Unique Dual DAT recorder - two R-DAT recorders housed in a 3U rackmount chassis, featuring a full complement of professional features and all the operating advantages of two independent DAT drives in a single unit.

Individual and common I/Os available to both decks; phono unbalanced analogue inputs provided commonly and separately; individual S/PDIF I/Os for simultaneous digital recording of different program material (deck 1 can digitally record while deck 2 transfers separate programme material to an external device); also simultaneous record capability.

Separate digital (selectable AES/EBU and S/PDIF formats) and analogue playout capability.

Digital and analogue cascade outputs available in multiple unit operation, with external control I/O capability.

Continuous record and playback between decks and within multiple unit configurations.

Normal and high speed digital dubbing (including ABS time, subcode and PCM data), with Program and Append dubbing (from any position on the master tape) modes; duplication possible with multiple units.

32/44.1 and 48kHz playback; 44.1 and 32kHz recording.

TASCAM 1 bit A to D and D to A convertor technology ensures high quality analogue recording and playback.

Comprehensive FL display for both decks with error rate and total running time display, Copy ID selection and input signal peak hold function.

Remote control, synchro cable and optional balanced analogue I/O convertor kit accessories available.

Would you swap your DA-302 for any TWO other DAT players?...not with these features you wouldn't.
Futurecasting

You have to be very careful about whose opinion you choose to canvas when attempting to forecast the fate of this industry as there are threads of thought that I would consider to be misleading and ill-informed.

There are those who will tell you we are on the precipice of a major geological shift in which the equipment that exists now will be banished to the land that time forgot in favour of a new order. This new order, which incidentally has been threatening for some time, is the challenge of the all-powerful host computer with its all-encompassing digital environment and the proliferation of plug-in substitutes for real-world hardware.

The same people will tell you that the plug-in writers and programmers are the small pro audio manufacturers of tomorrow; that the incessant drive downwards in price will make this approach irresistible to users causing a dramatic drop in demand for the real stuff which in turn will decimate the traditional pro audio manufacturing base.

No matter how much walnut you strip in to a VW Golf, how much sound proofing you include to isolate me from its engine or how much you make of the MPG, the performance and the overall value for money, I still want a Jaguar.

What these radical thinkers conveniently fail to admit — or choose not to as it clearly reveals the direction in which they intend to go, with the money and not with the need — is that the pro audio user community is not large. While it can certainly be influenced by mass technological changes, its requirements remain unique in enough aspects for it to require special attention.

The revolutionaries think that the availability of something at a cheaper price and in a different form is sufficient in itself to change the way everything is done. This is about as daft as correlating the increased sales of computer cricket games with an inevitable change in the fortunes of the English cricket team against its traditional adversaries.

The fate is still decided by a man walking out there with a piece of wood in his hand and post and broadcast still require someone near the top of their audio profession to make it all happen.

It is dangerous for marketing types in this industry — who for the majority are not practitioners — to be seduced by the impact of the computer in the rest of the world and then apply this to professional audio environments. For starters, we've been using them for a long time and the mystery and potential has largely been revealed. More importantly audio's demands on computing, particularly with regard to networking and real-time, puts it at the very forefront of the technology. We are already up to are necks in computers and their promise lies in providing real high power solutions and not just replacements.

I for one remember when we were being spun the line that it was possible to record edit and mix on a DAW using only a mouse whereas now the rush for hardware controllers is irresistible. I've also appreciated the operational downsides of plug-ins vis a vis proper outboard and can remember when turgid assignability was heralded as the only way forward to harness the enormous power of digital desks.

We mustn't misinterpret the computer-oriented results of the economic pressures that manufacturers are under as an indication of what the market wants. Manufacturers may be solving their own problems and not necessarily yours. People get real.
LAB 4000 – One power amplifier with more than 10 different power ratings.
(Only available in 2U anodized black.)

Whilst other brands offer dozens of models with differing power ratings for special purpose, our LAB’s MLS-switches (Minimum Load Select) can create a multiple of combinations; Load matching, Power sharing, Biamping, Limited power and High voltage modes to name but a few.

The result is a standard product and more often than not, a standard product has a higher second hand value than a special purpose one. LAB.GRUPPEN power amplifiers are therefore a good investment. The choice is easy, – LAB 4000, the convertible power amplifier.

<table>
<thead>
<tr>
<th>Mode of Operation</th>
<th>Power/Impedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional mode</td>
<td>Ch.A</td>
</tr>
<tr>
<td>Ch.A</td>
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<tr>
<td>Ch.B</td>
<td>2100/4</td>
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<tr>
<td>Ch.C</td>
<td>3200/2</td>
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<td>High voltage mode</td>
<td>102 Vrms</td>
</tr>
<tr>
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</tr>
<tr>
<td>Ch.B</td>
<td>650/16</td>
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<tr>
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<td>1300/8</td>
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<tr>
<td>Ch.A</td>
<td>2100/4</td>
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<tr>
<td>Ch.B</td>
<td>820/8</td>
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<tr>
<td>Power sharing</td>
<td>3200/2</td>
</tr>
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<td>Ch.A</td>
<td>3200/2</td>
</tr>
<tr>
<td>Ch.B</td>
<td>3200/2</td>
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<tr>
<td>Limited power</td>
<td>1600/2</td>
</tr>
<tr>
<td>Ch.A</td>
<td>2200/2</td>
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<tr>
<td>Ch.B</td>
<td>1320/4</td>
</tr>
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<td>3200/2</td>
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Distributor in UK. and Ireland:
AUTOGRAPH SALES Ltd
+44 171 485 37 49

LAB.GRUPPEN AB
Gullrengsvägen 16, SE-434 44 KUNGSBACKA, Sweden
Tel: +46 300 168 23, Fax: +46 300 142 48

Reader Response No. 003
**Energy efficient amps**

Three amps in Yamaha's Energy Efficient Engine range are the P1600, P3200 and P4500 offering 230W, 520W and 720W per channel into 4 Ohms respectively. The company claims the models require around half the input power of traditional designs to achieve the same output power. Three output modes embrace normal stereo, parallel and bridged mono. All models have power-on muting, quiet variable-speed cooling fans, noise filtering, PC-limiter for short circuit protection and fuses for protection level settings. Input attenuators are 31-position and dB calibrated while balanced XLR, standard jack and barrier strip handle inputs connection. Speaker connection is via 5-way binding posts.

**Outline**

The main selling point of the T2.5 Twin Pulse power amplifier is that they offer exceptionally high output from a compact design. The T1U device produces 450W per channel into 8 Ohm, rising to 1,400W per channel into 2 Ohm, according to the manufacturers' specification. Other specifications include power bandwidth of 26Hz-80kHz, THD 0.5% from 1 Ohm, 0.1% from 100 Ohm, and a slew rate of 50V/sec. The manufacturer states that the design is totally digital. Genie 5 is a DSP controller designed for Outline loudspeaker systems. A two-input, five-output system, it incorporates electronic crossovers, parametric equalisers, de-ay and multiband limiter. It can also be configured for two-way scene operation with an additional mono subwoofer.

**Six-channel amp**

The CP660 6-channel power amp from Crown provides independent channels in 2U of rack space. With 75W output per channel it is suitable for surround applications as well as paging, zone and background music applications. Pairs of channels can be bridged for double the power.

Controls and connectors are mounted on the rear panel and a quiet variable speed fan provides cooling.

Crown IQ for Windows 3.0 features enhanced custom controls that allow the user to create control panels designed specifically for each application. The upgrade allows scheduling of dataframes and scenes and for those who want hands-on control it offers a Scenes sequencer to choreograph a series of complex events.

Crown has added an Administrator Password for global access. IQ for Windows 3.0 expands on Crown's IQ NET with the introduction of a Chat Utility which allows users to communicate with all others on their local IQNET.

**Adastra**

Designed for a range of installations from retail outlets to clubs, the A75 PA Centre combines a 75W amplifier with AM/FM tuner, auto-reverse cassette deck and inputs for two microphones plus CD/auxiliary and telephone. Priority override is fitted to the mic 1 input and telephone input. The unit will operate from mains power or 12V DC. To assist continuity of operation, Adastra offers a low cost replacement cassette transport module on 24-hour delivery time.

**Adam Hall**

The CD-6 voice alarm and background loudspeaker system is designed to meet BSS839 Part 8 standards. The steel cabinet and internal components are fire resistant, giving the maximum operating time in an emergency. The cabinet may be mounted in a number of ways and combines tamper proof fittings with a mesh grille to protect the speaker cone from vandalism. The 100V system has a power rating of 6W and is said to have a maximum SPL of 100dBA.

**Exicon**

New 250V DC, 8A power Mosfets allow audio amplifiers 1,750W per channel into 4 Ohm load, or more than 3kW in bridged mode. The devices are also said to feature fast slew rate, low distortion and no secondary breakdown or thermal runaway. Other advantages are said to include wide bandwidth, low drive requirements and ease of paralleling. Models are ECF10N25 for the N-channel version and ECF10P25 for the P-channel type.

**Nagra**

The PLP-P Class A vacuum tube preamplifier is aimed at the upper end of the hi-fi market. It incorporates a power supply which charges a Ni-Cad battery, so that the audio electronics are fed with pure DC, not directly from the mains. The system also incorporates a custom designed phono stage, with transformers made for low noise and the widest possible dynamic range.

**ARX Systems**

AmbiDrive is a three channel power amplifier which also includes electronic crossover, loudspeaker processing and mono sub circuitry. Rated at 160W RMS from the two main channels and 200W from the sub woofer channel (4 Ohm), the unit has XLR inputs and Speakon outputs. It comes in a 2U rackmount.

**Cloud**

The latest zoning product from Cloud Electronics is the Matrix 4 mixer and amplifier. It provides four microphone inputs with paging and two line inputs with source select. These are routed to four zones. The amplification module is optional and is available in a choice of low impedance or 100V output.

**Rane**

CP31 has two programme inputs and mic/mute page inputs, with independently adjustable ducking for the two output zones. It also has an expand output, allowing it to feed page or programme audio to other Rane units.

**Electro-Voice**

AP2200 and AP2400 are 2U power amplifiers producing 100W and 200W per channel respectively. They are available with a range of plug-in processor modules which can be linked to multiple amplifiers to reduce system costs. The units are compatible with the InterActive Technology SuperVisor network standard and will operate at 8 Ohms, 4 Ohms and 70.7V.

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For further product information use our free enquiry service

Reader Response No. 004

JULY 1998
UK amps
The UK Power Series of power amps from Matrix Audio Developments are targeted at fixed installations and mobile use and are housed in shallow rackmounts. Two-speed thermistor controlled fans, short circuit protection, DC sensing, active clip limiter and output relays are standard. The range is complemented by the M series amplifiers with outputs of up to 400W.

Matrix

Chevin Research
Delivering 2,500W per channel into 2 Ohms, the new AS500 is a 4U amplifier weighing 25kg. The manufacturer has also shown a prototype of D1600, an amplifier delivering 600W per channel into 2 Ohms in a 2U package weighing 7kg.

Chevin

QSC PLX
QSC's PLX series of amps use PowerWave switching power supplies and are said to combine the performance of the company's PowerLight series with the value of the MX series. Four initial models are being shipped delivering 500W, 800W, 1000W and 1500W into 2 Ohms. Proportional response clip limiters optimise response based on programme material to preserve dynamics and user selectable low-frequency filters increase usable power and protect speakers. Features include Speakon and touch-proof binding post outputs and LED indicators for major functions.

QSC

ATC pro amp
The SPA2-200 Pro is ATC's first standalone professional amp and delivers 200W a side. Claimed attributes include ultra low distortion, momentary gain reduction circuitry and huge current reserves.

ATC

TACT Millennium digital amp
TACT has what it claims is the world's first true digital audio power amplifier. The TACT Millennium is not a conventional combination of D-A converter and analogue amplification, but employs a PWM amplification stage. Among the benefits claimed are efficiency approaching 90% and constant dynamic range regardless of volume control setting. The Millennium is the result of a joint research project between Danish Toccata Technology and NAD Electronics, UK. The amplifier circuit is based on proprietary PCM-to-PWM EQUIBITTM technology. EQUIBITTM simplifies the signal path from the digital signal source to the speakers. A processor circuit controls the power output devices directly using digital pulses.

TACT

Acoustic Sound Systems
Acoustic Sound Systems now has two controllers for its Reflekta sound reinforcement range. FX2010 is designed for the MX900 speaker system. It is configured for two-way, stereo operation, with an additional mono sub-bass equipped with an adjustable delay which will compensate for the equivalent of 4m distance. FX2020 is designed for use with the MX600 mid/hi enclosures and MX1200 bass cabinet. The unit is configured for four-way mono operation, with separate control of the sub-bass. Designed by ASS' Spanish distributor Audio Stage Design, the controllers are also fitted with multi-band limiters to increase power handling and protect drivers.

Australian Monitor
Specifically designed for driving induction loop systems, K-Series amplifiers are available in two versions. KLa1 is for driving small to medium sized systems of up to six amps peak, while the KLa2 is for driving loops up to 12 amps peak. The manufacturer points out that the constant current output of an amplifier driving an induction loop is a different requirement to the constant voltage type amplifier normally used to drive a loudspeaker. Australian Monitor claims that its amplifiers are designed to maintain a constant current and thereby overcome the often substantial phase shift associated with rising impedance in the loop as audio frequency rises.

Australian Monitor

Fidek Audio System
Apollo Home Theatre System is the result of Fidek's remarkable game for the modern lifestyle surround sound system. It required the development of new advanced technologies to take the seemingly impossible and make it reality. But final judgement of Fidek's success rests with you, on what you see and what you hear.

Fidek

Acoustic Sound Systems 113
Australian Monitor 114
Introducing PLX.

High Impact Power.

Introducing a new line of amplifiers that defines high impact. Up to 3,000 watts in a 2 rack-unit chassis.

Only 13" deep and 21 lbs. Our exclusive PowerWave™ Technology used in our PowerLight™ Series for chest pounding bass and crystal clear highs. A hum-free noise floor of -108 dB (20Hz-20kHz) and ultra-low distortion of .03% THD. An advanced thermal management system for true 2-ohm performance.

And not to mention QSC's 30 year reputation for reliability. They're called PLX. And at a low impact price, you'll definitely want to find a dealer near you. Call (800) 854-4079.

Model | Watts per channel
--- | ---
PLX 2102 | 500 W @ 4Ω, 250 W @ 8Ω
1202 | 400 W @ 4Ω, 200 W @ 8Ω
1602 | 350 W @ 4Ω, 175 W @ 8Ω
2402 | 1200 W @ 8Ω
3002 | 1500 W @ 8Ω

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Reader Response No. 006
Crown's cheapest Crown's CE series amps are described as its most affordable yet. The CE1000 and CE2000 produce 560W and 975W into 2 Ohms respectively and are said to guarantee 0.5% or less THD at rated power. Both models have fan-assisted cooling, front panel controls, signal present LEDs, a rear panel fault jack that permits remote monitoring of the fault light circuit, and a 3-year warranty.

ATC amp ATC has a stereo amp in the SIA2-150 which combines a simplified preamp with essentially the same power amp as the SPA2-150. Output of well over 150W per channel with a current delivery of over 25A per channel and with operation well into Class A means the amp is robust. Massive heatsinks, a huge power transformer and a tough power supply combine with no spurious outputs greater than 90dB down. There is full microprocessor monitoring of all aspects of the output stage, overdrive, over temperature, offset and RE.

Amate amps and cabs Amate Electroacoustica's DPU Series amps include the DPU-2K4 for a minimum output power of 1200W per channel and the DPU-3K6 which delivers 1800W per channel into 4Ohms and 1000W per side into 8Ohms. The amps weigh 17kg and 19kg respectively and are both 3U rack-mounts.

The manufacturer has included a mains filter and a circuit which protects the units from mains overload. Another feature is their switching double rail voltage power supplies which boast increased reliability and a 30% decrease in temperature.

A processing card for the company's MD systems includes EQ, phase adjustment and thermal power control.

Speaker systems from Amate include the latest generation of the PS and SW systems including the PS10, PS12, PS15, PSM15 and PSW18 - the last two being subwoofers.

Apart from new internal passive filters and optimised tuning, PS systems have trapezoidal edge shaped cabinets for floor monitor or flown applications. New horns integrated to the same enclosures claim a better frequency response on high band and a clearer response on the mid band.

On the Speaker Systems' range Amate has launched a full range system named MD-183 using a 1-inch driver in passive configuration with a 12-inch speaker for medium high frequencies, and an 18-inch subwoofer.
Crystal

There are now chips available which support digital audio transmission and reception at 96kHz. Targeted at professional and the emergent DVD markets, the chips are believed to be a first. They also support SPDIF and AES-EBU standards and are pin-compatible with the existing 48kHz Crystal chips, enabling OEM upgrades without hardware redesign.

Verity Systems

Designed to degauss metal tapes including DATs, DVC-PRO and Umatic. V880 has a conveyer belt which passes the tapes over two degaussing coils for complete erasure. Metal tapes are more difficult to erase due to their greater density, or coercivity. Verity claims its system completely erases all information on the tapes, including control data. An optional belt cover is available.

New EL34

The EL34WXT valve has what is described as a unique grid block construction that allows it to operate at higher trans-conduc-
tance and power ratings than other EL34s and claims 6% higher output at the same nonlinear distortion level.

Furman expands range

New additions from Furman include the HP6 headphone personal 6-channel headphone mixer which clamps to a mic stand and allows musicians to customise their own mix; the HD60 headphone distribution system for driving a chain of HP6s; and the UP28 Iso-Patch dual transformer isolator.

The PHL15 power and light centre combines a power conditioner with lights while the MiniPort20 power relay is an upgrade to the original MiniPort and adds support for momentary-action switches, multi unit linking and knockout holes for permanent installation.

Furman's first product the PQ3 parametric Eq and instrument preamp has been re-released with its familiar green panel and red knobs but with the addition of a front panel input socket.

Deltron

New from the manufacturer are patchbay systems, a stagebox and speaker connectors. The Patchbay Recall System was developed by Air Studios in conjunction with Deltron. Running under Windows, the system stores patch connections, which can then be recalled as a sequence of illuminated LEDs at the patchbay, taking the user back through the original connection routine. Deltron has also launched a low cost MI patch system using IDC insulated contacts and has taken on the Media Products line of video, audio, data and mains distribution systems. The lightweight Mini Stagebox is a pre-punched mild steel unit designed to accommodate as many as 40 universal XLR connectors. It can be supplied as a box, or as a prewired, finished in matt black, the box is said to be rugged and suitable for wall mounting or portable use.

Deltron has also developed a hi-fi plug in conjunction with A&R Cambridge. An EN60065 compliant replacement for normal 4mm speaker plugs, the Camcon system prevents amplifier short circuit during equipment demonstration. Unlike the conventional alternative, it cannot be inserted into European mains sockets.

VCA chips

That Corporation has introduced the 2002 which it claims has the lowest noise, lowest distortion and widest dynamic range of any 202-series VCA ever made. Of particular interest to owners of SSL, Neve, Sony, MCI and Harrison desks the chips are available as pin-for-pin upgrades for all modular 202 VCAS.

Alphaton splitter

The MPV-43 is a new 4-way audio splitter from German Alphaton. Housed in a 1U-high rack and offering three outputs per channel, the MPV-43 will be available early this year at a cost of $129. The 12 channel MPV-123, meanwhile, has received 'MKII' status and a price cut (DM3,390 exc. VAT), and comes with options on output configurations.

Scheck Audio

Merlin Equipment

The Voltec DC-DC step down converter takes the 24V DC supply of OB trucks and other sources, producing clean 12V DC for lighting and sound equipment. The unit is said to deliver 18 Amps continuously, with the ability to deliver 20 Amps for five minutes.

Klotz cable

Polywire is a new multipair studio cable available in 4-pair to 40-pair formats and promising 'outstanding flexibility'. The cable offers individually coloured and numbered pair jackets, and has additional outer foil shielding. Lengths available range from 1m up to 1,500m.

Devin

A new soft-push switch is said to feature a smooth action, regardless of the angle from which it is pushed. Recommended for broadcast and general electronics, the switch is said not to suffer from stickiness.
How Many Codecs Do You Need To Make All Your ISDN Calls?

The NEW Dialog4 VP-Pro communicates in stereo with both the Prima and the Zephyr. So you no longer have to have one of everything to be compatible. And with Layer 2, Layer 3, G.722, G.711, built-in TA’s, X.21, One-Touch dialing, analogue & digital audio I/O, remote control, no fan... All as standard - It has everything at a price which makes it the only codec to buy!

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Reader Response No. 009

New Isopatch from Signex

Signex has replaced its Isopatch with a fully redesigned model. Retaining many of the features of the original model, the 1U-high rackmount now has 48 sockets which are of a fully-enclosed design that helps keep out contaminants. All sockets are mounted on two horizontal PCBs which eliminate internal wiring and add rigidity. Supplied with all sockets isolated, half or full normalising can be achieved by soldering across pads on the top PCB. The use of flexible jumper cables to carry normalising signals between top and bottom sockets allows full access for servicing.

The new Isopatch is available with jack, phono or direct solder terminations at the rear.

Accessory

Rolls continues to expand its range of small fix-it accessories. Latest in the line that already includes a direct inject box, high-low impedance matcher, personal monitor system, headphone tap, phantom power adapter, cable tester, headphone mixer, 4:1 mixer, 2:1 mixer, tiny 2-way crossover, mini mic preamp and test oscillator is a mic splitter and a phono preamp. The splitter is transformer coupled with a ground lift while the phono preamp offers RIAA EQ on phono inputs and outputs plus a stereo jack output.

Patchbay

Switchcraft’s TTP96 audio patch panel is available as a patch panel, patch kit, with EDAC connectors and new front access version. Offered in full normal, half normal and open circuit configurations, fanned solder terminals make soldering easier while common bus ground connections are aided by offset ground terminals.

Rean

A new line of LF (Long Frame) 1/4 inch jack fields accommodate 48 or 52 jacks. They are available in a choice of four colours and employ a colour coding scheme for ease of identification. The manufacturer has also introduced a line of BA patch cords. Available in a number of spindle fits, Reans three colour moulded knobs are available in hard or soft plastic and allow for a wide range of colour combinations without custom ordering.

Nvision

The New 4000 series of modular processing equipment developed for the DTV environment is based on horizontally mounted modules. Twelve of these occupy a 2U space but each module can contain dual processes. For instance, there is a 24-bit AES-EBU A-D module with two discrete stereo channels. Other modules include an AES fan-out distribution amplifier, jitter removing distribution amplifier and a dual D-A converter. A variety of racks is also available.
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<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

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WHAT'S NEW IN PRO AUDIO
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RESPONSE PAYEE
GRANDE-BRETAGNE

WHAT'S NEW IN PRO AUDIO
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ROYAL SOVEREIGN HOUSE
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Medianix

Described as the first single-chip Dolby Pro Logic decoder that includes Spatializer N-2-2 virtual surround technology in on-chip memory, the MED25009 digital 3D audio processor is available from Medianix Semiconductor Inc. N-2-2 is a Dolby certified post-processing algorithm which is said to accurately simulate the three dimensional Pro Logic soundfield with only two speakers. The IC is intended to bring Dolby Pro Logic to a broader market by delivering the benefits of surround sound to televisions and computers without requiring five or six separate speakers.

Link connectors

PCB mounting Link connectors

L Link connectors are now available in PCI mounting versions. The connectors, which are made in pin configurations supporting 4-48 channels, are also available with a female line version which features a rubber locking ring. Solder and crimping types are offered in addition to the PCB units.

Also available from Link is the Eurocable multipair LKSSA series with aluminium foil shield. Each pair has two conductors and a 24AWG drain wire, all sheathed in individual, numbered PVC jackets.

SCR's fancy caps for audio

French company SCR has developed a range of capacitors for audio filtering comprising aluminium metalised polypropylene capacitors, coated or encapsulated in plastic or aluminium cases.

Versadyne/Telemetrics

The manufacturer has released two amplifier and bias generator units specifically for owners of older cassette duplication systems who want to upgrade to a digital bin. The AB-100 is designed for passive slave systems of up to 12 units including the Versadyne 1000 series, Electro Sound 4000/6000 series and most Ampex units in service. AB-150 is similar but has extra features specifically for the Versadyne 1500 series of slaves. Also available are three digital bins.

Digital adaptors

Neutrik’s NADITDBNC-F and M AES-EBU digital audio adaptors with digital audio impedance transformers allow for longer cable runs via unbalanced coaxial lines rather than twisted pairs. The adaptors provide impedance matching between 100 Ohms and 74 Ohms, transition of balanced and unbalanced circuits, electrical isolation, attenuation for use of analogue video distribution equipment and the reduction of hum and noise.

For further information use our enquiry service
MTR
The DCB-DPR power supply has eight 9V DC outlets. Fully regulated, the system is designed for use with guitar pedals, radio mic transmitters and outboard units which use external power. The polarity for each output is indicated by coloured LEDs. The unit has a total capacity of 4.1A.

ITC Cannon
The TMN series of bayonet-lock water-proof connectors are designed to withstand hostile environments involving water, oil or dust and also provide EMC screening. Available in four different shell sizes with contact configurations from 4 to 19 pin, the connectors are compatible with existing Trident types and are rated for 13A signals.

Electrospeed 146
Sovtek
Modelled on the vintage RCA 6L6GC blackplate valve, the new 6L6WKT vacuum tube is said to have a larger plate and improved grid structure for increased power, as well as mica spacers to eliminate tube rattle and microphony. A 20% higher output than the Sovtek 5881WKT is claimed, with superior performance to 6L8 or KT66 units.

Sovtek 147
New EDACs
EDAC's 521 series of connectors are available with 28 hermaphroditic Edacon contacts along with six 75 Ohms or 500 Ohm contacts or six power contacts each capable of 40 Amps.

The design permits the mixing of different types of connector requirements which could include eight audio channels, eight component video channels, or 75 Ohm coax contacts. It would also allow for two pairs of Edacon contacts to be used for sync, control signal or parallel filtered power up to 16 Amps.

EDAC 120
John Hornby Skewes
New from JHS is a number of pre-made cable products with terminations including Speakon connectors, XLR, jack and phono. A range of 3mm multicores is available in 12, 20 or 24 channels. The premade stage box is fitted with XLR inputs and returns, while the console end has an XLR fan.

JHS 148
Sound bit
PCM now offers with all models of Columbus Lodestar hoist, a package which includes automatic phase alignment of hoists, weather-proofing and a free first service, plus load test.

Sound bit 149
Titan and AluLite from CP Cases
CP Cases has introduced Titan and AluLite ranges. The former represents an affordable and lightweight range of cases and containers that are moulded from polyethylene with 15% thicker corners for protection. They can be interlocked and fork lifted and have moulded tongue and groove with rubber gaskets to ensure watertight and vapour-proof sealing.

APC
MultiMount MM-022 is a new mounting system designed to allow a single installer to position speakers weighing up to 60lbs on walls or ceilings. Intended to cut installation time compared to ball and socket mounts, the new system is based on a steel support arm, which also acts as a convenient carrying handle when carrying and positioning the enclosure. Once this has been attached to the mounting plate, the weight is taken off the installer, who is then free to complete the wiring. The manufacturer states that the assembly does not suffer from drift and has a plate which fits standard hole patterns. APC also offers the APC U-Bracket line, a series of more than 20 off-the-shelf heavy gauge steel mounts for wall, ceiling, balcony, truss and tripod locations. Models are available to fit popular enclosures from Community, EAW, EV, JBL, Klipsch, Peavey, TOA and others.

APC 151
Analog Devices’ fastest SHARC
Analog Devices’ newest SHARC 32-bit DSP, the ADSP-21065L, is priced at $10 per unit and is claimed to be twice as fast as any 32-bit DSP available and more than three times faster than any DSP in its price range.

The ADSP-21065L processes 180 million floating-point operations per second and 180 million fixed-point operations per second, and features I/O throughput up to 240 megabits per second. The chip supports eight data channels for consumer audio/video applications.

Analog Devices is developing a static superscalar SHARC DSP capable of 5 billion operations per second on a single chip for high-performance signal processing applications.

Analog Devices 152
Cable reels
Hannay offers a range of cable reels for recording studios, film, TV and radio and live applications. AV, AVX and AVC series reels are lightweight and have carrying handles. All models have a non-reflective matt black finish and are stackable. Removable side panels offer customisation of XLR and BNC connector patterns.

AVX models have trays for storing stage box units and some have adjustable friction brakes to prevent cable overrun.

Metool Products 153
Valentino library
Valentino Production Music Library has released 12 individual and different Production Libraries each based on subject matter and style and called the Evergreen Collection. Distinct from the 90 CD Valentino production music library, the new libraries are genre-CD sets with styles and subject headings. Subjects include drama, comedy, cartoon, historic, dance, foreign, Americana, documentary, electronic, instrumental solo, industrial, and mystery.

Both libraries are now downloadable via bit stream technology over the internet from the company's web site.

Valentino 154
Co-connector
A joint development by Deltron Components, Linn Products and Mission Centralforce, the TS connector/ System is designed to meet the EN60065 European safety standard for connecting hi-fi loudspeakers to amplifiers. The plug and socket are insulated against accidental shock and the socket is available in PCB mount versions. Gold plated contacts are used. The old 4mm plugs are now banned.

Deltron 155
Rendar
The MiniBlock power distribution adaptor is designed to provide quick and simple organisation of connections. The manufacturer states that it is ideal for the broadcast industry because it enables the working environment to remain uncluttered. Adaptors can be free-standing or mounted and each one accommodates four IEC connectors, to a maximum of 10A.

Rendar 156
Radial Engineering
Roadstar TX is a stagebox system which supports several connector types and can be upgraded in line with user's needs. The low-profile box is fluted at one end in order to accommodate a choice of multi-pin connectors. A choice of front panel will accommodate as many as 50 plugs and sockets. Radial Torsion or Mogami cable can be specified.

Radial 157
FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE
Cadac adds to J-Type

Cadac has introduced two programmable modules for its J-Type live production console designed to offer enhanced automation.

Following the introduction of a Programmable Dual Input Channel module for the J-Type last year, the latest additions are a Programmable/Recallable Matrix Module and a Programmable/Recallable Stereo Input Module. Users can programme and recall switch and routing settings to match the facilities of Cadac’s flagship Concert Board.

Designed for use alongside existing J-Type modules, the new modules use nulling LEDs for manual reset and all pot settings, together with their associated EQ and selected switch settings, can be stored and recalled cue by cue. In addition, the new modules incorporate Cadac’s 4-band EQ and filters, as introduced for the F-Type.

Mixed Rolls

Rolls Corporation has a portable 4-channel stereo mic mixer called the MX442 field mixer. Four balanced XLR inputs have phantom power, trim controls, 20dB pad and low-cut switch. Each input has trim and volume controls and a pan. Large level meters may be switched to monitor the left and right channel outputs mono and stereo, monitor signal or battery condition.

The field mixer has two oscillators and an internally switchable limiter with adjustable threshold. Powered by two 9V alkaline batteries the mixer is housed in a tough but lightweight aluminium chassis.

Yamaha live desks

Yamaha’s GA32/12 and GA24/12 sound reinforcement consoles sport 12-buses for up to ten monitor mixes while a Group/Aux Diversity feature permits four buses to be configured as auxes or groups depending on the application.

Both models have four stereo returns, stereo tape input and record output and a talkback circuit. Two matrix outputs can create independent mixes consisting of mix buses 1 through 4 and the stereo mix. Addressing small PA installations the EMX2000 powered console combines a mixer with digital reverb and echo, a 7-band graphic and 2-channels of 200W amplification.

There are 8 mono inputs with mic/line switching, phantom, channel insert, 3-band EQ, two monitor sends and an effects send. Outputs take in stereo 1 and 2, mono, effect, and monitor 1 and 2 and you get 16 reverb and effects programs to choose from and the graphic equaliser sits across the main stereo outputs.

Libra Live enhancements

Improvements to the AMS Neve Libra Live digital desk include an enhanced IFB matrix which makes an output available for every fader with talkback and AFI facilities plus a split console mode which allows global changes to be applied independently to the left and right sides of the console.

The desk’s snapshot automation now incorporates a ‘scope’ tool for giving the user control over which console functions are reset while on-air logic has been extended to safeguard the desk against any action that will take the desk off-air. Hardware options now include standalone 10U units and fast reboot from Flash RAM.

The 55 Series analogue board now includes VCA faders that permit the creation of eight VCA subgroups via a compact master controller section, an input preamplifier system and new bargraph meters with programmable VU or PPM ballistics, variable reference level and a range of scale types.

Line mixer upgrade

Speck Electronics has upgraded its Xtrimix 40:8:2 4U rackmount line mixer. New features include true stereo effects sends and eight stereo effects returns that are fully assignable to the 8 buses, lower noise electronically balanced inputs and a talkback section with an internal mic and level control. All inputs and outputs sections have undergone significant circuit improvements, a new grounding architecture and lower noise.

Alesis

The Studio 24 mixer is aimed at single ADAT users. An in-line design, it combines eight mono input channels with four stereo input channels and two stereo submix groups. Equalisation is three band with a sweep mid. There are two pre and two post fader aux mixes.

CS3 facelift

EVI has announced revisions to the DDA CS3 mixer to bring it into line with the CS8 and the wide range of desks. The revisions consist of cosmetic and component changes such as a new colour scheme and higher profile pots as used on the CS8.

Soundcraft adds

Soundcraft has announced a 48-channel version of its K2 live sound console and a 56-channel version of its Series 5 FOH desk. Both moves are said to be a result of requests from the live sound industry.
CONSOLES

Oxford adds surround
The functionality of Sony's Oxford console has been expanded with Version 1.2 system software which adds multifORMAT surround sound mixing. The desk is also available in a compact 24-channel model with a master control section but still offering the same 120 input channel capability.

Sony

Studiomaster Trilogy
Targeting budget multitrack and live applications, Studiomaster's Trilogy 326 is a 24-channel, 4-bus desk offering 20 mono mic-line and four mono-mic stereo channels. Channel features include 3-band EQ, 6 aux sends, peak and signal present LEDs and the PSU is external.

Studiomaster

Roland
Designed for DJ use, the DJ-V2000 is a four channel mixer with three band EQ on each channel. An automatic BPM counter, MIDI capabilities and DSP effects are included. In addition to the line inputs, there are two microphone inputs and an effects loop. There is also a sampler output, as well as the master output. A three-band equalizer can be used to cut specific frequency ranges from the mix, while a grab switch triggers isolator EQ settings.

Roland

A&H desk with valves
Allen & Heath is to launch the 8-bus GS3000, an in-line analogue desk aimed at commercial and project recording studios, with twin-fader, dual path inputs and two patchable valve preamps.

Allen & Heath

Studionmaster 950S VSP surround
The surround capability of Studer's 950S offers onboard Virtual Surround Panning (VSP). The perception of the distance in a room is largely determined by the time and spatial distribution and the location mechanisms for left/right and front/back are different. To imitate this, in addition to conventional means, delay and filtering is used and the coefficients of these filters vary depending on the selected pan pot angle.

Studer

Spirit Folio FX8
An eight channel mixer in the mould of the Folio FX16, the new Folio FX8 has the same built-in Lexicon effects section. This offers 16 programs including chorus and reverb, chorus and delay and reverb and delay. With four stereo inputs and a tape return to mix facility, the mixer provides 16 inputs in total. It also has eight direct outputs. The Ultramic preamps handle mic or line input. EQ is three band, sweep-mid and there are two aux sends, including the dedicated Lexicon send.

Spirit

STONE-D 001
digital mixing console
The desk that changes the industry without changing the feel

Features
- conventional user interface
- modular just like analog consoles
- superb sonic performance, 24-bit AD/DA 32-bit DSP
- infinite internal digital headroom
- revolutionary Dynamic Range Control system prevents digital peak or overload
- easy-installation, standard analog and AES/EBU digital inputs with sample rate converters
- future upgradeability by means of internal modular design
- snapshot, on air and dynamic automation
- optional serial and parallel interfaces

Applications
- TV & Radio on air
- classical music and drama recording
- live theater console
- video post production
- audio editing
- CD mastering
- data transmission

Helstraat 25 - 3500 Hasselt (Belgium) - tel +3211281458 - fax +3211281459

Reader Response No. 012
Focused on Film ...
Perfect for Post

Avant is the only digital console with a control surface designed specifically for multi-channel film mixing and video post production. SSL’s Real Time Resource Processing means that all the controls on every channel are always available, whether the console has 24 channels with a single operator or 96 channels and three film mixing positions.

Avant combines the look and feel of a traditional analogue console with all the digital benefits of dynamic automation plus global or selective snapshot instant reset. With 32 main mix buses, 24 pre-dub buses and a 64 x 8 digital monitor matrix, Avant becomes the logical choice for multi-channel surround sound mixing.

"It’s the overall flexibility and expansion capabilities of Avant that convinced us."

Alan Snelling, Anvil Post Production, UK.

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http://www.solid-state-logic.com
Yamaha 01V streamlines mixing desk

The 01V is not a development of the original 01 Programmable Mixer so much as a further stripping off of the 02R. It looks like a 01 but internally it is perhaps closest to an 03D. The major omission is that of on-board automation with this reduced to snapshots with supplementary control afforded by MIDI automation.

The desk surface is further streamlined with even less channel hard control and more screen, cursor, dial dependance. It has 24 inputs including 8 digital inputs, 15 60mm motor faders, and 14 outputs, four configurable analogue outputs plus a coaxial digital I-O as standard and an optional I-O board for connecting digitally to TDM.

Scoring and multiformat options for Capricorn

A MS Neve's Capricorn has new multiformat monitoring and music scoring options. These include a dedicated 8-way scoring panel which provides full format flexibility plus PEC/Direct switching.

Hardware additions to the console provide rapid busing and monitor configuration for work in all audio formats and a pair of assignable joysticks are also available.

Capricorn software Version 2.8 provides optional automated 8-way panning, which can be fully controlled locally via the central bus although digital interface cards are optional.

Panasonic unveils Ramsa DA7

The LA NAMM gathering saw the first public showing of the Ramsa DA7 following a clandestine appearance at the New York AES. Features include moving faders, touch-sensitive pots in the super-stripe area, 24-bit A-D and D-A, surround sound capability, built-in snapshot and optional dynamic automation via external computer.

The board comes standard with 32 inputs, six aux returns, and is 16 stereo are based on ADAT and AES-EBU. Inputs have balanced XLRs and phantom power and pads on the first 12 channels and balanced jacks on inputs 1 to 16. You can strap two desks together via digital stereo 1-0s and enjoy, three fader and mute groups, 99 snapshots, stereo pairing, 4-band EQ from the 02Rit with 40 preset and 40 user presets, and two multi-effits built in and 42 preset and 57 user patches. Dynamics are again from the 02R and you get 40 preset and 40 user programs all governed by a 320 x 80 dot display.

Audio Development's PICO mixer

UK broadcast specialist Audio Development has introduced its new PICO mixer, the AD245. This keeps the facilities and useability found on its predecessor, the AD145, but features the low noise microphone amplifier originally designed for the AD140 series of mixers.

A hybrid of this component has been produced for the new PICO which offers power for 40V and 12V Toned microphones. While this new feature has been added, the main selling point of the original mixer, its simple but effective EQ section, has been retained.

Other features include protection against radio frequency interference on the inputs, a balanced transformer, a high-pass filter to guard the transformer against low frequency saturation, limiters on the main output, switchable PPM or VU meters and a choice of frame sizes (six, eight or ten inputs).

Amek launches broadcast console

Amek has introduced a new product for the broadcast market. The IB100 is aimed at on air broadcast for television and radio, and features clean feeds, aux sends and fader starts as standard, with five modules available for mono and stereo inputs.

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The ultimate broadcast network: DSN

Distributed Studio Network DSN
- data transfer rate 25 Gbit/s
- parallel routing of up to 4000 linear audio channels
- Interfaces:
  - ATM (all standards available),
  - audio, data, video, IT, stageboxes

mc' series mixing console technology
- up to 192 channels with all sound designing modules
- up to 144 summing buses
- operating surfaces: mc 50, mc 80, mc 82
- at full scale design with DSP capacity routing of additional 1500 linear audio channels possible
- assignment of DSP capacity to diverse consoles
- stageboxes: AES3, ANALOG, TDIF

mc' mixing console
- flexible operational surface, control and signal processing
- integrated DSP
- stageboxes: AES3, ANALOG, TDIF

diamond on-air console (with integrated DSP)
- integration in radio automation systems
- flexible operational surface, control and signal processing
- integrated DSP
- stageboxes: AES3, ANALOG, TDIF

diamond on-air console
- data transfer rate 25 Gbit/s
- parallel routing of up to 4000 linear audio channels
- Interfaces:
  - ATM (all standards available),
  - audio, data, video, IT, stageboxes
- up to 192 channels with all sound designing modules
- up to 144 summing buses
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- assignment of DSP capacity to diverse consoles
- stageboxes: AES3, ANALOG, TDIF

Peripherals
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Reader Response No. 014
Graham-Patten's DTV console

Graham-Patten used NAB to air plans for a DTV-capable digital audio mixer. Hardware platform for the scaleable processing is a 333MHz Pentium II using CompactPCI architecture to provide dual plug-in power supplies and hot-swappable modules. The DSP core is modular and can be configured with up to 144 SHARC processors with a full blown desk able to cope with 512 channels.

Harrison Surround

Harrison has demonstrated the SMS Surround Monitoring System for multi-channel film, video and DVD mixing. This computer-automated system may be retrofitted to any mixing console with at least 8 bus outputs. Its operation is controlled via an interactive Touchscreen interface, and permits mixing in LC5S, 5.1 or 7.1 surround formats.

Innova Son's cheaper digital desk

French manufacturer Innova Son has unveiled a cheaper and non-modular version of its Sensory digital console. Called the Sentry and targeted at live production, the fixed configuration board costs 35% less than the original and still current product meaning that a 48-channel, 20 aux Sentry will cost around £30,000.

Soundcraft

Soundcraft has revealed the SM20 monitor console which is available in 40, 48 and 56 input sizes with 20 outputs globally switchable to mono or stereo. Features include built-in mic splitting, sweepable high-pass filters and MIDI control of BSS VariCure equalizers.

Reader Response No. 015
GS3000

OK... or Outstanding?

8 buss routing architecture
24 and 32 channel frames
52 and 68 inputs to the mix
2 SVT (symmetrical valve technology) valve preamps
Wide ranging mic preamp
In-line twin fader input format
4 band EQ with fully parametric mids
2 dual stereo inputs with automation as standard
6 aux sends with 2 automated master mutes
MIDI mute automation
4 mute groups
MIDI machine control
Tape send and return on every channel
Group/direct switching
Oscillator for signal setup
Talkback facility
2 studio feeds
Solo in place and PFL on both fader paths
Channel status indicator LED
Optional 21 segment input bargraph meterbridge
Interface for three 2-track recorders

GS3000's 2 valve preamps can be patched to individual channel inserts, groups or LR. The valve preamps incorporate Symmetrical Valve Technology, allowing them to be used in balanced mode for regular inputs or in single-ended "guitar" mode, which drives the valve to give the type of pleasing harmonic distortion much sought after by guitarists. Other valve preamp features include valve drive control, pre-valve swept frequency EQ, hi-cut filter and output level trim.

Most modern recordings sound OK - but few sound really outstanding. The new GS3000 gives you truly great sounding mixes, with all the analogue warmth, sparkle and power that set the best apart from the rest. The new GS3000 - sounds glorious.
Audio Toys

ATI offers the Paragon Monitor 64-input automated mixing console. It is capable of providing 20 stereo monitor mixes and is suggested for in-rear as well as wedge monitoring. Inputs are fitted mix ATI high voltage preamps, 4-band parametric EQ, ATI compressor and parametric noise gate. Each channel has a variable direct out which can be stereo or dual mono. The standard frame has 48 input spaces which can hold either mono or stereo inputs and includes stereo line returns with EQ as standard. Fader and mute automation is by Uptown Automation.

Gemini Sound

There are two new DJ mixers from Gemini. The FS846 is a four channel stereo mixer with balanced outputs. There are 4 input and 2 mic inputs, plus two phone inputs and 1 phantom line convertible input. Bass, mid and high on each channel is equipped with -26dB cuts for removing complete sections of the mix. CDX-1000 is similar but high ended and can be controlled by a PC.

High quality construction and design primarily for use with the Gemini CDJ-1200 top-loading CD player. A heavy duty road case houses two CDJ-1200 CD players and a CDM-1000 mixer.

SSL MT for music

SSL has launched the Axion-2 MT digital mixing console for music production presented as a familiar in-line with monitor and channel faders. The MT can run to 96 in-line channels (192 automated mix inputs) plus 12 stereo effects returns to the centre section. It has 48 multitrack, 12 aux, and 12 main mix buses and each strip has access to 4-band fully parametric EQ with high and low filters and a separate compressor-limiter and expander-gate section. Automation is fully dynamic and snapshot with 5.1 capability.

Logitek's radio digital mix

Logitek now has a 5-fader version of the RDC10 digital radio mixer called the RDC5 which runs with the company's Audio Engine processor. RDC5 prices for a 16-channel configuration start at $8000 US and the system can be scaled up to 64 inputs. Target markets are newsrooms, newsshows, dubbing studios and automated stations.

Amptec has launched a digital radio mixing console called the Flinstone 2000 based on the earlier Stone D001 console. Using the same traditional user interface, it is configurable by means of different 100 modules, features sample rate converters on every digital input, and under the bonnet uses 24 bit A/D-D/A converters, and 32-bit floating point DSP. The Flinstone aims to be the perfect digital substitute for an analogue broadcast console, and without some of the more high-end features of the Stone is priced attractively.

Maintaining the geological theme, the Boulder OB1 is an analogue production console designed for OB vans and TV or radio production studios. The Boulder features stereo and mono inputs with four band EQ, HP filter, direct and cleanfeed outputs on every input module, 10 aux sends, eight mono sub groups, eight VCA groups and eight mono matrix outputs, two stereo and one mono program output, two monitor and one communication module. Other special broadcast features include: compressor/gate on every 1/O module, fader start, 1/O transformers, and programmable channel on/off output.

The console is prepared for moving fader and snapshot automation, based on the Stone snap shot system, specially adapted for broadcast use.

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JULY 1998 WHAT'S NEW IN PRO AUDIO
We proudly present to you our new series of purely analogue audio processors. Taking account of many of your suggestions in terms of expansion and functionality, the BEHRINGER PRO SERIES features advanced versions of our Standard Audio Devices which have proven their reliability in applications throughout the world.

The tube stage in our discrete ULTRAGAIN PRO microphone preamp, the side-chain filter and the balanced ins and outs of the AUTOCOM PRO, the expanded level meters, the COMPOSER PRO's expander/gate with adjustable threshold and ratio as well as many other details are living proof of both your and our good ideas. These improvements have only been made possible through the use of state-of-the-art SMD technology and the resulting higher packing densities. Moreover, optimized circuit design and extremely short signal paths allow for improved S/N ratios and greater reliability. The BEHRINGER PRO SERIES – the first choice for creative and efficient sound design.

Reader Response No. 017
The Digital T Series from Calrec

The Digital T Series console combines the assignable control surface of the established T Series mixing system with an all-digital signal path. Aimed at on-air and production applications, the system is designed to provide the same level of reliability as the existing T Series. In the event of failure, control panels and DSP cards are designed to be hot-pluggable, so that they can be swapped while the rest of the console is still in operation.

In addition, if a board were to fail, the rest of the console will automatically reconfigure to take over the necessary functions within four seconds. When a card is replaced, it is automatically recognised and the parameters are automatically reset.

Calrec claims that because all its controls are interlaced, it is impossible to generate a click by moving a control or actuating a switch. Converters are 24-bit and the internal word length is 40-bit floating point.

According to Calrec, unique algorithms have been developed to mimic the natural sound of the Calrec analogue system. Delivery is planned to start in January 1999.

Calrec 203

DK-Audio

The MkII version of the MSD600C audio meter has a new colour display with brighter image and improved contrast. A VGA output enables the unit to drive external video monitors. The unit is a combined phase meter, audio vector oscilloscope and level meter which can visually represent stereo and multichannel programme.

DK-Audio 199

The Gemini range of compact routers provides a 16x2 switch in a 1U casing. Multiple frames can be linked for larger systems. Formats available include: SDI and stereo analogue audio; analogue video and stereo analogue audio.

Pro-Bel

The Gemini range of compact routers provides a 16x2 switch in a 1U casing. Multiple frames can be linked for larger systems. Formats available include: SDI and stereo analogue audio; analogue video and stereo analogue audio.

Orban's DAB processor

Orban's OptiNoD-DAB 6200 is designed to meet the demands of digital audio radio, 2-channel TV broadcasting and webcasting. Features include Protection Processing for peak control to within 0.1dB, 2-band processing for controlling dynamic range while maintaining the frequency balance, and 5-band processing with equalisation.

Other features include digital I/O at 48, 44.1 and 32kHz, a dedicated external digital sync input for house reference signal, analogue balanced inputs, and analogue monitor output while the 2-channel TV option includes the CBS Loudness Controller to prevent loud commercials.

Version 3.0 software for the OptiNoD-FM B200 includes 21 new format-specific presets including nip, rock, pop, classical, instrumental, jazz, news and sports. It retains the original version's phase rotation on/off, adjustable output balance on the 5-band compressors, adjustable bass clipper threshold and control of the AES-EBU status bit to accommodate digital STLs.

Orban 206

Audio codec

The Philips Comms 204 audio codec encodes according to ITU-R 724 and ITU-T 1411/142. MPEG Layer II and is claimed to be a solution for studio to studio links, FM transmitter feeds, remote pick ups, OB and remote coverage. Bidirectional 1.5 and 2Mbit/s encoding and decoding send audio and data signals on the network and it supports digital and analogue audio formats with bandwidths from 7kHz to 20kHz. It can interface with six types of audio and data format including dual channel analogue, AES-EBU and RS232/422.

The device is also surprisingly compact at only 1U high with all settings, controls and monitoring software controllable via the IIOA graphical interface.

Barco

DK-Audio 207

Global ISDN connectivity

Grand Central Pro file transfer software supports Windows and Mac file formats and sends and receives data on up to four channels for high-speed communication at 256kbit/s.

The software supports all common protocols including TelEdisquette, Twist, 2-Modem, FTP, Leonardo Pro, 4-Sight Rapidio, ID-Trans and A Copy and EuroFile Transfer ETS 300 075.

Hermstedt 202

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WHAT'S NEW IN PRO AUDIO

JULY 1998

Sabine

A manufacturer of low-jitter digital audio products for the professional sector, Aardvarc has announced AES-EBU and SPDIF format adaptors. Two models are available, allowing the transition to be made to either standard, when interfacing DAT machines, digital desks, CD players and other digital products. The convertors have a suggested price of $65 in the US.

Aardvarc 201

DK-Audio

There are several new versions of the Master Stereo Displays available. The four channel unit in the MSD600 series is now joined by two, six and eight channel display systems. The eight channel MSD200 Series display has been followed by a four channel version.

In addition, the manufacturer has reduced the price of the spectrum analyser option and now provides the Surround Sound option as standard. In total, there are now 13 models.

DK-Audio 208

Digi radio desk

Klotz Digital has targeted the radio market with the Paradigm digital console which has sample rate converters on every input channel, all mic inputs with voice processing, an AES reference clock for master synchronisation and an integrated timer, cue speaker and clock. It boasts 24 stereo input sources, 8 input channel faders, and 4 output buses in a compact and attractive package. The announcer's mic feeds the talkback bus, there are 16 GPI and GPOs, an intercom port with automated input sensor, console set ups, LCD channel labelling and a mix-minus system for phone lines.

Klotz Digital 198

Philips Protecta suppression

When used together with dedicated Acoustic Feedback Suppression software, the Philips Protecta audio processing platform can eliminate audio feedback in a variety of venues. Under certain acoustic conditions up to 20dB gain above the level of howling can be attained, claims the company.

The Protecta is a modular digital signal processing system that can be inserted into any sound reinforcement installation between the preamp and the power amp stages. It runs a variety of application-specific software that can enhance sound quality, remove unwanted acoustic effects or to improve the performance of the equipment. It has its own processor, internal non-volatile memory and a menu-driven interface with front panel keys and backlit display. The software is download from a PC to enable Protecta to carry out the desired processing functions.

Hardware options include A-D and D-A converters, a digital interface and RS485 or RS232 interface.

Philips Comms 204

DK-Audio

The Barco RB600 audio codec encodes according to ITU-R 724 and ITU-T 1411/142 and MPEG Layer II and is claimed to be a solution for studio to studio links, FM transmitter feeds, remote pick ups, OB and remote coverage. Bidirectional 1.5 and 2Mbit/s encoding and decoding send audio and data signals on the network and it supports digital and analogue audio formats with bandwidths from 7kHz to 20kHz. It can interface with six types of audio and data format including dual channel analogue, AES-EBU and RS232/422.

The device is also surprisingly compact at only 1U high with all settings, controls and monitoring software controllable via the IIOA graphical interface.

Barco

207
New delivery channels, including DVD, satellite cable, digital TV and the internet, are providing an explosive increase in the number of routes available to deliver material to an ever-more enlightened audience, demanding complex levels of audio format. This in turn has created a requirement for powerful audio tools capable of generating and controlling these significantly more complex formats, effortlessly combining and distributing the increase in the numbers of audio channels.

Manual operation is no longer an option.
Are you ready for this?
People who work with Soundtracs DPC-II Digital Production Consoles are.
They're assured of 160 automated channels with comprehensive digital audio processing, controlled by an intuitive worksurface.
They're also dubbing in all current and known future mix formats in 24 bit and feeling secure with the knowledge that 'future proof' 96kHz resolution and 7.1 operation is built in.
And they're saving time by opening up creative possibilities with each new project they produce.
For a full colour prospectus, or better still book a personal demonstration simply call Soundtracs.

**The new DPC-II**

- 160 Digital Channels
- Worksurfaces from 16 to 96 motorised faders
- 24 bit Conversion
- 96kHz operation
- Stereo, LCRS, 3.1, 7.1
Multichannel monitoring

A digi Design's Director is a programmable microprocessor-controlled system for monitoring in multichannel environments. It can handle one main monitoring system with eight output channels and two stereo auxiliary systems. Functions include mute, dim, mono and solo. Individual cut on speakers, preset monitoring levels, and variable levels. The chassis is built around a motherboard that provides interconnection between various plug in cards with DI255 Tascam pin-out terminations. Plug in modules include an input module, a bus amp/insert send module, insert return/mono module, output module, comms module and matrix input card. The Director consists of the rackmount chassis and a remote control.

Broadcast Electronics

Designed to provide an expensive stereo digital input path for all STI applications. Tel-Tex Lynx is intended for broadcasters who wish to retain their existing analogue exciter. Able to accept left and right analogue audio AES/EBU digital audio on either XLR or Toslink fibre connector the input automatically synchronises and corrects inserting samples rates from 32kHz-48kHz. An analogue composite loop can be used to automatically switch to a backup STI path in the event of failure. A look-ahead digital limiter is included to handle overloads.

SCSI decoder

Vela Research's 4-channel MPEG 2 SCSI decoder is designed for the cable and broadcast industry and features a SCSI 2 fast-wide (optional ultraSCSI) interface with NTSC or PAL video inputs. Each video channel is independently configured with separate genlock inputs to allow for the locking of video outputs to external video sources. Each video channel operates independently to allow playback of different stream types, video resolutions, compression types and start-stop times.

Drawmer

DA-6 is a balanced distribution amplifier designed to provide multi-zone operation and headphone monitoring from a single rack-mounted source. It offers six stereo/12 mono channels on balanced XLR input and outputs. Transformer balancing is an option. Stereo inputs have individual left/right level controls with bargraph metering. Each of the six outputs also has left/right level controls, plus a mono/stereo switch. There are auxiliary link TRS jack sockets for linking multiple units.

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE
Harris

Designed to provide visual monitoring of six Dolby 5.1 channels, the new products from Harris fit into a 2U space in a machine room or edit suite. Three models are available: ATSC-1, ATSC-2 and ATSC-3 accepting six channel analogue, three channel AES-EBU or encoded ATSC data stream inputs.

Standard features include high resolution bargraphs, L/R and L/S phase LEDs and adjustable-duration display of peak PPM value. Any single input or pair of inputs can be routed to speaker channels for verification.

Also new from Harris is an audio test signal generator AJS-1, which generates AES3 or analogue stereo tones. It supports three sample rates and can be synchronised to an external reference.

Nicolai enhances radio control

Nicolai has debuted the NicaX Digital Audio Codec and the Arc Access PC user-interface for the company’s Arc Multi-Modular (SMX) broadcast system for radio broadcasters.

The NicaX is a multifunction codec system configurable by the user and provides X21 and S bus interfaces. The codec is also designed for ISDN-only applications, and is available with apt-X100 or G.722/MPEG Layer II coding.

Arc Access is suited to system configuration and setup tasks as well as on-air operation, and is available in single- and multi-user versions to run on new or existing PC networks.

QSC AudioRAVE

AudioRAVE stands for Routing Audio Via Ethernet. The technology is said to dramatically reduce cabling costs, simplify installation, increase routing flexibility and improve audio performance.

Up to 64 channels of digital audio can be sent over a 100Mbit Ethernet network. Individual RAVE units will handle up to 16 channels of audio input or output.

Cost effective BMS from Sony

Available from April, BMS is a PC based radio production and automation system. With a price of around 12,000 DM for an entry level system, BMS is designed to give broadcasters cost effective manipulation of high quality digital audio via an intuitive graphical interface.

Applications include programme production and live cue playback, as well as unmanned station operation and statistically-based reporting. BMS is the result of co-operation between Sony and Swedish software developer and radio automation specialist BCC, which has systems with broadcasters including NRK and the Swedish Broadcasting Corporation. BMS enables broadcasters to perform tasks including direct control of multiple audio sources, cue editing and playlist assembly, as well as the maintenance and interrogation of music and audio databases. The system is scalable from standalone operation to large networks and will run on any suitable Windows NT platform fitted with a PC sound card. Audio is stored and manipulated in the new E11H WAF format, supporting word lengths of up to 24-bit, plus additional channel header information. The system is also modular; separate software modules manage the media player, playlist, library and editor functions.

TimeMachine synchroniser

C-Lab’s TimeMachine universal clock converter can synchronise digital sources and sequencers to tape machines, and film and video recorders. The box can read, generate and regenerate LTC, VITC and MTC and burn time code into video picture. It works as a standalone unit with operation via a 4-key pad and text display. Two option slots permit ADAT machine control and video sync pulse generator boards to be fitted. The box uses a special algorithm to render MTC acceptable as a sync source.

Hamlet’s Monitor Scope 601

The Monitor Scope 601 can analyse NISC and PAL serial digital 601, AES-EBU and all analogue signals with displays, waveforms, vectors, colour bar graphs and peak level indicators displayed on a built-in colour LCD. The digitised in-picture video outputs may also be transmitted and seen on any monitor. It comes with an RS232 port for downloading analysed data and traces directly to a computer or printer via a modern and incorporates a new proprietary 10-bit design.

Other features include 512 x 512 display resolution; full SDI-EDH analyser; active picture EDH; pixel amplitude; SAV and EAV timings plus embedded filed group study; error time-date stamp; full field time select; vertical- horizontal measurement cursors with precise amplitude and period read-outs; overlay; mix traces with picture-black; 999 function mode memory; and internal colour bar test signals.

C180 2-way crossover

Claimed to be the most cost effective 2-way stereo crossover available, the C180 from Studiomaster is an 8dB/octave design with only rear-mounted output level controls. Factory fitted with a crossover point of 150Hz, the unit is supplied with four other sub-plug in frequencies (80, 100, 200 and 250Hz) on SIMM type cards. Intended for biamped systems, a mono switch sums the two low outputs for adding sub bass feeds to an existing multiway system. The unit has signal present leds, balanced jack and XLR connectors, and separate ground lift switches on inputs and outputs.

Studiomaster

Neutrik’s audio analyser

Neutrik has introduced the RT-2X Audio Analyser which features analogue and ISDN inputs and outputs. The remote-controlled instrument was designed for the simultaneous acquisition of level, distortion, noise, phase and cross-talk plots vs frequency. Three versions of new BNC connectors - non-flammable, low budget, bayonet with easily accessible locking, and push-pull - all feature a new cable clamping system and an absolute constant wave propagation resistance (60 or 75 Ohm) is guaranteed. They are compatible with existing BNCs.

Neutrik

AudioVault upgrade

The AudioVault 64K digital audio system includes Voice Tracker as an extension to AVSchedule that simplifies the scheduling, production and maintenance of recorded voice tracks. AVEdit is a cut and splice editor that greatly simplifies the most common editing tasks around a station. AirBoss is a test management system that integrates jock, music and artist notes and live copy reads into your on-air studio.

Datatest

The Datatest 64K portable data communications test set has a set of error-rate facilities together with a datasync function. It includes a full V.24 breakout and patch area together with optional X.21, RS422 or V.35 interface adaptors.

Datalines

Audio Precision

The ATS-1 audio test system has features designed to simplify benchtop testing, with an easy to comprehend front panel which produces readouts from a single push of a function button. Three parameters are simultaneously displayed, including amplitude and noise level, THD+N, SINAD, IMD and frequency, as well as phase, crosstalk, level ratio, SN, wow and flutter. Accuracy across the audio spectrum is said to be 0.02dB, with the frequency response 20Hz-20kHz 0.05dB.

AP
Motu launches budget 24 track

Mark of the Unicorn has launched a 24-track expandable hard disk recording system for PC or Mac, with a UK suggested price of £1950 plus VAT. Model 2408 offers 24 simultaneous inputs and outputs, with the ability to expand to 72 channels and include real-time effects. The system’s PCI card connects via Firewire to an external 1U 1-O module containing six Alesis ADAT fibre optic connectors and three Tascam TDF connectors, either of which will provide 24 tracks of digital interfacing. There is also a bank of eight unbalanced phone outputs, as well as one stereo SPDIF input, two stereo SPDIF outputs, and two balanced outputs on TRS jacks. As many as 2408 I-O units can be connected to a single PCI card, giving the full 72 tracks. Macintosh versions will be shipping with audio workstation software supporting 16-bit and 24-bit recording. The Windows version will have a driver compatible with audio applications that support multichannel Wave drivers.

The Mac software will apparently include multichannel waveform editing, automated virtual mixing, graphical editing, real-time effects plug-ins and support for third party plug-ins in MOTU Audio System and Adobe Premiere formats.

Although the PCI card handles I-O processing and also acts as a digital router audio processing is handled by the host computer. MOTU says that a 200MHz+ Power Mac will provide 16-24 tracks of audio, with the very fastest machines allowing 32 tracks or more.

Paris update

Ensoniq says that it is now shipping its Paris DAW for Wintel PCs or PowerMacs. Core of the system is an Ensoniq EDS1000 PCI card, a cross-platform CD-ROM with MacOS and Windows 95 compatible software and a 16-channel Control Surface. It is available in three bundled versions with different I-O options determining the particular bundle.

Publison

Three significant improvements have been made to the Totalstation DAW. The pitch change/varispeed function can now be adjusted in real time during playback with immediate confirmation of the result. OMF files are now supported for project import or export, via network or removable media. The networking capabilities have also been improved, with transfer rates of 1.5 minutes for one hour of audio claimed.

The network is said to operate in the background and to permit instant auditioning of sound clips on remote systems. Duplex capability enables simultaneous, bi-directional sound file transfer between two Totalstations.

Foundry plug-ins

NAMM saw the introduction of Soft Encode, a plug-in for Digidesign’s Avid AC3 encoding. This is a stand-alone, running under WinNT and NT/2000 in both 32- and 64-bit set-ups. XFX 2 is a suite of plug-in processors for Sound Forge 4.0 including a gate, graphic EQ, parametric EQ, graphic dynamics, multiband dynamics.
Introducing the latest in 24 bit recording technology: RADAR II

The World's Best Sounding Hard Disk Recorder... JUST GOT BETTER

Otari's RADAR has replaced analog & digital multitrack recorders in hundreds of commercial and private facilities. RADAR has become the benchmark of sonic excellence and ease of use in HD recording. In keeping with Otari's legacy of innovation, RADAR II offers the highest digital multitrack performance. 45 minutes of 24 bit, 24 track audio are available from a single removable hard drive - with longer recording times possible by adding internal or external SCSI drives. Multiple RADAR IIIs can be linked together and the new dedicated controller provides track arming, solo and optional metering of 48 tracks. RADAR II locks to all standard SMPTE rates, video composite and word clock formats. Sampling rates are variable between 32 and 48 kHz. Varispeed, MIDI I/O, and RS-422 are standard, making interfacing with all existing studio equipment simple.

Contact Otari today for RADAR II information and listen to the future of digital recording.

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Reader Response No. 019
**Tascam dubber**

The MMP16 derivative of the MMR8 dubber offers 16-channel of playback, 20-bit D-A and 24-bit digital output capability and can load and play Pro Tools session files, Waveframe projects and OMF compositions directly. Version 1.25 software for the MMR8 and MMP16 includes OMF export, 9-pin, PC-AT keyboard connection with the MMRC remote and Pro Tools 3.2 and higher session files compatibility.

**Opcode Vinyl**

A new DSP plug-in from California software experts, Opcode, is intended to bring the character of vinyl recordings to your recordings. Termed the property 'grit', Opcode presents it in 78, 45, and 33 1/3 rpm varieties and offers control over record surface and condition in its Fusion: Vinyl program.

**Sonic Acid**

Sonic Foundry has unveiled the Acid digital audio loop sequencer for Windows 95 and NT which specialises in loop arranging and permits real-time pitch and tempo adjustments on multiple loops simultaneously. Loops can be previewed in real time before being opened and the program automatically matches the tempo and pitch of a loop. Tempo changes are made on a bpm slider while multiple time stretching algorithms allow users to choose the setting best suited to the material.

**D8 exchange**

Software revision v1.50 for Akai's D8 dubber allows direct playback of Sound Designer II takes from Mac-formatted Pro Tools disks. The process requires an OMF Composition to be created containing only the edit information from the Pro Tools session and the D8 relates this directly to the audio takes in the Pro Tools native file format allowing the OMF Composition to be played back instantly.

Direct file exchange with other manufacturers is planned and DD1500 users will receive the same capability with their system's next software release.

**Cream Scope**

Creamware has announced the Scope (Scalable Object Processing Environment) modular DSP platform for Mac, PC which combines the technologies of sampling, synthesis, effects and mixing. Based on a multi-DSP PCI board that can use 12 SHARC processors, it includes a large library of components from DSP modules to complete devices with their graphical user interface and presets. Scope will be able to operate several devices at the same time to emulate a complex studio set up.

The system will be open to third party developers and integrates into the TripleDAT family of workstations. Many of the Pentium native DSP effect modules of TripleDAT will be able to be used within Scope and all Creamware's present hardware can be integrated into the system to increase the number of physical I-Os.

**Canadian digit 8**

The Bertsch DPR-8 is an 8-in, 8-out hard-disk recorder with built-in dynamics processing. Its 8 compressors, 8 gates, and 8 duckers use look-ahead RMS envelope detection while two assignable side-chain inputs permit de-essing.

A digital mixer and headphones amp are included and DPR-8s can be synced together to create larger systems. A-D and D-A converters are 18-bit, the standard removable drive is an EIDE 1.5Gb and options include an SMF interface, TIDF interface and 3.1Gb internal drive. The machine has a selection of editing processes and is compatible with all Vestax HDR Series machines.

**Arboretum effects**

New Hyperprism Windows processing software from Arboretum represents a first in PC-based systems and offers 25 processes including pitch shifting, ring modulation, filtering and delay effects as well as a selection of conventional delay, pan and reverber processes and custom effects such as Quasi Stereo and Sonic Decimation. The program is compatible with Microsoft Direct-X and Active Movie applications such as Sound Forge and Cakewalk pro.
There are many companies in the marketplace offering multi-channel audio PCI cards, but for most, this is where it ends. Most companies can at best just 'pal chips on boards', but from Soundscape Digital Technology there is an unbeatable combination of software and hardware... mixtreme.

The mixtreme PCI card has a completely different concept, as not only does it provide 16 channels of 24 bit digital I/O via two industry standard 8 channel TDM (Tascam Digital Interface) ports, but it also has 24 bit custom digital mixing and real-time DSP effects plug-ins from some of the world's leading audio companies. mixtreme performs like you expect, without the annoying in/out delays that make native mixing and effects impossible to use in real time.

You can connect two Soundscape SS8IO-3 8-Channel TDM to Analogue interfaces to mixtreme, for a full 16 channels of 20 bit analogue input and output, or you can connect the TDM directly to a digital console or Tascam DA-88.

For ADAT users, there is the SS8IO-2 TDM to ADAT converter, and you can connect two of these, or combine one ADAT and one Analogue interface. Optional SPDIF completes the range of Digital Connections available.

With standard Multimedia drivers for Windows 95 and Windows NT, plus VST compatible ASIO drivers, mixtreme can be used with most PC based MID/Audio sequencers or PC based recording/editing software.
Sonorus enhancements
The Studiol 16-channel digital interface for PC and Mac DAWs is soon to be made available in a version designed to complement Steinberg’s Cubase VST 3.5. Studio users are currently able to use Cubase VST via the standard Windows WaveAudio drivers. Audio drivers will noticeably improve the overall performance. Drivers will also be released for Windows NT 4.0. Other news includes the Sync Backplate for Studio which provides word clock in and out, ADAT timecode input and MTC input.

Roland 16-track
Roland’s VS-1680 24-bit 16-track system combines recording, mixing, editing and effects processing based on the same technology that produced the VS-880. The device offers 16-track playback, 8-track simultaneous recording, a 24-channel fully-automated digital mixer, 256 virtual tracks, nondestructive editing, optional CD recording capability, and two optional multi-effects boards offering four independent stereo effects processors. Operation is helped by a 320 x 240 dot LCD, 20-bit D-A and A-D converters and a 2.1Gb internal hard drive.

DVD-ROM developer
Available for Mac OS and Windows NT, Sonic Dvd Volutar is an authoring tool that enables multimedia producers to create content for DVD-ROM and digital broadcast use.

Steinberg VST 3.5.5 for PC
Steinberg has released Cubase VST 3.5.5 for Windows which now features channel strip inserts meaning that every channel of the VST mixer is able to run four additional effects and realises 32 x 4 additional effects for the entire system.

Steinscape adds PCI card
A PCI digital audio interface card and two less expensive audio I-O interfaces, the SS8IO-2 and SS8IO-3, will be released by Soundscape.

Steinscape does not intend to provide any editing/recording software for this product — as it is intended for use with PC software, such as Sound Forge, Cakewalk, Emagic Logic Audio, Cubase Audio & VST, SAW, Samplitude, and Cool Edit. Additionally there are packages for the video post industry that could also use the card, including Adobe Premiere, In-Sync Speed Razor, Ultrad Media Studio, Sofimage OS, Montage, and Dvision.

Soundscape PCI card
The card will run 16 tracks of digital audio simultaneously, in and out of the computer, using 2 standard TDFI ports and will be supplied with the company’s V2 Mixer Software from the SSHDR-1 plus DAW.

This will allow the use of high quality third party plug-ins developed for the SSHDR-1 Plus, such as TC Reverb, Wave Mechanics Reverb and the Soundscape Audio Toolbox.

Soundscape does not intend to provide any editing/recording software for this product — as it is intended for use with PC software, such as Sound Forge, Cakewalk, Emagic Logic Audio, Cubase Audio & VST, SAW, Samplitude, and Cool Edit. Additionally there are packages for the video post industry that could also use the card, including Adobe Premiere, In-Sync Speed Razor, Ultrad Media Studio, Sofimage OS, Montage, and Dvision.

Steinberg VST 3.5.5 for PC
Steinberg VST 3.5.5 for Windows which now features channel strip inserts meaning that every channel of the VST mixer is able to run four additional effects and realises 32 x 4 additional effects for the entire system.

Other features include an updated implementation of DirectX plug-ins, support for Recycle Export Files, and the VST Audio Engine can now be disabled while VST is running.

Cubase VST for Windows has also been integrated with the Lexicon Studio System. The Steinberg ASIO system provides complete support for LexiPowerCore technology for 32 tracks of 24-bit audio. Cubase

Otari releases RADAR II with 24-bit I-O
Otari has release RADAR II as an enhanced version of its random access digital multitrack. Features added include 24-bit resolution, built-in backup and storage, a single 9Gb drive, new digital and analogue I-O and a new remote with 48-track recording.

Akai upgrades to 24-bit
Akai has announced the Kit-DB, an upgrade path for its DD8 Digital Dubber which allows 20- and 24-bit recording at sample rates of up to 96kHz. An upgraded DD8 will be able to mix 16-bit, 20-bit and 24-bit media in a single project, and will also be able to play back disks from all earlier DD and DR systems. Significantly the DD1500 will be able to playback and edit 24-bit media, courtesy of a 'split bit' 24-bit recording mode on the DD8.

Akai is enhancing the file compatibility of its DD8 and DD1500 with other digital audio workstations. New software allows the use of a Mac formatted disk as the native hard drive and to record in AIFF or SDI formats. The same software also allows the machines to receive and work with some file types recorded on Mac disks without the use of OME.

Fostex launches budget HD
Just £339.50 ex VAT (UK price), now buy a digital four-track hard disk recorder, albeit without the hard disk.

The FD-4 is not supplied with an internal drive but has a SCI-2 port, allowing the user to hook up a range of drives, including devices they may already own. In addition to editing and MIDI facilities, the unit has a four channel mixer with two XLR mic inputs.

Another new product, COP-2 accepts an optical input and outputs a balanced XLR signal, as well as transmitting SDIF and ADAT Lightpipe signals for distances of 100m and 20m respectively. The manufacturer also offers the COP-1 SDIF optical to coax converter.
It's not another million dollar mixing console. And it's not the impossible dream. ProControl is, quite simply, the most powerful tactile control surface for the world's leading digital audio production environment — Pro Tools.

Anything you can do with your Pro Tools TDM system, you can do from ProControl. Record, mix, edit, and automate everything — including mutes, sends, volume, panning, and all Plug-In parameters — with instant and total recall. Access all the tracks in your session from the ProControl Main unit, or add Fader Expansion Packs (in eight-channel increments) for up to 32 faders. ProControl even has a comprehensive monitoring section, so it's the only mix controller you'll need in your studio.

We could go on and on about ProControl's patented DigiFader touch-sensitive moving faders, the unique Channel Matrix, and other powerful features, but here's the bottom line: a Pro Tools/ProControl system runs circles around consoles and recorders costing 5 or 10 times more. So what are you waiting for? Put the future of mixing in your hands today.

Call Digidesign at 01753 653 322 ext. 496 for a full-color brochure or to schedule a personal demo with an authorised ProControl Dealer.

Reader Response No. 021
**Steinberg launches Nuendo post editor for SGI**

Steinberg's Nuendo is audio postproduction software for the Silicon Graphics computing platform and combines native audio processing with EQ, real-time effects, VST-compatible plug-ins, in architecture and up to 256 tracks of digital audio plus MIDI recording and editing.

Audio can be recorded, processed and played back at 44.1, 48, 88.2 and 96kHz sample rates and 16-, 20- and 24-bit resolution. SGI's Octane and Onyx2 workstations come with eight channels of 24-bit ADAT optical I-O as standard, expandable with additional cards. Audio processing can be run off-line or in real-time using VST plug-in architecture.

Several Nuendo front-ends can be run on various machines hooked into a central server, allowing separate dialogue editing, sound fx and music alignment sessions to run simultaneously. Nuendo supports Studio Central, an open framework for media asset management which allows creating, searching, editing and archiving of media data to be comprehensively implemented.

**Fairlight demonstrates MediaLink file server**

Fairlight has demonstrated its MediaLink PC-based file server supporting multiple audio networks with multiple simultaneous transfers between connected systems. Storage options include single or multiple high speed RAID arrays with data redundancy and MediaLink takes advantage of the PCI architecture of the MFX3Plus for an affordable 100Mbit network on ethernet cabling.

Communicating on TCP/IP protocol, MediaLink will allow edit lists, OMF files and audio in standard file formats to be exchanged between systems in a multiplatorm environment.

Version 2.0 software for FAME allows support for 5.1 surround, dynamics on all mixing buses (including auto-gain and enhanced metering) and dynamics and EQ are now available on all inputs patched directly to tracks. V2.0 allows storage of automated files on the hard drive and combined back up and there is now full cue list automation including VFX, notepad and console preset events. Using locate points as cues permits frame-accurate static punch ins from preview to write mode. New automation modes include auto takeover and out-board automation plus expanded macro capability.

MFX3Plus’ revision 14.3 supports audio in 18, 20 and 24-bits in any combination in a project and a new overwrite recording mode. Fade across clips, solo follows edit and an enhanced wave menu have been added to the editing functions. New features for the DaDa 24-track dubber include the ability to be configured as a 2 x 12, 3 x 8, 4 x 6 or 24 x 1 track dubber. It now also features Multi-Project Load for the simultaneous loading and playback of 24 projects in any combination and in any supported format from six disks.

**Digigram adds stereo PCXnp PCI bus cards**

Digigram has added two stereo record/playback cards to its multichannel PCX800np range. The PCX820np and PCX821np are designed to complement the PCX800np and 801np, which were launched last year.

The PCX820np is an analogue record/playback PC sound card for PCI buses, with four balanced analogue stereo or eight mono outputs and one stereo input that can be configured as a balanced analogue or AES-EBU connection. The PCX821np is a digital record/playback PC sound card with four stereo AES-EBU outputs and one stereo AES-EBU input. All PCX800np series cards use a 32-bit driver.

The PCXnp driver features better multitasking and multiple application management. Multiple audio streams, in linear PCM or MPEG compressed formats, can be mixed into each hardware output. Digigram has also introduced the LCM range of professional PCI sound cards. The first in the series are the LCM440, giving duplex operation with any combination of up to four active mono inputs and outputs, and the LCM220, a full-duplex card that can mix three stereo files to its stereo output. This last product is available in two versions: one with unbalanced 1-Os (LCM220A), the other with balanced 1-Os (LCM220B).

**Merging cards**

Keops is Merging Technologies’ new 16-track PCI-based V2.1 compliant audio card for the Pyramix Virtual Studio. It uses a 32-bit floating point DSP engine. Sphynx is a modular A/D-D-A converter, the 8 ins and outs of which can be configured as 24-bit converters up to 48kHz or 96kHz as an option. It connects optically to Pyramix.

DUA has an on-board MTM interface that allows it to be interfaced to the Kefren and Keops audio cards. It occupies a single ISA Type Bus PC slot and contains all A-D/ D-A electronics and AES-EBU-I0 circuitry while a breakout box provides analogue connections and headphones monitoring. DUA has 4 analogue inputs, 6 analogue outputs, 2 AES-EBU 24-bit inputs and outputs, internal crystal lock, external AES-EBU sync and external wordclock sync.
Cubase always had a life of its own. It was always ready to take a twist and a turn as it became the blueprint for today's sequencing model. Now the new version 4.0 for the Power Macintosh takes one giant leap as it prepares itself for the coming millennium.

Be part of it.
Massenburg partners with Sonic Solutions

Sonic Solutions has announced that George Massenburg Labs has signed on as the first member of Sonic's High Density Signal Processing Partners group. The HDSP is intended as an exclusive partnership between Sonic Solutions and leading developers of audio processing technology to deliver a full range of 24-bit, 88.2/96kHz High-Density Audio and surround sound processing applications for the Sonic Solutions SonicStudio DAW. The new Sonic HDSP Plug-in Processor uses an advanced multiprocessing DSP-based architecture to deliver a fast and flexible hardware platform. With four, parallel-patched 80MHz 24-bit 56301 DSP processors, the plug-in processor can provide up to ultra-precision accuracy for stereo 192kHz audio. GML is currently developing a double-precision mastering equalizer and other 96kHz/24-bit mastering tools for the HDSP Plug-in Processor.

Pro Tools/ADAT bridge

Digidesign’s ADAT Bridge I-O is a redesigned ADAT interface for Pro Tools, which features 16 discrete channels of ADAT optical I-O and allows users to transfer 16 tracks of digital audio into Pro Tools in a single pass. The Bridge can be used as the sole interface or used in addition to Digidesign’s 882/24, 888 or 882-I-O with Pro Tools/24, Pro Tools II/PCI or Pro Tools Project PCI systems. Users with multiple ADATS, or ADAT optical-equipped devices such as Yamaha’s 02R and 930 digital mixers, can combine multiple ADAT Bridges for up to 72 channels of I-O. The ADAT Bridge I-O is compatible with any digital audio sequencer that is Pro Tools 4.1.1 compatible, as well as with third-party ADAT sync devices such as the Alesis BRC and MOTU’s Digital Timepiece. It also includes a 20-bit D-A pair for high-quality monitoring, and 24-bit capable SPDIF and AES-EBU ports.

Merging networks

Merging Technologies has introduced AudioShare networking which uses Fibre Channel Arbitrated Loop technology to link two, three, or more DAWs to the same storage devices as if they were connected locally. This enables multiple users to access the same files simultaneously, doing away with multiple file copies or a server to keep them on. In this way Merging Technologies claims it has eliminated the need for post production, CD mastering and broadcast facilities to invest in expensive and intermediate file servers. Information is sent between the workstations at 100MB per second, connected by either copper for up to 30m between nodes or fibre optic cable for distances of up to 10km.

Pro Tools gets dedicated control surface

Digidesign’s ProControl control surface for Pro Tools is modular with expansion to 32 channels of tactile control of virtually every function in Pro Tools. It employs touch-sensitive moving faders and a dedicated switch group for dynamic and snapshot automation for parameters capable of automation in Pro Tools TDM.

ProControl provides direct access to recording, mixing, editing and routing functions of Pro Tools, and includes 25 eight-character LCD scribble strips.

Well Aard guy

The Aark 20/20 from US developer Aardvark is a 20-bit PCI audio card with eight multitrack analogue I-O and stereo digital I-O on SPDIF. During replay, all 10 outputs can be used.

Included with the system are full level mixing, stereo level meters, monitoring, word clock sync, video sync, and a control panel designed to allow the elimination of sync and sample rate errors.

The Aark 20/20 can be used with a wide range of third party audio applications and comes bundled with Samplitude Basic multitrack recording and effects software. Also available is a bundle with Sound Forge 4.0 from Sonic Foundry.

Price is US $995.

Sonic Solutions 264

Waveframe 408 Plus workstation

Waveframe’s 408 Plus workstation plays back 8 tracks from a single SCSI bus which is identical to Tascam’s MMR824 rubber. Version 6.2 software adds OMFI.01 file compatibility, support for optional multichannel digital I-O and import/export filters for .WAV, .AIFF and SDIF formats. Other features include 64-bit graphics, Sony P2 and ES bus machine control, ISA and PCI expansion slots and integrated Ultra SCSI controller for OMFI and multimedia applications.

The 408 Plus shares the same underlying architecture as its predecessors the 401, DCS and DAW80 with prices starting at $10,995 US for an 8-track, 8 analogue I-O configuration.

Advanced Systems 270

Sav demos 192kHz SADiE

Studio Audio & Video has introduced its latest digital audio workstation. The SADiE 24 96 offers 192kHz editing and mixing, surround sound and can give up to 32 inputs and outputs. It is available now and sells for £5995 including computer.

It has been designed for film and television, CD/DVD mastering, music editing, radio production, telerecipe transfer, speech editing, education and multimedia. As 24-bit, 96kHz and 192kHz operation is standard, the new DAW is said to be DVD ready. Surround sound mixing and editing can be handled by the eight channels of the I-O card, with all internal audio processing working on 32-bit floating point accuracy.

Each system includes a CAT card, which supplies a time code reader/ generator and 4 channels of RS422 interface. Also included is the Breakout Box 800, with 8 channels of XLR digital I-O, XLR digital reference input, RS422 nine-pin I-O, XLR timecode and B channels of unbalanced analogue I-O. There is also the Breakout Box 800P, adding balanced XLR analogue inputs and outputs at all standard operating levels.

SAV 271
This is the RMS 2020 radio microphone system. It's an advanced, 32 channel synthesised diversity system with ground-breaking clear sound and superb reliability. Audio Media called it "quite remarkable".* Test it and you will too.

* Audio Media, January 1998

For information, please call +44 (0)1494 511711 or fax +44 (0)1494 539600, e-mail us at info@AudioLtd.Com or visit us on the web at www.AudioLtd.Com

Reader Response No. 023
Small lavalier

Latest mic from Countryman Associates is the B3 small, round, omni electret which is said to be resistant to moisture and makeup. The mic is available in black, white, light tan, cocoa and grey and boasts a claimed frequency response of 10Hz to 25kHz and an SPL handling of up to 150dB on 48V power. The model is accompanied by the Isotonix headset mic which has a headband hat fits around the back of the head. Available with hypercardioid or cardioid patterns with a frequency response designed to create a warm sound at the side of moño, it features a telescopic adjustable mini-mic boom.

Countryman 272

Rode on-air

The Broadcaster is a low cost, large diaphragm condenser microphone aimed at the on-air voicover market.

The one-inch gold sputtered capsule is internally shock mounted. In addition to the sound quality associated with this type of microphone, the unit apparently sports an integral LED which serves as an on-air indicator. Two of the five pins on the XLR can be connected to a console or announcer-controlled mute button.

HBB 273

Future sound of Microtech Gefell

Microtech Gefell's UM900 is based on the ageless M7 capsule (originally designed by Georg Neumann many years ago) and immortalised in the lines of the U47 and M49 mics), but is combined with more up to date design work.

For instance, unlike most valve mics the UM900 operates off regular 48V phantom powering. Additionally, a variety of polar patterns are available as is a -10dB pad switch.

Microtech Gefell 274

A string of Pearls

Pearl Microphone Laboratory has three new models: the CC22, TL44 and DS60 mics.

The TL44 revamps the older TL4 model but still retains the original polar pattern switching flexibility of the original. The CC22 aims to offer a completely honest flat frequency response and very low noise. Meanwhile the DS60 is a multipattern microphone with four cardioid outputs, 90 degrees apart from each other.

Pearl also has a microphone for fixed installation applications. The PA58 has been developed to replace the old PA54. The difference is a smaller microphone head at a 25cm gooseneck. Moreover, the frequency response is markedly flatter in the frequency band 3kHz-8kHz while the updated PA58 has its electronics powered by 15V to 48V phantom power.

Pearl 275

AKG updates C1000S

AKG has updated the 11-year-old C1000S. The new version still has a Polar Pattern convertor but adds a Presence Boost Adapator. In cardioid mode this provides a 5dB peak between 5 and 9kHz.

Cosmetically the new model has a satin-silver finish and an improved battery compartment.

AKG 276

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Reader Response No. 024
Schoeps filters
Schoeps has introduced a new line of active high pass filters for removing wind, infrasonic and handling noise.

The phantom powered LC60 and LC120 filters (6kHz and 12kHz frequencies respectively) have low output impedances for low long run cable losses and RF pickup and are inserted in any convenient point in the mic cable.

Although designed primarily as an accessory for the CCM series compact mics, the devices are applicable to other manufacturers’ products.

Neumann low price TLM103
Available at a lower price than previous Neumann designs, the TLM103 uses a K87-derived capsule, as found in the U67 and U87 condensers.

The transformerless circuitry is said to be the same as Neumann’s best solid-state designs but with advances in self-noise and SPL performance. The dynamic range is said to be 131dB with the ability to withstand peaks of 138dB without distortion. Included with the TLM103 are a wooden case and a swivel stand mount.

Also available are an elastic suspension and a wind shield. Echoing the styling of classic Neumann microphones, the new unit comes in either satin nickel or matte black and has a UK price tag of £595 ex VAT.

Shure network
Shure’s UA888 networking interface system can be used remotely to control and monitor 32 Shure UHF receivers and consists of a rackmount interface module, Windows software and connecting cables. Monitoring features keep tabs on RF levels, diversity signal strength, audio levels and available battery power at the transmitters. Monitoring and control capabilities are offered for group-channel selection, frequency, user name, squelch and lock-unlock status.

A walk-around RF plotter function is included together with a frequency scanner to identify local RF activity. The system will interface with any Shure DSP device and is password protected while the software permits scenes to be setup, stored and recalled.

AKG headset
C 200SR is a broadcast headset with microphone and headphone components. Aimed at studio and OB applications such as sports announcements, the unit has a condenser microphone and lightweight headphones, along with integrated equalisation for personalising the mic response. The headphones are semi-open in order to protect the user from environmental noise without complete isolation. A frequency response of 20Hz-25kHz is specified for the ear pieces.

CAD valve mic is fitted with digital output
Claimed to offer a completely different approach to valve mic design, each side of the CAD VX2 capsule has its own independent valve head amp and output including separate high quality custom output transformers. Polar pattern switching is performed at the output of the mic rather than at the capsule which has a diameter of 1.25-inches, aged, gold sputtered and made of 3-micron thick polymer. An optional 24-bus digital output module is available with 32-96kHz sampling rates.

Reader Response No. 025
T he new cost-effective 30-series mics from Audio Technica debut with the AT3535 medium-diameter diaphragm, and AT3527 and 28 small-diameter electret condenser models. All feature 30Hz-20kHz response, 20dB padding to accommodate 156dB, 158dB and 157dB SPLs, and 124dB (123dB for the 3528) dynamic ranges.

The top-line 40-series adds the 4054 and 4055 vocal true condenser models, giving essentially identical performance with the option of a rolled LF response on the 4054.

Audio Technica

**Shure unveils UHF system**

Shure has unveiled a new UC wireless UHF system which has been designed to be a flexible and affordable contracting tool offering frequency agility, interchangeable microphone capsules and extensive LED metering. The main elements are a diversity receiver and choice of body-pack or handheld transmitters. Occupying only half a rack space, the system's receiver is equipped with adjustable squelch control, group and channel switches for frequency changes, a two-band adjustable EQ section and Shure's proprietary MARCAD (Maximum Ratio Combining Audio Diversity) circuitry.

Shure

**Telex UHF gear**

USR-100 is a UHF microphone system aimed at broadcasters in ENG and other roving production situations. Features include microprocessor control, factory tuning and 100 channel operation. The system also uses a Dual Squelch design, whereby a tone-coded squelch on a tone frequency of 31.250kHz is combined with an RSSI amplitude squelch.

Telex

**Beyerdynamic**

MCE 58 is an electret condenser microphone designed for reporters. It has an omnidirectional capsule and a long handle for interviews. The unbalanced output is said to produce a very high level for direct connection to portable DAT and MD machines. An elasticated suspension and active filter help to reduce handling and traffic noise.
Sound that Bytes...

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Reader Response No. 027
Beyerdynamic's double barrelled shotgun
MC836 and MC837 are new lightweight shotgun microphones designed for ENG, film and theatre applications. MC836 has a lobe/cardiod polar pattern, weighs 116g and is 246mm in length. The longer MC837 is even more directional and weighs in at 218g. Both units are fitted with a bass roll-off switch for rumble reduction and accept phantom power from 11V-52V.

According to the manufacturer, the units have been tested by a major film and sound company in Hollywood and found to perform extremely well.

Mikrofonbau Haun condensers
Mikrofonbau Haun is a German microphone manufacturer which has in the past mainly concentrated on OEM business, supplying other makers. Now it has launched its own line of hand-made and individually certified condenser products.

Model MBC-621 is a boundary device. There is also a complete range of slim-line palm/pattern bodies with interchangeable capsules with varying polar patterns, along with a number of extensions, pads and other accessories. Unusually, this range also includes large capsule heads, the cardiod KA-1000 and the omnidirectional KA-1100. These have the capsules mounted in a separate cage, with only the base of the unit matching the diameter of the slim-line preamp.

Developed specially for measurement purposes, MBC-550 is an electret condenser with a very small capsule and a frequency response specified by the manufacturer to have a 1dB deviation from 20Hz-20kHz.

MBHO 288

Wireless range
MIPRO's wireless mic systems are fitted with Japanese condenser capsules and Pilotone and NoiseLock squelch circuitry. The mics claim low handling noise and the ability to endure a 1m vertical drop without damage to the performance or casing.

Products in the range include the MA101 and MA707 portable wireless PA systems. M1812 single-channel true diversity.

MR312 16-channel VHF PLL-synthesised diversity and 30-channel MR812.

MBHO 288

Telex mics
Telex has debuted its Cobalt SL60 electret condenser cardioid mic with a claimed 40Hz to 20kHz frequency response and maximum S/N of 140dB.

The news coincides with the release of the Prostar Uhf2A0 UHF wireless handheld mic with Audix OM-3XN dynamic hypercardioid capsule. The system works in the 660 to 725 MHz range with a frequency stability of 0.05%. The receiver comes in a half-rack space unit.

Telex 290
DPA miniature microphones

The latest additions to DPA's range of miniature mics, the 4065 is a lightweight headband unit that can be used live and in the studio. In theatrical applications the problem of humidity is always present so DPA has paid particular attention to this matter, building in a double vent protection system and a drop stopper on the tube, intending the mic to be less prone to failure. Further durability is offered through use of a new kevlar reinforced cable that has enhanced flexibility and tensile strength. The capsule features a pre-polarised omnidirectional cartridge element with a 5.4mm vertical diaphragm that is acoustically identical to the unit used in the DPA 4061. The headband itself is pre-bent to give a tight fit position on any shape of head and can be easily reshaped. With a sensitivity of 6mV/P matching the level of the human voice to the general input sensitivity of most wireless transmitters, the 4065 has a noise floor of 26dB(A) and can handle SPLs of up to 144dB before clipping.

Beyer Sport

Beyerdynamic has released a mic in response to German broadcasting companies requests for a close talking interview mic for motor racing track-side reporting. The M59 Sport dynamic has a stiffened diaphragm to increase intelligibility in noisy surroundings and a shock-mount capsule to eliminate handling noise.

Electro-Voice

Designed especially for voices in the higher registers, the N/D367 female vocal mic is said o have a frequency response comparable to a condenser, although it is actually a dynamic with a Neodymium magnet structure. The EV N/D168 is tailored for snare drums and has a special mount which enables it to be attached to the drum rim, mic stand or other hardware. It is a miniature design finished in non reflective black steel.

Neumann M149 power

Bringing vintage-style power to a vintage-style mic is the function of Neumann's N149V power supply. Shipping immediately, the N149V is available as an optional alternative to the N 149 power supply packaged with the mic.

Sanken shotgun

Sanken's CS3 short shotgun mic follows on from the CSSS stereo shotgun and features a low-frequency roll-off switch in which case it can operate as traditional shotgun or with increased high-directivity in the low frequency ranges.

The Reference Brauner VM-1 Tube Microphone

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Reader Response No. 029

Reader Response No. 030
**Fane**

Three models have been added to the Colossus range of chassis speakers. The 12 inch 12MB is a 450W (AES) power handling mid/bass driver designed to handle peaks in excess of 1,800W. The 15SB600 and 18B-600 are 15-inch and 18-inch units respectively and are both said to be capable of handling peaks in excess of 2,400W.

**KRK V8**

New at NAMM was KRK Systems’ V8 close-field monitor. A shielded, active design using a 1-inch silk tweeter and 8-inch kevlar woofer crossed over at 1.6kHz, the V8 has a response of 49Hz-22kHz and 130W power handling to give 106dB SPL for $1,249 (US).

**New monitors**

The CES show saw the launch of an active version of ATC’s SCM20T monitor, the SCM20TL TA. The speaker is intended for critical listening and costs £3,750 (UK).

**ATC**

354

**Peavey**

The Maxsys range of sound reinforcement enclosure comprises five units loaded with 4-inch titanium diaphragm compression drivers and Black Widow cone drivers, with field-replaceable baskets. There are two mid/high frequency enclosures and three bass cabinets.

**Peavey**

355

**Jamo**

The Indoor/Outdoor 3 is designed for environments such as patios and swimming pools, where water would otherwise be a problem. Available in black or white, the enclosure is fitted with a 5-inch cone driver and a 1-inch tweeter. A sensitivity is specified as 88dB and the 8 Ohm load is said to present an easy load to amplifiers. Wall brackets are supplied.

**Jamo**

356

**Rooster monitors**

Rooster’s monitor line now includes five models and all models are active. The HFN65 is a cost effective nearfield with 6.5-inch polycone woofer and a 1-inch dome tweeter. The HFN85 is a more powerful upgrade with two 6.5-inch polycone woofers and the same tweeter.

The SNF6 is a small high-end nearfield with a long throw 6.5-inch woofer while the tweeter is a 1-inch fabric dome. The SNF8 is the near-to-mid field alternative to the SNF6, featuring two of the same 6.5-inch kevlar composite wafers and a Revelator 1-inch fabric dome tweeter.

**Quested active sub bars**

The F11 is a compact, magnetically shielded, 2-way design with a 165mm bass driver and 28mm softdome HF unit. The electronics are housed in a pod at the rear of the cabinet and can deliver 110W RMS and 40W RMS into the bass and HF units respectively.

The moulded cabinet has built-in mountings for wall or ceiling fixing and is designed for installation, surround sound and as monitors.

Also new is the QS818 18-inch active sub bass cabinet designed to complement the HQ218 active systems and comes powered by a Quested AP7000 amplifier. The 18-inch bass driver is ‘double cooled’ using vented pole piece and the external radial chassis which acts as a heat sink. This improves reliability and means that bass performance will not deteriorate when driven at high power levels.

Rounding up the new product line-up is the UD1, a 3-way passive loudspeaker in the vertical format with built-in stands and drivers housed in individual chambers, eliminating any inter-modulation distortion.

Also new are Quested’s VS112 compact self-powered sub-bass designed to complement the VS205 and VS2108, the VI21208 and VS2108 full-range monitors suitable for near and midfield monitoring and the VS2025 active portable nearfield monitor.

**Hafler’s monitors and amps**

Hafler’s TRM8 monitor is magnetically shielded and can be mounted in two different positions by using Optional Mount parts. It uses the company’s Diamond Series Transnova amplifier technology and is a biamped, 2-way system offering a flat frequency response of 45Hz to 21kHz. Peak acoustic output per speaker is 123dB or greater.

Hafler’s P4000 Transnova DIAMOND amp is designed for the studio and fixed installation markets with 200W per channel. The amp has full LED display, gain controls, balanced inputs, and internal MOSFET output devices.

The flagship 9050 Transnova DIAMOND is a three-stage convection cooled amplifier that uses a patented J-FET input/MOSFET output circuit in a balanced design and is a true differential power amplifier.

**ARX amps and cabs**

ARX launched the AmbiDrive 3-channel power amp at Frankfurt with built-in electronic crossover, ISC speaker processing, XLR and jack inputs and Speakon outputs. Channels A and B deliver 160W into 4Ohms while the mono subwoofer channel delivers 200W into 4Ohms. AmbiSub is a compact subwoofer, accompanied to the Ambience 1 and 5 loudspeakers.

EC-4 is a 4-channel 2-way electronic crossover designed for monitor applications with 24dB Linkwitz Riley filters, low and high level controls on all outputs, balanced 1-Os and user variable crossover points while the 125K loudspeaker system is a mid/high loudspeaker designed for club installations with a 12-inch midrange driver complete with a phase plug and a 2-inch compression driver mounted in a rigid flying frame. Dispersion pattern is stated as 60 degrees horizontal and 40 degrees vertical.

**K&H nearfields**

Klein and Hummel’s O198 is identical to the company’s O98 studio monitor and can be rackmounted or freestanding.

The 3-way system has been designed to achieve best results in voice reproduction. A new baffle material is used so all three drivers could be placed closer together deeper inside the cabinet.

Waveguides have been integrated for mid and mid range drivers.

The O198 has a tuned 8.5-inch cone woofer with a long voice coil, 3-inch midrange and 1-inch alloy dome tweeter.

**Dynaudio BABES**

Dynaudio Acoustics has introduced the BX30 subwoofer specifically targeted at 5.1 surround.

Known as IBABES, the BX30 is a development of Dynaudio’s ABES subwoofer but is more compact and less expensive than ABES. It incorporates crossover electronics and a 140W amplifier in a design that combines reflex tuning with electronic protection enabling the acoustic power output of the BX30 to be increased while lowering the frequency response down to 22Hz (-3dB).
WE HANG IN SOME INTERESTING PLACES

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Audio F’s new monitors

Audio F has released a new range of monitors, the A/V 368, which are designed to be used in conjunction with the company’s PowerMax 3 processor. The system is designed to be used with Audio F PowerPro II loudspeaker processor or PowerDrive 3 power amplifier with in-built processor.

Stage Accompany Efficiency

The latest releases from Stage Accompany are the Efficiency Series of class G amplifiers and the Master M57 Studio Monitor. There are two models in the new amplifier range, the ES50 and ES20. Both are said to give excellent sonic performance with particularly high damping factor and extremely rugged aluminium chassis for touring applications. There is also an Extended Function Network capability, which enables the use of plug-in modules for crossover, limiting and other additional functions. Output power goes up to 2.8 kW 4 Ohm bridged for the ES20.

Apogee arrays

Apogee Sound has unveiled the A/V 368 Apogee Linear Array Loudspeaker which extends the concept used in the ALA5 and ALA3 systems. It comprises dual 15-inch cone drivers in a slot loaded configuration, dual 10-inch cone drivers loaded by two damped midrange horns and dual 2-inch compression drivers loaded by paired high frequency waveguides. The pairing of waveguides produces a vertical dispersion angle of 10 degrees while horizontal dispersion is 60 degrees and extends to the lower frequencies by the dou-blet principle.

Renkus Heinz total concept

Renkus-Heinz has introduced a new range of loudspeakers, including the HR-80 and HR-81, which are designed to cater for a wide range of applications. The HR-80 is a 80W/80W loudspeaker with a 200Hz-20kHz frequency response. The HR-81 is a 120W/120W loudspeaker with a 80Hz-20kHz frequency response.

Apogee Sound 367

Westlake sub

Westlake Audio has introduced the BB-10SWP Subwoofer designed as a partner to the BB5M-10-way monitor. The system’s dual-tuned port enclosure is coupled with a S5b crossover and can be powered by a single stereo amplifier or passive bi or tri-amp. It uses an 18-inch driver unit with a 8 Ohm impedance and claimed sensitivity of 96.5dB at 1m.

Pink and Violet monitors

Emes has expanded its range of monitors to include the Pink TV and Violet HR. Both are 2-way bass reflex in passive and active versions with moulded wave-guider elements for the tweeter. Pink TV uses a 14cm polypropylene bass driver and a 25mm textile dome. All crossovers are shielded. The active version uses a digital power supply design featuring Emes quick delivery circuitry. On the Pink, identical amplifiers (80W LF/80W HF) are used for the woofer and the tweeter while dipswitches control input sensitivity, buzz and HF level. The Violet HR features an 18cm carbon/paper woofer and a 26mm ultra light textile dome tweeter.
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EV X-array
EV claims that until the development of its X-Array system, no manufacturer had succeeded in producing a speaker system with full Ring-Mode Decoupling. RMD addresses mechanical resonances with mechanical solutions and acoustical resonances with acoustical solutions and is applied at every level throughout the design from the component level up to the interaction between multiple enclosures.

Nucleus monitors
British manufacturer TDL's Nucleus 2 nearfield is a reflex loaded design with a tapered reflex port at the back. It uses a 130mm doped paper cone and a 19mm soft dome/terrothod cooled tweeter with crossover at 3kHz. Sensitivity is claimed as 86dB at 1m for 1W and frequency response 50Hz-20kHz.

Cerwin Vega
The V-Series of enclosures features four models. The largest of these is the V-253, a three-way system loaded with two 15-inch cone drivers, a one-inch exit compression driver and what is described as a bi-morph drive - a system said to produce less distortion above 12kHz than any other compression driver. The V-253 is said to produce an output of 134dB and bass down to 30Hz.

Tannoy
New enclosures have been launched in Tannoy's sound reinforcement and studio monitoring ranges. In at the top of the Dual Concentric sound range comes T300/TX3. It is loaded with a new 12-inch Dual Concentric driver, using a cambric double roll suspension and a halogen high-frequency protection system.

The wedge shaped cabinet allows a number of uses including ceiling mounting, portrait configuration or use as a foldback monitor. Pole mount and flying points are fitted.

It is intended for use with the TX3 system controller, which includes EQ and 100Hz sub-bass crossover. Designed to provide Tannoy quality monitoring at a budget price, the Revel nearfield monitor is aimed at users including project studios and broadcasters.

The design features a curved baffle to minimise diffraction and is loaded with a 25mm soft dome tweeter, combined with a 165mm long throw bass driver and internal crossover. The drivers are magnetically shielded.
In your studio the only thing you actually listen to is your monitors

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- 30dB SPL sensitivity

Reader Response No. 036
TASCAM 5 Marlin House, The Croxley Centre, Watford, Herts, WD1 8YA. Brochure Hotline 01923 819630
Tannoy announcement
Two new-at-NAMM loudspeaker models from Tannoy are the System 600A active and the Reveal close-field designs. The System 600A is a 61/2-inch dual-concentric featuring a pair of 75W bi-amps, a 44Hz-20kHz response and capable of delivering 117dB spl. Reveal is a shielded low-cost 2-way (1-inch, 61/2-inch) passive close-field monitor giving 65Hz-20kHz into 8Ohms and 90dB at 1m.

ServoDrive
An updated Contra Bass Subwoofer has been launched. The system replaces the normal speaker system with a unique servomotor design, reproducing frequencies as low as 16Hz. First released around eight years ago, the enclosure now has a re-engineered transfer coupling to increase cone excursion and optimise acoustic alignment.

AVI mini monitor
AVI’s NuNeutrons compact monitors measure only 285mm high x 140mm wide x 205mm deep and are intended for wall or stand mounting. Available in cherry, black ash and ebony the company claims it has virtually eliminated phase anomalies in the crossover.

The monitors comprise a 5-litre rear ported enclosure with a 5-inch doped paper, curvilinear diaphragmed bass driver with a 25mm voice coil. The 28mm tweeter has a viscous damped fabric diaphragm while the second order Linkwitz Riley crossover uses large ferrite inductors and polystyrene capacitors on a 2 ounce copper PCB. Prices start at £499 UK.

Apogee
The ALA-5 loudspeaker system is part of the Acoustical Linear Array family which also includes the smaller ALA-3 and ALA-4. The most recent addition is a bi-amped system loaded with two 15-inch LF drivers and a paired assembly of conical high frequency guides coupled to compression drivers.

The manufacturer states that the high frequency system produces a unique wavefront with an extremely narrow 10 degree vertical angle and a very useful 60 degree horizontal angle. Multiple enclosures are said to combine seamlessly in terms of acoustic summation and vertical pattern control is designed to extend to lower frequencies as the array grows in size. A 10-cabinet configuration is said to provide control down to 60Hz. The multi-angle enclosures and patent-applied-for rigging system combines to allow different vertical patterns to suit particular venues. The manufacturer suggests that a nine-speaker array could include the top four enclosures in a straight line and the lower five splayed for wider dispersion, for example.

Apogee Sound

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Reader Response No. 036
Welcome to an oasis of real satisfaction, where your thirst for the Whole Truth and Nothing But the Truth will finally be quenched.

For Nearly 20 years we've been known for our active monitoring systems, particularly our compact, nearfield bi-amplified ones. But outside the nearfield, where the heat really gets turned up, Genelec's S30C, 1037B and 1038A integrated tri-amp* active monitors are designed for bigger spaces - mucho grande.

*Amplifier modules may be rack-mounted in any soffit installation.
ARX

The Concert Series of enclosures now includes the processor controlled 925 sub bass enclosure, which is designed to complement the 922 full range enclosure. Two 15-inch cone drivers are loaded in a vented bandpass enclosure made from plywood. Input impedance is 4 Ohms and the manufacturer states that it is conservatively rated at 1,000W. Also new from ARX is the DI-4 quad direct box and stereo line mixer. It allows an unbalanced to balanced interfacing with gain control, ground lift and stereo mixing. It also has aux sends more effects and return, plus a stereo return.

Beyma

There are now improved versions of several Beyma drivers. The CP650/TI is a 2-inch throat compression driver with a titanium diaphragm attached to a three inch ribbon voice coil. It has a copper ring over the pole piece to reduce harmonic distortion and ensure an even impedance over the frequency range. The low version of Beyma's 8-inch coaxial speaker, 8BX has a concentrically mounted compression unit and a polypropylene bass cone with rubber surround. Also updated are the 12-inch and 15-inch coaxial designs, now designated 12EX and 15XK.

Stage Accompany

The first in a new Entertainer series, the E24 enclosure is a compact but high powered full-range enclosure, recommended for a variety of sound reinforcement applications. With a quoted frequency range of 60Hz-30kHz and a continuous power rating of 400W, the enclosure is said to produce SPLs of up to 126dB. The system is loaded with SFX's Turbo Drive Ribbon Compact Driver, a ribbon tweeter suitable for high powered applications. The manufacturer states that the E24 is available in any colour.

Apogee Sound

The FS-2 stage monitor is loaded with a 2-inch throat driver coupled to a 40x80 horn. A 12-inch bass driver is loaded in a vented enclosure. Frequency response is quoted as 50Hz – 19kHz at 3dB and SPL is said to be 126dB continuous, 132dB peak @ 1m on-axis. The manufacturer cites low distortion, the ability to 'cut through' ambient sound, and a compact profile as advantages of the design.

JBL monitors

Additions to the LSR line of monitors are the LSR312 mid-field system, a bi-amplified LSR28P and the LSR2P bi-powered sub-woofer. The LSR312 mid-field is loaded with a 13-inch bass unit, 5-inch mid range with Kevlar cone and a one inch composite diaphragm high frequency unit, coupled to a wave-guide giving 60x100 dispersion.

The bass driver handles frequencies below 25kHz, which the manufacturer says allows optimum dispersion pattern and reduced intermodulation distortion. The LSR28P is a bi-amped rearfledd with an 8-inch cone driver and a tweeter. The companion LSR12P powered subwoofer has a 250W amplifier and a 12-inch driver.

SA cinema

Stage Accompany's SL series bass cabinets expand its Screen Series cinema sound systems. The cabinets are 22cm deep, with a single or double SA 15-inch woofer configuration (SL15/SL30). The reflex ports are located on the side panels of the cabinet to prevent screen resonances and dust spots and the cabinets can be floor mounted or flown.

Fidek HP series

The HP series of sound reinforcement enclosures is based on two-way designs and a number of bass driver sizes. All enclosures in the range use a 38mm exit compression driver with a 100mm titanium diaphragm, coupled to a horn designed for an even 45° coverage.

Philips low-cost

The LSC2350 and 3951 compact, low-cost ceiling speakers are designed to simplify installation in areas such as hotels, shops, offices and lifts. Rated at 2W maximum power, the speakers have integral clamps that are designed to eliminate the need for special tools and are said to hold the units securely in place. The manufacturer also states that the wide dispersion area of 170 means fewer speakers are required to cover a given area.

Wharfedale

There are five models in the new EVP Series of enclosures, designed for sound reinforcement applications. Three of the semi-trapezoidal enclosures are full range units and the other two are subwoofers. One contains an 18 inch driver rated at 400W; the other has dual 15-inch units and a power rating of 800W. The three full range cabinets are loaded with either 10, 12 or 15 inch cone drivers and a PZ-7 horn loaded HF unit.

Electro-Voice

Electro-Voice EVP-28 is a compact system loaded with two eight inch cone drivers and a Vari Intense horn in a vented enclosure. It is apparently capable of 123dB peak SPL and 200W continuous power handling.

Electro-Voice T251 is a two-way trapezoidal sound reinforcement enclosure combining a 15-inch woofer with a 60x40 horn. T251 is a touring version and T251H has pre-installed suspension hardware and a paintable exterior. The manufacturer claims the incorporation of a number of proprietary solutions to increase intelligibility, reduce coil heat and lessen the risk of overload.

System 2000 is offered as a complete PA system comprising powered mixer and enclosures. The Powermate 1000 mixer combines a 500W EV amplifier with 14 input channels and two separate Dynacord digital effects, each with 10 programs.

The available enclosures include full range models based on 12 and 15-inch cone drivers, plus a subwoofer.

Peavey cabs

The Impulse 500 PA enclosure is the big brother to the existing Impulse 200 and is loaded with a 22XT titanium compression driver coupled with a moulded-in 90° x 45° horn and a 15-inch weather-resistant 1568 Black Widow woofer with field-replacement basket. Rated at 8 Ohms, the enclosure also features the Sound Guard high-frequency driver protection circuitry. This is joined by the compact Impulse 200 Sub which is a weather-resistant 12-inch 1254 Black Widow woofer loaded enclosure with field-replacement basket and features the Peavey’s 'Hypervent' porting technology in a 4 Ohm package. The existing Impulse 200 speaker is being offered in white in addition to the standard black.

RCF extended

RCF's ART series of loudspeakers has been expanded with five new models including the 500 15-inch 2-way passive and the active 500A version which incorporates a 400W amp for the LF. The 15-inch 2-way 400A active is biamped with 300W for the LF and 50W to the HF.

Subwoofers are covered with the 800AS which is 15-inch active and is compatible with the 200A, 200AM, 300A and 500A systems and this is joined by the 800S 15-inch passive subwoofer which is designed to work in conjunction with the ART 300 and 500 speaker systems.
The Missing Ingredient Has Always Been the Amplifier!

The engineers at Hafler have gone to great lengths to mix the perfect ingredients. Our Trans•nova/DIAMOND amplifier will deliver the accuracy and transparency your music deserves. These circuits combined with our proprietary high frequency waveguide and low frequency transducer will deliver a smooth response and create an undeniable depth of field.

Go hear the TRM8 Trans•nova Reference Monitor

"The TRM8 is a true synergy between speaker and amplifier, something rare in pro audio”

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Reader Response No. 538
Albrecht optical uses laser

Albrecht's LLK3 Optical Sound Laser Camera claims substantial improvements in quality in optical sound recording through the application of laser technology. Albrecht lists the main advantages of the LLK3 as high reliability, long-term stability, easy setting of operating parameters, substantially improved frequency response, low wow and flutter, insensitivity to overdriving, and an almost inaudible ground noise reduction system.

Film exposure is carried out by means of a scanned He-Ne laser beam which is deflected via acousto-optical modulators and the camera uses a Motorola DSP56002 for audio processing and laser beam control.

During recording, the audio signal derived from the laser beam via a photo-diode enables acoustic audio monitoring through headphones or a monitor loudspeaker, while the signal is also displayed on a VU meter.

8-track MD

Yamaha has gleaned 8-tracks from MiniDisc on the MD8 personal multi-track by doubling the MD data drive speed. Features include 8-track simultaneous recording and playback, plus 4-track, 2-track, monoaural MD Data record and playback and 2-track and monoaural standard MD record and play modes.

You can ping-pong digitally from 8 tracks to one or more, auto punch in and out with 99 takes, song edit, and cue with a shuttle dial. The recorder is has an 8-channel analogue mixer with 3-band EQ, 2 auxes, pans and faders.

Denon MiniDisc gives 7 hours

DMR-R70 portable MiniDisc recorder is designed to provide seven hours of record time or nine hours of continuous playback using a lithium ion cell. Alternatively an optional clip on 6xAA battery pack will provide 24 hours of operation when fitted with Duracells.

The package includes MD to MD transfer, sample rate converter and optical input capabilities, plus remote, headphones and PSU/charger. A Pro reporter kit is available from Audio Systems Components. UK price is £255.31 ex VAT.

MediaFORM Introduces a New CD-R Duplicator Designed for the "Audio Professional"

DAT's EASY

CD2CD/PRO CD-R Duplicator

MediaFORM's CD2CD/POWER PRO is already the industry leader in CD-R copiers with one button burning of 8 CD's simultaneously, expandable to 64 drives, and auto-loader ready. The CD2CD/POWER PRO offers an option bay which allows for the following: Jaz Drive, Zip Drive, Plextor CD-Rom Drive or virtually any SCSI device. So how do we top that? DAT's easy! MediaFORM's new Easy-DAT option allows audio users to interface their existing DAT player with the CD2CD/POWER PRO by way of SPDIF, Optical and AES/EBU ports. Audio professionals can also take advantage of the CD2CD/POWER PRO's unique track extraction feature. Finally, a CD-R copier that's flexible enough to meet all of your audio needs.
Tascam’s 24-bit DAT first

Tascam has introduced the world’s first commercially-available 24-bit DAT recorder. The DA-45HR is the first DAT recorder to record true 24-bit audio data on a standard DAT tape and sets a new standard in mastering technology.

Features include XLR balanced and RCA unbalanced analogue audio I-O, AES-EBU and SPDIF digital I-O, Word Sync I-O and a parallel control interface.

Marantz CD-R

Marantz has what it describes as an entry level priced CD-R machine in the CD1630 which can play CD, CD-R and CD-RW discs and record CD-R and CD-RW.

Features include balanced analogue inputs, coax and optical digital inputs, automatic indexing, sampling rate converter bypass, CD sync for auto start recording from digital sources, rackmounting cabling and remote control. Shipping is expected in June for around £750 (UK).

Onyx MiniDisc on the table

Onyx has a range of professional location MiniDisc recorders.

The MobiDisc is built around an unmodified Sony MZ-I30 MD fitted into a metal chassis.

Featuring a mono XLR balanced mic/line input with phantom power, it also offers a mono balanced line output, a built-in monitor loudspeaker and a 1/4-inch jack headphone socket.

A recording level control with LED PPM and a monitor volume control are located on the front panel. The unit is powered by internal Ni-MH rechargeable batteries.

The Carrier is a simpler and cheaper version of the MobiDisc and is similarly built around a MZ-I30 machine. It features a mono (or stereo) XLR mic input, a stereo cinch line output and a 1/4-inch stereo jack headphone output.

MediaForm

MediaForm's CD2CD/Pro CD5900 standalone duplicator can copy eight CD-Rs simultaneously. A slave tower for an additional eight drives can be added. An option bay permits the fitting of Jaz, Zip, Plextor CD-ROM drive or any SCSI device. The device is accompanied by the CD2701 standalone spindle-based CD-R copier which boasts one-button operation and unattended duplication of 50 CD-Rs.

Unusually the machine is firmware upgradeable by CD or through the Internet and automatically identifies complex formats. A batch copy mode allows several masters to be loaded in the hopper for processing multiple jobs.

Philex

With a projected retail price of £5.99, the Philex CD-R disc is said to have a capacity of 680MB, giving it 30MB more storage than competitive products. There is also a rewritable CD-RW disc available. This has a 650MB capacity and is said to withstand more than 1,000 erasures with a life expectancy of 30 years.

The new STELLADAT II

- 2 and 4 tracks on tape
- 44.1/48/96kHz sampling rate
- True 4 channels audio mixer
- Only 4 kg (8,8lbs) with battery
- 2 to 3 hours with Lithium Ion battery
**Fidelipac digital cart**

Fidelipac's Dynavox DCR 10 digital cart machine replaces the DCR 1000 and is equipped with a 2MB drive operating at 32kHz, while Zip or MD drives can be used for high-capacity requirements. Units with these drives can be configured for linear uncompressed operation. The DCR 10 can be upgraded to AES-EBU I-O at 44.1kHz.

With the Zip or MO drive option, the DCR 10 allows 99 cuts to be recorded and cuts can be cued up using a front panel search knob or an optional PC keyboard. The optional Q56 Instant Access keyboard allows push-button access to 50 cuts on any Zip or MO disk. The small custom-keyboard also permits chains, rotations or loops of any of the cuts on the disk.

**Otari CD-R and MD recorder**

The CDR 18 includes a sample-rate converter and a turntable-type disc drive mechanism. It employs 1-bit A/D converters, XLR and phono inputs and phono outputs in addition to AES-EBU, coaxial and optical digital connectors and coaxial and optical digital outputs.

Features include a digital synthesizer record mode, automatic track numbering, a digital fader, copy bit selection, parallel remote-control interface, wireless remote and a rackmounting chassis.

The MR30 MD recorder has an automatic recording start function, automatic track numbering, cue paint writing and editing (five per track) and basic editing functions to divide and combine tracks, as well as insert or delete through the dedicated front-panel keys.

Two previous editing operations can be undone, a rotary dial can be used to select tracks, pitch control achieves +/-9.9% in 0.1 steps, and up to 20 tracks per disc can be selected for instant playback per disc. The programmable playback of 25 tracks remains in memory even if power is interrupted, while an end of track notification alerts the user and is adjustable between 5s and 35s. SCMS is selectable and an optional sample-rate converter can be installed. The unit has AES-EBU and SPDIF inputs together with XLR and phono connectors while output options include AES-EBU, SPDIF and coaxial. It is remote controllable via RS232C, RS422A and 9-pin or 25-pin.

A standard PC keyboard can be plugged into the front panel to control playback, recording, editing and instant playback, and to enter track names while recording.

**AnTares offers perfect pitch**

AnTares Systems has released a hardware rack version of its Auto-Tune TDM plug-in. According to the company, the Auto-Tune Rack permits any solo vocal or instrument track to be instantaneously and automatically corrected to the proper pitch without losing the nuances of the original performance.

The Rack comes with preset scales including major, minor and chromatics in any key and can save 100 different custom scales. Any scale can be detuned to a different pitch centre and the box can be set up to ignore vibrato, bends, slides, and other performance frills. A retune speed parameter controls the time allowed for the pitch to remain out of tune while vibrato can be added with programmable delay, depth, rate and waveform. Extensive MIDI control is supported.

**Focusrite Platinum Class A**

Focusrite has introduced the cost-effective Platinum range of processing units including the Vocamaster (Platinum 1) and Tonescape (Platinum 2). The Vocamaster vocal recording path incorporates a Class A discrete transistor preamp, high pass filter, expander, vocal simulator (creates tape/valve style saturation and adds compressed harmonic related second order artefacts to produce a valve mic sound), opto-compressor, enhancer (adds natural voice related harmonics), voice-optimized EQ, and opto De-esser.

**Fidelipac** 319

**Eventide offers DSP4500**

Eventide's DSP4500 includes all the presets from the DSP4000 standard, guitar and broadcast versions plus the Alchemy 101 package of 225 third party presets. It has an 87-second sampler included and at more than 1000 presets is claimed to offer the greatest number of presets on any effects processor.

A total of 147 distinct effects models can be built into programs and custom programs can be saved to removable PC cards which can also be used for importing third party programs.

**TC Gold Channel**

TC Electronic's Gold Channel 2-channel digitally enhanced microphone preamp, features 24-bit, 96kHz A-D conversion with equalisation and dynamics processing.

Features include an expander/gate, Softlimiter compressor/limiter, equaliser and additional processing tools, all accessible through a channel strip interface with high resolution metering, AES/EBU, TosLink SPDIF and ADATI 1-0s are provided in addition to standard mic and line inputs and wordclock in. It has 200 user presets.

**Avalon optical comp**

Advance news from the American Avalon Design outboard campus includes two compressors. The AD2077 optical mastering compressor will offer a partner for the AD2077 EQ in mastering suites while the VT747 dual-channel vacuum tube compressor will add its weight to the company's mid-priced VT range.

**Summit** 317

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**Asap** 318

**Fidelipac** 319

**PreSonuS M80 pre**

The PreSonuS M80 8-channel mic/ instrument preamplifier mixes bus houses Jensen transformers, FET, Class A discrete input buffers, twin servo gain stages, and an XLR balanced output on each channel. Each channel has switchable phantom power, phase reverse, 20dB pad, high pass filter, pan, insert, routing to the stereo bus and a gain control. An additional 11xS input adjusts harmonic distortion from 0.001% to 0.5%. The box is described as a suitable front-end for existing DAW A-D converters.

**PreSonuS 316**

**Rupert Summit**

In a collaborative agreement with Rupert Neve the designer, Summit expects to unveil a new product line under the Rupert Neve signature. The new line will include 'innovative technology', according to the company, and will combine the traditions of Summit and the sound quality of the designer.

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**Asap** 318
Last year, over a billion people listened to remarkable audio just passing through our domain.

Look down the avenues where the world's most listened-to audio travels. The view would look something like the one you're seeing now. In theaters, concert halls and arenas where chance is not an option, the XTA DP226 Speaker Management System is the only choice.

In a two-by-six format, the DP226 provides total control over multiple crossover formats, including full stereo 3-way. Plus input and output EQ, Limiting and Delay. But the secret's in the elegant algorithms and uncompromising electronics of our proprietary AudioCore™ design.

The DP226's precision removes the guess-work from speaker management and system optimization. And as with all XTA products, the audio quality is simply unparalleled. That's why XTA is specified by the most demanding engineers and sound designers.

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A short list of some of last year's "XTA performances" includes:
- The 1997 Super Bowl, Grammy Awards and Academy Awards
- The Lollapalooza Tour
- Broadway Shows, including A Doll's House, Titanic, Jekyll & Hyde, Bring in 'Da Noise, Bring in 'Da Funk and Rent.
- Jane Eyre (Royal Alexandra Theater, Canada)
- Providence Performing Arts Center
- Ice Capades
- Howard Schwartz Recording
- 1996 Summer Olympic Games
- Royal Opera House
- Glastonbury Rock Festival
- The Prodigy
- Riverdance
- Björk World Tour

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Reader Response No. 044
BSS adds to Opal series
New to the Opal series is the DPR-344 2+2 parametric compressor. In a 1U package it provides two channels of noise gain and two channels of compression. The compressors feature a parametric filter on the sidechain for frequency sensitive contouring used in de-essing or enhancement. Gates are also equipped with tuneable key filters. The compression sections are fitted with threshold, ratio and gain controls, with auto/fast envelope control. Gate release time is fittably adjustable and gate shut attenuation can be set to 85dB or 20dB.

Lucid convertor
Lucid Technology has a series of multi-channel A-D and D-A computer audio interfaces planned with the first, the ADA8824-Sonic, interfacing directly to Macs equipped with Sonic Solution's 16.24 digital I-O card. The device has 8 channels of 24-bit A-D and D-A conversion as well as 8 channels of AES-3 I-O and 2 channels of SPDIF I-O. It has digitally controlled analogue input and output attenuation while 15 LEDs cover metering. Internally controlled sample rates are 44.1 or 48kHz while external sample rates can be controlled by AES-3 sync or wordclock.

Frontier offers PC convertors
Tango, from the Frontier Design Group, is described as a 20-bit professional digital audio conversion system in a 1U rack. Designed for use with PCs, the system provides A-D, D-A and ADAT optical I-O. As standard, the system has eight outputs and a choice of no inputs, four or eight inputs. Connectors are balanced TRS jacks. Upgrade kits are available to add the extra inputs.

To create a complete hard disk recording system, users need to combine Tango with an ADAT compatible card such as the Frontier WaveCenter, Sonorus StuII/O, Korg 1212 or Alesis PCR. The ADAT optical interface helps to ensure that the PC does not corrupt the audio signals and also enables interfacing with similarly equipped recorders and mixers.

Word clock ports are provided, so that multiple units can be locked together or synchronised to an external source. Tango's front panel includes eight level meters and there is also an ADAT Thru port for archiving. The product is available directly from the manufacturer for $698 (0-in/8-out), $798 (4-in/8-out) or $890 (8-in-/8-out).

Weiss de-esser-compressor
More information is now available on the Weiss DS1 de-esser-compressor. The unit features a low-pass, band-pass, high pass switchable, linear phase, crossover filter with crossover frequencies between 300Hz and 20kHz.

The device is fully MIDI controllable with 128 snapshots, uses 40-bit floating point processing, 24-bit AES-EBU I-O with switchable dithering, compressor input-output metering, and gain reduction metering. It offers variable soft knee, programme dependent release, oversampling side chain and gain multiplier, an auto gain makeup feature.

Sony effects
Sony's DPSV55 effects processor is based on the DPS77 with which it shares the DSP rate, processing chip and converters, but is geared more towards surround applications. A total of 45 effect types can run on the unit's four processor channels which operate in 4-channel surround, dual true stereo or quad mono modes.
The compressor that forgives, but never forgets.

**It Forgives**
- New dbx technology, the TYPE IV™ Conversion System with TSE™ (Tape Saturation Emulation) gives you the pleasant overload characteristics of analog tape without the harsh distortion of those digital input systems. No more dancing around with the input levels to protect the integrity of your audio.
- Ultra-wide dynamic range 24-bit A/D and D/A converters with TYPE IV™ make your signal sound better than you ever thought possible.
- With the extensive metering of the DDP, you can see exactly what is going on with ALL parts of your signal.

**It Never Forgets**
- The DDP works right out of the box. It comes with 50 factory settings that are guaranteed to knock your socks off. There are presets for every application you can think of, and then some.
- Want to duplicate that perfect compressor setup? Each processor in the chain has all the parameters you would expect. After you set the parameters the way you want them, save it as a processor preset, available to be recalled any time.
- And speaking of stereo, you can work in stereo with dbx's True RMS Power Summing™ for phase-coherent tracking, or in dual mono mode, without the two channels intersecting at all.
- When you make changes to any parameter, you can see where your adjustments are effecting the signal, simply by looking at the Hi-Res graphical display, which shows the processing curve in real time as you make your adjustments.

Check out the DDP at your local pro audio dealer, and experience DIGITAL performance you'll never forget.
Bel shuffles audio for video

New Bel units include the 2110 AES-EBU audio shuffler, the 8110 8-channel analogue audio delay synchroniser and the 8310 AES-EBU audio delay synchroniser. The 2110 is said to offer a cost-effective way of modifying AES-EBU signals in the digital domain, for applications such as transmission racks and VT areas.

The 8110 is designed for synchronising audio to video in post-production where video delays have resulted from VT editing and video effects. Each of the eight channels can be dedicated to a specific item of video equipment. The 8310 broadcast delay is used wherever four channels of digital audio need to be synchronised to video. The unit features two AES-EBU I-Os, manual and auto-tracking operation, auto-tracking via sync reference or TTL pulse, glitch-free adjustment in real-time, SMPTE delay, full digital referencing and serial control.

Prism for Mases

New from Prism Media Products are the AD-124 A-D converter and a 'classic' analogue stereo compressor. Successor to the AD-1, the AD-124 A-D converter is said to benefit from a -120dB noise figure, plus 16-bit, 24-bit and 24-bit resolution with a choice of four noise-shaper curves when reducing to 16-bit in either A-D or D-D modes. Fitted with the Prism Sound DRE system, the converter also allows high resolution recording on an ordinary DAT recorder.

The MLA-2 classic analogue stereo compressor is part of the Maselec Master Series of products, developed in conjunction with engineer Lief Mases. Features include precision stepped controls and a new approach to stereo linking said to avoid the excessive ducking typically caused by transients on one channel. A dynamically controlled release time is also employed.

Dbx DPP: 100 dynamics presets

Three dbx units have made their debut: the 1086 mic preamp and dynamics processor; the DDP digital gate, OverEasy compressor, PeakStopPlus limiter, de-esser; and the first in the Silver series, the 586 valve preamp. The 1086 is a single-channel unit using the proprietary V2YCA chip and featuring optional Type IV digital output from the dbx flagship Blue series. US price is $749.95.

The DDP Digital Dynamics Processor is said to combine classic gating, compression, limiting, and de-essing in a 1U digital package. Aimed at live and recording applications, the system includes 50 presets and 30 user definable patches. Information stored includes sample rate, MIDI configuration, sidechain set-up, EQ settings and more. A high resolution display provides a number of metering possibilities, including a composite output versus input curve to represent compressor settings.

The 266XL dual compressor/gate is an update on the existing 266A and now boasts XLR as well as TRS balanced connectors. Light pipe switches are now used for the OverEasy, bypass and stereo couple functions, providing easier status monitoring. An Auto mode replaces the earlier Auto Dynamic mode, enabling the system to more accurately set its own attack and release parameters according to the input signal.

The dbx 586 dual channel tube microphone preamp is said to be the first in a Silver series and has a rugged casing with a brushed aluminum fascia. Included are 48V phantom power, large VU meters, 20dB pad, phase invert and low cut filter.

Designed for use with almost any kind of input, from line to mic level, the unit is fitted with a gold contact Neutrik XLR and a 1/4 inch TRS socket. The three band EQ has a parametric mid, while the limiter is based on PeakStopPlus topology. The design is based on two hand-graduated 12A7J valves.

Neotek MicMax

Based on the same circuitry as that found in the Neotek Elite console, the MicMax mic preamp is balanced from input to output and apparently employs discrete transistors and high voltage op-amps. Features include a subsonic filter, bargraph metering, polarity reverse, switchable input impedance with 500 Ohm, 1.5kOhm and 10kOhm settings, output ground lift, and phantom power. Gain is controlled with a 5dB increments on nudge buttons with a 2-digit readout plus a +/-5dB detented trim on the output.

The next issue of What's New in Pro Audio will be published early 1999 and will cover developments at IBC Amsterdam, AES San Francisco and national shows.

JULY 1998

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

WHAT'S NEW IN PRO AUDIO
The new Focusrite Platinum VoiceMaster™ provides all the functions you need to process vocals to get that elusive hit record sound.

"This must surely become the project studio industry standard."
Paul White, SOS, July '98
TL Audio turns digital with P&G technology

Valve outboard specialist TL Audio has launched a digital division with the acquisition from Penny & Giles of the rights to design, develop, market and sell its Audio Multiprocessor System. Following the re-alignment of P&G earlier this year, the company felt the Audio Multiprocessor range would be better served by a company specialising exclusively in the development of audio products. TL Audio is already shipping the new digital units.

NEWS FROM TUBE-TECH MEC 1A

The new TUBE-TECH MEC 1A is a state of the art complete recording channel.


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TL Audio 340

SPL's triple

SPL has launched three new products: a valve version of its stereo Vitalizer, the Qure equaliser, and the Transient Designer dynamic signal effects processor. The new Stereo Vitalizer MK2.1 combines valves with vintage type coil filters for a retro sound. Qure is a dual-channel, 3-band parametric equaliser featuring a control designed to 'cure' digital harshness by introducing warmth, depth and dimension to mixes.

The unit is said to selectively employ valves, coils and transistors at their optimum working frequencies. For easy recall of control settings, the unit is equipped with stepping potentiometers throughout.

The Transient Designer introduces SPL's Differential Envelope Technology said to provide much greater control and flexibility in level-independent sound processing. Transients can be accelerated or slowed down and sustain prolonged or shortened, while all time constants are automatically adjusted.

Behringer

New from Behringer are the Virtualizer DSP 1000 multi-effects unit, Feedback Destroyer DSP 1100, and the Ultramatch SRC2000 digital format convertor. DSP 1000 is designed to provide high class reverb simulation, as well as pitch shift and modulation based effects. The MIDI controllable device can also function as two independent mono channels. The reverb settings have adjustable reverb times, diffusion and wall settings. DSP 1100 has two separate channels containing 12 user defined parametric filters. The system automatically hunts feedback prone frequencies and uses the filters to suppress them. The DSP 1100 is software upgradeable and editor software is also planned. SRC2000 converts AES-EBU and SPDIF signals at sampling frequencies from 25kHz-60kHz, producing output at 44.1kHz or 32kHz. It can also remove copy prohibit bits and change incorrect emphasis coding. The manufacturer claims that simply passing a digital audio signal through the unit can improve it by reducing tape dropout errors and removing jitter.

Behringer 343

dB Technologies

The db Technologies Multichannel conversion system is available in multiples of two channels to a maximum configuration of eight in one unit. Sampling frequencies of 44.1kHz and 48kHz are supported, along with 88.2kHz and 96kHz. The Crystal-Lock feature is said to eliminate jitter. Incoming signals are suspended in RAM, locked for absolute accuracy, and then sent out as jitter-free, high resolution signals, the manufacturer claims.

Modules available for the system are D-A, A-D and 2-1 single/double wire AES translator.

Symetrix 342

Dual dynamics

The compressor and expander sections of Symetrix's 565E dual compressor/limiter/expander use 'Dynamic Squeezed' circuitry which is said to control gain without adding distortion. A separate limiter section is included with its own threshold control. Other controls are provided for expander thresholds and release, compression ratio and gain makeup.

Connectors are balanced and unbalanced and a side chain is provided on each independent but stereo linkable channel.

Symetrix 342

Lydkraft

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WHAT'S NEW IN PRO AUDIO

Reader Response No. 048
The Drawmer MX30
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Reader Response No. 049
Orex launches Microphone Workstation MWS mkII

The Oram Microphone WorkStation of two channels of mic pre and 4 band EQ has been enhanced. The MWS mkII has an improved noise floor and an inser attention for maximum flexibility. Sonicon I is targeted at the project studio and is a linkable two channel compressor with identical sonic performance as Sonicon II with LED metering. Sonicon II complements the Oram Hi-End range in a bigger case with VU meters. Both units have variable pots for input level, threshold, ratio, attack, release and output level.

Lexicon updates PCM processors to 81 and 91

Lexicon has introduced the PCM 81 Digital Effects Processor and the PCM 91 Digital Reverberator, which follow in the footsteps of the established PCM 80 and PCM 90 respectively. The PCM 81 adds more onboard effects, more effects algorithms, more delay, AES-EBU I/O and comes with 300 presets. Other features include 24-bit internal processing, true stereo signal path, balanced analogue I/O, and the ability to mix analogue and digital inputs and outputs. Presets are editable, with access in 'Pro' mode to as many as 100 parameters.

The PCM 91 includes all features of the PCM 90 and adds Dual Reverberation algorithms together with dynamic spatialisation effects for 2-channel or surround sound applications.

The Pro Audio publication with 'Rapid Response'

Genesis: a revelation in ADs

The new AD is a balanced audio so that the digital audio range of converters can be considered complete. This has been a long time coming and Lexicon is well placed to fill the gap in the market for high-quality converters.

Rane gear from Santa Fe

Rane introduces a new range of gear with the new T4. The T4 is a new four-channel mixer with a new look and feel. The mixer features a new look and feel with a new design.

Readers get the 'low down' from the product stories... and further information from the supplier

What's New in Pro Audio makes finding the right product so much easier.
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Reader Response No. 051

PreSonus
[audio electronics]
LA Audio's DigEQ
LA Audio's DigEQ programmable EQ features simultaneous graphic and parametric equalisation, sweepable high and low pass filters, shelving EQ, compressor/limiter and noise gate. Options include dual channel slave units, a choice of wired or wireless remotes, RTA, digital delay and digital I/O.

White units
Using 32/40-bit floating point DSP, White Instruments Paramedic digital parametric EQ offers 70 filters. These can be configured as parametric and very narrow notch filters, one-third and one-sixth octave graphic filters, and high pass, low pass and shelving filters. Frequency centres are adjusted in 1Hz increments and amplitude in 0.1dB steps. Paramedic Plus models add delay to the package. Servo balanced I/Os are standard but transducers are an option.

White has also introduced the single channel 4700XL and dual channel 4700-2XL digitally controlled one-third octave graphics. Control is afforded by RS232 connection to a PC running suitable software. Also new are the two channel DSP5022XL and four output DSP5024XL digital signal processors again with PC control. DSP and graphic EQs have been released for the Crown IQ system.

Focusrite Green gets quad comp
The latest addition to the Green range of processors is the 6 Quad Compressor Limiter. Described as an affordable and versatile model, the Green 6 is said to be ideal for recording to digital formats requiring accurate compression and instant limiting. Sound Reinforcement is another suggested application. Class A audio VCA's are used. Functions include threshold, fast/ slow attack and release, auto/ release, ratio and make-up gain combined with threshold limiter. VU and gain reduction metering is provided.

Rapid Response works!

ART valve EQ
Art's Tube EQ 4-band single channel equaliser uses a 12AX7a and fully adjustable input and output controls. The fixed LF and HF bands can be switched between 50Hz/80Hz and 5kHz/15kHz respectively while the two frequency variable mid bands both sweep from 20Hz to 20kHz with the help of x10 multiplier switches. All bands offer +/- 12dB of boost or run to balanced XLR and unbalanced jack connectors.

The Tube Pac on the other hand uses two valves to combine a mic/line preamplifier with phantom power and phase reverse and an optical compressor. Equipped with fully variable threshold and output pots, switches select limiting or compression and automatic or fast release times.
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Reader Response No. 054