reproduced from the record head with limited frequency response. Synchronous recording of channel 2 to an existing recording on channel 1 is possible. The VU-meter [36] indicates the level of the SYNC reproduce signal. The SYNC signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

#### C411 REPRO

Output selector channel 1. The audio signal is reproduced from the reproduce head. The VU-meter [36] indicates the level of the reproduce signal. The REPRO signal can also be monitored via the XLR output, the speaker [4], and the headphones [58]. This function can also be activated while a recording is in progress in order to continuously monitor the quality of the recording (tape/source monitoring).

#### [42] READY

Record ready for channel 2 (right), the red LED next to the key flashes. This LED is continuously lit while a recording is in progress.

#### **F433 INPUT**

Output selector channel 2. The VU-meter [47] indicates the level of the input reproduce signal. This input signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

#### [44] MIC ATT

Microphone attenuator channel 2. The input signal on the MIC INPUT CH2 socket is attenuated by approximatly -28dB.

#### [45] MIC LEVEL

Input level potentiometer channel 2 for adjusting the sensitivity of the MIC INPUT CH2.

#### [46] MIC ON

Switches the microphone input channel 2 on and off. When the line input is simultaneously activated with the LINE ON [48] key, the two signals will be mixed.

#### [47] VU-METER

Output meter for channel 2 with three peak indicator LEDs for +6, +9, and +12 dB relative to 0 VU.

#### C481 LINE ON

Switches the LINE INPUT CH2 on and off. When the microphone input is simultaneously activated with the MIC ON [46] key, the two signals will be mixed.

#### [49] LINE LEVEL

Input level potentiometer for the LINE INPUT CH2. Only enabled when the UNCAL [50] key has been selected for uncalibrated record mode.

### C503 UNCAL

Activates the uncalibrated record mode for channel 2. The record level can be adjusted with the LINE LEVEL [49] potentiometer.

### [51] SYNC

Output selector channel 2. The audio signal is reproduced from the record head with limited frequency response. Synchronous recording of channel 1 to an existing recording on channel 2 is possible. The VU-meter [47] indicates the level of the SYNC reproduce signal. The SYNC signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

### (52) REPRO

Output selector channel 2. The audio signal is reproduced from the reproduce head. The VU-meter [47] indicates the level of the reproduce signal. The REPRO signal can also be monitored via the XLR output, the speaker [4], and the headphones [58]. This function can also be activated while a recording is in progress in order to continuously monitor the quality of the recording (tape/source monitoring).

### C533 UNCAL

Activates the uncalibrated record mode. The output level of channel 1 can be adjusted with the REPRO/SYNC LEVEL CH1 [54] potentiometer.

### [54] REPRO/SYNC LEVEL CHI

Output level potentiometer for channel 1. In the UNCAL [53] position, the reproduce amplifier output level (LINE OUTPUT CH1) can be adjusted.

# [55] MONO / INSERT

This key activates the internal audio insertion point (in stereo models for the optional mono/stereo switch). To prevent unintentional operation, it can only be selected in conjunction with the SHIFT [18] key (press and hold SHIFT, then also press MONO / INSERT). The MONO/INSERT mode is signalled by a green LED. When the insert point is not used, this key is disabled by means of JUMPER JP17 located below the cover.

### [56] REPRO/SYNC LEVEL CH2

Output level potentiometer for channel 2. In the UNCAL [57] position the reproduce amplifier output level (LINE OUTPUT CH2) can be adjusted.

### [57] UNCAL

Activates the uncalibrated reproduce mode. The output level of channel 2 can be adjusted with the REPRO/SYNC LEVEL CH2 [56] potentiometer.

#### **CSBT PHONES**

Headphones socket. The built-in monitor speaker is automatically switched off when the headphones jack is inserted. The Tape/source reproduce level of the headphones can be adjusted with the VOLUME [5] potentiometer.

Booster amplifier (only on models with optional TEST GENERATOR). Depending on the switch setting the input signal is attenuated by -10 or -20 dB and the output signal boosted by +10 or +20 dB.

#### E603 NAB

TAPE B

SECOND REPRO HEAD (RIGHT)

Programmable key for changing over the equalization to the NAB standard, the calibration data of a second tape type TAPE B, or for activating the optional second reproduce head (HEAD B). To prevent unintentional operation, it can only be changed over in conjunction with SHIFT [18] (press and hold SHIFT key and also press NAB key). The method of programming key [60] is described in paragraph 2.5.

#### [61] CCIR

TAPE A

REPRO HEAD LEFT

Programmable key for changing over the equalization to the CCIR standard, the calibration data of type TAPE A, or for activating the main reproduce head (HEAD A) if two reproduce heads are installed. To prevent unintentional operation, it can only be changed over in conjunction with SHIFT [18] (press and hold SHIFT key and also press CCIR key). The method of programming key [61] is described in paragraph 2.5.

Test generator (only on models with the optional TEST GENERATOR). Depending on the switch setting a sine wave signal (O VU) with a frequency of 60 Hz, 125 Hz, 1 kHz, 10 kHz or 16 kHz is fed to the input. In the OFF position the test generator is disabled. To prevent mixing of the test generator signals with the inputs, the functions MIC ON [35/46] and LINE ON [37/48] should be switched off.

#### [63] DEVIATION

Potentiometer for continuously varying the tape speed in "varispeed", mode (VARISPEED [67] key) within the range of ±7 semitones (-35%, +54%) relative to the selected nominal speed (at 3.75 ips the range is: +7, -1.5 semitones).

## [64] 15 (30)

Speed selector 15 ips (30 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set in such a way that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 15 (30) key).

Speed selector 7.5 ips (15 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set so that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 7.5 (15) key).

Speed selector 3.75 ips (7.5 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set in such a way that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 3.75 (7.5) key).

### [67] VARISPEED

varispeed mode. In this mode the tape speed can be varied with the DEVIATION [63] Activates the potentiometer. To prevent unintentional activation, this key is only effective when pressed in conjunction with SHIFT [18] (press and hold SHIFT and also press the VARISPEED key).

Head shield in front of the reproduce head(s). Can be opened and closed by hand.

### **F691**

Cutting block for cutting the tape.

Pinch roller. Presses the tape against the capstan shaft. In spooling mode, cueing of the tape is possible by pressing the pinch roller toward the capstan shaft. The closer the tape is moved to the capstan shaft, the louder the signal. The pinch roller cannot be pressed completely against the capstan!

Scissors are available as an option, but can only be installed in place of the optional second reproduce head. The tape is cut by antimagnetic scissors at an angle of 30° (±30°) when the cutter button is pressed.

Optional tape marker for identifying a splicing point in front of the reproduce head.

#### 2.4.2 Power switch [1]

#### Caution:

Before you connect the tape recorder to the AC outlet, check that the setting of the line voltage selector agrees with the local mains voltage. The fuse rating must be checked whenever the setting of the line voltage selector has been changed (paragraph 2.3.1).

The power switch [1] is located at the top edge of the tape deck cover.

When the tape recorder is switched on, the operating state that existed when the machine was switched off is automatically reestablished and displayed. The software release date (WW.YY = week year) is shown on the display [17] for a few seconds. The last timer reading is subsequently displayed.

#### Exception:

Tape transport functions that were active when the machine was switched off are not restarted, and the channels that were set to READY and the varispeed mode are disabled. The tape recorder is always switched to STOP [29]. When a tape is inserted, the yellow LED of the STOP key is continuously lit. If there is no tape or if the tape is slack, the LED flashes for approx. 10 seconds and then switches off.

# 2.4.3 Indications at power on time

After the machine has been switched on, the VUmeters [36/47] are illuminated and the software date is shown on the display [17]. The following indications are also possible. They signal the current operating state of the tape recorder:

- Display: The last tape address is indicated.
- Locator addresses are saved.
- STOP: The stop function is active. If the LED flashes for approx. 10 s and then switches off, there is no tape inserted or the inserted tape is slack.
- CCIR (TAPE A / REPRO HEAD LEFT) or NAB (TAPE B / REPRO HEAD RIGHT): the selected equalization standard (tape type / reproduce head) is indicated.
- 3.75 7.5 15 or 30: The selected tape speed is indicated next to the display [17] and on the speed selector keys [64/65/66].
- Input selector: The selected input is indicated with MIC ATT [33/44], MIC ON [35/46]. LINE ON [37/48] or UNCAL [39/50].
- Output selector: The selected output is indicated with INPUT [32/43], SYNC [40/51], or REPRO [41/52].
- Output level: Uncalibrated output level is indicated by the red LED next to the UNCAL [53/57] keys.
- MONO/INSERT [55] is indicated if a corresponding option is installed and if it was selected before the machine was powered off. On models equipped with an instrument panel the channel selection for the monitor output is also indicated.

#### 2.4.4 Inserting the tape

The tape recorder is normally equipped with 3-pronged adapters. For NAB reels and self-supporting pancakes with hubs, special adapters are available.

# Three-pronged reel (DIN 45514, 45517)

Mount the full reel on the left-hand spindle [2], the empty reel on the right-hand spindle [3]. Pull out the three-pronged guide and lock it with a 60° turn.

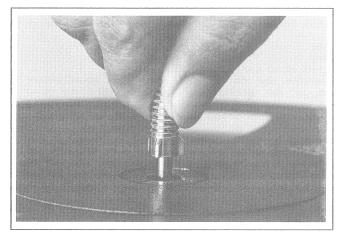


Fig. 2.4.2

# NAB reel

Mount the NAB adapters on the two spindles [2/3] and lock them by pulling out the three-pronged guides and giving a 60° turn. Mount the full NAB reel on the left-hand NAB adapter, the empty reel on the right-hand NAB adapter. To lock the tape reels turn the top section of the adapter clockwise until it engages.

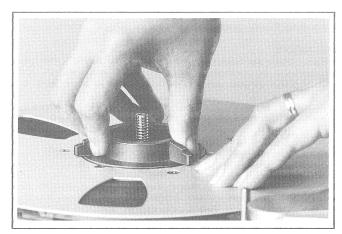
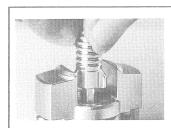


Fig. 2.4.3

# Self-supporting pancakes with hub (DIN45515)

Mount the adapter discs on the reels [2/3] in such a way that the two pins engage in the spindle. Lock the discs by pulling out the three-pronged guides and giving a 60° turn. Mount the full pancake on the left-hand adapter disc and the empty hub on the right-hand adapter disc. To lock the hubs give the adapter lug a 90° turn.



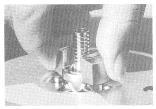


Fig. 2.4.4

#### Threading the tape

Thread the tape as illustrated. It must be threaded exactly around the tape tension sensor [7], the tacho roller [7], through the light barrier [8], and over the soundheads. Pull the leading end of the tape over the pinch roller [70] (the pinch roller can be moved to the idle position by actuating the tape lifter [6]), and around the right-hand guide roller. Thread the tape on the right-hand reel and secure the tape by giving the right-hand reel a few counterclockwise turns. If the tape starts with a transparent leader, continue to press the pushbut-ton >[27] or PLAY [28] until the oxide coating has passed the light barrier [8]. Set the tape timer to zero by pressing the RESET [16] key.

If the tape is always set to zero at the same address, the tape can be repeatedly positioned at any address by means of the real-time tape counter [17].

If necessary, raise the head shield [68] in front of the reproduce head(s).

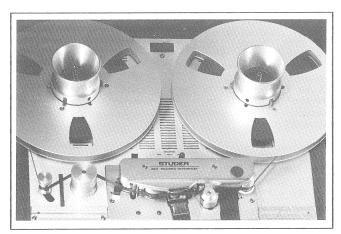


Fig. 2.4.5

#### 2.4.5 Tape speeds [64/65/66]

Three tape speeds are available. Depending on the model, three of the following four speeds can be selected: 3.75/7.5/15/30 ips. The speed is selected by pressing the corresponding key [64/65/66]. The LED in the key lights up. If correspondingly programmed, the speed selection is interlocked with the SHIFT [18] key. In this case a speed can only be selected by holding the SHIFT [18] key down while you select the desired tape speed.

### 2.4.6 Play mode

PLAY [28]

When the local PLAY key [28], a corresponding remote control button, or a fader start device is actuated (possibly via the FADER READY key), the tape recorder switches to play mode. The yellow LED above the PLAY key lights up.

The play mode can be cancelled by pressing the STOP [29] key or any other tape command key (except fader start mode A, B or C).

If the PLAY key is pressed while a recording is in progress (REC), the machine switches to play without interruption and the record mode is cancelled.

If the PLAY key is pressed in spooling mode, the tape is immediately decelerated and the play function is preselected. As soon as the tape has come to a standstill or achieved the nominal speed in the play direction, the machine switches to play mode.

Any tape transport function can be selected independently of the current operating state of the machine. The microprocessor checks automatically the validity of the command and protects the tape by first decelerating it before the opposite sense of rotation or a slower speed is activated. A SHUTTLE or locator function can also be selected directly.

When no tape is mounted (tape tension sensor in idle position, light barrier not covered), you can switch on the capstan motor for cleaning the shaft by pressing the PLAY [28] key. The motor rotates for as long as the key is pressed.

### 2.4.7 Reverse play mode REVERSE PLAY

By simultaneously pressing the SHIFT [18] and PLAY [28] keys, the tape recorder can be switched to REVERSE PLAY for searching a tape location or for achieving special effects. Any tape transport command, including the SHUTTLE and the locator function can be selected directly from reverse play mode.

#### 2.4.8 Varispeed control [64/67]

In reproduce as well as record mode, the variable tape speed can be selected by simultaneously pressing the two keys SHIFT [18] and VARISPEED [67]; the red LED next to the VARISPEED key flashes.

The deviation from the nominal tape speed can be selected with the DEVIATION [63] potentiometer within the range of  $\pm 7$  semitones (+7 to -1.5 semitones at 3.75 ips). The tape speed can also be altered by means of an external varispeed control (option). When the external varispeed control is activated, the internal control frequency is automatically disabled.

#### Notes:

The delay time for the drop-in and drop-out is matched to the corresponding nominal speed; these delays are not adjusted in varispeed mode! The indication of the tape timer no longer corresponds to the true elapsed time but rather to the playing time at nominal speed.

# 2.4.9 Record mode

REC [30]

The information in this Section does not apply to "playback only" models (PBO) !

When the REC [30] and the PLAY [28] keys are pressed simultaneously, the tape recorder switches to record mode provided at least one channel has been enabled with the READY [31/42] key and the red LED next to the key flashes. During a recording the LEDs of the REC [30], PLAY [28], and READY [31/42] keys are continuously lit.

The setting of jumper JP03 below the front cover can be changed in such a way that the record mode can be activated from play mode by simply pressing the REC [30] key (but PLAY and REC still have to be pressed to enable recording from the STOP condition).

From record mode it is possible to switch directly to fast wind, play or a locator function by pressing the corresponding key. The STOP [29] command immediately interrupts the record mode. Channels that are switched to SYNC reproduction automatically switch to INPUT with the drop in and back to SYNC with the drop out.

# Drop-in

Click-free changeover from SYNC reproduction to record mode is possible. Depending on the jumper setting, this is possible by either pressing REC [30] together with PLAY [28] or only the REC [30] key.

The record head is switched on with a speeddependent delay so that the erase head and the record head are enabled at exactly the same tape location.

#### Drop-out

A807

Click-free changeover from record mode to SYNC play mode is possible by pressing the PLAY [28] key.

The record head is switched off with a speeddependent delay so that the erase head and the record head are switched off at exactly the same tape location.

#### Notes:

Since the machine interrupts a recording immediately when the STOP [29] key is pressed, the drop-out process can no longer be executed. For joining recorded segments without a gap it is necessary to switch from record to PLAY before STOP is activated. For the drop-in we recommend that you first switch to PLAY [28] and then to record (in order to prevent inaccuracies caused by the tape start).

#### Overlapping drop in

If e.g. applause is to be faded in with overlap at the end of a recording, the tape can be lifted off the erase head by means of the tape lifter [6]. The machine is then restarted in record mode and the tape lifter slowly released. The tape first contacts the record head and the applause is added to the existing modulation. When the tape lifter is released, the tape also contacts the erase head. The existing modulation is erased and only the applause is recorded.

# 2.4.10 SYNC reproduction SYNC [40/51]

The SYNC [40/51] key switches the corresponding channel to SYNC reproduction. This means that the audio signals are not supplied by the reproduce head but by the record head via the reproduce amplifier.

Since there is no time offset between record and reproduce in this mode, it is possible to add a synchronous recording to a channel with an existing recording (e.g. vocalization of instrumental music).

Procedure: Synchronous recording to channel 1

- Switch channel 1 to SYNC [40].
- Switch channel 2 to READY [42] and connect MIC to CH2. Select MIC ON [46] and adjust the sensitivity with the potentiometer [45]. (Possibly activate the attenuator [44], switch the phantom power on or off).
- Start the machine in record mode
- Monitor the music of channel 1 via the headphones [58] and add the vocal part via the microphone.

For technical reasons, the reproduce frequency response is limited to approx. 6 kHz at 3.75 ips, 10 kHz at 7.5 ips, 12 kHz at 15 ips, and 12 kHz at 30 ips. A degradation in quality is, therefore, inevitable with SYNC reproduction.

# SYNC preselection:

SYNC reproduction can be preselected for a channel that has been readied for record mode. When the SYNC [40/51] key is pressed during a recording, the corresponding channel is connected to INPUT. This channel is automatically switched to SYNC reproduction when the drop-out occurs (PLAY, STOP).

# 2.4.11 Spooling mode <> [26/27]

The < [26] key activates fast wind in the reverse direction, the > [27] key in the forward direction. The tape will be wound at the maximum spooling speed.

The spooling functions are cancelled by STOP [29], PLAY [28], REC+PLAY [30,28], SHUTTLE [23], TAPE DUMP [25], LOC functions and by spooling in the opposite direction.

It is admissible to switch from spooling directly to play or record mode. The LED of the preselected function flashes; the tape is decelerated, and the preselected function is only activated when the tape has come to a stop or reached nominal speed.

#### Tape lifting:

In spooling mode the tape is automatically lifted off the soundheads in order to minimize wear of the tape and audio heads.

# Automatic cueing:

When the programmable LIFTER [22] key is actuated (different functions can be assigned to the keys [21] and [22] by setting the jumpers JPOO, JPOI, and JPO2, see paragraph 2.5) the tape lifter is retracted so that the tape makes contact with the audio heads. Depending on the setting of jumper JP1O, tape lifting is defeated either for as long as the key is pressed or until the key is pressed again.

Manual cueing:

Cueing in spooling mode is possible by manually pressing the pinch roller [70] toward the capstan shaft. The closer the tape is pushed to the reproduce head, the stronger the output signal. For safety reasons it is not possible to press the pinch roller completely against the capstan shaft.

### Note:

In order to protect the treble speaker of the monitor system from overloads when the cueing function is active in spooling mode, the reproduce level is automatically attenuated by -12 dB.

# 2.4.12 Producing pancakes at reduced spooling speeds, LIBRARY WIND

The reduced spooling speed is intended for pancakes that are to be saved in a library. The tape is wound more gently and, due to the absence of an air cushion between the individual layers, also more tightly.

The library wind function is activated by pressing and holding down the SHIFT [18] key and simultaneously pressing the spooling key < [26] or > [27]. The library wind function is cancelled as soon as any tape transport function is selected.

To ensure that a smooth pancake can be produced with any type of tape, the reduced spooling speed can be individually adjusted with the trimmer potentiometer SHTL located below the left-hand tape splicing block [10].

#### 2.4.13 Stop mode STOP [29]

The STOP [29] key has the highest priority and cancels all operating states such as play, record, spooling, SHUTTLE, and the LOC functions. The tape is immediately decelerated after this function has been selected.

Any new command entered during the deceleration phase of the tape is stored and immediately activated when the tape speed required for this function is achieved.

# 2.4.14 Locator Z-LOC, LOC1 (-3) [19-22]

Depending how the keys [21] and [22] are programmed, up to three transfer locators and one zero locator are available (for programming refer to paragraph 2.5). All locator addresses refer to the main tape timer. When a locator function is called with auxiliary timer (LAP [15]) activated, the machine switches from the auxiliary timer to the main timer before the locator function is executed. The LAP function remains switched off.

## Z-LOC:

When the Z-LOC [19] key is pressed, the tape is wound forward or backward at high speed until the tape location corresponding to timer address 00.00.00 is reached.

### LOC START:

Pressing the LOC START [21/22] key initiates fast rewind mode. The tape is then wound to the point where the previous Play- or Record command was entered providing the tape was at stand still when entering the command. The play or record function can be preselected by pressing the corresponding key while the tape is being positioned. The LED of the selected function flashes until the function is performed.

### LOC1...LOC3:

At least one transfer locator is always available with the LOC1 [20] key. One additional transfer locator each (LOC2, LOC3) can be assigned through corresponding programming of keys [21] and [22]. In this way up to three tape addresses can be stored and automatically searched at high speed by pressing the corresponding key. The locate function can be cancelled by pressing [29], < [26], > [27] or by selecting a different LOC function. As is the case for the LOC START function, the play and record functions can be preselected.

#### Programming the locator addresses:

#### Storing the current tape address:

Position the tape at the desired tape address, press the SET [14] (the first digit in the display [17] flashes), and then the key of the transfer locator (LOC1...LOC3) in which the tape address is to be stored.

#### Storing a known tape address:

The locator address can also be entered via the keyboard without positioning the tape. Press the SET [14] key; the first digit in the display flashes. With the STEP [12] key you can now alter the value of the digit in single steps. Then press the SEL [13] key to access the next digit and alter it with the STEP [12] key. Repeat these steps until the tape address to be stored is shown on the display. Store the tape address by pressing one of the locator keys (LOC1...LOC3).

#### Reading out a LOC address:

During a LOC process: Press the corresponding LOC key a second time. In any other operating mode: Press the SHIFT [18] key and then the corresponding LOC key. Whenever the display [17] does not indicate the current tape address, the two dots are flashing.

#### Note:

The locator addresses always relate to the actual tape address and are automatically converted when the tape counter is set to zero (RESET [16] key). When a different tape speed is selected, the current counter content as well as all locator addresses are recomputed and remain stored even when the tape recorder is switched off.

### 2.4.15 Programmable functions

The programmable keys [21] and [22] (JPOO, JPO1 and JPO2) as well as [60] and [61] (JPO5, JPO6, and JPO7) can be assigned to different functions by changing the jumper positions below the front cover. The programming method is described in pragraph 2.5.

Key [21]: LOC START, LOC2 or LOOP. Key [22]: BACKSPACE, LOC3, LOC START, LIFTER, or FADER READY

Key [60]: NAB, TAPE B, or REPRO HEAD RIGHT.

Key [61]: CCIR, TAPE A, or REPRO HEAD LEFT.

The locator functions are described in paragraph 2.4.14.

### LOOP:

This function performs a continuous loop between tape address 00.00.00 and the address stored in LOC 1. The lower of the two addresses (timer reading 00.00.00) or a negative address in LOC 1 is taken as the starting address. When the LOOP key is pressed the tape is positioned at the starting address and the play mode is activated until the ending address is reached. At this point the tape is automatically rewound to the starting address and the play mode is reactivated. This procedure is repeated until the LOOP function is cancelled with the input of a new tape deck command.

#### BACKSPACE:

In this function the tape is rewound at approx. 4 times the reproduce speed (relative to the selected nominal speed) but the tape is not lifted off the soundheads. The reproduce paths are enabled. As soon as this key is released, the machine switches automatically to PLAY.

#### LIFTER:

The LIFTER key defeats the tape lifter function in spooling mode, either continuously, i.e. until this key is pressed again, or for as long as this key is pressed. The mode of this switch depends on the setting of jumper JP10 below the front cover. For a detailed description of the LIFTER function refer to paragraph 2.4.11, Tape lifter.

#### FADER READY:

Depending on the selected fader start mode (set with jumpers JP11 and JP12 below the front cover), a FADER READY KEY may be required for enabling or disabling the fader start circuit (such a switch is required for mode B, C, and D).

Rather than with an external switch, this function can also be performed with key [22]. When the fader start circuit is enabled (FADER READY), the yellow LED next to the key as well as the FAD LED in the display window [17] are lit to signal the fader ready condition. When this key is pressed again, the circuit is disabled, the LEDs switch off, i.e. opening of the fader has no effect on the tape recorder. When the SHIFT [18] key is pressed together with the built-in fader ready key, the tape recorder starts in record mode when the fader is opened, provided at least one channel is switched to READY [31,42].

### NAB / CCIR:

These keys are used for changing over between NAB [60] and CCIR [61] equalization standard which can individually calibrated. The method of programming the keys [60/61] is described paragraph 2.5.

#### TAPE A / TAPE BE

In this mode the keys [60/61] are used for changing over between two individually calibrated tape types (type A and type B). The method of programming is described in paragraph 2.5.

#### HEAD A / HEAD B:

In this mode the keys [60/61] are used for switching from the standard reproduce head to the optional second reproduce head. The reproduce level for each reproduce head is individually adjustable.

The method of programming is described in paragraph

#### 2.4.16 Fader start

With the fader start circuit, the tape recorder can be started in PLAY mode by means of 5V...24V DC or AC applied by a remote control unit between pins 11 and 12 of the parallel remote control socket. In the operating modes (FADER B, C, or D), the fader start must be readied ("FADER START READY") by a switch that interconnects pin 6 (SR-READY signal) and 1 (ground) of the same socket. Direct fader start selection without a ready key is only possible in FADER A mode.

The fader can also be readied with the programmable FADER READY [22] key of the local keypad or on the optional remote control. The function programmed in the tape recorder (FADER B, C, or D) is then performed.

When the SHIFT [18] key is pressed together with the local fader ready key [22], the machine is started in record mode when the fader is opened, provided at least one channel has been set to READY [31/42].

#### Important:

When the FADER READY function is switched off or when both READY [31/42] are cancelled, fader start ready is automatically cancelled.

#### FADER A

Fader start without FADER START READY key. After the fader start the local keypad and the remote control keys are disabled, the built-in monitor speaker is muted (but not the headphones!). When the fader is pulled back (the fader switch opens), the tape recorder stops, but the built-in monitor speaker is only unmuted when the tape has come to a standstill. The machine can now again be operated.

### FADER B:

Fader start with FADER START READY key. In order to activate the fader start function, the FADER READY key must be selected (FAD LED in the display window [17] is on). After the fader start, the local keypad and the remote control keys are disabled, the built-in monitor speaker is muted (but not the headphones!). When the fader is pulled back (the fader switch opens), the tape recorder stops, but the built-in monitor speaker is only unmuted when the tape has come to a standstill. The machine can now again be operated. If the fader switch is actuated but the fader ready key has not been pressed (FAD LED is dark), the operating state of the tape recorder does not change. Exception: in play mode the built-in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

### FADER C:

Fader start with FADER START READY key.

After the fader ready key has been pressed, the local keypad and the remote control keys are disabled. The machine can only be started by opening the fader. The built—in monitor speaker is muted (but not the headphones!). If the fader switch is actuated but the fader ready key has not been pressed, the operating state of the tape recorder does not change. Exception: in play mode the built—in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

#### FADER D

Fader start with FADER START READY key.

Regardless of the position of the fader read switch, the local keypad and the remote control keys remain enabled, even after the fader start. The built-in monitor speaker is muted (but not the headphones!). If the fader switch is actuated but the fader ready key has not been pressed, the operating state of the tape recorder does not change. Exception: in play mode the built-in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

#### 2.4.17 Tape timer

[17]

The electronic tape timer always displays the real tape time in hours, minutes, and seconds, relative to the selected nominal tape speed (exception: varispeed mode).

The timer has a display range -9 h 59 min 59 s to 99 h 59 min 59 s. The timer can be set to zero (00.00.00) by pressing the RESET [16] key. When the end of the tape, a torn tape, or the tape leader is detected, the timer stops automatically. In waste basket mode (TAPE DUMP [25]) the timer continuous to run or stops, depending on the setting of the soft jumper 05 (paragraph 2.5.3). Tape segments can also be timed (paragraph 2.5.3) tape segments can also be timed (paragraph 2.5.2) the tape timer display shows the setting of the audio parameters; in soft jumper programming mode (paragraph 2.5.3) it shows the setting of the selected software switch. When the SHIFT key is pressed followed by a LOC key, the tape timer displays the content of the locator assigned to the corresponding key.

#### Note:

The locator addresses always relate to the actual tape address and are automatically recomputed when the tape timer is set to zero (RESET [16] key).

#### 2.4.18 Auxiliary timer

LAP [15]

The LAP [15] key activates a second (auxiliary) tape timer with a user-selectable reference (zero setting). The auxiliary timer mode is signalled by the LAP LED in the display window. The auxiliary timer can be set to zero (RESET [16] key at any tape address and can thus be used for determining the exact playing time of a selection without influencing the main timer or having to compute the difference between the start and the end time. When the LAP [15] key is pressed a second time, the display switches back to the main timer, the LAP LED switches off.

#### Note

When the LAP function is active, it is not possible to set a locator address. The locator addresses always relate to the main timer. When a locator key is pressed, the LAP function is automatically cancelled, the main timer is activated, and the tape is positioned at the selected locator address.

#### 2.4.19 MONO / INSERT

#### [55] 2.4.20

On two-channel and stereo models with channel selector buttons, this key is labelled with MONO; on all other models with INSERT. However, the actual function is always the same: the internal insert point of the O dB amplifier is activated in the audio input and output path. On stereo models the optional MONO/STEREO switch can be connected into the circuit at this point. A noise reduction system (Dolby) or a supplementary circuit of a different type can also be connected here.

The function of the MONO (INSERT) [55] key is enabled by moving the jumper JP17 on the COMMAND PANEL BOARD 1.727.36X.XX to position "B". In addition the straps W2, W3, W7, and W8 on the AUDIO CONTROL BOARD 1.727.40X.XX must be opened so that the audio signals can be looped via the INPUT or the OUTPUT INSERT BOARD (MONO/STEREO SWITCH). With the jumpers JS1 and JS2 on the AUDIO CONTROL BOARD (1.727.400.81 / 401.00) the user can define whether the signal for the built-in monitor speaker is to be tapped before or after the insert point.

To enable this function, the SHIFT [18] key must be pressed and held while the MONO or INSERT [55] key is pressed. When SHIFT and MONO/INSERT are pressed again, the function is switched off.

The various modes of the MONO/STEREO switch are programmed by changing jumper settings:

on the input by setting the jumpers JP1 and JP2 on the M/S INPUT AMPLIFIER 1.727.441.00 / 451.00.

### MONO MODE A:

The input signal of channel 1 is recorded simultaneously on channel 1 and channel 2 (JP1 = A, JP2 = B).

#### MONO MODE B:

The input signals of channel 1 and channel 2 are added and the aggregate signal recorded simultaneously on both channels (JP1 = A, JP2 = A).

### MONO MODE C:

The input signal of channel 2 is simultaneously recorded on channel 1 and channel 2 (JP1 = B, JP2 = A).

on the output side by changing the jumpers JP1 and JP2 on the M/S OUTPUT AMPLIFIER 1.727.442.00 / 452.00.

#### MONO MODE A:

The mono reproduce signals of channel 1 and channel 2 are added and reproduced via the output channel 1 (OUTPUT CH1) (JP1 = A, JP2 = B), the output channel 2 (OUTPUT CH2) remains muted.

### MONO MODE B:

The signals of both channels are added and the aggregate signal is simultaneously reproduced via both outputs (OUTPUT CH1, CH2) (JP1 = A, JP2 = A).

#### MONO MODE C:

The mono reproduce signals of channel 1 and channel 2 are added and reproduced via the output channel 2 (OUTPUT CH2) (JP1 = B, JP2 = A), the output channel 1 (OUTPUT CH1) remains muted.

#### 2.4.20 Remote control

The following functions can be remote controlled by means of the parallel remote control unit: play, record, fast wind, stop, reset timer, zero loc, loc start, lifter, varispeed on/off, and fader (fader ready), as well as indirectly also backspace (PLAY +

Status indicator outputs (for external bulbs or LED's) for all above functions are available from the remote plug of the tape recorder. Exeption: Reset-timer, zero-Locate and Lifter. The status indicate output for Fader start ready goes active low to indicate the fader-start-operation possibility. The pin assignment of the remote control socket as well as the connection configuration are described in paragraph 2.3.4.

#### 2.4.21 VU-Meter-Panel

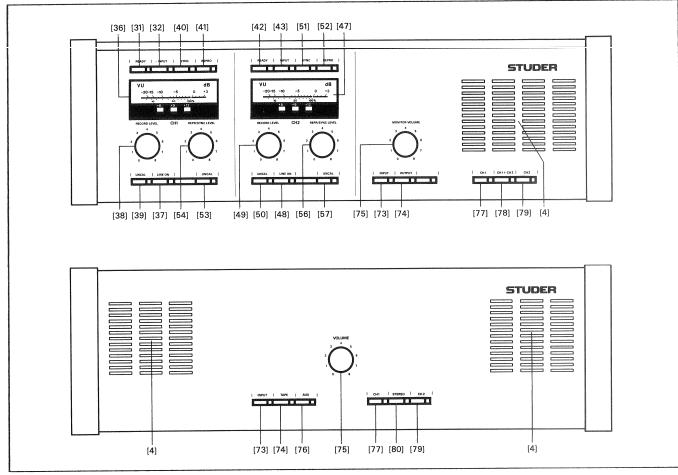


Fig. 2.4.6

On models equipped with an instrument panel (VUK), some of the operator controls and the monitor speaker are installed in a box above the unit. Depending on the machine type, some of the following elements are either installed in an internal or external instrument panel.

#### READY [31/42]

Record ready for the corresponding channel, the red LED next to the key flashes. This LED is continuously lit while a recording is in progress. No signals can be recorded on a channel that is not switched to READY.

### INPUT [32/43]

Output selector for the corresponding channel. The input signal from the balanced input (INPUT CHI/CH2) and/or from the microphone (MIC INPUT CHI/CH2, if present), is taken directly to the balanced output (OUTPUT CHI/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58] (source monitoring). The monitor switch [5] is therefore permanently connected to INPUT in both settings.

### SYNC [40/51]

Output selector for the corresponding channel. The signal is reproduced from the record head with limited frequency response (paragraph 2.4.10). The signal is taken to the balanced output (OUTPUT CH1/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58]. For the duration of the recording it is automatically switched to INPUT. With the monitor selector switch INPUT/OUTPUT or TAPE [5/73/74), the monitor signal of a SYNC reproduction can be switched between tape and source without influencing the output signal on the balanced output (OUTPUT CH1/CH2).

### REPRO [41/52]

Output selector for the corresponding chanel. The signal is reproduced from the reproduce head. The signal is taken to the balanced output (OUTPUT CH1/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58]. With the monitor selector switch INPUT/OUTPUT or TAPE [5/73/74], the monitor signal can be switched between tape and source without influencing the output signal on the balanced output (OUTPUT CH1/CH2).

#### LINE LEVEL / RECORD LEVEL [38/49]

Input level potentiometer for the LINE INPUT CH1/CH2. When the input amplifier is uncalibrated (UNCAL [39/50] key pressed), the input level can be attenuated or increased by up to 10 dB above the calibrated value.

#### MIC LEVEL [34/45]

Input level potentiometer for the MIC INPUT CH1/CH2. The level potentiometers are always enabled when the microphone inputs are switched on (MIC ON IS5/46] key). For high-sensitivity microphones, an additional input attenuator (approx. 28 dB) can be connected (MIC ATT IS3/44] key).

### REPRO/SYNC LEVEL [54/56]

Output level potentiometer for the LINE OUTPUT CH1/CH2. When the input amplifier is uncalibrated (UNCAL [53/57] key pressed), the input level can be attenuated or increased by up to 10 dB above the calibrated value.

### 2.4.22 External monitor

### MONITOR VOLUME [75]

Volume control of the monitor amplifier. Influences the output level of the monitor speaker built into the instrument panel. When the machine is equipped with a stereo monitor panel, the output level of the headphones socket PHONES [58] built into the panel is also influenced.

### INPUT / OUTPUT or INPUT / TAPE [73/74]

Signal selector of the monitor speaker. When the INPUT [73] key is pressed, the signal available on the input is reproduced via the monitor speaker, if the OUTPUT or TAPE [74] key is pressed, the reproduce or SYNC signal from the tape is reproduced via the monitor speaker. If the output selector is set to INPUT [32/43], the input signal will always be reproduced via the monitor speaker, regardless of whether the INPUT [73] or OUTPUT [74] switch is set.

### AUX [76]

On the stereo monitor panel, the AUX [76] can be pressed so that the signal fed to the AUX input of the recorder can be heard via the monitor speaker or the PHONES [58] socket. This signal has no further connection to the recorder. The AUX input is strictly a monitoring channel.

#### CH1 / CH1+CH2 / CH2 [77/78/79]

On two-track or stereo recorders, the channels for the monitor reproduction are selected with these keys. When the CHI [77] key is pressed, only the signal of channel 1 is reproduced via the monitor speaker. When the CHI+CHZ [78] key is pressed, the signals of both channels are added and reproduced. When the CH2 [79] key is pressed, the second channel is connected to the monitor speaker, analogously to the CHI [77] key. The signal selected with the INPUT [73], TAPE (or OUTPUT) [74], or AUX [76] key is reproduced.

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When CH1 [77] or CH2 [79] is selected on models equipped with a stereo monitor instrument panel, only the left-hand or the right-hand channel is reproduced via the two monitor speakers and the two headphone channels.

#### STEREO [80]

When the STEREO [80] key is pressed on the stereo monitor instrument panel, both channels are reproduced stereophonically over the two built-in monitor speakers and the headphones socket PHONES [58].

### 2.4.23 Test generator (option)

On all 2-channel versions of the A807, a test generator with booster amplifier can be installed (in conjunction with the MONO/STEREO switch [55]) on the right-hand side of the operator panel. The MONO/INSERT [55] key, with which the internal insert point is controlled, can be activated by changing the position of the jumper JP17 (below the front cover) to position B, in this case the generelly built in mono/stereo switch is required. To deactivate the built-in Mono/Stereo Switch change Jumper JP17 to position A.

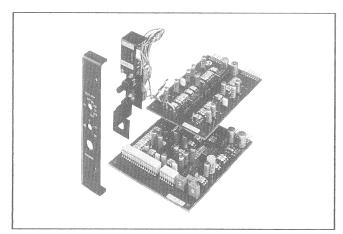


Fig. 2.4.7

The controls of the test generator are accessible from the operator panel and can be adjusted with a screwdriver. The test generator is switched on and the test frequency (60 Hz, 125 Hz, 1 kHz, 10 kHz, 16 kHz) of the sine wave generator is set with the Hz [62] switch. The test generator is disabled when this switch is in the OFF position.

#### Note:

When operating with the test generator, make sure that no signals are available on the inputs (MIC INPUT and LINE INPUT). This signal would be mixed with the generator signal and could lead to measurement errors.

- On models without input selector, the signal cables on the inputs should be detached.
- On models with input selector the inputs should be switched off (MIC ON [35/46] and LINE ON [37/48] in off position).

The booster amplifier is operated with the dB [59] switch. The generator level can be attenuated by 10 or 20 dB. At the same time the gain in the reproduce path is automatically increased by 10 dB or 20 dB; in this way the reference value of the VU-meter is the same as for nominal level. The booster amplifier can also be used when the test generator is switched off, e.g. when playing a reproduce test tape.

#### 2.4.24 Editing, cutting the tape

### Searching a tape address with fast wind

Any tape address can be searched by means of fast forward > [27] and rewind < [26] keys. However, additional facilities have been provided that may be more convenient:

SHUTTLE [23/24], Z-LOC [19], LOC1 [20], and, depending on the internal programming (Jumpers JPOO to JPO2), the keys [21] and [22] which support the following functions:

[21] [22]
L0C2 L0C3
L0C START BACKSPACE
L0C START
LIFTER

The locator functions are described in paragraph 2.4.14, the BACKSPACE function in paragraph 2.4.15.

### SHUTTLE [23/24]

The SHUTTLE [23] key activates the editing mode. The tape is not lifted so that cueing is always possible. Editing under assistance of the spooling motors is possible with the aid of the SHUTTLE CONTROL [24] wheel. When this wheel is turned, the tape is spooled in the corresponding direction. The greater the deflection of the wheel from its home position, the faster the spooling speed. An edit point can thus be conveniently searched and approximately aligned.

For fine-positioning of the edit point, the tape can be moved forward or backward by manually turning the right-hand tape reel [3]. The tape tension control and the reproduce paths are enabled.

#### Marking the tape

The center of the reproduce head (head gap) can be marked on the reverse side of the tape by means of a grease pen or a soft pencil.

A tape marker [72] is available as an accessory. A light pressure on the marking lever marks the tape with a stamp exactly at the reproduce head gap. The tape can subsequently be cut at the marked

#### Cutting the tape

position.

The tape can be easily lifted off the reproduce head by means of antimagnetic scissors and cut exactly in front of the head gap.

If the position of the reproduce head gap has previously been marked, the tape can be transported up to the optional scissors [71] and cut or be inserted manually into the optional cutting block on the head shield or below the head block, and cut with a razor blade.

#### Splicing the tape

The two tape sections to be joined are inserted with the reverse (marked) side facing upwards the splicing block [10] or the cutting block [69]. The ends are butted together without overlap and spliced with an adhesive tab that is approx. 20 mm long and %" wide.

### 2.4.25 "Waste basket mode" TAPE DUMP [25]

In "waste basket mode" (TAPE DUMP [25] key) the right-hand spooling motor [3] is disabled. Unwanted tape segments can thus be played into the waste basket

When the TAPE DUMP [25] key is pressed, the machine switches either to play or preselects the "waste basket mode", depending on the programming with the jumper JP4 below the front cover.

### Mode A (JP4 in position L):

The TAPE DUMP [25] key functions as a preselector. The "waste basket mode" is activated by pressing the PLAY [28] key. The tape is played but not wound up.

The STOP [29] key interrupts the tape feed, but the TAPE DUMP function remains active until it is cancelled by pressing the TAPE DUMP [25] key again.

When the "waste basket mode" is active, all tape transport functions except < [26], PLAY [28], and STOP [29] are disabled.

### Mode B (JF4 in position H):

The "waste basket" mode is activated directly by pressing the TAPE DUMP [25] key. The machine stops when this key is pressed again.

# Retraction of a loose tape segment (only possible in TAPE DUMP mode A)

If too much tape has been unwound in "waste basket" mode, it is not necessary to rewind it manually. Simply tension the tape with two fingers of your right hand (preferably gloved) and continually hold down the < [26] key. The left—hand spooling motor [2] rotates and slowly takes up the loose tape. This process can be stopped by releasing the < key.

The motor torque is limited and controlled in such a way that the tape can be easily decelerated by hand. As soon as the tape is released, the motor continuous to run only very slowly. The motor speed can be increased by lightly tensioning the tape segment.

In order to wind up a loose tape segment with the right-hand spooling motor [3], the TAPE DUMP mode must be switched off by pressing the TAPE DUMP [25] key; the yellow led is no longer light. The tape can then be wound on the right-hand reel in short pieces by repetitively pressing the PLAY [28], < [26], or > [27] key.

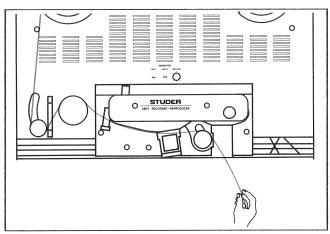


Fig. 2.4.8

#### Playing a discarded tape segment

After a long editing session it may happen that many tape sections have been cut and that it is no longer clear as to which piece belongs where and which end of the tape is the beginning or the end. With the A807 tape recorder you can play cut segments without first joining them and winding them on a reel.

#### Procedure:

- Thread the tape according to Fig. 2.4.9 and select the TAPE DUMP [25] function.
- With two fingers of your left hand tension the left-hand tape end in such a way that the tape makes contact with the head.
- In TAPE DUMP mode A start the reproduction by pressing the PLAY [28] key. The PLAY function can be cancelled by pressing the STOP [29] key.

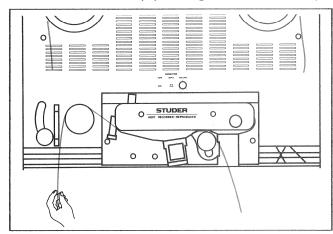


Fig. 2.4.9

#### 2.5 PROGRAMMING

The four keys [21], [22], [60] and [61] of the A807 tape recorder can be assigned to different functions by changing jumper settings. After the round knobs have been removed by pulling them off and the four fixing screws have been unfastened, the cover of the operator panel can be removed and the jumpers become accessible.

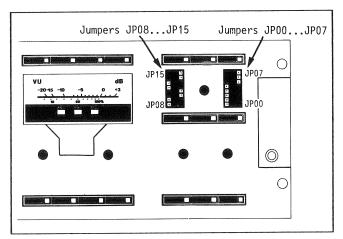


Fig. 2.5.1

For the sake of completeness, the functions of all jumpers are listed in the following table. To reassign the functions of keys [21] and [22], only the jumpers JPOO, JPOI, and JPO2 need to be changed; for the keys [60] and [61] the jumpers JPO5, JPO6, and JPO7 have to be changed. The listed jumper positions correspond to the standard settings of an A8O7 2 mm VU versions as shipped ex factory (software release 30/88).

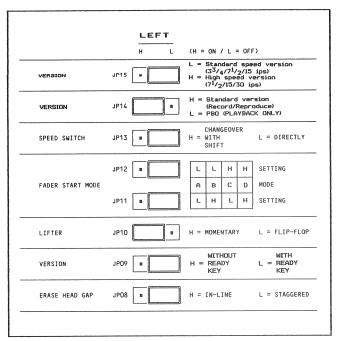


Fig. 2.5.2

All jumper settings will be enabled only when tape recorder is switched off an on again.

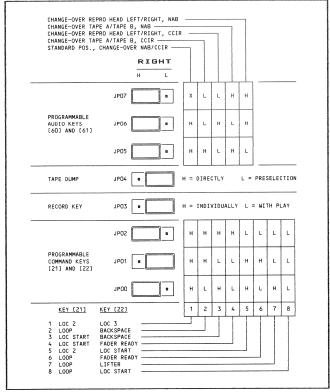


Fig. 2.5.3

#### 2.5.1 Fader start mode

Four different fader start modes can be set with the jumpers JP11 and JP12.

FADER mode:	Α	В	С	D
FADER READY KEY required		8	8	89
FADER READY KEY not required	121			
BUILT-IN MONITOR SPEAKER muted	11	5	9	10
FADER CLOSED: Tape recorder operable Tape recorder not operable	16	10	8	<b>B</b>
FADER OPEN: Tape recorder operable Tape recorder not operable	B B	18	8	R

When one or both audio channels are switched to READY [31/42]:

The tape recorder starts in record mode when the fader is opened, provided the SHIFT [18] key and the built-in FADER READY [22] key have been pressed (the yellow LED next to the key flashes to signal that record has been preselected).

#### Important:

If the machine is put into the so-called safe condition by deselecting the ready function with the READY key [31/421, or if the FADER READY function is reset by pressing [22], the record preselection is also cancelled.

### 2.5.2 Programming the audio parameters

When you press the microswitch adj [11] by means of a pointed tool, the ABO7 tape recorder is switched to audio alignment mode.

In this mode the display [17] of the tape timer no longer shows the current tape address but information concerning the audio parameters. The three red LEDs to the right of the display indicate which parameter is being displayed (functions identified with lower case letters: lvl, trbl, and bias). In addition the functions of the keys LAP [15], SEL [13], STEP [12], LOC START [21], and BACKSPACE [22] change to the functions specified in yellow lettering below the keys.

LAP = channel

SEL = parameter

STEP = store

LOC START = down

BACKSPACE = up

TAPE DUMP = input (only in models without

output signal selector)

In adj mode the machine remains operable so that play and record commands can be entered and different tape speeds can be selected, and for switching over between CCIR/NAB, TAPE A/B, or HEAD A/HEAD B. The tape timer also continues to run internally.

#### Procedure:

A detailed description concerning the alignment of the audio parameters can be found in Section 4 of this manual. Only the method for entering the parameters is described here.

- = Switch the machine to the alignment mode by pressing the adj [11] key.
- Select the desired tape speed, equalization standard, tape type or reproduce head by pressing the appropriate keys.
- Select the desired operating mode (REPRO, SYNC or READY+REC).
- Select the audio channel to be calibrated by pressing the channel [15] key.
- Select the parameter to be adjusted by pressing the param [13] key.

lvl = level adjustment
trbl = treble correction

bias = bias adjustment

- With the down [21] and up [22] key you can modify in the desired direction the decimal value and consequently the level selected with param [13].
- When the setting is correct, save the value by pressing the store [12] key.
- Press the adj [11] key again to quit the alignment mode. All modified values that have not been stored yet (identified by a flashing dot) will be lost. The machine continues to operate with the old data.

The display [17] e.g. shows the following information:

A1 .025 LED: 1v1

The letter A in the first position of the display signals the "adj" mode.

The digit in the second position of the display specifies the audio channel: 1 = CH1 (left), 2 = CH2 (right).

The last three digits of the display specify the decimal value of the setting (min. = 000, max = 255).

The dot between the numbers indicates whether or not the value has been stored.

- If the dot is continuously lit, the value has been stored.
- If the dot flashes (\*), the value has been entered but not stored.

The program can be terminated by pressing the adj [11] key again. All values that have not been stored yet (flashing dot) will be lost.

However the newly updated parameter values become effective immediately. Those that have not been stored are only effective for as long as the program is not terminated.

#### Function chart

Functio	on	Key		Indicat.	Comment
panel	adj.	СН	LED		*flashing dot .continuously lit
REPRO or SYNC or READY+ RECORD	up up up : up down store	1	1 v 1	A1 .025 A1 *026 A1 *027 : A1 *255 A1 *254 A1 .254	stored setting Level at 026 Level at 027 : Max. level Level at 254
	channel up : up down store channel param up store	1	l∨l trbl	A2 *031 : A2 *122 A2 *121	treble setting CH1 treble at 123
indervision addressystem for the formation of the formati	channel down store	2	trbl	A2 .153 A2 *152 A2 .152	treble at 152
ONLY in READY+ RECORD	param up store	2	bias	A2 .089 A2 *090 A2 .090	
Reproprietable provide a p	channel down store	1	bias	A1 .112 A1 *111 A1 .111	•
	adj				Quit program

#### 2.5.3 Programming the soft jumpers

Since the introduction of the software release 40/87, so-called soft jumper functions can be programmed in addition to other function changes. Soft jumpers are software switches that can be changed over in the "adj" mode.

The functions 04/05 and 06 are only implemented in software release 30/88.

### Soft jumper 00 = mute time

With the soft jumper OO, the mute time during the STOP-PLAY transition can be individually entered for each of the three tape speeds within the range of 00 ms to 950 ms.

Indication: 00. 100 100 ms mute time 250 ms mute time 00. 250

### Soft jumper 01 = baud rate

transmission rate (baud rate) of the serial RS232 interface can be set with the soft jumper 01. Two speeds can be set: 1200 or 9600 baud. Indication: 01. 12 01. 96 baud rate = 1200 baud rate = 9600

<u>Soft jumper 02 = echo mode</u> Soft jumper 02 switches the echo mode of the serial RS232 interface on and off. Indication: 02. 0 02. 1 no echo mode

echo mode enabled

#### Soft jumper 03 = light barrier

Soft jumper 03 switches the light barrier [8] on and off. When the light barrier is enabled, the machine switches to STOP when the transparent tape section is reached. The tape recorder responds as follows in the various modes:

Section 2/27

- In PLAY mode the machine stops immediately when the transparent tape section is detected. If transparent tape is in front of the light barrier when the machine is in STOP mode, the desired tape transport function (e.g. PLAY) must be pressed until the tape with the oxide coating
- covers the light barrier.

  In spooling mode (< or >) the tape recorder stops immediately when the transparent tape is reached. If the spooling key is continuously pressed, the transparent tape section will be skipped.
- In fader start mode the tape recorder also stops when the transparent tape is detected. If the transparent tape is in front of the light barrier when the fader is closed, the tape recorder starts in play mode when the fader is opened, and stops when the next transparent tape section is reached.
- Transparent tape sections are ignored in all LOCATE functions (Z-LOC, LOC1, etc.). The tape is positioned directly at the target address.
- Transparent tape sections are ignored in waste basket mode (TAPE DUMP).

Indication: 03. 0 Light barrier disabled 03. 1 Light barrier enabled

### Soft jumper 04 = mono/stereo changeover

Soft jumper O4 controls the mono/stereo changeover as a function of the selected tape speed (only active when MONO/STEREO switch is installed). When the changeover is enabled, the MONO priority is automatically activated when the machine is switched to either 3.75 or 7.5 ips. STEREO mode is automatically selected when the machine is started with 15 ips or 30 ips.

The selected status can always be changed by pressing the SHIFT [18] and MONO [55] keys.

Indication: 04. 0 Speed-dependent M/S, priority setting disabled

> Speed-dependent M/S, 04. 1 priority setting enabled

### Soft jumper 05 = timer stop for TAPE DUMP

With the soft jumper 05 a timer stop can be set in TAPE DUMP mode. In this case the content of the tape timer is frozen when the TAPE DUMP [25] is selected. It is not updated as long as the "waste basket" mode is active. As soon as this mode is terminated, the tape timer continues to run from

terminateu, en ... the frozen reading. Indication: 05. 0 05. 1 timer stop disabled timer stop enabled

### Soft jumper 06 = retracting the pinch roller

With the soft jumper 06 the pinch roller [70] can be retracted to the idle position when an "out-oftape" condition is detected. An out-of-tape condition is recognized when there is no tape tension (tape tension sensor [9] in the idle position) and if no tape is detected by the light barrier [8] (both conditions exist e.g. during tape editina).

When the STOP [29] function is initiated or when the tape is edited with TAPE DUMP [25], the pinch roller stays in the cueing position.

06. 0 06. 1 retraction disabled Indication: retraction enabled

#### 2.5.4 Selecting the soft jumper program

In order to activate the soft jumper program, the SHIFT [18] key must be held down while the adj [11] button is pressed with a pointed tool. The display [17] indicates e.g.:

#### 00.150

The first two numbers of the display specify the number of the soft jumper (in our example: 00 = mute time).

The following number(s) specify the status of the selected soft jumper (in our example: 150 ms mute time).

The dot between the numbers indicates whether or not the setting is stored:

- Dot continuously lit (.) = value stored
- Flashing dot (\*) = value set but not stored yet. The keys with the yellow lettering on the operator panel change their functions as follows:
- Channel [15]. The soft jumpers are selected with this key. Each time this key is pressed the next soft jumper is selected (00 ... 01 ... 02 ... 03 ... etc. After the last jumper it wraps around to jumper 00).
- The up [22] and down [21] keys change the status of the soft jumper (150 ms ... 200 ms ... 250 ms ... 200 ms).
- The store [12] key saves the current jumper setting in memory.

The soft jumper program can be terminated by pressing the adj [11] key again. All settings that have not been stored yet (flashing dot) will be lost. However the newly updated soft jumper settings become effective immediately. Those that have not been stored are only effective for as long as the program is not terminated.

#### Funktion chart

Function	Key	Indic.	Comment			
Program	SHIFT & adj	00. 150	Program call			
Mute time:	up up : up down store	00* 200 00* 250 00* 950 00* 900 00. 900	Mute time 200 ms Mute time 250 ms  Mute time 950 ms Mute time 900 ms 900 ms stored			
	other speed: up store	00. 050 00* 100 00. 100	Mute time 50 ms Mute time 100 ms for other speed stored			
Baud rate:	channel down up	01. 96 01* 12 01. 96	Baud rate 9600 Baud rate 1200 9600 Baud already stored!			
Echo mode:	channel up store	02. 0 02* 1 02. 1	No echo mode Echo mode Echo mode stored			
Light barrier:	channel up store	03. 0 03* 1 03. 1	Enabled Disabled Enabled is sto- red			
"X MONO/ STEREO CHANGE OVER:	channel up: : : : etc.	04. 0 04* 1 : : etc.	enabled Disabled : : etc.			

Can only be called up, if the equipment is accordinly equiped.

#### 2.6 SERIAL INTERFACE RS232

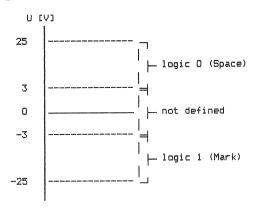
The STUDER A807 tape recorder is equipped with a serial interface (RS232) for operation with a terminal, a computer, or for remote control of the tape deck functions.

#### 2.6.1 RS 232 Standard interface

The term "RS232" defines a connection between a "terminal" (computer) and a "modem" (A807) for the purpose of exchanging data. In addition this standard defines the:

- Electrical characteristics (level, lines)
- Mechanical characteristics (connector)
- Signal descriptions
- Standard connections.

The interface can operate with a data rate of up to 19.2 k baud (On the A807/A810/A812/A820 up to 9.6 k baud) and cable lengths of up to 15 m. The signal levels are defined as follows



The 25-pin connector defined in this standard supports various interface structures. The full pin assignment is rarely used nowadays. Modern systems frequently use a minimal structure according to Fig. 2.5.4 for the terminal-modem or terminal-terminal connection and consequently need only a smaller 9-pin connector.

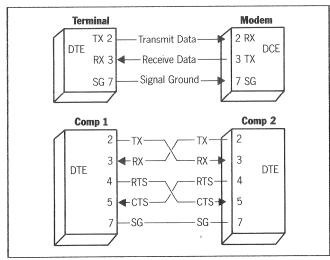


Fig. 2.5.4

All parameters (e.g. baud rate, code, synchronous/asynchronous connections, number of start/stop bits, parity, hardware/software handshake) are defined by the manufacturer.

#### 2.6.2 RS 232 Interface of the A807

A 9-pin connector is used for the serial interface of the A807 tape recorder. With a correspondingly prepared adapter cable it is possible to define whether a unit should function as a terminal or a modem.

Recorder 9-pin		Terminal 25-pin		Modem 25-pin	
Signal	Pin no.	Signal	Pin no.	Signal	Pin no.
SNDATA	2	Trans. Data	2	Trans. Data	3
RCVDATA	8	Rec. Data	3	Rec. Data	2
GROUND	9	Signal- Ground	7	Signal- Ground	7

No additional handshake lines are used. A software handshake (X ON / X OFF protocol) is implemented for all transmission rates, however it is only required for 9.6 k baud.

X ON = 0001 0001 (ASCII: DC1) = resume

X OFF = 0001 0011 (ASCII: DC3) = interrupt

Upon receipt of an X OFF, the tape recorder still transmits up to 2 characters. After the tape recorder itself has transmitted X OFF, it can still receive five characters without losing a command.

Fixed settings:

- 1 start bit
- 1 stop bit8 data bits
- No parity bit

The baud rate can be set with the aid of soft jumper 01 (1200 or 9600 baud). Only ASCII characters are admissible as data!

#### 2.6.3 Working with the serial interface RS 232

The computer or the terminal are to be connected to the tape recorder by means of an adapter cable fitted with a 9-pin socket.

The computer or the terminal must be set as follows:

1 start bit, 8 data bits, 1 stop bit, no parity bit, no echo mode, baud rate 1200 or 9600 baud. The handshake lines CTS and RTS are to be connected to "LOW".

After a RESET of the tape recorder (switching the tape recorder off and on again), the following message is displayed on the screen: A807

The desired commands can now be entered via the terminal keyboard according to the table below. Most commands are not executed until the ENTER or LINE FEED key is pressed.

### Command list:

Command 115C:				
Tape deck commands				
Command (_ =blank, / = CR, * = blank or CR)	Response of the A807	Explanation		
STP* RWD* FWD* PLY* REC*	<pre><cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> </lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></pre>	Stop Rewind Fast forward Play Record (directly without PLAY)		
SSA* s1 SSB* s1 SSC* s1 SSD* s1	<cr><lf> <cr><lf> <cr><lf> <cr><lf></lf></cr></lf></cr></lf></cr></lf></cr>	3,75 ips (9,5 cm/s) 7,5 ips (19 cm/s) 15 ips (38 cm/s) 30 ips (76 cm/s)		
NS?*	X <cr><lf> X = 1 Byte HEX X = 00 X = 01 X = 02 X = 03</lf></cr>	Inquiry of nom. speed where: 9,5 cm/s (3.75 ips) 19 cm/s (7.5 ips) 38 cm/s (15 ips) 76 cm/s (30 ips)		
VEN* VEF*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Varispeed external on Varispeed ext. off		
FEN* #2	<cr><lf></lf></cr>	FADER START ENABLE		
FEF* •2	<cr><lf></lf></cr>	on FADER START ENABLE off		
EDT*	<cr><lf></lf></cr>	Lifter disabeld during spooling		
LFT*	<cr><lf></lf></cr>	Lifter enabled during spooling		
LOC_ <hh:mm:ss></hh:mm:ss>	<cr><lf></lf></cr>	Positioning at the ti- mer reading hh:mm:ss e.g.: LOC_01:20:15 or : LOC1_03_22		
LMV_ <xxxxxx></xxxxxx>	<cr><lf></lf></cr>	Positioning at the number of tacho-roller pulses <xxxxxxx 3="" =="" byte="" e.g.:="" hex="" lmv_odae4f<="" td=""></xxxxxxx>		
MV?*	XXXXXXXCR> <lf> 3 Byte HEX</lf>	Read out the number of tacho roller pulses		
STM_ <hh:mm:ss></hh:mm:ss>	<cr><lf></lf></cr>	Set timer to hh:mm:ss e.g.: STM0:43:57 or : STM_00_55_12		
TM?*	hh:mm:ss,xx <cr><lf> xx = xx/256 s</lf></cr>	Read out timer content		

Tape deck commands (continuation)				
Command (_ =blank, / = GR, * = Blank or CR)	Response of A807	Explanation		
ST?*	X <cr><lf> X = 1 Byte HEX X = 81 X = 01  X = 82 X = 02 X = 83 X = 03 X = 84 X = 04  X = 85 X = 05 X = 86 X = 89 X = 09 X = 0A X = 59 X = 0A X = 59 X = D9 X = C0 X = 40 X = C2</lf></cr>	Tape deck status where: Tape out position Tape mounted, no tension STOP, tape tension yes STOP not achieved Rewind achieved Rewind achieved Fast forward achieved Fast forward not achieved PLAY achieved PLAY achieved Varispeed Record achieved Reverse play achieved Reverse play not achieved TAPE DUMP selected TAPE DUMP active SHUTTLE acitve SHUTTLE not achieved Positioning at LOC		
DST* m3	<pre></pre>	Continuous indication of the tape deck status with counter reading and status		
LCD*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Local keypad off Local keypad on		
SD?*	00.WW.YY WW = Woche YY = Jahr	Inquiry of soft- ware release date		

### Notes:

- •1 Only possible if speed changeover is not interlocked with the SHIFT [15] key by means of jumper JP13 (below the front cover).
- $^{\rm a2}$  Only feasible in FADER START MODE B, C, or D
- $^{\rm m3}$  Terminate continuous status indication with Control X.

	Audio commands				
Command (_ =blank, / = CR, # = blank oder CR)	Response of the A807	Explanation			
SNB* SCR*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Select NAB Select CCIR			
REA_i * SAF_i *	<cr><lf> <cr><lf></lf></cr></lf></cr>	channel i to READY Cancel READY of channel i			
INP_i* SYN_i* REP_i* MTN_i*	<cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr>	Set channel i to INPUT Set channel i to SYNC Set channel i to REPRO Set channel i to MUTE Cancel MUTE of channel 1     i = 1, 2 or F     1 = channel 1     2 = channel 2     F = both channel			
ION*	<cr><lf></lf></cr>	Switch on INSERT (MONO)			
IOF*	<cr><lf></lf></cr>	Switch off INSERT (STEREO)			
AP?_i,j*	XX <cr><lf> XX=1 Byte HEX</lf></cr>	Inquire audio parameter i = channel 1 or 2 j = D/A converter O = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias			
PAP_i,j,xx* xx = 1 Byte HEX	<cr><lf></lf></cr>	Set audio parameters without storing i = channel 1 or 2 j = D/A converter 0 = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias			
SAP_i,j,xx* xx = 1 Byte HEX	<cr><lf></lf></cr>	Set audio parameters and store i = channel 1 or 2 j = D/A converter 0 = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias			

THE ABOVE LIST COMMANDS MAY NOT NECESSARILY BE COMPLETE. IT WILL BE UPDATED OR EXTENDED AS REQUIRED.

#### 2.7 CARE INSTRUCTIONS

Daily care is limited to cleaning the soundheads, the capstan shaft, and all elements that come in contact with the tape.

Dust and oxide particles of the magnetic coating accumulate principally on soundheads and the tape guidance elements. This can lead to drop outs.

Cleaning should, therefore, be performed daily, or if contamination is visible, even more frequently. For proper care of the tape recorder we recommend

For proper care of the tape recorder we recommend the STUDER CLEANING KIT (part No. 10.496.010.00). It contains everything required for cleaning a tape recorder:

- Head cleaner
- Aluminite cleaner
- Felt sticks
- Cleaning rag

#### Procedure:

Moisten a felt stick or the cleaning rag with a small amount of head cleaner and clean the soundheads and all elements that come in contact with the tape. Use a second felt stick or a dry section of the cleaning rag to wipe the cleaned parts dry.

Normally, the capstan shaft does not rotate when the recorder is not switched to play mode. For cleaning purposes a special function has been provided: When the magnetic tape is unthreaded (tape tension sensor in idle position, light barrier not covered), the capstan shaft continues to rotate for as long as the PLAY [28] key is pressed.

For cleaning aluminum surfaces use the special aluminite cleaner. It removes the dirt and restores the metallic lustre of the aluminum.

#### Caution:

Make sure that neither head cleaner nor aluminite cleaner penetrates into the bearing of the capstan shaft!

The acrylic panels of the VU-meters are not resistant to solvents!

### Lubricating the capstan bearing:

The capstan motor and its sintered—sleeve bearing are virtually maintenance—free. To replenish the oil or grease in the bearing, oil lubricated sintered—sleeve capstan bearings should be re—oiled semiannually, and grease lubricated sintered—sleeve capstan bearings should be re—greased annually or after a prolonged idle period.

Particularly in the case of oil lubricated sinteredsleeve bearings, the oil can eventually escape through the bearing gap when the shaft is aligned vertically.

For relubrication use only the recommended lubricants!

For <u>oil lubricated</u> capstan motors the synthetic oil ISOFLEX PDB 65 (Part No. 20.020.401.04) should be used.

For <u>grease lubricated</u> capstan motors (in production since 1.1.1988, identified with a <u>red label</u>), only the liquid grease CONSTANT GLY 2100 (Part No. 20.020.401.10) should be used.

#### Procedure:

On oil lubricated capstan motors lift off the upper plastic bearing cap and apply a few drops of oil to the felt.

On grease lubricated capstan motors (red label) lift off the upper plastic bearing cap and apply a few drops of liquid grease into the bearing gap (between the capstan shaft and the bearing).

#### Note:

The bearing seat of capstan shafts is ground to the internal diameter of the pressed—in sintered-sleeve bearing within very close tolerances. For this reason it is impossible to replace the capstan shaft in the field if any service is needed. Capstan motors should always be shipped to the

national STUDER dealer for overhaul.



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### 3. TAPE DECK ELECTRONICS

#### 3.1 CIRCUIT DESCRIPTION

Note: A summary of all electronic assemblies is given in the following Section 3.1.1, "Introduction". The assemblies are described individually in the Section 3.1.2 and following. A description of the AUDIO CONTROL and AUDIO ELECTRONICS assemblies can be found in Section 4.

#### 3.1.1 Introduction

The entire electronics can be subdivided into function blocks (refer to block diagram):

- Power supply unit comprising the power transformer, rectifier, filtering (GR 2..6), and stabilization (part of GR 10).
- TAPE DECK ELECTRONICS (GR 10) which is the heart of the machine; it supplies control commands to all other assemblies.
- SPOOLING MOTOR CONTROL, GR 11.
- CAPSTAN MOTOR CONTROL, GR 2Ø.
- COMMAND PANEL, GR 3Ø.
- Audio assemblies (refer to Section 4.1).

In addition there is a number of peripheral devices such as sensors, remote control interfaces, and feedback which are described in conjunction with the assemblies in which they are incorporated.

#### 3.1.2 Power supply

The power supply is connected via an IEC connector with built-in primary fuse and an RF rejection filter to a voltage selector with which the line voltage can be set within the range of 100...140 V and 200...240 V.

Five electrically isolated secondary windings are connected individually via secondary fuses to the rectifiers and filtered. The smoothing is so efficient that power interruptions of up to approx. 100 ms duration do not adversely affect the operation becomes approxed individually; only the +60 V is cascaded from +20 V and +40 V.

The stabilized phantom supply for the microphone socket is derived from the +60 V. It normally is 48 V but it can also be changed to 24 V or 12 V by changing the resistors R23, R25, and R30 (refer to circuit diagram). The circuit is current limited; if due to excessive current the voltage drop across R18 is larger than on D8 (D 9 is required for compensating the voltage drop across the basis/emitter link of Q8), Q8 blocks and consequently also Q9.

From the same non-attenuated voltage also the 25 V for controlling the EEPROMs is derived. The voltage reference is implemented with the Zener diodes D5 and D6.

The operating voltage for the logic is derived from a non-attenuated voltage of 24 V by a switching regulator (IC1) whose pulse duty factor is controlled as a function of the load. This switching regulator is clocked by the 76 kHz equipment clock (from IC 11/6). The filter circuit comprising L1 and C 5...7 are used for smoothing the output voltage. Because the TTL circuit is very sensitive to surge voltages, a crowbar circuit (Q2) has been provided which is triggered by D2 in the event of a voltage surge.

The operating voltage of  $\pm$  15 V is produced via normal three-step regulators (IC2 and 3).

The logical PWRON, signal derived from Q1, is of particular importance because 40 ms after a power failure it initiates a data protection routine via the switching regulator, i.e. at a time when the logic still functions correctly. Certain equipment states such as the tape speed and the selected equalization are saved in the EEPROMs so that this information is available when power returns. Other functions, particularly RECORD and READY are not saved but are set to the default setting after power is restored. Example: If the machine was in record mode, STOP mode is activated after the power is switched on again.

# 3.1.3 Control (TAPE DECK ELECTRONICS, GR 10)

For the block diagram of this section please refer to page 6/4.

The CPU is a microprocessor type  $68\emptyset 3$  (IC12) that is clocked with a frequency of 4.9 MHz. It processes the various inputs and outputs corresponding commands to the connected assemblies.

The resident microprocessor program is stored in two EPROMs (IC14 and 15); a RAM chip (IC16) with a capacity of 2 x 8k is used for working storage. Data and parameters that should automatically be reestablished after power is switched on again are saved in EEPROM IC10 each time the power is switched off (refer to table).

Input signals are supplied by the following assemblies:

a.) MOVE SENSOR GR 24. The sensor signals are produced on the Move Sensor board; the light produced by the LEDS DLG1 and 2 is switched off rhythmically by a rotating disc with rectangular serrations. The disc is driven by a tape guide roller which means that the frequency of the move sensor signal is a measure of the tape speed. The tape move direction can also be determined from the overlapping of the signals. The receiving photo transistors control G1 or G2 respectively; when they are through-connected, the current through the diode is increased by R3 or R7 respectively, causing the square-wave signal to become steeper.

The final signal shape is produced by the Schmitt trigger stages IC5 when they are input to the tape deck electronics board.

b.) SPOOLING MOTOR TACHO GR 17...18. Each spooling motor has its own tacho whose circuit corresponds largely to the one of the move sensor. Since the signal frequency is proportional to the spooling motor speed, the pancake diameter can be measured by comparing the signals from the spooling motor tacho and the move sensor.

The tacho signals 1 M1-TACHO and M2-TACHO are taken to IC8 and IC9. The tacho signal 2 is divided by 16 in IC9: in spooling mode the CPU can thus determine whether it wants to track the individual tacho signals (input P13) or the divided signal (input P12).

- c.) Operator entries from the control panel are buffered in coded form in register IC 27 (see 3.1.6).
- d.) The M3-SYNC signal (input P11) indicates that the capstan motor has synchronized to its control frequency.
- e.) Commands can also originate from outside the
- From the remote control (PARALLEL REMOTE CONTROL) or the SYNCHRONIZER PARALLEL PORT with buffer in registers IC29 and 30.
- From the connected bidirectional RS 232 inter-

Commands are output via the registers IC 25, 26, 28 and 31 as well as the RS 232 interface and the SYNCHRONIZER PARALLEL PORT. IC 18 functions as an address decoder for the ports in both directions.

Unconventional is the control of the take-up spooling motor. Normally the tape tensions are controlled on both sides by means of tape tension sensors or similar devices. However, there is no such sensor on the right-hand side of the STUDER A8Ø7; for this reason the control information for the right-hand motor must be obtained in a different way. The CPU knows the speed of the tape (move sensor) and the rotational frequency of the take-up motor (tacho 2). From these values it computes the required tape tension which is output to the spooling motor control via the D/A converter IC24.

From the move sensor information the CPU also knows the spooling speed and limits it to approx. 10 m/sec.

#### 3.1.4 TAPE TENSION SENSOR BOARD 1.727.320. (GR13)

The tape tension sensor is equipped with an oscillator that oscillates with a frequency of approx. 833 kHz. The coupling of this signal from L1 to L2 is more or less damped by a shaped part mounted on the tape tension sensor so that a DC voltage proportional to the tape tension is obtained on C3 after rectification by D2. Through summation in C2 with the reference voltage for full tape tension sensor deflection set with R16, and subsequent inversion, the following voltage should be available on TP1 if the alignment is correct:

+4 V in the absence of any tape tension Ø V for maximum tape tension

The gain of IC2 is adjusted with R11.

#### 3.1.5 SPOOLING MOTOR CONTROL 1.727.340.XX

For the block diagram of this section please refer to page 6/25.

The principle is as follows:

The tape tension sensor controls the unwinding motor. From the ratio of the tape move speed (move sensor pulse) and the rotational frequency of the take-up motor the microprocessor computes the control voltage for the take-up motor.

The allocation of the control voltage to the corresponding motor is

achieved with the commutation IC7.

The output voltage of the TAPE TENSION SENSOR BOARD (AN-TTENS) is taken via pin 4 of connector J2 to the spooling motor control 1.727.340.XX. IC1/2 adds the tape tension reference value selected by IC2 to the ACTUAL tape tension value. The following reference values can be connected in accordance with the tape deck function:

- Reference value for PLAY tape tension
- Reference value for fast forward (FORW) tape tension
- Reference value for fast rewind (REW) tape tension
- Reference value for library wind speed (LIBR)

These four references are selected by means of the two signals MS-REFA and MS-REFB from register IC25 of the TAPE DECK ELECTRONICS BOARD 1.727.350.XX.

The aggregate signal of IC1/2 is now taken to the input of IC1/1 which normally functions as a buffer. Via the FET G4 the control voltage is taken to the previously mentioned commutation IC7 which in fast forward mode supplies the tape tension sensor signals to the summation IC11/2. This IC functions as an inverter, except in shuttle mode. The (M1-CTL) signal can be measured on test point 4 and is taken via the comparator IC13/2 to the positive input of the pulse width modulator IC14/2.

The negative input of IC14/2 receives a saw tooth voltage of 76 kHz which is produced from the 76 kHz microprocessor clock (MS-C76k). This square-wave signal is converted by C12 to needle pulses. The wiring of the current source Q9 ensures that the capacitor C21 is charged to operating voltage. With each needle pulse, transistor Q8 becomes conductive, causing the capacitor C21 to be discharged and recharged. The result is a saw tooth voltage that is available on the negative inputs of the pulse width modulators IC14/1 and IC14/2. The pulse duration on the output of the pulse width modulator IC14/2 is determined by the deflection of the tape tension sensor, i.e. the magnitude of the DC voltage. The higher the DC voltage the larger the pulse width on the output.

The pulse width modulated signal connects the small-signal transistor Q12, and the power transistors Q6 and Q7 connect the operating voltage for the spooling motors (+50 $^{\circ}$ V) in the 76 $^{\circ}$ kHz rhythm. The L/C element integrates the signal so that the required power for the spooling motor is available in the U-M1 signal.

The voltage for the other motor is supplied in a similar way, except that the DC voltage does not originate from the tape tension sensor but from the microprocessor (refer to block diagram).

The DC voltage M2-REFAN, computed by microcomputer from the ratio of the rotational speeds of the tape move sensor and the take-up motor is taken via pin 14 of connector J3 to the potentiometer R35 so that the maximum control voltage (10 V on TP5) can be set.

Via the amplifier IC5/1 and the commutation IC7 the signal is applied to the negative input of the summation amplifier IC11/1. The M2-CTL signal is taken via the comparator IC13/1 to the pulse width modulator IC14/1 and connects the operating voltage  $+5\emptyset$  V via the transistors Q13, Q10, and Q11. The U-M2 voltage filtered by the storage choke L2 and by C25 is now taken to the corresponding spooling motor.

The three phases R, S, and T of the two 3-phase asynchronous spooling motors are controlled via the complementary power transistors BWD47 and BDW42.

For the left-hand motor M1 the transistors Q15, Q19 or Q23 connect one of the three phases to the positive voltage, and a second phase is connected to Ø Volt by one of the three transistors Q17, Q21, or Q25

The PROM IC15 (IC18) ensures that the transistors switch in the correct sequence so that always one phase of the spooling motor is connected to the positive voltage, while the second phase is connected to Ø Volt. The third phase remains de-energized. Through the correct sequential commutation of the individual phases by means of the PROM, a rotary field is produced that puts the motor into motion.

The sense of rotation of the spooling motor is determined by the two signals MI-DIR and M2-DIR. The following rules apply:

- With a high signal the motor rotates in the take-up direction
- With a low signal the motor rotates in the supply direction.

The speed with which the individual phases are changed over determines the rotational frequency of the take-up motor.

The square-wave signal M1-TSENS of the left-hand spooling motor on pin 4 of connector J5 of the SPOOLING MOTOR TACHO LEFT 1.727.315 board and the square-wave signal M2TSENS of the right-hand spooling motor on pin 4 of connector J5 of the SPOOLING MOTOR TACHO RIGHT 1.727.316 board are taken via a Schmitt trigger IC4 to the commutation IC8 which connects the signal of the take-up motor to the mono flop IC6, depending on the tape move direction. For each incoming control edge this mono flop supplied a pulse of constant width.

After the integrator C9/1 a DC voltage (FRQ-CTL) is produced that controls the VCO IC17 (voltage controlled oscillator). On output 3 a frequency depending on the input voltage of the VCO is produced that is subsequently divided by the frequency divider IC16 and which is used by the two PROMs as the clock for controlling the individual motor phases.

The following rule applies:

The higher the speed of the take-up motor the larger the number of constant-width pulses that appear on the output of IC6. This results in a smaller DC voltage after the integrator which in turn leads to a higher control frequency of the spooling motor that ranges from 35 to 70 Hz.

The result is that the commutation frequency of the spooling motors is adjusted so that an even higher speed is achieved.

In play mode the MS-PRESS signal disables the mono flop via the inputs 3/13. The resulting DC voltage GRQ-CTL is 12 V which corresponds to a motor frequency of 35 Hz.

To prevent "singing" of the motor due to fast commutation of the phases, the spooling motor control has been equipped with the SPOOLING MOTOR FILTER 1.727.342 board.

Each phase R, S, T is allocated a 47  $\mu F$  capacitor that is connected to Ø Volt. In play mode the MS-PRESS signal, which after the inverter IC4 is called C-MOTFLT, connects a 10Ø  $\mu F$  parallel capacitor (C1, 3, 5 as well as C 7, 9, 12) via the transistor Q7 by means of the transistors Q1 to Q6 so that the individual phases are loaded with 147  $\mu F$ .

In rewind mode the MS-REW signal trips the commutation IC7. The tape tension sensor is now allocated to the right-hand (supply) motor, and the reference voltage from the MPU is allocated to the left-hand (take-up) motor.

The following functions are responsible for smooth changeover of the tape deck functions without creating tape loops:

- The comparator IC3/1 checks the position of the tape tension sensor and via transistor Q3 supplies the tape end signal (S-TAPOUT) when the tape tension sensor returns to the neutral position. (comparison with 3.7 V reference). At the same time the FET Q4 interrupts the control signal to the supplying motor.
- However, if the tape tension becomes too high (tape tension sensor fully deflected, i.e. the voltage on pin 5 of IC5/2 is lower than Ø V), the comparator IC5/2 short circuits the control voltage of the MPU via the FET Q5.
- To prevent excessive tape tensions, particularly when the tape is accelerated, a starting aid is activated:

In order to keep the output of IC1/1 always positive, this IC functions as a buffer (non-inverting amplifier when Q1 is high impedance), but it can also operate as an inverter (controlled by voltage level) when Q1 is conductive.

This changeover occurs when the tape tension is so high that the output voltage of IC1/2 changes to zero and the MS-DIR signal is high. In this case the sense of rotation of the supply motor is reversed via the capstan direction dependent commutator IC7. This means that during the brief start-up phase the supplying motor pushes the tape rather than back tensioning it which results in greater acceleration (start kick).

The MS-SHUTL signal activates the shuttle mode via the switch IC8. This switch connects the R-SHUTL2 voltage, tapped on the shuttle potentiometer, to the comparator IC10/2. If the output voltage on IC10/2 is zero, the tape tensions are the same as in play mode. The tape does not move.

If the shuttle voltage on test point TP6 is positive, the right-hand motor is controlled with the M2-CTL voltage via the summing amplifier IC11/1, i.e. the tape moves to the right. If the shuttle voltage is negative, IC11/2 controls the left-hand motor via the M1-L voltage so that the tape is transported to the left.

The TTA-SHT potentiometer can be aligned to prevent the tape from standing still in the neutral position of the shuttle wheel.

A negative feedback circuit ensures that the spooling speed in shuttle mode is limited and kept constant. The pulses of the move sensor MS-MVCLK are taken from pin 12 to the mono flop (IC6) which in turn supplies constant width pulse that is integrated by C12 and IC9/2. The tape direction dependent MS-MVDIR signal connects the integrated signal either directly by means of IC8 or via the inverter IC10/1 and is thus added to the shuttle voltage.

#### 3.1.6 CAPSTAN MOTOR CONTROL 1.727.330. (GRP 20)

For the block diagram of this section please refer to page 6/39.

The capstan motor is equipped with a capacitative tacho ring which is connected to pins 1 and 2 of the connector J3/EL3.

IC1 is an FM demodulator IC which is supplied by a 5.5 MHz oscillator (circuit with Q1). The frequency can be aligned with L2. Pins 5 and 6 are connected to the demodulator circuit that comprises coil L1 and the capacitative tacho ring. When the capstan motor rotates, the mid frequency of the demodulator circuit changes in the rhythm of the rotation. This frequency is available on the AF output signal 8 as a sine-shaped signal that is amplified by IC3/2. The output signal can be by L1 aligned to maximum amplitude on test point TP 2.

The frequency on test point TP 2 depends on the selected tape speed and in synchronous operation is:

- 300 Hz at 3 3/4 ips
- 600 Hz at 7½ ips
- 1200 Hz at 15 ips
- 2400 Hz at 30 ips

IC3/1 is wired as a Schmitt trigger and IC4/1 as an amplifier. When the tape speed is 3 3/4 ips the square-wave signal is taken directly to the output 13 of the analog switch IC14.

At the other three tape speeds the square-wave voltage is divided in the frequency divider IC13, and the switching IC14 selects the dividing ratio as a function of the speed in such a way that 300 Hz are always available at the output 13 when synchronism is achieved.

The correct dividing ratio is selected by IC12 which actuates the changeover switch by decoding the data line via the transistors Q16, Q17. The logic table above the switch contains information on the two control bits and the corresponding switch setting.

IC17 is a data register which is controlled via a serial data input (M3-DATA), a clock signal (M3-CLK), and a strobe signal (M3-EN). These control signals are converted from serial to parallel in the IC and buffered.

Since the original square-wave signals are available on the output 13 of IC14 only at 3 3/4 ips tape speed, R20 must be aligned to a symmetrical pulse/pause ratio (wow and flutter).

The tacho signal is now taken to the frequency-to-voltage converter. IC18 is a monoflop that is controlled with both signal edges so that the frequency is doubled. A pulse of approx. 16  $\mu s$  is available on output 6 and a pulse of approx. 42  $\mu s$  on output 9 which controls a sample/hold circuit.

- The longer pulse charges the capacitor C47 via the transistor Q22.
- The shorter pulse closes the analog switch IC19/4 which transfers the current charge voltage of C47 to the hold capacitor C44. This capacitor retains its charge until the next sample is loaded to the hold capacitor via switch 19/4.

The sampled DC voltage is subsequently taken to the inverting input of the comparator IC16/1 which compares the ACTUAL tacho signal value with the reference.

The reference frequency can be either the MPU clock frequency M3-9600 divided down to 9600 Hz, or the output frequency M3-REFEX of an external varispeed remote control, or an internal varispeed frequency. The latter is generated in the VCO (voltage controlled oscillator) IC6 from the DC voltage tapped on the varispeed potentiometer RE1. At 3 3/4 ips the transistor Q34 connected by the commutator IC14 limits the lower varispeed range to

ming input of 2/2. The analog switch IC8 select the reference signal (9600 Hz for nominal speed) via the transistor G2 on the frequency divider IC10 which divides the frequency by 16. As a result, the reference signal and the tacho signal after the mono flops IC11 and IC18 have the same frequency, i.e. 600 Hz for nominal speed.

approx. minus 1.5 semitones (approx. 8%) at the sum-

The reference signal is now taken via the frequency-to-voltage converter Q3 and IC19/2 comprising the charging capacitor C35 and the holding capacitor C36 to the positive input of the comparator IC16/1.

When synchronism is achieved the sampled DC voltages on the outputs of IC17/1 (TP-9) and IC15/2 are approx. 7 V. When the tacho voltage and reference voltage are approximately within 5% of each other after the start or a speed changeover, the comparator IC22/1 responds and outputs a synchronism signal.

During the capstan start phase or extreme speed changes, control is principally performed by the frequency-to-voltage converter by comparing the reference frequency and the tacho frequency.

The phase comparison of the two frequencies compensates minor fluctuations in synchronous operation. The phase comparison circuit consists of an integrator IC15/1 that is cyclically short-circuited by the reference signal via IC19/3. This results in a saw tooth signal. This circuit is followed by a differentiating element IC19/1 and C42 which is cyclically enabled by the tacho signal. Similar to the frequency-to-voltage converter this is a sample/hold circuit with C37 serving as the charging capacitor and C42 as the holding capacitor. Refer to the following detail diagram.

The correction signal which is proportional to the phase comparison is now available at the output of IC17/1 and is added to the positive input of the comparator IC16/1. The control voltage resulting from the frequency and phase comparison now passes through a passive integrator IC16/2 and is taken via the summing amplifier IC20/1 to the pulse width modulator IC22/2.

IC21 converts the 76 kHz clock M3-C76k to needle pulses which via the transistor G23 periodically discharge the capacitor C58 that has been charged by the current source C24. A saw tooth voltage is again generated.

The DC voltage from the summing amplifier IC20/1 determines the pulse duty factor which controls the switching regulator (Q25 to Q33) via the input transistor Q31.

The operating voltage (+50.0 V) clocked by the power FETs (032 and 033) is smoothed by the storage choke L3 and C56 and supplied to the capstan motor  $M^3$ 

The capstan motor is a three-phase synchronous motor that features the same type of control as the spooling motors, i.e. one phase (M3-R, M3-T or M3-S) is connected via the corresponding transistor Q15, Q11 or Q7 respectively to the positive voltage of the switching regulator. A second phase is connected to ground by one of the three transistors Q14, Q10 or Q6 while the third phase remains de-energized.

Three Hall elements built into the motor detect the magnet field of the rotor and signal it via the three amplifiers IC5/1, IC5/2, and IC4/2 to the PROM IC9 which cyclically controls the individual phases as a function of the momentary rotational motor speed. The effect is that the electrical rotating field and the mechanical position of the motor are in harmony which is essential for a synchronous motor.

The PROM read-out direction for reverse play is determined by the M3-DIR signal from the decoder C12.

The supply voltage for the three Hall elements is decoupled from the 5 V by the two diodes D1 and

When a capstan motor stop command is initiated, the M3-STOP signal short-circuits the input and the output of IC16/1 with the transistors Q21 and Q18 respectively to ensure that no control voltage is supplied to the pulse width modulator IC22/2. The M3-STOP signal prevents control of the individual motor phases at the input 13 of PROM IC19.

The comparator IC2/1 monitors the supply voltage of the PROM IC9 to prevent simultaneous throughconnection of all three phases. The resistor R130 measures the total current through the motor and supplies this value to the comparator IC20/2. Via IC12 the two signals (current select) connect the maximum admissible starting current through the two transistors G19, G20, defined the at outputs 4 and 5 of the microprocessor, to the inverting input 6 of IC20/2.

Both comparators (IC2/1 and IC20/2) add their output currents directly to the control current Uout of the summing amplifier IC20/1.

Circuit changes effective with modification index .22:

To improve the wow-and-flutter performance at 15 ips and 30 ips, the SPEED-B signal increases the gain of IC16/1 by 6 dB via the transistors Q37 (Q2\*) and Q36 (Q3\*).

During the start phase the uncharged capacitor C53 which determines the control voltage causes an interruption. For this reason the transistor Q35 (Q1\*) supplies the starting voltage until the M3-SYNC signal indicates synchronism of the capstan motor with the preset reference frequency. At this point the capacitor C53 has also been charged with the control voltage.

\*The transistor designation in parentheses apply to the capstan PCBs 1.727.330.22 with the supplementary board 1.727.332.00 (Capstan Start CTL Board).

### 3.1.7 Command panel

The command panel (COMMAND PANEL BOARD, GR 30) processes the operator entries and indicates the states by means of various displays.

The displays are controlled by chips type SAA 1061 which also perform a latching faction. The chip control is implemented with the signals:

- DS-DATA: serial data with a leading 2-bit address
- DS-CLK: clock and
- DS-ENLED: enable function

Up to four SAA 1061 chips can be accessed with the leading 2-bit address; in the maximum system configuration three such chips are used in the tape deck itself and a fourth one in the console penthouse.

The keyboard is arranged as a matrix. In order to prevent continuous scanning of the keyboard by the CPU, the keyboard does not become active until a key has been pressed and consequently a bit of the line byte DØ ... D7 has changed. At this moment the CPU starts to scan the columns by means of Q1Ø through Q16 while simultaneously decoding the answer of the line byte. From this information it is possible to determine the exact key that has been pressed.

When the machine is powered on, the columns Q8 and Q9 are activated. As a result all default conditions set with the jumpers JPØ to JP15 will be scanned.

The VU-meters (if configured) are controlled by the precision rectifiers IC 2/1 and 2/2 as well as IC 6/1 and 6/2 respectively. The three LEDs per channel for indicating peak values at +6 dB, +9 dB, and +12 dB are driven by individual comparators. As is customary for peak indicators, the resetting time of all three LEDs is delayed by C8 (C11).

### 3.2 DISMANTLING THE ASSEMBLIES

#### WARNING:

UNPLUG THE AC POWER CORD BEFORE YOU REMOVE ANY HOUSING PANELS OR BEFORE YOU REMOVE ANY ELECTRICAL ASSEMBLY!

### 3.2.1 Headblock assembly

#### Head cover

 Unfasten two screws [A] (hexagon-socket-screw kev size 3)

#### Headblock cover

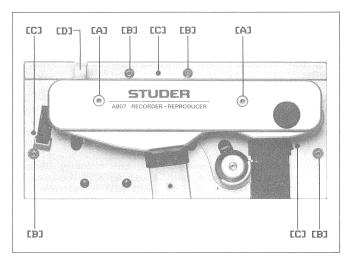
- Remove the head cover. Swing up the hinged headshield in front of the reproduce head.
- Unfasten four screws [B] (hexagon-socket-screw key size 2.5)

#### Headblock

It is not necessary to remove the head cover and the headblock cover in order to deinstall the headblock!

IMPORTANT! IN ORDER TO PREVENT INADMISSIBLE MAGNETIZATION OF THE HEADS, THE TAPE RECORDER MUST BE SWITCHED OFF WHEN YOU REMOVE OR INSTALL THE HEADRLOCK.

- Unscrew the pinch roller cover (hexagon-socketscrew key size 2.5).
- Unfasten the three screws (accessible through the holes [C] in the headblock cover) with the aid of a hexagon-socket-screw key size 3. Before removing the headblock check wether the pinch roller is in its rest position; if not, push lever D.
- Carefully lift off the headblock so that the capstan shaft will not become damaged.



#### 3.2.2 COVERS

#### Transport cover

- Remove the guide roller (small guide roller of the tape tension sensor) without any tool. The pinch roller can be removed with a screwdriver size 2.5.
- Remove the headblock cover (or headblock).
- Unfasten seven screws (two of these are accessible through one hole each in the to slicing rails) with the aid of a hexagon-socket-screw key size 2.5.
- Lift off the cover.

### Operating panel

- Turn the knobs (1 to 7, depending on recorder model) to the clockwise limit position and pull them off.
- Unfasten 4 screws (hexagon-socket-screw key size 2.5)
- Lift off the panel

#### Monitor panel

 Unfasten 2 screws (hexagon-socket-screw key size 2.5)

#### Rear panel

- Set the recorder in upright position.
- Unfasten seven screws (hexagon-socket-screw key size 2.5)
- When you reinstall the rear panel make sure that the position of the two serrated lock washers is correct: on the left and right-hand side in the middle.

### End panel/power supply cover

- Turn the recorder in upright position.
- Remove the rear panel
- Unfasten the mounting screws of the slide switch PHANTOM POWERING (if this option is installed) with the aid of a hexagon-socket-screw key size
- Unfasten the screening plate below the MIC INPUT sockets (this plate is fastened with the same screws on the PHANTOM POWERING switch).
- Unfasten the XLR <u>input sockets</u> (MIC and LINE INPUT).
  - One screw each is accessible through a fourth hole in the socket (without contact); approximately one 90° counterclockwise turn (screwdriver size 00) is required. Carefully push the inserts inward.
- Power inlet: Disconnect the stranded wire of the protecting ground (yellow/green) as well as the two stranded wires (brown and blue, in grey plastic tube) from the power inlet.
- Unfasten eight screws (hexagon-socket-screw key size 2.5).
- Also unfasten the ninth screw on the ground terminal while gripping the nut and the washer on the bottom.
- Slide the cover lightly backward.

- Unfasten the inserts of the XLR <u>output connectors</u> (LINE OUTPUT). The screw is well visible (same position as for the input sockets). Approximately one 90° counterclockwise turn (screwdriver size 00) is required. Carefully push the inserts inward.
- On reinstallation make sure that first the XLR output connectors (LINE OUTPUT) are installed with the cover in place but lightly shifted to the back. The cover can subsequently be screwed on and the remaining connectors can be mounted to this cover.
- On reinstallation make sure that the position of the two serrated lock washers is correct: on the left and right-hand side next to the connectors.

#### Wooden side panels

 Unfasten four screws each (hexagon-socket-screw key No. 4)

#### 3.2.3 TAPE DECK ELECTRONICS PCB 1.727.350 GR10

The TAPE DECK ELECTRONICS PCB with its heat sink is located in the middle of the rear part of the recorder and extends across its full width. It can be swung down in order to gain better accessibility.

- Remove the rear panel
- At the right-hand and left-hand rear corner of this assembly there is one latch each (accessible through the cutouts in the heat sink contour). Press both latches inward and swing down the printed circuit.

#### Dismantling:

- Separate all plug connections.
- Open or separate all cable ties that fix the cables against the inside of the frame.
- The pivots also consist of latches; these have to be released in order to deinstall the assembly.
- On reinstallation make sure that the latches are engaged in the corresponding recesses of the unit. The cable must be reattached to the frame by means of cable ties (Part No. 35.03.0109).

If repairs are necessary please return the circuit board together with its frame for replacement.

### 3.2.4 Amplifier module

- AUDIO CONTROL PCB 1.727.400.GR 40
- AUDIO ELECTRONICS PCB 1.727.420 GR 41/42
- AUDIO ELECTRONICS PCB 1.727.421 GR 41/42
- AUDIO ELECTRONICS PCB 1.727.425 GR 41/42 (PBO version)
- INSERT, e.g. MONO/STEREO SWITCH INPUT PCB 1.727.44Ø GR 44 OUTPUT PCB 1.727.445 GR 45

#### a.) Pulling out the amplifier module

- Remove the rear panel (see 3.2.2)
- The amplifier board is located below the TAPE DECK ELECTRONICS PCB and extends across the full width of the tape recorder. A latch is located at the lower right and lower left corner of the module. Press in both latches so that the module can be pulled back to the rear stop position.
- Separate all plug connections
- The stop consists of two additional latches.

#### b.) Removing the AUDIO ELECTRONICS PCB

- Unfasten all plug connections on both AUDIO ELECTRONICS PCBs.
- Certain PCB versions feature two retaining brackets; unfasten them with a hexagon-socketscrew key size 2.5.
- To remove the PCB channel 1 GR 41 (located closer to the front panel) the retaining bar of the INSERT PCB(s) (if configured) must first be unfastened, otherwise its removal will be obstructed by the heat sink.
- One nut pin each is pressed into the upper left and right corner of the AUDIO ELECTRONICS PCB. Lift the circuit board simultaneously on both pins by means of a suitable tool (screwdriver). To prevent damage, utmost care is necessary because of the numerous plug contacts.

### c.) Removing the INSERT PCBs (if configured)

- These modules (e.g. MONO/STEREO switch) which can be switched on and off by means of the INSERT key on the front panel are located on the AUDIO CONTROL PCB 1.727.400 between the two AUDIO ELECTRONICS PCBs 1.727.420...
- Separate all plug connections on the rear AUDIO ELECTRONICS PCB and on the INSERT PCB.
   Unfasten two screws each to the left and the
- Unfasten two screws each to the left and the right of the mounting rail and carefully lift the assembly.
- In order to remove the INSERT PCB we recommend that you remove the AUDIO ELECTRONICS PCB GR 42 (channel 2) located closer to the rear panel. This provides better access to the INSERT PCB.

### d.) Removing the amplifier module

- Remove the AUDIO ELECTRONICS PCBs and the INSERT PCBs (see above).
- Unfasten the plug connection on the narrow side of the AUDIO CONTROL PCB 1.727.400.
- The two latches that form the stop of the drawer mechanism can now be released one at the time.

#### e.) Installing the amplifier module

The installation is performed in the reverse order. When you plug in the connecting cables make sure that the connector assignment is correct (labelling on the connectors, numbering from left to right, viewed from the rear toward the recorder:

#### EL 1, EL 2b, EL 2A, EL 3, EL4...EL 7

GR 41 = channel 1, front (front panel) GR 42 = channel 2, rear

 On reinstallation also make sure that the latches engage in the corresponding guide rails.

#### 3.2.5 Panel

- COMMAND PANEL PCB 1.727.360 GR 30 (without VU meter)
- COMMAND PANEL PCB 1.727.361 GR 3Ø (with one VUmeter)
- COMMAND PANEL PCB 1.727.362 GR 3Ø (with two VU-meters)
- COMMAND PANEL PCB 1.727.363 GR 3Ø (2/2 version, without VU-meters)
- COMMAND PANEL PCB 1.727.364 GR 3Ø (PBO version, reproduce only)
- DISPLAY PCB 1.727.370.00 GR 31

#### COMMAND PANEL

The COMMAND PANEL PCB is inserted into the recorder from the front and is fixed by the command panel.

In order to remove this board proceed as follows:

- Set the recorder upright
- Remove the rear panel, swing down the TAPE DECK ELECTRONICS PCB.
- Unplug the 3-pin connector (brown/red/orange connector labelled "GR 11, EL Ø6") on the SPOOLING MOTOR CONTROL PCBs above the pinch solenoid.
- Remove the operating panel (see 3.2.2).
- Unplug the VU-meter connections, if existing (brown stranded wire).
- Pull the assembly slightly toward the front, separate the multiple plug connection, and carefully pull the connecting cable (brown/red/orange) from the SHUTTLE potentiometer to the SPOOLING MOTOR CONTROL PCB through the slot toward the front.

### SHUTTLE UNIT

- Unfasten 2 screws on the front of the push button unit (hexagon-socket-screw key size 2.5).
- Carefully pull out the SHUTTLE UNIT toward the back.

### DISPLAY PCB:

Carefully pull the PCB out of the socket. Make sure that the pins are not bent.

#### Narrow key housing:

- Squeeze the clips (on the solder side) and simultaneously pull the key housing from the component side toward the circuit board in order to cancel the mechanical pretension. The key housing can be lifted off after all clips have been released.
- Considerable pressure is required for reinstalling the housing. For correct engagement of the clips some assistance with a screwdriver may be necessary. Make sure that all clips are engaged properly.

#### Wide key housing (with large tape command keys)

 Release the four clips on the solder side. Lift off the key housing.

### VU-meters, lamps for VU-meter illumination

- Unplug the stranded red (left) and black (right) connecting wires. Release the two clips on the solder side. Remove the measuring instrument.
- The bulbs ( 6 V, 30 mA, glass socket T 1%) are located in the sockets below the measuring instrument.

#### Pilot LEDs

 All LEDs on the COMMAND PANEL PCB are of the plug-in type. The cathodes of the LEDs always point either toward the right or the top.

#### Switching mats

- The rubber contact mats can be lifted over the LED sockets after the key housings and the LEDs have been removed.
- On reinstallation make sure that the protrusions on the underside of the contact mat engage in the corresponding holes of the COMMAND PANEL PCB.

#### 3.2.6 Tape lifter

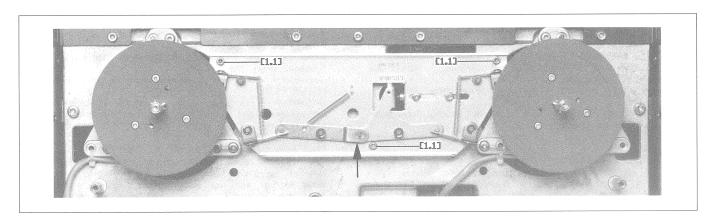
The explanations are enhanced by the illustration on page 8/4. The number in brackets refer to the information in this illustration. The same numbers can also be found on the on the opposite page.

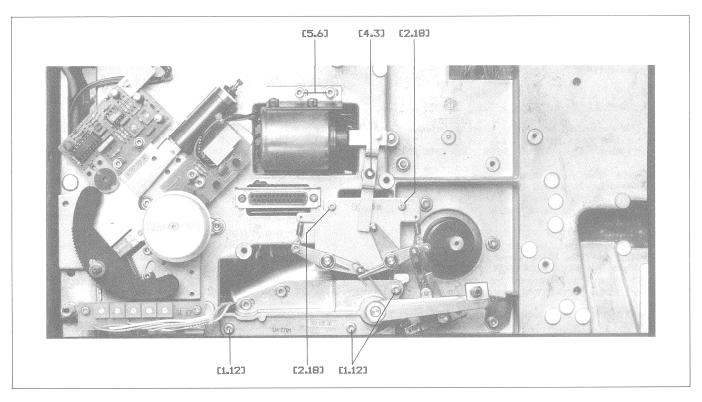
### Tape lifter assembly:

- Set the tape recorder in upright position.
- Remove the headblock (3.2.1).
- Remove the transport cover (3.2.2)
- Unscrew the monitor speaker, if configured (1 x IS screwdriver size 2, 1 x size 2.5). Do not detach the connecting cable (no plug connection).
- Remove the circlip of the driving pin [4.3].
- Unhook the tension spring of the latch on the pin of the pinch roller arm, unhook the tension rod on the left-hand tape lift lever.
- Unfasten 2 screws [2.18] (hexagon-socket-screw key size 2.5)
- Remove the tape lifter assembly while simultaneously released the plastic clips from the pin of the pinch roller arm.
- On reinstallation make sure that <u>first</u> the plastic clips and then <u>the</u> tension spring of the latch are hooked into the pin of the pinch roller arm; subsequently engage the tension rod of the latch in the left-hand tape lift lever.

#### Tape lift solenoid

- Remove the circlip of the driving lever [4.3], remove the driving lever.
- Unfasten 2 screws [5.6] (hexagon-socket-screw key size 3)
- Carefully remove the solenoid toward the front.
   Do <u>NOT tilt</u> it, otherwise the armature drops out.
- Unplug the stranded connecting wires (grey, violet) at the solenoid.
- On reinstallation make sure that the polarity is correct! (violet = +).





### 3.2.7 Pinch roller assembly

- Set the record in the upright position.
- Remove the headblock (3.2.1)
- Remove the transport cover and the rear panel (3.2.2).
- Unscrew the monitor speaker, if configured (1 x hexagon-socket-screw size 2, 1 x size 2.5). Do not detach the connecting cable (no plug connection).
- Remove the circlip of the drive lever [4.3].
- Remove the tape lifter (3.2.6)
- Unplug the stranded wires (grey, violet) from the solenoid.
- Unfasten 3 screws [1.12] (hexagon-socket-screw key size 3).
- Carefully remove the pinch roller assembly toward the front and observe the positioning of the tension lever.
- On reinstallation make sure that the polarity of the connections is correct! (violet = +".

## 3.2.8 Tape tension and tape move sensor

- TAPE TENSION SENSOR PCB 1.727.320 GR 13
- TAPE MOVE SENSOR PCB 1.727.321 GR 24
- Remove the transport cover (3.2.2)
- Unplug one connecting cable each on the TAPE TENSION SENSOR PCB and on the TAPE MOVE SENSOR PCB.
- Unfasten 3 screws (only the one without locking paint!) (hexagon-socket screw key size 2.5)
- Lift off the assembly.

#### 3.2.9 Tape brakes

- Set the recorder in upright position.
- Remove the rear panel (3.2.2)
- Unplug the 2 stranded wires (brown, violet) of the brake solenoid.
- Restore the recorder to its normal position.
- Remove the transport cover (3.2.2).
- Remove the spindles (3 screws each, hexagonsocket-screw key size 2.5).
- Unfasten 3 screws [1.1] (hexagon-socket-screw key size 2.5).
- Unplug the connecting cable.
- Apply light pressure to the movable connection of the two brake levers from the front to disthe brakes sufficiently so that the brake chassis can be carefully lifted off (see

The brake bands should be neither kinked nor touched on the inside with ungloved heads! Kinked brake bands should be replaced. If they are contaminated they can be cleaned with ethanol.

On reinstallation make sure that the polarity of the connections is correct! (violet = +).

#### 3.2.10 Spooling motors

- Set the recorder to the upright position.
- Remove the rear panel (3.2.2).
- Swing down the TAPE DECK ELECTRONICS PCB (3.2.3).
- Separate the plug connections of the spooling motor feeder lines on the SPOOLING MOTOR FILTER PCB. This circuit board is located in the righthand half of the unit below the spooling motor (viewed from the back).
- The CAPSTAN MOTOR PCB 1.727.330 GR 20 (3.2.14) should be removed before you remove the takeup motor (on the left, viewed from the rear).
- The SPOOLING MOTOR CONTROL PCB 1.727.340 GR 11 (3.2.11) should be removed before you remove the supply motor (on the right, viewed from the
- Guide out the spooling motor feeder lines through the chassis toward the front. Swing up the TAPE DECK ELECTRONICS PCB and
- lock it.
- Restore the recorder to the normal position.
- Remove the spindles (3 screws each, hexagonsocket-screw key size 2.5).
- Remove the brake chassis (3.2.9). After reinstallation the brakes must be readjusted (see 3.3.2). Do not touch the brake lining (reddish fabric) with ungloved hands!
- Unfasten three screws on each spooling motor, screwdriver size 3.
- Lift out the spooling motor toward the top.
- On reinstallation make sure that neither the ring gear nor the light barrier into which the former engages, become damaged.

### 3.2.11 Spooling motor control

- SPOOLING MOTOR CONTROL PCB (1.727.340 GR 11)
- Set the recorder in the upright position.
- Remove the rear panel (3.2.2).
- Swing down the TAPE DECK ELECTRONICS PCB
- Pull out the amplifier module to the stop position (3.2.4).

- Separate the plug connections of the spooling motor feeder lines on the SPOOLING MOTOR FILTER PCB. This circuit board is located in the righthand half of the unit below the spooling motor (viewed from the rear).
- Separate all plug connections on the SPNOLING MOTOR PCB.
- Unfasten 4 screws. The lower 3 screws can be unfastened by inserting the screwdriver between the lowered TAPE DECK ELECTRONICS PCB and the pulled out amplifier module.
- Pull out the SPOOLING MOTOR CONTROL PCB.
- On reinstallation make sure that the serrated washer is placed below the right-hand, upper fixing screw (ground connection). Also make sure that the polarity of the supply voltage feeder line is correct: the plus marking on the circuit board corresponds to the red positive line. Also make sure that the position of the insulated cover is correct: no connecting cables should be routed between the insulating cover and the circuit board.

#### 3.2.12 Spooling motor filter

SPOOLING MOTOR FILTER PCB 1.737.342 GR 12

subassembly is plugged into the SPOOLING MOTOR CONTROL PCB and fixed with 2 screws (hexagon-socket-screw key size 2.5). It should be un-plugged after the SPOOLING MOTOR CONTROL PCB has been removed.

#### 3.2.13 Spooling motor Tacho

- SPOOLING MOTOR TACHO LEFT PCB 1.737.315 GR 17
- SPOOLING MOTOR TACHO RIGHT PCB 1,727,316 GR 18

The infrared light barriers on the SPOOLING MOTOR TACHO PCBs scan the ring gear on the spooling motor. 64 pulses are generated for each revolution.

For field repairs we recommend that only the fixing screws are unfastened and the circuit board with its cable harness should be left inside the unit.

- Unfasten 2 screws (hexagon-socket-screw key size 2.5).
- For complete removal of the left-hand SPOOLING MOTOR TACHO PCB it is necessary to remove the CAPSTAN MOTOR CONTROL PCB and the SPOOLING MOTOR CONTROL' PCB (3.2.11 and 3.2.14).
- For complete removal of the right-hand SPOOLING MOTOR TACHO PCB it is necessary to remove the SPOOLING MOTOR CONTROL PCB (3.2.11).
- Unplug the connecting cables (yellow/green/black) on the SPOOLING MOTOR CONTROL PCB 1.727.340 GR 11 and unthread the cable.

#### 3.2.14 Capstan motor

- Set the recorder in the upright position.
- Remove the headblock (3.2.1).
- Remove the transport cover and the rear panel (3.2.2).
- Disengage all latches of the TAPE DECK ELECTRONICS PCB 1.727.350 GR 10 and slide the circuit board to the back and down as far as the cable connections allow it.
- Separate the cable connections of the capstan motor control feeder lines on the CAPSTAN MOTOR CONTROL PCB.
- From the front unfasten three fixing screws of the capstan motor (hexagon-socket-screw key size 3) while supporting the motor on the back. When removing the motor toward the back and the reinstalling the motor proceed carefully to prevent any damage to the capstan shaft.

#### 3.2.15 Capstan motor control

- CAPSTAN MOTOR CONTROL PCB 1.727.33Ø GR 2Ø
- Set the recorder in the upright position.
- Remove the transport cover (3.2.2).
- Swing out the TAPE DECK ELECTRONICS PCB toward the back.
- The CAPSTAN MOTOR CONTROL PCB is located to the left and above the capstan motor (viewed from the back of the recorder).
- Unplug all connecting cables, unfasten 4 screws (hexagon-socket-screw key size 2.5).
- On reinstallation make sure that a serrated washer is inserted under each of the four fixing screws (ground connection). Also make sure that the polarity of the feeder lines is correct: the plus marking on the circuit board corresponds to the red positive line. Also make sure that the position of the insulated cover is correct: no connecting cables should be routed between the insulating cover and the circuit board.

### 3.2.16 Power transformer

- Set the recorder in the upright position.
- Remove the transport cover (3.2.2)
- Remove the power supply cover (3.2.2)
- Unplug the multiple connector of the RECTIFIER PCB 1.727.31Ø GR 6 on the right-hand face (viewed from the back of the recorder).
- Unfasten the RECTIFIER PCB (4 screws, hexagonsocket-screw key size 2.5) and turn it to the left.
- Remove four shock protection tabs from the transformer terminals.
- Unplug the cable connections leading from the transformer to the voltage selector; sequence from left to right:

brown, red, orange, yellow, green, blue, violet, grey

- Unfasten the 4 fixing screws of the power transformer (hexagon-socket-screw key size 3).
- Lift out the power transformer.

When returning the power transformer for repair, please send only the transformer 1.727.305.00 without the bottom plate and cover plate.

### 3.3 MECHANICAL ALIGNMENT

Prior to mechanical alignments please check whether all connectors are correctly inserted and properly seated.

Check supply voltage and switch on.

#### 3.3.1 Brake maintenance

Brakes which lack appropriate checking and alignment can cause damage to tapes. Please check frequently if braking is smooth and constant and if there are no tape loops even with very different spool diameters.

Brakes and brake bands have to be clean and free of grease. Cleaning can be performed with methylated alcohol. Please take care that brakes or brake bands are not touched with fingers after having been cleaned.

Brake bands must not be kinked and should touch the brakes on their full width.

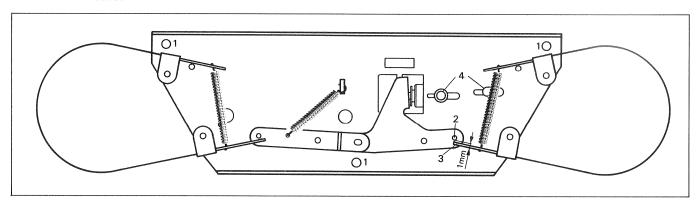
### 3.3.2 Brake adjustment

### a) Height of brakebands

When turning the reel flanges the brake bands must always be in the middle of the brake lining.

### b) Brake chassis alignment

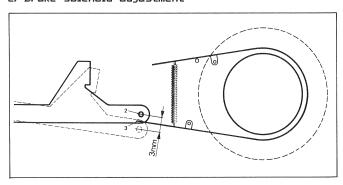
The brake bands are supported by a common chassis, the brake chassis.



By pulling the brake chassis in direction to the rear of the unit it can be aligned in such a way that the brake levers [3] have a clearance of approx. 1mm to the lifting pin [2] when braked. If a clearance of 1 mm is not adjustable the front brake lever has to be gently bent.

By shifting the brake chassis parallel to the front edge of the unit lifting of both pins can be adjusted to be equal.

#### c) Brake solenoid adjustment

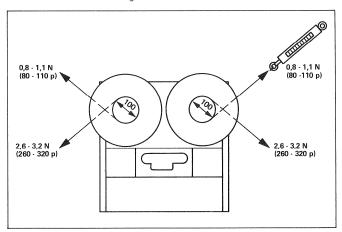


Move the tape tension sensor out of its idle position and press the "SHUTTLE" key. The brake will open; the lifting pin will travel 2 to 3 mm out of its rest position (see figure). The brake bands must not touch the brake drum when the reel flange is turned. Adjust by shifting the solenoid; tighten the screws [4] again firmly.

When turning the reel flanges the brake bands must always be in the middle of the brake lining.

### d) Checking the brake torque

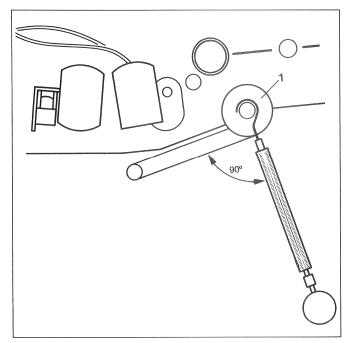
After alignment a measurement of the brake torque is advisable (see figure).



Are the obtained results different from the data in the figure and you are sure that the brakes and brake bands are absolutely clean, try to hook the springs at a different position.

#### 3.3.3 Pinch force adjustment

- Remove the pinch roller cover (Allen key 2.5) and turn the screw back into the shaft.
- Move the tape tension sensor out of its rest position. Press the TAPE DUMP key (if thy TAPE DUMP key has been jumper-programmed to a preselection key, the PLAY key must be pressed also).



Hook the spring dynamometer into the screw and pull the spring dynamometer perpendicularly to the pinch roller arm until the pinch roller lifts off the capstan shaft. The dynamometer should give a reading of 8 .. 10 N (800 .. 1000 p). If the reading is above or below this range, lightly loosen the two fixing screws of the pinch roller solenoid (Allen key No. 3) and carefully shift the solenoid until the normal value is attained. Retighten the solenoid screws.

Make sure that the arm moves smoothly to the rest position; if not, the solenoid is out of line.

### Verifying the adjustment:

- Move the tape tension sensor out of the rest position.
- Press the pinch roller arm lightly with one finger against the capstan until the pinch roller just starts to turn.
- Press the TAPE DUMP key (depending on programming together with PLAY).

Now the pinch roller should again move slightly but clearly visibly towards the capstan. This ensures that the pinch roller solenoid pulls through completely so that only the tension spring in the solenoid armature constitutes the coupling between the solenoid lever and the pinch roller arm. Check by repetition that this process is clearly visible.

If no perceptible play can be observed the pinch roller force must be increased by shifting the solenoid in line.

### 3.3.4 Head adjustment check

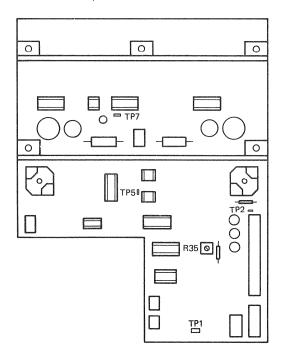
Check the headblock on a levelling plate or on a flat glass plate. Height and perpendicularity may be tested by means of the gauge order no. 10.010.001.02 and the reference block order no. 10.010.001.01.

When fixing the head block again push the headblock completely towards the rear of the unit while tightening the fixing screws.

Be absolutely sure to have power off during removing or installation of the headblock (danger of magnetizing the heads).

### 3.3.5 Tape lift solenoid

- Switch power on and load a tape. Press a wind key.
- Loosen the two lower screws of the tape lift solenoid and adjust that the tape is lifted 2 mm off the heads but without touching the raised headshield.
- Check that the aramature moves freely in the solenoid. The internal monitor speaker must be dismounted for that check.
- After alignment tighten screws again firmly. Reinstall the speaker.



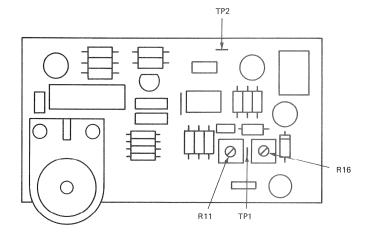
### 3.3.6 Tape tension sensor

### At first put machine in upright position:

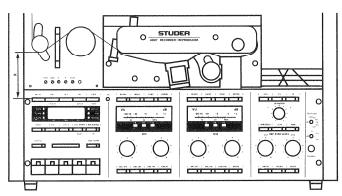
- Load tape.
- Connect Voltmeter to TP 5 (+) and TP 2 (ground) on the SPOOLING MOTOR CONTROL PCB 1.727.34Ø (GR 11).
- Hold the right tape pancake with your hand and switch the machine to FAST FORWARD.
- Adjust 10.0 Volt DC by means of R 35 on this board.
- Stop the machine.

#### Then put machine to the horizontal position:

- Connect voltmeter to TP 1 (+) and TP 2 (ground) on the TAPE TENSION SENSOR PCB 1.727.320 (GR 13).
- Press tape tension sensor to the rear until distance "X" (see figure) is 85 mm. With the upper trimmer pot R 16 adjust to  $\emptyset.\emptyset$  V; with the tape tension sensor released to the rest position (approx. distance of "X" = 46 mm) adjust +4. $\emptyset$  V by means of the lower trimmer pot R 11. The allowed tolerance is  $\pm$   $\emptyset.\emptyset$ 5 V.
- Re-check both readings and correct, if necessary.



### 3.3.7 Tape tension



- Load tape (100 mm hub) and spool up to the middle.
- Unscrew left splicing block. The potentiometers for the tape tension adjustment will become accessible.
- Adjust the following values:

PLAY: Insert a tape tension meter between the left reel and the tape tension sensor. Press the key PLAY. By means of the trimmer "Play" adjust to 60 p ± 2 p; the distance "X" should be in the range of 58 to 62 mm.

WIND: Press the key WIND. Adjust "X" equal to 57 mm by means of the trimmer "Wind".

REWIND: Press the key REWIND. Adjust "X" equal to 67 mm by means of the trimmer "Rewind".

LIBRARY WIND: Set this mode by pressing SHIFT and REWIND together. Adjust for best pancake with your preferred brand by means of the trimmer "Libr". Factory setting is "X" equal to 65 mm .

SHUTTLE: Press the key SHUTTLE. Adjust so that the tape does not move. After a slight kick of the right hand spool in either direction the tape should come evenly to stop both ways.

### 3.3.8 Lifting Pin

During spooling adjust the height of the two lifting pins thus the tape would not move up or down when the tape is lifted off the heads.

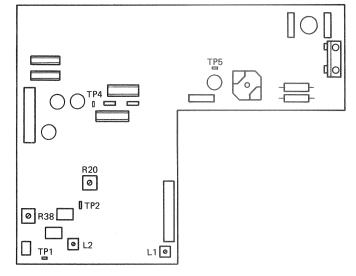
### 3.3.9 Capstan motor control

- Connect counter to TP 1 (Ø V to TP 4) on the CAPSTAN MOTOR CONTROL PCB 1.727.33Ø (GR 2Ø).
- Adjust the frequency to 5.5 MHz (± 200 kHz) by means of L 2.
- Switch the machine to 7.5 ips and press PLAY.
   Connect Oscilloscope or Multimeter (AC range) to
   TP 2 (Ø V to TP 4). Adjust maximum reading by
   means of L 1 (approx. 2 Volt RMS)

If you have a Wow and Flutter Meter, adjust flutter minimum by means of R  $2\emptyset$  (Switch machine to  $3\ 3/4$  ips).

Alternatively (if no W+F Meter is available):

- Connect oscilloscope to TP 5 (Ø V to TP 4).
   Select AC range. Adjust to minimal jitter by means of R 2Ø.
- Listen with a big screwdriver or a stethoscope to the capstan motor. The screwdriver blade should be pressed to the motor housing, the shaft to the ear. Try to minimize the mechanical noise by means of R 20.



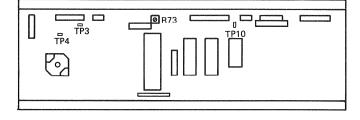
### 3.3.10 Varispeed circuit

- Connect counter to TP 2 (Ø V to TP 4) on the CAPSTAN MOTOR CONTROL PCB 1.727.33Ø (GR 2Ø).
- $\blacksquare$  Knob "DEVIATION" to  $\ensuremath{\mathcal{Q}};$  Switch Varispeed on, machine to 15 ips.
- $\bullet$  Adjust frequency by means of R 38 to 1200 Hz.

#### 3.3.11 Transparent tape sensor

- Connect DC voltmeter to TP 10 (0 V to TP 4) on TAPEDECK ELECTRONICS PCB 1.727.350 (GR 10).
- If there is no tape or clear tape in the sensor gap, the voltage at TP 10 should be approx. 5.6 V; with tape (or colored tape) approx. 10 V.

Adjustment by R 73.



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#### 4. AUDIO

### 4.1 CIRCUIT DESCRIPTION

#### Note:

Information concerning the design of the audio electronics can be found in 4.1.1. Introduction; the basic function is subsequently described with the aid of level diagrams (4.1.2. a and b). Information concerning the functional details, as well as the alignment and programming instructions, can be found beginning with Section 4.13

### 4.1.1 Introduction

The complete audio electronics are implemented on a pull-out chassis. It comprises the:

- AUDIO CONTROL BOARD, GR 40 which contains the control electronics as well as the connectors for the channel boards.
- Channel boards (AUDIO ELECTRONICS BOARD, GR41/42).

Each of these channel boards (in stereo versions there are two) contains the record, reproduce, and sync amplifier, depending on the model.

The audio electronics board for the left-hand channel is located nearest the front (viewed from the front of the machine), the board for the right-hand channel is located nearest the back.

In addition to the amplifiers, these audio electronics boards also contain the control elements for adjusting the operating parameters. Some of these are implemented as conventional trimmer potentiometers: for matching the input and output levels to the internal reference level. All other adjustments, particularly those for changing over to other tapes, other flux values or for compensating the loss at high frequencies are performed with DACs. These have the advantage that the parameters can be stored and retrieved from memory at any time.

The audio electronics boards are available in different configurations. The descriptions in this section refer to the fully configured boards. The numbers of the audio electronics boards are coded as follows:

#### 1.727.4ab.xx

#### where:

- a = 2 :for use with high- $\mu$  heads 1.317.xxx.xx
- a = 6 :for use with glass metal heads
- 1.318.xxx.xx
- b = 0 :fully configured version
- b = 2 :2-channel with VU-meters, console version (without MIC)
- b = 3 :2-channel without VU meters, but with output selector
- b = 5 :playback only
- b = 7 :same as 2, but with high tape speed
- b = 9 :same as 0 , but with high tape speed

The digital circuits required for controlling the DAC's on the audio electronics boards as well as other control circuits are located on the audio control board. In addition to the connectors for the audio electronics boards, it features additional slots into which other options can be plugged, i.e.:

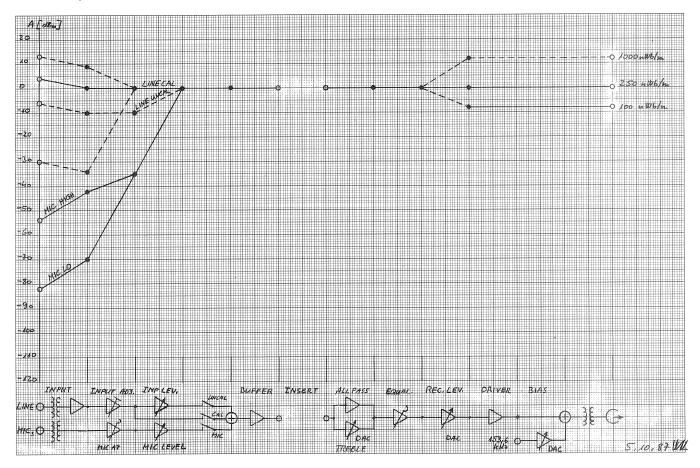
- Preamplifier for a second reproduce head (GR 43),
   Mono/stereo switch for record and reproduce
- mode with built-in test generator (GR 43 46).

The parameters for controlling the DACs are set and retrieved via the front panel (refer OPERATION, Section 2).

### 4.1.2 Level diagram

The signal flow through the unit can best be described using on the level diagram with a greatly simplified block diagram:

#### a) Record path



The unit is equipped with a balanced line input and a balanced microphone input. Both signals first pass through separate amplifiers; the basic gain (Input Adj. or Mic. Att) can be adjusted individually for each path. In the case of the line input, this adjustment is used for matching the external levels to the internal reference level of O dBu; for operation according to CCIR standard and for studio installations which are monitored with peak reading meters, it should be noted that all calibration levels are 6 dB below the peak levels.

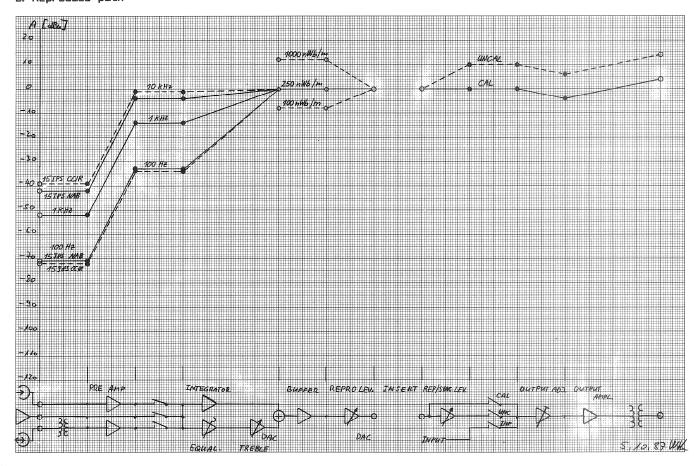
Example: peak recording level: +6dBu
Input level: OdBu
Internal ref. level: OdBu

The microphone input level can be controlled with the MIC LEVEL potentiometer. Also in the UNCAL position the line input can be adjusted with the INPUT LEVEL potentiometer.

Since the microphone path and the line path to the summation point are independent, both inputs can be operated in mixed mode (example: voice announcement to music). After the summing amplifier, a level of O dBu is available at the "Insert" point if the calibration is correct. Either the monitoring path or the output amplifier is connected to this point when the input signal is to be monitored. An additional circuit such as the mono/stereo switch can also be brought into the circuit at this point.

The signal path is subsequently split: a high-pass (TREBLE) path with DAC controllable gain for treble adjustment, and a wide-band path with group delay equalized by an all pass filter. This element is followed by the fixed, selectable standard equalization networks, the record level controller for determining the desired tape flux (also implemented with DACs), the bias superposition, and the record head.

### b) Reproduce path



The reproduce amplifier has three selectable inputs:

- from the normal reproduce head via the preamplifier to the audio electronics board,
- from a supplementary reproduce head (if configured) via a separate preamplifier which is plugged into the audio control board, or
- from the record head (sync function, it configured).

The reproduce equalization can be adjusted by means of a DAC; an integrator is responsible for the basic compensation of the amplitude response which increases proportionally with the frequency. Also the reproduce level can be matched via DAC to the previously selected tape flux. After this DAC an insert point with internal reference level is reached. In the input mode the input signal from that insert point is picked up here.

The output line level can also be adjusted (UNCAL position) or be selected with a fixed setting (CAL position).

#### 4.1.3 Input amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx

The line input and the microphone input are each taken via a low pass filter in order to suppress high-frequency noise signals.

The basic gain for the line input is adjusted with R18; however the unit must be operated in CAL mode. In order to simplify the alignment, three adjustment ranges can be selected

Input level range: Jumper JP 1 in position:

-4 to +12 dBu A -17 to -1 dBu B -30 to -14 dBu C

The signal from the microphone is taken via an input transformer to the amplifier. In order to prevent overloading of the amplifier when high-level microphones are used, the gain can be decreased by approx. 28 dB by means of the MIC ATT key. The three paths Line cal, Line uncal, and Microphone are selected by the logical control signals:

C - CALINX (line cal)
C - UNCINX (line uncal)
C - MICONX (microphone)

This selection takes place in IC 4. Since several signals can be selected at the same time, mixdowns are also possible (example: voice announcement to music).

### 4.1.4 Record amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx

From the insert point the audio signal A - RECINX is split into two paths: a high-pass path (TREBLE) in which the treble adjustment is made by the DAC IC 11/2, and a wide-band path (IC 5/1 with connected all-pass filter IC 6/2 for compensating the group delay). In IC 6/1 the two paths are summed again. The signal now passes through the standard equalization stage (IC 8/2) in which the equalization is changed, as a function of the selected standard and speed, by the control signals C-EQA and C-EQB.

Certain standard equalizations contain the 3180  $\mu$ s time constant which becomes active at low frequencies (See Fig.4.2.1a).

This bass equalization is enabled by the jumpers W4 to W7 which are configured depending on the speed version. On standard models shipped by the factory the jumpers W5 and W7 are installed.

The STUDER A807 professional tape recorder is equipped with a facility for optimizing the output level at high frequencies according to the DOLBY HX PRO system. This system is enabled with the jumper JP 2; when it is in the ON position (factory setting), HX PRO is active.

The time constants for the buildup and decay of the RF bias and the voltage for the erase head are generated by the circuits around IC 7/1 and 7/2 respectively. The RF bias is adjusted with the DAC IS 12; it produces a DC voltage at the output while causes the voltage of the RF bias to be adjusted in the OTA (Operational Transconductance Amplifier). The DOLBY HX PRO control circuit intervenes at this point.

The erase head voltage is controlled via the OTA IC 16/1. For calibration it is adjusted with R 139 (measurement on test point TP 3).

It should be noted that the erase circuit is aligned to minimum current with the aid of T 3 (measurement on TP 4).

#### 4.1.5 Reproduce amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx
The signal from the reproduce head is first
amplified in a low-noise preamp (Q 26 and IC 19).

The analog switch IC 17 selects between the normal reproduce head, the record head, as the sync reproduce head, or an optional second reproduce head. The sync preamplifier and the preamplifier for the second reproduce head, that can be plugged into the audio control board, basically have a similar design to the reproduce amplifier.

The filter with L 6 and C 95 to C 97 is used to suppress bias components in the output voltage.

The signal path is subsequently split into two. IC 20/2 is wired as an integrator and thus equalizes the reproduce frequency response, which basically increases in proportion to the frequency when the reproduce head is connected into a high impedance. At low frequencies a small amount of ripple is produced in the frequency response by the head face. This ripple is compensated by the combination of R 219 and C 129. At low tape speeds this RC time constant is bypassed by FET Q 24.

The resistors selected by the analog switch IC 18/2 limit the integration behavior at very low frequencies; the standard equalization of 3180  $\mu s$  is thus activated (for NAB).

The upper signal path is laid out in such a way that it dominates, starting with medium frequencies. This means that as the frequency rises the response changes from integrator characteristic to a linear condition. This transition frequency corresponds to the standard equalization. At even higher frequencies the signal is again branched off via C 99 and amplified by IC 21/1. The gain of this path can be influenced with DAC IC 23/3 (TREBLE adjustment).

All three paths are summed in IC 25/1. It is followed by the DAC IC 23/1 for controlling the total reproduce level.

#### 4.1.6 Line amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx
The line amplifier (output amplifier) receives its input signal A - DRVINX from the reproduce insert point. This signal first passes through a voltage divider which is activated when FET Q 28 conducts. This FET is activated as soon as double the nominal tape speed is exceeded in spooling mode. With cueing enabled, this prevents the occurrence of high output levels and high frequencies which are annoying and could even destroy the connected speaker. This voltage divider decreases the signal level by approx. 12 dB and also limits the frequency response.

With the analog switch IC 26, one of three line amplifier sources are selected:

- Normal reproduce path
- Reproduce path via repro level control and IC22/1 which provides a basic gain of 10 dB, or
- directly from the insert point of the input amplifier (signal A - PREOUX).

In certain modes, IC 26 can disable (mute) all three inputs.

To prevent clicks at the output when the unit is switched on or off, the relay K 2 interrupts the signal path before and after the output amplifier.

At the output the adjustment of the output level (with R 246) can be changes by selecting different adjustment ranges.

Output level range: Jumper JP 3 in position:

# 4.1.7 Monitor (standard version)

#### See circuit diagram 1.727.120.xx

With the monitor it is possible to monitor either the input or the reproduce signal. The source signal is tapped at the insert points. If the input signal is monitored, the position of jumper JS 1 (left-hand channel) or JS 2 (right-hand channel) on the audio control board defines whether the signal is monitored before or after the insert point. This selection is only meaningful if internal or external options are connected to the insert points and if the jumper connections W 2 or W3 (on the audio control board) are consequently open.

The desired signal (input or reproduce) is selected by pulling out (input) or pushing in (output) the knob of a logarithmic potentiometer which is also responsible for the volume control. The output signal is tapped after the output selector, in parallel with the VU-meters. The selected signals are subsequently amplified by 20 dB by means of one amplifier per channel (IC 11/1 left, IC 11/2 right). The monitor signal is available at a stereo jack socket; if headphones are not plugged in, the signals are fed to the speaker amplifier.

#### 4.1.8 Stereo monitor (special version)

# See circuit diagram 1.727.910.xx

With this monitor it is also possible to monitor either the input or the reproduce signal picked up at the corresponding insert points. The explanations given in 4.1.7 similarly apply to this version.

In addition two auxiliary inputs (AUX 1 or AUX 2) can be selected. By changing the setting of jumper JP 1 on the monitor board, it is possible to determine whether Aux 1 is used as the source for both monitoring channels or whether AUX 1 and AUX 2 are to be considered as a stereo pair.

The inputs are selected by IC 4. The logical control for this IC is also located on the monitor board. The signals of the momentary-action push buttons Input, Tape, and Aux are stored in the NOR flipflops IC 14 and 15. The stored states are indicated by the LEDs DL 1 through 3. The logical gating before the flip flops prevents double assignment and causes a reset when new input signals become available. The monitoring left, right, or stereo, is enabled in a second analog switch IC 6. The logical control of IC 6 is similar in design to that of the source selection. The monitoring volume is determined by a stereo potentiometer. If no headphones are plugged in, the socket contact connects the input to the output amplifier. A muting circuit (Q 1 or Q 2) is located at the input of the speaker amplifier. It interrupts the signal path in the event of a remote fader start. The monitor speaker thus cannot interfere when the program is on the air.

# 4.1.9 Mono switch and test generator (option)

#### a.)Test generator

See circuit diagram 1.727.441.xx
The test generator produces the following frequencies by changing the ext. componets to IC 5:

60, 125, 1k, 10k, and 16 kHz

The level is attenuated in steps of 0, -10dB, -20dB, and OFF by the analog switch IC 6. IC 7 is the output amplifier.

The test signal is mixed down to the audio channels via IC 1/1 or 1/2.

#### b.)Mono switch, input

See circuit diagram 1.727441.xx or 1.727.451.xx From the outputs of the two amplifiers IC 1/1 and 1/2, signals are branched off and added by the summing amplifier IC 2/1. A prerequisite for proper mono signal creation is that the jumpers JP 1 and JP 2 are in position A. Stereo or mono is selected with the analog switch IC 3/1 and 3/2.

#### c.)Mono switch, output

See circuit diagram 1.727.442.xx or 1.727.452.xx At the outputs of the two amplifiers IC 4/1 and 4/2, signals are branched off and combined to a mono signal by the summing amplifier IC 3/1. Depending on the position of jumpers JP 1 and JP 2, the mono signal appears either at the left—hand, the right—hand, or both outputs (this selection is performed by the analog switches IC 2/1 and 2/2).

# 4.1.10 Control logic (AUDIO CONTROL BOARD, GR 40)

See circuit diagram 1.727.400.xx or 1.727.401.xx
The microprocessor is responsible for all control functions of the audio electronics. The control signals and the data are generated in the CPU (IC12, TAPE DECK ELECTRONICS, GR10) and output serially via IC 28 on five lines.

The signals on these lines are as follows:

AS - WREN	Write enable
AS - STRAB	Strobe for data register and
	chip select AB
AS - CLK	Clock
AS - DATA	Serial data
AS - STR	Strobe for the other registers

The data arrives via the AS - DATA line, all other lines carry control signals.

The valid data records are latched into the instruction registers IC 1 through 5 and IC 9, depending on the control signal. The individual registers fulfill the following functions:

IC3	register	1:	Input control	see	Fig.4.1.1
IC5	register	2:	EQ control	see	Fig.4.1.2
IC4	register	3:	Record control	see	Fig.4.1.4
IC9	register	4:	Output control	see	Fig.4.1.5
IC1	register	5:	Address register	see	Fig.4.1.6
IC2	register	6:	Data register	see	Fig.4.1.7

The last two registers are used in conjunction with the AS - STRAB control signal for controlling the DACs.

The truth tables of the registers are summarized below; commands with the prefix C (control) are control commands for the audio boards, commands with the prefix S (switch) are initiated when an input function (e.g. key) is actuated.

However, these do not occur individually because the keys are read out from a matrix. The commands with prefix S are sent to the CPU already in coded form

The generation of the commands C - EQA and C - EQB depend on whether the machine is a standard, a high-speed or a low speed version. The truth table is as follows:

# VERSION: Jumper W5 Jumper W6 in pos. in pos.

Standard	Α	Α
High-speed	В	В
Low-speed	В	C

Jumper W 1 is not needed when a mono erase head is used.

# 4.1.11 Preparation of the erase and bias

See circuit diagram 1.727.400.xx or 1.727.401.xx The 307 kHz clock frequency derived from the internal clock signal (IC 11 TAPE DECK ELECTRONICS, GR 10) is supplied to the AUDIO CONTROL BOARD (ASHFCLK). IC 12 functions as a frequency divider, IC 13/1 and 13/2 as a low-pass filter. From the 153 kHz square-wave signal, this circuit filters out the basic frequency for the bias. A distortion of less than 0.1% is achieved.

# 4.1.12 Audio Control Board

# Logic tables:

REGISTER 1:	REGISTER 1: Input Control CH1 (IC 3)							•	8	B	8	C-MICAT 1 C-MICON 1 C-CALIN 1 C-UNCIN 1	
S-MICAT 1	S-MICON 1	S-LINON 1	S-UNCAL 1									Notes :	
0	0	0	0	х	×	×	×	0	0	0	0	Line off, Mic off	ж
0	o	0	1	х	х	×	х	0	0	0	0	Line off, Mic off	水
0	0	1	0	×	х	×	×	0	0	1	0	Line on Cal	車
0	0	1	1	х	×	×	х	0	0	0	1	Line on Uncal	車
0	1	0	0	х	×	×	×	0	1	0	0	Mic on	車
0	1	0	1	ж	×	×	х	0	1	0	0	Mic on	*
0	1	1	0	х	х	×	X	0	1	1	0	Mic on, Line on Cal	車
0	1	1	1	х	×	×	×		1	0	1	Mic on, Line on Uncal	車
1	0	0	0	х	×	×	×	1	О	0	0	Line off, Mic off	#
1	0	0	1	х	×	×	×	1	0	0	0	Line off, Mic off	#
1	0	1	0	×	×	ж	X	1	0	1	0	Line on Cal	#
1	0	1	1	×	×		Х	1	0	0	1	Line on Uncal	#
1	1	0	0	х	×	×	×	1		0	0	Mic on attenuated	#
1	1	0	1	х	Х	×	×	1	1	0	0	Mic on attenuated	#
1	1	1	0	х	×	×	×		1		0	Mic on att., Line on Cal	#
1	1	1	1	×	×	×	×	1	1	0	1	Mic on att., Line on Uncal	
Mic sensitivity: * = -82 dBu / # = -54 dBu													

S-MICAT 1 The microphone input level sensitivity changes.
S-MICON 1 The microphone input will be switched on or off.
S-LINON 1 The line-input will be switched on or off.
S-UNCAL 1 The line level control potentiometer will be switched on or off.

	REGISTER 1: Input Control CH2 (IC 3) (same as CH1 exept)					12						C-MICAT 2 C-MICON 2 C-CALIN 2 C-UNCIN 2
S-MICAT 2	S-MICAT 2 S-MICON 2 S-LINON 2 S-UNCAL 3											Notes :
0	0	0	0	0	0	0	0	×	×	х	×	Line off, Mic off *
			##			***	**	**		0.0	**	11 (12 (12 (12 (12 (12 (12 (12 (12 (12 (
1	1	1	1	1	1	0	1	×	×	×	ж	Mic on att., Line on Uncal #

Fig.4.1.1

REGISTER 2: EQ Control (IC 5)								0	102	10)	2	C-EQ-M (A	Activ	LOW) LOW)
S-NAB	5-5PD-F	5-SPD-M	S-SPD-S									Notes :	HS-Ver	eion:
0	0	0	1	х	×	×	х	0	1	1	0	CCIR 3.75ips	CCIR	7.5ips
0	0	1	0	ж	х	×	×	0	1	0	1	CCIR 7.5 ips		15 ips
0	1	0	0	х	×	×	×	0	0	1	1	CCIR 15 ips		30 ips
1	o		1	×	×	×	×	1	1	1	0	NAB 3.75ips		7.5ips
1	0	1	0	х	×	×	×	1	1	O	1	NAB 7.5 ips		15 ips
1	1	0	o	х	Х	×	х	1	0	1	1	NAB 15 ips	NAB	30 ips

REGISTER 2:		證	8	10					C-SECHD C-OUTSW C-CUEAT (Activ LOW) C-INSERT			
S-SECHD	S-POWER	S-LIFTER	S-INSERT									Notes :
0	0	0	0	0	0	0	0	ж	×	×	×	
0	1	0	0	0	0	1	0	×	×	×	×	Power-ON
0	1	0	0	0	1	1	0	×	×	×	×	2 sec after Power-DN
0	1	0	1	0	1	1	1	×	×	×	×	INSERT enabled
Ō	1	1	0	0	1	0	0	×	ж	×	×	Lifter disabled, Cue att.active
0	1	1	1	0	1	0	1	×	×	×	×	Lifter disabled, INSERT enabled
1	1	0	0	1	1	1	0	ж	×	×	×	Second REPRO-Head enabled
ō	0	×	×	х	0	×	×	×	х	ж	×	Immediately after Power-OFF

S-NAB NAB equalisation is chosen with S-CCIR selected, S-NAB will be cancelled and vice versa.

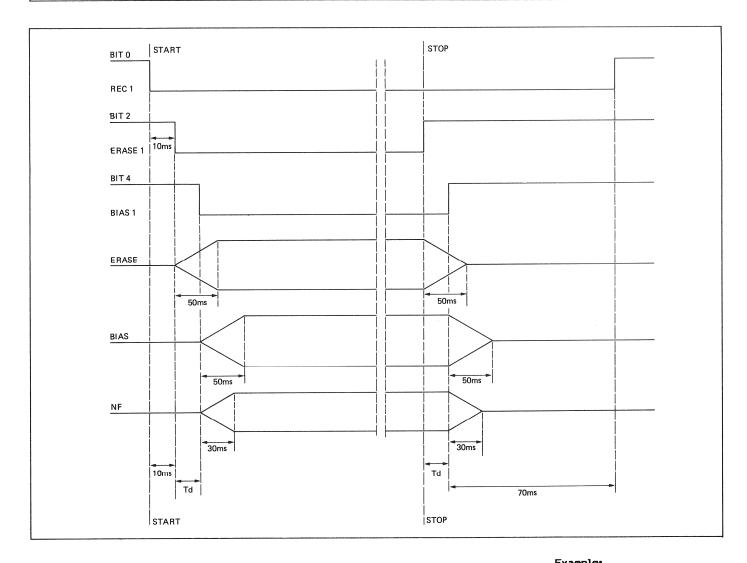
S-SPD-F High tape speed
S-SPD-M Medium tape speed
S-SPS-S Low tape speed
S-SECHD Enabling of the second reproduce head
S-POWER Tape recorder switched on
S-LIFTER Tape - lifter enabled
S-INSERT Insertation (or enabling) of an option like Mono/Stereo switch or testgenerator etc.

Fig.4.1.2

For the subsequent processing of the command C-SECHD refer to Decoder IC 8. (Fig.4.1.3)

DECODER IC				88	8	<b>6</b>	m	88	C-REPRO1 C-SYNC1 C-SECRP1 C-REPRO2 C-SYNC2 C-SECRP2	
C-SECHD	C-SYNC1	C-SYNC2							CH 1	CH 2
0	0	0	1	0	0	1	0	0	Reproduce	Reproduce
0 1	Ö	1	1	O	0	0	1	0	Reproduce	Sync
	1	Ō	0	1	0	1	0	0	Sync	Reproduce
ő	1	1	o	1	0	0	1	0	Sync	Sync
1	Ö	0	lo	0	1	0	0	1	2. Head, Repro	2. Head, Repro
1 1	ō	1	0	0	1	0	1	0	2. Head, Repro	Sync
1 1	1	0	0	1	0	0	0	1	Sync	2. Head, Repro
1	1	1	þ	1	0	0	1	0	Sync	Sync

REGISTER 3: Re	100	9		<b>a</b>	<b>m</b>		(a)	8	Reserve C-BIAS2 C-ERASE2 C-REC2 Reserve C-BIAS1 C-ERASE1 C-REC1		
S-READY1	S-READY2	S-REC					***************************************				Notes :
0	0	0	×	0	0	0	×	0	0	0	Refer to drop in/
1 1	o	0	×	0	0	0	×	0	0	0	drop out time table
0	1	0	×	0	0	0	×	0	0	0	
1	1	0	х	0	0	0	×	0	0	0	
0	o	1	×	0	0	0	×	0	0	0	By activating the signal
1	0	1	×	0	O	0	×	1	1	1	S-PLAY again, S-REC will
0	1	1	×	1	1	1	×	0	0	0	become = 0 (LOW)
1	1	1	×	1	1	1	×	1	1	1	



Τd

Timedelay in ms Distance between erase — and record head Tape speed in cm/s Lh Vt

Example: (Td = 115ms) (Lh = 43.8mm) (Vt = 38.1cm/s)

REGISTER 4:	8	18	Si	<b>a</b>	88	<b>10</b>	80	9	C-INPUT2 C-UNCOU2 C-CALOU2 C-SYNC2 C-INPUT1 C-UNCOU1 C-CALOU1 C-SYNC1			
S-INPUT1	S-SYNC1	S-REPRO1	S-UNCOU1									Notes:
1 0 0 1 0	0 1 0 0 1	0 0 1 0 0	0 0 0 1 1	x x x x	× × × × ×	× × × ×	* * * * *	1 0 0 1 0	0 0 0 0 1 1	0 1 1 0 0	1 1 0 0 1	See note 1 and note 2 Input 1 calibrated note 2 Sync 1 calibrated Repro 1 calibrated Input 1 calibrated Sync 1 uncalibrated Repro 1 uncalibrated
S-INPUT2	S-SYNC2	S-REPRO2	S-UNCOU2									Notes :
1 0 0 1 0	0 1 0 0 1	0 0 1 0 0	0 0 0 1 1	1 0 0 1 0	0 0 0 0 1 1	0 1 1 0 0	1 1 0 0 1	× × × ×	× × × × ×	× × × ×	× × × ×	See note 1 and note 2 Input 2 calibrated note 2 Sync 2 calibrated Repro 2 calibrated Input 2 calibrated Sync 2 uncalibrated Repro 2 uncalibrated

A807

The above push buttons will cancel their function when pressing them again.

# Note 1: MUTE CONTROL

The output signal will be muted during each transient Status like starting and braking phase.

# Note 2: SYNC/INPUT change over

By entering the record command while the machine is in SYNC — mode, the record enable signal S-READXY automatically switches off the signals CALOU1, CALOU2, UNCOU1 and UNCOU2 and enables the INPUT1 resp. INPUT2 signals instead.

Entering the PLAY — Command again will cancel the above signals and the previous status will return.

Fig.4.1.5

# REGISTER 5: Address Register (IC 1)

To control the audio parameters

- TREBLE channel 1,2 ; Rec. Repro Parameter: - LEVEL channel 1,2 ; Rec, Repro - BIAS channel 1,2 ; Rec Control signals: - AS-STRAB (A/B)

- WR-RECx , WR-BIASx , WR-REPRx

- A-DO...A-D7

	•	æ				9	8	•	Reserve WR-BIAS2 WR-REC2 WR-REPR2 Reserve WR-BIAS1 WR-REC1 WR-REPR1
STROBE A/B						one and the second second			Notes:
×	×	0	0	0	×	0	0	0	
0	×	0	0	0	×	0	0	1	Level , channel 1, reproduce
1	×	0	0	0	×	0	0	1	Treble, channel 1, reproduce
O	×	0	0	0	×	0	1	0	Level , channel 1, record
1	×	0	0	0	×	0	1	0	Treble, channel 1, record
×	×	0	0	0	×	1	0	0	Bias , channel 1
1	×	0	0	1	×	0	0	0	Level , channel 2, reproduce
1 0	×	0	0	1	×	0	0	0	Treble, channel 2, reproduce
1	×	o	1	0	×	0	0	0	Level , channel 2, record
l n	×	ō	1	0	×	0	0	0	Treble, channel 2, record
×	×	1	0	0	×	0	0	0	Bias , channel 2

After pressing one of the following push buttons, new audio parameters will be read into the DAC's:

S - Speed-x (Tape speed) S - CCIR S - NAB (Equalization) (Equalization) S - TAPE-x (Tape sort) etc.

Fig.4.1.6

The timing can be seen from the following diagram of the Data Register (Fig.4.1.7)

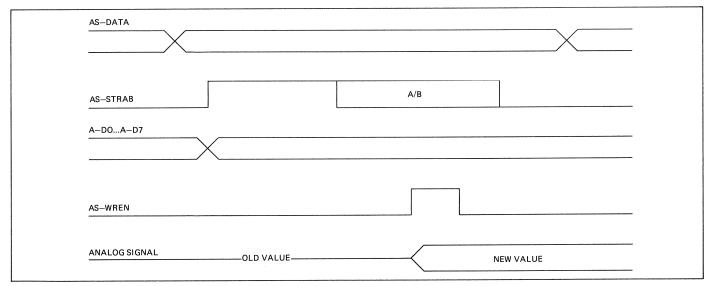


Fig.4.1.7

#### 4.2 CALIBRATION

The audio parameters are read from RAM into the registers of the audio amplifier whenever the tape speed, the tape type, or the equalization standard is changed.

When new parameters are set with the UP/DOWN [21/22] key or via the serial interface, the stored parameters in the RAM and in the registers of the audio amplifiers are overwritten.

The audio parameters are also stored in an EEPROM when the machine is switched off. This nonvolatile memory retains the data also while the machine is switched off. The data are recopied into the RAM when the machine is switched on again.

If the data in the RAM are lost, all parameters are set to zero, i.e. all registers are closed.

### 4.2.1 Introduction

#### General

The assumption is that the tape recorder to be calibrated has been mechanically adjusted to specifications (particularly with respect to the tape tensions and the tape transport).

Before you start with the calibration of the tape recorder, clean and demagnetize the soundheads and the tape guidance elements.

The calibration of the tape recorder should always be performed in the following order:

# REPRODUCE ALIGNMENTS:

# Preferred studio tape speed:

- Level
- Azimuth alignment of the reproduce head gap (see note 1)
- Frequency response (see note 2)

# All other tape speeds:

- Level
- Frequency response (see note 2)

#### Note 1:

Depending on the reference tape, minor deviations can occur between the different speeds. In this case the final azimuth alignment should be made with the preferred studio speed.

#### Note 2:

Normally the studio tape recorders are calibrated with full-track reference tapes. Due to fringing, frequency response errors occur in stereo and 2-channel machines at low frequencies, i.e. the low frequencies appear to be overemphasized.

This measurement error does not occur on tapes with correct guard track width or when a recording with tape is made.

#### RECORD ALIGNMENTS

#### Preferred studio tape speed:

- Record level preadjustment
- Azimuth alignment of the record head gap (bias parameter at approximately the same value for both channels!)
- Bias
- Record level
- Frequency response

#### All other tape speeds:

- Record level preadjustment
- Bias
- Record level
- Frequency response

#### SYNC REPRODUCTION

- Level
- Frequency response

#### 4.2.2 Level definition

Voltage level O dBu = 0.775 V

Also refer to Figs. 4.2.1 and 4.2.2

# Voltage level O dBm = 0.775 V:

It is based on the voltage drop with an output of 1mW into any load resistance. Across a load of 600ohms, the voltage drops by 775 mV. This voltage has been defined (without reference to a load) as a voltage level of 0 dBm.

More correct is, however:

O dBu = 0.775 V: corresponds to the voltage of 775 mV without reference to a load resistance.

#### Line level

The level that,

- appears on the output of a tape recorder when a tape with reference flux is reproduced.
- fed to the input of a tape recorder produces reference flux on the tape.

# Voltage reference level:

CCIR designation for line level; this level produces an indication of O dB on a quasi peak program meter (PPM).

# Standard reference level (operating level):

Designation commonly used in the USA for the level required for a tape flux of 250 nWb/m (for recording on high-quality tapes) or 200 nWb/m (for recording on standard tapes); this level gives a reading of 0 VU on a VU-meter.

#### Peak level:

Designation commonly used in the USA for a level that is 8 to 10 dB higher than the operating level. For reasons of simplicity, a peak level of +6 dB relative to the operating level (double the voltage value) is used for calibrating a tape recorder.

dB	Voltage	dB	Voltage
0	0,775	0	775mV
+1	0,8690	-1	691mV
+2	0,9757	-2	615mV
+3	1,097	-3	548mV
+4	1,23V	-4	489mV
+5	1,387	-5	436mV
+6	1,55V	-6	388mV
+7	1,73∨	-7	346mV
+8	1,95V	-8	308mV
+9	2,187	-9	275mV
+10	2,457	-10	245mV
+11	2,757	-11	218mV
+12	3,08V	-12	195mV
+13	3,467	-13	173mV
+14	3,887	-14	155mV
+15	4,367	-15	138mV
+16	4,897	-16	123mV
+17	5,487	-17	109mV
+18	6,15V	-18	97,5mV
+19	6,91V	-19	87mV
+20	7,750	-20	77,5mV

Fig.4.2.1

# IEC/CCIR-Alignment

Definition:	Line Level [dBm]	VU Meter Ind. [VU]
"Bezugspegel":	+6	+6

# NAB-Alignment

-	Definition:	Line Level [dBm]	VU Meter Ind. [VU]		
	Oper. Level:	+4	0		
	"Peak Level":	+10	+6		

#### 4.2.3 Equalizations

Equalization networks that correct the frequency response are installed in the record and reproduce path.

The attack points of the correction are referred to as the transition frequencies or the transition time constants (1 / 2  $\pi$  f) and have been standardized by various organizations (IEC, NAB, AES, CCIR).

Tape	Transition Frequencies,LOW and HIGH									
Speed	(Transition Time Constants)									
	IEC-1968	IEC-1968 NAB-1965 NAB-1975								
9,53 cm/s	50Hz;1800Hz	50Hz ; 1800Hz	()							
3,75 ips	(3180μs;90μs)	(3180μs; 90μs)								
19,05 cm/s	OHz;224OHz	50Hz;3150Hz	OHz;315OHz							
7,5 ips	(ω;70μs)	(3180μs;50μs)	(Φ;50μs)							
38,10 cm/s	OHz;450OHz	<b>50Hz</b> ;3150Hz	()							
15 ips	(ω;35μs)	(3180µs;50µs)								
76,20 cm/s 30 ips	OHz;900()Hz (ω ;17,5μs)	AES 1971 OHz;9000Hz (ω ;17,5μs)	······· )							

Fig.4.2.1a

# 4.2.4 Magnetic reference flux, standard calibration data

When a recording with reference flux is reproduced, line level is produced on the output of the tape recorder.

The following standard settings are made by the factory:

#### CCIR settings:

- Line voltage: 220 V
- Line frequency: 50 Hz
- Line level: + 6 dBu
- Reading of the VU-meter at line level: + 6 VU
- Load impedance: 10 kohm
- Tape type: AGFA PER 528

# Tape flux with line level:

IACAM WALLI	was see a	Same V Same alle Sti		
3,75	ips,	stereo:	400	nWb/m
3,75	ips,	mono:	250	nWb/m
7,5	ips,	stereo:	510	nWb/m
7,5	ips,	mono:	320	nWb/m
15	ips,	stereo:	510	nWb/m
15	ips,	mono:	320	nWb/m
30	ips,	stereo:	510	nWb/m
30	ios.	mono:	320	nWb/m

# NAB settings:

- Line voltage: 220 V
- Line frequency: 50 Hz
- Line level: + 4 dBu
- Reading of the VU-meter at line level: + 0 VU
- Load impedance: 10 kohm
- Type tape: Scotch 3M 226

# Tape flux with line level:

or.	mono	and	stereo:	3,75	ips	200	nWb/m
				7,5	ips	250	nWb/m
				15	ips	250	nWb/m
				30	ios	250	nWb/m

Until further notice the machines leaving the factory will be calibrated to one of these two standards.

STUDER REWOX ABO7 Section 4/15

#### 4.2.5 Calibration tapes

Calibration tapes are used for aligning the reproduce path of tape recorders. They are generally magnetized across their full width. A separate tape is used for each tape speed.

#### IMPORTANT:

In order to prevent unintentional erasure of these costly tapes, all channels should be switched to SAFE (i.e. the READY keys [31/42] are to be deselected so that the red LED is dark).

#### The reference tapes contain the following sections:

#### evel tone sections

(Reference flux = 320 nWb/m for 7½, 15, and 30 ips; 250 nWb/m for 3 3/4 ips) produces line level in play mode on the output of the tape recorder.

The output level should be adjusted to the specified line level, while the approx. 60 to 180 sec. level tone section is being played.

NAB calibration tapes with a reference flux of 200 nWb/m produce an output level of -4 dB relative to 320 nWb/m; CCIR calibration tapes with a reference flux of 320 nWb/m produce in stereo mode an output level of -4 dB relative to the line level and 510 nWb/m.

Reference frequency: 333 Hz or 500 Hz at 3 3/4 ips; 1 kHz at 7½ to 30 ips (there are also NAB calibration tages with 700 Hz reference frequency).

#### Level adjustment:

 If the tape recorder is to be calibrated with a different (usually higher) reference level, the reference flux difference is computed according to the following formula:

#### Example:

Reference flux on the tape = 200 nWb/m desired reference flux, e.g. for a tape with high dynamic range = 510 nWb/m.

Difference = 20 log[10] - 
$$\frac{510 \text{ nWb/m}}{200 \text{ nWb/m}} = 8 \text{ dB}$$

Refer also to Fig.4.2.2

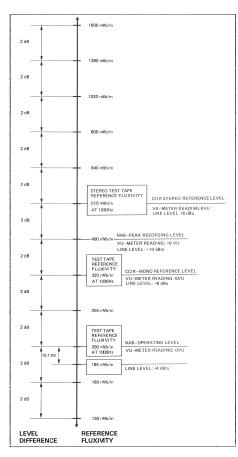


Fig.4.2.2

#### Azimuth alignment section:

Used for correcting the perpendicularity (azimuth alignment) of the reproduce head gap. This section comprises a shorter section with the reference frequency (for coarse adjustment) and a longer section with 10 kHz for fine-adjustment. NAB calibration tapes can be arranged differently. The level of this section is normally 10 dB below the reference level.

The alignment is made by means of the azimuth adjustment screw until the normal output voltage is achieved. In two-channel and stereo recorders, alignment to minimum phase difference between the two channels is possible with the aid of a 2-channel oscilloscope or an AF millivoltmeter with two inputs and summation.

#### Important:

If major adjustments on the reproduce head are made, additional voltage peaks occur, however with lower level!

If the reproduce amplifier operates with correct equalization, there is no difference between the reproduce levels of the reference frequency and the 10 (8; 16) kHz recording.

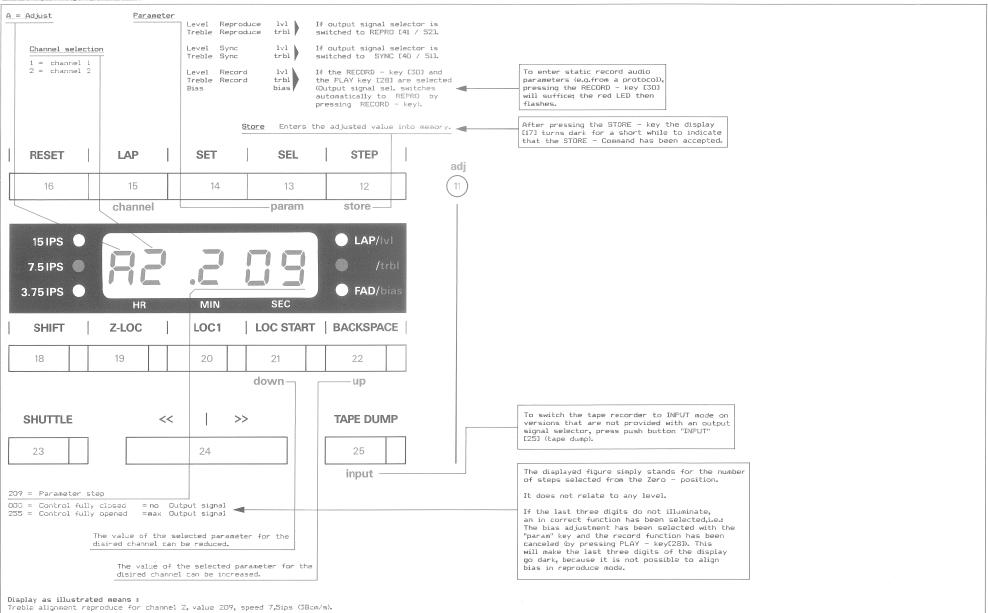
#### Frequency alignment section:

Used for determining and adjusting the operational reproduce frequency. NAB calibration tapes exist on which the frequencies differ from the following table.

Reference Tape		CCIR				NAB			
Tape-Speed [cm/s;ips]	9,5	19	38	76	3,75	7,5	15	30 AES	
Rev.Lev.Sec.: Ref.Freq. Ref.Flux Density	315Hz 257Hz	1kHz 32OnWb∕m			500Hz 200	1kHz(700Hz)			
Azimuth Alignment Section: (-10dB)	315Hz 10kHz	1kHz 10kHz			250Hz 4kHz 8kHz	500(700)Hz 8kHz 16kHz			
Frequency Response Section: (CCIR:-20dB) (NAB :-10dB)	315Hz 31½Hz 40 63 125 250 500 1kHz 2 4 6,3 8 10 12,5 14 16 315Hz	1kHz 31½Hz 40 63 125 250 500 1kHz 2 4 6,3 8 10 12,5 14 16 18 1kHz			31½Hz 63 125 250 500 1kHz 2 4 5 6,3 8 10 500Hz		11½Hz 63 125 250 500 1kHz 2 4 8 10 12,5 16 20 1kHz		

Fig.4.2.3

Audio - Operating - pushbuttons



#### 4.2.6 Input keyboard

Keys with additional yellow lettering are dual function keys:

When the "adj" [11] key is pressed, these keys are assigned to the function specified by the yellow lettering. (In the preceding audio setup key summary, these functions are shown in red).

With these keys it is possible to perform all audio setups (except line level adjustment and RF circuit alignment) from the outside without any tools.

When the "adjust" [11] key is pressed, the display changes to:



The tape recorder is now prepared for adjusting the reference level based on a reproduce calibration tape.

If output function selector keys are available, it is possible to determine in play mode whether the reproduce channel or the sync reproduce channel (reproduce signal read from the record head) is to be adjusted.

READY	INPUT	SYNC	REPRO	
31 [42]	32 [43]	40 [51]	41 [52]	

If the INPUT function is selected, the last three digits on the display disappear because the internal level cannot be adjusted to the external line level by means of the keyboard.

For alignment instructions refer to Section 4.2.8.

#### Note:

In "adjust mode" the output function selector keys for stereo channels 1 and 2 are switched in parallel, i.e. when the function key of one channel is pressed, the other channel switches automatically to the same function.

### Displaying the set value:

The amplifier gain can be adjusted between 0 and the maximum in 255 steps (corresponds to 256 discrete values).

These 256 values correspond to range between the minimum and the maximum setting of a potentiometer.

The adjusted value is displayed on the tape timer:

e.g. A1 .209

#### Important:

From the displayed figure (e.g. 209) the user can determine the range in which the corresponding amplifier operates. No conclusions concerning the actual voltage values can be drawn from this reading!

### Modifying and storing the parameters:

Pressing the UP [22] key increases the gain, the DOWN [21] key decreases the gain.

Pressing UP or DOWN has the same effect as the clockwise or counterclockwise adjustment of a potentiometer.

The gain changes continually when the UP or DOWN key is held down.

The amplifiers immediately operate with the changed level (same as with conventional potentiometer settings).

In contrast to conventional potentiometers, the original value stored in the RAM can be retrieved at any time by pressing the "adj" [11] key.

When the desired value has been attained (e.g. operating level +10 dBu = 2.5 V), it can be stored in RAM by pressing the STORE [12] key; the display [17] turns dark for a brief moment and thus acknowledges that the setting has been stored.

A807

#### Buffering the parameters

As soon as a value has been modified with the UP or DOWN key, the dot in front of the 3-digit number on the display [17] flashes to indicate that for the corresponding function the audio amplifier no longer works with the value stored in RAM but with the modified value.

The modified value is stored in a buffer and is retained even when the next adjustment is started before you have pressed the STORE [12] key. For example different bias and treble equalization values for linearizing the frequency response can be tried without losing the original values stored in RAM.

#### Important:

If new values are to be stored in the RAM, all modified setup functions must be selected individually and be stored separately by pressing the STORE [12] key.

#### Example:

Select treble adjustment (trbl) channel 1 and press STORE.

Select bias adjustment channel 1 and press STORE. Select treble adjustment channel 2 and press STORE. Select bias adjustment channel 2 and press STORE.

The value in the buffer memory is deleted when the STORE [12] is pressed.

When the "adj" [11] key is pressed, all parameters in the buffer memory are deleted and the original RAM values are reactivated!

For comparison purposes, the gain settings shown on the display can be recorded in a log.

### (Example:)

A 8 Ser.No NA CC	D	Та	pe Si	peed				Remarks
Tape Tape Head Head	e A □ e B □ d A □	15:	ips	7½	ips		ips 🗆 Sips 🗆 CH2	
Repro	Level Treble	55B		***	202	222		
Record	Level Treble Bias	***		***	***	222	# # # # # # # # # # #	
Sync	Level Treble			 naa				

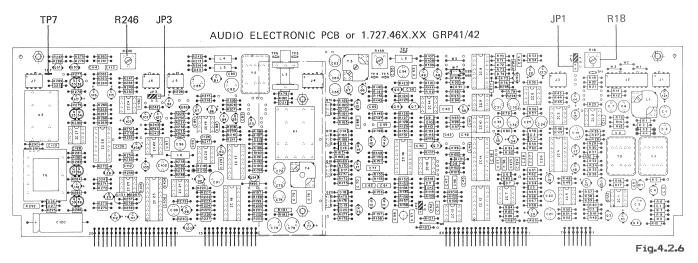
Fig.4.2.5

Two such logs are required for the complete documentation of a tape recorder if a different calibration was performed for NAB and CCIR (or for tape type A, type B; or reproduce head A, head B).

#### 4.2.7 Audio PCB layout

After the rear panel has been removed, the audio module can be pulled out by pressing the two locking springs marked with arrows.

In stereo models the circuit board facing the rear panel is for channel 1, the other is for channel 2. The following potentiometers and test points are needed for the following adjustment of the internal levels:



#### Matching the internal level to 4.2.8 the corresponding operating level

#### For record/reproduce models

#### Preparatory steps:

- Remove the rear panel
- Switch the machine to INPUT by pressing the keys [32/43].

without INPUT key, actuate the On models microswitch "adj" [11] with a pointed instrument (pencil). (If disabled, change the setting of jumper JS 16 below the front panel!).

Press the TAPE DUMP [25] key in order to switch the machine to INPUT.

#### If existing:

- Switch all UNCAL keys [39, 50, 53, 57] to calibrated mode.
- Select LINE ON [37, 48] keys.
- Deselect MIC ON [35, 46] keys.
- Set MONO/STEREO [55] switch to stereo.

Connect the audio frequency generator to the line input to be calibrated (CH 1, CH 2) and feed 1 kHz  $\,$ with operating level (corresponds to input level for a recording of 0 VU).

This corresponds to the following standard values: 0,775 Veff ( 0 dBu) CCIR 1,23 Veff (+4 dBu)

#### Note:

If the input sensitivity should be higher (e.g. for operation with hi-fi equipment), the setting of jumper JP 1 can be changed.

Position A: input sensitivity -4 to +12dBu (standard)
Position B: input sensitivity -17 to -1dBu
Position C: input sensitivity -30 to -14dBu

### Adjustment procedure:

On the AUDIO ELECTRONICS PCB 1.727.420/421 1.727.422/423/425 1.727.460/461/462 or 1.727.463/465/467 (GR41 or GR42), measure the 1 kHz signal on test point TP 7 of the channel to be calibrated and adjust the signal with the aid of R18 to 0.775 V (O dBu).

This value is identical for NAB and CCIR.

(Important: measure with high impedance, i.e. without termination resistor)

Connect the AF millivoltmeter to the output to be calibrated.

With the aid of R 246 adjust the output signal to the desired operating level.

This corresponds to the following standard values: 0,775 CCIR Veff ( 0 dBu) (+4 dBu) Veff NAB 1,23

# Note:

If the output level should be smaller (e.g. for operation with hi-fi equipment), the setting of jumper JP3 can be changed.

Position A: output level range -4 to +12dBu (standard) Position **B:** -17 to -1 dBu

#### 4.2.9 VU - Meters

# (Not applicable to machines without VU-meters)

Pull off the MIC level knobs on the VU-meter panel (or the RECORD LEVEL knobs on the external VU-meter panel. The trimmer potentionmeters on the COMMAND PANEL PCB 1.727.361/362/364/365 (GR30) or the external VU-meter panel PCB 1.727.925/935 thus become accessible.

Feed the same 1 kHz input level for an indication of O VU on the input as described in 4.2.8.

#### Adjustment procedure:

 With R16 (channel 1) and R46 (channel 2) adjust to a reading of 0 VU.

#### 4.2.10 LED peak indicator

# (Not applicable to machines without VU-meters)

The trimmer potentiometers for the LED peak meters become accessible after the line level knobs on the VU-meter panel or the REPR/SYNC LEVEL knobs on the external VU-meter panel have been removed.

Increase the input level by 6 dB according to Section 4.2.8.

Standard values for CCIR and NAB: CCIR 1.55 Veff ( +6 dB

CCIR 1,55 Veff (+6 dBu)
NAB 2,46 Veff (+10 dBu)

#### Adjustment procedure:

 Adjust R32 for channel 1 and R63 for channel 2 in such a way that the "+6" peak LED just lights up.

The peak program LEDs "+9" and "+12" cannot be adjusted. They follow automatically the setting of the "+6" LED.

#### Note:

In the VUK version these two potentiometers are numbered R18 and R48 respectively.

# 4.2.11 PLAYBACK ONLY tape players

### Alignment instructions for:

- Internal level
- External level
- VU and peak meter display

# Preparatory steps:

- Actuate the "adj" [11] microswitch with the aid of a pointed tool (pencil). If it is disabled, change the setting of jumper JS16 below the front panel!
- Switch the UNCAL [53/57] keys for the output level potentiometer to the calibrated position. If existing set the MONO/STEREO [55] switch to the stereo position.

Level adjustments if the desired tape flux corresponds to the reference tape flux

Because the nominal (reference) flux and the nominal level according to NAB relate to the operating level, and for CCIR to the peak recording level, different adjustments result for NAB and CCIR as shown in the following table:

#### Adjustment procedure:

	NA	BO	CCIR		
Flux density	200	320	320	510	
from Testtape	nWb/m	nWb/m	nWb/m	nWb/m	
required	200	320	320	510	
Level	nWb/m	nWb/m	nWb/m	nWb/m	
1= internal	0dBu=	OdBu=	6dBu=	6dBu=	
Level (on TP7)	0,775V	O,775V	1,55V	1,55V	
2≡ external Level (on XLR)	4dBu= 1,23V ★	4dBu= 1,23V ★	6dBu= 1,55V ☆	6dBu= 1,55V ☆	
3 VU Meter	ה	An	6	6	
Indication	ה	D	VU	VU	

#### Fig.4.2.7

- ★+4 dBu corresponds to the standard operating level for NAB
- ☆ +6 dBu corresponds to the standard peak recording level for CCIR

● CCIR standard: 320 nWb/m = 6VU +6dBu peak recording level

- Mount the calibration tape, section: level tone
- Connect the AF millivoltmeter to test point TP 7 of the circuit board AUDIO CONTROL ELECTRONICS PCB 1.727.425 or 1.727.465.
- Start the recorder in play mode.

The internal level on TP 7 can be adjusted with the UP and DOWN keys [21,22] to OVU for NAB and +6dBu for CCIR (refer to Table 4.2.7 in 1m)

#### Important:

After the correct value has been set with the UP and DOWN keys, it must be saved in memory by pressing the STORE [12] key.

 Connect the AF millivoltmeter to the output to be measured and adjust the output signal to the desired line level by means of R246:

NAB to operating level / CCIR to peak recording level  $% \left( 1\right) =\left( 1\right) +\left( 1$ 

# Standard values:

for NAB +4dBu (1,23V) = operating level =**OVU** for CCIR +6dBu (1,55V) = peak rec. level =**6VU** 

(also refer to Table 4.2.7 under 2 external level)

#### Note:

If the output level range should be smaller (e.g. for operation with hi-fi equipment), the position of jumper JP3 can be changed (See Fig.4.2.6)

Position **A:** output level range -4 to +12 dBu (standard)

Position **B:** output level range -17 to -1 dBu

VU and peak meter adjustment for playback only tape players

#### Preparatory steps:

- Remove the front panel
- Same measurement arrangement as above
- Connect the AF millivoltmeter to the output to be measured and play the level tone section of the calibration tape:

The trimmer potentiometers R16, R46, R32, and R62 are located on the command panel PCB 1.727.364.00 or 1.727.365.00 respectively.

#### Adjustment procedure:

#### NAB:

- Adjust R16 for channel 1 and R46 for channel 2 to O VU (refer to Table 4.2.7 under 3. VU-meter
- Activate the UNCAL [53,55] key and increase the output level of the channel to be measured by 6dB with the aid of the output level potentiometer [54,56]. (For NAB standard calibration this corresponds to a level of +10dBu (2.45 V) on the AF millivoltmeter).
- Adjust R32 for channel 1 and R63 for channel 2 "+6" peak LED just in such a way that the lights up.

### CCIR:

- Adjust R32 for channel 1 and R63 for channel 2 "+6" peak LED just in such a way that the lights up.
- Activate the UNCAL [53,55] key and lower the output level of the channel to be measured by 6dB with the aid of the output level potentiometer [54,56]. (For CCIR standard calibration this corresponds to a level of O dBu (0.775 V) on the AF millivoltmeter).
- Adjust R16 for channel 1 and R46 for channel 2 to O VU. (See Table 4.2.7 under 3m VU-meter indication).

The peak program LEDs "+9" and "+12" cannot be adjusted. They automatically follow the setting of the "+6" LED.

Adjusting the level when the desired tape flux does not correspond to the one on the calibration tape

desired magnetic tape flux does not correspond to the one recorded on the calibration tape, the tape flux correction value ( ΔU) must be determined.

The tape flux correction value ( 🛆 U) is positive when the desired tape flux is smaller than the one recorded on the calibration tape. Conversely, it is negative when the desired tape flux is greater than the one recorded on the calibration tape.

flux correction value (ΔU) can be determined from Table 4.2.2:

(e.g. desired tape flux 250 nWb/m Available calibration tape 200 nWb/m Tape flux correction value  $\Delta U = -2$  dB).

The tape flux correction value △U computed according to Table 4.2.2 is to be added to or deducted from the values 10, 20, 30 in Table 4.2.7 (depending on the sign).

For the above example (NAB) this means:

- Internal level O dBu 2 dBu = -2 dBu External level 4 dBu 2 dBu = +2 dBu
- VU meter reading O VU 2 dBu = -2 VU

Other common settings can be determined from the table Fig.4.2.8 (all others can be computed with the aid of Table 4.2.2):

# Adjustment procedure:

The adjustments are performed similarly to those described in 4.2.11 .

Play the level tone section of the calibration tape and aligne as follows :

- Internal level: set it to the computed value
- External level: desired line level + (-) tape flux correction value
- VU-meter: set it to the computed value.

# Note:

If the value to be set is greater than the VUmeter reading (+3 VU) or much below the O VU mark, connect the millivoltmeter to the XLR output and adjust the gain with the output level trimmer potentiometers [54, 56] (enabled with the UNCAL keys [53,57]) in such a way that a O VU reading can be obtained.(Refer to example 2.)

		CC	IR .	NAB			
Test - Tape	320	320	510	185	200	320	
	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	
required	510	640	320	640	250	320	250
flux density	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m
Tape flux	-4	-6	+4	−2	−3	–4	+2
correction value	dBu	dBu	dBu	dBu	<b>dB</b> u	dBu	dBu
internal Level	+2	0	+10	+4	-3	-4	+2
(on TP 7)	dBu	dBu	dBu	dBu	<b>d</b> Bu	dBu	dBu
external Level	+2	<b>O</b>	+10	+4	+1	O	+6
(on XLR)	dBu	dBu	dBu	dBu	dBu	dBu	dBu
VU Meter	+2	O	+10	+4	-3	-4	+2
Indication	VU	VU	VU *	VU ¥	VU	VU ¥	VU

# Peak LED

The Peak LED should light up at Peak-recording level (= 6dB above OVU).

Because the nominal-tapeflux for CCIR-tape recorders is related to the Peak recording level (6VU), the calculated value of the external Line level (see Table 4.2.8) is also the treshold point of the "+6" Peak LED.

The nominal-tapeflux for NAB-tape recorders is related to the operating level (OVU), i.e. add 6dB to the computed value of the external Line level to achieve the treshold point of the "+6" Peak LED.

#### Example 1:

NAB Testtape 185nWb/m Tapeflux correction required tapeflux 250nWb/m value -3dB Standard Line level +4dBu

VU-Meter indication -3VU corresponds to an external Line level of +1dBu.

Peak LED indication at (-3VU + 6dB = ) +3VU which corresponds to the external Line level of (+1dBu + 6dB = ) +7dBu.

Connect the millivoltmeter to the XLR output to be measured and increase the external level by 6dB with the aid of the output level trimmer potentiometers [54,56] (enabled with UNCAL keys [53, 57]). In the above example, increase the external level by 6dB to +7dBu.

Afterwards adjust potentiometer R32 for channel 1 on the command panel board (below frontpanel cover) and R62 for channel 2 in such a way that the "+6" Peak LED just lights up.

# Example 2:

# Requirement:

320nWb/m = 6VU = 6dBu line level Available calibration tape 510nWb/m Standard Line level (external level) +6dBu

With the definition of 6VU we know that the 6dBu line level corresponds to peak recording level, i.e. the internal level is also at the peak value (6dB above OVU).

The tape flux correction value (computed according to Table 4.2.2) is +4dB.

Consequently, when the 510nWb/m calibration tape is played, the internal level on TP7 of the corresponding audio electronics board must be adjusted to (+6dBu standard Line level + 4dB flux correction value = ) 10dBu = 2.45V (by means of the UP [22] and DOWN [21] keys.

 The external level is at +6 dBu + 4dBu = 10dBu. Adjustable with R246 on the corresponding audio electronics board.

The VU-meter reading should also be at 6VU + 4dB = 10VU.

Because this value is not adjustable, the level must be lowered by 10dB with the aid of the output level trimmer potentiometers [54, 56] (enabled with the UNCAL keys [53,57]).

The VU-meter is subsequently calibrated to OVU by means of R16 for CH1 and R46 for CH2 on the command panel PCB.

The peak LED is always lit at Peak recording level (6dB above OVU).

For this example, the Peak LED "+6" must light up with an external Line level of +10dBu. (Standard Line level 6dBu + 4dB tapeflux correction value).

Therefore release the UNCAL pushbuttons again into calibrate position and adjust the potentiometers R32 for channel 1 and R62 for channel 2 on the command panel PCB in such a way that the corresponding LED just lights up.

#### Note:

If no AF millivoltmeter with dB scale is available, the voltage values can be derived from Table 4.2.1.

#### 4.3 REPRODUCE ALIGNMENTS

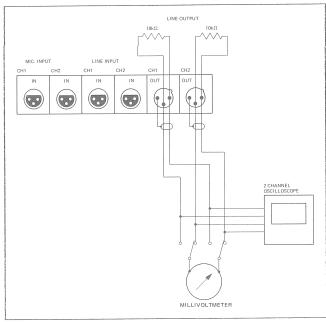


Fig. 4.3.1

# 4.3.1 PREPARATION

The alignment is performed with the aid of the front-panel keyboard. See Fig. 4.2.4.

### Preparatory steps:

- Press the REPRO [41/52] key (only on models with output selector switches)
- Actuate the "adj" key (possibly interlocked with jumper 16 below the front cover). The following picture appears on the display [17]:



Select the preferred studio speed.

#### If existing:

- Select the READY [31/42] key (the red LED should not flash)
- Deselect all UNCAL [53/57] keys so that calibrated level can be set.
- Deselect Mono [55] by simultaneously pressing shift and mono.
- Set the programmable keys [60/61] to the desired calibration mode:
  - NAB or CCIR equalization
  - Tape type A or B (Tape A / Tape B)
  - Reproduce head left or right (HEAD A / HEAD B)
- Connect the AF millivoltmeter to the XLR output to be calibrated, possibly terminated with 200 or 600 ohm (factory termination 10 kohm).
- Mount the corresponding reproduce calibration tape and play the level tone section.

#### Adjustment procedure:

- Read the output level and set the desired operating level with the aid of the UP or DOWN [22/21] keys.
- Save the found value by pressing the STORE [12] key.
- On stereo models connect the millivoltmeter to the line output channel 2. Press the channel [15] key for switching to channel 2 (display [17] shows A2 . XXX). Set the desired operating level with the UP or DOWN key. Press STORE.

The factory calibrates the machine to the following reference tape flux values:

for NAB calibration the internal level of 0.775V corresponds to 0VU and to an operating level of 1.23V on the output of mono and stereo units.

at:	3.75	ips	200	nWb/m
	7.5	ips	250	nWb/m
	15	ips	250	nWb/m
	30	ips	250	nWb/m

For CCIR calibration a reference level of +6 dBu corresponds to 1.55 V at the output of mono and stereo units (VU-meter reading: 6VU).

			S	tereo	Mo	no
at:	3.75	ips	400	nWb/m	250	nWb/m
	7.5	ips	510	nWb/m	320	nWb/m
	15	ips	510	nWb/m	320	nWb/m
	30	ips	510	nWb/m	320	nWb/m

If the desired tape flux does not correspond to the one on the available calibration tape, the difference can be computed by means of the formula in paragraph 4.2.5 or be derived from the table (Fig.4.2.2).

#### Important:

If the desired magnetic flux is higher than on the available calibration tape, the value obtained from table 4.2.2 must be subtracted from the desired line level.

#### Example:

Desired setting 510 nWb/m = +6 VU = 6 dBu line level.

Available calibration tape: 320 nWb/m Difference  $\Delta U$  = 4 dB

The line level to be set is therefore: +6dB - 4dB = +2dB Indication: +2 VU

# 4.3.2 Azimuth alignment

Spool the reproduce calibration tape forward to the azimuth alignment section.

The head gap is adjusted by swivelling the reproduce head. For this purpose the calibration tapes contain an azimuth alignment section that has been recorded with a tape flux that is down by 10dB (20dB).

The objective of the adjustment is to achieve the maximum output voltage at the head gap reference frequency (10 kHz on CCIR calibration tapes, 8 or 16kHz on NAB calibration tapes). The adjustment is most accurate when performed at the slowest speed.

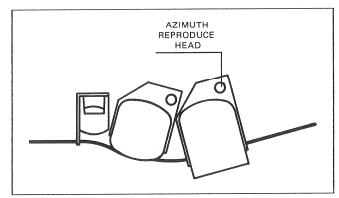


Fig. 4.3.2

#### Coarse adjustment:

While the recording with reference frequency is being played, adjust the reproduce head until the highest output voltage is achieved.

#### Fine-adjustment:

Connect the line outputs of both channels either

- to the inputs of a 2-channel oscilloscope. While a recording with 8, 10, or 16 kHz is being played, align for minimum phase difference of the output signals on the audio channels with the aid of the azimuth adjustment screw, or
- to the inputs of an AF millivoltmeter with summation facility. While the recording with 8, 10 or 16 kHz is being played, align for maximum level of the sum of the audio channels with the aid of the azimuth adjustment screw.

Minor deviations in the gap position can occur between the calibration tapes of different manufacturers or for different tape speeds. We therefore recommend to optimize for the most frequently used speed.

# Important:

Always adjust for maximum level and then to minimum phase difference! If major adjustments are made to the reproduce head, other maxima but with lower levels can occur. Check: measure the phase with a slightly changed frequency.

#### Level check:

Rewind the calibration tape to the LEVEL TONE section and switch the machine to play mode. Check the level of channels 1 and 2. Correct it, if necessary.

# 4.3.3 Reproduce treble adjustment

- Spool the calibration tape forward to the FREQUENCY RESPONSE 16 kHz section (applies to 30 ips; 14 kHz for 15 ips; 12.5 kHz for 7½ ips). The level of this section is approx. 20 dB (CCIR) lower than in the level tone section.
- Connect the millivoltmeter to the line output channel 1.
- Start the tape recorder in play mode.
- With the CHANNEL [15] key, select the channel to be calibrated (A1 .XXX appears on the display [17] for channel 1).

- Press the PARAM [13] key so that the red "lvl" LED on the right-hand side of the display [17] lights up.
- Alignment to optimum frequency response is possible with the UP and DOWN keys [21/22].
- Press STORE [12] to save the setting.

#### Note:

These frequencies are intended as reference points for matching the high frequencies to those of the line level. These are empirical values for which a more or less linear frequency response should result. The final setting should be made individually for each unit in such a way that when the entire frequency response test is played from tape, a linear, symmetrical pattern (deviation from the desired value identical in the positive and negative area) is obtained, regardless of the reference frequency.

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key, the display shows A2 .XXX. With the UP or DOWN key align for optimum frequency response. Press store.

#### Note:

#### Bass adjustment:

The A807 tape machine is not equipped with a bass trimmer potentiometer. Machines with serial numbers below 2141 are equipped with the audio electronics PCB 1.727.42X.00.

This circuit board has been matched to the deviations in the bass range caused by the various head formats.

If repairs become necessary and particularly if this circuit board is replaced, the different resistor configuration should be noted.

These resistors are socket mounted so that they can be easily replaced.

Resistor configuration for bass alignment of the 1.727.420/421/423/425.00 board:

Config.	R 195	R 197
2 / 2	560 kΩ	820 kΩ
0.75	1.5 ΜΩ	1.5 MΩ
MONO	not equipped	1.5 MΩ

Fig.4.3.3

Audio electronics boards with 1.727.460/461/462 1.727.463/465 and boards with 1.727.420/421/423.81 1.727.425.81 have been manufactured in such a way that bass alignment is not necessary.

#### Note:

If the optional test generator is installed, reproduce levels 10 or 20 dB below the reference level can be amplified in the 10 or 20dB setting by this amount so that they can again be adjusted to 0 VU with the aid of the VU-meter.

# 4.4 RECORD ALIGNMENT

# 4.4.1 Adjusting the erase current

- Mount a blank tape
- Press the ready keys [31/42], the red LEDs flash.
- Start the machine in record mode.

#### Adjustment procedure:

Turn R139 on the AUDIO ELECTRONICS PCB 1.727.420/421/422/423 or 1.727.460/461/462/463/467 (GR 41 or GR 42) to the minimum. (See Fig.4.4.1)

- Connect the oscilloscope or the vacuum tube voltmeter to TP 4 (0 V to TP 2).
- With the trimmer T3 adjust the voltage on TP 4 to the minimum. A screwdriver with a narrow blade is needed for this purpose.
- Connect the voltmeter to TP 3 (0 V to TP 2) and adjust to the following values with the aid of R139:

2-Channel erase head 44 V Mono erase head 75 V 4-Track 2-channel erase head 36 V

#### Note:

- On 2-channel units with separate erase head, the adjustments must be performed on both channels.
- On 2-channel units with mono erase head, jumper W1 must be removed on the AUDIO ELECTRONICS PCB 1.727.400/401 (GR 40). In this case the adjustments for channel 2 are made on the AUDIO ELECTRONICS PCB 1.727.420/421/422/423/ or 1.727.460/461/462/ 463/467 (GR 42).

# 4.4.2 Adjusting the bias trap

• Insert the tape and start the machine in record mode.

#### Adjustment procedure:

- Connect the vacuum-tube voltmeter to TP6 (OV to TP2) of the AUDIO ELECTRONICS PCB 1.727.420/421
   1.727.422/423 or 1.727/460/461/462/463/467
   (GR 41 or GR 42 respectively). (See Fig.4.4.1)
- With the trimmer screw on L3, adjust the voltage to the minimum; a screwdriver with a plastic blade is required for this purpose.

#### Note:

On all 2-channel machines, the channels must be aligned individually.

#### 4.4.3 Record audio alignments

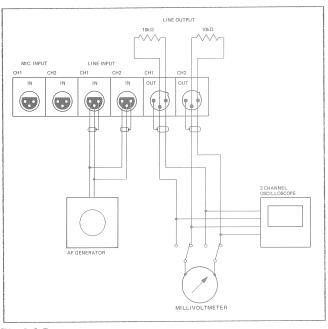


Fig.4.4.2

# Preparatory steps:

 Actuate the "adj" key (possibly interlocked with jumper 16 below the front cover).

The display shows:



- With the CHANNEL [15] key, select the channel to be measured.A1 .XXX on the display [17] means channel 1.
- With the PARAM [13] key, select the "lvl" position; the "lvl" LED on the right-hand side of the display [17] lights up.

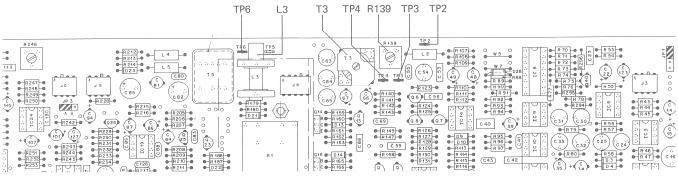


Fig.4.4.1

AUDIO ELECTRONICS or 1.727.42X.XX GRP41/42

#### If existing

- Select the REPRO [41/52] key
- Release all UNCAL [39/50/53/57] keys to switch to calibrated level
- Deselect Mono [55]
- Select the LINE ON [37/48] keys
- Deselect the MIC ON [35/46] keys (the yellow LEDs should be dark)
- Press the READY [31/42] keys (the red LEDs flash)

Install a new or practically new tape of the desired type.

- With the keys [60/61]
  - -Select the correct equalization(NAB or CCIR), or -Select the correct tape type A or B, or
  - -Select the reproduce head (head A).
- Connect the AF generator with 1 kHz and operating level to the line input channel 1 (on stereo machines to channels 1 + 2), and connect the millivoltmeter to the line output of channel 1. For NAB calibration feed a reference frequency of 700 Hz.

#### 4.4.4 Record preadjustment

- With the PARAMETER [13] key select the level adjustment function, i.e. the "lv1" LED on the right-hand side of the display [17] should be light.
- With the CHANNEL [15] key, select the channel to be calibrated
- (A1 .XXX = channel 1, A2 = channel 2)
- Start the machine in record mode.
- Read the output level and adjust to operating level by pressing the UP or DOWN [21/22] key.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key (display shows A2). Adjust to operating level with the UP or DOWN key. Press STORE [12].

# 4.4.5 Aligning the azimuth of the record head

- Switch the audio generator to 10 kHz and decrease the level by 20 dB (or if available, set the test generator to the -20 dB position).
- Connect the millivoltmeter to the line output channel 1.
- Start the machine in record mode.

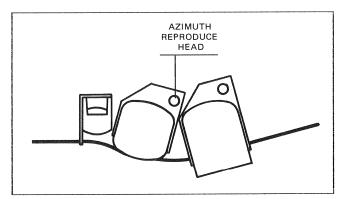


Fig.4.4.3

With the azimuth alignment screw, adjust the position of the record head until the highest output voltage and simultaneously the lowest level fluctuations are attained.

If major corrections are made with the azimuth alignment screw, the record preadjustment (Section 4.4.4) must be repeated.

#### Note:

If the bias has not been adjusted yet, the bias parameters of 2-channel and stereo machines should be set to the same or at least similar values for both channels, refer to 4.4.6.

(Reason: the mechanical and the "electrical" head/gap of the record head are not in the same location; the offset depends on the magnitude of the bias current. For this reason an azimuth correction is made after the bias adjustment).

#### 4.4.6 Bias adjustment

- Audio generator at 10 kHz and level 20 dB below operating level. Connect the millivoltmeter to the line output channel 1.
- Start the machine in record mode
- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1)
- Press the PARAM [13] key repetitively until the red bias LED on the right-hand side of the display window [17] lights up.
   (Note: only possible when the machine is in
  - (Note: only possible when the machine is in record mode).
- Press the DOWN [21] key repetitively until the value A1 000 appears on the display. Then search the maximum output voltage with UP [22] and write down this value. Continue with UP until the output voltage drops by the value ΔU (dB) specified in the bias Table (at the end of this Section). This value depends on the tape type and the speed.
- Press STORE [12].

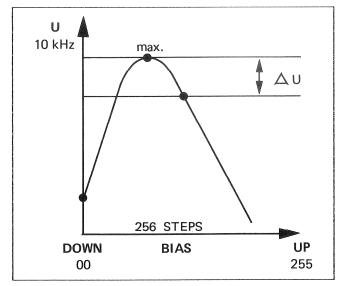


Fig.4.4.4

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key (A2 .XXX appears on the display [17]). Perform the bias adjustment as specified for

channel 1. Press STORE.

#### 4.4.7 Azimuth alignment STEREO

On stereo machines, the output signals on channels 1 and 2 are adjusted to minimum phase difference with the aid of the oscilloscope and by carefully turning the azimuth alignment screw of the record head.

#### 4.4.8 Record level adjustment

- Set audio generator at 1kHz (possibly 700Hz for NAB, 333Hz for 3 3/4 ips), and operating level.
- Connect the millivoltmeter to the line output channel 1.
- With the CHANNEL [15] key select the channel to be calibrated (Al = channel 1)
- Repetitively press the PARAM [13] key until the red "lv1" LED on the right-hand side of the display window [17] lights up.
- Start the machine in record mode.
- With the UP or DOWN [21/22] adjust the output level to operating level.
- Press STORE [12].

On Stereo machines connect the millivoltmeter to the line output channel 2. Press CHANNEL [15] (A2 .XXX appears on the display [17]). With the UP or DOWN key adjust the output level to operating level. Press STORE.

# 4.4.9 Frequency response alignment

- Set the AF generator to operating level -20 dB.
- Connect the millivoltmeter to the line output
- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1)
- Repetitively press the PARAM [13] key until the red "trbl" LED on the right-hand side of the display window [17] lights up.
- Start the machine in record mode.
- With the UP or DOWN [21/22] keys, align for optimum treble frequency response (above 1 kHz):

The reference points for matching the treble frequency to the reference level are specified in the following table. These are empirical values which produce a more or less linear frequency response.

Tape S	Speed	Adjusting Freq.
[cm/s]	[ips]	[kHz]
9,5	3,75	8
19	7,5	10
38	15	12,5
76	30	16

Fig.4.4.5

The final adjustment should be made individually for each machine in such a way, that with a continuous increase of the input frequency a linear, symmetrical pattern (deviation from the desired value identical in the positive and the negative area) is attained, regardless of the above alignment frequencies.

Press the STORE kev [12]

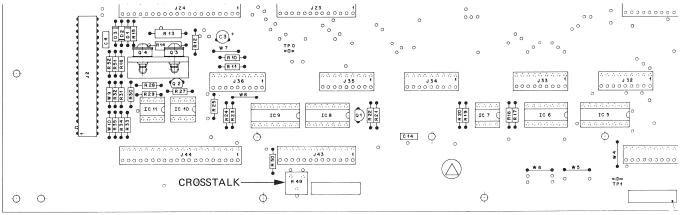
#### Stereo models:

- Connect the millivoltmeter to the line output channel 2.
- Press the CHANNEL [15] key (A2 .XXX appears on the display).
- Start the machine in record mode.
- With the UP or DOWN key align to optimum treble frequency response (above 1 kHz).
- Press STORE.

### 4.4.10 Adjusting the channel separation

(only on 2-channel and stereo machines)

- Connect the audio generator (operating level, 1kHz) to the line input channel 1;
- connect the millivoltmeter (preferably a selective meter because the value is within the noise level) to the line output channel 2.
- Switch both channels to READY and start the machine in record mode.
- With the CROSSTALK potentiometer on the audio base board 1.727.400 or 1.727.401 (see Fig. 4.4.6), align for minimum output voltage. Repeat the same measurement with swapped channels. If large deviations occur, find an optimum value for both channels.



#### 4.5 SYNC ALIGNMENTS

#### 4.5.1 Preparations

- Connect the millivoltmeter to the line output channel 1.
- Switch on the tape recorder.
- Select the tape speed, equalization, tape type, and the corresponding reproduce head with the keys [60/61].
- Deselect READY [31/42] (the red LEDs should not flash).
- Press the SYNC keys [40/51] of Ch 1 or Ch 2.
- Release all UNCALL keys [53/57] (cal. level).
- Mount a reference tape of the corresponding speed and spool forward to the LEVEL TONE SECTION.

#### 4.5.2 Sync reproduce level adjustment

- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1).
- Repetitively press the PARAM [13] key until the red "lv1" LED on the right-hand side of the display window [17] lights up.
- Start the machine in play mode.
- Read the output level and adjust to operating level by pressing the UP or DOWN [21/22] key.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2.

- Press the CHANNEL [15] key (the display shows A2 for channel 2).
- With the UP or DOWN key align to operating level.
- Press STORE .

# 4.5.3 Sync frequency response alignment

- Spool the reference tape forward to the FREQUENCY RESPONSE section. The level of this section is approx. 20 dB below the level tone section.
- Connect the millivoltmeter to the line output channel 1.
- Press the CHANNEL [15] key so that A1(=channel 1) appears on the display.
- Repetitively press the PARAM key until the "trbl" LED on the right-hand side of the display window
   1173 lights up.
- Start the machine in play mode.
- With the UP or DOWN [21/22] key align for optimum frequency response.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2.

- Press the CHANNEL [15] key (the display shows A2 for channel 2).
- With the UP or DOWN key align to optimum frequency response.
- Press STORE.

#### Note:

#### Bass-Sync:

 There are no trimmer potentiometers for the bass frequencies.

Normally the studio tape recorders are calibrated with full-track reference tapes. Bass frequency response errors occur on stereo and 2-channel machines due to fringing.

For this reason the sync reproduce frequency response for the bass frequencies should be checked with tape, i.e. the sync reproduce frequency response should be repeated with a user produced test tape, if no reference tapes with the correct quard track width are available (approx. 3 minutes each: 1 kHz (NAB 700 Hz), 10 kHz (8 kHz for 7½ ips) and 6 kHz for 3 3/4ips), 50 Hz.

To minimize cross talk (considerable at high frequencies) from the record channel into the SYNC reproduce channel, the frequency response has been limited. The following cutoff frequencies result:

3 3/4 ips 6 kHz;  $7\frac{1}{2}$  ips 10 kHz; 15 and 30 ips 12 kHz each.

# 4.6 MONO/STEREO SELECTOR SETTINGS

A mono/stereo selector switch is available as an option. In this case the mono level must be aligned. A precondition for this alignment is that the recorder has been correctly calibrated in stereo mode.

### 4.6.1 Preparations

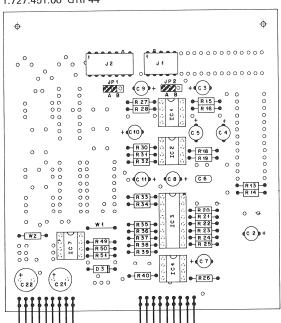
Set the jumper on the mono stereo switch to the desired setting.

The input amplifier can optionally be fitted with the test generator.

By setting the jumpers JS1 and JS2 on the mono/stereo input amplifier it is possible to define the channel that is to supply the mono signal to be recorded.

It is also possible to mix both input signals and to record them in mono mode.

# M/S INPUT AMPLIFIER 1.727.451.00 GRP44



M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44

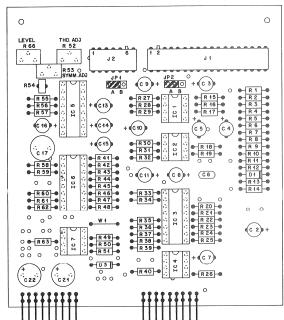


Fig.4.6.1

Jumper JP1 in position A Jumper JP2 in position A The input signal of channel 1 and the input signal of channel 2 are mixed. The resulting monophone signal is recorded on channel 1 and on channel 2.

Jumper JP1 in position A Jumper JP2 in position B The input signal of channel 1 is recorded on channel 1 and on channel 2.

Jumper JP1 in position B Jumper JP2 in position A The input signal of channel 2 is recorded on channel 1 and on channel 2.

Jumper JP1 in position B
Jumper JP2 in position B

Both input signals are short-circuited to ground. No mono recording can be made. By setting the jumpers JS1 and JS2 on the mono/stereo output amplifier it is possible to define the channel on which the aggregate signal (mono signal) of the tape recording is available. It is also possible to make the signal available on both channels. (See Fig.4.6.2)

# M/S OUTPUT AMPLIFIER WITH TEST GENERATOR 1.727.442.00 GRP45

# 

# M/S OUTPUT AMPLIFIER PBO 1.727.452.00 GRP45

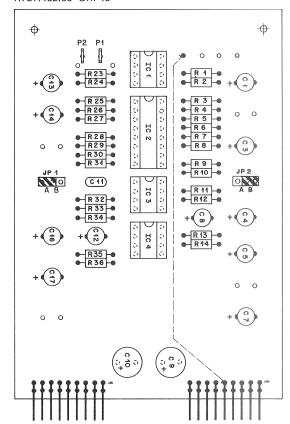


Fig.4.6.2

in position A in position A Jumper JS1 The aggregate signal of the reproduce channels 1,2 are available on the XLR output channels 1,2. Jumper JS2 in position A in position B Jumper JS1 The aggregate signal of the reproduce channels 1,2 is only available on the XLR output channel 1. Jumper JS1 in position B in position A Jumper JS1 The aggregate signal of the reproduce channels 1,2 Jumper JS2 is only available on the XLR output channel 2. in position B in position B Both reproduce channels are short-circuited to Jumper JS1 ground, i.e. the XLR outputs are muted. Jumper JS2

# 4.6.2 Mono reproduce level adjustment

#### Prepare the recorder as follows:

 Select mono mode by simultaneously pressing the MONO [55] and the SHIFT [18] keys.

#### If existing:

- Deselect all UNCAL keys [39,50,53,57] -> callevel
- Press REPRO [41/52].
- Deselect the READY [31/42] keys.
- Select the desired equalization (NAB/CCIR) or the desired tape type (TAPE A / TAPE B) or the desired reproduce head (HEAD A / HEAD B).

#### Note:

Change over is only possible by simultaneously pressing the SHIFT [18] key and the corresponding key [60/61].

- Select the prefered studio speed.
- Mount the corresponding calibration tape.
- Unfasten the small cover plate on the right-hand side of the mono key by unfastening two hexagon-socket-head screws (2.5 mm).
- Connect the audio millivoltmeter to the output that supplies the mono signal.

#### Adjustments:

Play the level tone section of the reproduce calibration tape and adjust the desired mono tape flux by means of the R2 REPRO LEVEL potentiometer (below the small right-hand cover above the headphones socket). See Fig.4.6.3

For different Mono-flux setting use tape flux difference table 4.2.2.

# Note:

For heads with 0.75 mm guard track, the MONO level can be adjusted to 1.1 dB below the standard mono level in order to compensate the quard track loss.

#### For example:

Calibration tape 320 nWb/m

Desired mono tape flux 320 nWb/m = 6VU = 6dBu line level.

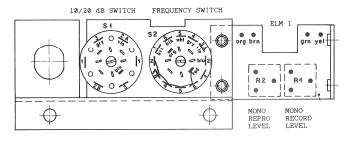
Mono level adjustment without compensation of the guard track loss:

Adjust R2 to line level, +6 dBu on the line output.

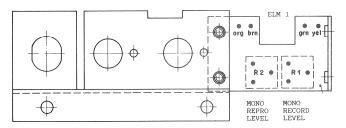
Mono level adjustments with compensation of the quard track loss:

Adjust R2 to the line level less the guard track loss value: i.e. to 6 dBu -1.1 dB = 4.9 dBu on the line output.

# M/S ADJUSTMENT WITH TEST GENERATOR 1.727.443.00 GRP46



#### M/S ADJUSTMENT 1.727.453.00 GRP46



#### M/S ADJUSTMENT PBO 1.727.454.00 GRP46

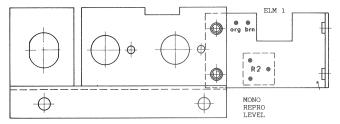


Fig.4.6.3

# 4.6.3 Mono record level adjustment

 Connect the audio generator (1 kHz and line level according to the jumper configuration as shown in Fig. 4.6.1) to the corresponding line input.

If both channels are mixed to produce the mono signal, feed line level to both inputs.

- Mount a new or practically new tape.
- Press the READY keys [31/42] (the red LEDs flash).
- If the machine is equipped with the corresponding options, make sure that the HEAD A [61] is selected.
- The following key selections are identical to the sequence described 4.6.2

# Adjustment procedure:

 With the RECORD LEVEL trimmer R1 below the small cover above the headphones socket align to line level.

Important: measure with -20 dB!

# 4.7. BIAS - ADJUSTMENT PARAMETERS

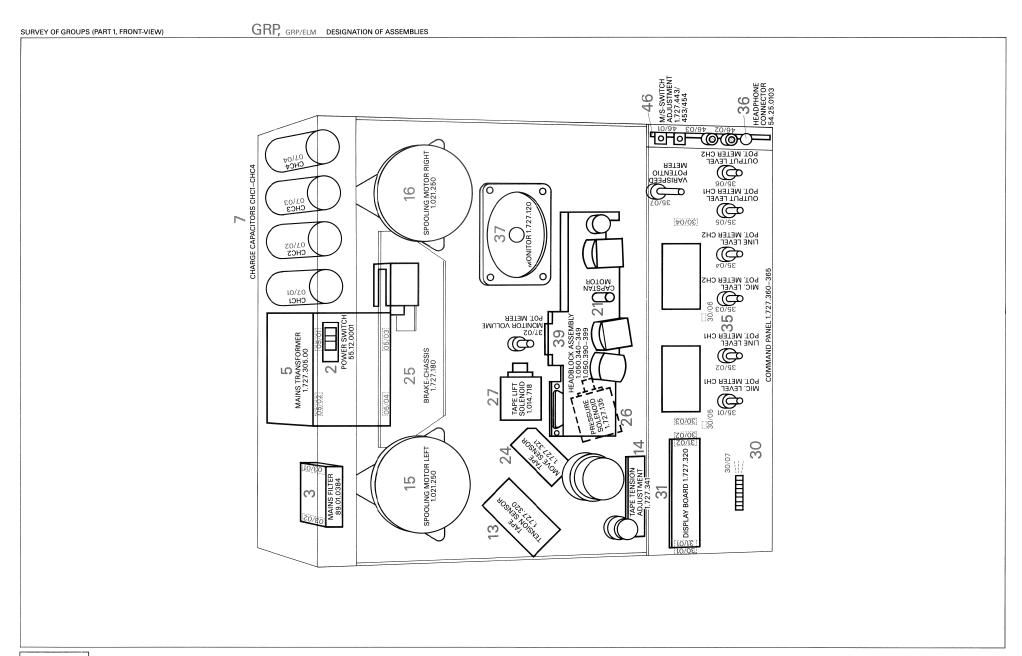
# ("Delta U" values)

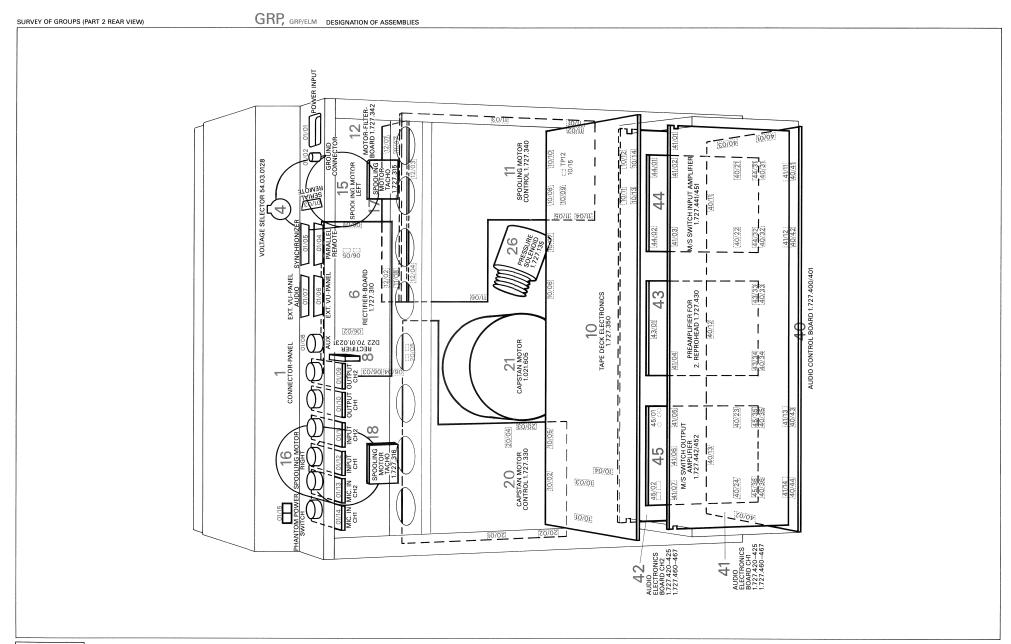
Tape speed Tape type		∆ U [dB]			
	9,5cm/s 3,75ips	19cm/s 7,5ips	38cm/s 15ips	76cm/s 30ips	
Agfa PEM 468	6	6	3,5	1,5	
Agfa PEM 469	7	7	5	2	
Agfa PER 525	6	6	A)	ind.	
Agfa PEM 526		6	3		
Agfa PER 528	6	6	3,5	1,5	
Ampex 406	6	5	3	1,5	
Ampex 456 Grand Master	5	6,5	3,5	1,5	
Ampex 457	7	7	4	2	
Ampex 478	8	7	3	100	
BASF LGR 30P	6	6	4	1,5	
BASF LGR 35P		4	3	1,5	
BASF LGR 50P	6	6	4	1,5	
BASF LGR 51	6	6	4	2,5	
BASF SPR 50LH/50LHL	6	5,5	3,5	1,5	
BASF Studio Master 910	5	6	4,5	1,5	
BASF Studio Master 911	6	6	4,5	3	
EMI 816/817	6	6,5	4	1,5	
Pyral CJ90	6	6,5	3,5	1,5	
Revox 641	6	5	4		
Scotch (3M) 206	5,5	5,5	3	1,5	
Scotch (3M) 226	6	6	3,5	1,5	
Scotch (3M) 250	5	6	3,5	1	
Scotch (3M) 256	6	6,5	3,5	1	
Scotch (3M) 263	6	6	3	1	

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Type Designation

#### . WIRING LISTS

#### 5.1 WIRING

For equipment with complex electronics, wiring diagrams are difficult to follow and can cause misinterpretations. For this reason we have chosen a more reliable method based on automatically generated computer wiring lists. These provide comprehensive information on all electrical connections within the equipment.

For the sake of clarity, the power supply, the tape transport control system, and the audio section have been subdivided into groups (GRP) which in turn comprise elements (ELM) and connecting points (FNT).

The signals carry designations that have been constructed from various abbreviations and which identify their function.

#### 5.1.1 Groups

The electrical part of he  $A8\theta T$  tape recorder has been subdivided into groups (GRP $\theta$ 1...GRP92). These Groups are interconnected by cables and connectors that are identified with the corresponding group number. The group summary (foldout page at the beginning of this Section) illustrates the group allocation and the physical location within the unit.

#### 5.1.2 Elements, points

Groups that comprise several plug-in circuit boards or other elements, are subdivided into elements (ELM). The elements accommodate the connecting points (PNT).

#### 5.1.3 Principal connector types

Туре	Designation	STUDER-No.	lŀ
A AA B	Connector, D-type, crimp: Contact pin, for thin stranded wires Contact pin, for thick stranded wires Contact pin, for thin stranded wires	54.02.0451 54.02.0455 54.02.0450	
BB	Contact sleeve, for thick stranded wires	54.02.0454	
C D	CIS-Connector: Contact sleeve Contact pin	54.01.0402 54.01.0401	
F FF	MOLEX connector: Contact sleeve, for thin stranded wires Contact sleeve, for thick stranded wires	54.02.0412 54.02.0413	
6	soldering pin	29.21.6002	11
Н	Stranded/solid wire, tin-coated (6 mm)	,,	╟
I	Connector, D-type, crimp, contact pin	54.02.1112	1-

Type	Designation	STUDER NO.
JM	Blad terminal AMP FASTON, crimp, Ø,8 x 6,3 mm:	
	Connector sleeve, for thin stranded wires	54.02.0337
J	Connector sleeve, for thick stranded wires	54.02.0332
JJ	Connector sleeve, for very thick stranded wires	54.02.0338
К	Stranded/solid wire, skinned (8 mm), tin coated (1 mm)	
L	Stranded/solid wire, tin-coated (4 mm)	THE ROLL OF THE COST OF THE COST OFF
М	MOLEX contact pin, for thin stranded wires	54.02.0411
MM	MOLEX contact pin for thick stranded wires	54.02.0410
MY N	AMP blade terminal (blade)  CIS connector, contact pin	54.02.0344
0	Contact spring,	04.01.02.0
	for EU card edge connector	54.01.0376
Р	Card edge connector: Contact spring,	
PP	for thin stranded wires Contact spring,	54.06.4512
Q	for thick stranded wires  Female multipoint connector,	34.96.4319
	contact sleeve	54.01.0451
R	Connector, D-type, crimp, contact sleeve	54.02.1111
s	Stranded/solid wire, skinned (4mm) and tin-coated	tain and a constant of total and and and
Т	TERMI-POINT plug contact on WIRE WRAP pin	700 FFE (6 107 CO.) (2 107 CO.) (2 107 CO.)
UU UU	Detent solder contact, crimp Detent solder contact, crimp	54.03.0201 54.34.6002
٧	Connector sleeve, for thick stranded wires	54.02.0432
VV	Connector sleeve, for thin stranded wires	54.02.0474
W	Wrapped	,
	Blad connector AMP FASTON, crimp, Ø,5 x 2,8 mm:	
х	Connector sleeve, for thin stranded wires	54.02.0325
xx	Connector sleeve, for thick stranded wires	54.02.0329
	Blade connector AMP FASTON, crimp,	
Υ	Ø,8 x 2,8 mm: Connector sleeve,	54.02.0326
YY	for thin stranded wires Connector sleeve, for thick stranded wires	54.02.0326
Z	Not tin-coated	

#### 5.1.4 Cable designations, color scheme

The most important connecting lines of the cabling are labelled. The wire ends carry three numbers which identify the group, the element, and the corresponding connecting point.

The flat-cable connectors have labels that specify the:

- Group and element numbers where the connector is plugged in, and either the
- name of the module into which the opposite end of the cable is plugged in, or the
  - name of the module into which the connector itself is plugged in.

#### Examples:

STUDER No.

■ TAPE DECK ELECTRONICS, GRP10, CIS connector ELM03. The conductors at this connector are black (0), green (5), red (2), and brown (1). The wires are labelled in this sequence as 10-3-1, 19-3-2, 19-3-3, and 10-3-5, i.e. the black wire is connected to contact 1 of element 03 of group 10, the green wire to contact 2, the red wire to contact 3, and the brown wire to contact 5 (contact 4 is the coding).

The opposite end, e.g. of the green conductor, is labelled as 24-1-5 which means that the wire is connected in group 24 (TAPE MOVE SENSOR) at element 1 to contact 5.

The labelling of the same CIS connector on the TAPE DECK ELECTRONICS, SRP20, ELM03 (connection to the TAPE MOVE SENSOR) is as follows:

GR 1Ø EL Ø3

The connector at the opposite end carries the designation:

GR 24 EL Ø1

#### Color scheme:

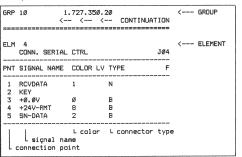
Ø	black	(blk)
1	brown	(brn)
2	red	(red)
3	orange	(org)
4	yellow	(yel)
5	green	(grn)
6	blue	(blu)
7	violet	(vio)
8	grey	(gry)
9	white	(wht)
-	uncolored	(unc)

### 5.1.5 Explanations to the LOCATION PIN

The LOCATION PIN LIST provides information on all connecting points and their signal names as well as the type of connection and if possible also the color of the connecting wire. This list is arranged by groups and contains all connecting points of a group, sorted by element number. However, it does not provide any information on the connections of an individual point. To trace the cable connection of a known signal name (on a certain group and the corresponding element), the SIGNAL WIRE LIST must be used.

If only the signal name is known, the SIGNAL WIRE LIST (paragraph 5.1.6) must again be used.

Example: (see LOCATION PIN LIST, page 8)



Group: GRP10, 1.727.350.20 TAPE DECK ELECTRONICS

Element:

ELMØ4 Serial remote control connectors (CIS)

Connection type: N CIS connector, contact pin

Connecting points: PNTØ1, PNTØ3, PNTØ4, and PNTØ5

Signal name: RCVDATA, +0.0V, +24V-RMT, and SN-DATA

Colors: brown, black, grey, and red

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# 5.1.6 Explanations to the SIGNAL WIRE

The SIGNAL WIRE LIST provides information on which connecting points are linked to each other. It is principally used for explaining the connection of a signal found in the diagram to the corresponding assembly(ies. This list is arranged alphabetically by signal name. The alphabetic section is preceded by the signal names of the zero Volt points as well as the supply voltages.

The signal name can be found in the first column (SIGNAL NAME). The second column specifies the wire COLOR. The fourth column specifies the groups (GRP), elements (ELM), and connecting points at which the signal appears. This column is arranged by assembly number and does not provide any information on the signal path through the equipment.

# Example: (see SIGNAL WIRE LIST, p.31)

SIGNAL NAME	COLOR	MI	ASY GRP	ELM	PNI	S	LV	TYPE	DESCRIPTION OF ELEMENT
-15.0V	6		1		16			8	CONN. EXT. VU PANEL. CTL
	6		10	2	11			N	CONN. CAPSTAN CTL.
	6		10	6	19			N	CONN. SPOOLING MUTOR CTL.
	6		10	8	11			N	CONN. EXT. VU-PANEL
	6		10	9	15			N	CONN. CCHMAND PANEL
	6		10	10	15			N	CONN. AUDID CTL.
	6		11	2	3			N	CONN. TAPE TENS. SENSOR
	6		11	3	10			N	CONN. TAPE DECK CTL.
	6		13	1	4			N	CONN. SP. MOTOR CTL. JO2
	6		20	ī	10			N	CONN. TAPE DECK CTL.
	6		30	3	18			D	CONN. TAPE DECK CTL. J10
	6		40	ī	13			N	CONN. TAPE DECK ELECTRONICS
			40	12	3			N	CONN. OPTION
			40	23	2			N	CONN. AUDIO ELECTRONICS CHI
			40	31	8			N	CONN. INSERT. INPUT CIRCUIT
			40	32	1			N	CONN. INSERT. INPUT CIRCUIT
			40	33	1			N	CONN. PREAMPLIFIER. SECOND R
			40	36	6			N	CONN. INSERT. OUTPUT CIRCUIT
			40	43	2			N	CONN. AUDIO ELECTRONICS CH2
			4.1	13	2			N	CONN. AUDIO CTL. J23
			42	13	2			N	CONN. AUDIO CTL. J43
			43	33	1			N	CONN. AUDIO CTL. J33
			44	3.2	ī			N	CONN. AUDIO CTL. J32
			45	36	6			N	CONN. AUDIO CTL. J36
	6			1				N	CONN. VU PANEL. CTL
-20.0V	6			4		-		N	CONN. TAPE DECK ELECTRONICS
	6			i				č	CONNECTOR PUWER SUPPLY
						-			
A-CTALK1				23				N	CONN. AUDIO ELECTRONICS CHI
			41	13	10			N	CONN. AUDIO CTL. J23
A-CTALK2			40	43	10	-		N	CONN. AUDIO ELECTRONICS CH2
					10			Ň.	CONN. AUDIO CTL. J43
						-			

SIGNAL NAME: -15.0 V

COLOR: 6 blue (blu) or none (internal connection on the PCB).

TYPE of connection:

- B (Contact sleeve for thin stranded wires), or D (Contact pin), or
- N (CIS connector, contact pin)

### Partial listing of the signal path:

GRP	ELM	PNT	
1	Ø6		Socket, VU PANEL CONTROL;
10	Ø2	11	CIS connector on TAPE DECK ELECTRONICS;
1Ø	ø6	19	CIS connector on auf TAPE DECK ELECTRONICS;
10	Ø8	11	CIS connector on auf TAPE DECK ELECTRONICS;
10	Ø9	15	CIS connector on auf TAPE DECK ELECTRONICS;
10	10	15	CIS connector on auf TAPE DECK ELECTRONICS;
11	Ø2	Ø3	CIS connector on auf SPOOLING MOTOR CONTROL
11	Ø3	10	CIS connector on auf SPOOLING MOTOR CONTOL

All of the above connecting points carry the -15.0V signal. However, this does not mean that the signal is actually wired in the listed sequence from point to point.

# 5.1.7 Explanation of the signal name abbreviations and their specifications

Signalnamen	Beschreibung	Spezifikation
Signal	Description	Specification
O-AUDIO	GROUND from AUDIO BOARD	0.0 V
O-MOTFL	GROUND to Motor Filter	0.0 V
O-MOVES	GROUND to Tape Move Sensor	0.0 V
O-MSPLY	GROUND to Motor Supply	0.0 V
O-TACH1	GROUND to Sp. Motor Tacho Left	0.0 V
O-TACH2	GROUND to Sp. Motor Tacho Right	0.0 V
O-TTA	GROUND to Tape Tension Adjustment	0.0 V
O-TTS	GROUND to Tape Tension Sensor	0.0 V
17VAC	Ctl.Voltage f. POWER ON/OFF Switch	
+0.0V	Zero Referency	0.0 V
+0.0VA	Zero Referency f. Audio Circuits	
+0.0VD	Zero Referency f. Digital Circuits	0.0 V
+1.2V	Supply Voltage	
+15.0V	Supply Voltage	
+20.0V	DC Supply Voltage f. +15 V	
+24.0V	Supply Voltage	
+24V-RMT	DC Supply Voltage f. Remote Ctl.	
+48.0V	Supply Voltage f. Microphons	
+5.0V	Supply Voltage	
+5.0VA	Supply Voltage f. Analog Circuits	
+5.0VMF	Supply Voltage f. Motor Filter Ctl.	•
+5.0VD	Supply Voltage f. Digital Circuits	
+5.6V	Supply Voltage	
+50.0V	Supply Voltage f. Motors	
+60.0V	DC Supply Voltage f. +48 V	
-15.0V	Supply Voltage	
-20.0V	DC Supply Voltage f15 V	

Signal	Description	Specification
A-CTALKx	Audio, Crosstalk Compensation	
A-DRVINx	Audio, Driver Input	0.775 V @ 0 VU
A-DO ¦	Audio Ctl, Data for DACs	H-Aktiv
A-D7		
A-HFIN×	Audio, HF Signal Input	2.0 V / 153,60 kHz
A-LINA×	Audio, Line Input A	
A-LINB×	Audio, Line Input B	
A-LINSx	Audio, Line Input Ground	
A-LOUTAx	Audio, Line Output A	
A-LOUTBx	Audio, Line Output B	
A-LOUTSx	Audio, Line Output Ground	
A-LSA	Audio, Loudspeaker Ampl. Output A	
A-LSAMPx	Audio, Loudspeaker Ampl. Input	
A-LSB	Audio, Loudspeaker Ampl. Output B	
A-LVINAx	Audio, to Input Level Ctl. Pot.	0.775 V @ 0 VU
A-LVINB×	Audio, from Input Level Ctl. Pot.	
A-LVINC×	Audio, Ground for Input Level Pot.	
A-LVMIAx	Audio, to Mic Level Ctl. Pot.	13.6 mV @ 0 VU
A-LVMIBx	Audio, from Mic Level Ctr. Pot.	
A-LVMICx	Audio, Ground for Mic Level Pot.	
A-LVMONx	Audio, to Monitor Level Ctl. Pot.	0.775 V @ 0 VU
A-L VOUAx	Audio, to Output Level Ctl. Pot.	0.775 V @ 0 VU
A-LVOUBx	Audio, from Output Level Ctl. Pot.	
A-LVOUC×	Audio, Ground for Output Level Pt.	
A-MIASC×	Audio, Asym. Mic Input Ground	
A-MICSAx	Audio, Sym. Mic Input A	
A-MICSBx	Audio, Sym. Mic Input B	
A-MICSS×	Audio, Sym. Mic Input Ground	
A-MICSWx	Audio, MIC Input Switch	
A-MONIT×	Audio, Monitor Signal	0.775 V @ 0 VU
A-PHIN×	Audio, Phones Ampl. Input	0.775 V @ 0 VU
A-PHOUT x	Audio, Phones Ampl. Output	
A-PHSWxx	Audio, Phones Mode Switch	
A-PHTMx	Audio, Phantom Powering Switch	
A-PREOUx	Audio, Preampl. Output	0.775 V @ 0 VU
A-RECINx	Audio, Record Ampl. Input	0.775 V @ 0 VU
A-SECRPx	Audio, Second Repro Signal	0.160 V @ 0 VU/1kHz
A-TAPOUx	Audio, Tape Ampl. Output	0.775 V @ 0 VU
A-VUMTR×	Audio, VU Meter Ampl.	0.775 V @ 0 VU

Signal	Description	Specification
ACA-17N ACA-17P ACA-20 ACA-36 ACA-40 ACB-17N ACB-17P	AC Voltage for -20 V AC Voltage for +20 V AC Voltage for +24 V AC Voltage for +48 V AC Voltage for +50 V AC Voltage for -20 V AC Voltage for +20 V	
ACB-20 ACB-36	AC Voltage for +24 V AC Voltage for +48 V	
ACB-40	AC Voltage for +50 V	
ACC-17N	Trafo Bridge	
ACC-17P	Trafo Bridge	
ACC-20	Trafo Bridge	
ACC-36 ACC-40	Trafo Bridge	
AN-TTENS	Trafo Bridge	4 O V without Tone
AS-CLK	Analog Signal, Tape Tension Audio Ser.Ctl, Data Clock	4.0 V without Tape
AS-DATA	Audio Ser.Ctl, Serial Data	
AS-FAD	Loudspeaker Ampl. Ctl.	L @ FADER activ
AS-HFCLK	Audio, CLK for HF Driver	307.20 kHz
AS-RESET	Audio Ctl. Reset	301.20 KH2
AS-STR	Audio Ser.Ctl, Strobe (Latch EN)	H @ on
AS-STRAB	Audio Ser.Ctl.	
	Strobe and A/B Ctl. f DACs	H @ on
AS-WREN	Audio Ser.Ctl, Write Enable	H @ on

Signal	Description	Specification
B-FAST B-MID B-SLOW BR-FADRY BR-FORW BR-LOCST BR-PLAY BR-REC BR-REW BR-STOP BR-VRSPD	LED, FAST SPEED LED, MIDDLE SPEED LED, SLOW SPEED Remote Control, LED """"""""""""""""""""""""""""""""""""	L @ on L @ on L @ on L @ on L @ on L @ on L @ on L @ on L @ on L @ on L @ on
C-BASS C-BIAS× C-CALIN× C-CALOU× C-CUEAT C-EQA C-EQA C-EQB C-EQF C-EQN C-EQS C-ERASE× C-INSERT C-MICON× C-MONOB C-MONOB C-MONOB C-MONOB C-MONOB C-NAB C-RECRO C-REPRO C-RECRO C-SYNC× C-UNCOU× C-UNCOUN CAP-GRD CHC1-P CHC2-P CHC3-P CHC4-P CHC4-P	Control, Bass switch @ FAST Control, Bias on Control, Calibrated Input Control, Calibrated Output Control, Signal Attenuation Control, Equalisation, A Control, Equalisation, B Control, Equalisation, Middle Control, Equalisation, Middle Control, Equalisation, Norm Control, Equalisation, Slow Control, Equalisation, Slow Control, Erase on Control, Input signal at output Control, Insert electronic Control, Microphon attenuator Control, Microphon input Control, Mono/Stereo Switch  Control, Sp. Motor Filter Control, Level switch @ NAB Control, Output line Control, Record relais Control, Record relais Control, Second Head Control, Second Reproduce Control, Sel Sync Control, Uncalibrated input Control, Uncalibrated output  Charge Capacitor  "" "" "" "" "" "" "" "" "" "" "" "" "	+15V=ON, -15V=OFF H @ on command H @ on H @ on L @ on H @ on L @ on H @

Signal	Description	Specification
DS-CLK DS-DATA DS-ENDPL DS-ENLED	Display serial Ctl., CLOCK , DATA , ENABLE DPL , ENABLE LED	
ERAHH-x ERAHL-x, low	Erase Head, high	40 V @ 153.6 kHz
EXT-CLK EXT-DATA EXT-D5 EXT-D6 EXT-D7	Extern Panel, CLOCK , DATA , Keyboard Matrix	
EXT-ENLD EXT-FAD	, ENABLE LED , LS MUTE	
F-ACA40 F-ACB40	AC Voltage f. + 50 V	
F-LINEx FAD1 FAD2	Power line after fuse FADER START Signal 1 FADER START Signal 2	
GND	GROUND	
HALL1A HALL1B HALL2A HALL2B HALL3A HALL3B	Capstan Motor HALL Element " " " " "	
IR-REFEX	INPUT, Ext. Referency f. Capstan	9600 Hz
K-BRAKE K-LIFT K-PRESS	Magnet, Brake Magnet, Tape lift Magnet, Tape press	L @ on L @ on L @ on
LINE1 LINE2	Power Line 1 Power Line 2	

Signal	Description	Specification
MRX-Q10 MRX-Q11 MRX-Q12 MRX-Q13 MRX-Q14 MRX-Q15 MRX-Q16	Keyboard Matrix Colone	L @ on L @ on L @ on L @ on L @ on L @ on
MS-C76K MS-DIREN	Sp. Motor Ctl. SR. Clock DIR Ctl. Eneble	76 kHz L @ PLAY
MS-MVCLK MS-MVDIR MS-ON MS-PRESS MS-REFA MS-REFB	MOVE CLOCK MOVE DIRECTION Sp. Motor Ctl. ON Switch PLAY Mode Tape Tension Ref. Switch A B	L @ FORW L @ on H @ PLAY
MS-REW MS-SHUTL	Sp. Motor REW Ctl. Sp. Motor SHUTTLE Ctl.	H @ REW H @ SHUTTLE
MV-CLK×	Move Sensor Signal	16 Hz / 7.5 IPS
M1-R M1-S M1-T M1-TACHO M1-TSENS M2-R M2-REFAN M2-S M2-T M2-TACHO M2-TSENS M3-CLK M3-C76K M3-DATA M3-EN M3-R	Supply Motor, Pole R Pole S Pole T Tacho Signal Tacho Sensor Signal Take up Motor, Pole R Referency Voltage Pole S Pole T Tacho Signal Tacho Sensor Signal Capstan Motor Ctl, Clock Capstan Motor Ctl, Data Capstan Motor Ctl, Enable Ploe R	5 V @ Wind
M3-REFEX M3-S	, rive K Ctl, Ext. Referency , Pole S	9.6 kHz
M3-SYNC M3-T	, Pole S Ctl, Synchron , Pole T	H @ Sync
M3-TACHO M3-9600	Ctl, Tacho Signal Ctl, Ref. Frequency	600 Hz @ 7.5 IPS 9.6 kHz

Signal	Description		Specification
OR-CMCLK OR-MVCLK OR-MVDIR OR-SYENB	Synchronizer Port,	•	16 Hz @ 7.5 IPS
PRIMW-x	Mains Trafo Primer	Winding	
R-SHUTL × R-RECL VA R-RECL VB R-REPL VA R-REPL VB R-VRSPD RECHH-× RECHL-× REPHH-× REPHL-× RVCDATA	Shuttle Control Por M/S Adjustment " " Varispeed Control Record Head, High , Low Reproduce Head, High	Potmeter gh	

```
Specification
             Description
Signal
----
S-LINEx
             Power Line, switched
S-TAPOUT
             Tape Out Switch
                                                    L @ Tape Out
S-TGATT
              Test Generator Command
S-TGINHI
                        11
S-TGOFF
                        11
S-TGO
S-TG1K
S-TG10DB
S-TG10K
                        11
S-TG125
S-TG16K
S-TG20DB
S-TG60
SF-LINEx
              Power Line after Filter
SM-DO
              Keybord Matrix, Data
i i
SM-D7
SN-DATA
                                                    L @ on command
SR-FADRY
              Remote Control, Switch
SR-FORW
                                                    L @ on
                         ..
                                                    L @ on
SR-LIFT
                         11
SR-LOCST
                                                    L @ on
SR-MUTE
                                                    L@ on
SR-PLAY
                                                    L @ on
                                                    L @ on
SR-REC
SR-RESET
                                                    L@ on
                                                    L@ on
SR-REW
                         11
                                                    L @ on
SR-STOP
                         11
                                                    L @ on
SR-VRSPD
                                                    L @ on
SR-ZLOC
SRPHH-x
SRPHL-x
TACHO-3x
              Capstan Tacho
TRS-A
              Tape Transparent Sensor, Anode
TRS-C
                                         Collector
                                         Emitter
TRS-E
TRS-K
                                         Kathode
TTA-FORW
              Tape Tension Adjustment
TTA-LIBR
TTA-PLAY
TTA-REW
TTA-SHT1
                          11
TTA-SHT2
TTA-SHT3
              Write, Data for bias adjustment L @ on
WR-BIASx
              Write, Data for record adjustment L@ on Write, Data for repro adjustment L@ on
WR-RECx
WR-REPRx
```

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DATE OF ORIGIN: 88/03/21 DATE OF PROC. : 88/06/09

GROUP NODE = #
INTER GROUP NODE = #
DIRECT WIRE TO # = C
WIRING NOT COMPUTED = a

S U M M A R Y

ASSEMBLYS 0
GROUPS 37
ELEMENTS 157
PINS (TOTAL) 1214
MULTIPLE PINS 0
CODING KEYS 61
SIGNALS 362 ( UNUSED PINS ( UNUSED SIGNALS 25 )

RECORDS READ 1472

OPTIONS SPECIFIED : LOCLIS, SIGLIS, ALLCOL, WIRALL

OPTIONS USED : LOCLIS, SIGLIS, ALLCOL, WIRALL

LISTINGS GENERATED: GROUP SUMMARY LOCATION PIN LIST SIGNAL WIRE LIST

====>> NO PUNCH GENERATED <<====

****	1.727.010.00	* STUDER A 807 * TAPE RECORDER ***********************************	*********	******	* 88/0 *******	3/21 - 01 ********	******	*******	***
GRP	PART NUMBER	DESCRIPTION	UNUSED PINS U	SED PINS	TOT.PINS	MULT.PINS	COD.KEYS	TO T.FLM	RE
1		CONNECTOR PANEL	23	109	132	0	4	15	
2	55.12.0001	POWER SWITCH	0	4	4	0	0	1	
3		MAINS FILTER	0	4	4	0	0	2	
4		VOLTAGE SELECTOR	0	8	8	0	0	1	
5		MAINS TRANSFORMER	4	28	32	0	0	4	
6	1.727.310.00	RECTIFIER BOARD	6	40	46	0	1	5	
7		CHARGE CAPACITORS	0	8	8	0	0	4	
8		RECTIFIER DZ2	0	4	4	0	0	1	
10		TAPE DECK ELECTRONICS	1	146	147		16	15	
11		SPOOLING MOTOR CONTROL	0	58	58		6	9	
12		SP. MOTOR FILTER	0	22	22	0	0	4	
13		TAPE TENSION SENSOR	0	4	4	0	1	1	
14		TAPE TENS. ADJUSTMENT	0	8	8	0	0	1	
15	1.021.250.00	SPOOLING MOTOR, LEFT	0	3	3	0	0	1	
16		SPOOLING MOTOR, RIGHT	0	3	3	0	0	1	
17	1.727.315.00	SP. MOTOR TACHO, LEFT	0	3	3	0	0	1.	
18		SP. MOTOR TACHO, RIGHT	0	3	3	0	0	1	
20		CAPSTAN MOTOR CONTROL	0	32	32	0	4	5	
21		CAPSTAN MOTOR	0	14	14	0	2	2	
24		TAPE MOVE SENSOR	0	4	4	0	1	1	
25		BRAKE CHASSIS	. 0	2	2	0	0	1	
26		PRESS SOLENDID	0	2	2	0	0	1	
27		TAPE LIFT SOLENGID	0	2	2	0	0	1	
30		COMMAND PANEL	0	47	47	0	2	7	
31	1.727.370.00	DISPLAY BOARD	0	8	8	0	0	2	
35		LEVEL CONTROL PANEL	0	21	21	0	0	7	
36		PHONES CONNECTOR	0	5	5	0	0	1	
37	1.727.120.00		0	14	14	0	0	2	
39		HEAD BLOCK ASSEMBLY	1	24	25	0	0	1	
40		AUDIO CONTROL BOARD	24	195	219	0	4	20	
41		AUDIO ELECTRONICS CH1	0	88	88	0	7	1.1	
42		AUDIO ELECTRONICS CH2	0	88	88	0	7	11	
43		PREAMPLIFIER F. SECOND HEAD	12	12	24	0	1	3	
44		MONO/STEREO SWITCH, INPUT AMPL.	10	31	41	0	2	4	
45		MONO/STEREO SWITCH, OUTPUT AMPL.	4	20	24	0	0	4	
46		MOND/STERED SWITCH, ADJUSTMENT	2	20	22	0	0	3	
92	1.727.920.00	EXT. VU PANEL	6	37	43	0	3	3	

***	1. *******	727.010.0	00 * STU: *******	DER A 807 ******	' * TA	PE RECORDER ********	*****	******	******	* 88 *****	/03/21 - 01 *******	*****	******	*****
GR P	1 CONNECTOR PA	NEL			GRP	1 <	<	< CONTI	NOITAUN		1 <			
ELM	1 CONNECTOR PO	WER INPUT	r	P01	ELM	4 PARALLEL REM	OTE CO	NNECTOR		ELM	5 CONN. SYNCHE			
PNT	SIGNAL NAME	COLOR LY	/ TYPE	F	PNT	SIGNAL NAME	CULGR	LV TYPE	F	PNT	SIGNAL NAME	COLOR	LV TYPE	
1	LINE1	1			1 2 3 4 5	+0.0V	8 3 2 6 4	8 8 8 8 8		1 2 3 4 5	+0.0V BR-REW BR-FORW BR-VRSPD SR-VRSPD	8 3 2 6 4	B B B B	
	2 CONN. GROUND SIGNAL NAME				7 8 9	BR-LOCST BR-FADRY BR-REC SR-RESET	7 5	В В		8 9	OR-MVCLK KEY BR-REC OR-MVDIR	5 5 6	B B	
PNT  1	GND 				13 14	IR-REFEX SR-ZLOC	5 1 2 3 6	В В В		11 12 13	OR-CMCLK OR-SYENB IR-REFEX +0.0V	1 8 3 5	8 8 8 8	
	SERIAL CTL.	CONNECTOR	·		16 17	BR-PLAY BR-STOP SR-LIFT SR-LOCST	1 4 7 6	8 B B		16 17	BR-PLAY BR-STOP SR-LIFT SR-MUTE	1 4 7 4	8 B B	
1	SIGNAL NAME			F		SR-REC SR-REW SR-FORW	3 1 0			20	SR-REC SR-REW SR-FORW	3 1 0	8 8 8	
3 4	SN-DATA +24V-RMT				23 24	SR-PLAY SR-STOP KEY +24V-RMT	9 2			23 24	SR-PLAY SR-STOP KEY	9	B B	
6 7 8	RCVDATA +0.0V	1	В			+24V-RMT			./.	25 	+24V-RMT	9	В	./.

***						PE RECORDER **********	******	***********	* 88 *****		*****************************	
GRP	<		CONTIN		GRP	<		CONTINUATION	GRP	<	· < < cn	
	6			=====	ELM		=======	************	ELM			
	CONN. EXT. V					CONN. EXT. V		Oldua		CONN. LINE C	DUTPUT. CH1	
	SIGNAL NAME			F		SIGNAL NAME		/ TYPE F	PNT	SIGNAL NAME	COLOR LV TYPF	F
1 2	+0.0VD +5.6V +15.0V	0 5 2	8 8 8 8		1 2 3	A-LVOUA1	9 S 6	A A A	1 2 3	A-LOUTS1 A-LOUTA1 A-LOUTB1	S 2 3	
5	EXT-D5 EXT-D6 EXT-D7	5 6 7	B B B		5 6 7	A-MONIT1 A-PHIN1 A-LSA	1 8 6	A A A	ELM	11 CONN. LINE I	NPUT. CH2	
10	EXT-DATA	3	B B		9 10	A-LVOUA2 A-LVOUC2 A-LVINB2	9 S 6	A A A	PNT	SIGNAL NAME	COLOR LV TYPF	F
11 12 13 14	EXT-CLK EXT-ENLD +0.0VA	1 9 0	8 8 8		13	A-MONIT2 A-LVOUB1	2	A A A		A-LINS2 A-LINA2 A-LINB2		
15 16 17 18	-15.0V	6	B B		15 16 17	A-LVINC1 A-LVINA1	S 9	A A A	ELM	CONN. LINE I		
19 20 21			B B B		19 20	A-PREOU1 A-PHIN2 A-LSB A-LVOUB2	5 4 7 6	A A A	PNT		COLOR LV TYPE	F
22 23 24			В В В		22 23	A-LVINC2 A-LVINA2 KEY	S 9	Ā A A	2	A-LINA1 A-LINB1	9	
25 			В				3	Α		CONN. MIC IN	PUT• CH2	
						CONN. XLR					COLOR LV TYPF	
					PNT	SIGNAL NAME	COLOR L	TYPE F	2	A-MICSS2 A-MICSA2 A-MICSB2	S 9 6	
					ELM	GONN. LINE OF			ELM	14 CONN. MIC IN	PUT. CH1	
								TYPE F			COLDR LV TYPF	
					2 3	A-LOUTS2 A-LOUTA2 A-LOUTB2			1 2		S 9	

	*************	: 88/06/09 * 13:38 * PAGF 5 * **********************************
GRP 1 < < CONTINUATION	GRP 2 55.12.0001 POWER SWITCH	< < CONTINUATION GRP 3 89.01.0384 MAINS FILTER
ELM 15 PHANTOM POWERING SWITCH	ELM 1 POWER SWITCH	ELM 1 MAINS FILTER. INPUT
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF F
1 A-PHTM1 0 L 2 A-PHTM2 8 L 3 A-PHTM3 9 L	1 F-LINE1 1 J 2 LINE2 6 J 3 S-LINE1 1 J	1 S-LINE1 1 J 2 S-LINE2 6 J
	4 S-LINE2 6 J	ELM 2 MAINS FILTER, OUTPUT
		PNT SIGNAL NAME COLOR LV TYPF F
		1 SF-LINE1 1 J 2 SF-LINE2 6 J

	4 VOLTAGE SELE	CTOR			GRP 5 1.727.305.00 MAINS TRANSFORMER									
	VOLTAGE SELE				ELM	PRIMARY 1			P01		4 SECONDARY 2			P 04
PNT	SIGNAL NAME	COLOR	LV TYPE	F	PNT	SIGNAL NAME	COLOR L	V TYPE	F	PNT	SIGNAL NAME	COLOR	LV TYPF	F
1 2 3 4A	SF-LINE2 PRIMW-3 PRIMW-7 PRIMW-4 PRIMW-6 PRIMW-1 PRIMW-5	6-8 3 7 4-4	L L L		1 2 3 4	PRIMW-1 SF-LINE1 PRIMW-3 PRIMW-4	1 2 3 4	Y Y Y		9 10 11 12	ACA-40 ACA-20 ACA-17N ACA-17P	0	L L	
•	PRIMW-1 PRIMW-5 SF-LINE1	2-1	L		ELM	2 PRIMARY 2			P02	14 15 16 17	ACA-36 ACC-36 ACC-17P ACC-17N	4 4 4	L L L	
						SIGNAL NAME			F	18 19	ACC-20 ACC-40	4	L L	
					8	PRIMW-5 PRIMW-6 PRIMW-7 SF-LINE2	8	Y		20				
					ELM	3 SECONDARY 1			P03					
						SIGNAL NAME								
					9 10 11 12 13 14 15 16 17 18	ACC-40 ACC-20 ACC-17N ACC-17P ACC-36 ACB-36 ACB-17P	4 4 4 4 5 6 7 8	L L L L L L						

	1.TIFIER BOA				GRP			- CONTINU		GRP	CHARGE C				*****
	IN. TRANSFO				ELM	4 CONN. TAPE D			J04	ELM	CHARGE C			C 1	
	SNAL NAME			F	PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL N	IAME	COLOR	LV TYPF	
1 ACA 2 ACA 3 ACA	1-17P	1 3 2	N N		1 2	+20.0V +60.0V 17VAC	5 3	N N		1 2	+50.0V 0-MSPL	,	2 0	L L	
4 ACB 5 ACB 6 KEY	3-40 3-40	9	N			+24V-RMT	8	N		ELM	2 CHARGE C	APAC I	TOR CH	C 2	
7 ACB 8 ACB	3-17P	7 6	N N		8						SIGNAL N				
9 ACB 0 ACB 1 ACA 2 ACA	3-36 4-40	8 5 0	N N N		10 11	+24.0V +24.0V +24.0V +24.0V	7 7 7 7	N N N		1	CHC2-P CHC2-N		7 8	L L	
3 ACA	1-36 	4	N		14 15	+24.0V +20.0V -20.0V	7 2 6	N N		ELM	CHARGE C				
	IN. TO CHAP			J 02	17	+0.0V +0.0V	4	N N		PNT	SIGNAL N	AME	COLOR	LV TYPF	
NT SIG	NAL NAME	COLOR L	TYPE	F		+0.0V	0	N 		1	CHC3-P CHC3-N		2	Ĺ L	
1 CHC 2 CHC 3 CHC 4 CHC	3-N 4-P	8 3 4 7	N N N			CONN. RECTIF			 F	ELM	4 CHARGE (	APAC I	TOR CH	 C4	
5 CHC	3-P	2	N N			F-ACB40	1				SIGNAL N				
7 CHC	4-N	6	N		12	F-ACA40	8	Y		1	CHC4-P CHC4-N		4	L L	

******					PE RECORDER *********					********	*****	**************************************	****
P 8 RECTIFIER					10 1. TAPE DECK EL	ECTRONICS				10 1	727.350	).20 < CONTINU	UATIO
M 1 RECTIFIER	DZ2			ELM	1 CONNECTOR PO	WER SUPPL	.Y	J01	ELM	4 CONN. SERIA	L CTL.		<b>1</b> 0
T SIGNAL NA	ME COLO	R LV	TYPE	PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT		COLOR	LV TYPF	
F-ACA40 F-ACB40 +50.0V O-MSPLY	1		J	 1 2 3	17VAC	3	C C C		1 2 3 4	RCVDATA KEY +0.0V +24V-RMT	1 0 8	N B B	
				 5 6 7 8	+0.0V +20.0V +0.0V +60.0V	2 4 5	C C C		5  ELM	SN-DATA 5	2		
				10		7	C C					ENT SENSOR LV TYPE	
				ELM		N CTL.		J02	1 2	TRS-K TRS-A KEY			
				PNT	SIGNAL NAME	COLOR LV	TYPE	F	4	TRS-C	4 5	N	
				2 3 4	M3-9600 M3-EN M3-CLK		N N N			CONN. SPOOL		OR CTL.	
				6	MOT I ACITO	7	N N		PNT	SIGNAL NAME	COLOR	LV TYPF	
				8 9 10	M3-REFEX KEY KEY	8	N		2	MS-C76K MS-PRESS MS-SHUTL	2 3	N N N	
				12 13 14	+15.0V +0.0VA +0.0VD	0	N N N		5 6 7	MS-REW MS-DIREN MS-ON MS-REFB	4 5 6 7	N N N	
									9 10 11	MS-REFA S-TAPOUT M2-REFAN M1-TACHO	8 9 0 1	N N N	
					CONN. MOVE S				12 13	M2-TACHO MS-MVDIR	2	N N	
					SIGNAL NAME			F	15	KEY	4	N	
				1 2 3	0-MOVES +5.0V MV-CLK2	0 5 2	N N N		17	+5.6V +0.0VD +0.0VA	5 0 0	N N N	
				4	KEY MV-CLK1				19	-15.0V +15.0V	6 2	N N	

		********	*****	******	*****	********	******	******	*****	******	******			
												< <		
SRP	10 1.	727.350.20	O CONTI	NUATION	GRP	10 1. <	727.350.2 < <-	O CONTINU	ATION	GRP	10 1.	727.350.2	0 - CNNT	INUATION
C 1 M	7 CONN. SOLENO				EI M	c				E I M				
	SIGNAL NAME										SIGNAL NAME			
2	K-BRAKE	1	N		1 2	SM-D7 SM-D6 SM-D5 SM-D3 SM-D3 SM-D2 SM-D1 SM-D0 DS-DATA DS-ENDPL DS-ENLED KEY	1	N N		1 2	FAC1 FAC2 IR-REFEX	1 2	N N	
	K-LIFT	8	N		3	SM-D5	3	N		3	IR-REFEX	3	N	
	KEY				4	SM-D4	4	N		4	KEY			
	K-PRESS				5	SM-D3	5	N		5	SR-FADRY	5 6	N	
					6	SM-D2	6	N		6	SR-LOCST	6		
: 1 M	8				,	SM-01 SM-D0	,	Ni Ni			SR-LIFT +0.0V	8	N N	
LM	CONN. EXT. V	U-PANEL		30 L	9	DS-DATA	g	N		9	SR-PLAY	9	N	
					10	DS-CLK	9	N			SR-FORW	0	N	
NT	SIGNAL NAME	COLOR LV	TYPE	F	11	DS-ENDPL	1	N		11	SR-REW	1	N	
					12	DS-ENLED	2	N			SR-STOP	2	N	
1	EXT-FAD		N		13	KEY	2				SR-REC	3	N N	
2	KEY EYT-D7	7	N		14	+15.0V	2	N N			SR-VRSPD SR-RESET		N N	
4	EXT-D6	6	N		16	+0-0VA	Ö	N			SR-ZLOC		N	
5	EXT-FAD KEY EXT-D7 EXT-D6 EXT-D5 KEY EXT-DATA EXT-CLK EXT-ENLD +15.0V +0.0VA +5.6V	5	N		17	KEY +15.0V -15.0V +0.0VA +5.6V +0.0VD	5	N						
6	KEY		N											
7	EXT-DATA	3 .	N							ELM				
8	EXT-CLK	1	N N		ELM	1.0					CONN. PARALL			
וח	+15.0V	2	N N		CLM	CONN. AUDIO	CTL.		110		SIGNAL NAME			
ĭ	-15.0V	6	Ň											
12	-15.0V +0.0VA +5.6V +0.0VD	0	N		PNT	SIGNAL NAME	COLOR LV	TYPE	F		BR-PLAY	1 2	N	
13	+5.6V	5	N							2	BR-FORW BR-REW BR-STOP	2	N	
L 4	+0.0VD	0	N			AS-FAD				3	BR-REW	3	N	
					2	KEY	~						N	
				-/-	3	AS-WKEN	3	N N		2	BR-REC	5	N N	
					5	AS-STRAD	5	N		7	RR-FADRY	7	N	
					6	AS-CLK	6	N		8	BR-VRSPD BR-FADRY BR-LOCST	8	N	
					7	AS-DATA	7	N		9	KEY			
					8	KEY AS-WREN AS-STRAB AS-STR AS-CLK AS-DATA AS-HFCLK AS-RESET	8	N		10	+24V-RMT	0	N	
					9	AS-RESET	9	N						
					10	+5.6V	5	N						./.
						+0.0VD +48.0V +0.0VA	U	N						
						+48.0V +0.0VA	ó	N N						
						+15.0V	2	N						
						-15.0V	6	N						
									./.					

***	*********	727.01( *****	0.00 * STU *********	DER A 807	* TAI	PE RECORDER ************	****	*******	******	* 88, ******	/03/21 - 01 ************* <-	*******	******	*****
GRP		<	0.20 < CONTI			11 1. SPOOLING MOT	TOR C			GRP			CONTIN	
ELM	13 CONN. SYNCHR				ELM	CONN. TAPE 1		ADJUSTMENT		ELM	3 CONN. TAPE			10:
	SIGNAL NAME	COLOR	LV TYPE	F		SIGNAL NAME	COL	OR LV TYPE	F	PNT	SIGNAL NAME	COLOR L	V TYPF	ſ
1 2 3 4										1 2 3 4	MS-PRESS MS-MVCLK S-TAPOUT KEY MS-MVDIR	2 4 9	N N N	
6 7 8 9	OR-MVDIR SR-LIFT +0.0V SR-PLAY	6 7 8 9			6 7 8 9	O-11A KEY TTA-LIBR TTA-PLAY TTA-REW TTA-FORW TTA-SHT1 TTA-SHT2 TTA-SHT3	6 7 8 9	N N N N		6 7 8 9	MS-C76K M2-TACHO M1-TACHO MS-REFA -15.0V	1 2 1 8	N N N	
11 12 13 14	SR-STOP SR-REC SR-VRSPD	2 3 4	N N N		ELM	2 CONN. TAPE 1	TENS.	ŚENSOR	J02	11 12 13 14	MS-REFB +0.0VA MS-DIREN M2-REFAN	7 0 5	N N N	
	+0.0V 14 CONN. SYNCHRI			' J14				OR LV TYPE  N  N		16 17 18 19	MS-ON +15.0V MS-REW +0.0VD +5.6V MS-SHUTL	6 2 4 0 5	N N N N	
PNT	SIGNAL NAME	COLOR	LV TYPE	F		+15.0V	ź	Ň						
2	BR-PLAY BR-FORW BR-REW	1 2 3	N N N						./.	ELM	4 CONN. SP. M			
5 6 7 8	BR-REC BR-VRSPD KEY OR-SYENB	5	N N N N N							1 2 3 4	SIGNAL NAME O-TACH2 +5.0V KEY M2-TSENS	0 5	N N	
	15 CONN. GROUND									ELM	5 CONN. SP. M			
	SIGNAL NAME	COLOR	LV TYPE	F							SIGNAL NAME	COLOR L	V TYPF	
1	GND		Y							2	O-TACH1 KEY +5.0V M1-TSENS	0	N N	

* ** *	1-72 ******	7.010	.00 * ST ******	UDER A 807	* TA	PE RECCRDER *********	******	*****	******	* 88 *****	/03/21 - 01 ******	*****	*******	****
•													< CUNTI	
	11 1.72	<	< CONT			12 1. SP. MOTOR FI	ILTER				13 1. TAPE TENSION	SENSO	R	
														=====
ELM	CONN. SHUTTLE					CONN. SP. MC					CONN. SP. MO			
PNT	SIGNAL NAME (	OLOR I	LV TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR	LV TYPF	
1 2 3 4	R-SHUTL1 1 R-SHUTL2 2 KEY R-SHUTL3 3	: :	N N		1 2 3 4	0-MOTFL M1-R M1-R M1-S M1-S		N N N N N		1 2	0-TTS KEY +15.0V -15.0V AN-TTENS	0	N	
	7 CONN. SP. MOTO				7 8	+5.0VMF C-MOTFLT M1-T M1-T		N N N						
	SIGNAL NAME C													
2	O-MOTFL M1-R M1-R		N N N		ELM	2 CONN. SP. MC								
4	M1-S M1-S		N N		PNT	SIGNAL NAME	COLOR LV	TYPE	F					
6	+5.0VMF		N N		1	M2-R		N						
	C-MOTFLT M1-T		N N			M2-R M2-S		N N						
	M1-T		N			M2-S		N						
					5			N						
LM	8					M2-T O-MOTEL		N N						
	CONN. SP. MOTO													
	SIGNAL NAME C				ELM	CONN. SP. MC								
	M2-R M2-R		N N		PNT	SIGNAL NAME								
	M2-S		N						<u>:</u>					
	M2-S		N		1	M1-R M1-S M1-T	2							
	M2-T M2-T		N N		2	M1-S	9							
7	O-MOTFL		N			wi-!								
	9 CONN. SP. MOTO					4 CONN. SP. MC								
	SIGNAL NAME C	OLOR I	LV TYPE	F		SIGNAL NAME								
			Y		1 2	M2-R	2							
	0-MSPLY 0		Ÿ		3	M2-5 M2-T	6							

***	**************************************			*********	****	**************************************	**************************************	*********	****	*********** /06/09 * 13	*************	********* G F 12 #
***	**************************************	******** 727.010.0	**************************************	******	*****	************** PE RECORDER	******	*******	****		*******	
										<	< < CI	OI T AUNI THE
GRP	14 1. TAPE TENS. A	727.341.0 DJUSTMEN		====	GRP	15 1. SPOOLING MO		=====	GRP	16 1. SPOOLING MOT		
ELM	1 CONN. SP. MO	TOR CTL,	J01		ELM		OTOR FILTER, JO1		ELM		TOR FILTER, JO	11
PNT	SIGNAL NAME	COLOR L	/ TYPE	F	PNT	SIGNAL NAME	COLOR LV TYPE	F	PNT	SIGNAL NAME	COLOR LV TYP	, , , , , , , , , , , , , , , , , , ,
1	TTA-SHT1	7	N		1	M1-R	2		1	M2-R	2	
2	TTA-SHT2	8	N			M1-S	9		2	M2-S	9	
3	TTA-SHT3	9	N			M1-T	6			M2-T	6	
	TTA-LIBR	3	N									
-	TTA-REW	5	N									
6	I I A-KEW											
6	TTA-FORW	6	N									
6 8 10		6 4	N N									

RP 17 1.727.315.00 SP. MOTOR TACHO, LEFT	GRP 18 1.727.316.00 SP. MOTOR TACHO, RIGHT	<pre></pre>
LM 1	ELM 1	ELM 1
CONN. SP. MOTUR CTL. JO5	CONN. SP. MCTOR CTL. JO4  PNT SIGNAL NAME COLOR LV TYPE F	CONN. TAPE DECK CTL. JO PNT SIGNAL NAME COLOR LV TYPF
NT SIGNAL NAME COLOR LV TYPE F		1 M3-CLK 4 N
1	1 0-TACH2 0 N 2 +5.0V 5 N 3 M2-TSENS 4 N	2 M3-DATA 5 N 3 M3-EN 3 N
		4 M3-C76K 1 N 5 M3-SYNC 7 N
		6 +5.6V 5 N 7 +0.0VD 0 N 8 +15.0V 2 N
		8 +15 <sub>*</sub> 0V 2 N 9 +0 <sub>*</sub> 0VA 0 N 10 -15 <sub>*</sub> 0V 6 N
		11 KEY 12 M3-9600 2 N
		13 M3-REFEX 8 N 14 M3-TACHO 6 N
		ELM 2
		CONN. VARI SPEED CTL. JO
		PNT SIGNAL NAME COLOR LV TYPF
		1 +0.0V 0 N 2 KEY 3 R-VRSPD 8 N 4 +15.0V 2 N
		4 +15.0V 2 N
		ELM 3 CONN. CAPSTAN TACHO JO
		PNT SIGNAL NAME COLOR LV TYPF
		1 TACHO-3A 1 N 2 TACHO-3B 9 N
		3 KEY N 4 HALLIA 7 N
		5 HALL1B 8 N 6 HALL2A 5 N 7 HALL2B 6 N
		7 HALL2B 6 N 8 HALL3A 3 N 9 HALL3B 4 N
		10 +0.0V 0 N 11 +1.2V 2 N
		12 CAP-GRD
WILLI STUDER AG * L O C A T		./ ************************************
######################################	ION PIN LIST ************************************	-/ ************************************
######################################	I O N P I N L I S T  **********************************	-/ ************************************
######################################	I O N P I N L I S T  TAPE RECORDER  1.021.605.00  CAPSTAN MOTOR  ELM 1  CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1-021.605.00  CAPSTAN MOTOR  ELM 1  CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1-021.605.00  CAPSTAN MOTOR  ELM 1  CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1-021.605.00  CAPSTAN MOTOR  ELM 1  CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1-021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T O N  ELM 2 CONN. CAPSTAN CTL, J03	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1-021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, J03  PNT SIGNAL NAME COLOR LV TYPE F	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1.021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, JO3  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3A 1 N 2 TACHO-3B 9 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1.021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, JO3  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3A 1 N 2 TACHO-3B 9 N	######################################
WILLI STUDER AG * L O C A T  * 1.727.010.00 * STUDER A 8  * 1.727.010.00 * STUDER A 8  **********************************	I O N P I N L I S T  TAPE RECORDER  GRP 21 1.021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, JO3  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3A 1 N 2 TACHO-3B 9 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21 1.021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, JO3  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3A 1 N 2 TACHO-3B 9 N	######################################
WILLI STUDER AG * L O C A T  * 1.727.010.00 * STUDER A 8  * 1.727.010.00 * STUDER A 8  **********************************	I O N P I N L I S T  TAPE RECORDER  GRP 21 1.021.605.00 CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T 0 N  ELM 2 CONN. CAPSTAN CTL, JO3  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3A 1 N 2 TACHO-3B 9 N	######################################
######################################	I O N P I N L I S T  TAPE RECORDER  TAPE RECORDER  TAPE RECORDER  TO N P I N L I S T  TAPE RECORDER  TAPE RECOR	**************************************
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21	######################################
### ##################################	I O N P I N L I S T  TAPE RECORDER	**************************************
######################################	I O N P I N L I S T  TAPE RECORDER  GRP 21	**************************************
######################################	I O N P I N L I S T  TAPE RECORDER   CAPSTAN MOTOR  ELM 1 CONN. CAPSTAN CTL, JO4  PNT SIGNAL NAME COLOR LV TYPE F  1 M3-R 9 N 2 KEY N 3 M3-S 2 N 4 M3-T O N  PNT SIGNAL NAME COLOR LV TYPE F  1 TACHO-3A 1 N 2 TACHO-3B 9 N 3 KEY N 4 HALLIA 7 N 5 HALLIB 8 N 6 HALL2A 5 N 7 HALL2B 6 N 8 HALL3B 4 N 9 HALL3B 4 N 9 HALL3B 4 N 10 *1.2V 0 N 11 *0.0V 2 N 12 CAP-GRD   CONN. TAPE DECK CTL. JO7	**************************************
######################################	I O N P I N L I S T  TAPE RECORDER  TAPE SOLENOID  TAPE RECORDER  TAPE SOLENOID  TAPE RECORDER  TAPE SOLENOID  TAPE RECORDER  TAPE SOLENOID  TAPE RECORDER	**************************************

GRP 30 1-727-362-00 COMMAND PANEL 1.727.362.00 <-- <-- CONTINUATION GRP 31 1.727.370.00
DISPLAY BOARD ELM 4 CONN. KEYS MATRIX ELM 1 CONN. SPEED INDICATORS ELM 1 CONN. COMMAND PANEL JO1 PNT SIGNAL NAME COLOR LY TYPE PNT SIGNAL NAME COLOR LV TYPE PNT SIGNAL NAME COLOR LV TYPF 1 B-FAST 2 B-MID 3 B-SLOW +5.6V SM-D7 SM-D6 SM-D5 SM-D4 SM-D3 SM-D2 SM-D1 1 B-FAST 2 B-MID 3 B-SLOW ELM 2 CONN. DISPLAY EL. ELM 2 CONN. COMMAND PANEL JO2 PNT SIGNAL NAME COLOR LV TYPF F PNT SIGNAL NAME COLOR LV TYPE F SM-D1 SM-D0 MRX-Q14 MRX-Q13 KEY +0.0VD MRX-Q12 MRX-Q16 MRX-Q11 MRX-Q11 1 +0.0VD | 1 2 DS-ENDPL | 1 3 DS-CLK | 4 DS-DATA | 5 5 +5.6V | 1 1 +0.0VD 2 DS-ENDPL 3 DS-CLK 4 DS-DATA 5 +5.6V ELM 3 CUNN. TAPE DECK CTL. J10 PNT SIGNAL NAME COLOR LV TYPE F ELM 5 CONN. VU-INPUT CHI 1 +5.6V 2 SM-07 3 SM-06 4 SM-05 5 SM-04 6 SM-03 7 SM-02 8 SM-01 10 +0.0V 11 KEY 12 DS-ENDPL 13 DS-ENLED 14 DS-ENLED 14 DS-ENLED 14 DS-ENLED 15 DS-CL K 16 +15.0V 17 +3.0V 18 +15.0V PNT SIGNAL NAME COLOR LV TYPE

1 A-VUMTR1 1 Y CONN. VU-INPUT CH2 PNT SIGNAL NAME COLOR LV TYPE 1 A-VUMTR2 1 Y DS-ENLEL DS-DATA DS-CLK +15.0V +0.0VA -15.0V ELM 7 SHUTTLE POTMETER PNT SIGNAL NAME COLOR LV TYPE 1 R-SHUTL1 2 R-SHUTL2 3 R-SHUTL3 GRP 36 54.24.0103
PHONES CONNECTOR GRP 35 LEVEL CONTROL PANEL GRP 35 GKY 35 <-- <-- CONTINUATION ELM 6 OUTPUT LEVEL POTM. CH2 ELM 1 MIC LEVEL POTM. CH1 ELM 1 CONN. HEAD PHONES PNT SIGNAL NAME COLUR LV TYPE PNT SIGNAL NAME COLOR LV TYPE PNT SIGNAL NAME COLOR LV TYPE 1 A-LVMIC1 0 2 A-LVMIB1 6 3 A-LVMIA1 9 ELM 2 LINE LEVEL POTM. CH1 ELM 7 VARIO SPEED POTM. PNT SIGNAL NAME COLOR LV TYPE PNT SIGNAL NAME COLOR LV TYPE F 1 A-LVINC1 2 A-LVINB1 3 A-LVINA1 1 +0.0V 2 R-VRSPD 3 +15.0V ELM 3 MIC LEVEL POTM. CH2 PNT SIGNAL NAME COLOR LV TYPE F

1 A-LVMIC2 0 L
2 A-LVMIB2 6 L
3 A-LVMIA2 9 L ELM 4 LINE LEVEL POTM. CH2 PNT SIGNAL NAME COLOR LV TYPE A-LVINC2 A-LVINB2 A-LVINA2 OUTPUT LEVEL POTM. CH1 PNT SIGNAL NAME COLOR LV TYPE F 1 A-LVOUC1 2 A-LVOUR1 A-LVOUB1 A-LVOUA1

<-- <-- CONTINUATION GRP 37 1-727-120-00 MONITOR GRP 40 1.727.400.00
AUDIO CONTROL BOARD GRP 39 1.050.341.00 HEAD BLOCK ASSEMBLY ELM 1 LOUDSPEAKER ELM 1 CONN. TAPE DECK ELECTRONICS ELM 1 CONN. AUDIO ELECTRONICS PNT SIGNAL NAME COLOR LV TYPF PNT SIGNAL NAME COLOR LY TYPE PNT SIGNAL NAME COLOR LV TYPE REPHL-01 REPHH-01 REPSC-01 SRPHL-01 SRPSC-01 RECHL-01 RECHH-01 ERAHL-01 AS-STRAB AS-DATA AS-CLK AS-WREN AS-STR ELM 2
MONITOR VOLUME POTM
PNT SIGNAL NAME COLOR LV TYPE F +0.0VD +5.6V +15.0V +0.0VA -15.0V AS-FAD KEY AS-RESET +48.0V KEY AS-HFCLK 1 +0.0VA 2 A-PHIN2 3 A-LWMON2 4 +0.0VA 5 A-PHIN1 6 A-LWMON1 7 A-LWMON2 8 A-PREOU2 9 A-MONITO 10 A-PREOU1 11 A-MONITO 12 A-LWMON1 ERAHH-01 TRS-K TRS-A REPHL-02 REPHH-02 REPSC-02 SRPHL-02 SRPHH-02 18 SRPHH-02 19 SRPSC-02 20 RECHL-02 21 RECHH-02 22 ERAHL-02 23 ERAHH-02 24 TRS-C 25 TRS-E CONN. MONITOR PNT SIGNAL NAME COLOR LV TYPF PNT SIGNAL NAM
1 A-MONIT2
2 KEY
3 A-PREOUZ
4 A-PHINZ
5 A-PHSWZA
6 A-PHSWZA
6 A-PHSWZA
6 A-PHSWZA
10 A-PHSWIB
11 A-PHOUT1
12 A-LSAMP2
13 A-LSAMP1
14 +0.0VA
16 A-LSA
17 A-LSB 2 19 A-PREGUI 20 A-MONITI GRP 40 1.727.400.00 CONTINUATION GRP 40 1.727.400.00 C-- C-- CONTINUATION GRP 40 1.727.400.00 <-- <-- CONTINUATION ELM 24 CONN. AUDIO ELECTRONICS CH 1 PNT SIGNAL NAME COLOR LV TYPF ELM 22 CONN. AUDIO ELECTRONICS CH1 PNT SIGNAL N.

1 A-00
2 A-01
3 A-02
4 A-03
5 WR-REPR1
6 AS-STRAB
7 A-04
8 A-05
9 A-06
0 A-07
1 C-NAB
2 A-DRVIN1
3 A-PREGU1
4 A-TAPOUI
5 C-INPUTI
6 C-CALOUI
7 C-UNCOUI
7 C-UNCOUI
8 A-TAPOUI
9 C-UNCOUI
9 C-UNCOUI
1 C-UNCOUI
1 C-UNCOUI
1 C-UNCOUI
1 C-OUTSW
1 A-MONITI PNT SIGNAL NAME COLOR LV TYPE F PNT SIGNAL NA

1 A-RECIN1
2 C-ERASE1
3 C-BIAS1
4 C-EQA
5 C-EQB
6 +5.0VA
7 WR-BIAS1
8 A-D0
9 A-D1
10 A-D2
11 A-D3
12 +0.0VD
13 WR-REC1
14 AS-STRAB
14 AS-STRAB
15 A-D4
16 A-D5
17 A-D6
18 A-D7
19 C-REC1
20 A-HFIN1 ELM 11 CONV. OPTION PNT SIGNAL NAME COLOR LV TYPE F ELM 12 CONN. OPTION PNT SIGNAL NAME COLOR LV TYPE F 1 +15.0V 2 +0.0VA 3 -15.0V 4 +0.0VD 5 +5.0VA ELM 31 CONN. INSERT. INPUT CIRCUIT CGNN. AUDIO ELECTRONICS CH1 PNT SIGNAL NAME COLOR LV TYPE PNT SIGNAL NAME COLOR LV TYPF ELM 13 CONN. OPTION 1 +15.0V 2 -15.0V 3 C-BASS 4 A-SECRP1 5 C-EQB 6 C-EQB 7 C-SYNC1 8 C-REPRO1 9 C-SECRP1 10 A-CTALK1 11 +0.0VA 12 +5.0VA 13 +0.0VD 1 A-PREOU1 PNT SIGNAL NAME COLOR LV TYPE F 2 3 4 A-RECIN1 5 +5.0VA 6 +0.0VD 7 A-PREDU2 8 -15.0V 9 A-RECIN2 -----ELM 21
CONN. AUDIO ELECTRONICS CH1

PNT SIGNAL NAME COLOR LV TYPE F +48.0V C-NAB C-MIGAT1 A-PREOU1 C-CALIN1 C-UNCIN1 C-MICON1

	40 1.727.400.00 < < CONTINUATION	GRP	40 1.727.400.00 < CONTINUA			727.400.00 < < CONTINUATI
LM	32 CONN. INSERT, INPUT CIRCUIT	ELM	35 CONN. INSERT, OUTPUT CIRCUIT	ELM	42	ELECTRONICS CH2
	SIGNAL NAME COLOR LY TYPE F		SIGNAL NAME COLOR LY TYPE			COLOR LV TYPF
	-15.0V N		C-EQN N		A-RECIN2	N
	+0.0VA N	2	C-EQF N		C-ERASE2	Ñ
	+15.0V N		C-EQM N		C-BIAS2	N
	C-INSERT N		C-EQS N		C-EQA	N
5	N N		C-INSERT N +5.0VA N		C-EQB	N.
	C-EQS N C-EQM N		+5.0VA N +0.0VD N		+5.0VA WR-BIAS2	N N
	C-EQF N	8	N N		MR-01A32 A-DO	N N
	C-EQN N	9	n N		A-D1	N N
					A-D2	N
					A-D3	N
LM	33	ELM			+0.0VD	N
	CONN. PREAMPLIFIER, SECOND REPRO		CONN. INSERT, OUTPUT CIRCUIT	13	WR-REC2	N
				14	AS-STRAB	N
	SIGNAL NAME COLOR LV TYPE F		SIGNAL NAME COLOR LV TYPE	F 15	A-D4 A-D5	N
	-15.0V N	1	N		A-D6	N N
	+0.0VA N	2	Ň	10	A-D7	N
	+15.0V N		A-DRVIN2 N		C-REC2	N
4	N		+0.0VA N		A-HFIN2	N
5	N	5	A-TAPOU2 N			
ó	N	6	-15-0V N			
7	N		A-DRVIN1 N	ELM		
8	N		+15.0V N			ELECTRONICS CH2
9 	N	9	A-TAPOU1 N			COLOR LV TYPF
	24					
- m	34 CONN. PREAMLIFIER. SECOND REPRO	ELM	CONN. AUDIO ELECTRONICS CH2		+15.0V	N N
	COMM. PREAMETITES, SECOND REPRO		CONN. AUDIO ELECTRONICS CH2	3	-15-0V C-BASS	N N
VΤ	SIGNAL NAME COLOR LV TYPE F	PNT	SIGNAL NAME COLOR LV TYPE	F 4	A-SECRP2	N N
					C-EQB	Ñ
1	N	1	+48.0V N	6	C-EQA	N
2	N		C-NAB N	7	C-SYNC2	N
3	N		C-MICAT2 N		C-REPRO2	N
4	N		A-PREGU2 N		C-SECRP2	N
5	N.		+48.0V N C-NAB N C-MICAT2 N A-PREGU2 N C-CALIN2 N C-UNCIN2 N C-MICON2 N		A-CTALK2	N.
7	A-SECRP1 N		C-UNCIN2 N C-MICON2 N		+0.0VA +5.0VA	N N
	+0.0VA N		C-MICUN2 N	12	+0.0VA +0.0VD	N
	A-SECRP2 N			./.		

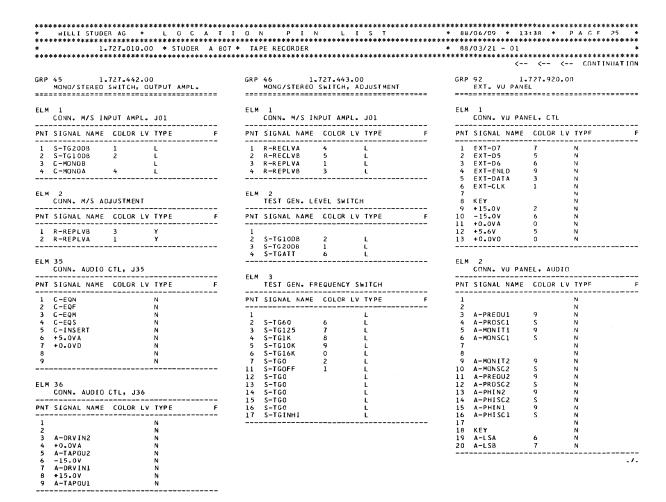
*	1.	**************************************	ER A 807	* TA1	PE RECORDER				* 88	/03/21 - 01 *******	*****		*****
		727.400.00 - < < CONTIN			41 1. AUDIO ELECTR	ONICS (	H1	=====				< CONTIN	
ELM	CONN. AUDIO	ELECTRONICS CH2			1 CONN. MIC LE				ELM	5 CONN. HEAD B			
PNT	SIGNAL NAME	COLOR LV TYPE	 F	PNT	SIGNAL NAME	COLOR	LV TYPE	F	PNT	SIGNAL NAME	COLOR	LV TYPF	
2 3 4	A-D0 A-D1 A-D2 A-D3 WR-REPR2	N N N N		1 2	A-LVMIA1 KEY A-LVMIB1 A-LVMIC1	9	N N		1 2 3 4	REPHL-01 REPHH-01 KEY REPSC-01	6 9 S	N N N N	
7 8 9	AS-STRAB A-D4 A-D5 A-D6	N N N			CONN. MIC AN					CONN. OUTPUT			
11 12 13 14 15	A-D7 C-NAB A-DRVIN2 A-PREOU2 A-TAPOU2 C-INPUT2	N N N N N N N N N N N N N N N N N N N		1 2 3 4	A-LINB1 A-LINS1 KEY	9 6 S	N N N N	<del>-</del>	1 2 3 4	SIGNAL NAME A-LVOUA1 KEY A-LVOUB1 A-LVOUC1	9 5 0	N N N	
17 18 19	C-CAL DU2 C-UNCOU2 C-CUEAT C-OUT SW A-MON I T2	N N N N		6 7 8 9	A-MICSS1 A-MICSB1 A-MICSA1 +0.0VA A-MICSW1 A-MICAS1	6	N N N N		ELM	7 CONN. LINE O SIGNAL NAME	OUTPUT CO	ONNECTOR. C	:н1
					CONN. LINE L				1 2 3	A-LOUTB1 A-LOUTA1 KEY A-VUMTR1	3 2	N N N	
				1 2 3	SIGNAL NAME A-LVINA1 A-LVINB1 KEY A-LVINC1	9	N N N	F 		11 CONN. AUDIO			
				ELM	4 CONN. HEAD B	LOCK, F	LECORD		1 2 3	+48.0V C-NAB C-MICAT1 A-PREOU1		N N N	
				1	SIGNAL NAME RECHH-01 RECHL-01 ERAHH-01	8 7	N N	F	6	C-CALIN1 C-UNCIN1 C-MICON1		N N N	./

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GRP 42 1.727.420.00
AUDIO ELECTRONICS CH2
                                                                                               1.727.420.00
<-- <-- CONTINUATION
GRP 41 1.727.420.00 

<-- <-- CONTINUATION
                                                                          GRP 41
                                                                                                                                                      ELM 1
CONN. MIC LEVEL POT. CH2
                                                                           ELM 14
CONN. AUDIO CTL. J24
ELM 12
CONN. AUDIO CTL, J22
PNT SIGNAL NAME COLOR LV TYPE F
                                                                                                                                                      PNT SIGNAL NAME COLOR LV TYPF
                                                                           PNT SIGNAL NAME COLOR LV TYPE
 1 A-RECINI
1 A-RECINI
2 C-ERASEI
3 C-BIASI
4 C-EQA
5 C-EQB
6 +5.0VA
7 WR-BIASI
8 A-D0
9 A-D1
10 A-D2
11 A-D3
12 +0.0VD
13 WR-REC1
14 AS-STRAB
15 A-D4
16 A-D5
17 A-D6
18 A-D7
19 C-REC1
20 A-HFINI
                                                                          1 A-D0
2 A-D1
3 A-D2
4 A-D3
5 WR-REPR1
6 AS-STRAB
7 A-D4
8 A-D5
9 A-D6
10 A-D7
11 C-NAB
12 A-DRVINI
13 A-PREOUI
14 A-TAPOUI
15 C-INPUI
16 C-CALOUI
17 C-UNCOUI
18 C-OUEAT
19 C-OUTSW
20 A-MUNITI
                                                                                                                                                      1 A-LVMIA2
2 KEY
3 A-LVMIB2
4 A-LVMIC2
                                                                                                                                                      ELM 2
CONN. MIC AND LINE INPUTS. CH2
                                                                                                                                                      PNT SIGNAL NAME COLOR LV TYPF F
                                                                                                                                                     1 A-LINA2
2 A-LINB2
3 A-LINS2
4 KEY
5 A-MICSS2
6 A-MICSS2
7 A-MICSS2
8 +0.0VA
9 A-MICSW2
10 A-MICSW2
CONN. AUDIO CTL, J23
                                                                                                                                                      CONN. LINE LEVEL POT. CH2
PNT SIGNAL NAME COLOR LV TYPE F
                                                                                                                                                      PNT SIGNAL NAME COLOR LV TYPF
1 +15.0V
2 -15.0V
3 C-9ASS
4 A-SECRP1
5 C-EQB
6 C-EQA
7 C-SYNC1
8 C-REPRO1
9 C-SECRP1
0 A-CTALK1
11 +0.0VA
2 +5.0VA
3 +0.0VD
                                                                                                                                                       1 A-LVINA2
2 A-LVINB2
3 KEY
4 A-LVINC2
                                                                                                                                                                                  9
4
                                                                                                                                                      ELM 4
CONN. HEAD BLOCK. RECORD
                                                                                                                                                      PNT SIGNAL NAME COLOR LV TYPF
                                                                                                                                                       1 RECHH-02
2 RECHL-02
3 ERAHH-02
4 KEY
5 ERAHL-02
```

GRP 42 1.727.420.00 CONTINUATION GRP 42 1.727.420.00 <-- <-- CONTINUATION ELM 12 CONN. AUDIO CTL, J42 ELM 5 CONN. HEAD BLOCK, REPRO ELM 14 CONN. AUDIO CTL. J44 PNT SIGNAL NAME COLOR LV TYPE F PNT SIGNAL NAME COLOR LV TYPE F PNT SIGNAL NAME COLOR LV TYPF 1 A-D0
2 A-D1
3 A-D2
4 A-D3
5 WR-REPR2
6 AS-STRAB
7 A-D4
8 A-D5
9 A-D6
10 A-D7
11 C-NAB
12 A-DRVIN2
13 A-PREOU2
14 A-TAPOU2
15 C-INPUE
16 C-CALOU2
17 C-UNCOUZ
18 C-CUEAT
19 C-OUTSW
20 A-MONITZ 1 A-RECIN2
2 C-ERASE2
3 C-BIAS2
4 C-EQA
5 C-EQB
6 +5.0VA
7 WR-BIAS2
8 A-D0
9 A-D1
10 A-D2
11 A-D3
12 +0.0VB
13 WR-REC2
14 AS-STRAB
15 A-D4
16 A-D5
17 A-D6
18 A-D7
19 C-REC2
20 A-HFIN2 1 REPHL-02 6 N 2 REPHH-02 9 N 3 KEY N 4 REPSC-02 S N ELM 6
CONN. OUTPUT LEVEL POT, CH2 PNT SIGNAL NAME COLOR LV TYPE 1 A-LVOUA2 2 KEY 9 3 A-LVOUB2 4 A-LVOUC2 ELM 7
CONN. LINE OUTPUT CONNECTOR, CH2 PNT SIGNAL NAME COLOR LV TYPE 1 A-LOUTB2 2 A-LOUTA2 3 KEY ELM 13 CONN. AUDIO CTL, J43 PNT SIGNAL NAME COLOR LV TYPE F A-VUMTR2 1 +15.0V 2 -15.0V 3 C-BASS 4 A-SECRP2 ELM 11 CONN. AUDIO CTL, J41 4 A-SECRP2 5 C-EQB 6 C-EQA 7 C-SYNC2 8 C-REPRO2 9 C-SECRP2 10 A-CTALK2 11 +0.0VA 12 +5.0VA 13 +0.0VD PNT SIGNAL NAME COLOR LV TYPE 1 +48.0V 2 C-NAB 3 C-MICAT2 4 A-PREOU2 5 C-CALIN2 6 C-UNCIN2 7 C-MICON2

***	*****	******	*****	******	******	******	******	*******	******	*****		13:38 * PAGE *************	
***1											******	****************	
	43 1. PREAMPLIFIER	F. SECON	D HEAD	====		44 1. MONO/STEREO	SWITCH. I	NPUT AMPL.			44	1.727.441.00 < CONTI	NUATION
ELM	1 CONN. HEAD B				ELM	1 CONN. M/S AD				ELM	CONN. AUDI	O CTL, J31	
PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAM	E COLOR LV TYPF	F
1 2 3 4 5	SRPHL-02 KEY SRPHH-02 SRPSC-02 SRPHL-01 SRPHH-01 SRPSC-01	6	N N		1 2 3 4 5 6 7	KEY  R-RECLVA  R-RECLVB  S-TG60  S-TG125	4 5 6	N N N N N N	40 W 40 40 40	1 2 3 4 5 6 7	A-PREOU1	N N N N N N	<del></del>
PNT	CONN. AUDIO	COLOR LV	TYPE	F	10 11 12 13	S-TG1K S-TG10K S-TG16K S-TG0FF S-TG0 S-TG1NHI	8 9 0 1 2 3	N N N N		ELM	CONN. AUDI	0 CTL. J32	
2	-15.0V +0.0VA +15.0V		N N N		17		6 7 8	N N N N		PNT 	SIGNAL NAM	E COLOR LV TYPF N	f
5 6 7 8 9			N N N		ELM		TPUT APML	•		3 4 5 6 7	+15.0V C-INSERT	N N N N N	
ELM	34 CONN. AUDIO	CTL, J34			1			N N			C-EQN	N	
PNT	SIGNAL NAME				4	C-MONOB C-MONOA	4	N N					
1 2			N N		5 6 7	KEY		N N N					
5 6 7	A-SECRP1		N N N						./.				
	+0.0VA A-SECRP2		N N										



<-- <-- CONTINUATION

GRP 92 1.727.920.00 <-- <-- CONTINUATION

CONN. LEVEL CONTROL, AUDIO

PNT SIGNAL NAME COLOR LV TYPE F

PNT SIGNAL NA)

1 A-LVINA2
2 A-LVINB2
3 A-LVINC2
4 A-LVOUG2
5 A-LVOUG2
7 A-LVING1
9 A-LVING1
0 A-LVING1
11 KEY
12 A-LVOUG1
13 A-LVOUG1

*	1.727.	.010.	.00 * 51	UDER	2 A 5	307 *	TAPE RECORDER	***************************************	/03/21 -	- 01	
SIGNAL NAME	COLOR	мі	ASY GRE	P ELM	1 PNT	S L	V TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
O-AUDIO	0		1	7	4		Α				
O-MOTFL			11 11 12 12	7 8 1 2	1 7 1 7		N N N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CIL, CONN. SP. MOTOR CTL,	J08 P01 P02		
O-MUVES	0		10 24	3 1	1 2		N N	CONN. MOVE SENSOR CONN. TAPE DECK CTL. JO3	103		
O-MSPLY	0 0 0		7 8 11 20	1 1 9 5	2 4 2 2		У У	CHARGE CAPACITOR CHC1 RECTIFIER DZ2 CONN. SP. MOTOR SUPPLY, CONN. CAPSTAN MOTOR SUPPLY	P1. P2		
0-TACH1	0		11 17	5 1	1		N N	CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5	J05		
0-TACH2	0		11 18	4	1		N N	CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR CTL. JO4	J04		
O-TTA	1 1		11 14	1	1 11		N N	CONN. TAPE TENS. ADJUSTMENT CONN. SP. MOTOR CTL. JO1	J01		*****
0-TTS	0		11 13	2	1 1		N N	CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2	J02		
17VAC	3 3		6 10	4	3 1		N C	CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY	J04 J01		
+0.0V	0 8 8 5 1 4 0 0 0 4 1 0 8 8 5 0 0		1 1 1 1 6 6 6 10 10 10 10 10 10 20 20 21	3 4 5 5 4 4 4 1 1 1 1 3 1 3 2 7	9 1 1 14 16 17 18 5 7 9 3 8 8 15 1		8 8 8 8 N N N N C C C C B N N N N N N N N N N N	SERIAL CTL. CONNECTOR PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. TAPE DECK ELECTRONICS CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONN. SERIAL CTL. CONN. SYNCHRONIZER A CONN. SYNCHRONIZER A CONN. VARI SPEED CTL. CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3 VARIO SPEED POIM.	J04 J04 J01 J01 J01 J04 J11 J13 J13 J02 J03		
+0.0VA	0 0 0 0 0		1 10 10	6	14 13 18 12		B N N N	CONN. EXT. VU PANEL. CTL CONN. CAPSTAN CTL. CONN. SPOOLING MOTOR CTL. CONN. EXT. VU-PANEL CONN. COMMAND PANEL	J02 J06 J08 J09		

* *********									APE RECORDER *******	*********	* 88/0			******
SIGNAL NAME	COLOR	MI	ASY	GRP	ELM	PNT	s	LV	TYPE	DESCRIPTION OF E			REMARK	ELEMFNT NR.
< CONT.OF	0			10	10	13	_		N	CONN. AUDIO CTL.		J10		
+0.0VA	0			11		12			N	CONN. TAPE DECK		J03		
	0			20	1	9			N	CONN. TAPE DECK	CTL.	J01		
	0			30	3				D	CONN. TAPE DECK				
	0			36	1	1			L	CONN. HEAD PHONE				
	0			37	2	1			L	MONITOR VOLUME P				
	0			37 40	2	4 12			L N	MONITOR VOLUME P CONN. TAPE DECK				
	0			40	2				N	CONN. MONITOR	ELECTRONICS			
	Ō			40	2	15			N	CONN. MONITOR				
				40	12	2			N	CONN. OPTION				
				40	23	11			N	CONN. AUDIO ELEC				
				40	32	. 2			N	CONN. INSERT, IN				
				40 40	33 34	2			N N	CONN. PREAMPLIFI		J		
				40	36	4			N	CONN. PREAMLIFIE CONN. INSERT, OU				
				40	43	1 i			N	CONN. AUDIO ELEC				
				41	2	8			N	CONN. MIC AND LI				
				41	13	11			N	CONN. AUDIO CTL,				
				42	. 2	. 8			N	CONN. MIC AND LI				
				42 43	13 33	11			N N	CONN. AUDIO CTL,				
				43	34	8			N	CONN. AUDIO CTL,				
				44	32	2			Ň	CONN. AUDIO CTL.				
				45	36	4			N	CONN. AUDIO CTL,	J36			
	0			92	1	11	_		N 	CONN. VU PANEL.				
+0.0VD	0			1	6	1			В	CONN. EXT. VU PA				
	0			10		14			N	CONN. CAPSTAN CT		J02		
	0			10 10	6 8	17 14			N N	CONN. SPOOLING M CONN. EXT. VU-PA		J06 J08		
	Õ			10		18			N	CONN. COMMAND PA		J09		
	0			10	10				N	CONN. AUDIO CTL.		J10		
	0			11	3	18			N	CONN. TAPE DECK	CTL.	J03		
	0			20	1	7			N	CONN. TAPE DECK		J01		
				30	2	1			N	CONN. DISPLAY EL				
	0			30 30	3	10 14			D N	CONN. TAPE DECK				
				31	2	1			N	CONN. KEYS MATRI CONN. COMMAND PA				
	0			40	ī	9			N	CONN. TAPE DECK				
				40	12	4			N	CONN. OPTION				
				40	22	12			N	CONN. AUDIO ELEC	TRONICS CH1			
				40	23	13			N	CONN. AUDIO ELEC				
				40	31	6			N	CONN. INSERT, IN				
				40 40	35 42	12			N N	CONN. INSERT, OU CONN. AUDIO ELEC				
				40	43	13			N	CONN. AUDIO ELEC				
				41	12	12			N	CONN. AUDIO CTL.				
				41	13	13			N	CONN. AUDIO CTL.				
				42	12				N	CONN. AUDIO CTL,	J42			
				42	13				N	CONN. AUDIO CTL.				
				44	31	6			N	CONN. AUDIO CTL.				
	0			45 92	35 1	7 13			N N	CONN. AUDIO CTL, CONN. VU PANEL,				
	9			,,	-	10				SUNNS TO FAMELS				

************** *	1.727-	010.	00	* ST	UDER	A ****	307 ****	* T	APE RECORDER	******	********	*****	* 88/03/	21 -	- 01 ******	******	
SIGNAL NAME	COLOR		ASY	GRP	ELM	PNT			TYPE	DE S	CRIPTION O	OF ELEMENT			REMARK	ELEMENT N	NR.
+1.2V	2 0			20		11 10	-		N N	CON	N. CAPSTAN	N CTL, JO3		J03			
+15.0V	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			11 11 13 20 20 30 35 40 40 40 40 40	2 6 8 9 10 2 3 1 1 2 3 7 1 1 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	5 16 3 8 4 16			B N N N N N N N N N N N N N N N N N N N	CON CONN CONN CONN CONN CONN CONN CONN	N. EXT. VLN. CAPSTAM N. SPOOLIN N. EXT. VL N. COMMANI N. AUDIO C N. TAPE DE N	U PANEL. CTL NG MOTOR CTL U-PANEL D PANEL CTL. ECKS. SENSOR ECK CTL. TOR CTL. JO2 ECK CTL. PEED CTL. ECK CTL. JIO POTM. ELECTRONICS , INPUT CIRC LIFIER, SECO , OUTPUT CIR ELT, J23 CTL, J43 CTL, J33	CS CH1 UIT ND REPRO	J02 J03 J04 J09 J09 J09 J09 J09 J09 J09			
	2			45 92	36 1	8 9 	_		N N	CON	N. AUDIO ( N. VU PANE						
+20.0V	2 2			6 6 10	4 4 1	1 14 6			N C	CON	N. TAPE DE NECTOR POW	ECK ELECTRON ECK ELECTRON MER SUPPLY	103	J04 J04 J01			
+24.0V	7 7 7 7 1 1 7			6 6 6 6 10 25 26 27	4 4	1	_		N N N N C X X	CONI CONI CONI CONI CONI CONI CONI CONI	N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE N. TAPE DE	ECK ELECTRON ECK ELECTRON ECK ELECTRON ECK ELECTRON MER SUPPLY ECK CTL. JO7 ECK CTL. JO7	ICS ICS ICS	J04 J04 J04 J04 J04 J01			
+24V-RMT	8 0 9 8 8 8 0			1 1 1 6 10 10 10	3 4 5 4 1 4 12	25 4 3 4	-		В В В N С В В N	SER PAR. CONI CONI CONI CONI CONI	IAL CTL. ( ALLEL REML N. SYNCHRO N. TAPE DE NECTOR POW N. SERIAL	CONNECTOR UTE CONNECTO ONIZER ECK ELECTRON WER SUPPLY CTL. EL REMOTE B	R	J04 J01 J04 J12 J14			

*	1.727.	010.	00	* S1	TUDE	R A	807	*	TAPE RECORDER	**************************************	8/03/21 -	- 01	
SIGNAL NAME								LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
+48.0V	7 7			40 40 40 41	10 1 21	12 17 1 1			N N N N N	CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J21 CONN. AUDIO CTL, J41	J10		
+5.0V	5 5 5 5 5 5			11 17 18 24	4 5 1 1 1	2 2 3 2 2 5			N N N N N	CONN. MOVE SENSOR CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5 CONN. SP. MOTOR CTL, JO4 CONN. TAPE DECK CTL. JO3	J03 T J04 J05		
+5.0VA				41 42 42 44 45	12 22 23 31 35 42 43 12 13 12	5 6 12 5 6 12 6 12 6			N N N N N N N N N N N N	CONN. OPTION CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. INSERT, INPUT CIRCUIT CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J23 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J43 CONN. AUDIO CTL, J43 CONN. AUDIO CTL, J43 CONN. AUDIO CTL, J31			
+5.0VMF				11 12	7 1	6			N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL,			
+5.6V	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			1 10 10 10 10 10 11 20 30 30 30 31 40 92	2 6 8 9 10 3 1 2 3 4 2 1	2 15 16 13 17 10 19 65 11 15 10			B N N N N N N N N N N N N N N N N N N N	CONN. EXT. VU PANEL, CTL CONN. CAPSTAN CTL. CONN. SPOOLING MOTOR CTL. CONN. EXT. VU-PANEL CONN. COMMAND PANEL CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. JIO CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX CONN. COMMAND PANEL CONN. TAPE DECK ELECTRONICS CONN. TAPE DECK ELECTRONICS CONN. VU PANEL, CTL	J02 J06 J08 J09 J10 J03 J01		
+50.0V	2 2 2 2			7 8 11 20	1	1			A A F	CHARGE CAPACITOR CHC1 RECTIFIER DZ2 CONN• SP• MOTOR SUPPLY• CONN• CAPSTAN MOTOR SUPPLY			
+60.0V	5 5			6 10		 2 8			N C	CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY	J04		

-15,0V	************* * *****	1.727.	010.							APE RECORDER ********	*******	0 / 88			******
-15.0V 6 1 6 16 8 CONN, EXT. VU PANEL, CTL 6 10 2 11 N CONN, CAPSTAN CTL, J02 6 10 8 11 N CONN, SPOOLING MOTOR CTL, J06 6 10 8 11 N CONN, SPOOLING MOTOR CTL, J06 6 10 8 11 N CONN, SPOOLING MOTOR CTL, J08 6 10 10 10 15 N CONN, AUDIO CTL, J08 6 11 3 10 N CONN, AUDIO CTL, J09 6 13 1 4 N CONN, TAPE DECK CTL, J03 6 20 1 10 N CONN, TAPE DECK CTL, J02 6 20 1 10 N CONN, TAPE DECK CTL, J02 6 30 3 18 D CONN, TAPE DECK CTL, J01 6 40 11 13 N CONN, TAPE DECK CTL, J01 6 40 11 13 N CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J01 7 CONN, TAPE DECK CTL, J01 7 CONN, TAPE DECK CTL, J01 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J02 7 CONN, TAPE DECK CTL, J03 7 CONN, AUDIO CTL, J33 7 CONN, AUDIO CTL, J32 7 CONN, AUDIO CTL, J32 7 CONN, AUDIO CTL, J32 7 CONN, AUDIO CTL, J32 7 CONN, AUDIO CTL, J33 7 CONN, AUDIO CTL, J33 7 CONN, AUDIO CTL, J34 7 CONN,	SIGNAL NAME	COLOR	МΙ	ASY C	GR P	ELM	PNT	s	LV			TION OF ELEMENT		REMARK	ELEMENT NR.
6 10 6 19 N CONN, SPOOLING MUTOR CTL, JO6 6 10 10 9 15 N CONN, CRIT, VUP-PAREL JO9 6 10 10 15 N CONN, CRIT, VUP-PAREL JO9 6 11 2 3 N CONN, CRIT, VUP-PAREL JO9 6 11 3 3 N CONN, AUDIO CTL, 6 11 3 3 N CONN, TAPE DECK CTL, 70 10 11 12 3 N CONN, TAPE DECK CTL, 70 10 15 N CONN, TAPE DECK CTL, 70 10 10 10 N CONN, TAPE DECK CTL, 70 10 10 11 13 N CONN, TAPE DECK CTL, 70 10 10 11 13 N CONN, TAPE DECK CTL, 70 10 10 11 13 N CONN, TAPE DECK CTL, 70 10 10 11 13 N CONN, TAPE DECK CTL, 70 11 10 N CONN, TAPE DECK CTL, 70 11 10 N CONN, TAPE DECK CTL, 70 11 10 N CONN, TAPE DECK CTL, 70 11 11 11 N CONN, TAPE DECK CTL, 70 11 11 N CONN, TAPE DECK CTL, 70 11 N CONN, TAPE DECK CTL, 70 11 N CONN, TAPE DECK CTL, 70 11 N CONN, TAPE DECK CTL, 70 11 N CONN, TAPE DECK CTL, 70 11 N CONN, TAPE DECK CTL, 70 11 N CONN, AUDIO ELECTRONICS CHI 70 11 N CONN, AUDIO ELECTRONICS CHI 70 11 N CONN, AUDIO CTL, 71 11 N CONN, AUDIO CTL, 71 11 N CONN, AUDIO CTL, 72 11 N CONN, AUDIO CTL, 72 11 N CONN, AUDIO CTL, 73 11 N CONN, AUDIO CTL, 74 11 13 2 N CONN, AUDIO CTL, 75 11 N CONN, AUDIO CTL, 76 11 N CONN, AUDIO CTL, 76 11 N CONN, AUDIO CTL, 77 11 N CONN, AUDIO CTL, 78 11 N CONN, AUDIO CTL, 78 11 N CONN, AUDIO CTL, 79 11 N CONN, AUDIO CTL, 70 11 N CONN, AUDIO CTL, 70 11 N CONN, AUDIO CTL, 70 11 N CONN, AUDIO CTL, 71 11 N CON	-15.0V	6			1	6	16	_				XT. VU PANEL, CTL			
6 10 8 11 N CONN. EXT. VU-PANEL JOB 6 10 9 15 N CONN. EXT. VU-PANEL JOB 6 10 10 15 N CONN. AUDIO CTL. JJO 6 10 10 15 N CONN. AUDIO CTL. JJO 7 CONN. AUDIO CTL. JJO 7 CONN. AUDIO CTL. JJO 7 CONN. AUDIO CTL. JJO 7 CONN. AUDIO CTL. JJO 7 CONN. AUDIO CTL. JJO 7 CONN. TAPE TENS. SENSOR JOZ 7 CONN. TAPE TENS. SENSOR JOZ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. TAPE DECK CTL. JOJ 7 CONN. AUDIO LECTRONICS CHI 7 CONN. AUDIO LECTRONICS CHI 7 CONN. AUDIO LECTRONICS CHI 7 CONN. AUDIO LECTRONICS CHI 7 CONN. AUDIO CTL. TAPE DECK CTL. JOJ 7 CONN. AUDIO CTL. TAPE DECK CTL. JOJ 7 CONN. AUDIO CTL. TAPE DECK CTL. JOJ 7 CONN. AUDIO CTL. TAPE DECK CTL. JOJ 7 CONN. AUDIO CTL. TAPE DECK CTL. JOJ 7 CONN. AUDIO CTL. TAPE DECK CTL. TAPE TAPE TAPE TAPE TAPE TAPE TAPE TAPE		-													
0		-													
6 10 10 15 N CONN. AUDIO CTL. J10 6 11 2 3 N CONN. TAPE TENS. SENSOR J02 6 13 1 4 N CONN. TAPE DECK CTL. J03 6 13 1 4 N CONN. SP. MOTO CTL. J02 6 20 1 10 N CONN. SP. MOTO CTL. J02 6 20 1 10 N CONN. SP. MOTO CTL. J02 7 O															
6 11 2 3 N CONN. TAPE TENS. SENSOR JO2 6 11 3 10 N CONN. TAPE DECK CIL. JO3 6 13 1 4 N CONN. TAPE DECK CIL. JO3 6 13 1 4 N CONN. SP. MOTOR CIL. JO2 6 20 1 10 N CONN. TAPE DECK CIL. JO1 6 30 3 18 D CONN. TAPE DECK CIL. JO1 6 40 12 3 N CONN. TAPE DECK CIL. JO1 6 40 12 3 N CONN. TAPE DECK CIL. JO1 6 40 12 3 N CONN. TAPE DECK CIL. JO1 6 40 12 3 N CONN. TAPE DECK CIL. JO1 7 CONN. TAPE DECK CIL. JO1 7 CONN. TAPE DECK CIL. JO2 7		-													
6															
6   13   1   4   N   CONN. SP. MOTOR CITL, JO2   6   20   1   10   N   CONN. TAPE DECK CITL. JO2   6   30   3   18   D   CONN. TAPE DECK CITL. JO   6   40   1   3   N   CONN. TAPE DECK CITL. JO   7   40   12   3   N   CONN. TAPE DECK CITL. JO   8   40   12   3   N   CONN. TAPE DECK CITL. JO   9   23   2   N   CONN. ADDID ELECTRONICS CH   9   40   31   8   N   CONN. DPTION   9   40   31   8   N   CONN. DPTION   9   40   31   8   N   CONN. INSERT, INPUT CIRCUIT   9   40   30   1   N   CONN. INSERT, INPUT CIRCUIT   9   40   40   50   N   CONN. DPREAMT. IF IT PROVING SCHOT REPRO   9   40   40   50   N   CONN. ADDID ELECTRONICS CH2   9   41   13   2   N   CONN. ADDID CITL. J33   9   42   13   2   N   CONN. ADDID CITL. J33   9   44   32   1   N   CONN. ADDID CITL. J33   9   45   36   6   N   CONN. ADDID CITL. J34   9   40   40   40   40   60   N   9   21   10   N   CONN. ADDID CITL. J34   9   40   40   40   40   40   40   9   40   40   40   40   40   9   40   40   40   40   40   9   40   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   40   9   40   9   40   40   9   9   40   9   9   40   9   9   40   9   9   9   9   9   9   9   9   9   9															
6 20 1 10 N CONN. TAPE DECK CTL. JO1 6 30 3 18 D CONN. TAPE DECK CTL. J10 6 40 1 13 N CONN. TAPE DECK CTL. J10 6 40 12 3 N CONN. TAPE DECK CTL. J10 7 40 12 3 N CONN. TAPE DECK CTL. J10 8 40 23 2 N CONN. TAPE DECK ELECTRONICS 9 40 12 3 N CONN. JOINT CIRCUIT 9 40 31 B N CONN. AUDIO ELECTRONICS CH1 9 40 32 1 N CONN. INSERT, INPUT CIRCUIT 9 40 33 1 N CONN. INSERT, INPUT CIRCUIT 9 40 36 6 N CONN. INSERT, INPUT CIRCUIT 9 40 36 6 N CONN. INSERT, INPUT CIRCUIT 9 40 43 2 N CONN. INSERT, INPUT CIRCUIT 10 40 43 2 N CONN. INSERT, INPUT CIRCUIT 11 13 2 N CONN. AUDIO ELECTRONICS CH2 11 13 2 N CONN. AUDIO CTL, J23 12 1 N CONN. AUDIO CTL, J23 13 1 N CONN. AUDIO CTL, J32 14 32 1 N CONN. AUDIO CTL, J36 15 10 1 4 C CONN. AUDIO CTL, J23 16 10 1 4 C CONN. AUDIO CTL, J23 17 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 18 10 N CONN. AUDIO CTL, J23 19 10 N CONN. AUDIO CTL, J23 19 10 N CONN. AUDIO CTL, J23 19 10 N CONN. AUDIO CTL, J23 19 10 N CONN. AUDIO CTL, J23 10 N CONN. AUDIO CTL, J23 10 N CONN. AUDIO CTL, J23 10 N CONN. AUDIO CTL, J23 10 N CONN. AUDIO CTL, J24 11 14 12 N CONN. AUDIO CTL, J26 10 10 1 1 N CONN. AUDIO CTL, J26 10 10 1 1 N CONN. AUDIO CTL, J26 10 10 1 1 N CONN. AUDIO CTL, J26 10 10 1 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J27 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26 11 N CONN. AUDIO CTL, J26		9											303		
6 30 3 18 0 CONN. TAPE DECK CIT. JIO 6 40 1 13 N CONN. TAPE DECK ELECTRONICS 40 12 3 N CONN. OPTION 40 23 2 N CONN. DUDIO ELECTRONICS CH1 40 31 8 N CONN. INSERT, INPUT CIRCUIT 40 32 1 N CONN. INSERT, INPUT CIRCUIT 40 33 1 N CONN. INSERT, INPUT CIRCUIT 40 33 1 N CONN. INSERT, INPUT CIRCUIT 40 33 1 N CONN. PREAMPLIFIER, SECOND REPRO 40 40 43 2 N CONN. AUDIO ELECTRONICS CH2 41 13 2 N CONN. AUDIO CIT., J23 42 13 2 N CONN. AUDIO CIT., J23 43 33 1 N CONN. AUDIO CIT., J23 45 36 6 N CONN. AUDIO CIT., J23 45 36 6 N CONN. AUDIO CIT., J23 46 92 1 10 N CONN. AUDIO CIT., J23 47 CONN. AUDIO CIT., J23 48 20 1 N CONN. AUDIO CIT., J23 49 20 1 N CONN. AUDIO CIT., J23 40 20 1 N CONN. AUDIO CIT., J23 40 20 1 N CONN. AUDIO CIT., J23 41 13 10 N CONN. AUDIO CIT., J23 42 13 10 N CONN. AUDIO CIT., J23 43 30 1 N CONN. AUDIO CIT., J23 44 52 1 N CONN. AUDIO CIT., J23 45 36 5 N CONN. AUDIO CIT., J23 46 70 N CONN. AUDIO CIT., J23 47 10 N CONN. AUDIO CIT., J23 48 10 N CONN. AUDIO CIT., J24 49 11 10 N CONN. AUDIO CIT., J24 40 41 12 N CONN. AUDIO CIT., J36 49 40 40 12 N CONN. AUDIO CIT., J36 40 44 12 N CONN. AUDIO CIT., J36 40 44 12 N CONN. AUDIO CIT., J36 40 44 12 N CONN. AUDIO CIT., J36 40 44 12 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 42 11 N CONN. AUDIO CIT., J36 43 30 N CONN. AUDIO CIT., J36 44 11 N CONN. AUDIO CIT., J36 45 36 3 N CONN. AUDIO CIT., J36 46 47 1 N CONN. AUDIO CIT., J36 47 1 N CONN. AUDIO CIT., J36 48 1 N CONN. AUDIO CIT., J36 49 40 40 12 N CONN. AUDIO CIT., J36 49 40 40 12 N CONN. AUDIO CIT., J36 49 40 40 12 N CONN. AUDIO CIT., J36 40 41 1 N CONN. AUDIO CIT., J36 40 41 1 N CONN. AUDIO CIT., J36 40 42 8 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36 41 10 N CONN. AUDIO CIT., J36										,,			.101		
6													001		
40    23    2		6								N					
40 31 8				4			3			N	CONN. C	PTION			
40 32 1							2			N					
40 33 1 N CONN. PREAMPLIFIER, SECOND REPRO															
40															
40 43 2															
1   13   2   N   CONN. AUDIO CTL. J23															
13 2   N   CONN. AUDIO CTL. J43															
43 23 1															
45 36 6				4	¥3	33	1			N					
CONN. VU PANEL, CTL							1			N					
-20.0V 6 6 6 4 15 N CONN. TAPE DECK ELECTRONICS JO4 CONNECTOR POWER SUPPLY JO1  A-CTALK1 40 23 10 N CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  A-CTALK2 40 43 10 N CONN. AUDIO CTL, J23  A-DRVINI 40 24 12 N CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24  40 36 7 N CONN. AUDIO CTL, J24  40 36 3 N CONN. AUDIO CTL, J24  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J24  40 41 12 N CONN. AUDIO CTL, J24  40 36 3 N CONN. AUDIO CTL, J24  40 36 3 N CONN. AUDIO CTL, J24  40 36 3 N CONN. AUDIO CTL, J36  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J36  A-DRVIN2 40 41 1 N CONN. AUDIO CTL, J36  A-DRVIN2 40 42 8 N CONN. AUDIO CTL, J36  A-DO 40 22 8 N CONN. AUDIO CTL, J36  A-DO 40 42 8 N CONN. AUDIO ELECTRONICS CH1  40 42 8 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 AUDIO CTL, J24  40 AUDIO CTL, J36  A-DO CONN. AUDIO ELECTRONICS CH2  40 AUDIO CTL, J36  A-DO CONN. AUDIO ELECTRONICS CH2  40 AUDIO CTL, J36  A-DO CONN. AUDIO ELECTRONICS CH2  40 AUDIO CTL, J36  A-DO CONN. AUDIO ELECTRONICS CH2  40 AUDIO CTL, J24															
6 10 1 4 C CONNECTOR POWER SUPPLY JO1  A-CTALK1 40 23 10 N CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  A-CTALK2 40 43 10 N CONN. AUDIO CTL, J43  A-DRVIN1 40 24 12 N CONN. AUDIO ELECTRONICS CH1 40 36 7 N CONN. AUDIO CTL, J24 45 36 7 N CONN. AUDIO CTL, J24  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J24  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J24  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J36  A-DRVIN2 40 36 3 N CONN. AUDIO CTL, J36  A-DRVIN2 40 44 12 N CONN. AUDIO CTL, J36  A-DRVIN2 40 44 12 N CONN. AUDIO CTL, J36  A-DRVIN2 40 44 12 N CONN. AUDIO CTL, J36  A-DRVIN2 40 44 11 N CONN. AUDIO CTL, J36  A-DRVIN2 40 40 41 N CONN. AUDIO CTL, J36  A-DRVIN2 40 40 41 N CONN. AUDIO CTL, J36  A-DRVIN2 40 40 41 N CONN. AUDIO CTL, J36  A-DRVIN2 40 42 8 N CONN. AUDIO CTL, J36  A-DRVIN2 40 44 11 N CONN. AUDIO ELECTRONICS CH2 40 44 11 N CONN. AUDIO CTL, J22 40 00NN. AUDIO CTL, J24		6						_		N					
A-CTALK1  40 23 10 N CONN. AUDIO ELECTRONICS CH1  41 13 10 N CONN. AUDIO CTL. J23  A-CTALK2  40 43 10 N CONN. AUDIO ELECTRONICS CH2  42 13 10 N CONN. AUDIO CTL. J43  A-DRVIN1  40 24 12 N CONN. AUDIO ELECTRONICS CH1  41 14 12 N CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J36  A-DRVIN2  40 36 3 N CONN. AUDIO CTL. J36  A-DRVIN2  40 44 12 N CONN. AUDIO CTL. J36  A-DO  40 24 1 N CONN. AUDIO CTL. J36  A-DO  40 24 1 N CONN. AUDIO ELECTRONICS CH1  40 42 8 N CONN. AUDIO ELECTRONICS CH1  40 44 1 N CONN. AUDIO ELECTRONICS CH2  40 044 1 N CONN. AUDIO CTL. J22  41 14 1 N CONN. AUDIO CTL. J24	-20.0V	6			6	4	15			N					
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********	******* 1.727	**** 010.	S I ******** T2 * 00.	G **** UDER	N ****	A L **** 807	****	**************************************	**************************************	* 13:38 * *********** - 01	PAGF 32 *
SIGNAL NAME	COLOR	MI	ASY GRP	ELM	PNT	s	LV	TYPE	DESCRIPTION OF ELEMENT	REMARK	ELEMENT NR.
A-D1			40 40 40 40 41 41 42 42	24	9 2 9 2 9 2 9 2	-		N N N N N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42		
A- 02			40 40 40 41 41 42	22 24 42 44 12 14 12	3 10 3 10 3 10 3	-		N N N N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42		
A-D3				22 24 42 44 12 14 12	4 11 4 11 4	-		N N N N N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42		
A-D4			40 40 40 41 41	42 44 12 14 12	7 15 7 15 7	_		N N N N N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL. J42 CONN. AUDIO CTL. J42		
A-D5			41	42 44 12 14 12	8 16 8 16 8			N N N N N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42		
A-D6			41	12	9 17 9 17 9	-		N N N N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL. J42 CONN. AUDIO CTL. J42 CONN. AUDIO CTL. J42		
* WILLI ST ************************	UDER AG	**** 010. ***	S I ****** T * 00 ****	G **** UDER ****	N .	4 L **** 807 ****	**** * I	W I R E L ***********************************	**************************************	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST	UDER AG	**** 010. ***	S I ******** 00 * STI ********  ASY GRP	G **** UDER **** ELM  22 24 42 44	PNT	A L **** 807 ****	**** * T; ****	W I R E L ***********************************	. I S T * 88/06/09 ************************************	* 13:38 * ***********************************	PAGF 33 *
* WILLI ST **********  ************ SIGNAL NAME A-D7  A-HFIN1	UDER AG ******* 1.727. *******	**** 010. ***	S I ******** 00 * ST' *******  ASY GRP 40 40 40 40 41 41 42 42 42 40 40	G **** UDER **** ELM 	N **** A **** PNT	A L **** 807 ****	**** * T; ****	W I R E L ***********************************	# 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST ***********  * ************ SIGNAL NAME A-D7	UDER AG ******* 1.727. *******	**** 010. ***	S I ***********************************	G **** UDER **** ELM 	N **** A ****  PNT 18 10 18 10 18 10 18 10 20 20 20	A L **** 807 ****	**** * T; ****	W I R E L  **********************************	I S T * 88/06/09 ************************************	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  ***********  SIGNAL NAME  A-D7  A-HFIN1	UDER AG ******* 1.727. *******	**** 010. ***	S I ***********************************	G **** ** ** ** ** ** ** ** ** ** ** **	N **** A ****  PNT 18 10 18 10 18 10 18 10 20 20 20	A L **** 807 ****	**** * T; ****	W I R E I ***********************************	I S T * 88/06/09 ************************************	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST *********** *********** ********** ****	UDER AG ******* 1-727- ********  COLOR 9	**** 010. ***	S I ********** 00 * STI *********  ASY GRP 40 40 40 41 41 42 42 40 41 41 40 41 41 41 40 41 41 41 41 41 41 41 41 41 41 41 41 41	G **** UDER* *** ELM* 22 44 12 14 12 12 12 12 12 11	N ***** ***** PNT	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST **********  *********** ********** ****	UDER AG *******  *******  COLOR   9  9 9	**** 010. ***	S I **********  00 * STI *********  ASY GRP  40 40 40 40 41 41 42 42 42 42 40 41 41 41 41 41 41 41 41 41 41 41 41 41	G **** R UNE ** * * * * * * * * * * * * * * * * *	N ***** PNT 18 10 18 10 18 10 20 20	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  ************  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2	UDER AG ******* 1.727- *******  COLOR 9 9 9 9 6	**** 010. ***	S I ********** 00 * STI *********  ASY GRP  40 40 40 40 41 41 42 42 42 40 41 41 41 41 41 41 41 41 41 41 41 41 41	G***** ELM	N ***** ***** PNT	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL, J44 CONN. AUDIO CTL, J44 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  **********  ***********  **********	UDER AG ******** COLOR 9 9 9 9 9 6 6 6	**** 010. ***	S I *********  00 * STI ********  ASY GRP  40 40 40 40 41 41 42 42 42 42 40 41 41 41 42 42 41 41 41 42 42 42 42 42 42 42 42 42 40 41 41 41 41 42 42 42 42 42 42 42 42 42 42 42 42 42	G ***** ELM	N ***** A * **** P NT	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST **********  ************ * SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2  A-LINB1  A-LINB2	UDER AG ******** COLOR 9 9 6 6 5	**** 010. ***	ASY GRP  40 40 40 40 41 41 42 42	G***** UDERR**** ELM**	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CIL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI CONN. LINE INPUT, CHI	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  ***********  ***********  **********	UDER AG ******* 1.727- *******  COLOR 9 9 9 9 6 6 6 5 S	**** 010. ***	ASY GRP  40 40 40 40 40 41 41 42 42 40 41 41 41 41 41 42 42 41 41 41 41 41 41 41 41 41 41 41 41 41	G G WUDER ****  ELM 12 22 24 42 12 11 21 12 12 11 2 11 2 11	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. MIC AND LINE INPUTS, CH1  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST *********  ************  ***********	UDER AG ******** COLOR 9 9 6 6 S S S S 2	**** 010. ***	ASY GRP  40 40 40 40 41 41 42 42	G G W *****  ELM	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST **********  *********** ********** ****	UDER AG ********* COLOR 9 9 9 6 6 6 S S S S 2 2	**** 010. ***	ASY GRP  40 40 40 40 40 41 41 42 42 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 42 41 41 41 42 42 42 40 41 41 41 42 42 41 41 42 42 42 41 41 41 42 42 42 42 41 41 41 42 42 42 42 43 44 44 44 44 44 44 44 44 44 44 44 44	G G W ****  WDER ****  ELM -22 24 44 12 14 12 14 12 12 12 2 12 2 1	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. MIC AND LINE INPUTS, CH1  CONN. LINE INPUT, CH1 CONN. MIC AND LINE INPUTS, CH2  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE OUTPUT, CH1 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST **********  ***********  * **********	UDER AG************************************	**** 010. ***	S I ********** 00 * STI *********  ASY GRP 40 40 40 40 41 41 42 42 42 42 40 41 41 41 41 41 41 41 41 41 41 41 41 41	G G W *****  *****  ELM	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH1  CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST **********  ***********  ***********	UDER AG ******** COLOR 9 9 6 6 6 S S S 2 2 2 3 3 3	**** 010. ***	S I ********** 00 * STI *********  ASY GRP 40 40 40 41 41 42 42 42 42 40 41 41 41 42 42 42 41 41 41 42 42 42 42 41 41 41 42 42 42 42 42 42 42 41 41 41 41 42 42 42 42 42 42 42 42 42 41 41 41 42 42 42 42 42 42 42 42 42 42 42 42 42	G G W*****  W****  ELM	N	A L **** 807 ****	**** * T; ****	W I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH1 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH1  CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT CONNECTOR, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  **********  ***********  **********	UDER AG ******** COLOR 9 9 6 6 S S 2 2 2 2 2 3 3 3 3 6	**** 010. ***	ASY GRP  40 40 40 40 40 41 41 42 42	G G W**********************************	N	A L **** 807 ****	**** * T; ****	N I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. MIC AND LINE INPUTS, CH1  CONN. LINE INPUT, CH2 CONN. MIC AND LINE INPUTS, CH2  CONN. LINE INPUT, CH2 CONN. MIC AND LINE INPUTS, CH2  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE OUTPUT, CH1 CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT CONNECTOR, CH2  CONN. LINE OUTPUT, CH2 CONN. EXT. VU PANEL, AUDIO	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  **********  ***********  **********	UDER AG************************************	**** 010. ***	ASY GRP  40 40 40 40 40 40 41 41 42 42 40 41 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 42 41 41 41 42 42 42 41 41 41 42 42 42 41 41 41 42 42 42 43 44 41 41 42 42 44 41 41 42 42 42 43 44 41 41 42 42 44 41 41 42 42 42 43 44 41 41 42 42 43 44 41 44 41 42 42 42 43 44 41 44 41 42 42 42 43 44 41 41 42 42 42 43 44 44 44 44 44 44 44 44 44 44 44 44	G G W*****  W****  ELM	N	A L **** 807 ****	**** * T; ****	N I R E I	# 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************
* WILLI ST  **********  ***********  **********	UDER AG ******* 1.727- *******  COLOR 9 9 6 6 5 S 2 2 2 2 3 3 5 S 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	**** 010. ***	ASY GRP  40 40 40 40 40 40 41 41 42 42 40 41 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 41 41 41 42 42 42 41 41 41 42 42 42 41 41 41 42 42 42 41 41 41 42 42 42 43 41 41 41 42 42 42 43 44 41 41 42 42 43 44 41 44 41 42 42 43 44 44 44 44 44 46 47 48 48 48 48 49 49 49 40 40 40 40 40 40 40 40 40 40 40 40 40	G G W*****  W****  ELM	N	A L **** 807 ****	**** * T; ****	N I R E I	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. AUDIO CTL, J42  CONN. LINE INPUT, CH1 CONN. MIC AND LINE INPUTS, CH1  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. MIC AND LINE INPUTS, CH2  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH2 CONN. LINE OUTPUT, CH1 CONN. LINE OUTPUT, CH2 CONN. LINE OUTPUT, CH1 CONN. LINE OUTPUT, CH2	* 13:38 * ********** - 01 *******	PAGF 33 * *********************************

SIGNAL NAME	COLOR	ΜI		LM PNT	S L	V TYPE	DESCRIPTION OF ELEMENT	REMARK	ELEMENT NR.
A-LSAMP2	3		36	1 2 2 12		L N	CONN. HEAD PHONES CONN. MONITOR		
A-LSB	7 7 7 7		37 40	7 20 1 2 2 17 2 20		A L N	CONN. EXT. VU PANEL, AUDIO LOUDSPEAKER CONN. MONITOR CONN. VU PANEL, AUDIO		
A-LVINA1	9 9 9 9		35 41	7 16 2 3 3 1 5 7		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CHI CONN. LINE LEVEL POT, CHI CONN. LEVEL CONTROL. AUDIO		
4-LVINA2	9 9 9 9		35 42 92	7 23 4 3 3 1 5 1		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT, CH2 CONN. LEVEL CONTROL, AUDIO		
A-LVINB1	6 2 2 6		35 41	7 3 2 2 3 2 5 8		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CHI CONN. LINE LEVEL POT, CHI CONN. LEVEL CONTROL, AUDIO		
A-LVINB2	6 4 4 6		35 42	7 10 4 2 3 2 5 2		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT. CH2 CONN. LEVEL CONTROL, AUDIO		
A-LV I NC 1	S 0 0 S		35 41	7 15 2 1 3 4 5 9		A L N	CONN. EXT. VU PANEL. AUDIO LINE LEVEL POTM. CH1 CONN. LINE LEVEL POT, CH1 CONN. LEVEL CONTROL. AUDIO		
A-LVINC2	S 0 0		35 42	7 22 4 1 3 4 5 3		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT, CH2 CONN. LEVEL CONTROL, AUDIO		
A-LVMIA1	9		35	1 3		L N	MIC LEVEL POTM. CH1	''	
A-LVMIA2	9		35	3 3 1 1		L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2		
A-LVMIB1	6		35	1 2 1 3		Ł N	MIC LEVEL POTM. CH1 CONN. MIC LEVEL POT, CH1		
A-LVMIB2	6 6			3 2 1 3		L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2		
A-LVMIC1	0 S			1 1 1 4		L N	MIC LEVEL POTM. CH1 CONN. MIC LEVEL POT. CH1		
********** * WILLI S *********	TUDER AG ************************************	* *** 010.	35 42  S I ***********************************	G N A ***********************************	L *****	W I R E ***********************************		9 * 13:38 * ************* 1 - 01	PAGF 35
**********  * WILLI S *********  * **************	********  TUDER AG  *********  1 • 727 •   *********	**** 010. ****	35 42 	3 1 1 4 	L ***** 07 * ****	***********  * I R E  ***********  *************  V TYPE	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  L I S T * 88/06/0  R * 88/03/2  DESCRIPTION OF ELEMENT	9 * 13:38 * ************* 1 - 01	PAGF 35
**********  * WILLI S *********  * **************	********  *******  *******  ********  ****	**** 010. ****	35 42 	3 1 1 4 	L ***** 07 * ****	***********  * I R E ***********  *****************  V TYPE	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2	9 * 13:38 * ********** 1 - 01 ******	P Δ G F 35 ************************************
*********  * WILLI S  ********  ***********  *IGNAL NAME  A-LVMON1	*********  ********  ********  ********	**** 010. ****	35 42 	3 1 1 4 	L ***** 07 * ****	***********  **********  ************  ****	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  L I S T * 88/06/0  *********************************	9 * 13:38 * ********** 1 - 01 ******	P Δ G F 35 ************************************
**********  * WILLI S  **********  SIGNAL NAME  A-LVMON1  A-LVMON2	********* TUDER AG ******** 1 • 72 7 • ( *********  COLOR 9 9 9	**** 010. ****	35 42 	3 1 1 4 4	L ***** 07 * ****	************  # I R E  ***********  ************  V TYPE  L  L	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  L I S T * 88/06/0  *********************************	9 * 13:38 * ********** 1 - 01 ******	PAGF 35 ************************************
**********  * WILLI S  *********  SIGNAL NAME  A-LYMON1  A-LVMON2  A-LVOUA1	******** 1.727.( ********* 9 9 9 9 9 9 9 9 9 9 9 9	**** 010. ****	35 42	3 1 1 4 6 N A 1 1 2 6 1 2 12 2 3 2 7 7 7 1 5 5 3 6 1 1 5 10 7 8 6 3 6 1 5 5 4	L ***** 07 * ****	***********  W I R E  ************  TAPE RECORDE:  *************  U L L L L L L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 ******	PAGF 35 ************************************
**********  * WILLI S  *********  * SIGNAL NAME  A-LYMON1  A-LYMON2  A-LVOUA1	\$	**** 010. ****	35 42	3 1 1 4 4	L ***** 07 * ****	***********  W I R E  ***********  **********  V TYPE  L  L  N  N  N  A  L  N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 ******	PAGF 35 ************************************
**********  * WILLI S  *********  **********  *-LVMON1 LVMON2 LVOUA1 LVOUA2	********* TUDER AG *********  COLOR 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	**** 010. ****	35 42 ******************************	3 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	L ***** 07 * ****	***********  W I R E  ************  ***********  V TYPE  L L L N N N N N N N N N N N N N N N N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 ******	PAGF 35 ************************************
*********  * WILLI S  *********  *********  *********  *A-LVMON1  A-LVMON2  A-LVOUA1  A-LVOUB1  A-LVOUB2	*********  ********  1.727.  *********  20LOR   9  9  9   9  9  9   9  9	**** 010. ****	35 42	3 1 1 4 4	L ***** 07 * ****	W I R E **************  V TYPE  L  L  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  N  A  L  N  N  N  A  L  N  N  N  N  A  L  N  N  N  N  A  L  N  N  N  N  N  N  A  L  N  N  N  N  N  N  A  L  N  N  N  N  N  N  N  A  L  N  N  N  N  N  N  A  L  N  N  N  N  N  N  N  A  L  N  N  N  N  N  N  N  N  N  N  N  N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 ******	P Δ G F 35 ************************************
######################################	S	**** 010. ****	35 42  ************* 00 * STUE ***********  ASY GRP E	3 1 1 4 4	L ***** 07 * ****	***********  W I R E  **********  *********  *********  V TYPE  L  L  N  N  A  L  N  N  N  M  M  M  M  M  M  M  M  M  M	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  CONN. MIC LEVEL POT, CH2  L 1 S T * 88/06/20  R * 88/03/2  DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. DUTPUT LEVEL POT, CH1 CONN. DUTPUT LEVEL POT, CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. GUTPUT LEVEL POT, CH2 CONN. GUTPUT LEVEL POT, CH2 CONN. EVEL CONTROL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. EVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. GUTPUT LEVEL POTM. CH2 CONN. GUTPUT LEVEL POTM. CH2 CONN. GUTPUT LEVEL POTM. CH2 CONN. EVEL CONTROL, AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. GUTPUT LEVEL POTM. CH1 CONN. GUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2	9 * 13:38 * ********** 1 - 01 ******	P Δ G F 35 ************************************
######################################	********** TUDER AG *********  COLOR 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	**** 010. ****	35 42	3 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	L ***** 07 * ****	************  W I R E  ************  ***********  V TYPE  L  L  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 ******	P Δ G F 35 ************************************
A-LVOUG2  A-LVOUG2  A-LVOUG2  A-LVOUG2  A-LVOUG2  A-LVOUG2  A-LVOUG2	**************************************	**** 010. ****	**************************************	3 1 1 4 4	L ***** 07 * ****	************  W I R E  *************  ************  V TYPE  L  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  N  A  L  N  N  N  N  N  N  N  N  N  N  N  N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  CONN. MIC LEVEL POT, CH2  L 1 S T ** 88/03/2  EXECUTED OF ELEMENT  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POT, CH2 CONN. OUTPUT LEVEL POT, CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. DUTPUT LEVEL POT. CH1 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. GUTPUT LEVEL POT. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. CONN. EXT. VU PANEL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. EVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO CONN	9 * 13:38 * ********** 1 - 01 ******	PAGF 35 ************************************
######################################	\$	**** 010. ****	35 42	3 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	L ***** 07 * ****	************  W I R E  *************  ************  V TYPE  L  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  A  L  N  N  N  N  A  L  N  N  N  N  N  N  N  N  N  N  N  N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 *****	PAGF 35 ************************************
######################################	*********  ********  1.727.  ********  COLOR  9  9  9  9  9  9  9  9  9  9  9  9  9	**** 010. ****	35 42	3 1 1 1 4	L ***** 07 * ****	***********  W I R E  ***********  *********  **********	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 *****	PAGF 35 ************************************
**********  * WILLI S **********  **********  * SIGNAL NAME A-LVMON1  A-LVMON2  A-LVOUD1  A-LVOUD2  A-LVOUD2  A-LVOUC1  A-LVOUC2  A-MICAS1  A-MICAS2  A-MICSA2	\$	**** 010. ****	35 42	3 1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	L ***** 07 * ****	************  W I R E  *************  ************  V TYPE  L  L  N  N  A  L  N  N  A  L  N  N  A  L  N  N  N  A  L  N  N  N  N  N  N  N  N  N  N  N  N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  ***********************************	9 * 13:38 * ********** 1 - 01 *****	PAGF 35 ************************************
######################################	*********  ********  ********  1.727*  ********  COLOR  9  9  9  9  9  9  9  9  9  9  9  9  9	**************************************	35 42	3 1 1 4	L ***** 07 * ****	***********  W I R E  ***********  **********  **********	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2  L I S T * 88/06/07  R * 88/03/2  DESCRIPTION OF ELEMENT  MONITGR VOLUME POTM. MONITGR VOLUME POTM. MONITGR VOLUME POTM. MONITGR VOLUME POTM. CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. DITPUT LEVEL POT, CH1 CONN. OUTPUT LEVEL POT, CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POT, CH2 CONN. GUTPUT LEVEL POT, CH2 CONN. EVEL CONTROL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. DUTPUT LEVEL POT, CH2 CONN. LEVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. LEVEL CONTROL, AUDIO CONN. MIC AND LINE INPUTS, CH1 CONN. MIC AND LINE INPUTS, CH1 CONN. MIC AND LINE INPUTS, CH2 CONN. MIC AND LINE INPUTS, CH2 CONN. MIC AND LINE INPUTS, CH2 CONN. MIC AND LINE INPUTS, CH2 CONN. MIC AND LINE INPUTS, CH2	9 * 13:38 * ********** 1 - 01 *****	PAGF 35 ************************************

*************** Signal name	COLOR	μт	ASY GRP	ELM DA	ı c	ıv	TYPE	DESCRIPTION OF ELEMENT	REMARK	ELEMENT NR.
A-MICSS2	S		1					CONN. MIC INPUT, CH2		ELEMPNI NK.
	S		42	2 5			N	CONN. MIC AND LINE INPUTS, CH2		
A-MICSW1			41	2 9			N	CONN. MIC AND LINE INPUTS. CHI		
A-MICSW2			42	2 9			N	CONN. MIC AND LINE INPUTS, CH2		
A-MONIT1	1 1		1 37	7 5 2 11			A L	CONN. EXT. VU PANEL, AUDIO MONITOR VOLUME POTM.		
	1		40 2	2 20 24 20			N N	CONN. MONITOR CONN. AUDIO ELECTRONICS CH1		
	9			14 20 2 5			N N	CONN. AUDIO CTL, J24 CONN. VU PANEL, AUDIO		
A-MONIT2	2 2		1 37	7 12			A	CONN. EXT. VU PANEL. AUGIO		
	2		40	2 1 44 20			N N	MONITOR VOLUME POTM. CONN. MONITOR CONN. AUDIO ELECTRONICS CH2		
	9		42	14 20			N N	CONN. AUDIO CTL, J44 CONN. VU PANEL, AUDIO		
4-MONSC1	 S			2 6			N	CONN. VU PANEL, AUDIO		
A-MONSC2	s			2 10			N	CONN. VU PANEL. AUDIO		
A-PHIN1	8		1	7 6			A	CONN. EXT. VU PANEL. AUDIO		
	8 8		37 40	2 5			L N	MONITOR VOLUME POTM. CONN. MONITOR		
	9			2 15			N	CONN. VU PANEL. AUDIO		
A-PHIN2	4		1 37	7 19			A L	CONN. EXT. VU PANEL, AUDIO MONITOR VOLUME POTM.		
	9		40 92	2 4 2 13			N N	CONN. MONITOR CONN. VU PANEL, AUDIO		
A-PHISC1	s		92	2 16			N	CONN. VU PANEL, AUDIO		
A-PHI SC2	s			2 14			N	CONN. VU PANEL. AUDIO		
A-PHOUT1	1		36	1 4			Ĺ	CONN. HEAD PHONES		
	1			2 11			N	CONN. MONITOR		
1-PHOUT2	2		36 40	1 3			L N	CONN. HEAD PHONES CONN. MONITOR		
A-PHSW1A			40	2 9			N	CONN. MGNITOR		
A-PHSW18			40	2 10			N	CONN. MONITOR		
A-PHSW2A			40	2 5			N	CONN. MONITOR		
			40	2 6			N	CONN. MONITOR		
-PHSW2B										
	TUDER AG	****	1 40 	15 1 3 4  ****** G N ******	**** A (	L *****	WIRE		* 13:38 * *******	************** P A G F 37 **********
N-PHTM1  **************** * WILLI S1	0  TUDER AG ******* 1.727.	**** 010 ***	1 40 	15 1 3 4 ****** G N ******* DER A	**** A   **** EC7	***** * T	N	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01	
	0  ******** TUDER AG ******** 1.727. ********	**** 010 ***	1 40 40 51 11 11 11 11 11 11 11 11 11 11 11 11	******  ******  G N  ******  DER A  ******  ELM PN   15 2	***** A I ***** EC7 ****	***** * T	**************************************	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
-PHTM1	0 TUDER AG*******  1.727. ********  COLOR 8 8	**** 010 ***	1 40	15 1 3 4  G N ******* DER A *******	***** A   ***** EC7 ****	***** * T	N	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	*********
	0  ******** TUDER AG ******** 1.727. ********	**** 010 ***	1 40	15 1 3 4  G N ******* DER A *******	***** A   ***** EC7 ****	***** * T	**************************************	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	*********
-PHTM1	0  TUDER AG ******** 1.727.* ******* COLOR 8 8 8  9 9	**** 010 ***	1 40	*******  G N  ******  DER A  ******  ELM PN  15 2 3 3 15 3 1 7 18	***** A   ***** EC7 ****	***** * T	****************  W I R E ***************  APE RECORDER  **********************************	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
-PHTM1	O ********************************	**** 010 ***	1 40	********  G N  *******  DER A  ******  ******  ******  ******  ******	***** A   ***** **** **** ****	***** * T	N	CONN. PHANTOM POWERING SWITCH  LIST * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
-PHTM1	0  ********* ******** 1.727. ******** COLOR  8 8  9 9  5	**** 010 ***	1 40	******** G N ******* DER A ******  ******  ******  ******  ******	***** A     ***** **** ****  *****	***** * T	**************************************	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	**********
-PHTM1	0  ********* ******** 1.727. ******** COLOR  8 8  9 9  5	**** 010 ***	1 40	*******  G N  ******  BLM PN  15 2  3 3  17 18  2 10  2 19  21 42  13 31  41 13	***** A     ***** EC7 ****  T S	***** * T	**************************************	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
	0  ********* ******** 1.727. ******** COLOR  8 8  9 9  5	**** 010 ***	1 40	*******  G N  ******  DER A  ******  15 3 3  16 3 3  17 18 2  2 19 2  2 19 3  3 1 1  1 1 4 1 3  3 1 1  3 1 1  3 2 3	***** A ** **** **** T S -	***** * T	**************************************	CONN. PHANTOM POWERING SWITCH  LIST * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	*********
	0  *******************************	**** 010 ***	1 40	********  G N N  DER A  ******  15 2 3 3 1  7 18 3 3 1  7 18 11 1  14 13 11 1  14 13 1  2 3 7 25	***** A # **** **** T S	***** * T	N	CONN. PHANTOM POWERING SWITCH  LIST * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
	0  *******************************	**** 010 ***	1 40	********  G N  Frame PN  15 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	***** A # ****  *****  *****  *****	***** * T	N	CONN. PHANTOM POWERING SWITCH  L I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 *******	********
-PHTM1	0  *******************************	**** 010 ***	1 40	3 4 4 4 4 4 13 3 1 1 2 2 8 3 7 2 5 8 1 1 1 2 2 8 3 1 7 2 5 8 1 1 2 2 8 3 1 7 2 5 8 1 1 1 2 2 8 3 1 7 2 5 8 1 1 1 4 4 13 13 1 1 1 2 2 8 1 1 1 2 2 8 1 1 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***** A *** EC7* T S	***** * T	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	**********
-PHTM1	0  *******************************	**** 010 ***	1 40	3 4 4 4 13 13 14 4 4 13 13 14 14 44 13 14 14 14 14 14 14 14 14 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	******  *****  *****  *****  ******  ****	***** * T	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	**********
-PHTM1	0  *******************************	**** 010 ***	1 40	3 3 4	+** +   +   +   +   +   +   +   +   +	***** * T	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	**********
-PHTM1	0  *******************************	***** 0103 ***** MI 	1 40	3 4 4 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** A	***** * T	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********
-PHTM1  ***********************************	0  *******************************	***** 0103 ***** MI 	1 40	15 1 1 3 4 4 1 3 1 3 4 4 1 3 1 1 1 4 4 1 3 1 1 1 4 1 4	***** A   ***** EC7 T S	Lv	**************************************	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
PHTM1 PHTM1 WILLI SI ***********************************	0  *******************************	***** 0103 ***** MI 	1 40	15 1 1 3 4 4 1 3 3 4 4 1 3 4 4 1 3 3 1 7 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	****** A	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
-PHTM1	0  *******************************	***** 0103 ***** MI 	1 40	3 3 4  *******  G N N  FELM PN  15 2 3 3 3  7 18 3 3 3  7 2 10 2 19  11 4 4 13 31 7  12 2 8 3 3 3 3  7 3 4 4 13 3 1 7  14 1 4 13 3 1 7  17 2 5 8 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	**************************************	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
PHTM1 PHTM1 WILLI SI ***********************************	0  *******************************	***** 0103 ***** MI 	1 40	3 3 4 4 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	****** A ***** ***** *****  *******  ********	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********
PHTM1 WILL I SI WILL I SI PHTM2 PHTM3 PREOU1 PREOU2 PROSC1 PROSC2 REG IN1	0  *******************************	***** 0103 ***** MI 	1 40	**************************************	*** A   ***** A   ****** S	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********
PHTM1 WILL I SI WILL I SI PHTM2 PHTM3 PREOU1 PREOU2 PROSC1 PROSC2 REG IN1	0  *******************************	***** 0103 ***** MI 	1 40	3 3 4 ********  *******  *******  *******  ****	* * * * * * * * * * * * * * * * * * *	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
PHTM1	0  *******************************	***** 0103 ***** MI 	1 40	**************************************	* * * * * * * * * * * * * * * * * * *	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
-PHTM1	0  *******************************	***** 0103 ***** MI 	1 40	3 3 4  *******  G N  G N  T N  T N  T N  T N  T N  T N	**************************************	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
-PHTM1  ***********************************	0  *******************************	***** 0103 ***** MI 	1 40	3 3 4 *******  *******  ******  ******  *****	**************************************	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	*********
-PHTM1  ***********************************	0  *******************************	***** 0103 ***** MI 	1 40	**************************************	* * A * * * * * * * * * * * * * * * * *	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********
PHTM1PHTM1PHTM2PHTM3PREOU1PREOU2PROSC1PROSC2RECIN1RECIN2	0  *******************************	***** 0103 ***** MI 	1 40	**************************************	*** A ****** S	Lv	**************************************	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********
**************************************	0  *******************************	***** 0103 ***** MI 	1 40	**************************************	* A * * * * * * * * * * * * * * * * * *	Lv	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 *******	********

IGNAL NAME	COLOR	MI	ASY	GRP (	ELM	PNT	s	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
-TAPQU2			;	40 4 42 :		5 14 14 5	-		N N N	CONN. INSERT, OUTPUT CIRCUIT CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44 CONN. AUDIO CTL, J36			
-VUMTR1	1			30 41	5 7	1 4	-		Y N	CONN. VU-INPUT CH1	H1		
-VUMTR2	1			30 42	6 7	1 4	-		Y N	CONN. VU-INPUT CH2 CONN. LINE OUTPUT CONNECTOR. C	н2		
CA-17N	2 2			5 6	4 1	12	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		
CA-17P	3			5 6	4 1	13	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		
CA-20	1 1			5 6	4 1	11	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		
CA-36	4 4			5 6	4 1	14	-		L N	SECCNDARY 2 CONN. TRANSFORMER	P04 J01		
CA-40	0			5	1	10	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		
C B-1 7N	7			 5	1 3	17	-		L	CONN. TRANSFORMER SECUNDARY 1	J01 P03		
CB-17P	7 6			6  5		7 16	-		L	CONN. TRANSFORMER SECONDARY 1	J01 P03		
.CB-20	8			6  5	1 3		-		N 	CONN. TRANSFORMER SECONDARY 1	J01 P03		
C 8-36	8  5			6  5	- <del></del> -	9  15	-		N  L	CONN. TRANSFORMER SECGNDARY 1	J01 P03		
C B-40	5  9			6  5	1 	10 19	-		N 	CONN. TRANSFORMER SECONDARY 1	J01 P03		
	9			6	1	4 5	_		N	CONN. TRANSFORMER CONN. TRANSFORMER	J01 J01		
CC-17N	4			5 5	3	12 17			L L	SECONDARY 1 SECONDARY 2	P03 P04		
CC-17P	4			5 5	3	13	-		L L	SECONDARY 1 SECONDARY 2	P03		
CC-20	4			5 5	3	11 18	-		L L	SECONDARY 1 SECONDARY 2	P03 P04		
CC-36	4				3	14	-		1	SECONDARY 1	P03		
:*************************************		**** 010.	*****		4 ***** G *****	15 **** N ****	**** 807	* * * *	L ************************************	L I S T * 88/ *********************************	/06/09 ******** /03/21		PAGF 39 *******
*******	******** 1.727. ******	**** 010. ****	***** .00 * *****	5 **** I **** STU	4  G ***** JDER	15 **** N ****	**** 807 ***	* * * * *	TAPE RECORDER	**************************************	**************************************	* 13:38 * ********* - 01 *******	PAGF 39
**************************************	******** 1.727. ******** COLOR 	**** 010.	*****	5  I **** STU ****	4 G ***** JDER *****	15  N **** A ****	**** 807 ***	* * * *	TAPE RECORDER ***********************************	**************************************	**************************************	* 13:38 * ********** - 01	PAGF 39 **************
**************************************	1.727. **********************************	**** 010. ****	***** .00 * ******	5  I **** STU **** GRP  5 5	4 G G ***** JDER ***** ELM 3 4	**** N **** A **** PNT 10 19	**** 807 ***	* * * * *	************  ************  TYPE  L  L	**************************************	******** 06/09 ******* 03/21 - ******	* 13:38 * ********* - 01 *******	PAGF 39
**************************************	******** 1.727. ******** COLOR  4 4  9 9 	**** 010. ****	****** 00 * ***** ASY 	5  **** STU **** GRP  5 5 11 13	4 G ***** JDER ***** ELM 	**** N **** A **** PNT 10 19 4 5 6	**** 807 ***	* * * * *	TYPE L L	L I S T *** 88/******************************	**************************************	* 13:38 * ********* - 01 *******	PAGF 39
************  IGNAL NAME  CC-40  N-TTENS  S-CLK	********* 1.727. ********  COLOR 4 9 9 6 6 7	**** 010. ****	ASY	5 **** I **** STU ***** 5 5 5 11 13 10 40 10	4  *****  G  *****  JDER  ****  ELM  3  4  2  1  10	15 ***** ***** PNT 10 19 	**** 807 ***	* * * * *	TYPE L L N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT SECONDARY 1 SECONDARY 2 CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2 CONN. TAPE DECK ELECTRONICS CONN. AUDIO CTL.	**************************************	* 13:38 * ********* - 01 *******	PAGF 39 **************
**********  IGNAL NAME  CC-40  N-TTENS  S-CLK  S-DATA	********  1.727.  *********  COLOR  4  4  9  9  6  6  7  7  1	**** 010. ****	******* 00 * ******* ASY 	5 **** I **** STU ***** 113	4  *****  G  ******  ****  ****  ****  10  1  10  1	15 ***** A ***** 10 19 	**** 807 ***	* * * * *	TYPE L L N N N N N N N N N N N N N N N N N	L I S T * 88.  L I S T * 88.  ********************************	**************************************	* 13:38 * ********* - 01 *******	PAGF 39
**********  IGNAL NAME  CC-40  N-TTENS  S-CLK  S-DATA  S-FAD	*********  1.727.  *********  COLOR  4  4  9  6 6 7 7 1 1 8	**** 010. ****	******* ******* ASY 	****  ****  GRP  5  11  13  10  40  10  40  10	4  *****  G  *****  JDER  3  4  2  1  10  1  10  1  10  1	15 ***** N ***** PNT 10 19 	**** 807 ***	* * * * *	***********  TAPE RECORDER  ***********  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T * 88/ *********************************	**************************************	* 13:38 * ********* - 01 *******	PAGF 39 **************
**********  *********  IGNAL NAME  CC-40  N-TTENS  S-CLK  IS-DATA  IS-FAD	**************************************	**** 010. ****	ASY	5 **** I **** STU ***** STU 40	4  *****  G  *****  DER  *****  ELM  3  4  2  1  10  1  10  1  10  1  10  1	15 ***** A ***** A 10 19 4 5 6 3 7 2 1 14  8 19	**** 807 ***	* * * * *	TYPE L L N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2  CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS	######################################	* 13:38 * ********* - 01 *******	PAGF 39 **************
IGNAL NAME ICC-40 IN-TTENS IS-CLK IS-DATA IS-FAD IS-HFCLK IS-RESET	**************************************	**** 010. ****	ASY	5 **** I **** STU ***** 5 TU 11 13 10 40 10 40 10 40 10 10 40 10 10 40 10 10 40 10	4  *****  G  *****  ****  ****  ***  **	15 ***** A ***** A ***** 10 19 	**** 807 ***	* * * * *	**************  TAPE RECORDER  ***********  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T * 88/ *********************************	**************************************	* 13:38 * ********* - 01 *******	PAGF 39 **************
***********  GRAL NAME CC-40  IN-TTENS  IS-CLK  IS-DATA IS-FAD  IS-HFCLK  IS-RESET  IS-STR	**************************************	**** 010. ****	****** ASY	****  I ****  STU ****  GRP 5 11 13 10 40 10 40 10 40 10 40 10 10 40	4 ******  G *****  DER **  1 10 1 1 1 10 1	15 ***** A **** 10 19	**** 807 ***	* * * * *	TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2  CONN. TAPE DECK ELECTRONICS	**************************************	* 13:38 * ********* - 01 *******	PAGF 39 **************
**********  IGNAL NAME CC-40  N-TTENS  S-CLK  S-DATA  S-FAD  S-HFCLK  S-RESET	**************************************	**** 010. ****	****** ASY	5 **** I **** STU ***** STU ***** 10 40 40 40 40 40 40 40 40 40 40 40 40 40	4 *****  G *****  ELM  3 4  2 1  10 1  10 1  10 1  10 1  10 1  10 1  10 1  10 2 2 4	15 ***** A ***** A ***** A 19 	**** 807 ***	* * * * *	************  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. TAPE TENS. SENSOR CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI	######################################	* 13:38 * ********* - 01 *******	PAGF 39 **************
***********  IGNAL NAME CC-40  N-TTENS  S-CLK  S-DATA  S-FAD  S-HFCLK  S-RESET  S-STR	**************************************	**** 010. ****	****** ASY	5 **** I * **** STU *****	######################################	15 ***** A ***** A ***** A 10 19 	**** 807 ***	* * * * *	***********  TAPE RECORDER  **********  TYPE  L	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL. CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI	######################################	* 13:38 * ********* - 01 *******	PAGF 39 *********************
**********  IGNAL NAME CC-40  N-TTENS  S-CLK  S-DATA  S-FAD  S-HFCLK  S-RESET	**************************************	**** 010. ****	****** ASY	5 **** I I ** STU W **** STU W **** 1 10 40	4 *****  G *****  JDER ****  1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 1 10 1	15	**** 807 ***	* * * * *	*************  TAPE RECORDER  ***********  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T * 88/ *********************************	######################################	* 13:38 * ********* - 01 *******	PAGF 39 **************
**********  IGNAL NAME CC-40  N-TTENS  S-CLK  S-DATA  S-FAD  S-HFCLK  S-RESET  S-STR	**************************************	**** 010. ****	****** ASY	5 **** STU ***** TU ***** TU **** STU *	4 ***** G ******  G ******  DER *****  10 1 10 1 10 1 10 1 10 1 12 2 4 4 4 4 4 1 2 1 4 1 1 1 1 1 1 1 1 1	15	***** 807 **** - - - -	* * * * *	***************  TAPE RECORDER  ***********  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T *********************************	######################################	* 13:38 * ********* - 01 *******	PAGF 39 **************
***********  **********  *********  ****	**************************************	**** 010. ****	****** ASY	5 **** STU**	4 *****  G *****  JDER *****  10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 10 1 1 1 10 1	15	***** S	* * * * *	X********** IAPE RECORDER  ***********  T YPE  L  L  N  N  N  N  N  N  N  N  N  N  N	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL. JO2  CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL. J44  CONN. AUDIO CTL. J44  CONN. AUDIO CTL. J44  CONN. AUDIO CTL. J44  CONN. AUDIO CTL. J44  CONN. SPEED INDICATORS	######################################	* 13:38 * ********* - 01 *******	PAGF 39 **************
SIGNAL NAME ACC-40 AN-TTENS AS-CLK AS-DATA AS-FAD AS-HFCLK AS-STR AS-STR	**************************************	**** 010. ****	****** ASY	5 **** STU **** STU **** STU *** STU *	4 *****  G *****  JDER ****  1 10 1  10 1	15	***** S	* * * * *	***********  TAPE RECORDER  **********  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T * 88/ *********************************	######################################	* 13:38 * ********* - 01 *******	PAGF 39
SIGNAL NAME ICC-40 IN-TTENS IS-CLK IS-DATA IS-FAD IS-FAD IS-FAT IS-FAD IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT IS-FAT	**************************************	**** 010. ****	****** ASY	5 **** STU ***** STU ***** STU **** TU **** TU **** STU **** STU ***  4 *****  G *****  JDER *  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15	***** S	* * * * *	X *** ** * * * * * * * * * * * * * * *	DESCRIPTION OF ELEMENT  SECONDARY 1 SECONDARY 2  CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS  CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS CONN. SPEED INDICATORS CONN. SPEED INDICATORS CONN. SPEED INDICATORS	######################################	* 13:38 * ********* - 01 *******	PAGF 39	
***********  IGNAL NAME CC-40  N-TTENS  IS-CLK  IS-DATA  IS-FAD  IS-HFCLK  IS-STR   **************************************	**** 010. ****	ASY	5 **** STU***** STU****** STU****** STU****** STU****** STU******* STU**********	4  *****  G  *****  JDER  3  4  2  1  10  1  10  1  10  1  10  1  10  1  1	15	**** S	* * * * *	**********  IAPE RECORDER  **********  TYPE  L  L  N  N  N  N  N  N  N  N  N  N  N	L I S T *********************************	######################################	* 13:38 * ********* - 01 *******	PAGF 39	
************** SIGNAL NAME ACC-40 AN-TTENS AS-CLK AS-DATA AS-FAD AS-HFCLK AS-STR AS-STR AS-STR AS-STR	**************************************	**** 010. ****	ASY	5 **** STU *** STU *** STU *** STU *** ** ** ** ** ** ** ** ** ** ** ** *	4 *****  G *****  JDER ****  2 1  10  1 1  1 1  1 1  1 1  1 1  1 1  1 1  1 1  1 1	15	**** S	* * * * *	***********  **********  ***********  ****	L I S T * 88/ *********************************	######################################	* 13:38 ***********************************	PAGF 39

SIGNAL NAME	COLOR	MI	ASY GRP	ELM PI	NT S	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
BR-LOCST	8		1 10		 7 8		B N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE B	J12		
BR-PLAY	1 1 1 1		1 1 10 10		5 1		B B N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
BR-REC	5 5 5 5		1 1 10 10	12	9 9 5		В В N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
BR-REW	3 3 3 3		1 1 10 10	4 5 12	 2 2 3		B B N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
SR-STOP	4 4 4		1	4 1 6 5 1 6	 6 6		В В N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER 8	J12 J14		
BR-VRSPD	6 6 6		1 1 10 10	4 6 5 6 12 6	4 4 6		B B N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
C-BASS			40 40 41	23 43 13	 3 3 3		N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J23			
-BIASI			42 40 41	22 12	3  3 3		N N	CONN. AUDIO CTL, 143  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, 122			
-BIAS2			40 42	42 12	3		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J42			
-CALIN1			40 41	21	5 5		N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL. J21			
-CAL IN2			40 42		5		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J41			
-CAL OU1				24 1 14 1			N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J24			
-CALOU2			40	44 14	 6		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44			
	UDER 40	****	40 41 42  ********* S I *********	G N ****** DER /	8 8 8  ****** A L	***** * T	W I R E ***********************************	******************	/06/09 ******* /03/21 -	* 13:38 * ***********************************	PAGF 41
**************************************	UDER AG	**** 010. ***	40 41 42 	******* G N ****** DER // ****** ELM PP 22 423	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	**************************************	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  LI S T * 88 ********************************	/06/09 ******* /03/21 -	* 13:38 * ***********************************	PAGF 41
	UDER AG	**** 010. ***	40 41 42 	44 14 14 14 14 14 14 14 14 14 14 14 14 1	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 ********************
**************************************	UDER AG	**** 010. ***	######################################	**************************************	8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
**************  ***********  * ********	UDER AG	**** 010. ***	######################################	44 11 14 14	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	*************  W I R E  **************  APE RECORDER  **********************************	CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  L I S T * 88  *******************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 ********************
**************************************	UDER AG	**** 010. ***	40 41 42	######################################	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
**************************************	UDER AG	**** 010. ***	40 41 42	######################################	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  L I S T * 88  *******************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 ********************
######################################	UDER AG	**** 010. ***	######################################	44 11 14 14	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  L I S T * 88  *******************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
######################################	UDER AG	**** 010. ***	40 41 42	44 11 4 14 14 14 14 14 14 14 14 14 14 14	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
**************************************	UDER AG	**** 010. ***	40 41 42	44 11 14 14	8888	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
######################################	UDER AG	**** 010. ***	######################################	44 11 4 14 14 14 14 14 14 14 14 14 14 14	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL. J24  CONN. AUDIO CTL. J244  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 *********************
-EQB -EQF -EQN -EQS	UDER AG	**** 010. ***	40 41 42	44 11 4 14 14 14 14 14 14 14 14 14 14 14	888 - * * * * * * * * * * * * * * * * *	***** * T	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J44  **********************************	/06/09 ******* /03/21 -	* 13:38 * ********* 01 *******	PAGF 41 ********************

SIGNAL NAME	COLOR	MI	ASY GRP	ELM	PNT	S	L۷	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
C-MICAT1			41	21 11	3	-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J21			
C-MICAT2			40	41 11	3	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J41			
C-MI CON1			40	21 11	7	-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J21			
C-MICON2				41 11	7	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J41			
C-MONOA	4			2 1	4	-		N L	CONN. M/S OUTPUT APML. CONN. M/S INPUT AMPL. JO1			
C-MONOB			44	2 1	3	-		N L	CONN. M/S OUTPUT APML. CONN. M/S INPUT AMPL. JO1			************
C-MOTFLT			11 12	7 1	7	-		N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL.	J07 P01		
C-NAB				21 24	2 11	-		N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI			
				41 44 11	2 11 2			N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J21			
			41 42 42	14 11 14	11 2 11			N N N	CONN. AUDIO CTL. J24 CONN. AUDIO CTL. J41 CONN. AUDIO CTL. J44			
C-OUTSW			40	24 44	19	-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2			
			41 42	14 14	19 19			N N	CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44			
C-REC1			40	22 12	19	_		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J22			
C-REC2			42	42 12	19	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J42			
C-REPRO1			40	23 13	8	-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23			
C-REPRO2				43 13	8	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J43			
C-SECRP1				23 13	9	-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23			
C-SECRP2				43	9	-		N	CONN. AUDIO ELECTRONICS CH2			
			72	13	9			N	CONN. AUDIO CTL, J43			
C-SYNC1 	TUDER AG ******** 1.727.	**** 010.	40 41  ******** S I ********	23 13  ***** G ****** UDER	7 7 7 	*** 807	**** * T	N N **********************************	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23	06/09 ****** 03/21 -	* 13:38 * ********* 01	PAGF 43
********** ************ ************	TUDER AG ******* 1.727. *****	**** 010. ****	40 41 ******** S I ******** 00 * ST ********	23 13  G ***** UDER *****	7 7 7  ***** A &	**** 807 ****	**** * T ****	N N E E E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T *********************************	06/09 ****** 03/21 -	* 13:38 * ********* 01	РДСF 43 : *************
C-SYNC1  **********  * WILLI S  *******  * *********  SIGNAL NAME  C-SYNC2	TUDER AG ******* 1.727. *****	**** 010. ****	40 41 ********* S I ********** 00 * ST ********* ASY GRP	23 13  ****** G ****** UDER ****** ELM	7 7 7  ***** A & *****	**** 807 ****	**** * T ****	N N I R E	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T * 88/ *********************************	06/09 ****** 03/21 -	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
C-SYNC1  *********  * WILL I S  ********  *  C-SYNC2  C-UNCINI	TUDER AG ******* 1.727. *****	**** 010. ****	40 41 ******** S I ********* ASY GRP 40 42 40 41	23 13 ****** G ****** UDER ***** ELM 43 13	7 7 7  ***** A & ***** PNT 	**** 807 ****	**** * T ****	N N N P E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T * 88/ *********************************	06/09 ****** 03/21 -	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
C-SYNC1  **********  * WILL I S  **********  SIGNAL NAME  C-SYNC2  C-UNCIN1  C-UNCIN2	TUDER AG******* 1.727. *******  COLOR	***** 010 . ****  MI	######################################	23 13 ****** UDER ***** ELM 43 13 -21 11	7 7 7 7 7 7 7 8 * * * * * * * * * * * *	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T * 88/  ********************************	06/09 ****** 03/21 -	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
######################################	TUDER AG******* 1.727. *******  COLOR	***** 010 . ****  MI	#********  *********  S I I  *********  ASY GRP  40  41  40  41  40  42  40  41	23 13 ****** G ******* UDER ****** ELM -43 13 -21 11 -21 11	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**** 807 ****	**** * T **** LV 	****************  **************  ******	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  LIST #88/ ***********************************	06/09 ****** 03/21 -	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
	TUDER AG ******** 1.727 ********  COLOR	***** 010 . ****  MI	######################################	23 13 ****** G ****** **ELM 43 13 21 11 24 141 14	7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T ** 88/ ********************************	06/09 ******** 03/21 - ******* 	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
######################################	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 **********************************	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	**************************************	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  L I S T * 88/ *********************************	06/09 ******** 03/21 - *******  J03	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
C-SYNC1  **********  * WILL I S  **********  * SIGNAL NAME  C-SYNC2  C-UNC IN1  C-UNC IV2  C-UNC IV2  C-UNC OU1  C-UNCOU2  CAP-GRD	UDER AG *******  1.727  ********  COLOR	***** 010 . ****  MI	######################################	23 13 ****** G **************************	7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	**************************************	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ************************************	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
C-SYNC1  **********  * WILL I S  ***********  * SIGNAL NAME  C-SYNC2  C-UNC IN1  C-UNC IN2  C-UNC OU1  C-UNCOU2  CAP-GRD  CHC2-N	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 ****** G ****** *ELM 43 13 21 11 -24 14 14 -44 14 -3 2 2 3	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CT1, J23  L I S T * 88/ *********************************	06/09 ******* 03/21 *******  J03 J03 J02	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
C-SYNC1  **********  * WILL I S  ***********  * SIGNAL NAME  C-SYNC2  C-UNC IN1  C-UNC IN2  C-UNC OU1  C-UNCOU2  CAP-GRO  CHC2-N	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 ****** G ****** ****** ****** ***** 13 21 11 11 24 14 14 14 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 3 2 3 2	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******** 03/21 - *******  J02 J03 J02 J03	* 13:38 * ******** *** *******	P Δ G F 43 **********************************
######################################	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 ****** ****** ELM 43 13 21 11 11 24 14 14 41 14 22 23 2 2 3 2 2 3 2	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******** 03/21 - *******  J02 J03 J02 J03 J02 J03 J02 J03	* 13:38 * ******** *** *******	PAGF 43 :***********************************
######################################	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 ****** ****** ****** ***** **** 13 21 11 11 24 14 14 14 14 2 3 2 2 3 2 2 3 2 2 3 3 3	777	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******** 03/21 -	* 13:38 * ******** *** *******	PAGF 43 :***********************************
######################################	TUDER AG************************************	***** 010 . ****  MI	40 41	23 13 ****** ELM 43 13 21 11 -41 14 14 14 22 3 2 2 3 2 2 3 2 2 3 2	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******* 03/21 *******  J03 J03 J02 J03 J02 J03 J02 J03 J02 J03	* 13:38 * ******** *** *******	PAGF 43 :***********************************
	TUDER AG************************************	***** 010 . ****  MI	######################################	23 13 ****** ****** ELM 43 13 21 11 11 24 14 14 41 41 42 2 3 2 2 3 2 2 3 2 2 3 3 4 2 3 3 4 3 3	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 1 7 1	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******* 03/21 - *******	* 13:38 * ******** *** *******	PAGF 43 :***********************************
C-SYNC1  **********  * WILL I S  **********  * SIGNAL NAME  C-SYNC2  C-UNCIN1  C-UNCIN2  C-UNCOU2  C-UNCOU2  CAP-GRO  CHC2-N  CHC2-P  CHC3-N  CHC3-P  CHC4-N	TUDER AG************************************	***** 010 . ****  MI	40 41 40 42 40 41 40 42 20 21 66 67 7 66 66 77 66 66 77 66 66 77 66 66	23 13 **********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CTL, J23  ***********************************	06/09 ******* 03/21 - *******	* 13:38 * ******** *** *******	PAGF 43 :***********************************
C-SYNC1  **********  * WILL I S  ***********  * SIGNAL NAME  C-SYNC2  C-UNCIN1  C-UNCIN2  C-UNCOU2  C-UNCOU2  CAP-GRO  CHC2-P  CHC3-P	TUDER AG************************************	***** 010 . ****  MI	40 41 40 42 40 41 40 42 20 21 66 67 7 66 66 77 66 66 77 66 66 77 66 66	23 13 ****** ****** ****** *ELM -43 13 21 111 -41 14 14 14 14 14 2 3 2 2 3 3 2 2 3 3 3 4 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	7 7 7 7 7 6 6 6 6 6 6 6 7 1 7 1 7 1 2 1 2 2 2 2 2 2 2 2 2 2 3 1 1 1 1 3 5 3 3 1 5 3 9 9 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1	**** 807 ****	**** * T **** LV 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CT1, J23  ***********************************	06/09 ******** 03/21 - *******  J02 J03 J02 J03 J02 J03 J02 J03 J02 J03	* 13:38 * ******** *** *******	P Δ G F 43 **********************************

SIGNAL NAME	COLOR	MI	ASY G	RP EL	M PNT	S	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMFNT NR.
DS-ENLED	2		1 3		12 13	-		N D	CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10	J09		
ER AHH-0 1	1		3		10 3	-		В N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD			
ER AHH-02	3		3 4		23 3	-		В N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK. RECORD			
R AHL -01	9 9		3	9 1		-		в N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK. RECORD			
RAHL-02	2 2		3	9 1	22 5	-		в N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK. RECORD			
XT-CLK	1			1 6	11	-		B N	CONN. EXT. VU PANEL. CTL CONN. EXT. VU-PANEL			
EXT-DATA	1  3					-		N 	CONN. VU PANEL. CTL			
	3		1 9			_		N N	CONN. EXT. VU-PANEL CONN. VU PANEL, CTL	J08		
EXT-D5	5 5 5		1 9					B N N	CONN. EXT. VU PANEL. CTL CONN. EXT. VU-PANEL CONN. VU PANEL. CTL	J08		
EXT-D6	6		1	1 6 0 8	6 4	-		В N	CONN. EXT. VU PANEL. CTL CONN. EXT. VU-PANEL	J08		
EXT-D7	6 7		9	2 1  1 6	3 7	-		N B	CONN. EXT. VU PANEL, CTL			
	7 7		1 9			_		N N	CONN. EXT. VU-PANEL CONN. VU PANEL, CTL	J08		
EXT-ENLD	9		1 9		9			B N	CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. VU PANEL, CTL	801		
XT-FAD			1		1	-		N	CONN. EXT. VU-PANEL	J08		
-ACA40	8			6 5 8 1	12	_		J	CONN. RECTIFIER DZ2 RECTIFIER DZ2			
-AC B 4 0	1 8			6 5 8 1		-		J	CONN. RECTIFIER DZ2 RECTIFIER DZ2			
-LINE1	1			1 1		-		J	CONNECTOR POWER INPUT POWER SWITCH	P0 1		
						-		В	PARALLEL REMOTE CONNECTOR			
AD1	1			1 4				N	CONN. PARALLEL REMOTE A	J11		
FAD2	UDER AG	****	1  ******* * S	1 4 0 11 *****	1 12 2 	***	***	B N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8	J11 ******* 8/06/09 ********	* 13:38 * ********	PAGF 45
FAD2	2  UDER AG ******* 1.727. *******	**** 010.	1  ******* * S ******* .00 *	0 11 1 4 0 11 ****** STUDE	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	**** 07 * ***	***	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  * 8.  * B.  DESCRIPTION OF ELEMENT	J11 ******************************	* 13:38 * ***********************************	PAGF 45
WILLI ST	2  UDER AG ****** 1.727.	**** 010.	1  ******* * S ******* * OO *	0 11 1 4 0 11 ***** I G ***** STUDE	1 2 2	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11 ******* 8/06/09 ********	* 13:38 * ********* 01 ******	PAGF 45 ************************************
FAD2	2  UDER AG ******* 1.727. *******	**** 010.	1	0 11 1 4 0 11 ****** I G ****** STUDE ***** RP ELI	1 12 2 2	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  * 8.  DESCRIPTION OF ELEMENT CONNECTOR POWER INPUT CONN. GROUND	J11 ******************************	* 13:38 * ********* 01 ******	PAGF 45 ************************************
FAD2  ************  ***********  *********	2  UDER AG ******* 1.727.* ******** COLOR  5-4	**** 010.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	******  I G  *****  RP ELI  1 1 2  0 31  2 31  2 31	1 12 2 2	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11 8/06/09 ********* 8/03/21 - ********* P01 J03	* 13:38 * ********* 01 ******	PAGF 45 ************************************
***********  * WILLI ST  ***********  ***********  **********	2  ******** 1.727- ******** COLOR  5-4	**** 010.	1	0 11 1 4 10 11 1 6 6 ******************************	1 - 1 2 2	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	######################################	* 13:38 * ********* 01 ******	PAGF 45 ***************************
************  ************  **********	2  UDER AG ******** 1.727 5-4  7 7 7  8 8	**** 010.	1	0 11 1 4 4 1	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11 ******** 8/06/09 *********  P01  J03  J03  J03	* 13:38 * ********* 01 ******	PAGF 45 ***************************
***********  * WILLI ST  ***********  SIGNAL NAME  GND  HALLIA  HALLIA  HALLIA	2 ******* UDER AG ******** 1.727- *******  COLOR 7 7 8 8 5 5 6	**** 010.	1	0 11 1 4 1	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	######################################	* 13:38 * ********* 01 ******	PAGF 45 **********************
************  ************  **********	2	**** 010.	1	0 11 1 41 1 41 1 41 1 51 1 61 1 61 1 61 1 61 1 61 1 61 1 6	1	**** 07 * ***	**** * T ****	N I R E	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11 ******** 8/06/09 ********* 8/03/21 - ******** P01 J03 J03 J03	* 13:38 * ********* 01 ******	PAGF 45 ***************************
************  ************  SIGNAL NAME  SND  HALL1A  HALL1A  HALL1B  HALL2A  HALL2B	2	**** 010.	1	0 11 1 41 1 1 41 1	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11	* 13:38 * ********* ********	PAGF 45 ***************************
************  * WILLI ST  *************  ************  ********	2	**** 010.	1	0 11 1 41 1 1 41 1 6 11 1 1 6 11 1 6 11 1 7 6 11 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	######################################	* 13:38 * ********* ********	PAGF 45 ***************************
**************************************	2	**** 010.	1	0 11 1 41 1 41 1 1 41 1	1 1 2 2 12 2 12 2 12 2 13 1 1 1 1 4 4 5 5 6 6 6 7 7 7 8 8 8 9 9 13 13 3 3 3 1 1 1 1 1 1 3 3 3 3	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11  ********  8/06/09  ********  8/03/21 -  *******  P01  J03  J03  J03  J03  J03  J03  J03  J	* 13:38 * ********* ********	PAGF 45 **********************
MILLI ST  MILLI	2	**** 010.	1	0 11 1 41 1 42 1 G 12 1 1 3 1 1 2 1 1 3 1 1 2 1 1 3 1 3	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  L I S T * 8.  *********************************	J11	* 13:38 * ********* ********	PAGF 45 ***************************
HILLI ST HIL	2	**** 010.	1	0 11 1 41 1 1 41 1 6 11 1 1 6 11 1 6 11 1 7 1 6 11 1 7 1 7 11 1 7 1 7 11 1 7 1 7 11 1 7 1 7	1 1 2 2 2 1 2 2 2 1 2 2 2 1 3 1 1 1 1 1 1 2 2 2 1 3 3 3 2 2 5 5 2 2 2 5 5 2 2 2 5 5 5 5	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11	* 13:38 * ********* ********	PAGF 45 ***************************
**************************************	2	**** 010.	1	0 11 1 41 1 41 1 11 1 41 1 11 1	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11  B/06/09  ********  8/06/09  ********  P01  J03  J03  J03  J03  J03  J03  J03  J	* 13:38 * ********* ********	PAGF 45 ***************************
************  ************  **********	2	**** 010.	1	0 11 1 41 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1	1	**** 07 * ***	**** * T ****	N I R E  W I R E  WAPE RECGRODER  TYPE  Y N N N N N N N N N N N N N N N N N N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11	* 13:38 * ********* ********	PAGF 45 ***************************
HALLIA HA	2	**** 010.	1	0 11 1 41 1 1 41 1 1 6	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11  B/06/09  ********  8/06/09  ********  P01  J03  J03  J03  J03  J03  J03  J03  J	* 13:38 * ********* ********	PAGF 45 ***************************
######################################	2	**** 010.	1	0 11 1 41 1 41 1 1 41 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	**** 07 * ***	**** * T ****	N I R E  APE RECGRDER  Y  N  N  N  N  N  N  N  N  N  N  N  N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11  B/06/09  ********  8/06/09  ********  P01  J03  J03  J03  J03  J03  J03  J03  J	* 13:38 * ********* ********	PAGF 45 **********************
MILLI ST  WILLI ST  WHILLI ST  WHALLIA  MALLIA   2	**** 010.	1	0 11 1 41 1 41 1 41 1 61 1 71 1 71 1 71 1 71 1 71 1 71 1 7	1	**** 07 * ***	**** * T ****	N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  ***********************************	J11  B/06/09  ********  8/06/09  ********  P01  J03  J03  J03  J03  J03  J03  J03  J	* 13:38 * ********* ********	PAGF 45 **********************	

* WILLI ST	UDER AC	**** 010	S I ************************************	G N ***** ER A	A L ****	**** * T	W I R E   ***********************************	**************************************	6/09 * ****** 3/21 -	* 13:38 * ***********************************	PAGE 46 *
SIGNAL NAME	COLOR	мі				L۷	TYPE	DESCRIPTION OF ELEMENT			ELEMENT NR.
MS-C76K	1		10 11	6 1 3 6			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.			
MS-DIREN	5 5		10	6 5 3 13			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.			
MS-MVCLK	4 4		11	6 14 3 2			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	703 706		
MS-MVDIR	3		10 11	6 13 3 5			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J06 J03		100 cm cm cm cm cm cm cm cm cm cm cm cm cm
MS-ON	6		10 11	6 6 3 15			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J06 J03		
MS-PRESS	2 2			6 2 3 1			N N	CONN. SPCOLING MOTOR CTL. CONN. TAPE DECK CTL.	<b>J</b> 03		40 ap 40 40 40 40 40 40 40 40 40 40 40 40 40
MS-REFA	8 8		10 11	6 8 3 9			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	003		
	7 7		10 11	6 7 3 11	-		N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.			
MS-REW	4			6 4 3 17	-		N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J06		
MS-SHUTL	3 3			6 3 3 20	-		N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J06		60 40 40 40 40 00 00 00 00 00 00 00 00 00
MV-CLK1	1			1 3	-		N N	CONN. MOVE SENSOR CONN. TAPE DECK CTL. JO3	J03		
MV-CLK2	2 2		10	3 3 1 1	-		N N	CONN. MOVE SENSOR CONN. TAPE DECK CTL. JO3	J03		
M1-R			11 11	7 2 7 3	-		N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR FILTER, LEFT	J07 J07		
	2			1 2 1 3 3 1			N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT	P01 P01 J01		
 M1-S	2		15  11	1 1 7 4	-		N	CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, LEFT	J07		
			11 12	7 5 1 4 1 5			N N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL,	J07 P01 P01		
	9		12 15	3 2 1 2				CONN. SP. MOTOR CTL. CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1	J01		
M1-T			11 11 12	7 8 7 9 1 8			N N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL,	J07 J07 P01		
	6		12 12	1 9 3 3 1 3			N	CONN. SP. MOTOR CTL. CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1	P01 J01		
********	******* 1.727 *****	**** •010 ****	********** •00 * STU *****	***** DER A *****	***** 807 ****	**** * ] ****	**************************************	*********	****** 03/21 -	*********** - 01 *******	***********
***********  **********  SIGNAL NAME	1.727 ******* COLOR	**** •010 ****	********* •00 * STU **********	***** DER A ***** ELM PN	***** 807 **** T S	**** * ] ****	**************************************	**************************************	****** 03/21 - *****	*********** - 01	******
********* * ******** SIGNAL NAME M1-TACHO	******* 1.727 *****	**** •010 ****	********** .00 * STU ********** ASY GRP 10 11	ELM PN 6 11 3 8	***** 807 **** T S	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	******* 03/21 - ****** J06 J03	*********** - 01 *******	***********
***********  **********  SIGNAL NAME	1.727 ******* COLOR	**** •010 ****	*********** .00 * STU *********  ASY GRP 10 11	ELM PN 6 11 3 8 5 4 1 3	***** 807 **** T S	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5	******* 03/21 - ******* J06 J03  J05	*********** - 01 *******	***********
********* * ******** SIGNAL NAME M1-TACHO	1.727 ******* COLOR	**** •010 ****	*********** .00 * STU *********  ASY GRP 10 11 11	ELM PN 6 11 3 8	***** 807 **** T S	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5	******* 03/21 - ****** J06 J03	*********** - 01 *******	***********
***********  ***********  SIGNAL NAME M1-TACHO M1-TSENS	**************************************	**** •010 ****	***********  ASY GRP  10 11 17 11 12 12 12	**************************************	***** 807 **** T S 	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.  CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL,	J06 J03 J05 J05 J05 J08 P02 P02 J02 J02	*********** - 01 *******	***********
*************  * **********  SIGNAL NAME M1-TACHO M1-TSENS M2-R	**************************************	**** •010 ****	ASY GRP  10 11 17 11 12 12 12 16 10 11 11 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 12 12 12 12 12 12	*********  ELM PN 6 11 3 8 5 4 1 3 8 2 2 1 1 1 1 6 10 3 14 8 3 8 4 2 3 2 4 4 2	****** 807 *****  I S	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL,	******** 03/21 - *******  J06 J03 J05 J05 J08 P02 P02 J02 J02	*********** - 01 *******	***********
*************  ***********  **********	**************************************	**** •010 ****	ASY GRP  10 11 11 12 12 12 16 11 11 11 12 12 16 11 11 11 11 11 11 11 11 11 11 11 11	**************************************	**************************************	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI	303/21 - 300 3/21 - 30	*********** - 01 *******	***********
***********  * *********  **********  ******	**************************************	**** •010 ****	ASY GRP  10 11 17 11 12 12 12 16 10 11 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 16 11 11 11 12 12 12 16 11 11 11 12 12 12 16 16 11 11 11 12 12 12 16 16 11 11 11 12 12 12 16 16 11 11 11 12 12 12 16 16 11 11 11 12 12 12 16 16 16	**************************************	**************************************	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.  CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1	303/21 - 303	*********** - 01 *******	***********
***********  * *********  **********  ******	**************************************	**** •010 ****	ASY GRP  10 11 11 17 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 12 16 11 11 12 12 12 12 16 11 11 12 12 12 12 12 16 11 11 12 12 12 12 12 12 12 12 12 12 12	**************************************	**************************************	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL,	303/21 - 303 303/21 - 303 303 305 308 308 308 902 302 303 308 902 302 303 308 902 303 308 902 902 902	*********** - 01 *******	***********
***********  * *********  ***********  ******	**************************************	**** •010 ****	ASY GRP 10 11 17 11 12 12 12 16 11 11 12 12 12 16 16 11 11 12 12 12 16 16 11 11 12 12 12 16 16 11 11 11 12 12 12 16 16 17 17 17 17 17 17 17 17 17 17 17 17 17	**************************************	**************************************	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTO	303/21 - 306	*********** - 01 *******	***********
************  ***********  SIGNAL NAME M1-TACHO M1-TSENS M2-R  M2-REFAN M2-R  M2-REFAN M2-TACHO	*********   COLOR  1  1   4  4   9  9  9   4  4  4   4  4   4  4	**** •010 ****	ASY GRP  10 11 17 11 12 12 16 10 11 11 11 12 12 16 10 11 11 11 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 14 15 16 11 11 11 12 12 12 14 15 16 11 11 11 12 12 12 14 15 16 11 11 11 12 12 12 14 15 16 11 11 11 12 12 12 14 15 16 11 11 11 11 12 12 12 14 15 16 11 11 11 11 12 12 12 14 15 16 11 11 11 11 11 11 11 11 11 11 11 11	**************************************	**************************************	**** * ] ****	TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.  CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR TACHO, RIGHT	303/21 306 J08 J08 J08 J08 J08 J08 J08 J08 J08 J08	*********** - 01 *******	***********
**********  **********  **********  ****	*********   COLOR  1  1   4  4   9  9  9   4  4  4   4  4   4  4	**** •010 ****	ASY GRP  10 11 11 17 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 10 11 11 11 12 12 12 16 10 10 11 11 11 12 12 12 16 10 10 11 11 11 11 12 12 12 16 10 10 11 11 11 11 12 12 12 16 10 10 11 11 11 11 11 12 12 12 13 14 15 16 10 10 10 11 11 11 11 11 11 11 11 11 11	**************************************	**************************************	**** * ] ****	TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR TILTER, JO1  CONN. SP. MOTOR TILTER, JO1  CONN. SP. MOTOR TILTER, JO1  CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR TACHO, RIGHT CONN. CAPSTAN CTL. CONN. CAPSTAN CTL.	303/21 - 303	*********** - 01 *******	***********
************  ***********  ***********	**************************************	**** •010 ****	ASY GRP  10 11 11 11 12 12 12 16 11 11 11 12 12 16 11 11 11 12 12 16 11 11 11 12 12 16 11 11 11 11 12 12 16 11 11 11 11 11 12 12 16 11 11 11 11 12 12 12 16 11 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 10 11 11 11 11 12 12 12 12 16 10 10 11 11 11 12 12 12 12 16 10 10 10 10 10 10 10	**************************************	******  *	**** * ] ****	APPE RECORDER  TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR TILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR CTL, CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL.	303/21 - 300 3/21 - 30	*********** - 01 *******	***********
************  ***********  ***********	**************************************	**** •010 ****	ASY GRP  10 11 11 17 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 10 10 20 10 20 10	**************************************	******  I S S S S S S S S S S S S S S S S S S	**** * ] ****	**************************************	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.  CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. CAPSTAN CTL.  CONN. CAPSTAN CTL. CONN. CAPSTAN CTL.	303/21 - 303 303/21 - 303 303 305 305 308 308 308 308 308 308 308 308 308 308	*********** - 01 *******	***********
***********  **********  **********  ****	**************************************	**** •010 ****	ASY GRP  10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 10 10 20 10 20 20 20	**************************************	**************************************	**** * ] ****	APPE RECORDER  TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.  CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL. CONN. CAPSTAN CTL.	303/21 - 300 3/21 - 30	*********** - 01 *******	***********
************  ***********  ***********	*********  1-727  ********  GOLOR  1 1 4 4 9 9 1 1 1 5 5 5 3 3 3 9 9 8	**** •010 ****	ASY GRP  10 11 11 11 12 12 16 10 11 11 11 12 12 16 10 11 11 11 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 12 12 12 16 10 10 10 20 20 20 20 21 10	**************************************	******  *	**** * ] ****	TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JOI  CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. TAPE DECK CTL.  CONN. CAPSTAN CTL.	303/21 - 303 3/21 - 303 3/21 - 303 3/21 - 305 3/21 - 30	*********** - 01 *******	***********
************  ***********  ***********	**********  COLOR  1 1 4 4 9 9 9 1 1 1 4 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	**** •010 ****	ASY GRP  10 11 11 17 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 10 11 11 11 12 12 12 16 10 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	**************************************	******  I S	**** * ] ****	TYPE  N N N N N N N N N N N N N N N N N N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. TAPE DECK CTL.  CONN. CAPSTAN CTL.	303/21	**************************************	***********

SIGNAL NAME	COLOR	ΜI	ASY GRP	ELM PNT	S L	V TYPE	DESCRIPTION OF ELEMENT		REMARK	**************************************
13-SYNC	7		10 20	2 7 1 5		N N	CONN. CAPSTAN CTL.	J02		
13-T	0		20	4 4		N	CONN. TAPE DECK CTL.	J01 J04		
13-TACHO	6		10	2 6		N N	CONN. CAPSTAN CTL. JO4	J02		
3-9600	2		10	2 2		N N	CONN. TAPE DECK CTL.	J01 J02		
R-CMCLK	1		20 1	1 12		. В В	CONN. TAPE DECK CTL.  CONN. SYNCHRONIZER	J01		
R-MVCLK	5		10	5 7		В	CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER	J13		
R-MVDIR	5  6		1	5 10		В	CONN. SYNCHRONIZER A	J13		
R-SYENB	8		1	5 12		В	CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER	J13		
 RIMW-1	1		4	1 5		 L	CONN. SYNCHRONIZER B  VOLTAGE SELECTOR	J14		
 R IMW-3	3		5 4	1 1		- <del>-</del> L	PRIMARY 1 VOLTAGE SELECTOR	P01		
 RIMW-4	3 4-4		5 4	1 3 		- Y L	PRIMARY 1 VOLTAGE SELECTOR	P01		
 RIMW-5	4  5		5 4	1 4 1 6		Y 	PRIMARY 1 VOLTAGE SELECTOR	P01		
RIMW-6	5 		5 4	2 5  1 4B		· · ·	PRIMARY 2  VOLTAGE SELECTOR	P02		
	6		5	2 6		- <del></del>	PRIMARY 2	P02		
RIMW-7	7 7 		4 5 	1 3 2 7		Y 	VOLTAGE SELECTOR PRIMARY 2	P02		
-RECLVA	4 4 		44 46 	1 4		N L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. JO1			
-RECLVB	5 5 		44 46	1 5 1 2		N L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. JO1			
-REPLVA	1		45 46	2 2 1 3		Y L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. JO1			
-REPLVB	3		45 46	2 1 1 4		Y L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. JO1			
	1 1  *****************************	; ; ****	11 30 	*******	 ***** L *****	N L 	**************************************	J06 ******* \$/06/09 ******* \$/03/21 -	01	**************************************
-SHUTL1	1 1  *****************************	010	30 ******** * S I ******** .00 * STU	7 1  ********* G N A *******	***** ]7	L ************************************	SHUTTLE POTMETER  **********************************	******* \$/06/09 ********	********* 01	**************************************
-SHUTL1 -********** WILLI S ************************************	1 1 1  ****************************	010	30 ******** * S I ******** .00 * STU	7 1  *******************************	***** ]7	L ************************************	SHUTTLE POTMETER  **********************************	******* \$/06/09 ********	********** 01 ******	********************
**********  **********  **********  ****	1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	010	30 ********* * S I ********* *00 * STU *********	7 1 ************************************	***** ]7	************  W I R !  ***********  TAPE RECORD.  **************  V TYPE  N	SHUTTLE POTMETER  **********************************	******** //06/09 ********* 3/03/21 - ******	********** 01 ******	**************************************
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	010	30 ******* * S I I ******** *00 * STU ********  ASY GRP	7 1  *********  G N A  **********  ELM PNT  6 2  7 2  6 4  7 3  2 3  7 2	***** ]7	M I R I *************************  **********	SHUTTLE POTMETER  **********************************	**************************************	********** 01 ******	*************
-SHUTL1	1 1 1 	010	30  ********  * S I  *********  * O0 * STU  *********  ASY GRP  11  30  20 35  11 10	7 1  ***********  G N A  *************  IDER A 86  ***********  ELM PNT	***** ]7	W I R I  W I	SHUTTLE POTMETER  E L I S T * 88  ER * 88  DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.	**************************************	********** 01 ******	ELEMFNT NR.
-SHUTL1	1 1 1 	010	30 ******** * S I ******** * S O * S T U ********  ASY GRP  11 30 20 35 1 10	7 1	***** ]7	W I R    *************  ************  ********	SHUTTLE POTMETER  **********************************		********** 01 ******	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 3 3 3 1 1 1 1	010	30  *********  * S I  **********  *********  ASY GRP	7 1  *********  G N A  *********  DER A 86  *******  ELM PNI  G 2  7 2  6 4  7 3  2 3  7 2  3 8  4 1  1 8  4 1  1 21  4 1	***** ]7	W I R    *************  ************  ********	SHUTTLE POTMETER  E L I S T *********************************		********** 01 ******	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 2 2 2 2 3 3 3 8 8 1 1 1 1 7	010	30 ********* * S I ********* * 20 * STU 130	7 1  *********  G N A  **********  IDER A 8( *********  6 2 7 7 2  6 4 7 3  2 3 7 2  3 8 4  1 1 8  4 1  1 21  4 1  1 7 4  4 2	***** ]7	W I R I W I R	SHUTTLE POTMETER  E L I S T * 88  ER * 88  DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SETTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 3 3 8 8 8 1 1 1 7 7 7 7	010	30 ********* * S I ********* * S O * STU *********  ASY GRP	7 1  ************  G N A  ***********  IDER A 8( **********  6 2 7 2  7 2  6 4 7 3  2 3 7 2  3 8 4 1  1 8 4 1  1 21 4 1  1 7 4 2  1 20 4 2	***** ]7	W I R   W I R	SHUTTLE POTMETER  E L I S T * 88  ER * 88  DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD		********** 01 ******	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 3 3 8 8 8 1 1 1 7 7 7 7	010	30 ********* * S I ********* * S O * STU *********  ASY GRP	7 1  *********  G N A  **********  IDER A 8( *********  6 2 7 7 2  6 4 7 3  2 3 7 2  3 8 4  1 1 8 4 1  1 21 4 1  1 7 4 2  1 20	***** ]7	W I R I W I R	SHUTTLE POTMETER  E L I S T * 88  ER * 88  DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 3 3 3 	010	30 ********* * S I ********* * 20 * STU 130	7 1  **********  G N A  **********  IDER A 8( *********  6 2 7 2  6 4 7 3  2 3 7 2  3 8 4  1 1 1 8  4 1 1  1 21  4 1  1 7 4  2 1 20  4 2  1 20  5 2  1 15  5 2	***** ]7	W I R I W I R	SHUTTLE POTMETER  E L I S T * 88  ER * 88  DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL.  CONN. SERIAL CTL.  CONN. SERIAL CTL.  CONN. HEAD BLOCK, RECORD		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 3 3 3 8 8 8 1 1 1 7 7 7 7 7 9 9	010	30 ********* * S I ********* * LOO * STU *********  ASY GRP	7 1  **********  G N A  **********  IDER A 8( *********  6 2 7 2  6 4 7 3  2 3 7 2  3 8 4  1 1 1 8  4 1 1  1 21  4 1  1 7 4  2 1 20  4 2  1 20  5 2  1 15  5 2	***** ]7	W I R    W I	SHUTTLE POTMETER  L I S T * 68  BESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL. SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, REPRO		**************************************	ELEMFNT NR.
	1 1 1 1 1 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9	010	30 ********* * S I ********* * ASY GRP	7 1  ***********  G N A  **********  IDER A 8( **********  6 2 7 2  6 4 7 3  7 2  6 4 7 3  7 2  1 1 21  1 7 4  1 21  4 1  1 21  4 1  1 21  4 1  1 21  5 2  1 15  5 2  1 15  1 14	***** ]7	######################################	SHUTTLE POTMETER  L I S T * 88  BESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL.  SHUTTLE POTMETER  CONN. SHUTTLE CTL.  SHUTTLE POTMETER  CONN. VARI SPEED CTL.  VARIO SPEED POTM.  SERIAL CTL.  CONN. SERIAL CTL.  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS  CONN. HEAD BLOCK, REPRO	**************************************	ELEMFNT NR.	
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 3 3 3 8 8 8 1 1 1 7 7 7 7 7 9 9 9 9	010	30  **********  * S I  **********  * O0 * STU  11 30  20 30  11 30  20 35	7 1  *********  G N A  **********  IDER A 8(  **********  6 4 7 3  2 3 7 2  6 4 1  1 8 4 1  1 21 4 1  1 21 4 2  1 20 4 2  1 20 5 2  1 15 5 2  1 15 5 1  1 1 3	***** ]7	W**************  *************  ********	SHUTTLE POTMETER  L I S T ** 88  ER ***********************************		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	010	30 ********* * S I ********* * S O * STU 10 30	7 1  **********  G N A  **********  IDER A 8( *********  6 2 7 2  6 4 7 3  2 3 7 2  6 4 1  1 1 8 4 1  1 21 4 1  1 21 4 2  1 20 4 2  1 20 5 2  1 15 5 2  1 15 1  1 14 5 1  1 14 5 1  1 14 5 1  1 14 5 1  1 14 5 1  1 14 5 1  1 14 5 1  1 14 5 1  1 1 14 5 1  1 1 14 5 1  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***** ]7	######################################	SHUTTLE POTMETER  L I S T		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	010	30 ********** * S I ********** * ASY GRP	7 1  **********  G N A  **********  IDER A 8( *********  6 2 7 2  6 4 7 3  7 2  6 4 1  1 1 21  4 1  1 21  4 1  1 21  4 1  1 1 21  4 1  1 21  5 2  1 15  5 2  1 15  1 14  5 1  1 3  5 4  1 16  5 4	***** ]7	L	SHUTTLE POTMETER  L I S T		**************************************	ELEMFNT NR.
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	010	30  **********  * S I  **********  * O0 * STU  11 30  20 30  11 30  20 35	7 1  *********  G N A  **********  IDER A 8(  **********  6 4 7 3  2 3 7 2  6 4 1  1 8 4 1  1 21 4 1  1 21 4 2  1 20 4 2  1 20 5 2  1 15 5 2  1 15 5 1  1 1 1 5 1  1 1 1 1 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 2 1  1 1 3 1  1 1 4 1	***** ]7	W************  ***********  **********	SHUTTLE POTMETER  L I S T		**************************************	ELEMFNT NR-
-SHUTL1	1 1 1 1 7 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9	MI	30 ********** * S I ********** * S O * STU 10	7 1  *********  G N A  *********  IDER A 8( *********  6 2 7 7 2  6 4 7 3  2 3 7 2  6 4 1  1 1 8 4 1  1 21 4 1  1 7 2  4 2  1 20 4 2  1 1 20 5 2  1 1 15 5 1  1 1 4 5 1  1 1 1 5 5 4  1 1 6 5 4  1 3 1 1  1 1 2 6 9	***** ]7	L	SHUTTLE POTMETER  L I S T	######################################	**************************************	ELEMFNT NR-
-SHUTL1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MI	30  **********  * S I  **********  * ASY GRP  11  30	7 1  *********  G N A  ********  ******  *****  *****  ****  ****	***** ]7	L	SHUTTLE POTMETER  L I S T ** 88  ER ***********************************		**************************************	ELEMFNT NR.

SIGNAL NAME	COLOR	ΜI	ASY GRP	ELM	PNT	S	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
S-TGOFF	1		44 46	1 3		-		N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
S-TG0	2 2		44 46		12 7	-		N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
	_		46 46		12			L L	TEST GEN. FREQUENCY SWITCH TEST GEN. FREQUENCY SWITCH			
			46 46	3	14 15			L L	TEST GEN. FREQUENCY SWITCH TEST GEN. FREQUENCY SWITCH			
	8		46 44	3 1	16  8	-		L N	TEST GEN. FREQUENCY SWITCH  CONN. M/S ADJUSTMENT			
	8		46	3	4	_		Ľ 	TEST GEN. FREQUENCY SWITCH			
-TG10DB	7 2		44 44	2	17 2			N N	CONN. M/S ADJUSTMENT CONN. M/S OUTPUT APML.			
	2		45 46	2	2	_		L L	CONN. M/S INPUT AMPL. JO1 TEST GEN. LEVEL SWITCH			
-TG10K	9		44 46	1 3	9			N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
5-TG125	7		44	1	7	-		N	CONN. M/S ADJUSTMENT			
-TG16K	7		46 	3 1	3  10	-		L N	TEST GEN. FREQUENCY SWITCH CONN. M/S ADJUSTMENT			
	0		46	3		_		Ľ	TEST GEN. FREQUENCY SWITCH			
-TG20DB	8 1 1		44 44 45 46	1 2 1 2	18 1 1 3			N N L	CONN. M/S ADJUSTMENT CONN. M/S OUTPUT APML. CONN. M/S INPUT AMPL. JO1 TEST GEN. LEVEL SWITCH			
5-TG60	6		44	1	6	-		N	CONN. M/S ADJUSTMENT			
F-LINE1	1		46 3	<del></del>	 1	-		L	TEST GEN. FREQUENCY SWITCH			
N -CINCI	2-1		4 5	1	7 2			Ľ Y	VOLTAGE SELECTOR PRIMARY 1	P01		
F-LINE2	6		3 4	2	2	-		J	MAINS FILTER, DUTPUT VOLTAGE SELECTOR			
	6-8 8 		5	1 2	1 8 	_		Υ	PRIMARY 2	P02		
5M-D0	8 8		10 30	9	8			N D	CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10	103		
	7		30 10	 9	9  7	-		N 	CONN. KEYS MATRIX	J09		
3M-D1	7		30 30	3 4	8			D N	CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX	307		
						-			CONN. COMMAND DANE!	J09		
SM-D2	6		10	9	6			N	CONN. COMMAND PANEL	30,		
*************	*******************************	* ***	30 30 	3 4  ***** G *****	7 7  *****	L ***	****	D N  W I R E	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  LIST * 88	******** /06/09 *****	* 13:38 * *******	
* WILLI ST ************ * ******	********* UDER AG ******* 1.727.0	* **** 10.0 ***	30 30 	3 4  G ***** UDER	7 7 7  N A ***** A 8(	L **** 07 * ****	**** * T/	D N	CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  ***********************************	******** //06/09 ******** //03/21 -	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
************  * WILL I ST ***********  * * * * * * * * * * * *	**************************************	* **** 10.0 ***	30 30 	3 4  G ***** UDER	7 7 7  N A ***** A 8(	L **** 07 * ****	**** * T/	D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	******** //06/09 ******** //03/21 -	* 13:38 * ********** - 01	PAGF 51
************* * WILL I ST ***********	6  WAXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	* **** 10.0 ***	30 30 	3 4  G G ***** UDER *****	7 7 7  N A ***** A 80 *****	L **** 07 * ****	**** * T/	D N	CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  ***********************************	******** /06/09 ******* /03/21 - ******	* 13:38 * ********* - 01 ******	PAGF 51 ****************************
*********** * WILL I ST ************ * * * * * * * * * * * *	******** UDER AG ******* 1.727.0 *******	* **** 10.0 ***	30 30 30 ******** 0 * ST ******** ASY GRP	3 4  G ****** UDER ***** ELM  9 3 4  9	7 7 7  N A ***** PNT  5 6 6  4	L **** 07 * ****	**** * T/ ****	D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	******** /06/09 ******* /03/21 - ******	* 13:38 * ********* - 01 ******	PAGF 51 ****************************
************** * WILLI ST **************** ******************	********  *******  *******  1.727.0  ********  COLOR  5 5	* **** 10.0 ***	30 30 30 ******* 0 * ST ******** ASY GRP 	3 4  G ****** UDER ***** ELM  9 3 4  9	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	L **** 07 * ****	**** * T/ **** LV	D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  L I S T * 88 ********************************	******** /06/09 ******** /03/21 - ******** J09	* 13:38 * ********* - 01 ******	PAGF 51 ****************************
**************************************	********  *******  *******  1.727.0  ********  COLOR  5 5	* **** 10.0 ***	*******  S I  *******  S I  *******  ASY GRP  10  30  30  10  30  10  30  30  10	3 4  6 ***** ELM 9 3 4 9 3	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	L **** 07 * ****	**** * T/ **** LV	D N N N D N N D D D D D D D D D D D D D	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	******** /06/09 ******** /03/21 - ******** J09	* 13:38 * ********* - 01 ******	PAGF 51 ****************************
**************************************	********* UDER AG ******** 1.727.0 ********  COLOR 5 5 4 4 3 3	* **** 10.0 ***	*******  S I  *******  O * S T  *******  ASY GRP  10 30 30 10 30 30 10 30 30 30 30 30 30 30 30	3 4 ****** G ****** ELM  9 3 4 9 3 4	7 7 7 ** * A * * A * 8 ** * A * * * * * 5 6 6 6 4 5 5 5 3 4 4	L **** 07 * ****	**** * T/ **** LV	*************  W I R E *************  ***************  TYPE  N D N N N N N N N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* /06/09 ********* /03/21 ********  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ****************************
**************************************	********* UDER AG *********  COLOR 5 5 4 4	* **** 10.0 ***	*******  ******  ******  ******  ASY GRP  10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30	3 4 	7 7 7 ** * A * * * * * * * * * * * * * *	L **** 07 * ****	**** * T/ **** LV	***********  W I R E  ************  PE RECORDER  ***************  TYPE  N D N N N N N N N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  L I S T * 88  *******************************	********* /06/09 ********* /03/21 ********  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
***********  **********  **********  ****	********* UDER AG *********  COLOR 4 4 3 3 2 2	* **** 10.0 ***	*******  S I  *******  O * S I  30  30  10  30  30  10  30  30  10  30  10  30  10  1	3 4	7 7 7 ** * * * * * * * * * * * * * *	L **** 07 * ****	**************************************	D N N N D N N N D N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* /06/09 ******** /03/21 ********  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
***********  WILLI ST  ***********  **********  **********	*********  UDER AG  *******  1.727.0  ********  COLOR  5  5   4   3  3   2  2	* **** 10.0 ***	******** 0 * ST ******* 0 * ST *******  ASY GRP  10 30 30	3 4 ***********************************	7 7 7 ** * A * * * * * * * * * * * * * *	L **** 07 * ****	**************************************	D N N N D N N N D N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* /06/09 ******** /03/21 ********  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
######################################	*********  ********  ********  ********	* **** 10.0 ***	******* 0 * ST ****** 0 * ST ******  ASY GRP  10 30 30 10 30 30 10 30 30 10 30	3 4	7 7 7 * * * A * * * * A * * * * * * * A *	L **** 07 * ****	**************************************	D N N N D N N N D N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* /06/09 ******** /03/21 ********  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
*************  ***********  IGNAL NAME  M-D3  M-D4  M-D5  M-D6  M-D7	*********  UDER AG *********  1.727.0  ********  *******  *******  *******  2 2  1 1 2 2 2 1 1	* **** 10.0 ***	******** 0 * ST  ******* 10 30 30 30 10 30 30 30 10 30 30 30 30 10 30 30 30 30 30 30 30 30 30 30 30 30 30	3 	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	L **** 07 * ****	**************************************	***********  W I R E  ************  ***********  TYPE  N D N N N N N N N N N N N N N N N N N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21 ********  J09  J09  J09  J09  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 ***********************
*********** ***********  IGNAL NAME  M-D3  M-D4  M-D5  M-D6  M-D7  N-DATA  R-FADRY	*********  UDER AG  ********  1.727.0  ********  COLOR   5   4   1  1   2  2   5  5  5	* **** 10.0 ***	******** 0 * ST  ******* 10 30 30 30 30 10 30 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 30 10 30 30 30 10 30 30 30 30 30 30 30 30 30 30 30 30 30	3 	77	L **** 07 * ****	**************************************	***********  W I R E  ***********  **********  **********	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  L I S T * 88  *******************************	********* /06/09 ******** /03/21 - ********  J09 J09 J09 J09 J09 J09	* 13:38 * ********* - 01 ******	PAGF 51 ***********************
*********** ***********  IGNAL NAME  M-D3  M-D4  M-D5  M-D6  M-D7  N-DATA  R-FADRY	*********  ********  ********  1.727.0  *********  *******  ******  *******  ****	* **** 10.0 ***	******** 0 * ST ******* 0 * ST *******  ASY GRP  10 30 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30	3 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	L **** 07 * ****	**************************************	***********  W I R E  *************  *************  TYPE  N  D  N  N  N  D  N  N  N  D  N  N  N	CONN. KEYS MATRIX  LIST * 88  ********************************	********* /06/09 ******** /03/21 - ********  J09 J09 J09 J09 J09 J09	* 13:38 * ********* - 01 ******	PAGF 51 ***********************
######################################	*********  *********  ********  *******	* **** 10.0 ***	******** 0 * ST  ******* 10 * ST  *******  ASY GRP  10 30 30 30 30 30 30 30 30 30 30 30 30 30	3 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	L **** 07 * ****	**************************************	************  W I R E  ************  PE RECORDER  N  N  N  N  N  N  N  N  N  N  N  N  N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* /06/09 ******** J09 J09 J09 J09 J09 J09 J09	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
**************************************	*********  ********  ********  1.727.0  ********  COLOR  5  4  4  1  2  2  0 0 0 7 7	* **** 10.0 ***	*******  \$ 1  *******  0 * \$ 5 7  *******  ASY GRP  10 30 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30 10 30 30	3 4	** * * * * * * * * * * * * * * * * * *	L **** 07 * ****	LV	D N	CONN. KEYS MATRIX  L I S T * 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	********* //06/09 ******** //03/21 - ********  J09  J09  J09  J09  J09  J11  J11 J13	* 13:38 * ********* - 01 ******	PAGF 51 ***************************
**********  WILLI ST  **********  ***********  **********	*********  UDER AG  ********  1.727.0  ********  COLOR   5   4  4   1  1  1  7  7  7	* **** 10.0 ***	******** 0 * ST ******* 0 * ST ******  ASY GRP  10 30 30 30 10 30 30 10 10 10 10 10 10 10 10 10 10 10 10 10	3 4	77 *** * * * * * * * * * * * * * * *	L **** 07 * ****	LV	D N	CONN. KEYS MATRIX  LIST * 88  ********************************	********* //06/09 ******** //03/21 - ********  J09 J09 J09 J09 J09 J09 J09 J09 J09 J09	* 13:38 * ********* - 01 **********  REMARK	PAGF 51 ***********************
######################################	*********  UDER AG  ********  1.727.0  ********  COLOR   5   4  4   1  1  1  7  7  7	* **** 10.0 ***	******** 0 * ST ******* 0 * ST ******  ASY GRP  10 30 30 30 10 30 30 10 10 10 10 10 10 11 10 11 10 11 10 11 10 11 10	3 4	7 7 7 7 7 7 8 * * * * * * * * * * * * *	L **** 07 * ****	LV	D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21 J09 J09 J09 J09 J09 J09 J11 J13 J11 J13 J11 J13	* 13:38 * ********* - 01 **********  REMARK	PAGF 51 ***************************
**************************************	*********  ********  ********  ********	* **** 10.0 ***	******** 0 * ST  ******* 0 * ST  *******  ASY GRP  10 30 30 10 30 30 11 10	3 4	77 *** * * * * * * * * * * * * * * *	L **** 07 * ****	LV	D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21 J09 J09 J09 J09 J09 J09 J11 J13 J11 J13 J11 J13	* 13:38 * ********* - 01 **********  REMARK	PAGF 51 ***************************
**************  ************  ********	*********  ********  ********  ********	* **** 10.0 ***	*******  ******  *****  *****   *****   ****	3 4	77	L ** * * * * * * * * * * * * * * * * *		D N N I R E *********************************	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21 J09 J09 J09 J09 J09 J09 J11 J13 J11 J13 J11 J13	* 13:38 * ********* - 01 **********  REMARK	PAGF 51 ***************************
*********** **********  ***********  IGNAL NAME  M-D3  M-D4  M-D5  M-D6  M-D7  N-DATA  R-FADRY  R-LIFT  R-LOCST  R-MUTE	********* UDER AG ********  ********  *******  *******  ****	* **** 10.0 ***	*******  ******  *****  *****   *****   ****	3 4	77	L + X + X + X + X + X + X + X + X + X +		D N N I R E STANDER ST	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21 -********  J09 J09 J09 J09 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13	* 13:38 * ********** - 01 ********* ********** ************** ****	PAGF 51 ***************************
************  WILLI ST  **************  IGNAL NAME  M-D3  M-D5  M-D6  M-D7  N-DATA  R-FADRY  R-FORW  R-LIFT  R-LOCST  R-MUTE  R-PLAY	*********  ********  ********  1.727.0  ********  *******  *******  *******  ****	* **** 10.0 ***	******** 0 * ST ******* 0 * ST ******  ASY GRP  10 30 30 30 10 30 30 10 10 10 10 10 10 10 10 10 10 10 10 10	3 4	7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	L + X + X + X + X + X + X + X + X + X +		D N N I R E STANDER ST	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  ***********************************	********* //06/09 ******** //03/21	* 13:38 * ********** - 01 ********* ********** ************** ****	PAGF 51 ****************************
*********** **********  ***********  IGNAL NAME  M-D3  M-D4  M-D5  M-D6  M-D7  N-DATA  R-FADRY  R-LIFT  R-LOCST  R-MUTE	*********  UDER AG ********  COLOR 5 5 4 4 1.727.0  ********  2 2 1 1 2 2 1 1 6 6 6 6 4 4 4 9 9 9 9 9	* **** 10.0 ***	******** 0 * ST ******* 0 * ST ******  ASY GRP  10 30 30 30 10 30 30 10 10 10 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10	3 4	777778********************************	L *** *** S		D N	CONN. TAPE DECK CTL. JIO CONN. KEYS MATRIX  L I S T * 88 ********************************	********* //06/09 ******** //03/21 - ********  J09 J09 J09 J09 J09 J11 J13 J11 J13 J11 J13 J11 J13 J11 J13	* 13:38 * ********** - 01 ********* ********** ************** ****	PAGF 51 ****************************

**************************************				**** [ G			************** W I R E	**************************************		********** * 13:38 *	
*							TAPE RECORDER		8/03/21 -		************
								*************	******		
SIGNAL NAME	COLOR	 A5 Y		ELM		-	 TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMFNT NR.
SR-REW	1		1	4 5	20 20		8 8	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER			
	1		10 10	11 13	11		N ·	CONN. PARALLEL REMOTE A	J11		
		 				_	 N	CONN. SYNCHRONIZER A	J13		
SR-STOP	2		1	4 5	23 23		B 8	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER			
	2		10	11	12		Ň	CONN. PARALLEL REMOTE A	J11		
	2	 	10	13	12	_	 N 	CONN. SYNCHRONIZER A	J13		
SR-VRSPD	4		1	4 5	5 5		8 B	PARALLEL REMOTE CONNECTOR			
	4		10	11	14		N	CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A	J11		
	4	 	10	13	14	_	 N	CONN. SYNCHRONIZER A	J13		
SR-ZLOC	6		. 1	. 4	14		В	PARALLEL REMOTE CONNECTOR			
		 	10		16 	-	 N	CONN. PARALLEL REMOTE A	J11		
SRPHH-01	9		39 43	1	5 6		B N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK,SEC REPRO			
		 				-	 				
SRPHH-02	9 9		39 43	1	18 3		B N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK.SEC REPRO			
SRPHL-01	6	 	 39	1		-	 В	CONN. AUDIO ELECTRONICS			
	6		43	ī	5		N .	CONN. HEAD BLOCK.SEC REPRO			
SRPHL-02	6	 	39	1	17	-	 В	CONN. AUDIO ELECTRONICS			
	6	 	43	1	1	_	 N	CONN. HEAD BLOCK.SEC REPRO			
SRPSC-01	S		39	1	6		В	CONN. AUDIO ELECTRONICS			
	s 	 	43 	1	7	_	 N	CONN. HEAD BLOCK, SEC REPRO			
SRPSC-02	S		39		19		В	CONN. AUDIO ELECTRONICS			
	s 	 	43 	1		-	 N	CONN. HEAD BLOCK, SEC REPRO			
TACHO-3A	1		20 21	3	1		N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3	J03		
		 				-	 				
TACHO-3B	9		20 21	3 2	2		N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3	J03		
TRS-A	3	 	10	 5	 2	-	 N				
INS-A	3		39		13		В	CONN. TAPE TRANSPARENT SENSO CONN. AUDIO ELECTRONICS	R J05		
TRS-C	4	 	10	5		-	 N	CONN. TAPE TRANSPARENT SENSC	R J05		
	4		39	1	24		В	CONN. AUDIO ELECTRONICS			
TRS-E	5	 	10	5	 5	-	 N	CONN. TAPE TRANSPARENT SENSC	R J05		
	5	 	39	1	25	_	 8	CONN. AUDIO ELECTRONICS			
TRS-K	2		10	5	1		N	CONN. TAPE TRANSPARENT SENSO	R J05		
	2	 	39 	1	12	_	 В	CONN. AUDIO ELECTRONICS			
TTA-FORW	6		11 14	1	6 8		N N	CONN. TAPE TENS. ADJUSTMENT CONN. SP. MOTOR CTL. JO1	J01		
		 				-	 	SF. MUIOR CIL. JUI			

**********	1.727.	010.	.00	* ST	UDER	Α :	3C7 *	T/	APE RE	CORDER					*	887	03/21	_	0.1					
SIGNAL NAME	COLOR	ΜI	ASY	GR P	ELM	PNT	S	LV	TYPE		DESCRI	I PT I ON	OF EL	EMENT					REMARK		ELEM	FNT	NR.	
TTA-LIBR	3			11 14	1 1	3 4	-		N N		CONN.	TAPE T SP. MO	TUR C	TL. J		r	70	1		-				
TTA-PLAY	4			11 14	1	4 10	-		N N		CONN.	TAPE T	ENS.	ADJUS		·	Jo	1		-				
TTA-REW	5			11 14	1	5 6	_		N N		 CONN.	TAPE T	ENS.			r	J0	1		-				
TTA-SHT1	7 7			11 14	1	7 1	-		N N		CONN.	TAPE T SP. MO	TOR C	TL. J		·	J0	1		-				
TTA-SHT2	8			11 14	1 1	8 2	-		N N		CONN.	TAPE T	ENS.	ADJUS			J0	1		-				
TTA-SHT3	9			11 14	1 1	9	_		N N			TAPE T					10	1		-				
WR-BIAS1				40 41		7 7			N N			AUDIO			S CHI			-		-				
WR-BIAS2				40 42		7			N N		CONN.	AUDIO	CTL,	J42	S CH2			-		-				
WR-REC1					22 12		-		N N		CONN.	Oldua Oldua	ELECT CTL,	RONIC	S CH1			-		-				
wR-REC2					42 12		-		N N		CONN.	OIGUA	ELECT CTL,		S CH2					-				
WR-REPR1				40 41	24 14	5 5	-		N N		CONN.	AUDIO OI GUA	ELECT		S CHI			-		-				
WR-REPR2				40 42	44 14	5 5	-	-,-	N N			AUDIO			S CH2	:		-		-				

## 6. GENERAL DIAGRAMS

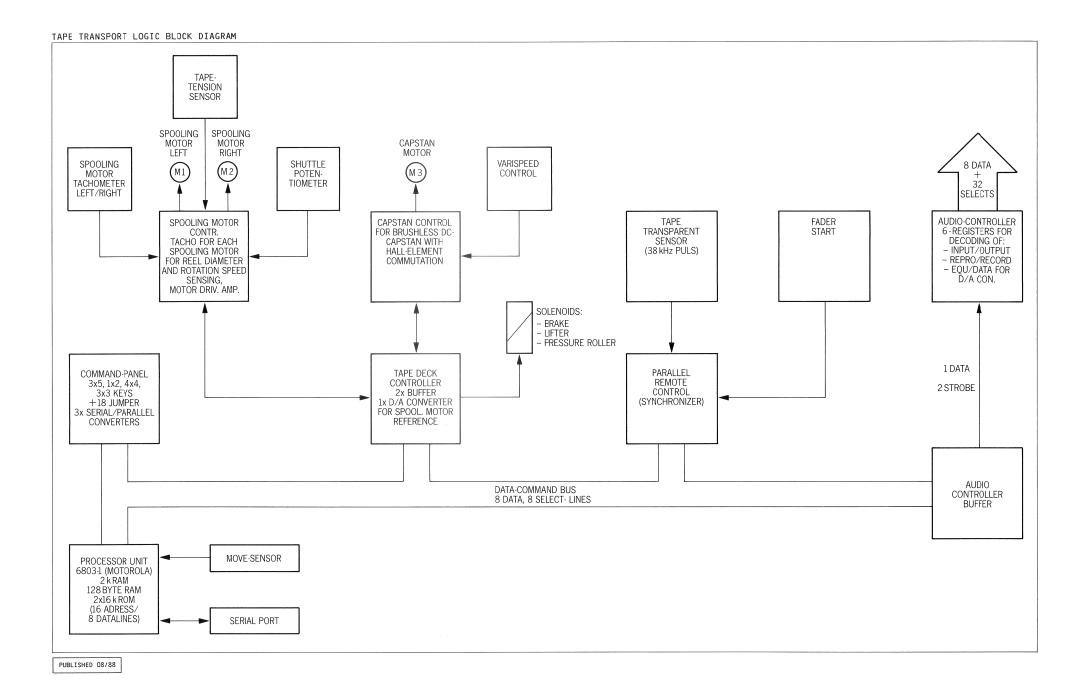
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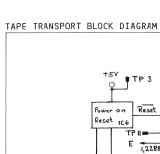
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- TAPE TENSION ADJUST 1.727.341.00 GRP14	
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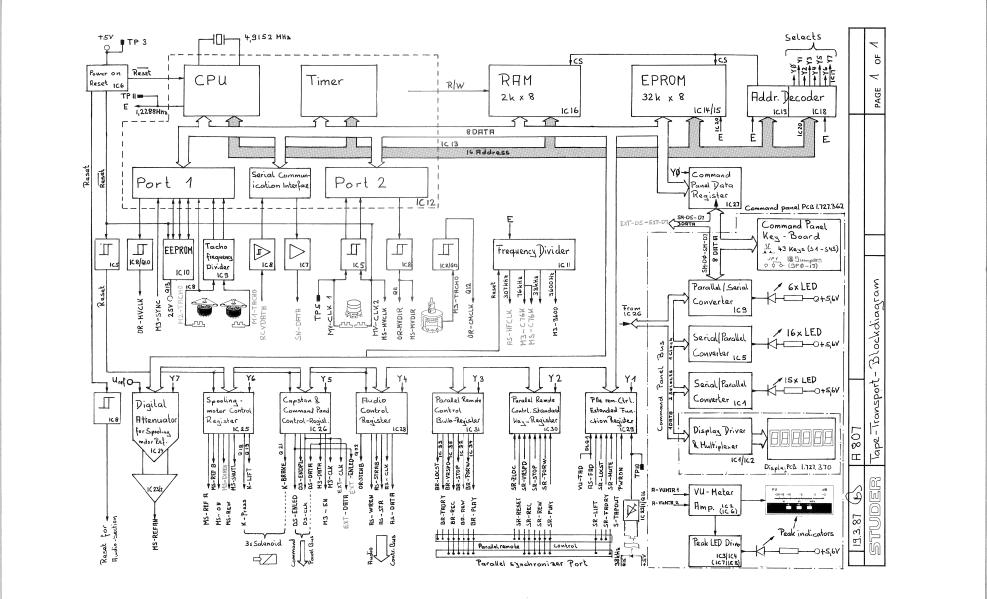
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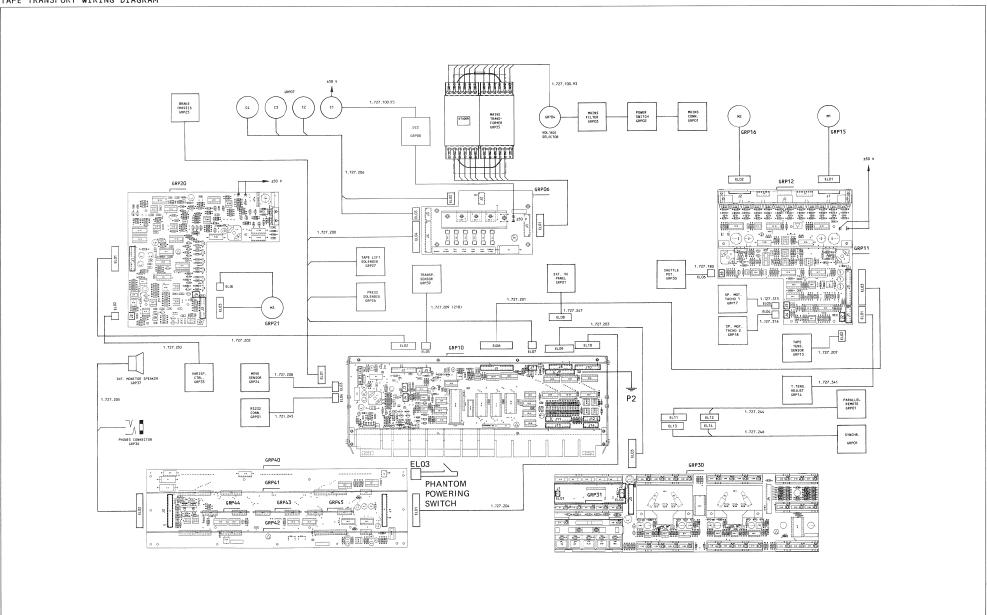




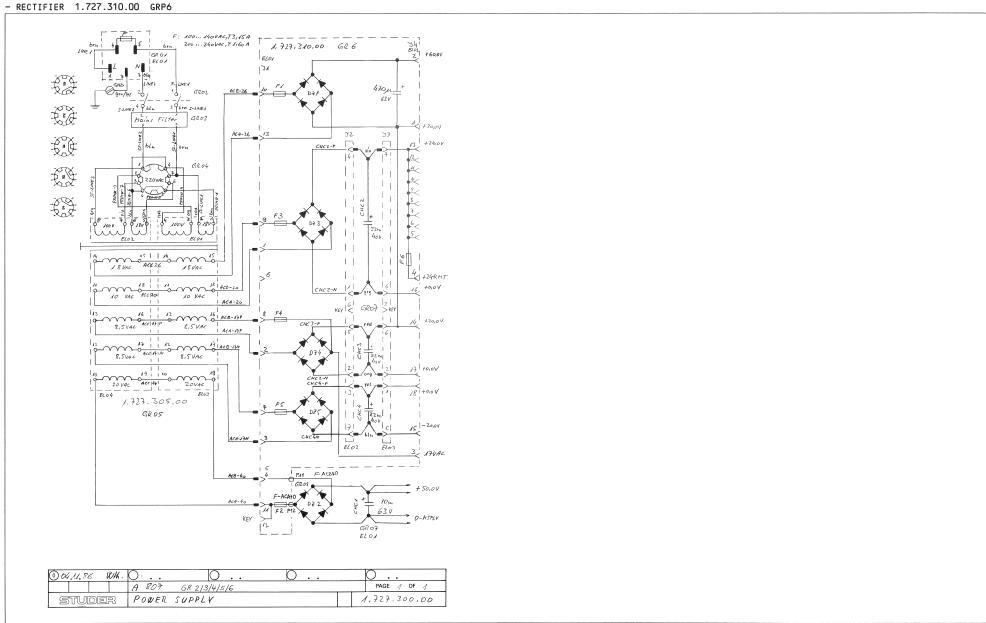
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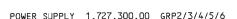


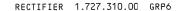


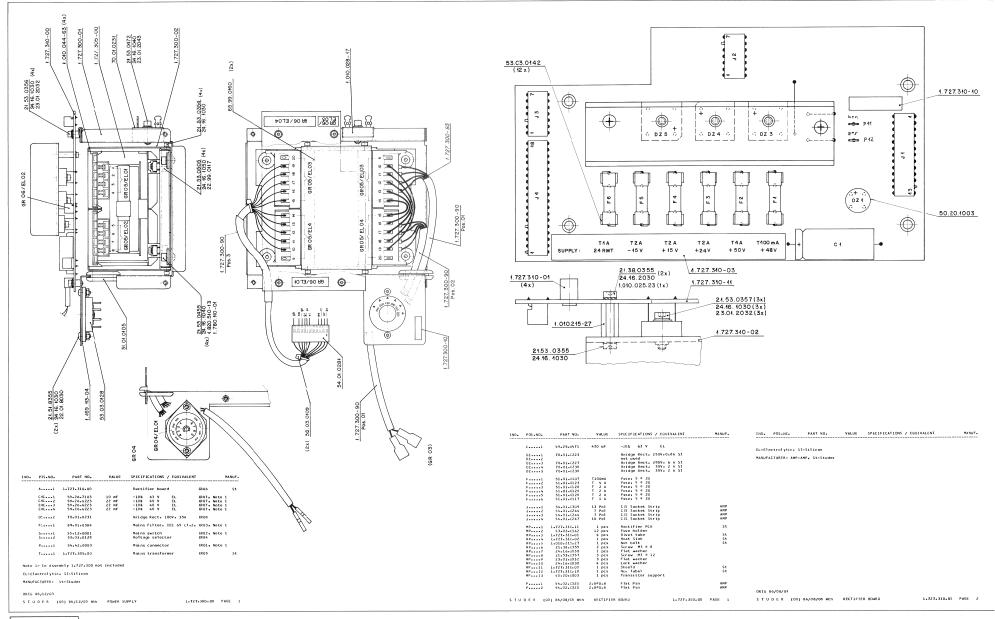


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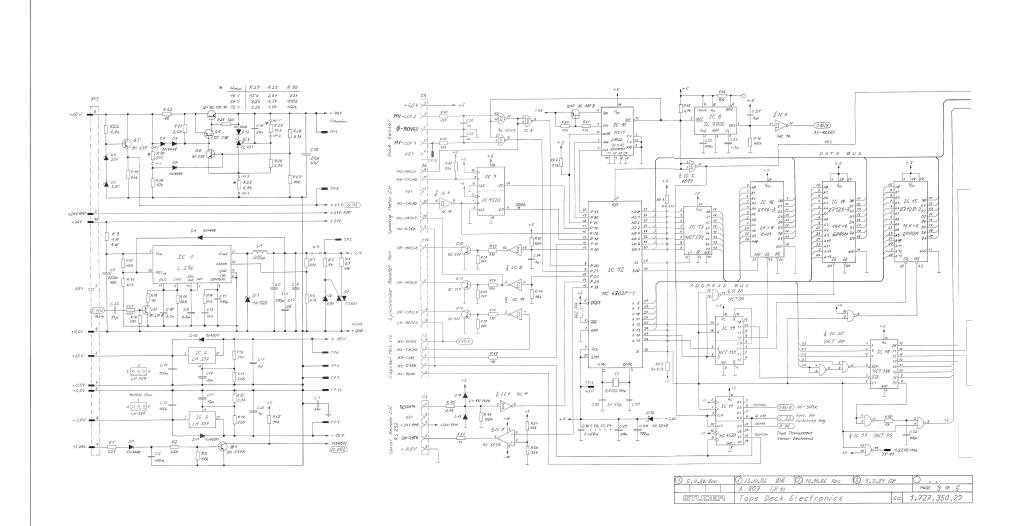






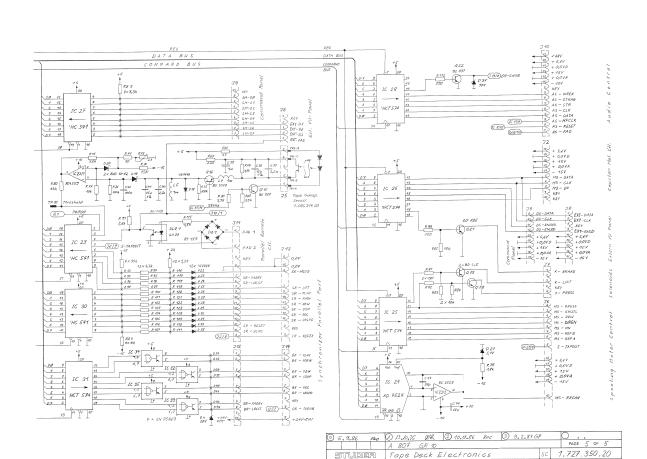


#### TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10



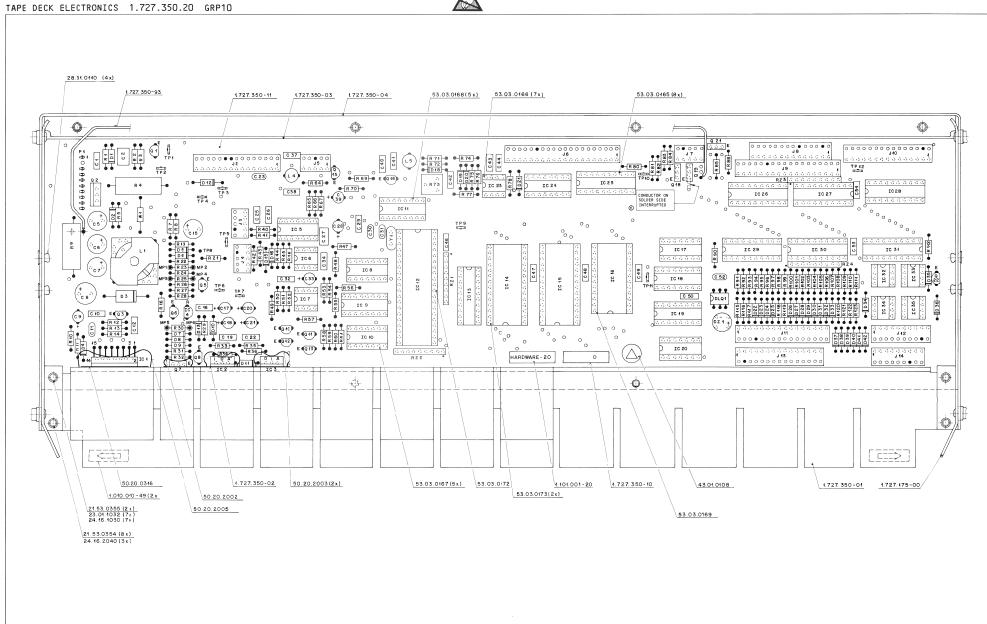


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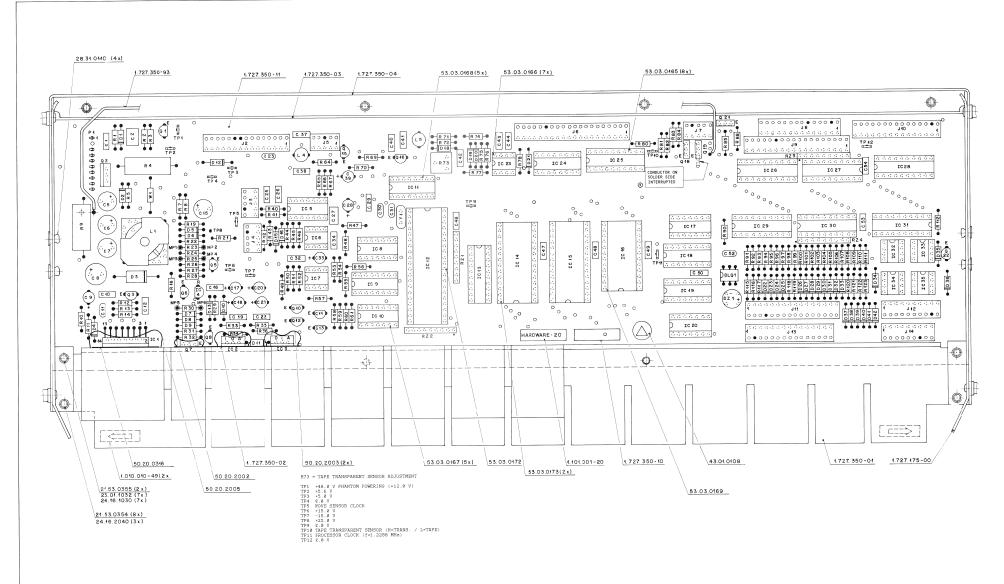
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TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10



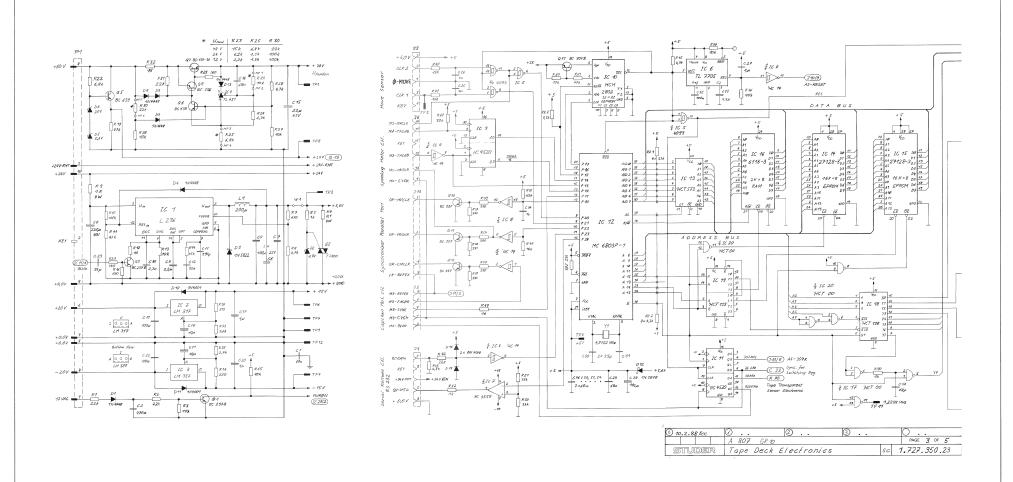


### TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10

PE DECK ELECTRONICS 1.727.350.20/21/22 GR	P10		
ING. POS-NO. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	THD. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT NAME.
C1 99-03-583	1	Rec.   27   37   11   403   13   13   13   13   13   13   13	
S T U D E R (05) 87/09/23 MHH TAPE DECK ELECTRONIES 1.727-350-2D PAGE 1	S T U D E R (DS) 07/09/23 WEN TAPE DECK ELECTRONICS L.727-350-20 PAGE 4	S T U D E R (05) 07/09/23 WEN TAPE DECK ELECTRONICS 1.727.350-20 PAGE 7	S T J D E R (05) 87/09/23 WEN TAPE DECK ELECTRONICS 1.727.350.20 PAGE 10
1ND	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  J11 54.01.0294 16 Pole CLS Socket Strip AMP	1NO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  867 57-111-9221 22C Ohm 22, 0-25W, MF	ING. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF (01] 13-10-86 Improved interfacing between TTL- and CMOS-level.
C6 99-06-2883 68 PF 10X 63 V PETP C67 99-06-2883 68 PF 10X 63 V PETP C67 99-06-2883 68 PF 10X 63 V PETP C67 99-06-2883 68 PF 10X 63 V PETP C67 99-06-2883 68 PF 10X 63 V PETP C69 99-06-2883	Jan   11   St. 01.0274   16 Pole   C15 Socket Strip   AMP	\$\( \text{S1} \) \$\( \t	(0) [1-1:0-16   Improved interfacing between TIL- and CODS-Invel. (02) [0-1:0-16   Remary expansion   (03) 10-0-16   Remary expansion   (03) 10-0-16   Retained range of temperature and sutment. (03) 21-0-17   Soft lear expansion for Soft Lamper function.  Note 1   Variable Phosion Supply      Variable Phosion Supply
S T U D E R (05) 87/09/23 WEB TAPE DECK ELECTRONICS 1.727-350-20 PAGE 2	S T U D E R (OS) 817/09/23 WEN TAPE DECK ELECTRONICS 1.727.350.20 PAGE 5	STUDEN TOS BY DOUGH THE DECK ELECTRONICS THE TOSAN OF	THE STATE OF THE S
Dec.	Dec.   Poisson   Part via   Par		

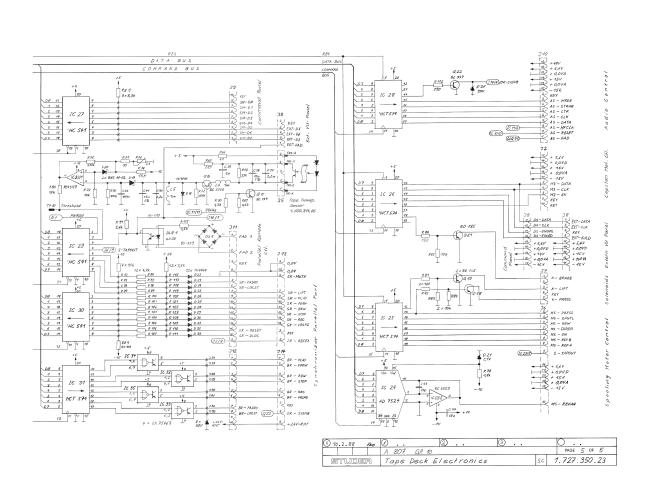




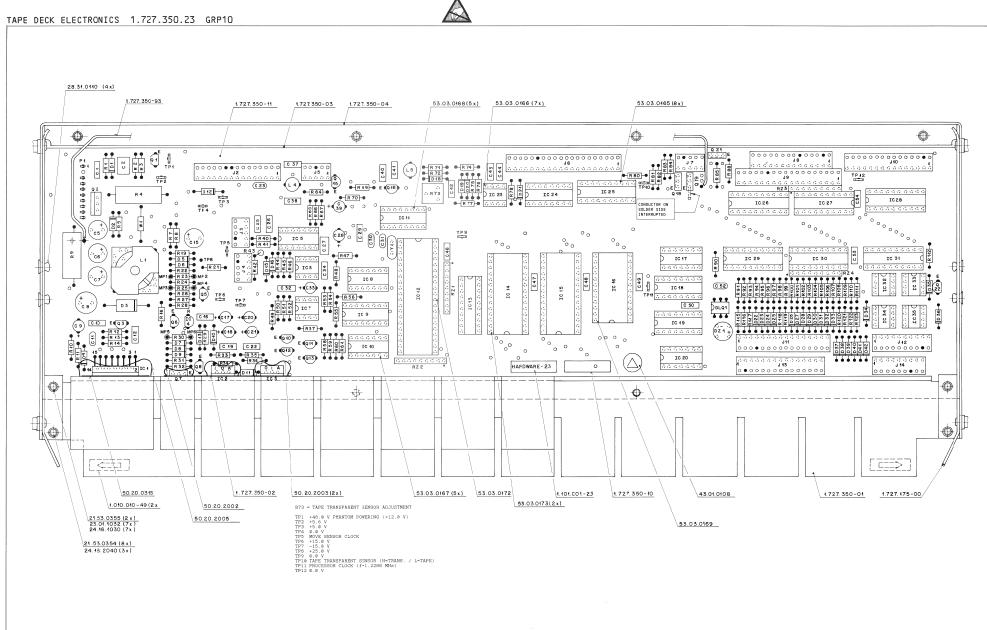




TAPE DECK ELECTRONICS 1.727.350.23 GRP10





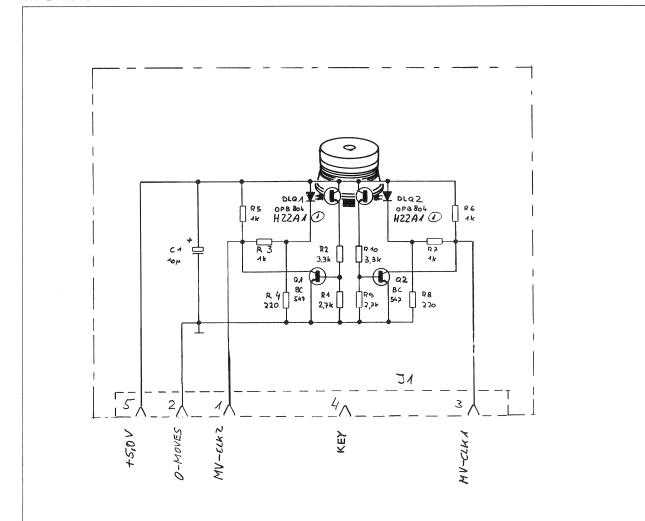




### TAPE DECK ELECTRONICS 1.727.350.23 GRP10

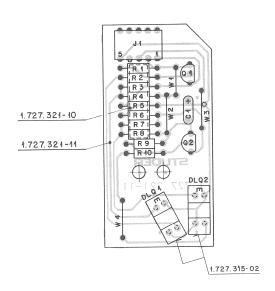
APE DECK ELECTRONICS 1.727.350.23 GRPTU	Accidental		
INC. PDS.NO. PART NO. VALUE STECIFICATIONS / EQUIVALENT MANUF-	ING. POS.NO. PART NO. VALUE SPECIFICATIONS / COUNTALENT MANUF-	ING. POS.NO. PARTING VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. P05.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALINT MANUE
C	1	### 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
C44 59-30-0003 68 nF 10% 63 V PETP  S 1 U D E R (00) 88/02/10 GP TAPE DECK ELECTRONICS 1.727-350-23 PAGE 1	MP5 1.010-028-54 1 Pole Wrap Pin  S T U D E R (00) 88/02/10 GP TAPE DECK ELECTRONICS 1-727-350-23 PAGE 4	R81 57.11.3121 123 Onn 1% 0.25% MF S T U D E R (00) 88/02/10 GP TAPE DECK ELECTRONICS 1.727.350.23 PAGE 7	ORIG 88/02/10 S T U D E R (00) 88/02/10 GP TAPE DECK ELECTRONICS 1-127-350-23 PAGE 1
INC. POS.HO. PARI NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.  C46 59.00.0083 68 RF 10% 63 Y PETP	ING. POS.NO. PART NG. VALUE SPECIFICATIONS / EGUIVALENT MANUF.  ***********************************	INO. PDS-NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  R82 57.11.3121 120 Ohm 13. 0.25%, MF	
C40 39-00-0033	### ### ### ### ### ### ### ### ### ##	### 1.00 C	
INP. POS.NO. PART NO. VALUE STECIFICATIONS / EQUIVALENT MANUF.	INO. PID-10. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NO. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
0	C	### 17.10	

## TAPE MOVE SENSOR 1.727.321.00 GRP24



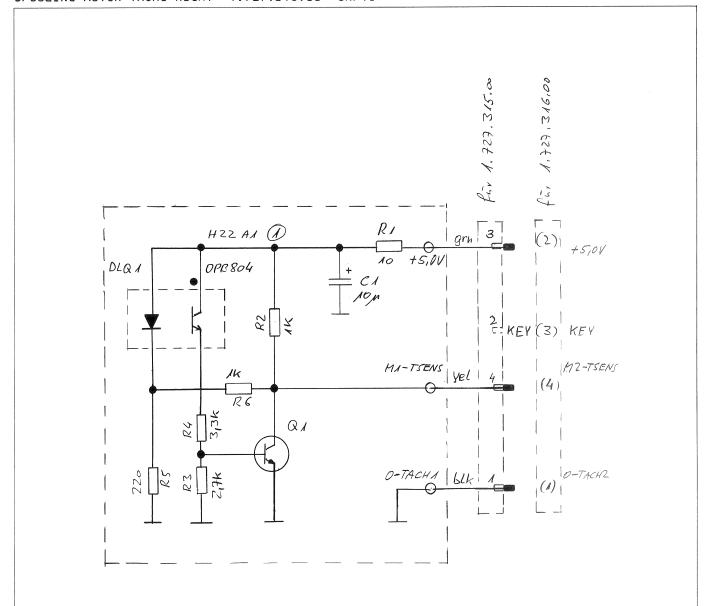
@18.8.86 WH	@13.11.87 WH. O.	. 0	0
	A 807 GR24		PAGE / OF /
STUDER	Move Sensor Boar	ol	1.727.321.00

## TAPE MOVE SENSOR 1.727.321.00 GRP24



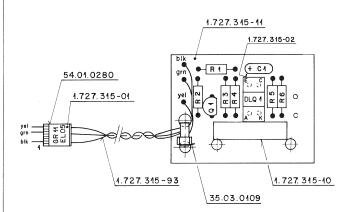
IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VAL ENT	MANUF.	I NO .	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EG	UIVALENT	MANUF
	C 1	59.26.2100	10 uF	20%, 16V, Sal		Ph							
							(01) T	ype change					
(00)	DLQl	50.04.2128	OPB804			0p							
(01)	DLJ1	50.04.2128	H22 A1			GE	291=20	lid alumini	um				
(00)	DLQ2	50.04.2128	0P8804			Оp					00-1 05-05:1:		
(01)	DLQ2	50.04.2128	HZZ A1			GE	MANUFA		=Intermetall, M =Siemens, Tf=Te		, Op=Optron, Ph=Phili	ips.	
	J1	54.01.0305	5 Pol	CIS Par.									
	MP1	1.727.321.11	1 pce	Move Sensor PCB		St							
	MP 2	1.727.321.10	1 pce	No. Label		St							
(01)	MP 3	1.727.315.02	4 pce	Spacer		St							
	Q1	50.03.0436	862378	BC5478+ BC5503	ITT • Mot • Ph	Sie+Tf							
	4 2	50.03.0436	BC237B	BC5478, BC5508	ITT.Mot.Ph	Sie,Tf							
	R 1	57.11.9272	2 . 7 kOtim	2%+ 0.25W+ MF									
	R 2	57-11-4332	3.3 kOhm	2%, 0.25W, MF									
	R 3	57-11-4102	1 kOhm	2%, 0.25W, MF									
	R 4	57.11.4221	220 Ohm	2%, 0.25W, MF									
	R * * * * * 5	57.11.4102	1 kOhm	2%, 0.25W, MF									
	R * * * * 6	57.11.4102	1 kOhm	2%, 0.25W, MF									
	R 7	57.11.4102	1 kOhm	2%, 0.25W, MF									
	R 8	57.11.4221	220 Ohm	2%, 0.25W, MF									
	R9	57.11.4272	2.7 kOhm	2%, 0.25W, MF									
	R10	57.11.4332	3.3 kOhm	2%, 0.25W, MF									
	W 1	04.01.0106		wire Bridge									
	H 2	64.01.0106		Wire Bridge									
	H3	64.01.0106		Wire Bridge									
	W4	64.01.0106		Wire Bridge									
							URIG 8	5/08/08 (	01) 87/11/13				
STU	D E R (	01) 87/11/13 Wth	MOVE SEN	ISOR BOARD	1 - 72 7 - 32 1 - 00 F	AGE 1	STU	D E R (01	) 87/11/13 Wth	MOVE SEN	SOR BOARD	1.727.321.00	PAGE 2

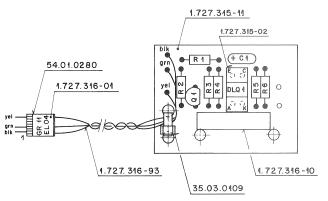
SPOOLING MOTOR TACHO LEFT 1.727.315.00 GRP17 SPOOLING MOTOR TACHO RIGHT 1.727.316.00 GRP18



1 04.11.86 WHh	13.11.87 Wth O O	0
	A 807	PAGE / OF /
STUDER	SPOOLING MOTOR TACHO LEFT	1.727,315.00
	RIGHT	1,727,316,00

SPOOLING MOTOR TACHO LEFT 1.727.315.00 GRP17 SPOOLING MOTOR TACHO RIGHT 1.727.316.00 GRP18





IND.	P05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
	C 1	59-26-2100	10 uF	20%, 16V, Sal	Ph
(00)	DLQ1	50-04-2128	OPB804		Op.
(10)	DLQ1	50.04.2128	H22 A1		GE
	MP1	1.727.315.11	1 pce	Sp.Motor Tacho PCB	St
	MP2	1.727.315.93	1 pce	L-LST Sp.Motor Tacho:left	St
	MP3	54.01.0280	1 pce	CIS Case, 4 Pol	AMP
	MP4	1.727.315.10	1 pce	No. Label	St
	MP 5	1.727.315.01	1 pce	Label, GR 11 EL 05	St
(01)	MP6	1.727.315.02	1 pce	Spacer	St
	Q 1	50.03.0436	BC2378	BC547B, BC550B	ITT,Mot,Ph,Sie,Tf
	R1	57-11-4100	10 Ohm	2%, 0.25W, MF	
	R 2	57.11.4102	1 kOhm	2%, 0.25W, MF	
	R * * * * * 3	57.11.4272	2.7 kOhm	2%, 0.25W, MF	
	R 4	57-11-4332	3.3 kOhm	2%, 0.25W, MF	
	R 5	57.11.4221	220 Ohm	2%, 0.25W, MF	
	R * * * * * 6	57.11.4102	1 kOhm	2%, 0.25W, MF	

IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C • • • • • 1	59+26+2100	10 uF	20%, 16V, Sal	Ph
(00)	DLQ1	50.04.2128	OPB804		0p
(01)	DLQ1	50.04.2128	H22 A1		GE
	MP1	1.727.315.11	1 pce	Sp.Motor Tacho PCB	St
	MP2	1.727.316.93	1 pce	L-LST Sp.Motor Tachoright	St
	MP 3	54.01.0280	1 pce	CIS Case 4 Pol	AMP
	MP 4	1.727.316.10	1 pce	No. Label	St
	MP 5	1.727.316.01	1 pce	Label, GR 11 EL 04	St
(01)	MP6	1.727.315.02	1 pce	Spacer	St
	Q1	50.03.0436	BC237B	8C547B. BC550B	ITT, Mot, Ph, Sie, Tf
	R * * * * 1	57-11-4100	10 Ohm	2%, 0.25W, MF	
	R • • • • 2	57-11-4102	1 kOhm	2%, 0.25W, MF	
	R * * * * 3	57.11.4272	2.7 kOhm	2%, 0.25W, MF	
	R 4	57.11.4332	3.3 kOhm	2%, 0.25W, MF	
	R 5	57.11.4221	220 Ohm	2%, 0.25W, MF	
	R 6	57.11.4102	1 kOhm	2%, 0.25W, MF	

MANUFACTURER: ITT=Intermetall, Mot=Motorola, Op=Optron, Ph=Philips, Sie=Siemens, Tf=Telefunken, St=Studer

ORIG 85/08/08 (01) 87/11/13

S T U D E R (01) 87/11/13 Wth SP-MOTOR TACHO BOARD-LEFT 1.727.315.00 PAGE 1

(01) Type change

Sal=Solid aluminium

MANUFACTURER: ITT=Intermetall, Mot=Motorola, Op=Optron, Ph=Philips, Sie=Siemens, Tf=Telefunken, St=Studer

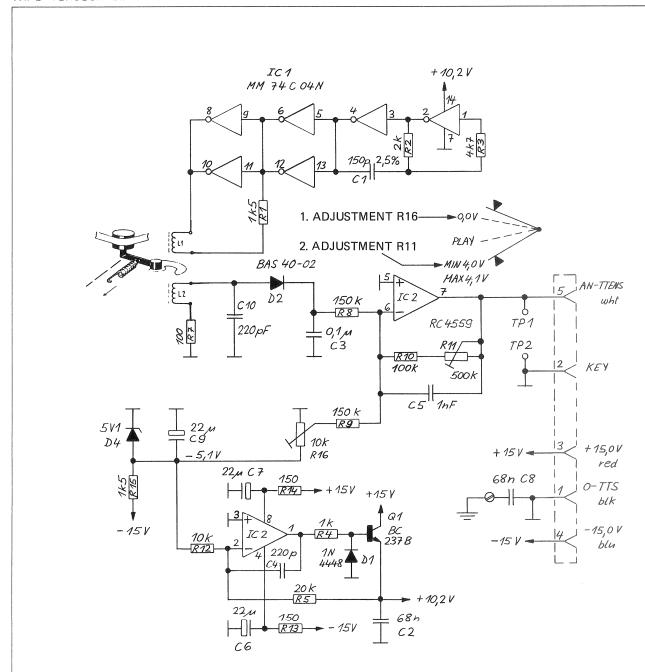
ORIG 86/08/08 (01) 87/11/13

S T U D E R (01) 87/11/13 Wth SP-MOTOR TACHO BOARD-RIGHT 1.727.316.00 PAGE 1



6/23

## TAPE TENSION SENSOR 1.727.320.00 GRP13

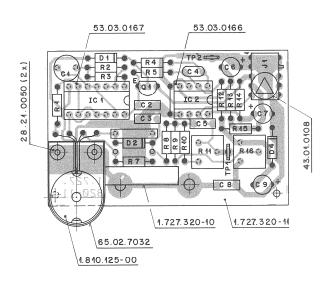


TP1=TAPE TENSON CONTROL VOLTAGE (+4V-0V) TP2=0V

@ 20.11.85 GP	① 29.10.86 GP O O	0
	A 807 GR13	PAGE 1 OF 1
STUDER	TAPE TENSION SENSOR BOARD SC	1,727.320.00

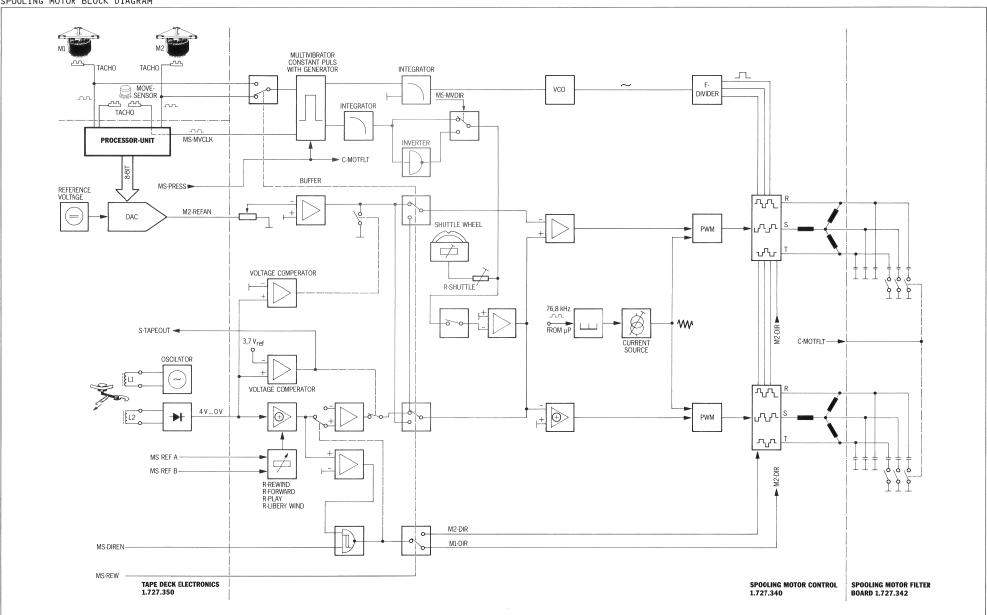


# TAPE TENSION SENSOR 1.727.320.00 GRP13



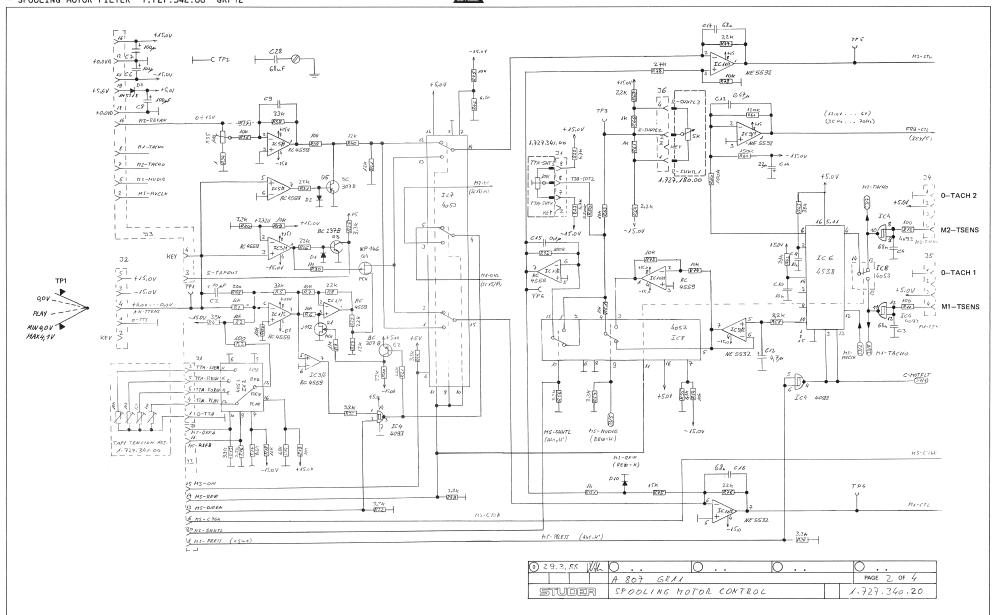
I ND .	POS = NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C 1	59-05-2151	150 pF	2.5%, 50V, PP		(00)	R = = = = 6	57-11-4472	4.7 kOhm	2%, 0.25W, MF	
	C 2	59.06.0683	68 nF	10%, 50V, PETP		(01)	R 6		not used		
	C	59.06.0104	0 - 1 uF	10%, 50V, PETP		(00)	R 7	57-11-4472	4 = 7 kOhm	2% 0.25W MF	
	C	59.32.1221	220 pF	10% 50V Cer		(01)	R 7	57-11-4101	100 Ohm	2%, 0.25W, MF	
	C5	59.06.0102	1 nF	10%, 50V, PETP		(00)	R B	57-11-4223	22 kOhm	2% 0.25H MF	
	C 6	59-22-5220	22 uF	-20% 25V E1		(01)	R 8	57.11.4154	150 kOhm	2%, 0.25W, MF	
	C 7	59.22.5220	22 uF	-20%, 25V, E1		. ,	R 9	>7-11-4154	150 kOhm	2%, 0.25W, MF	
	C 8	59.06.0683	68 nF	10%, 50V, PETP			R * * * * 10	>7-11-4104	100 KOhm	2%, 0.25W, MF	
	C *****9	59-22-5220	22 uF	-20% 25V, EL			R11	58-01-8504	500 kOhm	10%, 0.5 W. PCerm	
(01)	C10	59-11-6221	220 pF	5%, 50V, PC			R * * * * 12	57-11-4103	10 kOhm	2%, 0.25w, MF	
(01)	0	,					R 13	57-11-4151	150 Ohm	2%, 0.25W, MF	
	0 1	50.04.0125	184448	50V+ SI			R * * * * 14	57.11.4151	150 Ohm	2%, 0.25W, MF	
	D2	50-04-0127	BAS 40-02	BAT 42. 9AT 85			R 15	57-11-4152	1.5 kOhm	2%, 0.25W, MF	
(00)	D 3	50.04.0127	BAS 40-02	BAT 42+ BAT 85			R16	58.01.5103	10 kOhm	10%, 0.5 W, PCerm	
(01)	D 3		not used								
(,	04	50.04.1112	5-1 V	5%, 0.4W, Zener			TP1	54.02.0320		Plug 2.8≎0.8	
							TP 2	54-02-0320		Plug 2-8±0+8	
	IC 1	50.99.0167	MM74CO4N	CD4069+ C-MOS							
	IC ****2	50-09-0107	RC 4559	Dual Op-Amp			XIC 1	53.03.0167	14-Pole	IC-Socket	
							XIC 2	53.03.0166	8-Pole	IC-Socket	
	J 1	54.01.0305	5-Pole	CIS Socket Strip							
	L 1	1.810.125.00		Coil							
	L2	1.810.125.00		Coil							
		1001001117000									
	MP1	28.21.0050	2 pcs	tubular rivet 2.5≑17							
	MP 2	1.727.320.10	1 pcs	No. Label							
	MP3	1.727.320.11	1 pcs	TAPE TENSION SENSOR PCB							
	MP 4	43-01-0108	1 pcs	ESE Warning label							
						(01)	9.10.86 Be	tter stability	of temperatu	re	
	Q1	50.03.0436	BC237B	BC5478, BC550B							
								PETP=Polyester	<ul> <li>PP≃Polypro</li> </ul>	pylen, SI=Silicon,	
	Reseast	57.11.4152	1.5 kOhm	2% 0 0 25 W o MF			al Film				
	R Z	57-11-3202	2 kOhm	2%, 0.25W, MF		MANUF				, Op=Optron, Ph=Philips,	
	R 3	57-11-4472	4.7 kOhm	2%, 0.25W, MF			Si	e=Siemens, Tf=T	elefunken		
	R 4	57-11-4102	1 kOhm	2%, 0.25W, MF							
	R * * * * * 5	57-11-3203	20 kOhm	2%, 0.25W, MF		ORIG	36/09/23	(01) 86/10/29			
STU	DER 10	1) 86/10/29 GP	TAPE TEN	SION SENSOR BOARD 1.727.320.	OO PAGE 1	STU	D E R (0	1) 86/10/29 GP	TAPE TEN	SION SENSOR BOARD 1.727	.320.00 PAGE 2





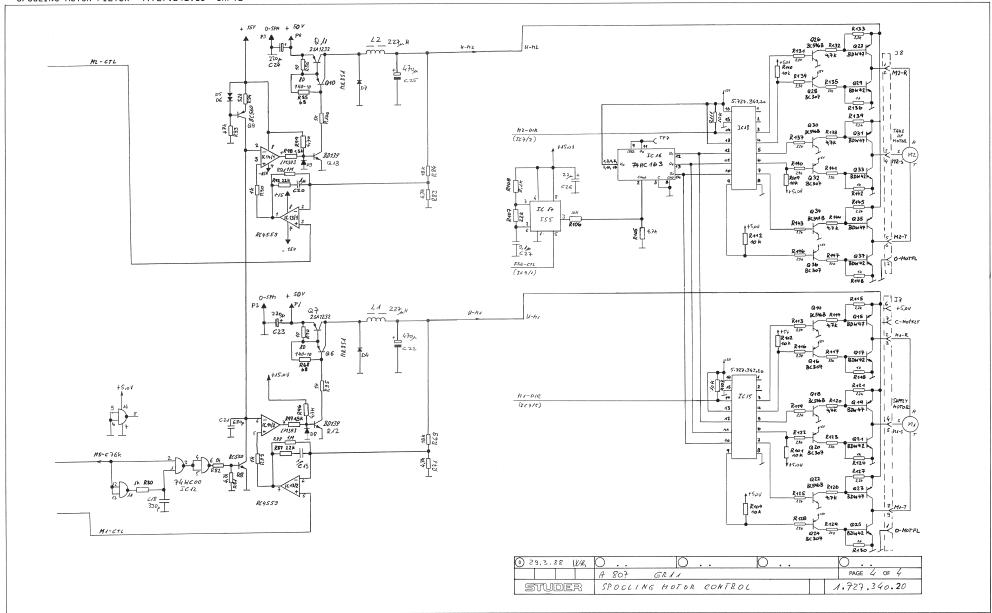
- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12



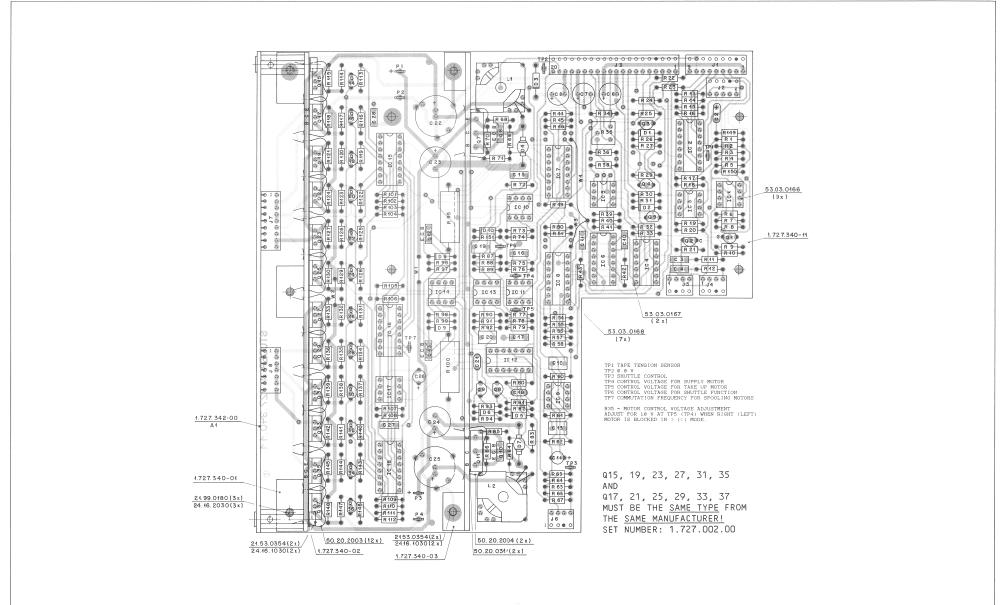


- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12









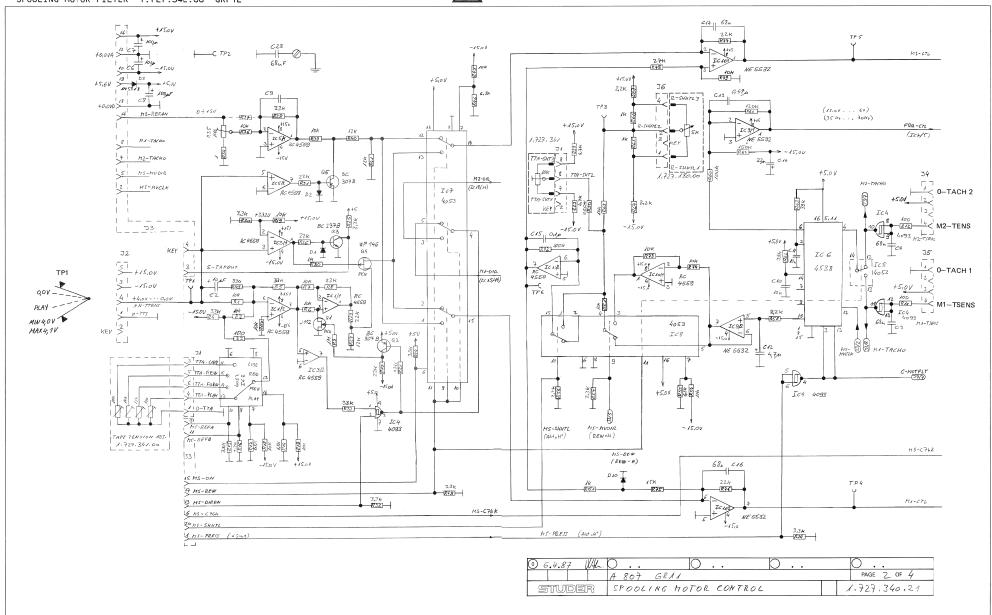


A1 1-727-342-00	VALUE SPECIFICATIONS / EQUIVALENT MANUF.  Sp. Motor Filter Board St	100. POS.NO. PAT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  920 30.31.0515 85.077 PAP PAP PAP NATURAL SPECIFICATIONS / EQUIVALENT MANUF.	100. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  803 37.11.1472 4.7 NORM 21.0.250. MF  804 37.11.1122 1.2 NORM 21.0.250. MF
C2 59-26-2100 1 C3 59-06-0683 6 C4 59-06-0683 6	not used .0 uF 20% 16 V SAL Ph .8 nF 10% 63 V PETP .8 nF 10% 63 V PETP	0 - 10	R95 57-56-102 1 kOhm 5t- 4 H- DR
C6 59-22-5101 10 C7 59-22-5101 10 C8 59-22-5101 10	not used 10 uF - 20% 25 V EL 10 uF - 20% 25 V EL 10 uF - 20% 25 V EL	G26 50-03-0491 RC546B NPN G27 50-03-0602 B0M47 PNP G28 50-03-0515 BC307 PNP G29 50-03-0717 B0M42 NPN	899 57-11.14472 4.7 kOhm 2½ 0.25% MF 8100 57-55-102 1 kOhm 5½ 4 k, 02 8101 57-11.14103 10 kOhm 2½, 0.25% MF 8102 57-11.14103 10 kOhm 2½, 0.25% MF
C10 59-06-0103 1 C11 59-06-0103 1 C12 59-06-0474 0-	not used 0 nF 10% 63 V PETP 0 nF 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 10% 64 V PETP 10% 64 V PETP 10% 64 V PETP 10% 64 V PETP 10% 65 V PETP 10% 65 V PETP 10% 65 V PETP	C30 50-03-0691 BC546B NPN (31 50-03-0802 B0M47 PNP C32 50-03-0515 BC307 PNP (32 50-03-0515 BC307 PNP	8*-103 57:11:4103 10 kOme 2½ 0.25% 56 8*-104 57:11:4103 10 kOme 2½ 0.25% 56 8*-1105 57:11:4172 47 kOme 2½ 0.25% 86 8*-1105 57:11:4172 10 kOme 2½ 0.25% 86
C9 (01 39-06-0103 1 1	0 of 10.5450 V PETP 0 of 10.5450 V PETP 7 OF 10.5450 V PETP 7 OF 10.550 V PETP 10.550		\$ 1.0
C18 59-34-4331 33 C19 59-06-0105 C20 59-06-0105 C21 59-32-1681 68	8 nF 10% 63 V PLTP 0 pF 5% 63 V PETP 1 uF 10% 63 V PETP 1 uF 10% 63 V PETP 0 pF 10% 50 V PETP	5	0 112 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
C18 59.34.4331 33 C19 59.06.0105 C20 59.06.0105 C22 59.21.0471 47 C23 59.22.0221 22 C24 59.22.0221 22 C25 59.22.0221 22 C25 59.22.0221 22 C25 59.22.0222 2 C26 59.22.0000000000000000000000000000000000	0 of	85 37.11.4333 33 KOhma Za, 0.2594 MF 85 37.11.4303 10 KOhma Za, 0.2594 MF k7 57.11.4303 10 KOhma Za, 0.2594 MF R8 57.11.4223 22 KOhma Za, 0.2594 MF	
C25 59.22.8471 47 C26 59.22.5220 2 C27 59.06.5104 10 C28 59.06.0683 6	2 UF -20% 25 V EL 0 nF 5% 63 V PETP 8 nF 10% 63 V PETP	\$\frac{1}{2} \frac{1}{2} \frac{1}{1} \frac{1}{2} \frac	### 101   \$7.11.103   10 kg/m
D1 50-04-0125 1N D2 50-04-0125 1N D3 50-04-0512 1N D4 50-04-0509 M D5 50-04-0125 1N D5 50-04-0125 1N	4448 Diode 50 V 51 918 Diode 30 V 31 918 Diode 30 V 51 918 Diode 30 V 5000 8851 Diode 50 V 51 4448 Diode 50 V 51	R13 57-11-4103 10 k0hm 22, 0.25M MF R14 57-11-4692 6-8 k0hm 22, 0.25M MF R15 57-11-4332 3-3 k0hm 22, 0.25M MF R15 57-11-4332 3-3 k0hm 22, 0.25M MF	8120
	94468 Diode 50 V SI POOLING MOTOR CTL. BOARD © 1.727.340.20 PAGE 1	K 7 57.11.4692 6.8 KDm 24. 0.2594, HF R 8 57.11.4693 10 KDm 24. 0.2594, HF S.T.U.D.E.R. (80) 86/18/14 Wth SPOOLING HOTOR CTL. 80ARD # 1.727.340-20 PAGE 6	6++129 37-111-331 330 Mm 21, 0-25% MF 6++129 37-111-331 330 Mm 21, 0-25% MF 5 T U D E R (00) 86/10/14 Wth SPOOLING WORD CTL. 80/MO = 1-727-340-20 PAGE 7
• POS•NO• PART NO•	VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IAO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT HAMUF.	INO. PDS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
07 50-04-0509 M 08 50-04-0125 IN 09 50-04-0125 IN 010 50-04-0125 IN	R851 Diode 100 V S1 14448 Diode 50 V S1 14448 Diode 50 V S1 4448 Diode 50 V S1	8 19 7-11.4403 10 LODS 28 0.2594 MF 8 20 7-11.4403 33 LODE 28 0.2594 MF 8 22 37-11.4472 4-7 LODE 28 0.2594 MF 8 22 37-11.4472 4-7 LODE 28 0.2594 MF 8 25 37-11.4572 3-3 LODE 28 0.2594 MF 8 25 37-11.4572 3-3 LODE 28 0.2594 MF 8 25 37-11.4572 3-3 LODE 28 0.2594 MF 8 25 37-11.4572 3-3 LODE 28 0.2594 MF	8130
1C1 50-09-0107 CC4 1C2 50-07-0924 4C 1C3 50-09-0107 RC4 1C4 50-07-0008 40	559 Dual Op. Amp. 14052 Dual 4-Ch Analog Switch, CMOS 559 Dual Op. Amp.	8   0 371.14433   10 100m 24 0.2594 mm 6   1 571.14432   22 100m 24 0.2594 mm 6   2 571.14423   22 100m 24 0.2594 mm 6   2 571.14424   2 100m 24 0.2594 mm 6   3 771.14432   3 100m 24 0.2594 mm 6   4 771.14432   3 100m 24 0.2594 mm 6   6 771.14423   22 100m 24 0.2594 mm 6   6 771.14423   22 100m 24 0.2594 mm	8***134
105 50-09-0107 106 50-07-0538 45 106 50-07-0538 45 108 50-07-0015 MC	V3 Quad Op. Amp. 38 Monoflop CMOS 14053 Triple 3-Ch Analog Switch, CMOS 14053 Triple 3-Ch Analog Switch, CMOS	R27 57.11.4123 12 k0hm 245 02.25% RF R26 57.11.4213 12 k0hm 245 02.5% RF R30 57.11.4213 12 k0hm 245 02.5% RF R31 57.11.4213 12 k0hm 245 02.25% RF R31 57.11.4223 12 k0hm 245 02.25% RF	8138 37.11.4472 47 KORM 21: 0.2594 MF 8139 37.11.7422 22 KORM 21: 0.2594 MF 8140 37.11.4392 33 KORM 21: 0.2594 MF 8140 37.11.4392 33 KORM 21: 0.2594 MF 8142 37.11.1102 1 KORM 21: 0.2594 MF
	0.000	860 37.11.4223 22 LOBE not used used used used used used used used	R163 57:11:1332 3-3 KUNN 21: 0:2394 mF R163 57:11:1332 3-3 KUNN 21: 0:2394 mF R163 57:11:1722 47:24 KUNN 21: 0:2394 mF
IC13 50.09.0107 RC4 IC14 50.05.0283 LM IC15 50.05.0206 IC16 50.17.1163 74	1559   Dual Op. Amp.   393   Dual Comparator   5p. Motor Commutation Ctl. 1-727-343-20 St   HC 163   HCHUS   1555 CN   Timer   1565 CN	836 27.1.14103 10 kGhm 2% 0.23% MF  437 27.1.14103 10 kGhm 20 0.23% MF  839 37.1.14103 10 kGhm 2% 0.23% MF  839 37.1.14103 10 kGhm 2% 0.23% MF  839 37.1.14103 10 kGhm 2% 0.23% MF	8. 1160 37.111.1922 3.29 KORm 21. 0.2504 MF  6. 1161 37.111.1102 30 KORM 21. 0.2504 MF  6. 1161 37.111.1103 30 KORM 21. 0.2504 MF  6. 1161 37.111.1103 310 KORM 21. 0.2504 MF  6. 1161 37.111.1103 11 KORM 21. 0.2504 MF
1C16 50.17.1163 74 1C17 50.05.0158 NE 1C18 50.05.0206  J1 54.01.0217 9	Sp. Motor Commutation Ctl. 1-727-343-20 St -PDLE CIS Socket Stein	6)7 6)8 6	
J1 54.01.0217 9 J2 54.01.0288 5 J3 54.01.0288 5 J3 54.01.0226 20 J4 54.01.0241 4 J5 54.01.0241 4 J5 54.01.0241 4 J5 54.01.0241 9 J8 54.01.0217 9	-POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP -POLE CLS Socket Strip ARP	R49 51.1.403 10 K0ha 24 0-294 NF R49 51.1.403 10 K0ha 25 0-294 NF R49 57.11.402 6-8 K0ha 25 0-294 NF	TP1 \$4.02.0320 Test Point AMP  TP2 \$4.02.0320 Test Point AMP  TP3 \$4.02.0320 Test Point AMP  TP4 \$4.02.0320 Test Point AMP  TP5 \$4.02.0320 Test Point AMP  TP5 \$4.02.0320 Test Point AMP  TP6 \$4.02.0320 Test Point AMP  TP6 \$4.02.0320 Test Point AMP
	POLE	\$ 1.4423   12 toler	M1 64.01.0106 Wire Bridge M2 64.01.0106 Wire Bridge M3 1.010.0106 Wire Bridge
MP1 1-727-340-11	1 pce Spooling Motor Ctl. PCB St	8 20 37.11.4023 22 kBm 24 b-294 MF 8 20 37.11.4023 22 kBm 24 b-294 MF 8 20 37.11.4023 12 kBm 24 b-294 MF 8 20 37.11.4023 22 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 21 37.11.4023 23 kBm 24 b-294 MF 8 21 37.11.4023 23 kBm 24 b-294 MF 8 21 37.11.4023 23 kBm 24 b-294 MF 8 21 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 10 kBm 24 b-294 MF 8 20 37.11.4023 10 kBm 24 b-294 MF 8 20 37.11.4023 10 kBm 24 b-294 MF 8 20 37.11.4023 10 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 29 kBm 24 b-294 MF 8 20 37.11.4023 29 kBm 24 b-294 MF 8 20 37.11.4023 20 kBm 24 b-294 MF 8 20 37.11.4023 20 kBm 24 b-294 MF 8 20 37.11.4023 20 kBm 24 b-294 MF 8 20 37.11.4023 20 kBm 24 b-294 MF 8 20 37.11.4023 20 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 23 kBm 24 b-294 MF 8 20 37.11.4023 33 kBm 24 kB	XIC1 53.03.01656 8 Pole IC Socket
0 0 E K (00) 36/10/14 MEN 5	POOLING MOTOR CTL. BOARD ♥ 1.727.340.20 PAGE 2	S T U D E ₹ (00) 86/16/14 Mth SPUOLING MOTOR CTL. 80ARD ⇒ 1.727-340-20 PAGE S	S T U D E R (00) 86/10//4 Wth SPOOLING MOTOR CTL. 80ARD ◆ 1.727.340.20 PAGE 8
. POS.NO. PART NG.	VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND- POS-NO- PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
MP2 1-727-340-01 MP3 1-727-340-02 MP4 50-20-2003 1 MP5 1-727-340-03	1 pce	856 57.11.4332 3.3 kOhn 25. 0.25W MF 857 57.11.4332 3.3 kOhn 27. 0.25W MF 859 57.11.4332 3.3 kOhn 27. 0.25W MF 859 57.11.432 8 kOhn 27. 0.25W MF	#112 33-30-186# 16 Fole 15 Socket #113 33-30-186# Fole 15 Socket #114 33-30-187# To Fole 15 Socket #114 33-30-187# To Fole 15 Socket #114 33-30-187# To Fole 15 Socket
HP6 50-20-0311 HP7 50-20-2004 HP8 21-99-0180 HP9 21-53-0354	Dec   Heatsink   St	R60 57.11.4104 100 K0hm 22. 0.2594 MF R61 57.11.4124 120 K0hm 22. 0.2594 MF R62 57.11.4154 50 K0hm 22. 0.2594 MF R63 57.11.4154 50 K0hm 22. 0.2594 MF	XIC7 53-03-0168 16 Pole It Socket
MP10 24-16-1030 MP11 24-16-2030 MP12 1-727-340-10 MP13 43-01-0108	4 pcs	664 57.11.4222 2-2 kOhm 22.0 0.25% HF 865 57.11.422 1 kOhm 23.0 0.25% HF 867 37.11.422 2 kOhm 23.0 0.25% HF 867 37.11.4222 2 k2 kOhm 23.0 0.25% HF 867 37.11.4222 8.2 kOhm 23.0 0.25% HF	
P1 54-02-0320 P2 54-02-0320 P3 54-02-0320 P4 54-02-0320	PLUG 2-8 ° 0-8 AMP PLUG 2-8 ° 0-8 AMP PLUG 2-8 ° 0-8 AMP PLUG 2-8 ° 0-8 AMP	808 37:11.4080 68 Ühm 2% 0:25% HF 869 37:11.4183 18 Kühm 2% 0:25% HF 870 37:11.4100 10 Ühm 2% 0:25% HF 871 37:11.4107 4.77 Kühm 2% 0:25% HF	10:113 53:05:1106
		**************************************	ACTION AND AND AND AND AND AND AND AND AND AN
		R77 57.11.4223 72 K0hm 23. 0.259. WF R78 57.11.4273 72 K0hm 23. 0.259. WF R79 57.11.4103 10 K0hm 23. 0.259. MF R00 57.11.4102 1 K0hm 23. 0.259. MF	
06 50.03.0518 25 08 50.03.0436 30 09 50.03.0436 30 010 50.03.0452 80 011 50.03.0518 25 012 50.03.0518 25 012 50.03.0518 80	140-10 PMP 110-10 PMP 110-10 PMP 110-10 PMP 110-10 PMP 1122 PMP 1139-10 NPM	R61 57-11.4-672 4-7 KOhm 23: 0.25% MF R62 57-11.4-6102 1 KOhm 23: 0.25% MF R63 57-11.4-672 4-7 KOhm 23: 0.25% MF R64 57-11.4-6103 16 KOhm 23: 0.25% MF	
C12 50-03-0451 8D C13 50-03-0451 8D C14 50-03-0491 BC C15 50-03-0802 8D C16 50-03-0515 BC	139-10 NPN 139-10 NPN 5468 NPN H47 PMP 307 PMP	R04 37.11.4103 18 KDHn 22. 0.2594 MF R05 37.11.4800 60 Eng 22. 0.2594 MF R07 37.11.4223 22 KDHn 22. 0.2594 MF R07 37.11.4223 22 KDHn 22. 0.2594 MF R08 57.11.4010 1 MDm 22. 0.2594 MF	Ecologically act of the control of t
G17 50.03.0777 80 V18 50.03.0491 8C G19 50.03.0802 8D			ORIG 85/19/14
D E R (00) 86/10/14 Wth S	POOLING MOTOR CTL. BOARD * 1.727.340.20 PAGE 3	STUDER (00) 86/10/14 With SPOOLING MOTOR CTL. BOARD • 1-727-340-20 PAGE 6	S T U D € R (00) 06/13/14 Hth SPODLING MOTGR CTL. BOARD + 1.727.240.20 PAGE 9

STUDER A807 6/31

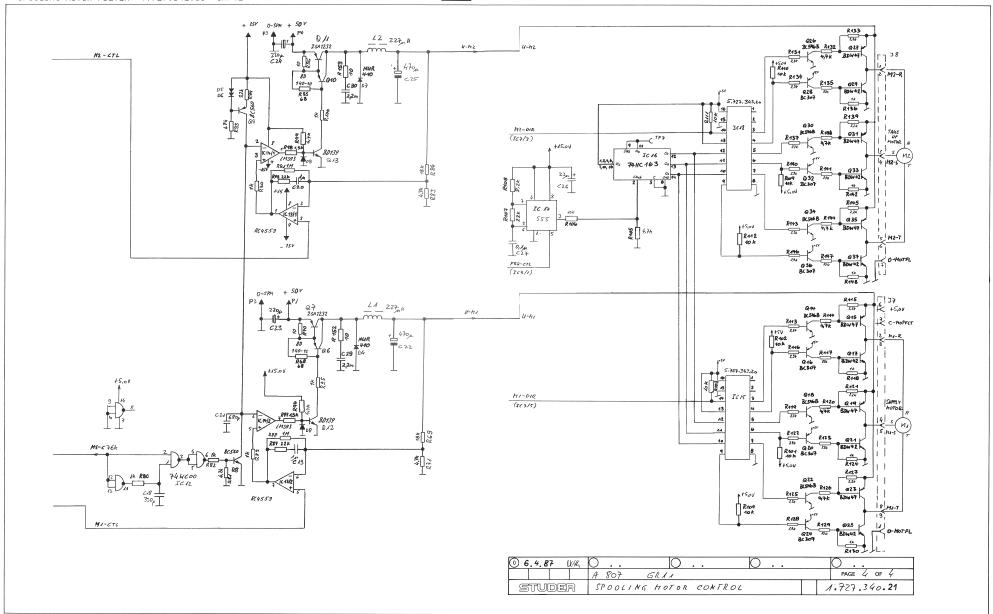
- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12



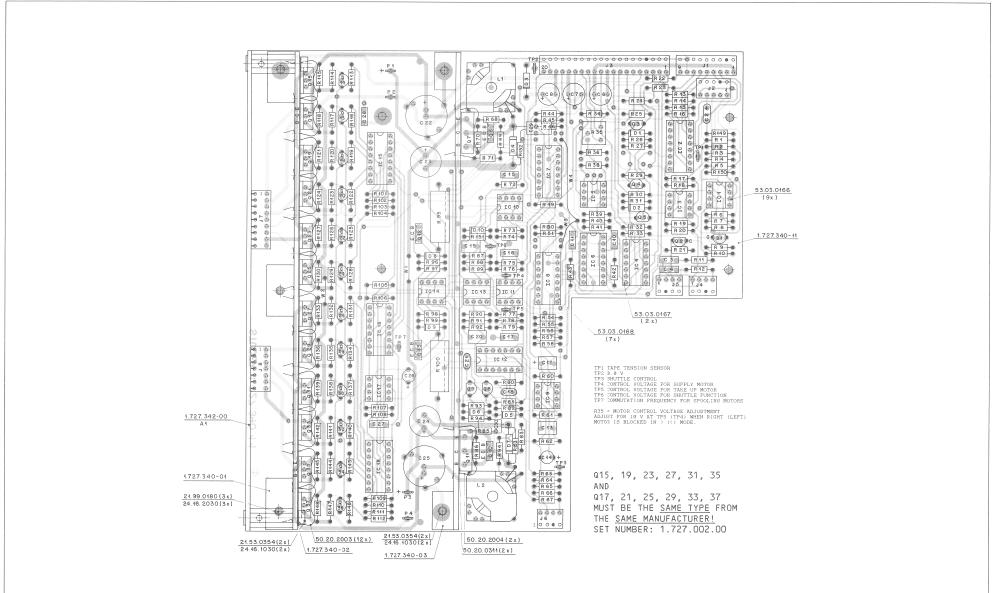


- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12





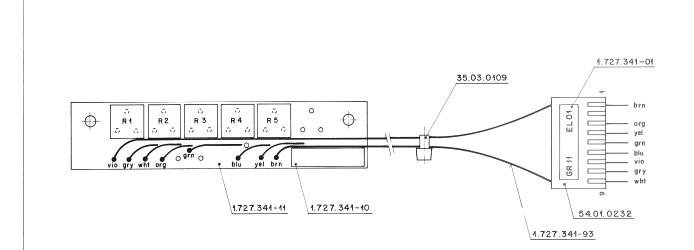






_ING MOTOR CONTRO	L 1.727.340.21 GRP11			
POS-AO- PART NO. VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.	ING. PGS.NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT M
A 1.727.342.00	5p. Weter Filter Board St.  NOT 15 10 V 501, Ph.  101 0 V 901, Ph.  102 0 V 901, Ph.  103 0 V 101, Ph.  104 0 V 101, Ph.  105 0 V 101, Ph.  105 0 V 101, Ph.  105 0 V 101, Ph.  106 0 V 901, Ph.  107 0 V 901, Ph.  108 0 V 901, Ph.  109 0 V 901, Ph.  100 0 V 901, Ph.		800 7-11.4100 1 000m 21.0-250.m m 801 27-11.4102 1 000m 21.0-250.m m 801 27-11.4102 1 000m 21.0-250.m m 901 27-11.4102	Note 1: 015, 19, 23, 27, 31 and 35 017, 21, 25, 29, 33 and 37 note the heave type from the same manufacturer.  Lt-Electrolytic, PETP-Polymater, PPP-Polympoplens 15:511con , MANUPACTURES: AMP-AMP, Physhilips, 10:510007
C21 59-32-1-681 800 pr C22 59-22-8-621 220 ur C23 59-22-8-221 220 ur C25 59-22-8-221 220 ur C25 59-22-8-221 220 ur C26 59-22-2220 22 ur C27 59-22-220 22 ur C27 59-22-220 22 ur C28 59-22-220 30 nr C29 59-22-222 2-2 nr C30 59-52-2222 2-2 nr	101 50 V CER -201 60 V EL -201 60 V EL -201 60 V EL -201 60 V EL -201 60 V EL -201 20 V EFFP 2551 160 V PP 2552 160 V PP		\$\begin{array}{cccccccccccccccccccccccccccccccccccc	
D1 50.04.0125 IN4448 D2 50.04.0125 IN448 D3 50.04.0512 IN5818 D4 50.04.0512 IN5818 D4 50.04.0521 MURRIO D E R (01) 88/01/11 Web SPOOLIP	Diede 50 V 51 010de 90 V 51 010de 90 V 5thottky Diede 100 V 5thottky Diede 100 V 51 G MOTOR CTL. SOARO 1+727+340-21 PAGE 1	R	#114 37-11-4072 4-7 KORB 21: 0-2594, MF # # # # # # # # # # # # # # # # # #	ORIG 87/04/04 (01) 88/01/11 S T U D E R (01) 88/01/11 Wth SPOOLING MOTOR CTL. 80ARD 1.727.340.2] PAI
POS-40- PART NO. VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUS.	ING. POS-NO- PART NG. VALUE SPICIFICATIONS / COULVALENT MANUF.	
0	State   50 v   51	R		
16.1.1 300.000.000	C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP C15 Socket Strip APP MP-C01L MP-C01L	A	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	
OS-NO- PART NO- VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PAIT NO. VALUE SPECIFICATIONS / COUIVALENT MANUF.	INO. POS.HO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
	Spooling Notor Ctl- PCB St	R\$3 97:11-0393 39 KOHH 22a 0.25W, HF R\$4 37:11-0393 39 KOHH 22a 0.25W, HF R\$5 37:11-0323 33 KOHH 22a 0.25W, HF R\$6 37:11-0326 6-B KOHN 22a 0.25W, HF R\$6 37:11-0326 6-B KOHN 22a 0.25W, HF R\$6 37:11-0326 6-B KOHN 22a 0.25W, HF R\$6 37:11-0326 6-B KOHN 22a 0.25W, HF R\$7 0.25W,	19  34.02.6220	
\$4,02,030  \$4,030  \$4,0	PLUE 2-8 0.6 AMP PLUE 2-8 0.6 AMP PLUE 2-8 0.6 AMP PLUE 2-8 0.8 AMP PLUE 2-8 0.8 AMP PLUE 2-8 0.8 AMP PLUE 2-8 0.8 AMP PLUE 2-8 0.8 AMP PLUE 2-8 0.8 AMP PMP PMP PMP PMP SC\$478. 95500 PMP PMP SC\$478. 95500 PMP PMP SC\$478. 95500 PMP PMP PMP	A		

## TAPE TENSION ADJUST 1.727.341.00 GRP14



IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP • • • • 1	1.727.341.11	1 pce	Tape Tension Adj. PCB	St
	MP • • • 2	1.727.341.93	1 pce	L-LST Tape Tension Adj.	St
	MP3	54.01.0232	1 pce	CIS Case, 9 Pol	
	MP 4	1.727.341.10	1 pce	No. label	St
	R * * * * 1	58.01.8103	10 kOhm	Potmeter PMG	
	R 2	58.01.8103	10 kOhm	Potmeter PMG	
	R 3	58.01.8103	10 k0hm	Potmeter PMG	
	R 4	58.01.8103	10 k0hm	Potmeter PMG	
	R 5	58.01.8103	10 kOhm	Potmeter PMG	
	R • • • • 6			not used	

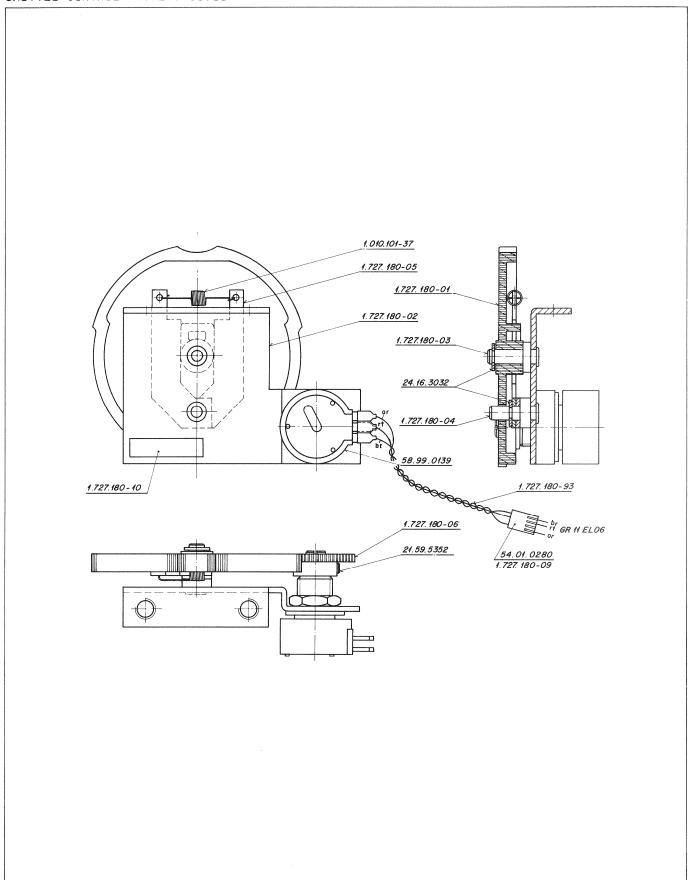
MANUFACTURER: St=Studer

ORIG 86/08/08

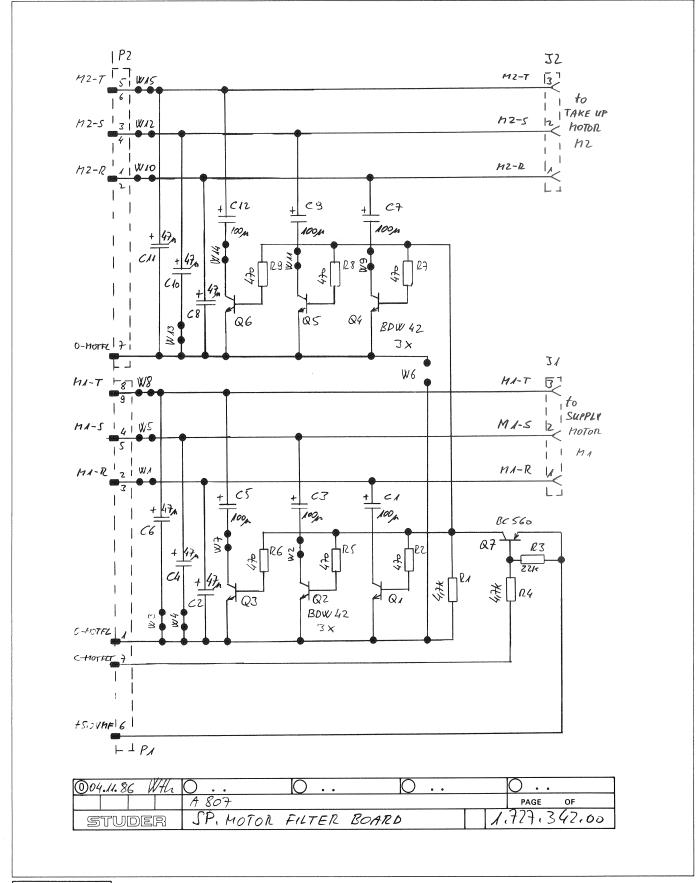
S T U D E R (00) 86/08/08 Wth TAPE TENSION ADJ. BDARD

1.727.341.00 PAGE 1

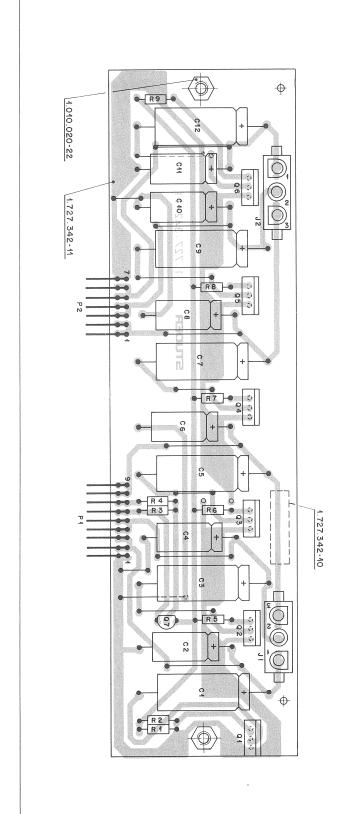
SHUTTLE CONTROL 1.727.180.00



## SPOOLING MOTOR FILTER 1.727.342.00 GRP12



# SPOOLING MOTOR FILTER 1.727.342.00 GRP12



I ND .	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C * * * * 1	59.25.6101	100 uF	-20%, 63 V EL	
	C * * * * * Z	59.25.6470	47 UF	-20%+ 63 V EL	
	C * * * * * 3	59.25.6101	100 uF	-20%, 63 V EL	
	C * * * * * 4	59.25.6470	47 uF	-20%, 63 V EL	
	C 5	59.25.6101	100 uF	-20%, 63 V EL	
	C * * * * * 6	59.25.6470	47 uF	-20%, 63 V EL -20%, 63 V EL	
	C * * * * * 7	59.25.6101	100 uF	-20%, 63 V EL	
	C * * * * * 8	59.25.6470	47 uF	-20%, 63 V EL	
	C 9	59.25.6101	100 uF	-20%, 63 V EL -20%, 63 V EL -20%, 63 V EL	
	C10	59.25.6470	47 uF	-20%, 63 V EL	
	C11	59.25.6470	47 UF	-20%, 63 V EL	
	C12	59.25.6101	100 uF	-20%, 63 V EL	
	J1	54.25.0003	3-Po1	Power Connector	AMP
	J * * * * * 2	54.25.0003	3-Po1	Power Connector	AMP
	MP 1	1-727-342-11	1 pcs	SP. MOTOR FILTER PCB.	St
	MP2	1.727.342.10	1 pcs	No. label	St
	MP3	1-010-020-22	2 pcs	Rivetnut 1=15	St
	P * * * * 1	54-01-0220	9 Pol	CIS Pin Strip	
	P 2	54.01.0223	7 Pol	CIS Pin Strip	
	01	50.03.0777	BDW 42	TU 220 NPN	
	0 2	50.03.0777	BDW 42	TU 220 NPN	
	4 3	50.03.0777	BDW 42	TO 220 NPN	
	U 4	50.03.0777	BDW 42	TO 220 NPN	
	U5	50.03.0777	BDW 42	TO 220 NPN	
	Q 6	50.03.0777	BDW 42	TU 220 NPN	
	Q7	50.03.0515	BC307B	BC251B, 8C560B PNP	
	R 1	57.11.4472	4.7 kDhm	2% 0 25W MF	
	R 2	57-11-4471	470 Ohm	2% 0.25W MF	
	R 3	57.11.4223		2%, 0.25W, MF	
	R 4	57-11-4472	4.7 kOhm	2% 0.25W MF	
	Reseas	57.11.4471	470 Ohm	2% 0.25W MF	
	R 6	57-11-4471	470 Ohm	2% 0.25W MF	
		21-11-4411	011111	red cersus in	
STU	D E R (0	0) 86/08/08 Wth	SP. MOTOR	FILTER BOARD 1.727.342.00	PAGE 1

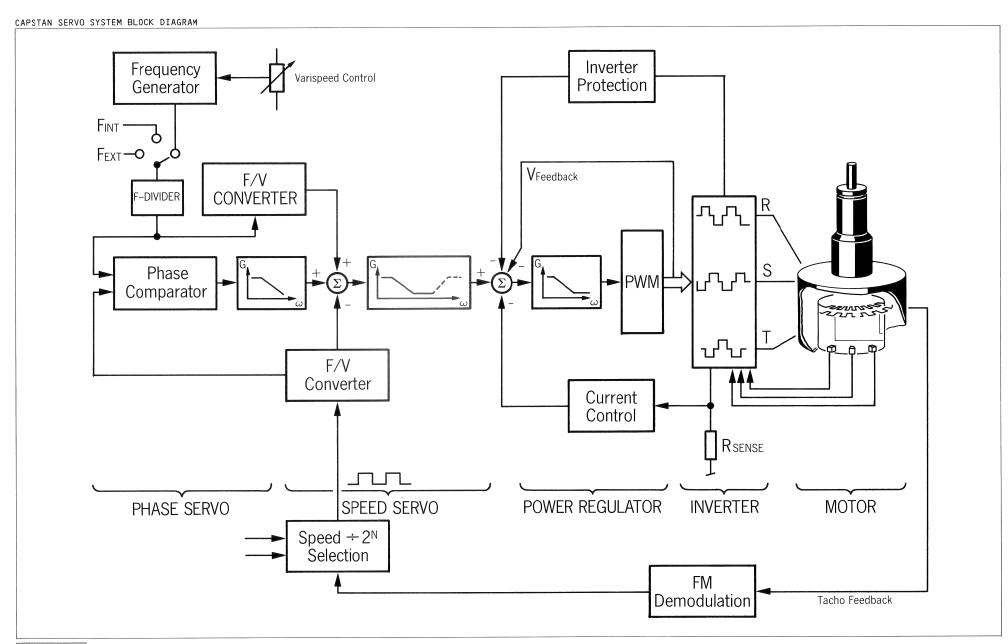
IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R 7 R 8	57.11.4471 57.11.4471	470 Ohm 470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	R 9	>7-11-4471	470 Ohm	2%, 0.25W, MF	

EL=Electrolytic, MF=Metal Film MANUFACTURER: AMP=AMP, St=STUDER

ORIG 86/08/08

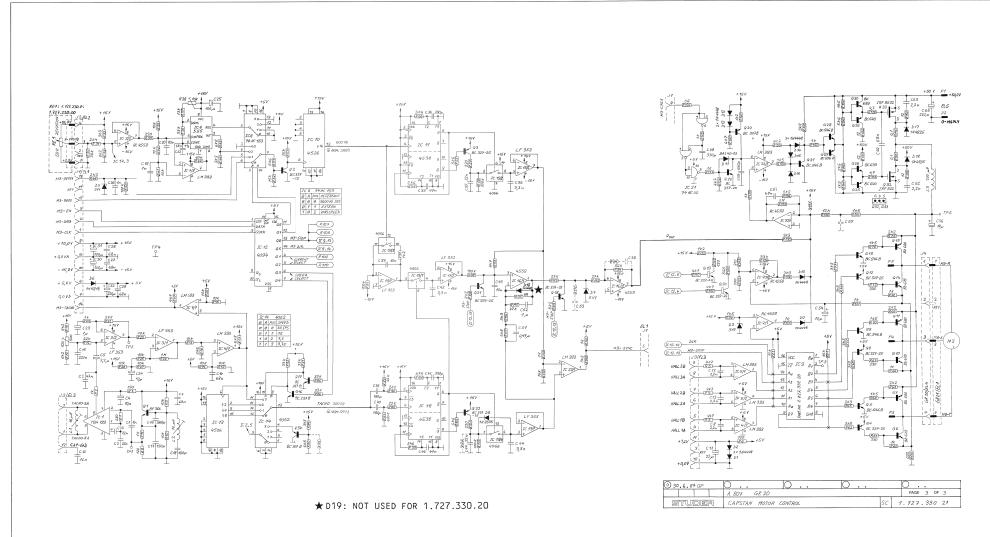
S T U D E R (00) 86/08/08 With SP. MOTOR FILTER BOARD

1.727.342.00 PAGE 2

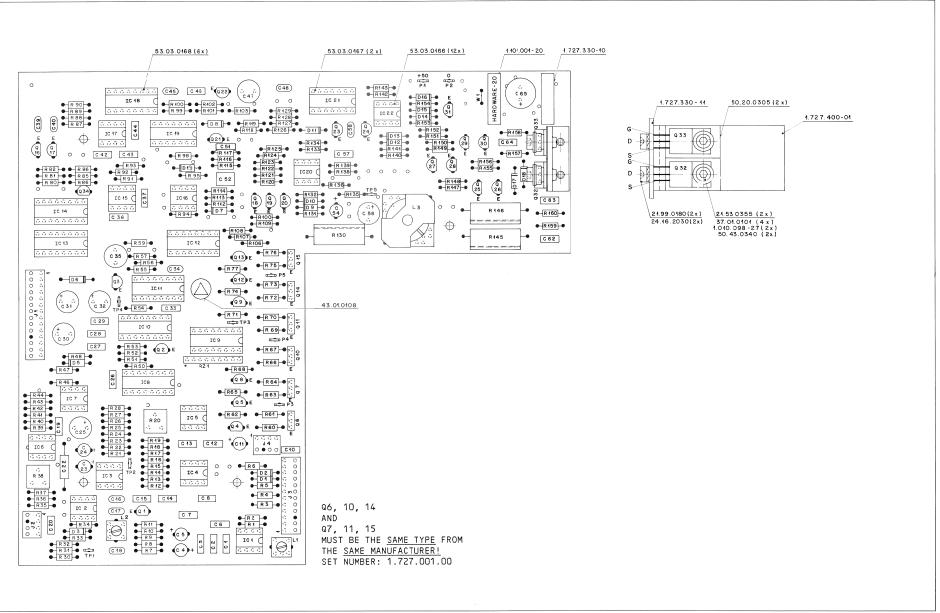


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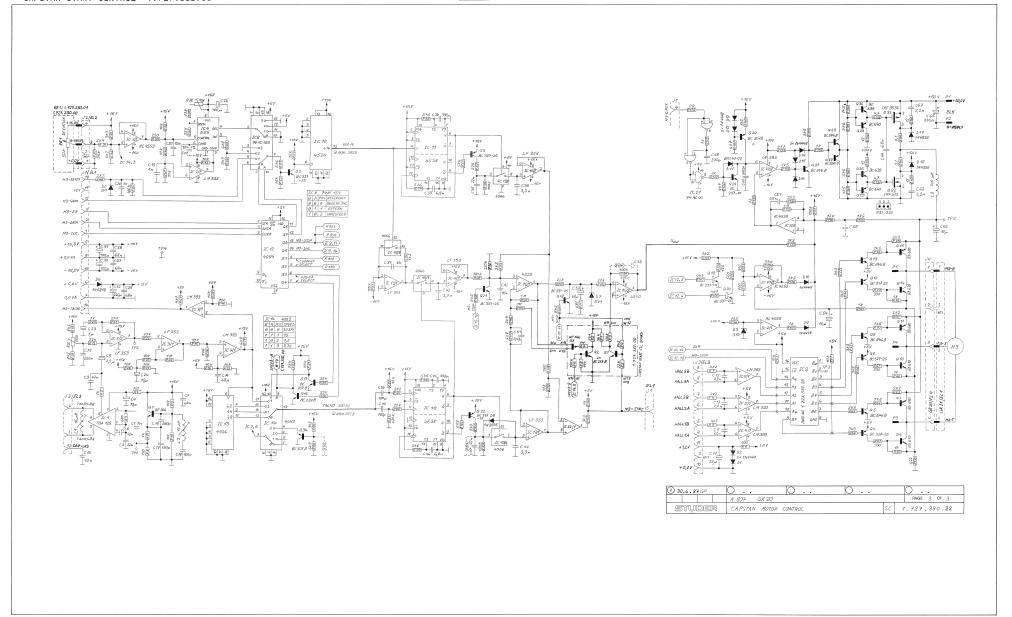


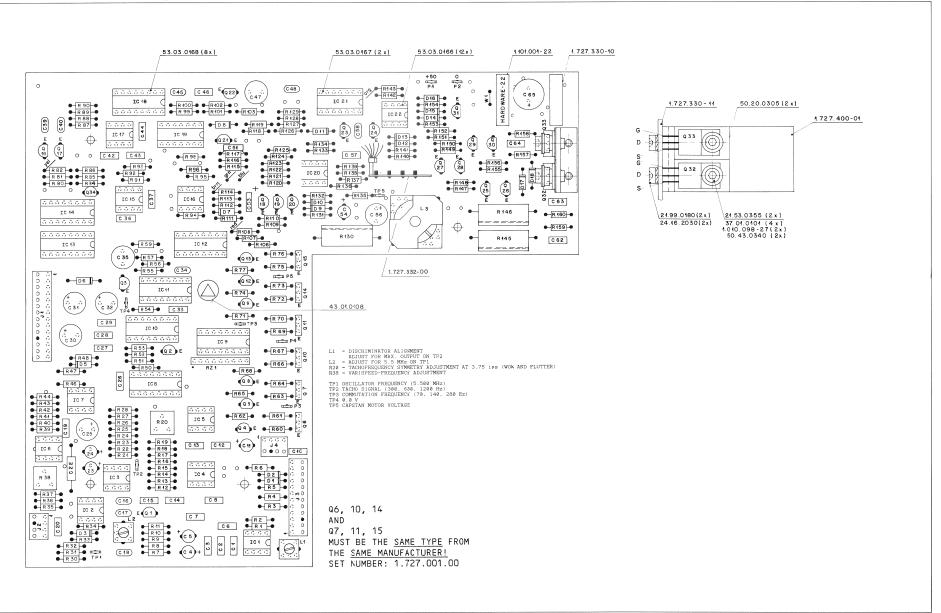
ND+	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO+	PART NO.	VALUE 4 pcs	SPECIFICATIONS / EQUIVALENT MA  Disc spring 03-2/8-0 ° 0-3
	C 2 C 3 C 4 C 5 C 6 C 7	59.06.0102 59.06.0223 59.06.0473 59.22.6100 59.22.8229 59.06.0223 59.06.0683	1 nF 22 nF 47 nF 10 uF 2•2 uF 22 nF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 35 V EL -20% 50 V EL 10% 63 V PETP 10% 63 V PETP			MP7 MP8 MP9 MP1U MP11	50.20.0404 1.010.098.27 50.20.0305 1.(2(0.330.10 1.727.331.01 43.01.0108	2 pcs 2 pcs 2 pcs 1 pce 1 pce 1 pce	Uisc Spring Uisc/com/ 0.03 / 0.3 / 0
	C 10 C 11 C 12 C 13 C 14	59.06.0222 59.06.0103 59.22.5220 59.06.0222 59.06.0222	2.2 nF 10 nF 22 uF 2.2 nF 2.2 nF 68 nF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP		(01)	P1 P2 P3 P4 P5	1-101-001-20 54-02-0320 54-02-0320 54-02-0320 54-02-0320	1 pce 1 Pole 1 Pole 1 Pole 1 Pole	Hardware label —20 Tab Tab Tab Tab Tab Tab
	C15 C16 C17 C18 C20 C20 C22 C23 C24 C25 C26 C27 C28 C29 C31 C31 C32 C33	59-06-0224 59-34-45561 59-34-4101 59-06-0103 59-06-0103 59-12-7182 59-22-0100 59-22-0102 59-22-0102 59-06-0083 59-06-0683 59-06-0683 59-06-0683 59-06-0683 59-06-0683 59-06-0683 59-06-0683 59-06-0683 59-06-073 59-22-5101 59-22-5101	220 nF 560 pF 150 pF 1 nF 1 nF 10 nF 1.8 nF 10 uF 1 uF 10 uF 68 nF 68 nF 68 nF 100 uF 100 uF 17 nF 390 pF	10X 63 V PETP 5X 63 V CER 5X 63 V CER 5X 63 V CER 10X 63 V PETP 10X 63 V PETP 11X 63 V PS -20X 55 V EL -20X 25 V EL 10X 63 V PETP 10X 63 V PETP 10X 63 V PETP 10X 63 V PETP 10X 63 V PETP 10X 63 V PETP 10X 63 V PETP -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL -20X 25 V EL			Q	54.02.0320 50.03.03140 50.03.0340 50.03.0351 50.03.0351 50.03.0351 50.03.0749 50.03.0749 50.03.0749 50.03.0749 50.03.0749 50.03.0799 50.03.0799 50.03.0799 50.03.0799 50.03.0799	1 Pole BF 366 BC 337-25 BC 327-25 BC 327-25 BC 546 B BD 679 BD 680 BC 327-25 BC 546 B BD 679 BD 680 BC 327-25 BC 546 B BD 679 BD 680 BC 327-25 BC 546 B BD 679 BD 680 BC 237 B	NPN NPN PNP PNP PNP PNP Darl. Darl. PNP See note 1) Ph. PNP NPN Darl. PNP Darl. PNP Darl. PNP Darl. PNP Darl. PNP See note 1) Ph. PNP Darl. PNP See note 1) Ph. RC 547 B BC 550 B NPN
	C 35 C 36 C 37 C 39 C 40	59.05.1223 59.06.0332 59.06.5103 59.34.4181 59.34.4181	22 nF 3•3 nF 10 nF 180 pF 180 pF	1% 63 V PP 10% 63 V PETP 5% 63 V PETP 5% 63 V CER 5% 63 V CER MOTOR CONTROL 1-727-330-21	PAGE 1	STU	Q18 Q19 Q20 Q21 Q22 D E R	50.03.0340 50.03.0340 50.03.0340 50.03.0340 50.03.0351	BC 337-25 BC 337-25 BC 337-25 BC 337-25 BC 327-25	MPN MPN MPN MPN PNP MOTOR CONTROL 1-727-330-21 PAGE
ND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I NO •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MA
01)	C 42 C 43 C 45 C 45 C 46 C 47 C 48 C 51 C 52 C 54 C 56 C 56	59.06.0332 59.06.0103 59.06.0332 59.34.5391 59.06.0473 59.05.1223 59.34.4331 59.06.5474 59.06.0105 59.22.6100 59.22.8100 59.06.0683	3-3 nF 10 nF 3-3 nF 390 pF 47 nF 22 nF 330 pF 470 nF 1 uF 10 uF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 5% 63 V CER 10% 63 V PETP 1% 63 V PETP 5% 63 V CER 5% 63 V PETP 10% 63 V PETP -20% 35 V EL -20% 63 V EL 10% 63 V PETP			Q 23 Q 24 Q 25 Q 27 Q 28 Q 29 Q 30 Q 31 Q 32 Q 33	50.03.0340 50.03.0515 50.03.0626 50.03.0551 50.03.0492 50.03.0491 50.03.0626 50.03.0551 50.03.0551 50.03.1552 50.03.1552 50.03.0515	BC 337-25 BC 307 B BC 640 BC 639 BC 556 B BC 546 B BC 640 BC 639 BC 546 B IRF 522 IRF 9532 BC 307 B	NPN 8C 557 8 8C 560 8 PNP PNP NPN PNP NPN PNP NPN PNP NPN NPN
	C62 C63 C64 C65 D1 D2 D3	59-34-5561 59-06-0222 59-06-0222 59-06-0683 59-22-8221 50-04-0125 50-04-0125 50-04-1101 50-04-1112	560 pF 2.2 nF 2.2 nF 68 nF 220 uF 1N4448 1N4448 3.9 V 5.1 V	5% 63 V CER 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 63 V EL 50 V 5% 0.4 W 5% 0.4 W			R	57.11.4681 57.11.4472 57.11.4472 57.11.4472 57.11.4472 57.11.4101 57.11.4121 57.11.4103 57.11.4103	680 Ohm 1 kOhm 4.7 kOhm 4.7 kOhm 4.7 kOhm 100 Ohm 120 Ohm 120 Ohm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	D6 D7 D8 D9 D10 D11 D13 D14 D15 D16 D17 D18 D19	50.04.0512 50.04.0134 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N5818 5-1 V 1N3595 DHD 1N4448 1N4448 BAS 40-02 1N4448 1N4448 1N4448 1N4448 1N4935 1N4935 1N4935	30 V 1M5817 Schottky 5% 0.4 W 150 V I rev <1 nA a 125 V 50 V 30 V BAT 85, BAT 42 Schottky 50 V 50 V 50 V 50 V 50 V 50 V 50 V 50 V	Fc Sie•Ph Mot•GI Mot•GI		R12 R12 R14 R15 R16 R17 R18 R19 R20 R21 R22	57-11-4102 57-11-4223 57-11-4103 57-11-4103 57-11-4103 57-11-4662 57-11-4662 57-11-4622 58-01-8501 57-11-4273 57-11-4103 57-11-4103	1 kOhm 22 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 6-8 kOhm 6-8 kOhm 8-2 kOhm 500 Ohm 27 kOhm 1 kOhm 1 kOhm	240 0.25 M, MF  280 0.25 M, MF
ΤU	DER (O	l) 87/02/04 Wth	CAPSTAN	MOTOR CONTROL 1.727.330.21	PAGE 2	SΤυ		01) 87/02/04 Wth	CAPSTAN	MOTOR CONTROL 1-727-330-21 PAGE
ND .	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MA
	IC1 IC2 IC3 IC4 IC5 IC6 IC6 IC9 IC10 IC11 IC12 IC13 IC14	50.11.01.37 50.09.0107 50.05.0283 50.05.0283 50.05.0283 50.05.0283 50.05.0283 50.05.0206 50.07.0526 50.07.0526 50.07.0538 50.07.0018	TBA 129 RC 4559 LF 353 N LM 393 N LM 393 N NE 555 N LM 393 N 74 HC 1534526452640524526452645264526	FM-ZF-Ampoliscriminator uPC.4559 Dual Op-Amp. TL 072 CP Dual Op-Amp. Bi-JFET LM 393 P Dual Comp. LM 393 P Dual Comp. LM 393 P Dual Comp. Capstan motor comm. Ctl. 1.727.331	Ph RayMEC NS-TI NS-TI NS-TI Sig-NS NS-TI		R25 R26 R27 R28 R30 R31 R32 R35 R35 R36 R37 R38 R37	57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4393 57-11-4922 57-11-452 57-11-4533 57-11-4333 57-11-4103 57-11-4103	10 kOhm 10 kOhm 10 kOhm 10 kOhm 39 kOhm 2-7 kOhm 3-3 kOhm 1-5 kOhm 1-5 kOhm 33 kOhm 13 kOhm 10 kOhm 10 kOhm	2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 1x, 0.25%, MF 1x, 0.25%, MF 2x, 0.25%, MF
	IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22	50.09.0101 50.09.0107 50.09.0101 50.07.0538 50.07.0066 50.09.0107 50.17.1000 50.05.0283	LF 353 N RC 4559 LF 353 N 4538 4066 RC 4559 74 HC 00 LM 393 N	IL U559 Dual Op-Amp. BI-JFET UPC 4559 Dual Op-Amp. Bi-JFET UPC 4559 Dual Op-Amp. Bi-JFET UPC 4559 Dual Op-Amp. LM 393 P Dual Comp.	Ras NEC NS.TI Ras NEC NS.TI		R 41 R 42 R 43 R 44 R 46 R 47 R 48	57.11.4103 57.11.4103 57.11.4082 57.11.4332 57.11.4332 57.11.4472 57.11.4222 57.11.4104 57.11.4562	10 k0hm 10 k0hm 6.8 k0hm 3.3 k0hm 10 k0hm 4.7 k0hm 2.2 k0hm 100 k0hm	2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF 2x, 0.25%, MF
	J3 J4 L1 L2	54.01.0241 54.01.0215 54.01.0241 1.022.222.00 1.022.222.00 1.022.222.00	4 Pole 12 Pole 4 Pole 16 uH 16 uH 196 uH	CIS socket strip CIS socket strip CIS socket strip HF-Coil Filter Coil	AMP AMP AMP St St St		R 52 R 53 R 54 R 55 R 57 R 57 R 59	57.11.4153 57.11.4153 57.11.4562 57.11.4562 57.11.4562 57.11.4221 57.11.3104 57.11.4102	15 kOhm 15 kOhm 5.6 kOhm 5.6 kOhm 5.6 kOhm 220 Ohm 100 kOhm 1 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF
	MP2	1.727.330.11 1.727.400.01 21.99.0180	1 pce 1 pce 2 pcs	PC Board Heatsink M3 * 5 Cross recessed oval head sc M3 * 8 Hexagon socket head cap scr	St St rew		R 61 R 62 R 63	57.11.4331 57.11.4392 57.11.4222 57.11.4152	330 Ohm 3.9 kOhm 2.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF



iD •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU F.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MANU
	R 66 R 67 R 68 R 69 R 70 R 71 R 72 R 73	57.11.4302 57.11.4331 57.11.4392 57.11.4152 57.11.4152 57.11.4332 57.11.4331 57.11.4331	1 kOhm 330 Ohm 3+9 kOhm 2+2 kOhm 1+5 kOhm 1 kOhm 330 Ohm 3-9 kOhm 2+2 kOhm	2% 0.25% MF 2% 0.25% MF			XIC17 XIC18 XIC19 XIC20 XIC21 XIC22	53.03.0166 53.03.0168 53.03.0167 53.03.0166 53.03.0166 53.03.0167	8 Pole 16 Pole 14 Pole 8 Pole 14 Pole 8 Pole	IC socket IC socket IC socket IC socket IC socket IC socket		
	R75 R76 R77 R80 R81 R82	57.11.4222 57.11.4152 57.11.4332 57.11.4682 57.11.4333 57.11.4333	1.5 kOhm 3.3 kOhm 6.8 kOhm 33 kOhm 33 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R84 R85 R86 R87	57.11.4332 57.11.4333 57.11.4333 57.11.4474	3.3 kOhm 33 kOhm 33 kOhm 470 kOhm	2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF		(01) 0	4.02.1987	Better wow and	flutter valu	es at 15 ips.		
	R88 R90 R91 R92	57-11-4223 57-11-4223 57-11-4222 57-11-4104 57-11-4122	22 k0hm 22 k0hm 2•2 k0hm 100 k0hm 1•2 k0hm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF		Note 1	- For exce respect manufac	ive the PNP - To	flutter valu ransistors s	es at 3.75 ips the bould be from the s	NPN - ame	
	R93 R94 R95 R98 R99	57-11-4472 57-11-4563 57-11-4105 57-11-4104 57-11-4562	4.7 kOhm 56 kOhm 1 MOhm 100 kOhm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			PETP :	= Ceramic, = Polyesterfoil P = AMP Incorpo	PS = Polys	rolytic, MF = Met. tyrol, PP = Pol Ph = Philips		
	R100 R101 R102 R103 R106 R107	57.11.4562 57.11.4221 57.11.4562 57.11.3104 57.11.4102 57.11.4822	5.6 kOhm 220 Ohm 5.6 kOhm 100 kOhm 1 kOhm 8.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		MANUFA	Fc GI IR Mo NEI	= Amp Incorpo = Fairchild = General Ins: = Internation t = Motorola C = Nippon Electorial	truments al Rectifier tric Corp.	Ra = Raytheon SGS = SGS/Ates	ruments	
τυ	R • • • 108 R • • • 109 D E R (01	57.11.4922 57.11.4472 1) 87/02/04 Wth	8.2 kOhm 4.7 kOhm CAPSTAN	2%, 0.25W, MF 2%, 0.25W, MF MOTOR CONTROL 1.727.330	-21 PAGE 7			(01) 87/02/04 1) 87/02/04 Wth	CAPSTAN	MOTOR CONTROL	1.727.330.2	PAGE
D.	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF •							
	R110 R112 R113	57.11.4472 57.11.4273 57.11.4273	4.7 kOhm 27 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R115 R116 R117 R118 R119	57.11.4473 57.11.4332 57.11.4682 57.11.4102 57.11.4103	47 kOhm 3.3 kOhm 6.8 kOhm 1 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	R120 R121 R122 R123 R124	57.11.4561 57.11.4121 57.11.4122 57.11.3911 57.11.4333	560 Ohm 120 Ohm 1.2 kOhm 910 Ohm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF								
	R125 R126 R127 R128	57-11-4101 57-11-4472 57-11-4102 57-11-4102	100 Ohm 4.7 kOhm 1 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R129 R130 R131 R132 R133	57.11.4000 57.56.5228 57.11.4102 57.11.4332 57.11.4105	0 Ohm 0-22 Ohm 1 kOhm 3-3 kOhm 1 MOhm	5%, 4.0 W, Wire 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R134 R135 R136 R138 R139	57-11-4222 57-11-4152 57-11-4332 57-11-4123 57-11-4102	2.2 kOhm 1.5 kOhm 3.3 kOhm 12 kOhm 1 kOhm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF								
	R • • • 1 40 R • • • 1 41 R • • • 1 42 R • • • 1 43	57.11.4122 57.11.4472 57.11.4402 57.11.4332 57.56.5108	1.2 kOhm 4.7 kOhm 1 kOhm 3.3 kOhm 0.1 Ohm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 10%, 4.0 W, Wire								
	R • • • 145 R • • • 146 R • • • 147 R • • • 148 R • • • 149	57.56.5108 57.11.4152 57.11.4562 57.11.4562	0.1 Ohm 1.5 kOhm 5.6 kOhm 5.6 kOhm	10%, 4.0 W, Wire 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
τυ	R***150 DER (01	57.11.4152 1) 87/02/04 Wth	1+5 kOhm Capstan	2%, 0.25%, MF MOTOR CONTROL 1.727.330	0-21 PAGE 8							
D.	R151	PART NO. 57.11.4392 57.11.4102	7ALUE 3.9 kOhm 1 kOhm	SPECIFICATIONS / EQUIVALENT  2%, 0.25W, MF  2%, 0.25W, MF	MA NU F •							
	R152 R153 R154 R155 R156	57.11.4472 57.11.4152 57.11.4120 57.11.4120	4.7 kOhm 1.5 kOhm 12 Ohm 12 Ohm	2%, 0+25%, MF 2%, 0+25%, MF 2%, 0+25%, MF 2%, 0+25%, MF								
	R157 R158 R159 R160	57-11-4479 57-11-4479 57-11-4120 57-11-4120	4.7 Ohm 4.7 Ohm 12 Ohm 12 Ohm	2% 0-25W, MF 2% 0-25W, MF 2% 0-25W, MF 2% 0-25W, MF								
	TP 2 TP 2 TP 3	57.88.4103 54.02.0320 54.02.0320 54.02.0320	8#10 kChm 1 Pole 1 Pole 1 Pole	5%, Single Line Tab Tab Tab								
	TP5 TP5	54.02.0320 54.02.0320 1.010.321.64	1 Pole 1 Pole	Tab Tab Wire Bridge								
	XIC1 XIC2 XIC3 XIC4	53.03.0166 53.03.0166 53.03.0166 53.03.0166	8 Pole 8 Pole 8 Pole 8 Pole 8 Pole	IC socket IC socket IC socket IC socket IC socket								
	XIC5 XIC6 XIC7 XIC8 XIC9	53.03.0166 53.03.0166 53.03.0166 53.03.0168 53.03.0168	8 Pole 8 Pole 16 Pole 16 Pole	IC socket IC socket IC socket IC socket								
	XIC 10 XIC 11 XIC 12 XIC 13 XIC 14	53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	16 Pole 16 Pole 16 Pole 16 Pole 16 Pole	IC socket IC socket IC socket IC socket IC socket IC socket								
	XIC15 XIC16	53.03.0166 53.03.0166 53.03.0166	8 Pole 8 Pole	IC socket IC socket	D.21 PAGE 9							







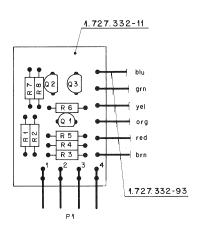


D•	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	A • • • • 1	1.727.332.00		Capstan Start Ctl. Board	St		MP6 MP7	37-01-0101 50-20-0404	4 pcs 2 pcs	Disc spring D3-2/8-0 = 0-3 Insulating pass through D6-0/3-5	
	C2	59.06.0102 59.06.0223	1 nF 22 nF 47 nF	10% 63 V PETP 10% 63 V PETP			MP8 MP9 MP10	1.010.098.27 50.20.0305 1.727.330.10	2 pcs 2 pcs 1 pce	Distance socket D3.1/7.0 * 2.3 Greased insulation for TD 220 No. label	
	C3 C4 C5	59.04.0473 59.22.6100 59.22.8229	10 uF 2,2 uF	-20% 35 V EL -20% 50 V EL			MP11 MP12	1.727.331.01	1 pce 1 pce	No. label 5 \$ 17 ESE label	
	C7	59.06.0223 59.06.0683	22 nF 68 nF	10% 63 V PETP 10% 63 V PETP			MP13	1.101.001.22	1 pce	Hardware label -22	
	C8 C10	59.06.0222 59.06.0103 59.22.5220	2.2 nF 10 nF 22 uF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL			P • • • • • 2 P • • • • • 3	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab	
	C 11 C 12 C 13	59.06.0222 59.06.0222	2.2 nF 2.2 nF	10% 63 V PETP 10% 63 V PETP			P 4 P 5	54.02.0320 54.02.0320	1 Pole 1 Pole	Tab Tab	
	C 14 C 15	59.06.0683 59.06.0224	68 nF 220 nF	10% 63 V PETP 10% 63 V PETP			01	50.03.0514	BF 366	NPN NPN	м
	C16 C17 C18	59.34.5561 59.34.4151 59.34.4101	560 pF 150 pF 100 pF	5% 63 V CER 5% 63 V CER 5% 63 V CER			Q 2 Q 3 Q 4	50.03.0340 50.03.0351 50.03.0351	BC 337-25 BC 327-25 BC 327-25	PNP PNP	
	C19 C20	59.06.0102 59.06.0103	1 nF 10 nF	10% 63 V PETP 10% 63 V PETP			Q5 Q6	50.03.0491 50.03.0749	BC 546 B BD 679	NPN Darl. NPN (see note 1	) Ph <sub>*</sub> S
	C 22	59.12.7182 59.22.8109	1.8 nF 1 uF	1% 63 V PS -150 •-60ppm/K -20% 50 V EL			Q7 Q8	50.03.0799 50.03.0351	BD 680 BC 327-25	Darl. PNP (see note 1 PNP NPN	) Ph <sub>*</sub> S
	C 24 C 25 C 26	59.22.6100 59.22.5101 59.06.0102	10 uF 100 uF 1 nF	-20% 35 V EL -20% 25 V EL 10% 63 V PETP			Q9 Q10 Q11	50.03.0491 50.03.0749 50.03.0799	BC 546 B BD 679 BD 680	Darl. NPN (see note 1 Darl. PNP (see note 1	
	C 27 C 28	59.06.0683 59.06.0683	68 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q12 Q13	50.03.0351 50.03.0491	BC 327-25 BC 546 B	PNP NPN	
	C • • • • 29 C • • • • 30	59-06-0683 59-22-5101	68 nF 100 uF	10% 63 V PETP -20% 25 V EL			Q14 Q15	50.03.0749 50.03.0799	BD 679 BD 680	Darl。 NPN (see note 1 Darl。 PNP (see note 1	
	C31	59.22.5101 59.22.3221	100 uF 220 uF	-20% 25 V EL -20% 10 V EL 5% 63 V PETP			Q16 Q17	50.03.0436 50.03.0436	BC 237 B BC 237 B BC 337-25	BC 547 B BC 550 B NPN BC 547 B BC 550 B NPN NPN	
	C 34 C 35	59.06.5682 59.34.5391 59.05.1223	6 • 8 nF 390 pF 22 nF	5% 63 V CER 1% 63 V PP			Q18 Q19 Q20	50.03.0340 50.03.0340 50.03.0340	BC 337-25 BC 337-25	NPN NPN	
	C **** 36 C *** 37	59.06.0332 59.06.5103	3.3 nF 10 nF	10% 63 V PETP 5% 63 V PETP			Q21 Q22	50.03.0340 50.03.0351	BC 337-25 BC 327-25	NPN PNP	
U	D E R (0)	) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL 1.727.330.22	PAGE 1	STU	D E R (0	0) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL 1.727.330.22	PAGE
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAR
	C 40 C 42	59.34.4181 59.34.4181 59.06.0332	180 pF 180 pF 3•3 nF	5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q23 Q24 Q25	50.03.0340 50.03.0515 50.03.0626	BC 337-25 BC 307 B BC 640	BC 557 B BC 560 B PNP PNP	
	C 43	59.06.0103 59.06.0332	10 nF 3.3 nF	10% 63 V PETP 10% 63 V PETP			Q26 Q27	50.03.0551 50.03.0492	BC 639 BC 556 B	NPN PN P	
	C 45	59.34.5391 59.06.5682	390 pF 6.8 nF	5% 63 V CER 5% 63 V PETP			Q28 Q29	50.03.0491 50.03.0626	BC 546 B BC 640	NPN PNP	
	C 47	59.05.1223 59.34.4331	22 nF 330 pF	1% 63 V PP 5% 63 V CER 5% 63 V PETP			Q30 Q31 Q32	50.03.0551 50.03.0491 50.03.1502	BC 639 BC 546 B IRF 522	NPN NPN MTP 8NIO Power FET N-Channel	IR.
	C • • • • 51 C • • • • 53 C • • • • 54	59.06.5474 59.26.0680 59.22.6100	470 nF 68 uF 10 uF	20% - 6+3 V SAL -20% 35 V EL	Ph		Q33 Q34	50.03.1552 50.03.0515	IRF 9532 BC 307 B	MTP 8910 Power FET P-Channel BC 557 B BC 560 B PNP	IR.
	C 56	59.22.8100 59.06.0683	10 uF 68 nF	-20% 63 V EL 10% 63 V PETP			R • • • • • 1	57.11.4681	680 Ohm	2%+ 0-25W+ MF	
	C58	59.34.5561 59.06.0222 59.06.0222	560 pF 2•2 nF 2•2 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			R 2 R 4	57.11.4102 57.11.4472 57.11.4472	1 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25N, MF 2%, 0.25N, MF 2%, 0.25N, MF	
	C • • • • 63 C • • • • 64 C • • • • 65	59.06.0683 59.22.8221	68 nF 220 uF	10% 63 V PETP -20% 63 V EL			R 5 R 6	57.11.4472 57.11.4101	4.7 kOhm 100 Ohm	2%, 0.25M, MF 2%, 0.25W, MF	
	01	50.04.0125	1N4448	50 V			R 8	57-11-4121 57-11-4121	120 Ohm 120 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	D2 D3	50.04.0125 50.04.1101	1N4448 3.9 V 5.1 V	50 V 5% 0.4 W 5% 0.4 W			R9 R10 R11	57-11-4103 57-11-4103 57-11-4102	10 k0hm 10 k0hm 1 k0hm	2% 0.25W; MF 2% 0.25W; MF 2% 0.25W; MF	
	D5 D6 D7	50.04.1112 50.04.0512 50.04.1112	1N5818 5+1 V	30 V 1N5819 Schottky 5% 0.4 W			R12 R13	57.11.4223 57.11.4103	22 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	D8 D9	50.04.0134 50.04.0125	1N3595 DHD 1N4448	150 V I rev <1 nA @ 125 V 50 V	Fc		R14 R15	57-11-4103 57-11-4103	10 k0hm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF	
	D10 D11	50-04-0125 50-04-0127 50-04-0125	1N4448 BAS 40-02 1N4448	50 V 30 V BAT 85, BAT 42 Schottky 50 V	Sie∗Ph		R 16 R 17 R 18	57.11.4562 57.11.4682 57.11.4822	5.6 kOhm 6.8 kOhm 8.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	D12 D13 D14	50.04.0125	1N4448 1N4448	50 V 50 V			R20	57.11.4822 58.01.8501	8.2 kOhm 500 Ohm	2%, 0.25W, MF 10%, 0.5 W, CERMET, lin. Trimmpot.	
	D15 D16	50.04.0125 50.04.0125	1 N4448 1 N4448	50 V 50 V 200 V 1N4936 RG1D	Mot • GI		R 21 R 22 R 23	57.11.4273 57.11.4103 57.11.4102	27 k0hm 10 k0hm 1 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D17 D18	50.04.0508 50.04.0508	1N4935 1N4935	200 V 1N4936 RG1D	Mot + GI	S T 11	R • • • • 24	57.11.4105 0) 87/06/30 WEN	1 MOhm	2%, 0.25W, MF	B 4 5 5
. 0	DER (O	0) 87/06/30 WEF	CAPSTAN	MOTOR CONTROL 1.727.330.22	PAGE 2	310	UEK (C	o) 67708/30 WEN	CAPSTAN	MOTUR CONTROL 1.127.330.22	PAGE
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA.
	IC1 IC2	50+11+0137 50+09+0107	TBA 129 RC 4559	FM-ZF-Amp.,Discriminator uPC 4559 Dual Op.Amp.	Ph Ra•NEC		R • • • • 25 R • • • • 26	57.11.4103 57.11.4103	10 k0hm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF	
	IC 3 IC 4	50.09.0101 50.05.0283	LF 353 N LM 393 N	TL 072 CP Dual Op.Amp. Bi-JFET LM 393 P Dual Comp.	NS.TI NS.TI		R 27 R 28	57-11-4103 57-11-4103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	IC6	50.05.0283 50.05.0158 50.05.0283	LM 393 N NE 555 N LM 393 N	LM 393 P	NS•TI Sig•NS NS•TI		R • • • • 30 R • • • • 31 R • • • • 32	57.11.4393 57.11.3242 57.11.4332	39 kOhm 2.4 kOhm 3.3 kOhm	2%, 0.25N, MF 1%, 0.25N, MF 2%, 0.25N, MF	
	IC 7 IC 8 IC 9	50.05.0283 50.17.1153 50.05.0206	74 HC 153	Capstan motor comm. Ctl. 1.727.33			R • • • • 33 R • • • • 34	57.11.4322 57.11.4152	8.2 kDhm 1.5 kDhm	2%, 0.25%, MF 2%, 0.25%, MF	
	IC ••• 10 IC ••• 11	50.07.0526 50.07.0538	4526 4538				R 35 R 36 R 37	57-11-4221 57-11-4333 57-11-3133	220 Ohm 33 kOhm 13 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 1%, 0.25%, MF	
	IC 12 IC 13 IC 14	50.07.0018 50.07.0526 50.07.0024	4094 4526				R 37 R 38 R 39	58.01.8103 57.11.4103	10 kOhm 10 kOhm	10%, 0.5 W, CERMET, lin. Trimmpot. 2%, 0.25W, MF	
	IC15 IC16	50.09.0101 50.09.0107	LF 353 N RC 4559	TL 072 CP Dual Op-Amp. Bi-JFET uPC 4559 Dual Op-Amp.	NS+TI Ra+NEC		R • • • • 40 R • • • • 41	57.11.4103 57.11.4103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC 17 IC 18	50.09.0101 50.07.0538 50.07.0066	LF 353 N ••4538•• ••4066••	TL 072 CP Qual Op.Amp. Bi-JFET	NS,TI		R • • • • 42 R • • • • 43 R • • • • 44	57-11-4103 57-11-4682 57-11-4332	10 k0hm 6.8 k0hm 3.3 k0hm	2% 0.25W MF 2% 0.25W MF	
	IC 20 IC 21	50.09.0107 50.17.1000	RC 4559 74 HC 00	uPC 4559 Oual Op.Amp.	Ra+NEC		R • • • • 46 R • • • • 47	57•11•4103 57•11•4472	10 kOhm 4•7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	IC 22	50.05.0283	LM 393 N	LM 393 P Dual Comp.	NS+TI		R • • • • 48 R • • • • 50	57-11-4222 57-11-4104 57-11-4562	2•2 kOhm 100 kOhm 5•6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	J2 J3	54.01.0293 54.01.0241 54.01.0215	14 Pole 4 Pole 12 Pole	CIS socket strip CIS socket strip CIS socket strip	AMP AMP		R51 R52 R53	57.11.4562 57.11.4153 57.11.4153	5.6 kOhm 15 kOhm 15 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	J4	54.01.0241	4 Pole	CIS socket strip	AMP		R • • • • 54 R • • • • 55	57.11.4562 57.11.4562	5.6 kOhm 5.6 kOhm	2%+ 0+25H+ MF 2%+ 0+25H+ MF	
	L1 L2	1.022.222.00	16 uH 16 uH	HF-Coil HF-Coil	St St		R 56 R 57	57.11.4562 57.11.4221 57.11.3104	5•6 k0hm 220 Ohm 100 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF	
	MP1	1.022.251.00	196 uH 1 pce	Filter Coil PC Board	St St		R59 R60 R61	57.11.4102 57.11.4331	1 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	MP 2 MP 3	1.727.400.01 21.99.0180 21.53.0355	1 pce 2 pcs	Heatsink M3 # 5 Cross recessed oval head so	St rew		R • • • • 62 R • • • • 63	57.11.4392 57.11.4222	3.9 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	MP 4	21.53.0355	2 pcs	M3 * 8 Hexagon socket head cap scr	ew		R • • • 64	57.11.4152	1.5 kOhm	444 V+4244 DE	



D •	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MANU
	R66 R67 R68 R69 R70 R71	57-11-4102 57-11-4331 57-11-4392 57-11-4222 57-11-4152 57-11-4332	1 k0hm 330 0hm 3.9 k0hm 2.2 k0hm 1.5 k0hm 3.3 KUNM	2% 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		XIC14 XIC15 XIC16 XIC17 XIC18 AIL19	53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0168 53.03.0167 53.03.0166	16 Pole 8 Pole 8 Pole 8 Pole 16 Pole 14 Pole 8 Pole	IC socket IC socket IC socket IC socket IC socket IC socket		
	R72 R73 R74 R75	57.11.4102 57.11.4331 57.11.4392 57.11.4222	1 kOhm 330 Ohm 3.9 kOhm 2.2 kOhm	2% 0.25H, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		XIC20 XIC21 XIC22	53.03.0166 53.03.0167 53.03.0166	8 Pole 14 Pole 8 Pole	IC socket IC socket IC socket		
	R76 R77 R80	57.11.4152 57.11.4332 57.11.4682	1.5 kOhm 3.3 kOhm 6.8 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF							
	R 81 R 82 R 84 R 85	57.11.4333 57.11.4333 57.11.4332 57.11.4333	33 kOhm 33 kOhm 3•3 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R86 R87 R88 R89	57.11.4333 57.11.4474 57.11.4223 57.11.4223	33 kOhm 470 kOhm 22 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		Note 1 - For exc	ellent wow and	flutter valu	es at 3.75 ips the	NPN -	
	R90 R91 R92 R93	57.11.4222 57.11.4104 57.11.4122 57.11.4222	2.2 kOhm 100 kOhm 1.2 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			ive the PNP - To		nould be from the s		
	R • • • • 94 R • • • • 95 R • • • • 96	57.11.4104 57.11.4105 57.11.4224	100 kOhm 1 MOhm 220 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			= Polyesterfoil	PS = Polys	rolytic	alfilm ypropylen	
	R98 R99 R100 R101	57.11.4104 57.11.4562 57.11.4562 57.11.4221	100 kOhm 5.6 kOhm 5.6 kOhm 220 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		GI IR	= Fairchild = General Ins = Internation	truments	Ra = Raytheon SGS = SGS/Ates Sie = Siemens		
	R102 R103 R106 R107	57-11-4562 57-11-3104 57-11-4102 57-11-4822	5.6 kOhm 100 kOhm 1 kOhm 8.2 kOhm	2%, 0=25W, MF 1%, 0=25W, MF 2%, 0=25W, MF 2%, 0=25W, MF		NE:	t = Motorola C = Nippon Elec = National Se	tric Corp. miconductor	Sig = Signetics St = Studer TI = Texas Inst	ruments	
τυ	R*** 108	57.11.4822 0) 87/06/30 Wth	8.2 kOhm CAPSTAN	2%, 0.25W, MF	•330•22 PAGE	ORIG 87/06/30 S T U D E R (0	0) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL	1.727.330.22	PAGE
D.	POS «NO»	PART NO+	VALUE	SPECIFICATIONS / EQUIVALEN	MANUF.						
	R109 R110 R111 R112	57.11.4472 57.11.4472 57.11.4681 57.11.4273	4.7 kOhm 4.7 kOhm 680 Ohm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R113 R115 R116 R117	57.11.4273 57.11.4105 57.11.4332 57.11.4682	27 kOhm 1 MOhm 3.3 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R118 R119 R120 R121	57-11-4561 57-11-4103 57-11-4561 57-11-4121	560 Ohm 10 kOhm 560 Ohm 120 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R122 R123 R124 R125	57.11.4122 57.11.3911 57.11.4333 57.11.4101	1.2 kOhm 910 Ohm 33 kOhm 100 Ohm	2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 126 R • • • 127 R • • • 128	57-11-4472 57-11-4102 57-11-4102 57-11-4000	4.7 kOhm 1 kOhm 1 kOhm 0 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R129 R130 R131 R132	57.56.5228 57.11.4102 57.11.4332	0.22 Ohm 1 kOhm 3.3 kOhm	5%, 4.0 W. Wire 2%, 0.25W, MF 2%, 0.25W, MF							
	R133 R134 R135 R136	57-11-4105 57-11-4222 57-11-4152 57-11-4332	1 MOhm 2.2 kOhm 1.5 kOhm 3.3 kOhm	2% 0.25W, MF 2% 0.25W, MF 2% 0.25W, MF 2% 0.25W, MF							
	R137 R138 R139 R140	57.11.4154 57.11.4123 57.11.4102 57.11.4122	150 kOhm 12 kOhm 15 kOhm 1•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 141 R • • • 142 R • • • 143 R • • • 145	57.11.4472 57.11.4102 57.11.4332 57.56.5108	4.7 kOhm 1 kOhm 3.3 kOhm 0.1 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 10%, 4.0 W, Wire							
ΤU	R146 R147	57.56.5108 57.11.4152 0) 87/06/30 WEH	0.1 Ohm 0.1 Ohm 1.5 kOhm CAPSTAN	10%, 4.0 W, Wire 2%, 0.25W, MF	7.330.22 PAGE 8						
D.	PO5 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	MANUF.						
	R148 R149 R150 R151	57-11-4562 57-11-4562 57-11-4152 57-11-4392	5.6 kOhm 5.6 kOhm 1.5 kOhm 3.9 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R152 R153 R154 R155	57.11.4102 57.11.4472 57.11.4152 57.11.4120	1 kOhm 4.7 kOhm 1.5 kOhm 12 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R156 R157 R158 R159	57.11.4120 57.11.4479 57.11.4479 57.11.4120	12 Ohm 4.7 Ohm 4.7 Ohm 12 Ohm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF							
	R21	57.11.4120 57.88.4103	12 Ohm 8¢10 kOhm	2%, 0.25%, MF 5%, Single Line							
	TP2 TP3 TP4	54.02.0320 54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole 1 Pole	Tab Tab Tab Tab							
	TP5	54.02.0320 1.010.321.64	1 Pole	Tab Wire Bridge							
	XIC 2 XIC 3 XIC 4	53.03.0166 53.03.0166 53.03.0166 53.03.0166	8 Pole 8 Pole 8 Pole 8 Pole	IC socket IC socket IC socket IC socket							
	XIC 5 XIC 6 XIC 7 XIC 8	53.03.0166 53.03.0166 53.03.0166 53.03.0168	8 Pole 8 Pole 8 Pole 16 Pole	IC socket IC socket IC socket IC socket							
	XIC9 XIC10 XIC11 XIC12	53.03.0168 53.03.0168 53.03.0168 53.03.0168	16 Pole 16 Pole 16 Pole 16 Pole	IC socket IC socket IC socket IC socket							
	XIC13	53.03.0168 D) 87/06/30 Wth	16 Pole	IC socket	7.330.22 PAGE 9						

### CAPSTAN START CONTROL 1.727.332.00 (DIAGRAM SEE PAGE 6/45)



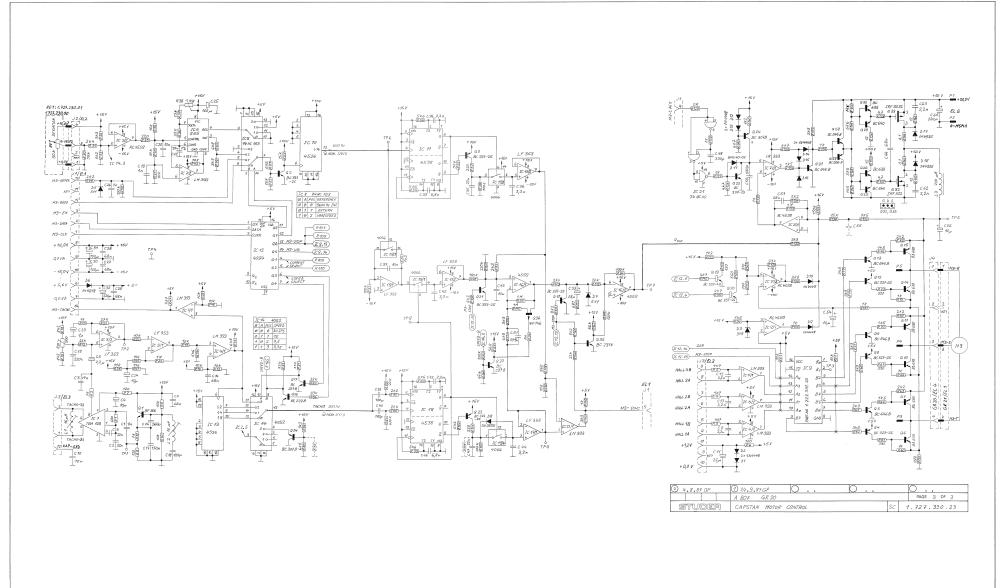
IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP2 MP3	1.727.332.11 1.727.332.10 1.727.332.93		Capstan Start Ctl. PCB No. Label Wiring List	
	P * * * * * 1	54.01.0223	4 Pol	CIS Pin Strip	
	Q2 Q2	50+03+0436 50+03+0436 50+03+0329	BC237B BC237B WP 146	BC547B+ BC550B NPN ITT+Mot+Ph+S BC547B+ BC550B NPN ITT+Mot+Ph+S FET P-CH	
	R2 R3 R4 R5 R6 R7	57.11.4822 57.11.4223 57.11.4154	56 kOhm 56 kOhm 120 kOhm 8•2 kOhm 22 kOhm 150 kOhm 1 MOhm 47 kOhm	2%, 0.25w, MF 2%, 0.25w, MF	

MANUFACTURER:

ORIG 87/06/30

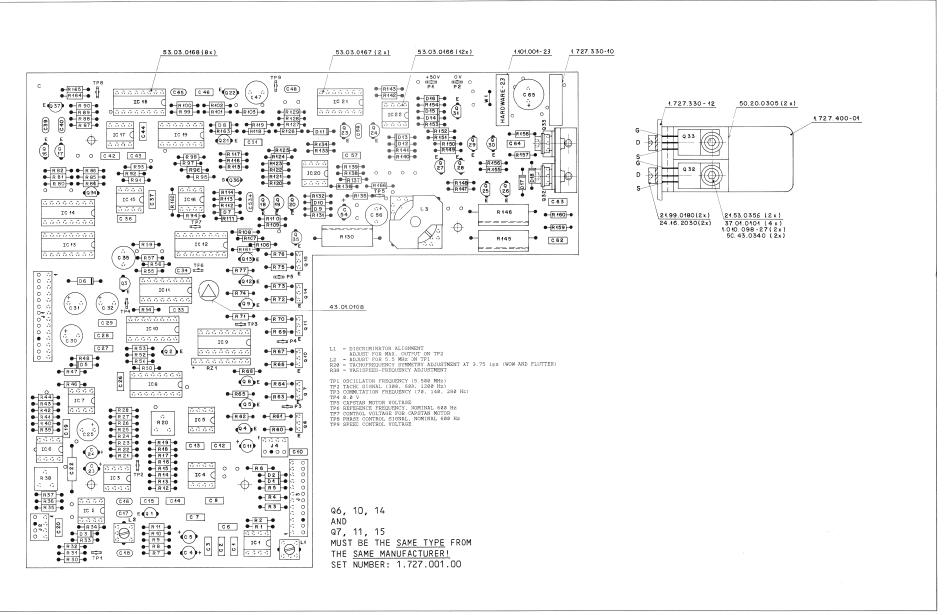
S T U D E R (00) 87/06/30 Wth CAPSTAN SRART CTL. BDARD 1.727.332.00 PAGE 1







STUDER





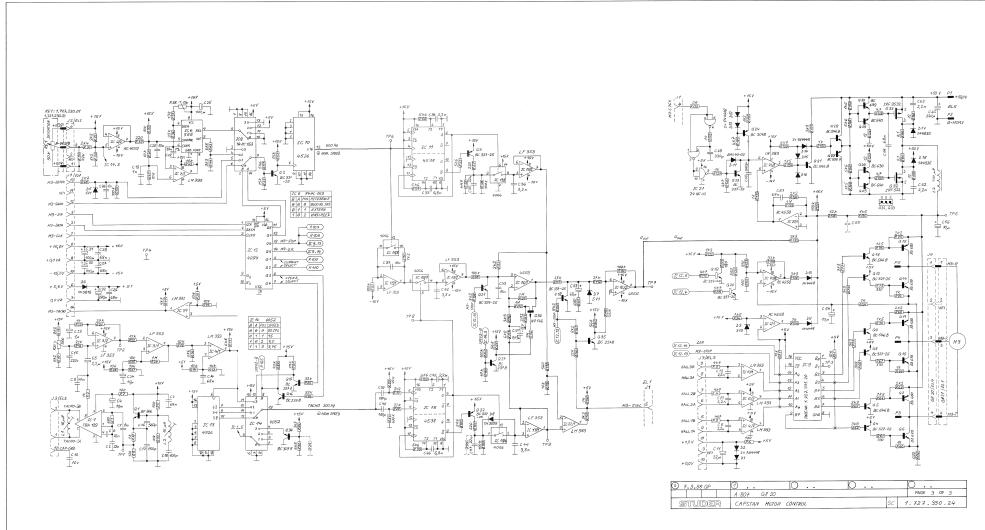
0.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUI
	C • • • • • 2	59.06.0102 59.06.0223	1 nF 22 nF	10% 63 V PETP 10% 63 V PETP			MP6 MP7	37.01.0101 50.20.0404	4 pcs 2 pcs	Disc spring D3-2/8-0 * 0-3 Insulating pass through D6-0/3-5	_
	C 3 C 4 C 5	59.06.0473 59.22.6100 59.22.8229	47 nF 10 uF 2+2 uF	10% 63 V PETP -20% 35 V EL -20% 50 V EL			MP8 MP9 MP10	1.010.098.27 50.20.0305 1.727.330.10	2 pcs 2 pcs 1 pce	Distance socket D3.1/7.0 * 2.3 Greased insulation for TD 220 No. label	s s
	C • • • • • 6 C • • • • • 7	59.06.0223 59.06.0683	22 nF 68 nF	10% 63 V PETP 10% 63 V PETP			MP11 MP12	1.727.331.01	l pce l pce	No. label 5 ÷ 17 ESE label Hardware label -23	s s
	C 8 C 10 C 11	59.06.0222 59.06.0103 59.22.5220	2•2 nF 10 nF 22 uF	10% 63 V PETP -20% 25 V EL			MP13	1.101.001.23 54.02.0320	l pce l Pole	Tab	3
	C 12 C 13 C 14	59.06.0222 59.06.0222 59.06.0683	2•2 nF 2•2 nF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P • • • • • 2 P • • • • • 3 P • • • • • 4	54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole	Tab Tab Tab	
	C 15	59.06.0224 59.34.5561	220 nF 560 pF	10% 63 V PETP 5% 63 V CER			P 5	54.02.0320	1 Pole	Tab	
	C 17 C 18 C 19	59.34.4151 59.34.4101 59.06.0102	150 pF 100 pF 1 nF	5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q2 Q3	50.03.0514 50.03.0340 50.03.0351	BF 366 BC 337-25 BC 327-25	NPN NPN PNP	Мо
	C 22	59.06.0103 59.12.7182	10 nF 1.8 nF	10% 63 V PETP 1% 63 V PS -150 +-60ppm/K			Q 4 Q 5	50.03.0351 50.03.0491	BC 327-25 BC 546 B	PNP NPN	
	C • • • • 23 C • • • • 24 C • • • • 25	59.22.8109 59.22.6100 59.22.5101	1 uF 10 uF 100 uF	-20% 50 V EL -20% 35 V EL -20% 25 V EL			Q7 Q8	50.03.0749 50.03.0799 50.03.0351	BD 679 BD 680 BC 327-25	Darl. NPN (see note Darl. PNP (see note PNP	1) Ph. SG
	C 26 C 27	59.06.0102 59.06.0683	1 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q9 Q10	50.03.0491 50.03.0749	BC 546 B BD 679	NPN Darl. NPN (see note	
	C 28 C 29 C 30	59.06.0683 59.06.0683 59.22.5101	68 nF 68 nF 100 uF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL			Q11 Q12 Q13	50.03.0799 50.03.0351 50.03.0491	BD 680 BC 327-25 BC 546 B	Darl. PNP (see note PNP NPN	1) PhySG
	C • • • • 31 C • • • • 32	59•22•5101 59•22•3221	100 uF 220 uF	-20% 25 V EL -20% 10 V EL			Q14 Q15	50.03.0749 50.03.0799	BD 679 BD 680	Darl. NPN (see note Darl. PNP (see note	1) Ph, SG 1) Ph, SG
0)	C 34 C 34	59.06.5682 59.34.5391 59.06.0222	6•8 nF 390 pF 2•2 nF	5% 63 V PETP 5% 63 V CER 10% 63 V PETP			Q16 Q17 Q18	50.03.0436 50.03.0436 50.03.0340	BC 237 B BC 237 B BC 337-25	BC 547 B BC 550 B NPN BC 547 B BC 550 B NPN NPN	
-,	C • • • • 35	59.05.1223 59.06.0332	22 nF 3•3 nF	1% 63 V PP 10% 63 V PETP			Q19 Q20	50.03.0340 50.03.0340	BC 337-25 BC 337-25	NPN NPN	
	C 37	59.06.5103 59.34.4181	10 nF 180 pF	5% 63 V PETP 5% 63 V CER			Q 22	50.03.0340 50.03.0351	BC 337-25 BC 327-25	NPN PNP	
ΤU	DER (O	1) 87/09/24 GP	CAPSTAN	MOTOR CONTROL 1.727.330.23	PAGE 1	STU	DER (O	1) 87/09/24 GP	CAPSTAN	MOTOR CONTROL 1.727.330.23	PAGE
	PDS.ND.		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		P0S+N0+		VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	C 40 C 42 C 43	59.34.4181 59.06.0332 59.06.0103	180 pF 3.3 nF 10 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			Q23 Q24 Q25	50.03.0340 50.03.0515 50.03.0626	BC 337-25 BC 307 B BC 640	NPN BC 557 B BC 560 B PNP PNP	
	C 44 C 45	59.06.0332 59.34.5391	3+3 nF 390 pF	10% 63 V PETP 5% 63 V CER			Q • • • • 26 Q • • • • 27	50.03.0551 50.03.0492	BC 639 BC 556 B	NPN PNP NPN	
1)	C • • • • 45 C • • • • 46 C • • • • 47	59.06.0222 59.06.5682 59.05.1223	2 • 2 nF 6 • 8 nF 22 nF	10% 63 V PETP 5% 63 V PETP 1% 63 V PP			Q28 Q29 Q30	50.03.0491 50.03.0626 50.03.0551	BC 546 B BC 640 BC 639	PNP NPN	
	C 48	59.34.4331 59.06.5474	330 pF 470 nF	5% 63 V CER 5% 63 V PETP	Ph		Q31 Q32	50.03.0491 50.03.1502	BC 546 B IRF 522 IRF 9532	NPN MTP 8N10 Power FET N-Channel MTP 8P10 Power FET P-Channel	IR • Ma
	C 54 C 56	59.26.0680 59.22.6100 59.22.8100	68 uF 10 uF 10 uF	-20% 35 V EL -20% 63 V EL	rn		Q33 Q34 Q35	50.03.1552 50.03.0515 50.03.0436	BC 307 B BC 237 B	BC 557 B BC 560 B PNP BC 547 B BC 550 B NPN	INTIN
	C 57	59.06.0683 59.34.5561	68 nF 560 pF 2•2 nF	10% 63 V PETP 5% 63 V CER 10% 63 V PETP			Q36	50.03.0329 50.03.0436	WP 146 BC 237 B	p-ch FET BC 547 B BC 550 B NPN	
	C 62 C 63 C 64	59.06.0222 59.06.0222 59.06.0683	2•2 nF 68 nF	10% 63 V PETP 10% 63 V PETP			R • • • • • 1 R • • • • • 2	57.11.4681 57.11.4102	680 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	C 65 D 1	59.22.8221 50.04.0125	220 uF 1N4448	-20% 63 V EL 50 V			R 4 R 5	57.11.4472 57.11.4472 57.11.4472	4.7 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	D 2 D 3	50.04.0125 50.04.1101	1N4448 3.9 V	50 V 5% 0+4 W			R6 R7	57.11.4101 57.11.4121	100 Ohm 120 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	D5 D7	50.04.1112 50.04.0512 50.04.1112	5.1 V 1N5818 5.1 V	5% 0.4 W 30 V 1N5819 Schottky 5% 0.4 W			R • • • • • 8 R • • • • • 9 R • • • • 10	57.11.4121 57.11.4103 57.11.4103	120 Ohm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D8 D9	50.04.0134 50.04.0125	1N3595 DHD 1N4448	150 V I rev <1 nA @ 125 V 50 V	Fc		R • • • • 11 R • • • • 12	57.11.4102 57.11.4223	1 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	D10 D11 D12	50.04.0125 50.04.0127 50.04.0125	1N4448 BAS 40-02 1N4448	50 V 30 V BAT 85, BAT 42 Schottky 50 V	Sie,Ph		R • • • • 13 R • • • • 14 R • • • • 15	57.11.4103 57.11.4103 57.11.4103	10 k0hm 10 k0hm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D13 D14 D15	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V 50 V 50 V			R16 R17 R18	57.11.4562 57.11.4682 57.11.4822	5.6 kOhm 6.8 kOhm 8.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	D16 D17	50.04.0125 50.04.0508	1N4448 1N4935	50 V 200 V 1N4936 RG1D	Mot + G I		R • • • • 19 R • • • • 20	57.11.4822 58.01.8501	8•2 k0hm 500 0hm	2% 0.25W; MF 10%, 0.5 W; CERMET; line Trimmpote	
ΤU	D18 DER (0	50.04.0508 1) 87/09/24 GP	1N4935 CAPSTAN	200 V 1N4936 RG10 MOTOR CONTROL 1.727.330.23	Mot•GI PAGE Z	STU	R****21 DER (0	57.11.4273 1) 87/09/24 GP	27 kOhm CAPSTAN	2%, 0.25%, MF  MOTOR CONTROL 1.721.330.23	PAGE
o•	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU
	IC 2 IC 3	50.11.0137 50.09.0107 50.09.0101	TBA 129 RC 4559 LF 353 N	FM-ZF-Amp.,Discriminator uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	Ph Ra∙NEC NS•TI		R • • • • 22 R • • • • 23 R • • • • 24	57.11.4103 57.11.4102 57.11.4105	10 kOhm 1 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC5	50.05.0283 50.05.0283	LM 393 N LM 393 N NE 555 N	LM 393 P Dual Comp. LM 393 P Dual Comp. LM 555 CN	NS+TI NS+TI Sig+NS		R • • • • 25 R • • • • 26 R • • • • 27	57.11.4103 57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC6 IC7 IC8	50.05.0158 50.05.0283 50.17.1153	NE 555 N LM 393 N 74 HC 153	LM 393 P Dual Comp	NS.TI		R 28 R 30	57-11-4103 57-11-4393	10 kOhm 39 kOhm	2% 0.25W MF 2%, 0.25W, MF	
	IC9 IC10 IC11	50.05.0206 50.07.0526 50.07.0538	4526 4538	Capstan motor comm. Ctl. 1.727.331	•20 St Ph•Mot		R • • • • 31 R • • • • 32 R • • • • 33	57.11.3242 57.11.4332 57.11.4822	2.4 kOhm 3.3 kOhm 8.2 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC12 IC13	50.07.0018 50.07.0526 50.07.0024	•• 4094 • • •• 4526 • •				R34 R35	57.11.4152 57.11.4221 57.11.4333	1.5 kOhm 220 Ohm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC 14 IC 15 IC 16	50.09.0101 50.09.0107	4052 LF 353 N RC 4559 LF 353 N	TL 072 CP Dual Op.Amp. Bi-JFET uPC 4559 Dual Op.Amp.	NS+TI Ra+NEC		R 36 R 37 R 33	57.11.3133 58.01.8103	13 kOhm 10 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET, lin. Trimmpot.	
	IC17 IC18 IC19	50.09.0101 50.07.0538 50.07.0066	LF 353 N ••4538•• ••4066••	Ti 072 CP Qual Op.Amp. Bi-JFET	NS•TI Ph•Mot		R • • • • 40 R • • • • 41	57.11.4103 57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC20 IC21	50.09.0107 50.17.1000	RC 4559 74 HC 00	uPC 4559	Ra•NEC NS•TI		R • • • • 42 R • • • • 43	57.11.4103 57.11.4682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC 22 J 1	50.05.0283 54.01.0293	LM 393 N 14 Pole	CIS socket strip	AMP		R • • • • 44 R • • • • 46 R • • • • 47	57.11.4332 57.11.4103 57.11.4472	3.3 kOhm 10 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	J2 J3	54.01.0241 54.01.0215	4 Pole 12 Pole	CIS socket strip CIS socket strip	AMP AMP AMP		R • • • • 48	57•11•4222 57•11•4104	2.2 kOhm 100 kOhm	2% 0.25W, MF 2%, 0.25W, MF	
	J4 L1	54.01.0241 1.022.222.00	4 Pole 16 uH	CIS socket strip HF-Coil	St		R • • • • 51 R • • • • 52 R • • • • 53	57.11.4562 57.11.4153 57.11.4153	5•6 kOhm 15 kOhm 15 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	L 3	1.022.222.00 1.022.251.00	16 uH 196 uH	HF-Coil Filter Coil	St St		R54 R55 R56	57.11.4562 57.11.4562 57.11.4562	5.6 kOhm 5.6 kOhm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	MP2	1.727.330.12 1.727.400.01	1 pce 1 pce	PC Board Heatsink	St St		R 57 R 59	57.11.4221 57.11.3104	220 Ohm 100 kOhm	2%, 0.25W, MF 1%, 0.25W, MF	
	MP • • • • 3	21.99.0180	2 pcs 2 pcs	M3 * 5 Cross recessed oval head sc M3 * 8 Hexagon socket head cap scr	rew Rw		R60 R61	57•11•4102 57•11•4331	1 k0hm 330 Ohm	2%, 0-25W, MF 2%, 0-25W, MF	
	MP5	24.16.2030	2 pcs	Serrat lock washer D3.2/6.0			R62	57.11.4392	3.9 kOhm	2%, 0.25W, MF	



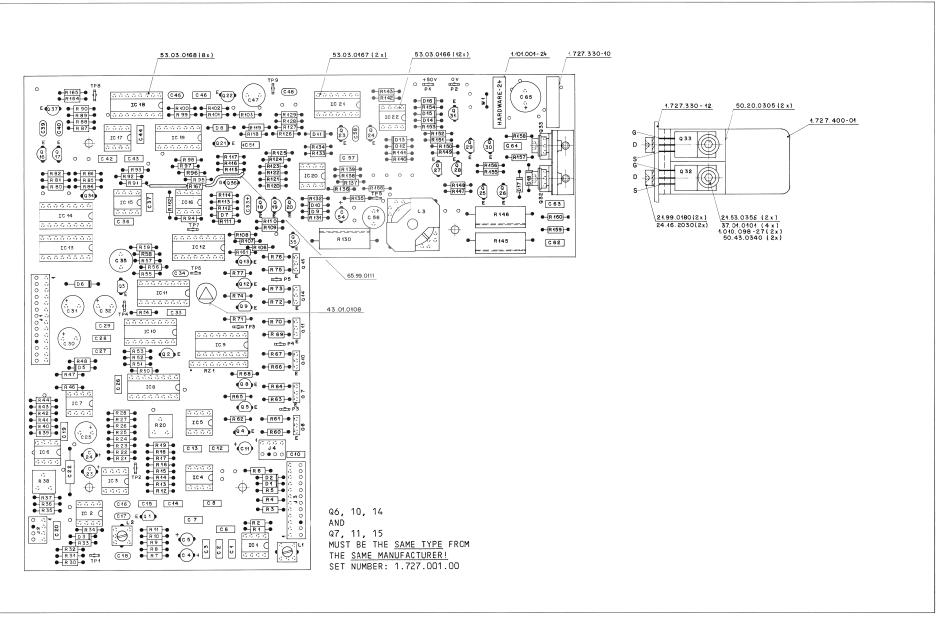
•	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS . NO .	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANU
	R63	57-11-4222	2.2 kOhm	2%, 0.25H, MF			W••••1	1.010.321.64		Wire Bridge		
	R 64 R 65 R 66	57.11.4152 57.11.4332 57.11.4102	1.5 kOhm 3.3 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC1 XIC2	53.03.0166 53.03.0166	8 Pole 8 Pole	IC socket IC socket		
	R68	57.11.4331 57.11.4392	3.9 kOhm	2%, 0.29W, MF 2%, 0.25W, MF			XIC4	53.03.0166	8 Pole	IC socket IC socket		
	R70 R71	57.11.4222 57.11.4152 57.11.4332	2.2 kOhm 1.5 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC5 XIC6 XIC7	53.03.0166 53.03.0166 53.03.0166	8 Pole 8 Pole 8 Pole	IC socket IC socket IC socket		
	R72 R73	57-11-4102 57-11-4331	1 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF			XIC8 XIC9	53.03.0168 53.03.0168	16 Pole 16 Pole	IC socket IC socket		
	R74 R75 R76	57.11.4392 57.11.4222 57.11.4152	3.9 kOhm 2.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC10 XIC11 XIC12	53.03.0168 53.03.0168 53.03.0168	16 Pole 16 Pole 16 Pole	IC socket IC socket IC socket		
	R 77 R 80	57.11.4332 57.11.4682	3.3 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			XIC13 XIC14	53.03.0168 53.03.0168	16 Pole 16 Pole	IC socket IC socket		
	R 82 R 84	57.11.4333 57.11.4333 57.11.4332	33 kOhm 33 kOhm 3•3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC15 XIC16 XIC17	53.03.0166 53.03.0166 53.03.0166	8 Pole 8 Pole 8 Pole	IC socket IC socket IC socket		
	R85	57•11•4333 57•11•4333	33 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			XIC • • 18 XIC • • 19	53.03.0168 53.03.0167	16 Pole 14 Pole	IC socket IC socket		
	R 87 R 88 R 89	57.11.4474 57.11.4223 57.11.4223	470 kOhm 22 kOhm 22 kOhm	2%, 0.25W; MF 2%, 0.25W; MF 2%, 0.25W; MF			XIC20 XIC21 XIC22	53.03.0166 53.03.0167 53.03.0166	8 Pole 14 Pole 8 Pole	IC socket IC socket IC socket		
	R90 R91	57.11.4222 57.11.4104	2.2 kOhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R92 R93 R94	57.11.4122 57.11.4222 57.11.4104	1.2 kOhm 2.2 kOhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • • 95 R • • • • 96	57.11.4105 57.11.4105	1 MOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R97 R98 R99	57.11.4563 57.11.4104 57.11.4562	56 kOhm 100 kUhm 5•6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R100 R101	57.11.4562 57.11.4221	5•6 k0hm 220 Dhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R102	57•11•4562 ) 87/09/24 GP	5.6 kOhm CAPSTAN	2%, 0.25W, MF  MOTOR CONTROL 1.727.330.	23 PAGE 7	STU	DER (O	01) 87/09/24 GP	CAPSTAN	MOTOR CONTROL	1.727.330.23	PAGE
	POS.NO.		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS+NO+	PART NO+	VALUE	SPECIFICATIONS		MAN
	R103 R105 R107	57•11•3104 57•11•4102 57•11•4822	100 kOhm 1 kOhm 8.2 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			- For exc	ellent wow and f	lutter valu	EF 4538 (Ct min. es at 3.75 ips th	e NPN -	
	R108 R109	57.11.4822 57.11.4472	8.2 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			respect manufac	tive the PNP - Tr	ansistors s	hould be from the	same	
	R110 R111 R112	57.11.4472 57.11.4681 57.11.4273	4.7 kOhm 680 Ohm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		MATERI	ALS: CER PETP	= Ceramic, = Polyesterfoil,	EL = Electi PS = Polys	rolytic+ MF = Met tyrol+ PP = Pol	alfilm vpropylen	
	R • • • 113 R • • • 114	57•11•4273 57•11•4124	27 kOhm 120 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		MANUFA	CTURER: AM	MP = AMP Incorpor		Ph = Philips		
	R115 R116 R117	57.11.4105 57.11.4332 57.11.4682	1 MOhm 3.3 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			GI	: = Fairchild ! = General Inst ! = Internationa	ruments 1 Rectifier	Ra = Raytheon SGS = SGS/Ates Sie = Siemens		
	R***118 R***119 R***120	57.11.4561 57.11.4103 57.11.4561	560 Ohm 10 kOhm 560 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			N.E	ot = Motorola :C = Nippon Elect : = National Sem	ric Corp.	Sig = Signetic St = Studer TI = Texas In		
	R • • • 121 R • • • 122	57.11.4121 57.11.4122	120 Ohm 1.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 123 R • • • 124 R • • • 125	57.11.4331 57.11.4333 57.11.4101	910 Ohm 33 kOhm 100 Ohm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 126 R • • • 127	57•11•4472 57•11•4102	4.7 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 128 R • • • 129 R • • • 130	57-11-4102 57-11-4000 57-56-5228	1 kOhm 0 Ohm 0.22 Ohm	2%, 0.25W, MF 5%, 4.0 W, Wire								
	R131 R132	57.11.4102 57.11.4332	1 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R133 R134 R135	57-11-4105 57-11-4222 57-11-4152	1 MOhm 2•2 kOhm 1•5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R136 R137	57.11.4332 57.11.4154 57.11.4123	3.3 kOhm 150 kOhm 12 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 1 38 R • • • 1 39 R • • • 1 40	57-11-4102 57-11-4102 57-11-4122	1 kOhm 1.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R141	57.11.4472 () 87/09/24 GP	4.7 kOhm CAPSTAN	2%, 0.25W, MF  MOTOR CONTROL 1.727.330.	23 PAGE 8			(01) 87/09/24 1) 87/09/24 GP	CAPSTAN	MOTOR CONTROL	1.727.330.23	PAGE
	,	() 0.70.72.				3.0	5 L W (5	1, 0,,0,,21 0.	CAISTAN	norda control		1 100
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.							
	R142 R143	57.11.4102 57.11.4332	1 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R145 R146 R147	57.56.5108 57.56.5108 57.11.4152	0.1 Ohm 0.1 Ohm 1.5 kOhm	10%, 4.0 W, Wire 10%, 4.0 W, Wire 2%, 0.25W, MF								
	R 148	57.11.4562 57.11.4562	5.6 kOhm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R150 R151 R152	57.11.4152 57.11.4392 57.11.4102	1.5 kOhm 3.9 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R153 R154	57•11•4472 57•11•4152	4.7 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R•••155 R•••156 R•••157	57•11•4120 57•11•4120 57•11•4479	12 Ohm 12 Ohm 4•7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R158 R159 R160	57.11.4479 57.11.4120 57.11.4120	4.7 Ohm 12 Ohm 12 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF								
	R161 R162	57.11.4822 57.11.4563	8.2 kOhm 56 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R163 R164 R165	57•11•4224 57•11•4473 57•11•4154	220 k0hm 47 k0hm 150 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 166	57.11.4223	22 kOhm	2%, 0.25W, MF								
	RZ1 TP1	57.88.4103 54.02.0320	8±10 k0hm '- 1 Pole	5%. Single Line Tab								
	TP • • • • 2 TP • • • • 3	54.02.0320 54.02.0320	l Pole l Pole	Tab Tab								
	TP 5 TP 6	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab								
	11		1 Pole	Tab								
	TP7 TP8 TP9	54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole	Tab Tab								











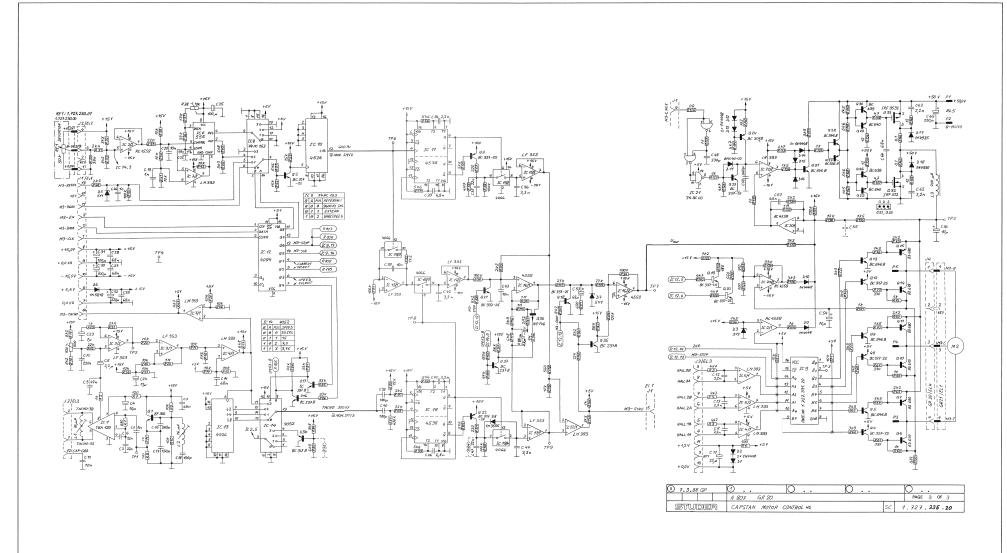


·	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQ		MA NU
	C 2	59.06.0102 59.06.0223	1 nF 22 nF	10% 63 V PETP 10% 63 V PETP			MP 7 MP 8	50.20.0404 1.010.098.27	2 pcs 2 pcs	Insulating pass the Distance socket D3	1/7.0 = 2.3	s
	C 4 C 5	59.06.0473 59.22.6100 59.22.8229	47 nF 10 uF 2•2 uF	10% 63 V PETP -20% 35 V EL -20% 50 V EL			MP9 MP10 MP11	50.20.0305 1.727.330.10 1.727.331.01	2 pcs 1 pce 1 pce	Greased insulation No∘ label No∘ label 5 ≎ 17	tor 10 220	S
	C 7	59.06.0223 59.06.0683	22 nF 68 nF	10% 63 V PETP 10% 63 V PETP			MP12	43.01.0108 1.101.001.24	1 pce 1 pce	ESE label Hardware label -24		s
	C • • • • • 8 C • • • • 10 C • • • • 11	59.06.0222 59.06.0103 59.22.5220	2.2 nF 10 nF 22 uF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL			P • • • • 1 P • • • • 2	54.02.0320 54.02.0320	l Pole 1 Pole	Tab Tab		
	C12 C13	59.06.0222 59.06.0222	2.2 nF 2.2 nF	10% 63 V PETP 10% 63 V PETP			P • • • • • 3 P • • • • • 4	54.02.0320 54.02.0320	l Pole l Pole	Tab Tab Tab		
	C15 C16	59.06.0683 59.06.0224 59.34.5561	68 nF 220 nF 560 pF	10% 63 V PETP 10% 63 V PETP 5% 63 V CER			P••••5	54+02+0320 50+03+0514	1 Pole BF 366	140	NPN	Мо
	C 17 C 18	59.34.4151 59.34.4101 59.06.0102	150 pF 100 pF 1 nF	5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q 3 Q 4	50.03.0340 50.03.0351 50.03.0351	BC 337-25 BC 327-25 BC 327-25		NPN PNP PNP	
	C 20 C 22	59.06.0103 59.12.7182	10 nF 1.8 nF	10% 63 V PETP 1% 63 V PS -150 +-60ppm/K			Q • • • • • 5 Q • • • • • 6	50.03.0491 50.03.0749	BC 546 B BD 679	Darl.	NPN NPN (see note	L) Ph+SG
	C 24	59.22.8109 59.22.6100 59.22.5101	1 uF 10 uF 100 uF	-20% 50 V EL -20% 35 V EL -20% 25 V EL			Q7 Q8 Q9	50.03.0799 50.03.0351 50.03.0491	BD 680 BC 327-25 BC 546 B	Darl.	PNP (see note ) PNP NPN	
	C 26 C 27	59.06.0102 59.06.0683	1 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q10 Q11 Q12	50.03.0749 50.03.0799 50.03.0351	BD 679 BD 680 BC 327-25	Darl. Darl.	NPN (see note : PNP (see note : PNP	
	C 29 C 30	59.06.0683 59.06.0683 59.22.5101	68 nF 68 nF 100 uF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL			Q13 Q14	50.03.0491 50.03.0749	BC 546 B BD 679	Dar1.	NPN (see note )	
	C 32	59.22.5101 59.22.3221	100 uF 220 uF	-20% 25 V EL -20% 10 V EL 5% 63 V PETP			Q · · · · 15 Q · · · · 16 Q · · · · 17	50.03.0799 50.03.0436 50.03.0436	BD 680 BC 237 B BC 237 B	Darl. BC 547 B BC 550 B BC 547 B BC 550 B	PNP (see note : NPN NPN	E) Ph <sub>9</sub> SG
	C 34 C 35	59.06.5682 59.06.0222 59.05.1223	6.8 nF 2.2 nF 22 nF	10% 63 V PETP 1% 63 V PP			Q18 Q19	50.03.0340 50.03.0340	BC 337-25 BC 337-25	BC 347 B BC 350 B	NPN NPN	
	C 36 C 37	59.06.0332 59.06.5103 59.34.4181	3•3 nF 10 nF 180 pF	10% 63 V PETP 5% 63 V PETP 5% 63 V CER			Q 20 Q 21 Q 22	50.03.0340 50.03.0340 50.03.0351	BC 337-25 BC 337-25 BC 327-25		NPN NPN PNP	
	C 40	59.34.4181	180 pF	5% 63 V CER			Q23	50.03.0340	BC 337-25		NPN	PAGE
TUC	DER (O	0) 88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.330.24	PAGE 1	210	DER (U	0) 88/03/07 GP	CAPSTAN	MOTOR CONTROL	1.727.330.24	PAGE
D.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.		POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQ	JI VALENT	MANU
	C42 C43	59.06.0332 59.06.0103	3•3 nF 10 nF	10% 63 V PETP			Q24 Q25	50.03.0515 50.03.0626	BC 307 B BC 640	BC 557 B BC 560 B	PNP	
	C **** 44 C *** * 45	59.06.0332 59.06.0222	3.3 nF 2.2 nF	10% 63 V PETP 10% 63 V PETP 5% 63 V PETP			Q 26 Q 27	50.03.0551 50.03.0492 50.03.0491	BC 639 BC 556 B BC 546 B		NPN PNP NPN	
	C 46 C 47 C 48	59.06.5682 59.05.1223 59.34.4331	6+8 nF 22 nF 330 pF	1% 63 V PP 5% 63 V CER			Q 28 Q 29 Q 30	50.03.0626 50.03.0551	BC 640 BC 639		PNP NPN	
	C **** 51	59.06.5474 59.26.0680 59.22.6100	470 nF 68 uF 10 uF	5% 63 V PETP 20% 6.3 V SAL -20% 35 V EL	Ph		Q 31 Q 32 Q 33	50.03.0491 50.03.1502 50.03.1552	BC 546 B IRF 522 IRF 9532	MTP 8N10 Power F MTP 8P10 Power F	NPN ET N-Channel ET P-Channel	IR + Mo
	C 54 C 56 C 57	59.22.8100 59.06.0683	10 uF 68 nF	-20% 63 V EL 10% 63 V PETP			Q • • • • 34 Q • • • • 35	50.03.0515 50.03.0436	BC 307 B BC 237 B	BC 557 B BC 560 B BC 547 B BC 550 B	PNP NPN	
	C 62 C 63	59.34.5561 59.06.0222 59.06.0222	560 pF 2•2 nF 2•2 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			Q36 Q37	50.03.0329 50.03.0436	WP 146 BC 237 B	BC 547 B BC 550 B	h FET NPN	
	C 64 C 65	59.06.0683 59.22.8221	68 nF 220 uF	10% 63 V PETP -20% 63 V EL			R • • • • • 1 R • • • • • 2	57.11.3681 57.11.3102	680 Ohm 1 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D2	50.04.0125 50.04.0125	1N4448 1N4448	50 V 50 V			R 4 R 5	57.11.3472 57.11.3472 57.11.3472	4.7 kOhm 4.7 kOhm	1%+ 0.25W+ MF 1%+ 0.25W+ MF		
	D3 D5	50.04.1101 50.04.1112 50.04.0512	3.9 V 5.1 V 1N5818	5% 0∙4 W 5% 0∙4 W 30 V 1N5819 Schottky			R * * * * * * * * * * * * * * * * * * *	57.11.3101 57.11.3121 57.11.3121	100 Ohm 120 Ohm 120 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D6 D7 D8	50.04.1112 50.04.0134	5.1 V 1N3595 DHD	5% 0.4 W 150 V I rev <1 nA @ 125 V	Fc		R9 R10	57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	D9 D10 D11	50.04.0125 50.04.0125 50.04.0127	1N4448 1N4448 BAS 40-02	50 V 50 V 30 V BAT 85+ BAT 42 Schottky	Sie•Ph		R12 R13	57.11.3102 57.11.3223 57.11.3103	1 kOhm 22 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D12 D13	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V 50 V 50 V			R14	57.11.3103 57.11.3103 57.11.3562	10 kOhm 10 kOhm 5•6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D14 D15 D16	50.04.0125 50.04.0125	1N4448 1N4448	50 V 50 V			R 16 R 17 R 18	57 • 11 • 3682 57 • 11 • 3822	6.8 kOhm 8.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	D17 D18	50.04.0508 50.04.0508	1N4935 1N4935	200 V 1N4936 RG1D 200 V 1N4936 RG1D	Mot + G I Mot + G I		R20 R21	57.11.3822 58.01.8501 57.11.3273	8.2 kOhm 500 Ohm 27 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET: 1%, 0.25W, MF	line Trimmpote	
T U	101 D F R (0	50.11.0137 (0) 88/03/07 GP	TBA 129 CAPSTAN	FM-ZF-AmpDiscriminator  MOTOR CONTROL 1.727.330.24	Ph PAGE 2	sти	R22	57.11.3103 00) 88/03/07 GP	10 kOhm CAPSTAN	1%, 0.25W, MF MOTOR CONTROL	1.727.330.24	PAGE
D.	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VALENT	MA N
	IC2 IC3	50.09.0107 50.09.0101	RC 4559 LF 353 N	UPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	Ra•NEC NS•TI NS•TI		R • • • • 23 R • • • • 24 R • • • • 25	57-11-3102 57-11-3105 57-11-3103	1 kOhm 1 MOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC 4 IC 5 IC 6	50.05.0283 50.05.0283 50.05.0158	LM 393 N LM 393 N NE 555 N	LM 393 P Dual Comp. LM 393 P Dual Comp. LM 555 CN	NS+TI NS+TI Sig+NS		R26 R27	57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	IC 8 IC 9	50.05.0283 50.17.1153 50.05.0206	LM 393 N 74 HC 153	LM 393 P Dual Comp  Capstan motor comm. Ctl. 1.727.331.	NS+TI -20 St		R 28 R 30 R 31	57.11.3103 57.11.3393 57.11.3242	10 kOhm 39 kOhm 2•4 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC 10 IC 11	50.07.0526 50.07.0538	4526 4538		Ph•Mot		R 32 R 33 R 34	57.11.3332 57.11.3822 57.11.3152	3.3 kOhm 8.2 kOhm 1.5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC12 IC13 IC14	50.07.0018 50.07.0526 50.07.0024	4094 4526 4052				R 35 R 36	57.11.3221 57.11.3333	220 Ohm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	IC15 IC16	50.09.0101 50.09.0107 50.09.0101	LF 353 N RC 4559 LF 353 N	TL 072 CP Dual Op.Amp. Bi-JFET uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	NS+TI Ra+NEC NS+TI		R 37 R 38 R 39	57.11.3133 58.01.8103 57.11.3103	13 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET, 1%, 0.25W, MF	lin. Trimmpot.	
	IC17 IC18 IC19	50.07.0538 50.07.0066	4538 4066		Ph. Mot Ra. NEC		R • • • • 40 R • • • • 41	57.11.3103 57.11.3103 57.11.3103	10 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC 20 IC 21 IC 22	50.09.0107 50.17.1000 50.05.0283	RC 4559 74 HC 00 LM 393 N	uPC 4559 Dual Op.Amp.  LM 393 P Dual Comp.	Ra•NEC NS•TI		R • • • • 42 R • • • • 43 R • • • • 44	57.11.3682 57.11.3332	6.8 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	J2 J2	54.01.0293 54.01.0241 54.01.0215	14 Pole 4 Pole 12 Pole	CIS socket strip CIS socket strip CIS socket strip	AMP AMP AMP		R • • • 46 R • • • 47 R • • • 48 R • • • 50	57.11.3103 57.11.3472 57.11.3222 57.11.3104	10 kOhm 4.7 kOhm 2.2 kOhm 100 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	J4 L1 L2	54.01.0241 1.022.222.00 1.022.222.00	4 Pole 16 uH 16 uH	CIS socket strip HF-Coil HF-Coil	AMP St St		R • • • • 51 R • • • • 52 R • • • • 53 R • • • • 54	57.11.3562 57.11.3153 57.11.3153 57.11.3562	5.6 kOhm 15 kOhm 15 kOhm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	L 3	1.022.251.00	196 uH 1 pce	Filter Coil PC Board	St St		R 55 R 56 R 57	57.11.3562 57.11.3562 57.11.3221	5.6 k0hm 5.6 k0hm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	MP2 MP3	1.727.400.01 21.99.0180	1 pce 2 pcs	Heatsink M3 ≎ 5 Cross recessed oval head sc	St rew		R • • • • 58 R • • • • 59	57.11.5475 57.11.3104	4.7 MOhm 100 kOhm	5%, 0.25W, MF 1%, 0.25W, MF		
	MP6 MP6	21.53.0355 24.16.2030 37.01.0101	2 pcs 2 pcs 4 pcs	M3 # 8 Hexagon socket head cap scr Serrat lock washer D3-2/6-0 Disc spring D3-2/8-0 # 0-3	ew		R • • • • 60 R • • • • 62	57.11.3331 57.11.3331 57.11.3392	1 kOhm 330 Ohm 3•9 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
				MOTOR CONTROL 1.727.330.24				00) 88/03/07 GP		MOTOR CONTROL	1.727.330.24	PAGE

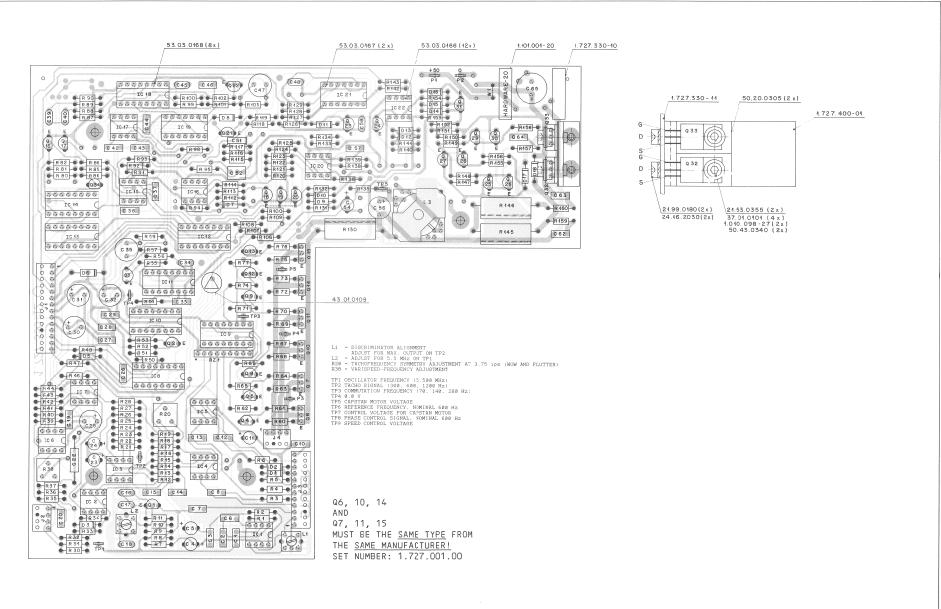


. POS.NO.		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
R6	57.11.3152	2.2 kOhm 1.5 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		W1 I	53.03.0166	8 Pole	Wire Bridge IC socket	
R • • • • 6! R • • • • 6! R • • • • 6'	57-11-3102 57-11-3331	1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		XIC2 XIC3	53.03.0166 53.03.0166	8 Pole 8 Pole	IC socket IC socket	
R	57.11.3222 57.11.3152	2.2 kOhm 1.5 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		XIC5 XIC6	53.03.0166 53.03.0166	a Pole 8 Pole	IC socket IC socket IC socket	
R 71	57.11.3332 57.11.3102	3.3 kOhm 1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC 7 XIC 8 XIC 9	53.03.0166 53.03.0168 53.03.0168	8 Pole 16 Pole 16 Pole	IC socket IC socket IC socket	
R 7 4 R 7 4 R 7	57.11.3392 57.11.3222	3.9 kOhm 2.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC10 XIC11	53.03.0168 53.03.0168	16 Pole 16 Pole	IC socket IC socket	
R76	57.11.3332	1.5 kOhm 3.3 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC 12 XIC 13 XIC 14	53.03.0168 53.03.0168 53.03.0168	16 Pole 16 Pole	IC socket IC socket IC socket	
R80 R81 R8	57.11.3333 57.11.3333	33 kOhm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC15 XIC16	53.03.0166 53.03.0166	8 Pole 8 Pole	IC socket IC socket	
R 8 ! R 8 !	57.11.3332 57.11.3333	3.3 kOhm 33 kOhm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC17 XIC18 XIC19	53.03.0166 53.03.0168 53.03.0167	8 Pole 16 Pole 14 Pole	IC socket IC socket IC socket	
R 8	57.11.3474 57.11.3223	470 kOhm 22 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC20 XIC21	53.03.0166 53.03.0167	6 Pole 14 Pole	IC socket IC socket	
R81 R91 R9	57.11.3222	22 kOhm 2•2 kOhm 100 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC • • 22	53.03.0166	8 Pole	IC socket	
R9.	57.11.3122 57.11.3222	1.2 kOhm 2.2 kOhm 100 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R 9 ! R 9 ! R 9 !	57.11.3105	1 MOhm 1 MOhm	1%, 0.25W, MF 1%, 0.25W, MF						
R • • • • 9 ° R • • • • 9 ° K • • • • 9 °	57.11.3104	56 kOhm 100 kOhm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R * * * 100	57.11.3562 57.11.3221	5.6 kOhm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF						
R10;	57.11.3562 (00) 88/03/07 GP	5.6 kOhm CAPSTAN	1%, 0.25W, MF  MOTOR CONTROL 1.727.330.24 PA	GE 7	STUDER (00)	88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.3	30 ° 24 PAGE
D. POS.NO		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
R10	6 57.11.3102	100 kOhm 1 kOhm 8.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		Note 1 - For exce	llent wow and f	lutter valu ansistors s	es at 3.75 ips the NPN - hould be from the same	
R * * * 10 R * * * 10 R * * * 10	8 57.11.3822 9 57.11.3472	8.2 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		manufact	urer.			
R * * * * 11 R * * * 11 R * * * 11	0 57.11.3472 1 57.11.3681	4.7 kOhm 680 Ohm 27 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			Polyesterfoil,	PS = Polys	rolytic, MF = Metalfilm tyrol, PP = Polypropylen	
R11	3 57.11.3273 4 57.11.3124	27 kOhm 120 kOhm 1 MOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		MANUFACTURER: AMP Fc GI	= AMP Incorpor = Fairchild = General Inst		Ph = Philips Ra = Raytheon SGS = SGS/Ates	
R • • • 11 R • • • 11 K • • • 11	6 57.11.3332 7 57.11.3682	3=3 kOhm 6=8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		IR Mot	= Internationa = Motorola	1 Rectifier	Sie = Siemens Sig = Signetics	
R11 R11 R12	9 57.11.3103	560 Ohm 10 kOhm 560 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		NEC NS	= Nippon Elect = National Sem	iconductor	St = Studer TI = Texas Instruments	
R * * * 12 K * * * 12 R * * * 12	1 57.11.3181 2 57.11.3122	180 Ohm 1.2 kOhm 910 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R 12 R 12	4 57.11.3333 5 57.11.3101	33 kOhm 100 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R • • • 12 R • • • 12 R • • • 12	7 57-11-3102	4.7 kOhm 1 kOhm 1 kOhm	1%, 0-25%, MF 1%, 0-25%, MF						
R12 K13	9 57.11.4000 0 57.56.5228	0 Ohm 0•22 Ohm 1 kOhm	5%, 4.0 W. Wire 1%, 0.25W, MF						
R • • • 13 R • • • 13 R • • • 13	2 57.11.3332 3 57.11.3105	3.3 kOhm i MOhm	1%, 0.25W, MF 1%, 0.25W, MF						
R 13 R 13 R 13	5 57.11.3152	2.2 kOhm 1.5 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R13 R13 R13	7 57.11.3154 8 57.11.3123	150 kOhm 12 kOhm 1 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R14	0 57.11.3122	1.2 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		ORIG 88/03/07				
TUDEK	(00) 88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.330.24 PA	AGE 8	STUDER (00	) 88/03/07 CP	CAPSTAN	MOTOR CONTROL 1-727-	330.24 PAGE
D. POS.NO		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.					
R14 R14	3 57.11.3332 5 57.56.5108	3.3 kOhm 0.1 Ohm	1%, 0.25W, MF 10%, 4.0 W, Wire						
R***14 R***14 R***14	7 57.11.3152 8 57.11.3562	0+1 Ohm 1+5 kOhm 5+6 kOhm	10%, 4.0 W, wire 1%, 0.25W, MF 1%, 0.25W, MF						
R15 R15	9 57.11.3562 57.11.3152	5.6 kOhm 1.5 kOhm 3.9 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R * * * 15	57.11.3102 57.11.3472	1 kOhm 4.7 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R 1 ! R 1 ! R 1 !	55 57.11.3120 56 57.11.3120	12 Ohm 12 Ohm	1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 1 ! R • • • 1 ! R • • • 1 !	57.11.3479	4.7 Ohm 4.7 Ohm 12 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R 10	57.11.3120 57.11.3822	12 Ohm 8.2 kOhm 56 kOhm	12, 0.25W, MF 12, 0.25W, MF 12, 0.25W, MF						
R16 R16	57.11.3473 55 57.11.3154	47 kOhm 150 kOhm	1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 16	57-11-5225	22 kGhm 2•2 MDhm	1%, 0.25W, MF 5%, 0.25W, MF						
RZ		8≑10 kOhm 1 Pole	5%, Single Line Tab						
TP	2 54.02.0320 3 54.02.0320	1 Pole 1 Pole	Tab Tab						
	5 54.02.0320 6 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab						
TP TP		1 Pole	Tab						
	8 54.02.0320	1 Pole 1 Pole	Tab Tab						











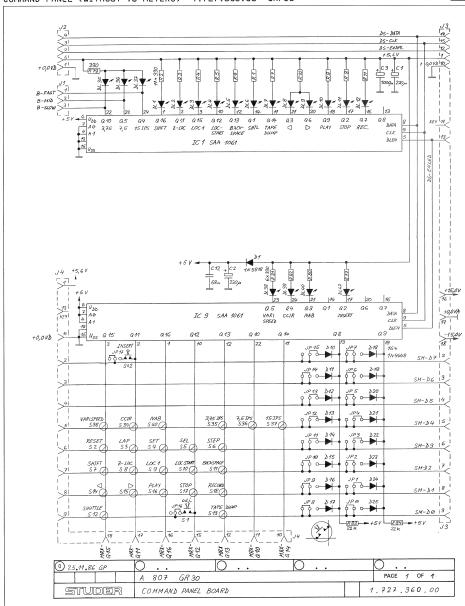
ND.	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS + NO +	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	C3 C5 C6 C7	59.06.0102 59.06.0223 59.06.0473 59.22.6100 59.22.8220 59.06.0223	1 nF 22 nF 47 nF 10 uF 2-7 uF 22 nF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 35 V EL -20% 50 V EL 10% 63 V PETP 10% 63 V PETP			MP 7 MP 8 MP 9 MP 10 MP 11 MP 12 MP 13	50*20*0404 1*010*098*27 50*20*0305 1*727*335*10 1*727*331*01 43*01*0108 1*101*001*20	2 pcs 2 pcs 2 pcs 1 pce 1 pce 1 pce 1 pce	Insulating pass through D6.0/3.5 Distance socket D3.1/7.0 ° 2.3 Greased insulation for TO 220 No. label No. label 5 ° 17 ESE label Hardware label -20	5 3 5
	C8 C10 C11 C12 C13 C14	59.06.0222 59.06.0103 59.22.5220 59.06.0222 59.06.0222 59.06.0683	2.2 nF 10 nF 22 uF 2.2 nF 2.2 nF 68 nF	10% 63 V PETP 10% 63 V PETP -20% 25 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P • • • • • 1 P • • • • • 2 P • • • • • 3 P • • • • • 4 P • • • • • 5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole 1 Pole 1 Pole	Tab Tab Tab Tab Tab	
	C15 C16 C17 C18 C19 C20	59.06.0224 59.34.5561 59.34.4151 59.34.4101 59.06.0102 59.06.0103	220 nF 560 pF 150 pF 100 pF 1 nF 10 nF	10% 63 V PETP 5% 63 V CER 5% 63 V CER 5% 63 V CER 10% 63 V PETP 10% 63 V PETP			Q2 Q3 Q4 Q5	50.03.0514 50.03.0340 50.03.0351 50.03.0351 50.03.0491	BF 366 BC 337-25 BC 327-25 BC 327-25 BC 546 B	NPN NPP PNP PNP NPN Darl. NPN (see note	Mo
	C 22 C 23 C 24 C 25 C 26	59.12.7182 59.22.8109 59.22.6100 59.22.5101 59.06.0102	1.8 nF 1 uF 10 uF 100 uF 1 nF	1% 63 V PS -150 *-60ppm/K -20% 50 V EL -20% 35 V EL -20% 25 V EL 10% 63 V PETP			Q6 Q7 Q8 Q9 Q10	50.03.0749 50.03.0799 50.03.0351 50.03.0491 50.03.0749	BD 679 BD 680 BC 327-25 BC 546 B BD 679	Darl. PNP (see note PNP NPN Darl. NPN (see note	1) Ph <sub>7</sub> Si
	C 27 E 28 C 29 C 30 C 31 C 32 C 33 C 34	59.06.0683 59.06.0683 59.06.0683 59.22.5101 59.22.5101 59.22.3221 59.06.5682 59.06.0222	68 nF 68 nF 68 nF 100 uF 100 uF 220 uF 6*8 nF 2*2 nF	100 63 V PETP 100 63 V PETP 100 63 V PETP 100 63 V PETP -200 25 V EL -200 25 V EL 50 63 V PETP 100 63 V PETP			Q11 Q12 Q13 Q15 Q16 Q17 Q18	50.03.0799 50.03.0351 50.03.0491 50.03.0749 50.03.0749 50.03.0436 50.03.0436	BD 680 BC 327-25 BC 546 B BD 679 BD 680 BC 237 B BC 237 B BC 337-25	Darl. PAP (see note PAP NPN NPN NPN NPN NPN NPN See note PAP BC 550 B NPN NPN NPN NPN NPN NPN NPN NPN NPN N	1) Ph <sub>7</sub> Si
	C 35 C 36 C 37 C 39 C 40	59.05.1223 59.06.0332 59.06.5103 59.34.4181 59.34.4181	22 nF 3.3 nF 10 nF 180 pF 180 pF	1% 63 V PP 10% 63 V PETP 5% 63 V PETP 5% 63 V CER 5% 63 V CER			Q20 Q21 Q22 Q23	50.03.0340 50.03.0340 50.03.0340 50.03.0351 50.03.0340	BC 337-25 BC 337-25 BC 337-25 BC 327-25 BC 337-25	NPN NPN PNP NPN	
ΤU	DER (O	) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.335.20	PAGE 1	STU	DER (C	00) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.335.20	PAGE
ND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA N
	C 42 C 44 C 45 C 46 C 47	59.06.0332 59.06.0103 59.06.0332 59.06.0222 59.06.5682 59.05.1223	3.3 nF 10 nF 3.3 nF 2.2 nF 6.8 nF 22 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 5% 63 V PETP 1% 63 V PP			Q24 Q25 Q26 Q27 Q28 Q29	50*03*0515 50*03*0626 50*03*0551 50*03*0492 50*03*0491 50*03*0626 50*03*0551	BC 307 B BC 640 BC 639 BC 556 B BC 546 B	BC 557 B BC 560 B PNP PNP NPN PNP NPN NPN PNP NPN PNP NPN	
	C48 C51 C53 C54 C56 C57	59.34.4331 59.26.5229 59.26.0680 59.22.6100 59.22.8100 59.06.0683 59.34.5561 59.06.0222	330 pf 2.2 uF 68 uF 10 uF 10 uF 68 nF 560 pF 2.2 nF	5% 63 V CER 20% 25 V SAL 20% 6-3 V SAL -20% 63 V EL -20% 63 V EL 10% 63 V FETP 5% 63 V CER 10% 63 V PETP	Ph Ph		Q30 Q31 Q32 Q33 Q35 Q35 Q36	50.03.0491 50.03.1502 50.03.1552 50.03.0515 50.03.0436 50.03.0436	BC 639 BC 546 B IRF 522 IRF 9532 BC 307 B BC 237 B WP 146 BC 237 B	MTP 8N10 Power FET P-Channel MTP 8P10 Power FET P-Channel BC 557 B BC 560 B PNP BC 547 B BC 550 B NPN P-ch FET BC 547 B BC 550 B NPN	IR•M IR•M
	C 62 C 63 C 64 C 65 D 1	59.06.0222 59.06.0683 59.22.8221 50.04.0125 50.04.0125	2.2 nF 68 nF 220 uF 1N4448 1N4448	10% 63 V PETP 10% 63 V PETP -20% 63 V EL 50 V			R • • • • • 1 R • • • • • 2 R • • • • • 3 R • • • • • 4 R • • • • • 5	57.11.3681 57.11.3102 57.11.3472 57.11.3472 57.11.3472	680 Ohm 1 kOhm 4.7 kOhm 4.7 kOhm 4.7 kOhm	1%, 0.25M, MF 1%, 0.25M, MF 1%, 0.25M, MF 1%, 0.25M, MF 1%, 0.25M, MF	
	D3 D5 D6 D7 D9 D10	50.04.1101 50.04.1112 50.04.0512 50.04.1112 50.04.0134 50.04.0125 50.04.0125 50.04.0127	3.9 V 5.1 V 1N5818 5.1 V 1N3595 DHD 1N4448 1N4448 BAS 40-02	5% 0.4 W 5% 0.4 W 30 V 1M5819 Schottky 5% 0.4 W 150 V I rev <1 nA @ 125 V 50 V 50 V 30 V BAT 85, BAT 42 Schottky	Fc Sie∗Ph		R6 R7 R8 R9 R10 R11	57-11-3101 57-11-3121 57-11-3121 57-11-3103 57-11-3103 57-11-3223 57-11-3223 57-11-3103	100 Ohm 120 Ohm 120 Ohm 10 kOhm 10 kOhm 1 kOhm 22 kOhm	1%, 0.25W, NF 1%, 0.25W, NF	
	D12 D13 D14 D15 D16 D17	50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0508 50.04.0508	1N4448 1N4448 1N4448 1N4448 1N4448 1N4935	50 V 50 V 50 V 50 V 50 V 200 V 1N4936 RGID 200 V 1N4936 RGID	Mot∗GI Mot∗jGI		R14 R15 R16 R17 R19 R20 R21	57.11.3103 57.11.3103 57.11.3562 57.11.3562 57.11.3822 57.11.3822 58.01.8501 57.11.3273	10 k0hm 10 k0hm 5.6 k0hm 6.8 k0hm 8.2 k0hm 8.2 k0hm 500 0hm 27 k0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 10%, 0.5 W, CERMET, lin. Trimmpot. 1%, 0.25W, MF	
т и	IC1 DER (0	50.11.0137 0) 88/03/21 CP	TBA 129 CAPSTAN	FM-ZF-AmpDiscriminator  MOTOR CONTROL HS 1.727.335.20	Ph PAGE 2	s T U	R • • • • 22	57.11.3103 DO) 88/03/21 GP	10 kOhm Capstan	1%, 0.25W, MF  MOTOR CONTROL HS 1.727.335.20	PAGE
I ND •	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAM
	IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11	50.09.0107 50.09.0101 50.05.0283 50.05.0158 50.05.0158 50.05.0283 50.17.1153 50.05.0206 50.07.0526	RC 4559 LF 353 N LM 393 N LM 393 N NE 555 N LM 393 N 74 HC 153	uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET LM 393 P Dual Comp. LM 393 P Dual Comp. LM 595 CN LM 393 P Dual Comp. LM 393 P Dual Comp. Capstan motor comm. Ctl. 1.777.331.	RayNEC NS+TI NS+TI NS+TI S+TI Sig+NS NS+TI -20 St Ph+Mot		R23 R24 R25 R26 R27 R30 R31 R32	57-11-3102 57-11-3105 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3242 57-11-3323 57-11-3242	1 kOhm 1 MOhm 10 kOhm 10 kOhm 10 kOhm 39 kOhm 2-4 kOhm 8-2 kOhm	1%, 0.25%, MF 1%, 0.25%, MF	
	IC 12 IC 13 IC 14 IC 15 IC 16 IC 17 IC 18 IC 19	50.07.0018 50.07.0526 50.07.0024 50.09.0101 50.09.0107 50.09.0107 50.07.0538 50.07.0066	4094 4526 4052 LF 353 N RC 4559 LF 353 N 4538	TL 072 CP Dual Op.Amp. Bi-JFET UPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	NS•TI Ra•NEC NS•TI Ph•Mot		R34 R35 R36 R37 R39 R39 R40	57-11-3152 57-11-3321 57-11-3133 57-11-3133 58-01-8103 57-11-3103 57-11-3103 57-11-3103	1.5 kOhm 220 Ohm 33 kOhm 13 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 10%, 0.5%, MF, CERMET, lin. Trimmpot 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	1C20 1C21 1C22 J1 J2 J3	50.09.0107 50.17.1000 50.05.0283 54.01.0293 54.01.0241 54.01.0215	RC 4559 74 HC 00 LM 393 N 14 Pole 4 Pole 12 Pole	uPC 4559 Dual Op.Amp.  LM 393 P Dual Comp.  CIS socket strip CIS socket strip CIS socket strip	Ra+NEC NS+TI AMP AMP AMP		R 42 R 43 R 44 R 46 R 46 R 50 R 51	57.11.3103 57.11.3682 57.11.3332 57.11.3103 57.11.3472 57.11.3222 57.11.3104 57.11.3562	10 kOhm 6.8 kOhm 3.3 kOhm 10 kOhm 4.7 kOhm 2.2 kOhm 100 kOhm 5.6 kOhm	1%, 0.25%, MF 1%, 0.25%, MF	
	L1 L2 L3	54.01.0241 1.022.222.00 1.022.222.00 1.022.251.00	4 Pole 16 uH 16 uH 196 uH	CIS socket strip  HF-Coil HF-Coil Filter Coil	St St St		R52 R53 R54 R55 R56 R57	57.11.3153 57.11.3153 57.11.3562 57.11.3562 57.11.3562	15 kOhm 15 kOhm 5-6 kOhm 5-6 kOhm 5-6 kOhm 220 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	MP2 MP3 MP4	1.727.330.12 1.727.400.01 21.99.0180 21.53.0355	1 pce 1 pce 2 pcs 2 pcs	PC Board Heatsink M3 * 5 Cross recessed oval head sc: M3 * 8 Hexagon socket head cap scr:	St rew		R 57 R 58 R 59 R 60	57.11.3221 57.11.5475 57.11.3104 57.11.3102	4.7 MOhm 100 kOhm 1 kOhm	1%, 0.25W, MF 5%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	



. PDS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF •	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
R • • • • 63 R • • • • 64	57.11.3222 57.11.3152	2.2 kOhm 1.5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		W1 1.010.321.64 Wire Bridge
R65 R66 R67	57.11.3332 57.11.3102 57.11.3331	3.3 kOhm 1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC1 53.03.0166 8 Pole IC socket XIC2 53.03.0166 8 Pole IC socket XIC3 53.03.0166 8 Pole IC socket
R • • • • 68 R • • • 69 R • • • • 70	57•11•3392 57•11•3222 57•11•3152	3.9 kOhm 2.2 kOhm 1.5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC4 53.03.0166 8 Pole IC socket XIC5 53.03.0166 8 Pole IC socket XIC6 53.03.0166 8 Pole IC socket
R71 R72 R73	57.11.3332 57.11.3102 57.11.3331	3.3 kOhm 1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC7 53.03.0166 8 Pole IC socket XIC8 53.03.0168 16 Pole IC socket XIC9 53.03.0168 15 Pole IC socket
R74 R75	57•11•3392 57•11•3222	3.9 kOhm 2.2 kOhm	1%, 0.25W; MF 1%, 0.25W; MF		XIC10 53.03.0168 16 Pole IC socket XIC11 53.03.0168 16 Pole IC socket
R76 R77 R80	57.11.3152 57.11.3332 57.11.3682	1.5 kOhm 3.3 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC12 53-03-0168 16 Pole IC socket XIC13 53-03-0168 16 Pole IC socket XIC14 53-03-0168 16 Pole IC socket
R • • • • 81 R • • • 82 R • • • 84	57.11.3333 57.11.3333 57.11.3332	33 kOhm 33 kOhm 3•3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC.•15 53.03.0166 8 Pole IC socket XIC.•16 53-03-0166 8 Pole IC socket XIC.•17 53.03.0166 8 Pole IC socket
R85 R86 R87	57.11.3333 57.11.3333 57.11.3474	33 kOhm 33 kOhm 470 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC18 53-03-0168 16 Pole IC socket XIC19 53-03-0167 14 Pole IC socket XIC20 53-03-0166 8 Pole IC socket
R • • • • 88 R • • • • 89 R • • • 90	57•11•3223 57•11•3223 57•11•3222	22 kOhm 22 kOhm 2•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC21 53.03.0167 14 Pole IC socket XIC22 53.03.0166 8 Pole IC socket
R • • • • 91 R • • • • 92 R • • • • 93	57.11.3104 57.11.3122 57.11.3222	100 kOhm 1•2 kOhm 2•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R * * * * 94 R * * * * 95	57.11.3104 57.11.3105 57.11.3105	100 kOhm 1 MOhm 1 MOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R96 R97 R98	57.11.3563 57.11.3104	56 kOhm 100 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R99 R100 R101	57•11•3562 57•11•3562 57•11•3221	5.6 kOhm 5.6 kOhm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R102 TUDER (	57.11.3562 00) 88/03/21 GP	5.6 kOhm CAPSTAN	1%, 0.25%, MF  MOTOR CONTROL HS 1.727.335	5.20 PAGE 7	S T U D E R (00) 88/03/21 GP CAPSTAN MOTOR CONTROL HS 1-727+335+20 PAG
D. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
R * * * 103 R * * * 106 R * * * 107	57.11.3104 57.11.3102 57.11.3822	100 kOhm 1 kOhm 8•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		Note 1 - For excellent wow and flutter values at 3-75 ips the NPN respective the PAP - Transistors should be from the same
R108 R109 R110	57.11.3822 57.11.3472 57.11.3472	8.2 kOhm 4.7 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		manufacturer. MATERIALS: CER = Ceramic,
R • • • 111 R • • • 112	57.11.3681 57.11.3273 57.11.3273	680 Ohm 27 kOhm 27 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		PETP = Polyesterfoil, PS = Polyestyrol, PP = Polypropylen  MANUFACTURER: AMP = AMP Incorporated Ph = Philips
R113 R114 R115	57.11.3124 57.11.3105	120 kOhm 1 MOhm	1%, 0.25W, MF 1%, 0.25W, MF		Fc = Fairchild Ra = Raytheon GI = General Instruments SGS = SGS/Ates
R116 R117 R118	57•11•3682 57•11•3561	3.3 kOhm 6.8 kOhm 560 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		IR = International Rectifier Sie = Siemens Hot = Motorola = Sig = Signetics NEC = Nippon Electric Corp. St = Studer NS = National Semiconductor TI = Texas Instruments
R • • • 119 R • • • 120 R • • • 121	57.11.3561 57.11.3181	10 kOhm 560 Ohm 180 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		NS = National Semiconductor
R122 R123 R124	57.11.3122 57.11.3911 57.11.3333	1.2 kOhm 910 Ohm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R125 R126 R127	57.11.3101 57.11.3472 57.11.3102	100 Ohm 4•7 kOhm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R • • • 128 R • • • 129 R • • • 130	57.11.3102 57.11.4000 57.56.5228	1 kOhm 0 Ohm 0•22 Ohm	1%, 0.25W, MF 5%, 4.0 W, Wire		
R * * * 131 R * * * 132 R * * * 133	57.11.3102 57.11.3332 57.11.3105	1 kOhm 3.3 kOhm 1 MOhm 2.2 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
R • • • 134 R • • • 135 R • • • 136	57.11.3222 57.11.3152 57.11.3332	1.5 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R • • • 137 R • • • 138 R • • • 139	57.11.3154 57.11.3123 57.11.3102	150 kOhm 12 kOhm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R • • • 140 R • • • 141	57.11.3122 57.11.3472	1.2 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		ORIG 88/03/21
TUDER	(00) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.33	5.20 PAGE 8	S T U D E R (00) 88/03/21 GP CAPSTAN MUTUR CUNTRUL HS 1+727+335+20 PAI
0. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	
R142 R143 R145	57.11.3102 57.11.3332 57.56.5108	1 kOhm 3.3 kOhm 0.1 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 10%, 4.0 W, Wire		
R146 R147 R148	57.56.5108 57.11.3152 57.11.3562	0.1 Ohm 1.5 kOhm 5.6 kOhm	10%, 4.0 W, Wire 1%, 0.25W, MF 1%, 0.25W, MF		
R149 R150 R151	57.11.3562 57.11.3152 57.11.3392	5.6 kOhm 1.5 kOhm 3.9 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
R152 R153 R154	57.11.3102 57.11.3472 57.11.3152	1 kOhm 4•7 kOhm 1•5 kOhm	1%, 0-25W, MF 1%, 0-25W, MF 1%, 0-25W, MF		
R155 R156 R157	57.11.3120 57.11.3120 57.11.3479	12 Ohm 12 Ohm 4•7 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R158 R159 R166	57.11.3479 57.11.3120 57.11.3120	4.7 Ohm 12 Ohm 12 Ohm	1%, 0-25W, MF 1%, 0-25W, MF 1%, 0-25W, MF		
R161 R162 R164	57.11.3822 57.11.3563 57.11.3473	8.2 kOhm 56 kOhm 47 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R165 R166 R167	57.11.3154 57.11.3223 57.11.5225	150 kOhm 22 kOhm 2•2 MOhm	1%, 0.25W, MF 1%, 0.25W, MF 5%, 0.25W, MF		
K41	5/-88-4103	8≑10 KODM	5%, Single Line		
TP••••1 TP••••2 TP••••3	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab		
TP5 TP5	54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole	Tab Tab Tab		
TP 7	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole	Tab Tab Tab Tab		
TP8 TP9	54.02.0320	1 Pole			



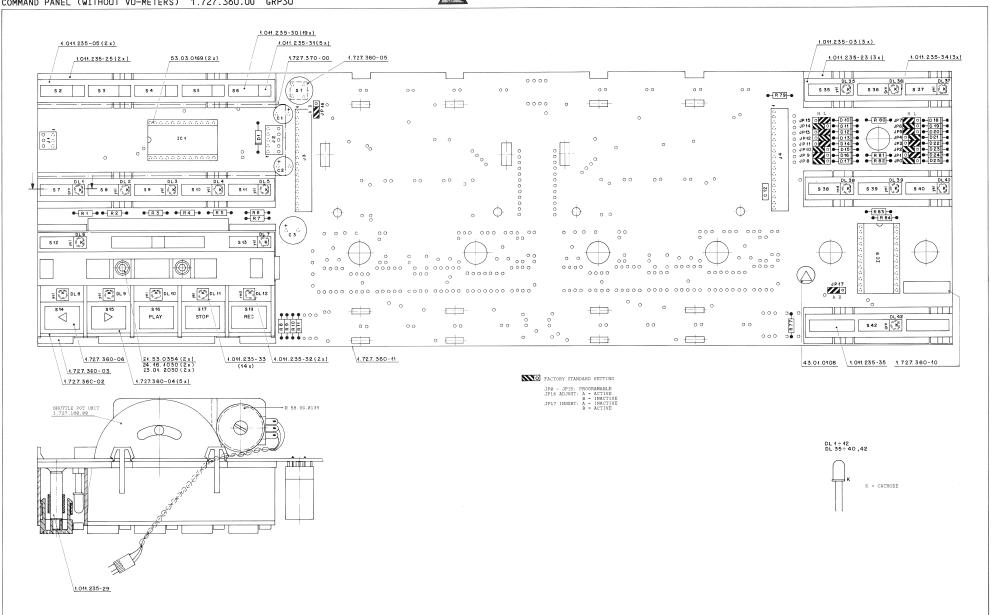
#### COMMAND PANEL (WITHOUT VU-METERS) 1.727.360.00 GRP30



4D. POS.NO.	PART NG.	VALUE	SPECIFICATIONS / EQUIV	ALENT	MANUF.	INO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
A1 A2	1+727+370+00 1+727+180+00		Display Board Shuttle Control			R 80 R 81 R 82 R 83 R 84	57.11.4391 57.11.4391 57.11.4391 57.11.4223 57.11.4223	390 Ohm 390 Ohm 390 Ohm 22 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
C1 C3 C12	59.22.3221 59.22.3221 59.22.3102 59.06.0683	220 UF 220 UF 1000 UF 68 NF	-20% 10 V EL -20% 10 V EL -20% 10 V EL 10% 50 V PETP			S * * * * * 1	55.15.0130		Push button Switch	111
0 1 0 10 0 11 0 12 0 13 0 14 0 15 0 16 0 17 0 18 0 19 0 20 0 21 0 22 0 23 0 24	\$0.04.0512 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125 \$0.04.0125	1N5818 1N4448 1N4448 1N4448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448 1M448	30 v Schottk 50 v 51	y.		XIC9	53.03.0169 53.03.0169	24-Pole 24-Pole	IC Socket	
0L 1 0L 2 0L 3 0L 4 0L 5 0L 6 0L 7 0L 8 0L 9 0L 10 0L 10	50.04.2501 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500	NV5452 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352 NV5352	LED grn 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm		GI 6 GI GI GI GI GI GI GI GI GI	CER=Ceramic. EL= MF=Metal Film, F MANUFACTURER: AP PF ORIG 66/11/25	FElectrolytic, Pi Cerm=Pot. Cerme MP, GI=General II I=Philips, Ra=Ra	ETP=Polyester t. nstrument. I ytheon	-, \$1=\$ilicon, TT,	
TUDER (	00) 86/11/25 GP	COMMAND P	ANEL BOARD	1.727.360.00		STUDER (C	00) 86/11/25 GP	COMMAND	PANEL BOARD 1.727.360	.00 PAGE 4
ND+ P05+N0-	PART NO.	VALUE	SPECIFICATIONS / EQUI	VAL ENT	MANUF.					
DL 12 DL 33 DL 35 DL 37 DL 37 DL 37 DL 42	50.04.2115 50.04.2500 50.04.2501 50.04.2500 50.04.2115 50.04.2500 50.04.2500	NV5752 NV5352 NV5452 NV5352 NV5352 NV5352 NV5352 NV5352	LEO red D=5 mm LEO yel D=5 mm LEO grn D=5 mm LEO yel D=5 mm LEO red D=5 mm LEO yel D=5 mm LEO yel D=5 mm LEO grn D=5 mm		GI GI GI GI GI GI					
IC?	50.04.2501 50.13.0106 50.13.0106	SAN 1061 SAN 1061	Driver Driver		Ph Ph					
Jl J3 J3	54-01-0287 54-01-0288 54-01-0228	3-Pole 5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP					
JP JP	5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021 5+.01.0021		Bridge Bridge							
MP	54.01.0020 (00) 86/11/25 GP	54 pcs COMMAND I	Contact Pin	1.727.360.00	PAGE Z					
IND. POS.NO.	. PART NG.	VALUE	SPECIFICATIONS / EQU	I VALENT	MANUF.					
MP	1.011.235.05 1.011.235.23 1.011.235.23 1.011.235.23 1.011.235.30 1.011.235.30 1.011.235.31 1.011.235.31 1.011.235.33	3 pcs 2 pcs 3 pcs 2 pcs 2 pcs 24 pcs 19 pcs 5 pcs 12 pcs 1 pcs 1 pcs 1 pcs 1 pcs 1 pcs 1 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 3 pcs 1 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 3 pcs 2 pcs 2 pcs 2 pcs 3 pcs 2 pcs 3 pcs 2 pcs 3 pcs 4 pcs 1 pcs 5 pcs 1 pcs 5 pcs 1 pcs 5 pcs 1 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 3 pcs 3 pcs 5 p	Push button case 37 Push button case 37 Push button case 37 Conductive rubber 58 Bolt Lutton 1405 Dummy colotte Calotte red Calotte red Calotte grn Push button case w Push button 19914 Push button 19914 Push button 19914 Push button 19914 Push button 19914 Push button 19914 Push button 19914 Push button 19914 Push button 140 Push bu	th Shuttle ith Shuttle cap screw M396	REC)					
R	57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391 5 57.11.4391	190 Ohe 190 Ohe 390 Ohe 390 Ohe 390 Ohe 190 Ohe 390 Ohe	2% 0.25% MF 2% 0.25% MF	1.727.360.00						

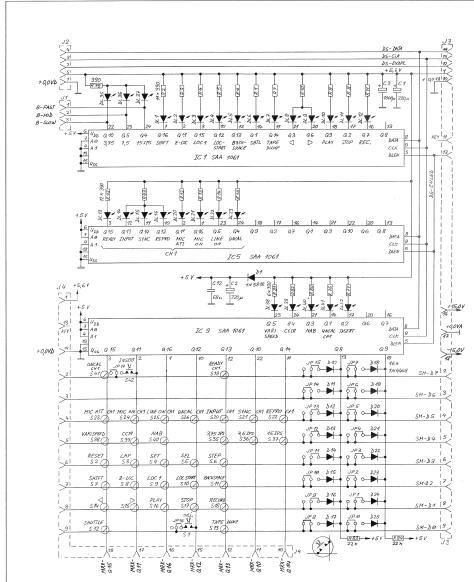


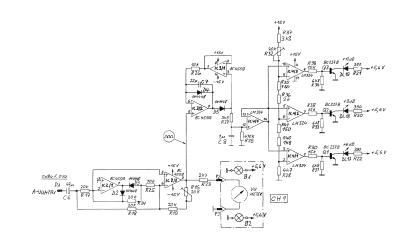
COMMAND PANEL (WITHOUT VU-METERS) 1.727.360.00 GRP30









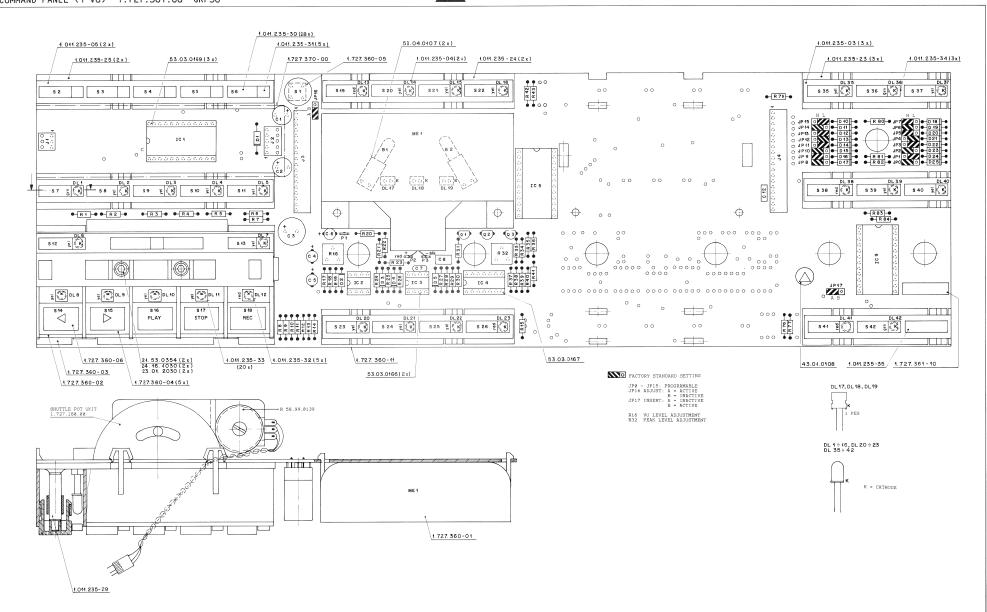




0 25.1	11.86	GP		$\circ$	0		0		0
				A 807 GR 30	)				PAGE 2 OF 2
51	rWi		₹}	COMMAND	PANEL	BOARD	1 VU	SC	1.727.36 <b>1</b> .00



COMMAND PANEL (1 VU) 1.727.361.00 GRP30



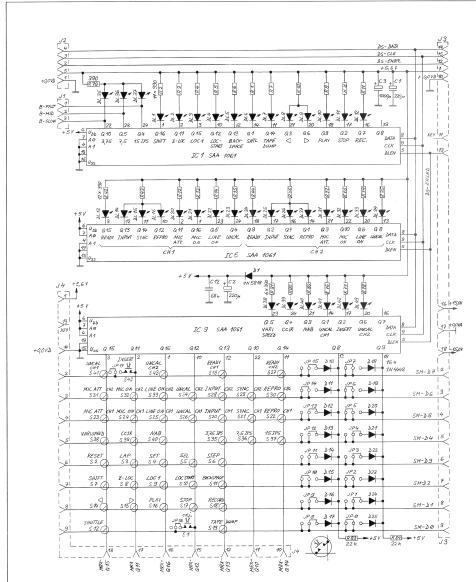


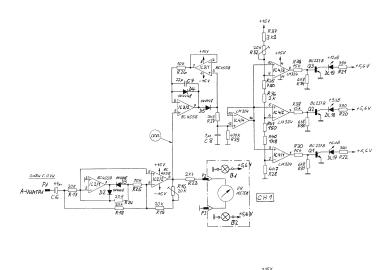
### COMMAND PANEL (1 VU) 1.727.361.00 GRP30

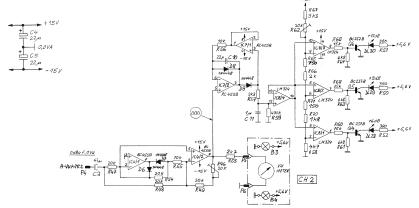
	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I NO •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
		1.727.370.00 1.727.180.00 51.02.0144 51.02.0144	6 V 6 V	Display Board Shuttle Control  0.03 A Lamp 0.03 A Lamp			MP12 MP13 MP14	1.011.235.31 1.011.235.32 1.011.235.33 1.011.235.34 1.727.360.02	5 pcs 5 pcs 20 pcs 3 pcs 1 pcs	Dummy calotte Calotte red Calotte yel Calotte grn Push button case with Shuttle Lonductive rubber with Shuttle	
	C 2	59.22.3221 59.22.3221	220 uF 220 uF	-20% 10 V EL -20% 10 V EL			MP15 MP16 MP17	1.727.360.04 1.727.360.05	1 pcs 5 pcs 1 pcs	Push button 19#14 Push button Adj.	
	C 4 C 5	59.22.5220 59.22.5220 59.22.5220	1000 uF 22 uF 22 uF	-20% 10 V EL -20% 25 V EL -20% 25 V EL			MP19 MP20	1.727.361.10 1.727.360.11 53.03.0221	1 pcs 1 pcs 31 pcs	No. Label Command Panel PCB 2-pole LED Socket	
	C 7 C 8	59.22.3470 59.34.2220 59.06.0105	47 uF 22 pF 1 uF	-20% 10 V EL 10% 50 V CER 10% 50 V PETP			MP21 MP22 MP23	1.727.362.93 21.53.0354 23.01.2032 24.16.1030	1 pcs 2 pcs 2 pcs	L-LST Command Panel Board Hexagon socket head cap screw M: Washer	3º 6
	01	59.06.0683 50.04.0512	68 nF 1N5818 1N4448	10% 50 V PETP  30 V Schottky 50 V SI			MP25 MP26 MP27	43.01.0108 1.727.360.06 1.011.235.35	2 pcs 1 pcs 1 pcs 1 pcs	Fin washer ESE Warning label Push button labels (<+>+PLAY+STO Dummy push button 19%5	OP «REC)
	D2 D4 D5 D10	50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI 50 V SI			P · · · · · 1 P · · · · · 2 P · · · · · 3	54.02.0320 54.02.0320 54.02.0320	T pes	Plug 2-8*0-8 Plug 2-8*0-8 Plug 2-8*0-8	AM AM AM
	0 · · · · 11 0 · · · · 12 0 · · · · 13 D · · · · 14	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			Q1 Q2 Q3	50.03.0436 50.03.0436 50.03.0436	8C237B 8C237B 8C237B	BC547B, BC550B NPN BC547B, BC550B NPN BC547B, BC550B NPN	
	D15 D16 D17	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R • • • • • 1 R • • • • • 2 R • • • • 3	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2%+ 0=25W+ MF 2%+ 0=25W+ MF 2%+ 0=25W+ MF	
	D18 D19 D20 D21	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI			R 5 R 6	57 • 11 • 4391 57 • 11 • 4391 57 • 11 • 4391	390 Dhm 390 Dhm 390 Dhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
	D22 D23 D24	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R 8 R 9	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
τυ	025	50.04.0125 1) 86/09/23 GP	1N4448	50 V SI	•00 PAGE 1	STU	R • • • • 10	57.11.4391 0) 86/09/23 GP	390 Dhm	2%, 0.25%, MF ANEL BOARD 1VU 1.727.361.0	00 PAGE
		PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.					SPECIFICATIONS / EQUIVALENT	MANU
	DL2 DL3 DL4	50.04.2501 50.04.2500 50.04.2500 50.04.2500	MV5452 MV5352 MV5352 MV5352	LED grn D=5 mm LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI GI		R12 R13 R14	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	DL 5 DL 6 DL 7	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R • • • • 15 R • • • • 16 R • • • • 17	57.11.4391 58.01.8203 57.11.3203	390 Ohm 20 kOhm 20 kOhm	2%, 0.25W; MF 10%, 0.5 W; PCerm 2%, 0.25W; MF	
	DL • • • • 8 DL • • • • 9 DL • • • 10	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	G I G I		R • • • • 18 R • • • • 19 R • • • • 20	57.11.3203 57.11.3203 57.11.4391	20 k0hm 20 k0hm 390 Dhm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF 2% 0.25W MF	
	DL • • • 11 DL • • • 12 DL • • • 13	50.04.2500 50.04.2115 50.04.2115	MV5352 MV5752 MV5752	LED yel 0=5 mm LED red 0=5 mm LED red 0=5 mm	61 61		R 22 R 23	57-11-4391 57-11-4391 57-11-4272	390 Ohm 390 Ohm 2•7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	DL14 DL15 DL16	50.04.2500 50.04.2500 50.04.2500	MV 5352 MV 5352 MV 5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R • • • • 24 R • • • • 25 R • • • • 26	57.11.3203 57.11.4103 57.11.4103	20 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 17 DL 18 DL 19	50.04.2119 50.04.2119 50.04.2119	MV57124 MV57124 MV57124	LED red 6.35¢3.81 LED red 6.35¢3.81 LED red 6.35¢3.81	GI GI GI		R • • • • 27 R • • • • 28 R • • • • 29 R • • • • 30	57.11.4332 57.11.3472 57.11.4474	3.3 kOhm 4.7 kOhm 470 kOhm 15 kOhm	2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	DI20 DL21 DL22 DL23	50-04-2500 50-04-2500 50-04-2500 50-04-2115	MV5352 MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI GI		R32 R33	57-11-4153 57-11-4682 58-01-8203 57-11-4682	6.8 kühm 20 kühm 6.8 kühm	2%, 0°25W, MF 10%, 0°5 W, PCerm 2%, 0°25W, MF	
	DL35 DL36 DL37	50.04.2500 50.04.2501 50.04.2500	MV 5352 MV 5452 MV 5352	LED yel D=5 mm LED grn D=5 mm LED yel D=5 mm	GI GI GI		R 34 R 35 R 36	57.11.4682 57.11.3751 57.11.3202	6.8 kOhm 750 Ohm 2 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	DL 38 DL 39 DL 40	50.04.2115 50.04.2500 50.04.2500	MV5752 MV5352 MV5352 MV5752	LED red D=5 mm LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	G I G I G I		R 37 R 38 R 39	57.11.4332 57.11.4153 57.11.4153	3.3 kOhm 15 kOhm 15 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL ••• 41 DL ••• 42	50.04.2115 50.04.2501	MV5452	LED grn D=5 mm	61		R • • • • 40 R • • • • 41 R • • • • 42	57.11.3182 57.11.4151 57.11.4391	1.8 kOhm 150 Ohm 390 Ohm	1%, 0°25W, MF 2%, 0°25W, MF 2%, 0°25W, MF	
	IC2 IC3	50.13.0106 50.09.0107 50.09.0107	SAA 1061 RC4559 RC4559	Oriver Oual Op. Amp. Oual Op. Amp.	Ph Ra Ra		R76 R77	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
T 11	IC5	50.05.0199 50.13.0106	LM324 SAA 1061	Quad Op. Amp. Driver PANEL BUARD IVU 1.727.363	NS.Mot Ph uu PAGE 2	S T 11	R****79 R****80	57.11.4391 57.11.4391 30) 86/09/23 GP	390 Ohm 390 Ohm	24, U.25W, MF 2%, U.25W, MF PANEL BOARD 1VU 1.727.361.	OO PAGE
10	D E X (0	3, 30,03,23 0	COMMAND	TATE TO TATE TO TATE TO THE TA	TAGE 2	3.0		30, 30,00,00	Committee		
ND.	POSNO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAM
	J1	50.13.0106 54.01.0287 54.01.0288	SAA 1061 3-Pole 5-Pole	Driver CIS Socket Strip CIS Socket Strip	Ph AMP AMP		R 81 R 82 R 83 R 84	57•11•4391 57•11•4391 57•11•4223 57•11•4223	390 Ohm 390 Ohm 22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	J • • • • 2 J • • • • 4 J • • • • 4	54.01.0288 54.01.0228 54.01.0228	5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP		S1	55.15.0130	FF KOUR	Push button Switch	1
	JP 0 JP 1 JP 2	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XB2	53.04.0107 53.04.0107		Lamp holder Lamp holder	
	JP • • • • 3 JP • • • • 4 JP • • • • 5	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC 2 XIC 3	53.03.0169 53.03.0166 53.03.0166	24-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	JP 6 JP 7 JP 8	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC 4 XIC 5 XIC 9	53.03.0167 53.03.0169 53.03.0169	14-Pole 24-Pole 24-Pole	IC Socket IC Socket IC Socket	
	JP9 JP10 JP11 JP12	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge							
	JP13 JP14 JP15	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge							
	JP • • • 16 JP • • • 17	54.01.0021 54.01.0021		Bridge Bridge							
	ME1 MP1	1.727.360.01	54 pcs	VU Meter Contact Pin							
	MP2 MP3 MP4	1.011.235.03 1.011.235.04 1.011.235.05	3 pcs 2 pcs 2 pcs	Push button case 3¢ Push button case 4¢ Push button case 5¢		CER=	Geramic, EL	=Electrolytic. P	PETP=Polyeste	r, SI=Silicon,	
	MP5 MP6 MP7	1.011.235.23 1.011.235.24 1.011.235.25 1.011.235.29	3 pcs 2 pcs 2 pcs 33 pcs	Conductive rubber 3° Conductive rubber 4° Conductive rubber 5°		MF = Me MANUI	FACTURER: A	PCerm=Pot. Cerme MP, GI=General I S=National Semic	instrument, I	TT, Mot=Motorola, h=Philips, Ra=Raytheon	
	MP 8			Bol t			86/09/23				





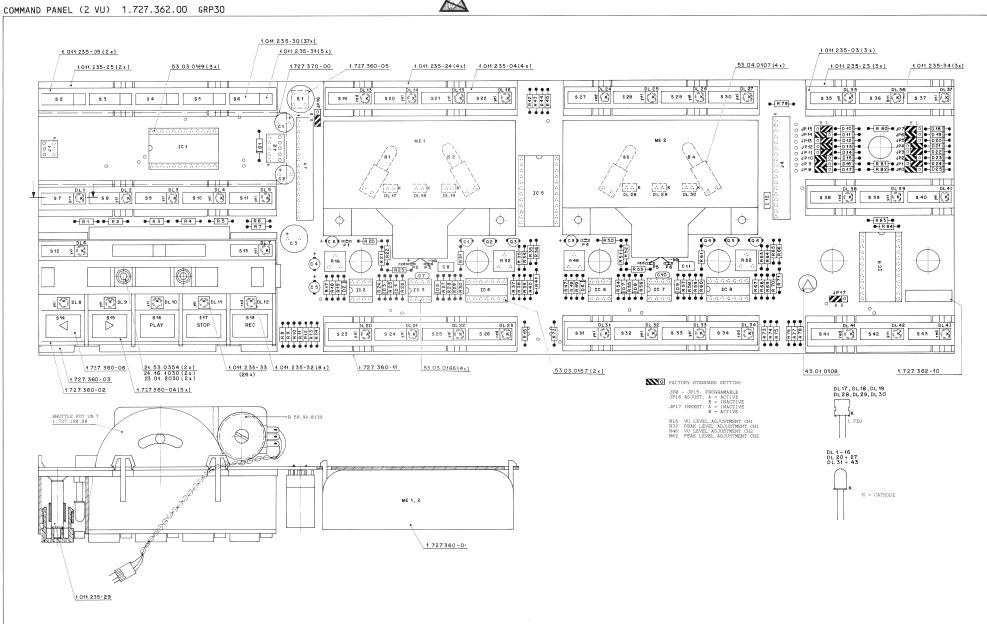






① 25.11.86 GP	0	) (	)	0
	A 807 GR 30			PAGE 2 OF 2
STUDER	COMMAND PANEL	BOARD 2 VU	SC .	1.727.362.00







### COMMAND PANEL (2 VU) 1.727.362.00 GRP30

4D •	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.		POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANU
		•727•370•00 •727•180•00		Display Board Shuttle Control			JP 5 JP 6 JP 7	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge
	B • • • • • 1 B • • • • • 3	51.02.0144 51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp 0.03 A Lamp			JP 8 JP 0 JP 10	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge
	64 C1 C2	51.02.0144 59.22.3221 59.22.3221	6 V 220 uF 220 uF	0.03 A Lamp -20% 10 V EL -20% 10 V EL			JP • • • 11 JP • • • 12 JP • • • 13 JP • • • 14	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge
	C 4 C 5	59.22.3102 59.22.5220 59.22.5220	1000 uF 22 uF 22 uF	-20% 10 V EL -20% 25 V EL -20% 25 V EL			JP15 JP16 JP17	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge
	C6 C7 C8	59.22.3470 59.34.2220 59.06.0105	47 uF 22 pF 1 uF	-20% 10 V EL 10% 50 V CER 10% 50 V PETP			ME 1 ME 2	1.727.360.01 1.727.360.01		VU Meter VU Meter
	C 9 C 10 C 11	59.22.3470 59.34.2220 59.06.0105	47 uF 22 pF 1 uF	-20% 10 V EL 10% 50 V CER 10% 50 V PETP 10% 50 V PETP			MP2 MP3	54.01.0020 1.011.235.03 1.011.235.04	54 pcs 3 pcs 4 pcs	Contact Pin Push button case 3* Push button case 4*
	D1 D2	59.06.0683 50.04.0512 50.04.0125	68 nF 1N5818 1N4448	30 V Schottky 50 V SI			MP5 MP6	1.011.235.04 1.011.235.05 1.011.235.23 1.011.235.24	2 pcs 3 pcs 4 pcs	Push button case 5* Conductive rubber 3* Conductive rubber 4*
	D 4 D 5	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			MP7 MP8 MP9	1.011.235.25 1.011.235.29 1.011.235.30	2 pcs 42 pcs 37 pcs	Conductive rubber 5* Bolt Push button 14*5
	D6 D7 D8	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			MP10 MP11 MP12	1.011.235.31 1.011.235.32 1.011.235.33	5 pcs 8 pcs 26 pcs	Dummy calotte Calotte red Calotte yel Calotte grn
	D9 D10 D11 D12	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			MP14 MP15 MP16	1.011.235.34 1.727.360.02 1.727.360.03 1.727.360.04	3 pcs 1 pcs 1 pcs 5 pcs	Carotte gri Push button case with Shuttle Conductive rubber with Shuttle Push button 19±14
	D13 D14 D15	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			MP•••17 MP•••18 MP•••19	1.727.360.05 1.727.362.10 1.727.360.11	1 pcs 1 pcs 1 pcs	Push button Adj. No. Label Command Panel PCB
ΤU	D16 DER (00)	50.04.0125 86/09/23 GP	1N4448 COMMAND	50 V SI PANEL BOARD 2VU 1.727.362.	00 PAGE 1	STU	MP+++20 D E R (0)	53.03.0221 0) 86/09/23 GP	43 pcs COMMAND P	2-pole LEO Socket  ANEL BOARD ZVU 1.727.362.00 PAGE
4D •	POS+NO+	PART NO.		SPECIFICATIONS / EQUIVALENT	MANUF.	I ND •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAN
	D17 D18 D19 D20	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			MP21 MP22 MP23 MP24	1.727.362.93 21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs 2 pcs 2 pcs 2 pcs	L-LST Command Panel Board Hexagon socket head cap screw M3≎6 Washer Fin washer
	D21 D22 D23	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI			MP25 MP26	43.01.0108 1.727.360.06	1 pcs 1 pcs	ESE Warning label Push button labels (<,>,PLAY,STOP,REC)
	D24 D25	50.04.0125 50.04.0125 50.04.2501	1N4448 1N4448 MV5452	50 V SI 50 V SI LED grn D=5 mm	GI		P · · · · · 2 P · · · · · 3 P · · · · · 4	54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2-8*0-8 A Plug 2-8*0-8 A Plug 2-8*0-8 A Plug 2-8*0-8 A Plug 2-8*0-8 A
	DL 2 DL 3 DL 4	50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI GI		P 6	54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8
	DL 5 DL 6 DL 7	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		Q 2 Q 3	50.03.0436 50.03.0436 50.03.0436	8C237B 8C237B 8C237B	9C547B+ BC550B NPN BC547B+ BC550B NPN BC547B+ BC550B NPN BC547B+ BC550B NPN
	DL 9 DL 10 DL 11	50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI GI		Q5 Q6	50.03.0436 50.03.0436 50.03.0436	3C237B BC237B BC237B	BC5478+ BC550B NPN BC5478+ BC550B NPN
	DL •••12 DL •••13 DL •••14	50.04.2115 50.04.2115 50.04.2500	MV5752 MV5752 MV5352	LED red D=5 mm LED red D=5 mm LED yel D=5 mm	61 61		R • • • • • 1 R • • • • • 2 R • • • • • 3	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	DL15 DL16 DL17 DL18	50.04.2500 50.04.2500 50.04.2119 50.04.2119	MV5352 MV5352 MV57124 MV57124	LED yel D=5 mm LED yel D=5 mm LED red 6.35¢3.81 LED red 6.35¢3.81	61 61 61		R 5 R 6 R 7	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	DL 20 DL 21	50.04.2119 50.04.2500 50.04.2500	MV57124 MV5352 MV5352	LED red 6.35\$3.81 LED yel D=5 mm LED yel D=5 mm	61 61		R 8 R 9 R 10	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF
	DL 22 DL 23 DL 24 DL 25	50.04.2500 50.04.2115 50.04.2115 50.04.2500	MV5352 MV5752 MV5752 MV5352	LED yel D=5 mm LED red D=5 mm LED red D=5 mm LED yel D=5 mm	G1 G1 G1		R12 R13 R14	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
τυ	DL • • • 26 DL • • • 27	50.04.2500 50.04.2500 86/09/23 GP	MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm	GI GI OO PAGE 2	S.T.U	R15 R16	57.11.4391 58.01.8203 00) 86/09/23 GP	390 Uhm 20 kühm	2%, 0.25W, MF 10%, 0.5 W, PCerm PANEL BOARD 2VU 1.727-362.00 PAGE
40.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / FQUIVALENT	MA NU F .	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAN
	DL 29 DL 30 DL 31	50.04.2119 50.04.2119 50.04.2119 50.04.2500	MV57124 MV57124 MV57124 MV5352	LED red 6.35*3.81 LED red 6.35*3.81 LED red 6.35*3.81 LED yel D=5 mm	G I G I G I		R **** 17 R **** 18 R **** 19 R **** 20	57.11.3203 57.11.3203 57.11.3203 57.11.4391	20 kOhm 20 kOhm 20 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	DL 32 DL 33 DL 34	50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	61 61 61		R • • • • 21 R • • • • 22 R • • • • 23	57.11.4391 57.11.4391 57.11.4272	390 Ohm 390 Ohm 2.7 kOhm 20 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	DL36 DL37 DL38	50.04.2500 50.04.2501 50.04.2500 50.04.2115	MV 5352 MV 5452 MV 5352 MV 5752	LED yel D=5 mm LED grn D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI		R • • • • 24 R • • • • 25 R • • • • 26 R • • • • 27	57.11.3203 57.11.4103 57.11.4103 57.11.4332	10 kOhm 10 kUhm 3.3 kOhm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF
	DL • • • 40 DL • • • 41	50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI GI		R • • • • 28 R • • • • 29 R • • • • 30	57.11.3472 57.11.4474 57.11.4153	4.7 kühm 470 kühm 15 kühm	1%, 0-25W, MF 2%, 0-25W, MF 2%- 0-25W, MF
	DL 42 DL 43 IC 1	50.04.2501 50.04.2115 50.13.0106	MV5452 MV5752 SAA 1061	LED grn D=5 mm LED red D=5 mm Driver	GI Ph		R 32 R 33 R 34	57.11.4682 58.01.8203 57.11.4682 57.11.4682	6.8 kühm 20 kühm 6.8 kühm 6.8 kühm	2%, 0.25W, MF 10%, 0.5 W, PCerm 2%, 0.25W, MF 2%, 0.25W, MF
	IC 3 IC 4	50.09.0107 50.09.0107 50.05.0199	RC 4559 RC 4559 LM324	Oual Op. Amp. Dual Op. Amp. Quad Op. Amp.	Ra Ra NS,Mot Ph		R • • • • 35 R • • • • 36 R • • • • 37	57.11.3751 57.11.3202 57.11.4332	750 Ohm 2 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	IC 5 IC 6 IC 7 IC 8	50.13.0106 50.09.0107 50.09.0107 50.05.0199	SAA 1061 RC4559 RC4559 LM324	Driver Dual Op. Amp. Dual Op. Amp. Quad Op. Amp.	Ra Ra NS+Mot		R 38 R 39 R 40 R 41	57.11.4153 57.11.4153 57.11.3182 57.11.4151	15 kühm 1•8 kühm 150 ühm	2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF
	J1	50.13.0106 54.01.0287	3-Pole	Driver CIS Socket Strip	AMP AMP		R • • • • 42 R • • • • 43 R • • • • 44	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	J 3 J 4	54.01.0288 54.01.0228 54.01.0228	5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R 45 R 46 R 47 R 48	57.11.4391 58.01.8203 57.11.3203 57.11.3203	20 kOhm 20 kOhm 20 kOhm	10%+ 0.5 W, PCerm 2%+ 0.25W, MF 2%+ 0.25W+ MF
		54.01.0021		Bridge			R 49	57.11.3203 57.11.4391	20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF
	JP0 JP2 JP3	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			R • • • • 50 R • • • • 51 R • • • • 52	57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%+ 0+25M+ MF 2%+ 0+25M+ MF



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### COMMAND PANEL (2 VU) 1.727.362.00 GRP30

MANUI	I VAL ENT	SPECIFICATIONS / EQUI	VALUE	PART NO.	D. POS.NO.	IND.
		2%, 0.25W, MF	20 kOhm	57-11-3203	R54	
		2% 0.25W MF	10 kOhm	57-11-4103	R 55	
		2%, 0.25W, MF	10 kühm	57.11.4103	R 56	
		2%, 0.25W, MF	3.3 kühm	57.11.4332	R57	
		1%, 0.25W, MF	4.7 kOhm	57.11.3472	R58	
		2% 0.25W MF	470 kühm	57.11.4474	R59	
		2%, 0.25W, MF	15 kOhm	57-11-4153	R * * * * 60	
		2%, 0.25W, MF	6.8 kOhm	57.11.4682	R61	
		10%, 0.5 W, PCerm	20 kühm	58.01.8203	R * * * * 62	
		2%, 0.25W, MF	6.8 kühm	57 - 11 - 4682	R • • • • 63	
		2%, 0.25W, MF	6.8 kOhm	57.11.4682	R * * * * 64	
		1%, 0.25W, MF	750 Dhm	57 • 11 • 3751	R65	
		1%, 0.25W, MF	2 kOhm	57-11-3202	R66	
		2%, 0.25W, MF	3.3 kOhm	57.11.4332	R * * * * 67	
		2%, 0.25W, MF	15 kühm	57.11.4153	R68	
		2%, 0.25W, MF	15 kOhm	57.11.4153	R****69	
		1%, 0.25W, MF	1.8 kOhm	57.11.3182	R70	
		2%, 0.25W, MF	150 Ohm	57.11.4151	R71	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R72	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R * * * * 73	
		2%, 0.25W, MF	390 Ohm	57 • 11 • 4391	R • • • • 7 4	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R 75	
		2%+ 0.25W+ MF	390 Ohm	57.11.4391	R • • • • 76	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R *** 77	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R • • • • 78	
		2%+ 0.25W+ MF	390 Ohm	57.11.4391	R • • • • 79	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R • • • • 80	
		2%, 0.25W, MF	390 Ohm	57.11.4391	R * * * * 81	
		2%, 0.25W, MF	390 Ohm	57-11-4391	R • • • • 32	
		2%, 0.25W, MF	22 kOhm	57-11-4223	R * * * * 83	
		2%, 0.25W, MF	22 kDhm	57-11-4223	R • • • • 3 4	
IT.		Push button Switch		55.15.0130	S1	
		Lamp holder		53.04.0107	XB1	
		Lamp holder		53.04.0107	XB2	
		Lamp holder		53.04.0107	X33	
PAGE	1.727.362.00	NEL BOARD 2VU	COMMAND	86/09/23 GP	TUDER (00)	STU

MANUF	SPECIFICATIONS / EQUIVALENT	VALUE	PART NO.	POS.NO.	IND.
	Lamp holder		53.04.0107	X84	
	IC Socket	24-Pole	53.03.0169	XICasel	
	IC Socket	8-Pole	53.03.0166	XICZ	
	IC Socket	8-Pole	53.03.0166	X1C3	
	IC Socket	14-Pole	53.03.0167	XIC4	
	IC Socket	24-Pole	53.03.0169	XIC5	
	IC Socket	8-Pole	53.03.0166	XIC6	
	IC Socket	8-Pole	53.03.0166	XIC 7	
	IC Socket	14-Pole	53.03.0167	XIC3	
	IC Socket	24-Pole	53.03.0169	XIC 9	

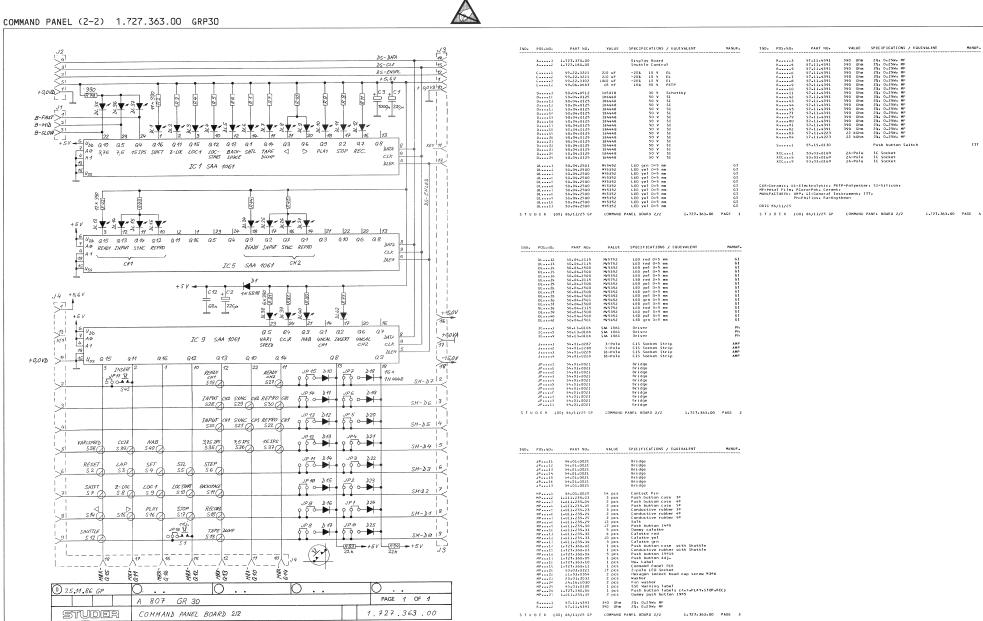
CER-Ceromic, EL=Clectrolytic, PETP-Polyester, SI=Silicon, MF=Metal Film, PEcrm=Pot. Cermet, MANUFACTURER: AMP, GI=General Instrument, ITT, Mot=Motorola, MS=National Semiconductor , Ph=Philips, Ra=Raytheon

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S T U D E R (00) 86/09/23 GP COMMAND PANEL BOARD 2VU 1.727.362.00 PAGE 8

A807 6/73 STUDER

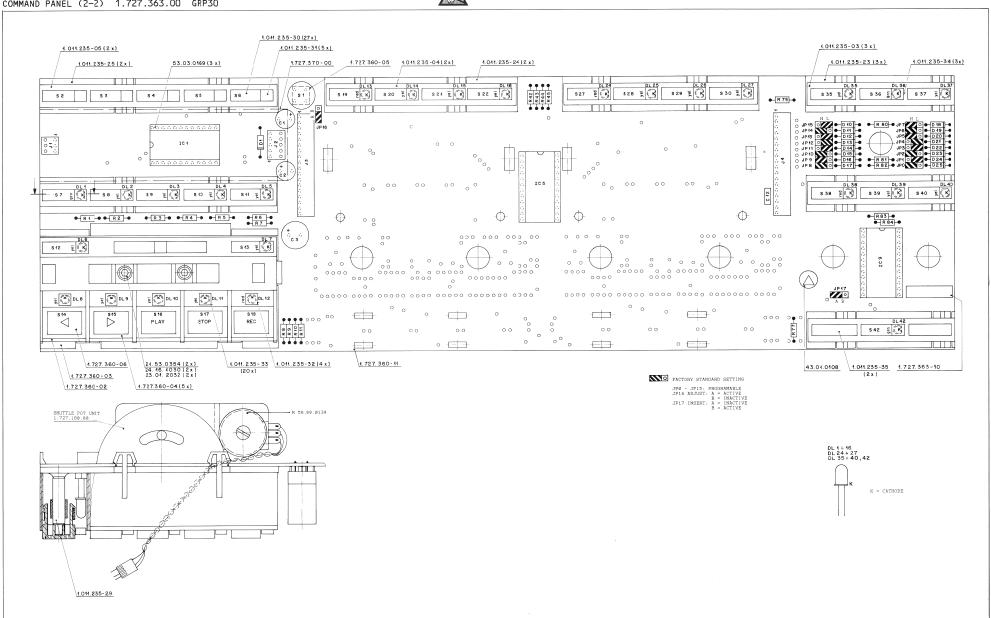




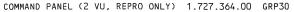


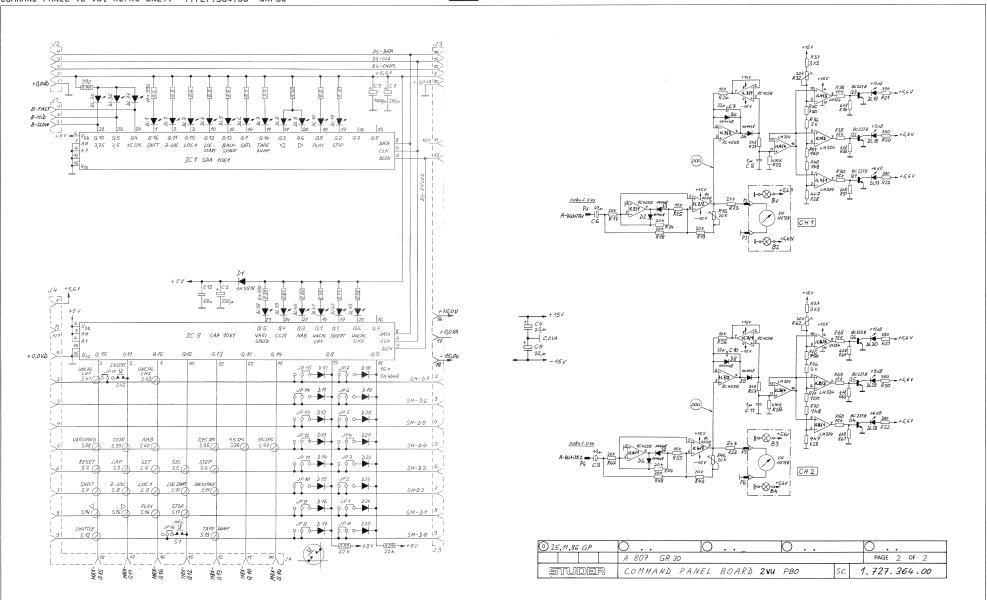
COMMAND PANEL (2-2) 1.727.363.00 GRP30

STUDER



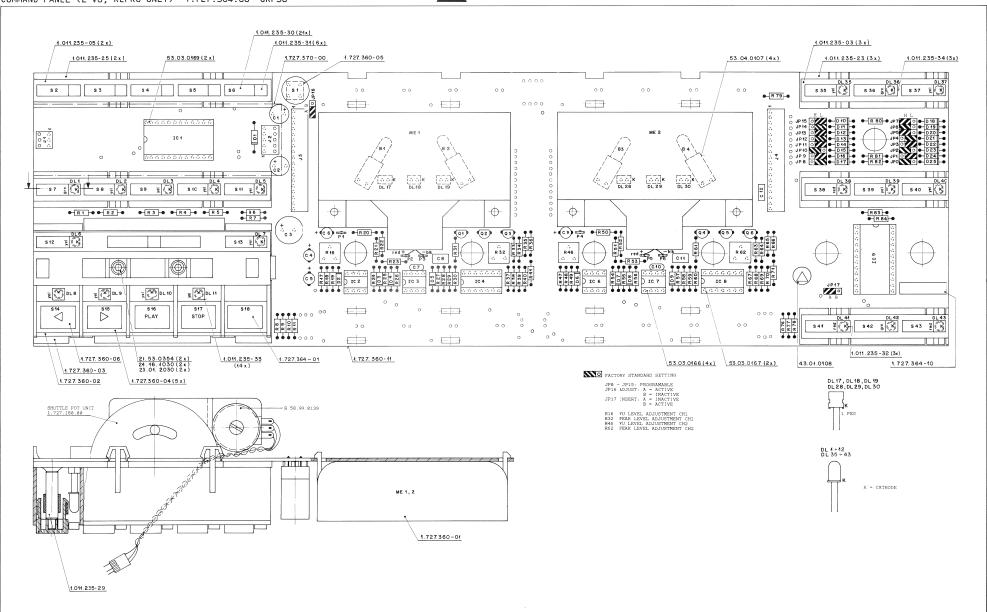
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COMMAND PANEL (2 VU, REPRO ONLY) 1.727.364.00 GRP30



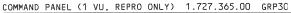


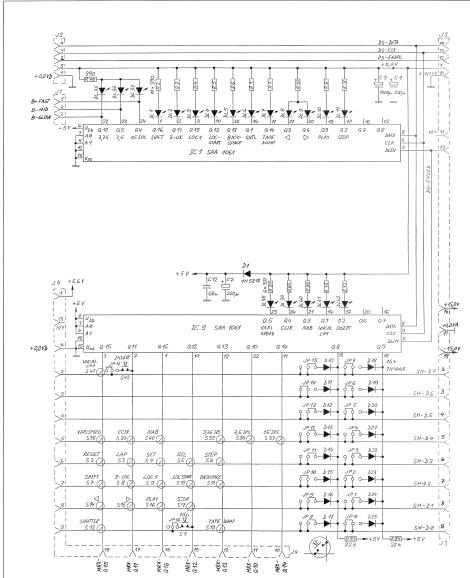
# COMMAND PANEL (2 VU, REPRO ONLY) 1.727.364.00 GRP30

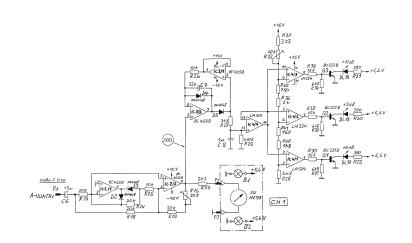
ND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
	A2	1.727.370.00 1.727.180.00		Display Board Shuttle Control			MP2	54.01.0020 1.011.235.03	54 pcs 3 pcs	Contact Pin Push button case 3* Push button case 5*	
	B • • • • • 1 B • • • • • 2	51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp			MP 4 MP 5 MP 7	1.011.235.05 1.011.235.23 1.011.235.25	2 pcs 3 pcs 2 pcs	Conductive rubber 3¢ Conductive rubber 5¢	
	B 4	51-02-0144 51-02-0144	6 V	0.03 A Lamp 0.03 A Lamp		(00)	MPR MP9 MP10	1.011.235.29 1.011.235.30 1.011.235.31	26 pcs 21 pcs 5 pcs	Aolt Push button 14#5 Dummy calotte	
	C 2 C 3	59.22.3221 59.22.3221 59.22.3102	220 uF 220 uF 1000 uF	-20% 10 V EL -20% 10 V EL -20% 10 V EL		(01) (00) (01)	MP10 MP11 MP11	1.011.235.31 1.011.235.32 1.011.235.32	6 pcs 4 pcs 3 pcs	Dummy calotte Calotte red Calotte red	
	C 4 C 5	59.22.5220 59.22.5220 59.22.3470	22 uF 22 uF 47 uF	-20% 25 V EL -20% 25 V EL -20% 10 V EL			MP12 MP13 MP14	1.011.235.33 1.011.235.34 1.727.360.02	14 pcs 3 pcs 1 pcs	Calotte yel Calotte grn Push button case with Shuttle	
	C 7 C 8	59.34.2220 59.06.0105	22 pF 1 uF	10% 50 V CER 10% 50 V PETP			MP15 MP16 MP17	1.727.360.03 1.727.360.04 1.727.360.05	1 pcs 5 pcs 1 pcs	Conductive rubber with Shuttle Push button 19#14 Push button Adj.	
	C10 C11	59.22.3470 59.34.2220 59.06.0105	47 uF 22 pF 1 uF	10% 50 V CER 10% 50 V PETP		(00)	MP18 MP19 MP20	1.727.364.10 1.727.360.11 53.03.0221	1 pcs 1 pcs 27 pcs	No. Label Command Panel PCB 2-pole LED Socket	
	D1	59.06.0683 50.04.0512	68 nF 1N5818	10% 50 V PETP  30 V Schottky		(01)	MP20 MP21	53.03.0221 1.727.362.93	26 pcs 2 pcs	2-pole LED Socket L-LST Command Panel Board	
	D 3 D 4	50.04.0125 50.04.0125 50.04.0125	1 N4448 1 N4448 1 N4448	50 V SI 50 V SI 50 V SI			MP • • • 22 MP • • • 23 MP • • • 24	21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs 2 pcs	Hexagon socket head cap screw M3*6 Washer Fin washer	
	D6 D7	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI		(01)	MP25 MP26 MP27	43.01.0108 1.727.360.06 1.727.364.01	1 pcs 1 pcs 1 pcs	ESE Warning label Push button labels (<+>+PLAY+STOP+REC Push button label blank (for \$18)	:)
	D9 D10	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			P · · · · · 2	54.02.0320 54.02.0320		Plug 2-8*0-8 Plug 2-8*0-8	AMI
	D12 D13	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			P • • • • • 4 P • • • • 5	54.02.0320 54.02.0320 54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8	AMI AMI
	D14 D15 D16	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			P••••6 4••••1	54+02+0320 50+03+0436 50+03+0436	BC237B BC237B	Plug 2.8*0.8 BC547B, BC550B NPN BC547B, BC550B NPN	AMI
T U I		1) 87/05/08 GP	COMMAND	PANEL BOARD 2VU PBO 1.727.364.00	PAGE 1		Q • • • • • 2 Q • • • • • 3 Q • • • • • 4	50.03.0436 50.03.0436	BC237B BC237B	BC547B, BC550B NPN BC547B, BC550B NPN	
							Q5 Q6	50.03.0436 50.03.0436	BC237B BC237B	BC547B, BC550B NPN BC547B, BC550B NPN	
							R • • • • • 2 R • • • • • 3	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
ND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.		R • • • • • • • • • • • • • • • • • • •	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D17	50.04.0125	1N4448	50 V SI			R 7 R 8 R 9	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF	
	D18 D19 D20	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R 10 R 11 R 16	57.11.4391 57.11.4391 58.01.8203	390 Ohm 390 Ohm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 10%, 0.5 W, PCerm	
	D21 D22	50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R17 R18 R19	57.11.3203 57.11.3203 57.11.3203	20 kOhm 20 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D 23 D 24 D 25	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			R • • • • 20 R • • • • 21	57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL • • • • 1 DL • • • • 2	50.04.2501 50.04.2500	MV5452 MV5352	LED grn D-5 mm LED yel D=5 mm	G I G I		R 22 R 23 R 24	57.11.4391 57.11.4272 57.11.3203	2.7 kOhm 20 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL • • • • • 5	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel 0=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R • • • • 25 R • • • • 26 R • • • • 27	57.11.4103 57.11.4103 57.11.4332	10 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	DL 6 DL 7 DL 8	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	G I G I		R • • • • 28 R • • • • 29 R • • • • 30	57.11.3472 57.11.4474 57.11.4153	4.7 kOhm 470 kOhm 15 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 9 DL 10 DL 11	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	G I G I		R • • • • 31 R • • • • 32 R • • • • 33	57.11.4682 58.01.8203 57.11.4682	6.8 kOhm 20 kOhm 6.8 kOhm	2%, 0.25W, MF 10%, 0.5 W, PCerm 2%, 0.25W, MF	
00)	DL 12 DL 12 DL 17	50.04.2115	MV5752 MV57124	LED red D=5 mm not used LED red 6.35÷3.81	G I		R • • • • 34 R • • • • 35 R • • • • 36	57.11.4682 57.11.3751 57.11.3202	6.8 kOhm 750 Ohm 2 kOhm	2%, 0.25W; MF 1%, 0.25W; MF 1%, 0.25W; MF	
	DL • • • 18 DL • • • 19 DL • • • 28	50.04.2119 50.04.2119 50.04.2119	MV57124 MV57124 MV57124	LED red 6.35*3.81 LED red 6.35*3.81 LED red 6.35*3.81	G1 G1 G1		R 38 R 39	57.11.4332 57.11.4153 57.11.4153	3.3 kOhm 15 kOhm 15 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	DL 30 DL 35	50.04.2119 50.04.2119 50.04.2500	MV57124 MV57124 MV5352	LED red 6.35*3.81 LED red 6.35*3.81 LED yel D=5 mm	GI GI GI		R40 R41 R46	57.11.3182 57.11.4151 58.01.8203	1.8 kOhm 150 Ohm 20 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 10%, 0.5 W, PCerm	
	DL 36 DL 37 DL 38	50.04.2501 50.04.2500 50.04.2115	MV5452 MV5352 MV5752	LED grn D=5 mm LED yel D=5 mm LED red D=5 mm	61 61		R 47 R 48 R 49	57.11.3203 57.11.3203 57.11.3203	20 kOhm 20 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 39 DL 40 DL 41	50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	61 61		R • • • • 50 R • • • • 51 R • • • • 52	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
T 11	DL •••42	50.04.2501 01) 87/05/08 GP	MV5452	LED grn D=5 mm  PANEL BOARD 290 PBO 1.727.364.00	G 1		R 54 R 55	57.11.4272 57.11.3203 57.11.4103	2.7 kOhm 20 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
		,,,					R • • • • 56 R • • • • 57 R • • • • 58	57-11-4103 57-11-4332 57-11-3472	10 kOhm 3.3 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 1%, 0.25%, MF	
							R59 R60 R61	57.11.4474 57.11.4153 57.11.4682	470 kOhm 15 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
LND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		R62 R63	58.01.8203 57.11.4682 57.11.4682	20 kOhm 6.8 kOhm 6.8 kOhm	10%, 0.5 W, PCerm 2%, 0.25W, MF 2%, 0.25W, MF	
		50.04.2115		LED red 0=5 mm	G I		R • • • • 65 R • • • • 66 R • • • • 67	57.11.3751 57.11.3202 57.11.4332	750 Ohm 2 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF	
	IC1 IC2	50.13.0106 50.09.0107	SAA 1061 RC4559	Oriver Dual Op. Amp.	Ph Ra		R • • • • 68 R • • • • 69 R • • • • 70	57.11.4153 57.11.4153 57.11.3182	15 kOhm 15 kOhm 1•8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF	
	IC4 IC6	50.09.0107 50.05.0199 50.05.0197	RC 4559 LM324 RC 4559	Dual Op. Amp. Quad Op. Amp. Dual Op. Amp.	Ra NS•Mot Ra		R • • • • 71 R • • • • 76 R • • • • 77	57.11.4151 57.11.4391 57.11.4391	150 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	1C8 1C9	50.09.0107 50.05.0199 50.13.0106	RC 4559 LM324 SAA 1061	Dual Op. Amp. Quad Op. Amp. Oriver	Ra NS•Mot Ph		R78 R79 R80	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	J1 J2	54.01.0287 54.01.0288	3-Pole 5-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP		R 81 R 82 R 83	57.11.4391 57.11.4391 57.11.4223	390 Ohm 390 Ohm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	J4	54.01.0228 54.01.0228	18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP		R84 S1	57.11.4223 55.15.0130	22 kühm	2%, 0.25W, MF Push button Switch	IT
	JP0 JP1 JP2	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XB1 XB2	53.04.0107 53.04.0107		Lamp holder Lamp holder	
	JP4 JP5	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XB4	53.04.0107 53.04.0107		Lamp holder Lamp holder	
	JP 6 JP 7 JP 8	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC2 XIC3	53.03.0169 53.03.0166 53.03.0166	24-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	JP9 JP10 JP11	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC 6 XIC 7	53.03.0167 53.03.0166 53.03.0166	14-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	JP12 JP13 JP14	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC9	53.03.0167 53.03.0169	14-Pole 24-Pole	IC Socket IC Socket	
	JP15 JP16 JP17	54.01.0021 54.01.0021 54.01.0021		Bridge⊬ Bridge Bridge			8.5.87 Cor				
	ME1 ME2	1.727.360.01		VU Meter VU Meter		MF=Me	tal Film, ACTURER: A	=Electrolytic, P PCerm=Pot. Cérme MP, GI≖General I	t, nstrument, I	TT, Mot=Motorola,	
								S-National Somic	onductor - Pl	h=Philips, Ra=Raytheon	



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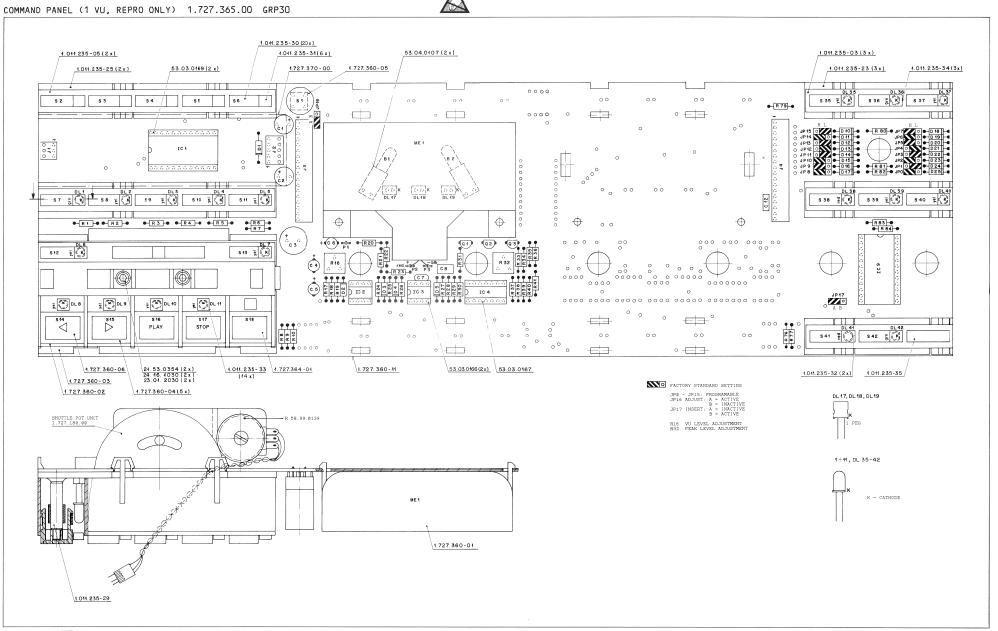






+ 15 V + 15 V + 22 M - 20 VA - 15 V

24.9.87 GP	0 0		
	A 807 GR 30		PAGE 2 OF 2
STUDER	COMMAND PANEL	BOARD 1 VU PBO	SC 1.727.36 <b>5</b> .00



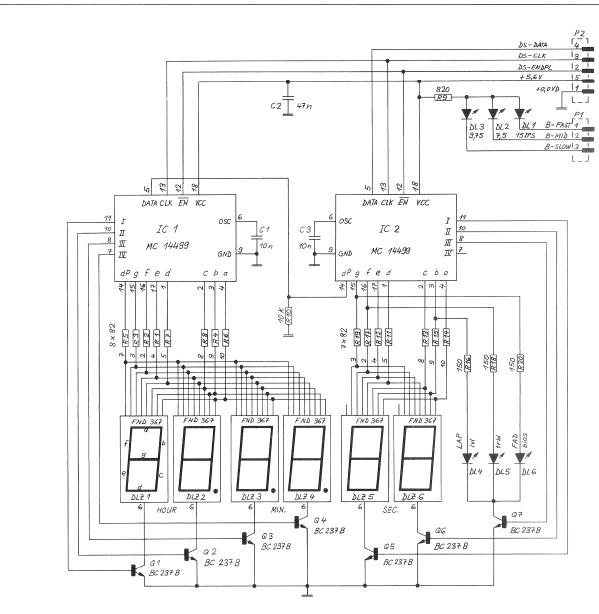


### COMMAND PANEL (1 VU, REPRO ONLY) 1.727.365.00 GRP30

ND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	P05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU
	A1 A2	1.727.370.00 1.727.180.00		Display Board Shuttle Control			MP 22 MP 23 MP 24	21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs 2 pcs	Hexagon socket head cap scr Washer Fin washer	ew M3≑6
	B2	51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp			MP25 MP26 MP27	43.01.0108 1.727.360.06 1.727.364.01	l pcs l pcs l pcs	ESE Warning label Push button labels (<+>+PLA rush button label blank (fo Dummy push button 19*5	Y,STOP,REC)
	C 2 C 3 C 4	59.22.3221 59.22.3221 59.22.3102 59.22.5220	220 uF 220 uF 1000 uF 22 uF	-20% 10 V EL -20% 10 V EL -20% 10 V EL -20% 25 V EL			P28	54.02.0320 54.02.0320	1 pcs	Plug 2-8*0-8 Plug 2-8*0-8	AA MA
	C 6 C 7 C 8	59.22.5220 59.22.3470 59.34.2220 59.06.0105	22 uF 47 uF 22 pF 1 uF	-20% 25 V EL -20% 10 V EL 10% 50 V CER 10% 50 V PETP			P3 Q1 Q2	54.02.0320 50.03.0436 50.03.0436	BC237B BC237B BC237B	Plug 2.8≈0.8 BC547B, BC550B NPN BC547B, BC550B NPN BC547B, BC550B NPN	AM
	0 · · · · · 1 D · · · · · 2	59.06.0683 50.04.0512 50.04.0125	68 nF 1N5818 1N4448	10% 50 V PETP 30 V Schottky 50 V SI			R 1 R 2	50.03.0436 57.11.4391 57.11.4391	390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D4 D5	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R • • • • • 4 R • • • • • 5	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D10 D11 D12 D13	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R6 R8 R9	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	014 015 016	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V S1 50 V S1 50 V S1 50 V S1 50 V S1			R10 R16 R17	57.11.4391 58.01.8203 57.11.3203	390 ühm 20 kühm 20 kühm	2%, 0.25W, MF 10%, 0.5 W, PCerm 2%, 0.25W, MF	
	D17 D18 D19	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI			R18 R19 R20	57.11.3203 57.11.3203 57.11.4391	20 kOhm 20 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D 20 D 21 D 22 D 23	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R • • • • 21 R • • • • 22 R • • • • 23 R • • • • 24	57.11.4391 57.11.4391 57.11.4272 57.11.3203	390 Ohm 390 Ohm 2•7 kBhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D24 D25	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI			R 25 R 26	57.11.4103 57.11.4103	10 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF	
TU	DER (OC	) 87/09/24 GP	COMMAND	PANEL BOARU 1VU PBO 1.727-365.00	PAGE 1	510	век (о	0) 87/09/24 GP	COMMAND P	1.727.	365.00 PAGE
ND •	P 05 + NO +	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
	DL 2 DL 3	50.04.2501 50.04.2500 50.04.2500	MV5452 MV5352 MV5352	LED grn D=5 mm LED yel D=5 mm LED yel D=5 mm	61 61		R 27 R 28 R 29 R 30	57.11.4332 57.11.3472 57.11.4474 57.11.4153	3.3 kOhm 4.7 kOhm 470 kOhm 15 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 4 DL 5 DL 6 DL 7	50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352	LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm LED yel 0=5 mm	61 61 61		R 32 R 33	57.11.4682 58.01.8203 57.11.4682	6.8 kOhm 20 kOhm 6.8 kOhm	2%, 0.25%, MF 10%, 0.5 W. PCerm 2%, 0.25%, MF	
	DL8 DL9 DL10	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R 34 R 35 R 36	57.11.4682 57.11.3751 57.11.3202	6.8 kOhm 750 Ohm 2 kOhm 3.3 kOhm	2%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF	
	DL11 DL17 DL18 DL19	50.04.2500 50.04.2119 50.04.2119 50.04.2119	MV5352 MV57124 MV57124 MV57124	LED yel D=5 mm LED red 6.35÷3.81 LED red 6.35÷3.81 LED red 6.35÷3.81	61 61 61		R 37 R 38 R 39 R 40	57.11.4332 57.11.4153 57.11.4153 57.11.3182	15 kOhm 15 kOhm 15 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF	
	DL36 DL37	50.04.2500 50.04.2501 50.04.2500	MV5352 MV5452 MV5352	LED yel D=5 mm LED grn D=5 mm LED yel D=5 mm	G I G I		R • • • • 41 R • • • • 76 R • • • • 77	57-11-4151 57-11-4391 57-11-4391	150 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL38 DL39 DL40	50.04.2115 50.04.2500 50.04.2500	MV5752 MV5352 MV5352 MV5752	LED red D=5 mm LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI GI		R *** * * * * * * * * * * * * * * * * *	57-11-4391 57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL41 DL42	50.04.2115 50.04.2501 50.13.0106	MV5452 SAA 1061	LED grn D=5 mm Oriver	G I Ph		R • • • • 83 R • • • • 84	57.11.4223 57.11.4223	22 kOhm 22 kOhm	2%, 0°25W, MF 2%, 0°25W, MF	
	IC 2 IC 3 IC 4 IC 9	50.09.0107 50.09.0107 50.05.0199 50.13.0106	RC 4559 RC 4559 LM324 SAA 1061	Dual Op. Amp. Dual Op. Amp. Quad Op. Amp. Driver	Ra Ra NS•Mot Ph		X81 X82	55.15.0130 53.04.0107 53.04.0107		Push button Switch Lamp holder Lamp holder	1
	J1 J2 J3 J4	54.01.0287 54.01.0288 54.01.0228 54.01.0228	3-Pole 5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		XIC1 XIC2 XIC3 XIC4	53.03.0169 53.03.0166 53.03.0166 53.03.0167	24-Pole 8-Pole 8-Pole 14-Pole	IC Socket IC Socket IC Socket IC Socket	
	JP0 JP1	54.01.0021 54.01.0021	10 1010	Bridge Bridge			XIC9	53.03.0169	24-Pole	IC Socket	
s T U	JP····2 DER (O	54.01.0021 0) 87/09/24 GP	COMMAND	Bridge Panel Board IVU PBO 1-727-365-00	PAGE 2	STU	D E R (	00) 87/09/24 GP	C OMMAND	PANEL BOARD 1VU PBO 1727	.365.00 PAGE
ND-	POS - NO -	PART NO.	VAI UF	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	+0V+204	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
	JP3 JP4 JP5	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge		ME=Me	tal Film.	=Electrolytic, P PCerm=Pot, Cerme	t.		
	JP 6 JP 7 JP 8	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge		MANUF	ACTURER: AI	MP, GI=General I S=National Semic	nstrument, I onductor , P	TT, Mot=Motorola, h=Philips, Ra=Raytheon	
	JP 9 JP 10 JP 11 JP 12	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge							
	JP 13 JP 14 JP 15	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge							
	JP16 JP17 ME1	54.01.0021 54.01.0021 1.727.360.01		Bridge Bridge VU Meter							
	MP1 MP2	54.01.0020 1.011.235.03	54 pcs 3 pcs	Contact Pin Push button case 3≑							
	MP4 MP5 MP7	1.011.235.05 1.011.235.23 1.011.235.25	2 pcs 3 pcs 2 pcs 25 pcs	Push button case 5# Conductive rubber 3# Conductive rubber 5# Bolt							
	MP9 MP10 MP11	1.011.235.29 1.011.235.30 1.011.235.31 1.011.235.32	20 pcs 6 pcs 2 pcs	Push button 14*5 Dummy colotte Calotte red							
	MP12 MP13 MP14	1.011.235.33 1.011.235.34 1.727.360.02	14 pcs 3 pcs 1 pcs	Calotte yel Calotte grn Push button case with Shuttle Conductive rubber with Shuttle							
	MP15 MP16	1.727.360.03 1.727.360.04 1.727.360.05	1 pcs 5 pcs 1 pcs	Push button 19#14 Push button Adj.							
	MP17 MP18	1.727.365.10	1 pcs	No. Label Command Panel PCB							



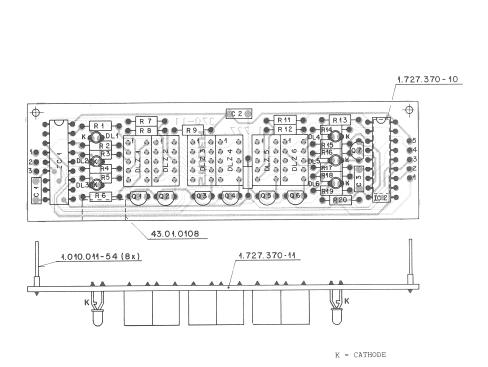
### DISPLAY 1.727.370.00 GRP31



0 25	.11.86	5 GP	, , , , , , , , , , , , , , , , , , , ,	$\bigcirc$			0		0	 			Ο.			
				Α	807	GR 31							PAGE	1	OF	1
5	TU	DE	29	DI	SPLAY	BOARD					SC	1	. 727	. 37	0.	00



### DISPLAY 1.727.370.00 GRP31



IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIV		MANU		IND.	POS • NO	• P#	ART NO+	VALUE	SPECIFICATIONS / EQU		MANU	
		50.04.0103	10 nF	10%, 63 V, PETP					R	4 57.1	11-4820	82 Ohm	2%, 0.25W, MF			
	C * * * * * 2	59.06.0103 59.06.0473	47 nF	10% 63 V. PETP					R		11-4820	82 Ohm	2%, 0.25W. MF			
	C 3	59.06.0103	10 nF	10% 63 V. PETP					R 6	6 57.1	11.4820	82 Ohm	2%, 0.25W, MF			
	L * * * * * 3	59.06.0103	10 HF	1044 03 44 FC1F					K		11.4820	82 Ohm	2%, 0.25W, MF			
	DL 1	50.04.2129	COV11-7	LED red D=3 mm		Sie			R		11-4820	82 Ohm	2%, 0-25W, MF			
	DL 2	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R		11-4821	820 Ohm	24, 0.25W, MF			
	DL 3	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R 1		11-4103	10 kOhm	2%, 0.25W, MF			
	DL 4	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R 1		11.4820	82 Ohm	2%, 0.25W, MF			
	DL5	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R 1		11.4820	8≥ 0hm	2% 0 - 25W + MF			
	Dt6	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R * * * * 1		11-4820	82 Ohm	2%, 0.25W, MF			
	00000	3000102121							R 1		11.4820	82 Ohr	2%, 0.25W, MF			
	DL Z * * * 1	73.01.0121	FND 367	Seven Segment Display		GI			R 1		11.4820	82 Oh#	2%, 0.25W, MF			
	DL Z * * * 2	73.01.0121	FND 367	Seven Segment Display		GI			R 1		11-4151	150 Ohm	2%, 0.25W, MF			
	DLZ 3	73.01.0121	FND 367	Seven Segment Display		CI			R 1		11.4820	82 Ohr	2% 0.25W MF			
	DL Z * * * 4	73.01.0121	FND 367	Seven Segment Display		GI			Recest		11.4151	150 Ohn	2% 0.25W MF			
	DL Z 5	73.01.0121	FND 367	Seven Segment Display		GI			R 1		11.4820	82 Ohr	2%, 0.25W, MF			
	DL 2 6	73.01.0121	FND 367	Seven Segment Display		GI			R 2	0 57.	11-4151	150 Ohm	2%, 0.25W, MF			
	161	50.07.0010	MC 14499	Display Decoder/Drive	r	Mot										
	IC2	50.07.0010	MC 14499	Display Decoder/Drive	r	Mot										
	MP1	1.727.370.11	l pcs	DISPLAY PCB												
	MP 2	1-010-011-54	8 pcs	Contact pin												
	MP 3	1.727.370.10	1 pcs	No. Label												
	MP 4	43.01.0108	1 pcs	ESE Warning label												
	0 1	50.03.0436	BC237B	BC5478, BC550B NPN												
	02	50.03.0436	BC237b	BC5478 BC5508 NPN												
	Q 3	50.03.0436	BC237b	BC547B, BC550B NPN												
	9 4	50.03.0436	BC237B	BC547B, BC550B NPN												
	6 5	50.03.0436	BC237B	BC5478+ BC5508 NPN												
	06	50.03.0436	BC237B	BC5478, BC550B NPN												
	4 7	50.03.0436	BC237B	BC547B+ BC550B NPN						r, MF=Meta GI=Gener		ments, Mot	=Motorola: Sie=Siemens			
	K 1	57.11.4820	82 Ohm	2%, 0.25W, MF												
	R * * * * 2	57.11.4820	82 Ohm	2%, 0.25W, MF												
	R 3	57-11-4820	82 Ohm	21. 0.25W. MF				ORIG	86/08/08							
STU	0 E R (0	O) 86/08/08 GP	DISPLAY	BOARD	1.727.370.00	PAGE	1	STU	DER	(00) 86/	08/08 GP	DISPL	Y BOARD	1.727.370.00	PAGE	2

### 7. AUDIO DIAGRAMS

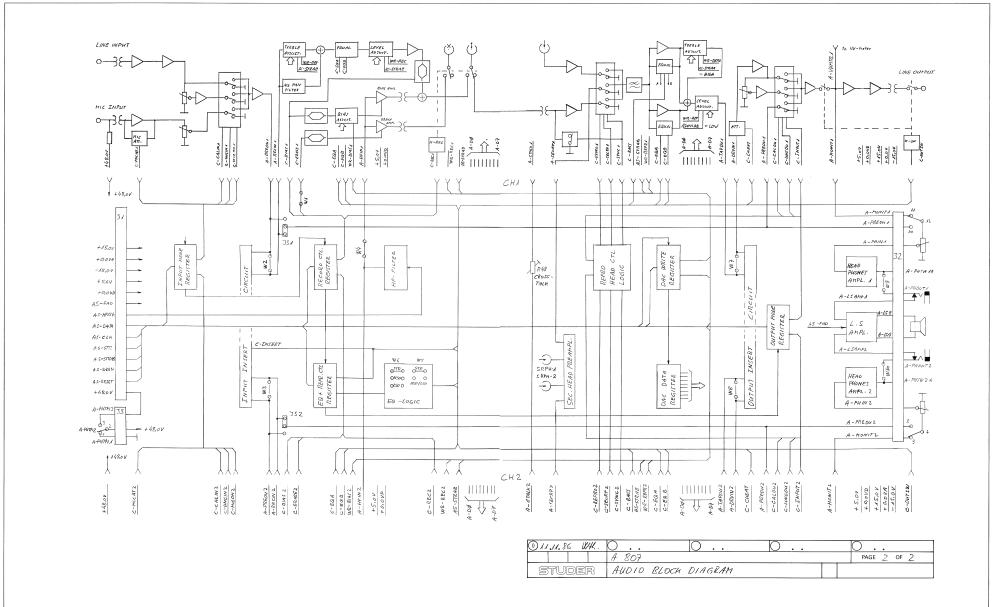
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AUDIO ELECTRONICS (2-2 WITH CH. SELECTORS ONLY) 1.727.423.00 GRP41/42	7/81
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TIGHT CALCULATION IN THE STATE OF THE STATE	7/95
THE ACT TO SECTION ASSESSMENT OF THE PROPERTY	7/99
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M/S ADJUSTMENT PBO 1.727.454.00 GRP46 CONSOLE MONITOR PANEL WIRING DIAGRAM	7/129
OGHOOLE HOME ON THE PERSON OF	
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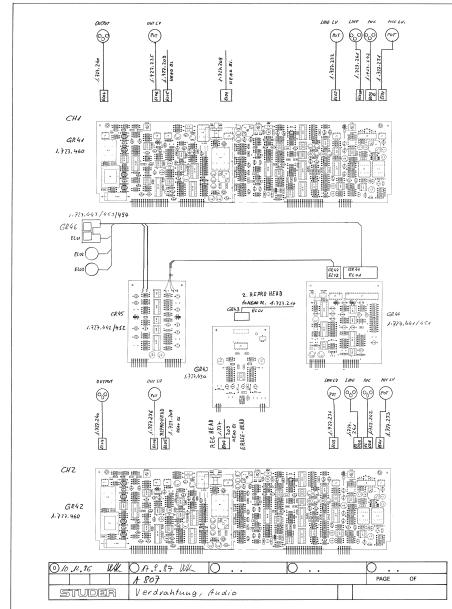
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	TAPE MOVE SENSOR	
	CAPSTAN MOTOR CONTROL	
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	M/S INPUT AMPLIFIER WITH TEST GENERATOR	
	M/S OUTPUT AMPLIFIER WITH TEST GENERATOR	
	M/S INPUT AMPLIFIER	
	M/S OUTPUT AMPLIFIER	
	M/S ADJUSTMENT	
	M/S ADJUSTMENT PBO	
	AUDIO ELECTRONICS (VU)	
	AUDIO ELECTRONICS (Ø VU)	
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	AUDIO ELECTRONICS VUK (2 VU)	
	AUDIO ELECTRONICS (2-2 WITH CH. SELECTORS ONLY)	
	AUDIO ELECTRONICS (2-2 WITH CH. SELECTORS ONLY)	
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	CONSOLE MONITOR	
	VU PANEL (2 VU)	
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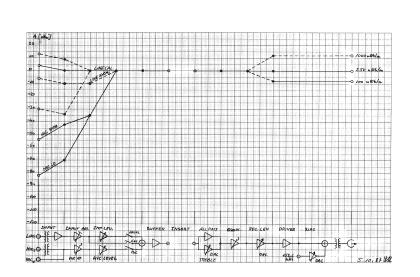


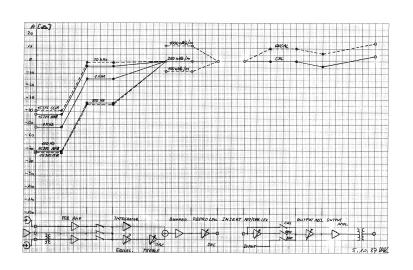


#### AUDIO WIRING DIAGRAM

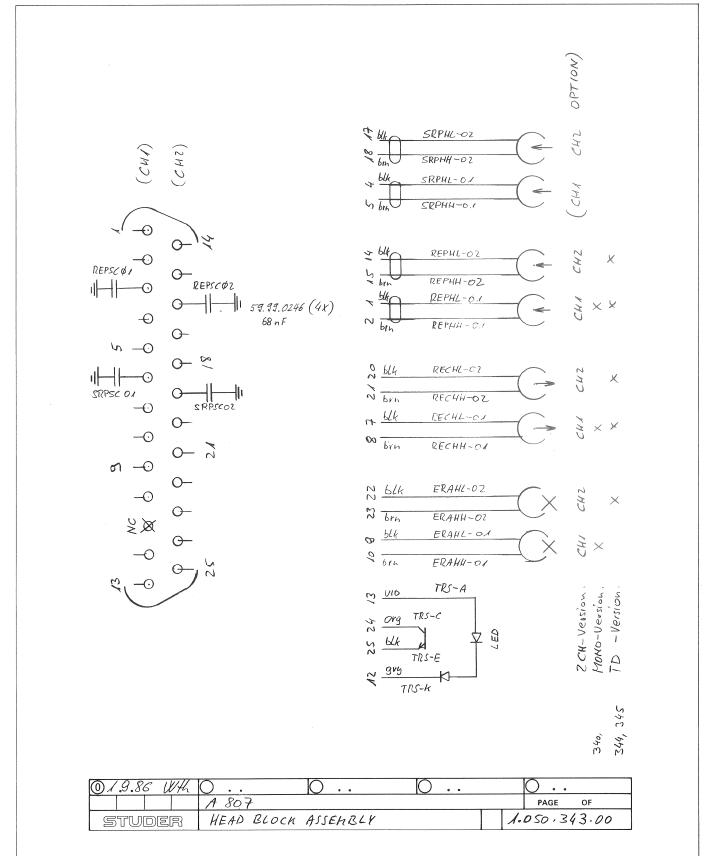
#### AUDIO LEVEL DIAGRAMS





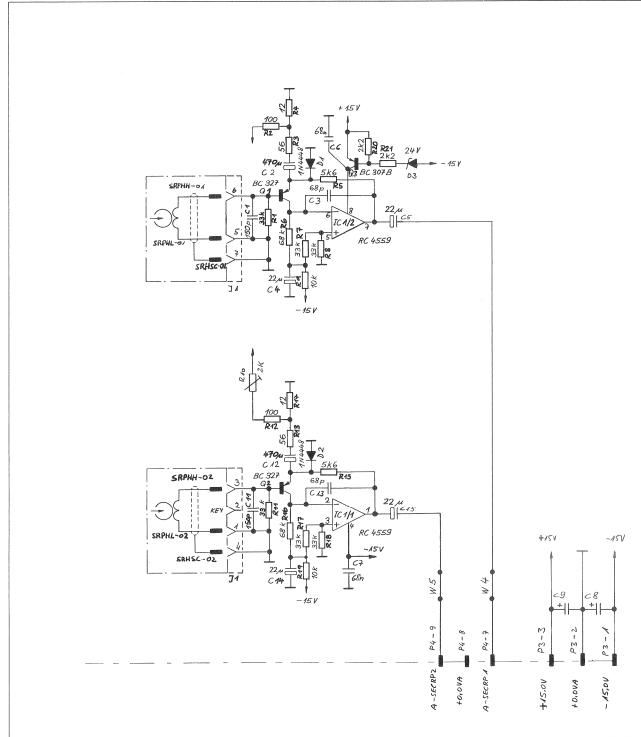


## HEAD BLOCK ASSEMBLY 1.050.340.00 GRP39





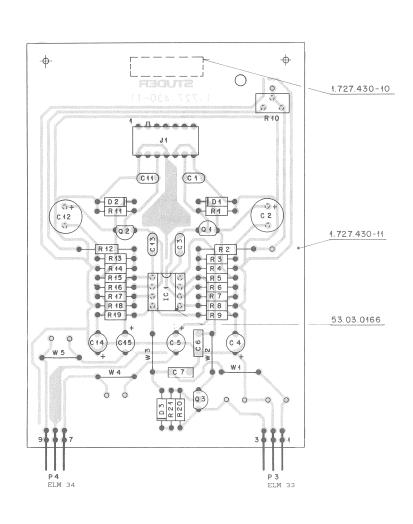
# REPRODUCE PREAMPLIFIER 1.727.430.00 GRP43



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	A 807 GR 43		PAGE / OF /
STUDER	PREAMPLIFIER BOARD		1.727.430.00



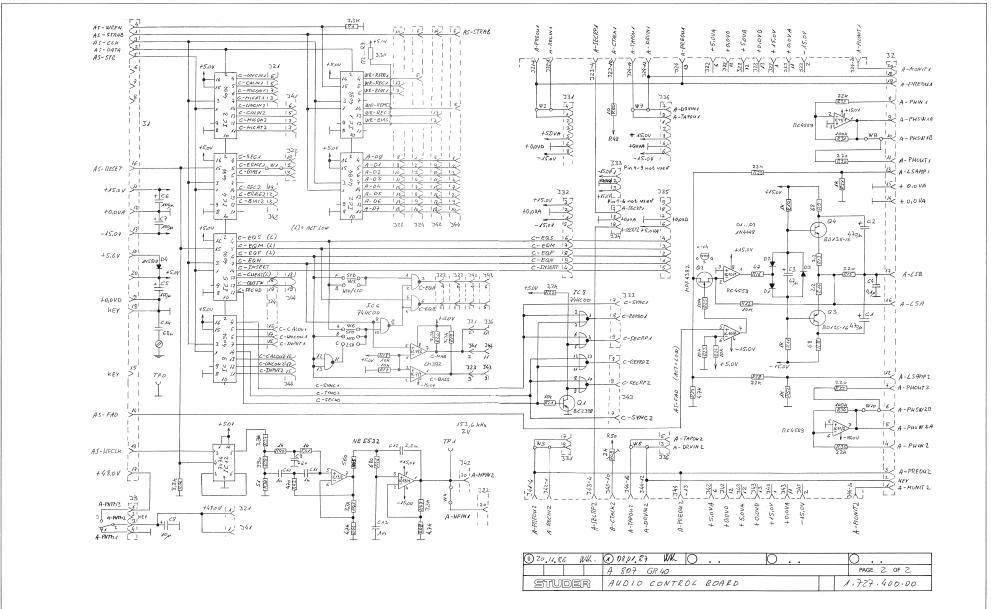
# REPRODUCE PREAMPLIFIER 1.727.430.00 GRP43



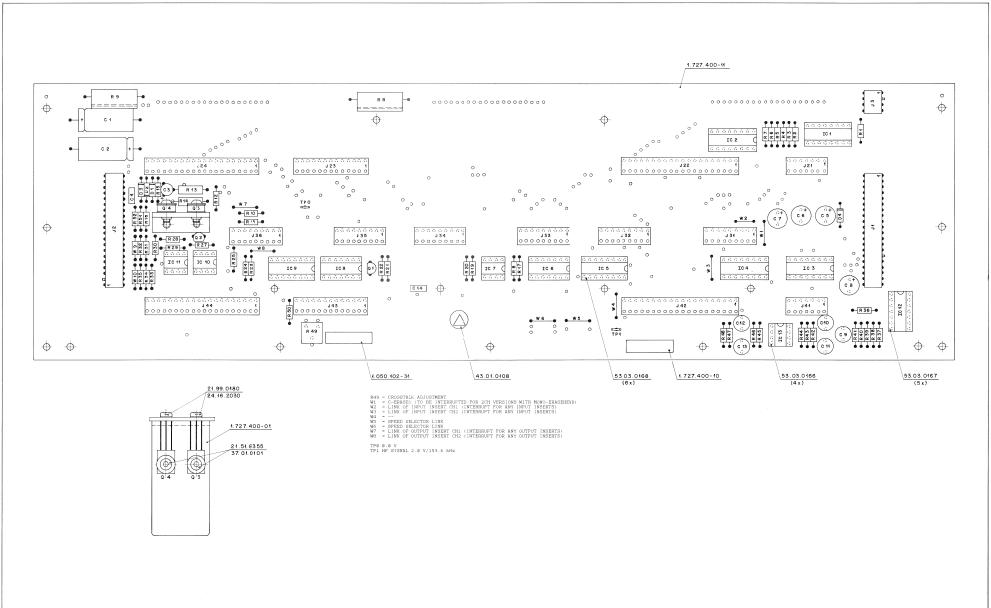
59.34.4151 59.22.2471	150 pF	10% 50V Cer						
				R * * * * * 5	57-11-4562	5.6 kOhm	2% + 0 + 25W + MF	
	470 UF	-20% 6.3V EL		R * * * * * 6	57-11-4683	68 kOhm	2%, 0.25W, MF	
59-34-4680	68 pF	10% 50V Cer		R * * * * * 7	57-11-4333	3.3 k Ohm	2% 0.25W • 4F	
59.22.5220	22 uF	-20% 25V EL		R = = = = 8	>7-11-4333	33 kOhm	2%, 0.25W, MF	
59.22.5220	22 uF	-20% 25V EL		R 9	57-11-4103	10 kOhm	2% 0 . 25W + MF	
					57.11.4333	33 kOhm	2%+ 0-25W+ MF	
				R 12	>7-11-4101	100 Ohm	2%, 0.25W, 4F	
				R * * * * 1.3	57.11.4560	56 Ohm	2% + 0 • 25W + 4F	
59.34-4151	150 nF				57-11-4120	12 Ohm	2%+ 0+25W+ MF	
				R * * * * 15	57-11-4562	5.6 kOhm	2%, 0.25W, MF	
				R * * * * 1.6	57-11-4683	68 kOhm	2%+ 0+25W+ MF	
		-20% 25V EL		R 17	57-11-4333	33 k0hm	2%, 0.25W, MF	
		-20% 25V EL		R18	57.11.4333	33 k0hm	2%, 0.25W, MF	
,,				R * * * * 19	57.11.4103	10 kOhm	2%, 0.25W, MF	
50-04-0125	1N4448	50V 51		R * * * * 20	57.11.4222	2.2 k0hm	2%, 0.25W, MF	
	1N4448	50V SI		R21	57.11.4222	2.2 kOhm	2%, 0.25w, MF	
50.04.1121	24 V	5% 0.4W Zener						
				W1			wire bridge	
50.09.0107	RC 4559	Oual Op. Amp.	Ra	W = = = = <			wire bridge	
				w3			wire bridge	
54-01-0244	7-Pole	CIS Socket Strip	AMP	W4				
				W****5	64.01.0106		wire bridge	
1-727-430-10	1 pcs	No. Label	St					
1.727.430.11	1 pcs	Preamlifier PCB	St	XIC1	53.03.0166	8 POLE	IC Socket	
50.03.0625	BC327	PNP						
50.03.0625								
50.03.0515	BC 307B	BC557B+ BC560B PNP						
54.01.0227	3-Pole	CIS Plug Strip	AMP					
54.01.0227	3-Pole	CIS Plug Strip	AMP	fer=feramic, FL=F	lectrolytics P	FTP=Polveste	r. SI=Silicon.	
57-11-4333	33 kOhm	2%, 0.25W, 4F		MF=Metal Film, P	4G=Cermet	,		
57.11.4101	100 Ohm	2%, D.25W, MF		MANUFACTURER: AME	P=AMP, Ra=Rayth	eon+ St=Stud	er	
57.11.4560	56 Ohm	2%, 0.25W, MF						
57 - 11 - 4120	12 Ohm	2%, 0.25W, MF		ORIG 86/10/17				
	59.06.0083 59.34.4151 59.22.2471 59.32.22471 59.34.4680 59.22.520 50.04.0125 50.04.0125 50.04.1121 50.09.0107 54.91.0244 1.77.7.430.10 1.77.7.430.11 50.03.0625 50.03.0625 50.03.0525	\$9.16.0883 68 nF \$9.34.4151 150 pF \$9.22.2471 470 uF \$9.32.22471 470 uF \$9.34.4680 68 pF \$9.22.5220 22 uF \$0.04.0125 NA4488 \$0.04.1121 24 V \$0.09.0107 RC 4559 \$1.727.430.10 1 pcs \$1.727.430.11 1 pcs \$1.727.430.10 1 pcs \$1.727.430.10 1 pcs \$1.727.430.10 2 pcs \$0.03.0025 8C327 \$0.03.0025 8C327 \$0.03.0025 8C327 \$0.03.0027 3-Pole \$4.01.0227 3-Pole \$4.01.0227 3-Pole \$4.01.0227 3-Pole \$5.11.14.101 100 00m \$57.11.14.505 56 0m	59.06.0883	10	100   100	100	10	Sp.06.0083



#### AUDIO CONTROL 1.727.400.00 GRP40



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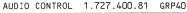


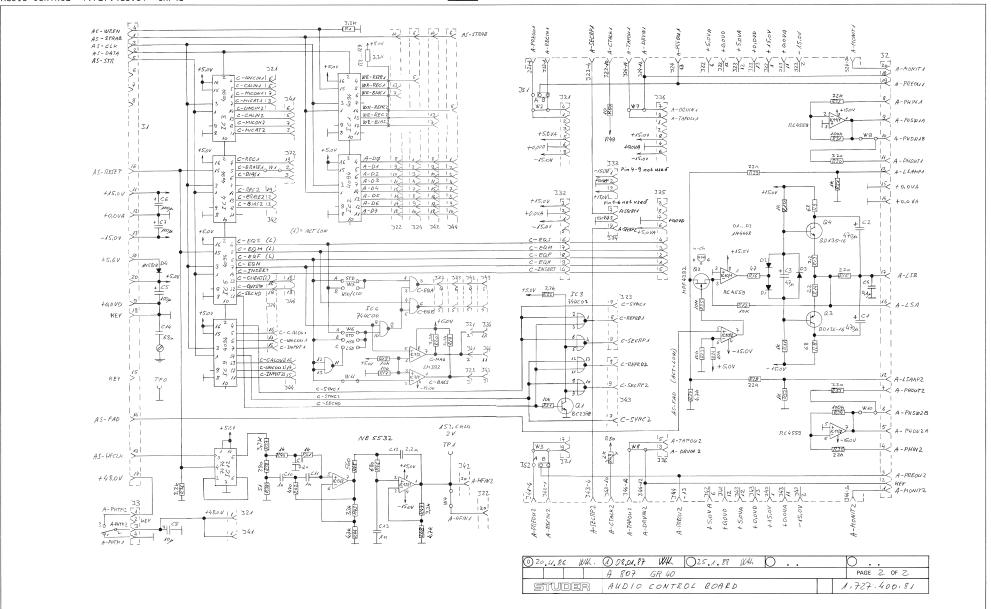


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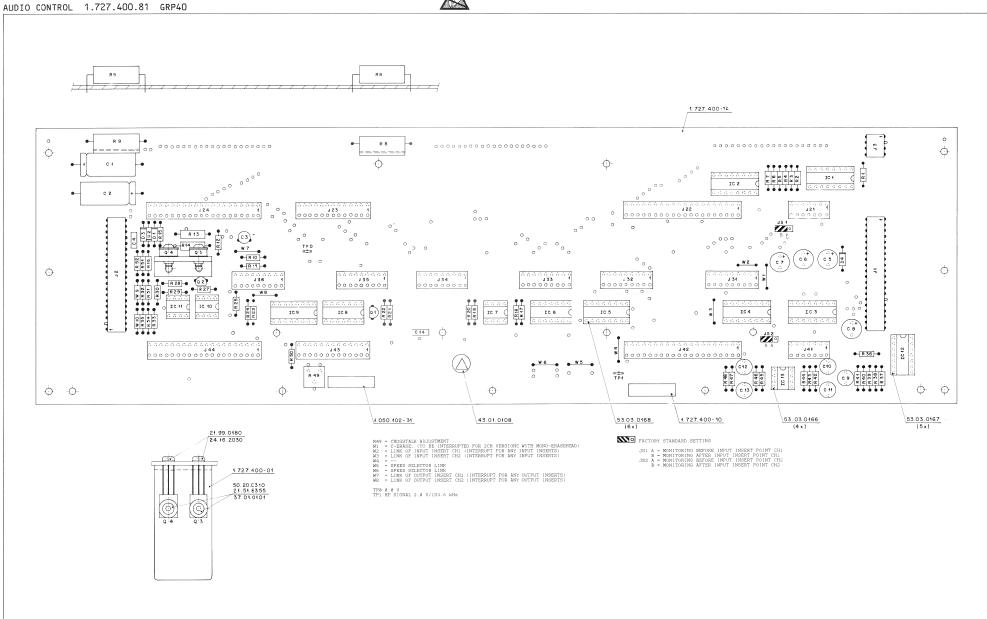
0.	P 05 • NO •	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANUF
	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13	59.25.3471 59.25.3471 59.22.3470 59.06.0104 59.22.5101 59.22.5101 59.22.5101 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.1102	470 UF 470 UF 47 UF 0-1 UF 100 UF 100 UF 10 UF 2-2 nF 1 nF 2-2 nF 1 nF 68 nF	-20% 16 V EL -20% 16 V EL -20% 10 V EL 10% 63 V PET -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 20 V EL -20% 10 V PP 1% 100 V PP			(00) (01)	R34 R35 R36 R37 R39 R40 R41 R42 R43 R44 R45	57-11-4104 57-11-4223 57-11-4332 57-11-4332 57-11-4332 57-11-3510 57-11-4102 57-11-4471 57-11-4472 57-11-4473 57-11-4681	100 kOhm 22 kOhm 3-3 kOhm 3-9 kOhm 3-3 kOhm 790 Ohm 1 kOhm 1 kOhm 470 Ohm 4-7 kOhm 560 Ohm 680 Ohm	2%, 0.25%, MF 2%, 0.25%, MF		
	D1 D2 D3 D4	50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0512	1N4448 1N4448 1N4448 1N5819	50V 50V 50V 30V	r	Mot		R 47 K 48 R 49 K 50 K 51	57-11-4332 57-11-4472 58-01-8202 57-11-4100 57-11-4102	3.3 kOhm 4.7 kOhm 2 kOhm 10 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF Potmeter PMG 2%, 0.25W, MF 2%, 0.25W, MF		
	IC 1 IC 2 IC 3 IC 4	50.07.0018 50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094 MC14094	CMOS CMOS CMOS CMOS		Mot Mot Mot Mot		TP0 TP1	57-11-4102 54-02-0320 54-02-0320	1 kOhm	2%, 0.25W, Mf PLUG 2.8≎0.8 PLUG 2.8≎0.8		
0)	IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13	50.07.0018 50.17.1000 50.05.0283 50.17.1002 50.07.0018 50.09.0107 50.09.0107 50.17.1074 50.09.0101	MC14094 74HC00 LM393 74HC02 MC14094 RC4559 RC4559 74HC74 LF353	CMOS HCMOS Dual Comparator HCMOS CMOS Dual Op. Amp. Dual Op. Amp. HCMOS Dual Op. Amp.		Mot Mot		W3 W3 W4 W5 W6 W6	64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.11.4000		Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge		
1)	IC13 J1	50.09.0105 54.01.0248	NE5532 20-POLE	Oual Op. Amp. CIS Socket Strip		AMP		W****10 XIC***1	57•11•4000 53•03•0168	16 pol	Wire Bridge IC Socket		
τυ	J2 D E R (0)	54.01.0248 1) 87/01/08 Wth	20-POLE AUDIO CON	CIS Socket Strip	1.727.400.00	AMP PAGE 1	SΤU	XIC 2 D E R (01	53.03.0168 3 87/01/08 Wth	AUDIO COM	IC Socket	1.727.400.00	PAGE
0•	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANUF.		POS-NO-	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANU
	J11 J12 J13 J21	54.01.0304 54.01.0218	4-POLE	CIS Socket Strip not used not used not used CIS Socket Strip		AMP AMP		XIC 3 XIC 4 XIC 5 XIC 6 XIC 7	53.03.0168 53.03.0168 53.03.0168 53.03.0167 53.03.0166	16 pol 16 pol 16 pol 14 pol 8 pol	IC Socket IC Socket IC Socket IC Socket IC Socket		
	J22 J23 J24	54.01.0226 54.01.0292 54.01.0226	20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP		XIC 9 XIC 9 XIC 10	53.03.0167 53.03.0168 53.03.0166	14 pol 16 pol 8 pol	IC Socket IC Socket IC Socket		
	J 31 J 32 J 33 J 34	54.01.0217 54.01.0217 54.01.0217 54.01.0217	9-POLE 9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP AMP		XIC11 XIC12 XIC13	53.03.0166 53.03.0167 53.03.0166	8 pol 14 pol 8 pol	IC Socket IC Socket IC Socket		
	J35 J36 J41 J42	54.01.0217 54.01.0217 54.01.0218 54.01.0226 54.01.0292	9-POLE 9-POLE 7-POLE 20-POLE 13-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP AMP AMP							
	MP2	54.01.0226 1.727.400.11 1.727.400.01	20-POLE 1 pce 1 pce	CIS Socket Strip  Audio Control PCE Headsink	3	AMP St St							
	MP 3 MP 4 MP 5	1.727.400.10 21.99.0180 1.727.170.00	1 pce 2 pcs 2 pcs	No∙ label Screw M3 ≑ 5 Revited spring		St St							
	MP6 MP7 MP8 MP9	1.727.400.02 1.727.400.03 1.727.400.04 21.53.0355	1 pce 1 pce 1 pce 2 pcs	Frame Tin plate Isolating plate Screw M3 ≉ 8		St St St							
	MP10 MP11 MP12	24.16.2030 21.53.0354 24.16.1030	2 pcs 11 pcs 11 pcs	Lock wacher Screw M3 ≉ 6 Lock wacher							us was to side		
	MP14 MP15 MP16	23.01.1032 28.31.0004 37.01.0101 43.01.0108	5 pcs 4 pcs 4 pcs 1 pce	Flat wacher POP-rivets Lock wacher ESE warning label		St St	PETP=	Polyester,	PP=Polypropyler =Motorola, St=St		n , MF=Metal Film	ı	
	Q1	50.03.0436 1) 87/01/08 Wth	802378	BC5478, BC550B	NPN 1.727.400.00		ORIG	86/09/23	(01) 87/01/08 1) 87/01/08 Wth		NTROL BOARD	1.727.400.00	
4D •	POS+NO+	PART NO+ 50+03+0350	VALUE MPF4392	SPECIFICATIONS /	FET	MANUF. Mot, Six							
	Q4 R1	50.03.0510 50.03.0495 57.11.4332	BD136-16 BD135-16 3.3 kOhm	2%, 0.25W, MF	PNP NPN								
	R 2 R 4 R 5	57.11.4332 57.11.4332 57.11.4332 57.11.4332	3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 6 R 7 R 8	57.11.4332 57.11.4332 57.56.5680 57.56.5680	3.3 kOhm 3.3 kOhm 68 Ohm 68 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 4 W, DR 2%, 4 W, DR									
	R9 R10 R11 R12	57.11.4102 57.11.4102 57.11.4103	1 kOhm 1 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R14 R15 R16	57.13.4229 57.13.4229 57.11.4221 57.11.4470	2.2 Ohm 2.2 Ohm 220 Ohm 47 Ohm	2%, 0.5 W, MF 2%, 0.5 W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 17 R 18 R 19	57.11.4103 57.11.4103 57.11.4332	10 kOhm 10 kOhm 3•3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 20 R 21 R 22 R 23	57.11.4332 57.11.4103 57.11.4332 57.11.4103	3.3 kOhm 10 kOhm 3.3 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R • • • • 24 R • • • • 25	57.11.4103 57.11.5106	10 k0hm 10 M0hm 4•7 k0hm	2%, 0.25W, MF 5%, 0.25W, MF not used 2%, 0.25W, MF									
	R26												
	R 26 R 27 R 28 R 29 R 30	57.11.4472 57.11.4223 57.11.4223 57.11.4221	22 kOhm 22 kOhm 22 kOhm 220 Ohm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									



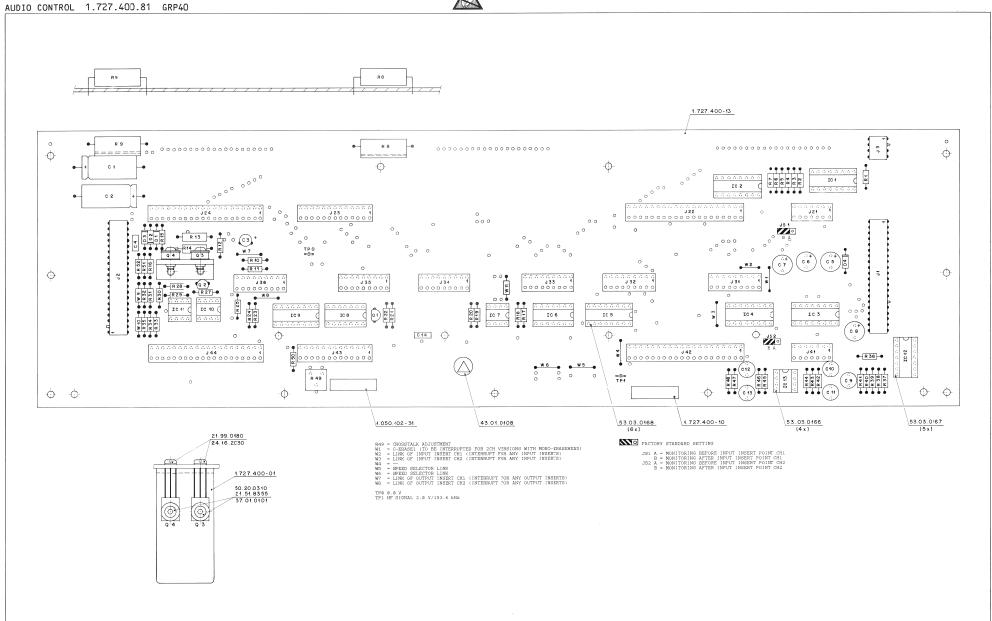










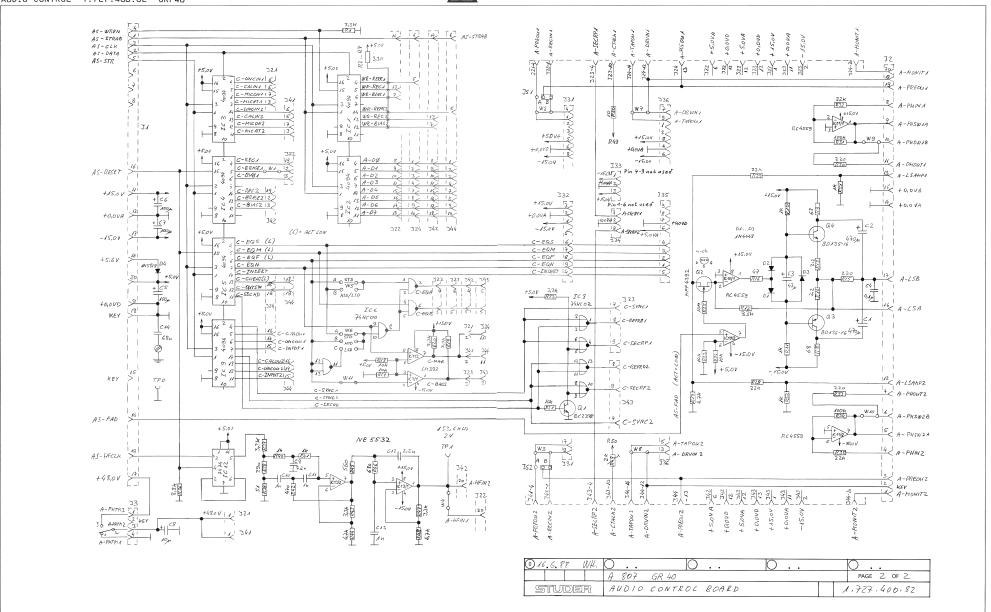




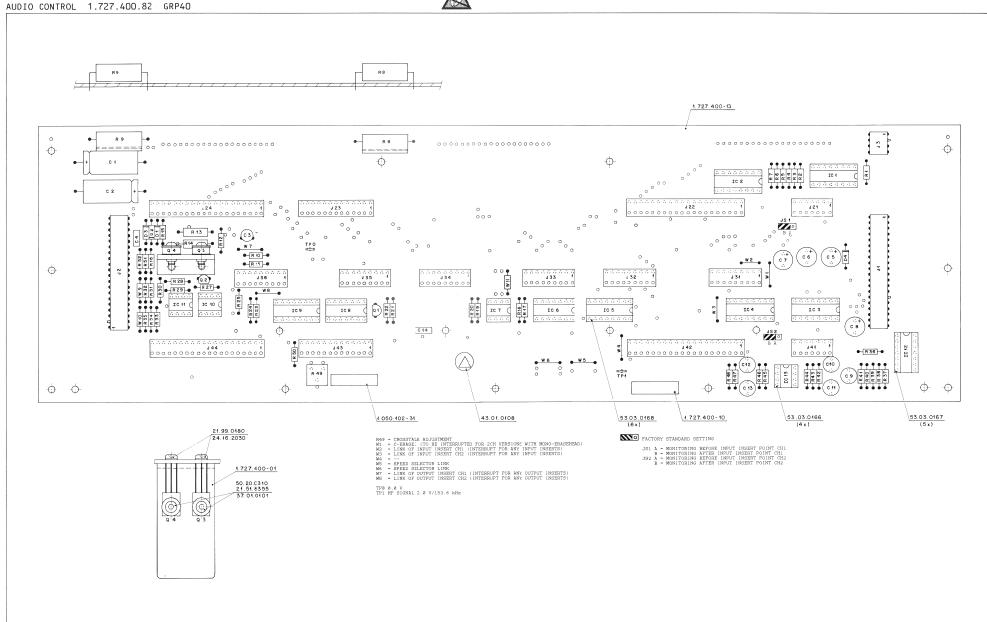
AUDIO CONTROL 1.727.400.81 GRP40	
The   Pos.   The   100	
180	1100- PTD-NUG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  XIC0 33.03.0167 1 pp pl 15 Secket XIC0 33.03.0167 1 pp pl 15 Secket XIC0 33.03.0168 2 pp pl 15 Secket XIC0 33.03.0168 2 pp pl 15 Secket XIC0 33.03.0168 2 pp pl 15 Secket XIC0 33.03.0168 2 pp pl 15 Secket XIC10 33.03.0168 2 pp pl 15 Secket XIC12 33.03.0168 2 pp pl 15 Secket XIC13 33.03.0168 8 pp pl 15 Secket XIC13 33.03.0168 8 pp pl 15 Secket
PACE   1771-00-10   PACE   190-00-10-00-	100   100



#### AUDIO CONTROL 1.727.400.82 GRP40









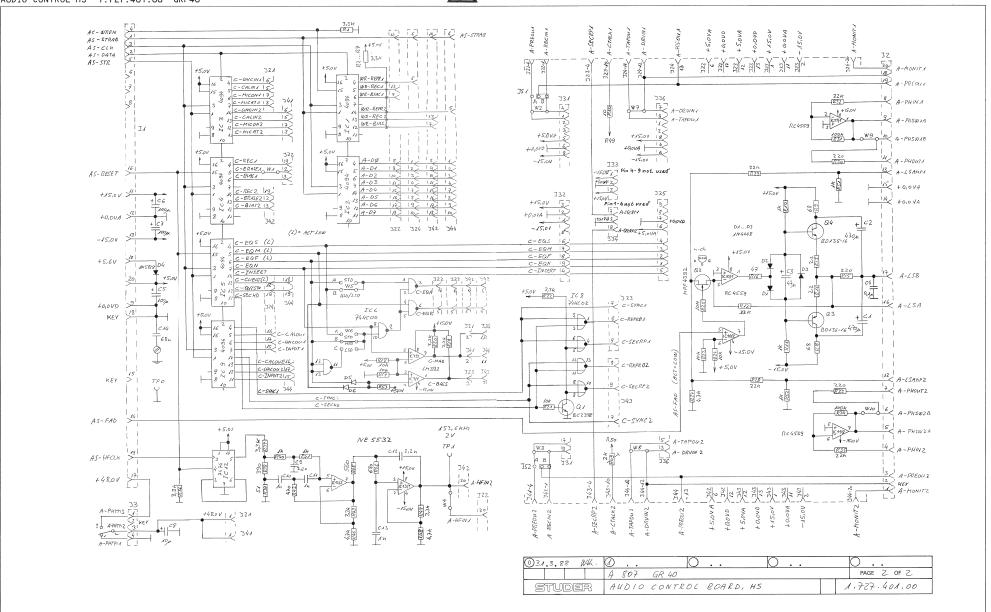
# AUDIO CONTROL 1.727.400.82 GRP40

PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.			PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MANUI
59.25.3471 59.25.3471 59.22.3470 59.06.0104 59.22.5101	470 uf 470 uf 47 uf 0.1 uf 100 uf	-20% 16 V EL -20% 16 V EL -20% 10 V EL 10% 63 V PETP -20% 25 V EL -20% 25 V EL		) ) )	(1C8 (1C9 (1C10 (1C11	53.03.0166 53.03.0167 53.03.0168 53.03.0166 53.03.0166 53.03.0166	8 pol 14 pol 16 pol 8 pol 8 pol 11 pol	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket		
59.22.8100 59.05.1222 59.05.1102 59.05.1102 59.05.1222 59.05.1222	10 uF 2-2 nF 1 nF 1 nF 2-2 nF 1 nF	-20% 63 V EL 1% 160 V PP 1% 160 V PP 1% 160 V PP 1% 160 V PP 1% 160 V PP 1% 160 V PP		,	(1013	53.03.0166	8 pol	IC Socket		
50-04-0125 50-04-0125 50-04-0125 50-04-0125 50-04-0512	1N4448 1N4448 1N4448 1N5819	50V 50V 50V 30V	Mot							
50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.17.1000 50.05.0283 50.17.1002 50.07.0018 50.09.0107 50.09.0107	MC14094 MC14094 MC14094 MC14094 MC140994 74HC00 LM393 74HC02 MC14094 RC4559 RC4559	CMOS CMOS CMOS CMOS CMOS GMOS DUAL Comparator HCMOS CMOS CMOS UMAL TOP AMP- DUAL TOP AMP- HCMOS	Mot Mot Mot Mot Mot			PP=Pal ypropylen	, SI=Silicon	, MF=Metal Film		
54.01.0248	20-POLE	CIS Socket Strip	AMP		•	Motorola, St=St	uder, Six=Si	liconix		
54-01-0248 54-01-0304 D) 88/03/28 Wth	4-POLE	CIS Socket Strip	AMP			) 88/03/28 Wth	AUDIO CON	TROL BOARD	1 • 727 • 400 • 82	PAGE
PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.			PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MA N
54.01.0218 54.01.0226 54.01.0229 54.01.0225 54.01.0217	7-POLE 20-POLE 13-POLE 20-POLE 9-POLE	not used not used CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP AMP AMP		R 39 R 40 R 41 R 42 R 43 R 44 R 45	57-11-3391 57-11-3510 57-11-3102 57-11-3471 57-11-3471 57-11-3332 57-11-3561	390 Ohm 51 Ohm 1 kOhm 1 kOhm 470 Ohm 3-3 kOhm 4-7 kOhm 560 Ohm	2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
54.01.0217 54.01.0217 54.01.0217 54.01.0217 54.01.0218 54.01.0226 54.01.0292	9-POLE 9-POLE 9-POLE 9-POLE 7-POLE 20-POLE 13-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	АМР АМР АМР АМР АМР АМР АМР		R47 R48 R49 R50 R51 R52	57.11.3332 57.11.3472 50.01.0202 57.11.3100 57.11.3102 57.11.3102 54.02.0320	680 Ohm 3.3 kOhm 4.7 kOhm 2 kOhm 10 Ohm 1 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF Potmeter PMC 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
54.01.0021 54.01.0021		Bridge Bridge Audio Control PCB	St		TP1 W2	54.02.0320 64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge		
1.727.400-01 1.727.400-10 21.99.0180 21.53.0355 24.16.2030 37.01.0101 43.01.0108 54.01.0020	1 pce 1 pce 2 pcs 2 pcs 2 pcs 4 pcs 1 pce 6 pcs	No. label Screw M3 † 5 Screw M3 † 8 Lock wacher Lock wacher ESE warning label	St St St		W5 H6 W7 W8 H9	64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.11.4000 57.11.4000		Mire Bridge Mire Bridge Mire Bridge Wire Bridge Mire Bridge Wire Bridge Mire Bridge Mire Bridge		
50.03.0436 50.03.0350 50.03.0510 50.03.0495	BC237B MPF4392 BD136-16 BD135-16	BC547B+ BC550B NPN J112 FET PNP NPN	Mot <sub>*</sub> Six		XIC2 XIC3 XIC4	53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	16 pol 16 pol 16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket IC Socket IC Socket		
			00•82 PAGE 2						1.727.400.82	PAGE
PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.							
57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, KF								
57-11-3332 57-11-3332 57-56-3680 57-56-3680 57-11-3102 57-11-3102 57-11-3333	3.3 k0hm 3.3 k0hm 68 0hm 68 0hm 1 k0hm 1 k0hm 33 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 4 %, DR 2%, 4 %, DR 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
57.13.3229 57.11.3221 57.11.3470 57.11.3103 57.11.3103 57.11.3332 57.11.3332	2.2 Ohm 220 Ohm 47 Ohm 10 kOhm 10 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.5 H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF								
57-11-3332 57-11-3103 57-11-3103 57-11-5106 57-11-3472 57-11-3223	3.3 k0hm 10 k0hm 10 k0hm 10 M0hm 4.7 k0hm 22 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 5%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF								
57-11-3223 57-11-3104 57-11-3223 57-11-3223 57-11-3223 57-11-3322 57-11-3332 57-11-3392	220 Ohm 100 kOhm 22 kOhm 220 Ohm 100 kOhm 220 Ohm 100 kOhm 22 kOhm 3-3 kOhm 3-9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF								
	59, 25, 3471 59, 2	59.25.3471	Solidaria	99-29-1971	99-25-1471 470 uf	PART NO.   VALUE   SPECIFICATIONS / EQUIVALENT   MANUF.   ELECTOPHICAL   STATE   SOCIETY   STATE   SOCIETY   STATE   SOCIETY   10   10   10   10   10   10   10   10			The column   The	



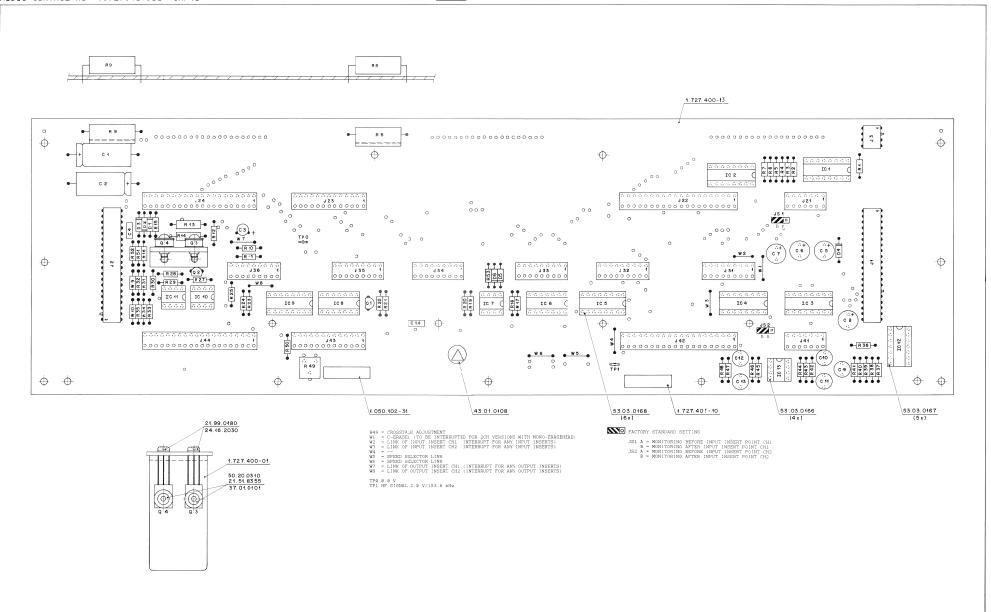
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#### AUDIO CONTROL HS 1.727.401.00 GRP40





AUDIO CONTROL HS 1.727.401.00 GRP40

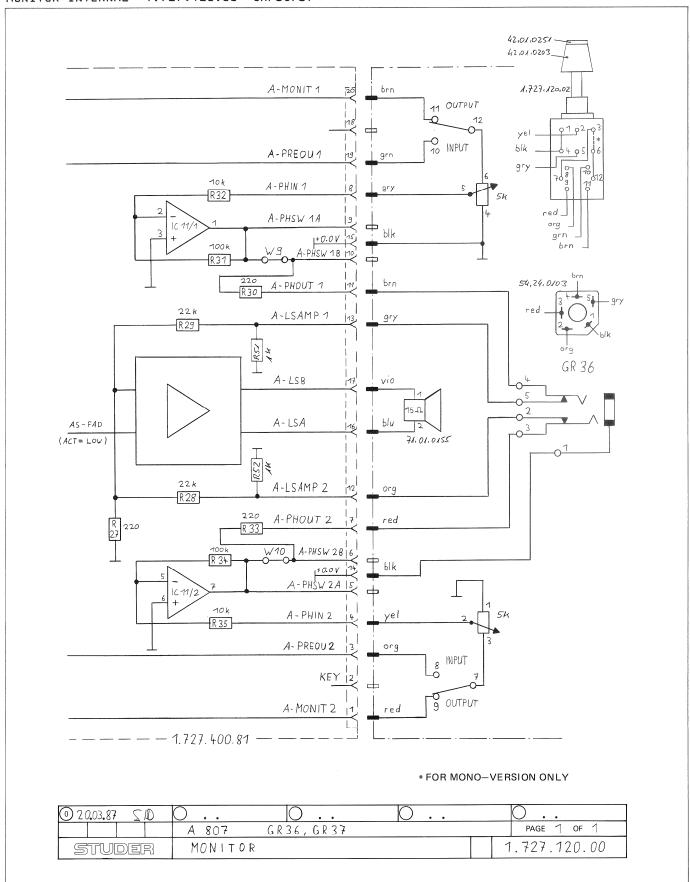




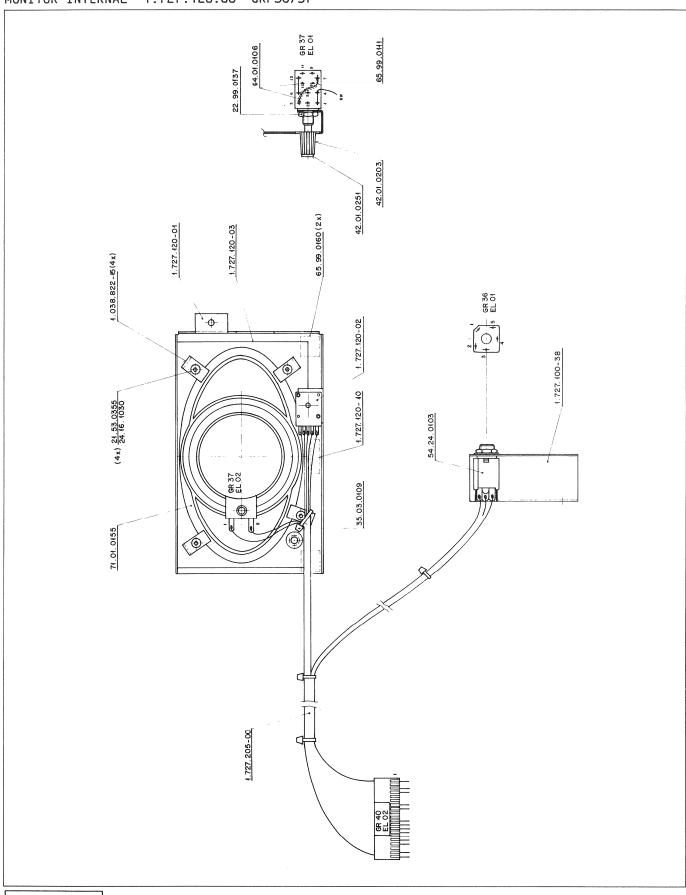
# AUDIO CONTROL HS 1.727.401.00 GRP40

ID •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANUI
	C1 C2	59.25.3471 59.25.3471	470 uF 470 uF	-20% 16 V EL -20% 16 V EL				R37 R38	57.11.3332 57.11.3391	3.3 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 4	59.22.3470 59.06.0104	47 uF 0.1 uF	-20% 10 V EL 10% 63 V PET	Р			R 39 R 40	57.11.3510 57.11.3102 57.11.3102	51 Ohm 1 kOhm	1%, 0.25W, MF 2%, 0.25W, MF		
	C5 C6	59.22.5101 59.22.5101 59.22.5101	100 uF 100 uF	-20% 25 V EL -20% 25 V EL				R • • • • 42 R • • • • 43	57.11.3102 57.11.3471 57.11.3332	1 kOhm 470 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 9	59.22.8100 59.05.1222	10 uF 2•2 nF	-20% 63 V EL 1% 160 V PP 1% 160 V PP				R 44 R 45 R 46	57•11•3472 57•11•3561 57•11•3681	4.7 kOhm 560 Ohm 680 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C10 C12	59.05.1102 59.05.1102 59.05.1222	1 nF 1 nF 2.2 nF	1% 160 V PP 1% 160 V PP				R * * * * 47 R * * * * 48	57•11•3332 57•11•3472	3.3 kOhm 4.7 kOhm	2% 0.25W MF 2% 0.25W MF		
	C13 C14	59.05.1102 59.06.0683	1 nF 68 nF	1% 160 V PP 10% 63 V PET	Р			R50 R51	58.01.8202 57.11.3100 57.11.3102	2 kOhm 10 Ohm 1 kOhm	Potmeter PMG 2%, 0.25W. MF 2%, 0.25W. Mf		
	D1 D2	50.04.0125 50.04.0125	1N4448 1N4448	50 V 50 V 50 V				R • • • • 52 R • • • • 53	57.11.3102 57.11.3332	1 kGhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	D4 D5 D6	50.04.0125 50.04.0512 50.04.0125 50.04.0125	1N4448 1N5819 1N4448 1N4448	30V 50V 50V		Mot		TP0 TP1	54.02.0320 54.02.0320 64.01.0106		PLUG 2.8¢0.8 PLUG 2.8¢0.8 Wire Bridge		
	IC 2 IC 3	50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094	CMOS CMOS CMOS		Mot Mot Mot		W3 W4	64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge		
	IC4 IC5	50.07.0018 50.07.0018	MC14094 MC14094	CMOS CMOS		Mot Mot		W5 W6	64.01.0106 64.01.0106		Wire Bridge Wire Bridge		
	IC6 IC7 IC8	50.17.1000 50.05.0283 50.17.1002	74HC00 LM393 74HC02	HCMOS Oual Comparator HCMOS				W8 W9	64.01.0106 64.01.0106 57.11.4000		Wire Bridge Wire Bridge Wire Bridge		
	IC9 IC10	50.07.0018 50.09.0107	MC14094 RC4559	CMOS Dual Op. Amp.		Mot		W10	57.11.4000		Wire Bridge		
	IC 12 IC 13	50.09.0107 50.17.1074 50.09.0105	RC 4559 74HC 74 NE 5532	Dual Op. Amp. HCMOS Dual Op. Amp.				XIC···2 XIC···3	53.03.0168 53.03.0168 53.03.0168	16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket		
	J1	54.01.0248	20-POLE	CIS Socket Strip		AMP		XIC4 XIC5	53.03.0168 53.03.0168	16 pol 16 pol	IC Socket IC Socket		
TU	) E R (01	) 88/03/28 Wth	AUDIO COM	TROL BOARD HS	1.727.401.00	PAGE 1	STU	D E R (0)	) 88/03/28 Wth	AUDIO CO	NTROL BOARD HS	1.727.401.00	PAGE
ın.	205 112	PART NO.	VALUE	SPECIFICATIONS / E	COULT VALLENT	MA NUF •	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MA NU
	J2 J3	54.01.0248 54.01.0304	20-POLE 4-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP		XIC6 XIC7	53.03.0167 53.03.0166	14 pol 8 pol	IC Socket IC Socket		
	J11 J12			not used not used not used				XIC 8 XIC 9 XIC 10	53.03.0167 53.03.0168 53.03.0166	14 pol 16 pol 8 pol	IC Socket IC Socket IC Socket		
	J21 J22	54.01.0218 54.01.0226	7-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP		XIC11 XIC12	53.03.0166 53.03.0167	8 pol 14 pol	IC Socket IC Socket		
	J23 J24	54.01.0292 54.01.0226	13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP AMP		XIC ••13	53.03.0166	8 pol	IC Socket		
	J31 J32 J33	54.01.0217 54.01.0217 54.01.0217	9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP							
	J34 J35	54.01.0217 54.01.0217	9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP AMP							
	J41 J42	54.01.0217 54.01.0218 54.01.0226	9-POLE 7-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP							
	J43 J44	54.01.0292 54.01.0226	13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP							
	JS2 JS2	54.01.0021 54.01.0021		Bridge Bridge									
		1.727.400.13 1.727.400.01	l pce l pce	Audio Control PC Headsink	3	St St							
	MP3	1.727.401.10	1 pce 2 pcs	No. label Screw M3 ≎ 5		St							
	MP 5 MP 6 MP 7	21.53.0355 24.16.2030 37.01.0101	2 pcs 2 pcs 4 pcs	Screw M3 ≉ 8 Lock wacher Lock wacher		St	(01)	28.03.1988	Sensibility ext	tension			
	MP9	43.01.0108 54.01.0020	1 pce 6 pcs	ESE warning labe Contact pin	l	St	EL≃E1e PETP=I	ectrolytic, Polyester,	PP=Polypropyle	n, SI=Silico	n , MF=Metal Fili	п	
	Q 1 Q 2	50.03.0436 50.03.0350	BC237B MPF4392	BC547B, BC550B J112	NPN FET	Mot.Six			=Motorola, St=Si	tuder, Six=S	iliconix		
	Q4	50.03.0510 50.03.0495	BD136-16 BD135-16		PNP NPN				(01) 88/03/28				
ΤU	D E R (01	) 88/03/28 Wth	AUDIO COM	NTROL BOARD HS	1.727.401.00	PAGE 2	STU	DER (O	1) 88/03/28 Wth	DO OIGUA	NTROL BOARD HS	1.727.401.00	PAGE
ND •	POS-NO-	PART NO. 57-11-3332	VALUE	SPECIFICATIONS /	EQUIVALENT	MANUF.							
	R 2 R 3 R 4	57•11•3332 57•11•3332 57•11•3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 6	57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R7 R8 R9	57.11.3332 57.56.5680 57.56.5680	3.3 kGhm 68 Ohm 68 Ohm	2% 0-25W MF 2% 4 W DR 2% 4 W DR									
	R10 R11	57.11.3102 57.11.3102	1 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
00) 01)	R12 R12 R13	57-11-3103 57-11-3333 57-13-3229	10 kOhm 33 kOhm 2•2 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.5 W, MF									
	R 14 R 15	57.13.3229 57.11.3221	2.2 Ohm 220 Ohm 47 Ohm	2%, 0.5 W, MF 2%, 0.5 W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R16 R17 R18	57-11-3470 57-11-3103 57-11-3103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R19 R20	57.11.3332 57.11.3332 57.11.3103	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 21 R 22 R 23	57.11.3332 57.11.3103	3.3 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R 24 R 25 R 26	57.11.3103 57.11.5106	10 kOhm 10 MOhm	2%, 0.25W, MF 5%, 0.25W, M⊢ not used									
	R 27 R 28	57.11.3472 57.11.3223	4.7 kOhm 22 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF									
	R29 R30	57.11.3223 57.11.3221 57.11.3104	22 kOhm 220 Ohm 100 kGhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 31		22 4 01	2%, 0.25W, MF									
	R 32 R 33	57-11-3223 57-11-3221	22 kOhm 220 Ohm	2%, 0.25W, MF									
	R 32	57-11-3223 57-11-3221 57-11-3104 57-11-3223 57-11-3332		2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF									

## MONITOR INTERNAL 1.727.120.00 GRP36/37

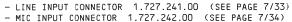


MONITOR INTERNAL 1.727.120.00 GRP36/37

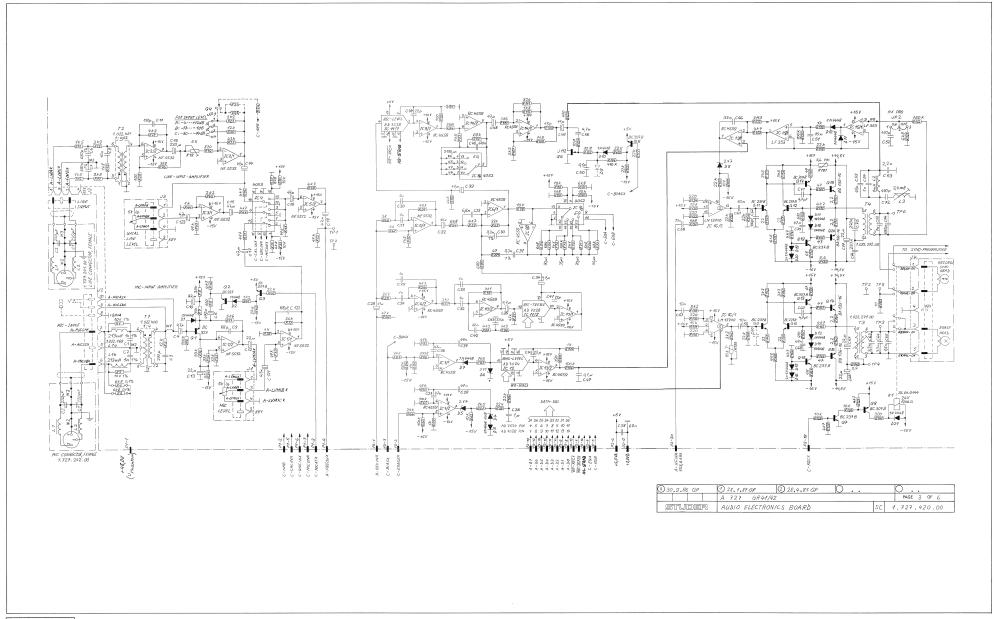


AUDIO ELECTRONICS (VU) 1.727.420.00 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)







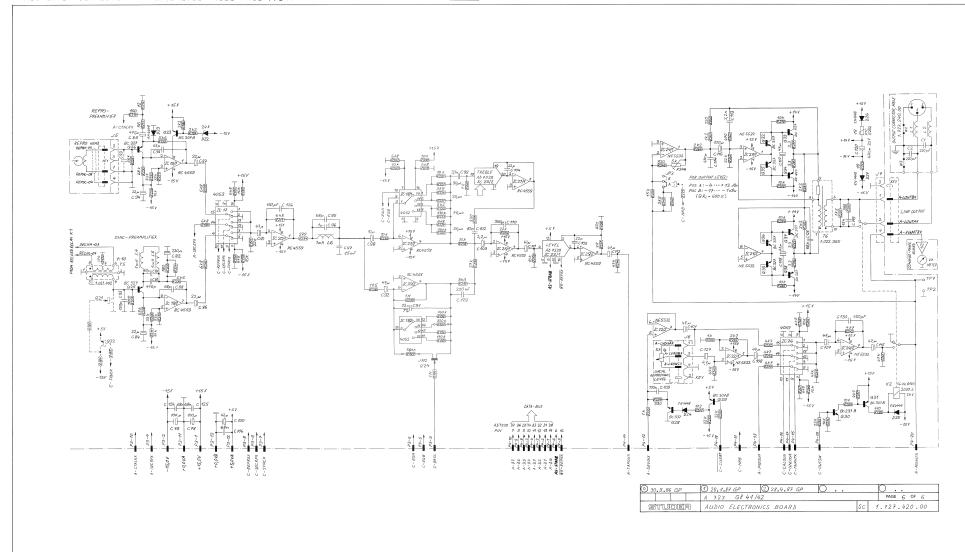
A807 7/28 STUDER

AUDIO ELECTRONICS (VU) 1.727.420.00 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

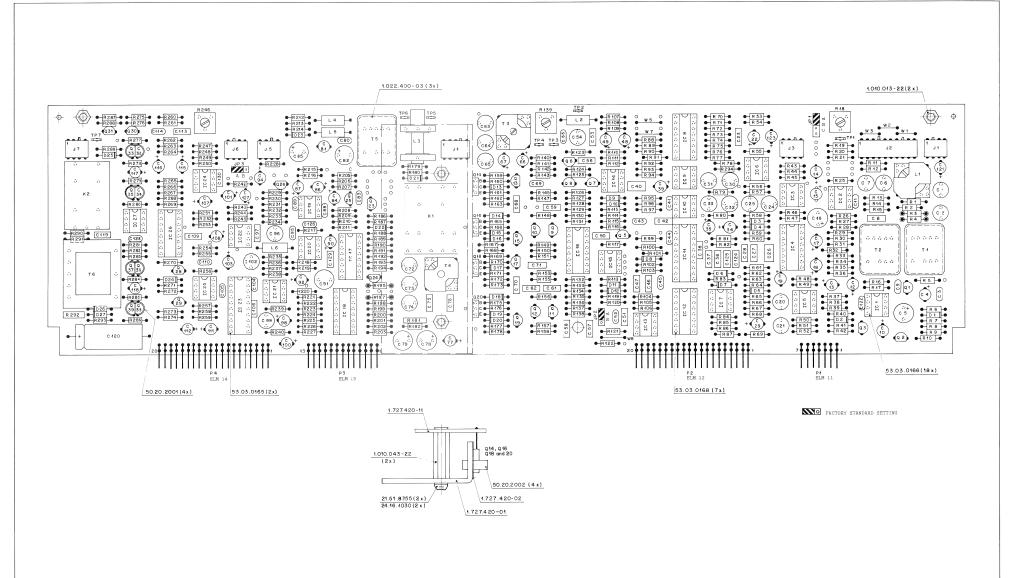
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)







AUDIO ELECTRONICS (VU) 1.727.420.00 GRP41/42





#### AUDIO ELECTRONICS (VU) 1.727.420.00 GRP41/42

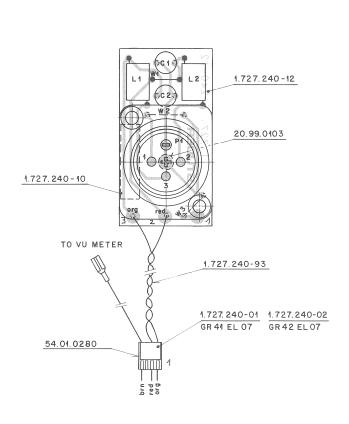
ELECTRONICS (VU) 1.727.420.00 GRP41/	/42			
S.RO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	1MO. POS-NO. PAST NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.		NUF. ING. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT M
99-05-1102 1 nF 1% 54V PP 99-05-1102 1 nF 1% 54V PP 99-25-1102 1 nF 1% 54V PP 99-25-26-79 4-70 F 10% 59V Cer 99-25-26-79 4-70 uF -20% 35V EL 99-25-26-71 470 uF -20% 53V EL 99-25-26-71 470 uF -20% 53V EL 99-25-26-71 470 uF -20% 53V EP 99-25-26-71 470 uF -30% 53V EP	(0) C110 93-35-4271 270 pF 102 509 Cer (CI) C110 930-35-910 390 pF 102 509 Cer (CI) C111 59-22-3670 47 uF -201 109 EL (111 59-22-3670 47 uF -201 109 EL (112 59-22-3670 47 uF -201 109 EL (114 59-32-3671 47 uF 100 pF 100 509 Cer (114 59-3-3-5671 47 uF 0 pF 100 509 Cer (115 59-3-3-3571 47 uF -201 109 EL		MP13 1.010.013.22 2 pcs Rivet Nut M3*3 MP14 50.20.2002 4 pcs Clip. T0126	5t R01 57:11:4152 1.5 KDhm 2%, 0-25% MF 5t R02 57:11:4103 10 kDhm 2%, 0-25% MF R03 57:11:4156 150 kDhm 2%, 0-25% MF R06 57:11:4150 1 kDhm 2%, 0-25% MF
2 39.05.1102 1 nF 12 50V PF3 99.3-1.2-27 pF 102 50V Cer3 99.3-2-27 pF 102 50V Cer5 9.2-2-27 pF 102 50V Cer6 99.2-2-27 pF 102 50V Cer6 99.2-2-27 pF 102 50V Cer7 99.2-2-1.01 600 pF 12 50V PF7 99.2-2-1.01 600 pF 12 50V PF7 99.2-2-0.010 100 pF 12 50V PF	C113 59-06-0222 2-2 nF 10% 50V PETP C114 59-34-5471 470 pF 10% 50V Cer C115 59-22-3470 47 uF -20% 10V EL C116 59-22-3101 100 uF -20% 10V EL		81 54-01-0223 7-Pole (IS Pin Strip	10
9 59-34-4600 68 pF 10\$ 50V Cor 10 59-22-3220 22 uF -20\$ 23V EL 11 59-34-4151 150 pF 10\$ 50V Cor 12 59-22-5220 22 uF -20\$ 23V EL	C117 59.22;.3470 47 UF -20% 10V EL C118 59.22;.3470 47 UF -20% 10V EL C119 59.02;.0153 15 nF 10% 50V PETP C120 59.21;.5471 470 UF -20% 35V EL		P2 54.01.0201 20-Pole CLS Pin Strip P3 34.01.0273 13-Pole CLS Pin Strip P4 54.01.0201 20-Pole CLS Pin Strip	R69 57.11.4473 47 kOhn 2%, 0.25%, MF R70 57.11.5312 5-1 kOhn 2%, 0.25%, MF R71 R72 57.11.3752 7.5 kOhn 2%, 0.25%, MF
	C121 59:22:4879 4-7 uf -20x 35V EL C122 59:34:4680 06 pF 10x 50V Cer C123 59:22:4879 4-7 uF -20x 35V EL C124 59:26:4083 06 nF 10x 50V PEP		G	N.
	(69) 6110 59-3-4-271 270 pf 103 50V Cer (11) 103 103 103 103 103 103 103 103 103 103		G6 50-03-0359 J112 G7 50-03-0456 BC378 BC5478 BC550B NPN G8 50-03-0915 BC378 BC5578 BC550B PNP G9 50-03-0915 BC2378 BC5578 BC550B PNP	55
22 59-22-6100 10 uF20x 35V EL 23 59-06-06982 6-8 nF 10x 50V PETP 24 59-05-2102 1 nF 2-5% 55V PP 25 59-05-2102 1 nF 2-5% 59V PP	01 50.04.0125 1N4448 50V SI 02 50.04.0125 1N4448 50V SI		G	R22 57.11.4473 47 kDhn 2% 0.25% MF R33 57.11.4452 1.5 kDhn 2% 0.25% MF R34 57.11.4156 150 kDhn 2% 0.25% MF R35 57.11.4156 150 kDhn 2% 0.25% MF R55 57.11.4102 1 kDhn 2% 0.25% MF
	D6 50.04-1102 0.8 V 5% 0.4W Zener D5 >0.04-1106 2.7 V 5% 0.4W Zener D6 50.04-1112 5.1 V 5% 0.4W Zener		Q15 50.03.0436 8C2378 8C5478, 8C5508 NPN	### A
29 99-22-3470 47 uF -201 10V EL30 99-05-1332 3-3 nF 11 50V PP31 99-05-1332 3-3 nF 12 50V PP32 99-05-1332 3-3 nF 13 50V PP33 99-05-2102 1 nF 2.53 50V PP33 99-05-2102 1 nF 2.53 50V PP34 99-22-8479 4.7 uF -203 33V EL	07 50-04-0125 124448 59V SI 08 59-04-1106 2-7 V 5% 0-4W Zener 09 not used 010 50-04-0125 12448		017 56.03.0313 8L076 8.05376 8.05360 PMP 018 56.03.0313 8L076 8.05376 8.05360 PMP 020 1020	No. 10 37.11.203 C8 kbbm 24 0.29% FF   R. 199 57.11.203 C8 kbbm 24 0.29% FF   R. 199 57.11.203 10 kbbm 23 0.29% FF   R. 190 57.11.203 10 kbbm 23 0.29% FF   R. 190 57.11.203 10 kbbm 23 0.29% FF   R. 190 57.11.203 10 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 23 0.29% FF   R. 190 57.11.203 20 8 kbbm 24 0.29% FF   R. 190 5
	0 9 net used 0 10 50.04.0125 1.4448 50V 51 0 11 50.04.0125 1.4448 50V 51 0 12 50.04.0125 1.4448 50V 51 0 13 50.04.0125 1.4448 50V 51 0 13 50.04.0125 1.4448 50V 51		U23 50.03.3515 BC307b BC5578. BC560B PNP U23 50.03.3550 J112 BC578. BC560B PNP U23 50.03.3502 BC527 PNP	R94 37.11.45962 5.6 kDhm 23. 0.2594 MF R95 37.11.45962 0.0 hm 23. 0.2594 MF Mot R96 37.11.3432 4.3 kDhm 23. 0.2594 MF R97 37.11.3432 4.3 kDhm 23. 0.2594 MF
R (02) 87/04/28 GP AUDIO ELECTRONICS BOARD 1.727.420.400 PAGE 1		00 PAGE +	S T U D E R (DZ) 87/04/28 GP AUDIO ELECTRONICS BOARD 1.727-420-00 PAGE	7 S T U D E R (02) 87/94/28 GP AUDIO ELECTRONICS BOARD 1.727.420.00 PAGE
S-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NG. VALUE SPECIFICATIONS / EQUIVALENT	MANUF-	ING. POS.NO. PARTING. VALUE SPECIFICATIONS / EQUIVALENT MA	NUF- LNO- POS-NO- PART NO. VALUE SPECIFICATIONS / EQUIVALENT M
38 59-06-0083 68 nF 10% 58V PETP 39 59-22-3470 47 0F20% 18V EL 40 59-06-5474 470 nF 5% 56V PETP 41 59-34-2220 22 pF 10% 58V Cor	0		020 50.03.0625 8C217  020 30.03.0625 8C217  020 30.03.0625 8C217  020 30.03.0618 8C3375 8C5578 8C5508 9P4  030 30.03.0618 8C3378 8C5578 8C5508 9P4  031 30.03.0615 8C337 8ct578 8C5508 9P4  032 30.03.0615 8C337 8ct578 8C558 9P4  033 30.03.0625 8C227 8ct578 8ct 9139 P4  035 30.03.0625 8C227 8ct578 4ct 914 914 914 914 914 914 914 914 914 914	849 77.11.4472 4.7 KCDm 22.025W F   8100 57.11.4572 4.7 KCDm 23.025W F   8100 57.11.4523 22 KDDm 23.025W F   8100 57.11.4523 32 KDDm 23.025W F   8102 57.11.4523 31 AB CDm 23.025W F   8103 57.11.4523 31 AB CDm 23.025W F   8104 57.11.4522 4.7 KDDm 25.025W F   8105 57.11.4522 4.8 KDDm 23.025W F   8107 57.11.4523 8.8 KDDm 23.025W F   8107 57.11.4524 0.00 KDDm 22.025W F   8107 57.11.4524 6.00 KDDm 22.025W F   8107 57.11.4522 6.00 KDD 22.00 KDD 22
			0	7.11.4672 4.7 KDm 2% 0.259 WF 8.100 37.11.4672 4.7 KDm 2% 0.259 WF 8.100 37.11.4672 3.2 KDm 2% 0.259 WF 8.1010 37.11.4672 3.1 kDm 2% 0.259 WF 8.1010 37.11.4672 4.7 KDm 2% 0.259 WF 8.1010 37.11.4672 4.1 kDm 2% 0.259 WF 8.1010 37.11.4672 4.1 kDm 2% 0.259 WF 8.1010 37.11.4670 4.1 kDm 2% 0.259 WF 8.1010 37.11.4670 0.0 KDm 2% 0.259 WF
	0 22 50-05-11/21 24 V 5 2 0.4M Zenore 0 23 50-05-01/25 144448 5 50V 51 0 26 50-05-01/25 144448 50V 51 0 26 50-05-01/25 144448 50V 51 0 26 50-05-01/25 144448 50V 51 0 26 50-05-01/25 144448 50V 51 0 27 50-05-01/25 144448 50V 51		034 \$0.03.0625 BC.227 satched with 035 PAP 035 \$0.03.0625 BC.237 satched with 034 PAP 036 \$0.03.0516 BC.337 satched with 034, PAP 037 \$0.03.0516 BC.337 satched with 037, PAP 038 \$0.03.0625 BC.227 satched with 036, PAP 039 \$0.03.0625 BC.227 satched with 036, PAP	R107 57:11:4922 0.2 KOhn 2% 0.22% wF R108 57:11:4121 1.0 KOhn 2% 0.22% MF R109 57:11:4151 150 Ohn 2% 0.23% MF R117 57:11:453 0.2 KOhn 2% 0.23% MF R111 57:11:493 0.2 KOhn 2% 0.23% MF
**************************************	IC1 50.09-0105 NE 5532 Dual Op. Anp. IC2 50.09-0105 NE 5532 Dual Op. Anp. IC3 50.09-0105 NE 5532 Dual Op. Anp.	Sig Sig Sig Mot	R1 57.11.3103 10 kOhn 1% 0.25% MF R2 57.11.3103 10 kOhn 1% 0.25% MF R3 5%-99.0250 6.8 kOhn 0.1% 0.25% MF. Note 1	\$ 127
54 99.05.2102 1 nF 2.9% 90P PF55 99.34.680 68 pF 10% 50V Cer55 99.34.680 68 pF 10% 50V Cer56 99.30.0072 4.7 nF 10% 50V PETP58 99.30.1033 10 nF 10% 50V PETP58 99.30.1033 10 nF 10% 50V PETP59 99.30.1033 10 nF 10% 50V PETP59 99.00.1033 10 nF 10% 50V PETP	IC4 50.07.0015 MC 14053 CMGS Anialog Switch IC5 50.094.0105 MC 95532 Dual Op. Amp. IC6 50.094.0107 MC 4559 Dual Op. Amp. IC6 50.094.0107 MC 4559 Dual Op. Amp. IC6 50.094.0107 MC 4559 Dual Op. Amp.	Mot Sig Ra Ra	R4 57.09.0250 6.8 kDhm 0.1% 0.2594 MF- Note 1 R5 57.11.4123 12 kDhm 2% 0.2594 MF- R5 17.11.4123 12 kDhm 2% 0.2594 MF- R5 17.11.4133 33 kDhm 2% 0.2594 MF- R5 37.11.4333 33 kDhm 2% 0.2594 MF-	\$ 110 37-11-423 0 k kbm 24 0-254 46 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	1Cd 50.07.0024 MC 14052 CMSS Analog Switch 1C9 50.04.0107 MC 4559 Dual Op. App. 1C10 50.04.0107 MC 4559 Dual Op. App. 1C12 50.07.0002 A 775243 Dual Op. App.	Ra Ra AOI	S	R120 57.11.4104 100 KDhm 2%, 0.25%; MF M121 57.11.4154 682 6.8 KDhm 2%, 0.25%; MF R122 57.11.4154 150 KDhm 2%, 0.25%; MF R123 57.11.4154 070 MDm 2%, 0.25%; MF
64 99.05.2332 3.3 nF 2.5% 100V PP 65 99.05.22332 1.5 nF 2.5% 100V PP 66 99.22.0220 22 uF -20% 3W EL 67 99.22.0220 22 uF -20% 3W EL	10	Ra Ra MS NS	\$ 37,740,030 a. b. blone 0.11 0.254 a. Ht. Note 1 \$ 0 711,1410 a. 100 kDhm 22 0.254 a. Ht. Note 1 \$ 0 711,1410 a. 100 kDhm 22 0.254 a. Ht \$ 0 711,1410 a. 100 kDhm 22 0.254 a. Ht \$ 0 711,1410 a. 100 kDhm 22 0.254 a. Ht \$ 10 37,11410 a. 100 kDhm 22 0.254 a. Ht \$ 10 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht \$ 11 37,114410 a. 100 kDhm 22 0.254 a. Ht	R124 57:11:5126 10 f00m 5% 0:25% MF R125 57:11:5126 10 f00m 5% 0:25% MF R127 57:11:4472 47 f00m 2% 0:25% MF R127 57:11:4472 47 f00m 2% 0:25% MF R128 57:11:4472 47 f00m 2% 0:25% MF
	D27 90.0%-0129 104-469 50V 51  IC27 90.0%-0129 105-329 Dual Dp. Amp. IC28 90.0%-0109 86 5932 Dual Dp. Amp. IC29 90.0%-0109 86 5932 Dual Dp. Amp. IC49 90.0%-0109 86 5939 Dual Dp. Amp. IC49 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 86 6939 Dual Dp. Amp. IC10 90.0%-010 Bull Dp. Amp.	Sig Ra Ra Ra Ra Ra ADI Ra MS MS MS MS MC Mot Mot Ra Ra Ra Ra Ra Ra Ra Ra Ra Ra Ra Ra Ra	8 7 37.11.4101 100 0hm 22 0.2594 HF 8 10 37.11.4102 110 8 0hm 22 0.2594 HF 8 11 37.11.4102 110 8 0hm 23 0.2594 HF 8 11 37.11.4102 110 8 0hm 23 0.2594 HF 8 11 37.11.4102 110 8 0hm 23 0.2594 HF 8 10 37.11.4102 10 10 8 0hm 23 0.2594 HF 8 10 37.11.4102 10 10 8 0hm 23 0.2594 HF 8 10 37.11.4102 10 10 8 0hm 23 0.2594 HF 8 11 37.11.4102 10 10 8 0hm 22 0.2594 HF 8 11 37.11.4102 10 10 8 0hm 22 0.2594 HF 8 11 38.01.1002 3 0hm 23 0.2594 HF 8 12 37.11.4102 12 8 0hm 23 0.2594 HF 8 12 37.11.4102 12 8 0hm 23 0.2594 HF 8 12 37.11.4102 12 8 0hm 23 0.2594 HF 8 12 37.11.4102 12 8 0hm 23 0.2594 HF	### 10
72 59.05.2471 470 pF 2.54 594V PP73 59.05.1102 1 nF 11 634V PP73 59.05.1102 1 nF 11 634V PP74 59.05.1681 600 pF 11 634V PP74 59.05.1681 600 pF 12 634V PP74 59.05.1681 6	IC22 50.09.0107 KC 4559V Dual Up. Amp. IC23 50.09.0105 MC 5532 Dual Up. Amp. IC23 50.01.0026 AD 7528JN Dual 8-bit D/A Converter  STUDER (02) 47704/23 OP AUDIO ELECTRONICS GOARD 1.727-420-0	Sig ADI	R	
S.NO. PART NO. VALUE SPECIFICATIONS / EUULVALENT MANUE.	14D. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT  1C24 50.09.0105 NE 5532 Dual Op. Amp.	MANUF- Sig		NNUF- IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
75	IC25 50.03.0107 RC 4559 Oual Op. Anp. IC26 50.07.0015 MC 14053 CMDS Analog Switch IC27 50.03.0105 ME 5532 Dual Op. Anp.	Ra Mot Sig	R25 57.11.5433 43 kOhm 2% 0.2594 MF R26 57.11.4992 3.9 kOhm 2% 0.2594 MF R27 57.11.432 4.3 kOhm 2% 0.2594 MF R28 57.11.4101 0 Ohm 2% 0.2594 MF	R155 97.11.4221 220 Ohn 23, 0.55% HF  (00) R150 37.11.4221 220 Ohn 23, 0.55% HF  (01) R150 37.11.4221 220 Ohn 23, 0.55% HF  (02) R177 37.11.4402
	1 5 × 111304 - 1-0-10 CLS Socket Stelp 2 2 5 × 011304 - 1-0-10 CLS Socket Stelp 2 3 5 × 011304 - 1-0-10 CLS Socket Stelp 2 5 × 011304 - 1-0-10 CLS Socket Stelp 2 5 × 011305 5 - 1-0-10 CLS Socket Stelp 2 5 × 011305 5 - 1-0-10 CLS Socket Stelp 2 5 × 011305 5 - 1-0-10 CLS Socket Stelp 2 7 × 011306 5 - 1-0-10 CLS Socket Stelp 2 7 × 011306 5 - 1-0-10 CLS Socket Stelp 2 7 × 011306 5 - 1-0-10 CLS Socket Stelp 2 7 × 011306 5 - 1-0-10 CLS Socket Stelp 3 7 × 011306 5 - 1-0-10	AMP AMP AMP AMP AMP AMP AMP	\$ 7.11.40.33	R139 58.01.8103 10 k0hm 10% 0.5 w PMG R141 57.11.2529 2-2 0hm 2% 0.25% MF R141 57.11.2501 30 0hm 2% 0.25% MF R141 57.11.2502 30 0hm 2% 0.25% MF R143 57.11.2502 3-3 k0hm 2% 0.25% MF
		AMP AMP	R. 33 3-(1.14)22 10 KUNN 22 0.258, ME R. 35 3-(1.40)33 3 KUNN 22 0.259, ME R. 36 3-(1.14)33 33 KUNN 22 0.259, ME R. 37 3-(1.14)53 35 KUNN 22 0.259, ME	8155 37.11.4332 3.3 AOhn 235 0.2594 MF 8174 37.11.4213 10.00 hin 235 0.2594 MF 810 37.11.4223 22 KOhn 235 0.2594 MF 8179 37.11.4220 22 Ohn 235 0.2594 MF
	JP2 54-01-0021 Bridge JP3 54-01-0021 Bridge		8	10.10 37.11.4220 12 00m 24.0.259 NF  8.1.131 37.11.4322 3.3 (One 24.0.259 NF  8.1.151 37.11.4321 3.3 (One 24.0.259 NF  8.1.151 37.11.4321 3.4 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF  8.1.151 37.11.4221 2.2 (One 24.0.259 NF
	1 1.022.169.00 213mH	St	800 37.11.4223 22 80 mm 220.025 m MF 810 37.11.4223 22 80 mm 220.025 m MF 812 37.11.4223 22 80 mm 230.025 m MF 812 37.11.4223 22 80 mm 230.025 m MF 812 37.11.4223 22 80 mm 230.025 m MF 812 37.11.4222 22 80 mm 230.025 m MF 812 37.11.4222 22 80 mm 230.025 m MF 812 37.11.4222 22 80 mm 230.025 m MF 812 37.11.4222 22 80 mm 240.025 m MF 812 37.11.4222 22 80 mm 240.025 m MF 812 37.11.423 47 80 mm 240.025 m MF	1 1 2 77.114.932 3.3 40m 24 0.259 8 6 6 6 6 7 7.114.932 3.3 40m 24 0.259 8 6 6 6 7 7.114.932 3.3 40m 24 0.259 8 6 6 7 7.114.932 3.3 40m 24 0.259 8 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
	L 1 .10272.199.00 233.84 L 2 65.01.0128 184 L 3 1.177.131.00 2.4694 L 4 62.01.0128 184 L 5 62.01.0128 184 L 6 20.01.0128 184	St	860 57.11.4472 4.7 KOhn 25. 0.2994 NF 87 57.11.4472 4.7 KOhn 25. 0.2994 NF R48 57.11.4473 47 KOhn 25. 0.2994 NF R48 57.11.4473 47 KOhn 25. 0.2994 NF R50 57.11.4313 23. 30 KOhn 25. 0.2994 NF	R10 9711149229 222 Ubm 224 02294 MF R10 972114472 47 Ubm 224 02294 MF R112 972114472 47 Ubm 224 02294 MF R112 972114472 47 Ubm 224 02294 MF
	MP1 54-01-0020 4 pcs Contact Pin JP1 MP2 54-01-0020 3 pcs Contact Pin JP2 MP3 54-01-0020 3 pcs Contact Pin JP3		R90 57-11.3132 1-3 kUhn 24, 0-25% MF- R51 57-11.4472 4-7 kUhn 24, 0-25% MF- R55 57-11.4472 4-7 kUhn 22, 0-25% MF- R54 57-11.4682 4-7 kUhn 22, 0-25% MF- R54 57-11.4682 6-8 kUhn 22, 0-25% MF- R54 57-11.4682 6-8 kUhn 22, 0-25% MF-	R155 57.11.4470 47 Ohn 2% 0.25% MF R167 57.11.4470 47 47 KDhm 2% 0.25% MF R167 57.11.4460 68 Ohn 2% 0.25% MF R100 57.11.4400 68 Ohn 2% 0.25% MF
103 59.26.5229 2.2 UP 20% 10V EL 104 59.34.2220 22 pF 10% 50V Cer 105 59.34.2220 22 pF 10% 50V Cer 106 59.06.0438 68 nF 10% 50V PETP		St St St	2	000   1.117   1.114
	MP8 L.727.420.01 1 pcs Heatsink			



# AUDIO ELECTRONICS (VU) 1.727.420.00 GRP41/42

	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I ND.	POS = NO =	PART NO.	VALUE	SPECIFICATIONS / EQUI	VALENT	MANUI
	R177 R178 R179 R180 R181 R182 R183	57.11.4680 57.11.4682 57.11.4473 57.11.4100 57.99.0209 57.11.4569	68 Ohm 6+8 kOhm 47 kOhm 10 Ohm 5+6 Ohm 5+6 Uhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 7C 2%, 0.25%, MF 001,586			R 286 R 287 R 288 R 289 R 290 K 291 R 292	57-11-4339 57-11-4472 57-11-4103 57-11-4471 57-11-4391 27-11-4192 57-92-1151	3+3 Ohm 4+7 kOhm 10 kOhm 470 Ohm 390 Ohm 1+2 kOliiii 18 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	R184 R185 R186 R187 R188	57-11-4222 57-11-4222 57-11-4103	2.2 kOhm 2.2 kOhm 10 kOhm	not used not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			R293 R294 T1 T2	57.11.4180 57.11.4470 1.022.400.00 1.022.451.00	18 Ohm 47 Ohm 1:4 1:0.62	2%, 0.25W, MF 2%, 0.25W, MF Mic Input Trafo Line Input Trafo		St St
	R189 R190 R191 R192 R193	57-11-4682 57-11-4682 57-11-4682 57-11-4682 57-11-4682	6.8 kOhm 6.8 kOhm 22 kOhm 6.8 kOhm 10 kOhm	2%, 0-25% MF 2%, 0-25% MF 2%, 0-25% MF 2%, 0-25% MF 2%, 0-25% MF			T4 T5 T6	1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:10	Erase Trafo Bias Trafo Sync Trafo Line Dutput Trafo		St St St
00) 01)	R194 R195 R196 R197 R197	57.11.4105 57.11.4564 57.11.4824 57.11.3164	1 MGhm 560 kOhm 820 kOhm 160 kOhm	2%, 0-25M, MF 2%, 0-25M, MF, with socket not used not used 2%, 0-25M, MF, with socket 2%, 0-25M, MF			TP····2 TP····3 TP····4 TP···5 TP···6	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		4A 4A 4A 4A 4A
	R199 R200 R201 R202 R203 R204	57-11-3164 57-11-4103 57-11-4682 57-11-4682 57-11-4103	160 kOhm 10 kOhm 6-8 kOhm 6-8 kOhm 10 kOhm	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF not used			H7 W2 W3	54.02.0320 54.01.0106 64.01.0106 64.01.0106		Plug 2-8*0-8 Wire Bridge Wire Bridge Wire Bridge not used Wire Bridge		AF
	R205 R206 R207 R208 R209 R210	57:11:4181 57:11:4562 57:11:4104 57:11:4683 57:11:4333 57:11:4333	180 Ohm 5.6 kOhm 100 kOhm 68 kOhm 33 kOhm 33 kOhm	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF			W 5 W 6 W 7 W 8	64.01.0106 64.01.0106 64.01.0106	8-Pole	not used Wire Bridge Wire Bridge IC Socket		
·	R • • • 211 R • • • 212	57-11-4103 57-11-4120	10 kOhm 12 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	•00 PAGE 13	5.7.11	XIC2 XIC3	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket ECTRONICS BOARD	1.727.420.00	PAGE
TU	D E R (02	87/04/28 GP	AUDIO EL	ECIRUNICS BUARD 1.127.420	OU PAGE 13	510	рек (с	2) 81/04/25 GP	AUDIO EL	ECTRONICS BOARD	107210420000	1 400
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUI		MANU
	R213 R214 R215	57.11.4560 57.11.4101 57.11.4682	56 Ohm 100 Ohm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC4 XIC5 XIC6	53.03.0166 53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
	R216 R217 R218 R219	57.11.4682 57.11.4682 57.11.4105 57.11.4332	6.8 kOhm 6.8 kOhm 1 MOhm 3.3 kOhm	2%			XIC 7 XIC 8 XIC 9 XIC 10	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket		
	R • • • 220 R • • • 221 R • • • 222 R • • • 223	57.11.4103 57.11.4822 57.11.4334	10 kOhm 8•2 kOhm 330 kOhm	2%, 0.25W, MF not used 2%, 0.25W, MF 2%, 0.25W, MF			XIC 11 XIC 12 XIC 13 XIC 14	53.03.0165 53.03.0168 53.03.0166 53.03.0166	20-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
	R • • • 224 R • • • 225 R • • • 226	57.11.4682 57.11.4154 57.11.4392	6.8 kOhm 150 kOhm 3.9 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC15 XIC16 XIC17	53.03.0166 53.03.0168 53.03.0168	8-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket		
	R227 R228 R229	57.11.4563 57.11.4562 57.11.4683	56 kOhm 5•6 kOhm 68 kOhm	not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			XIC 18 XIC 19 XIC 20 XIC 21	53.03.0168 53.03.0166 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
	R • • • 2 30 R • • • 2 31 R • • • 2 32 R • • • 2 33	57-11-4683 57-11-4333 57-11-4333 57-11-4103	33 kOhm 33 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC 22 XIC 23 XIC 24	53.03.0166 53.03.0165 53.03.0166	8-Pole 20-Pole 8-Pole	IC Socket IC Socket IC Socket		
00) 01)	R • • • 234 R • • • 234 R • • • 235	57.11.4470 57.11.4271 57.11.4273	47 Ohm 270 Dhm 27 kOhm	2%, 0.25W, MF 2 % 0.25W, MF 2%, 0.25W, MF			XIC 25 XIC 26 XIC 27	53.03.0166 53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket		
	R236 R237 R238 R239 R240	57.11.4152 57.11.4331 57.11.4103 57.11.4103 57.11.4102	1.5 kOhm 330 Ohm 10 kOhm 10 kOhm 1 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			XR3 XR4	53.03.0221 53.03.0221	Z-Pole Z-Pole	R3/R4 Socket R3/R4 Socket		
	R • • • 2 4 2 R • • • 2 4 3	57.11.4472 57.11.4473	4.7 kOhm 47 kOhm	not used 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF								
	R • • • 244 R • • • 245 R • • • 246 R • • • 247	57.11.4102 57.11.4222 58.01.8502 57.11.4821	1 kOhm 2•2 kOhm 5 kOhm 820 Ohm	2%, 0+25%, %F 2%, 0+25%, MF 10%, 0+5 %, PMG 2%, 0+25%, MF								
тυ	R • • • 248	57•11•4392 ) 87/04/28 GP	3•9 k0hm	2%, 0.25%, MF ECTRUNICS BOARO 1.727.420	.00 PAGE 14	sτυ	DER (	DZ) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD	1.727.420.00	PAGE
					*******	****		0.07.10	VALUE	SPECIFICATIONS / FOU	TVALENT	MAN
NO.	PRS.NO. 	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT  not used	MA NU F.			PART NO.		SPECIFICATIONS / EQU	TVACENT	
	R250 R251 R252	57.11.4153 57.11.4473 57.11.4472	15 kOhm 47 kOhm 4.7 kOhm 4.7 kOhm	2% 0-25W MF 2% 0-25W MF 2% 0-25W MF 2% 0-25W MF				etter S/N ratio le Phantom Supp	ly			
	R • • • 253 R • • • 254 R • • • 255 R • • • 256	57.11.4472 57.11.4331 57.11.4102 57.11.4273	330 Ohm 1 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			48	   K3 / K4	57990250	VALUE 6.8 kOhm 0.1 % 0.25 W	MF	
	R • • • 257 R • • • 258 R • • • 259	57.11.4102 57.11.4471 57.11.4103	1 kOhm 470 Ohm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			12		57990199	4.3 kOhm 0.1 % 0.25 W 680 Ohm 0.1 % 0.25 W TP = Polvester	MF MF	
	R • • • 260 R • • • 261 R • • • 262 R • • • 263	57.11.4221 57.11.4122 57.11.4471 57.11.4223	220 Ohm 1•2 kOhm 470 Ohm 22 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		PP =	ACTURER: A	EL = Elect len MF = Metal DI = Analog Dev S = National S	Film SI ices Inc.	= Silicon Mot = Motorola		
	R264 R265 R266	57.11.4222 57.11.4473 57.11.4103	2.2 kOhm 47 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF				ig = Signetics		St = Studer		
	R • • • 267 R • • • 268 R • • • 269	57-11-4682 57-11-4682 57-11-4103	6.8 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R270 R271 R272 R273	57-11-4472 57-11-4122 57-11-4223 57-11-4223	4.7 kOhm 1.2 kOhm 22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R 274 R 275 R 276	57-11-4473 57-11-4223 57-11-4103	47 kOhm 22 kOhm 10 kOhm	2% + 0 + 25 H + MF 2% + 0 + 25 H + MF 2% + 0 + 25 H + MF								
	R • • • 277 R • • • 278 R • • • 279	57.11.4339 57.11.4103 57.11.4103	3.3 Ohm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R 280 R 281 R 282 R 283	57.11.4339 57.11.4222 57.11.4222 57.11.4339	3.3 Ohm 2.2 kOhm 2.2 kOhm 3.3 Ohm	2%, 0 <sub>*</sub> 25W+ MF 2%, 0*25W+ MF 2%, 0*25W+ MF 2%, 0*25W+ MF								
	R 283 R 284	57.11.4339 57.11.4103	10 kOhm	2%, 0.25W, MF		0010	0	(01) 87/01/28	(02) 87/04	/28		
	R 285	57-11-4103	10 kOhm	2%, 0.25W, MF				02) 87/04/28 GP		LECTRONICS BOARD	1.727.420.00	

LINE OUTPUT CONNECTOR 1.727.240.00 GRP01 ELM09/10 (DIAGRAM: AUDIO ELECTRONICS PCBs)



I ND .	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.
	C 1	59+05+1221	220 pF	1 % 630V PP	
	C 2	59-05-1221	220 pF	1 % 630V PP	
	L 1	62-01-0115		Interference Coil, Note 1	Ph
	L 2	62.01.0115		Interference Coil, Note 1	Ph
(00)	MP1	1.727.240.11	1 pcs	Output Connector PCB	St
(01)	MP 1	1.727.240.12	1 pcs	Output Connector PCB	St
' '	MP 2	1-727-240-93	1 pcs	Li-L Audio Connector	St
	MP3	20-99-0103	1 pcs	Screw 0 2-2 ≠ 5	
	MP 4	54.01.0280	4 po1	CIS, Case	AMP
	MP5	1-727-240-10	1 pcs	Nr. Label	St
	P 1	54.21.2001		XLR. Male	Neu
	W1	1.010.323.64		Wire Bridge	
	W 2	1.010.324.64		Wire Bridge	
	W 3	1.010.323.64		Wire Bridge	

Note 1: Philips 4312 020 36700

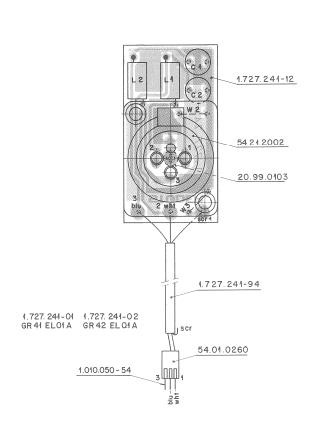
PP=Polypropylen

MANUFACTURER: AMP+AMP, Neu=Neutrik, Ph=Philips, St=Studer

ORIG 86/08/08 (01) 87/02/19

S T U D E R (01) 37/02/19 GP DUTPUT CONNECTOR, MALE 1.727.240.00 PAGE 1

LINE INPUT CONNECTOR 1.727.241.00 GRP01 ELM11/12 (DIAGRAM: AUDIO ELECTRONICS PCBs)



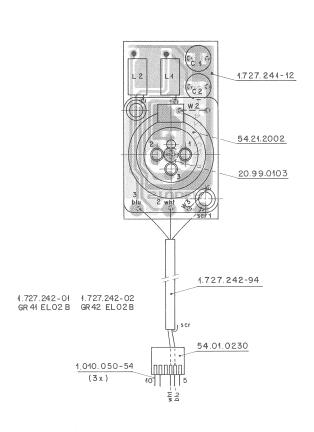
IND.	P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F »
	C 1	59.05.1221	220 nF	1 % 630V PP	
	C 2	59.05.1221	220 pF		
	J 1	54.21.2002		XLR, Female,	Neu
	L 1	02.01.0115		Interference Coil, Note 1	Ph
	L 2	62.01.0115		Interference Coil, Note 1	Ph
(00)	MP1	1.727.241.11	1 pcs	Line Connector PCB	St
(01)	MP 1	1.727.241.12	1 pcs	Line Connector PCB	St
, ,	MPanani	1.727.241.94	1 pcs	KA-L Line Connector	St
	MP 3	20.99.0103	1 pcs	Screw D 2 • 2 ≠ 5	
		54.01.0260	3 pol	CIS, Case	AMP
		1.010.050.54	1 pcs	CIS, Plug	AMP
	MP 6	1.727.241.10	1 pcs	Nr. Label	St
	W2	1.010.323.64		Wire Bridge	
	W 3			wire bridge	

Note 1: Philips 4312 020 36700

PP=Polypropylen,

MANUFACTURER: AMP=AMP, Neu=Neutrik, Ph=Philips, St=Studer

DRIG 86/08/08 (01) 87/02/19
S T U D E R (01) 87/02/19 GP LINE CONNECTOR. FEMALE 1.727.241.00 PAGE 1 MIC INPUT CONNECTOR 1.727.242.00 GRP01 ELM13/14 (DIAGRAM: AUDIO ELECTRONICS PCBs)



IND.	PO\$ - NO -	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C * * * * * 1	59+05+1221	220 pF	1 % 630V PP	
	C * * * * Z	59.05.1221	220 pF	1 % 630V PP	
	J 1	54.21.2002		XLR, Female,	Neu
	Locatel	62.01.0115		Interference Coil, Note 1	Ph
	L2	62.01.0115		Interference Coil, Note 1	Ph
(00)	MP1	1-727-241-11	1 pcs	Mic Connector PCB	St
(01)	MP 1	1-727-241-12	1 pcs	Mic Connector PCB	St
	MP 2	1-727-242-94	1 pcs	KA-L Mic Connector	S t
	MP3	20-99-0103	1 pcs	Screw D 2.2 ≠ 5	
	MP 4	54.01.0230	6 pol	CIS+ Case	AMP
	MP 5	1.010.050.54	3 pcs	CIS, Plug	AMP
	MP 6	1.727.242.10	1 pcs	Nr. Label	St
	W * * * * * 2	1.010.323.64		Wire Bridge	
	W • • • • • 3	1.010.323.64		Wire Bridge	
( )					

1.727.242.00 PAGE 1

Note 1: Philips 4312 020 36700

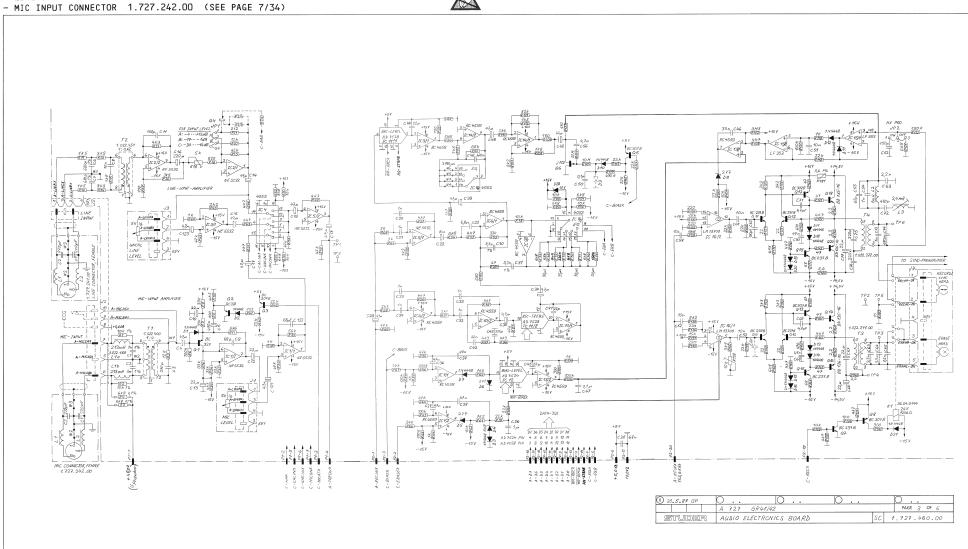
PP=Polypropylen,

MANUFACTURER: AMP=AMP, Neu=Neutrik, Ph= Philips, St=Studer

ORIG 86/08/08 {01} 87/02/19
S T U D E R {01} 87/02/19 GP MIC CONNECTOR+ FEMALE

AUDIO ELECTRONICS (VU) 1.727.460.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

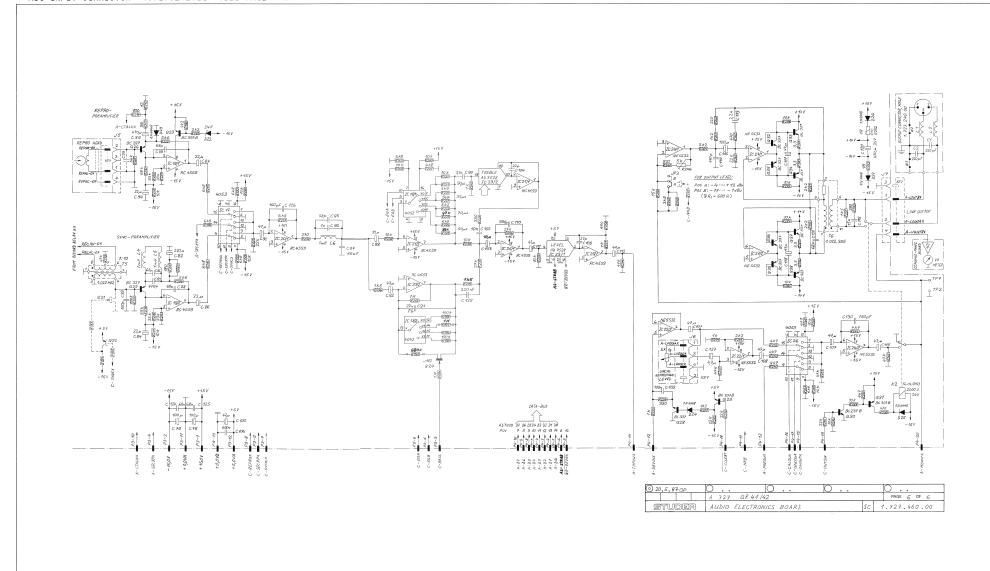




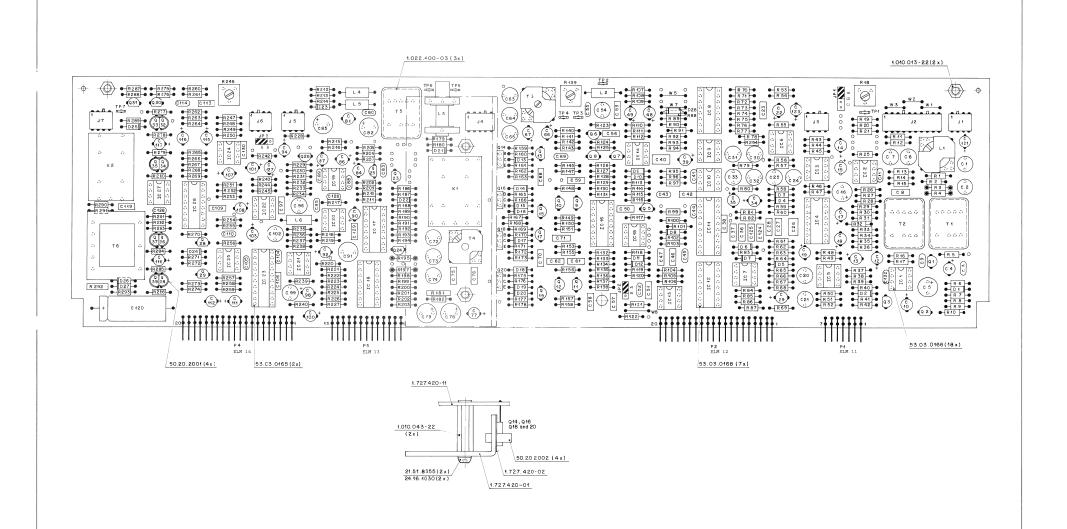
- AUDIO ELECTRONICS (VU) 1.727.460.00 GRP41/42
   LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
   LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
   MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)







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### AUDIO ELECTRONICS (VU) 1.727.460.00 GRP41/42

IND. POS.NO. PARTING. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	150. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C	C112 392-23-470 47 af -760 10V Expr  C112 392-23-470 47 af -760 10V Expr  C115 392-23-470 47 af -760 10V Expr  C115 392-23-470 47 af -760 10V Expr  C115 392-23-470 47 af -760 10V Expr  C116 392-23-470 47 af -760 10V Expr  C118 392-23-470 47 af -760 10V Expr  C118 392-23-470 47 af -760 10V Expr  C121 392-23-470 47 af -760 10V Expr  C121 392-23-470 47 af -760 10V Expr  C122 392-34-480 48 af -760 10V Expr  C123 392-34-480 48 af -760 10V Expr  C123 392-34-480 48 af -760 10V Expr  C125 392-480 10V Expr  C125 392-480 10V Expr  C126 392-480 10V Expr  C127 392-480 10V Expr  C128 392-480 10V Expr  C129 392-480 10V Expr  C120 40V Expr	##	R6) 3 7:11:415 130 KDhm
	C115 39-22-1473 47 of -004 107 Et.  C116 39-22-1473 47 of -004 107 Et.  C117 39-22-1473 47 of -004 107 Et.  C118 39-22-1473 47 of -004 107 Et.  C120 39-23-1473 47 of -004 107 Et.  C120 39-23-1473 47 of -004 107 Et.  C121 39-22-1473 47 of -004 107 Et.  C123 39-23-1473 47 of -004 107 Et.  C124 39-23-1473 47 of -004 107 Et.  C125 39-24-1083 08 of 108 507 Et.  C126 39-24-1403 08 of 108 507 Et.  C127 39-24-1403 08 of 108 507 Et.  C128 39-24-1403 08 of 108 507 Et.  C129 39-24-1403 08 of 108 507 Et.  C120 39-24-1403 08 of 108 507 Et.  C121 39-24-1403 08 of 108 507 Et.	P2 54.01.0261 20-Pole CIS Pin Strip P3 54.01.0273 13-Pole CIS Pin Strip P4 54.01.0261 20-Pole CIS Pin Strip	R
C	C121 39-22-24-77 4-7 of -004 359 6.  C231 39-22-34-77 4-7 of -004 359 6.  C231 39-22-34-77 4-7 of -004 359 6.  C231 39-22-34-77 4-7 of -004 359 6.  C231 39-22-34-71 120 of -004 359 6.  C231 39-24-341 120 of -004 359 6.	0	R71
C		0 2 30.03.03.05 (8.337-5 8.73 1.4.5.60) Wink 0 30.03.03.05 (8.00) Wink 0 30.03.03.05 (8.00) Wink 0 30.03.03.05 (8.00) Wink 0 30.03.05 (8.	### 17 57:11:435 135 bonn 276 0259 nF   ### 18 17 57:11:435 135 bonn 276 0259 nF   ### 18 17 57:11:451 135 bonn 276 0259 nF   ### 18 18 18 18 18 18 18 18 18 18 18 18 18
C	01 50.04.0125 184448 50V 51 02 50.04.0125 184448 50V 51 02 0.0.0125 184448 50V 51	Q12 50.03.0436 8C2378 8C5478 9C5708 NPN Q12 50.03.0436 8C2378 8C5478 8C5508 NPN	822 57.11.4477 47 kOhn 23; 0.259; nF 833 57.11.4492 1.5 kOhn 25; 0.259; nF 836 57.11.4156 155 kOhn 25; 0.259; nF 836 57.11.4156 105 kOhn 25; 0.259; nF 836 57.11.4159 105 kOhn 25; 0.259; nF
C	04 50.0+.1102 6.8 V 5% 0.44M Zener 05 50.0+.1106 2.7 V 5% 0.44M Zener 06 50.0+.1112 5.1 V 5% 0.44M Zener 07 50.0+.0125 1.04448 50V 51	Q14 50.03.0495 80135-16 MPN Q15 50.03.0495 8C2378 8C5478 8C5508 MPN Q16 50.03.0510 80136-16 Q17 50.03.0515 8C3078 8C5578 8C5608 MPN	R86 57.11.4104 100 k0hm 2% 0.25% MF R87 57.11.4204 24 k0hm 25.0.25% MF R88 57.11.4103 10 k0hm 25.0.25% MF R89 57.11.4103 10 k0hm 25.0.25% MF R90 57.11.4103 10 k0hm 25.0.25% MF
C23 39-35-2102 1 nd 2-24 889 PF  C25 39-35-2103 2 nd 18-25 889 PF  C25 39-35-2031 2 nd 18-25 889 PF  C25 39-35-2031 2 nd 18-25 889 PF  C25 39-35-2103 2 nd 18-25 889 PF  C25 39-35-2103 2 nd 18-25 889 PF  C35 39-35-2103 2 nd 18-25 889 PF  C38 39-35-2103 2 nd 18-25 889 PF  C39 39-35-2103 2 nd 18-25 889 PF  C30 39-35-2103 2 nd 18-25 889 PF  C30 30-35-2103 2 nd 18-25 889 PF  C30 30-3	06 20.04.1106 2.7 V 5% 0.49 Zener 010 50.64.0155 114448 50V 51 012 50.64.0125 114448 50V 51 012 50.64.0125 114449 50V 51	U····21 not used	R91 57.11.4682 6.8 KOhn 2%, G.25%, MF R92 57.11.4683 68 KOhn 2%, G.25%, MF R93 57.11.3752 2.5 KOhn 2% G.25%, MF
C	015 30.50.40.25 184440 599 51  015 30.50.40.25 184440 599 51  015 30.50.40.25 184440 599 51  017 30.50.40.25 184440 599 51  017 30.50.40.25 184440 599 51  017 30.50.40.25 184440 599 51	Q23 50.03.0515 8C3078 8C5578, 8C5608 PNP Q24 50.03.0350 J112 FET Mot Q25 50.03.0625 8C327 PNP	R74 37.11.4.592 54. 80hm 23. 0.22% ME R79 57.11.1.591 100 0hm 22. 0.22% ME R70 57.11.1.3432 4.3 80hm 22. 0.22% MF R79 77.11.3.512 4.3 80hm 22. 0.22% MF R79 27.11.4.5472 4.7 80hm not used
C36 59.06.0473 47 nF 10% 54V PETP C37 59.06.0473 47 nF 10% 54V PETP S T U D E R (00) 07/05/20 GP AUDIO ELECTRONICS BOARD 1.727.460.00 PAGE 1	D17 50.01.0125 IN4448 50V SI STUGER (03) 87/05/20 CP AUDIO ELECTRONICS BOARD :-727-460.00 PAGE 4	U26 30.03.2629 BC127 PRIF U28 30.03.13469 BC137-25 NPN S T U D E R (00) 87/09/20 GP AUDIO ELECTRUICS BOARD 1.727-460.00 PAGE 7	N78 NO. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
IND. POS.80. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INC. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C38 59-36-0883 68 oF 103 50V FETP (C27 59-24-3471 47 uF 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	D18 50.0-0125 104448 50V 51  D19 50.0-0125 104448 50V 51  D21 50.0-0125 104448 50V 51  D21 50.0-0125 104448 50V 51  D21 50.0-0125 104448 50V 51  D21 50.0-0125 104448 50V 51  D21 50.0-0125 104448 50V 51	030 50-03-0436 BC237B BC547B+ BC550B NPN 031 50-03-0515 BC307B BC557B+ BC560B NPN	R101 57-11-4103 10 KONm 2%, 0-25% MF R102 57-11-5335 3-3 MONm 5%, 0-25% MF R103 57-11-4972 4-7 KONm 2%, 0-25% MF
C:	D25 50-04-0125 IN44468 50V SI D26 50-04-0125 IN4448 50V SI	012 09.030910 80337 satched with 033 MPH 6012 09.030910 8037 satched with 033 MPH 6012 09.030910 8037 satched with 033 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09.030910 8037 satched with 034 MPH 6012 09	
C	D27 50-04-0125 1N4448 50V 51 D28 50-04-1114 10 V 5% 0-4W Zener	018 50.03.0625 BC327 satched with 039; PMP 039 50.03.0625 BC327 satched with 038; PMP 81 57.11.3103 10 kDhm 12.0.259; MF 82 57.11.3103 10 kDhm 12.0.259; MF	R109 57:11:4351 150 0hm 2% 0,22% MF R110 57:11:452 56 KDhn 2% 0,42% MF R111 57:11:4523 82 KDhn 2% 0,42% MF R113 57:11:4233 82 KDhn 2% 0,42% MF R113 77:11:4233 2% KDhn 2% 0,42% MF
C54 59-05-2102 1 NF 2-72 20V PF C55 59-34-4680 68 pF 102 50V Cer	1	R 3 57.99.0250 5.8 KDnm 0.1% 0.25M MF, Note 1 R 457.99.0250 6.8 KDnm 0.1% 0.25M MF, Note 1 R 5 57.11.4123 12 KDnm 2% 0.25M MF R 6 57.11.410 100 KDnm 2% 0.25M MF	R114 37.11.14476 478 Shihe 22b 0.2294 MF R115 37.11.4523 22 Khihe 22b 0.2294 MF R116 57.11.4223 22 Khihe 22b 0.2294 MF R117 57.11.4223 22 Khihe 22b 0.2294 MF R119 57.11.4223 22 Khihe 22b 0.2294 MF R119 57.11.4223 22 Khihe 22b 0.2294 MF R119 57.11.4223 22 Khihe 22b 0.2294 MF
C56 59.06.0472 4.7 nf 103 50V PETP C57 59.06.0103 10 nf 103 50V PETP C58 59.06.0103 10 nf 103 50V PETP C59 59.06.0103 10 nf 103 50V PETP	167 50.09.0107 RC 4559 Dual Op. Amp. Ra 168 50.07.0024 MC 16032 CMDS Amalog Switch Mot 169 50.09.0107 RC 4559 Dual Op. Amp. Ra 1610 30.09.0107 RC 4559 Dual Op. Amp. Ra	R7 57:11:4333 33 KOhn 2% 0.25% MF R8 57:11:4333 33 KOhn 2% 0.25% MF K9 57:11:4011 100 Ohn 2% 0.25% MF R10 57:11:4072 47 KOhn 2% 0.25% MF	8118 57.11.4223 22 kOnn 22% 0.25% MF 8129 57.11.4102 1 kOhn 22% 0.25% MF 8120 57.11.4104 100 kOhn 22% 0.25% MF 8121 57.11.4682 6.8 kOnn 22% 0.25% MF
C80 HOC 0540	10   12   13   14   14   15   15   15   15   15   15	R11 57.11.4152 1.5 kOhn 2% 0.25% MF R12 57.11.4152 1.5 kOhn 2% 0.25% MF H13 57.11.4592 3.9 kOhn 2% 0.25% MF H15 57.11.4592 3.9 kOhn 2% 0.25% MF	R (2 31.1.14) 120 NOIN
L65 59.05.2152 1.5 nF 2.5% 160V PP C60 59.22.0220 22 uF -20 150V EL C67 59.22.0220 22 uF -20 35V EL C67 59.00.0473 47 nF 10% 56V PETP	15	8	R[27 57.1].4472 4.7 KOhn 2%, 0.25% MF R[28 57.1].4472 4.7 KOhn 2%, 0.25% MF R[29 57.1].4410 10 KOhn 2%, 0.25% MF R[30 57.1].4153 15 KOhn 2%, 0.25% MF
C	IC23 SD-D7-0026 AD 7528UN Dual 6-bit D/A Converter ADI	8	S. 120 9 7:11-922 9-2 kDhm 22 0-29k 9F  R. 120 9 7:11-922 9-2 kDhm 22 0-29k 9F  R. 110 9 7:11-922 9-2 kDhm 22 0-29k 9F  R. 110 9 7:11-922 9-2 kDhm 22 0-29k 9F  R. 110 9 7:11-922 9-2 kDhm 22 0-29k 9F  R. 110 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 114 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 115 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 116 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 117 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 118 9 7:11-923 9-2 kDhm 22 0-29k 9F  R. 119 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F  R. 120 9 7:11-11-12 1-20k PDM 22 0-29k 9F
C73 39.05.102 1 nF 1% 0.50V PP  C74 39.05.1601 680 PF 1% 0.50V PP  S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD 1.727.460.60 PAGE 2	[C24 50.09.0105 NE 5532 Dual Op. 4mp. Sig [C25 50.09.0107 RE 4535 Dual Op. 4mp. Sig STUDER (00) 87/85/20 GP AUDIO ELECTRONICS BOARD 1.727-460-00 PAGE 5	A2 57.11.3433 43 KDNm 254. 0.4254, MF S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD 1.727.460.00 PAGE 8	STUDER (00) 87/05/20 GP AUDIO ELECTRONICS BOARD L.727.460.00 PAGE 11
ING. POS.NG. PART NO. VALUE SPECIFICATIONS / FOULVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANDE.
C75 9-00-0-0224 220 mf 101 59V PETP C75 9-00-0-224 220 mf 101 59V PETP C77 99-224-022 220 mf 101 59V PETP C77 99-224-022 22 uf -201 39V EL C78 99-223-010 100 uf -201 29V EL C79 99-22-3101 100 uf -201 29V EL C39 39-34-660 68 pf 101 59V Cer	IC26 50.07.0015 MC 14053 CMOS Analog Switch Mot IC27 50.09.0105 ME 5932 Dual Op. Amp. Sig	R26 57.11.4592 3.0 kDhm 23.0.2594 MF R27 57.11.4592 4.3 kDhm 23.02594 MF R25 37.11.4493 100 0hm 24.0.2594 MF R25 37.11.4493 100 0hm 24.0.2594 MF R25 37.11.4493 100 kDhm 24.0.2594 MF	R 137 37.11.4082 0.8 Kübne 2% 0.259 MF R 138 37.11.4022 0.2 Kübne 2% 0.259 MF R 139 38.01.8103 10 Kübne 1% 0.559 MF R 139 38.01.8103 10 Kübne 1% 0.559 MF R 141 37.11.3011 300 0 Me 2% 0.259 MF
C76 59.05.0224 220 mF 103 594 98TP  C77 59.722.422 22 mF 103 594 98TP  C77 59.722.422 110 100 mF -201 397 EL  C78 99.722.423 110 100 mF -201 397 EL  C81 99.52.421 120 mF -201 397 Ec  C81 99.52.421 120 mF -201 597 Cor  C81 99.52.421 120 mF -201 6.377 FG  C82 99.52.421 120 mF -201 6.377 FG  C83 99.72.4221 120 mF -201 6.377 FG  C84 99.72.4221 120 mF -201 6.377 FG  C85 99.72.4221 120 mF -201 6.377 FG  C85 99.72.4221 130 mF -201 6.377 FG	3  5-0.0-006	R30 37.11.103 10 KUhn 2%, 0.25% HF  R31 57.11.1472 47 KUhn 2%, 0.25% HF  R32 57.11.14602 6.8 KUhn 2%, 0.25% HF  R33 57.11.14103 10 KUhn 2%, 0.25% HF	R***:141 57:11-3301 300 0he 2%, 0.25%* MF R****:42 57:11-4332 3.3 K0hn 2%, 0.25%* MF R****:43 57:11-4332 3.3 K0hn 2%, 0.25%* MF R****:45 57:11-4332 3.3 K0hn 2%, 0.25%* MF
	JP1 59-01-0021 Bridge	R14 57.11.4472 4.7 KOhm 25. 0.2594. HF R35 57.11.4933 33 KOhm 25. 0.2594. HF R36 57.11.4933 33 KOhm 25. 0.2594. HF R36 57.11.4532 13 KOhm 25. 0.2594. HF R38 57.11.45(12 1 KOhm 25. 0.2594. HF	S. 14. 37.11.3301 300 Ohem 220 0.224 48 48 48 48 48 48 48 48 48 48 48 48 48
C 27 39 + 22-2220 22 22 of 27 27 28 EL C 28 39 51 24 25 25 25 25 25 25 25 25 25 25 25 25 25	JP2 54-01.0021 Bridge JP3 54-01.0021 Bridge Bridge L1 56-04-0144 4-90 Relays 24V-1200 Uhm L2 56-08-0143 290 Relays 24V-2000 Uhm	R 39 57-11-0473 47 KDhm 2%, 0.2544 MF R 40 57-11-0423 22 KDhm 2%, 0.2544 MF R 41 57-11-0422 1-2 KDhm 2%, 0.2544 MF R 42 57-11-0423 22 KDhm 2%, 0.2544 MF	8149 3 37.11.4292 2 25 0 0 0 22 0 0 25 0 0 0 0 0 0 0 0 0
	11 1-022-169-00 213mH St	R43 57:11:46173 47 KDhm 22, 0.25%; MF R44 57:11:4102 1 KDhm 22, 0.25%; MF R45 57:11:4022 2.2 KDhm 22, 0.25%; MF R46 57:11:4672 47 KDhm 23, 0.25%; MF	R158 57.11.4220 22 00hs 2x, 0.25% HF R159 57.11.4670 47 0hn 2x, 0.25% HF R160 57.11.4229 2.2 0hn 2x, 0.25% HF R161 57.11.4229 2.2 0hn 2x, 0.25% HF
C		\$\frac{1}{2}\$\frac{7}{2}\$\frac{1}{1}\$\frac{1}{1}\$\frac{1}{2}\$\frac	R165 57.11.4470 47 Ohm 2%, 0.25%, MF R160 57.11.4472 4.7 kOhm 2%, 0.25%, MF R167 57.11.4680 68 Ohm 2%, 0.25%, MF
C102 59-22-4103 10 07 07 10 08 10	##	852 37.1144473 47 KOhn 28, 0.2544 MF 853 37.1144472 47 KOhn 28, 0.2544 MF 854 37.114602 6-8 KOhn 28, 0.2544 MF 859 37.114602 33 X KOhn 28, 0.2544 MF	R157 57:11:4650 68 Ohm 2% 0.25% MF R168 57:11:4652 6-8 MOhm 2% 0.25% MF R169 57:11:4452 47 Ohm 2% 0.25% MF R169 57:11:4470 47 Ohm 2% 0.25% MF R171 57:11:4470 77 Ohm 2% 0.25% WF
C(10) \$42-14-10 \$4 ut -0.01   100 Et   C(10) \$42-14-10 \$4 ut -0.01   100 Et   C(10) \$42-14-100   10 ut -0.01   100 Et   C(10) \$42-14-100   10 ut -0.01   300 Et   C(10) \$42-14-14-100   100 Et   C(11) \$42-14-100   100 Et   C(	MP7 50-20-2001 4 pcs Clip, 2=1092 MP9 1-727-7420-01 1 pcs Heatsink St MP9 1-727-7420-02 1 pcs Thermonlastic St	R50 37:11:4472 4:7 KOhn 22: 0:254 MF R57 37:11:4272 2:7 KOhn 21:0254 MF R50 37:11:4272 2:7 KOhn 21:0254 MF R50 37:11:4272 2:7 KOhn 21:0254 MF R50 37:11:4473 3:7 KOhn 21:0254 MF	R172 57-111-4472 4-7 NOhn 24: 0.2544 MF R173 57-111-422 2-2 Ohn 24: 0.2544 MF R175 57-111-4270 47 Ohn 24: 0.2544 MF R175 57-111-4472 47: NOhn 24: 0.2544 MF
C109 59.06.0104 100 nF 10% 59V PETP C101 59.4.5919 390 pF 10% 59V Cer C111 59.22.3970 47 uF -20% 11V EL S.T.U.D.E.M. (00) 4705/20 DF AUDIO ELECTRONICES OMBOD 1.727.460.00 PAGE 3	MP10 1.777.460.10 1 pcs No. Label 54 MP12 1.022.400.03 3 pcs Audio Electronics PCB 54 MP12 1.022.400.03 3 pcs 1.50lation Ti. 72.15 STUD E R (00).377.92.05 PC AUDIO ELECTRONICS DNATO 1.721.460.00 PAGE 5	R60 37:11:4473 47 KONE 2% 02:594 MF R61 37:11:4152 13 KONE 2% 02:594 MF R62 37:11:4150 10 KONE 2% 02:594 MF STU DE R (00) 97:07:205 PAGE 9	R177 57:11:4-608 08 Dhm 2% 0.25% MF R178 57:11:4-602 0.8 MDhm 2% 0.25% MF R179 77:11:4-473 47 KDhm 2% 0.25% MF S T U O E R (00) 87:05722 GF AUDIC ELECTRONICS SOURD 1.7727-460-00 PAGE 12
J. C.			

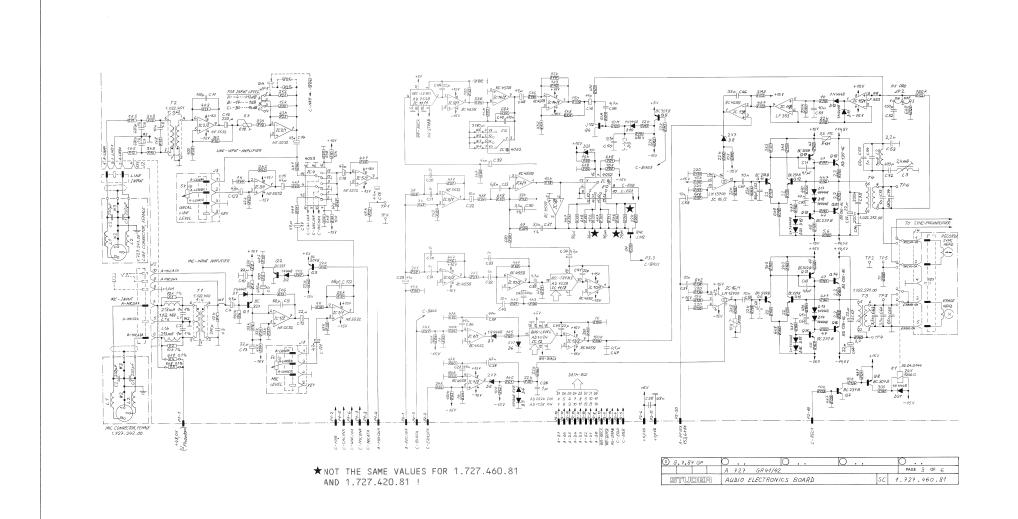


## AUDIO ELECTRONICS (VU) 1.727.460.00 GRP41/42

ND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MAN
	R180 R181 R182 R183 R184	57-11-4100 57-99-0209 57-11-4569	10 Ohm 5-6 Ohm 5-6 Ohm	2%, 0.25W, MF PTC 2%, 0.25W, MF not used not used			R • • • 291 R • • • 292 R • • • 293 R • • • 294	57.11.4152 57.92.1151 57.11.4180 57.11.4470	1.5 kOhm 18 Ohm 18 Ohm 47 Ohm	2%, 0.25W, MF 150mA, PTC 2%, 0.25W, MF 2%, 0.25W, MF	
	R185 R186 R187 R188 R189	57+11-4222 57-11-4222 57-11-4103 57-11-4682 57-11-4682	2.2 kOhm 2.2 kOhm 10 kOhm 6.8 kOhm 6.8 kOhm	not used 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			T2 T3 T4 T5	1.022.400.00 1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:4 1:0.62	Mic Input Trafo Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Qutput Trafo	S S S S S S
	R191 R192 R193 R194 R195 R196	57.11.4223 57.11.4682 57.11.4103 57.11.4105 57.11.4684	22 kOhm 6.8 kOhm 10 kOhm 1 MOlum 680 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF, with socket not used			TP1 TP2 TP3 TP4 TP5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.0°0.0 Plug 2.8°0.8 Plug 2.8°0.8	A A A A
	R197 R198 R199 R200 R201 R202 R203	57.11.4105 57.11.3164 57.11.3164 57.11.4103 57.11.4682 57.11.4682 57.11.4682	1 MOhm 160 kOhm 160 kOhm 10 kOhm 6.8 kOhm 6.8 kOhm 10 kOhm	2%, 0.25%, MF, with socket 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			TP6 TP7 W2 W3	54+02+0320 54+02+0320 64+01+0106 64+01+0106		Plug 2-880-8 Plug 2-880-8 Wire Bridge Wire Bridge Mire Bridge not used	A
	R203 R205 R205 R206 R207 R208	57.11.4181 57.11.4562 57.11.4104 57.11.4683 57.11.4333	180 Ohm 5.6 kOhm 100 kOhm 68 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			W5 W7 W8	64.01.0106 64.01.0106 64.01.0106 53.03.0166	8-Pole	Wire Bridge not used Wire Bridge Wire Bridge	
	R210 R211 R212 R213 R214 R215	57-11-4333 57-11-4103 57-11-4103 57-11-4560 57-11-4560 57-11-4682	33 kOhm 10 kOhm 12 Ohm 56 Ohm 100 Ohm 6-8 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			XIC 2 XIC 3 XIC 4 XIC 5 XIC 6 XIC 7	53.03.0166 53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket	
τυ	R***216 DER (00)	57-11-4682 87/05/20 GP	6.8 kOhm AUDIO EL	2%, 0.25W+ MF ECTRONICS BOARD 1.727.46	0.00 PAGE 13	STU	XIC 8 D E R (C	53.03.0168 00) 87/05/20 GP	16-Pole AUDIO EL	IC Socket ECTRONICS BOARD 1.72	7.460.00 PAGE
ND.	POS.NG.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANI
	R217 R218 R219	57.11.4682 57.11.4105 57.11.4152	6.8 kOhm 1 MOhm 1.5 kOhm	2%, 0-25W+ MF 2%, 0-25W+ MF 2%, 0-25W+ MF	·		XIC 9 XIC 10 XIC 11			IC Socket IC Socket IC Socket	and and and and and and and and and and
	R220 R221 R222 R223 R224 R225 R225 R227 R227 R228	57-11-4103 57-11-4822 57-11-4473 57-11-4682 57-11-4592 57-11-4563 57-11-4563 57-11-4563	8.2 kOhm 47 kOhm 47 kOhm 6.8 kOhm 39 kOhm 3.9 kOhm 56 kOhm 56 kOhm	2%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			XIC12 XIC13 XIC14 XIC15 XIC16 XIC17 XIC18 XIC19 XIC20 XIC21	53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0168 53.03.0168 53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole 16-Pole 16-Pole 16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket	
	R 2 30 R 2 31 R 2 32 R 2 33 R 2 34 R 2 35 R 2 36	57.11.4683 57.11.4333 57.11.4333 57.11.4103 57.11.4271 57.11.4273 57.11.4152	68 kOhm 33 kOhm 33 kOhm 10 kOhm 270 Ohm 27 kOhm 1.5 kOhm	2% 0.25%, MF 2% 0.25%, MF 2% 0.25%, MF 2% 0.25%, MF 2% 0.25%, MF 2% 0.25%, MF 2% 0.25%, MF			XIC22 XIC23 XIC24 XIC25 XIC26 XIC27	53.03.0166 53.03.0165 53.03.0166 53.03.0166 53.03.0168 53.03.0166	8-Pole 20-Pole 8-Pole 8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket	
	R 2 35 R 2 38 R 2 39 R 2 40 R 2 41 R 2 42 R 2 43 R 2 44	57-11-4331 57-11-4103 57-11-4103 57-11-4102 57-11-4472 57-11-4473 57-11-4102	330 Ohm 10 kOhm 10 kOhm 1 kOhm 4.7 kOhm 47 kOhm 1 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF not used 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF			XReese3 XReese4	53+03+0221 53+03+0221	2-Pole 2-Pole	R3/R4 Socket R3/R4 Socket	
	R245 R246 R247 R248 R250 R250 R251 R252	57.11.4222 58.01.05002 57.11.4821 57.11.4392 57.11.4453 57.11.4473 57.11.4472 57.11.4472	2.2 k0hm 5 k0hm 820 Uhm 3.9 k0hm 15 k0hm 47 k0hm 4.7 k0hm 4.7 k0hm	2%, 0.25%, MF 10%, 0.5 M, PMG 2%, 0.25%, MF 2%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
Tυ		87/05/20 GP		ECTRONICS BOARD 1.727.46	0.00 PAGE 14	STU	DER (C	0) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD 1.72	7.460.00 PAGE
	P05+N0+	PART NO.		SPECIFICATIONS / EQUIVALENT	MA NUF.		POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MAN
	R254 R255 R256 R257 R258 R259 R260 R261 R262	57-11-4331 57-11-4102 57-11-4273 57-11-4102 57-11-4471 57-11-4103 57-11-4221 57-11-4223 57-11-4273	330 Ohm 1 kOhm 27 kOhm 1 kOhm 17 kOhm 10 kOhm 10 kOhm 20 Ohm 1-2 kOhm 22 kOhm	2%, 0.25% MF 2%, 0.25% MF			U (V)     48	R 3 / R 4   5' R 3 / R 4   5' R 3 / R 4   5'	7990250   6	VALUE	
	R 263 R 264 R 265 R 266 R 267 R 268 R 269 R 270 R 271 R 271	57.11.4222 57.11.4473 57.11.4103 57.11.4682 57.11.4103 57.11.4472 57.11.4122 57.11.4223	2.2 kOhm 47 kOhm 10 kOhm 6.8 kOhm 6.8 kOhm 10 kOhm 4.7 kOhm 1.2 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		DD =	Polypropyl ACTURER: AC NS	en MF = Metal I DI = Analog Devic = National Ser g = Signetics	ilm SI	= Silicon	
	R273 R274 R275 R276 R277 R277 R278 R278 R280 R281	57.11.4223 57.11.4473 57.11.4223 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4239 57.11.4239	22 kOhm 47 kOhm 22 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 2.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF							
	R 282 R 283 R 284 R 285 R 286 R 287 R 288	57.11.4222 57.11.4339 57.11.4103 57.11.4103 57.11.4403 57.11.4472 57.11.4403 57.11.4403	2.2 kOhm 3.3 Ohm 10 kOhm 10 kOhm 3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm	2%, 0.25%; MF 2%, 0.25%; MF							
		57.11.4391	390 Ohm	2%, 0.25W, MF			37/05/20				

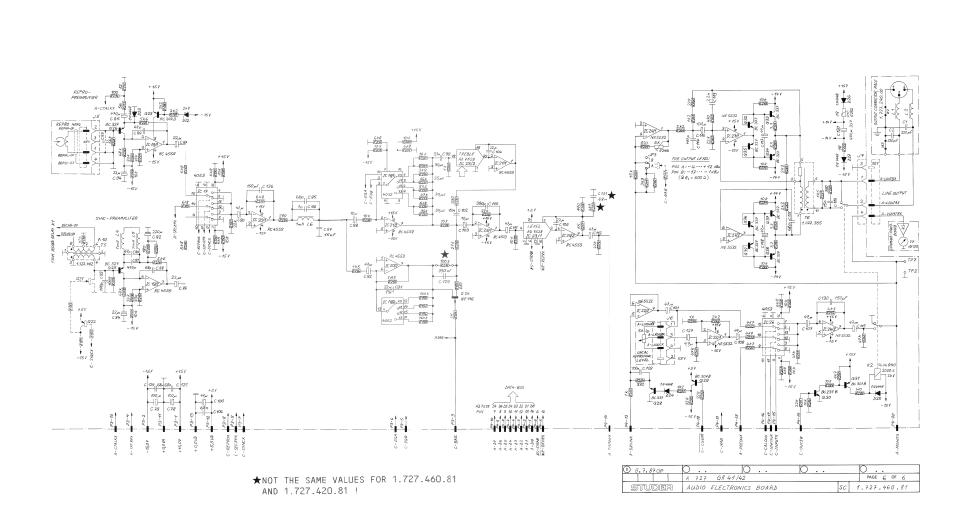
AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42
AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)





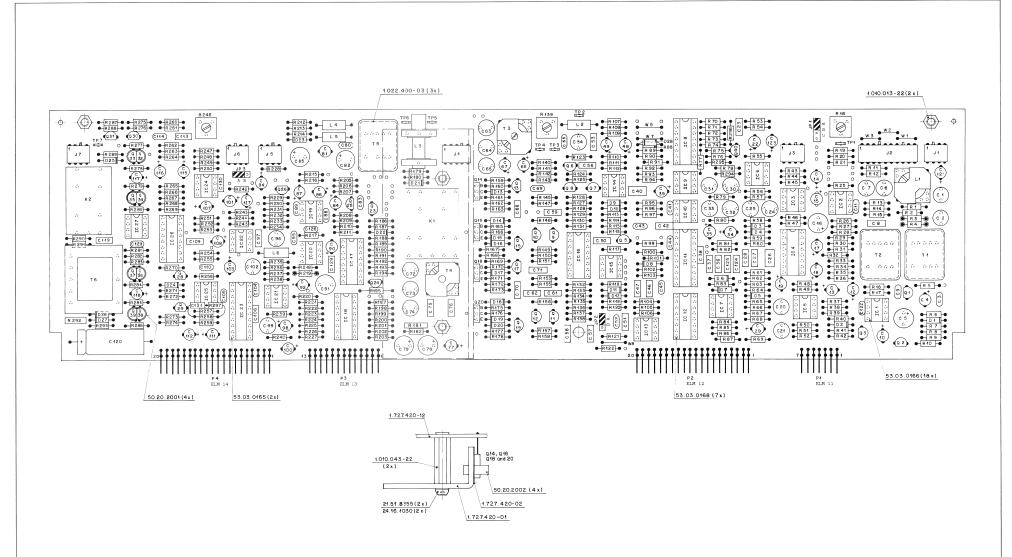
AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42
AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)





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AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42





#### AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42

ELECTRONICS (VU) 1.727.460.81 GRP41/4	<u> </u>			
POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. PDS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA
	C112 39-22-3470 v7 u8 -203 10V EL C113 39-22-3470 v7 u8 -203 10V EL C13 39-22-3470 v7 u8 -203 10V EL C13 39-22-3470 v7 u8 -203 10V EV C13 39-22-3470 v7 u8 -203 10V EL C13 39-22-3470 100 u8 -203 10V EL C13 39-22-3470 100 u8 -203 10V EL C13 39-22-3470 100 u8 -203 10V EL C13 39-22-3470 v7 u8 -203 10V EL C12 39-22-3470 v7 u8 -203 10V EL C12 39-22-3470 v7 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8 -203 10V EL C12 39-22-3470 v8 u8		##:-12 1-022-00-00 3 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 3 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-11 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-12 1-022-00-00 4 pcs 1:olation T1: T2- T5 51 ##:-12 1-022-00-00-00-00-00-00-00-00-00-00-00-00	8 1 37.11.4152 1.2 KDBH 22% 0.25% WI  8 1 37.11.4152 1.2 KDBH 22% 0.25% WI  8 2 37.11.4154 100 KDBH 22% 0.25% WI  8 37.11.4154 100 KDBH 22% 0.25% WI  8 2 37.11.4154 100 KDBH 22% 0.25% WI  8 2 37.11.3154 12% 12% KDBH 22% 0.25% WI  8 2 37.11.3154 12% 12% KDBH 22% 0.25% WI  8 2 37.11.3154 12% ASS WINE 22% 0.25% WI  8 2 37.11.457 12% ASS WINE 22% 0.25% WI  8 2 37.11.457 12% ASS WINE 22% 0.25% WI  8 2 37.11.458 2 6.8 KDBH 22% 0.25% WI  8 2 37.11.458 2
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	0		December   December	8
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 - 1	PAGE •	U 15 30:03:2510 R0158-16 P0158-16 P0	
POS-NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.HO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
C	017 50.00.0125 100.00125 100.00125 0	510 510 510 510 510 610 610 610 610 610 610 610 610 610 6	G 20 30.30-30-30 BC.377-25 BC.577-35 BC.597-35 BPM BPM BC.577-35 BC.577-	**************************************
POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF-	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
C15 \$9.0.0224 220 MF 103 509 FFF    C16 \$9.0.0224 220 MF 103 509 FFF    C17 \$9.2.2.0.0224 220 MF 103 509 FFF    C17 \$9.2.2.0.0224 220 MF 203 509 FFF    C17 \$9.2.2.0.0224 220 MF 203 509 FFF    C17 \$9.2.2.0.0224 220 MF 203 509 FFF    C18 \$9.0.0224 220 MF 203 5		Page 1901 St. St. St. St. St. St. St. St. St. St.	\$\frac{1}{8}\$\frac	## 130   5711-1221   220   Dina   27.0   GFS   WE   ## 150   5711-1221   220   Dina   27.0   GFS   WE   ## 151   5711-1263   220   Dina   27.0   GFS   WE   ## 151   5711-1263   220   Dina   27.0   GFS   WE   ## 151   5711-1263   100   Dina   27.0   GFS   WE   ## 151   5711-1263   27.0   Dina   27.0   GFS   WE

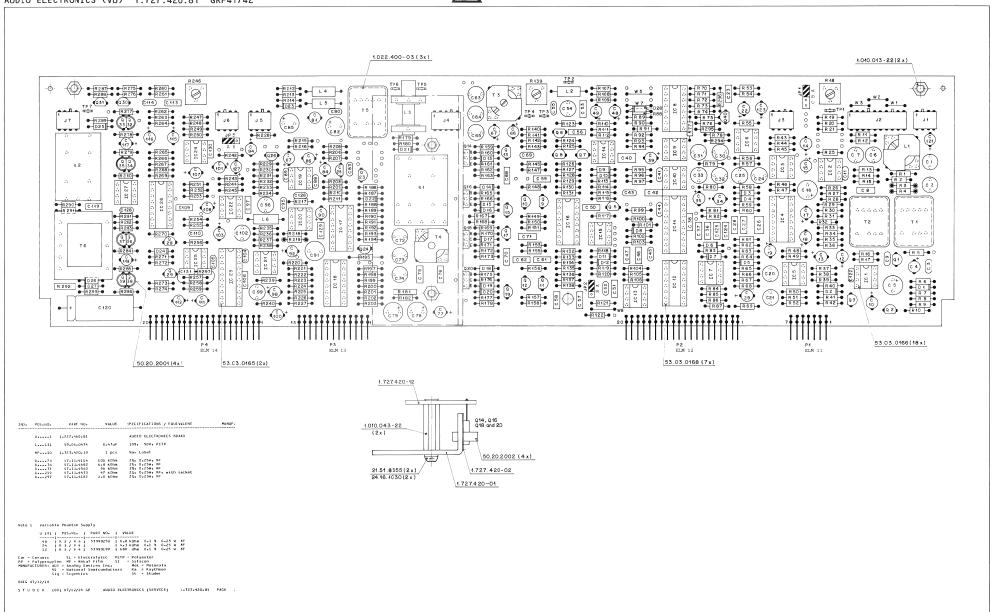


### AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42

D .	P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		P 05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQU	IVALENT	MANU
	R178 R179	57.11.4682 57.11.4473	6.8 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			R • • • 289 R • • • 290	57.11.4471 57.11.4391	470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R180 R181	57-11-4100 57-99-0209 57-11-4509	10 Ohm 5.6 Ohm	2%, 0.25W, MF PTC 2%, 0.25W, MF			R • • • 291 R • • • 292	57.11.4152 57.92.1151	1.5 kOhm 18 Ohm	2%, 0.25W+ MF 150mA+ PTC 2%, 0.25W- MF		
	R183 R184	57.11.4509	Sec Ohm	not used not used			R • • • 295 R • • • 295	57.11.4100 57.11.4470 57.11.4223	10 Ohm 47 Ohm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R***185 R***186	57.11.4222	2.2 kOhm 2.2 kOhm	not used 2%, 0.25W, MF 2%, 0.25W, MF			R • • • 296 R • • • 297	57.11.4105 57.11.4472	1 MOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R187 R188 R189	57-11-4222 57-11-4103 57-11-4682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			T1 T2	1.022.400.00	1:4	Mic Input Trafo Line Input Trafo		S S
	R•••190 R•••191	57.11.4682 57.11.4223	6.8 kOhm 22 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			I • • • • • 4 I • • • • • 5	1.022.271.00 1.022.272.00 1.022.402.00	1:10	Erase Trafo Bias Trafo Sync Trafo		s s s
	R192 R193 R194	57.11.4682 57.11.4103 57.11.4105	10 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF			T *****6	1.022.355.00	1-10	Line Output Trafo		S
	R195 R196	57.11.4681	680 Ohm	2%, 0.25W. MF not used not used			TP 2 TP 3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8≎0.8 Plug 2.6≎0.8 Plug 2.8¢0.8		A A
	R197 R198 R199	57.11.3164 57.11.3164	160 kOhm 160 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			TP5	54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8		A A
	R • • • 200 R • • • 201	57.11.4103 57.11.4682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			TP7	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8		A
	R • • • 202 R • • • 203 R • • • 204	57.11.4682 57.11.4103	6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF not used			W*****1 W*****2	64.01.0106 64.01.0106		Wire Bridge Wire Bridge		
	R • • • 205 R • • • 206	57.11.4181 57.11.4562	180 Ohm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			W * * * * * * 4	64.01.0106		Wire Bridge not used		
	R • • • 207 R • • • 208 R • • • 209	57-11-4104 57-11-4683 57-11-4333	100 kOhm 68 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			W5 W5 W7	64.01.0106 64.01.0106		Wire Bridge not used Wire Bridge		
	R • • • 210 R • • • 211	57.11.4333 57.11.4103	33 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			W8	64.01.0106	8-Pole	Wire Bridge IC Socket		
	R • • • 212 R • • • 213 R • • • 214	57.11.4120 57.11.4560 57.11.4101	12 Ohm 56 Ohm 100 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF			XIC 2 XIC 3	53.03.0166 53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket		
τυ		) 87/07/09 GP			0.81 PAGE 13	STU		00) 87/07/09 GP		ECTRUNICS BOARD	1.727.460.81	PAGE
).	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I NO .	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQU	I VALENT	MAN
	R215 R216	57.11.4682 57.11.4682	6.8 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC4 XIC5 XIC6	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket		
	R217 R218 R219	57.11.4682 57.11.5155 57.11.4104	6.8 kOhm 1.5 MOhm 100 kOhm	24, 0.25W, MF 5%, 0.25W, MF 2%, 0.25W, MF, with socket			XIC 7 XIC 8	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket		
	R220 R221	57•11•4103 57•11•4822	10 kOhm 8•2 kOhm	2%, 0.25W, MF not used 2%, 0.25W, MF			XIC 9 XIC 10 XIC 11	53.03.0166 53.03.0166 53.03.0165	8-Pole 8-Pole 20-Pole	IC Socket IC Socket IC Socket		
	R • • • 222 R • • • 223 R • • • 224	57.11.4473 57.11.4682	47 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			XIC 12 XIC 13	53.03.0168 53.03.0166	16-Pole 8-Pole	IC Socket IC Socket		
	R • • • 225 R • • • 226 R • • • 227	57.11.4393 57.11.4392 57.11.4563	39 kOhm 3.9 kOhm 56 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC++14 XIC++15 XIC++16	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket		
	R • • • 228 R • • • 229	57.11.4563 57.11.4562	56 kOhm 5∗6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			XIC17 XIC18	53.03.0168 53.03.0168	16-Pole 16-Pole	IC Socket IC Socket		
	R • • • 230 R • • • 231 R • • • 232	57.11.4683 57.11.4333 57.11.4333	68 kOhm 33 kOhm 33 kOhm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%+ 0.25W+ MF			XIC20 XIC21	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket		
	R • • • 233 R • • • 234	57.11.4103 57.11.4271	10 kOhm 270 Ohm	2%, 0.25W, MF 2 % 0.25W, MF			XIC 22 XIC 23	53.03.0166 53.03.0165 53.03.0166	8-Pole 20-Pole 8-Pole	IC Socket IC Socket IC Socket		
	R • • • 235 R • • • 236 R • • • 237	57.11.4273 57.11.4152 57.11.4331	27 kOhm 1.5 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC 24 XIC 25 XIC 26	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket		
	R • • • 238 R • • • 239	57.11.4103 57.11.4103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			X1627	53.03.0166	8-Pole	IC Socket		
	R • • • 240 R • • • 241 R • • • 242	57.11.4102 57.11.4472	1 kOhm 4+7 kOhm	2%, 0.25W, MF not used 2%, 0.25W, MF								
	R • • • 243 R • • • 244 R • • • 245	57.11.4473 57.11.4102 57.11.4222	47 kOhm 1 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 246 R • • • 247	58.01.8502 57.11.4821	5 kOhm 820 Ohm	10%, 0.5 W. PMG 2%, 0.25W, MF								
	R • • • 248 R • • • 249 R • • • 250	57.11.4392 57.11.4153	3.9 kOhm 15 kOhm	2%, 0.25W, MF not used 2%, 0.25W, MF								
	R***251	57.11.4473	47 k0hm	2%, 0.25W, MF ECTRONICS BOARD 1.727.46	0.81 PAGE 14	STU	DER (	00) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD	1-727-460-81	PAGE
	D E K (00	, 31,01,03 3	NODIO EE	ECTROTICS BOARD TETETO	V-01 170L 17							
o <b>.</b>	POS-NO-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQU	JI VAL ENT	MA
	R252 R253	57.11.4472 57.11.4472	4.7 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		Note	1 Variab	le Phantom Supp	1 y			
	R • • • 254 R • • • 255 R • • • 256	57.11.4331 57.11.4102 57.11.4273	330 Ohm 1 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF				POS+NO+				
	R • • • 257 R • • • 258	57•11•4102 57•11•4471	1 k0hm 470 0hm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			24	1 R 3 / R 4 I	1 4	-8 kOhm 0-1 % 0-25 W -3 kOhm 0-1 % 0-25 W 80 Ohm 0-1 % 0-25 W	I MF	
	R • • • 259 R • • • 260 R • • • 261	57•11•4103 57•11•4221 57•11•4122	220 Ghm 1•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		Cer =	Ceramic	EL = Electi	rolytic PE	P = Polyester	. 191	
	R • • • 262 R • • • 263	57.11.4471 57.11.4223	470 Ohm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		PP = MANUF	Polypropy ACTURER: A	len MF = Metal DI = Analog Dev S = National S	Film SI	= Silicon		
	R • • • 264 R • • • 265 R • • • 266	57.11.4222 57.11.4473 57.11.4103	2.2 kOhm 47 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			S	ig = Signetics	_mrconductor:	St = Studer		
	R • • • 267 R • • • 268	57.11.4682 57.11.4682 57.11.4103	6.8 kOhm 6.8 kUhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R269 R270 R271	57•11•4472 57•11•4122	4.7 kOhm 1.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R272 R273 R274	57.11.4223 57.11.4223 57.11.4473	22 kOhm 22 kOhm 47 kOhm	2%, 0.25W; MF 2%, 0.25W; MF 2%, 0.25W; MF								
	R • • • 275 R • • • 276	57.11.4223 57.11.4103	22 k0hm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 277 R • • • 278 R • • • 279	57.11.4339 57.11.4103 57.11.4103	3.3 Ohm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
	R • • • 280 R • • • 281	57.11.4339 57.11.4222	3.3 Ohm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R282 R283 R284	57.11.4222 57.11.4339	2.2 kOhm 3.3 Ohm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF								
		57.11.4103		2%, 0.25W, MF 2%, 0.25W, MF								
	R285	57.11.4103 57.11.4339	10 k0hm 3.3 Ohm	2%, 0.25W, MF								
	R285		3.3 Ohm 4.7 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			87/07/09	00) 87/07/09 GP		ECTRUNICS BOARD .	1.727.460.81	

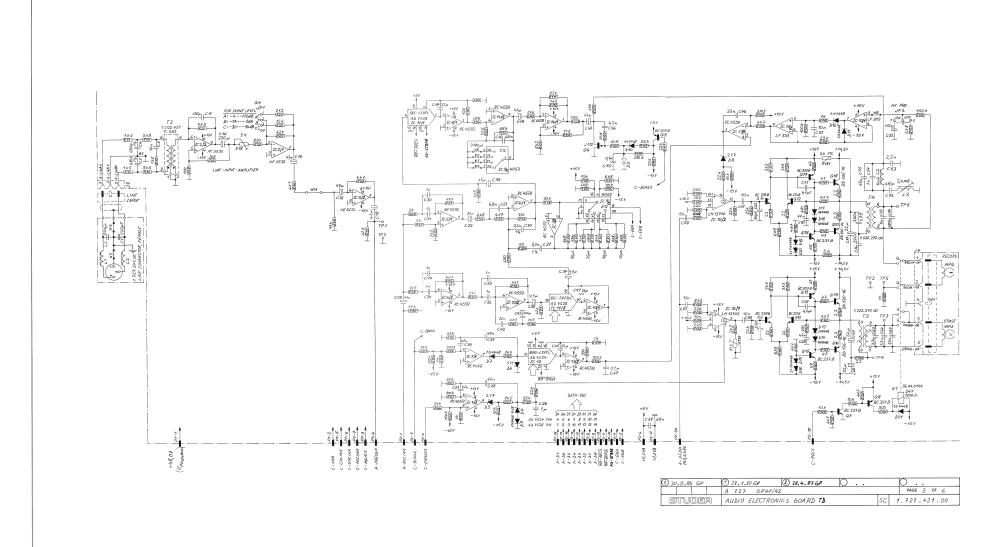


AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42



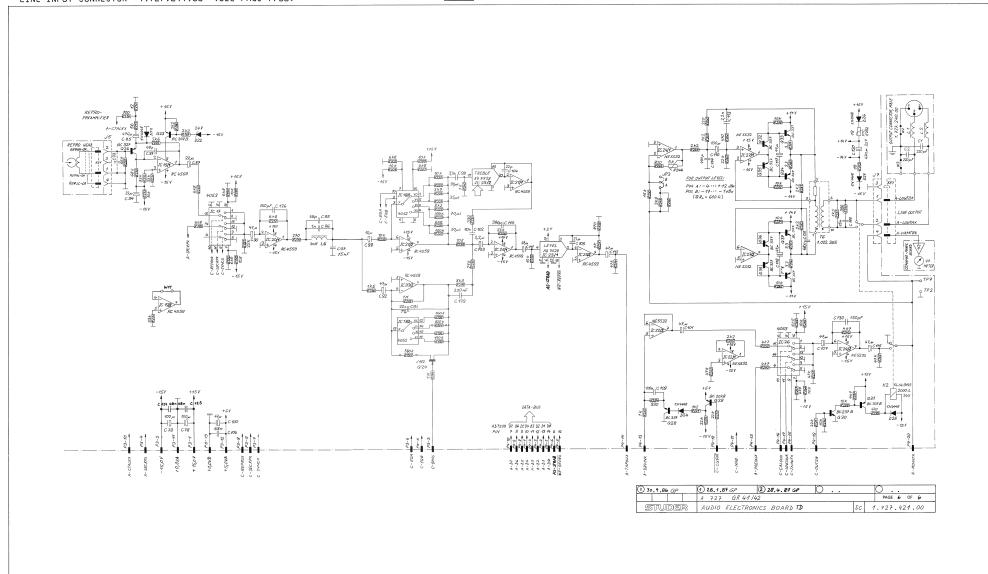
AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)





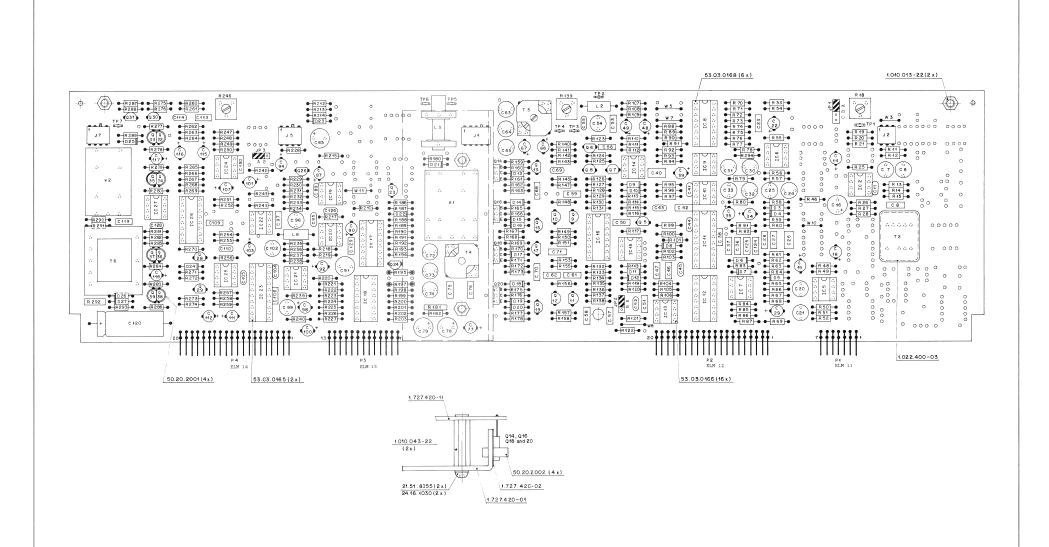
AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)





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AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42





#### AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42

D. POS-NO. PART NO. VALUE SPECIFICATIONS ∕ EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	ING. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. PDS.NG. PART ND. VALUE SPECIFICATIONS / EDUIVALENT MA
C	D	Sig Sig Sig Sig Sig Sig Sig Sig Sig Sig	0) 90.03.016 80.078 80.078 0.0000 WPN 10.0000  WPN 10.000000 WPN 10.00000 WPN 10.00000 WPN 10.00000 WPN 10.0000 WPN 10.0000	**************************************
. PDS-10. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NUF «	ING. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA
C00 99-22-14TD	IC  5	MS G G G G G G G G G G G G G G G G G G G	\$01 37-11-0132 11-5 ADRES 21-0-250- 96  \$01 37-11-0132 11-5 ADRES 21-0-250- 96  \$02 37-11-0132 11-5 ADRES 21-0-250- 96  \$03 37-11-0132 11-5 ADRES 21-0-250- 96  \$04 37-11-0132 11-5 ADRES 21-0-250- 96  \$05 37-11-0132 11-0-250- 96  \$06 37-11-0132 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0133 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134 11-0-250- 96  \$07 37-11-0134	8 177 37-11-1000 68 Ohm 23-0-20- HF 8 100 37-11-1010 10 Ohm 22-0-22- HF 8 100 37-11-1010 10 Ohm 22-0-22- HF 8 110 37-11-1010 10 Ohm 22-0-22- HF 8 110 37-11-1010 10 Ohm 22-0-22- HF 8 110 37-11-1022 2-2- Bhm 2-22-0-22- HF 8 120 37-11-102- Bbm 2-22-0-22-
PDS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS. NO. PART NO. VALUE SPECIFICATIONS / FOULVALENT MANUF.	THO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA
C		\$4 \$4 \$4 \$4 \$4 \$4 \$4 Mot	8	1





#### AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42

IND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQU	JIVALENT	MANUF.
	0 266		2.2 kOhm 47 kOhm 10 kOhm 6.8 kOhm	2%. 0.25W. MF		
	R • • • 265 R • • • 266 R • • • 267	57.11.4473 57.11.4103 57.11.4682	47 kUhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
		57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	R • • • 269	57-11-4082 57-11-4103 57-11-4472	10 kOhm	2%+ U.29W+ MF 2%+ U.25W+ MF		
	R270	57.11.4472 57.11.4122	4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 271 R • • • 272	57.11.4223 57.11.4223	22 kOhm	2%, 0.25W, MF		
	R • • • 273 R • • • 274	57•11•4223 57•11•4473	22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 275	57.11.4223 57.11.4103	22 kOhm	2%, 0.25W, MF		
	R276	57.11.4103	10 kOhm	2%+ 0+25W+ MF		
	R • • • 278	57-11-4103 57-11-4339 57-11-4103	10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R279 R280	57.11.4103 57.11.4339	10 kDhm 3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 281	57.11.4222	2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 281 R • • • 282 R • • • 283	57.11.4222 57.11.4339	2.2 kUnm 3.3 Ohm	2%, 0.25W, MF		
	R • • • 284	57.11.4103 57.11.4103	10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 286	57.11.4103 57.11.4339	3+3 Ohm	2%, 0.25W, MF		
	R 287	57.11.4472 57.11.4103	4.7 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 289	57-11-4103	470 Ohm	2%, 0.25W, MF		
	R285 R286 R287 R288 R289 R290 k291 R292	57.11.4391 57.11.4152	390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 292	57.92.1151	18 Ohm	150mA+ PTC		
	R • • • 293 R • • • 294	57.11.4180 57.11.4470	6-8 km wm 10 km m 110 km m 12 km m 12 km m 12 km m 12 km m 12 km m 12 km m 10	2%, 0.25W, MF 2%, 0.25W, MF		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		24, 01234, 11		
	T • • • • • 2	1.022.451.00	1:0.62	Line Input Trafo Erase Trafo		St St
	T 4 T 6	1.022.451.00 1.022.271.00 1.022.272.00 1.022.355.00		Line Input Trafo Erase Trafo Bias Trafo Line Output Trafo		St St St
s T U	DER (	02) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD TD	1.727.421.00	PAGE 13
INO.			VALUE		UIVAL ENT	MANUF.
	TP1 TP2	54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8		AMP AMP
	TP • • • • 3	54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8		AMP AMP
	TP 4 TP 5	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8		AMP
	TP 7	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		AMP AMP
	W4	64.01.0106		Wire Bridge not used		
	W5	64.01.0106		not used Wire Bridge		
	W6 W7	64.01.0106		not used Wire Bridge Wire Bridge		
	W8 W10	64.01.0106		Wire Bridge		
	W10	64.01.0106 57.11.4000		Wire Bridge Wire Bridge		
	X1C2		8-Pole	IC Socket		
	XIC *** 5	53.03.0166				
	XIC 6 XIC 7	53.03.0166 53.03.0166	8-Pole 8-Pole			
	XIC8	53.03.0168	16-Pole	IC Socket IC Socket		
	XIC9 XIC10	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket		
	XIC11	53.03.0165	20-Pole	IC Socket IC Socket		
	XIC-+12	53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole 20-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket		
	X1C14 XIC15	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 16-Pole	IC Socket		
	XIC - + 16	53.03.0168	8-Pole 16-Pole	IC Socket IC Socket IC Socket		
	XIC17 XIC18	53.03.0168 53.03.0168	16-Pole 16-Pole 16-Pole 8-Pole	IC Socket IC Socket		
	XIC19	53.03.0166	8-Pole	IC Socket IC Socket		
	XIC20 XIC21	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket		
	XIC 22 XIC 23	53.03.0166 53.03.0165	8-Pole 20-Pole	IC Socket IC Socket		
STII		53.03.0165 [02] 87/04/28 GP		ECTRONICS BOARD TD	1.727.421.00	PAGE 14
	D C N	(02) 01/04/20 01	AUDIO EL	LECTROTTES BOARD TO	201011102101	
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VALENT	MA NUF.
	XIC24	53.03.0166			UI VALENT	MA NUF -
				SPECIFICATIONS / EQ IC Socket IC Socket IC Socket IC Socket	UI VALENT	MA NUF -

(01) 87/01/28 better frequency response (02) 87/04/28 better S/N ratio

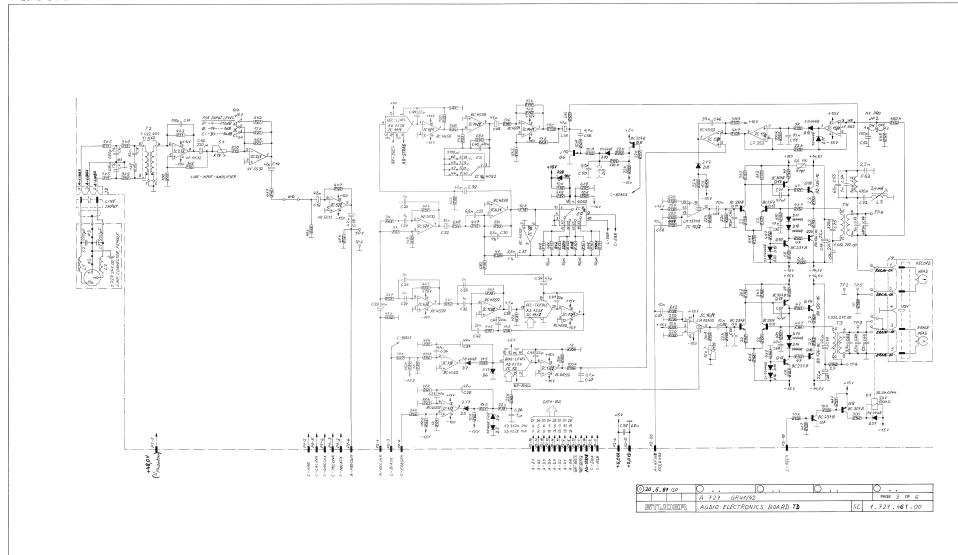
Sty - Signetics St = Studer

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STUDER (02) 87/04/28 GP AUDIO ELECTRONICS BOARD TD 1-727-421-00 PAGE 15

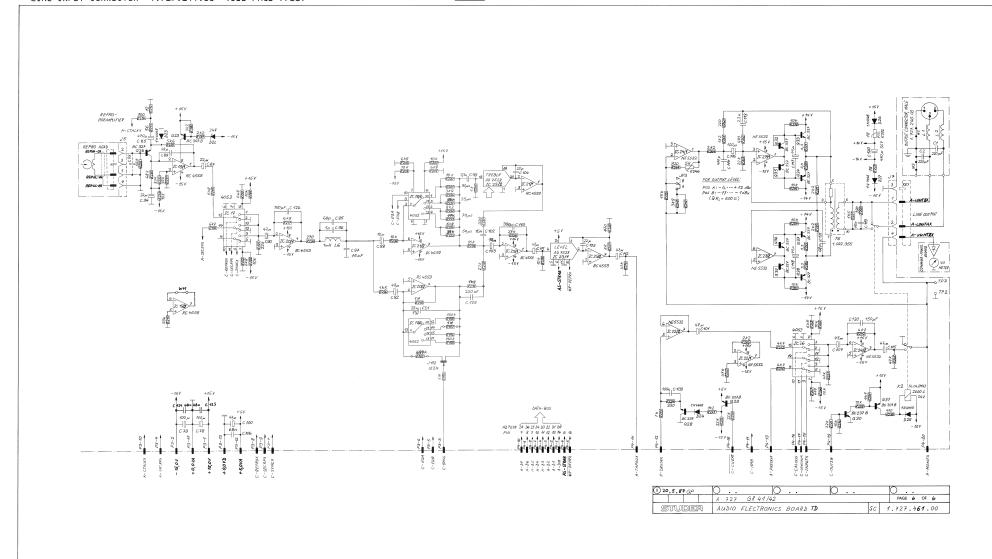
AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)





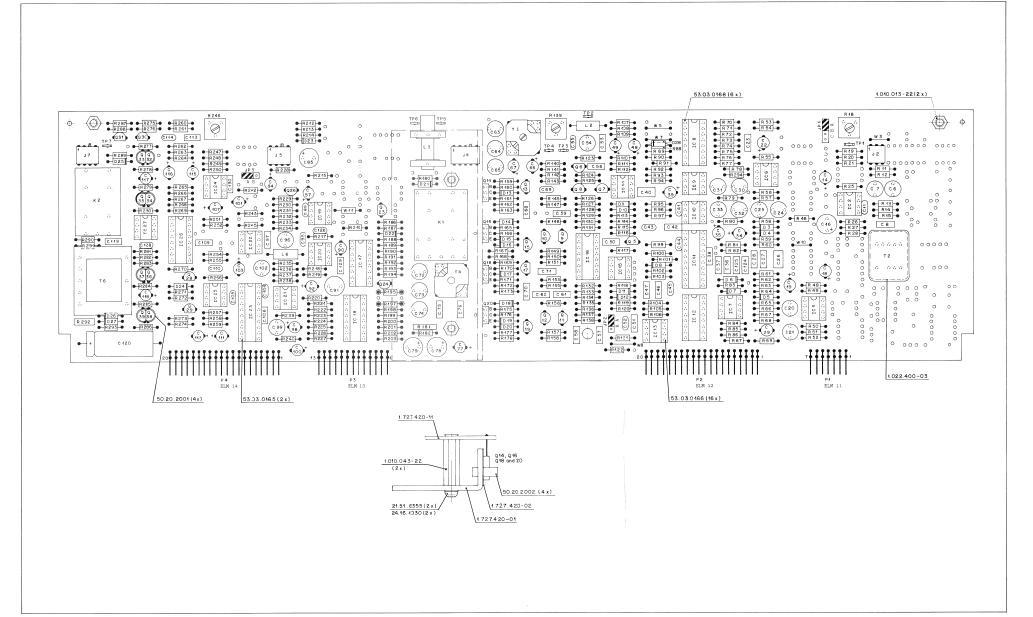
AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
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AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42

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ELEC	IKONIC	5 (0	VU) 1.727.461.00 (	GRP41	142															
P05+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAN	NUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	NANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO. PO		PART NO.		PECIFICATIONS / EQUIVALENT	т !
C6 C7 C8 C11	59.05.1681 59.05.1681 59.06.0103 59.34.4151 59.22.3470 59.22.2221	680 pF 680 pF 10 nF 150 pF 47 uF 220 uF 47 uF 1 nF 1 nF	1% 50V PP 10 15 50V PP 101 50V PP 101 50V PF 101 50V PF 102 10 50V PF 102 10 50V PF 102 10 50V PP 103 10 FE 104 10 FE 105 10 FE 105 10 FE 105 10 FF 105 10 F		D5 D6 D7 D8	50-04-1106 50-04-1112 50-04-0125 50-04-1106	2.7 V 5.1 Y 1N4448 2.7 V	52, 0.4W Zener 52, 0.4W Zener 50V SI 52, 0.4W Zener not used 50V SI 50V SI 50V SI 50V SI		Q32 Q33 Q34 Q35	50.03.0516 50.03.0516 50.03.0625 50.03.0625	BC337 BC337 BC327 BC327	matched with 033, NPN matched with 032, NPN matched with 035, PNP matched with 034, PNP matched with 034, PNP matched with 036, NPN matched with 036, NPN matched with 038, PNP matched with 038, PNP		R • R • R •	· 136 57 · 137 57 · 138 57 · 139 58	•11•4221 •11•4682 •11•4822 •01•8103	220 Ohm 6.8 kOhm 8.2 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 M, PMG 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
C8 C11 C14 C16 C19 C20 C21	59.22.3470 59.22.3470	47 uF 220 uF 47 uF 47 UF	-20% 1GV EL -20% 6-3V EL -20% 1GV EL -20% 1GV EL		06 D7 D8 D9 D10 011 012 D13 014	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	90V SI 90V SI 90V SI		Q36 Q37 Q38 Q39	50.03.0516 50.03.0516 50.03.0625 50.03.0625	8C337 8C337 8C327 8C327	matched with Q37, NPN matched with Q36, NPN matched with Q39, PNP matched with Q38, PNP		R.	141 57 142 57 143 57	.11.4229 .11.3301 .11.4332 .11.4332	10 kOhn 2-2 Ohn 300 Ohn 3-3 kOhn 3-3 kOhn 3-3 kOhn	2% 0.25M MF 2% 0.25M MF 2% 0.25M MF 2% 0.25W MF	
C23	59.05.2102 59.05.2102 59.22.6100 59.06.0682	1 nF 1 nF 10 uF 6+8 nF	2.5% 50V PP 2.5% 50V PP -20% 35V EL 10% 50V PETP		D13 D14 D15 D16	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448			R11 R12 R13	57.11.4152 57.11.4152 57.11.4392	1.5 kOhm 1.5 kOhm 3.9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R.	145 57 147 57 148 57	•11.4332 •11.4471 •11.4223 •11.4220	3.3 kDhm 470 Dhm 22 kDhm 22 Dhm	2% 0.25H MF 2% 0.25H MF 2% 0.25H MF 2% 0.25H MF	
C25 C26 C27	59.05.2102 59.05.2102 59.06.0105 59.06.0473 59.06.0473 59.22.3470 59.05.1332	1 nF 1 nF 1 uF 47 nF	-201 35V EL 101 58P PETP 2.1 50V PETP 101 56V PETP 101 56V PETP 102 56V PETP -201 LCV EP -201 LCV EP 112 56V PETP		017 018 019 020	50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448 1N4448 1N4448	50V SI 50V SI 50V SI 50V SI 50V SI 50V SI 50V SI		R15 R18 R19	57.11.4392 57.11.4182 58.01.6502 57.11.4821	3.9 kOhm 1.8 kOhm 5 kOhm 820 Dhm	2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 %, PMG 2%, 0.25%, ME		R. R. R.	150 57 151 57 153 57 155 57	-11.4471 -11.4471 -11.4223 -11.4220 -11.4220 -11.4332 -11.4471 -11.4223 -11.4220 -11.4220 -11.4220	22 Ohm 3-3 kOhm 3-3 kOhm 470 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
C28 C29 C30 C31 C32 C33 C34		47 nF 47 uF 3.3 nF 3.3 nF	10% 50V PETP -20% 10V EL 1% 50V PP 1% 50V PP 2.5% 50V PP		0 12 0 16 0 17 0 18 0 19 0 21 0 22 0 23 0 24 0 25 0 25 0 25	50.04.1121 50.04.0125 50.04.0125	24 V 184448 184448	50V SI 51 0-4W Zener 50V SI 50V SI 50V SI		R	57-11-4123 57-11-4222 57-11-3433 57-11-4392	12 kOhm 2-2 kOhm 43 kOhm 3-9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R.	156 57 157 57 158 57	-11-4223 -11-4220 -11-4270	22 Ohm 22 Ohm 22 Ohm 47 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
C35	59.05.2102 59.05.2102 59.22.8479 59.22.8479	1 nF 1 nF 4.7 uF 4.7 uF	2.5% 50V PP 2.5% 50V PP -20% 35V EL -20% 35V EL		D25 D27 D28	50.04.0125 50.04.0125 50.04.0125 50.04.1114	184448 184448 184448 10 V	50V SI 52 0.4W Zener		R28 R46 R48	57-11-4101 57-11-4472 57-11-4473	100 Ohm 4-7 kOhm 4-7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R.	-169 57 -161 57 -162 57 -163 57 -165 57 -165 57 -168 57	-11-427 -11-4470 -11-4229	47 Ohm 4-7 kOhm 2-2 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
C36 C37 C38 C39	59.06.0473 59.06.0473 59.06.0683 59.22.3470 59.06.5474 59.34.2220 59.34.4221 59.34.2220 59.34.2220 59.34.2220 59.34.2220	10 UF 6-8 NF 1 NF 1 NF 47 NF 47 NF 47 NF 3-3 NF 1 NF 4-7 UF 4-7 U	11		IC2 IC5 IC6 IC7	50.09.0105 50.09.0105 50.09.0107 50.09.0107	NE 5532 NE 5532 RC 4559 RC 4559	Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp. Oual Op. Amp.	Sig Sig Ra	R	57.11.4392 57.11.4392 57.11.4392 57.11.4392 57.11.4392 57.11.4392 57.11.4323 57.11.4323 57.11.4323 57.11.4323 57.11.4323 57.11.4323 57.11.4472 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473	1-5 kOhm 3-9 kOhm 3-9 kOhm 1-8 kOhm 5 kOhm 5 kOhm 12 kOhm 12 kOhm 12 kOhm 43 kOhm 43 kOhm 47 kOhm 47 kOhm 47 kOhm 47 kOhm 47 kOhm 47 kOhm 47 kOhm 47 kOhm 48 kOhm 49 kOhm 40 kOhm 40 kOhm 41 kOhm 42 kOhm 43 kOhm 44 kOhm 45 kOhm 46 kOhm 47 kOhm 47 kOhm 48 kOhm 49 kOhm 49 kOhm 40 kOhm 40 kOhm 40 kOhm 41 kOhm 42 kOhm 43 kOhm 43 kOhm 44 kOhm 45 kOhm 46 kOhm 47 kOhm 47 kOhm 48 kOhm 48 kOhm 48 kOhm 48 kOhm 49 kOhm 40 kOhm 40 kOhm 40 kOhm 41 kOhm 43 kOhm 44 kOhm 45 kOhm 46 kOhm 47 kOhm 48 kOhm	22. 0.234. 46 22. 0.234. 47 22. 0.234. 48 23. 0.234. 48 24		R.	.165 57 .167 57 .168 57	-11-4220 -11-4470 -11-4229 -11-4470 -11-4472 -11-4229 -11-4470 -11-4680 -11-4682 -11-4470	470 Ohn 22 Uhh 22 Uhh 22 Ohn 23 Ohn 24 Ohn 25 Ohn 26 Ohn 26 Ohn 27 Ohn 27 Ohn 28 Ohn 29 Ohn 29 Ohn 20 Ohn 20 Ohn 20 Ohn 20 Ohn 21 Ohn 22 Ohn 22 Ohn 23 Ohn 24 Ohn 25 Ohn 26 Ohn 27 Ohn 27 Ohn 28 Ohn 29 Ohn 29 Ohn 20 Ohn 20 Ohn 20 Ohn 20 Ohn 20 Ohn 20 Ohn 21 Ohn 22 Ohn 22 Ohn 23 Ohn 24 Ohn 25 Ohn 26 Ohn 27 Ohn 27 Ohn 28 Ohn	220 0.2500 or 2200 or	
C40 C42 C43 C44 C45	59.34.2220 59.06.0223 59.34.4221	22 pF 22 nF 22 nF 220 pF	10% 50V Cer 10% 50V PETP 5% 50V Cer		100 109 1010 1011 1012	50.07.0024 50.05.0107 50.05.0107	RC 4559 RC 4559 RC 4559 RC 4559 AD 7528JN AD 7524JN RC 4559 RC 4559 LF 353	CMOS Analog Switch Oual Op. Amp. Oual Op. Amp. Oual Op. Amp.	Mot Ra Ra	R54 R55 R55	57.11.4682 57.11.4333 57.11.4472	6.8 kOhm .33 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R.	·171 57	-11.4229 -11.4470 -11.4472	2.2 Ohn 47 Ohn 4.7 kOhn 2.2 Ohn	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
C45 C46 C47	59.34.2220 59.06.0333 59.06.0104 59.22.3470	22 nF 220 pF 22 pF 22 pF 33 nF 100 nF 47 uF	10% 50V Cor 10% 50V PETP 10% 50V PETP 10% 50V PETP -20% 10V EL		1012 1013 1014 1015	50.07.0026 50.07.0002 50.05.0107 50.05.0107 50.05.0101	AD 7524JN RC 4559 RC 4559	8-bit O/A Converter Dual Op. Amp. Dual Op. Amp. Dual Op. Amp.	Ra Ra ADI ADI Ra Ra NS	R53 R59 R60 R61	57.11.4272 57.11.4272 57.11.4223 57.11.4473 57.11.4152	4.7 kOhm 2.7 kOhm 2.7 kOhm 2.7 kOhm 22 kOhm 47 kOhm 1.5 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R.	- 115 57	•11.4470 •11.4472 •11.4680 •11.4682	4-7 KOhn 4-7 Ohn 4-7 KOhn 68 Ohn 6-8 KOhn	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF	
	87/05/20 GP		ECTRONICS BOARD TO 1.727.461.40 PAGE	1	STUDER (O		AUDIO EL	ECTRONICS BOARD TD 1+727+461		STUDER (				00 PAGE 7		R (00) 87				7.461.00 P
POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EDUIVALENT MAN	INUF.	IMD. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO-	PART NO+		SPECIFICATIONS / EQUIVALENT	MANUF.	IND. PO	s.NO.	PART NO.		SPECIFICATIONS / EQUIVALEN	NT
50 51	59.22.3470 59.06.0104 59.06.0103 59.34.4151	47 uF 100 nF 10 nF	-20% 1CV EL 10% 5CV PETP 10% 5CV PETP		IC16 IC17 IC18 IC19	50.09.0112 50.01.0015 50.01.0024 50.02.0107	LM 13700 MC 14053 MC 14052 RC 4559	Dual OTA CHOS Analog Switch CHOS Analog Switch Dual One Ann	NS Hot Hot Ra	R 62 R 63 R 64	57-11-+103 57-11-+154 57-11-+102 57-11-+104	10 kOhm 150 kOhm 1 kOhm 100 kOhm 24 kOhm 3 kOhm 3 kOhm 47 kOhn 6+8 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			181 5	7.11.4100 7.99.0209 7.11.4569 7.11.4222	10 Ohe 5-6 Ohe 5-6 Ohe 2-2 kOhe 10 kOhe 10 kOhe 6-8 kOhe 2-2 kOhe 10 kOhe 6-8 kOhe 10 kOhe 11	2%, 0.25%, MF PTC 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
52 53 54	59-06-0222	150 pF 2.2 nF 1 nF 68 pF 4.7 nF 10 nF 10 nF	-200 1cV Eurp 102 5cV PETP 103 5cV PETP 104 5cV PETP 105 5cV PETP 106 5cV PETP 107 5cV PETP 108 5cV PETP 108 5cV PETP 108 5cV PETP 108 5cV PETP			50-07-0015 50-07-0024 50-09-0107 50-09-0107 50-09-0105 50-07-0105	NC 14052 RC 4559 RC 4559 RC 4559 NE 5532 A0 7528JN NE 5532 RC 4559	Dual OTA CHOS Annal on Suitech CHOS Annal on Suitech Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. Dual Gp. Amp. CHOS Gp. Amp. CHOS Annal Gp. Amp. CHOS Annal Gp. Amp. CHOS Annal Gp. Amp. CHOS Annal Gp. Amp. CHOS Annal Gp. Amp.	Mot Mot Ra Ra Ra Sig ADI	R 65 R 66 R 67 R 69 R 70 R 71 R 72 R 73 R 74	57-11-104 57-11-3243 57-11-3302 57-11-3302 57-11-4473	24 k0hm 3 k0hm 3 k0hm 47 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R. R.		7-99-0209 7-11-4569 7-11-4222 7-11-4222 7-11-4103 7-11-4682 7-11-4682 7-11-4682 7-11-4682	2+2 k0hm 10 k0hm 6+8 k0hm 6+8 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
57	59.34.4680 59.06.0472 59.06.0103 59.06.0103 59.06.0103				10 21 10 22 10 23 10 24 10 25 10 26 10 27	50.09.0105 50.09.0107 50.01.0015 50.09.0105	NE 5532 RC 4559 MC 14053 NE 5532	Oual Op. Amp. Oual Op. Amp. CMOS Analog Switch Oual Op. Amp.	Sig Ra Mot Sig	R70 R71 R72 R73	57-11-+682 57-11-+822 57-11-+224 57-11-+682		not used		R: R: R:	191 5 192 5 193 5		10 kOhm 1 MOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
56 57 58 59 60 61 62 63	59.06.0103 59.34.4101 59.05.2332 59.05.2332	10 nF 100 pF 3.3 nF 3.3 nF	10% 50V PETP 10% 50V Cer 2.5% 160V PP 2.5% 160V PP		J2 J4 J5	54.01.0249 54.01.0305 54.01.0304 54.01.0304	3-Pole 5-Pole 4-Pole 4-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP	R74 R75 R70 R77	57.11.+682 57.11.+683 57.11.+682 57.11.+154	6.8 kOhm 68 kOhm 6.8 kOhm 150 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R. R.	195 5 196 197 5 198 5	7-11-4684 7-11-4105 7-11-3164	680 kOhn 1 MOhn 160 kOhn	2%, 0.25%, MF, with sock not used 2%, 0.25%, MF, with sock 2%, 0.25%, MF	ket ket
66	59.05.2152 59.22.5220 59.22.5220 59.06.0473	100 nr 100 pr 3+3 nr 3+3 nr 1+5 nr 22 ur 22 ur 47 nr 4-7 nr	2.5% 160V PP -20% 35V EL -20% 35V EL 10% 5CV PETP		JP1 JP2 JP3	54.01.0304 54.01.0021 54.01.0021 54.01.0021	4-Pole	CIS Socket Strip Bridge Bridge Bridge	AMP	R78 R79 R80 R81	57.11.4472 57.11.4681 57.11.4673	10 k0hm 4.7 k0hm 680 Ohm 47 k0hm	23. 0.25%, HF 22. 0.25%, HF 23. 0.25% MF 25. 0.25% MF 26. 0.25% MF 27. 0.25% MF 28. 0.25% MF		R R R	198 5 199 5 200 5 201 5 202 5	7-11-3164 7-11-4103 7-11-4682 7-11-4682	160 kOhm 10 kOhm 6-8 kOhm 6-8 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
68 69 70 71 72 73 74 75 76 77	59+22+5220 59+22+5220 59+06+0473 59+34+0479 59+06+0473 59+34+0479 59+05+2471 59+05+1102	4-7 pF 47 nF 4-7 pF 470 pF 1 nF	2.5% 166V PP 2.5% 160V PP -20% 35V EL 100 50V PFP 101 50V PFP 103 50V PFP 104 50V PFP 108 50V Cer 2.5% 50V OP		урз К2	56.04.0144 56.04.0143	40U 20U	Bridge Relay: 24V: 1200 Ohn Relay: 24V: 2000 Ohn		R - 76 R - 77 R - 78 R - 79 R - 80 R - 81 R - 82 R - 83 R - 84 R - 85	57.11.+082 57.11.+082 57.11.+1082 57.11.+103 57.11.+472 57.11.+473 57.11.+473 57.11.+152 57.11.+154	8-2 k0hm 2-20 k0hm 6-8 k0hm 6-8 k0hm 6-8 k0hm 10 k0hm 110 k0hm 4-7 k0hm 1-5 k0hm 1-5 k0hm 1-5 k0hm 1-5 k0hm 1-6	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R. R.	-200 > .201 5202 5202 5203 5210 5212 5214 5214 5215 5216 5216 5217 5218 5219 5219 5219 5219 5219 5219 5221 5221 5221 5222 52221 5222 5 5222	7.11.4105 7.11.3164 7.11.3164 7.11.403 7.11.4082 7.11.4082 7.11.4083 7.11.4123 7.11.4323 7.11.4560 7.11.4682 7.11.4082 7.11.4082 7.11.4103	1 M0hm 160 k0hm 160 k0hm 160 k0hm 10 k0hm 12 dhm 12 dhm 14 dhm 15 k0hm 1 M0hm 1 M0hm 1 k0hm 1 k0hm 1 k0hm	22 0.25% MF, with soch tused 24 0.25% MF, with soch 22 0.25% MF, with soch 22 0.25% MF 22 0.25% MF 23 0.25% MF	
74	59.05.1102 59.05.1681 59.06.0224 59.06.0224 59.22.6220	680 pF 220 nF	1% 63CV PP 1% 63CV PP 10% 5CV PETP 10% 5CV PETP		L3 L6	62.01.0128 1.177.231.00 52.01.0128	1 mH 2 • 4 mH 1 mH		St	R87 R88 R89	67 11 1262	24 k0hm 10 k0hm 6.8 k0hm	23. 0.25%, MF 22. 0.25% MF 23. 0.25% MF 24. 0.25% MF 25. 0.25% MF 26. 0.25% MF 27. 0.25% MF 28. 0.25% MF 28. 0.25% MF 28. 0.25% MF 28. 0.25% MF 28. 0.25% MF 28. 0.25% MF		R. R. R.	214 5 215 5 217 5 218 5	7-11-4101 7-11-4682 7-11-4682 7-11-4105	100 Ohm 6.8 kOhm 6.8 kOhm 1 MOhm	2% 0-25W HF 2% 0-25W HF 2% 0-25W HF 2% 0-25W HF	
C77 C78 C79 C85	59.22.6220 59.22.5101 59.22.5101 59.22.2471	22 UF 100 UF 100 UF 470 UF	-20% 35V EL -20% 25V EL -20% 25V EL -20% 6-3V EL		MP1 MP2 MP3	54.01.0020 54.01.0020 54.01.0020	4 pcs 3 pcs 3 pcs	Contact Pin JP1 Contact Pin JP2 Contact Pin JP3		R91 R92 R93	57-11-+103 57-11-+082 57-11-+083 57-11-+083 57-11-562 57-11-562 57-11-101 57-11-3432	6-8 kOhm 68 kOhm 7-5 kOhm	25, 0-25H- MF 25, 0-25H- MF 25, 0-25H- MF		R- R- R- R-	220 5 221 222 5	7-11-4822			
79 85 87 89 90 91	59.22.5101 59.22.5101 59.22.2471 59.22.5220 59.34.4680 59.22.3470 59.05.1223 59.22.3470	22 UF 100 UF 100 UF 100 UF 470 UF 22 UF 68 PF 47 UF 22 NF 47 UF	10   10   10   10   10   10   10   10		MP2 MP2 MP3 MP5 MP5 MP6 MP7	54.01.0020 54.01.0020 1.010.043.22 21.26.0355 24.16.1030 50.20.2001 1.727.420.01	4 pcs 3 pcs 3 pcs 2 pcs 2 pcs 2 pcs 2 pcs 4 pcs 1 pcs	Contact Pin JP1 Contact Pin JP2 Contact Pin JP3 Rivet Nut N3=20 Screw M3=8 Wosher Clip, 2=T092 Heotsink	St	R	57-11-101 57-11-3432 57-11-3432	100 Dhm 4-3 kDhm 4-3 kDhm	2% 0-25% MF 2% 0-25% MF 2% 0-25% MF 2% 0-25% MF act used		R. R. R.	222 5 223 5 224 5 225 5 226 5 227 5	7.11.4473 7.11.4682 7.11.4393 7.11.4392	8.2 kOhm 47 kOhm 6.8 kOhn 39 kOhn 3.9 kOhn 56 kOhn	2%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	87/05/20 GP		-204 107 EL ECTRONICS BOARD TD 1-727-461-00 PAGE	. z	STUDER (C				.00 PAGE 5	STUDER (	00) 87/05/20 GP	AUDIO EL		OD PAGE 8		227 5 R (00) 8	7 - 11 - 4363	AUDIO ELEC	TRONICS BOARD TD 1-72	27.461.30
DS+40+	PART NG.	VALUE	SPECIFICATIONS / EQUIVALENT NAM	ANUF.	IMD. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. PO	S.NO.	PART NO.		SPECIFICATIONS / EQUIVALEN	NT
93 94 95	59+22+5220 59+34+4680 59+05+2102 59+06+0153	22 UF 68 pF 1 nF	not used -20% 25V EL 10% 50V Cer 2.5% 50V PP		MP9 MP10 MP11	1.727.420.02 1.727.461.10 1.727.420.11 1.022.400.03	1 pcs 1 pcs 1 pcs 1 pcs	Thermoplastic No. Label Audio Electronics PCB Isolation T2 Rivet Nut M303 Clip, Tul26	St St St St	R99 R100 R101 R102	57.11.4472 57.11.4223 57.11.4103 57.11.5335	4.7 kOhn 22 kOhn 10 kOhn 3.3 MOhn	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 5%, 0-25%, MF		R. R.	229 5 230 5 231 5	7-11-4563 7-11-4562 7-11-4683 7-11-4333	56 kOhm 5•6 kOhm 68 kOhm 33 kOhm	22. 0.25%, MF 22. 0.25%, MF 23. 0.25%, MF 23. 0.25%, MF 24. 0.25%, MF 25. 0.25%, MF 26. 0.25%, MF 27. 0.25%, MF 27. 0.25%, MF 28.	
94 95 96 97 98 99 00 101	59.06.0153 59.22.6100 59.05.2332 59.22.3470 59.22.3470	15 nF 10 uF 3-3 nF 47 uF 47 uF			MP10 MP11 MP12 MP13 MP14 MP15 MP16	1.010.013.22 50.20.2002 43.01.0108 53.03.0228	1 pcs 1 pcs 1 pcs 1 pcs 2 pcs 4 pcs 1 pcs 4 pcs	Rivet Nut M393 Clip, TUI26 ESE Marning Label 1-Pole Sacket (R195,R197)		R***103 R***104	57-11-472 57-11-472 57-11-402 57-11-404 57-11-408 57-11-4182 57-11-452 57-11-423 57-11-423 57-11-423	4-7 kOhn 22 kOhn 10 kOhn 3-3 NOhn 4-7 kOhn 1 kOhn 390 kOhn 8-2 kOhn 8-2 kOhn 1-8 kOhn 5-6 kOhn 8-2 kOhn 1-3 kOhn 1-3 kOhn 1-3 kOhn	12t, 0.254, ME 22t, 0.254, ME 22t, 0.254, ME 25t, 0.254, ME 22t, 0.254, ME		R.			5-6 kOhm 5-6 kOhm 68 kOhm 68 kOhm 33 kOhn 10 kOhm 270 Ohm 27 kOhm 1-5 kOhm 10 kOhm 10 kOhm 1 kOhm 10 kOhm 1 kOhm 1 kOhm 1 kOhm 1 kOhm 1 kOhm 1 kOhm 5 kOhm 5 kOhm 5 kOhm 5 kOhm 5 kOhm 5 kOhm 620 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
01	59.05.2103	10 nF 10 uF	-20% 35V EL 2-25% 39V EP 2-20% 10V EL 2-2% 39V EP 2-20% 10V EL 2-2% 35V EL 10% 55V EL 10% 59V Cer 10% 59V EFP 10% 59V FEFP		P1 P2 P3 P4	54-01-0223 54-01-0261 54-01-0273 54-01-0261	7-Pole 20-Pole 13-Pole 20-Pole	CIS Pin Strip CIS Pin Strip CIS Pin Strip CIS Pin Strip		R 105 R 105 R 108 H 108 R 110 R 111 R 112 R 113	57-11-4822 57-11-4182 57-11-4151 57-11-4562	8.2 kOhm 1.8 kOhm 150 Ohm 5.6 kOhm	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF		R. R. R.	234 5 235 5 236 5 237 5 238 5 239 5 240 5	7-11-4103 7-11-4271 7-11-4273 7-11-4273 7-11-4152 7-11-4103 7-11-4103 7-11-4103	1.5 kOhm 330 Ohm 10 kOhm 10 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
05	59.22.6100 59.34.2220 59.34.2220 59.06.0683 59.22.3470 59.34.5391 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.34.5471	22 pF 68 nF 47 uF 100 nF 390 pF 47 uF 47 uF	-201 35V U.  -201 35V U.  -201 35V U.  -201 35V U.  -201 31V U.  -201			50.03.0515	8C3078		Not	R111 R112 R113 R114	57.11.4823 57.11.3132 57.11.4223 57.11.4974 57.11.4223	470 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		R. R.	243 5 245 5	7.11.4473	1 k0hm 4-7 k0hm 47 k0hm 2-2 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	59.34.5391 59.22.3470 59.22.3470 59.06.0222	390 pF 47 uF 47 uF 2-2 nF	-20% 19W EL 10% 59V PETP 10% 59V Cer -20% 10V EL -20% 10V EL 10% 59V PETP		Q5 Q6 Q7 Q8 Q9	50.03.0436 50.03.0515 50.03.0436 50.03.0436	BC2378 BC307B	BC547B+ 8C550B FET  8C557B+ 8C550B PNP  8C547B+ 8C550B NPN  8C547B		R 116 R 117 R 118		22 kOhn 22 kOhn 22 kOhn 22 kOhn	2%, U-25%, MF 2%, U-25%, MF 2%, U-25%, MF 2%, U-25%, MF		R. R.	•• 246 5 •• 247 5 •• 248 5	8.01.8502 7.11.4821 7.11.4392	5 kOhm 820 Ohm 3.9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF not used	
	59.22.3101	2.2 nF 470 pF 47 uF 100 uF 47 uF	-20% 10V EL 10X 50V PETP 10% 50V Cer 20% 10V EL 20% 10V EL 20% 10V EL		Q12 Q13 Q14 Q15	50.03.0436 50.03.0436 50.03.0515 50.03.0495	BC2378 BC2378 BC2378 BC2378 BC135-16 BC2378 BO136-16 BC3078 BO135-16 BC3078 BO136-16 BC3078 BO136-16 BC3078 BO136-16	3C5478+ 3C5508 NPN 8C5478+ 8C5508 NPN 3C5578+ 8C5608 PNP NPN		R119 R120 R121 R122	57-11-7223 57-11-7223 57-11-7223 57-11-102 57-11-102 57-11-104 57-11-105 57-11-105 57-11-103 57-11-103 57-11-103 57-11-103 57-11-103 57-11-103	100 k0hm 6-8 k0hm 150 k0hm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF			250 5 251 5 252 5 254 5	7-11-4153 7-11-4473 7-11-4472 7-11-4331 7-11-432 7-11-4273 7-11-4102 7-11-4471 7-11-4103	15 kOhm 47 kOhm 47 kOhm 47 kOhm 330 Ghe 1 kOhm 1 kOhm 1 kOhm 1 kOhm 120 Ohm 142 kOhm 142 kOhm 220 Ohm 2470 Ohm 22 kOhm 2470 Ohm 2470 Ohm 25 kOhm 470 kOhm 470 kOhm	2%, 0.25%, 4% not used; MR 22%, 0.25%, MR 22%, 0.25%, MR 2%, 0.25%, MR	
C[16 C[19 C[20 C[23	59.22.3470 59.06.0153 59.25.5471	47 uF 15 nF 470 uF	-20% 10V EL 10% 50V PETP -20% 35V EL not used			50.03.0515 50.03.0515 50.03.0515 50.03.0515 50.03.0510 50.03.0515 50.03.0495 50.03.0495 50.03.0515 50.03.0515 50.03.0555	8C2378 8D136-16 8C3078 8D135-16	8C5478+ 8C5508 NPN PNP BC5578+ BC5608 PNP NPN BC5478+ BC5508 NPN		R 120 R 121 R 122 R 122 R 123 R 125 R 126 R 127 R 126 R 127 R 128 R 130 R 130 R 130 R 130	57-11-9471 57-11-9106 57-11-9108 57-11-9103	10 MOhm 10 MOhm 10 kOhm	12, 0.25% MF 12, 0.25% MF 12, 0.25% MF		R. R.	252 5 254 5 255 5 255 5 257 5 258 5 259 5 259 5 250 5 251 5	7-11-4102 7-11-4273 7-11-4102 7-11-4471	1 kUhm 27 kOhm 1 kOhm 470 Ohm	21, 0.25%, MF 21, 0.25%, MF 21, 0.25%, MF 21, 0.25%, MF	
C 24 C 25 C 126 C 28	59.06.0683 59.06.0683 59.34.4151 59.34.4680 59.06.0224 59.34.4151	68 nF 68 nF 150 pF 68 pF 220 nF 150 pF	not used 103 589 PETP 103 589 PETP 103 589 PETP 103 589 Cer 103 589 Cer 103 599 Cer 103 599 Cer		Q 17 Q 18 Q 19 Q 20 Q 23 Q 24 Q 24 Q 26 Q 28 Q 28	50.03.0436 50.03.0510 50.03.0515 50.03.0350	8C237B B0136-16 BC307B J112	BC547B+ BC550B NPN PNP BC557B+ BC560B PNP FET	Mot	R 127 R 128 R 129 R 130	57-11-+472 57-11-+972 57-11-+103 57-11-+153	4.7 k0hn 10 k0hn 15 k0hn	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF		R. R.	•• 251 5 •• 252 5	7-11-4103 7-11-4221 7-11-4122 7-11-4471	10 k0hm 220 0hm 1-2 k0hm 470 0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
D3 D4	59.06.0224 59.34.4151 50.04.0125 50.04.1102	220 nF 150 pF 1N4448	10% 50V PETP 10% 50V Cer 50V SI 5% Q:-W Zener		Q26 Q28 Q29 Q30	50.03.0625 50.03.0340 50.03.0515 50.03.0436 50.03.0515	8C327 8C337-25 8C3078 8C2378 8C3078	86551/2 C55600 PMP  865476 C5560 PMP  865478 C5560 PMP  865478 C5560 PMP  865478 C5560 PMP  865578 C5560 PMP		R 131 R 132 R 133 R 134 R 135	57-11-+153 57-11-+153 57-11-+223 57-11-+221 57-11-+221 57-11-+221	22 kOhn 22 kOhn 22 kOhn 22 kOhn 1 kOhn 100 kOhn 100 kOhn 150 kOhn 170 kOhn	0.2.56. WE STAND TO S		R. R.	254 5 255 5	7.11.4223 7.11.4222 7.11.4473 7.11.4103	22 k0hm 2.2 k0hm 47 k0hm 10 k0hm 6.8 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	50.04.1102 37/05/20 GP		5% G.4W Zener ECTRONICS BOARD TD 1.727.461.00 PAGE	3	STUDER (C				.00 PAGE 6				LECTRONICS BOARD TD 1.727.461.	OO PAGE 9		R (00) 6				27.461.00 P



#### AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42

P 05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUI	VALENT	MANUF
R 268	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
R • • • 269	57-11-4103	10 kOhm	2%, 0.25W, MF		
R • • • 270 R • • • 271	57.11.4472 57.11.4122	4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
R • • • 272	57.11.4223	22 kOhm	2%, 0.25W, MF		
R273	57.11.4223	22 kOhm	2%, 0.25W, MF		
R274	57-11-4473	47 kOhm	2%, 0.25W, MF		
R275 R276	57.11.4223 57.11.4103	22 KUNM 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
R • • • 277	57-11-4339	3.3 Ohm	2%, 0.25W, MF		
R • • • 278	57.11.4103	10 kOhm	2%, 0.25W, MF		
R279 R280	57.11.4103 57.11.4339	10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF		
R 281	57.11.4222	2+2 kOhm	2%, 0.25W, MF		
R • • • 282	57-11-4222	2.2 KONM	2%, 0.25W, MF		
R283 R284	57.11.4339 57.11.4103	10 kObm	2%, 0.25W, MF 2%, 0.25W, MF		
R285	57.11.4103	10 kOhm	2%, 0.25W, MF		
R • • • 286	57.11.4339	3.3 Ohm	2%, 0.25W, MF		
R287 R288	57•11•4472 57•11•4103	4 • / kUhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
R • • • 289	57-11-4471	470 Ohm	2%, 0.25W, MF		
R290	57.11.4391	390 Ohm	2%, 0.25W, MF		
R291 R292	57•11•4152 57•92•1151	1.5 kOhm	2%, 0.25W, MF 150mA, PTC		
R 292	57.11.4180	16 Ohm	2%, 0.25W, MF		
R294	57-11-4470	4-7 kOhm 1-2 kOhm 1-2 kOhm 22 kOhm 22 kOhm 22 kOhm 22 kOhm 3-1 kOhm 3-3 Chm 3-3 Chm 3-3 Chm 3-3 Chm 10 kOhm 3-3 Ohm 10 kOhm 10 Ohm 10 Ohm 10 Ohm 10 Ohm	2%, 0.25W, MF		
T • • • • 2	1.022.451.00	1:0.62	Line Input Trafo		St St
T • • • • • 3 T • • • • • 4	1.022.272.00		Erase Trafo Bias Trafo		St
T6	1.022.355.00		Line Output Trafo		St
TP1	54.02.0320		Plug 2.800.8		AMP
TP 2	54.02.0320		Plug 2.8*0.8		AMP AMP
TP 3 TP 4	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		AMP
DER (	00) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD TD	1.727.461.00	PAGE 13
POS • NO •	PART NO.	AUDIO EL			
P05+N0+	PART NO.		SPECIFICATIONS / EQUI		PAGE 13
POS • NO •	PART NO.		SPECIFICATIONS / EQUI		MANUF.
P05+N0+	PART NO.		SPECIFICATIONS / EQUI		MANUF.
POS • NO •  TP • • • • 5  TP • • • • 6	PART NO. 54+02+0320 54+02+0320		SPECIFICATIONS / EQUI Plug 2.890.8 Plug 2.890.8 Plug 2.890.8 Wire Bridge		MANUF.
POS - NO	PART NO. 54.02.0320 54.02.0320 54.02.0320 64.01.0106		SPECIFICATIONS / EQUI Plug 2-890-8 Plug 2-890-8 Plug 2-890-8 Wire Bridge not used		MANUF.
POS.NO.  TP5 TP6 TP7 W3 W5	PART NO. 54.02.0320 54.02.0320 54.02.0320		SPECIFICATIONS / EQUI Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Wire Bridge not used Wire Bridge		MANUF.
POS - NO	PART NO. 54.02.0320 54.02.0320 54.02.0320 64.01.0106		SPECIFICATIONS / EQUI Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used wire Bridge not used wire Bridge not used wire Bridge		MANUF.
POS.NO.  TP5 TP6 TP7 W3 W5 W6 W5	PART NO.  54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106		SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge		MANUF.
POS.NO.  TP5 TP6 TP7 W3 W4 W5	PART NO.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106		SPECIFICATIONS / EQUI Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used wire Bridge not used wire Bridge not used wire Bridge		MANUF.
POS.NO.  TP5 TP6 TP7 W3 W4 W5 W6	9402-0320 54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 64-01-0106	VALUE	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge Mire Bridge		MANUF  AMP AMP
POS-NO.  1P5 1P6 1P7  H3 N5 N5 N6 N1 N11 XIC2 XIC2	PART NO.  54.02-0320 54.02-0320 54.02-0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166	VALUE 	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge Mire Bridge		MANUF  AMP AMP
POS-NO.  TP5 TP6 TP7 H3 H4 N5 H10 H11 XIC2 XIC5 XIC5	PART NO.  54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 65.01.0106 63.03.0166 63.03.0166	VALUE  8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge Mire Bridge		MANUF  AMP AMP
POS-NO.  TP5  TP5  TP7  H3  M5  H5  H7  XIC2  XIC5  XIC6	PART NO.  54.02-0320 54.02-0320 54.02-0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166	VALUE  8-Pole 8-Pole 8-Pole 9-Pole 16-Pole	SPECIFICATIONS / EQUI  Plug 2.890.8 Plug 2.890.8 Plug 2.890.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge LC Socket LC Socket LC Socket		MANUF  AMP AMP
POS.NO.  1P5 1P6 1P7  H3  H4  H5  H11  XIC2  XIC5  XIC6  XIC7  XIC8	PART NO.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 64-01-0106 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0168	8-Pole 8-Pole 8-Pole 8-Pole 16-Pole	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket IC Socket IC Socket IC Socket		MANUF  AMP AMP
PDS-NO.  IP5 IP6 IP7 H3 W4 W5 W6 W7 W3 III6 XIC6 XIC6 XIC6 XIC7 XIC6 XIC7 XIC8 XIC9 XIC9	PART NO.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 57-11-4000 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166	VALUE  6-Pole 8-Pole 6-Pole 6-Pole 6-Pole 6-Pole 6-Pole 6-Pole 6-Pole	SPECIFICATIONS / EQUI  Plug 2-800-8 Plug 2-800-8 Plug 2-800-8 Wire Bridge not used Wire Bridge Mire Br		MANUF  AMP AMP
POS-NO.  TP5 TP6 TP7  H3 H45 M65 M65 M7 M8 H10 XIC2 XIC5 XIC5 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6 XIC6	PART NO.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 64-01-0106 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0168	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 20-Pole 10-Pole	SPECIFICATIONS / EQUI  Plug 2.80-0.8 Plug 2.80-0.8 Plug 2.80-0.8  Hire Bridge not used Hore Bridge Hire Bridge Hire Bridge Hire Bridge Hire Bridge Hire Bridge LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket LC Socket		MANUF  AMP AMP
POS-NO.  TP5 TP6 TP7 H3 H5 H5 H5 H6 H7 H8 H10 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H12 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H11 H7 H8 H12 H8 H12 H8 H12 H8 H12	PART NU.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166	8-Pole 8-Pole 8-Pole 6-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used dige Wire Bridge LIC Socket		MANUF  AMP AMP
POS.NO.  TP5 TP6 TP7  M3 M4 N5 N6 N7 N3 N10 N10 N10 N11 XIC2 XIC5 XIC6 XIC7 XIC8 XIC10 XIC12 XIC13 XIC14 XIC13	54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 54-01-0108 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 10-Pole 10-Pole 10-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used dige Wire Bridge LIC Socket		MANUF 
POS-NO.  1P5 1P6 1P7  H3  M4  N5  M11  XIC25  XIC6  XIC5  XIC5  XIC5  XIC5  XIC5  XIC12  XIC12  XIC12  XIC12  XIC12	PART NU.  54.02.0320 54.02.0320 54.02.0320 54.01.0106 64.01.0106 64.01.0106 54.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 6-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2-80-0-8 Plug 2-80-8 Plug 2-80-8 Wire Bridge not used Wire Bridge Hire Bridge LC Socket		MANUF 
POS NO.  195 196 197 196 197 196 197	PART NO.  54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 54-01-0106 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0168 53-03-0168 53-03-0168 53-03-0168 53-03-0168 53-03-0168	8-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2-890-8 Plug 2-890-8 Plug 2-890-8 Wire Bridge mot used Wire Bridge Mire Br		MANUF 
POS-NO.  IP	PART NO.  54-02-0320 54-02-0320 54-02-0320 54-01-0106 64-01-0106 64-01-0106 63-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166	8-Pole 8-Pole 8-Pole 6-Pole 16-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 16-Pole	SPECIFICATIONS / EQUI  Plug 2-890-8 Plug 2-890-8 Plug 2-890-8 Wire Bridge not used Wire Bridge Wire Br		MANUF 
POS-NO.  1P	PART NO.  54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 63.03.0166	8-Pole 8-Pole 8-Pole 6-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 16-Pole 16-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2-890-8 Plug 2-890-8 Plug 2-890-8 Wire Bridge not used Wire Bridge Mire Br		MANUF 
POS.NO.  IP5  IP7  H3  M4  W5  M6  H10  XIC.2  XIC.5  XIC.6  XIC.7  XIC.12  XIC.12  XIC.12  XIC.13  XIC.14  XIC.15  XIC.10  XIC.11  XIC.12  XIC.13  XIC.14  XIC.15  XIC.10  XIC.11  XIC.12  XIC.13	54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 64-01-0106 53-03-0166	### VALUE  ###################################	SPECIFICATIONS / EQUI  Plug 2+890+8 Plug 2+890+8 Plug 2+890+8 Wire Bridge not used Wire Bridge Mire Br		MANUF 
POS NO.  1P5 1P6 1P7  H3  M4  N5  M11  XIC25  XIC6  XIC7  XIC8  XIC9  XIC12  XIC12  XIC16  XIC17  XIC10  XIC17  XIC10  XIC10  XIC10  XIC10  XIC11  XIC10	94.02.0320 54.02.0320 54.02.0320 54.02.0320 54.01.0106 64.01.0106 64.01.0106 54.01.0106 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 16-Pole 16-Pole 16-Pole 8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 8-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800-8 Plug 2.800-8 Plug 2.800-8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket		MANUF 
POS.NO.  IP5  IP7  H3  M4  W5  M6  H10  XIC.2  XIC.5  XIC.6  XIC.7  XIC.12  XIC.12  XIC.12  XIC.13  XIC.14  XIC.15  XIC.10  XIC.11  XIC.12  XIC.13  XIC.14  XIC.15  XIC.10  XIC.11  XIC.12  XIC.13	54-02-0320 54-02-0320 54-02-0320 64-01-0106 64-01-0106 64-01-0106 64-01-0106 53-03-0166	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 16-Pole 16-Pole 16-Pole 8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 8-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800-8 Plug 2.800-8 Plug 2.800-8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket		MANUF 
POS-NO.  1P5 1P6 1P7  H3  H10  H10  H11  XIC25  XIC06  XIC7  XIC12  XIC12  XIC12  XIC12  XIC14  XIC15  XIC16  XIC16  XIC17  XIC18  XIC19  XIC10  XIC11	PART NU.  54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 16-Pole 16-Pole 16-Pole 8-Pole 16-Pole 8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 8-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	SPECIFICATIONS / EQUI  Plug 2.800-8 Plug 2.800-8 Plug 2.800-8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket		MANUF.
POS NO.  195 195 196 197  H3  M4  N5  H5  XIC2  XIC5  XIC5  XIC5  XIC5  XIC5  XIC5  XIC5  XIC5  XIC5  XIC6  XIC11  XIC12  XIC13  XIC14  XIC16  XIC17  XIC18  XIC10	PART NU.  54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 53.03.0166	### VALUE  ###################################	SPECIFICATIONS / EQUI  Plug 2.800-8 Plug 2.800-8 Plug 2.800-8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket		MANUF.

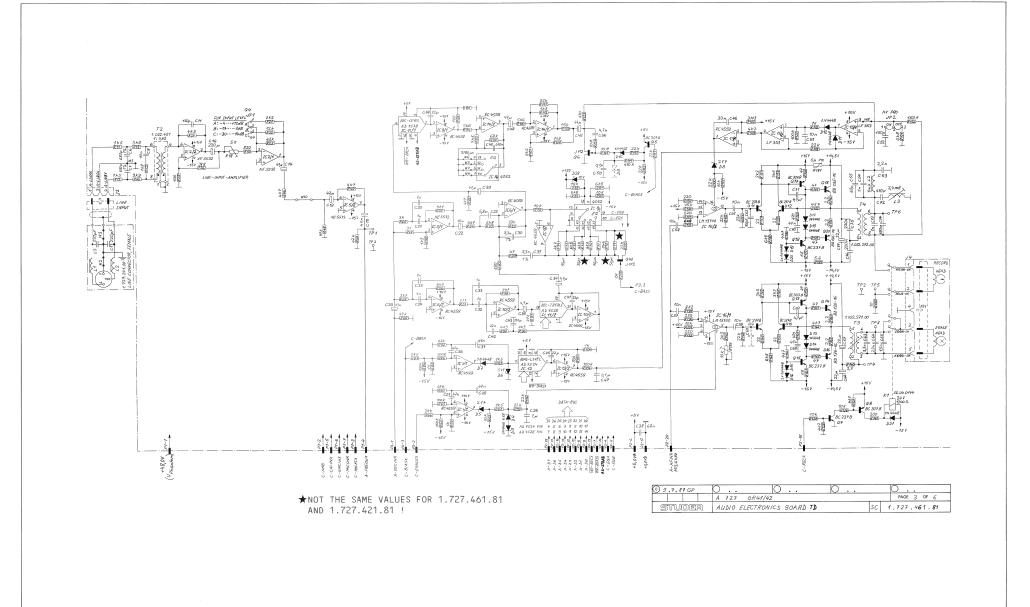
ORIG 87/05/20

S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD TD 1.727.461.00 PAGE 15

IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.

AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42
AUDIO ELECTRONICS (O VU) 1.727.421.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)



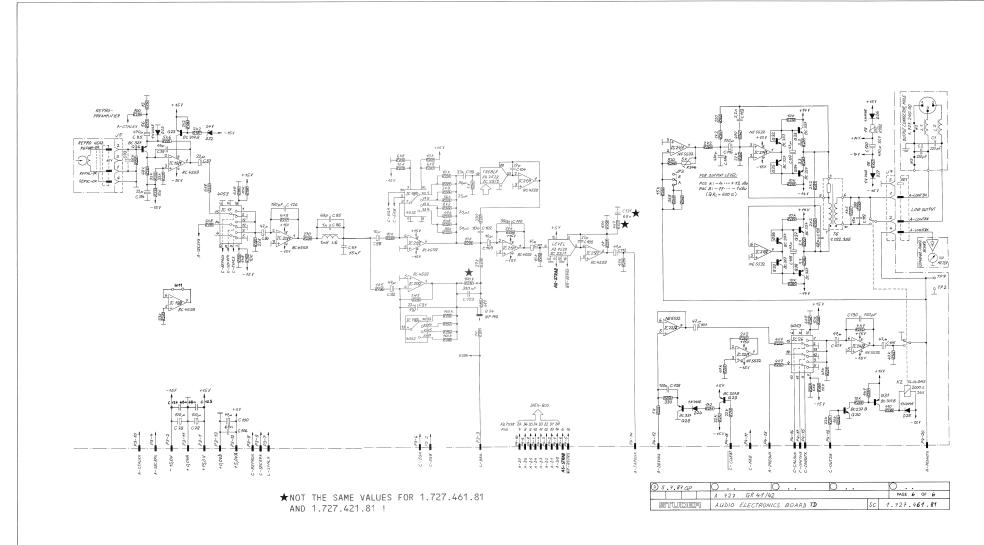


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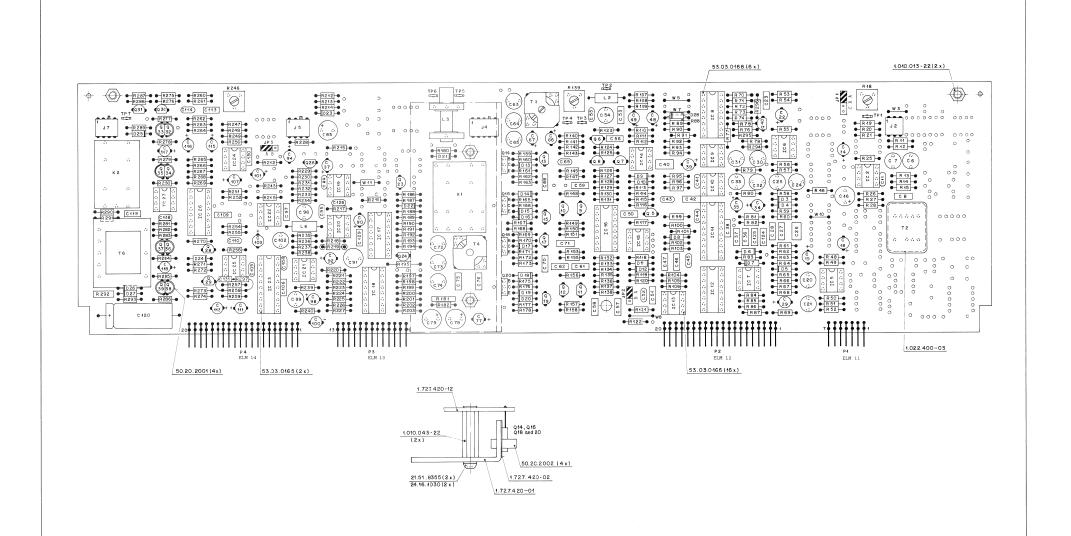
AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42
AUDIO ELECTRONICS (O VU) 1.727.421.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)







AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42





#### AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42

JD10 ELECTRONICS (U VU) 1.727.461.81 GRP417	7-5	Remains and American		
INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF. II	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	1NO. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NU. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C	December   December	\$19 \$19 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	0 11 0 0-1-11 0 0-	8 - 114
	TC9 56.077.0025 MC 14052 CRDS Analog System TC9 50.0550107 MC 14052 CRDS Analog System TC10 50.0550107 MC 45050 Dual Dp. Amp. TC11 50.077.0025 MD 7252M Dual B-bit DyA Convertor TC12 50.070.0025 MD 7252M Dual B-bit DyA Convertor TC15 50.076.0027 MC 4599 Dual Dp. Amp. St U D C R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD ID 1.727.461		R53 57:11:4052 6.8 ADNH 18 0.2998 W R55 57:11:4072 7.7 ADNH 18 0.2598 W R50 57:11:4072 4.7 ADNH 18 0.2598 W R50 57:11:4072 4.7 ADNH 18 0.2598 W R50 57:11:4072 2.7 ADNH 18 0.2598 W R50 57:11:4072 2.7 ADNH 18 0.2598 W R50 57:11:4072 2.7 ADNH 18 0.2598 W R50 57:11:402 2.2 ADNH 28 0.2598 W R50 57:11:402 2.2 ADNH 28 0.2598 W STUD E R (DO) 17/07/09 GP ANDIO ELECTRONICS DOAND TO 1.777-461.81 PAGE 7	8 - 114 9 77-11-4080
ING. POS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF. II	IND- POS-NO- PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NU F.	IND. POS-NO. PART NO. VALUE SPICIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. YALUE SPECIFICATIONS / EQUIVALENT MANUF.
C92 99-22-3470	C.   10   10-05-0101   E   305   Duel (De Amps   Company   Compa	NS NS NS NS NS NS NS NS NS NS NS NS NS N	R60 57.11.1473 47 KDnn 24. 0.259. WF R61 57.11.473 15 KDnn 24. 0.259. WF R62 57.11.473 150 KDnn 24. 0.259. WF R63 57.11.135 150 KDnn 24. 0.259. WF R63 57.11.135 150 KDnn 24. 0.259. WF R64 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R65 57.11.135 150 KDnn 24. 0.259. WF R73 57.11.1472 4.7 KDnn 24. 0.259. WF R73 57.11.1473 4.7 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1473 150 KDnn 24. 0.259. WF R73 57.11.1453 150 KDnn 24. 0.259. WF R74 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF R75 57.11.1453 150 KDnn 24. 0.259. WF	8 - 177
O NO. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF. 1	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF,	1NO. POS.NO. PARTING. VALUE SPECIFICATIONS / EQUEVALENT MANUF.	ING. POS.NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C	## ## 1-777-10-01   1 pcs   measinh	SE SE SE SE SE MOT	R	8 - 222



### AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42

I ND •	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQU	IVALENT	MANUF.
	R266	57.11.4103	10 kOhm	2%, 0.25W, 4F		
	R267	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	R268	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	R 269	57.11.4103	10 kOhm	2%, 0.25W, MF		
	K • • • ∠ / U	2744.11.472	++T KOIIII	ER, O.ESH, MC		
	R271	57.11.4122	1.2 kOhm	2%+ 0.25W+ MF		
	R • • • 272	57.11.4223	22 kOhm	2%, 0.25W, MF		
	R 273	57-11-4223	22 kOhm	2%, 0.25W, MF		
	R274	57-11-4473	47 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF		
	R • • • 275	57.11.4223	22 kOhm	2%, 0.25W, MF		
	R • • • 276	57-11-4103	10 kOhm	2%, 0.25W, MF		
	R • • • 277	57.11.4339	3.3 Ohm 10 kOhm	2% 0.25W MF		
	R • • • 278 R • • • 279	57.11.4103 57.11.4103	10 kOhm	2% 0.25W MF		
	R 279	57-11-4103	3.3 Ohm	2%, 0.25W, MF		
	R 231	57-11-4337	2.2 kOhm	2% 0.25W MF		
	R • • • 282	57.11.4222	2.2 kOhm	2%, 0.25W, MF		
	R 283	57.11.4339	3 • 3 Ohm	2%, 0.25W, MF		
	R284	57-11-4103	10 kOhm	2% 0 . 25W . MF		
	R285	57.11.4103	10 kOhm	2% 0.25W . MF		
	R 286	57.11.4339	3.3 Ohm	2%, 0.25W, MF		
	R287	57.11.4472	4.7 kOhm	2%, 0.25W, MF		
	R288	57-11-4103	10 kOhm	2% • 0 • 25W • MF		
	R 289	57.11.4471	470 Ohm	2% 0.25W MF		
	R290	57.11.4391	390 Ohm	2% · 0 · 25W · MF		
	R 291	57.11.4152	1.5 kOhm	2% · 0 • 25 W • MF		
	R292	57.92.1151	18 Ohm	150mA, PTC		
	R 293	57.11.4180	18 Ohm	2%, 0.25W, MF		
	R • • • 294	57.11.4470	47 Ohm	2%, 0.25W, MF		
	R 295	57.11.4223	22 k0hm	2%, 0.25W, MF		
	R296	57.11.4105	1 MGhm	2%, 0.25W, MF		
	R297	57.11.4472	4.7 kOhm	2%, 0.25W, MF		
	T • • • • 2	1.022.451.00	1:0.62	Line Input Trafo		St
	T • • • • • 3	1.022.271.00		Erase Trafo		St
	T 4	1.022.272.00		Bias Trafo		St
	T • • • • 6	1.022.355.00		Line Output Trafo		St
		00 x 27/07/00 CD	ALIDTO EL	ECTRONICS BOARD TD	1.727.461.81	PAGE 1

I ND .	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQU	I VALENT	MANUF
	TP1	54.02.0320		Plug 2.8÷0.8		AMP
	TP2	54.02.0320		Plug 2.800.8		AMP
	TP 3	54.02.0320		Plug 2.800.8		AMP
	TP 4	54.02.0320		Plug 2.8*0.8		AMP
	TP 5	54.02.0320		Plug 2.8=0.8		AMP
	TP 6	54.02.0320		Plug 2.800.8		AMP
	TP 7	54.02.0320		Plug 2.800.8		AMP
	W3	64.01.0106		Wire Bridge		
	W4			not used		
	W5	64.01.0106		Wire Bridge		
	W 6			not used		
	W7	64.01.0106		Wire Bridge		
	W 8	64.01.0106		Wire Bridge		
	W10	64.01.0106		Wire Bridge		
	Wli	57-11-4000		Wire Bridge		
	XIC2	53.03.0166	8-Pole	IC Socket		
	XIC5	53.03.0166	8-Pole	IC Socket		
	XIC6	53.03.0166	0-Pole	IC Socket		
	XIC • • • 7	53.03.0166	8-Pole	IC Socket		
	XIC8	53.03.0168	16-Pole	IC Socket		
	XIC *** 9	53.03.0166	8-Pole	IC Socket		
	XIC10	53.03.0166	8-Pole	IC Socket		
	XIC11	53.03.0165	20-Pole	IC Socket		
	XIC12	53.03.0168	16-Pole	IC Socket		
	XIC •• 13	53.03.0166	8-Pole	IC Socket		
	XIC14	53.03.0166	∂-Pole	IC Socket		
	XIC15	53.03.0166	8-Pole	IC Socket		
	XIC16	53.03.0168	16-Pole	IC Socket		
	XIC17	53.03.0168	16-Pole	IC Socket		
	XIC 18	53.03.0168	16-Pole	IC Socket		
	XIC19	53.03.0166	8-Pole	IC Socket		
	XIC20	53.03.0166	8-Pole	IC Socket		
	XIC21	53.03.0166	8-Pole	IC Socket		
	XICZZ	53.03.0166	8-Pole	IC Socket		
	XIC23	53.03.0165	20-Pole	IC Socket		

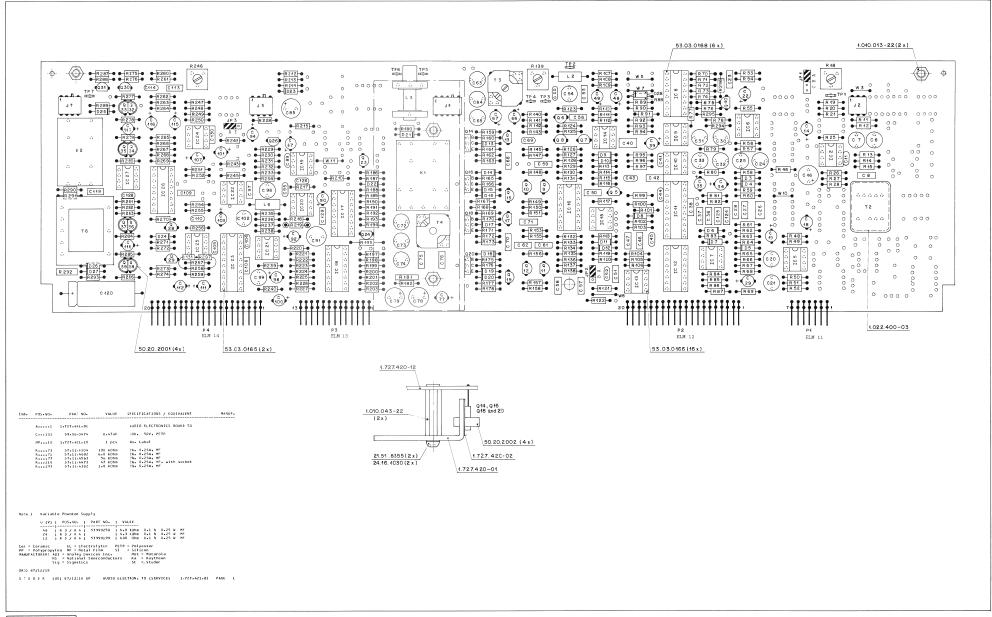
IND.	P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	XIC24	53.03.0166	8-Pole	IC Socket	
	XIC 25	53.03.0166	8-Pole	IC Socket	
	XIC 26	53.03.0168	16-Pole	IC Socket	

Cer = Ceramic EL = Electrolytic PETP = Polyester PP = Polypropylen MF = Metal Film SI = Silicon

ORIG 87/07/09 S T U D E R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD TD 1.727.461.81 PAGE 15

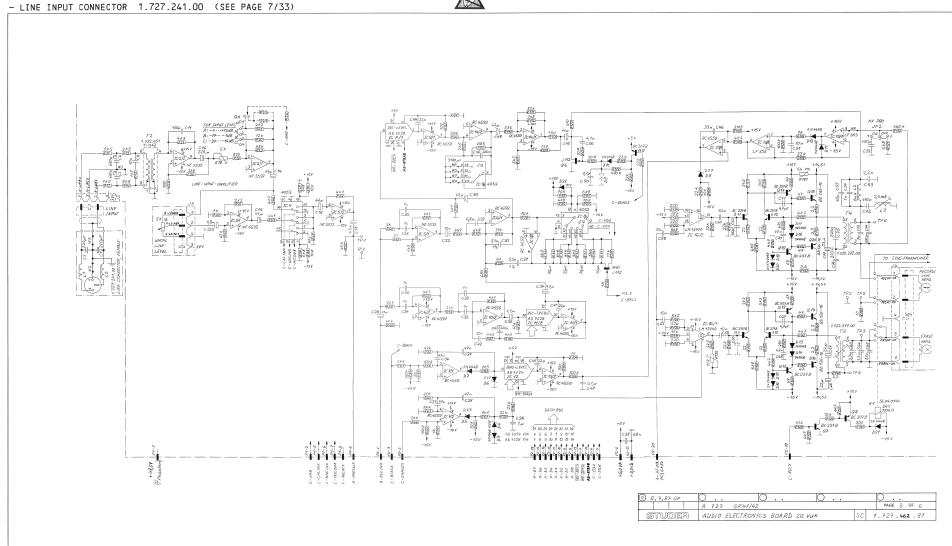




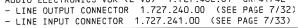


AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)



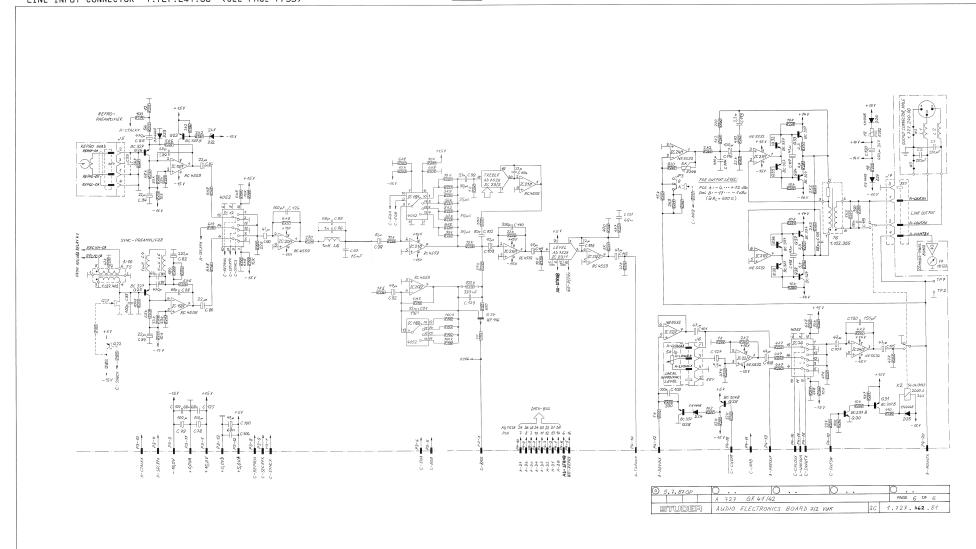


AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

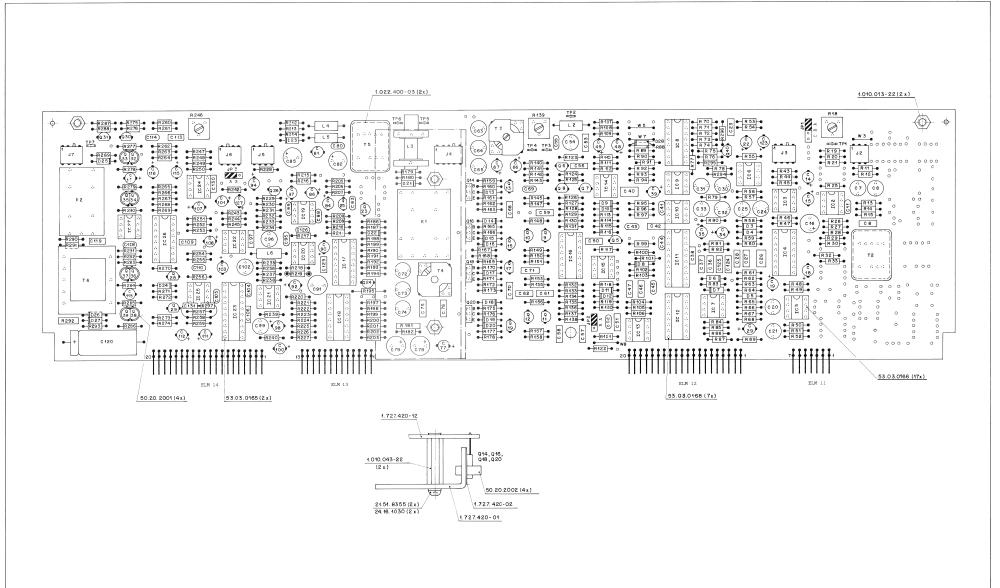




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AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42





#### AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

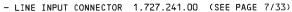
10 ELECTRONICS VON (2 VO) 1.727.402.01	UNT + 17 42			
POS-NO- PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NU. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.		NUF. IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANU
	C124 50.00.0033 80 mF 100 50V PETP  C127 50.00.0033 80 mF 100 50V PETP  C127 50.00.0033 80 mF 100 50V PETP  C127 50.00.0033 80 mF 100 50V PETP  C127 50.00.0033 80 mF 100 50V Cer  C120 50.00.0033 80 mF 100 50V Cer  C110 50.00.0033 80 mF 100		010 50.014436 0C.2778 (55-78) 55500 NPN 011 50.014436 0C.2778 (55-78) 55500 NPN 013 50.014436 0C.2778 (55-78) 55500 NPN 013 50.014436 0C.2778 (55-78) 55500 NPN 013 50.014436 0C.2778 (55-78) 55500 NPN 013 50.014436 0C.2778 (55-78) 55500 NPN 015 50.014436 0C.2	### 133   \$7   1   1   1   2   7   80   1   2   0   25   1   1   1   1   1   1   1   1   1
1	D		0	### 110   \$7:11.4223   \$2 donn
	024 50.0-0.0125 14449 50V 51  027 50.0-0.0125 14449 50V 51  027 50.0-0.0125 14449 50V 51  027 50.0-0.0125 14449 50V 51  027 50.0-0.0125 14449 50V 51  027 50.0-0.0125 10V 50 0.40 26667  It2 50.0-0.015 MF 5512 3ual Igs. Amp.  STUDER (00) 87/07/09 GP AUDIO ELECTRONICS BOAND 2/2VVK 1-727-462-6	Sig 81 PAGE 4	\$ 1.0   57.11.152   1.5 kOhn   13. 0.294	
POS.NG. PART NG. VALUE SPECIFICATIONS / SOUTVALENT MARGE.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA	TUF. ING. PDS.NO. PART NG. VALUE SPECIFICATIONS / COURVALENT MAN
		\$ 10 Mex \$ 110 Mex \$ 110 Mex \$ 110 Mex \$ 100 M		### 100 27-11-12/20 2-2-2 One 2h 0-25% We  ***********************************
C	J2 3x-01.0349 3-Pole IIS Socket Strip J3 3x-01.0349 4-Pole IIS Socket Strip J3 3x-01.0309 4-Pole IIS Socket Strip J3 3x-01.0309 4-Pole IIS Socket Strip J3 3x-01.0309 4-Pole IIS Socket Strip J3 3x-01.0301 4-Pole IIS Socket Strip J1 3x-01.0321 3ridge J3 3x-01.0321 8ridge J3 3x-01.0321 8ridge J3 3x-01.0321 8ridge STUDER (09) 87/07/99 GP AUGIO ELECTRONICS BRAND Z/ZYUK 1-727x-462-6	AMP AMP AMP AMP AMP AMP AMP AMP AMP AMP	**************************************	
PDS.NO. PART NU. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	INO. POS-NO. PART NO. VALUE SPICIFICATIONS / EQUIVALENT MA	NUF- IND. POS-NO- PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANU
1	### 1 50-0-0144 au ### 1 ### 1 ### 24V 1200 Ome ### 1 ### 1 ### 24V 1200 Ome ### 1 ### 1 ### 24V 1200 Ome ### 1 ### 1 ### 24V 1200 Ome ### 1 ###	St St St St St	*** 60	1.13
C10	##	Mot	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	1



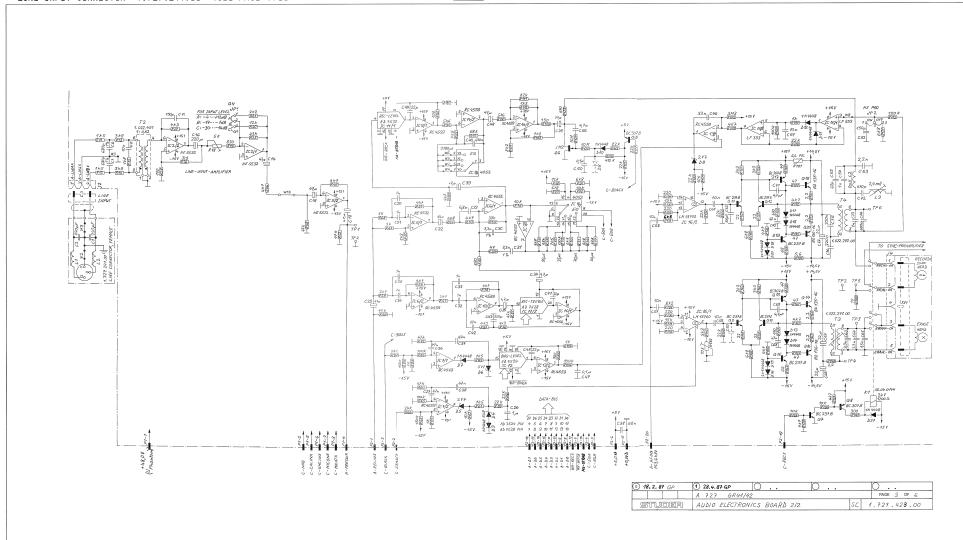
## AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

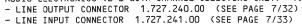
	PART NO.		SPECIFICATIONS / EQUIVALENT	MANUF.			VALUE	SPECIFICATIONS / EQUIVALENT MA
R • • • 220 R • • • 221	57-11-4103	10 kOhm	2%, 0.25W, MF not used		XIC13 XIC14	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket
R 222 R 223 R 224	57.11.4473	8.2 kOhm 47 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		XIC15 XIC16 XIC17	53.03.0166 53.03.0168 53.03.0168	16-Pole	IC Socket IC Socket IC Socket
R225 R226	57-11-4393 57-11-4392	39 kOhm 3.9 kOhm	2% 0-25W MF 2% 0-25W MF 2% 0-25W MF		x fr18 XIC - • 19	53.03.0168 53.03.0166	16-Pole 8-Pole	IC Socket IC Socket IC Socket
R • • • 228 R • • • 229	57•11•4563 57•11•4562	56 kOhm 5.6 kOhm	2%, 0.25%, MF 2%, 0.25%, MF		X1C21 XIC22	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket
R • • • 231	57.11.4333	33 kOhm	2% 0 0 25 W + MF 2% + 0 0 25 W + MF 2% + 0 0 25 W + MF		XIC++24	53.03.0166	20-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket
R233 R234	57.11.4103 57.11.4271	10 kOhm 270 Ohm 27 kOhm	2%, 0,25W, MF 2 % 0,25W, MF 2%, 0,25W, MF		XIC26 XIC27	53.03.0168 53.03.0166	16-Pole 8-Pole	IC Socket IC Socket
R 236 R 237	57•11•4152 57•11•4331	1.5 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF					
R239	57-11-4103 57-11-4103 57-11-4102	10 kOhm 10 kOhm 1 kOhm	2% 0.25W MF 2% 0.25W MF					
R • • • 241 R • • • 242	57•11•4472 57•11•4473	4.7 kOhm	2%, 0.25W, MF					
R • • • 244 R • • • 245	57•11•4102 57•11•4222	1 kOhm 2•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 247 R • • • 248	57.11.4821 57.11.4392	820 Ohm 3.9 kOhm	2%, 0.25W, ME 2%, 0.25W, ME					
R • • • 249 R • • • 250 R • • • 251	57.11.4153 57.11.4473	15 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		PP = Polypropyle	en MF = Metall	ilm SI	= Silicon
R • • • 252 R • • • 253	57•11•4472 57•11•4472	4.7 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		NS	= National Ser	es Inc. niconductors	Mot = Motorola Ra = Raytheon St = Studer
R 255 R 256	57.11.4102 57.11.4273	1 kOhm 27 kOhm	2%+ 0+25W+ MF 2%+ 0+25W+ MF		ORIG 87/07/09	g - styllectes		30 - 30000
D E R (00	) 87/07/09 GP	AUDIG EL	ECTRONICS BDARD 2/2VUK 1.727.462.8	1 PAGE 13	STUDER (O	) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD 2/2VUK 1.727.462.81 PAGE
	PART NO.		SPECIFICATIONS / EQUIVALENT	MANUF.				
R • • • 257 R • • • 258 R • • • 259	57•11•4102 57•11•4471 57•11•4103	1 k0hm 470 Ohm 10 k0hm	2% 0 0 2 5 W + M F 2% 0 0 2 5 W + M F 2% 0 2 5 W + M F					
R • • • 260 R • • • 261	57.11.4221 57.11.4122	220 Ohm 1•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 263 R • • • 264	57•11•4223 57•11•4222	22 kOhm 2•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R266	57.11.4103	10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 268 R • • • 269	57•11•4682 57•11•4103	6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 271 R • • • 272	57•11•4122 57•11•4223	1•2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R273 R274 R275	57.11.4223 57.11.4473 57.11.4223	47 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R276 R277	57-11-4103 57-11-4339 57-11-4103	10 kOhm 3•3 Ohm	2%, 0.25W. MF 2%, 0.25W. MF					
R279 R280	57.11.4103 57.11.4339	10 k0hm 3•3 0hm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 282 R • • • 283	57•11•4222 57•11•4339	2.2 kOhm 3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 285	57.11.4103 57.11.4103 57.11.4339	10 kOhm 3•3 Ohm	2%, 0.25W. MF 2%, 0.25W. MF					
R • • • 287 R • • • 288	57-11-4472 57-11-4103	10 k0hm	2%, 0.25W, MF					
R • • • 290 R • • • 291	57•11•4391 57•11•4152	390 Ohm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					
R • • • 293	57.11.4180	18 Ohm	2%, 0.25W, MF	I PAGE 14				
POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F 。				
R • • • 294 R • • • 295 R • • • 296	57-11-4470 57-11-4223 57-11-4105	47 Ohm 22 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF					
T • • • • 2	1.022.451.00	4.7 kOhm 1:0.62	Line Input Trafo	St				
T 4 T 5	1.022.272.00	1:10	Bias Trafo Sync Trafo	St St				
TP1	54.02.0320		Plug 2.8*0.8	AMP				
TP2 TP3 TP4	54.02.0320 54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8	AMP AMP				
TP • • • • 5 TP • • • • 6	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP AMP				
W••••3	64.01.0106		Wire Bridge not used					
W • • • • • 6	64.31.0106		Wire Bridge not used					
W 8	64.01.0106		Wire Bridge					
XIC 2 XIC 3 XIC 4	53.03.0166 53.03.0168 53.03.0166	16-Pole 8-Pole	IC Socket IC Socket					
XIC 5 XIC 6	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket					
XIC8 XIC9	53.03.0166 53.03.0166 53.03.0166	16-Pole 8-Pole	IC Socket IC Socket IC Socket					
XIC10 XIC11	53.03.0166	8-Pole 20-Pole	IC Socket					
	R	R. 220 57.11.4103 R. 221 57.11.402 R. 222 57.11.402 R. 223 57.11.402 R. 224 57.11.402 R. 226 57.11.403 R. 226 57.11.403 R. 226 57.11.403 R. 226 57.11.403 R. 227 57.11.403 R. 228 57.11.403 R. 239 57.11.403 R. 239 57.11.403 R. 239 57.11.401 R. 239 57.11.402 R. 240 57.11.402 R. 240 57.11.402 R. 240 57.11.402 R. 241 57.11.402 R. 242 57.11.403 R. 240 57.11.403 R. 240 57.11.403 R. 240 57.11.403 R. 240 57.11.403 R. 240 57.11.403 R. 240 57.11.403 R. 241 57.11.402 R. 242 57.11.403 R. 243 57.11.403 R. 244 57.11.402 R. 245 57.11.422 R. 246 58.01.8502 R. 247 57.11.402 R. 249 57.11.402 R. 249 57.11.403 R. 251 57.11.402 R. 253 57.11.403 R. 254 57.11.403 R. 255 57.11.407 R. 256 57.11.407 R. 257 57.11.407 R. 258 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 250 57.11.407 R. 251 57.11.402 R. 252 57.11.407 R. 253 57.11.407 R. 254 57.11.403 R. 256 57.11.407 R. 257 57.11.402 R. 258 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 250 57.11.407 R. 251 57.11.402 R. 252 57.11.407 R. 253 57.11.407 R. 254 57.11.403 R. 256 57.11.407 R. 257 57.11.407 R. 258 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 250 57.11.407 R. 251 57.11.407 R. 252 57.11.407 R. 253 57.11.407 R. 254 57.11.403 R. 256 57.11.407 R. 257 57.11.407 R. 258 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 250 57.11.407 R. 250 57.11.407 R. 250 57.11.407 R. 250 57.11.407 R. 250 57.11.407 R. 250 57.11.407 R. 251 57.11.407 R. 252 57.11.407 R. 253 57.11.407 R. 254 57.11.403 R. 256 57.11.407 R. 257 57.11.407 R. 258 57.11.407 R. 259 57.11.407 R. 259 57.11.407 R. 250 57.11.407 R. 2	R. 220	R	### 220		### 1930   \$7.11.4413   13 Billion   74 October   17   17   17   17   17   17   17   1	

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

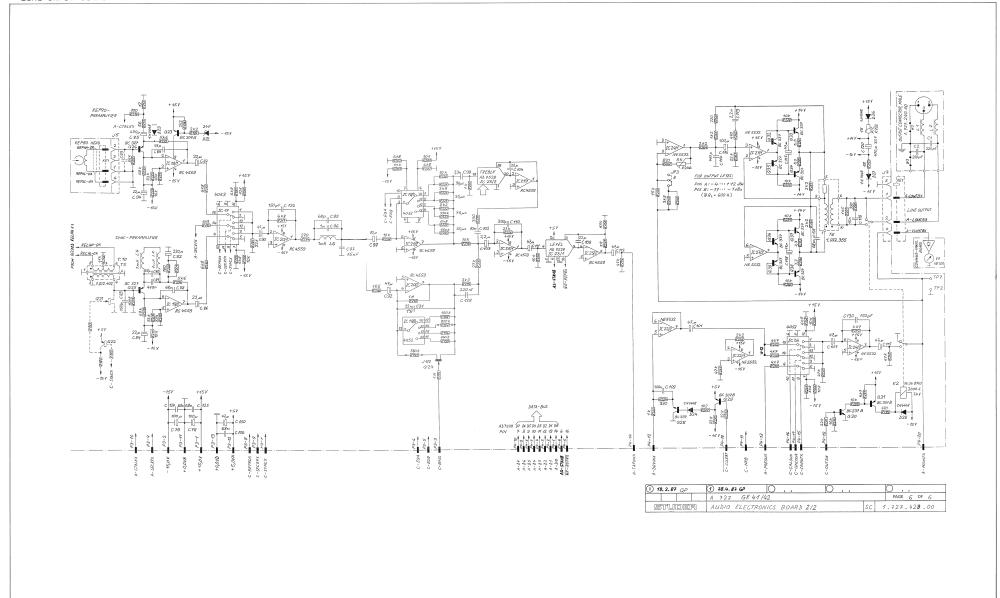


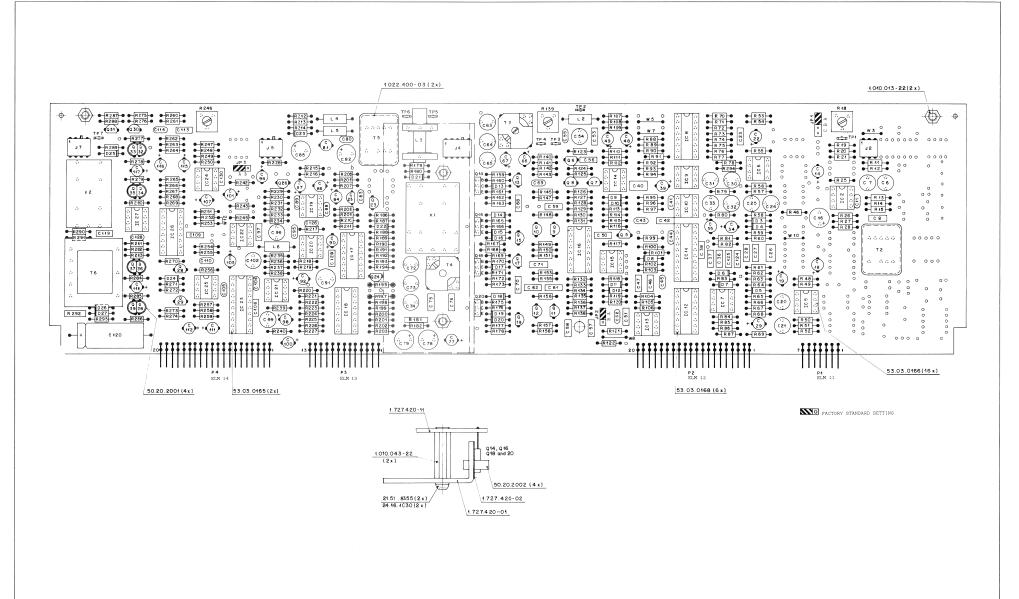










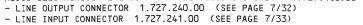




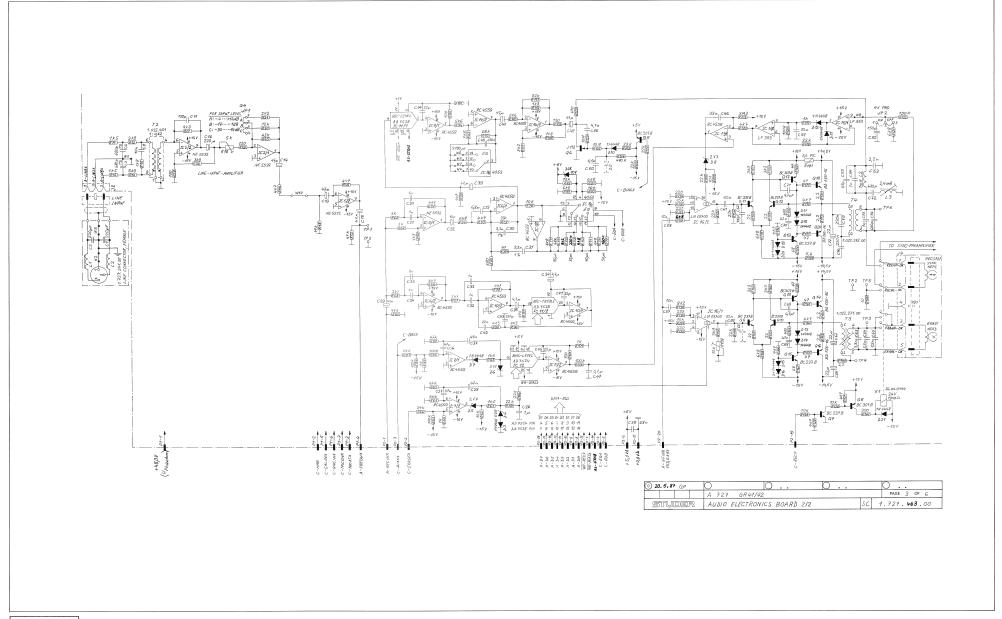
• POS •NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	INC. POS.NO.	PART ND.	VALUE	SPECIFICATIONS / EQUIVALENT	HANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	МА
C	\$3.06.0103   1.00   1.0	80 pF 10 nF 10 nF 10 nF 10 nF 11 nF 11 nF 11 nF 11 nF 12 nF 13 nF 14 nF 14 nF 17 nF 17 nF 17 nF 17 nF 18 nF 10 nF 10 nF 10 nF 11 nF 12 nF 13 nF 14 nF 15 nF 16 nF 16 nF 17 nF 18 nF 18 nF 19 nF 10	11 507 PP 11 10 507 PP 11 10 507 PP 11 10 507 PP 10 10 50	C129 C139 C139 C139 C139 C139 C139 C131 C13	50.07.0024 50.09.0107 50.09.0107	RC 4559	101 50 V Ger   101	STQ STQ BTQ BTQ BTQ BTQ BTQ BTQ BTQ BTQ BTQ B	0	\$0.03.0518 \$0.03.0518 \$0.03.0625 \$0.03.0625 \$0.03.0625 \$0.03.0625 \$0.03.0635 \$0.03.	9G1978 9G197 9G297	not used not	MOT	\$	57:11:403 57:11:407 57:11:407 57:11:407 57:11:407 57:11:407 57:11:403 57:11:403 57:11:403 57:11:402	10 kDne 4-7 kDne 4-7 kDne 4-7 kDne 10 kDne 10 kDne 11 kDne 12	23. 0.214. WE REAL PROPERTY OF THE PROPERTY OF	•D) PAGE
. POS.40.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INC. POS.NO.	PART NO.	YALUE	SPECIFICATIONS / EQUIVALENT	NANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	на
C	39-06-0103   39-06	47 UF 47 UF 400 NF 400	-201 337 EL 137		50.07-0002 50.09-0007 50.09-0007 50.09-0007 50.09-0007 50.09-00107	3-Pole 5-Pole 4-Pole 4-Pole 4-Pole 2-91 1mH 2-4mH 1mH 1mH 1mH	Dual Parks DAL Convertor  Balls DAL Convertor  Dual Da. Amp.  Cl5 Scekes Strip  Cl5 Scekes Strip  Frigge  Relay: Adv. 1200 Dhe  Relay: Adv. 1200 Dhe  Relay: Adv. 1200 Dhe  Contact Pin JPI  TROMICS BOARD 2/2 1-727-423	ADTI ADDI B a B a B a B a B a B a B a B a B a B a	R	57.11.4673 57.11.4673 57.11.4673 57.11.4672	47 KDhai 4-4 KDhai 4-7 KDhai 4-7 KDhai 4-7 KDhai 100 KDhai 100 KDhai 4-7 KDhai 100 KDhai 4-7 KDh	23. 0.750. NE 24. 0.750. NE 25. 0.750. NE 25. 0.750. NE 25. 0.750. NE 26. 0.750. NE 27.  PAGE 8	\$	37.11.4580 37.11.4580 37.11.470 37.11.470 37.11.471 37.1	06 Ohn 6-2 Ohn 6-2 Ohn 6-3 Ohn 6-3 Ohn 6-3 Ohn 6-3 Ohn 6-3 Ohn 6-3 Ohn 6-3 Ohn 6-4 Ohn 6-4 Ohn 6-5 Ohn 6-6 Ohn	71. 0.725. ## # # # # # # # # # # # # # # # # #	i• 00 PAC	
P05.40.	PART ND.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	PART NG.	VALUE	SPECIFICATIONS / EQUIVALENT	HANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.AD.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	,
C86 C87 C89 C90 C91 C92 C92 C95 C95 C96 C97 C103 C103 C104 C105 C	\$91,22,4220 \$91,344,6400 \$91,34	22 UF 22 UF 22 UF 22 UF 23 UF 24 UF 25 UF 26 UF 27 UF	-01 297 EL  -024 297 EL  -034 297 EF  -034 297 EF  -034 297 EF  -034 297 EF  -11 397 PF  -204 297 EF  -205 297 EF  -206 297 EF  -207 EF  -208 297 EF	##	3+01-0020 1+00-0020 1+00-0020 1+00-0020 1+00-0020 1+00-0020 1+10-0	7-Pole 20-Pole 13-Pole 20-Pole 8C3078 J112 8C3378 8C3378 8C3378 8C2378 8C2378 8C3378 8C3378 8C3378 8C3378 8C3378 8C3378	Contact Pin JB2 Contact Pin JB3 Sivet Nut HB20 Sive	54 58 54 54 54 54 Mot	R	97-11-4082 97-11-41092 97-11-41092 97-11-41092 97-11-41092 97-11-4092	6-8 kOhn 110 kOhn 110 kOhn 110 kOhn 110 kOhn 110 kOhn 1-5 kOhn 1-5 kOhn 1-5 kOhn 1-5 kOhn 1-5 kOhn 1-6 kOhn 1-7	C1. 0.0504 WF  C2. 0.0504 WF		\$	77.11.4189 77.11.4189 77.11.4191 77.11.4193	180 Ohn 5-6 k0h 6-8 k0h 33 k0h 11 Ohn 12 Ohn 12 Ohn 13 k0h 13 k0h 14 Ohn 15 Ohn 16 k0h 16 k0h 17 Ohn 18 k0h 18 k0h 18 k0h 18 k0h 18 k0h 18 k0h 18 k0h 19 k0h 19 k0h 10 k0h	21. 0.230. HE 21. 0.230. HE 22. 0.250. HE 23. 0.250. HE 24. 0.250. HE 25. 0.250. HE 26.	

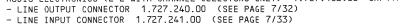


ITO	ELECTRONICS	(2-2 WIII	H LHAN	INEL SEL	_ECTOR	S UNLY)	1.727.	423.00	GRP41/42
		****	POS NO	PART NO.	VALUE	SPECIFICATIONS / EG	DITI VALLENT	MA NU F.	
		IND.	R * * * 243 R * * * 245	97.11.4473 57.11.4222	47 kOhm 2•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	AOT AWEFU!	MANUF.	
			R • • • 246 R • • • 247 R • • • 249 R • • • 249	58.01.8502 57.11.4821 57.11.4372	5 kOhm 820 Ohm 3-7 kolim	10%, 0.5 W, PMG 2%, 0.25W, MF 2%, 0.25W, MF not used			
			R • • • 250 R • • • 251 R • • • 252	57.11.4153 57.11.4473 57.11.4472	15 kOhm 47 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 253 R • • • 254 R • • • 255 R • • • 256	57.11.4472 57.11.4331 57.11.4102 57.11.4273	4.7 kOhm 330 Ohm 1 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 257 R • • • 258 R • • • 259	57-11-4102 57-11-4471 57-11-4103	1 k0hm 470 Ohm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 260 R • • • 261 R • • • 262 R • • • 263	57.11.4221 57.11.4122 57.11.4471 57.11.4223	220 Ohm 1•2 kOhm 470 Ohm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			
			R • • • 264 R • • • 265 R • • • 266	57.11.4222 57.11.4473 57.11.4103	2.2 kOhm 47 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 267 R • • • 268 R • • • 269 R • • • 270	57.11.4682 57.11.4682 57.11.4103 57.11.4472	6.8 kOhm 6.8 kOhm 10 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 271 R • • • 272 R • • • 273	57.11.4122 57.11.4223 57.11.4223	1.2 kOhm 22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 274 R • • • 275 R • • • 276 R • • • 277	57-11-4473 57-11-4223 57-11-4103 57-11-4339	47 kOhm 22 kOhm 10 kOhm 3•3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R278 R279 R280	57-11-4103 57-11-4103 57-11-4339	10 kOhm 10 kOhm 3•3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
		ςτ	UDER (C	01) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 2/2	1.727.423.0	00 PAGE 13	
						ence the control of	OUT WALCET	MA NUF •	
		I ND	R 281 R 282	97.11.4222 57.11.4222	2.2 kOhm 2.2 kOhm	2%, U.25W, MF 2%, O.25W, MF	QUI VALENI	MANUF.	
			R • • • 283 R • • • 284 R • • • 285	57-11-4339 57-11-4103 57-11-4103	3.3 Ohm 10 kOhm 10 kOhm	2%, 0,25W, MF 2%, 0,25W, MF 2%, 0,25W, MF			
			R • • • 286 R • • • 287 R • • • 288 R • • • 289	57-11-4339 57-11-4472 57-11-4103 57-11-4471	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			
			R • • • 290 R • • • 291 R • • • 292	57.11.4391 57.11.4152 57.92.1151	390 Ohm 1.5 kOhm 18 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 150mA+ PTC			
			R • • • 293 R • • • 294 T • • • • 2	57.11.4180 57.11.4470 1.022.451.00	18 Ohm 47 Ohm 1:0.62	2%, 0.25W, MF 2%, 0.25W, MF Line Input Trafo		St	
			T4 T5 T5	1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:10	Erase Trafo Bias Trafo Sync Trafo Line Output Trafo		St St St St	
			TP 1 TP 2	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8		AMP AMP AMP	
			TP • • • • 3 TP • • • • 4 TP • • • • 5 TP • • • • 6	54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		AMP AMP AMP	
			TP7 W3 W4	54.02.0320 64.01.0106		Plug 2.8*0.8 Wire Bridge not used		АМР	
			W5 W6 W7	64.01.0106 64.01.0106		Wire Bridge not used Wire Bridge			
			W8 W10 W12	64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge			
		5. T	UDER (	01) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 2/2	1.727.423.0	00 PAGE 14	
		Ind	• POS•NO•	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANUF.	
			XIC 2 XIC 5 XIC 6	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket			
			XIC 8 XIC 9	53.03.0166 53.03.0168 53.03.0166 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket			
			XIC 10 XIC 11 XIC 12 XIC 13	53.03.0165 53.03.0168 53.03.0166	20-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket			
			XIC14 XIC15 XIC16 XIC17	53.03.0166 53.03.0166 53.03.0168 53.03.0168	8-Pole 8-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket			
			XIC 18 XIC 19 XIC 20	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket			
			XIC 21 XIC 22 XIC 23 XIC 24	53.03.0166 53.03.0166 53.03.0165 53.03.0166	8-Pole 8-Pole 20-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket			
			XIC 25 XIC 26 XIC 27	53.03.0166 53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket			
			) 87/04/28 b ≃ Ceramic	etter S/N ratio EL = Elect	rolytic PF1	TP = Polyester			
		PP	= Polypropy	len MF = Metal  DI = Analog Dev  S = National S	Film SI	= Silicon			
			S	S = National Sig = Signetics (01) 87/04/28	emiconductors	s Ra = Raytheon St = Studer			
				01) 87/04/28 GP	AUDIO EL	LECTRONICS BOARD 2/2	1.727.423.	00 PAGE 15	

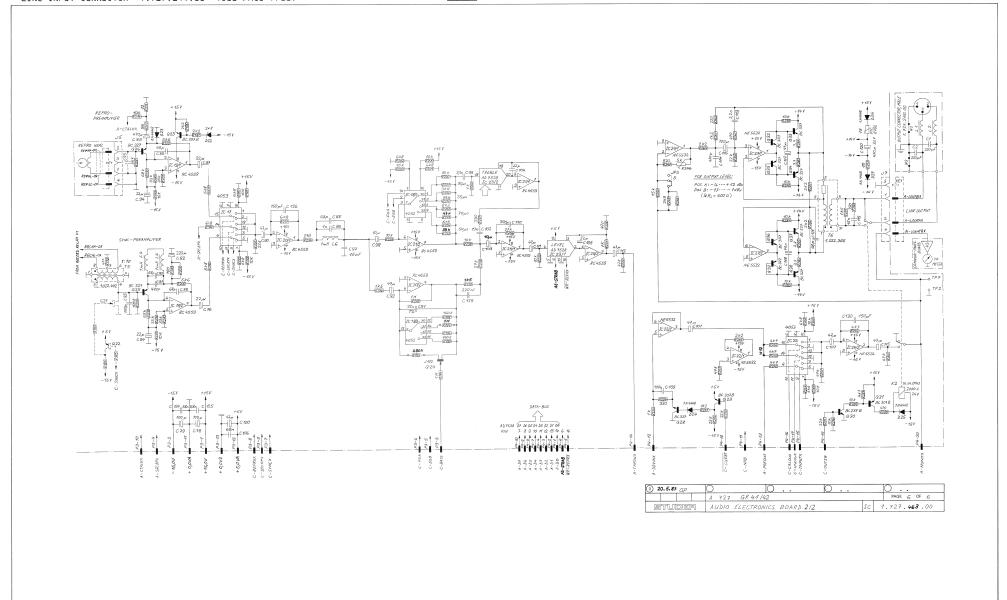


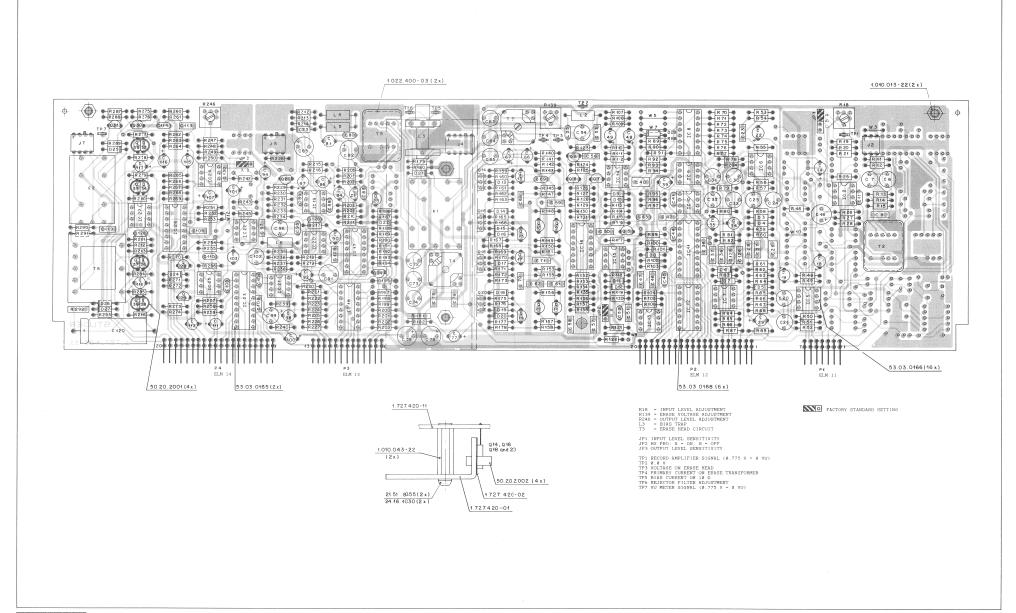














ND+ POS+NO+ PART NO+ VA	NLUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	HA NUF.	IND. POS.NO. PART NO. VALUE SPICIFICATIONS / EQUIVALENT MANUF.	IND. POS.NC. PART NO. YALUE SPECIFICATIONS / EQUIVALENT N.
C	pp 11 3 909 PP  12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C129 59-34-6000 08 pf 103 50V Cer C129 59-34-6000 08 pf 103 50V Cer C129 59-36-0224 220 pf 103 50V PET C129 59-36-0224 220 pf 103 50V PET C129 59-36-1202 136-60 50V PET C129 59-36-1202 08 V 51 104-60 50V PET C129 59-36-1202 08 V 53 0-44 Zemer C129 59-36-1202 08 V 53 0-44 Zemer C129 59-36-1202 08 V 53 0-44 Zemer C129 59-36-1202 08 V 53 0-44 Zemer C129 59-36-1202 136-60 80  50 V 51 104-60 80 V 51 104-60 80  50 V 51 104-60 80 V 51 104-60 80  50 V 51 104-60 80 V 51 104-60 80  50 V 51 104-60 80 V 51 104-60 80  50 V 51 104-60 80 V 51 104-60 80  50 V 51 104-60 80 V 50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80  50 V 51 104-60 80 V50 V50 V50 V50 V50 V50 V50 V50 V50 V5	\$19 \$19 \$10 Ra Ro Ro Ro	020   50-03-0510   00136-16   net used   PNP	8125 37.11.510.0 10 NON
ND» POS-NG» PART NO» V	ALUE SPECIFICATIONS / EQUIVALENT MANUE.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	NA NU F»	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT NA
C96 97.22.3178 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	### 1		Ra ADI ADI ADI ADI ADI ADI ADI ADI ADI ADI	No.	### 1.07   7-111-0-00   60   00m   2% 0.750%   NF   ### 1.09   7-111-0-00   6-0   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   6-0   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   6-0   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   2.2   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   2.2   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   2.2   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   2.0   00m   2% 0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   2.0   0.750%   NF   ### 1.00   7-111-0-00   0.0   0.0   ###
ND. POS.NO. PART NO. Y	ALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.10. PART NO. VALUE SPICIFICATIONS / EQUIVALENT MANUF.	ING. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT M
C	0		51 52 53 54 54 55 55 55 55 55 55 55 55 55 55 55	R.	\$\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{1} \frac{1} \frac{1}{1} \frac{1} \frac{1}{1} \frac{1} \frac{1}{1} \frac{1}{1} \frac{1} \frac{1} \frac{1} \frac{1}{1}



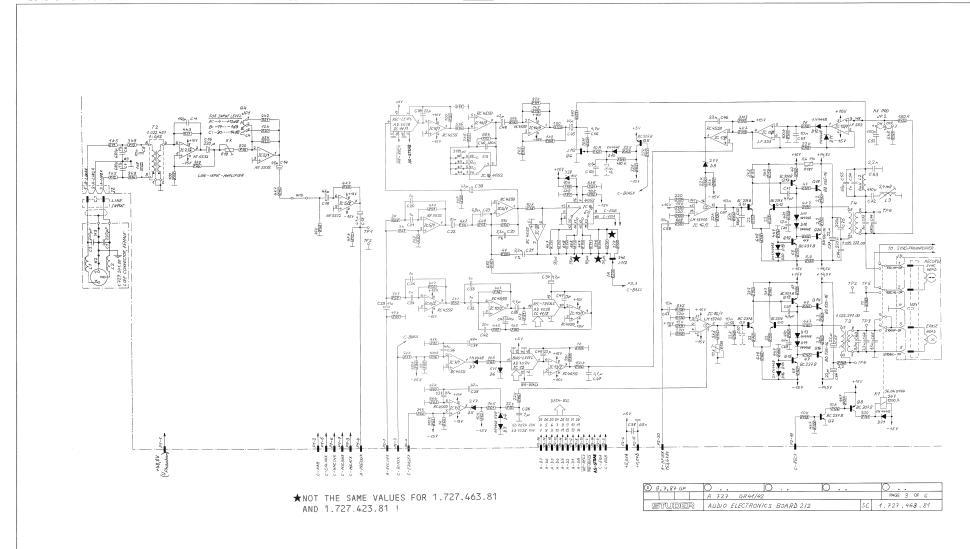
I ND .	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R • • • 243 R • • • 245 R • • • 246	57-11-4473 57-11-4222 58-01-8502	47 kOhm 2-2 kOhm 5 kOhm	2%, 0.25N. MF 2%, 0.25N. MF 10%, 0.5 N. PMG	
	R247 R248 R249 R250	57.11.4821 57.11.4392 57.11.4153	820 Ohm 3.9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF not used 2%, 0.25%, MF	
	R • • • 251 R • • • 252 R • • • 253	57.11.4473 57.11.4472 57.11.4472	47 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R254 R255 R256 R257	57-11-4331 57-11-4102 57-11-4273 57-11-4102	330 9hm 1 k0hm 27 k0hm 1 k0hm	2%, 0.25H+ MF 2%, 0.25H+ MF 2%+ 0.25H+ MF 2%, 0.25H+ MF	
	R • • • 258 R • • • 259 R • • • 260	57.11.4471 57.11.4103 57.11.4221	470 Olim 10 kOhm 220 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R • • • 261 R • • • 262 R • • • 263 R • • • 264	57.11.4122 57.11.4471 57.11.4223 57.11.4222	1.2 kOhm 470 Ohm 22 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 265 R • • • 266 R • • • 267	57.11.4473 57.11.4103 57.11.4682	47 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R268 R269 R270 R271	57-11-4682 57-11-4103 57-11-4472 57-11-4122	6.8 kOhm 10 kOhm 4.7 kOhm 1.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R • • • 272 R • • • 273 R • • • 274	57.11.4223 57.11.4223 57.11.4473	22 kOhm 22 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 275 R • • • 276 R • • • 277 R • • • 278	57-11-4223 57-11-4103 57-11-4339 57-11-4103	22 kOhm 10 kOhm 3•3 Ohm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R279 R280	57.11.4103 57.11.4339	10 kOhm 3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
STU	DER (O	00) 87/05/20 GP	AUDIO ELI	ECTRONICS BOARD 2/2 1.727.463.00	PAGE 13
IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF »
	R281 R282	57.11.4222 57.11.4222	2.2 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 283 R • • • 284 R • • • 285	57.11.4339 57.11.4103 57.11.4103	3.3 Ohm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 286 R • • • 287 R • • • 288	57-11-4339 57-11-4472 57-11-4103	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm	2%, 0.25W+ MF 2%+ 0.25W+ MF 2%, 0.25W+ MF 2%+ 0.25W+ MF	
	R289 R290 R291 R292	57.11.4471 57.11.4391 57.11.4152 57.92.1151	390 Ohm 1.5 kOhm 18 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 150mA, PTC	
	R293 R294	57.11.4180 57.11.4470 1.022.451.00	18 Ohm 47 Ohm 1:0:62	2%, 0.25W, MF 2%, 0.25W, MF Line Input Trafo	St
	T • • • • • 3 T • • • • • 4 T • • • • 5	1.022.271.00 1.022.272.00 1.022.402.00	1:10	Erase Trafo Bias Trafo Sync Trafo	St St St
	TP1 TP2	1.022.355.00 54.02.0320 54.02.0320		Line Output Trafo Plug 2.8*0.8 Plug 2.8*0.8	St AMP AMP
	TP • • • • 4 TP • • • • 5	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP
	TP 6 TP 7	54.02.0320 54.02.0320 64.01.0106		Plug 2.8\$0.8 Plug 2.8\$0.8 Wire Bridge	AMP AMP
	W 5 W 6	64.01.0106		not used Wire Bridge not used	
	W7 W8 W10 W12	64.01.0106 64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge Wire Bridge	
STU		00) 87/05/20 GP	AUDIO EL	ECTRUNICS BOARD 2/2 1.727.463.00	PAGE 14
I ND •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	XIC 2 XIC 5 XIC 6	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	XIC 8 XIC 9 XIC 9 XIC 10	53.03.0166 53.03.0168 53.03.0166 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket	
	XIC11 XIC12 XIC13	53.03.0165 53.03.0168 53.03.0166	20-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	
	XIC 14 XIC 15 XIC 16 XIC 17	53.03.0166 53.03.0166 53.03.0168 53.03.0168	8-Pole 8-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket	
	XIC 18 XIC 19 XIC 20	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket	
	XIC 21 XIC 22 XIC 23 XIC 24	53.03.0166 53.03.0166 53.03.0165 53.03.0166	8-Pole 20-Pole 8-Pole	IC Socket IC Socket IC Socket	
	XIC 25 XIC 26 XIC 27	53.03.0166 53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	
Cer :	= Ceramic = Polypropy	EL = Electr len MF = Metal	olytic PET	P = Polyester = Silicon	
	ACTURER: AL	DI = Analog Devi S = National Se	ces Inc.	Mot = Motorola	
	87/05/20	ig = Signetics			
ST	JDER (	00) 87/05/20 GP	AUDIG EL	ECTRONICS BOARD 2/2 1.727.463.00	PAGE 15

AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42 AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

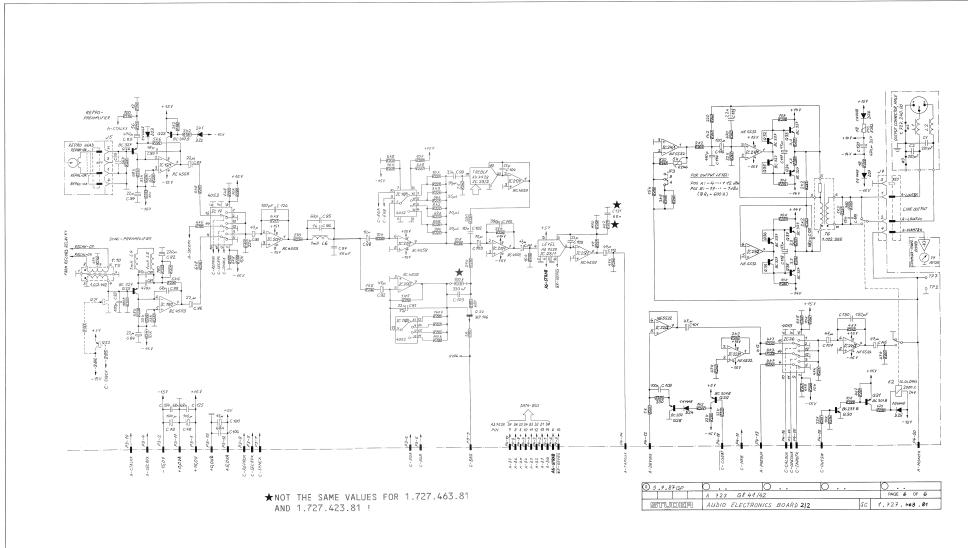




AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42 AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

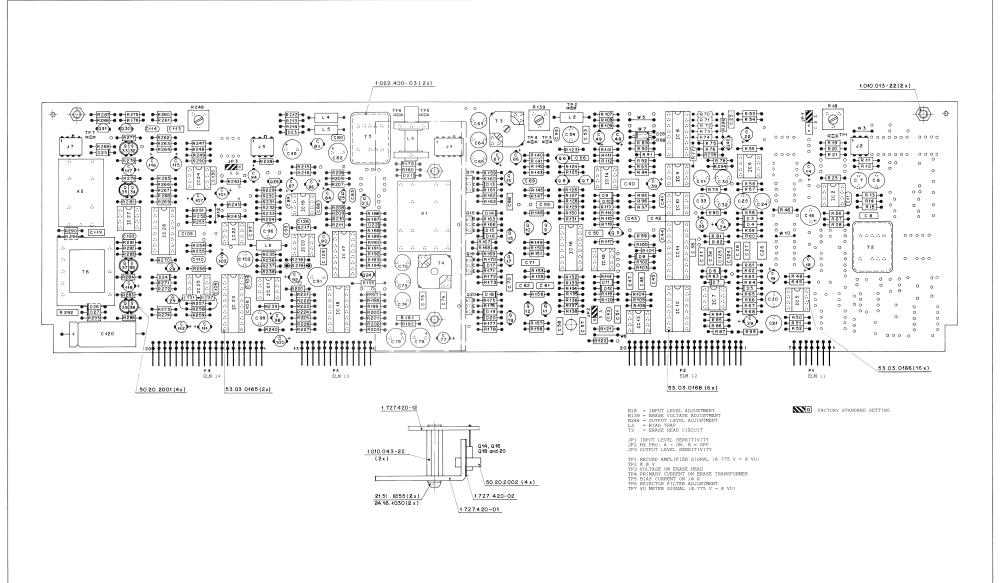
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)







AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42



AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42



• POS+N3+ PART NO• VALUE SPECIFICATIONS / EQUIVALENT MANUF•	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MAN	F. IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MA
2	C.   120   27.2 a. a. b.   20   101   507   Cer	010 50.03.6510 80136-16 not used not used not used not used not used not used not used not used not used not used not used not used not used not used not used not used not used not used not used not not not not not not not not not not	8 - 123
C	022	\$ 37111472 14 14 15 14 16 15 14 16 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 17 16 17 17 17 17 17 17 17 17 17 17 17 17 17	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
POS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NG. PART NG. WALUE SPECIFICATIONS / EQUIVALENT MAN	P. ING. POS.NG. PARTING. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
C 99 5922-3470 07 0F -203 10V EL C 10 3900-005 10 10 0F 10 10 10 10 10 10 10 10 10 10 10 10 10	1624 50.09.0105 ME 5932 Dual Op. Amp. 5 1625 50.39.0107 MC 4559 Dual Op. Amp. P.	1	R. 150 37111472 47 ADDM 21 C554 F F R C555 F F R C555 F
POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PAITING. VALUE SPECIFICATIONS / EQUIVALENT MAN		IND. POS.NC. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
C	##   3-01-0020	1.	### 1.200 ### 2.

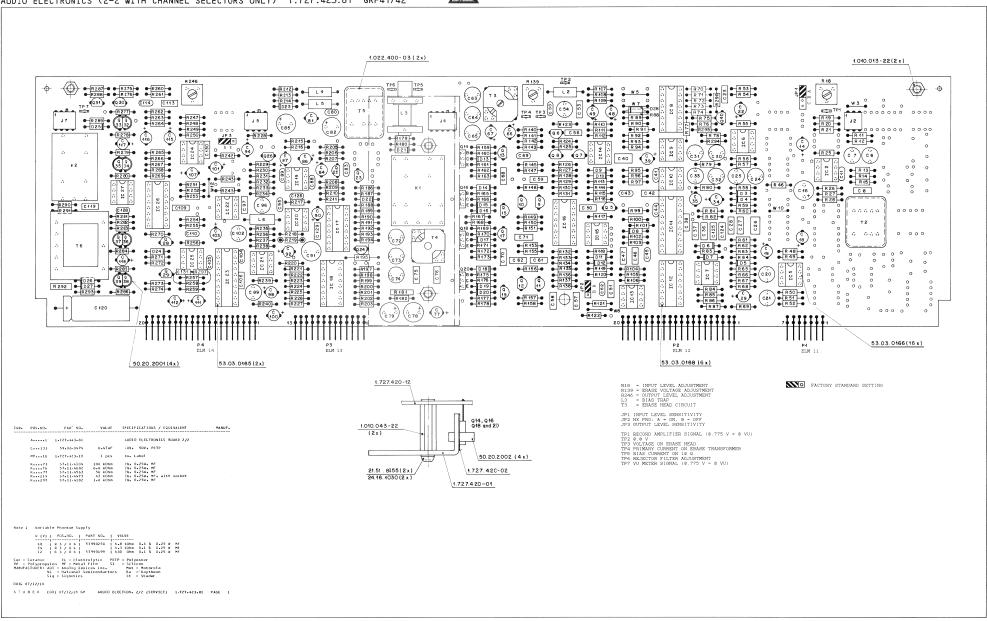




# AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42

	S • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MAN
R R R R R R R R R R R R R R R R R R R		57-11-4473 57-11-4473 57-11-4473 57-11-4223 57-11-4392 57-11-4392 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4273	4-77 kOhm 2-2 kOhm 2-2 kOhm 3-5 kOhm 3-5 kOhm 3-9 kOhm 15 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 1-7 kOhm 1-7 kOhm 1-8 kOhm 1-8 kOhm 1-8 kOhm 1-8 kOhm 1-8 kOhm 1-8 kOhm 1-8 kOhm 1-9 kOhm 1-9 kOhm 1-1 kOhm 1-1 kOhm 1-1 kOhm 1-2	2x, 0.25 ky MF 2x, 0.25 ky MF		Cer = Ceramic EL = Electrolytic PETP = Polyester PP = Polypropylen MF = Metal Film SI = Silicon  MANUFACTURER: ADI = Amalog Devices Inc. No = National Semiconductors & Amalog Services Inc. Sig = Signetics Studer  Style="Color: Studen;">Style="Color: Studen;">Style="Color: Style="Color: Style-"Style="Color: Style="Color: Style-"Style="Color: Style="Color: Style="Color: Style="Color: Style: Style="Color: Style="Color: Style="Color: Style: Style="Color: Style: Style="Color: Style: St
R.	••276 ••277 ••278	57-11-4103 57-11-4339 57-11-4103	10 k0hm 3•3 Ohm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R.	••279	57.11.4103 ) 87/07/09 GP	10 kOhm	2%, 0.25%, MF ECTRONICS BOARD 2/2 1.727.463.81	PAGE 13	ORIG 87/07/09 S T U D E R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD Z/2 1.727.463.81 PAGE
1D. PO	ne na	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	
R.	280	57.11.4339	3+3 Ohm	2%, 0.25W, MF		
R • R •	281 282 283	57.11.4222 57.11.4222 57.11.4339 57.11.4103	2.2 kOhm 2.2 kOhm 3.3 Ohm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R. R.	285 286 287	57.11.4103 57.11.4339 57.11.4472	10 kOhm 3.3 Ohm 4.7 kOhm 10 kOhm	2% 0.25W+ MF 2% 0.25W+ MF 2% 0.25W+ MF 2% 0.25W+ MF		
R• R•	288 289 290	57.11.4103 57.11.4471 57.11.4391 57.11.4152	470 Ohm 390 Ohm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R • R • R •	292 293 294 295	57.92.1151 57.11.4180 57.11.4470 57.11.4223	18 Ohm 18 Ohm 47 Ohm 22 kOhm	150mA, PTC 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R. R.	•••296 •••297	57•11•4105 57•11•4472	1 MOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
T.	3	1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:0.62	Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	St St St St	
TP TP TP TP	P 2 P 3 P 4 P 5 P 6 P 7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8	AMP AMP AMP AMP AMP AMP	
w -	4	64.01.0106		Wire Bridge not used Wire Bridge		
	ER (0	) 87/07/09 GP	AUDIG EL	not used ECTRONICS BOARD 2/2 1.727.463.81	1 PAGE 14	
ND. PC	05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	
W e	7 8 10	64-01-0106 64-01-0106 64-01-0106 64-01-0106		Wire Bridge Wire Bridge Wire Bridge Wire Bridge		
X I	IC2 IC5 IC6	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket		
X 1 X 1 X 1	IC7 IC8 IC9 IC10	53.03.0166 53.03.0168 53.03.0166 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
X 1 X 1 X 1	IC••11 IC••12 IC••13	53.03.0165 53.03.0168 53.03.0166	20-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket		
X 1 X 1	IC 14 IC 15 IC 10 IC 17	53.03.0166 53.03.0166 53.03.0168 53.03.0168	8-Pole 8-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket		
X1 X1 X1	IC18 IC19 IC20 IC21	53.03.0168 53.03.0166 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
X 1 X 1 X 1	IC 22 IC 23 IC 24 IC 25	53.03.0166 53.03.0165 53.03.0166 53.03.0166	8-Pole 20-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
x 1	IC26 IC27	53.03.0168 53.03.0166	16-Pole 8-Pole	IC Socket		
X1						
X1						

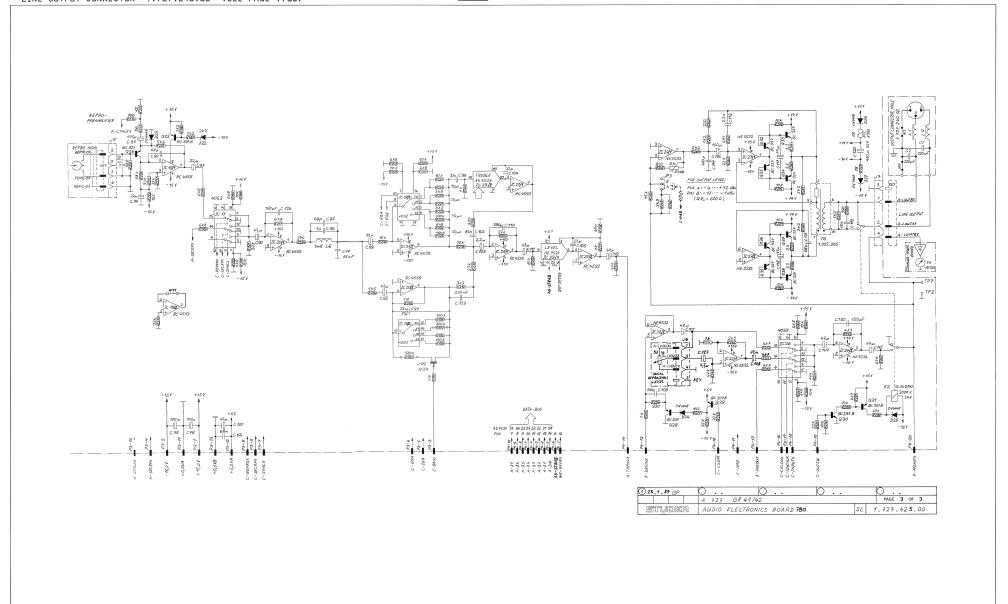
AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42



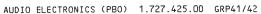
AUDIO ELECTRONICS (PBO) 1.727.425.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)



7/95







-	53.03.0166 (7x) 	<del>c</del>		<b></b>	•
1   1   1   1   1   1   1   1   1   1		м	20 P2 ELM 12	P1 P1 ELM 11	
05:10- PART NO. VALUE SPECIFICATIONS / COUVALENT MANUF- 10. PDD	127 59-22-8479 4-7 uF -20% 35V EL 128 59-34-4680 68 pF 10% 50V Ger 129 59-06-0224 220 nF 10% 50V PETP 10% 50V Ger	Q23 50.03.6515 Q24 50.03.6350 Mot Q26 50.03.6625	VALUE SPECIFICATIONS / EQUIVALENT MANUF.  1 RCS Addio Stectronics PCD St.  1 RCS Addio Stectronics PCD St.  1 RCS PC Sterning (Labo)  1 PC St.  1	Table	

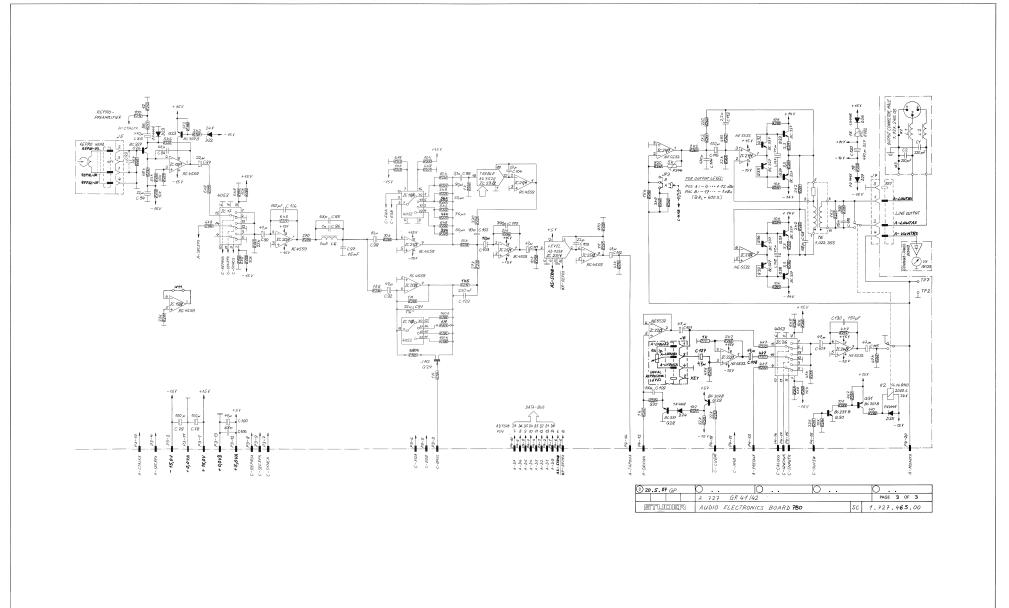


# AUDIO ELECTRONICS (PBO) 1.727.425.00 GRP41/42

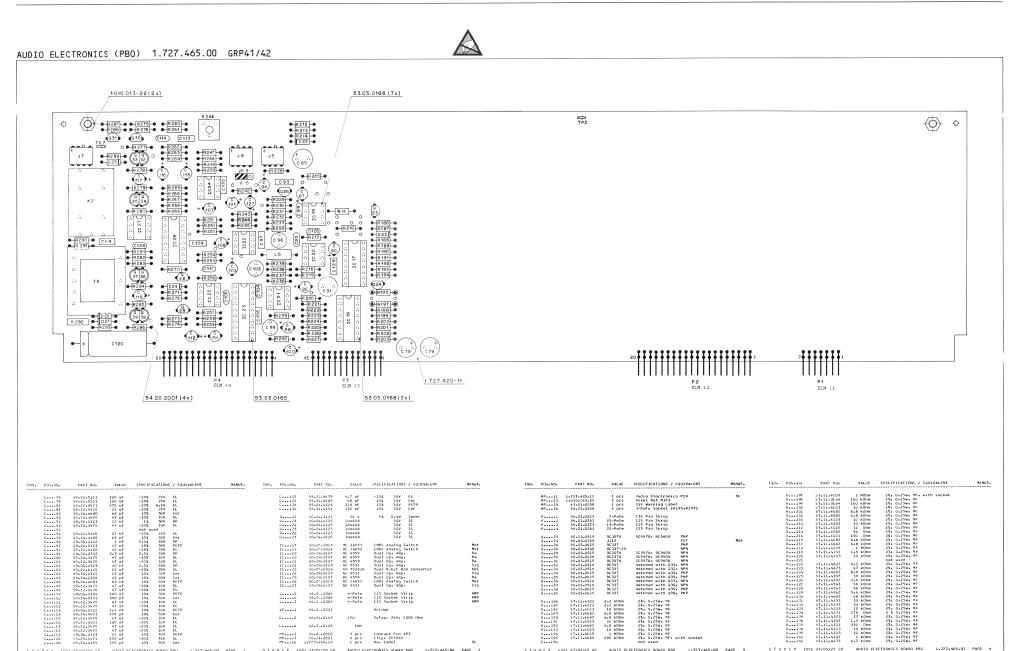
10010	ELECTRONICS	(100)			01(1 4	1776	
			INO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F •
			R	57.11.4473 57.11.4102 57.11.4102 57.11.4222 56.01.8502 57.11.4392 57.11.4473 57.11.4473 57.11.4472 57.11.4472 57.11.4472 57.11.4417 57.11.4102 57.11.4102 57.11.4102 57.11.4102 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103	47 kOhm 1 kOhm 2-2 kOhm 5 kOhm 6 kOhm 6 kOhm 15 kOhm 4-7 kOhm 4-7 kOhm 11 kOhm 11 kOhm 12 kOhm 12 kOhm 14 kOhm 14 kOhm 15 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 %, MF 10%, 0.5 %, MF 10%, 0.5 %, MF 2%, 0.25%, MF	
			R	57.11.4682 57.11.4472 57.11.4472 57.11.4122 57.11.4223 57.11.4223 57.11.4223 57.11.4103 57.11.4103 57.11.4103	6.8 kOhm 10 kOhm 4.7 kOhm 1.2 kOhm 22 kOhm 22 kOhm 22 kOhm 47 kOhm 22 kOhm 3.3 Uhm 10 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	-425-00 PAGE 5
			1NO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
			R 280 R 281 R 283 R 283 R 285 R 285 R 286 R 289 R 289 R 289 R 290	57.11.4339 57.11.4222 57.11.4222 57.11.4339 57.11.4103 57.11.4103 57.11.4339 57.11.4403 57.11.4403 57.11.4401 57.11.4452 57.12.1151	3.3 Ohm 2.2 kOhm 2.2 kOhm 3.3 Ohm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 11 kOhm 15 kOhm 15 kOhm 16 Ohm	2% 0.25% MF 2% 0.25% MF	64.
			T	1.022.355.00 54.02.0320 54.02.0320 57.11.4000 33.03.0168 33.03.0168 33.03.0166 33.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	16-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	Line Output Trafo Plug 2.800.8 Plug 2.800.8 Wire Bridge IC Socket	St ANP AMP
			STUDER (	00) 87/02/17 GP	AUDIO EL	ECTRONICS BOARD PBO 1.727	'•425•00 PAGE 6
			IND. POS.NO.		VALUE	SPECIFICATIONS / EQUIVALENT	T MANUF.
			MANUFACTURER: A	EL = Elect len MF = Metal DI = Analog Dev S = Netional S ig = Signetics	Film SI ices Inc. emiconductor	= Silicon	
			ORIG 87/02/17 STUDER	00) 87/02/17 GP	P AUDIO E	ELECTRONICS BOARD PBO 1.72	7.425.00 PAGE 7

AUDIO ELECTRONICS (PBO) 1.727.465.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)





AUDID ELECTRONICS BOARD PBD 1.727.465.00 PAGE 1 \$ T U D E R (00) 87/05/20 GP



S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD PBD 1.727.465.00 PAGE 3

S T U D E R (00) U7/05/20 GP AUDIO ELECTRONICS BDARD PBD

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AUDIO ELECTRONICS BOARD PBO 1.727.465.00 PAGE 2



### AUDIO ELECTRONICS (PBO) 1.727.465.00 GRP41/42

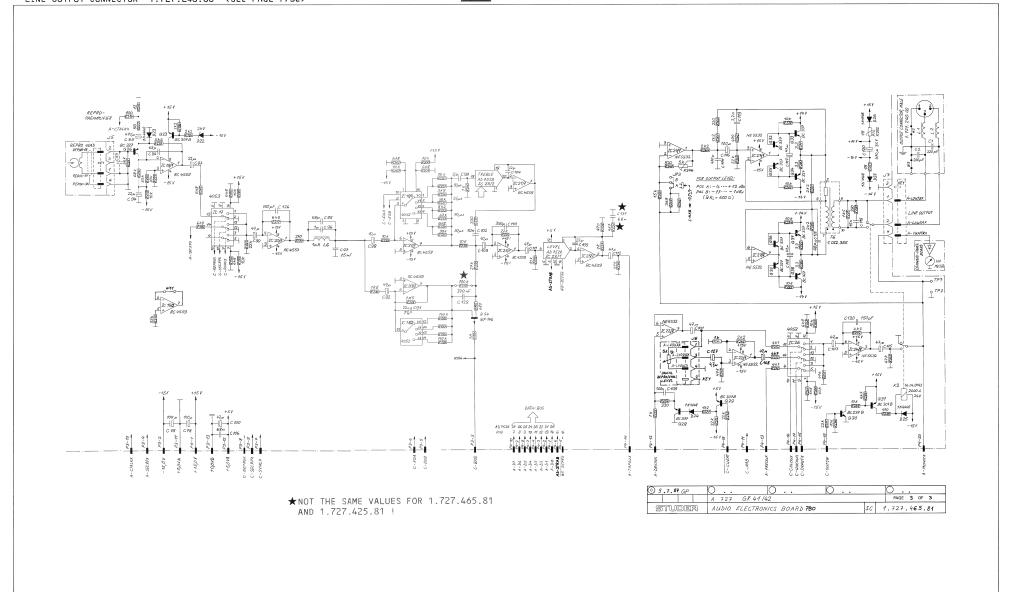
	46	+1/46	GIVI 4	403.00		1.	(FBO)	DMICS	ELECIK	טוטנ
								MARKET NO.		
MANUF.	PECIFICATIONS / EQUIVALENT	SPEC 1F	VALUE	PART NO.	P05.NO.	IND.				
	2%, 0.25W, MF 2%, 0.25W, MF	2%+	47 k0hm	57.11.4473	R 243					
	2% - 0 - 25W - MF	2%.	1 kOhm 2•2 kOhm	57.11.4102 57.11.4222	R • • • 244 R • • • 245					
	10%, 0.5 W. PMG 2%, 0.25W. MF 2%, 0.25W. WF	10%,	5 kOhm 820 Ohm	58.01.8502 57.11.4821	R • • • 246					
	2t, 0.25W. WE not used	22,	3.9 kOhm	57-11-4393	R247 R248 R249					
	2%, 0.25W, MF 2%, 0.25W, MF	2%•	15 kOhm	57.11.4153	R • • • 250					
	2%, 0.25W, MF	2%.	47 kOhm 4•7 kOhm	57.11.4473 57.11.4472	R • • • 251 R • • • 252					
	2%, 0.25W, MF 2%, 0.25W, MF	1 2% •	4.7 kOhm 330 Ohm	57.11.4472 57.11.4331	R • • • 253 R • • • 254					
	2%, 0.25W, MF 2%, 0.25W, MF	2%,	1 kOhm 27 kOhm	57.11.4102 57.11.4273	R255					
	2%, 0.25W, MF	1 2%,	1 k0hm 470 0hm	57.11.4102	R 257					
	2%, 0.25W, MF 2%, 0.25W, MF	1 2% •	470 Ohm 10 kOhm	57•11•4471 57•11•4103	R * * * 258 R * * * 259					
	2%, 0.25W, MF 2%, 0.25W, MF	1 2%.	220 Ohm 1•2 kOhm	57•11•4221 57•11•4122	R • • • 260 R • • • 261					
	2%, 0.25W, MF 2%, 0.25W, MF	22.	470 Ohm 22 kOhm	57.11.4471 57.11.4223	R 262					
	2%, 0.25W, MF	2%,	2.2 kOhm	57.11.4222	R • • • 263 R • • • 264					
	2%, 0.25W, MF 2%, 0.25W, MF	2%.	47 kOhm 10 kOhm	57.11.4473 57.11.4103	R • • • 265 R • • • 266					
	2% 0.25W MF 2% 0.25W MF	2%+	6.8 kOhm 6.8 kOhm	57.11.4682 57.11.4682	R * * * 267 R * * * 268					
	2%, 0.25W, MF	2%•	10 kOhm	57-11-4103	R * * * 269					
	2%, 0.25W, MF 2%, 0.25W, MF	2%,	4.7 kOhm 1.2 kOhm	57.11.4472 57.11.4122	R • • • 270 R • • • 271					
	2%, 0.25W, MF 2%, 0.25W, MF	2%,	22 kOhm 22 kOhm	57.11.4223 57.11.4223	R * * * 272 R * * * 273					
	2%, 0.25W, MF	2%,	47 kOhm 22 kOhm	57.11.4473	R 274					
	2%, 0.25W, MF 2%, 0.25W, MF	2%.	10 kOhm	57.11.4223 57.11.4103	R275 R276					
	2%, 0.25W, MF 2%, 0.25W, MF	2%,	3.3 Ohm 10 kOhm	57.11.4339 57.11.4103	R 277 R 278					
	2%, 0.25W, MF	2%,	10 k0hm	57.11.4103	R • • • 279					
PAGE 5	RONICS BOARD PBO 1.727.465.00	ELECTRONIC	AUDIO E	10) 87/05/20 GP	DER (	STU				
MANUF										
	SPECIFICATIONS / EQUIVALENT		VALUE	PART NO.	P 05 • NO •	IND.				
	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%, n 2%,	3.3 Ohm 2.2 kOhm 2.2 kOhm 3.3 Ohm 10 kOhm 10 kOhm 1.0 kOhm 4.7 kOhm 10 kOhm 15 kOhm 17 kOhm 18 Ohm 18 Ohm	57-11-4339 57-11-4222 57-11-4222 57-11-4339 57-11-4103 57-11-4103 57-11-4471 57-11-4471 57-11-4471 57-11-4471 57-11-4152 57-11-4152 57-11-4152	R280 R281 R282 R283 R284 R285 R286 R287 R289 R289 R290 R291 R292					
St	Line Output Trafo	Line		1.022.355.00						
AMP	Plug 2.840.8			54.02.0320	TP2					
AMP	Plug 2-8*0-8	Plug		54.02.0320	TP 7					
	Wire Bridge	Wire		57.11.4000	W11					
	IC Socket		16-Pole	53.03.0168	XIC17					
	IC Socket IC Socket	e IC Sc	16-Pole 8-Pole	53.03.0168 53.03.0166	XIC18 XIC19					
	IC Socket IC Socket	e ICSo	8-Pole 8-Pole	53.03.0166 53.03.0166	XIC20 XIC21					
	IC Socket	e IC So	8-Pole 20-Pole	53.03.0166 53.03.0165	XIC 22 XIC 23					
	IC Socket IC Socket	e TC Sc	8-Pole 8-Pole	53.03.0166	XIC 24					
	IC Socket	e IC Sc	16-Pole	53.03.0166 53.03.0168	XIC 25 XIC 26					
	IC Socket	e ICSo	8-Pole	53.03.0166	X1C • • 27					
PAGE 6	TRUNICS BOARD PBO 1.727.465.00	EL ECTRONIC	AUDIO	00) 87/05/20 GP	DER (	s T u				
MANUF.	SPECIFICATIONS / EQUIVALENT	E SPECIF	VALUE	PART NO.	P0S+N0+	IND.				
	= Polyester = Silicon		rolytic Pi Film S	EL = Electr len MF = Metal	Ceramic Polypropy	Cer =				
	Mot = Motorola Ra = Raytheon St = Studer	Mot	ices Inc.	DI = Analog Devi S = National Se	ACTURER: A					
	St = Studer	St		ig = Signetics	S					

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S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD PB0 1.727.465.00 PAGE 7

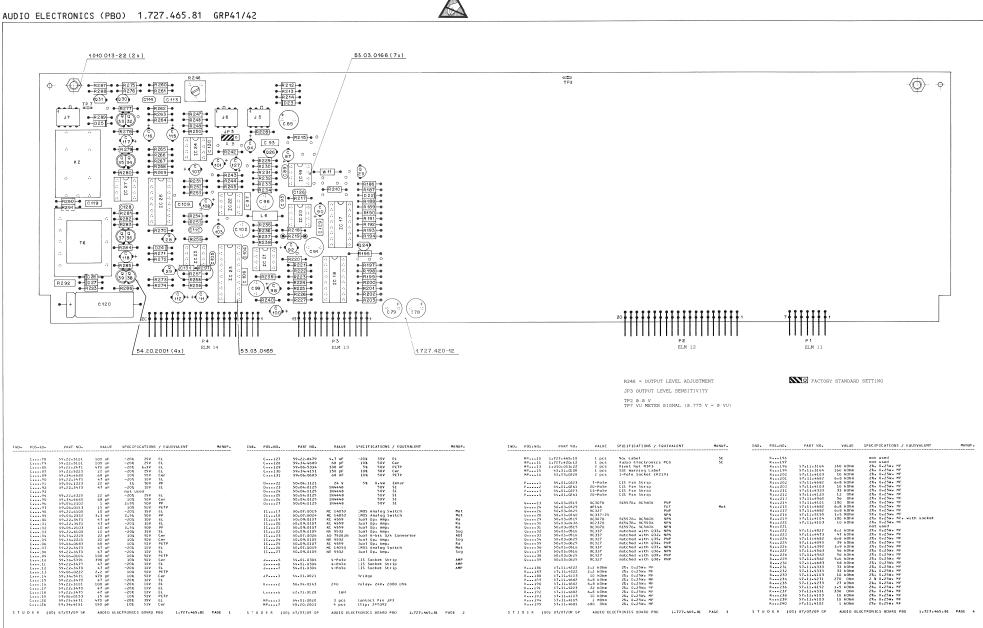
AUDIO ELECTRONICS (PBO) 1.727.465.81 GRP41/42
AUDIO ELECTRONICS (PBO) 1.727.425.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)





7/104 A807 STUDER







## AUDIO ELECTRONICS (PBO) 1.727.465.81 GRP41/42

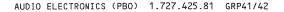
	/ EQUIVALENT	SPECIFICATIONS /	VALUE	PART NO.	IND. POS.NO.
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 47 kOhm 1 kOhm	57.11.4472 57.11.4473 57.11.4102	R • • • 242 R • • • 243 R • • • 244
	: 1G	2%, 0.25W, MF 10%, 0.5 W, PMG 2%, 0.25W, MF	2.2 kOhm 5 kOhm 820 Ohm	57.11.4222 58.01.8502	R * * * 245
		2%, 0.25W, MF not used	3.9 kOhm	57•11•4821 57•11•4392	R • • • 247 R • • • 248 R • • • 249
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	15 kOhm 47 kOhm 4•7 kOhm	57.11.4153 57.11.4473 57.11.4472	R • • • 250 R • • • 251 R • • • 252
		2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 330 Ohm	57•11•4472 57•11•4331	R • • • 253 R • • • 254
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	1 kOhm 27 kOhm 1 kOhm	57.11.4273 57.11.4273 57.11.4102	R • • • 255 R • • • 256 R • • • 257
	:	2%, 0.25W, MF 2%, 0.25W, MF	470 Ohm 10 kOhm	57•11•4471 57•11•4103	R258 R259
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	220 Ohm 1•2 kOhm 470 Ohm	57•11•4221 57•11•4122 57•11•4471	R • • • 260 R • • • 261 R • • • 262
	:	2%+ 0.25W+ MF 2%+ 0.25W+ MF	22 kOhm 2•2 kOhm	57.11.4223 57.11.4222	R • • • 263 R • • • 264
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	47 kOhm 10 kOhm 6.8 kOhm	57.11.4473 57.11.4103 57.11.4682	R • • • 265 R • • • 266 R • • • 267
		2%, 0.25W, MF 2%, 0.25W, MF	6.8 kOhm 10 kOhm	57•11•4682 57•11•4103	R268 R269
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 1.2 kOhm 22 kOhm	57.11.4472 57.11.4122 57.11.4223	R • • • 270 R • • • 271 R • • • 272
		2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 47 kOhm	57.11.4223 57.11.4973	R • • • 273 R • • • 274
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 10 kOhm 3.3 Ohm	57.11.4223 57.11.4103 57.11.4339	R • • • 275 R • • • 276 R • • • 277
PAGE 5		2%, 0.25W, MF ECTRONICS BOARD PBO	10 kOhm	57.11.4103	R***278
MANUF.	/ EQUIVALENT	SPECIFICATIONS /	VALUE	PART NO.	ND. POS.NO.
	= =	2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 3.3 Ohm	57•11•4103 57•11•4339	R279 R280
		2%, 0.25W, MF 2%, 0.25W, MF	2.2 kOhm 2.2 kOhm	57.11.4222 57.11.4222	R281 R282
	-	2%, 0.25W, MF 2%, 0.25W, MF	3.3 Ohm 10 kOhm 10 kOhm	57.11.4339 57.11.4103	R • • • 283 R • • • 284
	=	2% 0.25W MF		57-11-4103	R 2R6
	: : :	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	3.3 Ohm 4.7 kOhm	57.11.4103 57.11.4339 57.11.4472	R • • • 285 R • • • 286 R • • • 287
		2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm	57-11-4103 57-11-4339 57-11-4472 57-11-4103 57-11-4471 57-11-4391	R285 R286 R287 R288 R289
	= = = = = = = = = = = = = = = = = = =	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 150mA, PTC	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm 1.5 kOhm	57-11-4103 57-11-4339 57-11-4472 57-11-4103 57-11-4471 57-11-4391 57-11-4152 57-92-1151	R285 R286 R287 R288 K289 R290 R291
	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 150mA, PTC 2%, 0.25%, MF 2%, 0.25%, MF	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm 1.5 kOhm	57-11-4103 57-11-4472 57-11-4172 57-11-4171 57-11-4391 57-11-4152 57-92-1151 57-11-4180 57-11-4472	R285 R285 R287 R288 K289 R290 R291 R292 R293 R297
St. AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm 1.5 kOhm 18 Ohm	57-11-4103 57-11-4339 57-11-4472 57-11-4403 57-11-4471 57-11-4391 57-11-4152 57-92-1151 57-11-4180	R 285 R 286 R 287 R 288 R 289 R 290 R 291 R 292 R 293 R 297
	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF 150%, 0.25%, MF 2%, 0.25%, MF Line Output Traf Plug 2.8°0.8 Plug 2.8°0.8	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm 1.5 kOhm 18 Ohm	57.11.4103 57.11.4339 57.11.4472 57.11.4403 57.11.4407 57.11.4497 57.11.4152 57.92.1151 57.11.4180 57.11.4472 1.022.355.00 54.02.0320 54.02.0320	R
AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 150mA, PTC 2%, 0.25%, MF 2%, 0	3-3 Ohm 4-7 kOhm 10 kOhm 3-70 Ohm 3-90 Ohm 1-5 kOhm 18 Ohm 18 Ohm 4-7 kOhm	57.11.4103 57.11.4439 57.11.4472 57.11.4473 57.11.4471 57.11.4451 57.11.4152 57.22.11.4150 57.11.4472 1.022.355.00 54.02.0320 54.02.0320 57.11.4000 53.03.0168	R 285 R 286 R 287 R 288 K 289 R 290 R 291 R 292 R 293 T 6 TP 2 TP 7
AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 150mA, PTC 2%, 0.25%, MF 2%, 0	3-3 Ohm 4-7 KOhm 10 KOhm 470 Ohm 390 Ohm 1-5 KOhm 18 Ohm 18 Ohm 4-7 KOhm	57.11.403 57.11.4339 57.11.4472 57.11.4473 57.11.4471 57.11.4391 57.11.4391 57.11.4391 57.11.4187 57.11.4187 57.11.4187 1.022.355.00 54.02.0320 54.02.0320 54.02.0320 57.11.4000 53.03.0168 53.03.0168 53.03.0168	R 285 R 286 R 287 R 288 R 277 R 288 R 297 R 290 R 297 R 292 R 297 T 6 TP 2 TP 7 XIC 17 XIC 18 XIC 17
AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF Line Output Traf Plug 2.880.8 Wire Bridge IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket	3-3 Ohm 4-7 KOhm 10 KOhm 10 KOhm 470 Ohm 390 Ohm 1-5 KOhm 18 Ohm 4-7 KOhm 4-7 KOhm  16-Pole 16-Pole 8-Pole 8-Pole 8-Pole 8-Pole	57.11.403 57.11.437 57.11.447 57.11.4471 57.11.4471 57.11.439 57.11.439 57.11.439 57.11.439 57.11.439 57.11.4472 57.02.355.00 54.02.0320 54.02.0320 54.02.0320 55.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	R285 R280 R273 R280 R271 R293 R293 R291 R292 R293 R29
AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25% HF 2%, 0.25% HF 2%, 0.25% HF 2%, 0.25% HF 2%, 0.25% HF 2%, 0.25% HF 150mA, PTC 2%, 0.25% HF 2%, 0.2	3-3 Ohm 4-7 KOhm 10 KOhm 470 Ohm 390 Ohm 1-5 KOhm 18 Ohm 4-7 KOhm 4-7 KOhm	57.11.403 57.11.473 57.11.4473 57.11.4471 57.11.4471 57.11.4371 57.11.4371 57.11.4312 57.92.1151 57.11.4472 57.022.955.00 54.02.0320 54.02.0320 54.02.0320 54.02.0320 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	R 285 R 286 R 287 R 287 R 291 R 292 R 292 R 293 R 293 R 297 R 293 R 297 H
AMP	e e e e e e e e e e e e e e e e e e e	2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF Line Output Traf Plug 2.800.8 Plug 2.800.8 Wire Bridge IC Socket	3-3 Ohm 4-7 KOhm 10 KOhm 470 Ohm 390 Ohm 1-5 KOhm 18 Ohm 4-7 KOhm 18 Ohm 4-7 KOhm 16-Pole 16-Pole 16-Pole 18-Pole 8-Pole	57.11.403 57.11.4339 57.11.4472 57.11.4103 57.11.4303 57.11.4303 57.11.4303 57.11.4303 57.11.4303 57.11.4472 1.022.3203 54.02.0320 54.02.0320 54.02.0320 55.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	R 285 R 286 R 287 R 288 R 288 R 290 R 291 R 292 R 293 R 297 T
AMP AMP	afo	2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 150mA, PTC 2%, 0.25% NF 2%, 0.2	3-3 Ohn 4-7 K0hn 10 K0hn 10 K0hn 11 K0hn 11 K0hn 11 K0hn 12 S K0hn 13 Ohn 14 Ohn 15 Ohn 16 Ohn 16 Ohn 16 Ohn 17 K0hn 18 Ohn 18 O	57.11.403 57.11.4339 57.11.4472 57.11.4103 57.11.4103 57.11.439 57.11.439 57.11.439 57.11.452 57.92.1151 57.11.4472 1.022.320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	R 285 R 266 R 277 R 288 R 289 R 291 R 292 R 293 R 297 T
AMP AMP	PBO 1-727-465-81	2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF Line Output Traf Plug 2.890.8 Wire Bridge IC Socket IC Socke	3-3 Ohn 4-7 K0hn 10 K0hn 10 K0hn 11 K0hn 11 K0hn 11 K0hn 12 S K0hn 13 Ohn 14 Ohn 15 Ohn 16 Ohn 16 Ohn 16 Ohn 17 K0hn 18 Ohn 18 O	57.11.403 57.11.4339 57.11.4472 57.11.4103 57.11.4103 57.11.439 57.11.439 57.11.439 57.11.452 57.92.1151 57.11.4472 1.022.320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0168	R
AMP AMP	PBO 1-727-465-81	2%, 0.25% , MF 2%, 0.	3-3 Ohn 4-7 KOhn 10 KOhn 10 KOhn 110 KOhn 130 KOhn 130 Ohn 14 Ohn 15 KOhn 18 Ohn 14 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 18 Ohn 19 Ohn 18 Ohn 19 Oh	37.11.403 37.11.4037 37.11.4473 37.11.4471 37.11.4471 37.11.4371 37.11.4371 37.11.4371 37.11.4391 37.11.4472 37.92.1131 37.11.4472 37.92.1355 37.11.4472 37.02.0320 34.02.0320 34.02.0320 34.02.0320 35.03.0168 33.03.0168 33.03.0168 33.03.0168 33.03.0168 33.03.0168 33.03.0168 33.03.0168 33.03.0166 33.03.0166 33.03.0166 33.03.0166 33.03.0166 33.03.0166 33.03.0166 33.03.0166 33.03.0166	R285 R286 R273 R280 R271 R292 R293 R291 R292 R293 R29

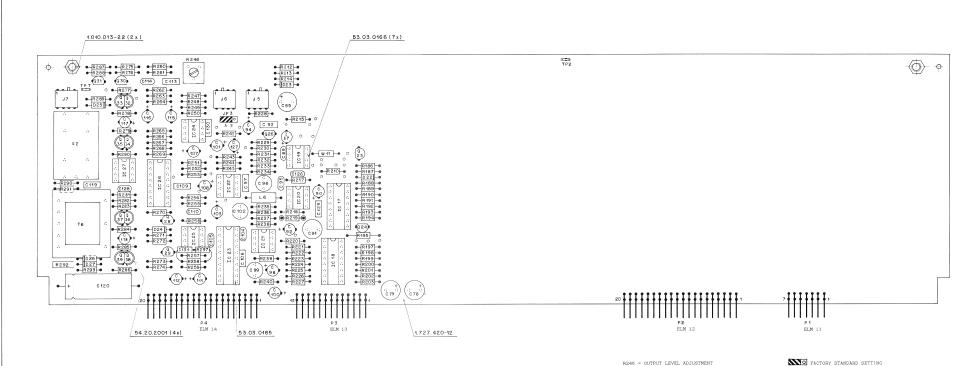
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7/107 STUDER A807







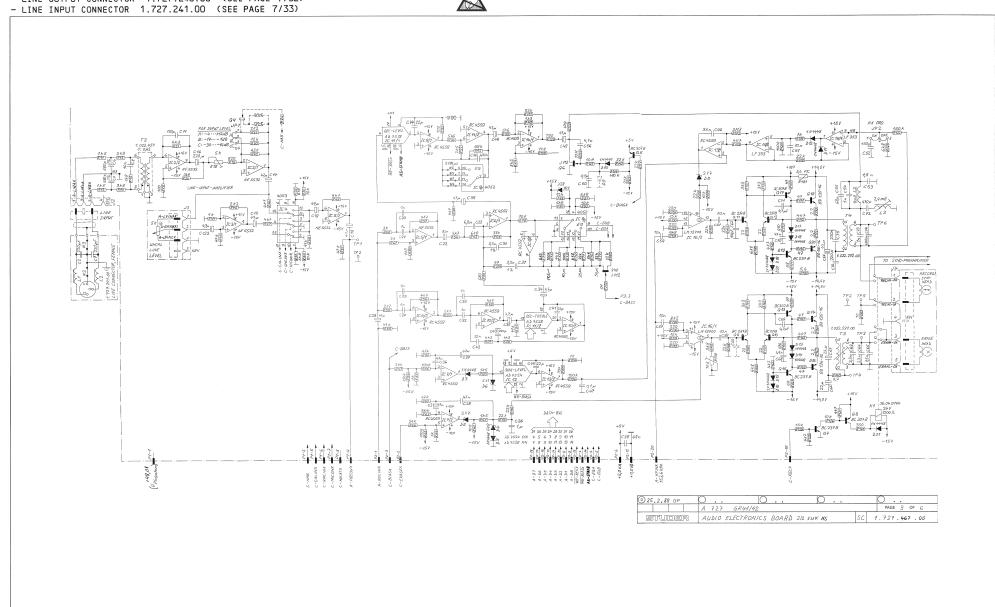
R246 = OUTPUT LEVEL ADJUSTMENT JP3 OUTPUT LEVEL SENSITIVITY TP2 0.0 V TP7 VU METER SIGNAL (0.775 V = 0 VU)

INO.	P05 - N0 -	PART NO.	VALUE	SEECIFICATIONS / EQUIVALENT	MANUI
	A1	1.727.465.81		AUDID ELECTRONICS BOARD PBO	
	C131	59.06.0474	0.47uF	10%. SOV. PETP	
	MP10	1.727.425.10	1 pcs	No. Label	
	R 219	57+11-4473	47 k0hm	2%, 0.25W, MF, with socket	

S ' U O E R (00) 87/12/18 GP AUDIO ELECTRON. PBO (SERVICE) 1.727.425.81 PAGE 1

A807

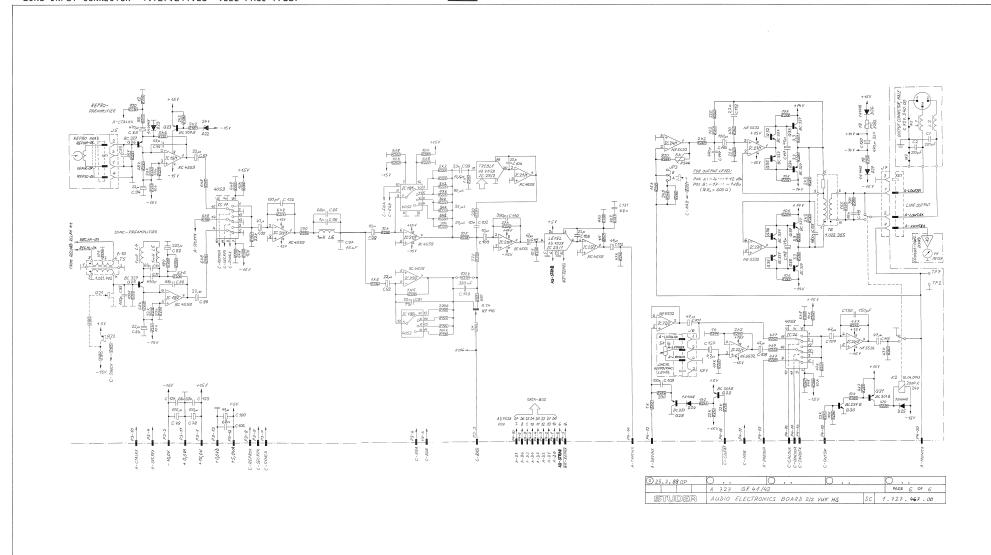




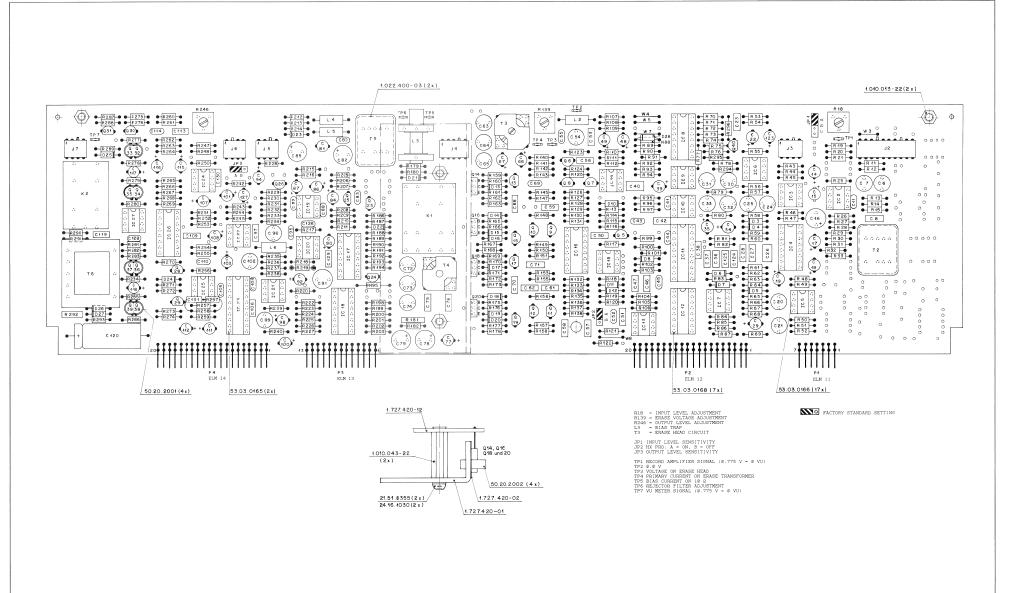
AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)











#### AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42

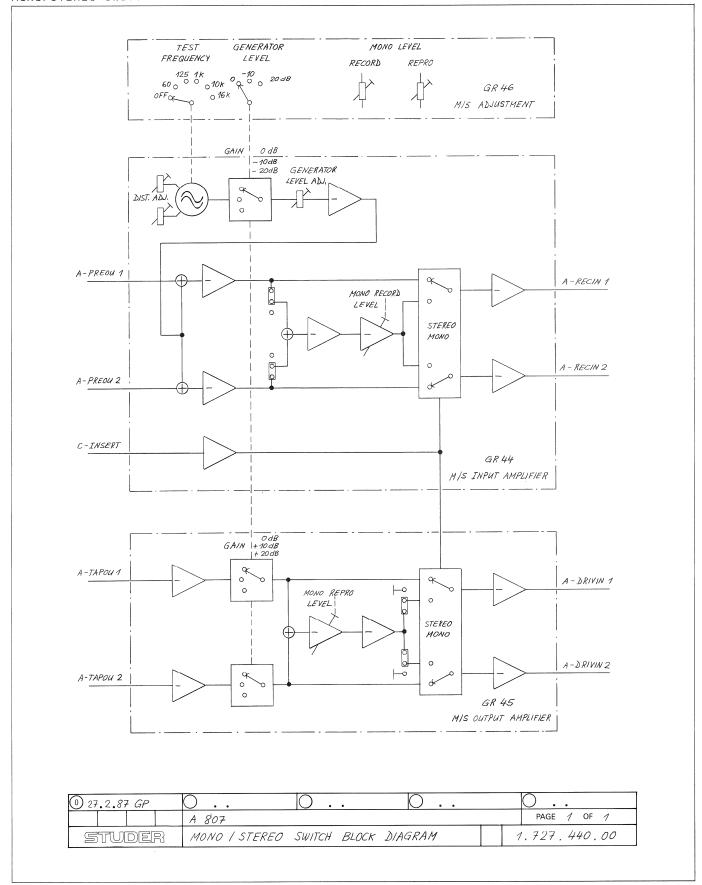
ADDIO ELECTRONICO TO		30 30 47742			
IND. POS.NO. PART NO. VALUE	: SPECIFICATIONS / EQUIVALENT HANUF-	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	ING. PDS-NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C 39-95-1681 S80 pf C 39-55-1681 S80 pf C 39-55-1681 S80 pf C 18 39-25-1681 S80 pf C 18 39-25-1682 S80 pf C 18 39-35-1682 S80	11 300 PP 11 13 500 PP 11 13 500 PP 12 14 500 PP 13 500 PP 14 500 PP 15 500	C124 9.90.0.0083 c8 nf 103 500 PETP C125 370.0.0083 c8 nf 103 500 PETP C127 370.2.0497 4.7 lf208 530 EL C127 370.2.0497 4.7 lf208 530 EL C127 370.2.0497 4.7 lf208 530 EL C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 Pf 101 500 Cer C120 370.4.4151 100 C	51g 5-00 PAGE 4	010 30.03.040.6 86.2378 86.5478 8.55508 WPR   010 30.03.040.6 86.2378 86.5478 8.55508 WPR   011 30.03.040.6 86.2378 86.5478 8.55508 WPR   012 30.03.040.6 86.2378 86.5478 8.55508 WPR   012 30.03.040.6 86.2378 86.5478 86.5508 WPR   023 30.03.040.6 86.2378 86.5578 86.5508 WPR   023 30.03.040.6 86.2378 86.5778 86.5508 WPR   023 30.03.040.6 86.2378 86.5578 86.5588 WPR   024 30.03.040.6 86.2378 86.5578 86.5588 WPR   025 30.03.040.6 86.2378 86.5578 86.5588 WPR   025 30.03.040.6 86.2378 86.5578 86.5588 WPR   025 30.03.040.6 86.2378 86.5578 86.5588 WPR   025 30.03.040.6 86.2378 86.5588 WP	## 1.00
IND+ PDS+N3+ PART ND+ VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NG. PART NO. VALUE SPICIFICATIONS / EQUIVALENT MANUF.	IND. POS.NC. PART ND. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
CV3 99-22-3470 47 uf CV3 99-22-3470 47 uf CV3 99-22-3470 47 uf CV3 99-22-3470 47 uf CV3 99-22-3470 47 uf CV3 99-22-3470 131 13 13 uf CV3 99-22-3471 13 uf CV3 99-22-3270 12 uf	10% 50V Cer 10% 50V PETP 10% 50V Cer 2-5% 630V PP	15  1	Signor State	### 17.11.2021 0.20 Che	8140 S7.11.3220 22 Dhe 8140 S7.11.3220 22 Dhe 8140 S7.11.3220 22 Dhe 8140 S7.11.3230 32 Dhe 8150 S7.11.3230 32 Dhe 8151 S7.11.3210 32 Dhe 8150 S7.11.32
IND. POS.NO. PART NO. VALUE	SPECIFICATIONS / EQUIVALENT HANUF.	ING. POS.NG. PAR'NG. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.	IND. POS.NO. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C	-200	### 1	SE SE SE SE SE SE SE SE SE SE SE SE SE S	7, 711, 120   3 kDhe   13, 0,214   6 c	### 110 ### ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ### 110 ##



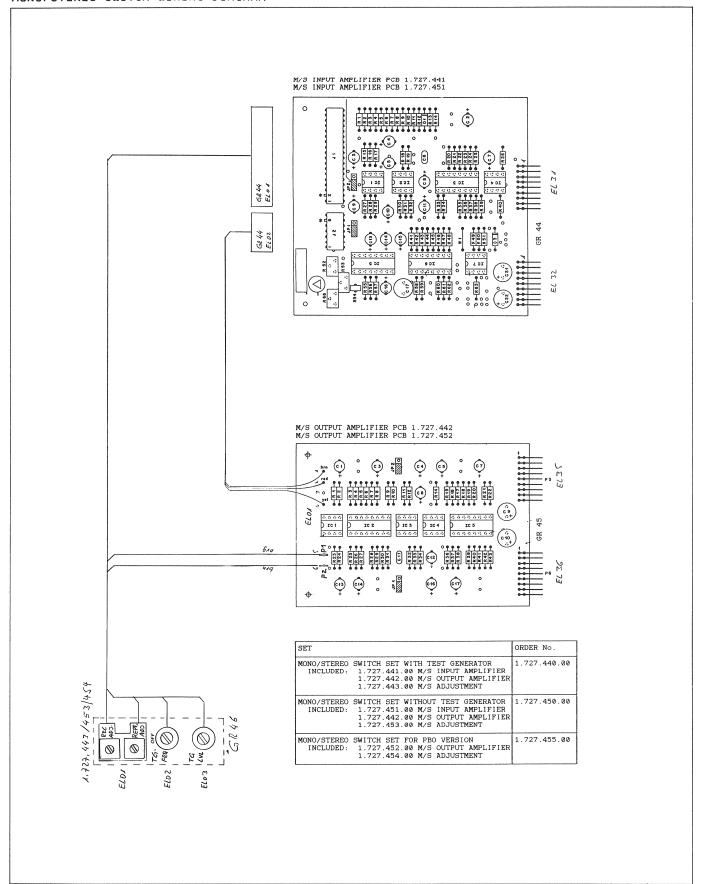
# AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42

ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUE
R***220 R***221 R***222	57.11.3222 57.11.3392	2.2 kOhm 3.9 kOhm	1%, 0.25W, MF not used 1%, 0.25W, MF		XIC 13 XIC 14 XIC 15	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
R • • • 223 R • • • 225	57.11.3563 57.11.3692 57.11.3393	56 kOhm 6-8 kOhm 39 kOhm	1%, 0-25W+ MF 1%, 0-25W+ MF 1%, 0-25W+ MF		XIC 16 ×IC 17 XIC 18	53.03.0168 53.03.0168 53.03.0168	16-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket	
R • • • 226 R • • • 227	57.11.3822 57.11.3473	8.2 kOhm 47 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC19 XIC20	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket	
R • • • 228 R • • • 229 R • • • 230	57•11•3563 57•11•3562 57•11•3683	56 kOhm 5∙6 kOhm 68 kOhm	1%, 0-25W+ MF 1%, 0-25W+ MF 1%, 0-25W+ MF		XIC21 XIC22 XIC23	53.03.0166 53.03.0166 53.03.0165	8-Pole 8-Pole 20-Pole	IC Socket IC Socket IC Socket	
R • • • 231 R • • • 232 R • • • 233	57.11.3333 57.11.3333 57.11.3103	33 kOhm 33 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC • • 24 XIC • • 25 XIC • • 26	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket	
R • • • 234 R • • • 235 R • • • 236	57•11•3271 57•11•3273 57•11•3152	270 Ohm 27 kOhm 1•5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC •• 27	53.03.0166	8-Pole	IC Socket	
R • • • 237 R • • • 238 R • • • 239	57.11.3331 57.11.3103 57.11.3103	330 Ohm 10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 2 40 R • • • 2 41 R • • • 2 42	57•11•3102 57•11•3472	i kühm 4•7 kühm	1%, 0.25W, MF not used 1%, 0.25W, MF						
R • • • 243 R • • • 244 R • • • 245	57.11.3473 57.11.3102 57.11.3222	47 kOhm 1 kOhm 2•2 kOhm	1%, 0.25%, ME 1%, 0.25%, ME 1%, 0.25%, ME						
R246 R247 R248	58.01.8502 57.11.3821 57.11.3392	5 kDhm 820 Ohm 3.9 kOhm	10%, 0.5 W. PMG 1%, 0.25W, ME 1%, 0.25W, ME						
R249 R250 R251	57.11.3153 57.11.3473	15 kOhm 47 kOhm	not used 1%, 0.25W, MF 1%, 0.25W, MF		Cer = Ceramic PP = Polypropy	EL = Electro en MF = Metal i	olytic PET ilm SI	P = Polyester = Silicon	
R 252 R 253 R 254	57.11.3472 57.11.3472 57.11.3331	4.7 kOhm 4.7 kOhm 330 Ohm	1%+ 0-25W+ ME 1%+ 0-25W+ ME 1%+ 0-25W+ ME		MANUFACTURER: AI	DI - Analog Devic = National Ser	es Inc. miconductors	Mot = Motorola Ra = Raytheon St = Studer	
R * * * 255 R * * * 256	57•11•3331 57•11•3102 57•11•3273	1 kOhm 27 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		ORIG 88/02/16	ig = Signetics		St - Studen	
TUDER (	00) 88/02/16 GP	AUDIO EL	ECTR. BOARD 2/2 VUK HS 1.727.467.00	PAGE 13	STUDER (	00) 88/02/16 GP	AUDIO EL	ECTR. BOARD 2/2 VUK HS 1.727.467.0	D PAGE
ND. POS.NO.	PART NO.		SPECIFICATIONS / EQUIVALENT	MA NU F.					
R257 R258	57.11.3102 57.11.3471	1 kOhm 470 Ohm	1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 259 R • • • 260 R • • • 261	57.11.3103 57.11.3221 57.11.3122	10 kOhm 220 Ohm 1.2 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R•••262 R•••263 R•••264	57.11.3471 57.11.3223 57.11.3222	470 Ohm 22 kOhm 2•2 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF						
R•••265 R•••266 R•••267	57.11.3473 57.11.3103 57.11.3682	47 kOhm 10 kOhm 6.8 kUhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R•••268 R•••269 R•••270	57•11•3682 57•11•3103 57•11•3472	6.8 kOhm 10 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 271 R • • • 272 R • • • 273	57•11•3122 57•11•3223 57•11•3223	1.2 kOhm 22 kOhm 22 kOhm	1%, 0.25W, ME 1%, 0.25W, ME 1%, 0.25W, ME						
R274 R275 R276	57.11.3473 57.11.3223 57.11.3103	47 kOhm 22 kOhm 10 kOhm	1%; 0.25W; MF 1%; 0.25W; MF 1%; 0.25W; MF						
R277 R278 R279	57.11.3339 57.11.3103 57.11.3103	3.3 Ohm 10 kOhm 10 kOhm	1%+ 0+25W+ MF 1%+ 0+25W+ MF 1%+ 0+25W+ MF						
R280 R281 R282	57•11•3339 57•11•3222 57•11•3222	3.3 Ohm 2.2 kOhm 2.2 kOhm	1%+ 0-25W+ MF 1%+ 0-25W+ MF 1%+ 0-25W+ MF						
R • • • 283 R • • • 284	57•11•3339 57•11•3103	3+3 Ohm 10 kOhm	1%, 0.25W+ MF 1%, 0.25W+ MF 1%, 0.25W+ MF						
R285 R286 R287	57.11.3103 57.11.3339 57.11.3472	10 kOhm 3.3 Ohm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF						
R288 R289 R290	57.11.3103 57.11.3471 57.11.3391	10 kOhm 470 Ohm 390 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF						
R • • • 291 R • • • 292 R • • • 293	57.11.3152 57.92.1151 57.11.3180	1.5 kOhm 18 Ohm 18 Ohm	1%, 0.25W, MF 150mA, PTC 1%, 0.25W, MF						
TUDER (	00) 88/02/16 GP	AUDIO EL	ECTR. BOARD 2/2 VUK HS 1.727.467.00	PAGE 14					
ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU F.					
R294 R295 R296	57-11-3470 57-11-3223 57-11-3105 57-11-3472	47 Ohm 22 kOhm 1 MOhm 4•7 kOhm	1%, 0.25H, MF 1%, 0.25H, MF 1%, 0.25H, MF 1%, 0.25H, MF						
R***297	1.022.451.00 1.022.271.00	1:0.62	Line Input Trafo Erase Trafo	St St					
T • • • • • 4 T • • • • • 5 T • • • • • 6	1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:10	Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	St St St					
TP1 TP2	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP					
TP3 TP4 TP5	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP AMP					
TP6 TP7	54.02.0320 54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8	AMP AMP					
W3 W4 W5	64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge						
W6 W8	64.01.0106 64.01.0106		not used Wire Bridge Wire Bridge						
XIC 2 XIC 3	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket						
XIC 4 XIC 5 XIC 6	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket						
	53.03.0166	8-Pole 16-Pole	IC Socket IC Socket						
XIC7 XIC8 XIC9	53.03.0168 53.03.0166	8-Pole	IC Socket						

### MONO/STEREO SWITCH BLOCK DIAGRAM (WITH TEST GENERATOR)



### MONO/STEREO SWITCH WIRING DIAGRAM





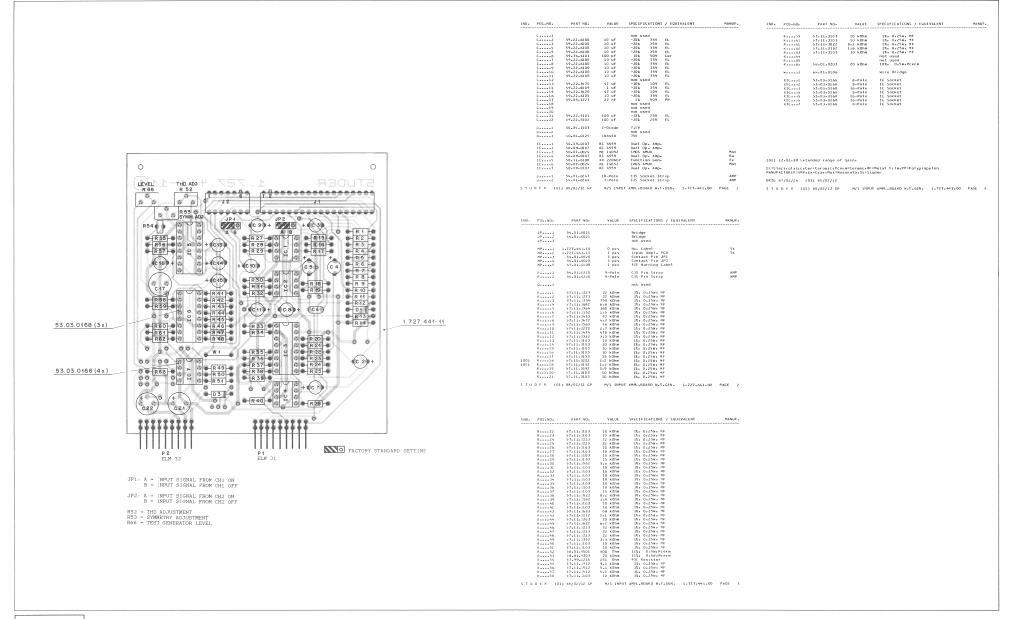
## M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44

A807

M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44	
GRW E11	
LEVEL 1	GR44/EL2
170	J2
PZ REP 3 R-REPUB 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<del></del>
[8] E33 + ME1	KEY 61
1 <sub>0</sub> 0 dB	51
20-10dB S-7G10DB   177	21 <s-t61038< td=""></s-t61038<>
S1 3Q-20dB S-TG20DB 18	+15V 1 S-T62608
	31
13-7660 1 16 183 183 114 1	IC3.9 4 C-HOUGH
52 2 5 5 7 5 7 6 7 12 5 5 7 5 7 6 7 12 5 7 5 7 6 7 6 7 5 7 5 7 6 7 6 7 5 7 6 7 6	
SZA 4 11th	S TEST GEN.
96 10kHz S-TG 10K 1 1 10 4KT R52 20 GENEMIUM 6 T22h	3 LEVEL 10 k R66/
16 kHz 1 4705 500 IC5 6k2 1	-0 1 1200
15 S-T616K 10 SF R53 W R2206 C13 RF4 RF4 RF3 W R53 W	C15 C19
S-TGOFF 111 3k3 187 18 18 18 18 18 18 18 18 18 18 18 18 18	1C7/1>
EL2   5   S-TGB   1   12 4   14   1   1   1   1   1   1   1   1	2 3 + RC 4559
1 28 0°4 1 1/3 1/3 1/43.	
	8k2 1r8 761 R62
S-TGINHI -	
1.727.443.00	
15k 10k	
	-1 401
Trafa 1 T F33	10 k (P40)
1 131 / 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 2
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	13/24/1
J.4 \$\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	RC 4559
(4.5   905)	
	C12
9 104 ( 1000 )	
	+15V
C8 11 3 1 10 3k9 172/2 7	<u>.</u>
JP2 15 + 1 1632 1 16453	E C1
0 - 157	<b>→</b> -\\
15 k 10 k	- R13
C3 10k +15V 9 10 10 10 10 10 10 10 10 10 10 10 10 10	16 10 K
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	+15V
5 6 80 4569	13 6 8
-15V +15V	1C4/2 7 B RC 4559
10k 10k 15 J1.14 10 g	J2.3 -15V 4283
	J2.4
1	
1 100m 3	P1.9
- PRESUL 1 - 45,0 V 1 - 60 V 1 - 50 V 1 - 50 V 1	11.7
-150V -150V -150V -150V +150V +50V	A-REIN 2 A-REIN 1
GR44/EL31 GR44/EL32 GR44/EL31	
① 26.2.87 GP ① 26.3.87 GP ② 12.2.88 GP ○	O
A - 807 GR 44, GR 46	PAGE 1 OF 1
STUDER M/S INPUT AMPL. BOARD WITH TEST GEN. SC 1	. 727 . 441.00

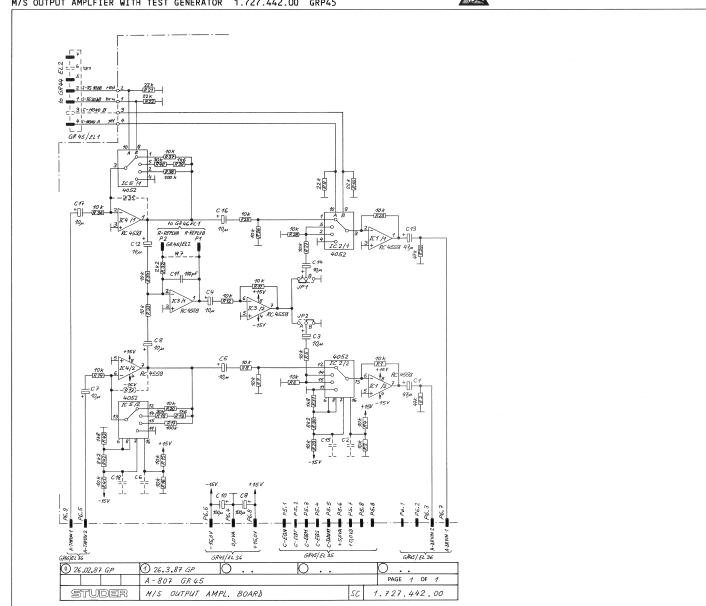


M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44



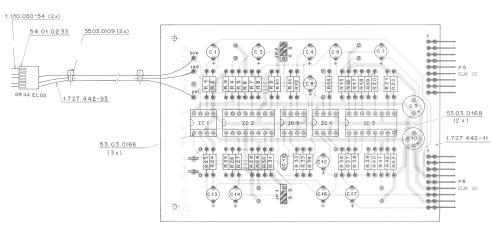


M/S OUTPUT AMPLFIER WITH TEST GENERATOR 1.727.442.00 GRP45





#### M/S OUTPUT AMPLFIER WITH TEST GENERATOR 1.727.442.00 GRP45



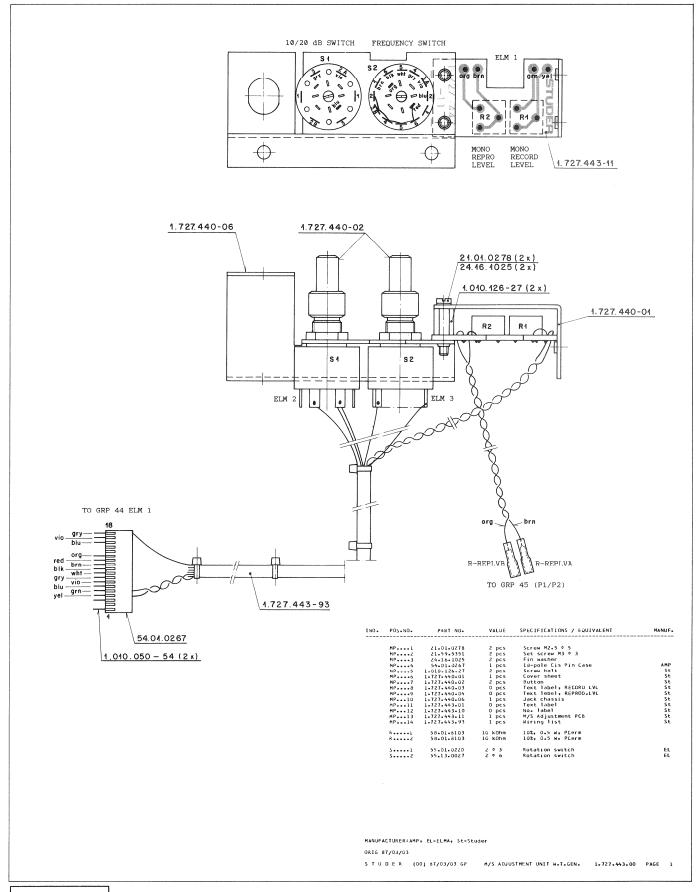
JP1: A = MONO OUTPUT SIGNAL PRESENT ON CH1
B = NO MONO OUTPUT SIGNAL ON CH1
JP2: A = MONO OUTPUT SIGNAL PRESENT ON CH2
B = NO MONO OUTPUT SIGNAL ON CH2

FACTORY STANDARD SETTING

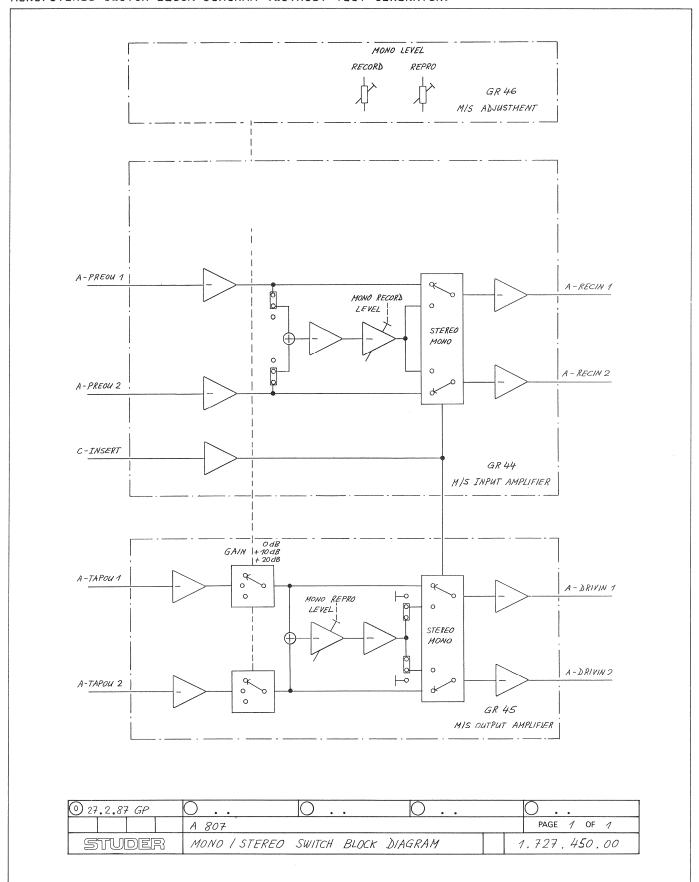
100.

100-						
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVA	LENT	HANUF.
	C	59+22+3470 59+22+6100 59+22+6100 59+22+6100	47 of 10 of 10 of 10 of	-20% LOV EL not used -20% 35V EL -20% 35V EL -20% 35V EL		
	C3 C6 C6 C6 C9 C11 C12 C13 C14 C15 C16 C17 C18	59-22-6100 59-22-6100 59-22-5101 59-22-5101 59-34-4101 59-22-6100	10 uf 10 uf 100 uf 100 uf 100 pf 100 pf	not used  -203 35V EL  -203 35V EL  -203 25V EL  -203 25V EL  103 50V Cer  -203 35V EL  -203 15V EL  -203 15V EL  -203 15V EL		
	C13 C14 C15 C16 C17	59.22.3470 59.22.6100 59.22.6100 59.22.6100	47 uf 10 uf 10 uf 10 uf	-20% 35V EL -20% 10V EL -20% 35V EL not used -20% 35V EL -20% 35V EL not used		
	102 103 104 105	50+09+0107 50-07-0024 50-09-0107 50-09-0107 50-07-0024	RC 4559 HC 14052 RC 4559 RC 4559 HC 14052	Dual Op. Amp. CHOS AHUX Dual Op. Amp. Dual Op. Amp. CHOS AMUX		Mot
	JP····I JP····2	54.01.0021 54.01.0021		Bridge Bridge		
	MP1 MP2 MP3 MP5 MP5 MP5 MP5	1-727-442-10 1-727-442-93 1-727-442-11 54-01-0020 54-01-0020 54-01-0233 43-01-0108 1-727-442-01	0 pcs 1 pcs 1 pcs 3 pcs 3 pcs 1 pcs 1 pcs 1 pcs 0 pcs	No. Label Miring List Gutput Ampl. PCB Contact Pin JP1 Contact Pin JP2 7-Pole Cis Pin Case ESE Warning Label Text Label		St St St
	MP5 MP5	54-01-0233 43-01-0108 1-727-442-01	l pcs l pcs 0 pcs	7-Pole Cis Pin Case ESE Warning Label Text Label		АМР
		l) 87/03/26 Wth			.727.442.00 PA	GE 1
IND.	P05+40+		VALUE	SPECIFICATIONS / EUJIVA	LENT	MANUF.
(01) (01) (00) (01) (00) (01)	P2 P5 P5 P0	54.02.0320 54.02.0320 54.01.0223 54.01.0220 54.01.0223 54.01.0223	2 - 8 + 0 - 8 2 - 8 + 0 - 8 7 - P a 1 e 9 - P a 1 e 9 - P a 1 e 9 - P a 1 e	Contact pin Contact pin CIS Pin Strip CIS Pin Strip CIS Pin Strip CIS Pin Strip		AMP AMP AMP AMP AMP
	R1 R2 R3 R4 R5 R5 R1 R1 R1 R1 R1 R1 R1	57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103	10 kOhm 47 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 22 kOhm 22 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm	250 0.2504 mf 230 0.2504 mf 231 0.2504 mf 232 0.2504 mf		
	R15 R17 R18 R21 R21 R22 R23 R24 R25 R25 R26 R27 R26 R27	57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-3104 57-11-3303 57-11-4223 57-11-4223 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103	10 kOhn 10 kOhn 10 kOhn 10 kOhn 10 kOhn 30 kOhn 1-6 kOhn 11-6 kOhn 11 kOhn 12 kOhn 14 kOhn 16 kOhn 17 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn 18 kOhn	2% 0.29% MF 1% 0.25% MF 1% 0.25% MF 1% 0.25% MF 1% 0.25% MF 2% 0.25% MF		
STU	D E R (0	)[] 87/03/26 Wth	M/S DUTP		.727-442-00 P#	iGE Z
100.	POS.NO.		VALUE	SPECIFICATIONS / EQJIVA	LENT	HANUF.
	R31 R32 R33 R35 R35 R37 R37 R38 R39 R40 R41 R42 R43	57.11.4182 57.11.4222 57.11.4103 57.11.4103 57.11.3103 57.11.3104 57.11.3103 57.11.3102 57.11.303 57.11.4103	1.8 kOhm 2-2 kOhm 1U kOhm 10 kOhm 10 kOhm 10 kOhm 100 kOhm 30 kOhm 30 kOhm 30 kOhm 10 kOhm 31 kOhm 32 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF not used 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	X1C1 X1C2 X1C3 X1C4 X1C5	93.03.0106 93.03.0168 93.03.0166 93.03.0166 93.03.0168	8-Pole 16-Pole 8-Pole 8-Pole	not used IC Socket IC Socket IC Socket IC Socket IC Socket		

#### M/S ADJUSTMENT WITH TEST GENERATOR 1.727.443.00 GRP46

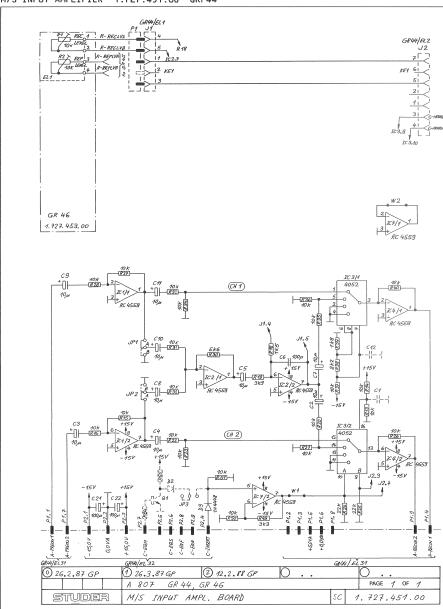


### MONO/STEREO SWITCH BLOCK DIAGRAM (WITHOUT TEST GENERATOR)

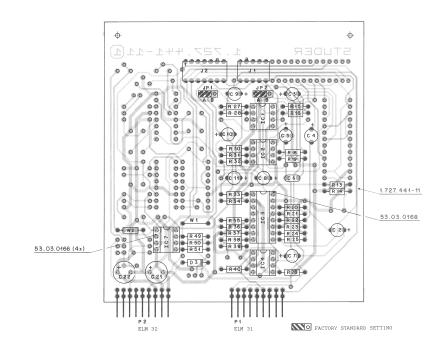








M/S INPUT AMPLIFIER 1.727.451.00 GRP44



JP1: A = !NPUT SIGNAL FROM CH1 ON
B = !NPUT SIGNAL FROM CH1 OFF

JP2: A = !NPUT SIGNAL FROM CH2 ON
B = !NPUT SIGNAL FROM CH2 OFF

I ND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQU	JI VAL ENT	MANU
	C2	59-22-6100 59-22-6100 59-22-6100 59-22-6100 59-34-4101 59-22-6100 59-22-6100 59-22-6100 59-22-6100 59-22-6100 59-22-6100	10 uF	-20% 35V EL		
	C3	59-22-6100	10 uf	-20% 35V EL -20% 35V EL		
	C 5	59.22.6100	10 ur	-20% 35V FI		
	C 7	59-34-4101	100 pf	102 50V Cer		
	C8	59-22-6100	10 uF	-20% 35V EL -20% 35V EL		
	(9	59.22.6100	LO of	-20% 35V FL		
	C10 C11	59.22.6100	10 uF	-20% 35V EL -20% 35V EL		
	(****21	59-22-5101	100 uF	-20% 25V EL -20% 25V EL		
	D 3	59-22-5101 59-22-5101 59-22-5101 50-04-0125	100 uF	-201 25V EL		
	16 1	50.09.0107		Oual Op. Amp.		
	102	50-09-0107 50-07-0024	RC 4559 RC 4559 MC 14052 RC 4559 RC 4559	Dual Op. Amp. CMGS AMUX		
	10 3	50-07-0024	MC 14052 RC 4559	Oual Op. Amp.		Mo Ra
	167	50-09-0107	RC 4559 RC 4559	Oual Op. Amp.		
	J1 J2	54-01-0305 54-01-0244	5-Pole 7-Pole	C1S Socket Strip C1S Socket Strip		AM AM
	JP 1	54.01.0021		Bridge		
	JP Z MP 1	54.01.0021 1.727.451.19	0 pcs	Bridge No. Label		St
	MP.ses2		1 pcs	Input Ampl. PCB		St
	MP 3 MP 4	54+01+0020 54+01+0020	1 pcs 3 pcs 3 pcs	Contact Pin JP1		
	MP	54.01.0020 43.01.0108	3 pcs 3 pcs 1 pcs	Input Ampl. PCB Contact Pin JP1 Contact Pin JP2 ESE Warning Label		
	P 1 P 2	54.01.0220 54.01.0220	9-Pole 9-Pole	CIS Pin Strip CIS Pin Strip		AH AH
	R13			12+ 0+25#+ MF		
T 1*	n s s	1) 88/02/12 GP		AMPL - BOARD	1.727.451.00	PAGE
	POS-NO-	PART NO.	VALUE	SPECIFICATIONS / EQ	UIVALENT	HAN.
IND.	POS-NO- R14				ULVALENT	HANU
IND.	R14 R15				ULVALENT	HANU
(00)	R14 R15 R16 K18				ULVALENT	HANU
(00)	R14 R15 R16 R18				UIVALENT	HANU
(00)	R14 R15 R16 R18 R19 R20				ULVALENT	HANU
(00)	R14 R15 R16 R18 R19 R20				ULVALENT	HANU
(00)	R16 R15 R16 R18 R19 R20 R21				ULVALENT	HANU
(00)	R14 R15 R16 R18 R19 R20 R21 H22 K23 R23				UL VALENT	HANU
(00)	R14 R15 R16 R18 R19 R20 R21 R21 R22 K23 R24 R24				ULVALENT	HANU
(00)	R14 R15 R16 R18 R19 R20 R21 R22 K23 R24 K25 R26 R27				ULVALENT	HANU
(00) (01)	R 14 R 15 R 16 K 18 R 19 R 20 R 21 K 22 K 23 R 24 K 25 R 25 R 27 R 27 R 28				ULYALENT	MANU
(00)	R14 R15 R16 K18 R18 R19 R21 K21 K22 K23 R24 R25 R25 R26 R27 R28 R28 R28 R29 R28 R29 R20 R				ULVALENT	HAND
(00)	R				ULVALENT	HAND
(00)	R				UVALENT	HANU
(00)	R14 R15 R16 R18 R19 R21 K22 R23 R24 K25 R27 R27 R27 R28 R29 R30 R31 R31 R32 R33 R33 R33 R34 R33 R34 R35 R35 R35 R35 R36 R.				UVALENT	MANU
(00)	R				UVALENT	MANU
(00)	R. 19 R. 15 R. 16 R. 18 R. 19 R. 20 R. 21 R. 22 R. 27 R. 21 R. 21 R. 28 R. 20 R. 31				UVALENT	MANU
(00)	R. 14 R. 15 R. 16 R. 18 R. 18 R. 22 R. 22 R. 23 R. 24 R. 25 R. 26 R. 27 R. 26 R. 27 R. 26 R. 27 R. 27 R. 29 R. 20 R. 27 R. 29 R. 20 R. 20				USVALENT	MANU
(00)	R. 19 R. 15 R. 16 R. 18 R. 19 R. 20 R. 21 R. 22 R. 27 R. 21 R. 21 R. 28 R. 20 R. 31				UVALENT	MANU
(00)	R. 19 R. 15 R. 18 R. 18 R. 19 R. 21 R. 22 R. 22 R. 22 R. 26 R. 27 R. 29 R. 30 R. 31 R. 31		10 k0hm 10 k0hm 10 k0hm 2.2 k0hm 1.5 k0hm 3.9 k0hm 10 k0hm 10 k0hm 10 k0hm 22 k0hm 22 k0hm 10 k0hm		UVALENT	HANU
(00)	R. 14 R. 15 R. 15 R. 18 R. 18 R. 19 R. 22 R. 21 R. 31 R.	37.11.3103 57.11.3103 57.11.3103 57.11.3122 57.11.3122 57.11.3123 57.11.3103	10 kOhn 10 kOhn	11. 0.254 · FF 11. 0.	USVALENT	HANU
(00)	R14 R15 R15 R15 R16 R18 R18 R12 R22 R22 R22 R23 R23 R23 R25 R25 R26 R27 R25 R26 R27 R25 R26 R27 R26 R27 R26 R27 R27 R27 R27 R27 R27 R27 R27 R27 R28 R27 R28 R27 R29 R29 R20 R20 R20 R20 R20 R31 R34 R35 R35 R36 R36 R36 R36 R37 R36 R37 R38	77-11-3103 57-11-3103	10 kOhn 13 kOhn 13 kOhn 13 kOhn 13 kOhn 14 kOhn 14 kOhn 15 kOhn 16 kOhn 17 kOhn 18 kOhn 18 kOhn 19 kOhn 10 kOhn	11. 0.254 · FF 11. 0.	UVAA ERT	HANU
(00)	R. 14 R. 15 R. 15 R. 18 R. 18 R. 19 R. 18 R. 19 R. 19 R. 19 R. 19 R. 22 R. 22 R. 24 R. 27 R. 28 R. 30 R.	37-11-3103 57-11-3103 57-11-3103 57-11-3122 57-11-3122 57-11-3103 57-11-	10 kOhn 13 kOhn 13 kOhn 13 kOhn 13 kOhn 14 kOhn 14 kOhn 15 kOhn 16 kOhn 17 kOhn 18 kOhn 18 kOhn 19 kOhn 10 kOhn	11. 0.254 · FF 11. 0.	USVAA ERT	HAM
(00) (01)	R	77-11-3103 57-11-3103	10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 11 kOhm 11 kOhm 11 kOhm 10 kOh	11. 0.25% of 11. 0.25% of 12. 0	1-727-451-00	
(00) (01)	R	77-11-303 77-11-303 77-11-31	10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 11 kOhm 11 kOhm 11 kOhm 10 kOh	12. 0.25% of 12. 0	1.727.451.00	

(01) 12:02:68 Extended range of gain:

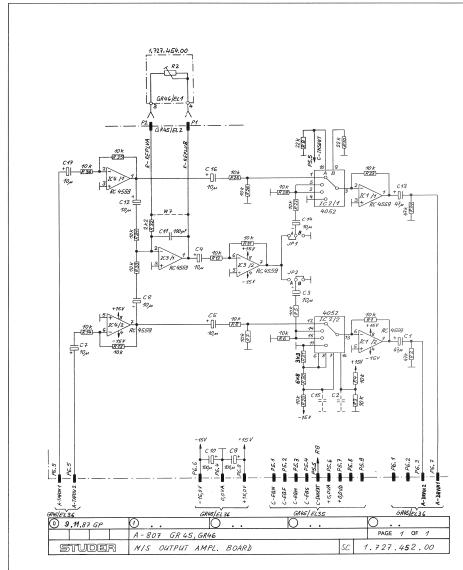
EL=electrolytic.Cer=Ceramic.Peerm=Cermet.MF=Hetal Film+PP=Polypropylen MANUFACTURER:AMP+Ex=Ex=r-Mot=Motorold+St=Studer

\$1\\$0\88 (10) 6\\$0\78 01AD

S T U D E R (01) 88/02/12 GP M/S INPUT AMPL. BOARD 1.727-451-00 PAGE 3

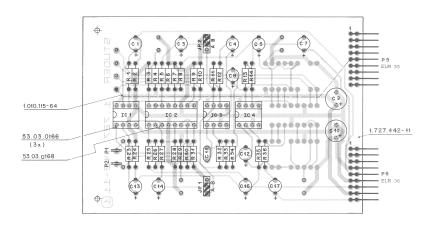


#### M/S OUTPUT AMPLIFIER PB0 1.727.452.00 GRP45





#### M/S OUTPUT AMPLIFIER PBO 1.727.452.00 GRP45



FACTORY STANDARD SETTING

JP1: A - MONO OUTPUT SIGNAL PRESENT ON CH1 B - NO MONO OUTPUT SIGNAL ON CH1

JP2: A = MONO OUTPUT SIGNAL PRESENT ON CH2
B = NO MONO OUTPUT SIGNAL ON CH2

IND.	POS.ND.	PART NO.	VALUE	SPECIFICATIONS / EQU	JIVALENT MANUF.
	C1	59.22.3470	47 uF	-20% 10V EL	
	6 5			not used	
	Ç 3	59.22.6100	10 UF 10 UF	-20% 35V EL -20% 35V EL -20% 35V EL -20% 35V EL -20% 35V EL	
	65	59.22.6100	10 UF 10 UF 10 UF 10 UF 100 UF 100 UF 100 UF 10 UF 47 UF	-20% 35V EL	
	C 7	59.22.6100	10 UF	-202 35V EL	
	C8	59.22.6100	10 uF	-20% 35V EL	
	C * * * * * 9	59.22.5101	100 uF	-20% 25V EL	
	C10	59-22-5101	100 uF	-20% 25V EL 10% 50V Cer -20% 35V EL -20% 10V EL -20% 35V EL	
	C12	59-22-6100	100 pr	-209 15V Cer	
	C13	59.22.3470	47 UF	-20% 10V EL	
	C 14	59.22.6100 59.22.3470 59.22.6100	10 uF	-20% 35V EL	
	C16				
	C 17	59-22-6100	10 06	-20% 35V EL -20% 35V EL	
	101	50.09.0107	RC 4559	Oual Op. Amp.	
	15 2	50.07.0024	MC 14052	CHOS AMUX	Mot
	103	50.09.0107	RC 4559	CMOS AMUX Dual Dp. Amp. Dual Dp. Amp.	
		3010710107	NC 4334	обат ора жира	
	JP L	54.01.0021		Bridge	
	JP 2	54.01.0021		Bridge	
	W0 1	1 727 667 10	0	No. Label Hire Output Ampl. PCB Contact Pin JP1 Contact Pin JP2 ESE Warning Label	St
	MP Z	140104115466	150 en	Mire	34
	MP3	1.727.442.11	1 pcs	Output Ampl. PCB	5 t
	MP 4	54+01+0020	3 pcs	Contact Pin JP1	
	MP5	1.727.452.10 1.010.115.64 1.727.442.11 54.01.0020 54.01.0020 43.01.0108	3 pcs	Contact Pin JP2 ESE Warning Label	
	P 1	54+02+0320	2.800.8	Contact pin Contact pin CIS Pin Strip CIS Pin Strip	AMP
	P 2 P 5	54+02+0320	2-800-8	Contact pin	AHP
	P * * * * * 6	54.01.0220 54.01.0220	9-Pole	CIS Pin Strip	AMP
	r ******	34.01.0220	4-5016	CIS Pin Strip	AHP
IND.	POS.ND.	PART NO.	VALUE	SPECIFICATIONS / EQU	ILVALENT MANUF.
IND.					IVALENT MANUF.
IND.					IVALENT MANUF-
IND.					IIVALENT MANUF-
IND.	R1 R2 R3				IVALENT HANUF-
IND.	R1 R2 R3 K5				HANUF-
IND.	R1 R2 R3 K5 R5				IVALENT HANUF-
IND.	R				IIVALENT MANUF.
IND.	R2 R2 R3 R5 R5				IVALENT HANUF.
IND	R				IVALENT HANUF.
IND.	R1 R2 R3 R5 R5 R0 R9 R9 R10				IVALENT MANUF.
IND.	R 1 R 2 R 3 R 5 H 0 H 17 R 9 R 10 R 11 R 11				IIVALENT HANUF-
IND.	R1 R2 R3 K4 R5 K0 R7 R9 R10 R11 R12 R11				TVALENT MANUF.
IND.	R1 R2 R3 K4 R5 K6 K9 R9 R10 R11 R12 R13 R14				IVALENT MANGE-
IND	R1 R2 R3 K9 R5 K0 R9 R9 R11 R12 R12 R14 R14 R23				IIVALENT MANUF-
IND.	R 1 R 2 R 3 K 5 K 5 K 0 K 10 K 11 K 12 K 13 K 14 R 23 K 24 K 25 K - 25				TIVALENT MANUF.
IND.	R 1 R 2 R 3 R 5 K 7 R 5 K 11 K 11 K 12 K 13 K 14 K 23 R - 25 R - 25 R - 25 R - 26 R - 27				IIVALENT HANGE-
IND.	R 1 R 2 R 3 K 5 K 5 K 5 K 7 R 9 K 10 K - 11 K - 12 K - 13 K - 14 R - 23 K - 25 K - 25 K - 27 K - 27				IIVALENT MANUF.
IND.	R 1 R 2 R 3 K 5 K 5 K 7 R 9 K 11 H 12 K 14 H 23 K 25 R 25 R 26 R 27 R 28				TVALENT MANUF-
IND	R1 R2 R - 3 G - 5 R - 5 R - 5 R - 10 R - 11 R - 12 R - 13 R - 14 R - 23 R - 25 R - 27 R - 25 R - 27 R - 25 R - 27 R - 25 R - 27 R - 28 R - 29 R - 27 R - 28 R - 29 R - 29 R - 29 R - 20 R - 20				IIVALENT HANGE-
IND	R	97.11.4103 97.11.4103	10 kOhe 17 kOhe 10 kOh	23. 0.25M, MF 24. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 26. 0.25M, MF	IIVALENT MANUF.
IND.	R	97.11.4103 97.11.4103	10 kOhe 17 kOhe 10 kOh	23. 0.25M, MF 24. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 26. 0.25M, MF	IIVALĒNT HANGF.
IND.	R	97.11.4103 97.11.4103	10 kOhe 17 kOhe 10 kOh	23. 0.25M, MF 24. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 26. 0.25M, MF	IIVALENT HANGF.
IND.	R	97.11.4(0) 97.11.4(1)	10 kOhe 47 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 12 kOhe 13 kOhe 14 kOhe 15 kOhe 16 kOhe 17 kOhe 18 kOhe 18 kOhe 19 kOhe 19 kOhe 10 kOh	23. 0.234. MF 23. 0.234. MF	TIVALENT MANUF.
IND	R	97.11.4103 97.11.4103	10 kOhe 17 kOhe 10 kOh	23. 0.25M, MF 24. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 25. 0.25M, MF 26. 0.25M, MF	IIVALENT HANGE-
IND	R	97-11-4103 97-11-4173 97-11-4103	10 kOhn 47 kOhn 10 kOhn 10 kOhn 10 kOhn 110 kOhn	23. 0.254, M5 23. 0.254, M5 24. 0.254, M5 25. 0.254, M7 25	TIVALENT MANUF.
IND.	R	97-11-4103 97-11-4173 97-11-4103	10 kOhn 47 kOhn 10 kOhn 10 kOhn 10 kOhn 110 kOhn	23. 0.254, M5 23. 0.254, M5 24. 0.254, M5 25. 0.254, M7 25	IIVALENT HANGE.
IND	R	97-11-4103 97-11-4173 97-11-4103	10 kOhe 47 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 10 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 11 kOhe 12 kOhe 13 kOhe 14 kOhe 15 kOhe 16 kOhe 17 kOhe 18 kOhe 18 kOhe 19 kOhe 19 kOhe 10 kOh	23. 0.254, M5 23. 0.254, M5 24. 0.254, M5 25. 0.254, M7 25	IIVALENT MANUF.

TWD. POS.HO. PART YO. VALUE SPECIFICATIONS / EQUIVALENT MANUF

S T U O E R (00) 07/11/09 GP M/S OUTPUT AMPL. BDARD 1.727.452.00 PAGE Z

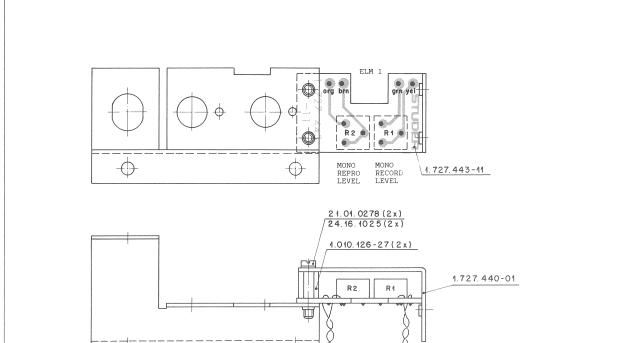
EL-Electrolytic,Ger-Geramic,MF-Metal Film MANUFACTURER:AMP,Mot-Motorola,St-Studer

ORIG 87/11/0

\$ F U O E R (00) U7/11/09 GP M/S DUTPUT AMPL. BOARD 1.727.452.00 PAGE 3

#### M/S ADJUSTMENT 1.727.453.00 GRP46

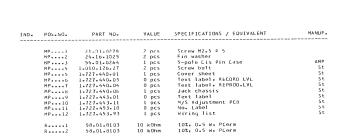
1.727.440-06



org

R-REPLVB R-REPLVA

TO GRP 45 (P1/P2)



MANUFACTURER: AMP + St=Studer

ORIG 87/03/UZ

S T U D E R (00) HT/03/02 GP M/S ADJUSTMENT UNIT

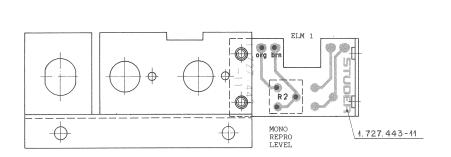
1 • 72 7 • 45 3 • 00 PAGE 1

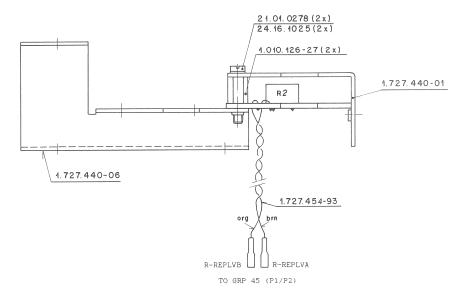
54.01.0264

yei R-RECLVA grn R-RECLVB

1.010.050-54(2x)
TO GRP 44 ELM 1

### M/S ADJUSTMENT PBO 1.727.454.00 GRP46



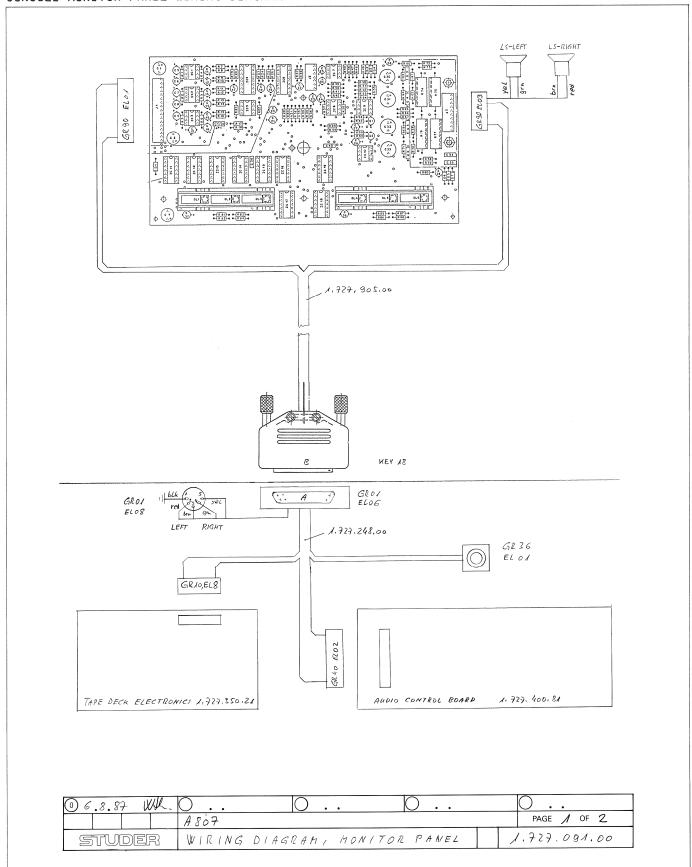


I NO •	PO5 + NO +	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP 1	21.01.0278	2 pcs	Screw M2+5	
	MP 2	24-16-1025	2 pcs	Fin washer	
	MP 4	1-010-126-27	2 pcs	Screw bolt	St
	MP 5	1-727-440-01	1 pcs	Cover sheet	St
	MP 7	1 = 72 7 = 440 = 04	0 pcs	Text label, REPRODaLVL	St
	MPB	1-727-440-06	1 pcs	Jack chassis	St
	MP10	1 - 72 7 - 44 3 - 11	1 pcs	M/S Adjustment PCB	St
	MP.s.ll	1.727.454.10	0 pcs	No. Label	St
	MP • • • 12	1.727.454.93	1 pcs	Wiring list	St
	P 2	58-01-8103	10 kObm	10% 0.5 We Pierm	

MANUFACTURER: AMP+St=Studer

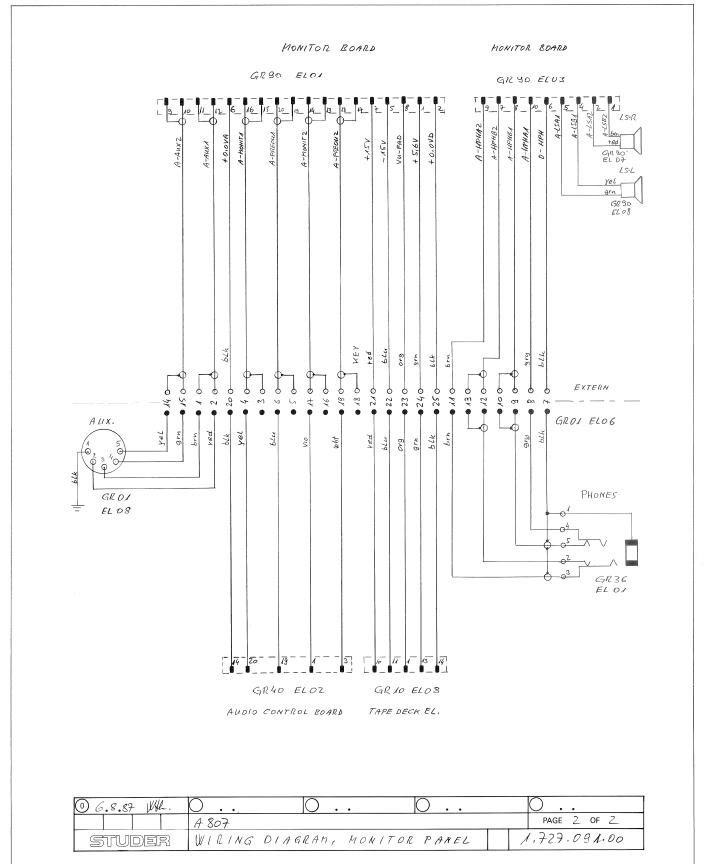
S T U D E R (00) 87/11/12 Wth M/S ADJUSTMENT PBO UNIT 1.727.454.00 PAGE 1

### CONSOLE MONITOR PANEL WIRING DIAGRAM



A807

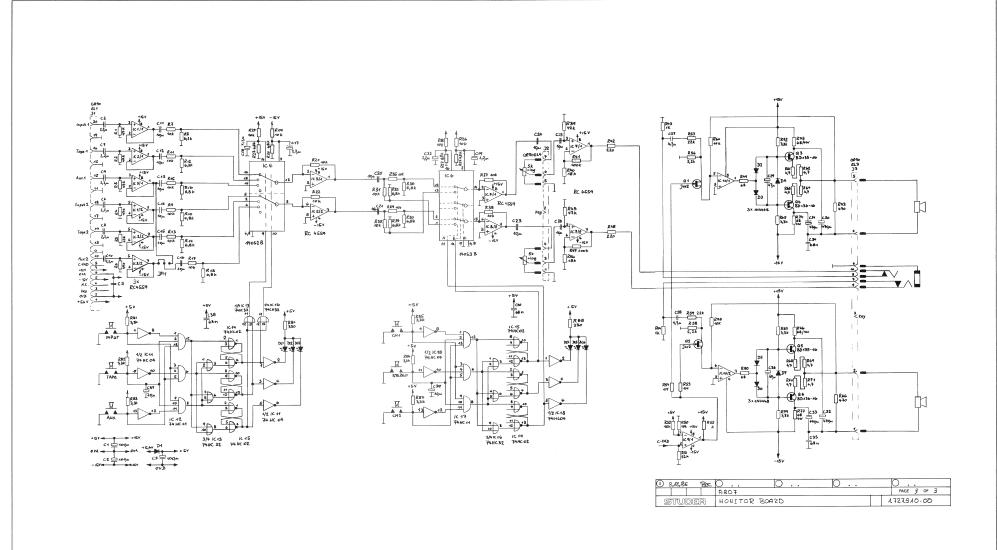
### CONSOLE MONITOR PANEL WIRING DIAGRAM



A807



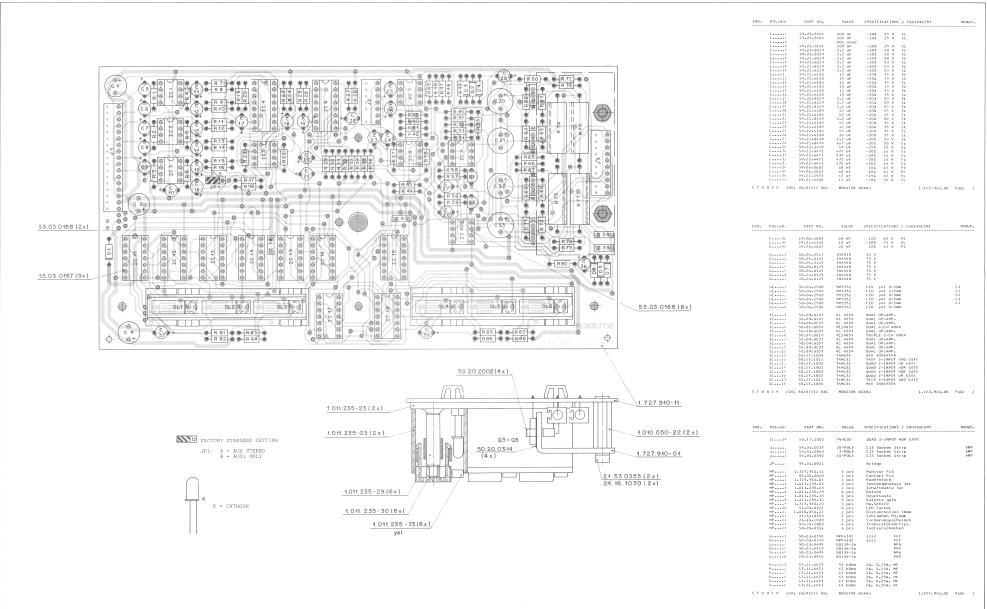
CONSOLE MONITOR 1.727.910.00 GRP90



STUDER A807 7/132



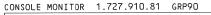
CONSOLE MONITOR 1.727.910.00 GRP90

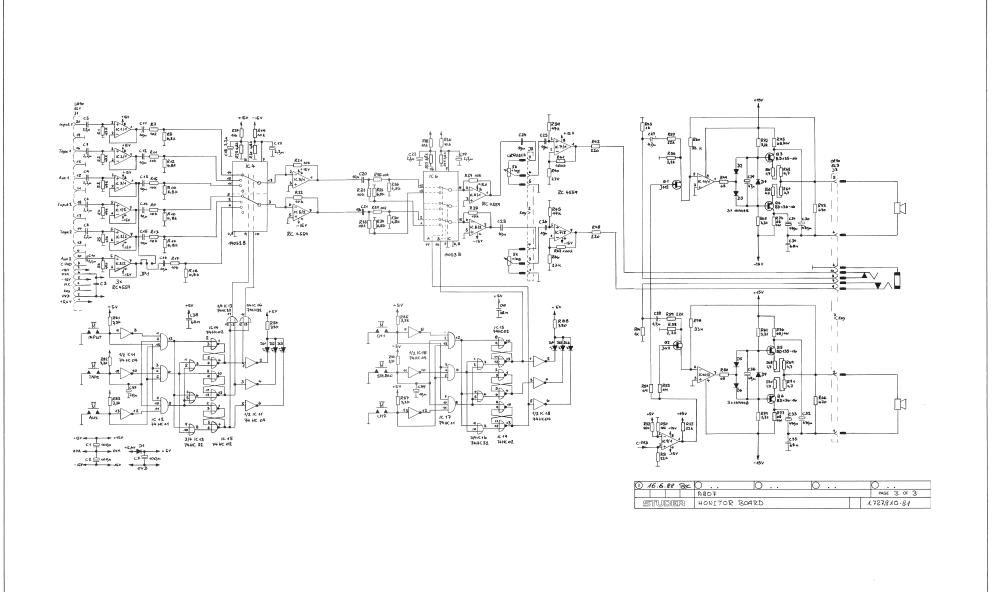




# CONSOLE MONITOR 1.727.910.00 GRP90

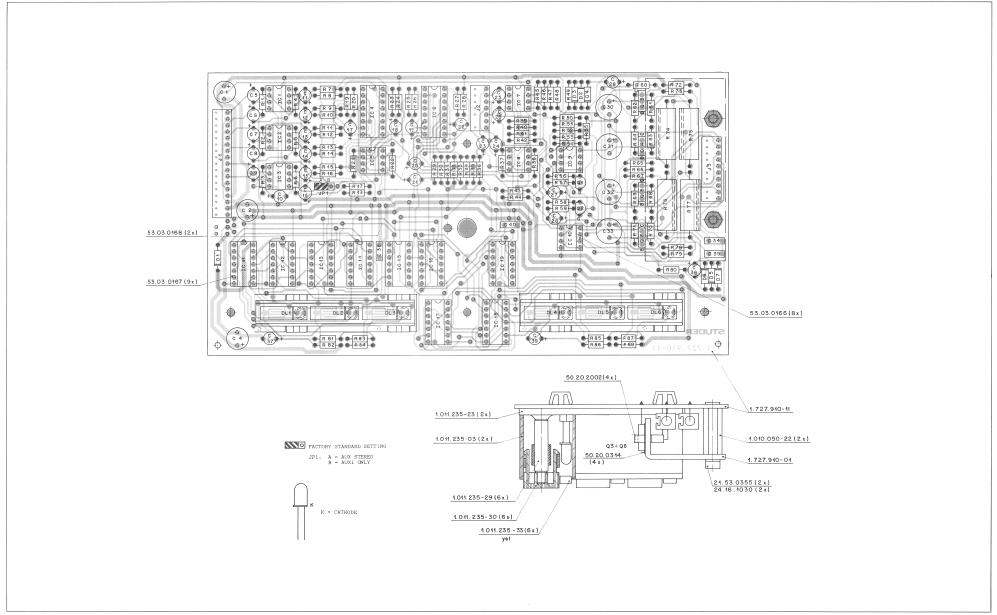
IND.	PO\$ . NO .	PART NO.	VALUE	SPECIFICATIONS /	EQUI VALENT	MA NUF.
	R7 R8 R9	57-11-4103 57-11-4682 57-11-4103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R10 R12	57-11-4682 57-11-4105 57-11-4682	6.8 kOhm 10 konu 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 1 4 R 1 5 R 1 6	57-11-4103 57-11-4682 57-11-4103 57-11-4682	10 kOhm 6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R18 R19	57-11-4103 57-11-4582 57-11-4103	10 kOhm 6-8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 20 R 21 K 22	57.11.4682 57.11.4103 57.11.4103	6.8 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 23 R 24 R 25 R 26	57.11.4682 57.11.4103 57.11.4682 57.11.4103	6.8 kOhm 10 kOhm 6.8 kOhm 10 kOhm	2% 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 27 R 28 R 29	57.11.4682 57.11.4103 57.11.4103	6.8 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 30 R 31 R 32 R 33	57.11.4682 57.11.4103 57.11.4682 57.11.4103	6.8 kOhm 10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	R • • • • 34 K • • • • 35 R • • • • 36	57-11-4682 57-11-3103 57-11-4682	6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R38 R39 R40	57.11.4103 57.11.4103 57.11.4473 57.11.4183	10 kOhm 10 kOhm 47 kOhm 18 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • • 41 R • • • • 42 R • • • • 43	57.11.4104 57.11.4221 57.11.4102	100 kOhm 220 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
ѕτυ	0 E R (	00) 86/07/11 BEC	MONITOR	BOARD	1.727.910.00	PAGE 4
	POS • NO •	PART NO.	VALUE	SPECIFICATIONS /	EQUI VALENT	MANUF.
	R44 K45	57•11•4102 57•11•4473	1 kOhm 47 kOhm	2% 0.25W, MF 2% 0.25W, MF		
	R • • • • 46 R • • • • 47 R • • • • 48	57.11.4183 57.11.4104 57.11.4221	18 kOhm 100 kOhm 220 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 49 R 50 R 51 R 52	57.11.4680 57.11.4103 57.11.4223 57.11.4103	68 Ohm 10 kOhm 22 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	R • • • • 53 R • • • • 54 R • • • • 55	57.11.4105 57.11.4105 57.11.4223	1 MOhm 1 MOhm 22 kOhm	2%, 0.25W, Mf 2%, 0.25W, Mf 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R 56 R 57 R 58 R 59	57.11.4222 57.11.4223 57.11.4222 57.11.4223	2,2 kOhm 22 kOhm 2,2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • • 60 R • • • • 61 R • • • • 62	57•11•4103 57•11•4479 57•11•4479	10 kOhm 4.7 Ohm 4.7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R63 R64 R65	57.11.4479 57.11.4479 57.11.4332	4.7 Ohm 4.7 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R66 R67 R68 R69	57.11.4471 57.11.4332 57.11.4479 57.11.4479	470 Ohm 3.3 kOhm 4.7 Ohm 4.7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R70 R71 R72 R73	57.11.4479 57.11.4479 57.11.4332 57.11.4471	4.7 Ohm 4.7 Ohm 3.3 kOhm 470 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	R74 R75 R76	57.56.5680 57.56.5680 57.56.5680	68 Ohm 68 Ohm 68 Ohm	2%, 4 W, DR 2%, 4 W, DR 2%, 4 W, DR		
	R77 R78 R79	57.56.5680 57.11.4103 57.11.4332	68 Ohm 10 kOhm 3.3 kOhm	2%, 4 W, DR 2%, 0.25W, MF 2%, 0.25W, MF		
s T U	R****80 DER (	57.11.4680 00) 86/07/11 BEC	68 Ohm	2%, 0.25W, MF BOARO	1.727.910.00	PAGE 5
IND.	PO\$ - NO -	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MA NUF.
	R * * * * * 81 R * * * * 82	57-11-4332 57-11-4332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R * * * * * 83 R * * * * 84 R * * * * 85	57.11.4332 57.11.4331 57.11.4332	3.3 kOhm 330 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	R86 R87 R88	57-11-4332 57-11-4332 57-11-4331	3.3 kOhm 3.3 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	XIC···1 XIC···2 XIC···3	54.03.0166 54.03.0166 54.03.0166	8 Pole 8 Pole 8 Pole	IC Socket IC Socket IC Socket		
	XIC 4 XIC 5 XIC 6 XIC 7	54*03*0168 54*03*0166 54*03*0168 54*03*0166	16 Pole 8 Pole 16 Pole 8 Pole	IC Socket IC Socket IC Socket IC Socket		
	XIC8 XIC9 XIC10	54.03.0166 54.03.0166 54.03.0166	8 Pole 8 Pole 8 Pole	IC Socket IC Socket IC Socket IC Socket IC Socket		
	XIC 11 XIC 12 XIC 13 XIC 14	54.03.0167 54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket		
	XIC 15 XIC 16 XIC 17	54.03.0167 54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket IC Socket		
	XIC18 XIC19	54.03.0167 54.03.0167	14 Pole 14 Pole	IC Socket		
EL=E1	ectrolytic	. PP=Polypropylen	SI=Silico	n • MF≃Metal Film		
MANUF	ACTURER: 86/07/11	,, -,, -,,				
STU	DER (	00) 86/07/11 BEC	MONITOR	BOARD	1.727.910.00	PAGE 6





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CONSOLE MONITOR 1.727.910.81 GRP90

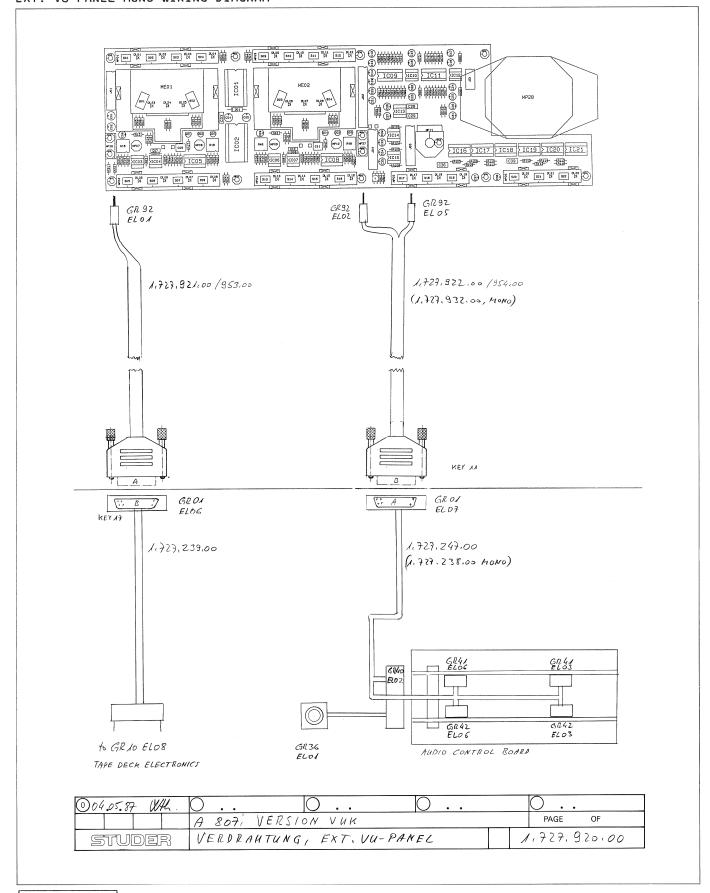




# CONSOLE MONITOR 1.727.910.81 GRP90

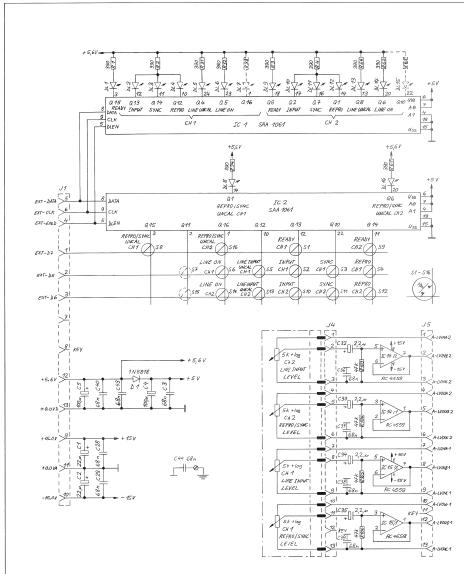
0.	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I ND .	POS÷NO.	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MANUE
	C 2	59.22.5101 59.22.5101	100 uF 100 uF	-20% 25 V EL -20% 25 V EL			R7 R8	57.11.3103 57.11.3682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 4 C 5	59.22.5101	not used 100 uF	-20% 25 V EL -20% 50 V EL			R9 R10 R11	57.11.3103 57.11.3682 57.11.3103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 7	59.22.8229 59.22.8229 59.22.8229	2.2 uF 2.2 uF 2.2 uF	-20% 50 V EL -20% 50 V EL			R13	57.11.3082 57.11.3103 57.11.3682	0.8 KUNM 10 kOhm 6.8 kOhm	2%, 0.25W, MF		
	C 9 C 10	59.22.8229 59.22.8229 59.22.8229	2.2 uF 2.2 uF 2.2 uF	-20% 50 V EL -20% 50 V EL -20% 50 V EL			R14 R15 R16	57.11.3103 57.11.3682 57.11.3682	10 kOhm 6.8 kUhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 11	59.22.6100 59.22.6100	10 uF 10 uF	-20% 35 V EL -20% 35 V EL			R17 R18	57-11-3103 57-11-3682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C13 C14 C15	59.22.6100 59.22.6100 59.22.6100	10 uF 10 uF 10 uF	-20% 35 V EL -20% 35 V EL -20% 35 V EL			R19 R20 R21	57.11.3103 57.11.3682 57.11.3103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 16 C 17	59.22.6100 59.22.8229	10 uF 2•2 uF	-20% 35 V EL -20% 50 V EL			R 22 R 23	57.11.3103 57.11.3682	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C18 C19 C20	59.22.8229 59.22.8229 59.22.6100	2.2 uF 2.2 uF 10 uF	-20% 50 V EL -20% 50 V EL -20% 35 V EL			R 24 R 25 R 26	57.11.3103 57.11.3682 57.11.3103	6.8 kOhm 10 kUhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C22	59.22.6100 59.22.8229 59.22.6100	10 uF 2.2 uF 10 uF	-20% 35 V EL -20% 50 V EL -20% 35 V EL			R 27 R 28 R 29	57.11.3682 57.11.3103 57.11.3103	6.8 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 23 C 24 C 25	59.22.6100 59.22.6100	10 uF 10 uF	-20% 35 V EL -20% 35 V EL			R30 R31	57.11.3682 57.11.3103	6.8 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 26 C 27 C 28	59.22.6100 59.22.8479 59.22.8479	10 uF 4,7 uF 4,7 uF	-20% 35 V EL -20% 50 V EL -20% 50 V EL			R 32 R 33 R 34	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C **** 29 C **** 30	59.22.3470 59.22.4471	47 uF 470 uF	-20% 10 V EL -20% 16 V EL			R • • • • 35 R • • • • 36 R • • • • 37	57.11.3103 57.11.3682 57.11.3103	10 kühm 6.8 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 32 C 33	59.22.4471 59.22.4471 59.22.4471	470 uF 470 uF 470 uF	-20% 16 V EL -20% 16 V EL			R 38 R 39	57-11-3103 57-11-3473	10 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 34 C 35 C 36	59.06.0683 59.06.0683 59.22.3470	68 nF 68 nF 47 uF	10% 63 V PE 10% 63 V PE -20% 10 V EL			R 40 R 41 R 42	57-11-3273 57-11-3104 57-11-3221	27 kOhm 100 kOhm 220 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
τυ	C 37	59-22-6100 0) 88/03/28 Wth	10 uF	-20% 35 V EL	•81 PAGE 1	s T u	R43	57.11.3102 0) 88/03/28 Wth	1 kühm MONITOR E	2%+ 0.25W+ MF	1.727.910.81	PAGE
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I ND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	UNAM
	C 38 C 39 C 40	59.06.0683 59.22.6100 59.06.0683	68 nF 10 uF 68 nF	10% 63 V PE -20% 35 V EL 10% 63 V PE			R 44 R 45 R 46	57.11.3102 57.11.3473 57.11.3273	1 kOhm 47 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	D••••1 D••••2	50.04.0512 50.04.0125	1N5818 1N4448	30 V 75 V			R 47 R 48 R 49	57.11.3104 57.11.3221 57.11.3680	100 kOhm 220 Ohm 68 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	D4	50.04.0125 50.04.0125	1N4448 1N4448	75 V 75 V			R • • • • 50 R • • • • 51	57-11-3103 57-11-3223	10 kOhm 22 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	D5 D7	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	75 V 75 V 75 V			R • • • • 52 R • • • • 53 R • • • • 54	57-11-3103 57-11-3105 57-11-3105	1 MOhm 1 MOhm	2%, 0.25W, Mf 2%, 0.25W, Mf		
	DL1	50.04.2500	MV5352 MV5352	LED yel D=5mm LED yel D=5mm	GI		R • • • • 55 R • • • • 56 R • • • • 57	57.11.3223 57.11.3222 57.11.3223	22 kOhm 2 <sub>9</sub> 2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	DL • • • • 2 DL • • • • 4	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5mm LED yel D=5mm	G I		R58 R59	57.11.3222 57.11.3223	2,2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	DL • • • • 6	50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5mm LED yel D=5mm	61		R * * * * 6C R * * * * 61 R * * * * 62	57.11.3333 57.11.3479 57.11.3479	33 kOhm 4-7 Ohm 4-7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	1C2	50.09.0107 50.09.0107	RC 4559 RC 4559	DUAL OP.AMP.			R • • • • 64	57-11-3479 57-11-3479	4.7 Ohm 4.7 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	IC 3 IC 4 IC 5	50.09.0107 50.07.0024 50.09.0107	RC 4559 MC14052 RC 4559	DUAL OP.AMP. DUAL 4-CH AMUX DUAL OP.AMP.			R * * * * 65 R * * * 66 R * * * * 67	57.11.3332 57.11.3471 57.11.3332	470 Ohm 3.3 kühm	2%, 0.25W, MF 2%, 0.25W, MF		
	IC6 IC7	50.07.0015 50.09.0107 50.09.0107	MC14053 RL 4559	TRIPLE 2-CH AMUX DUAL OP-AMP+ DUAL OP-AMP+			R • • • • 68 R • • • • 69 R • • • • 70	57.11.3479 57.11.3479 57.11.3479	4.7 Ohm 4.7 Ohm 4.7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	IC 9 IC 10	50.09.0107 50.09.0107	RC 4559 RC 4559 RC 4559	OUAL OP-AMP- DUAL OP-AMP-			R * * * * 71 R * * * * 72	57.11.3479 57.11.3332	4.7 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	IC12 IC13	50.17.1004 50.17.1011 50.17.1032	74HC04 74HC11 74HC32	HEX INVERTER TRIP 3-INPUT AND GATE QUAD 2-INPUT OR GATE			R • • • • 7 3 R • • • • 7 4 R • • • • 7 5	57-11-3471 57-56-5680 57-56-5680	470 Ohm 68 Ohm 68 Ohm	2%, 0.25W, MF 2%, 4 W, DR 2%, 4 W, DR		
	IC14 IC15 IC16	50.17.1002 50.17.1002 50.17.1032	74HC02 74HC02 74HC32	QUAD 2-INPUT NOR GATE QUAD 2-INPUT NOR GATE QUAD 2-INPUT OR GATE			R76 R77 R78	57.56.5680 57.56.5680 57.11.3333	68 Ohm 68 Ohm 33 kOhm	2%, 4 W, DR 2%, 4 W, DR 2%, 0,25W, MF		
	IC17 IC18	50.17.1011 50.17.1004	74HC11 74HC04 MONTTOR 6	TRIP 3-INPUT AND GATE HEX INVERTER	.81 PAGE 2		R79 R80	57.11.3332 57.11.3680	3.3 kOhm 68 Ohm MONITOR	2%, 0.25W, MF 2%, 0.25W, MF	1.727.910.81	B. C.
ΓU	DER (O	0) 88/03/28 Wth	MONITOR E	(OARD 1.777.910	-BI PAGE 2	V 1 u	век (в	)) 88/03/28 Wth	MUNITOR	BUARU	107276710901	PAGE
•	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MA NU
	IC 19	50+17+1002 54+01+0237	74HC 02 20-POLE	QUAD 2-INPUT NOR GATE	AMP		R 81 R 82 R 83	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	J2 J3	54.01.0263 54.01.0242	7-POLE 10-POLE	CIS Socket Strip CIS Socket Strip	AMP AMP		R • • • • 84 R • • • • 85	57.11.3331 57.11.3332	330 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	JP1	54.01.0021		Bri dge			R86 R87 R88	57.11.3332 57.11.3332 57.11.3331	3.3 kOhm 3.3 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	MP 2 MP 3	1.727.910.11 54.01.0020 1.727.910.01	1 pcs 3 pcs 1 pcs	Monitor PCB Contact Pin Kuehlblech			XIC1 XIC2	54.03.0166 54.03.0166	8 Pole 8 Pole	IC Socket IC Socket		
	MP 5	1.011.235.03 1.011.235.23	2 pcs 2 pcs	Tastengehaeuse 3er Schaltmatte 3er			XIC3 XIC4	54.03.0166 54.03.0168	8 Pole 16 Pole 8 Pole	IC Socket IC Socket IC Socket		
	MP6 MP7 MP8	1.011.235.29 1.011.235.30 1.011.235.33	6 pcs 6 pcs 6 pcs	Bolzen Drucktaste Kalotte gelb			XIC5 XIC6 XIC7	54.03.0166 54.03.0168 54.03.0166	16 Pole 8 Pole	IC Socket IC Socket		
	MP9 MP10	1.727.910.10 53.03.0221 1.010.050.22	0 pcs 6 pcs 2 pcs	No.Schild LED Socket Distanzbolzen 18mm			XICR XIC9 XIC10	54.03.0166 54.03.0166 54.03.0166	8 Pole 8 Pole 8 Pole	IC Socket IC Socket IC Socket		
	MP12 MP13	21.53.0355 24.16.1030	2 pcs 2 pcs	Schrauben M3∗8mm Sicherungsscheiben			XIC - +11 XIC - +12	54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole	IC Socket IC Socket		
	MP14 MP15	50.20.2002 50.20.0314	4 pcs 4 pcs	Transistorenclips Isolierscheiben			XIC13 XIC14 XIC15	54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket		
	Q2 Q3	50.03.0350 50.03.0350 50.03.0495	MPF4392 MPF4392 BD135-16	J112 FET J112 FET NPN			XIC16 XIC17 XIC18	54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket		
	Q5 Q6	50.03.0510 50.03.0495 50.03.0495 50.03.0510	BD136-16 BD135-16 BD136-16	PN P PN P NP N PN P			XIC19	54.03.0167	14 Pole	IC Socket		
		57.11.3473	47 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF								
	R 2	57.11.3473				F						
		57-11-3473 57-11-3473 57-11-3473 57-11-3473 57-11-3473	47 kOhm 47 kOhm 47 kOhm 47 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		MANUF	ectrolytic, ACTURER: B8/03/28	PP=Polypropyler	, SI=Silicor	n , MF=Metal Film		

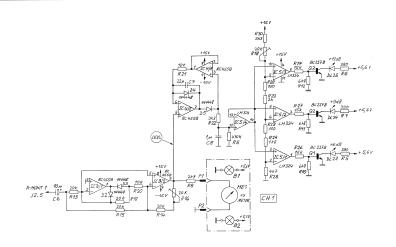
EXT. VU-PANEL 2CH WIRING DIAGRAM EXT. VU-PANEL MONO WIRING DIAGRAM

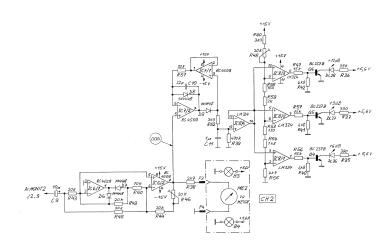


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#### VU PANEL (2 VU) 1.727.925.00 GRP92





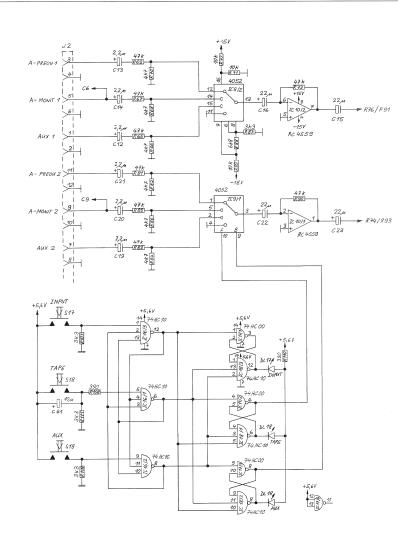


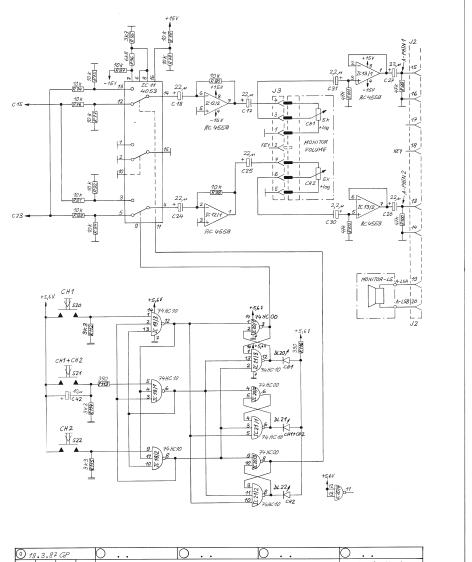
19.3.87 GI	<sup>,</sup> O	0	0	0
	A 807 GF	? <i>9</i> 2		PAGE 2 OF 4
STUDE	R VU PANE	L BOARD 2CH	SC	1.727,925,00

STUDER A807 7/140



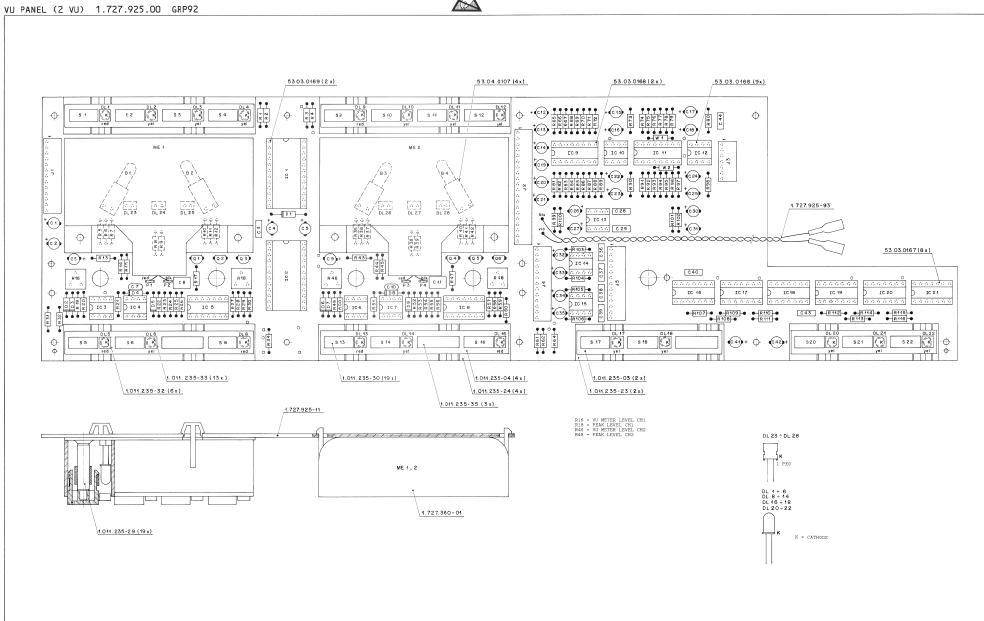
#### VU PANEL (2 VU) 1.727.925.00 GRP92





① 19.3.87 GP	$0 \dots 0 \dots$	O	$\cup$
	A 807 GR 92		PAGE 4 OF 4
STUDER	VU PANEL BOARD 2CH	SC	1.727:925.00





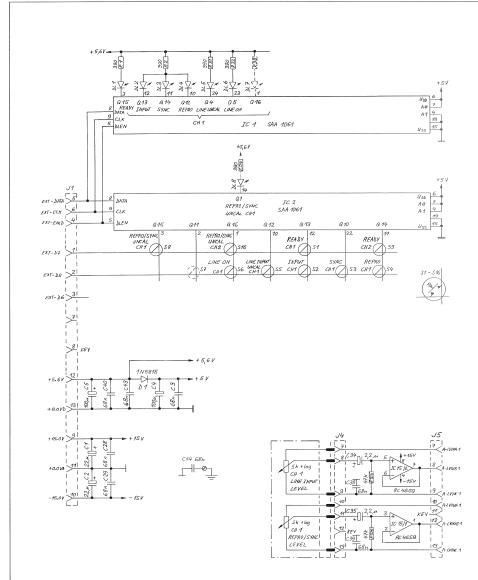


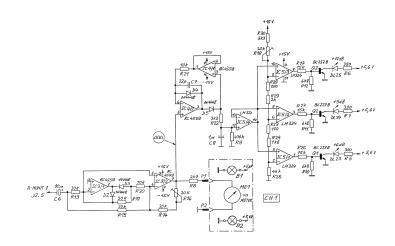
#### VU PANEL (2 VU) 1.727.925.00 GRP92

VU PANEL (2 VU) 1.727.925.00 GRP92		
ING. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
Dec   Dec	J 34-01-02*9 13-Pele (IS Socket Strip) APP  J 34-01-02*9 13-Pele (IS Socket Strip) APP  J 34-01-02*3 7-Pele (IS Socket Strip) APP  J 34-01-02*3 7-Pele (IS Socket Strip) APP  J 34-01-02*3 13-Pele (IS Socket Strip) APP  J 1-02-02*3 12-Pele (IS Socket Strip) APP  J 1-02-02*3	1 15
	Q6 50.03.0436 BC2378 BC5478, BC5508 NPM	Rili 57-il-4332 3-3 KUhm 2%, 0-25w, MF
S T U D E R (00) 8T/06/01 GP VU PANEL BDARD 2CH 1.727.925.00 PAGE 1	S T U D E R (00) 87/06/01 GP VU PANEL BOARD 2CH 1.727-925-00 PAGE 4	S T U D E R (00) 87/86/0; GP UU PANEL BGARO 2CH 1.727-925-00 PAGE 7
1NO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INC. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
1	R 1 37.11.4391 390 Ome 24. 0.2594 mf h 2 37.11.4391 390 Ome 24. 0.259	8112 37.11.4312 3.35.00m 2% -2.5% mg  8113 37.11.4312 3.90 mg  8113 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8115 37.11.4312 3.90 mg  8112 3.90 mg
IND. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NO. PART 40- VALUE SPECIFICATIONS / EQUIVALENT MANUF.
Di.		CERCLEMENT CASES OF THE PROPERTY CONTENT OF THE PROPERTY OF TH



#### VU PANEL (1 VU) 1.727.935.00 GRP92



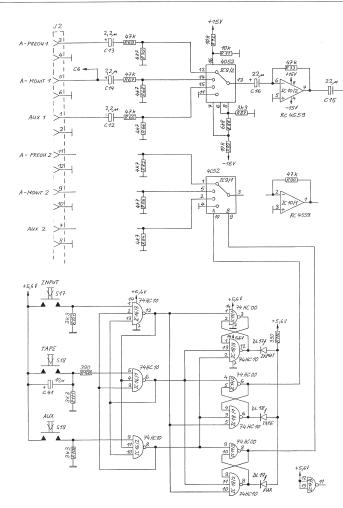


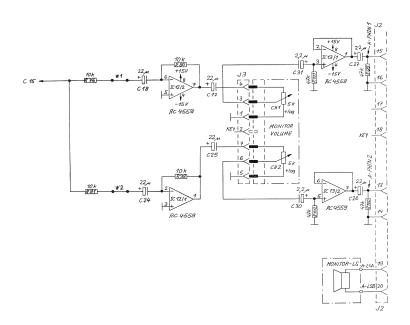
19.3.87 GP	0	0		0
	A 807 GR 92			PAGE 2 OF 4
STUDER	VU PANEL BOARD MO	NO	SC	1.727,935,00



7/144

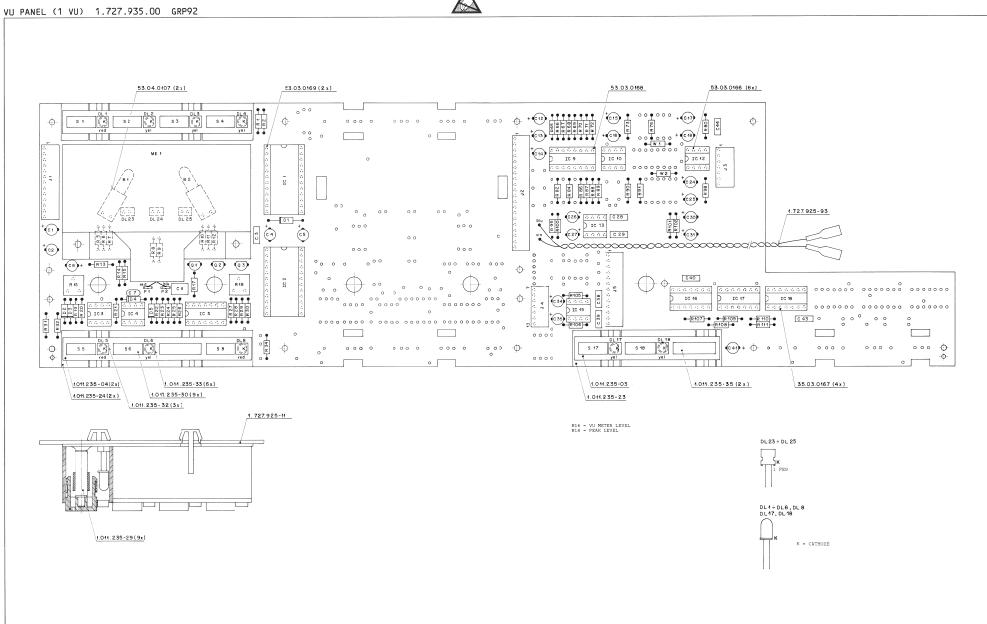
#### VU PANEL (1 VU) 1.727.935.00 GRP92





① 19.3.87 GP	O	. 0	0
	A 807 GR 92		PAGE 4 OF 4
STUDER	VU PANEL BOARD MONO	S	C 1.727.935.00



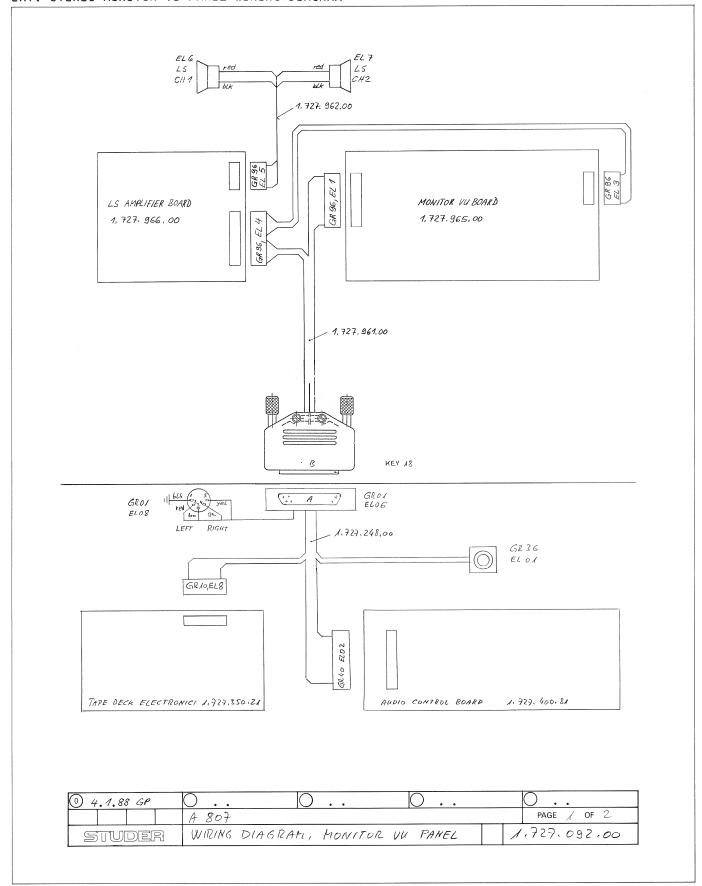




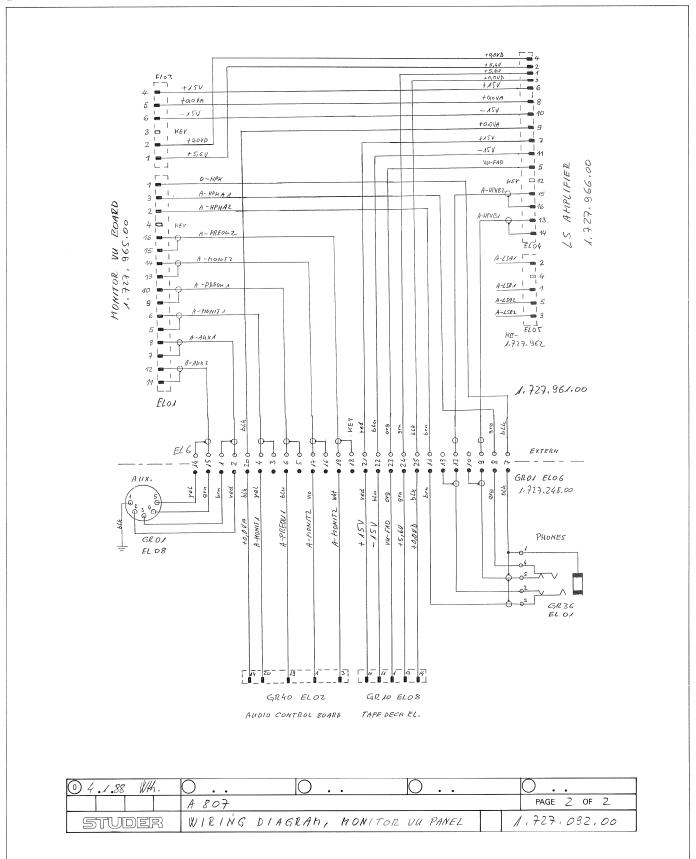
#### VU PANEL (1 VU) 1.727.935.00 GRP92

VU PANEL	(1 VU)	1.72	7.935.00 GRP92							
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IN).	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
81 82 C2 C3 C4	51.02.0144 51.02.0144 59.22.5220 59.22.5220 59.06.0583 59.22.3101 59.22.3101	6 V 6 V 22 uF 22 uF 68 nF 100 uF	0.03 A Lomp 0.03 A Lomp -20X 25 V EL -20X 25 V EL 10X 50 V PETP -20X 10 V EL -20X 10 V EL -20X 50 V EL			R 13 R 14 R 15 R 16 R 17 R 19 R 20 R 21 R 22 R 23 R 24	57-11-3203 57-11-3203 57-11-3203 58-01-3203 57-11-4153 58-01-3203 57-11-4103 57-11-4103 57-11-4103	20 kOhm 20 kOhm 20 kOhm 20 kOhm 15 kOhm 20 kOhm 20 kOhm 10 kOhm	1: 0.25% MF 1: 0.25% MF 1: 0.25% MF 10: 0.25% MF 10: 0.25% MF 10: 0.25% MF 10: 0.25% MF 2: 0.25% MF	
C	59.22.6100 59.34.2220 59.06.0105 59.22.8229 59.22.8229 59.22.8229 59.22.8229	27 UF 68 NF 100 UF 100 UF 100 UF 1 UF 22 PF 1 UF 2-2 UF	10% 50 V CER 10% 50 V PETP -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL			R 21 R 22 R 23 R 24 R 25 R 26 R 21 R 28	57-11-4103 57-11-4332 57-11-4151 57-11-4182 57-11-4472 57-11-4153 57-11-4153 57-11-3751 57-11-3202	20 kdha 20 kdha 20 kdha 15 kdha 20 kdha 20 kdha 10 kdha 10 kdha 150 dha 150 dha 150 dha 150 dha 150 dha 25 kdha 353 kdha 353 kdha 350 dha 350	14. 0.254. AP  14. 0.254. AP  15. 0.254. AP  16. 0.254. AP  17. 0.254. AP  17. 0.254. AP  18. 0.254. AP  18. 0.254. AP  18. 0.	
C24 C25 C27	59.22.5220 59.22.5220 59.22.5220 59.22.5220	22 UF 22 UF 22 UF 22 UF 22 UF 22 UF	-20% 25 V EL -20% 25 V EL			R 30 R 31 R 32 R 33 R 34	57-11-4332 57-11-4391 57-11-4391		1% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF not used 2% 0.25% MF	
C28 C29 C34 C34 C35 C38 C38	59.06.0583 59.06.0683 59.22.8229 59.22.8229 59.22.8229 59.22.8229 59.06.0683 59.06.0683	68 nF 68 nF 2.2 uF 2.2 uF 2.2 uF 2.2 uF 68 nF 68 nF 68 nF 68 nF	-20% 25 V EL 10% 50 V PETP 10% 50 V PETP -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V PETP 10% 50 V PETP 10% 50 V PETP			R30 R31 R32 R33 R34 R65 R66 R67 R67 R10 R17 R17 R17 R17 R17 R18 R38 R.	57-11-4391 57-11-4473 57-11-4473 57-11-4472 57-11-4473 57-11-4473 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103	390 Dhm 47 K0hm 4-7 K0hm 4-7 K0hm 4-7 K0hm 4-7 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 10 K0hm 4-7 K0hm 4-7 K0hm 4-7 K0hm 4-7 K0hm	23, 0.25%, MF 22, 0.25%, MF 22, 0.25%, MF 23, 0.25%, MF 22, 0.25%, MF 22, 0.25%, MF 22, 0.25%, MF	
C40 C43 C49 U1	59.06.0683 59.22.6100 59.06.0683 59.06.0683 50.04.0512 50.04.0125	68 nF 10 uF 68 nF 68 nF 1N5618 1N4448	10% 50 V PETP -20% 25 V EL 10% 50 V PETP 10% 50 V PETP 30 V Schottky 50 V SI			R75 R76 R80 R82 R84 R86	57.11.4473 57.11.4103 57.11.4103 57.11.4472 57.11.4472 57.11.4472	47 küha 10 küha 10 küha 4-7 küha 4-7 küha 4-7 küha	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	00) #7/06/OL GP		80ARD MONO 1-727-935-00	PAGE 1	s · u		37+11+4332 1) 87/06/01 GP		80ARD MONO 1-727-93	15.00 PAGE 4
IND. POS.AG.	PART NO.	VALUE	SPECIFICATIONS / EDUIVALENT	MANUE.	IN).	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIYALENT	MANUF
D3 D4 O5	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			P 89	57+11+4682 57+11+4103	6-8 kOhn 10 kOhn	24, 0.254, MF 24, 0.254, MF	
DL1 DL2 DL3	50.04.2115 50.04.2500 50.04.2500 50.04.2500 50.04.2115 50.04.2500	MV5752 MV5352 MV5352 MV5352 MV5352 MV5752	50 V 31 LEO rad De5 mm LEO val De5 mm LEO val De5 mm LEO val De5 mm LEO val De5 mm LEO rad De5 mm LEO rad De5 mm LEO rad De5 mm LEO val De5 m	61 61		R	57-11-4682 57-11-4103 57-11-4473 57-11-4103 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-432 57-11-4332 57-11-4332 57-11-4332 57-11-4332 57-11-4332	6-8 kOhn 10 kOhn 47 kOhn 10 kOhn 10 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn	22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF 22. 0.259. MF	
DL4 DL5 DL6 DL7	50.04.2500 50.04.2115 50.04.2500	MV5352	LED yel 0-5 mm LED red 0-5 mm LED yel 0-5 mm not used	61 61 61		R101 R102 R105 R106	57-11-4473 57-11-4473 57-11-4473 57-11-4473	47 k0hm 47 k0hm 47 k0hm 47 k0hm	2%+ 0=25M+ MF 2%+ 0=25M+ MF 2%+ 0=25M+ MF 2%+ 0=25M+ MF	
DL 2 DL 2 DL 3 DL 4 DL 5 DL 6 DL 7 OL 4 DL 19 DL 19 DL 24	50.04.2500 50.04.2500 50.04.25119	NV5752 NV5352 NV5352 NV57124 NV57124	LED yel 0:5 mm LED yel 0:5 mm not used LED red 6:3593-81	61 61 61		R108 R109 R110 R111	57-11-4391 57-11-4332 57-11-4391 57-11-4332	390 Ohm 3-3 kOhm 390 Ohm 3-3 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
		MV57124	LED red 6.35°3.81 LEO red 6.35°3.81 Driver	G1 G1 G1 Ph		M1 W2 X01	57.11.4000 57.11.4000		Bridge Bridge	
162 163 164 169 1619 1610 1612	50.13.0106 50.09.0107 50.09.0107 50.05.0199 50.07.0024	3AA 1061 3AA 1061 3C 4559 4C 4559 LM 324 MC 14052 8C 4559 8C 4559 8C 4559 8C 4559 8C 4559 4C 4559 4C 4564 4C 4C	Delver Delver Delver Delver Dual Op. Amp. Du	Ph Ph Ra Ra NS• Mot Not Ra Ra Ra Ra		Y82	53.04.0107 53.04.0107 53.03.0169 53.03.0169	24-Pole 24-Pole	Lamp holder Lamp holder IC Socket IC Socket	
IC12 IC13 IC15	50.09.0107 50.09.0107 50.09.0107 50.09.0107 50.17.1010	RC 4559 RC 4559 RC 4559 RC 4559	Duel Op. Amp. Duel Op. Amp. Duel Op. Amp. Duel Op. Amp.	Ra Ra Ra		X1C9 X1C9	53.03.0169 53.03.0166 53.03.0166 53.03.0167 53.03.0168	8-Pole 8-Pole 14-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket	
IC17 IC18	50.17.1000 50.17.1010	74 HC 00 74 HC 10	Quad 2-Input NAND Gate Triple 3-Input NAND Gate CIS Socket Strip	AMP		XIC1 XIC2 XIC3 XIC5 XIC9 XIC10 XIC12 XIC13 XIC16 XIC16 XIC17 XIC18	53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0167	24-Pole 24-Pole 8-Pole 14-Pole 16-Pole 8-Pole 8-Pole 8-Pole 14-Pole 14-Pole 14-Pole	IC Socket IC Socket	
J2 J4	54.01.0299 54.01.0237 54.01.0263 54.01.0263	13-Pole 20-Pole 7-Pole 7-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip BOARD MONO 1-727-935-00	AMP AMP AMP AMP			53.03.0167 53.03.0167 0) 87/06/01 GP		IC Socket IC Socket BCARD MONO 1-727-9	35.00 PAGE
31000	(00) 01/00/01 01	TO PARILE	111211733400	FA0E 2	3.0	5 C K (0	0, 11,00,01 01	TO TRICE		
IND. POS.40-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+ND+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	HANUF
J5 ME1		13-Pole	CIS Socket Strip VU Meter	АМР	CER = Ce NF= He t NANUFA	ramic, EL= al Film, P CTURER: AM NS	Electrolytic, PE Cerm=Pot, Cermet P, GI=General In =National Semico	TP=Polyester  strument, I	r, SI=Silicon, FT, Mot=Motorola, n=Fhilips, Ra=Raytheon	
MP2 MP3 MP3 MP3 MP5 MP5 MP7 MP7	43.01.0108 53.03.0221 1.011.235.03 1.011.235.04 1.011.235.23 1.011.235.24 1.011.235.24	1 pcs 13 pcs 1 pcs 2 pcs 1 pcs 2 pcs	ESE Warning label 2-pole LES Socket Push button case 30 Push button case 40 Conductive rubber 30 Conductive rubber 40							
MP7 MP8 MP10 MP11 MP12 MP13 MP14 MP15	1.011.235.29 1.011.235.30 1.011.235.32 1.011.235.33 1.011.235.35 1.727.362.93 1.727.935.10 1.727.925.11 1.727.925.93	1 pcs 13 pcs 1 pcs 2 pcs 1 pcs 2 pcs 9 pcs 9 pcs 3 pcs 6 pcs 2 pcs 1 pcs 1 pcs 1 pcs 1 pcs	Bolt Push button 1405 Calotte rad Calotte you Calotte you Calotte you Calotte you Calotte Calo							
P1 P2	54.02.0320 54.02.0320		Pług 2+890+8 Pług 2+890+8	AMP						
Q1 Q2 Q3	50.03.0436 50.03.0436 50.03.0436	8C2378 8C2378 8C2378	BC5478+ 9C550B NPN BC5478+ 9C550B NPN BC5478+ BC550B NPN							
R 1 R 2 R 5 R 6 R 7	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF							
R9 R10 R11	57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4474 57.11.4682 57.11.4682 57.11.4682	390 Ohe 390 Ohe 390 Ohe 390 Ohe 2-7 kOhe 470 kOhe 6-8 kOhe 6-8 kOhe	22v, 0.25Ma, MF 22v, 0.25Ma, MF		gare -	7 (06 (02				
8 T U D E R	57.11.4682 (00) 87/06/01 GP	6.8 kOhm VU PANEL	2%, 0.25%, MF BOARD MONO 1.727.935.00	PAGE 3		7/06/01 0 E R (00	0) 87/06/01 GP	VU PANEL	BOARD MONO 1.727.99	85.00 PAGE 6
1										

## EXT. STEREO MONITOR VU-PANEL WIRING DIAGRAM

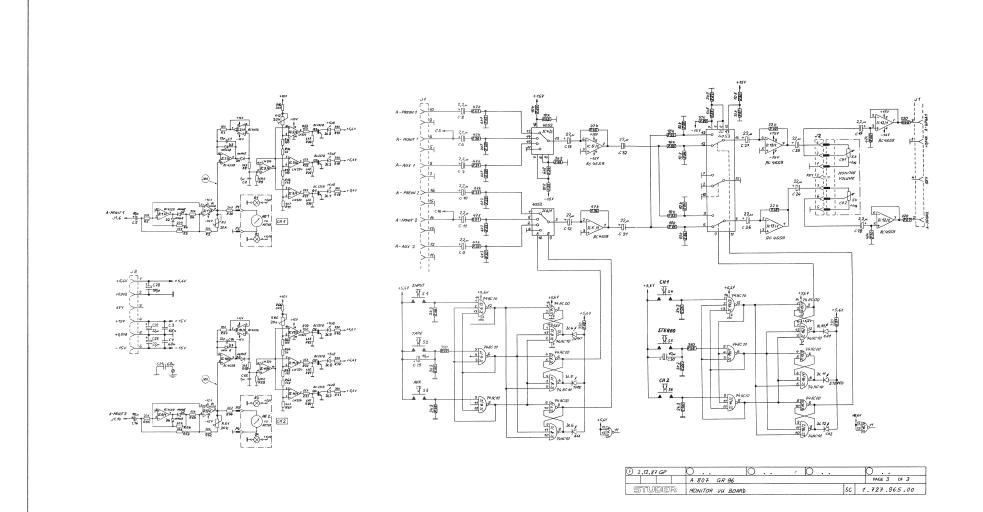


# EXT. STEREO MONITOR VU-PANEL WIRING DIAGRAM





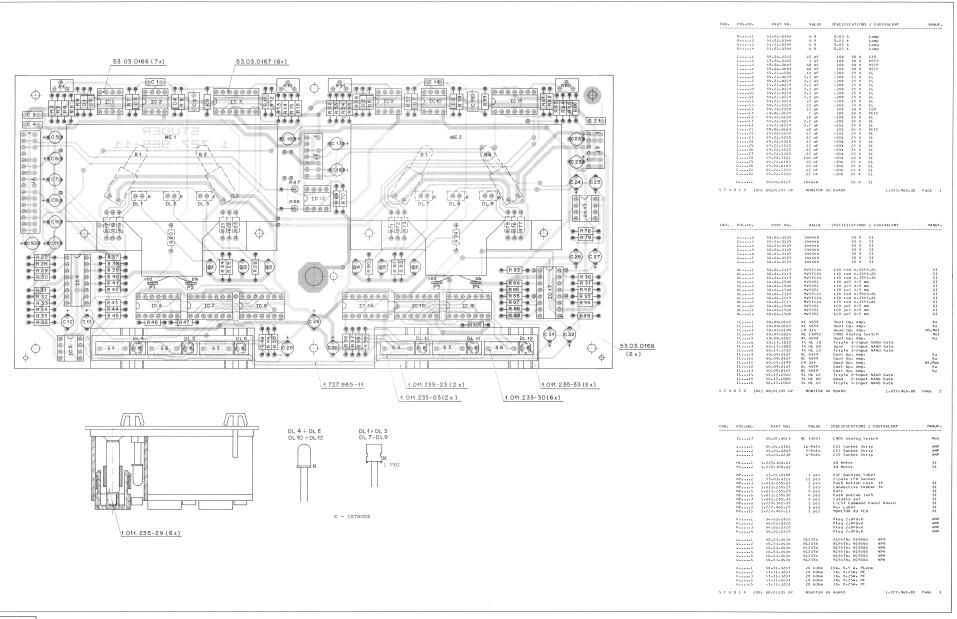
### MONITOR WITH VU-METERS (STEREO) 1.727.965.00



STUDER A807 7/150



MONITOR WITH VU-METERS (STEREO) 1.727.965.00

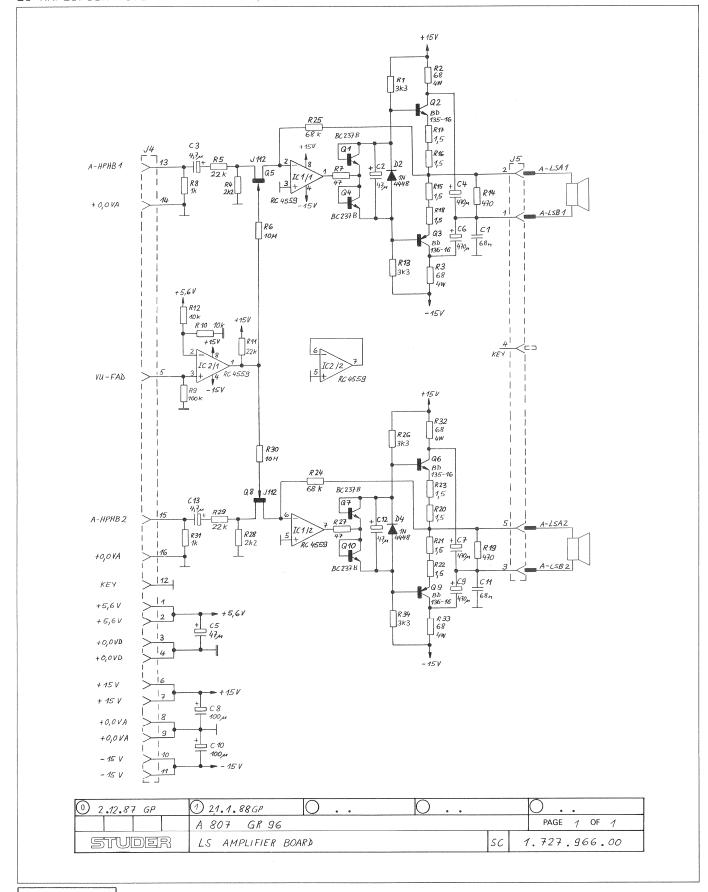




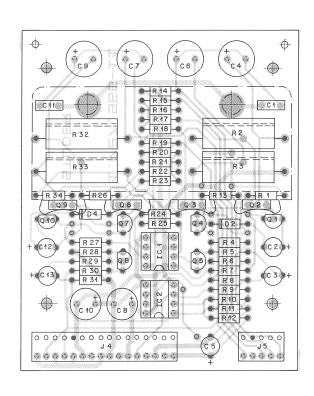
# MONITOR WITH VU-METERS (STEREO) 1.727.965.00

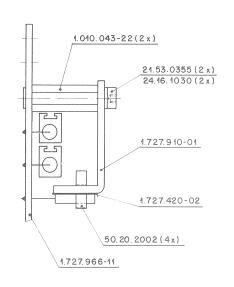
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NG.	VALUE	SPECIFICATIONS / E	EQUIVALENT	MANU
R7 R8 R9 R10	57-11-3203 57-11-4103 57-11-4332 57-11-4474 68-01-9203	20 kOhm 10 kOhm 3-3 kOhm 470 kOhm 20 kOhm	1% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 10% 0.5% MP		XIC12 XIC12 XIC13 XIC14 XIC15	53.03.0167 53.03.0166 53.03.0166 53.03.0167	14-Pole 8-Pole 8-Pole 14-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket		
R • • • • 12 R • • • • 13 R • • • • 14	57.11.4472 57.11.4182 57.11.4151 57.11.3202	4.7 kOhm 1.8 kOhm 150 Ohm 2 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 1% 0.25% MF		X1C16 XIC17	53.03.0167 53.03.0168	14-Pole 16-Pole	IC Socket IC Socket		
R16 R17 K18	>7.11.3751 57.11.4332 57.11.4391 57.11.4391	750 Uhm 3.3 kUhm 390 Uhm 390 Uhm	1&+ 0.25W+ MF 2&+ 0.25W+ MF 2%+ 0.25W+ MF 2&+ 0.25W+ MF							
K****21 R****22	57-11-4391 57-11-4272 57-11-4153 57-11-4153	390 Ohm 2.7 kOhm 15 kOhm 15 kOhm	2%+ 0.25M+ MF 2%+ 0.25M+ MF 2%+ 0.25M+ MF 2%+ 0.25M+ MF							
R * * * * 24 R * * * * 25 R * * * * 26	57.11.4153 57.11.4682 57.11.4682 57.11.4682 57.11.4673	15 kOhm 6.8 kOhm 6.8 kOhm 6.8 kOhm 47 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
R • • • • 28 R • • • • 29 R • • • • 30	57.11.4472 57.11.4473 57.11.4473 57.11.4472	4.7 kOhm 4.7 kOhm 4.7 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
R • • • • 32 R • • • • 33 R • • • • 34	57.11.4472 57.11.4332 57.11.4682	4.7 kOhm 3.3 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R • • • • 36 R • • • • 37 R • • • • 38	57-11-4103 57-11-4473 57-11-4473 57-11-4472 57-11-4473	47 kOhm 47 kOhm 4-7 kOhm 4-7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		CER=Ceramic, EL= MF=Metal Film, P MANUFACTURER: AM	Cerm=Pot。 Cermet P=AMP。 GI=Genera	, 1 Instrument	, IIT=Intermetall,	line	
R * * * * 40 R * * * * 41	57.11.4472 57.11.4473 57.11.4472	4.7 kGhm 47 kGhm 47 kGhm 4.7 kUhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		0RIG 88/01/05	=Raytheon, St=St	uder.	onductors • Ph≃Phil	rtps+	
TUDER (00)	88/01/35 GP	MONITOR V	U BOARD 1.727.965.0	DO PAGE 4	STUDER (O	0) 88/01/05 GP	MONITOR V	U BOARD	1 • 72 7 • 965 • 00	PAGE
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.						
K * * * * 44 K * * * * 45 R * * * * 46	>7.11.4103 >7.11.4103 57.11.4473 57.11.4332 57.11.4391	10 kOhm 10 kOhm 47 kOhm 3.3 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R47 R48 R49 R50 R51	57-11-4391 57-11-4332 57-11-4391 57-11-4332 58-01-9203	3+3 kOhm 3+3 kOhm 390 Ohm 3+3 kOhm 20 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5%, PCerm							
R • • • • 52 R • • • • 53 R • • • • 54	57.11.3203 57.11.3203 57.11.4103 57.11.4203	20 kühm 20 kühm 20 kühm 10 kühm 20 kühm	14, 0-254, MF 14, 0-254, MF 14, 0-25W, MF 24, 0-25W, MF 14, 0-25W, MF							
R • • • • 56 R • • • • 57 R • • • 58	57.11.3203 57.11.4103 57.11.4332 57.11.4474	20 kOhm 10 kOhm 3•3 kOhm 470 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R****60 R***61 R***62	58.01.9203 57.11.4472 57.11.4182 57.11.4151	20 kOhm 4.7 kOhm 1.8 kUhm 150 Ohm	10%, 0.5 W. PCerm 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R • • • • 64 R • • • • 65 R • • • • 66	57.11.3202 57.11.3751 57.11.4332 57.11.4221	2 kühm 750 ühm 3.3 kühm 220 ühm	1%, 0.25M, MF 1%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF							
R68 R69 R70 R71	57.11.4221 57.11.4473 57.11.4473 57.11.4153	220 Ohm 47 kOhm 47 kOhm 15 kOhm	2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF							
R73 R74 R75	57-11-4153 57-11-4153 57-11-4272 57-11-4391	15 kOhm 15 kOhm 2.7 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 9.25W, MF							
R77 R78	57-11-4391 57-11-4391 57-11-4223 57-11-4223	390 Ohm 390 Ohm 22 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
STUDER (00)	88/01/05 GP	MONITOR V	U BUARD 1.727.965.4	DO PAGE 5						
ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / FQUIVALENT	MANUF.						
R81 R82	57.11.4682 57.11.4682 57.11.4682	6.8 kOhm 6.8 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R * * * * 8 4 R * * * * 8 5 R * * * * 8 6	57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4332	10 kOhm 10 kOhm 10 kOhm 10 kOhm 3.3 kOhm	24, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF							
R 88 R 89 R 90 R 91	57.11.4682 57.11.4103 57.11.4103 57.11.4103	6.8 kOhm 10 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
R****92 R****93 R****94 R****95	57-11-4103 57-11-4103 57-11-4103 57-11-4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF							
R****96 R****97 R****98 R****99	57-11-4332 57-11-4391 57-11-4391 57-11-4332	3.3 kOhm 390 Ohm 390 Ohm 3.3 kOhm	2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF							
X81 X82 X93	57.11.4332 53.04.0107 53.04.0107 53.04.0107	3.3 kOhm	2%, 0.25%, MF  Lamp holder  Lamp holder  Lamp holder							
XIC1 XIC2	53.04.0107 53.03.0166 53.03.0166 53.03.0167	8-Pole 8-Pole 14-Pole	Lamp holder IC Socket IC Socket IC Socket							
XIC4 XIC5 XIC6	53.03.0168 53.03.0166 53.03.0167 53.03.0167	16-Pole 8-Pole 14-Pole 14-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket							
XIC8 XIC9	53.03.0167 53.03.0166 53.03.0166	14-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket							
TUDER (00)		8-Pole MONITOR V		O PAGE 6						

# LS AMPLIFIER (STEREO) 1.727.966.00



### LS AMPLIFIER (STEREO) 1.727.966.00





I ND .	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
				10% 63 V PETP	
	C 1	59.06.0663	68 nF		
	C 2	59.22.3470	47 uF	-20% 10 V EL -20% 50 V EL	
	C * * * * * 3	59.22.8479	4.7 uF		
	C 4	59.22.4471	470 uF		
	C 5	59.22.3470	47 UF		
	C 6	59.22.4471	470 UF	-20% 16 V EL	
	C 7	59.22.4471	470 uF	-20% 16 V EL	
	C8	59.22.5101	100 uF	-20% 25 V EL	
	C * * * * * 9	59.22.4471	470 uF	-20% 16 V EL	
	C * * * * 10	59.22.5101	100 uF	-20% 25 V EL	
	C * * * * 11	59.06.0583	68 nF	10% 63 V PETP	
	C12	59.22.3470	47 uF	-20% 10 V EL	
	C13	59.22.8479	4.7 uF	-20% 50 V EL	
	D1			not used	
	0 2	50.04.0125	1N444B	50 V S1	
	D 3			not used	
	D 4	50.04.0125	1N4448	50 V SI	
	D * * * * * 5			not used	
	D6			not used	
	IC1	50.09.0107	RL 4559	DUAL OP-AMP-	Ra
	IC 2	50.09.0107	Rf. 4559	DUAL OP.AMP.	Ra
	J 4	54-01-0294	16-POLE	CIS Socket Strip	AME
	J 5	54.01.0283	5-POLE	CIS Socket Strip	AMA
	MP 1	21.53.0355	2 pcs	Screw M3≎8mm	
	MP2	24.16.1030	2 pcs	Washer	
	MP3	50.20.2002	4 pcs	Clip: T0126	Ph
	MP 4	1.010.043.22	2 pcs	Rivet Nut M3≎20mm	St
	MP5	1.727.420.02	1 pcs	Thermoplastic	St
	MP 6	1.727.910.01	1 pcs	Heatsink	St
	MP 7	1.727.966.10	0 pcs	No.Label	Sŧ
	MP8	1.727.966.11	1 pcs	LS Amplifier PCB	St
	Q1	50.03.0436	BC237B	BC547B NPN	
т п	DER (	01) 88/01/21 GP	LS AMPLI	FIER BOARD 1.727.966.00	PAGE

END .	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUE
	L02+M0+				
			00135 14		
	Q2	50.03.0495	BD135-16	NPN	
	Q3	50.03.0510	BD136-16	PNP	
	Q4	50.03.0436	BC237B	BC 54 7B NPN	
	Q 5	50.03.0350	MPF4392	J112 FET	Mot
	Q 6	50.03.0495	BD135-16	NPN	
	Q7	50.03.0436	BC237B	BC547B NPN	
	Q 8	50.03.0350	MPF4392	J112 FET	Mot
	Q9	50.03.0510	BD136-16	PNP	
	Q10	50.03.0436	BC2378	BC547B NPN	
	R 1	57.11.3332	3.3 kOhm	1%, 0.25W, MF	
	R 2	57.56.5680	68 Ohm	5%, 4 W, Wire	
	R 3	57.56.5680	68 Ohm	5% 4 W. Wire	
	B 4	57-11-3222	2,2 kOhm	1%, 0.25W, MF	
	R 5	57.11.3223	22 kOhm	1%, 0.25W, MF	
	R 6	>7.11.5106	10 MOhm	5%, 0.25W, Mf	
	R 7	57.11.3470	47 Ohm	1%, 0.25W, MF	
	R 8	57.11.3102	1 kOhm	1%, 0.25W, MF	
	R * * * * 9	57.11.3104	100 kOhm	1%, 0.25W, MF	
	R 10	57-11-3103	10 kOhm	1%, 0.25W, MF	
	R 11	57-11-3223	22 kOhm	1%, 0.25W, MF	
	R 12	57-11-3103	10 kühm	1%, 0.25W, MF	
	R * * * * 13	57.11.3332	3.3 k0hm	1%, 0.25W, MF	
	R + 14	57-11-3471	470 Ohm	1%, 0.25W, MF	
	K15	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
	R * * * * 16	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
	R * * * * 17	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
	R18	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
	R * * * * 19	57.11.3471	470 Ohm	1%, 0.25W, MF	
	R 20	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
	R * * * * 21	57-11-3159	1.5 Ohm	1%, 0.25W, MF	
	R = = = 22	57-11-3159	1.5 Ohm	1%, 0.25W, MF	
	R23	57.11.3159	1.5 Ohm	1%, 0.25W, MF	
(00)	R • • • • 24	57.11.3223	22 kOhm	1%, 0.25W, MF	
(01)	R = = = 24	57.11.3683	68 kOhm	1%, 0.25W, MF	
(00)	R * * * * 25	57.11.3223	22 kOhm	1%, 0.25W, MF	
(01)	R * * * * 25	57-11-3683	68 kOhm	1%, 0.25W, MF	
s T U	DER (OI	1 88/01/21 GP	LS AMPLIE	1ER BDARD 1.727.96	6.00 PAGE 2

MANUF.	/ EQUIVALENT	PECIFICATIONS /	VALUE	PART NO.	POS.NO.	I ND .
		1%, 0,25W, MF	3.3 kOhm	57.11.3332	R26	
		1%, 0.25W, MF	47 Ohm	57.11.3470	R * * * * 27	
		1%, 0.25W, MF	2 • 2 kOhm	57.11.3222	R 28	
		1%, 0-25W, MF	22 kOhm	57-11-3223	R = = = 29	
		5%, 0.25W, Mf	10 MOhm	57.11.5106	R 30	
		1%, 0.25W, MF	1 kOhm	57-11-3102	R * * * * 31	
	e	5%, 4 W, Wire	68 Ohm	57.56.5680	R 32	
	e	5%, 4 W, Wire	68 Ohm	57.56.5680	R * * * * 33	
		1%, 0.25W, MF	3.3 kOhm	57-11-3332	R 34	
		IC Socket	8 Pole	53.03.0166	XIC1	
		IC Socket	8 Pole	53.03.0166	XIC 2	

(Ol) Encrose of yain. CER=Ceramic, EL=Electrolytic, PETP=Polyester, SI=Silicon, ME=Metal Film. MANUFACTURER: AMP=AMP, Mot=Motorola, Ph=Philips, Ra=Raytheon, St=Studer.

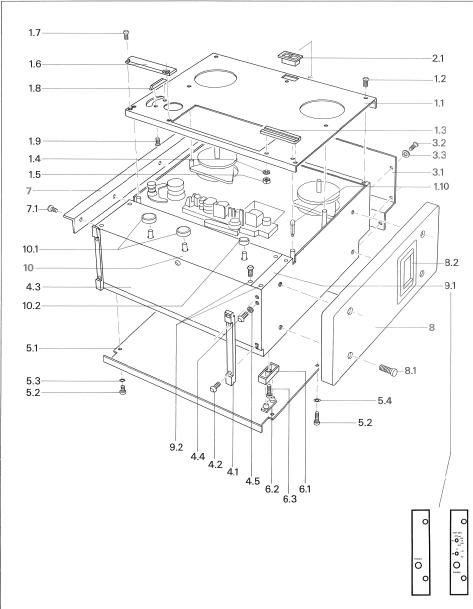
ORIG 87/11/30 (01) 88/01/21

S T U D E R (01) 88/01/21 GP LS AMPLIFIER BOARD 1.727.966.00 PAGE 3

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8.1 VERKLEIDUNG UND ZUBEHOER / COVERS AND ACCESSOIRES



#### VERKLEIDUNG UND ZUBEHOER

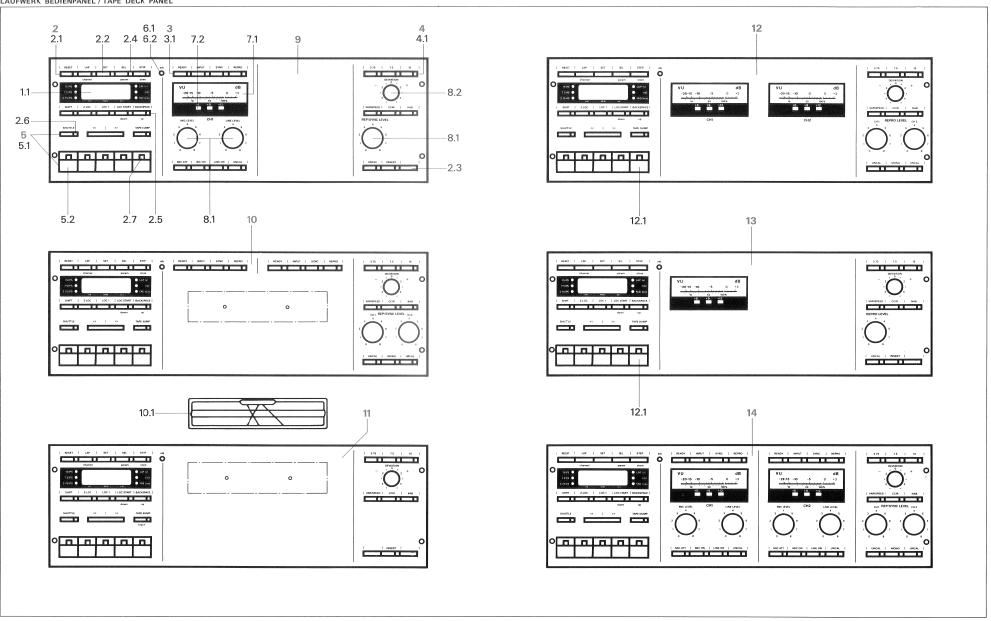
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1.1 1.2 1.3 1.4 1.5 1.6		1.727.100.07 1.727.091.01 1.727.120.00 21.51.8455 1.727.100.42 24.16.130 22.01.8030 1.727.100.37 1.010.010.21 1.811.090.20 20.01.2153 1.077.100.20	Laufwerkabd. mit Monitor Laufwerkabd. ohne Monitor Monitorlautsprecher kpl. Lin-Schraube IS M4x8 Klebeschiene Sicherungsscheibe D3,2/5,5 6kt. Mutter M3 Pot Meter Abdeckung mit Klebeschiene Lin-Schraube IS M4x8 spez. Bandanlauf S-Blechschraube D2,9x6,5 Summikappe
2.1		55.12.0001	Netzschalter
3.1		1.727.161.01	Rückwand / Anschlussschiene
3.2		1.010.007.21	Lin Schraube IS M4x8 SW
3.3		24.16.1030	Sicherungsscheibe D3,2/5,5
4.1		1.727.100.10	Kunststoffüsse
4.2		1.010.007.21	Lin Schraube IS M4x8 SW
4.3		1.727.100.06	Abdeckblech audio
4.4		1.010.042.21	Lin Schraube IS M4x6
4.5		24.16.2040	Fächerscheibe D4,3
5.1		1.727.100.05	Bodenblech
5.2		1.010.007.21	Lin Schraube IS M4x8 SW
5.3		24.16.1030	Sicherungsscheibe D3,2/5,5
5.4		24.16.2040	Fächerscheibe D4,3
6.1		1.177.930.08	Fuss
6.2		1.067.010.08	Gummieinlage
6.3		21.53.0356	Z-Schraube IS M3×10
7		.1.727.071.00	19" Rackwinkel Set (Option)
7.1		21.51.2454	S-Schraube IS M4x6
8		1.727.070.00	Holzseitenwand Set (Option)
8.1		21.53.0511	Z-Schraube IS M5x22
8.2		1.810.077.04	Klappgriffe kpl.
9.1 9.2		1.727.011.01 1.727.440.05 1.010.047.21	Abdeckung Standard Abdeckung Testgenerator Lin Schraube M4x8
10.1 10.2		1.727.100.43 1.727.100.33	Audio-Frontabdeckung (Varianten-abhängig) Best.Nr.siehe nächste Seite Drehknöpfe gross Drehknöpfe klein

#### COVERS AND ACCESSOIRES

P05	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8		1.727.100.07 1.727.091.01 1.727.120.00 21.51.8455 1.727.100.42 24.16.1030 22.01.8030 1.727.100.32 1.010.010.21 1.811.090.20 20.01.2153 1.077.100.20	Tape transport cover with MONITOR Tape transport cover without MONITOR Monitor-loudspeaker compl. Oval head screw IS M4x8 Splicing block Lock washer D3.2/5.5 Hexanut M3 Cover plate w.splicing block Screw IS M4x8 Threading guide Screw D2.9x6.5 Cap
2.1		55.12.0001	Slide switch
3.1 3.2 3.3		1.727.161.01 1.010.007.21 24.16.1030	Top cover Screw IS M4x8 Lock washer D3.2/5.5
4.1 4.2 4.3 4.4 4.5		1.727.100.10 1.010.007.21 1.727.100.06 1.010.042.21 24.16.2040	Footrail Screw IS M4×8 Botton cover Screw IS M4×6 Lock washer D4.3
5.1 5.2 5.3 5.4		1.727.100.05 1.010.007.21 24.16.1030 24.16.2040	Rear cover Screw IS M4x8 Lock washer D3.2/5.5 Lock washer D4.3
6.1 6.2 6.3		1.177.930.08 1.067.010.08 21.53.0356	Foot Foot insert grey Z-Screw IS M3x10
7 7.1		1.727.071.00 21.51.2454	19" Rack rail set (option) S-Screw IS M4x6
8.1 8.2		1.727.070.00 21.53.0511 1.810.077.04	Set of wooden side panels (option) Z-Screw IS M5x22 Handle compl.
9.1		1.727.011.01 1.727.440.05	Jack socket cover (standard) Jack socket cover
9.2		1.010.047.21	with testgenerator Screw M4x8
10.1 10.2		1.727.100.43 1.727.100.33	Audio-Frontpanel (according to different versions) / Order-Number following page Push button Rotary knob varispeed

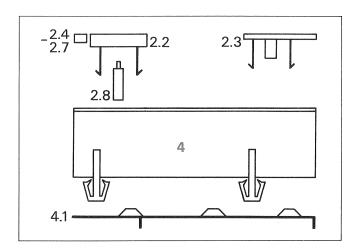
STUDER A807 8/2





### PANELS

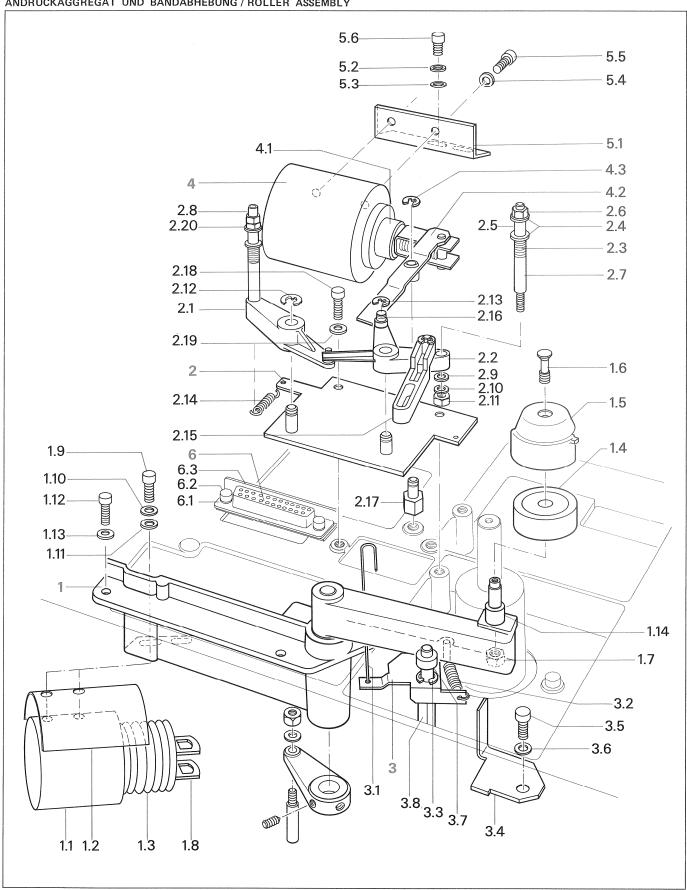
PANE	LS		
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1.1		1.727.100.40 1.727.015.02	Anzeigefenster 3,75-15ips Anzeigefenster 7,5 -30ips
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8		1.011.235.05 1.011.235.25 1.011.235.30 1.011.235.35 1.011.235.31 1.011.235.33 1.011.235.34 1.011.235.32	Tastengehäuse (5-Tasten) Schaltmatte (5 Kontakte) Druck-Taste Blind-Taste Blind-Kalotte Kalotte gelb Kalotte grün Kalotte rot Bolzen
3 3.1		1.011.235.04 1.011.235.24	Tastengehäuse (4 Tasten) Schaltmatte (4 Kontakte)
44.1		1.011.235.03 1.011.235.23	Tastengehäuse (3 Tasten) Schaltmatte (3 Kontakte)
5 5.1 5.2		1.727.360.02 1.727.360.03 1.727.360.04 1.727.360.06	Tastengehäuse Schaltmatte Drucktaste gross Schildersatz
6.1 6.2		1.727.360.05 55.15.0130	Adjust-Tastenverlängerung Adjust-Schalter
7 7.1 7.2		1.727.360.01 51.02.0144 50.04.2119	VU-meter VU-meter-Beleuchtungs- lämpchen 6V/0,03A Peak LED
8.1 8.2		1.727.100.43 1.727.100.33	Drehkopf gross Drehknopf klein
9		1.727.100.26	Bedienpanel Mono
.10 10.1		1.727.100.23 1.820.110.18	Bedienpanel 2/2 Klebeschiene (Option)
11		1.727.100.25 1.727.015.01	Bedienpanel OVU Bedienpanel OVU / HS
12 12.1		1.727.100.27 1.727.364.01	Bedienpanel nur Wiedergabe Tastenschild unbeschriftet
13		1.727.100.29	Bedienpanel nur Wieder- gabe Mono
14		1.727.100.24 1.727.064.01	Bedienpanel 2VU Bedienpanel 2VU / HS



### PANELS

POS	QTY	ORDER NUMBER	PART NAME SPEZIFIKATION
1.1		1.727.100.40 1.727.015.02	Display 3.75-15ips Display 7.5 -30ips
2		1.011.235.05	Push button housing for
2.1		1.011.235.25	5 push button Switching rubber activater mat for 5 push button
2.2 2.3 2.4 2.5 2.6 2.7 2.8		1.011.235.30 1.011.235.35 1.011.235.31 1.011.235.33 1.011.235.34 1.011.235.32	Push button Push button cover cap Filler cover Cover yellow Cover green Cover red Bolt
3		1.011.235.04	Push button housing for 4 push buttons
3.1		1.011.235.24	Switching rubber activater mat for 4 push button
4		1.011.235.03	Push button housing for 3
4.1		1.011.235.23	Switching rubber activater mat for 3 push button
5 5.1		1.727.360.02 1.727.360.03	Push button housing Switching rubber activater mat
5.2		1.727.360.04 1.727.360.06	Push button large Label set
6.1 6.2		1.727.360.05 55.15.0130	Adjust-Extension Adjust-push button switch
7 7.1 7.2		1.727.360.01 51.02.0144 50.04.2119	VU-meter Vu-meter-bulb 6V/0.03A Peak LED
8.1 8.2		1.727.100.43 1.727.100.33	Push button large Push button small
9		1.727.100.26	Cover plate for operating panel mono
10 10.1		1.727.100.23 1.820.110.18	Audio-frontcover plate Splicing block (Option)
11		1.727.100.25	Cover plate for operating panel without VU-meter
		1.727.015.01	Frontcover plate OVU / HS
12		1.727.100.27	Frontpanel-cover for playback only version
12.1		1.727.364.01	Blanc label
13		1.727.100.29	Frontpanel-cover for mono playback only version
14		1.727.100.24 1.727.064.01	Frontcover plate 2VU · Frontcover plate 2VU / HS

8.3 ANDRUCKAGGREGAT UND BANDABHEBUNG/ROLLER ASSEMBLY



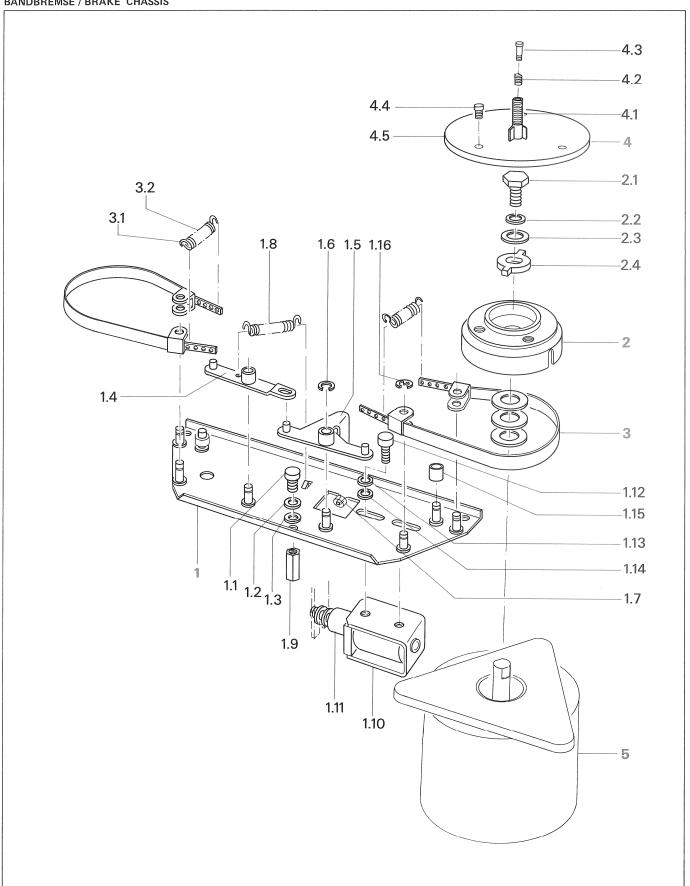
### ANDRUCKAGGREGAT UND BANDABHEBUNG

		AGGREGAT UND	BANDABHEBUNG
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.135.81 1.014.718.00 1.810.100.09 1.810.100.08 1.167.178.82 1.727.136.00 1.010.048.21 22.01.5040 1.810.101.00 21.53.0455 24.16.1040 23.01.2043 21.53.0456 24.16.1040 1.727.135.01	Andruckaggregat kpl. Andruckmagnet Abschirmung Gummibalg Andruckrolle Andruckrollendeckel kpl. S-Schraube IS 6kt.Mutter M4x0,5 Anker kpl. Schraube IS,ZN M4x8 Sicherungsscheibe D4,3/7 U-Scheibe D4,3/9x0,8 Schraube IS,ZN M4x10 Sicherungsscheibe D4,3/7 Andruckachse
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.10 2.11 2.12 2.13 2.14 2.15 2.16 2.17 2.17 2.19 2.20		1.727.115.00 1.810.133.00 1.810.133.00 1.020.820.12 1.810.130.13 1.810.130.09 22.99.0112 1.810.130.10 1.727.115.02 23.01.1032 24.16.1030 22.01.5030 24.16.3040 24.16.3049 1.020.250.21 1.810.130.12 1.727.115.01 1.810.090.10 21.53.0353 24.16.1030 22.15.8030	Bandabhebung kpl. Lifterarm links kpl. Lifterarm rechts kpl. Druckfeder Bandführungsscheibe Distanzhülse 6Kt. Stop-Mutter M3 Lifterbolzen Abschlussmutter U-Scheibe D3,2/6 Sicherungsscheibe D3,2/5,5 6Kt. Mutter M3 Clip Clip Zugfeder Lasche Rolle Bolzen Schraube IS ZN M3x5 Sicherungsscheibe D3,2/5,5 6kt. Mutter M3
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8		1.727.130.00 1.727.100.48 1.077.100.13 24.16.3040 1.727.100.59 21.53.0454 24.16.1040 1.067.170.14 1.727.100.47	Sperrklinke kpl. Auslöse-Gestänge Zugfeder Seegerring D4 Entriegelungswinkel für Andruckarm Schraube IS ZN M4x6 Sicherungsscheibe D4,3/7 Dämpfungsgummi Bolzen
4 4.1 4.2 4.3		1.014.718.00 1.810.136.00 1.810.135.00 24.16.3032	Liftermagnet kpl. Anker kpl. Hebel kpl. Seegerring D3
5.1 5.2 5.3 5.4 5.5 5.6		1.810.090.09 24.16.1040 23.01.1043 24.16.1040 21.53.0453 21.51.8455	Befestigungswinkel Sicherungsscheibe D4,3/7 Unterlagsscheibe D4,3/8 Sicherungsscheibe D4,3/7 Schraube M4x5 Z-Schraube IS M4x8
6.1 6.2 6.3		1.727.211.00 1.727.209.00 1.727.210.00 54.02.0442 54.02.0450 54.02.0454 24.16.1030 21.51.8354 1.727.209.07	Kabelbaum kpl. Mono Kabelbaum kpl. Stereo Kabelbaum kpl. Stereo mit 2.Repro-Kopf Kopfträger Steckergehäuse D-Type 25pol Crimp-Kontakte für 0,22 mm² Draht Crimp-Kontakte für 0,56 mm² Draht Sicherungsscheibe D3,2/5,5 Schraube LS IS M3x6 Zugentlastung

### ROLLER ASSEMBLY

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.135.81 1.014.718.00 1.810.100.09 1.810.100.08 1.167.178.82 1.727.136.00 1.010.048.21 22.01.5040 1.810.101.00 21.53.0455 24.16.1040 23.01.2043 21.53.0456 24.16.1040 1.727.135.01	Pressure aggregat compl. Solenoid Shield Rubber bellows Pinch roller Pressure roller cover compl. S-Screw IS Hex nut M4x0,5 Plunger compl. Screw IS ZN M4x8 Lock washer D4,3/7 Washer D4,3/9 x0,8 Screw IS ZN M4x10 Lock washer D4,3/7 Pressure roller shaft
2 2.1 2.2 2.3 2.4 2.5 2.7 2.19 2.11 2.12 2.13 2.14 2.14 2.16 2.17 2.18 2.19 2.10 2.11 2.12		1.727.115.00 1.810.133.00 1.810.132.00 1.020.820.12 1.810.130.09 22.99.0112 1.810.130.10 1.727.115.02 23.01.1032 24.16.1030 22.01.5030 24.16.3040 24.16.3040 24.16.3019 1.020.250.21 1.810.130.12 1.727.115.01 1.810.090.10 21.53.0353 24.16.1030 22.15.8030	Tape lifting compl. Lifter lever left compl. Lifter lever right compl. Pressure spring Guide washer Guide bushing Self locking nut M3 Lifter bolt Hex nut Washer D3,2/6 Lock washer D3,2/5,5 Hex nut M3 Circlip Circlip Tension spring Fish plate Roller Bold Screw IS ZN M3x5 Lock washer D3,2/5,5 Hexanut M3
3 3.1 3.2 3.3 3.4 3.5 3.6 3.7		1.727.130.00 1.727.100.48 1.077.100.13 24.16.3040 1.727.100.59 21.53.0454 24.16.1040 1.067.170.14 1.727.100.47	Stop pawl compl. Connecting rod Brake tension spring Circlip D4 Edit lever retainer Screw IS ZN M4x6 Lock washer D4,3/7 Rubber tube Bold
4 4.1 4.2 4.3		1.014.718.00 1.810.136.00 1.810.135.00 24.16.3032	Solenoid compl. Plunger compl. Lever compl. Circlip D3
5.1 5.2 5.3 5.4 5.5 5.6		1.810.090.09 24.16.1040 23.01.1043 24.16.1040 21.53.0453 21.51.8455	Mounting bracket Lock washer D4,3/7 Washer D4,3/8 Lock washer D4,3/7 Screw M4x5 Z-Screw IS M4x8
6.1 6.2 6.3		1.727.211.00 1.727.209.00 1.727.210.00 54.02.0442 54.02.0450 54.02.0454 24.16.1030 21.51.8354 1.727.209.07	Cable harness compl. mono Cable harness compl. stereo Cable harness compl. stereo with 2.Repro-head Chassis receptacle housing 25p Crimp-contact for 0,22 mm² cable Crimp-contact for 0,56 mm² cable Lock washer D3,2/5,5 Screw LS IS M3x6 Cable harness tie on bracket

8.4 BANDBREMSE / BRAKE CHASSIS



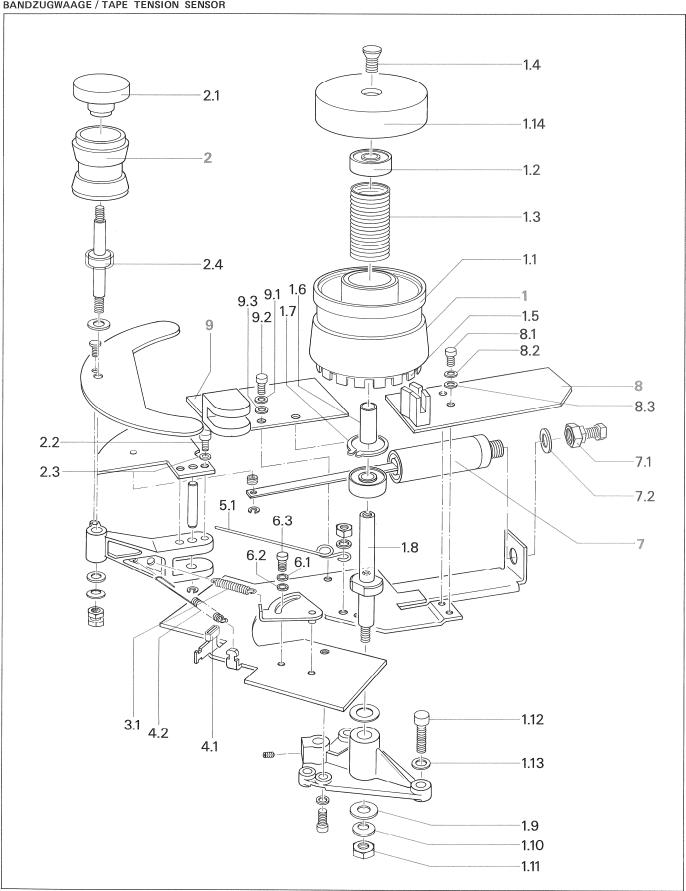
### BANDBREMSE

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15		1.077.406.00 21.53.0354 24.16.1030 23.01.2032 1.077.415.00 1.077.411.00 24.16.3032 1.067.100.36 1.062.210.06 1.010.139.27 1.014.852.00 1.014.854.00 21.53.0353 24.16.3032 23.01.2032 1.067.170.14 24.16.3032	Bremschassis kpl. Z-Schraube IS M3x6 Sicherungsscheibe D3.2/5.5 U-Scheibe D3,2/7 xO,5 Bremshebel links Bremshebel rechts Clip Anschlagschlauch Feder Bremshebel links Befestigungsbolzen Laufwerkchassis Bremsmagnet Anker kpl. Z-Schraube IS M3x5 Sicherungsscheibe D3,2/5,5 U-Scheibe D3,2/7 xO,5 Dämpfungsgummi Seegerring 3,2
2		1.067.242.00	Bremsrolle kpl.
2.1		21.01.4455	Schraube 6kt. M4x8
2.2		24.16.1040	Sicherungsscheibe D4,3/7
2.3		23.01.3043	U-Scheibe D4,3/12 x1
2.4		1.067.100.27	Mitnehmerscheibe
3		1.167.866.00	Bremsband kpl.
3.1		1.077.100.13	Bremsfeder
3.2		1.727.100.90	Dämpfungsschlauch
4		1.067.638.00	Wickelteller kpl.
4.1		1.067.688.01	3 Zack-Hülse
4.2		1.067.688.02	Druckfeder
4.3		1.062.390.02	Schaftschraube
4.4		21.51.0355	Z-Schraube IS M3x8
4.5		1.077.567.01	Wickelteller
5		1.021.250.00	Wickelmotor kpl.

### BRAKE CHASSIS

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15		1.077.406.00 21.53.0354 24.16.1030 23.01.2032 1.077.415.00 1.077.411.00 24.16.3032 1.067.100.36 1.062.210.06 1.010.139.27 1.014.852.00 1.014.854.00 21.53.0353 24.16.3032 23.01.2032 1.067.170.14 24.16.3032	Brake chassis compl. Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2/7 x0.5 Brake lever left Brake lever right Circlip Stop tube Return spring Spacer bolt Brake solenoid Plunger compl. Z-Screw IS M3x5 Circlip D3.2/5.5 Washer D3,2/7 x0,5 Rubber tube Circlip 3.2
2 2.1 2.2 2.3 2.4		1.067.242.00 21.01.4455 24.16.1040 23.01.3043 1.067.100.27	Brake drum compl. Screw hex M4x8 Lock washer D4.3/7 Washer D4.3/12 x1 Cam disc
3 3.1 3.2		1.167.866.00 1.077.100.13 1.727.100.90	Brake band compl. Brake tension spring Rubber tube
4 4.1 4.2 4.3 4.4 4.5		1.067.688.00 1.067.688.01 1.067.688.02 1.062.390.02 21.51.0355 1.077.567.01	Spooling plate compl. Cine centre sleeve Cine centre spring Cine centre shaft screw Z-Screw IS M3x8 Spooling plate
5		1.021.250.00	Spooling motor compl.

BANDZUGWAAGE / TAPE TENSION SENSOR



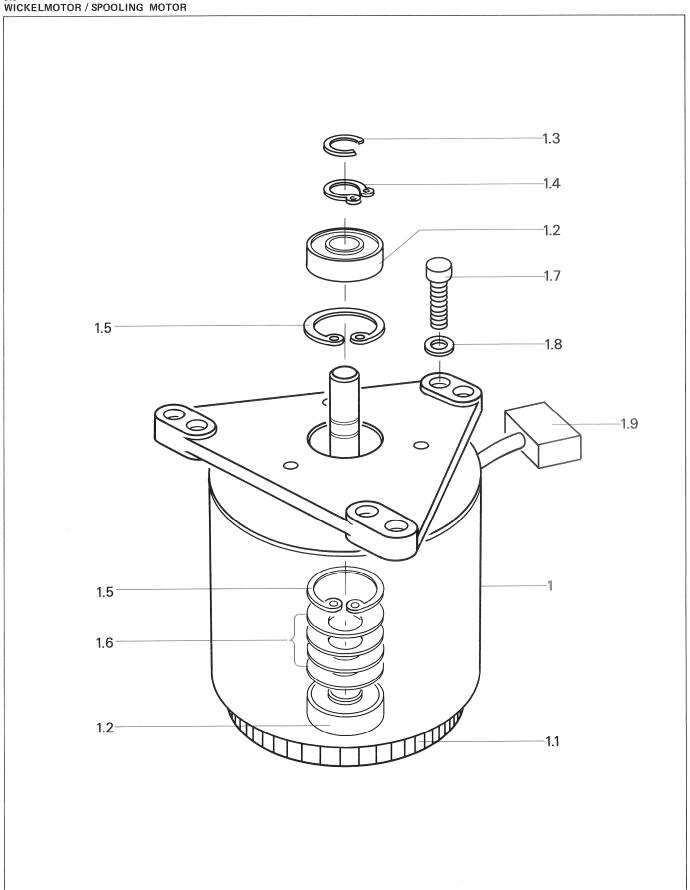
### BANDZUGWAAGE

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.110.81 1.727.112.81 1.810.150.08 41.79.0106 1.010.091.37 21.51.2356 1.810.150.01 1.167.838.02 24.16.4160 1.811.111.06 23.01.1064 24.16.1060 22.01.8060 21.53.0357 24.16.1030 1.810.150.03	Bandzugwaage kpl. Tachorolle kpl. Tachorolle Kugellager Druckfeder S-Schraube IS NI M3x10 Tachoblende Distanzhülse Clip Achse U-Scheibe D6,4x11 Sicherungsscheibe D6,4x10 6kt. Mutter M6 Z-Schraube IS M3x12 Sicherungsscheibe D3,2x5,5 Tachorollendeckel
2		1.727.113.00	Umlenkrolle kpl.
2.1		1.167.831.00	Deckel
2.2		21.01.0203	Z-Schraube M2x5
2.3		24.16.1020	Sicherungsscheibe D2,2x4
2.4		1.811.110.02	Anschlag-Gummiring
3.1		1.010.032.37	Zugfeder kurz
4.1		1.067.170.14	Dämpfungsgummi
4.2		1.010.125.37	Zugfeder lang
5.1		1.727.110.03	Anschlagfeder
6.1		24.16.1030	Sicherungsscheibe D3,2x5,5
6.2		23.01.2032	U-Scheibe D3,2x7
6.3		21.53.0353	Z-Schraube IS M3x5
7		1.727.114.00	Dämpfungspumpe kpl. eingest.
7.1		22.01.5060	Mutter M6
7.2		37.02.0101	Tellerfeder D6,2x9,8
8		1.727.321.00	Move sensor BOARD kpl.
8.1		21.53.0353	Z-Schraube IS M3x5
8.2		24.16.1030	Sicherungsscheibe D3,2x5,5
8.3		23.01.2032	Unterlagsscheibe D3,2x7
9.1 9.2 9.3		1.727.320.00 24.16.1030 21.53.0353 23.01.2032	Tape tension sensor BOARD kpl. Sicherungsscheibe D3,2x5,5 Z-Schraube IS M3x5 Unterlagsscheibe D3,2x7

#### TAPE TENSION SENSOR

TAPE	TENS	SION SENSOR	
POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.110.81 1.727.112.81 1.810.150.08 41.99.0106 1.010.091.37 21.51.2356 1.810.150.01 1.167.838.02 24.16.4160 1.811.111.06 23.01.1064 24.16.1060 22.01.8060 21.53.0357 24.16.1030 1.810.150.03	Tacho tension sensor compl. Tacho roller compl. Tacho roller Ball bearing D5/16x6 Pressure spring Screw IS M3x10 Tacho mask Spacer Internal retaining ring D16 Shaft Washer D6.4x11 Lock washer D6.4x10 Hexanut M6 Z-Screw IS M3x12 Lock washer D3.2x5.5 Cover
2 2.1 2.2 2.3 2.4		1.727.113.00 1.167.831.00 21.01.0203 24.16.1020 1.811.110.02	Guide roller compl. Cover Z-Screw M2x5 Lock washer D2.2x4 Stop rubber
3.1		1.010.032.37	Tension spring short
4.1 4.2		1.067.170.14 1.010.125.37	Rubber tube Tension spring long
5.1		1.727.110.03	Spring
6.1 6.2 6.3		24.16.1030 23.01.2032 21.53.0353	Lock washer D3.2x5.5 Washer D3.2x7 Z-Screw IS M3x5
7 7.1 7.2		1.727.114.00 22.01.5060 37.02.0101	Dashpot compl. adjusted Nut M6 Spring washer D6.2x9.8
8 8.1 8.2 8.3		1.727.321.00 21.53.0353 24.16.1030 23.01.2032	Move sensor BOARD compl. Z-Screw IS M3x5 Lock washer D3.2x5.5 Washer D3.2x7
9 9.1 9.2 9.3		1.727.320.00 24.16.1030 21.53.0353 23.01.2032	Tape tension sensor BOARD compl. Lock washer D3.2x5.5 Z-Screw IS M3x5 Washer D3.2x7

8.6 WICKELMOTOR / SPOOLING MOTOR



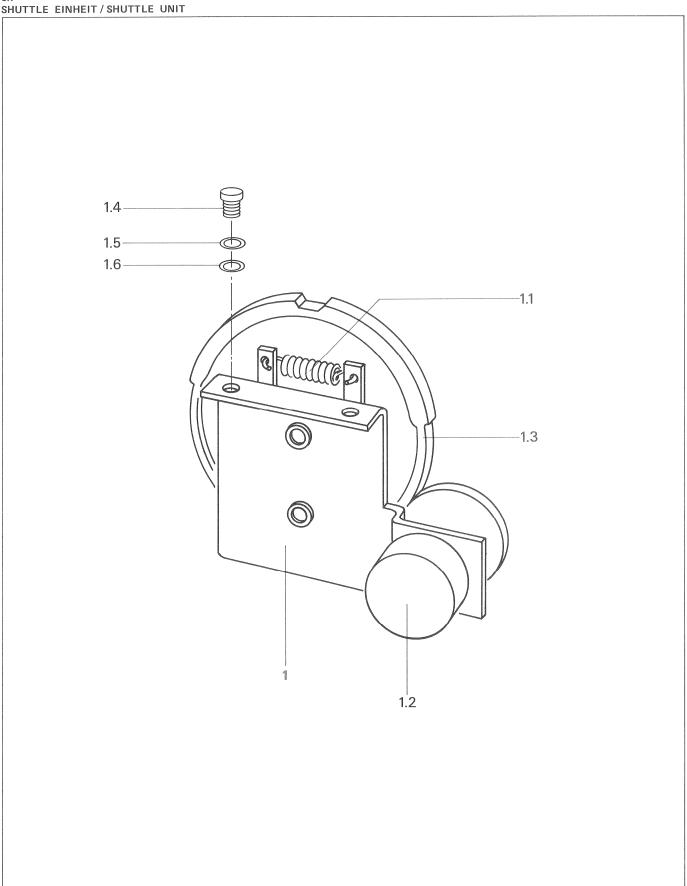
## WICKELMOTOR

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7		1.021.250.00 1.777.100.40 41.99.0105 1.021.256.04 24.16.5080 24.16.4220 37.02.0206 21.53.0457 24.16.1040 54.25.0303 54.01.0207	Wickelmotor kpl. Tachoblende Kugellager Clip geschliffen Clip Clip Tellerfeder Z-Schraube IS M4x12 Sicherungsschraube Steckergehäuse 3pol/16A Kontaktstift

### SPOOLING MOTOR

POS G	YTE	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8		1.021.250.00 1.777.100.40 41.99.0105 1.021.254.04 24.16.5080 24.16.4220 37.02.0206 21.53.0457 24.16.1040 54.25.0303 54.01.0207	Spooling motor compl. Tacho ring Ball bearing Circlip Circlip Circlip Spring washer Z-Screw IS M4x12 Lock washer Connector shell 3pol/16A

8.7 SHUTTLE EINHEIT/SHUTTLE UNIT



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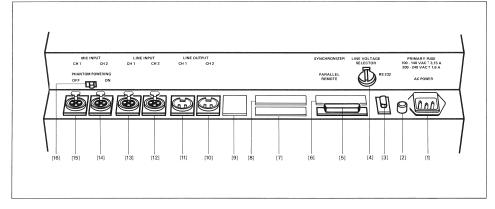
#### SHUTTLE EINHEIT

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2			Shuttle-Einheit kpl. Zugfeder Shuttle-Potentiometer 5 kΩ/2 W
1.3 1.4 1.5 1.6			Shuttle-Rad Z-Schraube IS M3x6 Sicherungsscheibe E3,2/5,5 U-Scheibe D3,2

#### SHUTTLE UNIT

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5		1.727.180.00 1.010.101.37 58.99.0139 1.727.180.01 21.53.0354 24.16.1030 23.01.2032	Shuttle-unit compl. Tension spring Shuttle-potentiometer 5 kα/2 W Shuttle-wheel Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2

8.8 ANSCHLUSSFELD / TERMINAL BOARD

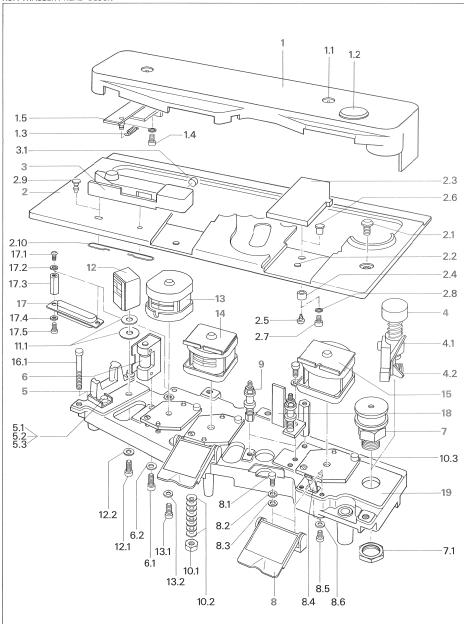


POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1		54.42.0003 51.01.0117 51.01.0122	Netzsteckersockel Sicherung 1,6A (220V) Sicherung 3,15A (110V)
2		1.010.001.53	Messbuchse O V
3		1.727.245.00	Kabelbaum RS 232
4		53.03.0128	Spannungswähler
5		1.727.244.00	Kabelbaum Parallele Fernsteuerung
6		1.820.560.06 1.727.246.00	Blindabdeckung oder Kabelbaum SYNCHRONIZER
7		1.820.560.06 1.727.248.00 1.727.239.00	Blindabdeckung oder Kabelbaum Stereo-Monitor oder Kabelbaum VU-Panel Schaltsignale
8		1.820.560.06 1.727.247.00 1.727.238.00	Blindabdeckung oder Kabelbaum VU-Panel Audio Stereo oder Kabelbaum VU-Panel Audio Mono
9		1.820.560.11 1.727.091.02	Blindabdeckung oder Einbaubuchse 5-pol
10-1	1	1.727.240.00	XLR-Ausgang mit Kabel
12-13		1.727.241.00 1.820.560.11	XLR-Eingang mit Kabel oder Blindabdeckung
14-15		1.727.242.00 1.820.560.11	XLR-Mic. Eingang mit Kabel oder Blindabdeckung
16		1.727.249.00 55.12.0007 1.820.560.05	Phantom Ein/Ausschalter mit Kabel Schalter oder Blindabdeckung

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1		54.42.0003 51.01.0119 51.01.0122	Power socket Fuse 1.6A (220V) Fuse 3.15A (110V)
2		1.010.001.53	0 V Terminal
3		1.727.245.00	Wire harness RS 232
4		53.03.0128	Voltage selector
5		1.727.244.00	Wire harness parallel remote control
5		1.820.560.06 1.727.246.00	Cover plate or wire harness SYNCHRONIZER
7		1.820.560.06 1.727.248.00 1.727.239.00	Cover plate or wire harn. Stereo monitor or wire harness VU-Panel switching signals
В		1.820.560.06 1.727.247.00 1.727.238.00	Cover plate or wire harness VU-panel audio stereo or wire harness VU-panel audio mono
9		1.820.560.11 1.727.091.02	Cover plate or 5-pin XLR socket f
10-1	1	1.727.240.00	XLR output incl. wire harness
12-1	3	1.727.241.00 1.820.560.11	XLR input incl. wire harness or cover plate
14-15		1.727.242.00 1.820.560.11	XLR Mic-input incl.wire harn. or cover plate
16		1.727.249.00 55.12.0007 1.820.560.05	Phantom sw. incl.wire harness Phantom powering switch or cover plate

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#### KOPETRAFGER

KOPF	COPFTRAEGER					
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION			
1 1.1 1.2 1.3 1.4		1.727.125.00 1.010.036.21 1.727.125.04 1.010.025.37 21.53.0354 24.16.1030	Kopfabdeckung kpl. S-Schraube IS Abdeckkappe Zugfeder Z-Schraube IS M3x6 Sicherungsscheibe D3,2x5,5			
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10		1.727.126.00 1.010.011.21 1.179.143.03 1.727.126.02 1.727.126.03 20.23.7280 1.727.127.01 21.53.0353 24.16.1030 1.810.186.02 1.810.400.05	Kopfträgerabdeckung kpl. Lin Schraube IS Gummianschlag Abdeckung 2.Repro-Kopf Buchse Schraube KS D2,5 Gewindebuchse Z-Schraube IS M3x5 Sicherungsscheibe D3,2x5,5 Abdeckstopfen Feder			
3 3.1		1.810.402.81 1.337.958.05	Bandmarkierer kpl.(OPTION) Stempeleinsatz			
4 4.1 4.2		1.020.889.81 1.020.861.07 1.020.715.12	Bandschere kpl.(OPTION) Scherenblatt fest Scherenblatt beweglich			
5 5.1 5.2 5.3		1.050.314.00 21.53.0354 24.16.1030 23.01.1032	Lichtschranke kpl. Z-Schraube IS M3x6 Sicherungsscheibe D3,2/5,5 Unterlagsscheibe D3,2x6			
6.1 6.2		1.050.311.00 21.53.0355 24.16.1030	Beruhigungsrolle kpl. Z-Schraube IS M3x8 Sicherungsscheibe D3,2/5,5			
7 7.1		1.050.351.00 1.050.351.04	Umlenkrolle kpl. Mutter			
8.1 8.2 8.3 8.4 8.5		1.050.350.00 21.51.8355 24.16.1030 23.01.1032 1.050.340.03 21.53.0353 24.16.1030	Abschirmklappe kpl. Lin Schraube IS M3x8 Sicherungsscheibe D3,2x5,5 U-Scheibe D3,2x6/0,5 Blattfeder T-Schraube IS M3x5 Sicherungsscheibe D3,2x5,5			
9		1.020.859.00	Bandführungsbolzen kpl.			
10.1 10.2 10.3		22.01.8030 37.01.0101 1.020.710.05	Mutter M3x0,8 Tellerfeder D3,2x8x0,3 Azimuteinstellschraube			
11.1		1.020.500.01	Distanzscheibe D4,2/15,5xO,1			
12 12.1 12.2		21.53.0456 24.16.1040	Variabel siehe unter 19 Schraube Sicherungsscheibe			
13 13.1 13.2		21.53.0455 24.16.1040	Variabel siehe unter 19 Schraube Sicherungsscheibe			
14			Variabel siehe unter 19			
15			Variabel siehe unter 19			
16.1		21.53.0464	Schraube M4x30			
17 17.1 17.2 17.3 17.4 17.5		54.13.1003 21.51.8355 24.16.1030 29.26.1022 1.050.340.07 24.16.1020 21.01.0204	Stecker D-Type 25pol Lin Schraube IS M3x8 Sicherungsscheibe D3,2x5,5 Lütöse D3,2x5,5x10,5 Distanzbolzen Sicherungsscheibe D2,2x4 Z-Schraube M2x6			
18			Sighe Foto			

#### HEAD BLOCK

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4		1.727.125.00 1.010.036.21 1.727.125.04 1.010.025.37 21.53.0354 24.16.1030	Head cover compl. S-Screw special Cover cap for scissors Tension spring shape B4x17 Z-Screw IS M3x6 Lock washer D3.2x5.5
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10		1.727.126.00 1.010.011.21 1.179.143.03 1.727.126.02 1.727.126.03 20.23.7280 1.727.127.01 21.53.0353 2.416.1030 1.810.186.02 1.810.400.05	Head block cover compl. Lin Screw IS special Rubber bumper for head cover Cover plate for 2nd reprohead Socket Screw KS D2.5 Screw socket Z-Screw IS M5x5 Lock washer D3.2x5.5 Stopper Spring
3 3.1		1.810.402.81 1.337.958.05	Marker compl.(OPTION) Rubber insert with ink
4 4.1 4.2		1.020.889.81 1.020.861.07 1.020.715.12	Tape scissors compl.(OPTION) Scissor blade fixed Scissor blade movable
5 5.1 5.2 5.3		1.050.314.00 21.53.0354 24.16.1030 23.01.1032	Light barrier compl. Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2x6
6 6.1 6.2		1.050.311.00 21.53.0355 24.16.1030	Damping pulley compl. Z-Screw IS M3x8 Lock washer D3.2/5.5
7 7.1		1.050.351.00 1.050.351.04	Tape guide roller compl. Nut
8 8.1 8.2 8.3 8.4 8.5 8.6		1.050.350.00 21.51.8355 24.16.1030 23.01.1032 1.050.340.03 21.53.0353 24.16.1030	Headshield compl. Lin Screw 18 M3x8 Lock washer D3.2x5.5 Washer D3.2x6/0.5 Plate spring Z-Screw 18 M3x5 Lock washer D3.2x5.5
9		1.020.859.00	Tape guide pin compl.
10.1 10.2 10.3		22.01.8030 37.01.0101 1.020.710.05	Nut M3x0.8 Spring washer D3.2x8.0.3 Head adjustment screw
11.1		1.020.500.01	Sleeve spacer
12 12.1 12.2		21.53.0456 24.16.1040	Variable see 19 Screw Lock washer
13 13.1 13.2	4	21.53.0455 24.16.1040	Variable see 19 Screw Lock washer
14			Variable see 19
15			Variable see 19
16.1		21.53.0464	Screw M4x30
17 17.1 17.2		54.13.1003 21.51.8355 24.16.1030 29.26.1022 1.050.340.07	Connector D-Type 25pin Lin Screw IS M3x8 Lock washer D3.2x5.5 Soldering tab D3.2x5.5x10.5 Bold
17.4 17.5		24.16.1020 21.01.0204	Lock washer D2.2x4 Z-Screw M2x6
18			See picture

## KOPFTRAEGER VOLLSPUR (MONO)

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14		1.116.097.81	Kopfträger Vollspur kpl. Löschkopf Vollspur Aufnahmekopf Vollspur Wiedergabekopf Vollspur

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14		1.116.097.81 1.318:710.00	Kopfträger Vollspur kpl. Löschkopf Vollspur Aufnahmekopf Vollspur Wiedergabekopf Vollspur

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.381.00	Kopfträger Vollspur nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13			Aufnahmekopfattrappe
14		1.318.616.00	Wiedergabekopf Vollspur

## KOPFTRAEGER 2-SPUR 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14		1.116.092.81 1.317.720.00	Kopfträger 2-Spur 2mm kpl. Löschkopf 2-Spur überlappend Aufnahmekopf 2-Spur 2mm Wiedergabekopf 2-Spur 2mm

- Contraction of the Contraction	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
COLUMN STATEMENT	19 12 13 14		1.116.092.81 1.318.720.00	Kopfträger 2-Spur 2mm kpl. Löschkopf 2-Spur überlappend Aufnahmekopf 2-Spur 2mm Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.343.81	Kopfträger 2-Spur 2mm mit zusätzlichem ¼Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.317.720.00	Aufnahmekopf 2-Spur 2mm
14		1.317.626.00	Wiedergabekopf 2-Spur 2mm
15		1.318.629.81	Wiedergabekopf %Spur 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.393.81	Kopfträger 2-Spur mit zusätzlichem %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.720.00	Aufnahmekopf 2-Spur 2mm
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm
15		1.318.629.81	Wiedergabekopf %Spur 2CH

## HEAD BLOCK FULL-TRACK (MONO)

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.097.81 1.317.710.00	Head block full track compl. Erase head full track Record head full track Reproduce head full track

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13		1.116.097.81	Head block full track compl. Erase head full track Record head full track
14			Reproduce head full track

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.381.00	Head block full track repro-only compl.
12 13 14			Dummy erase head Dummy record head Reproduce head full track

## HEAD BLOCK 2-TRACK 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.092.81 1.317.720.00	Head block 2-track 2mm compl. Erase head 2-track overlapp. Record head 2-track 2mm Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.092.81 1.318.720.00	Head block 2-track 2mm compl. Erase head 2-track overlapp. Record head 2-track 2mm Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.343.81	Head block 2-track 2mm with additional %track 2CH reproduce head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.317.720.00	Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm
15		1.318.629.81	Reproduce head %track 2CH

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.393.81	Head block 2-track with additional %track 2CH reproduce head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.318.720.00	Record head 2-track 2mm
14		1.318.626.00	Reproduce head 2-track 2mm
15		1.318.629.81	Reproduce head %track 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.345.00	Kopfträger 2-Spur 2mm mit Vollspur Löschkopf kpl.
12			Löschkopf Vollspur
13		1.317.720.00	Aufnahmekopf 2-Spur 2mm
14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.395.00	Kopfträger 2-Spur 2mm mit Vollspur Löschkopf kpl.
12		1.116.097.81	Löschkopf Vollspur
13			Aufnahmekopf 2-Spur 2mm
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.347.00	Kopfträger 2-Spur 2mm, Lösch- kopf 0,8mm Trennspur kpl.
12		1.116.814.00	Löschkopf mit O,8mm Trennspur
13			Aufnahmekopf 2-Spur 2mm
14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.397.00	Kopfträger 2-Spur 2mm, Lösch- kopf O,8mm Trennspur kpl.
12		1.116.814.00	Löschkopf mit O,8mm Trennspur
13		1.318.720.00	Aufnahmekopf 2-Spur 2mm
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.348.00	Kopfträger 2-Spur 2mm nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13		1.216.010.01	Aufnahmekopfattrappe
14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.398.00	Kopfträger 2-Spur 2mm nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13		1.216.010.01	Aufnahmekopfattrappe
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm

## KOPFTRAEGER STEREO 0,75mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 mit 2-Spur Löschkopf überlappend kpl.
12			Löschkopf 2-Spur überlappend
13			Aufnahmekopf 0,75
14		1.317.636.00	Wiedergabekopf 0,75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.392.00	Kopfträger 0,75 mit 2-Spur Löschkopf überlappend kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.730.00	Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.345.00	Head block 2-track 2mm with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.317.720.00	Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.395.00	Head block 2-track 2mm with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.318.720.00	Record head 2-track 2mm
14		1.318.626.00	Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.347.00	Head block 2-track 2mm, erase head 0.8mm sep. track compl.
12		1.116.814.00	Erase head, O.8mm sep.track
13		1.317.720.00	Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm
1		l .	

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.397.00	Head block 2-track 2mm, erase head, O.8mm sep.track compl.
12		1.116.814.00	Erase head, O.8mm sep. track
13		1.318.720.00	Record head 2-track 2mm
14		1.318.626.00	Reproduce head 2-track 2mm

POS	aty	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.348.00	Head block 2-track 2mm
12		1.116.089.01	repro-only compl. Dummy erase head
13		1.216.010.01	Dummy record head
14		1.317.626.00	Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.398.00	Head block 2-track 2mm repro-only compl.
12		1.116.089.01	Dummy erase head
13		1.216.010.01	Dummy record head
14		1.318.626.00	Reproduce head 2-track 2mm

## HEAD BLOCK STEREO 0,75mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.342.00	Head block 0.75 with 2-track overlapping erase head compl.
12 13			Erase head 2-track overlapp. Record head 0.75
14			Reproduce head 0.75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.392.00	Head block 0.75 with 2-track overlapping erase head compl.
12			Erase head 2-track overlapp.
13		1.318.730.00	Record head 0.75
14		1.318.636.00	Reproduce head 0.75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.344.00	Kopfträger O,75 mit Vollspur Löschkopf kpl.
12		1.116.097.81	Löschkopf Vollspur
13		1.317.730.00	Aufnahmekopf 0,75
14		1.317.636.00	Wiedergabekopf 0,75

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.344.00	Head block 0.75 with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.317.730.00	Record head 0.75
14		1.317.636.00	Reproduce head 0.75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.394.00	Kopfträger 0,75 mit Vollspur Löschkopf kpl.
12		1.116.097.81	Löschkopf Vollspur
13			Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.394.00	Head block 0.75 with full track erase head compl.
12			Erase head full track
13			Record head 0.75
14		1.318.636.00	Reproduce head 0.75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.346.81	Kopfträger 0,75 mit zusätzl. %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.317.730.00	Aufnahmekopf 0,75
14		1.317.636.00	Wiedergabekopf 0,75
15		1.318.629.81	Wiedergabekopf ¼Spur 2CH

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19			Head block 0.75 with add. %track 2CH repro-head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.317.730.00	Record head 0.75
14		1.317.636.00	Reproduce head 0.75
15		1.318.629.81	Reproduce head %track 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 mit zusätzl. %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.730.00	Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75
15		1.318.629.81	Wiedergabekopf %Spur 2CH

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.396.81	Head block 0.75 with add. %track 2CH repro-head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.318.730.00	Record head 0.75
14 15			Reproduce head 0.75 Reproduce head %track 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.349.00	Kopfträger 0,75 nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13		1.216.010.01	Aufnahmekopfattrappe
14		1.317.636.00	Wiedergabekopf 0,75

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.349.00	Head block 0.75
12		1.116.089.01	repro-only compl. Dummy erase head
13			Dummy record head
14		1.317.636.00	Reproduce head 0.75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 nur Wiedergabe kpl.
12			Löschkopfattrappe
13			Aufnahmekopfattrappe
14		1.318.636.00	Wiedergabekopf 0,75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.399.00	Head block 0.75 repro-only compl.
12 13			Dummy erase head Dummy record head
14			Reproduce head 0.75
1	1	i	

## KOPFTRAEGER 1/4 SPUR 2 SPUR \*

(011110)(2021) 17.0.011 20.011			
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 * 12 13 14		1.116.099.81 1.318.724.00	Kopfträger %Spur 2CH kpl. Löschkopf %Spur 2CH Aufnahmekopf %Spur 2CH Wiedergabekopf %Spur 2CH

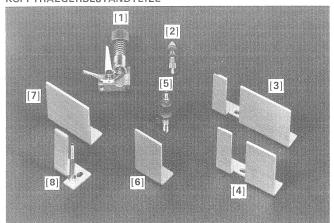
## HEAD BLOCK 1/4 TRACK 2 TRACK \*

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 * 12 13 14		1.116.099.81 1.318.724.00	Head block ¼track 2CH compl. Erase head ¼track 2CH Record head ¼track 2CH Reproduce head ¼track 2CH

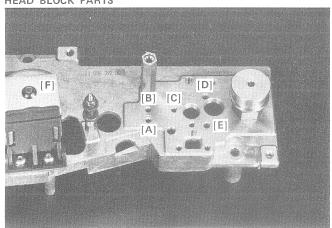
<sup>\*</sup> WIRD NICHT MEHR PRODUZIERT, NUR NOCH ERSATZKOEPFE ERHAELTLICH

<sup>\*</sup> NO LONGER PRODUCED, JUST REPLACEMENT HEADS AVAILABLE

## KOPFTRAEGERBESTANDTEILE







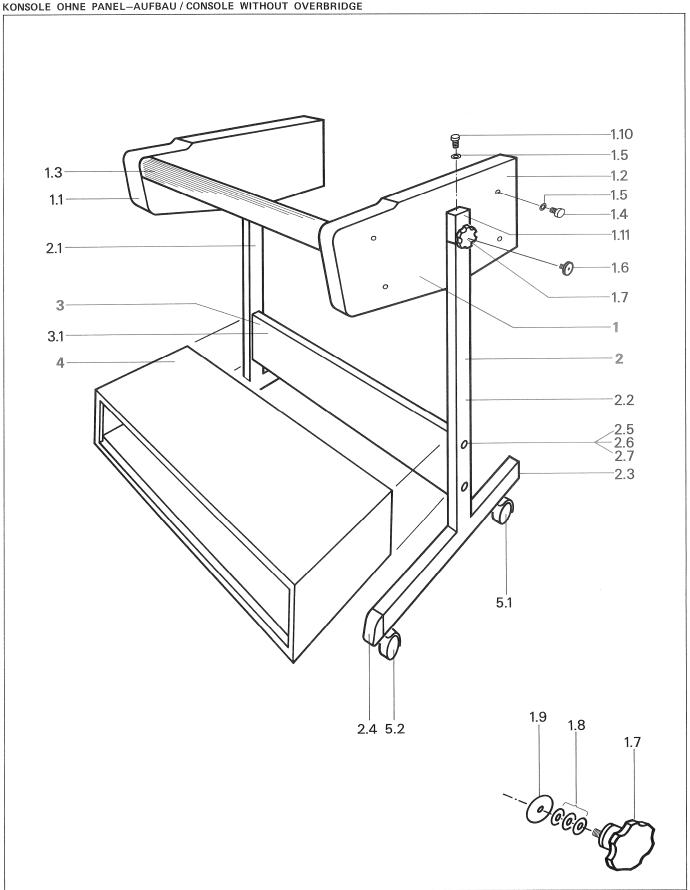
y				
	1.020.889.81	Bandschere kpl. (Befest. mit Pass-Sitz in POS D und mit der Schraube in POS E).		
	ür Kopfträger von A8 200 (POS A vorhanden)			
[2] =	1.020.859.00	Bandführungsbolzen kpl. (Befestigung in <b>POS A</b> )		
[3] =	1.050.390.01	Abschlusswinkel 56mm  Version ohne Bandschere (Befest. in POS B und C)		
[4] =	1.050.390.02	Abschlusswinkel 41mm Version mit Bandschere (Befest. in POS B und C)		
	Teile für Kopfträger von A807 mit Seriennummern unter 2200 (Loch POS A fehlt) :			
LD 1 -	1.050.352.00	Bandführungsbolzen (ohne Führungselemente) (Befestigung in POS B)		
[6] =	1.050.340.06	Abschlusswinkel 20mm Version mit Bandschere (Befestigung in POS C)		
[7] =	1.050.340.05	Abschlusswinkel 36mm Version ohne Bandschere (Befestigung in POS C)		
	Verlängerte Abschlus 7 mit Seriennummern	swinkel für Kopfträger unter 2200 :		
[8] =	1.050.353.00	Bandführungsbolzen (ohne Führungselemente)(Befest. in POS B) auch in Kopftr. mit 2.Reprokopf vorhanden - Führungselemente von Bandführung [5] verwenden - Abschlusswinkel [6] oder [7] bleiben eingebaut		

[1]	<b>32</b>	1.020.889.81	Tape scissors complete (Fastening with dowel pin in POS D and mounting screw in POS E).
		ARTS of A807 with A existing) :	Serialnumbers above
[2]	=	1.020.859.00	Tape guide pin complete (Fastening in <b>POS A</b> )
[3]	******	1.050.390.01	Angle braket 56mm, version without tape scissors (Fastening in POS B and C)
[4]	Time .	1.050.390.02	Angle braket 41mm, version with tape scissors (Fastening in <b>POS B</b> and <b>C</b> )
		ARTS of A807 with POS A not existi	Serialnumbers below ng) :
[5]	MOTOR MARKET	1.050.352.00	Tape guide pin (without tape guide elements) (Fastening in POS B)
[6]	==	1.050.340.06	Angle braket 20mm, version with tape scissors (Fastening in POS C)
[7]	=	1.050.340.05	Angle braket 36mm, version without tape scissors (Fastening in POS C)
		for extended ang with Serialnumber	le braket for A807 s below 2200 :
[8]	==	1.050.353.00	Tape guide pin (without tape guide elements) (Fastening in POS B)  - Use tape guide elements of tape guide pin [5].  - Remain angle braket [6] or [7] built - in.

(F) =	1.050.340.04	μ - Metall Anschlag
		siehe Zeichnung 8.9
		Index 14/15

(F) =	1.050.340.04	μ - metal stopper see drawing 8.9
		Index 14/15

8.10 KONSOLE OHNE PANEL-AUFBAU/CONSOLE WITHOUT OVERBRIDGE



## KONSOLE OHNE PANEL-AUFBAU

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1		20.020.205.25 20.020.205.35	Konsole kompl. mit Traver- se ohne Panelaufbau Konsole kompl. mit 19" Rack- unterbau ohne Panelaufbau
1 1.1 1.2 1.3		1.058.055.00 1.058.055.01 1.058.055.02 1.058.071.00 21.53.0456	Konsolenset ohne Panelaufbau Holzseitenwand links Holzseitenwand rechts Handauflage Befestigungsschraube Z IS M4x10 Rippenscheibe D 4,3/7
1.4 1.5 1.6 1.7 1.8 1.9 1.10		1.010.037.21 24.16.1050 1.058.053.05 1.058.053.06 37.01.0128 1.058.053.06 1.010.052.21	IS-Schraube M5x30 Rippenscheibe D 5,3/9 Spez. Schraube M10 Handrad spez M10 Tellerfeder Anlaufscheibe Z-Schraube IS M5x50 Lagerbock kompl.
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7		1,058,050,00 1,058,060,00 1,058,061,00 1,038,880,01 1,058,001,05 31,03,0106 21,53,0571 26,16,1060	Beinset Bein links H=780/840 Bein rechts H=780/840 Abschlusspfropfen Rohrabschluss Abdeckkappe Z-Schraube IS M6x14 Rippenscheibe D 6,4/10
3 3.1		1.058.101.00 1.058.112.00	Traversenset kompl. Traverse
4		1.058.057.00	19" Rackunterbau
5.1 5.2		33.04.0270 33.04.0271	Rolle schwenkbar ohne Bremse Rolle schwenkbar mit Bremse

### CONSOLE WITHOUT OVERBRIDGE

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
- фий		20.020.205.25 20.020.205.35	Console with traverse for machines without overbridge Console with pedestal rack 19" for machines without overbridge
1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10		1.058.055.00  1.058.055.01 1.058.055.02 1.058.071.00 21.53.0456 24.16.1040 1.010.037.21 24.16.1050 1.058.053.05 1.058.053.06 37.01.0128 1.058.053.06 1.010.052.21 1.058.068.00	Console—set without overbridge Side panel left Side panel right Leather hand rest Fixing screw Z IS M4x10 Lock washer D 4.3/7 Screw IS M5x30 Lock washer D 5.3/9 Special screw M10 Handwheel M10 Spring washer Thrust—ring Z—Screw IS M5x50 Bearing braket
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7		1,058,050,00 1,058,060,00 1,058,061,00 1,038,880,01 1,058,001,05 31,03,0106 21,53,0571 26,16,1060	Set of legs Leg left H=780/840 Leg right H=780/840 Cover cap straight Plastic plug Plastic cover Z-Screw IS M6x14 Lock washer D 6,4/10
3 3.1		1.058.101.00 1.058.112.00	Traverse compl. Traverse
4		1.058.057.00	Pedestal rack 19"
5.1 5.2		33 <b>.</b> 04 <b>.</b> 0270 33 <b>.</b> 04 <b>.</b> 0271	Castor black without brake Castor black with brake

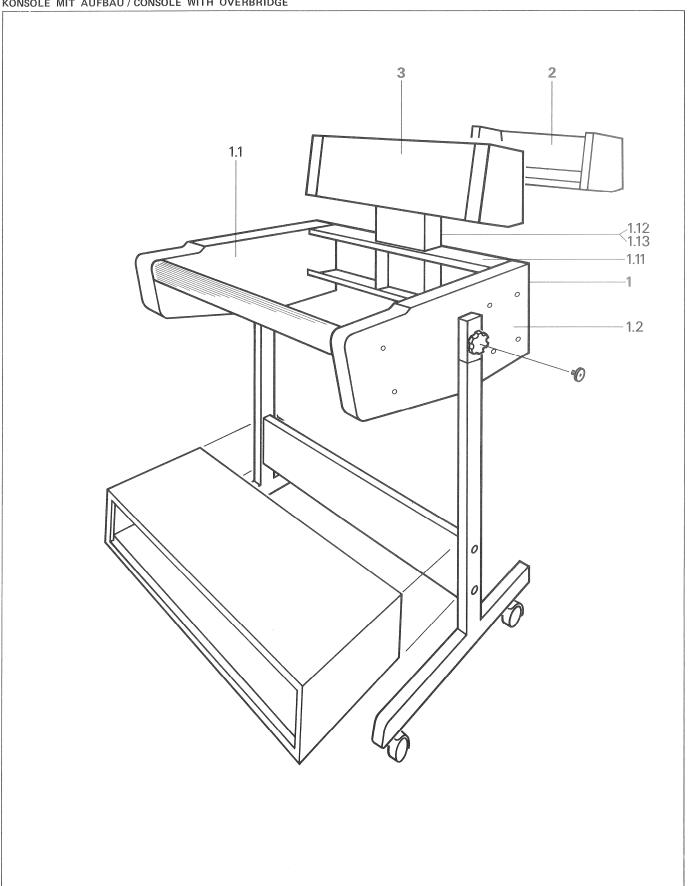
## BLINDABDECKPLATTE FUER 19" RACKUNTERBAU

	FAR	BE
	grau	eloxal
1 Einheit hoch 2 Einheiten hoch 3 Einheiten hoch	1.918.011.00 1.918.012.00 1.918.013.00	1.918.001.00 1.918.002.00 1.918.003.00
Schrauben für 19" Ra M6x12 Schrauben für 19" Ra M6x16	21.99.0164 21.99.0167	
Unterlagsscheibe für M6 für 19" Rackeinsc		23.99.0121

## FILLER PANELS FOR 19" PEDESTAL RACK

	FIN:	(SH
	gray paint	anodized
1 unit width 2 units width 3 units width	1.918.011.00 1.918.012.00 1.918.013.00	1.918.001.00 1.918.002.00 1.918.003.00
Screw for 19" rack m	ounting	21.99.0164
Screw for 19" rack m M6x16	ounting	21.99.0167
Washer for 19" rack M6	Washer for 19" rack mounting	

8.10.1 KONSOLE MIT AUFBAU/CONSOLE WITH OVERBRIDGE



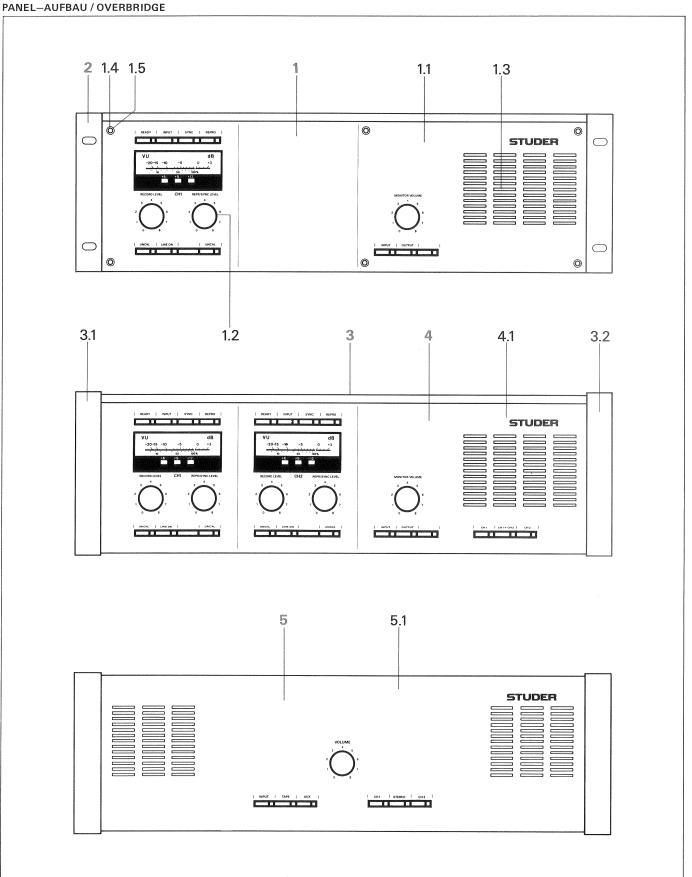
## KONSOLE MIT PANELAUFBAU

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
d or		20.020.205.05 20.020.205.15	Konsole mit Panelaufbau und Traverse Konsole mit Panelaufbau und 19" Rackunterbau
1 1.1 1.2 1.12 1.13 1.14		1.058.056.00 1.058.056.01 1.058.056.02 1.058.072.00 1.058.100.17 1.010.034.21	Konsolenset mit Panelaufbau Holzseitenwand links Holzseitenwand rechts Konsolenrückwand mit Hals Deckblech Hals Schrauben für Deckblech Hals IS M4 x 8
2		21.811.560.00	Tablar - Aufbau
3		manus advongenera con ni di censorio i si sul con este con di milita della cindi di centra di centra di centra	Panelaufbau Versionen siehe Paragraph 8.11

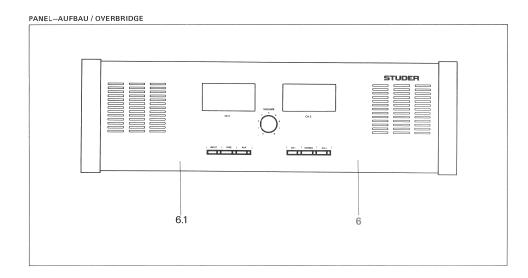
## CONSOLE WITH OVERBRIDGE

POS	GTY	ORDER NUMBER	PART NAME SPECIFICATION
diameter and the second		20.020.205.05 20.020.205.15	Console with overbridge and traverse Console with overbridge and 19" pedestal rack
1 1.1 1.2 1.12 1.13		1.058.054.00 1.058.054.01 1.058.056.02 1.058.072.00 1.058.100.17 1.010.034.21	Console-set with overbridge Lumber side panel left Lumber side panel right Console back panel with neck Plate cover neck Screw for plate cover neck IS M4 × 8
2		21.811.560.00	Shelf
3			Overbridge - Versions see paragraph 8.11

8.11 PANEL-AUFBAU / OVERBRIDGE



STUDER A807 8/25



POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1.1 1.2 1.3 1.4		1.727.930.81 1.727.951.81 1.727.930.01 1.727.100.43 71.01.0159 1.010.025.21 1.010.001.24	Ext. Panel Mono kpl. mit Holzseitenwänden Ext. Panel Mono kpl. mit 19" Rack-Winkeln Ext. Frontpanel Abd. Mono Drehknopf Lautsprecher Schraube M33% Spannscheibe M3
2		1.727.952.00	19" Rackbox kompl.
3 3.1 3.2		1.811.550.00 1.820.550.03 1.820.550.04	Panelaufbau mit Holzseiten- wänden Holzseitenwand links Holzseitenwand rechts
4.1		1.727.920.81 1.727.950.81 1.727.920.01	Ext. Panel stereo kol. mit Holzseitenwänden Ext. Panel stereo kol. mit 19" Rack-Winkeln Ext. Frontpanel Abd. 2VU
5 5.1		1.727.900.00 1.727.900.01	Ext. Monitor Panel stereo kpl. mit Holzseitenwänden Ext. Monitor Frontpanel Abdeckung
6 6.1		1.727.960.00 1.727.960.01	Ext. Stereo-VU monitor Panel kpl. mit Holzseitenwänden Ext. Stereo-VU monitor Panel Abdeckung

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5		1.727.930.81 1.727.951.81 1.727.930.01 1.727.100.43 71.01.0159 1.010.025.21 1.010.001.24	Ext. panel mono compl. with wooden side panels Ext. monitor panel mono compl. with 19" rack rail set Ext. front panel cover mono Buttom Loudspeaker Screw MSxó Washer M3
2		1.727.952.00	19" rack box compl.
3 3.1 3.2		1.811.550.00 1.820.550.03 1.820.550.04	Overbridge with wooden side panels Wooden side panel left Wooden side panel right
4.1		1.727.920.81 1.727.950.81 1.727.920.01	Ext. panel stereo compl. with wooden side panels Ext. panel stereo compl. with 19" rack rail set Ext. front panel cover 2VU
5 5.1		1.727.900.00 1.727.900.01	Ext. monitor panel stereo compl. with wooden side panel Ext. monitor front panel cover
6.1		1.727.960.00 1.727.960.01	Ext. Stereo-VU monitor panel compl.with wooden side panels Ext. Stereo-VU monitor front cover plate

#### 8.12

#### SCHILDER / LABEL



#### 1.727.100.50

Audio Anschlussaufkleber Audio connection designation plate, self adhesive



#### 1.727.100.49

Schild - Netzteil, Fernsteuer - Anschlüsse Power supply, remote control designation plate, self adhesive



#### 1.727.360.06

Schildersatz, Laufwerktasten Set of designations plates, tape transport keys



#### 1.727.091.03

Monitor Panel - Anschlussaufkleber Monitor panel designation plate, self adhesive

LOC 2	LOC3
LOOP	BACKSPACE
LOC START	BACKSPACE
LOC START	FADER RDY
LOC 2	LOC START
LOOP	FADER RDY

#### 1.727.100.58

Schildersatz programmierbare Tasten Set of designation plates, programmable keys

LOOP | LOC START
HEAD A | HEAD B
TAPE A | TAPE B
MONO MONO/T.GEN



#### 1.727.013.01

VU - Meter Panel - Anschlussaufkleber VU - meter panel designation plate, self adhesive



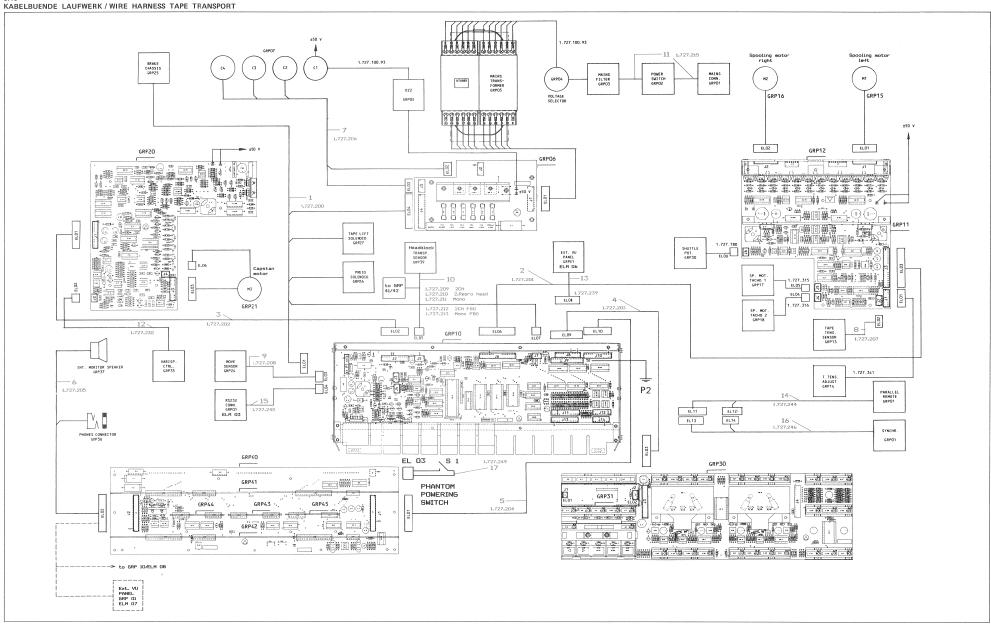
1.727.364.01

Tastenschild unbeschriftet (für PBO – Versionen) Designation plate blank for PBO – versions



1.727.100.57

Schild Phantom - Speisungsschalter Phantom powering switch designation plate, self adhesive STUDER A807 8/26



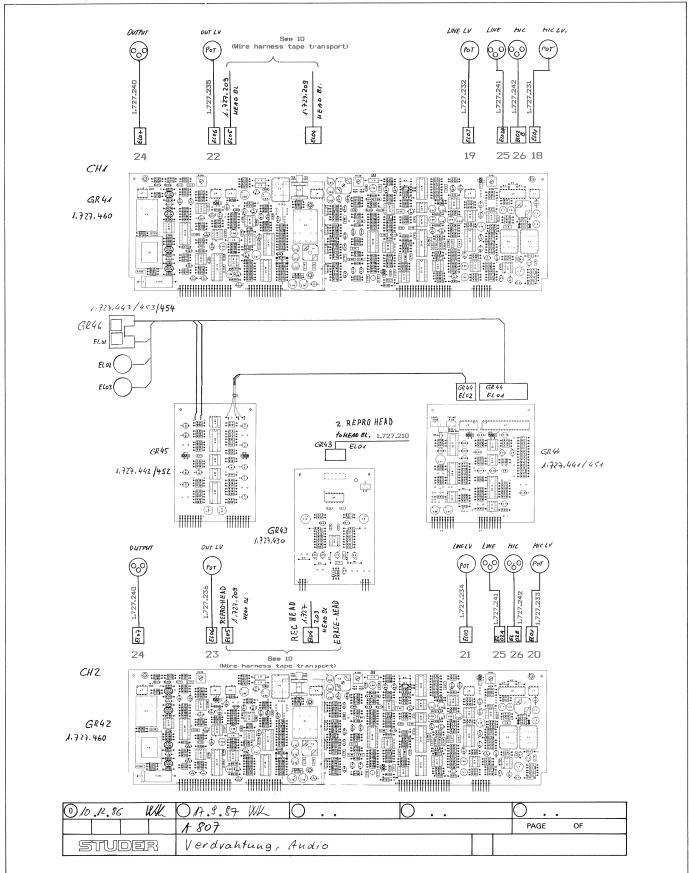
## KABELBUENDE LAUFWERK

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1		1.727.200.00	Kabelbund Netzteil
2		1.727.201.00	Kabelbund Laufwerk - Wickelmotorsteuerung
3		1.727.202.00	Kabelbund Laufwerk – Capstanmotorsteuerung
4		1.727.203.00	Kabelbund Laufwerk - Commandpanel
5		1.727.204.00	Kabelbund Laufwerk - Audiocontrol-Print
6		1.727.205.00	Kabelbund int. Monitor- Audio control print
		1.727.238.00	oder anstelle von 1.727.205.: Kabelbund ext. VU-Panel Audioanschluss MONO
		1.727.247.00	Kabelbund ext. VU-Panel Audioanschluss 2CH
		1.727.248.00	Kabelbund ext. Monitoranschluss
7		1.727.206.00	Kabelbund Kondensatoren, Gleichrichter – Print
8		1.727.207.00	Kabelbund Bandzugsensor, Wickelmotorsteuerung
9		1.727.208.00	Kabelbund Bewegungs- sensor - Laufwerk
10		1.727.209.00 1.727.210.00	Kabelbund Kopfträger 2CH Kabelbund Kopfträger 2CH + zusätzlicher Reprokopf
		1.727.211.00	Kabelbund Kopfträger MONO (1CH)
		1.727.212.00	Kabelbund Kopfträger 2CH nur Wiedergabe
		1.727.213.00	Kabelbund Kopfträger MONO nur Wiedergabe
11		1.727.215.00	Kabelbund Netzeingang
12		1.727.230.00 1.727.230.01	Kabelbund Varispeed - Poti Potentiometer 50kΩ lin
13		1.727.239.00	Kabelbund ext. VU-Panel Control – Anschluss
14		1.727.244.00	Kabelbund paralleler Fernsteuer – Anschluss
15		1.727.245.00	Kabelbund serieller Fernsteuer – Anschluss
16		1.727.246.00	Kabelbund paralleler Synchronisator – Anschluss
17		1.727.249.00 55.12.0007	Kabelbund Phantomschalter Phantom Schalter S1

## WIRE HARNESS TAPE TRANSPORT

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1		1.727.200.00	Wire harness supply
2		1.727.201.00	Wire harness tape transport - spooling motor control
3		1.727.202.00	Wire harness tape transport - capstan motor control
4		1.727.203.00	Wire harness tape transport - command panel
5		1.727.204.00	Wire harness tape transport - audio control
6		1.727.205.00	Wire harness int. Monitor - audio control PCB or in place of 1.727.205.:
		1.727.238.00	Wire harness ext. VU-Panel audio connector MONO
	SCHOOL STATE OF STATE	1.727.247.00	Wire harness ext. VU-Panel audio connector 2CH
		1.727.248.00	Wire harness ext. Monitor connector
7		1.727.206.00	Wire harness capacitors - rectifier PCB
8		1.727.207.00	Wire harness tape tension sensor,spooling motor contr.
9		1.727.208.00	Wire harness move sensor – tape transport
10		1.727.209.00 1.727.210.00	Wire harness headblock 2CH Wire harness headblock 2CH +
	a.c. coulomb modern	1.727.211.00	add. reprohead Wire harness headblock
	down the second	1.727.212.00	MONO (1CH) Wire harness headblock 2CH playback only
		1.727.213.00	Wire harness headblock MONO playback only
11		1.727.215.00	Wire harness mains input
12		1.727.230.00 1.727.230.01	Wire harness varispeed - pot. Potentiometer 50kΩ lin
13		1.727.239.00	Wire harness ext. VU-Panel control connector
14		1.727.244.00	Wire harness parallel remote control connector
15		1.727.245.00	Wire harness serial remote control connector
16		1.727.246.00	Wire harness parallel synchronizer connector
17		1.727.249.00 55.12.0007	Wire harness ph. pow. switch Phantom powering switch S1

8.14 VERDRAHTUNG, AUDIO/AUDIO WIRING DIAGRAM



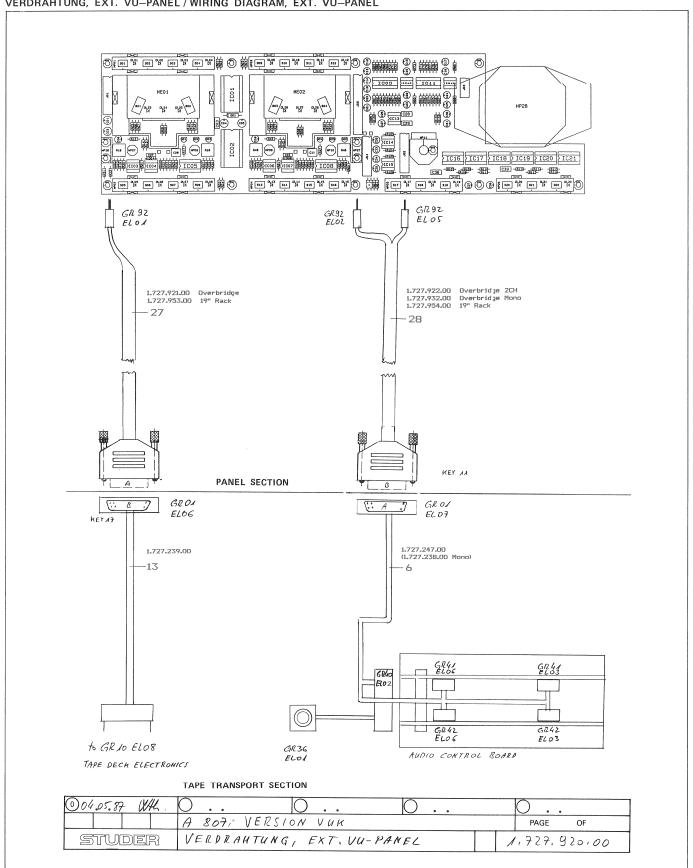
## VERDRAHTUNG, AUDIO

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
18		1.727.231.00	Kabelbund Mic. Pegel Pot. Meter CH1
19		1.727.232.00	Kabelbund Linien-Pegel Pot. Meter CH1
20		1.727.233.00	Kabelbund Mic. Pegel Pot. Meter CH2
21		1.727.234.00	Kabelbund Linien-Pegel Pot. Meter CH2
22		1.727.235.00	Kabelbund Ausgangspegel Pot. Meter CH1
23		1.727.236.00	Kabelbund Ausgangspegel Pot. Meter CH2
18 -	23	1.727.230.01	Pot. Meter 50kΩ lin
24		1.727.240.00	XLR Ausgang kpl. (Stecker)
25		1.727.241.00	XLR Linien-Eingang kpl. (Buchse)
26		1.727.242.00	XLR MicEingang kpl.(Buchse)

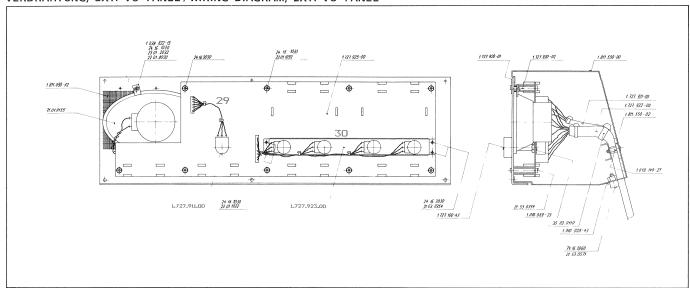
## AUDIO WIRING DIAGRAM

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION			
18		1.727.231.00	Wire harness Mic. Level pot. meter CH1			
19		1.727.232.00	Wire harness Line Level pot. meter CH1			
20		1.727.233.00	Wire harness Mic. Level pot. meter CH2			
21		1.727.234.00	Wire harness Line Level pot. meter CH2			
22		1.727.235.00	Wire harness Output Level pot. meter CH1			
23		1.727.236.00	Wire harness Output Level pot. meter CH2			
18 -	23	1.727.230.01	Pot. meter 50kΩ lin			
24		1.727.240.00	XLR Output compl. (connector)			
25		1.727.241.00	XLR Line input compl. (jack)			
26		1.727.242.00	XLR Mic. input compl. (jack)			

8.15 VERDRAHTUNG, EXT. VU-PANEL/WIRING DIAGRAM, EXT. VU-PANEL



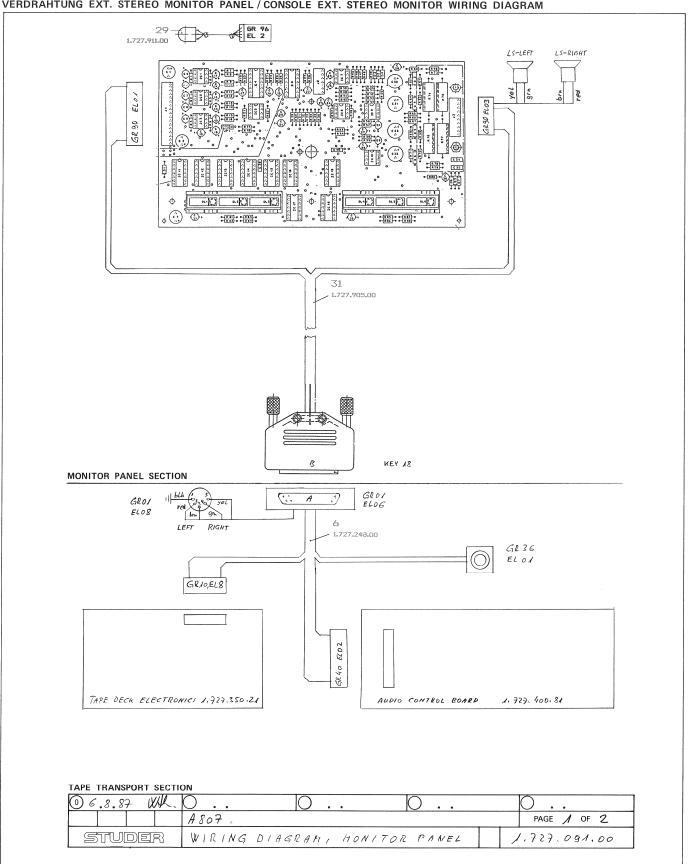
# VERDRAHTUNG, EXT. VU-PANEL/WIRING DIAGRAM, EXT. VU-PANEL



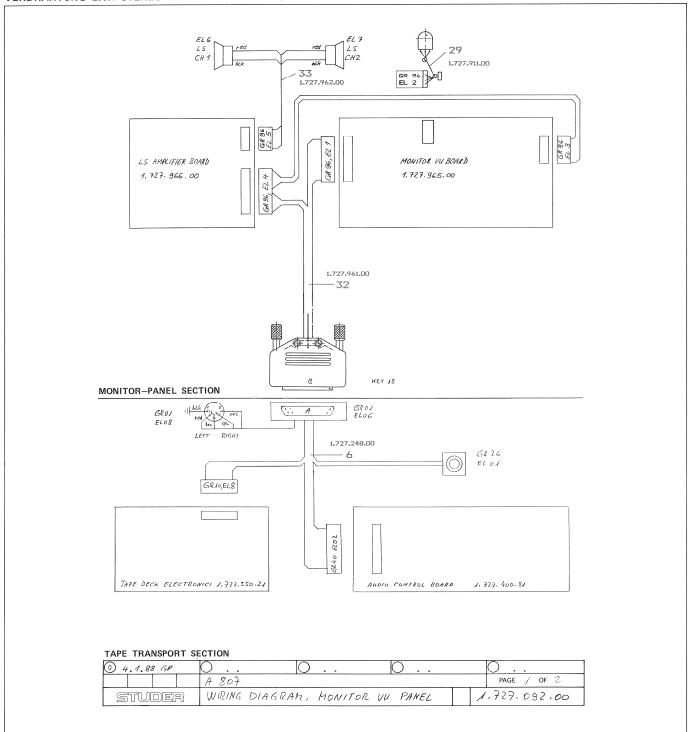
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
27		1.727.921.00 1.727.953.00	Kabelbund VU-Meter Panel Control oder Kabelbund 19" Rack VU-Meter Panel,Control
28		1.727.922.00 1.727.932.00 1.727.954.00	Kabelbund VU-Meter Panel Audio 2CH oder Kabelbund VU-Meter Panel Audio Mono oder Kabelbund 19" Rack VU-Meter Panel Audio
29		1.727.911.00 1.727.911.01	Kabelbund ext. Monitor Pot. Meter Pot. Meter Monitor- lautstärke
30		1.727.923.00 1.727.231.01	Kabelbund ext. Potmetergruppe Pegel Pegel Pot. 5kΩ log

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
27		1.727.921.00 1.727.953.00	Wire harness VU-Meter panel control or Wire harness 19"rack moun- ting VU-Panel,control
28		1.727.922.00 1.727.932.00 1.727.954.00	Wire harness VU-Meter panel Audio 2CH or Wire harness VU-Meter panel Audio mono or Wire harness 19"rack VU-Meter panel Audio
29		1.727.911.00 1.727.911.01	Wire harness ext. monitor pot. meter Monitor volume control pot. meter
30		1.727.923.00 1.727.231.01	Wire harness ext. Level pot. meter unit Level pot. 5kΩ log

8.16 VERDRAHTUNG EXT. STEREO MONITOR PANEL/CONSOLE EXT. STEREO MONITOR WIRING DIAGRAM



# VERDRAHTUNG EXT. STEREO MONITOR VU PANEL/CONSOLE EXT. STEREO MONITOR VU PANEL WIRING DIAGRAM



POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION			
31		1.727.905.00	Kabelbund Stereo-Monitor Panel			
32		1.727.961.00	Kabelbund Stereo-Monitor Panel mit VU-Metern			
33		1.727.962.00	Kabelbund Lautsprecher Stereo-Monitor VU-Panel			

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
31		1.727.905.00	Wire harness Stereo-monitor panel
32		1.727.961.00	Wire harness Stereo-monitor panel with VU-meters
33		1.727.962.00	Wire harness Loudspeaker Stereo-monitor VU-panel

8.17 A807 VARIANTEN / A807 VERSIONS

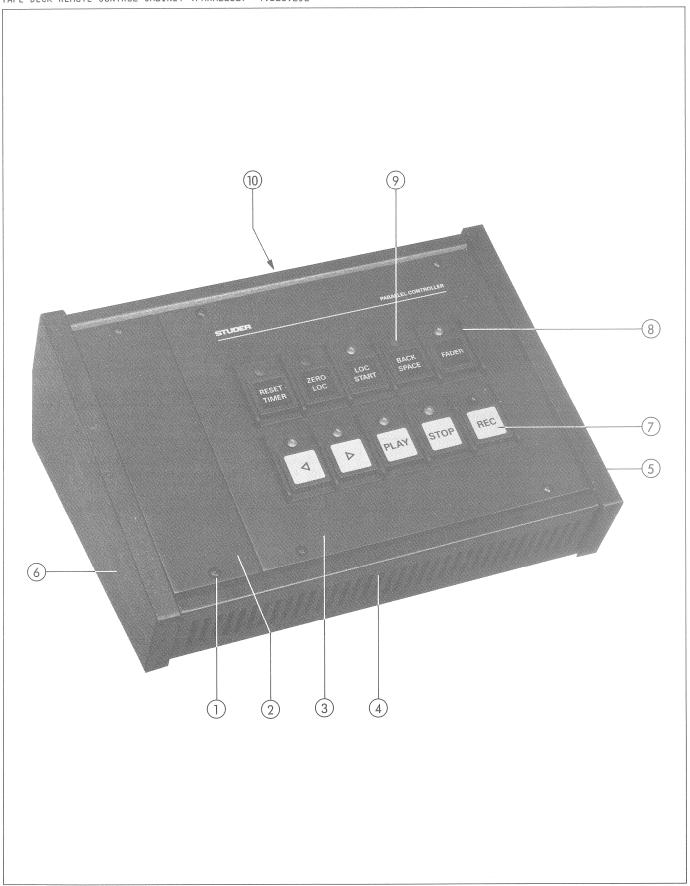
A 8 0 7 Number	VERSIONS Part Name	Headblock	Capstan Contr. 1.727XX	Command Panel 1.727XX	Audio Contr. 1.727XX	Audio Electr.PCB 1.727XX
60.116.07011	A807-1	.390	770	1 7/6	400	
60.116.07011	A807-1 VU	.390	.330	.360	.400	-461
60.116.07013	A807-1 VUK	.390	.330	.361 .360	.400	.460
60.116.07015	A807-1 VUK HS	.390	.335	1	.400	.462
60.116.07016	A807-1 VUK H5	.381	i	.360	.401	.461
60.116.07017	A807-1 N.W.(PBO)	.381	.330	.360	.400	.465
60.116.07021	A807-0.75	.394	.330	.365	.400	.465
60,116,07021	A807-0.75 VU	.392	.330	-360	-400	.461
60.116.07024	A807-0.75 VUK	i	.330 .330	.362	.400	.460
60.116.07024	A807-0.75 VUK HS	.392	1	.360	.400	-462
60.116.07025	A807-0.75 N.W.(P80)	.392	.335	.360	.401	-467
60.116.07027		.399	.330	.360	.400	-465
	A807-0.75 VU.N.W.(PBO)	.399	.330	.364	.400	.465
60.116.07030	A807-2 F	.395	.330	.360	.400	.461
60.116.07031	A807-2/2	.391	.330	-363	.400	.463
60.116.07032	A807-2/2 VU	.391	.330	.362	.400	.460
60.116.07033	A807-2	.397	.330	.360	.400	.461
60.116.07034	A807-2/2 VUK	.391	.330	.360	.400	.462
60.116.07036	A807-2/2 N.W.(PBO)	.398	.330	.360	.400	.465
60.116.07037	A807-2/2 VU.N.W.(PBO)	.398	.330	.364	.400	.465
60.116.07051	A807-2/4 VUK	.393	.330	.360	.400	-462
60.116.07052	A807-0.75/4 VUK	.396	-330	-360	.400	.462
60.116.07053	A807-2/4 VU	.393	.330	.362	.400	.460
60.116.07054	A807-0.75/4 VU	.396	.330	.362	.400	.460
60.116.07063	A807-0.75 VU/HS	.392	.335	.362	-401	.469
60.116.07064	A807-2/2 VU/HS	.391	.335	.362	.401	.469
60.116.07065	A807-2/2 VUK HS	.391	.335	.360	.401	.467
60.116.07066	A807-2/2 VUK NRS	.391	.330	.360	.402	.462

# 9 SPARE PARTS/DIAGRAMS ACCESSORIES

## CONTENTS

TAPE DECK REMOTE CONTROL CABINET (PARALLEL) -TAPE DECK REMOTE CONTROL PCB LED PCB (2X)	1.328.250.00 1.328.251.00 .1.810.735.00	9/1 9/3 .9/3
TAPE DECK REMOTE CONTROL MODULE (PARALLEL) -PUSHBUTTON PCB -CONNECTOR PCB	1.328.256.00	9/7
REMOTE TIMER -CPU PCB -DISPLAY BOARD	1.328.275.00 1.328.276.20 .1.328.277.00	9/11 9/13 .9/15
VARISPEED CONVERSION KIT  (FOR PARALLEL REMOTE CONTROL ONLY)  VARISPEED CONTROL MODULE  -VARISPEED CONTROL PCB	1.328.290.00 .1.810.762.82	9/19
VARISPEED CONTROL MODULE DE LUXE -DISPLAY AND KEYBOARD PCB -MAIN BOARD -CONNECTORS BOARD	1.328.282.20	9/23 9/25

TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250



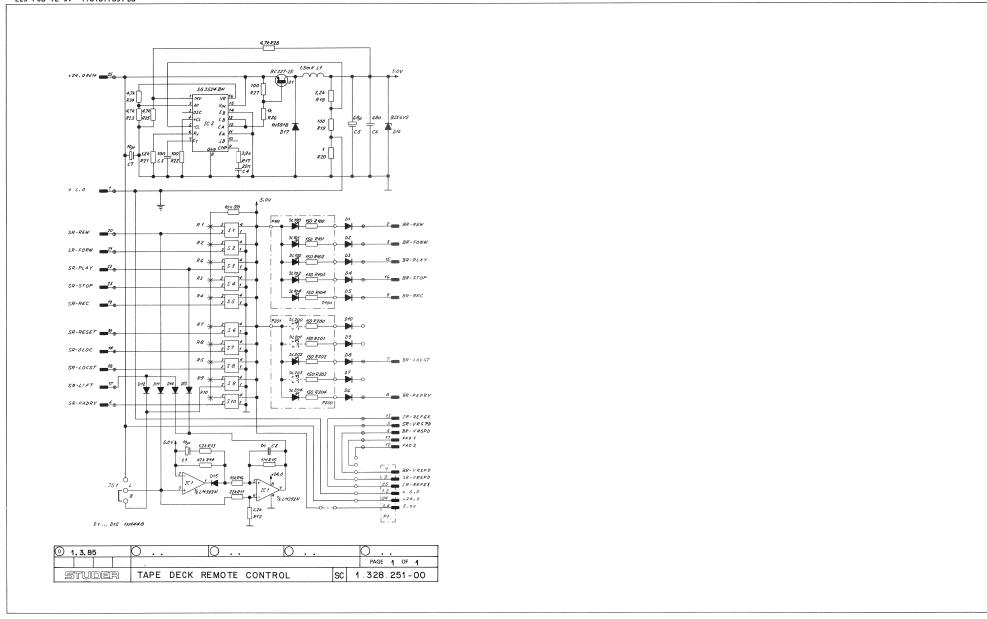
# TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250

	ANZ	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
	1	1.328.250.00	Laufwerk-Fernsteuerung (parallel) (Klebeschilder: Paragra	ph 8.12)
	1 4 4 4	1.328.250.08 1.010.025.21 24.16.1030	Laufwerk control Print Sechskantbolzen Linsenkopfschraube Sicherungsscheibe Unterlagsscheibe	M3x6
01	6	1.010.025.21	Linsenkopfschraube	M3x6
02	1	1.328.250.05	Blindabdeckung	
03	1	1.328.250.03	Frontblende	
04	1	1.820.921.00 31.02.0211	Gehäuse kompl. (mit Pos und Füssen) Fuss	5,6,10
05	1 4 4	21.53.0454	Holzseitenwand Z-Schraube IS Unterlagsscheibe	rechts M4x6
06	1 4 4	21.53.0454	Holzseitenwand Z-Schraube IS Unterlagsscheide	links M4x6
07	10 10	1.011.210.01 1.010.202.37		
08	2 2	1.810.300.03 1.810.300.06	Drucktastengehäuse Dämpfungsstreifen	
09	3	1.810.300.21	Abdeckkappe	
10	1 1	35.03.0120 21.51.8454 24.16.1040	Kabelbefestigungssockel LIN-Schraube IS Sicherungsscheibe	M4x6

	QTY	ORDER NUMBER	PART NAME SPECIFICATION
	1	1.328.250.00	Tape deck remote control cabinet (parallel) (self-adhesive labels:Paragraph8.12)
	1 4 4 4	1.328.250.08 1.010.025.21	TAPE DECK REMOTE CONTROL PCB Hex stud bolt Round head allen screw M3x6 Fin washer Washer
01	6	1.010.025.21	Round head allen screw M3x6
02	1	1.328.250.05	Dummy plate
03	1	1.328.250.03	Front cover
04	1	1.820.921.00 31.02.0211	Housing compl. (with pos.5, 6, 10 and feet) Foot
05	1 4 4		Side panel right Allen screw M4x6 Fin washer
06	1 4 4		Side panel left Allen screw M4x6 Fin washer
07	10 10	1.011.210.01 1.010.202.37	Push button Pressure spring
80	2		Push button housing Damping strip
09	3	1.810.300.21	Plastic cover
10	1 1 1	21.51.8454	Cable mounting support Round head allen screw M4x6 Fin washer

TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250.00 - TAPE DECK REMOTE CONTROL PCB 1.328.251.00

- LED PCB (2 x) 1.810.735.00

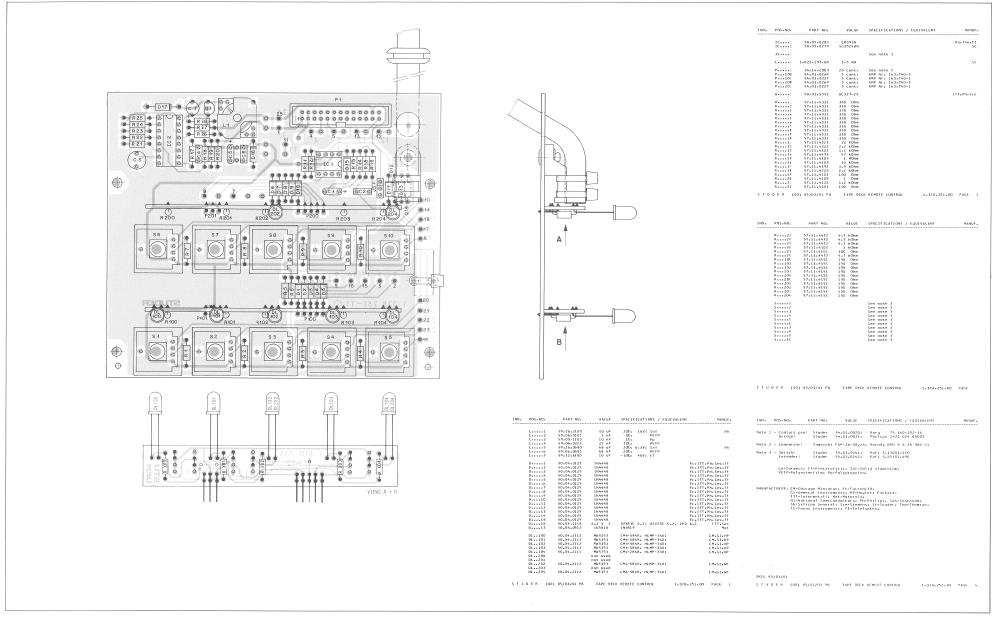


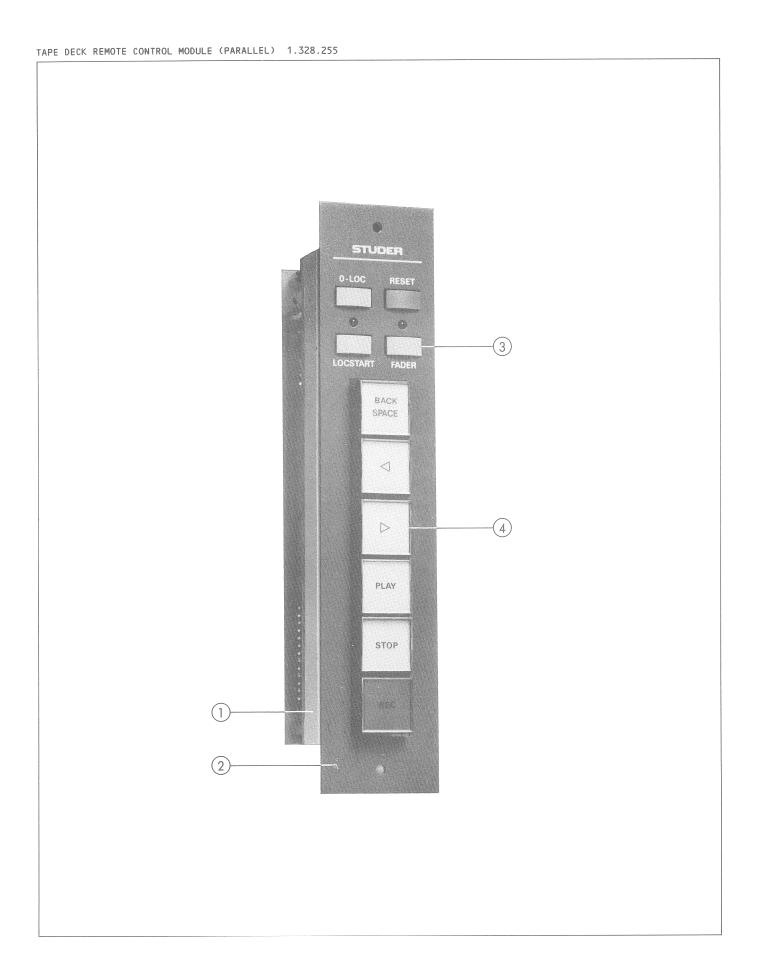
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TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250.00

- TAPE DECK REMOTE CONTROL PCB 1.328.251.00

- LED PCB (2 x) 1.810.735.00



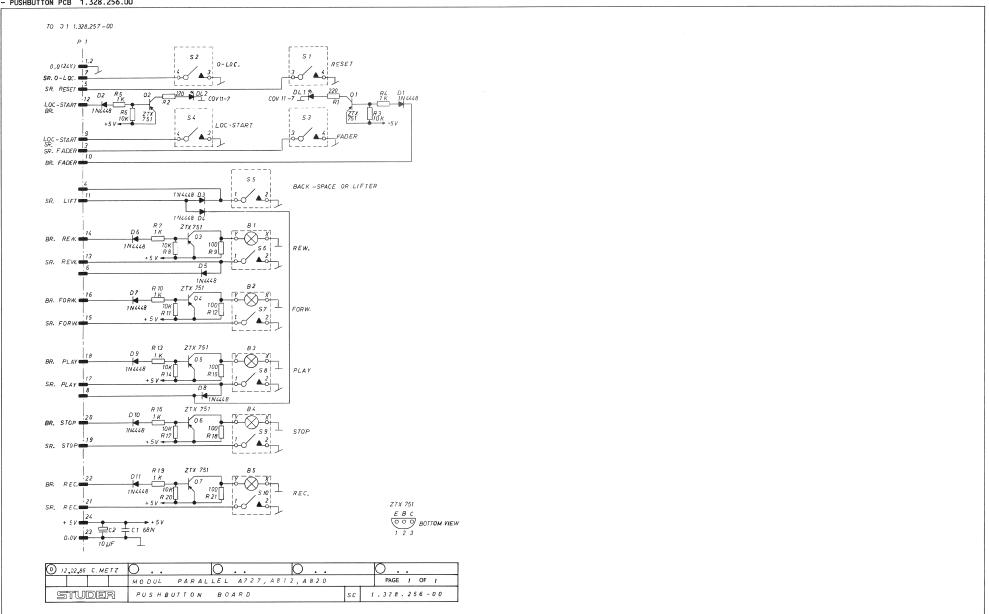


## TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255

	ANZ	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
	1	1.328.255.00	Parallele Laufwerksteue (Schilder: Paragraph 8.	
	1 1 4 4 4 4	1.328.257.00 1.010.110.27 21.53.0354 24.16.1030	Drucktasten Print Connector Print Sechskant-Gewinde-Bolze Z-Schraube IS Sicherungsring Unterlagsscheibe	n M3x6
01	1	1.328.255.01	Träger	
02	1	1.328.255.02	Frontplatte	
03	1	55.15.0122 55.15.0128		rot grau
04	1 5 1 5 6	55.15.0202 55.15.0212 55.15.0221		konkav flach rot weiss

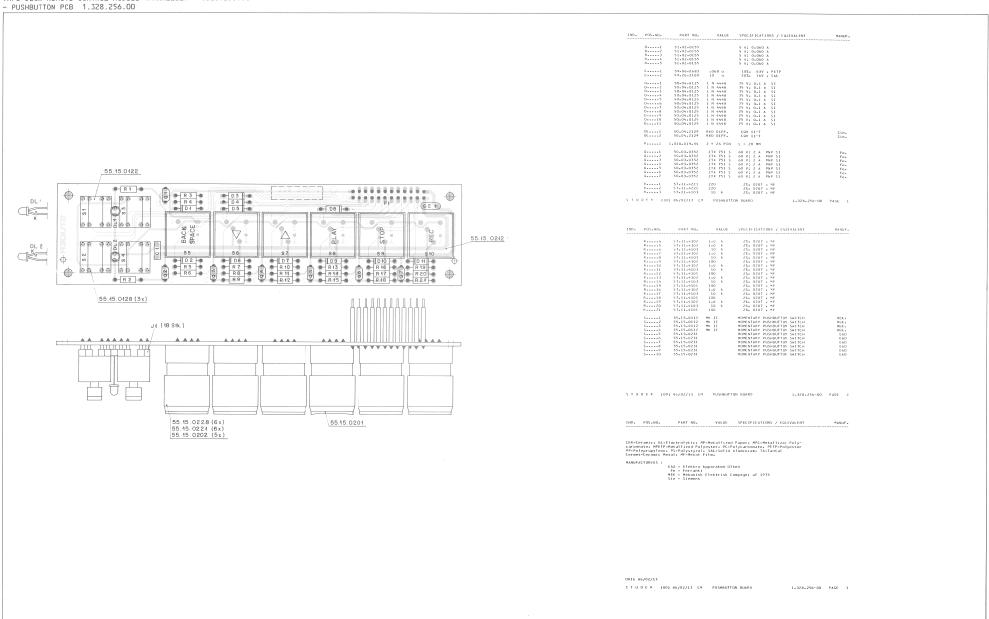
	QTY	ORDER NUMBER	PART NAME SI	PECIFICATION
	1	1.328.255.00	Tape deck remote control (parallel) (labels: Paragraph 8.12)	module
The second section of the section of the sect	1 1 4 4 4	1.328.257.00 1.010.110.27	1	М3х6
01	1	1.328.255.01	Support	
02	1	1.328.255.02	Front plate	
03	1		Push button knob Push button knob	red grey
04	1 5 1 5 6	55.15.0202 55.15.0212 55.15.0221	Push button cover Push button cover Diffusing screen Diffusing screen Push button frame	concave flat red white

TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00 - PUSHBUTTON PCB 1.328.256.00

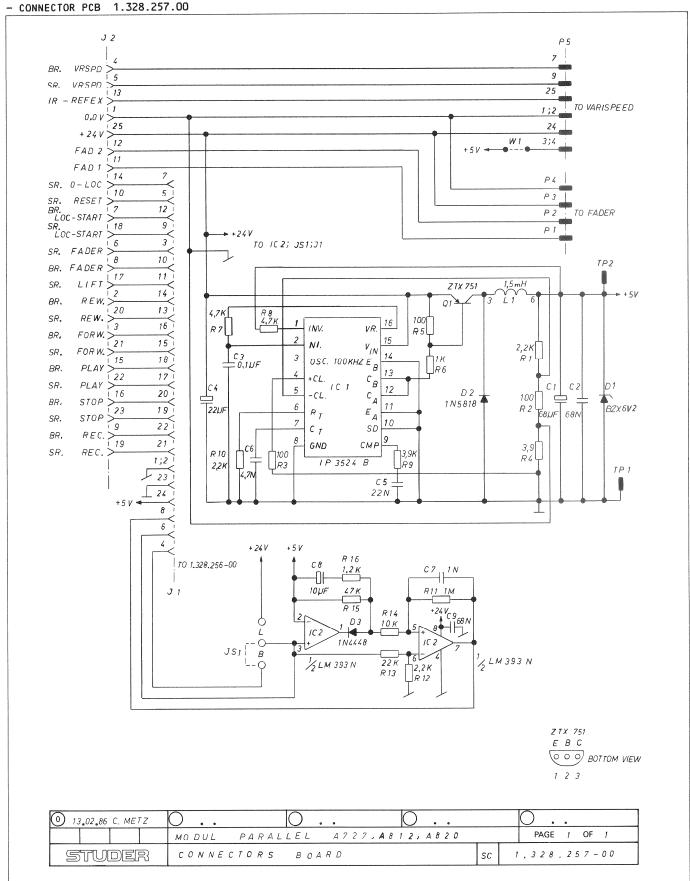


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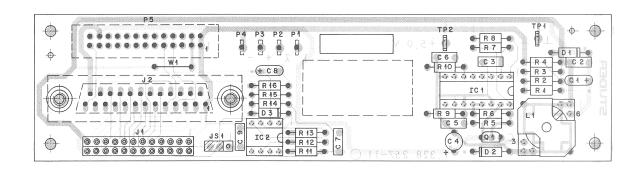
#### TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00

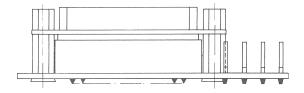


TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00

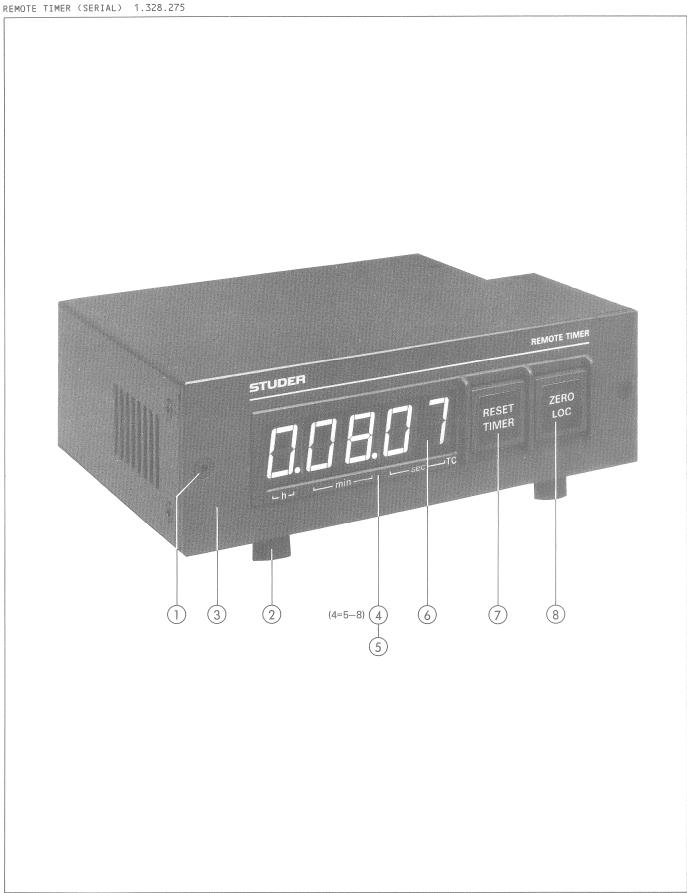


TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00 - CONNECTOR PCB 1.328.257.00





IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF .	I ND .	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C 1	59.26.0680	68 u	20%, 6.3V , SAL			R 6	57.11.4102	1.0 k	2%, 0207 , MF	
	C * * * * Z	59.06.0683	.068 u	10%, 63V , PETP			R * * * * * 7	57.11.4472	4.7 k	2%, 0207 , MF	
	C * * * * * 3	59.06.0104	•1 u	10%, 63V , PETP			R 8	57.11.4472	4 • 7 k	2%, 0207 , MF	
	C 4	59.22.6220	22 u	-20%, 35V , EL			R * * * * * 9	57-11-4392	3 • 9 k	2% 0207 * MF	
	C * * * * * 5	59.06.0223	.022 u	10%, 63V , PETP			R 10	57.11.4222	2 • 2 k	2%, 0207 , MF	
	C 6	59.06.0472	4700 p	10%, 63V , PETP			R • • • • 11	57-11-4105	1 M	2%, 0207 , MF	
	C 7	59.06.0102	1000 p	10%, 63V , PETP			R = = = 12	57.11.4222	2 • 2 k	2%, 0207 , MF	
	C * * * * * 8	59-26-2100	10 u	20%, 16V , SAL			R * * * * 13	57.11.4223	22 k	2% 0207 * MF	
	C 9	59.06.0683	.068 u	10%, 63V , PETP			R 14	57-11-4103	10 k	2%, 0207 , MF	
							R 15	57-11-4473	47 k	2%, 0207 , MF	
	D1	50.04.1118	BZX 6V2	5%, 6.2 V, 0.40 d, Z,			R16	57.11.4122	1.2 k	2%+ 0207 + MF	
	02	50.04.0512	1 N 5818	SCHUTTKY	Mot.						
	D 3	50.04.0125	1 N 4448	75 V; 100 mA; SI			TP * * * * 1	54.02.0320	2.8 = 0.8	SOLDERING PIN	
							TP * * * * 2	54.02.0320	2.8 0.8	SOLDERING PIN	
	101	50.05.0279	IP 3524 B	REGULATING PULSE WIDTH MODULATOR	IPS.						
	IC2	50.05.0283	LM 393 N	DUAL LOW POWER COMPARATOR	TI.						
	J 1	53.03.0212	2 = 12 PIN								
	J 2	54.13.0023		D-TYPE, 25 PIN PRINT FEMALE CONNECT	OR						
	JS1	54.01.0021	2 * 0.63	JUMPER							
	L1	1.022.197.00	1,5 mH	CHOKE	St.						
	P1	54.02.0320	2.8 * 0.8	SOLDERING PIN						d Paper, MPC=Metallized Poly-	
	P 2	54.02.0320	2.8 * 0.8	SOLDERING PIN						Polycarbonate, PETP=Polyester	
	P 3	54.02.0320	2.8 0.8	SOLDERING PIN		PP=Po	ypropylene-	PS=Polystyrol	, SAL=Solid	Aluminium, TA=Tantal	
	P 4	54.02.0320	2.8 * 0.8	SOLDERING PIN		Cerme	:=Ceramic Me	etal, MF=Metal	Film.		
	P 5	54-14-2003		26 PIN PRINT MALE CONNECTOR							
						MANUE	CTURERS :				
	01	50.03.0352	ZTX 751 S	60 V, 2 A, PNP SI	Fe.			Fe = Ferranti	i		
								IPS = Integrat	ted Power Sen	niconductors Limited	
	R 1	57-11-4222	2 • 2 k	2%, 0207 , MF				Mot = Motorola	3		
	R Z	57-11-4101	100	2%, 0207 , MF				St = Studer			
	R 3	57-11-4101	100	2%, 0207 , MF				TI = Texas Ir	struments		
	R 4	57-11-4399	3.9	2%, 0207 , MF							
	R 5	57-11-4101	100	2%, 0207 , MF		ORIG	6/02/14				
	K	3101101	100	244 0201 4 111			,,				
STU	D E R (0	0) 86/02/14 C	M CONNECTO	RS BOARD 1 • 328 • 257-00	PAGE 1	STU	D E R (00	D) 86/02/14 C	1 CONNECTO	DRS BUARD 1.328.257	-00 PAGE 2



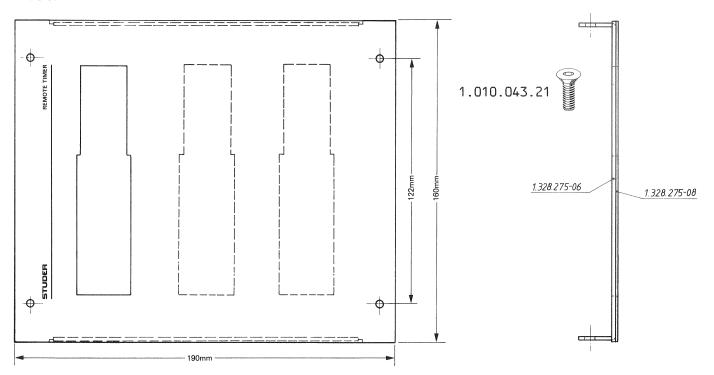
# REMOTE TIMER (SERIAL) 1.328.275

	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
1	1.010.045.21 21.51.2354	Schraube schwarz Schraube Ni	M3x6 M3x6
2	31.02.0211	Fuss schwarz	D16x6,5
3	1.328.275.01	Frontplatte	
4	1.810.253.00	Display-Gehäuse kompl	ett
5	1.810.303.01	Display-Gehäuse	
6	1.810.303.02	Filterglas	
7	1.011.210.14 1.011.210.01	Schild RESET TIMER Taste	
8	1.011.210.15 1.011.210.01	Schild ZERO LOC Taste	

	ORDER NUMBER	PART NAME	SPECIFICATION
1	1.010.045.21 21.51.2354	Screw black Screw Ni	M3x6 M3x5
2	31.02.0211	Foot black	D16x6,5
3	1.328.275.01	Front cover	
4	1.810.253.00	Display cover compl.	
5	1.810.303.01	Display cover	
5	1.810.303.02	Display window	
7	1.011.210.14 1.011.210.01	Label ZERO TIMER Push button	
8	1.011.210.15 1.011.210.01	Label ZERO LOC Push button	

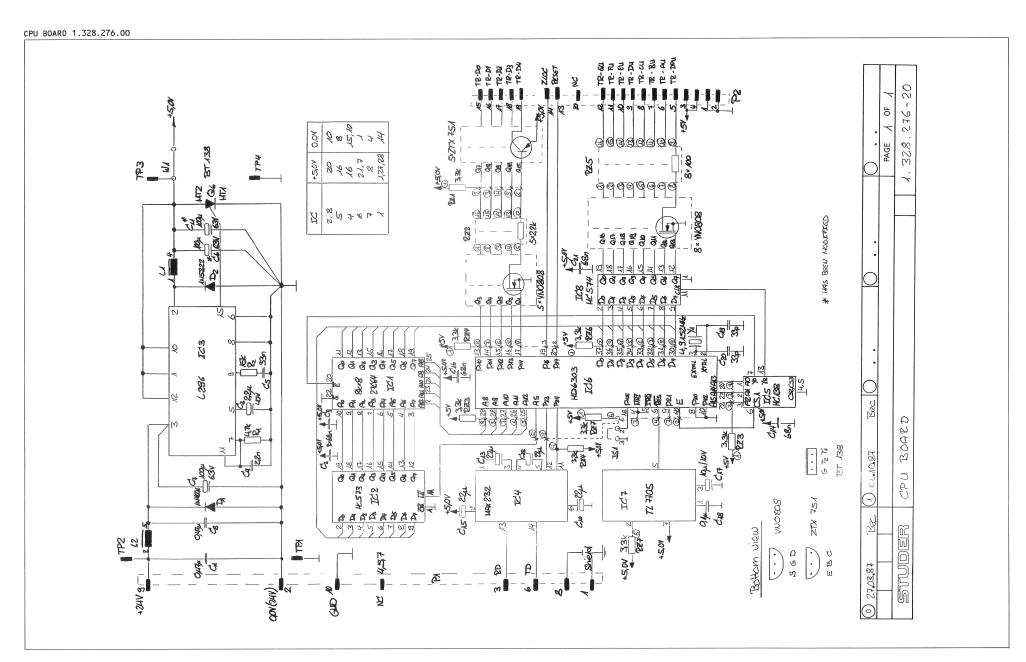
# ZUBEHOR

## **ACCESSORIES**



	BESTELLNR.	BEZEICHNUNG
9	1.328.275.31	Befestigungsblende für 1 Zähler
10	1.328.275.32	Befestigungsblende für 2 Zähler
11	1.328.275.33	Befestigungsblende für 3 Zähler

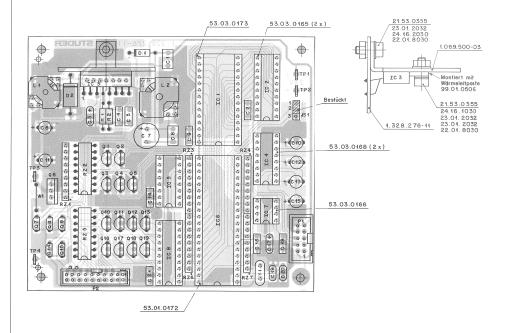
	ORDER NUMBER	PART NAME SPECIFICATION
9	1.328.275.31	Mounting frame for 1 counter
10	1.328.275.32	Mounting frame for 2 counter
11	1.328.275.33	Mounting frame for 3 counter



STUDER

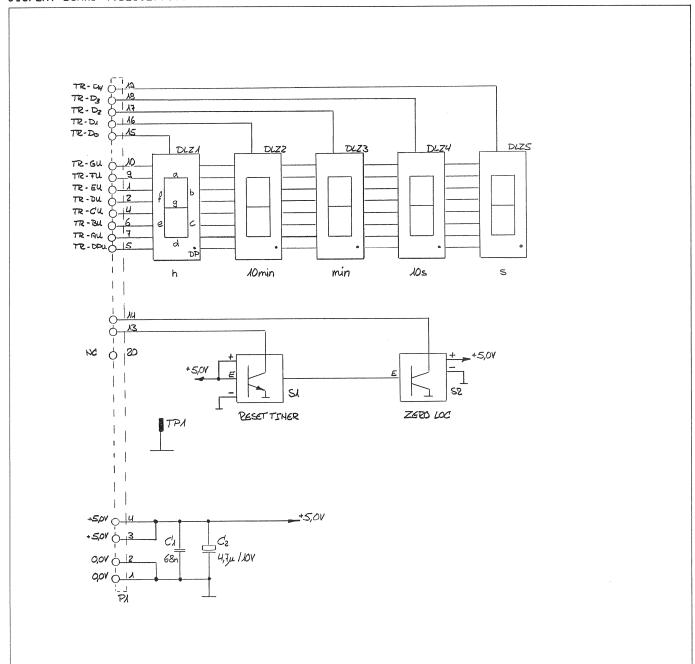
STUDER A807 9/1

CPU BOARD 1.328.276.00



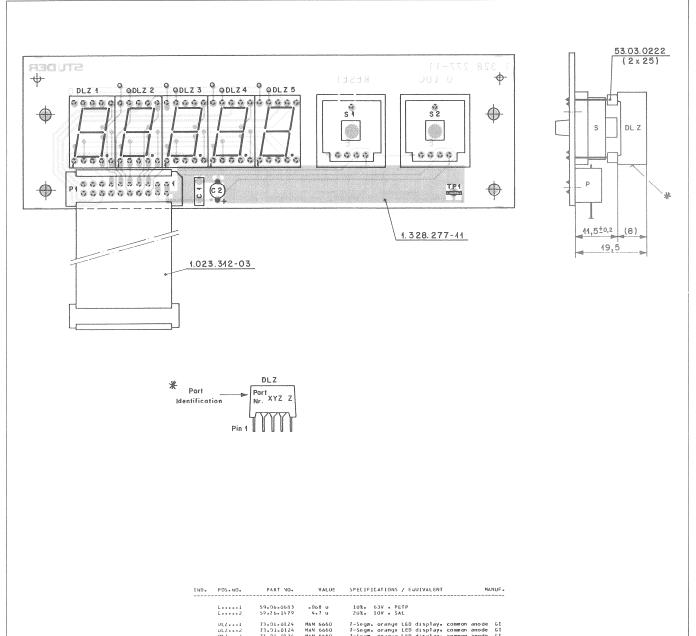
	()		VALUE	SPECIFICATIONS / COUNTY OF CHIT	NUF
	11				HUF
1)	C 2	\$9,00,0474 9,00,0474 9,00,0229 9,00,0222 9,00,0222 9,00,0222 9,00,033 9,22,3101 9,22,4101 9,00,047 9,00,068 9,22,3101 9,00,068 9,00,0	-47 u -068 u	10% 69% 6EP 10% 69% 6EP 20% 59% 6EP 20% 59% 6EP 20% 59% 6EP 20% 69% 6EP 20% 60% 6EP 20% 6E	
1)	C3 C4	59.26.5229 59.06.0222	2.2 u 2200 p	20%, 25V , SAL 10%, 63V , PETP	
1)	C * * * * * * * *	59-06-0333	-033 u	10%, 63V , PETP -20% 10V , FI	
1)	C5 C8 C9 C10 C11 C12 C14 C15 C17 C18 C19	59-22-8101	-47 U -058 U 2-22 U 2200 p -033 U 100 U 100 U -47 U -058 U 22 U 100 U 22 U 22 U -058 U -058 U -11 U -058 U -11 U -058 U -11 U -058 U	100	
1)	Ç9	59+06+0683	-91 U	101, 63V , PETP	
	C10	59+22+6229 59+22+3101	22 u 100 u	-20%, 40V + EL -20%, 10V + EL	
	C 12	59+22+6220	22 u 22 u	-20% 40V + EL -20% 40V + El	
	C 14	59-06-0683	-058 U	10% 63V + PETP	
	C10	59-06-0683	+068 u	101, 63V , PETP	
	C18	59+26+2100 59+36+0104	10 u	20%, 16V - SAL 10%, 63V - PETP	
	C 20	59+34+2330 59+14+2330	33 p	5%, N150 + CER 5%, N150 + CER	
	C **** 21	59.06.0683	33 p -068 u	10%, 63V . PETP	
	D1 D2	50.04.0122 50.04.0519	IN 4001 IN 5822	50 V, 1 A, Si 40 V, 3 A, Schottky	
	101	1.32 8.982.20 57.17.1573 50.10.0110 50.15.0120 50.17.1138 50.16.0119 50.17.1574	76 UC 573	S# 50/87 REMOTE TIMER 3-state Octal D-Type Latch Switching Voltage Regulator Switching Voltage Regulator L-of-8 Decoder/Demultiplemer Hicrocomputer Unit CMS, 8 8 sit, 2 MHz Keset Generator 3-state Non Inverting Octal D-Type Flip-F	\$ t
	103	50.10.0110	L 296	Switching Voltage Regulator	sg s
	105	50.15.0120	74 HC 138	RS 232 Transmitter/Receiver 1-of-8 Decoder/Demultiplexer	MAX
	IC2 IC3 IC4 IC6 IC6 IC7	50+16+0119	74 HC 573 L 296 HAX 232CPE 74 HC 138 HO 63803RP TL 7705ACP 74 HC 574	Microcomputer Unit CMOS, 8 5it, 2 MHz Reset Generator	HI
	108	50.17.1574	74 HC 574	3-state Non Inverting Octal D-Type Flip-F	1 op
	JS **** 1	54-31-0021	2 * 0.63	Jumper (bridging 2 of 3 pins 54-01-0020)	
	L 1	1 + 9 2 2 + 1 9 1 + 0 9		Inductor	Sŧ
U D	E ? (	01) 87/10/05 C	M CPU BOARD	PL 1.328.276-20 PAGE	
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAI	NUF.
	2	1.022.252.00	0.32 uH	Filter Coil+ 0-4 x	St
5			2 * 5 Pin 2 * 10 Pin	Straight Print Male Connector	
	P * * * * * 1 P * * * * * 2	54+14+2001 54+14+2008	2 * 10 Pin	Straight Print Male Connector Straight Print Male Connector	
	1	50.03.1505 50.03.1505 50.03.1505 50.03.1505 50.03.1505 50.93.1505 50.93.0352 50.03.0352 50.03.0352 50.03.1505 50.03.1505 50.03.1505 50.03.1505	VN 0808 M VN 0808 M VN 0808 M VN 0808 M VN 0808 M ST 138 2TX 751 S 2TX 751 S VN 0808 M VN 0808 M	\$1 x x y y y y y y y y y y y y y y y y y	i×
- 5	4 3	50.03.1505	VN 0808 M	80 V: 0:35 A: FET N-Channel 80 V: 0:35 A: FET N-Channel	ix ix ix Ph Fe
	15	50.03.1505 10.03.1505	VN 0808 H	80 V, 0.35 A, FET N-Channel 5	ix
-	J	53.99.0106	8T 138	400 V. B A. TRIAC	Pĥ
- 6	38	50.03.0352	2TX 751 S	60 V. Z A. PNP Si	Fe
č	210	30-03-0352	VN 0808 H	60 V, 2 A, PNP Si 80 V, 0.35 A, FET N-Channel	Fe
6	311	50.03.1505 50.03.1505	VN 0808 H VN 0808 H	80 V. 0.35 A, FET N-Channel 80 V. 0.35 A, FET N-Channel 80 V. 0.35 A, FET N-Channel	Fe
9	113	50.33.1505	VN 0808 H	80 V, 0.35 A, FET N-Channel	Fe
- 2	15	50.73.0352	21x 751 S	60 V. 2 A. PNP SI	Fe
- 5	17	50.03.1505 50.03.1505	VN 0808 H	80 V, 0.35 A, FET N-Channel 80 V, 0.35 A, FET N-Channel	ix
- 5	J13	50.03.0352 50.03.1505 50.03.1505 50.03.1505 50.03.1505	VN 0808 M VN 0808 M	80 V, 0.35 A, FET M-Channel 80 V, 0.35 A, FET M-Channel 80 V, 0.35 A, FET M-Channel 80 V, 0.35 A, FET M-Channel	FFFFFFXXX
8	1	57.11.4472 57.11.4153	4.7 k 15 k	2% 0207 • 4F 2% 0207 • 4F	
R	(Z) (Z) (Z) (Z)	57-88-4332 57-88-3222 57-88-4332 57-88-4332 57-88-4332 57-88-4332 57-88-4332	8 ° 3.3 k 8 ° 2.2 k 8 ° 3.3 k 8 ° 3.3 k 8 ° 100 8 ° 3.3 k 8 ° 100	2%, SIP 9 2%, OIL 16 2%, SIP 9 2%, SIP 9 2%, OIL 16 2%, SIP 9 2%, OIL 16 2%, SIP 9	
8	(22	57.88.3222 57.88.4332	8 = 2.2 k 8 = 3.3 k	2%, DIL 16 2%, SIP 9	
R	2 4	57.88.4332	8 = 3.3 k	2t, SIP 9	
Ř		57.88.4332	8 = 3.3 k	21, SIP 9	
K	(//	>7+88+4332	8 = 3.3 k	2%, SIP 9	
	P1 E R (0	54.02.0320 1) 87/10/06 CM		Straight Soldering Pin PL 1-328-276-20 PAGE	è
	P05-N0-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAI	vuF.
1	TP2	55+02+032N			
1	TP2 TP3 TP4	56+02+0320	2-8 * 0-8	Straight Soldering Pin Straight Soldering Pin Straight Soldering Pin	
	Y 1	49-01-0560	9.9152 MHz	serving strikering Pin	
	Y1 H1			Pari Ass	St
,	******	1-010-324-64	4.3 * 10.2	Bridge	

## DISPLAY BOARD 1.328.277.00



0 10.04.87 Bec	0	0	O	0
				 PAGE A OF A
STUDER	DISPLAY	BOARD		1.328.277-00

## DISPLAY BOARD 1.328.277.00



1140.0	PU3 = NU =		TALUC	SPECIFICATIONS / CONTRECTO	HAROT &
	61	59.06.0683	.068 u	10% 63V • PETP	
	C Z	59.26.1479	4.7 U	20% 10V • SAL	
	C * * * * * Z	3702 00 1477	401 0	2049 10V 9 3AL	
	ULZ 1	73.01.0124	MAN 6660	7-Segm, orange LED display, common a	node GI
	UL Z • • • 2	73.91.0124	MAN 6660	7-Segm. orange LED display, common a	node GI
	DLZ 3	73.01.0124	MAN 6660	7-Segm. orange LED display: common a	node GI
	DL Z * * * 4	73.01.0124	MAN 6660	7-Segme orange LED displaye common a	node GI
	OL Z 5	73.01.0124	MAN 6660	7-Segm. orange LED display, common a	ano de GI
	P • • • • 1			see Note 2	
	5 1	55.03.0261	RS 76 E	Momentary Key Switch 1 * OC	R f
	5 2	55.03.0261	RS 76 C	Momentary Key Switch 1 ≠ 0C	R F
	TP1	54 • 02 • 0320	2.8 = 0.8	Straight soldering pin	
Inday	Ol · Part :	#53.03.0228 re	lares nart f	53-03-0222	
(10-1)			oracas porc s	3340340222	
(1001)	,				
(01)	ote 1 : Al	DLZ devices .	are plugged i	nto socket terminal strips	

(Ol) Note 1 : All DL? devices are plugged into socket terminal strips #553-03-0228 (2 ° 5 sockets for each device).

Note 2 : Print connector 54-14-5034 of the 20-conductors ribbon cable #1-023-312-03 is soldered on print-

PETP=Polyester. SAL=Solid Aluminium

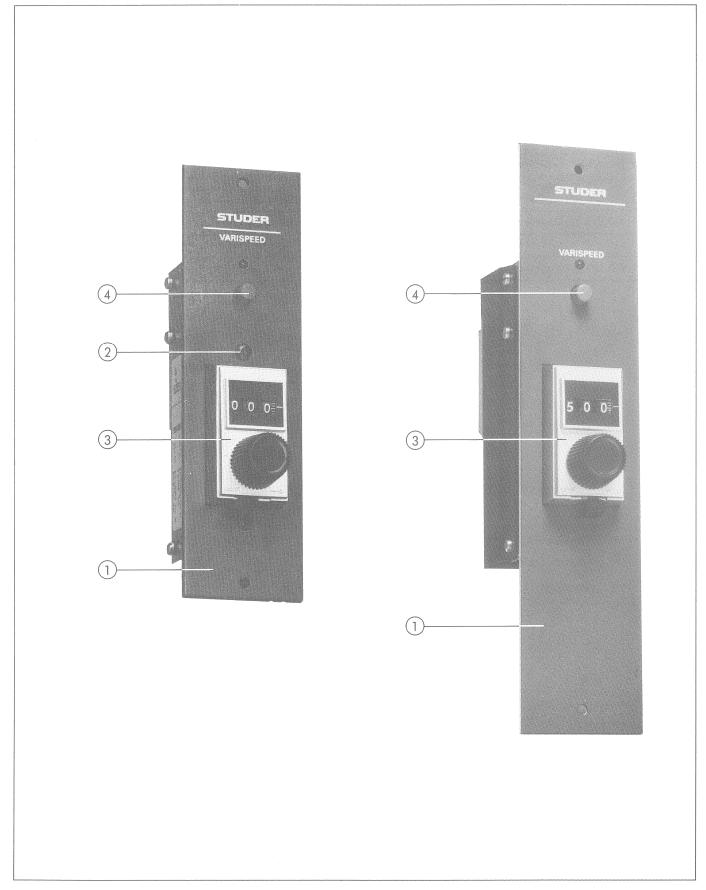
MANUFACTURERS : GI = General Instruments Rf = Raft

ORIG 88/11/10

S T U D E R (O1) 88/11/10 CM DISPLAY BOARD

PL 1.328.277-00 PAGE 1

VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00 - VARISPEED CONTROL PCB 1.810.762.82

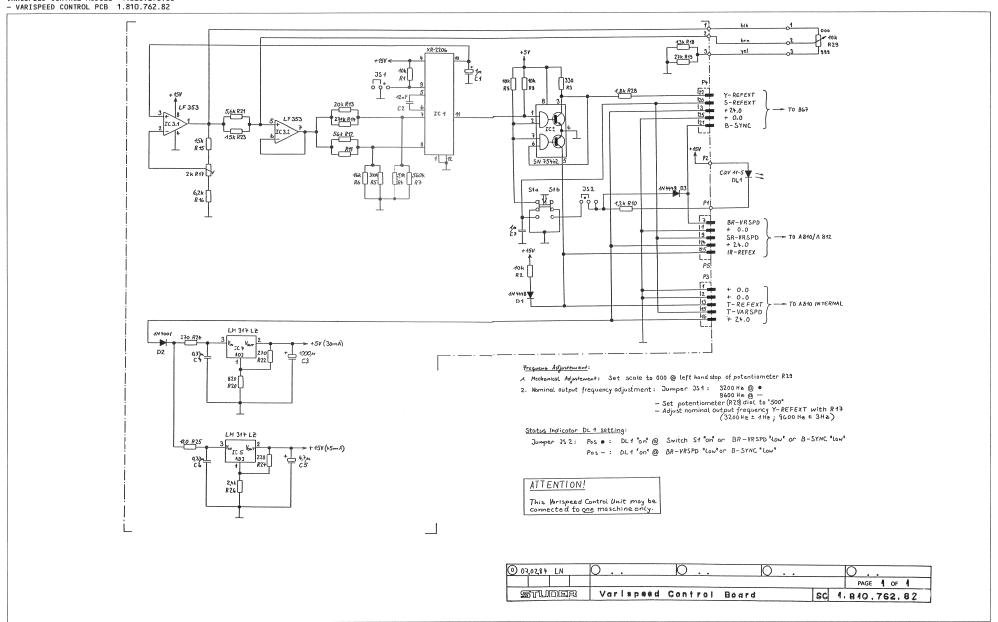


VARISPEED CONVERSION KIT (FOR PAR, REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00 - VARISPEED CONTROL PCB 1.810.762.82

-	-				
	A	NZ	BESTELLNR.	BEZEICHNUNG SPEZIF	IKATION
	1		1.328.253.00	Nachrüstsatz Varispeed (nur für parallele Fernsteu	ierung)
		1	1.328.290.00	Varispeed Einheit	
	1 3 3	1 3 3 1	21.01.0279	Varispeed control Print Z-Schraube Sicherungsscheibe Isolation	M2,5x6
01	1	1	1.328.250.10 1.810.330.02 1.328.290.01 1.328.290.02	Unterlage Träger	50 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
01	2		1.010.025.21	Linsenkopfschraube	МЗхб
03	1	1	58.99.0116	Feinantrieb mit Ableseskala	I
04	1	1	1.810.320.07	Druckknopf, lang	rot

	Q.	ΤΥ	ORDER NUMBER	PART NAME SPECIF	ICATION
	1		1.328.253.00	Varispeed conversion kit (for parallel remote control	only)
		1	1.328.290.00	Varispeed control module	
	1 3 3	1 3 3	21.01.0279		M2.5x6
01	1	1	1.328.250.10 1.810.330.02 1.328.290.01 1.328.290.02	Spacer Support	
02	2		1.010.025.21	Round head allen screw	МЗхб
03	1	1	58.99.0116	Fine drive with reading scale	TO THE SECOND SE
04	1	1	1.810.320.07	Push button, long	red

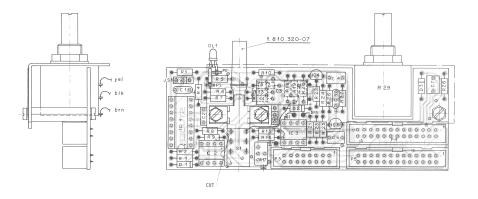
VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00



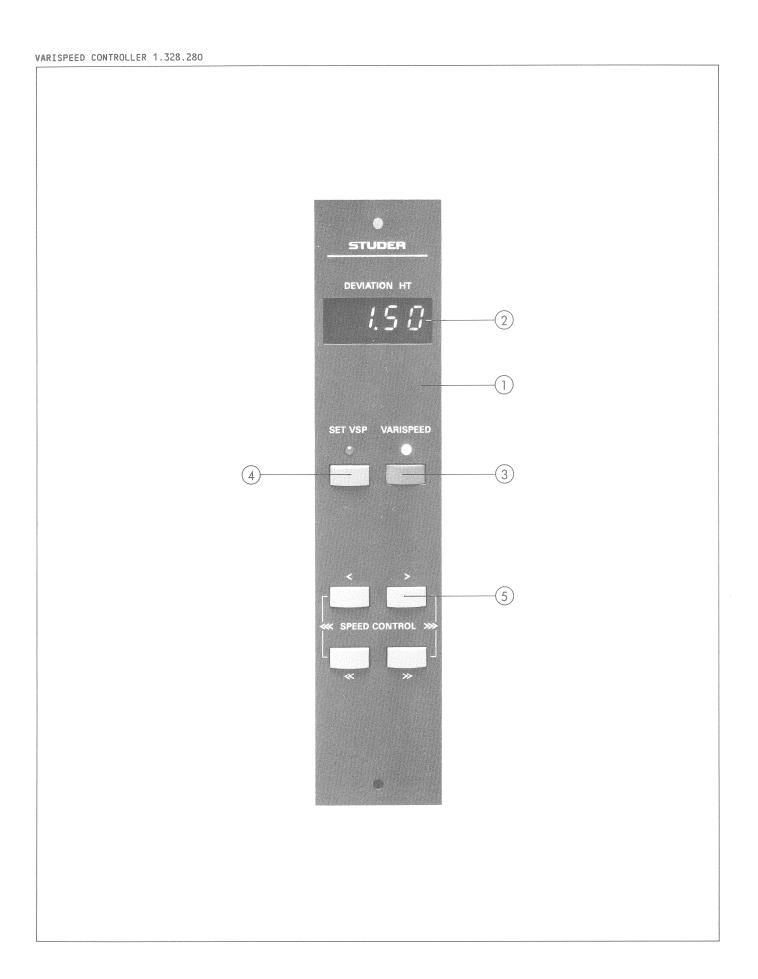
9/19

VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00
VARISPEED CONTROL MODULE 1.328.290.00
- VARISPEED CONTROL PCB 1.810.762.82





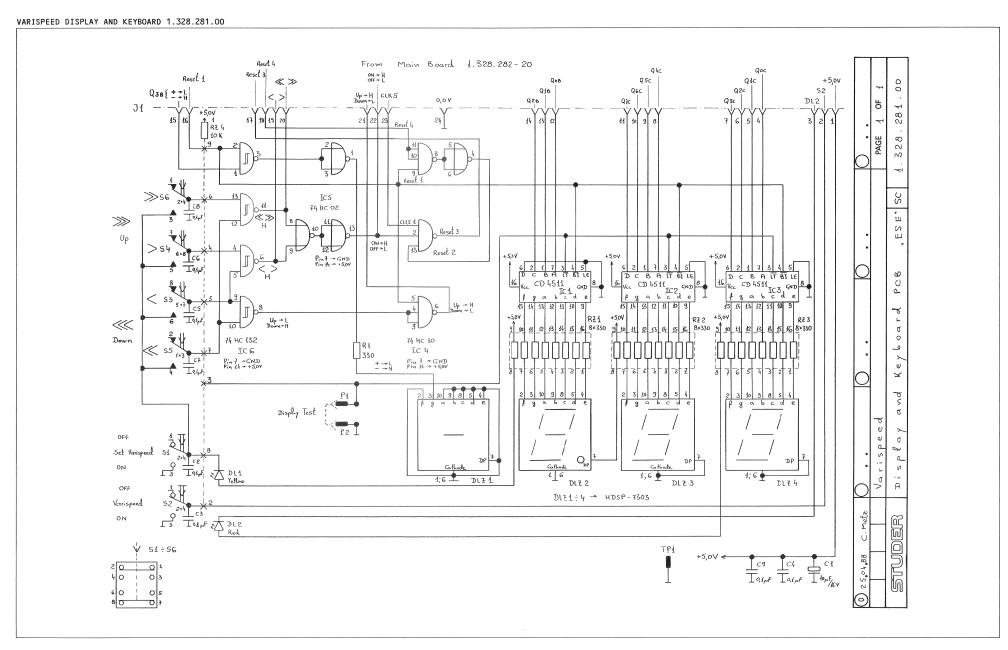
NO.	P05.NO.	PART NO.	PALUS	SPECIFICATIONS /	COUI VAL ENT	MANUF.
	C0001 C0002 C0003 C0004 C0005	59.26.9109 59.99.0220 59.99.1700 59.06.0336 59.26.5679	1 uF 12 nF 1000 uF 0.33uF 4.7 uF 0.33uF	20%	see note l D < 10mm	Ph Ph
	C0006 C0007	59-06-0334 59-06-5105 50-06-0125	Luf	10%, 63V , Petp	o o o o o	ITT+FC+Tf
	D0002 D0003 DL.0001	50.04.0125 50.04.0122 50.04.0125 50.04.2129	IN 4448 IN 4001 IN 4448 COV11-7		Ph.Ses.	ITT+Fc+Tf lot+SI+Sol ITT+Fc+Tf
		50-11-0108		SG 2206		
	IC.0001 IC.0002 IC.0003 IC.0004 IC.0005	50.11.0108 50.05.0227 50.09.0101 50.10.0108 50.10.0109	XR2206CP SN7546ZP LF 353N LM317LZ LM317LZ	TL 072CP		Ex TI TI+NS+Mot Nat+Mot Nat+Mot
	12:0005 12:0001	54.01.0020 54.01.0020	Pin (3°) Pin (3°)	54.01.0021 Bridge 54.01.0021 Bridge	(1º) see note 2 (1º) see note 2	
	P0001 P0002 P0003 P0004 P0005	54-02-0320 54-02-0320 54-14-2002 54-14-2003 54-14-2003		Z+8*O+8 Z+8*O+8 16-contacts Z6-contacts Z6-contacts	see note 3 see note 4 see note 4	
	R0001 R0002 R0003 R0004 R0005 R0006 R0007 R0008	57-11-4103 57-11-4103 57-11-4331 57-11-3512 57-11-3503 57-11-3103 57-11-4504 57-11-4103	10 k0hm 10 k0hm 330 0hm 5-1 k0hm 300 k0hm 16 k0hm 560 k0hm 10 k0hm	5% 5% 5% 1% 5% 1% 5% 5%		
тип	) F R (00)	9 85/07/09 LN	VARISPEEC	CONTROL BOARD	1 - 81 0 - 762 - 82	PAGE 1
	P05+N0+	PART NO.	VALUE		EQUIVALENT	MANUF.
	R0009 R0010 R0011 R0011 R0013 R0015 R0015 R0016 R0017 R0017 R0018 R0018 R0020 R0021 R0021 R0022 R0023 R0024 R0025 R0025	57-11-4103 57-11-4122 57-11-3563 57-11-3203 57-11-3203 57-11-3153 57-11-3153 57-11-3022 57-11-4273 57-11-3621 57-11-3621 57-11-3562 57-11-3153 57-11-3153 57-11-3271	10 kOhm 1-2 kOhm not used 56 kOhm 20 kOhm 270 kOhm 15 kOhm 6-2 kOhm 27 kOhm 6-2 kOhm 6-3 kOhm 6-3 kOhm 6-1 kOhm 6-2 kOhm 6-2 kOhm 6-2 kOhm 6-2 kOhm 6-4 kOhm 6-4 kOhm 6-4 kOhm 6-6 kOhm 6-7 kOhm	5% 5% 1% 1% 5% 5% 5% 5% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1% 1%		
	R0028	57-11-4182	La8 kühm	12		
	R==0028 R==0029	57-11-3242 57-11-3242 57-11-3221 57-11-4182 58-99-0123	1.8 kOhm 10 kOhm	12 51 10 turns Switch		St
	R0028 R0029 S0001 I		L=9 kUhm 10 kUhm	5% 10 turns Switch	1-810-762-82	
ΓUΟ	R0028 R0029 S0001 I	1-177-100-07	L=8 kUhm 10 kUhm varispeeo	10 turns Switch CONFROL BOARD		
FUD NO.	R0029 S0001 1 Ex (00) POS.NO.	PART NO.  Controllab Stemon Nr. Kemet Nr.	VARISPEED  VALUE  VALUE  No. C. M. 40 C.  8 3.7 93.0 C.00.2 5.	20 turns Switch  CONTROL BOARD  SPECIFICATIONS / 123 J 3123 - 512		PAGE 2
FUD NO.	R0029 S0001 1 Ex (00) POS.NO.	PART NO.  Controllab Stemon Nr. Kemet Nr.	VARISPEED  VALUE  VALUE  No. C. M. 40 C.  8 3.7 93.0 C.00.2 5.	20 turns Switch  CONTROL BOARD  SPECIFICATIONS / 123 J 3123 - 512		PAGE 2
T U O	R0029 S0001 1  E. (00)  POS.NO.  : 12nF.50V: : Contact p	PART NO.  Centralab Scenons Nr. Aprilips Nr. Aprilips Nr. Aprilips Nr.	VARISPEED  VALUE  VALUE  VA. O. 4.0 (  0.317.93)  C. 602.3  75160-10.2  7422.023  1242.025  1242.025	25 1D turns Switch  CONTROL BOARD  SPECIFICATIONS / 1  123 3 123 - 3  123 2 5 2 6 2  180333 180033		PAGE 2
T U 0	#0028 #0001 1 ### (00) ### (00) ### (00) ### (00) ### (00) #### (00) #### (00) #### (00)	PART NO.  Controllab Stemon Nr. Kemet Nr.	VARISPEED  VALUE  VALUE  Nr CN 40 C	20 turns Switch  CONTROL BOARD  SPECIFICATIONS / 123 J 3123 - 512		PAGE 2
T U D  NOte 1  Note 2	#0028 #0028 #0091	PART NG.  Control also Control	VALUE  VALUE  VALUE  VALUE  N.F. CN 40 C  S 17 943 C  C 70 0 14 1757-1  7422 0 275 6 277-1  7422 0 175 6 2	5% 1D turns Switch  CONTROL BOARD  SPECIFICATIONS / 1  23	EQUIVALENT	PAGE 2
NOse 1 Note 2 Note 3:	#0028 #0028 #0091	PART NG.  Control also Control	VALUE  VALUE  VALUE  VALUE  N.F. CN 40 C  S 17 943 C  C 70 0 14 1757-1  7422 0 275 6 277-1  7422 0 175 6 2	25	EQUIVALENT	PAGE 2
T U D  NOte 1  Note 2	1.0029	PART NG.  Control also Control	VALUE  VALUE  VALUE  VALUE  N.F. CN 40 C  S 17 943 C  C 70 0 14 1757-1  7422 0 275 6 277-1  7422 0 175 6 2	25	EQUIVALENT	PAGE 2



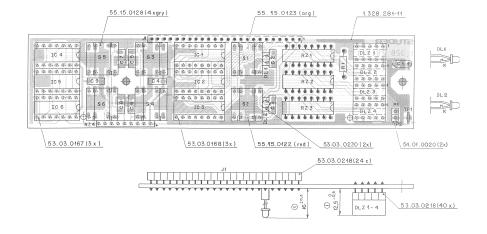
## VARISPEED CONTROLLER 1.328.280

	BESTELLNR.	BEZEICHNUNG
1	1.328.280.01	Frontblende
2	1.328.280.03	Blende
3	55.15.0122	Tastenknopf rot
4	55.15.0123	Tastenknopf orange
5	55.15.0128	Tastenknopf grau

	ORDER NUMBER	PART NAME SPECIFICATION
1	1.328.280.01	Front cover
2	1.328.280.03	Display cover
3	55.15.0122	Push button red
4	55.15.0123	Push button orange
5	55.15.0128	push button grey



## VARISPEED DISPLAY AND KEYBOARD 1.328.281.00



HANUF		ICATIONS / E	VALUE SPEC	PART YO.	P05-N0-	NO.
		16V + SAL	10 u 20%	59+26+2100	Cassal	
		63V · PETP		59+36+0104	C	
		63V + PETP		59.06.0104	C 3	
		63V . PETP		59.00.0104	E 4	
		63V . PETP		59.00.0104		
		63V . PETP		59-26-0104	6	
		63V * PETP		3.9+06+0104	C 7	
		63V + PETP		59+06+0104	C 8	
		63V , PETP		59.06.0104	C 9	
Sie		ed yellow.	r 3160 Diff	50-04-2130	DL1	
Sie.		ed red.	S 3160 Diff	50.04.2129	DL Z	
ne. HP.	Sec. Displays 7.6 m	cro-Bright 7	DSP-7303 Red	73.01.0128	01.2 1	
on. HP.	Seq. Display, 7.6 m	cro-Bright 7	DSP-7303 Red	73+01+0128	DLE2	
on. HP.	Seq. Display, 7.6 m	cro-Bright 1	DSP-7303 Red	73.01.0128	DLZ3	
an. HP.	Seg. Display, 7.6 m	cro-Bright 1	DSP-7303 Red	73 -01 - 01 28	OL Z 4	
	/Decoder/Oriver.			50-07-0511	101	
	h/Decoder/Driver.				102	
	h/Decoder/Driver+				103	
		3-Input NAM			10 ****	
		-Input NOR (			105	
	tt Trigger NAND Gate	-Input Schmi	4 HC 132 Quad	50+17+1132	106	
	rip ( 24 pcs.)	ht socket st	4 º I pin Stra	53.03.0218	J 1	
	male pin.	ht soldering	.63*0.63 Stra	54-01-0020	P 1	
	male pin-	ht soldering	.63±0.63 Stra	54.01.0020	P 2	
		07 + MF	330 1%.	57-11-3331	R 1	
			= 330 2%. i	57-88-3331	871	
			9 330 2%, I	>7.88.3331	822	
			□ 330 2% I	>7+88+3331	823	
		P 9	9 10 k 2%;	57.88.4103	AZ 4	

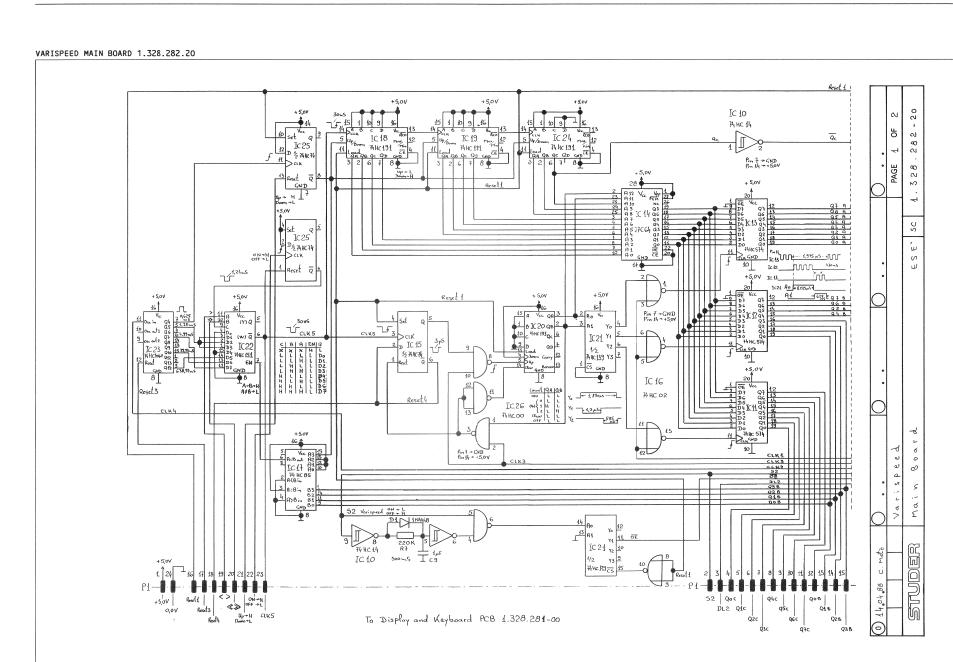
S T U D E R (00) 88/02/11 CM DISPLAY & KEYBOARD PCB PL 1-328-281-00 PAGE L

eO.	PD5 • ND+	PART VO+	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	S 1	55+15+0113	2 + U	Push-Push Button Schwitch.	HEC.
	5 * * * * * 2	55.15.0113	2 ± U	Push-Push Button Schwitch.	MEC.
	5 *** * 3	55.15.0112	2 ± U	Momentary Push Button Switch.	MEC.
	5 4	55-15-0112	S = 0	Momentary Push Button Switch.	MEC.
	S 5	55-15-0112	S D D	Homentary Push Button Switch.	MEC.
	\$	55+15+0112	2 0 U	Momentary Push Button Switch.	HEC.
	IP	54+02+0120	2.8 2 0.8	Straight soldering strip.	

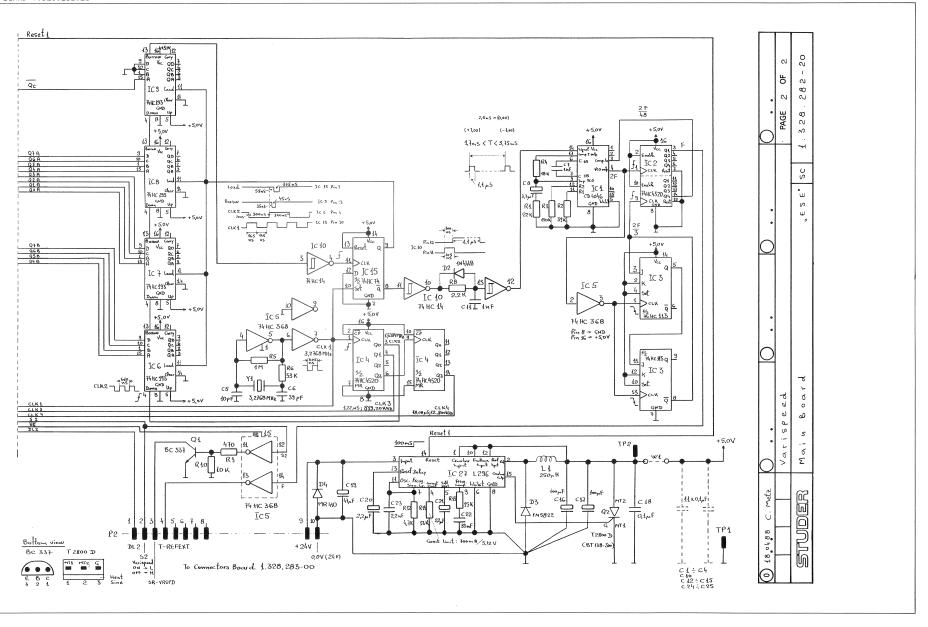
SAL-Solid Aluminium, PETP-Polyester, MF-Metal Film.

0x16 88702711

5 T U D E R (00) 39/22/11 CM DISPLAY & KEYBOARD PCB PL 1-328-281-00 PAGE 2

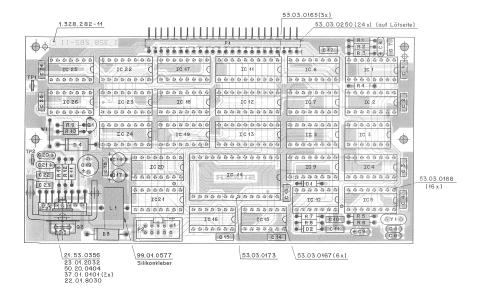


## VARISPEED MAIN BOARD 1.328.282.20



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IND.	POS+NO+	PART NO.		SPECIFICATIONS / EQUIVALENT	MANUF.
	C1 C2 C3 C3 C5 C5 C6 C7 C8 C7 C8 C10 C11 C12 C1	59.100.104 59.000.004 59.000.004 59.000.004 59.34-1109 59.34-2390 59.260.102 59.260.102 59.060.002 59.060.002 59.060.002 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003 59.060.003	-1 u -1 u -1 u -1 u -1 u -1 u -1 u -1 u	101. 639 - PETP 101. 639 - PETP 101. 639 - PETP 101. 639 - PETP 35 - WE O - CEE 101. 639 - PETP 35 - WE O - CEE 101. 639 - PETP 102. 639 - PETP 103. 639 - PETP 103. 639 - PETP 103. 639 - PETP 104. 639 - PETP 105. 639 - PET	
	C4	59.06.0104	-1 u	10%, 63V , PETP 10%, 63V , PETP	
	C6	59-34-1100 59-34-2390	10 p 39 p	5%, NP 0 , CER 5%, NLSO , CER	
	C 7	59+06+0102 59+26+2339	3.3 u	10%, 63V , PETP 20%, 16V , SAL	
	C10	59.06.0104	-1 u	20% 25V + SAL 10% 63V + PETP	
	C12 C13	59-06-0104 59-06-0104	1000 p -1 u -1 u -1 u -1 u 100 u 100 u 47 u 2-2 u 2-2 u 2-33 u 2200 p -1 u	10%, 63V , PETP	
	C14 C15	59-06-0104 59-06-0104	*1 u	10%, 63V , PGTP 10%, 63V , PFTP	
	C16 C17	59.22.4101 59.22.4101	100 u	-20%, lov , EL -20%, lov , EL	
	C18	59-06-0104 59-22-6470	-1 o 47 u	-20%, 16V , EL 10%, 53V , PETP -20%, 50V , EL	
	C20	59-26-2229	2+2 u	20% 16V + SAL 20% 16V + SAL	
	C23	59-06-0222 59-06-0106	2200 p	10%, 53V , PETP	
		59-06-0104		10%, 63V , PETP	
	0 · · · · · 1 0 · · · · · 2 0 · · · · · 3 0 · · · · · 4	50+04+0125 50-04+0125 50-04+0519 50+04+0521	IN 4448 IN 4448 I N 5822 MUR 410	75 V, 0-1 A, 4 ns, Si. 75 V, 0-1 A, 4 ns, Si. 40 V, 3 A, Schottky. 100 V, 5 A, Si.	
	0	>0.04.0519 >0.04.0521	I N 5822 MUR 410	100 V. 5 A. Schottky.	Mot.
	101	50.07.0046	NC 14046 B	Phase-Licked Loop.	Mot.
	104	50-17-1113 50-17-4520	74 HC 113 74 HC 4520	Dual J-C Flip-Flop with Set. Dual 4-Bit Binary Counter.	
	16 1 16 2 16 3 16 4 16 5	50.07.0046 50.17.4520 50.17.1113 50.17.4520 50.17.1368 50.17.1193	NC 14046 B 74 HC 4520 74 HC 113 74 HC 4520 74 HC 368 74 HC 193	Phase-tacked Loop. Dual 4-8it Binary Counter. Dual J-C Flipp-flop with Set. Dual 4-8it Binary Counter. Hex 3-State Inv. Ruff., Z-Bit C Preset. 4-8it 8in. Up/Down Count	4-Bit Sect. • with Reset
STU		00) 88/03/08 (O	M MAIN BOARD	PL 1.328.282	-20 PAGE 1
I NO.	POS-NO-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	167	50-17-1193 50-17-1193 50-17-1193 50-17-1193 50-17-1016 50-17-1574 50-17-1574 50-17-1574 50-17-1002 50-17-1074 50-17-1075 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191 50-17-1191	74 HC 193	Present a-Bit Bin. Up/Down Count Present - 4-Bit Bin. Up/Down Count Present - 4-Bit Bin. Up/Down Count Present - 4-Bit Bin. Up/Down Count How County	• with Reset
	107 108 109 1010 1012 1012 1014 1015 1016 1017 1018 1019	50-17-1193 50-17-1193	74 HC 193 74 HC 193 74 HC 193 74 HC 193 74 HC 14 74 HC 574 74 HC 574 74 HC 574	Preset. 4-Bit Bin. Up/Down Count Preset. 4-Bit Bin. Up/Down Count	• with Reset • with Reset
	1010	50-17-1014 50-17-1574	74 HC 14 74 HC 574	Hex Schmitt-Trigger Inverter. Octal 3-State Noninverting O-Typ	e Flip-Flop.
	1012	50-17-1574	74 HC 574 74 HC 574	Octal 3-State Noninverting D-Typ Octal 3-State Noninverting D-Typ	e Flip-Flop. e Flip-Flop.
	1015	50-17-1074	74 HC 74	Oual D-Type Flip-Flop with Set 5	Reset.
	IC 17	50-17-1085	74 HC 85	4-Bit Magnitude Comparator.	Counter.
	1019	50-17-1191 50-17-1193	74 HC 191 74 HC 193	Presettable 4-Bit Binary Up/Down Preset. 4-Bit Bin. Up/Down Count	Counter. . with Reset
	10 21	50.17.1139 50.17.1151	74 HC 139 74 HC 151	Dual 1-of-4 Decoder/Denultiplexe 8 Input Data Selector/Multiplexe	r.
	1024	50-17-4060 50-17-1191	74 HC 4060 74 HC 191	14 Stage Sinary Ripple Counter w Presettable 4-Bit Binary Up/Down	ith Osc. Counter.
	IC 19 IC 20 IC 21 IC 22 IC 23 IC 24 IC 25 IC 26 IC 27	50-17-1074 50-17-1000	74 HC 74 74 HC 02 74 HC 02 74 HC 191 74 HC 191 74 HC 193 74 HC 139 74 HC 139 74 HC 151 74 HC 4060 74 HC 191 74 HC 00 L 296	Uses D-Type Flip-Flop with Set & Guad 2-Input NAND Gate.	Keset.
	1027	50.10.0110 62.03.0005	250 uH	High Current Switching Voltage R	egulator SGS St.
	P 2		24 ° 1 pin 2 ° 5 pins	Right Argle Male Contact Strip. Straight Print Male Connector.	
	Q1 Q2	50.03.0343 50.99.0106	3C 337-25 T 2800 D	45 V, O.8 A, Si. NPN. 400 V, B A, Triac.	RCA.
	R 2 R 2 R 4 R 5 R 5	57-11-3223 57-11-3393 57-11-3154 57-11-3183 57-11-3105 57-11-3333 57-11-3224	22 k 39 k 150 k 18 k 1 M 33 k 220 k	12, 0207 , 4F 12, 0207 , 4F	
	R 3	57-11-3393 57-11-3154	39 k 150 k	1%, 0207 , 4F 1%, 0207 , 4F	
	R5	57-11-3135 57-11-3105	1 M	1% 0207 - MF 1% 0207 - MF	
	R 7	57-11-3224	220 k		
TU	DER (D	O) 88/03/08 CM	MAIN BOARD	Pt 1-328-282-	-20 PAGE 2
IND.	POS - NO -				
: ND -		PART NO+	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R9 R10 R11 R12 R13	57.11.3222 57.11.3471 57.11.3103 57.11.3133 57.11.3472 57.11.3153	2-2 k 470 10 k 13 k 4-7 k 15 k	1%, 0207 , 4F 1% 0207 , MF 1%, 0207 , MF 1%, 0207 , MF 1%, 0207 , MF 1%, 0207 , MF	
	R10 R11	57-11-3103 57-11-3133	10 k 13 k	1%, 0207 + MF 1%, 0207 + MF	
	R****12 R****13	57.11.3472 57.11.3153	4.7 k 15 k	1%, 0207 , MF 1%, 0207 , MF	
	TP2	54.02.0320 54.02.0320	2.8 = 0.8 2.8 = 0.8	Straight Soldering Strip. Straight Soldering Strip.	
	N1	1.010.324.64		Bridge.	
	Y * * * * 1	89.01.0376	3.2768 MHz	HC 18 U Ceramic Resonator.	
CER=Co MF=Het	eranic, EL= al Film.	Electrolytic+ F	PETP=Polyester	+SAL=Solid Aluminium+	
MANUFA	CTURERS T	Mot - Motorola	,		
		Mot = Motorolo RCA = RCA Corp SGS = SGS Mid St = Studer	oration roelettronica	Sp A	
		St = Studer			
	8/03/08				
STU	DER (O	0) 88/03/09 (6	MAIN BOARD	PL 1-328-282	-20 PAGE 3

