## GENERAL DESCRIPTION

Models 1028 and 1048 are dual channel, direct capstan drive recorders with integrated vacuum tube electronics and tape speeds of $7.5 / 15$ and $3.75 / 7.5 \mathrm{ips}$ respectively. Both models are expressly designed for professional and broadcasting applications.

## TAPE TRANSPORT

The tape transport mechanism of the 1028/1048 will handle 5, 7 and $101 / 2^{\text {" }}$ reels and is built on a precision machined, solid aluminum die-casting to insure the stability and ruggedness required in a machine intended for hard, continuous duty in broadcast and industrial service.


The brakes, pressure roller and tape gate are solenoid operated for reliability and permit the tape to be remotely started and stopped, in a pre-selected mode, by switching the primary of the solenoid power supply. The solenoid operated braking system is power fail-safe and provides differential braking action under all operating conditions including power failure.
The solenoid operated tape gate control provides straight slot loading, dropping the tape away from the heads during high speed winding modes and also provides for tape to head contact for manual cueing or editing.
The tape drive is direct by means of a special micro-ground chromium plated capstan extending from a two speed hysteresis synchronous motor shaft. This is the simplest, most reliable of capstan drives and gives the best timing accuracy as well as the lowest wow and flutter. Each reel is driven by a high torque split winding capacitor induction motor. A high inertia stabilizer, riding in low loss ball bearings, combines with a tape break sensing arm to effectively filter out tape velocity variations due to uneven tape wind and/or payout motor characteristics. A four digit, push-button resettable counter is provided.
Model 1028 or 1048 fits into a deep drawn, sturdy aluminum case with built-in ventilating fan for portability or table top use, or into an adaptor panel for rack or console mounting.

## ELECTRONICS

The integrated electronics are two channel vacuum tube type. Standard inputs (mic. and line) are unbalanced, as are the cathode follower outputs. Accessory input and output transformers are available for use where balanced lines are required. Inputs are through "XL" connectors and barrier terminal strips. Outputs are through barrier terminal strips. Auxiliary input and output phono jacks (unbalanced) are provided for quick connect/disconnect use with mixer and portable power or public address amplifiers. Individual channel gain and master gain controls are in the record amplifier. Separate, ganged gain controls are in each channel of the playback amplifier. Channels may be operated independently as bias and erase are selectable for each channel. Each channel is monitored by its own VU meter. The electronics are equipped with all of the adjustments necessary to provide maximum efficiency of the unit as a recording system.

## ENGINEERS' AND ARCHITECTS' SPECIFICATIONS

The tape recorder reproducer shall be a two speed, dual channel (stereo) unit capable of handling reels of 5 ", 7 " and $101 / 2$ " diameter with EIA and NAB IIubs. The tape transport shall be constructed on a solid die-cast aluminum transport main plate. The unit shall have a direct drive, micro-ground chromium plated capstan extending from a two speed, hysteresis synchronous capstan motor shaft. Each of the reels shall be driven by a separate split winding capacitor type motor. The unit must provide for straight slot tape loading as well as for manual cueing or editing. The unit shall be equipped with a ball bearing inertial stabilizer, a payout compliance arm and tape break switch. The tape gate, brakes and pressure roller are to be solenoid operated and the brakes shall be fail-safe in the event of power failure.

The amplifier shall be equalized to NAB standards and contain unbalanced microphone and line inputs and cathode follower outputs with provisions for optional input and output transformers when balanced lines are required. Unbalanced auxiliary inputs and outputs shall be available for use with external mixer or power amplifier. Individual channel and master gain control are to be provided for record mode and ganged individual channel controls for playback. A VU meter shall be incorporated in each amplifier channel with provisions for independent channel operations.
The entire recorder shall fit into an optional portable case or rack mounting adaptor panel. The unit shall be TEL,EX model Magnecord 1028 or 1048 (specify catalog number).


1. REEL MOUNTING FLANGE
2. REEL RETAINER
3. REEL SIZE SWITCH
4. TAKE-UP TURNTABLE
5. SUPPLY TURNTABLE
6. HEAD COVER
7. PLAY HEAD SELECTOR SWITCH
8. PLAYBACK HEAD (OPTIONAL)
9. CAPSTAN
10. TAPE GUIDE
11. PRESSURE ROLLER
12. MONITOR JACK
13. TAPE SPEED SELECTOR
14. RECORD INTERLOCK BUTTON
15. RECORDER CONTROL SWITCHES
16. TAPE LIFTER GATE
17. PLAYBACK GAIN CONTROL
18. PLAYBACK HEAD
19. RECORD GAIN CONTROL (CH. 2)
20. TAPE LIFTER OPERATION CONTROL
21. RECORD GAIN CONTROL (CH. 1)
22. RECORD HEAD
23. MASTER RECORD GAIN CONTROL

24. CHANNEL SELECTOR CONTROL
25. RECORD INDICATOR
26. METER SWITCH
27. VU METER (CH. 1-TOP, CH. 2-BOTTOM)
28. COMPLIANCE ARM
29. ERASE HEAD
30. STABILIZER ROLLER
31. TAPE BREAK SWITCH
32. PORTABLE CARRYING CASE
33. INPUT SELECTOR SWITCH (CH. 2)
34. INPUT BARRIER STRIP
35. OUTPUT BARRIER STRIP
36. MICROPHONE INPUT (CH. 2)
37. MICROPHONE INPUT (CH. 1)
38. INPUT SELECTOR SWITCH (CH. 1)
39. SAFETY SWITCH
40. AUXILIARY AC OUTLET
41. A-C POWER CORD PLUG-IN
42. FUSE HOLDER
43. UN-BAL IN JACK
44. UN-BAL OUT JACK
45. TAPE POSITION INDICATOR


ORDER MODELS 1028 ( $7.5 \& 15 \mathrm{ips}$ ) OR 1048 ( $3.75 \& 7.5 \mathrm{ips}$ ) BY CATALOG NUMBER

| HEAD CONFIGURATION CODE: $\mathrm{H}=$ Half Track $\mathbf{Q}=$ Quarter Track $2=$ Two Ch |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ModelOescription |  | Type of Control | Speeds | Operat- <br> ing <br> Power | Equalization | $\begin{gathered} \text { Heads } \\ \text { (see code above) } \\ \hline \end{gathered}$ |  |  |  | Mounting | Order By Catalog Number | Model Description | Type of Control | Speeds | Operating Power | Equali2ation | $\begin{gathered} \text { Heads } \\ \text { (see code above) } \end{gathered}$ |  |  |  | Mounting | Order By Catalog Number |
|  |  | $\stackrel{2}{3}$ |  |  |  | $\stackrel{\text { E. }}{\text { E. }}$ | $\frac{5}{2}$ | 交 | $\begin{gathered} x \\ \mathbf{B} \end{gathered}$ |  |  |  |  |  |  |  | 르률 | 岩 | $\frac{2}{2}$ |  |  |
| 1028-2X |  |  | Electro Mechanica | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Unmounted | A91A9808-2 | 1048.2X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Unmounted | A91A9682.2 |
| 1028-24X |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Unmounted | A91A9808.4 | 1048-24X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Unmounted | A91A9682-4 |
| 1028.2 |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Cased | A91A9808.1 | 1048-2 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Cased | A91A9682-1 |
| 1028.24 |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Cased | A91A9808-3 | 1048-24 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Cased | A91A9682-3 |
| 1028-4X |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Unmounted | A91A9808.6 | 1048-4X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Unmounted | A91A9682.6 |
| 1028-42X |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Unmounted | A91A9808-8 | 1048.42X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Unmounted | A91A9682-8 |
| 1028.4 |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Cased | A91A9808-5 | 1048-4 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Cased | A91A9682-5 |
| 1028.42 |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Cased | A91A9808.7 | 1048-42 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 60 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Cased | A91A9682.7 |
| 1028-2X |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Unmounted | A91A9808-10 | 1048-2X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Unmounted | A91A9682-10 |
| 1028-24X |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Unmounted | A91A9808-12 | 1048.24X | Electro Mechanica! | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Unmounted | A91A9682-12 |
| 1028.2 |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Cased | A9149808.9 | 1048-2 | Electro Mechanical | 3.75.7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 |  | Cased | A91A9682.9 |
| 1028.24 |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Cased | A91A9808-11 | 1048.24 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | H2 | H2 | H2 | Q2 | Cased | A91A9682-11 |
| 1028-4X |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Unmounted | A91A9808.14 | 1048.4X | Electro Mechanical | 3.75.7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Unmounted | A91A9682-14 |
| 1028-42X |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Unmounted | A91A9808-16 | 1048-42X | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Unmounted | A9 1A9682-16 |
| $1028-4$ |  | Electro Mechanical | 7.5-15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | 02 | Q2 | Q2 |  | Cased | A91A9808-13 | 1048.4 | Electro Mechanical | 3.75.7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 |  | Cased | A91A9682.13 |
| 1028-42 |  | Electro Mechanical | 7.5.15 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 | Q2 | H2 | Cased | A91A9808-15 | 1048-42 | Electro Mechanical | 3.75-7.5 | $\begin{aligned} & 117 \mathrm{~V} \\ & 50 \mathrm{~Hz} \end{aligned}$ | N.A.B. | Q2 | Q2 |  | H2 | Cased | A91A9682.15 |
|  |  | Carrying Case |  |  |  |  |  |  |  |  | A91A3168.2 |  |  |  |  |  |  |  |  |  |  | A91A3168.2 |
|  | Rack Adaptor Panel |  |  |  |  |  |  |  |  |  | A91C2959 |  |  |  |  |  |  |  |  |  |  | A91C2959 |
|  | Input Transformer (50/150Q), Plug-In |  |  |  |  |  |  |  |  |  | A32A33-1 |  |  |  |  |  |  |  |  |  |  | A32A33-1 |
|  | Output Transformer (150/6008), Plug-In |  |  |  |  |  |  |  |  |  | A32890. 1 |  |  |  |  |  |  |  |  |  |  | A32890. 1 |

NOTE: Units Supplied with High Impedance Un-balanced Inputs and Cathode Follower Outputs.


## SPECIFICATIONS

## MODEL 1028

Tape Speeds: 7.5 and 15 inches per second.
Flutter and Wow: less than $0.15 \%$ at 7.5 ips ;* less than $0.1 \%$ at $15 \mathrm{ips.*}$.
Frequency Response - OVERALL RECORD/REPRODUCE:
30 to $20,000 \mathrm{~Hz} \pm 2 \mathrm{~dB}$ at 15 ips ;
30 to $18,000 \mathrm{~Hz} \pm 2 \mathrm{~dB}$ at 7.5 ips .
Signal-to-Noise Ratio: 55 dB minimum ( $1 / 2$ track)** 50 dB minimum ( $1 / 4 \mathrm{track})^{* *}$

## MODEL 1048

Tape Speeds: 7.5 and 3.75 inches per second.
Flutter and Wow: less than $0.15 \%$ at 7.5 ips ;*
less than $0.25 \%$ at 3.75 ips . ${ }^{*}$
Frequency Response - OVERALL RECORD/REPRODUCE:
40 to $16,000 \mathrm{~Hz} \pm 2 \mathrm{~dB}$ at 7.5 ips ;
40 to $7,500 \mathrm{~Hz} \pm 2 \mathrm{~dB}$ at 3.75 ips .
Signal-to-Noise Ratio: 52 dB minimum ( $1 / 2 \mathrm{track})^{* *}$ 45 dB minimum ( $1 / 4 \mathrm{track})^{* *}$
MODELS 1028 AND 1048
Timing Accuracy: $\pm 0.2 \%$.
Reel Size: All standard 5, 7, 81/4 and $101 / 2$ inch reels.
Tape Size: $1 / 4$ inch wide, 1.5 and 1.0 mil thick.
Start Time: 0.2 seconds (slow speed). 0.25 seconds (fast speed).
Stop Time: 0.1 seconds (slow speed). 0.1 seconds (fast speed).
Rewind \& Fast Forward: 1200 feet 45 seconds. 2400 feet 90 seconds max.
Cross Talk Ratio**t: -52 dB at 1 kHz (half track)
Playback Equalization: Conforms to NAB standards at 15, 7.5 and 3.75 ips.

## Input Each Channel:

MICROPHONE, input impedance 50 k ohms, input sensitivity -70 dBm to -25 dBm .
LINE, high impedance, unbalanced: input impedance 53 k ohms nominal. Input sensitivity $-40 \mathrm{dBm}(8 \mathrm{mV})$.

[^0]Inputs Each Channel With
Accessory Input Transformer:
MICROPHONE, 10 -impedance, balanced: Microphone impedance, $150-250$ or 50 ohms.
INPUT SENSITIVITY, -90 dBm to -35 dBm .

## Outputs Each Channel:

CATHODE FOLLOWER, unbalanced: 3300 ohms nominal output impedance. 2.5 Volts rms ( $\pm 0.5 \mathrm{~V}$ ) output level at 0 VU .
MONITOR, phones, unbalanced: 2000 ohms nominal output impedance. 2.5 Volts rms ( $\pm 0.5 \mathrm{~V}$ ) output level at 0 VU .

## Outputs Each Channel With Accessory <br> Output Transformer:

LINE, balanced: 600 ohm output impedance with transformer, taps for 150 ohms. $+3( \pm 0.5 \mathrm{~dB}) \mathrm{dBm}$ at 0 VU with line terminated and $+4 \mathrm{dBm}( \pm 0.5 \mathrm{~dB})$ with line not terminated.
CATHODE FOLLOWER, unbalanced: 3300 ohms nominal output impedance. 2.5 Volts ( $\pm 0.5 \mathrm{~V}$ ) rms at 0 VU output level.
Normal Record Level: (0 VU on meter): A point 8 dB below the $3 \%$ harmonic level at 1 kHz .

Power Requirement: 115 Volt, $60 \mathrm{~Hz}, 240$ Watts cased, 205 Watts uncased. 115 Volts, $50 \mathrm{~Hz}, 260$ Watts cased, 225 Watts uncased.

## Dimensions:

PANEL SIZE: $17-5 / 8$ inches wide, 13 inches high. OVERALL UNIT DEPTH: 12 inches cased or uncased.
MOUNTED WITH RACK ADAPTER: 19 inches wide, 14 inches high. Rear projection from panel: $81 / 4$ inches. Front projection from panel: $23 / 4$ inches.

Weight: 47 pounds (55 pounds encased).

[^1]
## SPECIFICATIONS

## (*OPTIO

FREQUENCY RESPONSE:
$70-25,000 \mathrm{~Hz} \pm 2 \mathrm{DB}$ at 15 IPS.
$0-10,000 \mathrm{~Hz} \pm 2 \mathrm{DB}$ ar $31 / 2 \mathrm{P}$ PS .
40. $6,000 \mathrm{~Hz} \pm 2 \mathrm{DB}$ of $1 \% / 1$ IPs.
signal-to noise ratio
55 DB or better below peak recording level $7 / 2 / 2$ IPS, hal track, overall record/play measuring all components
$40-16,000 \mathrm{~Hz}$ unweighted. OUTPUTS:*

One per channel. Balanced +4 VU into 600 ohm load
Less than $1 \%$ THD at +20 DBM. For use with eithe
matched or bridging loads. Connectors; type XL-3 male
Head Phone Jack -600 ohm nominal (for 16 to 4,00 NPUTS:*
Two per channel.
i) High leve Unbalonced bridging, 150 K ohm
impedance, 100 MV sensitivity.
2) Low level: High impedan ce unbalanced micro Connectors: type XL-3 female
DISTORTION: $1 \%$ total hormonic distortion, record CROSSTALK REJECTION: 55 DB or better record EQUALIZATION:* NAB and ElA standard selected NAB ond EIA standard, selecte
by front panel switch for high on by front panel switch for high and
low speed. Equalized for $3^{3 / 4}$ and
$71 / 2$ IPS.
RECORD INTERLOCK: 24 V DC (matches Viking 230 tape transport). Reloy con-
trolled function for each
chanel. 10 pin socket and
interconnecting cobe to tope
indensport for interlocking
trans
BIAS/ERASE OSCILLATOR: 100 kHz High-Q Low statertion circusth-pult solid
sith con-
trolled attack rolled at tack and decay
ime constants. Adiust ent at rear panel.

## CONTROLS

MODEL RPIIO
LEVEL: Play; In int A; Input B.
SWITCHES: Equolization
(AC
Record; Monitor (Source/Tape).



NTERNAL TRIMMING ADJUSTMENTS: Ploy equaliza leve
lrap.
HEADS: Adjusted for half track optimum heads, * ERASE; 40 V opt mum, can be modified for 120 Volt.
ERE RECORD: 50 MHY optimum, con be used with 50 to PLAY; 400 MHY op
LAY;
$1,000 \mathrm{MHY}$.
OP.

$$
\begin{aligned}
& \text { CIRCUITRY: Completely solid state. } \\
& \text { OWER:* } 110-120 \mathrm{~V} A C 50 / 60 \mathrm{~Hz} ; 20 \text { watts maximum. } \\
& \begin{array}{l}
\text { Use - } 0.5 \mathrm{~A} \text {, slow blow line fuse; Receptocle } \\
\text { - switched AC for tran sport Cord - supplied }
\end{array} \\
& \begin{array}{l}
\text { - switched } A C \text { for tran sport; } \\
\text { with } 6 \mathrm{ft} \text { removable } A C \text { cord. }
\end{array} \\
& \text { DIMENSIONS: Standard EIA rack mount panel. Height }
\end{aligned}
$$

$\begin{aligned} & \text { Cal low 3" addition } \\ & \text { in front of panel. }\end{aligned}$
PANEL FINISH: Stainless steel.
WEIGHT: Maximum 16 lbs . net. 20 lbs . in shipping

## *OPTIONS AND ACCESSORIES

EqUALIZATION:
OPTION $\# E 1$ - Factory adiusted for 17,9 and $33 /$ IPS.
OPTION $\# E 2$ - Factory odiusted for $71 / 2$ and 15 IPS.
LUG-IN INPUT MODULES: Each of the 2 inputs per channel accept ony one
of the plug-in accessory of the plug-in
options listed.
ACCESSORY aPI - (One per channel supplied) Unbal anced bridging $150 \mathrm{Kohm}, 100 \mathrm{MV}$
sensitivity sensitivity
ACCESSORY \#P2 - Balonced bridging 10 K ohm, transformer isolated for 150 to 600 ohm
lines - 20 DBM to +10 DBM.
CCESSORY $\mathrm{FP}^{-}$- (One per channel supplied) High impedance unbalon ced microph
200 K ohm 1 MV sensitivity.


OPTION $=$ LI - Factory set, 150 to 250 ohm bal-

HEAD ADJUSTMENT
Factory adiusted for full track
OPTION HH 2 l - Foctimum heods. $\begin{gathered}\text { Foctory odiusted for quarter track } \\ \text { stereo optimum heads. On RP120 }\end{gathered}$ stereo
only.

$$
\begin{aligned}
& \text { OWER: } \\
& \text { OPTION } \# V 2-220 \text { to } 240 \text { V AC } 50 / 60 \mathrm{~Hz} \text { avail- } \\
& \text { able on special order } \\
& \begin{array}{l}
\text { Secial interconnection for synchronizing the bios } \\
\text { oscillators in two amplifiers for multiple channel }
\end{array}
\end{aligned}
$$

TECHNICAL DATA 4027

## SERIES RP110 \& RP120

 RECORD PLAYBACK AMPLIFIERGENERAL DESCRIPTION
Model RP110 single channel (monaural), and model RP120 wo channel (stereo) solid state tape record and playback amplifiers incorporate the latest modular design concepts. essional quality and is intended for use with electrically ontrolled magnetic tape transports with separate erase, unctions and flexibily of the aplifies unctions and flexibility of these amplifiers meet today's ards. Solid state circuitry on etched, glass epoxy plug-in adds much to the convenience of service and adjustment.
 Two inputs per channel for line and microphone are provided on the rear panel with optional, readily per channel works into 600 ohm load with front panel playback level control. One balanced outpu ohm balanced line output available.
The two speed equalization switch and source-tape monitor switch are to the left and right of the ront panel respectively, with a headphone jack at the center. An illuminated ASA standard precisio VU meter, and an illuminated record push-button is provided per channel. Standard amplifiers are equalized for half track tape heads, $7-1 / 2$ and $3-3 / 4$ ips operation with options for other head con gur
A 24 V DC record interlock, complete with control cable is standard and matches the Telex mode iking 230 tape transport.

ENGINEER'S \& ARCHITECT'S SPECIFICATIONS

The magnetic tape record and playback amplifies shall be a one channel (or, two channel) unit with solid state circuitry on glass epoxy plug-in with electrically controlled tape transports with separate erase, record and play heads such as Telex model Viking 230 . Two rear panel inputs with XL-3 female type connectors are to be provided per channel with interchangeable plug-in
modules, each with front panel level control. A rear panel balanced line output per channel with XL-3 male type connectors is to work into 600 ohm load with front panel playback level control.
A front panel jack for 16 to 4000 ohm headphone A front panel jack for 16 to 4000 ohm headphones panel switching for AC power and high-low speed equalization, tape-source monitoring, an illuminated push-button type record switch per channel and illuminated ASA standard VU meter per
channel. Rear panel bias adjustment and internal trimming adjustments are to be provided for play equalization, record level and bias trap.
Amplifier performance shall meet or exceed NAB standards for haf track, $7-1 / 2 \mathrm{ips}$ operation as $\mathrm{Hz} \pm 2 \mathrm{db}$. Signal to noise ratio 55 db or better below peak recording level. Record playback crosstak rejection The amplifier shall operate on 115 V AC, $50 / 60$ Hz , power consumption not to exceed 20 watts. The front panel shall be stainless steel, suitable wide. The amplifier shall be Telex model Viking RP110 (or RP120) catalog no. (specify catalog no. designating monaural or stereo amplifier, head configuration and speed equalization. Add re quired input module accessories by catalog no.)

[^2]see telex technical data sheet no. 4026.
Specifications listed here in are subiect to change without notice

RP110
FRONT, REAR AND TOP VIEW


| Model | NAB Equalized <br> Single Channel | Equalized For <br> Tape Speeds | Order By <br> Cataiog Number |
| :---: | :---: | :---: | :---: |
| RP110 | Full Track | $1.875-3.75$ | 1100.01 .503 |
| RP110 | Half Track | $1.875-3.75$ | $1100-01.501$ |
| RP110 | Full Track | $3.75-7.5$ | 1100.01 .508 |
| RP110 | Half Track | $3.75-7.5$ | $1100-01.500$ |
| RP110 | Full Track | $7.5-15$ | 1100.01 .504 |
| RP110 | Half Track | $7.5-15$ | $1100-01.502$ |

ORDER RP120 BY CATALOG NUMBER
RP120
FRONT, REAR AND TOP VIEW


| Model | NAB Equalized <br> Two Channel | Equalized For <br> Tape Speeds | Order By <br> Catalog Number |
| :--- | :--- | :--- | :--- |
| RP120 | Half Track | $1.875-3.75$ | 1200.01 .501 |
| RP120 | Quarter Track | $1.875-3.75$ | $1200-01.505$ |
| RP120 | Half Track | $3.75-7.5$ | 1200.01 .500 |
| RP120 | Quarter Track | $3.75-7.5$ | 1200.01 .507 |
| RP120 | Half Track | $7.5-15$ | 1200.01 .502 |


[^0]:    * These specifications are based on using a standard E.I.A. 7-inch reel and 1.5 mil tape. Specifications will vary for other reel sizes, tape types and tape thicknesses.
    ** Down from a $3 \%$ 3rd harmonic distortion recording at $1,000 \mathrm{~Hz}$.

[^1]:    *** Measured by placing both channels in record mode and recording a 1 KC signal at 0 VU on one channel and reading the playback level of the other. The playback gain set to produce 0 VU from a 0 VU recording.

[^2]:    FOR MATCHING TAPE TRANSPORT TELEX MODEL VIKING 230

