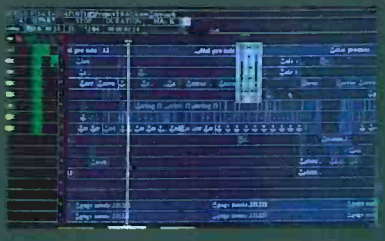
What's new in Pro Audio

THE GUIDE TO THE LATEST PRODUCTS AND EQUIPMENT

ISSUE No3 December 1997

IN THIS ISSUE



dar genesis – hard disk p26

AMPLIFIERS	4
ANCILLARIES	8
CONSOLES	12
CONTROL	22
HARD DISK	26
MICROPHONES	34
MONITOR SPEAKERS	39
OUTBOARD	47
TWO TRACK	57

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

Test Our Metal

Rorke Data's digital A/V storage product family enhances current workflow by providing solutions designed for long term usage. The modular design of our products ensure a flexible storage solution path designed to be easily upgraded and adapted to the latest in digital technology.

All aspects of our product family are aimed towards providing future options as well as initial performance for the constantly changing digital A/V industry. This is made possible through rigorous development and testing programs in cooperation with the widest variety of industry OEM's.

With this in mind, our focus is on integration and service quality. Our full metal construction ensures that delicate mechanisms are protected from both shock and heat exposure. The result is a robust, manageable, high performance digital storage system which has the shelf life to provide a high level of investment return.

Ultra SCSI & Fibre Channel Raid Systems

All Metal Construction (approved with 10000 RPM Drives)

Capacities from 16 GB to 1 TB

Compatible with MAC, NT and Unix based systems

A/V Optimized Rack and Desktop Storage Arrays

Customized Disk, Tape, CDR and Optical Arrays

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ESD certified environment

A/V Firmware revision control

Custom Integration

Worldwide support, Swap/Express warranties and installations

READER RESPONSE No. 001

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Buyer beware

Welcome again to What's New in Pro Audio. Issue Three takes in the rather quieter second half of the year and includes the notable product launch platforms of the IBC in Europe and the AES in the USA.

The interminable exhibition circuit serves to remind us that manufacturers today are being stretched by the demand of attending an increasing number of 'local' shows in addition to the established calendar hot spots. While it would be nice to think that they could reveal something new for each major event, the reality is altogether more humble with the rough outline pattern emerging that relies on unveiling a product at the beginning of the year and then doing the rounds with it to cover the pertinent territories.

However, the pressure to announce something new remains and despite the embarrassing lessons learned by many in the software-happy beginnings of the 1990s, when it became almost fashionable to wheel out products sometimes years before they were ever to become available, there are still a number of examples of technology that has been a mighty long time a-coming.

Why companies continue to play this game is easy to understand from a marketing standpoint - announce product A regardless of its nearness to completion to steal the thunder of rival product B. In the worse case scenario, such manufacturers, in outlining a product in detail that is deemed to be right for the market today, do risk the possibility that it might not be as relevant by the time it finally arrives.

However, this cynical practice is harder to justify from the point of view of the end user who after all is the one for whom this game is being played.

While the intention may be to halt purchasing decision making, this quickly translates into user annoyance and disillusion when product A remains undeliverable even though product B is already shipping.

The upshot is that confidence in the manufacturer is eroded and if more than a few companies are at it then it is confidence in the manufacturing industry, guilty or not guilty, that suffers.

A short-term gain is no trade-in for longer term malaise. When the end user adopts a stance of suspicion and scepticism towards all software-driven produce then we all lose out and restoring faith is always so much harder.

Honesty in the timescales involved in bringing a product to market should be encouraged and applauded. Those who clearly cannot estimate with any degree of reliability should be ostracised.

Zenon Schoepe
Executive Editor

What's new in Pro Audio

Issue No 4

will feature new product and enhancements from the AES Convention and the Musik Messe in Europe and NAMM and NAB in the USA.

Don't Miss It!

The Pro Audio publication with 'Rapid Response'

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

What's New in Pro Audio

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Miller Freeman
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C Audio GB series

New GB series power amplifiers are available in power ratings of 130W, 260W and 380W RMS per channel into 8 Ohms. All three units will run into loads as low as 2 Ohms.

Aimed at the MI and small-scale installation markets, the standard features on the amps include clip limiters, two position HP filter and a twin speed fan. The units also support the C Audio AMPSAP protocol, allowing them to incorporate functions including speaker protection, crossover and equalisation.

C Audio 100

RH amps

The P2400 and P2700 are dual channel amps delivering 350W and 500W per channel in to 4 Ohms respectively. Both have provision for plug-in controller modules which eliminate the need for separate controllers or electronic crossovers, compressors and limiters. Self-restoring protective circuitry safeguards against damage from overheating, short circuits, subsonic and ultrasonic signals and DC appearing in the output. Status LEDs give a visual indication of each channel's operating condition and of any problems.

The CDT1 driver used in the CDT350 series large format horns combines the output of an 8-inch mid range and 1-inch high frequency driver in a single 350W, 2-way device. The horns are available in 40 x 20, 60 x 40 and 90 x 40 degree versions and include hanging points and a weather resistant cover.

Renkus-Heinz 101

TOA DPA series

The DPA series of power amplifiers is designed to offer an attractive price/performance ratio for a variety of sound reinforcement and installation applications.

Offering power ratings of 400W, 600W and 1000W per channel into 4 Ohms, the two smaller units are 2U in height with the largest DPA being 3U. All are fitted with protection circuitry.

TOA 102

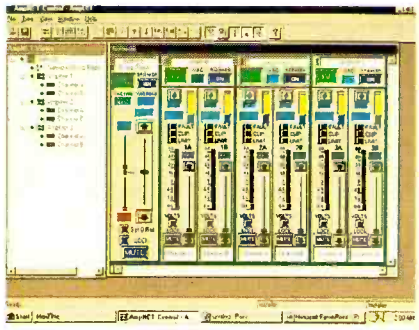
Crest launches

TKS amps are more compact and lighter than the current Professional Series and have direct computer control network connection for NexSys software monitoring, control and load analysis and on-board DSP modules with digital or analogue capability. The Pro2 Series amps are described as cost effective and lightweight and will initially be available in 600, 1000 and 1200W versions.

Crest 103

Apogee's AmpNET 98

Apogee has introduced AmpNET 98 as an enhanced version of its amp control software for DA Series digitally controlled amp compatibility out of the box and the company's SA Series and CA Series amps can be upgraded to run AmpNET. The new version has all the features of the previous version and works with DA Series digitally controlled amps out of the box, the SA Series and CA Series amps which can be upgraded for networking ,but adds support for MA Series modular multichannel amps which are designed for the commercial sound market.



Apogee 104

Martin Audio

An addition to the Martin product range is a lightweight power amplifier.

The E1300 is described as 'the first in a new generation of high-specification lightweight power amplifiers' and is said to benefit from a high-frequency, linear power supply, custom heat exchanger and high current, floating output stage.

Weighing less than 1kg, the amplifier itself produces 650W per channel into 4 Ohms and the overall system includes a plug-in front panel card facility which eliminates the need for external controllers. A four-stage thermal management provision is linked to two high flow fans in order to maintain the system temerature.

There is also a dedicated output that can be used for a sub bass cabinet when another card is fitted. Inputs are on balanced XLRs and integral limiters are fitted to ensure that the amplifier never clips.

Martin Audio 108

Electro-Voice

Also new are the kW series amplifiers which use improved switching technology to allow smaller transformers, while conservative thermal design results in smaller heat sinks and lower operating temperatures. The result is a smaller, more reliable unit. Low frequency performance is enhanced by EV's proprietary Dynamic Signal Processing switches which match the amp to the speaker, enabling custom-tuning to suit different PA systems.

The three models are the 300W kW1 weighing 21lb/9.5kg, the 450W kW1.5 weighing 24lb/10.9kg, and the 550W kW2 weighing 25lb/11.4kg.

EVI 107

Rapid Response!

Card inside back cover

Crown K2

The K2 amplifier is said to generate virtually no component-degrading heat and to consume less energy than competing amplifiers, due to its BCA (Balanced Current Amplifier) design. Overall, the amplifier is said to be three times more thermally efficient than any other amplifier on the market, which has enabled the manufacturer to use a sealed casing, protecting the components from dust and environmental problems. The K2 delivers 1,250W per channel into 2 Ohms.

Crown 105

Altec 7100s

There are three amplifiers in the new 7100 series designed for fixed applications such as paging and background music. All are dual channel and are compatible with EVI's Interactive Technology network for remote control. Model 7120 produces 136W per channel, 7140A 215W and 7140A 437W into 8 Ohms. All are equipped with XLR and screw terminals and have options for plug-in signal processing.

Altec 106

CyberLogic

Install options for the NC-800 series of eight channel Power Systems include a new power frame, rear connector panel and control panel. The connector panel provides barrier strip connections and the control panel has a variable gain control behind the panel. Overall cost saving is described as 'significant'.

CyberLogic 109

Micro amp upgrade from ARX

The updated Micro system from ARX includes the MicroDrive amp which is a 3-channel unit with on-board speaker processing.

It contains all the circuitry of the MicroPro loudspeaker processor plus amplification to power one or two MicroMax speakers per side.

MicroMax on-board processing provides phase correction EQ contour, crossover to sub functions and Interactive System Control which monitors the amp output level and protects the speakers.

Extra outputs permit slaving up to other amplifiers while Enhance circuitry is designed to produce the dynamic impact associated with a much larger system.

The LSP2 dual-channel, dual-band loudspeaker processor supplies Band 1 (low frequency) and Band 2 level control, variable HF EQ trim and ISC fail-safe speaker protection. Designed to complement the company's Concert Series Loudspeakers, the LSP2's operating parameters are preset by a range of plug-in model-specific modules for each of ARX's products.

ARX 110

PowerLight

The latest addition to the PowerLight series of power amplifiers is the 1.0HV, which delivers 300W per channel into 8 Ohms and 500W per channel into 4 Ohms. A Class A/B output circuit has been included for low distortion, and the 2U device weighs 8.2kg.

Defeatable clip limiters, detented calibrated gain controls, Neutrik combo connectors, LED meters and a data port for control via QSC's MultiSignal Processor are standard. Also fitted is switching between stereo, parallel and bridged modes of operation.

QSC 111

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

10 POWERPOINTS, 1 COLOR.

	WATTS PER CHANNEL		
POWERLIGHT	8Ω	4Ω	2Ω*
1.0	200	325	500
NEW ▷ 1.0HV	300	500	NR
1.4	300	500	700
1.8	400	650	900
BI-AMP ▷ 1.5X	200 450	325 700	500 1000
BI-AMP ▷ 1.6HVX	300 725	450 1100	NR NR
2.0HV	650	1000	NR
1 CH ▷ 2.4MB	1000	1550	2400
3.4	725	1150	1700
4.0	900	1400	2000
COMING SOON!			
8.0PFC	1800	3000	4000

*1KHz, 1% THD

POWERWAVE

THE BEST SOUNDING, MOST RELIABLE AMPS LOOK BEST IN BLACK.

For three decades, the most demanding professionals have relied on us for high performance power. In fact, they've inspired many of our new specialized models. Take the PowerLight™ 1.0HV for example—it was developed to send smooth sound to your mids and highs. And our 2.4MB delivers 2400 watts of thundering bass to your woofers. We even offer bi-amplified power with our 1.5X and 1.6HVX. So, no matter what your power requirements don't settle for anything but the best. Since the development of our exclusive PowerWave™ technology, PowerLights™ have redefined industry standards for audio performance, reliability and light weight. For more information check out our classic black PowerLight™ amplifiers on our website or call (800) 854-4079.

"HEAR THE POWER OF TECHNOLOGY"

PowerLight™ Features

- PowerWave™ Technology
- Neutrik "Combo" (XLR & 1/4" and barrier balanced input connectors)
- Stereo/bridging/parallel mode switch
- Advanced thermal protection
- Computer Control Data Port
- "Touch proof" binding post output connectors
- Variable speed fan
- Power standby control
- Clip Limiters (user defeatable)
- Detented gain controls with 2 dB steps for easy resetting
- DC, sub audio and thermal overload protection
- Patented Output Averaging™ short circuit protection
- Full LED status arrays

QSC™ AUDIO

www.qscaudio.com

READER RESPONSE No. 002

"PowerLight", "PowerWave","Output Averaging,"and "Hear the Power of Technology" are trademarks of QSC Audio Products, Inc."QSC" and the QSC logo are registered with the U.S. Patent and Trademark Office. Powerlight Patents Pending. QSC Audio Products, Inc.: 1675 MacArthur Blvd., Costa Mesa, CA 92626 USA

Peavey CS3000G

The CS3000G is a power amplifier designed to deliver 3000W RMS into 4 Ohms bridged.

Using patented circuitry based on a Class G design, the device is said to have distortion of less than 0.04% 20Hz-20kHz. Accessory sockets are provided for input transformers and Speakon connectors are provided on the outputs.

The CS800S is a new version of an established amplifier that delivers 420W per channel into 4 Ohms but is 2U high and weighs only 23.5lbs.

According to the manufacturer, the advanced high frequency power supply allows intelligent load and thermal sensing for increased reliability.

Peavey 112

QSC audio adds Mono Block to PowerLight

The PowerLight 2.4 Mono Block amplifier is designed to deliver 2.4kW into 2 Ohms, while still operating from a standard mains supply. The amplifier weighs 18lb, is housed in a 2U casing and is suggested as an ideal way to power multiple subwoofers.

As with other PowerLight devices, the new unit is fitted with Neutrik combo connectors and has defeatable clip inputs along with calibrated gain controls. An HD15 data-port allows control from a QSC MultiSignal processor.

QSC has also launched CM16, the first multisignal processor for its audio networking solution.

This provides control and monitoring for as many as 16 channels of audio. Processing functions include attenuation, signal mute, metering, page input switching, polarity change and input sensitivity. Monitoring facilities include input and output levels, temperature and clipping.

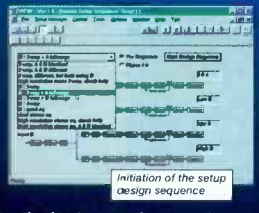
QSC 113

Imagine – no limits!

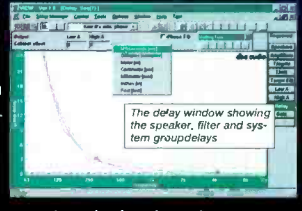
There are lots of black boxes that claim to deliver loudspeaker control.

There is only ONE that actually gives you precise control over ANY loudspeaker system.

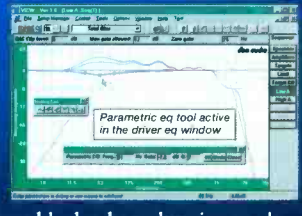
The new LAB. - GRUPPEN DSP 24 is the first 2-way stereo or 3/4-way mono crossover, with full system equalization, independent time delay, and true future proof up-gradability (both the internal operating system and the DSP algorithms).



The DSP 24 uses unique proprietary pseudo FIR algorithms in a custom DSP engine, to produce minimum phase filters, or mixed phase filters compensating the loudspeaker response to create a linear phase speaker system*.



Imagine – up to 96dB/octave crossovers with no ripple or phase shift – 66 bands of parametric equalization per output – A fully protectable database, keeping track of all loudspeaker and filter parameters.



Our VIEW™ software means no tiny hard to read LCD's. Powerful curve shaping tools with full drag/ drop capabilities, means that you get exactly what you want for all frequencies.

The DSP 24 – NO LIMITS .

Call your dealer or distributor for a chance to experience the future. Lab.gruppen's DSP 24 – The new benchmark in digital processing for loudspeaker compensation and control.

LAB.GRUPPEN AB

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Tel: +46 300 168 23. Fax: +46 300 142 46

A feature of VIEW Pro, a separately sold software. VIEW Light is included with DSP 24. VIEW is a trademark of dbx audio ab.

Minimum PC REQUIREMENTS – 486DX, 12MB RAM, 640x480 VGA graphics, Windows95 or NT. WINDOWS is a trademark of Microsoft Corp.

Distributor in UK. and Ireland:
AUTOGRAPH SALES Ltd
+44 171 485 37 49

READER RESPONSE No. 003

Three's a Cloud

Cloud VTX amplifers are designed to work for long periods at continuously high power levels. Features include Dynamic Clip Protection to ensure that amplifeirs and speakers can withstand prolonged use without sistaining damage. The range comprises the 375W per channel VTX750, 600W per channel VTX1200 and the 725W per channel VTX1500.

Cloud 114

Beyerdynamic

The Blueprint A75 is a 1U stereo amplifier delivering 50W per channel at 8 ohms or 75W per channel at 4 ohms. Designed for use in studios or sound contracting installations, it has balanced and unbalanced inputs with output on a four pole Speakon connector. A VCA option is available for remote control.

Beyerdynamic 115

Profuse modules

Exicon MosFet evaluation amplifier modules are available in output powers ranging from 100W to 3kW or more. They are designed for a number of applications including sound reinforcement and hi-fi. Quoted specifications include THD < 0.01%, slew rate >100V/As and a power bandwidth of >100kHz.

Profusion 116

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

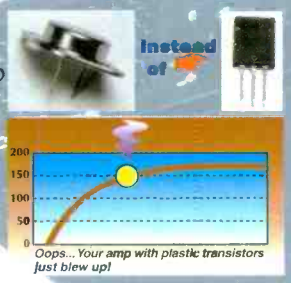
How do you improve the world's best selling power amp?

Very carefully!

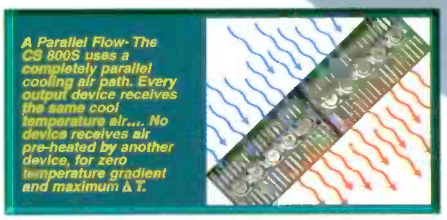
Popular wisdom says "don't change the recipe when you're making good biscuits." The reason the CS®800 has remained dominant for over twenty years is that we've only changed it a few times and when we did, we knew what to throw out and what to keep.

What to Keep

The new CS 800S uses metal (TO-3) power transistors, because plastic devices just don't deliver equivalent thermal performance. While metal devices can be used right up to silicon junction failure, plastic devices degrade 50°C (90°F) sooner. This margin of "thermal headroom" can be the difference between a really loud finale and something more final.



Oops... Your amp with plastic transistors just blew up!


A Parallel Flow- The CS 800S uses a completely parallel cooling air path. Every output device receives the same cool temperature air.... No device receives air pre-heated by another device, for zero temperature gradient and maximum Δ T.

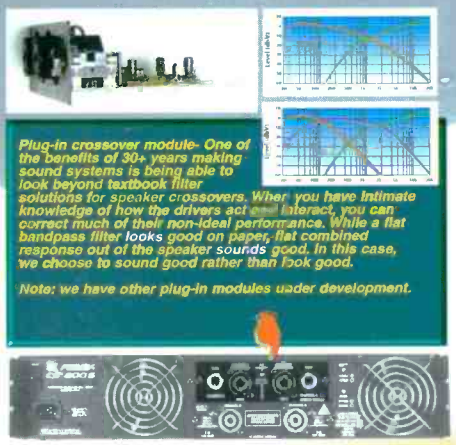
Books have been written about thermal management, but it all boils down to three things: air flow, heat sink area, and Δ T (the difference between the heat radiator and ambient air). The CS 800S uses a unique "parallel flow" heat sink alignment so every transistor receives the same cool temperature air for optimum Δ T.

With two variable-speed 32 CFM fans cooling hundreds of square inches of heat sink area, and metal (TO-3) power devices (in the air stream), the CS 800S will play very loud for very long (years - not minutes or seconds).

The audio amplifier section uses proven Class A/B ultra-linear complementary topology with several improvements that further reduce the distortion/noise floor even lower than the already "audiophile quality" CS®800X (40 v/µsec, <0.03 % thd, etc.)

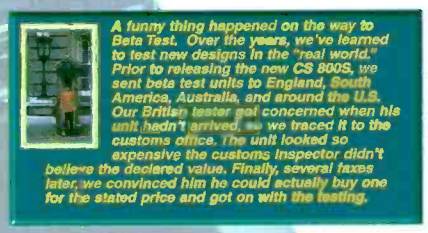
Our exclusive output circuit design (patents pending) completely compensates for amplifier output impedance. We conservatively spec damping factor at 1000 but it is only limited by component tolerance.

Modular inputs and outputs provide flexibility in configuring the CS 800S for your application. Binding post, or Speakon® outputs, it's your call. A clever input circuit accepts anything from XLR balanced line level signals to single-ended speaker level signals. Caution: don't try this with a non-CS amplifier; speaker level input signals will fry most amps on the market today!


Plug-in crossover module- One of the benefits of 30+ years making sound systems is being able to look beyond textbook filter solutions for speaker crossovers. When you have intimate knowledge of how the drivers act and interact, you can correct much of their non-ideal performance. While a flat bandpass filter looks good on paper, flat combined response out of the speaker sounds good. In this case, we choose to sound good rather than look good.

Note: we have other plug-in modules under development.

DDT™ - A fast-acting limiter, triggered by clipping or current limiting, which prevents speaker/equipment damage, is probably our most copied feature. Only Peavey Electronics offers "true" DDT. (U.S. Patent #4,318 053)


A funny thing happened on the way to Beta Test. Over the years, we've learned to test new designs in the "real world." Prior to releasing the new CS 800S, we sent beta test units to England, South America, Australia, and around the U.S. Our British tester got concerned when his unit hadn't arrived, so we traced it to the customs office. The unit looked so expensive the customs inspector didn't believe the declared value. Finally, several faxes later, we convinced him he could actually buy one for the stated price and got on with the testing.

What to Change

The new CS 800S is two rack spaces high and weighs only 23.5 lbs! The CS800S wasn't lightened by using a smaller power transformer and fewer output devices on a "trick" heat sink. We used our years of digital and "switchmode" experience to develop an advanced high frequency power supply. More than just a replacement for the old heavy iron transformer, intelligent load and thermal sensing dynamically interact to provide more power, longer, and more reliably than previous approaches.

This, combined with our more than 30 years of experience building the most reliable solid-state amplifiers in the world, allowed us to redesign the whole amplifier from input to output, merging the best of the old with the best of the new to deliver 1,200 watts of superior performance without breaking your back or your pocketbook. The CS800 just keeps getting better!

1200 W
23.5 lbs.

CS® 800S

PEAVEY ELECTRONICS LTD.
Great Folds Road • Oakley Hay • CORBY • Northants NN18 9ET • England
Telephone: +44 (0) 1536 461234 • Fax: +44 (0) 1536 747222
http://www.peavey.com • AOL Keyword: Peavey • CompuServe: Go Peavey

PEAVEY®

READER RESPONSE No. 004

Mini stagebox

Deltron has launched a low cost mini stagebox that will accept 40 universal XLR connectors front or rear mount. Of simple mild steel construction it can be supplied as a plain box or prewired assembly painted matt black.

Deltron 117

HHB Hi8 tape

HHB DA113 DTRS digital 8-track tape is optimised for DA-88 and PCM800 machines in 113-minute lengths. It has a specially formulated metal binder said to ensure a negligible drop in output after repeated playback cycles.

HHB 118

Studio management

Studio Suite is a PC/Mac software package for studio management that organises, manages and simplifies the working of a multiroom facility. Modules include click'n'book calendar, contacts, calls and letters, production orders, sessions, invoices, recording budgets, tape library, tape labels, tape release, track sheets, tape stock, recall sheets, equipment inventory, maintenance, part inventory, sample library, patchbay labeller, and bar code labels.

AlterMedia 119

Valve guide

Svetlana Electron Devices, which claims to be the largest valve manufacturer in the world, has a new product guide and catalogue. From pentode to beam tetrode and power triode, the literature includes detailed information including performance curves for each tube.

Svetlana 120

Dubber update

Audio Electronics Mk 84 and Mk 90 amplifier boards update non-Sondor dubbers for use with Nagra D and Sondor OMA S Magfilm recorders.

The boards are housed in self-powered 19-inch 3U racks - one rack for up to eight replay tracks or four record/replay tracks. The control unit measures 19 inches by 1U and can be placed remotely. The units automatically reduce the level of line output in high-speed mode, and when reverse or stop is selected recording is automatically disabled.

Sondor provides all plugs needed to connect mains, heads and lines, and detailed documentation is included.

Sondor 121

Rane balances

Converting four mono unbalanced phono -10dB signals to +4dB balanced XLR or vice versa, the BB44X Balance Buddy is fitted with one pair of male and one pair of female XLRs.

There is also an expander to convert the unit to eight channels within the same 19-inch chassis.

The device is based on nickel core passive transformers and is said to have no effect on signal to noise performance.

SSE22 is a stereo equaliser designed to correct the surround channels of home entertainment systems. It combines an 11 band graphic section with a two-band parametric.

Rane 122

Battery preamp

The MD-1 is a compact battery powered mic preamp line driver with built in headphones monitoring and line input capability. The input stage has a transformer isolated studio quality preamp with gain control over 40dB and phantom power. The output stage is also transformer isolated and the entire device can be bypassed in a Loop Thru mode while still permitting headphones monitoring.

Whirlwind insert snakes are targeted at desks that use 1/4-inch jacks for their inserts. Available in 4 and 8-channel versions TT and XLR connectors are optional at the processor end of the snakes.

Whirlwind 123

Audio Standard

LK connectors

THE AUDIO MULTIPIN CONNECTION

STANDARD !

LK

LKP

LKG

- Male and female for both cable and panel version.
- High resistance of the locking ring to the release.
- Audible "snap in" lock for full and safe coupling.
- Skin Top cable clamp with anti-bend spring.
- Waterproof to 10 m (33 ft) for 12 hours.
- Guaranteed for over 2000 applications.
- Bayonet locking ring.

- Conceived for audio applications.
- Availabel from 13 to 150 pins.

READER RESPONSE No. 005

Link

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Internet: www.pronet.it/link E-mail link.pro@iol.it

4-channel DI

The Radial JD4 is a 4-channel rackmounted direct box that uses Jensen audio transformers and Mogami cable and was designed with input from the live and recording studio communities. It uses the circuitry from Cabletek's JD1 DI which is claimed to be flat to 80kHz, has a phase response that is said to be 'spot on' and is said to be virtually impossible to overload.

Entirely passive, input and through connectors have been paired on the front and back of the unit and supersonic filters on each channel reduce the noise from keyboards and computers. A phase reverse switch is included along with a stereo sum switch, which takes a stereo output from a keyboard and sums it to mono, plus a ground lift and 15dB pad.

The Radial Convertible is a 50-channel audio snake that is set up in metric rows of ten. The last ten channels are paralleled with male output connectors allowing the snake to be used in a 40 x 10 or 24 x 8 configuration. The device is also equipped with a Ground Test Circuit which self tests the 50 channels for abnormal ground hum.

Cabletek 124

Three-colour knobs from Re'an

The Re'an P3 three-colour knobs claim the ability to add a range of colour combinations never possible before with separate colours for the body, cap and pointer moulded together in a single process. The knobs are manufactured from the company's soft-touch material.

Re'an 266

Precert test

The most commonly used emission test instruments have been combined in a single cost effective package for precertification test capabilities.

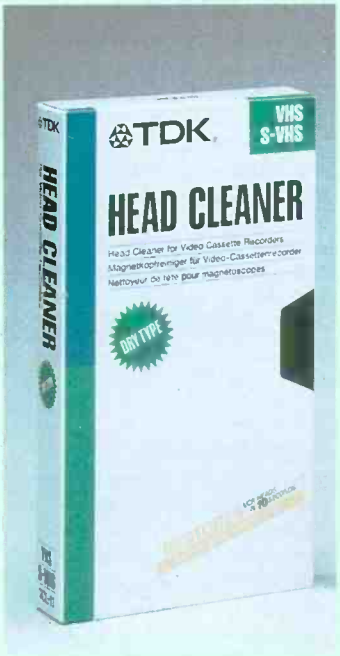
The ES-Plus comprises the 150kHz-1GHz test receiver ESPC from Rohde & Schwarz and the 10kHz-3.5GHz spectrum analyser R4131C from Advantest supplied with Rohde & Schwarz Windows software ESPC-K1.

Rohde & Schwarz 125

ASL checks

A loudspeaker polarity checking system, the SP-01 combines an impulse generator with an acoustic receiver. Linked to any line level input, the impulse generator produces a click once a second, while a five-stage filter allows the user to eliminate interference outside the band of interest. The hand-held acoustic receiver contains two LEDs that reveal whether the speakers under test are in phase or not.

ASL 126



ADAT cleaner

TDK's TCL-11 head cleaner for ADAT machines is a non-abrasive, dry head cleaner for VHS and S-VHS systems. The product follows the introduction of TDK's Studio range of products which includes professional grade CD-R, MiniDisc, Hi8 and DAT media.

TDK 127

READER RESPONSE No. 006

Merlin DC to AC inverter

Notebook computers, test equipment and other electronic devices can be run from a car by using the NOTEpower 75 to convert the 12V battery supply to 230V AC electricity.

The NOTEpower 75 is the smallest in a range of DC to AC invertors. The manufacturer offers units which provide up to 2,500W of power. Possible applications include the use of mains powered audio devices on location.

Merlin 128

Beyerdynamic

Roxx Series 301 is a personal headphone amplifier and line checker. Accepting mic, line or speaker level signals - balanced or unbalanced - the device has male and female XLR connectors, as well as mono/stereo jack. Fitted with level controls and a -20dB pad, the amplifier also has a built-in limiter.

Beyerdynamic 129

ARX quad direct box

The DI-4 is a quad direct box and stereo line mixer in one unit. It provides unbalanced to balanced interfacing with gain or padding, ground lifting and stereo mixing. It is also equipped with aux sends for monitors and effects with a stereo aux return that brings the signal back onto the stereo buses.

ARX 130

BSS active DI box

The AR-133 active DI box/line balancer is designed to be affordable to musicians as well as studios and sound reinforcement companies. The unit includes a battery supply and can also be phantom powered. Inputs are on jack and XLR with the output on balanced XLR. Two stages of input attenuation are provided and there is a ground lift on the output. The signal path is an enhanced version of the established AR-116.

BSS 131

Alphaton

The FC-100 feedback controller is again available. Designed to provide between 6dB and 10dB of additional gain before feedback, the unit can be used with piezo transducer equipped musical instruments as well as microphones. The unit automatically applies a notch filter to offending frequencies.

Scheck Audio 132

National Semiconductor

An audio 'system on a chip', the LM4832 is a stereo audio amplifier that also incorporates the ability to control treble, bass, volume, 3D sound and microphone sensitivity. In speaker mode, the chip typically delivers 500mW at 5V and in headphone mode, delivers 75mW into a 32 Ohm load. With its low power consumption, the device is suitable for portable audio editing or multimedia systems.

NS 133

Link in pairs

The Italian cable and connector manufacturer recently introduced three audio products. The LKSSA series of multipair cables is available with between two and 48 individually screened pairs. Each pair also has a drain wire and a transparent jacket showing the pair identification number.

AD audio distribution systems are modular arrangements that allow a variety of stage boxes to be assembled, while the Outboard Box is designed for effects racks and allows all units to be interfaced to the console with a multi-pin connector.

Link 136

APLs faders and knobs

New slimline faders from ALPS claim attenuation levels exceeding 110dB, resistance values of 10kOhms minimum and availability in 600mm and 100mm versions. The EM20 range of magnetic encoders have 40 detented positions with a pulse per position and the option of a built-in push-button. An optional 31-LED array can be fitted around the encoder to enhance position recognition and can be mounted directly on to the PCB.

Roxburgh 134

Elma switches

The E27 series of incremental encoder switches is said to offer an operating lifetime of 100,000 full rotations. The E27 consists of a rotational contact generator that produces a series of indexing pulses at each of two output lines when the shaft is rotated. Each pulse is interpreted by the system as an increment or decrement. A typical application is the simulation of potentiometers, with the ability to employ any characteristic desired.

In addition, the shaft has a push-button action, typically used to represent a reset or acknowledge command.

Elma 137

Sonifex one box solution

Described as a 'one-box solution to a radio station's central equipment needs', Station Master is designed to simplify installations by eliminating much of the wiring required for routing and switching.

Station Master connects studios and switches them to air. It also distributes outside sources and incoming news feeds, provides multiple logging feeds and enables the monitoring of studio outputs, incoming feeds and main output.

In addition, Station Master incorporates a 5-location talkback system which is said to be compatible with most broadcast audio consoles. Station Master is also said to cost less than the usual rackmount switching equipment.

Sonifex 135

Klotz test & DI

New from Klotz are a cable tester, two DI boxes and a mains distribution system.

The Audiocheck cable tester is a microprocessor controlled device fitted with LEDs to indicate circuit status. Designed to work with all common professional audio connectors, the Audiocheck is fitted with male and female 3-pin XLRs, 3.5mm and quarter-inch jack (stereo or mono), 4-pole Speakon, German IS 180 degree 3-, 5- and 7-pole, German IS 240 degree 5- and 6-pole, plus phono socket.

The D-10 is a passive DI box and the AD-100 X is an active unit using two 9V batteries or 48V phantom power. Both units have parallel XLR and quarter-inch jack outputs, ground-lift, and a two stage lowpass filter designed to simulate 12- and 10-inch speakers.

The modular 19-inch power distribution system is an addition to the existing Distribution line. Designed to meet a number of international standards, the system complies with CEI 884-1, is fireproof to 750 degrees C and is self-extinguishing to UL standards. In addition to enabling the distribution of power, the new system supports a variety of modules for protection against overloads, short-circuits, malfunctions and other conditions.

Klotz 138

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Valve bias

Biasking is a simple but accurate diagnostic tool designed to read current flowing through the output tube of an amplifier. It works on most octal socket tube amps, is small enough to carry in a guitar case, requires no power source other than the amp it is plugged in to, and can be used to match tubes into pairs.

Svetlana 139

Acoustic modules

IAS-A1/A2 and IAS-D1 are acoustic modules for the low-priced acoustic optimisation of smaller studios. The modules are accompanied by general installation instructions free of charge. An alternative to on-the-spot consultation is the measurement CD which can be used for simple measurement of reverberation time in the rooms which can then be evaluated by the acoustic engineers of IAS.

The modules are extremely flat in design and serve to provide absorption of resonances and the optimisation of reverberation time. The A1 is a low/mid frequency absorber, the A2 a broadband absorber for reverberation time correction while the D1 is a diffuser for mixing the generated sound energy.

IAS 140

Furman units

The manufacturer offers a useful range of rack-mounted devices including systems with integral rack illumination (as above) and mains power conditioners.

Furman 141

Penn handle

Penn Fabrication has produced a new recessed pull-out handle kit for flight cases. The H2000 retractable handle fits inside the case beneath either a false bottom or the foam lining, with the handle grip located in a preformed recess at one end of the bottom of the case. The handle is released by a sliding thumb catch, and extends to a predetermined length where it automatically locks into place.

A W2001 kit comprising a pair of wheels, also in preformed recesses, are fitted at the opposite end of the case, so that when the extended handle is lifted and the case tilted, it performs in the same way as a pull-along suitcase.

Penn Fabrication 142

Analog Devices

The HUSH single-ended noise reduction is now available on a single chip. The system, which is based on a combination of variable filtering and downward expansion with an adaptive noise threshold detector, is said to provide up to 25dB of noise reduction.

The SSM2000 has an external VCA control input and has functions including TTL level controlled mute and defeat for A/B comparison. A 100dB dynamic range is specified.

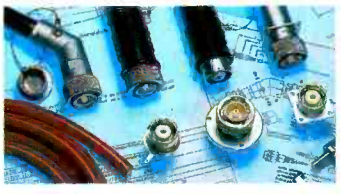
Analog Devices 143

Belden

An addition to the Brilliance family is an AES-EBU digital audio cable, which the company says gives 'unsurpassed performance' in analogue applications, thereby enabling facilities to 'future proof' installations in anticipation of an increasingly digital environment. Belden has also patented a new braid shield which it claims to give 93% coverage but with high flexibility and greatly increased flex life. The new 'French Braid' is also said to allow a lower DC loop resistance.

The 1800F high flex AES-EBU digital audio interconnect cable is recommended as a digital audio patch cable, for analogue microphone cabling and other demanding audio applications. The matt PVC jacket is available in a number of colours.

Belden 144



Klotz Triax

In addition to making test equipment and DI interfaces, Klotz offers a wide range of pre-made cables.

Klotz 145

Kart-a-bag

has released a new range of hand trucks under the Remin name, with components including telescoping handles and wheels.

Kart-a-bag 146

Sifam

Sifam has released a range of two-colour soft-touch collet knobs, in 15mm and 21mm diameter. They are suitable for use as a dual concentric set and will accommodate existing Sifam caps.

Sifam 147

Deltron

Has a new range of MI cable assemblies that comprises ready made cables for XLR mic, jack musical instrument and MIDI applications. Available in lengths ranging from 3m to 10m, the leads are made from Gotham cable to ensure a high level of RF rejection.

Deltron Components has introduced a Brighteye connector which flashes a red LED if MIDI data is present in MIDI cables, Out or Thru connectors.

Deltron 148

Profusion

Said to contain 'all the active circuitry to construct a wide range of dynamics processors', That Analog Engine is a single chip offering VCA, RMS level sensor and three general purpose op-amps. Suggested applications include speaker protection and a range of devices including compressors, noise gates and noise reduction systems. The manufacturer quotes dynamic range in excess of 115dB, with THD typically 0.003% at 0dB gain. Combining VCA and RMS detection on the same chip is said to allow very accurate tracking.

Profusion 149

MAYAH COMMUNICATIONS

SendIt!

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READER RESPONSE No. 008

Get MAYAH™ – and get your audio everywhere

Behringer

Behringer's MX3282 uses Panasonic faders throughout and boasts eight sub groups with 3-band EQ with a swept mid and high pass filter on all input channels.

The company's DSP8000 Ultra Curve aims to replace the signal generator, real time analyser and calibrated measuring mic previously used by engineers to equalise a live sound system. Using the newly introduced ultra-linear ECM8000 omnidirectional mic allows the Ultra-Curve to perform the task while also adding limiting, noise gate, feedback elimination, delay and AES-EBU connectivity.

Behringer 150

Millennia mixer

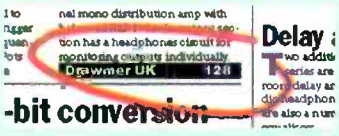
Offering full compatibility with the GML HRT-9100 mixing system, the Millennia Mixing Suite claims audio excellence and modular flexibility.

With an expanding selection of input and outputs options, the mixer is intended for critical location recording, submixing, MIDI rig mixing and multi-source mastering. Mixers can be combined for a total of 80 inputs.

Employing circuitry similar to that found in the company's mic preamps, the Mixing Suite is almost entirely DC coupled without the addition of servo amplifiers.

Millennia 151

Rapid Response!



Card inside back cover

SSL launches Avant multi-op digital

Part of the A-Series family born from the Axiom, Avant is a multi-operator system that offers up to three motion control panels, three monitor panels and multiple joy sticks. It boasts compatibility with SSL digital products and can share resources with Axiom, Aysis, Altimix or SL 9000 J Series installations within a facility.

Frame sizes include 48, 56, 64, 72, 80, 88, and 96 channels and all offer control surface layering allowing 192 inputs to be controlled from the smallest frame. Control surface channels with fully automated 4-band EQ access a library of different EQ curves; fully automated dynamics section; 48 automated digital delays and 24 reverbs assignable to any channel; automated bus routing; and eight auxes per channel configurable as mono or stereo. Real Time Resource processing means items like EQ, dynamics and routing are always available to every channel regardless of console size.

Avant offers 32 record buses for multiple stem mixes which allows each of the three mix engineers to perform an independent surround mix for each stem (music, dialogue and effects) of a film project whether it be for 7.1, 5.1, or 4 channel matrix. The desk has an integrated 64 into 8 monitor matrix and 50 format and record presets on a per project basis allow quick setup and comparisons between different formats.

A recorder control panel has paddle type switches and punch in and out on the master recorders can be performed on individual or multiple tracks. Control of conventional film chains and serially controlled 8-track is supplemented by assignable joy sticks capable of controlling individual and groups of channels.

Each Avant system comes with the DiskTrack and Hub Router system - the routing matrix handling up to 2000 channels of audio.

SSL 152

Soundcraft B400 broadcast

A derivative of the B800 broadcast desk, Soundcraft's B400 is available in frame sizes from 24 to 56 modules filled with mono, stereo and stereo telco modules. Features include one stereo and three mono auxes, LED indicators on all switches and flexible clean feed facilities through direct outputs on all channels.

Soundcraft 153

News travels fast in Cyberspace

and no-one has more audio news than Miller Freeman Entertainment publishers of Studio Sound, Whats New In Pro Audio, Pro Sound News Europe, Pro Sound News Asia and TVB Europe. Now They're all on line

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The State of the *Art*

Dream Series 96kHz A/D and D/A converters for music

AD-2

96kHz 24-bit A/D converter

State of the art performance with Prism Sound's proprietary A/D conversion system

Dual digital outputs allow (for example) simultaneous 44.1kHz, 16-bit noise-shaped and 96kHz 24-bit recordings

Built-in digital-to-digital synchronous sampling-rate converter with SNS noise-shaping system for high-quality down-conversion for CD

Comprehensive range of interface formats:
TOSLINK, SPDIF, SDIF-2 & AES ports with both 2-wire and 2x speed 96kHz formats

High-quality internal master clock plus proprietary high-order, high-attenuation triple PLL system to eliminate external clock jitter without incurring long lock-up times

Fully impedance and voltage balanced transformerless inputs

DRE encoder and decoder for hi-bit performance using 16-bit media

DA-2

96kHz 24-bit D/A converter

State of the art performance with Prism Sound's proprietary D/A conversion system

Full 24-bit processing for all inputs avoids truncation distortion or extra dithering

Comprehensive range of interface formats:
TOSLINK, SPDIF, SDIF-2 & AES ports with both 2-wire and 2x speed 96kHz formats

Interface jitter effects 100% eliminated with clock master mode, plus proprietary high attenuation triple PLL system

Independently floating, transformerless balanced outputs

7-way multi-format source selector, with feed-through digital output

DRE decoder for hi-bit performance using 16-bit recording media

The Super-Noise-Shaping (SNS) system is a dithered re-quantizing system for digital word-length reduction with a broad range of spectral weightings to suit all music types and preferences. Typical applications include 24- to 16-bit conversion for CD.

READER RESPONSE No. 010

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Prism Sound

FF V3.10

Version V3.10 Flying Faders software will be the final release of the automation system with Encore taking on the development path for the company's systems. V3.10 adds a stationary Safe Stop facility and a safer disk formatting procedure which is no longer possible via the copy disk window. Also for improved safety, the mix and special files backup and restore utilities have been relocated from the Disk menu. The release also incorporates minor enhancements to the handling of mutes and channel events. V3.10 is available together with a copy of the operator's manual to Flying Faders owners for a small handling charge while freelance engineers may download a copy of the release notes and a full manual from the company's website.

AMS Neve 154

Crest desks

Crest Audio has two new desks. The V12 is its new flagship live performance desk for high-end mobile and installed sound and has 12 VCA groups, doubles as a monitor mixer and has sidecar expanders that can realise 220 mono or stereo channels. Sixteen aux sends are provided as are separate direct output controls, microprocessor-based mute and MIDI control, illuminated switches throughout and 8 mono and 4 stereo matrix outputs. The X Series desk has feature sets to address particular installation and tour disciplines. Two versions are currently available: the X-Eight-HS with group and master sections adaptable for FOH and stage monitor use, and the X-Eight-RT which can be configured for live performance recording and theatre applications. Eight-bus, 4-bus, stage monitoring and rackmounting versions will also be available.

Crest 155

DAW mixer

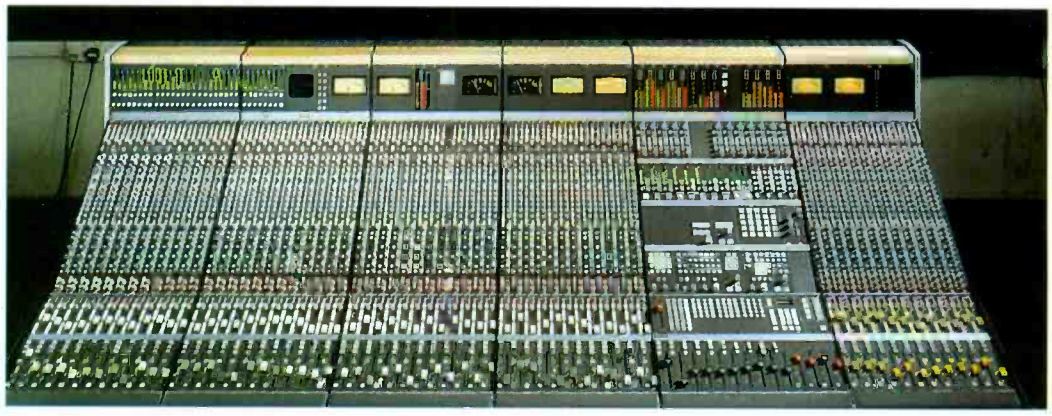
Audix Broadcast's ADD5000 digital desktop workstation mixer is designed for use in news, small production and editing suites and is designed to allows the monitor to be mounted directly above the control surface and the keyboard directly in front of the user. The ADC7000 mixer augments the company's range of live radio on-air desk systems and can be supplied in in-line or split formats with up to 16 channels. The desk stores EQ, dynamics and routing configurations which can be saved to and recalled from a smart card.

Audix Broadcast 156

Midas

Midas now offers a specially configured version of the XL4 console for broadcast applications and a broadcast XL200 is scheduled for release in 1998. The broadcast version of the XL4 has adapted routing and monitoring.

EVI Audio 157



Calrec introduces Q2 and Compact 2 for broadcast

The Calrec Q2 offers a high density of mono and stereo broadcast facilities together with optional multitrack recording and replay circuits. Channel modules have dual inputs and facilities are not compromised on stereo modules as these have MS conversion and width control and also feature 4-band EQ and two filters plus Surround capability and VCA grouping.

The Calrec Compact 2 desk is designed for medium-sized production facilities and vehicles where space it at a premium. It is available with up to 56 inputs and with mono mic/line, stereo mic and stereo line inputs and eight stereo or mono subgroups. All channels have 3-band EQ with swept mid, high and lowpass filters, mix minus output with talkback and metering, 6 auxes, surround panning and 4 VCA groups plus an optional surround monitoring panel.

Calrec 158

Amek Soho lowers DMS cost

Amek has re-engineered the technology of its DMS to develop the Soho lower-cost digital desk designed to accompany third-party DAWs in post. With 16 output buses and 48 channels at mix with EQ, dynamics and auxes, the desk is fully automated and able to work in 5.1. Two sizes are available: a version with 8 faders, 32 digital inputs, 8 analogue inputs and 4 mic inputs; and a version with 16 faders, 24 analogue inputs, 32 digital inputs and 4 mic inputs. On board processing includes effects in addition to the company's remote VFX control software.

Amek 159

Ramsa digital desk debuts

The long rumoured Ramsa digital desk made a clandestine appearance on the Panasonic stand at the AES. Slated for release after NAMM at a price of around $5000 US the WRDA7 is similar in appearance to the Yamaha 02R employing a large LCD mounted at the top right of the compact surface and employing an assignable facilities type strip to the right with press-sensitive controllers. It features 16 analogue and 16 digital inputs, 24-bit A-D/D-A conversion, 32-bit internal processing, 8 buses, and 4-band EQ and dynamics on each channel.

A derivative of the large-scale DX1000 digital desk installed in a number of Tokyo theatres, the new board has moving faders, MMC, 5.1 capability as standard, 50 snapshots and dynamic automation although an external computer will be required to store larger volumes of mix data.

Two WRDA7s can be strapped together to create a larger mixer with full bidirectional control between the two. A variety of interface cards will be available including ADAT, TDIF, AES-EBU and SPDIF.

Ramsa 160

Location mixer

SQN's SQN-4S has been upgraded to Series IV status with an extension to the control panel placing all the controls on one face.

New features include redesigned all-electronic input amps, larger output transformers for low distortion bass, virtually unbreakable analogue level meters, PFL, slating microphone, logic processing of many switching functions leading to a minimal length audio path, optional feed for four output channels and improved filtering and screening.

SQN 161

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inspired TASCAM

Digital Synergy

TASCAM TM-D8000

digital mixing from the digital recording people

TASCAM understands how intuitive digital recording has to be, and they have built the TM-D8000 around that understanding.

■ **Extensive "up-top" control surface** with multiple faders and controls, provides maximum degree of functionality at any time, while optimum use of assignability provides deeper access to functions and parameters when required. ■ **Synchronization and control**; direct digital interfacing (TDIF, AES/EBU S/FDIF) and full function transport control (TASCAM sync I/O, Sony P2, MMC) enable desk and recorders to operate seamlessly. ■ **High resolution A/D convertors**, high-performance mic-amps and balanced line inputs. ■ **Programmable** level EQ, pan, aux. solo/cue and dynamics' processing operate under snap-shot scene automation, with on-line dynamic automation software also available. ■ **Full scale monitor and comms** facilities.

LCD console/channel status and parameter values display, and full analogue and digital I/O metering give the TM-D8000 an operational status superior to far more expensive analogue recording and post production consoles.

TASCAM 5 Marlin House, The Croxley Centre, Watford, Herts, WD1 8YA. **Brochure Hotline 01923 819630**

READER RESPONSE No. 011

3D Yamaha 02R

When connected to a Yamaha 02R digital desk, the SoundWare SP02 joystick allows automated surround panning of every channel.
Supported formats include Dolby Surround, Dolby Digital, DVD, DTS, SDDS and the proposed 7.1 MPEG. In addition, the manufacturer says that the SP02 can simultaneously control a TC effects processor for integrated panning and effects changes.
V2 software for the O2R adds many of the features already standard on the cheaper 03D such as on-board surround capability plus numerous additions the automation including a 'touch' mode for the desk's motorised faders.

Yamaha 162

Three Powerstations

There is now a range of three Spirit Powerstation powered mixers for live sound use. All feature a new Lexicon effects section with dual effect capability and user memories for edited settings. Effects combinations include chorus and reverb, chorus and delay, and reverb and delay. There are now three aux sends per channel, with one send dedicated to the internal Lexicon. An 18dB high pass filter and UltraMic padless preamps have also been added. Powerstation 350 has six mono mic/line and two stereo inputs, coupled to a 175W per channel, 4 Ohm amplifier. Powerstation 600 has eight mono mic/line and two stereo inputs, coupled to a 300W per channel, 4 Ohm amplifier. Powerstation 1200 has 16 mono mic/line channels and a 600W per channel, 4 Ohm amplifier.

Spirit 163

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.

Rolls 164

Otari debuts Advanta digital desk

Otari has unveiled the Advanta digital console which uses 40-bit DSP and is capable of operating at 24 bits and 96kHz sampling rate. It offers 256 inputs in a music mixing version with three operator positions in a film variant.

An expandable control surface is connected via the Ethernet communications protocol to a processing rack which contains the core digital engine, I-O modules and power supplies.

Sixteen physical paths are provided per input section, each with eight layered Virtual paths for up to 128 input paths per input section and 1024 virtual paths per console.

Sixteen 40-segment tricoloured LED meters on each input section are user configurable while Multi Chroma technology permits two parameters to be viewed simultaneously on the same meter.

Processing includes six filters, three dynamics, one insert send and return and an assortment of effects functions.

Bus and Path resources can be allocated by the user and console configurations may be stored and recalled with frame accuracy.

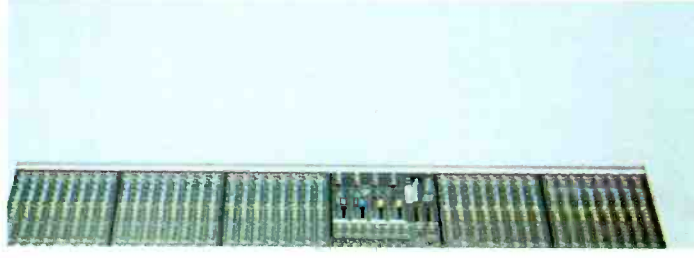
Otari 165

Allen & Heath GL3300 has dual role live

The 8-group GL3300 sound reinforcement console, like the GL2000 and GL4000, is a dual function mixer, allowing it to be used in FOH, monitor roles, or combining both tasks simultaneously.

The key to the console's dual functionality is a series of sub-panel switches which reconfigure the auxes as main outputs and the mono out as the engineer's listen wedge.

GL3300 builds on the GL3000, the most notable additions are 4 mute groups, group mute switches, direct outputs on all channels, an 8 group out option on a D connector, groups 1-4 inserts, +6dB boost on auxes and matrix sends, and the choice of different mono/stereo input configurations. GL3300 is available in 16, 24, 32 and 40 channel frame sizes.



Mono inputs are on balanced XLRs and balanced jacks with insert and direct output. Mic/line inputs have 4-band, 2 sweep EQ, 8 auxes on individual controls, LED metering and 100mm faders. Stereo inputs (if chosen) offer dual mic inputs and now have balanced jacks and XLRs. Two Stereo FX returns are also fitted as standard.

In addition to individual channel metering and 12 segment LED's on the L-R outputs, GL3300 can be fitted with an optional VU meterpod.

The MixWizard Series WZ14:4:2 is designed for live sound and recording applications and is also a dual function console. Like all the MixWizards, WZ14:4:2 has 4 band EQ, 100mm faders, vertical PCB construction, nutted pots and Minimum Signal Path architecture.

A&H 166

SSL Aysis Air

Aysis Air is a 48-channel Axiom-derived digital console specifically configured for live broadcasters. It incorporates its own router for standalone operations, yet can be extended to use SSL's Hub Router, providing control of over 2000 sources and destinations. The system offers the advantage of reduced wiring complexity with 95 channels of digital audio on a single coaxial cable. SSL's DiskTrack may also be accessed via the Hub Router.

Aysis Air has a dedicated control surface optimised for real-time mixing operations and all console controls are automated either dynamically or via snapshots. All settings, including routing assignments and settings for faders, EQ, dynamics and effects, can be stored and recalled, selectively or globally.

Main Features include a range of frame sizes with different amounts of layering to fit all rooms, four stereo subgroups, each with inserts and master dynamics, multichannel Surround capability, 20 Mix Minus sends for clean feeds to remote studios and phone-ins and 48 channel direct output sends, switchable pre or post fader.

SSL 167

Midas desk with MIDI mutes

Midas now offers a 50-input, 128-scene MIDI mute package version of the XL200 console. Configured with 42 mono and four stereo inputs, the MIDI mute package allows routing to any combination of 21 audio buses and incorporates a 13x8 matrix.

Ten extra mute groups are provided by the MIDI mute automation system, which can be used in conjunction with a sequencer to save snapshots of mute and solo in place settings.

Midas 168

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Hand it over!

EURODESK

MX2442
24 Channel 4 Bus
Console

MX8000
24/48 Channel 8 Bus
Inline Console
with option. Meterbridge

The Behringer EURODESK series has already received rave reviews with the MX8000 as regards cynamics, translucency and versatility. Now let your creativity run wild with the MX2442, while still keeping a tight grip on things. Full featured Mix-B section, eight busses and six auxes in the MX8000 or four busses and six auxes in the MX2442 give control and flexibility to you, whether live or in recording. Our robust 19" power supply units and the manufacturing under ISO9000 guarantee an exceptional and reliable performance.

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READER RESPONSE No. 012

Lamba

The KAM Imperial is an advanced DJ mixer that uses digital control and programmability of the audio functions for remixing without recourse to multi-track. In particular, there are two Eliminator channels which can selectively remove areas of the frequency spectrum from the programme. It is possible to use both these channels on the same programme simultaneously and route the outputs independently. The KAM Beat Pro mixer is fitted with its own BPM meter, which calculates the tempo from the 110Hz trigger of the bass drum as an aid to track matching.

Lamba 179

Cadac releases channels and preamps

Cadac has two new programmable dual input channel modules for the J-Type console using nulling LEDs to assist with manual resetting in a fashion similar to that on the company's Concert board. All pot and switch settings can be stored as cues and the new modules employ the 4-band EQ section introduced for the F-type.

The company now also produces remote mic preamps (pictured right).

Cadac 183

CONTROL

Sealer test

Designed in co-operation with Germany's IRT, the Scheck Audio UDP100 ultrasonic sealing tester for acoustic testing consists of a battery powered ultrasonic transmitter and receiver housed in two aluminium boxes. Possible acoustic sealing problems between rooms are made audible by the receiver box.

The LST100 is a simple tool for testing loudspeakers without connecting to an amp or PA. It covers five selectable frequencies between 20Hz and 20kHz with three selectable output levels.

Scheck Audio 180

Dolby

A new Dolby Digital multichannel encoder, the DP561B is a lower cost system designed for applications including DVD content generation and digital broadcast. It meets European CE specifications.

Otherwise identical in specification to the original DP561A encoder first used on film soundtracks, the new unit provides an encoder for the European market where Dolby Digital is being used for PAL DVD. It is the standard multi-channel audio format for NTSC DVD.

Dolby 181

Soft codec

Described as a software only audio codec, the Mayah Sendit supports real time transfer with MPEG 1/2 Layer II and III and connects to conventional audio codecs and to PC-based systems such as PCX cards. No special MPEG hardware is required but it needs sound and telcoms cards under Windows 95 or NT on a Pentium. Communications via ISDN is at up to 128kps, modem with 8 to 33.6kbps for stereo or mono signals. An editing tool - EditPro - facilitates cue in, cue out, copy, paste, and take list manipulation.

CCS 182

TV Metering

Chromatec's AM-1 low-cost broadcast quality in-picture audio meter is designed for basic 2-channel analogue audio indication and the bargraph may be half or full screen height, as well as positioned anywhere in the picture.

The mix level of the superimposed image can be adjusted from the front panel or via the remote interface and most popular scales and ballistics are selectable together with input sensitivity.

A peak hold indicator with variable parameters may also be displayed. PAL or NTSC composite video is auto selected.

MS&P 184

Turbosound's phase checker

The Turbosound TPC-1252 Phase Checker Set is designed to check the acoustic phasing and electronic polarity of multiple loudspeaker arrays. The set also performs a variety of other test functions, including cable continuity, cable polarity, locating lines in multicore cables and verifying signal flow through components in the audio path.

It consists of two units: the TPG-12 Pulse Generator and the complementary TPD-52 Pulse Detector. The TPG-12 plugs directly into a power amplifier, electronic crossover, mixing desk or other input via an extended male XLR connector (no patch leads are needed) and generates a unipolar pulse.

The rugged, hand held TPD-52 detector carries a condenser mic for measuring acoustic phase, and a female XLR for electronic polarity. The microphone's low sensitivity ensures that ambient noises will not affect the detector. It senses the positive or negative leading edge of an incoming pulse to determine its polarity, and displays this information with either a red or a green LED.

The TPC-1252 set is built in a 14 gauge steelcase. Current drain on the 9V batteries is extremely low.

Turbosound 185

ISDN remote

The ISDN remote audio router control uses the auxiliary data facility available on many ISDN audio codecs to control an Audionics audio router at the far end allowing full remote control over which audio feed is sent on the audio codec's return line.

It can be used to remotely monitor studios around the world from a central position or from anywhere where an ISDN line and compatible codec are available. Engineers can monitor the audio paths around distant transmitter sites, remote access can be provided to programme material for redistribution or editing and outside broadcast presenters can select their reverse feeds without intervention at the studio end.

Rather than being stored locally, the source names are received in real-time from the matrix. This means that for each matrix accessed, the remote module will display a new set of available source names, exactly the same names as those shown in the studios at the far end. Although it is envisaged that ISDN lines will be the most popular way to use this system, it can also be used with any digital data line that supports RS232 transfer.

Audionics 186

Nicral router

The ARC audio router is designed to provide seamless routing of audio when sending it via ISDN. Designed to form an integrated part of the ARC multi-master system, the audio router can also be used independently. A modular system that can be configured to suit the user's specific requirements, the router is suggested where control is from an existing higher level system, or simply where a competitively priced audio router is required.

Nicral also offers a package comprising the CDQ Prima 110 codec with integral TA and the EasyCall Prima remote control at a reduced price.

Nicral 187

PortaMonitor

RTW's PortaMonitor complements the company's existing product line and uses three DSPs for a wide variety of measurement functions and analysis. It provides level indicators as peak or VU, an audio vector scope, a correlator, an AES-EBU status monitor (showing all the status and data bytes) and a 1/3-octave analyser. A surround options helps the depiction of 3:1, 3:0 or 2:1 signals in a special display mode on the vectorscope and when used in this mode the device calculates the Lt and Rt stereo signals to examine the stereo compatibility of the surround mix.

The PortaMonitor uses a 320 x 240 pixel TFT colour display for measurement results, bargraphs and figures and is distinguished by high contrast images and a wide viewing angle. Physically the unit is the size of two VHS cassettes placed one behind the other and is available in 2 and 4-channel versions.

RTW 188

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AD 149

FILM SOUND MIXER

After years of research the design team that produced some of the most successful portable mixers in the world has developed the definitive mixer for Film Sound Recordists.
You can take for granted the features and qualities that have made Audio Developments famous world-wide for sound quality and ruggedness so here are some extra features you will find especially useful.

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- Private Line
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READER RESPONSE No. 016

Tektronix

The AV601 combines a serial component waveform monitor with a digital audio monitor.
It is designed for television system integrators and video project engineers working in the 270Mb digital component environment.
User definable options include embedded audio monitoring and line level audio outputs.
There are two CRT based displays, one for audio and the other for video.

Tektronix 202

Stereo audio display launch from DK Audio

The latest MSD200 master stereo display introduces a 4-channel mode and other features designed to make life easier for audio engineers. The manufacturer points out that there are times when it is necessary to monitor the left and right stereo signals as well as the sum and difference, thus enabling the stereo width and the mono content to be determined.
In addition to displaying mono, stereo, left, and right, the MSD200 has an electroluminescent display with a 160 degree viewing angle, selectable analogue or AES-EBU operation, built in signal generators and the option of a spectrum analyser.

DK Audio 203

Switchers expand test system

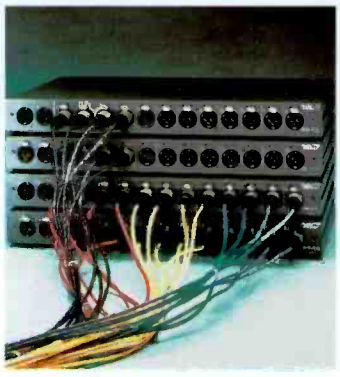
SWR-2122 audio switchers are designed to expand the 2-channel input and output of the Audio Precision System One and System Two audio test systems. The switchers are available in 2 x 12 formats with various connectors to suit specific applications.

Sixteen units can be cascaded to handle 192 inputs and outputs and are suitable for interfacing with multichannel devices or production 'bed of nails' test fixtures.

Based on high-reliability relays, the units preserve the signal integrity of the generator and signals from the device under test for transparent operation. It achieves crosstalk performance that typically exceeds 140dB at 20kHz in balanced operation.

The switchers are controlled by various AP software options via an APIB interface and integrate into APWIN Windows or S1.EXE DOS control software.

AP 206



Portable Precision testing

The Portable One Dual Domain analogue, digital and interface tester includes high performance analogue and digital hardware. Figures quoted include -118dBu analogue analyser noise residuals and -130dB digital distortion figures. Digital interface testing and monitoring functions include jitter generation and measurement, audio bit error rate, and sample rate measurement. The unit has save and recall of stored tests and data.

AP 207

Rohde & Schwarz

The Audio Analyser UP06 can now be enhanced with the AMD-K5 Processor, which is said to have similar performance to an Intel Pentium. This and other options such as the UPL66 with fast processor and IEEE bus interface allow for rapid and continuous testing of audio products on production lines. A modification kit is also available for older models of test equipment.

Rohde & Schwarz 208

HARD DISK

128-track Pentium

US company Methalithis Systems' Digital Wings for Audio v1.4 amounts to a 128-track hard disk recording system with sound card and a CD-ROM that includes the first plug-in - Way Cool Edit by Syntrillium Corporation - which offers a suite of signal processing.
The system claims 128-tracks of simultaneous recording and playback on a Pentium PC under Windows 95 with 16Mb of RAM. The card is reconfigurable via software with upgrades available over the Internet.

Serious Audio 204

Darwin V2.01

Darwin 2.01 software provides support for the new DSP option card for time compression/expansion, pitch transposition with 'de-munchkinisation' and gain/fade level control.
New features include the ability to control Darwin's internal digital mixer via MIDI, the ability to store locate points on the fly, support for the two front panel assignable keys and the ability to back up to low-cost QIC drives which can be mounted inside the machine.

EMU 205

DAR Genesis extends DAW functionality

DAR has launched new Genesis software which will be installed in all current systems with an upgrade path for existing users. Also debuted is CDAdvance - a means of accessing CD material directly from SoundStation and Sabre systems.

Genesis software will form the basis for the company's next generation systems and combines the current user interfaces and multiplatform compatibility with file import/export, networking/OMFI compatibility and the ability to work with a wide range of third party devices. Much larger format multitrack will also be possible.

This introduces a new method of project handling that enables users to open multiple reels simultaneously together with enhanced storage and drive usage.

New editing features include slip, trim, slide, new roll and copy/spot over functions. Sample rate conversion and segment reverse facilities are included.

DAR 209

OTARI

Digital Recorders

DX-5050

2-Channel MO-Recorder & Editor
Inexpensive 1/4" 2-track replacement • special broadcast features with familiar tape-like interface • records in standard PC WAV-file format • compatible with most PC based editors • portable and lightweight design

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PD-20

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DX-5050

PD-80

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READER RESPONSE No. 019

Soundscape reverb

TC Electronic's new plug-in company and Soundscape have announced a reverb plug-in for the Soundscape DAW which uses the DSP capabilities of its SSAC-1 accelerator card.

The plug-in has a graphical approach to parameter control and will be available soon. According to TC it is the first of many similar collaborations that will be announced.

Soundscape 210

MFX3Plus Rev 14.2

Revision 14.2 for Fairlight's MFX3Plus workstation includes 64 levels of undo, an extended Audiobase clip database and search engine, and support for storage media greater than 4Gbytes.

Audiobase provides search facilities for clips by user-defined criteria including wild card and simultaneous multiple-field searches. Clips may be auditioned and a sync point found using audio scrub directly into the Audiobase database before placement in to the current project.

Fairlight's DaD digital audio dubber will be compatible with Avid's Level 2 release of OMF for playback capability with other workstations.

Fairlight 211

Command stations

JL Cooper's MCS3000 series of media command stations provide direct control of computer-based workstations. Control features include touch-sensitive motorised faders, 60 user-programmable function keys, LCD and LED dual displays, five rotary encoders, transport controls, numeric keypad and concentric jog/shuttle wheel. The MCS3800 offers 64 moving fader channels each with four programmable switches and 40 virtual encoder knobs.

With 100 locate points and built-in SMPTE reader and MTC reader, Command stations have MIDI ports and two expansion slots allow optional interface cards to be added.

JL Cooper 212

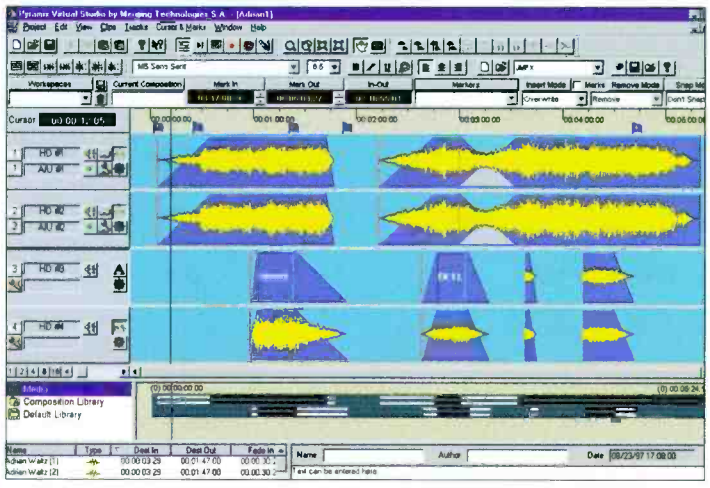
Korg PCI

The latest addition to the Soundlink digital recording system, the 1212 I-O PCI multichannel audio interface offers full functionality of multichannel computer based digital recording on Macs. The card offers 12 inputs and 12 outputs configured as a pair of analogue I-Os, an SPDIF and an 8-channel ADAT optical all of which can be used simultaneously.

The card is also equipped with wordclock in and out aswell as an input for ADAT timecode. It ships with Mac drivers for any Sound Manager-compatible program and Steinberg and E-Magic have announced support. The card is compatible with the DRS 880 A-D interface.

Korg 213

Pyramix Portable DAW



Based on the Pyramix Virtual Studio DAW, the Pyramix Portable has an LCD, 64Mbyte RAM, 180MHz Pentium Pro CPU, Adaptec wide SCSI adapter, external monitor connector and a 9Gbyte drive in a 'lunchbox' sized package. The system is capable of uninterrupted recordings to the full capacity of the recording medium and supports optical disks, Jaz and Syjet media.

Enhancements introduced with V1.2 for Pyramix adds 4-channel 24/96 recording, punch in/out directly to the Project and support for the TDIF-1 interface. The AudioExpress option adds workgroup functionality to the audio production process by permitting the sending and receipt of email containing audio files, EDLs, news and complete multichannel audio productions. Formats include WAV and BWE.

Audio Magic Ring offers high quality sample rate conversion, wordlength convertor including dither and advanced noise shaping, and a normaliser with DC offset removal.

MT 214

File security

Wave Safe is described as the first software product to actively monitor the integrity of audio data and protect sound files from corruption. Wave Safe protects sound files before they travel to back up and storage devices and can then monitor the integrity of the sound files for any loss of fidelity or corruption and provide detailed, printable reports and offer advice should corruption occur.

The process is also able to salvage corrupt sound files and the professional version can rescue sound data from media that Windows and other audio software has deemed unreadable. It works by storing detailed information about the sound files it protects in a central database and then uses these protection details to check the sound files when they are restored or taken out of archive. Should a file corrupt, Wave Safe uses this information and an advanced set of fixing algorithms to rebuild the structure of the sound file and restore it.

Calistan Solutions 216

DVD verified

Sonic Solutions' Sonic DVD PrePlay is a verification tool for DVD title production that emulates the control and playback of a set-top DVD player and permits quality control steps to take place prior to disc manufacture. Features include DVD player navigation and switching of multilingual audio tracks, multi-angle video streams and subtitles. The system can emulate from final DVD disc images as well as intermediate multiplexed streams, allowing producers to check quality during the premastering process.

Sonic and Daikin US Comtec Laboratories have announced 96kHz HDA support for Sonic DVD Creator and Scenarist II. The latter allows publishers to create DVD-Video titles with the full interactivity of the DVD 1.0 standard: full-length movies, educational videos, games, karaoke, interactive marketing tools and multichannel audio titles.

Sonic's DVD Creator has received Dolby Digital AC-3 certification making it the first audio workstation-based Dolby Digital encoder.

Sonic Solutions 218

Broadcast NewsBoss editor

Broadcast Electronics now has a digital audio editor in its NewsBoss newsroom system for radio stations.

Finished audio cuts can be linked to stories written in NewsBoss and then played to air from the Prompter.

Features of the editor include drop markers for finding locations in long recordings, multiple edit screens with cut and paste and four clipboards, zoom in and out, and on-screen entry of in and out cues and description information. The editor cuts in .WAV file format and uses PC audio cards.

AV-VoiceTrack for the company's AudioVault digital audio system allows the station's talent to quickly skip through a day's music and preview song transitions, recording voice tracks right into the playlist for playback later by AudioVault. Voice tracks can be rerecorded or repositioned against the music.

BE 215

Azimuth fix

Win5: Azimuth Corrector is the fifth Cedar process to run on the Cedar for Windows platform. The new module has improved autodetection algorithms, Lissajous and balance metering, 18 output modes and autocorrection to within 0.25 samples. A manual control allows the sliding of channels against each other with a precision of 0.01 samples. Benefits include the recovery of high frequencies, bass response improvement, mono compatibility restoration and image clarification.

Cedar 217

Akai 12-track

Aimed primarily at the home recording market, the DPS12 is a combination 12 track random access recorder and automation-capable digital recorder due to be launched in January. The mixer accommodates 20 channels at mixdown, including instruments synchronised with the MIDI-reading automation system.

Available with an internal 1Gb removable Jaz drive, the DPS12 can record as many as eight tracks simultaneously and will support 250 virtual tracks. Backup is to DAT or SCSI drives. The audio format is based on 16-bit resolution with no compression.

Akai 219

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16 IN+16 OUT-DIGITALDOMAIN-REALTIME-SYSTEM

CreamWare announce the launch of TDAT16 - but be forewarned... you'll have to add your name to the list of recording engineers who are ahead of you in the queue for one! Why? TDAT16's all new, yet mature and stable - we've taken our proven tripleDAT interface and added the powerful capacity of 16 I/O's, whilst keeping all the features that earned tripleDAT a 1997 T.E.C. Award nomination! Why gamble with new products that are not proven in the field? Don't risk your valuable studio time and recording talents with one piece of hardware combined with some 'off-the-shelf' software interface. TDAT16 is a finely tuned hardware AND software solution. No installation problems and no waiting for an update that actually works! Install TDA116 and your creativity starts flowing. The fastest editing with all the power tools that make tripleDAT so outstanding; integrated CD-Writing and a whole suite of excellent REALTIME effects. You won't find a product like this at any price! TDAT16 is the HDR solution for the digital studio. Now you're digital, stay digital. Link your digital mixing consoles, your tape (like Alesis ADAT or DAT) and your TDAT16 powered PC together without ever having to turn back to analog.

The A8 and A16 external converter units are the ideal addition to TDAT as well as for any other digital audio equipment having an ADAT interface. 16 (A8) or 32 (A16) conversion channels in true studio quality at an exceptionally attractive price. A8 and A16 are also perfectly suited for analog expansion of any free ADAT port on digital mixers, effect processors or synthesisers!

TDAT 16 DIGITAL

- PCI system for PC
- fast on-board DSP
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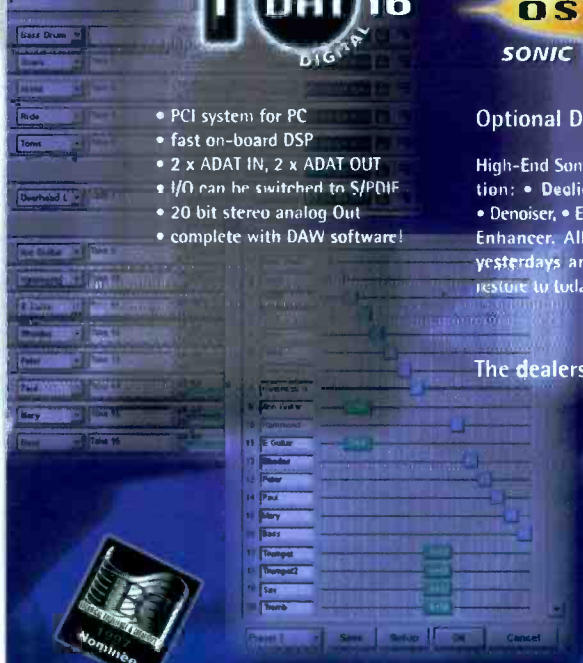
- 20 bit stereo analog Out
- complete with DAW software!



nominated for the 1997 TEC Award

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Optional DSP packages for expanding any CreamWare system:

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masterport

If 4 channels of I/O are more than enough for your work then remember CreamWare's other professional products - MasterPort and tripleDAT, the ultimate Windows recording packages. Software version 2.5 (included with TDAT), offers a number of improvements and new features and is available to all MasterPort and tripleDAT users - free. CreamWare - check it out and discover why so many engineers around the world have made tripleDAT with integrated CD-Writing and realtime effects their number one choice for so long!

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fidelity at work

READER RESPONSE No. 020

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Fibre channel

Rorke Data's Fibre Channel is used for mass storage and networking that connects mainframes, supercomputers, workstations, storage devices and servers. It meets the demands for increased I-O speed, connectivity and reliability and allows for very fast transfers of large volumes of information while providing a scaleable technology that claims it will take system designers, OEMs and end users into the next century. It supports full duplex 200Mbytes/s rates on copper and optical media which are well suited to workstations, servers, symmetrical multiprocessing applications and massively parallel processor applications requiring high bandwidth, scalability and connectivity.

Rorke Data 220

Lexicon cards

Lexicon's Studio System is described as audio hardware that is compatible with popular audio software and provides I-O options, DSP, signal routing and synchronisation for PC or Mac-based audio production systems like Steinberg's Cubase VST.

Studio System incorporates proprietary LexiPowerCore technology to accelerate the host computer while Core 32 PCI bus master implementation makes it able to support 32 simultaneous voices as sources or destinations from the host system via the PCI bus with 24-bit resolution. Core 32 can be used as either clock master or clock slave and this clock can be distributed within the system. The LDI-12T interface provides 20-bit A-D and D-A conversion with stereo analogue I-Os and a Toslink optical input while the LDI-16S interface allows integration with workstations. A basic version has 8 analogue I-Os and TDIF I-O and can be used with a maximum of 32 simultaneous channels of I-O. An 8-channel AES-EBU option can also handle SPDIF and includes a real-time SRC.

Lexicon 221

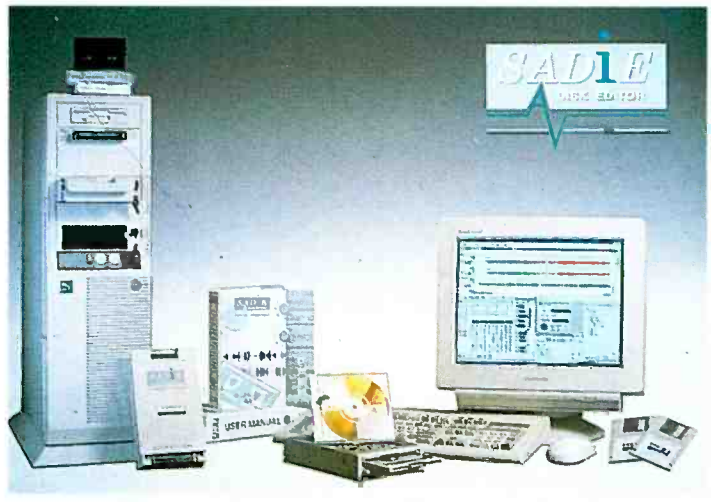
Soft vocoder

Vocode launches Opcodes's line of cross-platform DSP plug-ins and brings the classic analogue vocoder effect on to the desktop.

The Fusion Effects platform currently supports plug-in formats including Adobe Premiere, Audiosuite and Direct X media allowing all Fusion plug-ins to be compatible with the most popular music recording and sequencing software. A TDM version of Vocode is currently being designed.

Opcode 222

SAVL launches Octavia 8/24 multitrack DAW



SAVL's Octavia 8/24 is a multiple output tracklaying and dubbing system that integrates with large mixing consoles but retains the editing facilities of Octavia 8/08. As with Sadie and Octavia 8/08, Octavia 8/24 operates with the recently released V3.02 software for seamless integration in multiple system installations.

The system has 8 inputs and 24 outputs in analogue and digital and can play at least 24 tracks off one SCSI disk. All connectors are on the back of the 5U processing unit with a single high-speed serial connection to the host PC. All audio processing is performed on SAVL purpose-built hardware and within Octavia 8/24 there are four AT&T 32-bit floating point DSPs for 33Mflops of processing power.

The system comes with 20-bit A-D and D-A Delta Sigma convertors on all inputs and outputs but is designed to operate from 11.025kHz to 96kHz sampling rates and from 8 to 24 bits. It chases or trigger locks to all LTC and VITC timecode rates and can be referenced to AES or video sync.

The company's Portia JPEG card system is now shipping and can be installed in any Sadie or Octavia system and replaces a VTR. Portia permits video to be recorded into a normal EDL and accessed with the audio, the video appears as a dedicated stream in the EDL and audio and video can be scrubbed simultaneously. Playlist functions such as cut, copy and paste can be performed on the video clips and can be automatically placed in to the EDL with respect to their recorded timecode.

The system allows the user to decide on the best use of disk space with the highest picture quality equating to Betacam quality. Up to 5 hours of video storage is possible on a 9Gb drive with YUV used as the video input and output to maximise picture quality and the system is supplied with a 9Gb drive, 19-inch rackmount breakout box for video, timecode and 9-pin RS422 control.

SAVL 223

1998: digital portables from Marantz

Marantz will launch its new portable digital recorders in the new year using solid state PCMCIA flash ROM cards or PCMCIA hard drives.

The mono PMD680 and stereo PMD690 are targeted at ENG and location recording. Users can choose between MPEG I, MPEG II or linear PCM formats and nondestructive editing via an EDL will be included. Data can also be accessed from a PC through a parallel remote interface and a built-in monitor speaker and SPDIF and analogue I-Os are provided.

Marantz 224

Vela four-channel 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.

The device decodes MPEG 1 and MPEG 2 system, program, transport and video only streams at resolutions of MPEG 1 SIF, MPEG 2 Half D-1, MPEG 2 D-2 (FOE) and MPEG 2 D-1 (AFF). It also has stereo audio outputs with the option of left audio or right audio only on both outputs plus options for 4-channel audio.

Vela Research 225

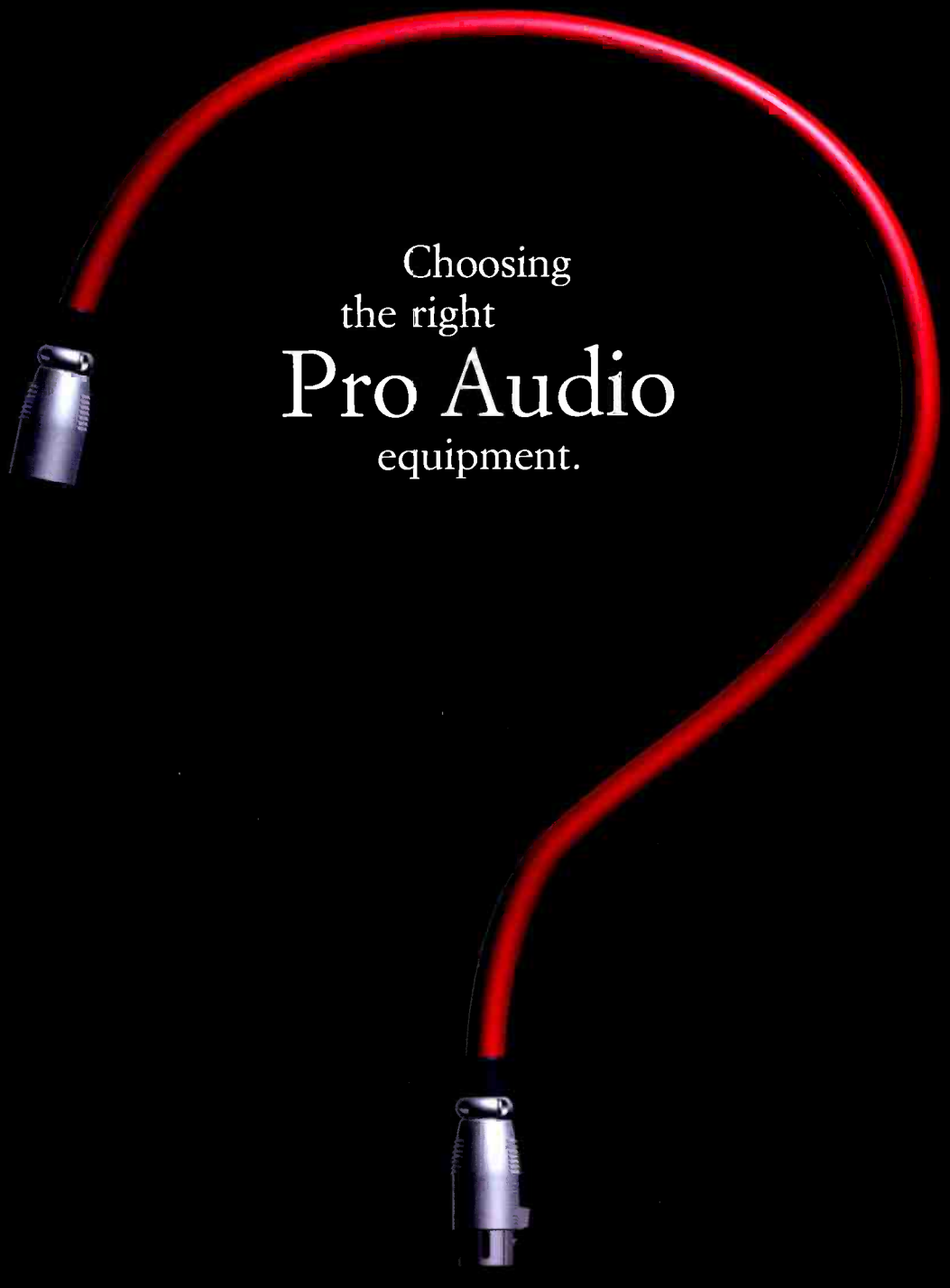
Doremi introduces V1D/2M

Fourth member in the V1M family of products, the V1D/2M random access video recorder-player is 2U high and has front panel controls for jog-shuttle, autolocator, audio input level and a LCD. It is intended as a drop-in replacement for VTRs.

The manufacturer claims for the unit compliance with CCIR-601 in 4:2:2 with one channel of 270Mb/s serial digital video I-O and analogue video I-O in composite and Y/C plus analogue video component output YUV, two channels of serial digital audio I-O and analogue audio I-O for full-screen NTSC and PAL resolutions. Additionally timecode (LTC. VITC, biphase) is recorded and enables the machine to be run from an edit controller or from the jog wheel. MIDI I-O and two RS422 serial ports enable the V1D/2M to follow an audio or video workstation.

Doremi Labs 226

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE



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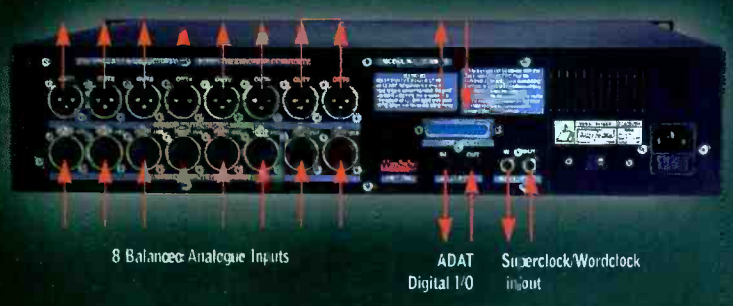
READER RESPONSE No. 021



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Digidesign ProTools 24

The ProTools 24-bit DAW boast integral 24-bit A-D and D-A convertors, guaranteed 32 tracks of 24-bit audio per card and extended control afforded by the Mackie HUI controller. AudioVision 4.0 combines broadcast quality picture with audio editing tools and has been re-engineered to run on PCI Power Macs with RISC-based processing. It now works with third generation TDM hardware enabling users to run any Digidesign software application including Sound Designer II, PostConform and MasterList CD. MasterList CD version 1.4 adds support for new Philips, Ricoh, HP and Yamaha CD recorders. Universal Slave Driver is a multipurpose synchronisation peripheral for Digidesign audio systems and achieves near sample-accurate lock to timecode and clock sources. It combines the capabilities of the Digidesign SMPTE Slave Driver and Video Slave Driver plus VITC reader/generator, timecode window burn, biphase and clock generation.

Digidesign 227

Steinberg VST plug ins

The stereo Magneto simulates tape saturation and tape overdrive effects while the Prosoniq Roomulator reverb has a set of stereo algorithms including hall, room and gated reverbs.

Steinberg 228

ISP 100 signal processing

The ISP-100 computer programmable signal processor has a screen interface that resembles the layout of familiar hardware units. The compact unit combines high sound quality, reduced cabling requirements and one-touch tamper proof operation with high specification 20-bit A-D/D-A convertors, 24-bit processing and a 48kHz sampling rate.

The ISP-100 is aimed at commercial contractors for use in installations such as exhibition halls, leisure centres and hotels. It replaces up to ten standalone processing units through QuickMAP processing templates, seven of which are preloaded. Setup is via a standard Windows PC.

Although dual-channel, the unit has a modular plug-in I-O card system which allows anything from 2x2 to 2x8 or 4x6 pairing, whether AES digital or analogue. Its flexible zoning/routing system can be configured to provide individual channel priority and comprehensive zonal processing.

Shuttlesound 229

AMS Neve AudioFile V2.0

Version 2 software for 16 and 24-bit AudioFile systems allows event parameters to be adjusted on the fly as the Assembly is playing and event trim functions can be accessed on any track without having to specify the edit track.

Multiple SCSI devices can now be attached to a single interface card and Jaz drives are also supported. A new ADR facility permits looping of playback of a selected region and automatically record multiple takes which can be chosen from a Take List. Trim can be applied to edits and between sections of takes. Stereo events can be split into two mono events and two mono events can be copied into a stereo event. V2.0 allows event lists to be saved on to exabyte and all project parameters can now be stored to a single archive.

A multimachine control option is available on 16-bit systems and the software includes arming of record tracks in external transports with manual or preprogrammed record commands.

AMS Neve 230

Short/Cut V2.0

360 Systems Short/Cut V2.0 adds support for an external Zip drive which can be used for recording, editing, archival and transfers. It can also create a DigiCart/II Plus formatted Zip disk and then store audio files to the disk for playback on DigiCart units.

V2.0 comes with D-NET file transfer capability for the transfer of audio files and related information such as cut names and running times. The version can also assign GPI inputs to trigger Hot Keys and allows users to replace files when copying to a Hot Key so the audio content mapped to a Hot Key can change while retaining the original name.

Other features include an undo transport command that returns the cursor to its original position, setting a zero mark at any point in a file, play selected (highlighted) audio in the editor, and the ability to copy an entire directory.

Storage capacity has been increased with four hours' storage on the internal 3.2Gbyte drive.

360 Systems 231

MASTER'S TOOLS

EQ1: Digital Parametric Equalizer (96kHz optional)

Highly ergonomical with 22 touch sensitive knobs • seven bands, each switchable to peaking, hi/low shelve, hi/low cut, each spanning a 16Hz to 20kHz frequency range • frequency response display • fully MIDI controllable • 128 snapshots • extremely low noise filter architecture • 40 bit floating point processing • 24 bit AES/EBU Input/Output with switchable dithering • peak meter • excellent price/performance ratio

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READER RESPONSE No. 022

the complete audio routing solution

a truly flexible audio router

The MCX2's 48 audio circuits can be specified, in groups of four, as either inputs or outputs, giving many possible matrix sizes, even multiple matrices, in a single 1U case. DC switching modules are also available for logic routing.

OUTSIDE SOURCE and REVERSE CUE switching
TRANSMISSION switching

Example sizes:
32x16 mono
24x24 mono
12x12 stereo
16x8 stereo

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A simple and intuitive front panel control option is complemented by a range of remote control modules and PC control options. The MCX2 can even be interfaced with third party software packages.

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READER RESPONSE No. 023

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PROFESSIONAL DIGITAL AUDIO

READER RESPONSE No. 024

You/com portable is tapeless recorder

The ReporterMate MTR/64 is a portable tapeless recorder with editing and communications for journalists which uses PCMCIA cards. The unit is suitable for live or file transfer and includes voice-over possibilities, a double PCMCIA slot and support of audio compression of MPEG Layer II, G722, G711 and WAV. Voice activated recording, AES-EBU connection and a help function are part of the package.

You/Com 232

Aphex plug-in

Aphex has joined the band of manufacturers producing TDM plug-ins with the Aural Exciter Type IIIpi which is modelled on the 250 exciter. Features include drive, tune, peaking, null fill, harmonics, timbre and mix plus new harmonics density.

Aphex 235

Features added to Dalet5

Many applications and features have been added to the Dalet Version 5 of the hard disk audio system for radio.

Dalet News attempts to create a paperless central newsroom and staff can create, review and modify their news stories using a single application from any networked workstation. NewsWalk transforms a portable computer into a mobile newsroom using Digigram's PCX Pocket Type II PC card. Reporters can record and edit audio, integrate audio into a text document and transfer it back to the newsroom by modem or ISDN.

Dalet Web Publisher enables radio stations to build and maintain a web site that incorporates audio, graphics and text. The site can be updated or modified by dragging and dropping audio, text or logs from the Dalet5 databases into the web publisher window.

Database replication is a new feature of Dalet5 and allows multi-site exchange and management of audio. By dragging and dropping a file from one database window to another the audio is transferred to the local server. New database management tools take advantage of client/server technology which permits Dalet to install much larger networks.

Dalet 's tradition is in providing an open architecture: Windows NT operating system, Sybase Client/server database and Digigram audio cards. ISDN, Internet and satellite technology connects stations within a group.

Dalet 237

MICROPHONES

Radio Station TS

While the Radio Station IDS is aimed at performers on the multinational touring circuit the Radio Station TS is designed for users that require several frequency options in their local spectrum and is supplied with 16 on-board UHF frequencies between 518-900MHz with a choice of four frequencies configured for legal use in different international territories. The 2-channel system can also be integrated into presenter IFB systems and operated in single or dual channel mode.

Also new is the System Plus 2 as the first low cost System product to use synthesizer technology rather than a crystal-based design. A stereo UHF unit with user selection of two on-board frequencies, it includes a mic/line switch to match input gain and 48V phantom plus a 12V DC option.

Garwood 233

AKG in-ear

AKG's in-ear monitoring system employs 'individual virtual acoustics' to overcome the 'in-head localisation of sound' that can be created with in-ear monitoring. AKG's system claims to achieve the separation and space produced by on-stage monitors but without the sound pressure levels and feedback. Each unit can be customised to an ear shape and transfer function characteristics.

The Emotion range of dynamic mics has diaphragms of varying thickness allowing the mics to be tuned at the capsule for 'near-perfect' feedback suppression.

AKG 234

AKG Tube

The AKG Solid Tube mic is a single pattern, large diaphragm, pressure-gradient valve condenser for $1195 US. It includes a bass attenuation switch, 20dB pad, an outboard power supply, shockmount and mic stand adapter, pushbutton ground lift on the PSU and an integrated pop shield. The mic uses a 12AX7 valve which can be viewed through a 'window' for 'visual monitoring of the internal tube operation and offers ambient light in darkened recording environments.'

AKG 236

Neumann TLM103

A large diaphragm microphone with a cardioid polar pattern equipped with a new capsule and circuit boards, the TLM103 has an equivalent SPL of only 7dB-A which represents an improvement of 5dB-A over the U87Ai and thus makes it suitable for applications where low noise is essential.

The claimed dynamic range of 131dB and the maximum SPL of 138dB is said to make the mic a good bet for vocals and instruments while the competitive price will make it appeal to home recording.

Neumann 238

Sanken shotgun

The CM-3 is a mono shotgun microphone which combines second gradient and line microphone design in order to maintain sharp directivity.

It measures only 270mm in length but is said to have extremely accurate pickup. Inside the unit are three capsules of the same design as the five capsules used in the CSS-5 stereo shotgun microphone, which was developed in conjunction with Japanese national broadcaster NHK.

The poly-phenylene sulfide diaphragms are said to provide exceptional response and optimum humidity/temperature stability. The 19mm diameter of the microphone allows the use of standard grips and other accessories.

Sanken 239

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READER RESPONSE No. 025

Tiny diversity

Claiming to be the smallest diversity receiver, Sennheiser's EK3041-U has been designed to operate with digital ENG camcorders.

Built in to a weather-proof housing the size of a cigarette packet, it can be inserted into the slot-in facility on the Sony SX, Philips LDK120 and Ikegami HL-V77 without additional cables or adapters and power is supplied from the camcorder's batteries.

The EK3041 features 32-channel switchable frequency synthesis and can be supplied for operation in the complete 450-960MHz UHF bandwidth.

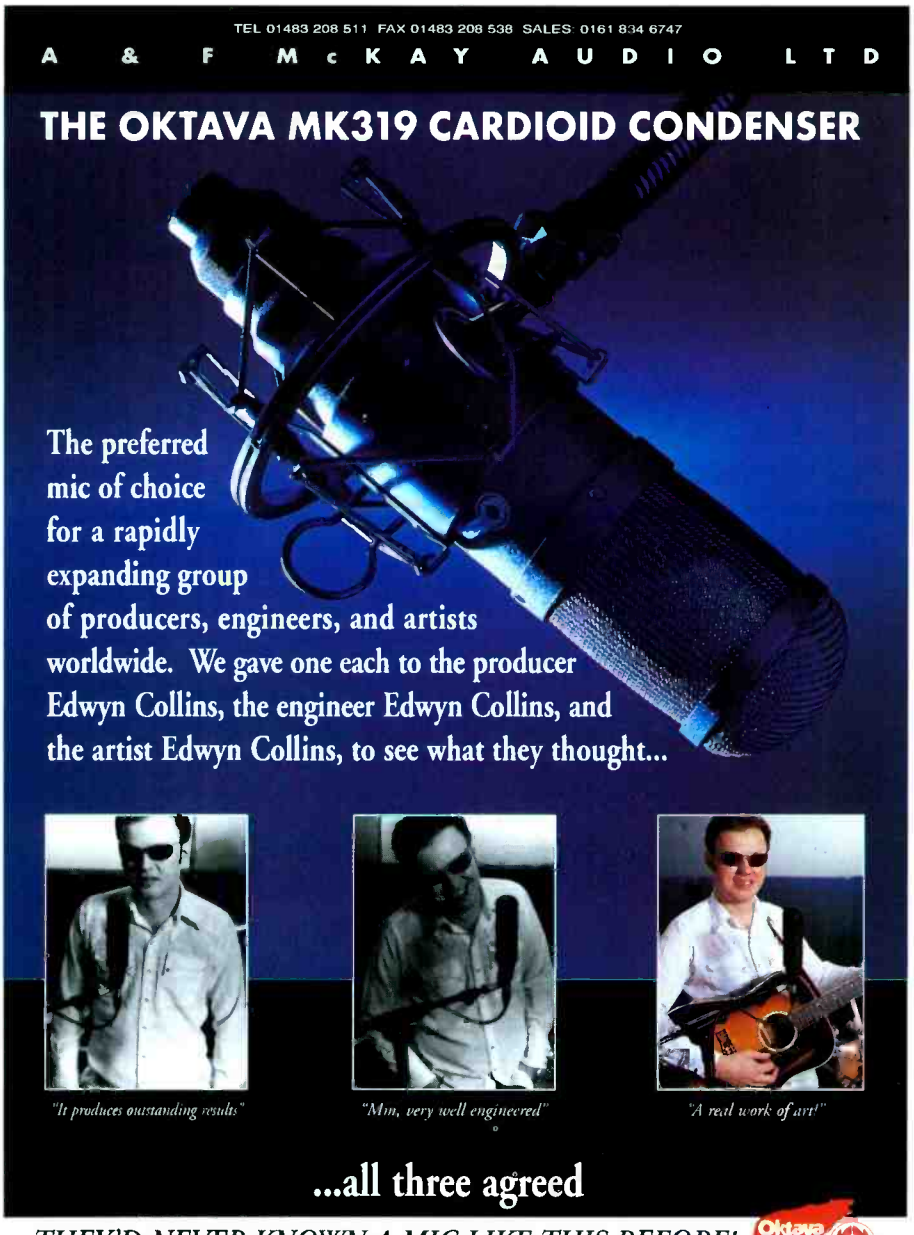
Sennheiser 240

Sondelux U195

The U195 is a large diaphragm FET cardioid condenser with 'fat' and 'norm' operation - the former resembling the tonal character of older designs the latter operating as a traditional FET.

The mic includes a non-capacitive pad and a low frequency rumble filter. Components include Roederstein resistors, polypropylene and polystyrene coupling capacitors, low ESR electrolytics, a selected low capacitance low noise FET and a massive extended bandwidth output transformer.

Sondelux 241



READER RESPONSE No. 026

Paperclip mic

Smaller than a standard paperclip, the EV CO2 miniature lavalier microphone is said to combine high quality sound with excellent concealment characteristics. An electret condenser design with an omni-directional pick-up pattern, the unit has a frequency response quoted as 50Hz-20kHz. The CO2 comes in black or white versions with a special Tincture surface that can be painted if required.

Also available is the N/D 868 bass drum mic, a large diaphragm unit said to benefit from a highly directional polar pattern.

EVI Audio 242

Neumann TLM50

The TLM50 is back in production and the replacement capsules for the earlier valve M50 microphone are also available once again. A small diaphragm omni-directional condenser, the TLM50 is a descendant of the valve design used in many Abbey Road recordings of The Beatles, classical music and jazz artists.

The transformerless design benefits from a high performance 12mm diaphragm, acoustically transparent head grille, extremely fast transient response, high SPL performance, exceptional common mode RF rejection, low self noise and high output. A 10dB pad and an HP filter are fitted.

Neumann 243

NX wireless system

There are three models in the NX wireless VHF range. These are the NX-201 single channel, NX-210 true diversity and NX-220 dual channel system. The NX-210 is said to have an operating range of 10m, while the other two allow 5m range. Transmitters are available in hand-held mic, lavalier mic, musical instrument and headset mic styles. All are said to have a battery life of 12-16 hours. The products come with a 3-year manufacturer's warranty.

Gemini Sound 244

EXPERIENCE THE WARMTH

- Large diaphragm capsule
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- -20dB attenuation switch
- Switchable bass-cut filter
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- Shock mount suspension

"The best value microphones manage a fine balance between character and colouration, offering slight flattery without deviating too far from flat, and the SOLIDTUBE has this flavour in abundance.....and you could be investing in tomorrow's classic."

Dave Foister - Studio Sound

In 1953 AKG's classic C12 set the standard in valve microphones.

Following an extensive R&D program designed to make this legendary technology available to a wider audience, AKG are now proud to present the SOLIDTUBE.

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AKG

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AKG studio

READER RESPONSE No. 027

Audio rack

Targeted at location recording, the Audio Rk2 minirack accepts two Audio DX2020 or DX2000 wireless mic receivers in a rigid casing that protects them. Only two aerials are required to feed the signal to the diversity receivers via custom filtered RF distribution amps. Reliability is aided by reverse power and over-voltage protection up to 30V while connectors include 6-pin Lemo or 4-pin Hi-rose. Phase reverse is included in a unit that weighs 545g and measures 168x151x30mm.

Audio 245

Mini diversity

One of the smallest diversity receivers available, the externally-powered Micron SDR530 is designed principally for ENG and personal single camera applications. Supplied in VHF and UHF versions the device offers switchable frequency facilities and joins the company's SDR570 internally-powered model.

Audio Engineering 246

Nady Gold

The Nady Gold series Wireless 441 and 442 feature four user-switchable VHF channels for what the company claims is a third the price of other multichannel systems. The new receivers are compact, rackmountable with front mounted antennae and feature 1/4-inch and XLR output options plus Nady's companding circuitry. The 441 has one antenna, the 442 has two and the company's DigiTRY diversity digital processing for dropout protection.

Nady 247

Electro-Voice

Designed to blend in with its surroundings in theatres, churches and concert halls, the Electro-Voice CH230X hanging microphone has been developed especially for choirs, orchestras, vocal groups and dialogue applications. The mic uses back-electret condenser technology for a flat response and high quality sound. Available in black or white, the mic has an extended frequency response of 75Hz to 20kHz. EV has incorporated an enclosed, shielded preamp for improved resistance to electrical noise and radio-frequency interference, plus a 75Hz fixed high-pass filter.

EVI 248

ENG kit

The Sennheiser ENG RF receiver kit comprises four EK4015 UHF miniature diversity receivers in a special flightcase that incorporates a power supply and an input for an external DC supply. The front and back panels of the flightcase are removable and the back cover includes stowage space.

Sennheiser 249

Sennheiser adds radio mics

There are a number of additions to the radio microphone product range. The EK3052-U miniature UHF stereo receiver system has 16 switchable frequencies and has Sennheiser's HiDynplus noise reduction circuitry, which is said to enable a S/N ratio of 110dB.

Providing single channel and dual channel operation respectively, the SR3054-U and SR3056-U stereo transmitters are UHF units. They both offer 16 programmable transmission frequencies and are said to have the same operational reliability as the System 3000. LCDs are provided for output power and signal deviation. The 1U devices have internal power supplies.

A new handheld transmitter has been added to the EM 3000 series of UHF equipment. The SKM3072 provides up to 32 programmable frequencies, a capability said to be unique. LCDs are provided for frequency, channel number and battery status. The device also sends a low battery warning signal to the receiver.

Sennheiser 250

Instrument mics from SD

SD Systems is a specialist in condenser microphones for acoustic instruments with a number of mics designed specifically for particular instruments. The mics can be fixed in the optimum position and have a shock-free hanging system to eliminate mechanical noise.

These include the LCM89T for tenor/baritone sax, LCM89A for alto sax, LCM85L or LP for wind or brass instruments, LDM94 dynamic high power mic, LCM80 for soprano sax, LCM77 for trumpet, LCM70 for flute, LCM82 for clarinet and the affordable SX-Series.

Stringed instruments are catered for by the LCM100HL for double bass and a piezo series for guitars. All systems come with preamp power supplies including belt clips.

SD Systems 251

Wireless talkback

The IFB 1624 is a UHF wireless system with two channels that can be employed in sportscaster situations where split feeds are required or in a mix to mono mode giving TV presenters the ability to adjust the relative levels between two IFB sources on one earpiece.

The stereo transmitter is programmed with 16 UHF frequencies between 518-865MHz and users have a choice of four separate frequency packages in 100MHz bands.

The IFB 1624 can be used with Garwood's standard size 16-frequency receiver or with a miniature bodypack featuring two independent volume controls. The LV2 miniature receiver weighs less than 70g with battery life of over 3 hours from a single AA cell.

Garwood 253

Earthworks creates cardioid

The Z30X cardioid mic has a claimed smooth response to 30kHz and very accurate impulse response. Its polar pattern is said to be unusually flat to some 75 degrees off axis while handling noise and proximity effect are said to be lower than most directional mics.

The mics are complemented by the LAB101 single channel preamp and the LAB102 2-channel version of the unit.

Features include polarity reverse, phantom power, standby, stepped gain control, clip LED and variable gain to the output.

Earthworks 252

Beyer drum mic additions

Aimed at drummers, the TGX10 supercardioid dynamic mic joins the established TGX5 and TGX50 (pictured). The new unit is small enough for close miking duties yet robust enough to take the occasional knock. An acoustic shock mount eliminates mechanical noise transmission through the shell of the drum.

The TGX45 neckworn cardioid dynamic mic has a gooseneck support for positioning while ear supports can be moulded for comfort and can be used with the company's wireless system.

Beyerdynamic 254

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

Community's portable XLT/E

The XLT/E series of loudspeakers is designed for a wide range of portable sound reinforcement applications. There are five enclosures in the range, including a monitor, a dual 15-inch subwoofer and three trapezoidal full range enclosures. These are: XLT43E with 15-inch LF and 1-inch HF; XLT46E with 15-inch LF, 6.5-inch mid and 1-inch HF; XLT47E with dual 15-inch LF and 1-inch HF.

Features include an HF level switch to voice the cabinets to different environments, and switchable passive and biamp modes. Neither biamplification or the addition of the subwoofer requires an electronic crossover.

The speakers are fitted with Dynamic Driver Protection which provides visual indication if the circuitry is activated. All cabinets except the monitor have the same footprint and drivers are protected by a perforated steel grille.

Community 255

Meyer powered

Based on its original UPA speakers, Meyer is introducing the self-powered Ultra-Series with the first products the UPA-1P and UPA-2P speakers, the USW-1P subwoofer and UM-1P stage monitor intended for small PAs in clubs, studios, churches and theatres.

Despite the inclusion of an amplifier and control electronics within the enclosure, the UPA-1P and UPA-2P are compact and lightweight and the same size but only 10lbs heavier than the non-powered versions. The speakers have 12-inch low frequency cone drivers and a 3-inch diaphragm high frequency compression driver and both offer a claimed maximum SPL of 132.5dB. The coverage pattern of the UPA-1A is 100 degrees x 40 degrees vertical, that of the UPA-2P is 45 degrees x 45 degrees. The speakers have two channels of biamplification and an electronic crossover/processor card. All powered Ultra Series speakers employ limiting technology that predicts power dissipation and include Intelligent AC, a power supply that protects the amplifier and drivers by auto-selecting voltage and minimising in-rush current, filtering EMI and performing power surge protection.

Meyer 256

Tannoy

With a new 8-inch constant directivity dual concentric driver, the Tannoy i8 is said to be the most powerful sound reinforcement enclosure of its size that the manufacturer has yet produced. Although developed from existing Tannoy drivers, the new unit is said to enable a programme power handling of 260W with a peak output of 122dB.

The new enclosure is said to be equally suitable for vertical or horizontal positioning and is fitted with inserts for a companion mounting bracket which allows positioning with any angle of tilt. The cabinet will also accept a pole mount.

Like the established i12 and i15 enclosures, the i8 can be used with the T40 sub-bass system and TX2 crossover.

Tannoy 257

L-Acoustics full frequency

Said to be the world's first full frequency line array speakers, the L-Acoustics sound reinforcement units are based on a patented DOSC waveguide developed by French physicist Dr Christian Heil.

The company says the benefits to the design include 'clarity and intelligibility, remarkably consistent SPL over a very large area, and a system that is free from the destructive comb filtering and phasing effects which plague conventional speaker systems.'

L-Acoustics currently has two speaker ranges using the DOSC waveguide. The V-DOSC products combine a cylindrical wave generator with V-shaped acoustic loading for the mid and high frequency transducers. The system is designed to be vertically arrayed as either ground stacks or flown columns. The other system is called ARCS and is designed as a side-by-side speaker array for smaller venues.

L-Acoustics 258

Electro-Voice

The S15E is a full range cabinet loaded with a 15-inch LF unit and a Hi-Q 60 x 40 degree horn. Built for durability, the cabinets are made from EV's proprietary RoadWood, said to be half the weight but twice the strength of the commonly used particle board. Corners are fitted with metal protectors. Power handling is rated at 250W continuous and 1,000W peak. Speakon connectors are standard.

EVI 259

Tannoy

The manufacturer has released a number of Cub brackets to make installation of its speakers easier in a number of speaker and location combinations.

Tannoy 260

READER RESPONSE No. 028

ServoDrive

A line of subwoofers originally manufactured by Intersonics is again available. The enclosures use a high speed rotary servo motor and belt-drive system in place of the conventional loudspeaker voice-coil and magnet assembly. The units were first introduced in 1983 and the following models are now available: BassTech 7, SDL-4, SDL-5, the TPL Series, Sub Terranean and ContraBass subwoofers.

ServoDrive 272

Wafer speaker

Measuring only 24mm deep, the Fostex SH501F 2-way speaker has been developed in co-operation with parent company Foster Corporation. The other dimensions are 362mm x 520mm and power handling is 60W with a claimed frequency response of 80Hz-20kHz from a 12cm woofer and 1cm tweeter. Supplied with wall mounting hardware and intended for installation purposes, the speakers use a side-mounted bass port which employs the wall surface for propagating low frequencies.

Fostex 273

DAS Audio

Said to be the largest moulded enclosure produced, the DAS DS-15 combines a 15-inch low frequency driver with a compression driver and horn assembly. The bass unit has a 77mm voice coil. Intended to fulfil a range of sound reinforcement and MI applications, the DS-15 is made using a high pressure 'mineral loaded' polypropylene injection moulding process. The manufacturer says this produces in three minutes a cabinet with all the rigidity and neutral colouration of a hand-built wooden cabinet. Cabinets come in black or white.

DAS Audio 274

Peavey

Peavey has added three units to its HiSys series of enclosures and launched two power amplifiers. The HiSys 6XT is a mid/high enclosure loaded with two 10-inch cone drivers and a Peavey 22XT compression driver coupled with a CH3 horn. There is also a flown version of the enclosure, the 6XTF. The units have an internal passive crossover. A complementary sub-bass enclosure, the 112XT, is a compact design with an on-board crossover and a satellite pole adapter. The cabinet is loaded with a single 12-inch Black Widow speaker.

Peavey 275

Shuttlesound

The Greystone GSS 15XR is a reintroduced sub bass unit loaded with a 15-inch Electro-Voice driver. Also available is the Greystone X-Pack 200, a passive crossover that can be retrofitted.

Shuttlesound 276

Altec ceiling speaker additions

The US manufacturer now offers two ceiling speakers, the contractor-orientated VI speaker system and power amplifiers for installation use.

The two new ceiling speakers are designed for vocal and music reproduction in rooms with ceilings higher than 2m.

The EP925 is based on a 12-inch driver and the EP950 is based on a 15-inch driver, both using Altec's Duplex co-axial design which incorporates a petal shaped horn said to reduce HF beaming and ensure flat frequency response over a rectangular coverage area. EP925-8B handles 250W and produces 120dB long-term SPL. EP950-8B is rated at 300W, 123dB SPL. Both versions have a frequency response of 60-20kHz and can be used in a variety of ceiling constructions.

VI stands for Vari-Intense and the idea behind this two-enclosure system is that contractors no longer need to specify separate short and long throw speakers, thereby simplifying the system design and saving money and space.

VI-12 and VI-15 are both intended as full range systems and couple a compression driver for the HF with a 12- or 15-inch cone driver respectively. The manufacturer says the triangular gap of the VI horn loading 'projects 30 percent more SPL to the back of the room, smoothly reducing toward the narrower section, which controls the amount of signal sent to the short-throw area'.

There are three amplifiers in the new 7100 series designed for fixed applications such as paging and background music. All are dual channel and are compatible with EVI's Interactive Technology network for remote control. Model 7120 produces 136W per channel, 7140A 215W and 7140A 437W into 8 Ohms. All are equipped with XLR and screw terminals and have options for plug-in signal processing.

Altec 277

Eagle trapezoidal cabinets

The Eagle series of sound reinforcement enclosures comprises two sub-bass and two high/mid systems. All are in trapezoidal enclosures of the same width for ease of configuration.

Eagle-6 and Eagle-8 sub-bass enclosures are fitted with single and double 18-inch drivers, giving a power handling of 800W and 1,600W RMS respectively.

Eagle-3 and Eagle-4 high/mid frequency systems are both fitted with horn loaded compression drivers. The smaller unit is loaded with a single 12-inch mid range and the larger has dual 12-inch drivers, handling 450W and 750W RMS respectively.

All cabinets are made with 13-ply birch and can be fitted with flying hardware, castor boards and any connectors specified.

McCauley 279

Quested F11

The F11 is a compact, magnetically shielded, 2-way design with 165mm bass driver and 28mm softdome HF. Electronics are housed in a pod at the rear of the cabinet and can deliver 100W and 25W into the two units respectively.

Built-in mountings in the moulded cabinets allow fixing to walls or ceilings and the monitor has been designed for installations and surround sound applications.

Quested 278

Tannoy

The CPA7 professional loudspeaker is designed for music and speech applications in bars, restaurants and retail stores, with optimised vocal performance and a stylish look. The eight-inch woofer for deep, powerful bass reproduction is complemented by a dome tweeter for wide dispersion and high frequency protection to prevent damage to the tweeter.

Tannoy 280

MONITORS

Meyer's HM1S self-powered

Meyer has introduced a new self-powered monitor in the HM1S coaxial with a phase response that is electronically corrected and a true single-point source.

The cabinets are magnetically shielded, have a wide coverage pattern and can be augmented by a subwoofer. It features a 7-inch graphite cone low frequency driver and a concentrically mounted 1-inch soft dome with a constant directivity horn affording 100 degree beamwidth in a vented cabinet.

Biamps delivering 400W are built into the enclosure which claims a response of 42Hz to 20kHz.

Meyer 281

Harbeth

Harbeth's Monitor 30 and 40 are the results of ground-up redesigns of the BBC LS5/8 and 5/9 monitors. Both retain roughly the dimensions of the original models allowing continued use of stands and ceiling cradles. Harbeth claims that colouration has been dramatically reduced by the use of its patented cones and advanced computer modelling.

The HL-Monitor 40 is the company's first 3-way system and uses a 300mm woofer and Radial midrange cone. It boasts a large 'traditional' box with classic BBC components like a thin-wall cabinet, complex network and an 'unmistakable' British monitor balance.

Harbeth 282

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READER RESPONSE No. 030

Hafler monitors

Hafler is introducing the TRM8 2-way powered monitor designed and produced in co-operation with speaker manufacturers the Rockford Acoustic Design Division.

Based on Diamond Series Transnova amp technology, the monitor is a biamped, 2-way system and claims a frequency response of 45Hz-21kHz and peak acoustic output of 123dB. The amps provide 75W for the HF driver and 150W for the woofer with two clip indicator lights monitoring the two drivers. Crossover is 2.5kHz with a 24dB/octave slope while a subsonic filter rolls off at 12dB/octave at 30Hz. Bass and treble level controls switch between -4,-2, 0, +2 and +4dB from 40Hz-200Hz and 3-20kHz respectively.

Hafler 283

PMC IB1S

The IB1S 3-way mid-field monitor has a 10-inch flat piston woofer, 3-inch soft dome mid range and 1-inch silk soft dome tweeter mounted in a transmission line enclosure. The flat piston driver is loaded by a 9-foot transmission line system and is constructed from a sandwich of carbon fibre and Nomex honeycomb. The IB1S features PMC's large turbulence-free port radiator which claims to extend response down to 25Hz. All three drivers are integrated by a 4th order crossover filter. Self powering electronics from Bryston are available.

PMC 284

Harbeth Acoustics

Best known in the broadcast market, Harbeth has introduced a near/midfield monitor for music recording studios.

The DPM1 is made from 46mm welded MDF loaded with an 8-inch moulded polymer cone driver with an integral 28mm tweeter and internal crossover. Options include a matched subwoofer.

Harbeth 285

Yamaha

YST-M7s are powered speakers designed to accommodate the outputs of a PC sound card and an additional line input. The integral 5W amplifiers are matched to a single full range 6.5-inch cone speaker.

Yamaha 286

Avocet cabs

The Integrity Acoustics range of loudspeaker enclosures is designed for high sound quality and power handling in a compact package. Suggested applications include installation, surround sound and studio monitoring.

The 150F is a compact cabinet with a frequency response quoted as 55Hz-22kHz. Built for a power handling of 150W RMS, it has a quoted SPL of 92dB 1W/1m. It is loaded with a coaxial driver. The 400F offers a handling of 400W and SPL is quoted as 102dB 1W/1m, with a frequency response of 65Hz-18kHz. The tweeter array is said to be time aligned with the bass drivers for precise imaging. The 750B is an optional bass cabinet designed to extend low frequency response to 35Hz. It is loaded with an 18-inch cone driver.

Avocet 287

Gallo's Bassballs

Anthony Gallo Acoustics has introduced a range of round aluminium speaker enclosures with a proprietary tweeter that claims a 330 degree soundstage and twenty four inches of driven surface area. The enclosures claim light weight but ultra-rigid construction.

The Nucleus Minor is a Bassball spherical cabinet with a 6.5-inch coaxial driver while the Nucleus Solo model is a Bassball with a CDT tweeter mounted on the top for deeper bass, higher output, and greater power handling than the Minor and no crossover.

Top of the range is the Nucleus Reference which comprises two Bassballs and one CDT tweeter per channel, with no crossover but claiming greater air coupling and lower frequency response.

AGA 290

KRK RoKit

RoKit personal shielded monitors are a passive 2-way design featuring a 6.5-inch polyvinyl proprietary long-stroke woofer and a 1-inch silk-dome tweeter. Power handling is 75W with a claimed frequency response of 69Hz-19kHz +/-3dB and a sensitivity of 91dB (1W @1m).

The monitor measures 12.5x10.5x8 inches and comes in a grey texture similar to the K.Roks.

Group One 288

Genelec's speaker setup guide

Genelec now includes a quick reference guide for monitor setup with all its units. Using clear diagrams the company draws attention to erroneous positioning and gives an indication of the correct and preferable location for speaker angle and distance, vertical distance, and the symmetry of the room installation complete with bass tilt adjustment suggestions. Bass tilt and bass roll-off settings are also recommended for speakers in corners and against front walls. Speaker positioning on stands and above the mixing console surface are also tackled together with the recommended critical distances of freestanding monitors from back walls.

1092A and 1094A subwoofers are now equipped with a new discrete subwoofer signal input channel. The new crossover filter retains the three front channel LCR input and output connectors but gives an improved overall system response when used with digital surround systems. The additional subwoofer input is required by decoders with a separate low frequency effects channel output. The upgrade makes the subwoofer equally applicable to analogue matrix type and digital discrete type surround formats.

The diminutive 1029A monitor is now available in a grey finish.

Genelec 289

FAR adds AV5 active monitor

FAR's AV5 active monitor has 15 tuning facilities for optimising response to listening conditions. Features include a 4-position LF control, 6-position HF control, fine level tuning at the rear of the box, 4-step level tuning on the front and green, yellow and red LEDs for power, limiting and overload indication.

The monitors have a 24dB/octave Bessel crossover, two 70W amps for levels up to 110dB, a low diffraction tweeter in a non-vibrating material and a switchable limiter for speaker protection. Targeted at postproduction, the boxes are shielded as standard and offer optional remote control of stereo level, balance, mono switching and muting. AV5s are available in blue, red, yellow or grey and will soon be joined by the AV1 and AV10 models.

FAR 291

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READER RESPONSE No. 031

Turbo wedge

The TFM-330 is a high specification professional active floor monitor that incorporates a custom designed 4-inch voice coil, 15-inch low frequency driver and a high power 2-inch high frequency compression driver on a custom waveguide. The HF horn pattern is designed to give essentially the same response when used very close to, or standing back from, the monitor.

The TFM-330's small footprint gives a highly efficient wedge monitor package that is well suited for use on smaller stages and the low box profile is maintained by mounting the HF horn alongside, rather than on top of, the 15-inch LF driver.

The THL-811W is a 2-way passive full range loudspeaker enclosure designed for use in professional sound reinforcement applications.

Its wide horizontal dispersion characteristics, together with its compact size and wide dynamic range, make it suitable for corporate/industrial and audio visual applications. The THL-811W incorporates two custom-designed front-loaded 10-inch mid/low frequency loudspeakers, matched via a third-order internal passive crossover network to a high efficiency, ultra low distortion high frequency compression driver loaded with a wide dispersion horn.

Turbosound 292

JBL launch Linear Spatial Reference monitors

JBL has introduced what it terms Linear Spatial Reference (LSR) technology that spearheads a new drive into monitor speakers. LSR is described as a series of techniques that measures spatially the response of a monitor over a s sphere that encompasses all energy radiated in to the listening environment.

This data is analysed to calculate optimisation of the sound field including direct sound field, the reflected sound field and the reverberant sound field to claim an improvement in performance over the +/-15 degree vertical and 30 degree horizontal field commonly used for assessment. JBL claims that its LSR 32 3-way mid field monitor offers consistent, precise sound reproduction in a wider field regardless of the playback environment.

The components in the LSR32 include Differential Coil Drive technology which uses two voice coils in each driver with their magnetic gaps at 180 degrees out of phase to give double the power handling of each driver. This is combined with lightweight Neodymium, a nested magnetic structure and preferential airflow design.

The monitor's high frequency device is a 1-inch composite diaphragm integrated with an Elliptical Oblate Spheroid (EOM) Waveguide with 60 x 100-degree dispersion. The midrange is a Neodymium 5-inch driver with a woven Kevlar cone whose motor structure was chosen to support the intentionally low crossover point of 250Hz to the 12-inch Neodymium woofer. An additional third coil between the drive coils acts as a dynamic brake to limit excess excursion and reduce distortion.

Mid and high frequency drivers are mounted within millimetres of each other on a cast-aluminium sub-baffle that can be rotated for horizontal or vertical placement.

JBL 293

Monster monitors from Alderson Acoustics

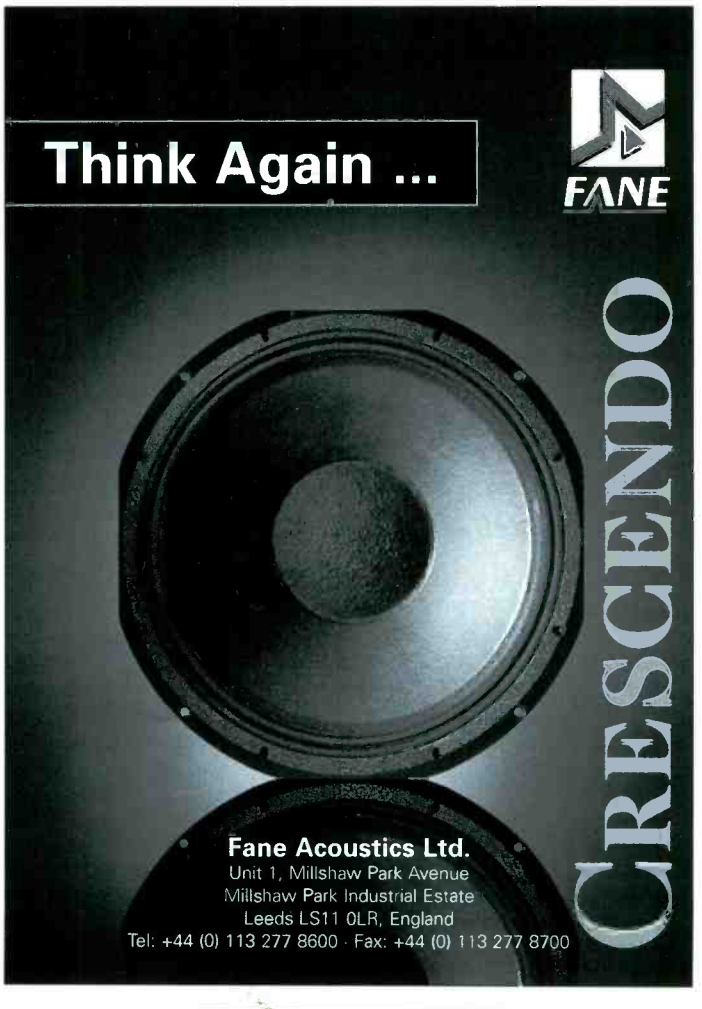
Described as 'the world's largest control room monitors', the Alderson Acoustics AA15(1288) is a soffit mount system capable of very high SPLs. Each cabinet measures 44 inches wide by 92 inches high by 20 inches deep and weighs 650lbs. The cabinets are divided in to two sections for ease of mounting and angling with the driver component consisting of four 15-inch woofers, twelve 7-inch low midranges, eight 2-inch dome high mid ranges and eight 1-inch dome tweeters per cabinet. Cabs are fitted with ten 1500W stereo amps and two 4-way digital crossover/equalisers.

Frequency response is claimed to be linear from 25Hz to 19kHz and the system is said to achieve an SPL of 125dB continuous at 5m.

Less hairy chested is the AA412(444) freestanding monitor for large mastering rooms which is built up of four 12-inch woofers, four 7-inch low midranges, four 2-inch dome high mids and four 1-inch dome tweeters per cabinet. It is said to be capable of an SPL of 110dB continuous at 5m.

Alderson 294

READER RESPONSE No. 032



READER RESPONSE No. 033

XTA processor

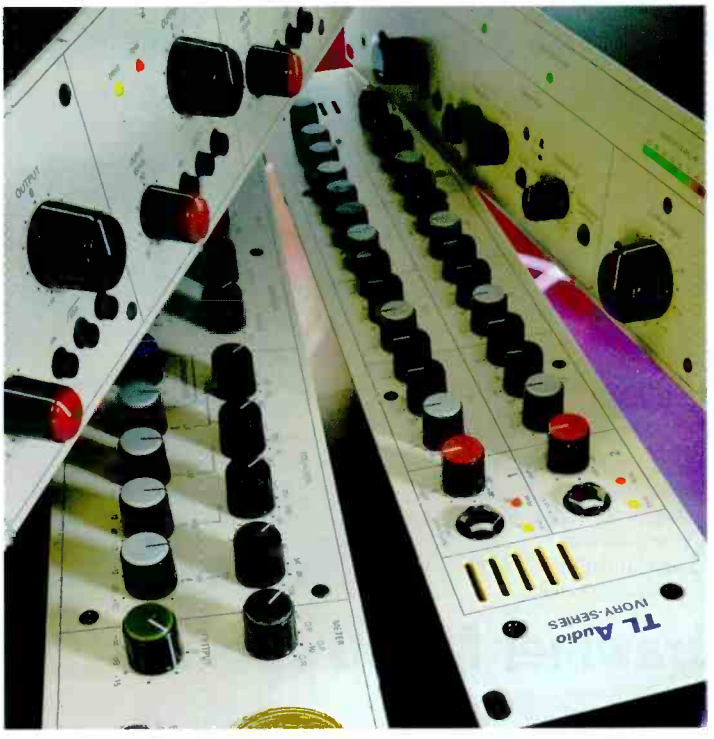
Building on the DP200 equaliser/processor, XTA's DP226 is a loudspeaker processor using the company's Audiocore DSP technology and features 2 inputs and 8 outputs with an 8-band parametric EQ on each input. Outputs have crossover filters, 5-band parametric EQ, limiter and delay. Metering is provided on inputs and outputs together with mute and access buttons for set up and gain adjustment.

XTA 295

Tube comp

Peavey's dual channel VC/L2 all valve compressor/limiter contains no solid state devices in the audio chain with an EL84 valve and an electro-luminescent panel at its heart. The latter is claimed to offer the best aspects of bulbs and LEDs. There are two 12AX7s for each channel while their output stages use a two-stage 12AT7 valve for a +20dBm output. Inputs and outputs are transformer balanced with 1/4-inch jacks provided for instrument and line inputs.

Peavey 296



TL Audio Ivory valve outboard

TL Audio has introduced a new Ivory range of valve outboard which offers extra facilities over the Indigo range and sits between this and the company's Classic range. Initially the range will include a 4-channel mic pre, a stereo parametric, a stereo compressor and a mono voice processor.

TL Audio 297

Crane Song pre

Flamingo is a 2-channel discrete class A mic preamp said to be capable of emulating vintage sounds and creating distinctive new ones. Input gain is selected by a stepped switch and is followed by a continuously variable attenuator for gain trim. Each channel has individually switchable phase and phantom power and the 1U-high rack-mount has two 22 element VU meters with an overload meter. Two switches marked Iron and Sound put iron in the audio path and change the type of amplifier respectively.

Crane Song 298

Weiss DS1

The Weiss Gambit Series de-esser/compressor/limiter is based on the design of the EQ1 equaliser and uses virtually the same user interface differing only in the array of processing controls.

It can operate as a frequency selective compressor or broadband compressor the latter being set from linear to limiting with adjustable predelays, auto release and soft-knee transfer function. The frequency crossover is implemented using ultra-steep linear phase FIR filters.

Weiss 299

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SMART RESEARCH C2
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READER RESPONSE No. 034

Bellari

Bellari valve-based processors include a dual stereo compressor limiter; a mic preamp, compressor and exciter; a stereo aural exciter; a dual channel mic preamp; a stereo DI box and a direct drive mic preamp.

According to the company, the designs are exceptionally quiet with THD+Noise typically <0.1%. Premium 7025 vacuum tubes are used throughout.

Bellari 300

DCS

An addition to the 900 Series of audio convertors, the 972DDC D/D convertor is designed to provide a bridge between 24-bit/96kHz production and 16-bit/44.1kHz distribution formats. In addition to 96kHz to 44.1kHz single-pass sample rate conversion, the unit will also convert between the following formats: AES-EBU, Dual AES, SPDIF and SDIF-2.

DCS 301

RDL Audio

New from RDL are a digital reverb and a crossover. The control of the RDL1600 is modelled on analogue devices for ease of use. The new unit has 16 pre-programmed effects, split into 10 reverbs, two echoes and four gated reverbs.

RDL has also introduced the GLXE 2-way crossover, which has a crossover point of 180Hz and an 18dB/octave slope.

RDL Audio 302

Beat extractor

Voyager 1 Beat Xtractor for remixer DJs and producers synchronises MIDI to an audio source, such as a CD, by constantly monitoring and displaying the audio track's BPM and generating a stable MIDI clock signal. I-Os are on phonos switchable between line and phono level and controls include a MIDI clock rotating display, run/pause, cue, restart and tap tempo.

Red Sound 303

Maselec compressor

Latest in the Maselec Master Series of outboard is the MLA2 2-channel compressor with input control of compression depth, output gain makeup, adjustable compression ratio from gentle to limiting, and adjustable attack and release times which can also be auto-adjusted.

Additionally the unit boasts electronically balanced I-Os, switchable gain reduction or programme level VU metering, stereo linking of the two channels, and precision stepped controls for accuracy and repeatability.

Prism 304

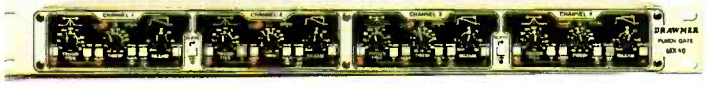
Korg multi fx and delay

Korg has announced the DL8000R digital multitap delay. Delay times of 4.8s are possible and the unit has a large display showing BPM in addition to time display. Features include tap tempo, audio trigger, MIDI trigger and modulation.

Forty ambience effects including delay, echo, reverb and pitch shifting are offered by the AM8000R multi-effects processor. The unit boasts an internal mixer that is used to combine effects and eight parameters can be controlled simultaneously via MIDI.

Korg 305

Drawmer MX40 cuts cost



Follow up to the MX30 gated compressor/limiter is the MX40 punch gate which has three controls per channel complemented by pushbutton selector switches. Peak punch circuitry accelerates the leading edge of the signal to heighten dynamics while a trigger frequency control adjust frequency conscious performance. Pots control threshold and release while pushbuttons activate external key source, filter in/out, key listen, peak punch, attenuation range and bypass.

Drawmer has also added the DA6 six channel stereo or 12 channel mono distribution amp with balanced XLR I-Os. An output section has a headphones circuit for monitoring outputs individually.

Drawmer 307

Apogee 24-bit conversion

Apogee Electronics has introduced a new A-D convertor system called the AD-8000 for 8-channel 24-bit conversion, optional D-A and interface cards and the company's Soft Limit and UV22 processes.

Soft Limit and UV22 can be switched in on a per-channel basis and the unit features AES-EBU outputs while four optional interface cards can be installed for multichannel format conversion. Interface cards currently include ADAT, Tascam TDIF (both with bit-splitting technology for recording 24-bit signals on multiple 16-bit tracks) and Pro Tools.

AES-EBU and SPDIF inputs permit the processing of external sources and an SPDIF output follows the channel pairs selected on a built-in headphone monitor D-A convertor. Optional stereo and 8-channel 24-bit D-A expansion cards enable the AD-8000 to be configured as a complete conversion system while comprehensive source/destination switching provides confidence monitoring, digital track bouncing and overdubbing features. An optional remote mic amp is planned.

The 2U-high rackmount has six-mode lightbar metering for simultaneous peak and average ballistics and 2-second and infinite peak hold. Digital overs are indicated numerically and are user definable. The device can sync to a range of external signals and sample rates including video with an optional video sync card aswell as providing internal crystal locked 44.1 and 48kHz sample rates and optional sample rate conversion.

The company has expanded its recording accessories line with a lint-free alcohol-based tape head cleaning wipe which uses medical grade 91% pure isopropyl alcohol.

Apogee 309

Bellari comp

Bellari has released a single channel valve compressor/limiter called the LA120 which has fully variable threshold and output level controls plus bypass and compression/limiting switches.

Connectors are on standard jack and XLR and the unit can be rack-mounted optionally. Gain reduction is displayed on an analogue VU meter.

All gain circuitry is valve-based, the only solid state device is the output buffer for the balanced signal, and gain reduction is handled by optical components.

Bellari 306

Tube voice channel

Lydkraft has revealed the Tube Tech MEC1A single-channel voice processor combining a mic preamp, equaliser and compressor in traditional blue livery.

The device draws from component parts of the existing Tube Tech range including the preamp from the MP1A, the compressor from the CL1B and the equaliser from the impressive EQ1A.

Shipping is expected at the beginning of the year.

Tube Tech 308

Delay and cans

Two additions to the DOD SR series are the SR400D digital room delay and the SR460H studio headphone amplifier. There are also a number of new graphic equalisers.

The SR400D is a dual input, dual output device that can also provide two outputs from a mono input. It has separate input levels with clip LEDs. Delays times can be entered in feet, metres or milliseconds and the system will also compensate for temperature and humidity if these values are entered. Values are shown on a backlit LCD.

The SR460H has six 1/4 inch headphone jacks with individual level controls, as well as a master level control. Unbalanced inputs are fitted to the front and rear of the unit. An auto-ramp start-up system is designed to protect hearing and the power output is 1W per channel.

The SR430Q is a dual 15-band 2/3 octave equaliser, also available as the balanced SR430QX. Other balanced graphic equalisers now include the SR430QX 1U mono 31 band and the SR831QX 2U mono 31 band.

DOD 310

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READER RESPONSE No. 035

LA Classic Bass

LA Audio's Classic Bass instrument preamp combines the company's Classic Compressor with a FET DI input stage and 4-band EQ targeted at bass players.

The box also includes a transformer balanced mic input.

Controls for the unit include ratio, attack, release and gain make-up, plus a variable low cut filter, fixed high cut filter, EQ to compressor side chain switching, VU meters and a 20-bit digital output option.

Also new is the PS-1 single channel strip which combines a mic/line preamp with DI, noise reduction, variable frequency de-esser, variable mode auto compressor and 4-band EQ.

LA Audio 311

dbx pre/dynamics

The 1086 single channel mic preamp and dynamics processor uses dbx's new V2 VCA. The preamp section has a variable frequency low-cut filter and low and high EQ plus phantom power, 20dB pad and phase invert. Levels are shown on a backlit VU meter and the preamp and dynamics sections can be used independently.

Dynamics processing includes a compressor, de-esser, expander/gate and limiter. Compression includes selectable hard knee or OverEasy characteristics plus de-essing with variable controls for threshold and frequency settings. The unit can be optionally fitted with the company's Type IV digital output similar to that found in the Blue series 704 device.

dbx 312

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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READER RESPONSE No. 036

Avalon tube 737

The Avalon 737 direct signal path combines valve preamps, an opto-compressor, sweep EQ, output level and VU metering.

Inputs are provided for mic, DI and line and four valves are configured in single ended topologies with anode coupled followers for high current drive.

The opto-compressor has a minimum signal path with twin Class A valve triodes for gain matching. Controls are provided for threshold, ratio-compression, attack and release while de-essing is possible with the EQ in the sidechain. EQ high and low bands are passive while the dual mid bands have variable frequency and switched Q. Mid band ranges are extended with x10 multiplier switches.

Avalon Design 313

Compressor with distortion

Distressor is a single channel digitally controlled compressor with distortion controls and a number of unusual features. There are eight compression ratio curves with individual release shapes. The 1:1 mode imparts no 'intentional compression' but adds second harmonic distortion, while the 30:1 setting is described as 'instant John Bonham'. Controls include second and third harmonic distortion, as well as the more familiar settings for attack and release. There are also emulation modes for several well known compressors.

The Vac Rac modular valve system is now available with a stepped equaliser module, as well as the established preamp, limiter and DI unit. Four-way and six-way chassis are also now manufactured.

Unity Audio 314

Hi-bit convertors

Developments of established Prism convertors, the AD2 and DA2 are 24-bit/96kHz capable A-D and D-A convertors respectively.

Included in the AD2 is a synchronous sample rate convertor along with a stereo peak-reading bargraph. Many of the features are accessible via a menu system and an LCD while a range of stored configurations can be selected using dedicated selector buttons.

The DA2 has up to seven inputs supporting 96kHz and other high sampling rates with double speed and 2-wire AES3-type interfaces. An 'exceptionally' stable PLL has high jitter attenuation and the unit's digital outputs can provide a dejittered digital feed-through for reliable digital transfers plus a master clock mode in which the effects of incoming clock jitter are eliminated completely.

The convertor technology in both units is proprietary.

Prism 315

There are a few things you'll miss with the Opal Series

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READER RESPONSE No. 037

AMEK

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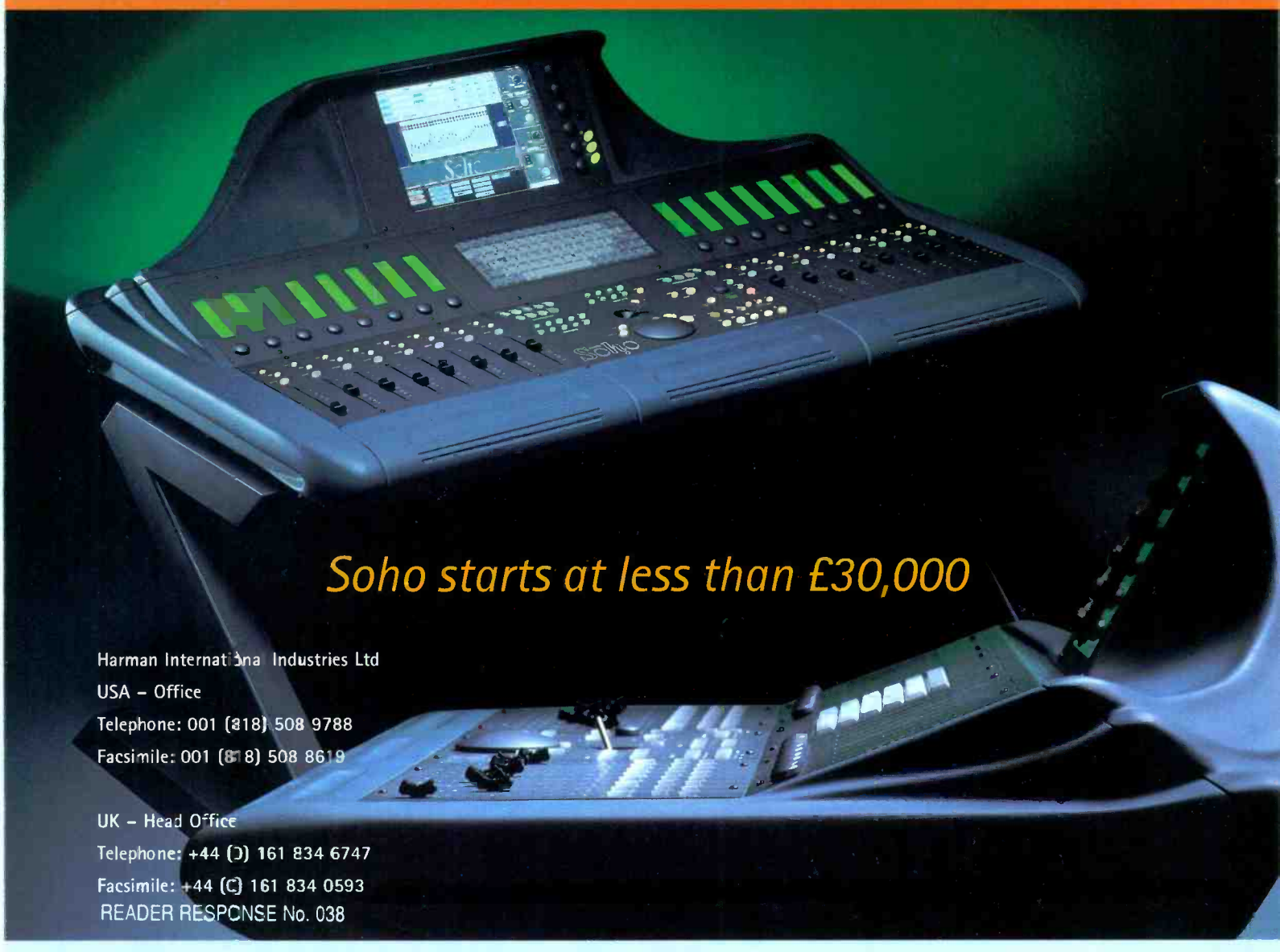
Soho

Digital Mixing Console



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READER RESPONSE No. 038

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- Dual Mode Buss Architecture for DAW/MDM Multi-channel recording
- 8 or 16 Motor Faders
- EQ – 4 Band Parametric
- Dynamics – Compressor, Limiter, Expander/Gate
- Dynamics and Snap-shot Automation of EQ, Dynamics, Faders, Pan, Mute, and Image Control
- Automated/Fully Assignable Joystick
- Dual Machine Control Ports plus MIDI machine control
- Multi-channel FX Rack (Reverb, Delay, Chorus, Flanging, 6/12 Band EQ, Mastering Compressor)
- 19 inch Pod – a rack unit option to house DAW controllers or outboard FX devices

Soho is the latest addition to Amek's range of fully specified digital mixing consoles. Developed specifically for audio post production applications, Soho is designed to be integrated with any existing or favoured Digital Audio Workstation. The sleek and ergonomic design and highly impressive specification makes it ideal for companies who require a cost-effective digital console, while maintaining the quality, professional image and functionality of their post production operation.

Oram Octasonic microphone pre

The Octasonic microphone preamplifier from Oram is now available as an eight channel unit in a 1U casing. Each channel has switchable 48V phantom power, 70dB of level adjustment with 41-position stepped control and an XLR balanced output. The unit is also designed to accept line level inputs. Frequency response is quoted as 20Hz-40kHz within 0.75dB.

Oram 316

Three from Meek stable

The SC3 is a stereo compressor and refines the quality of the SC2 while adding 20-bit digital inputs and outputs.

The VC6 is a combined preamp, compressor and enhancer that offers a signal path for mic, line and instrument sources and will appeal to those who have been impressed by the VC3. The compressor has fully variable control of compression depth, ratio, attack and release while the enhancer has control of drive, Q and enhancer depth.

Finally the VC5 Meequalizer is a stereo unit with 3-bands per channel based around a discrete class A transistor circuit. It can be connected to the company's voice channel products.

JoeMeek 317

Presonus offers ACP22 comp

The ACP22 stereo compressor/limiter with spectral gates provides full control over compression threshold, ratio from 1:1 to 20:1, variable attack and release times and switchable hard/soft knee characteristics. An auto mode selects programme dependent attack and release times while a stereo link function links both channels together.

On-board metering is provided for gain reduction and input-output metering. LEDs show soft/hard/knee, auto in/out selection and channel bypass while de-essing, ducking and other forms of spectral processing can be accessed by using the side chains.

The noise gate hands over control of threshold, variable attack and release and switchable gate range and the unit also has a low pass gate filter for eliminating gate triggering from high frequency signals. An independent gate key side chain is included for external triggering.

Connectors are XLR and unbalanced 1/4-inch jack selectable from the rear panel.

PreSonus 318

C Audio

The MultiFunction Crossover is an active unit in a 1U chassis. It is a two channel unit designed to accommodate biamplified operation, with an additional mono sub woofer. Each channel is equipped with a +/-6dB gain, with output limiters adjustable in 1dB steps. There are LEDs for signal preset, limit and clip. The sub bass channel has a phase reverse facility and a crossover phase adjustment control of 0-180 degrees for time alignment. All connections are electronically balanced but may be used unbalanced.

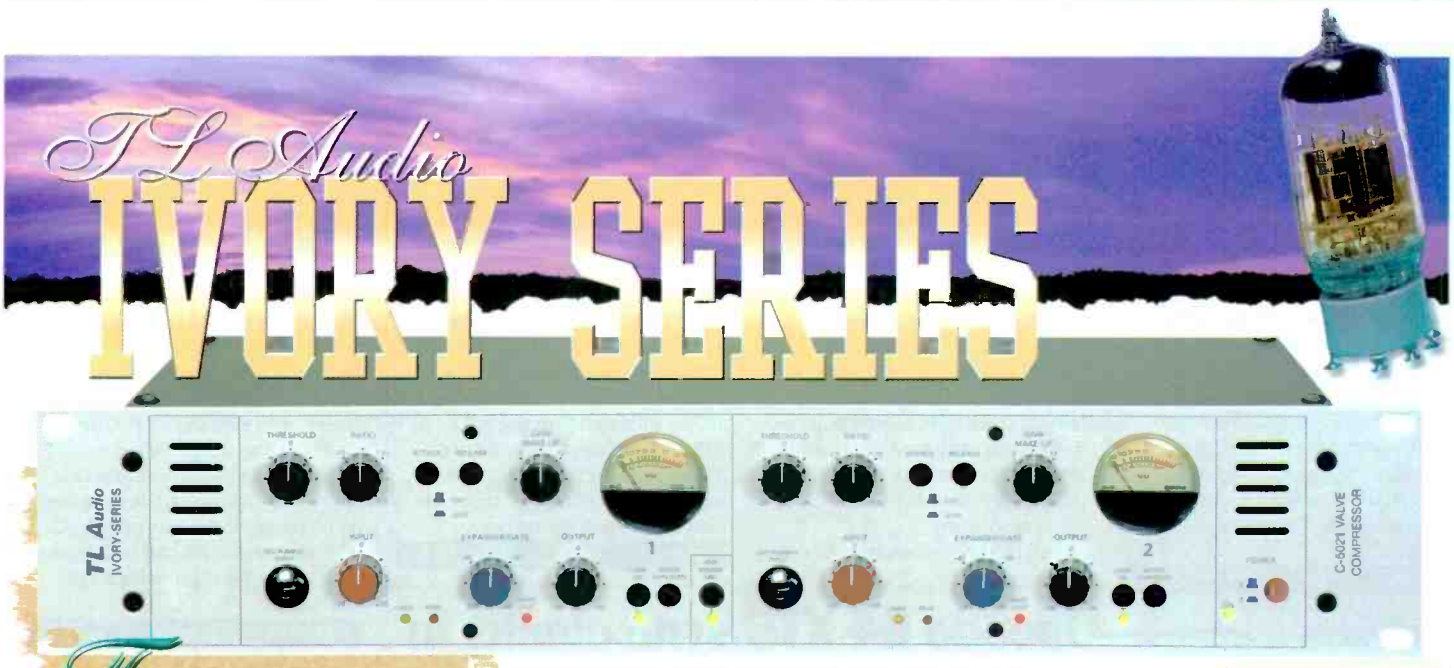
All crossover functions are carried on two plug-in cards. The standard unit has fourth order Linkwitz-Riley filters but other responses can be supplied to order. The most frequently used controls are at the front, others are at the back and the limiter threshold controls are shielded from unauthorised tampering by a security window.

C Audio 319

Eventide

Has released two preset libraries for the 4000 series Ultra-Harmoniser, one including musical instrument 'stomp box' simulations and other aimed at broadcast applications.

Eventide 320



TL Audio have taken the outstanding valve performance and flexible operation loved by professionals in our Classic Series, packaged it in enclosures oozing style and presence and combined it with an ultra-affordable price tag.

There simply is no better sounding or better value valve signal processors.

5021 2 Channel Valve Compressor

Each channel offers fully variable control of input and output gain, threshold, ratio and gain make up.

Attack and Release times are switchable for 'fast' and 'slow' modes.

An expander/gate is provided with control of threshold. Metering is via VU meters - either output level or gain reduction can be monitored.

A front panel instrument input is also included.

The unit will work in dual mono or stereo linked modes, and a compressor bypass switch is provided on each channel. Inputs and outputs are duplicated on balanced XLR and unbalanced jack, and a sidechain insert point is included on each channel.

£399 EX VAT £469 INC

5050 Mono Valve Mic Pre-Amp & Compressor

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5013 2 Channel Valve Parametric EQ

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READER RESPONSE No. 039

Grace Preamp

Grace Model 201 features two channels of preamplification each with a large stepped rotary gain control, smaller trim knob, peak led and lit-when-active buttons for 48V phantom (red), phase reverse (green) and insertion of a 20dB pad (yellow).

Power is switched from the front panel; connections are all balanced XLR with the outputs using a proprietary transformerless class-AB amplifier reckoned to outperform 'traditional transformer-like designs' and there is a ground lift toggle switch provided on the rear panel.

The peak is the only form of metering, lighting green at -14dB and going red at +16dB. Setting the level using the 24-position gain control gives 18dB-64dB of gain in 2dB steps, with the unstepped 10dB attenuation of the trim control available for fine tuning. With the attenuator switched in, the 201 will handle a +4dB line-level input.

The unit is said to have a frequency response of 20Hz-300kHz (±0.2dB), <0.0015% THD+N at 40dB gain (+20dB output), phase deviation of <2° between 50Hz and 20kHz, and -130dB noise level at 60dB gain.

Grace 321

DACS Micamp

Digital Audio and Computer Systems claims 'negligable' noise, distortion and crosstalk in its preamp. Frequency response is said to be DC-45kHz. Carefully matched transistors are used in the design, which couples minimal controls with special microphone power arrangements aimed at producing the cleanest signal path possible.

The Micamp has two independent channels. Gain is handled by an 8-position switch plus a trim pot; the switch has 6dB increments while the pot has a 10dB range with repeatable 0.5dB scale markings. Level monitoring employs a circular window containing three coloured LEDs.

DACS 322

Cheap effects

DigiTech Studio's S100 is an affordable dual multi-effects processor that can be configured in series, parallel or combined. Effects include stereo reverbs, multitap delays, chorus, flange, tremolo, detune and parametric EQ with 99 factory programs and 99 user presets. The device is MIDI and footswitch controllable.

DigiTech Studio 323

Sabine feedback killer upgrade

Sabine's FBX1020 feedback exterminator, an upgrade on the PBX901, automatically senses feedback, determines its frequency and places a narrow constant-Q digital notch filter on the offending frequency. The new unit has 20-bit performance and offers ten feedback filters. ClipGuard adaptive clip level control with Turbo setup mode makes setup faster and easier and the unit has an internal power supply and front panel buttons for setting total number of filters, setting the desired number of fixed filters, locking fixed filters and switching filter width.

The Power Q ADF4000 workstation combines the functions of seven digital products in a 2U-high package through 24-bit processing.

Features include up to 12-band parametric EQ with high and low pass filters,; 31-band graphic EQ with adjustable filter widths; up to 12-band FBX feedback exterminator with adjustable sensitivity; real-time analyser with reference mic input; a compressor/limiter; digital delay for speaker alignment and a noise gate. It also sports ClipGuard and an automatic room equalisation process.

Sabine 324

Roland EQ and noise eliminator

AP-700 is an 'Advanced Equalising Processor' which works in three modes: AFB Feedback Elimination, PEQ Parametric Equaliser and GEQ Graphic Equaliser.

SN-700 is a 'Noise-Hum Eliminator' that features auto and manual operation for the two processes. Both units feature balanced jack and XLR connectors. Operating level, for both units is +4dBm with maximum output level quoted as +24dBm.

MIDI In and Out connections are provided for programme changes relating to stored patches (up to 16 on each unit), SysEx and Control Changes. The AP-700 additionally includes XLR AES-EBU connections.

With the SN-700 and the AP-700's analogue inputs, audio passes through a sigma-delta 20-bit 64x oversampling A–D convertor and then through a 20-bit 8x oversampling D–A convertor on output. Sampling frequency is 48kHz, with 44.1kHz also available on the AP-700. Processing is digital.

Both units are black and 1U-high, with green-lit LCD (larger on the AP-700 for graphic displays), square pushbuttons, and dual-concentric input level pots with centre detent. The SN-700 has a data wheel, which can be rotated, pushed, or pushed and rotated, to access different functions. The AP-700, meanwhile, makes do with nudge buttons for parameter adjustment and arrow cursor buttons for display navigation.

Roland 326

Opcode 64 XTC sync clocks in

The Studio 64 XTC synchronises analogue and digital multitracks to PC and Mac-base workstations. Simultaneous wordclock and superclock outputs permit sample accurate sync of Pro Tools to machines like the DA-88, Akai DR4, EMU Darwin and some DAT machines. It can also control ADATs through MMC.

An internal sync clock can write SMPTE as the master reference or it can generate wordclock and superclock from incoming SMPTE. It also accepts video and blackburst signals as reference and routes MTC and MMC. It can also be used as a 4x6 MIDI interface with patchbay capabilities and can be networked with an Opcode Studio 4 interface or added to any MIDI setup that has a spare serial port.

Opcode 328

SPLDynamaxx

Dynamaxx differs from other compressors by providing automated settings for parameters including attack, hold and release. Each channel has only two controls for gain and compression, plus three switches for the other functions. A noise gate is included at the end of the chain, as well as stereo link and side-chain inputs.

There is also a function which the manufacturer has dubbed 'Decompression'. Designed to put dynamics back into highly compressed signals such as samples and some keyboard sounds, the function is also said to be effective on drum modules.

The SPL Charisma is now available in a two-channel version. A tube processor designed to simulate tape saturation, Charisma allows control of the onset of saturation, giving a range of effects from soft to hard. Applications include the addition of subjective loudness to instruments and the emulation of valve vocal mics.

SPL 325

Economy compressor

The C-132 is designed as an economical, single channel compressor/limiter for a range of live and recording applications. Although it replaces the earlier C-128, it is a completely new design with lower noise, a high performance VCA element and new features.

The action of the unit can be varied from a gentle 2:1 compression to a 50:1 hard limiting. Attack time is adjustable from .05ms to 50ms and release times from 50ms to 5 seconds. There are three modes of operation: compress, de-ess and side chain, for line ducking and other uses.

There is a low level input that allows electric guitars and basses to be plugged straight into the C-132, and two units can be coupled for stereo operation with a 1/4-inch cable.

Furman Sound 327

Digitech vocals

A no-MIDI processor, the Vocalist Performer produces two harmonies and also has reverb. The 50 user presets can use six scale variations and allow for an A/B variation within each preset, which can be addressed with a footswitch.

Digitech 329

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

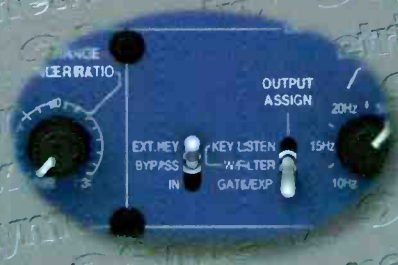
Built for Speed

The 562E Windowing Expander/Gate

Drum miking demands a gate armed with a fast attack. But even the fastest gates race *behind* the audio, playing a noisy game of catch-up with the drummer. For them, superfast attack times usually mean false triggering. Their added speed comes with enough snap, crackle and pop to compete with breakfast cereal.

Smart gates leap *ahead*. Meet the smarter, swifter 562E Windowing Expander/Gate. The 562E's breakthrough technology brings you rapid attack without additional noise. Symetrix creates ultra-fast click-free gating using its unique AutoWindowing and Window Advance functions.

AutoWindowing is a dynamic smoothing process. It eliminates the pops typically produced by envelope edges and overshoot. Window Advance preserves the full impact of kick and snare. This sidechain process discerns even the fastest attack transients. Centering the signal within its envelope, Window Advance then opens the gate slightly *ahead* of the waveform's leading edge. Users control this powerful system through three separate switch settings and monitor the gated signal as well as the key/sidechain signal.



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READER RESPONSE No. 040

Convertor box

Zulu is a 4-input/8-output digital convertor that combines 20-bit A-D and D-A with ADAT optical I-O and is mounted in a shielded external half rack-width chassis with an independent power supply. Bi-colour LEDs monitor signal level and clipping while unbalanced 1/4-inch jack connectors are provided.

Frontier Design 330

Mytek 24/96

Mytek Digital has introduced the ADAC 9624 A-D and D-A convertor which offers 24-bit, 96kHz performance. Targeted at high-end mastering, the unit offers several selectable sampling rates, noise shaping, headphones amp, optional external synchronisation and several optional digital I-O interfaces. Included in the package is the MRX data format licensed from Prism Sound which allows for six channels of 20-bit, 4 channels of 24-bit or stereo 24/96 to be stored on 16-bit machines like the DA-88 and ADAT.It is claimed to be the first convertor on the market to use the new Crystal Semiconductors CS5396 chip.

Mytek Digital 331

ART EQ has '3% centre accuracy'

The new ART 2-U high 355 dual channel 31-band equaliser has constant Q circuitry with a 3% centre frequency accuracy, 20mm centre detent slider, selectable boost/cut range of 6dB or 12dB, plus balanced and unbalanced input and output connections.

The unit is additionally equipped with adjustable high pass filter, adjustable low pass filter, variable input level control, clip level indicators, ground lift and an internal power supply.

The availability of the new device coincides with the release of the 310 stereo 2-way or mono 3-way audio crossover. This employs 24dB per octave state-variable fourth order Linkwitz Riley filters.

Access to each channel's input level, high and low output level and filter frequency is available from the front panel rotary controls. The 310 has balanced and unbalanced connectors with a filter tuning range of 80-920Hz which can be switched to operate from 800Hz to 9.2kHz.

ART 332

X marks spot for cheaper CEDAR

Breaking the price barrier that has kept digital audio restoration within the elite, CEDAR's Series X consists of three boxes - the DCX declicker, CRX decrackler and DHX dehisser. All units are real-time and based on 40-bit floating point DSP and support 24-bit I-O but differ significantly over the original units in being simpler and lacking programmability. More X Series products are expected.

CEDAR 333

What's New in Pro Audio 4

will be published Mid 1998 and will feature all new equipment, updates and enhancements from NAMM, SIEL, MUSIKMESSE, NAB and AES Amsterdam.

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Dump and log from OPNS

CD Fastlink is an audio dump facility that permits the direct transfer of audio tracks from CDs on to a PC hard disk in .WAV or MPEG layer I and II format. Transfers are made at 12 times playback speed and it is targeted at radio stations wanting to set up a digital record library and multimedia and website developers looking to employ audio in their products. It can work with single CD-ROM drives, 6 CD changers or jukeboxes. Running under Windows 95 and NT it can handle 8 host adapters and works with up to 14 SCSI device controllers.

Also available from the company is the Audiospy multitrack logging system which stores on 4mm DAT compressed MPEG audio for programme archiving and rebroadcasting purposes. In addition to providing continuous or programmed start recordings, the system has a extensive database environment and keeps track of all sound file locations along with individual DAT tapes associated with each session. OPNS claims that a specific location on a tape can be found in less than a minute and previewing of a chosen sound is possible while Audiospy continues to record.

OPNS 334

DA20 MkII

Tascam has brought its DA20 DAT machine up to mark II status with an improved error correction system, an error rate detection system which checks tape and head integrity before recording and a new sampling monitor mode which prevents head and tape wear when monitoring sources.

Improvements have also been made to the convertors, the circuitry layout, and the transport mechanism and software servo control. Start ID sensitivity can be set at four different levels. The price has also been reduced over the original machine.

Tascam 335

DAT to CD-R

Following the release of the CD2CD/Pro CD-R duplicator, MediaForm has introduced the Easi-DAT add-on which allows a DAT player to be interfaced via SPDIF or AES-EBU ports and offers conversion of DATs to CD-DA discs. Features include selective track extraction, multisample rate support, start ID editor and CD player emulation from hard disk.

The CD2CD/Pro standalone duplicator copies up to six CD-Rs simultaneously from a single CD with a single button touch. Features include prescan, which scans the entire master for any errors prior to burning, and a six-digit password to prevent unauthorised operation.

MediaForm 336

New CD-Rs

Ricoh has announced a new generation of phthalocyanine CD-R optimised for multispeed recorders ranging from 1x to 6x operation. The new dye is durable and resistant to intense heat, light and humidity and incorporates a special Hardcoat layer that protects the disc from scratches and peeling.

Ricoh 337

Gemini

A dual CD player, the CD-9800 has control pads for each transport and offers direct access to any track. A variable pitch control can operate on a range of +/-4, 8 or 16 percent. Track start is frame accurate. A digital output is provided via a BNC connector.

Gemini 338

Cassette copiers

Graff has expanded its Turbo Trax cassette copier range with the Turbo Trax 3, a 1 to 3 non-expandable unit with long-life heads and ferrite erase head. There's now also an expandable Multi Trax model with a master unit supplied with three slaves expandable to a maximum of 15. The third model is a 1 to 1 Turbo Trax model. All machines use direct drive motors for gentle tape handling at 16x speed and are available in mono and stereo versions.

Graff 339

READER RESPONSE No. 043

CD-RW

The £500 price barrier for CD recorders is about to be broken with the launch of the CDR870. The Philips machine is apparently a stand-alone recorder which allows multiple-session use and produces fully Red Book compatible discs. Sample rate conversion is included, so digital sources recorded at 48kHz or 32kHz will automatically be converted to 44.1kHz. Automatic track numbering from CD, DAT, DCC and MiniDisc is supported. According to SRTL, which has been appointed by Philips to handle distribution to professional users in the UK, the CDR870 is also the first machine based on CD-RW technology, which enables the last track or the complete disc to be erased, making it completely reusable.

SRTL 340

Sony miniDAT

The PCM-M1 is 20% smaller and 25% lighter that the consumer TDCD-D100 and allows for 3.5 hours' of recording time using the supplied Ni-MH batteries. The device has selectable SCMS, a recording margin indicator and uses the same mic amp as the SBM-1 Super Bit Mapping adapter with 20-bit convertor and optical and coaxial digital I-O. It has three adjustable recording levels (automatic, mic limiter and manual) and two automatic gain system modes.

Sony 341

ASC's DARTlite

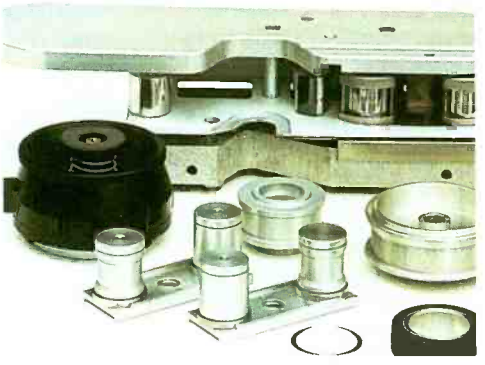
The existing range of DART diskette-based cart replacement machines is being substituted by DARTlite, a series with models supporting 4Mb floppy, Zip and MO recording formats. All machines are record-capable when used with a PC. Features include dial-up track selection, fast search, time elapsed/ remaining and peak reading meter. Accessories include an Instant Access remote.

As standard, DARTLite operates at 32kHz stereo, with optional boards for 44.1Hz and 48kHz operation. There is also a linear PCM version for applications where compression is not desired.

ASC 342

JRF introduces A80 conversion

JRF Magnetic Sciences has introduced a complete kit of all the parts required to convert a 1/4-inch Studer A80 to 1/2-inch 2-track format including heads, pinch roller, tape reel hubs and all roller guide assemblies. Customers may choose Flux Magnetics Extended Performance heads or JRF's own PLX replacement heads.



The company offers similar conversions for Ampex ATR102, Otari MTR10 and MTR12, MCI JH110 and Sony APR5000 machines and some kits are also available for those who wish to convert a 4-track 1/2-inch machine to 2-track operation.

JRF 343

Tascam MDs

Tascam has introduced two additions to its MD range. The MD501 a mid-price 2-track recorder/player designed for radio, live theatre and installations while the MD301 is a budget version of it.

The MD501 has balanced XLR I-Os, a PS/2 PC keyboard connector for disc and track naming while a port for fader or event start allows remote activation. Auto ready and program play make the unit suitable for broadcast while an SRC converts incoming digital to 44.1kHz and there is digital level control and programmable fade.

The MD301 offers the same playback and editing facilities with coax and TOS optical digital I-O but unbalanced jack connectors.

Tascam 344

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DN-M1050R MiniDisc Recorder/Player

DN-C680 CD Player

Common features Matched 3u rack mount chassis, displays, operation. Carefully designed front panel with intuitive layout enabling fumble free operation. Varipitch, Jog/shuttle wheel, illuminated control buttons, balanced + unbalanced analogue i/o, AES/EBU-SPdif digital i/o, serial + parallel control ports, track select dial.

Option Cards - Sync Sony 9-pin, Word clock, SMPTE. **SRC** 32/44.1/48khz. **'Hot' start** 20 track memory.

MD V4.0 Atrac, PS/2 Keyboard socket, 'undo' edit, auto level record start, AB insert edit.

CD True instant start-10ms, cue to audio, enhanced display, index search, hi-grade audio.

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READER RESPONSE No. 044

HR824 ACTIVE MONITOR

"Overall frequency response was so flat that it was almost hard to believe." Electronic Musican Magazine*

Ready to confront reality? The HR824 Active Monitor is now in stock at Mackie Dealers.

Owning a set of HR824 near-field studio monitors has the potential of seriously altering your perception of sound.

For the first time, you'll be able to hear **precisely** what's going on all the way through your signal chain — from microphones right through to your mixdown deck. You'll suddenly discern fine nuances of timbre, harmonics, equalization and stereo perspective that were sonically invisible before.

> "The low end was robust and present; the electric bass and kick drum thumped into my chest the way those huge UREI® monitors did back in the old days."

Compare HR824s to the competition, and listen to the dramatic differences. Critical listeners tell us that it's as if a curtain has been lifted between themselves and the sound source.

> "In fact, all the sonic details that I can discern on a $45,000 reference system were very well reproduced, although not identically, on the HR824s. That was very impressive."

Next, you'll notice low frequency output. The HR824 really IS capable of flat response to 39Hz. Moreover, it's capable of **accurate, articulated** response at frequencies that low. Rather than a loudspeaker's "interpretation" of bass, you can finally hear through to the actual instrument's bass quality, texture and nuances.

Next thing you'll notice is the huge "sweet spot" directly between the monitors, which is so broad that several people can sit next to each other and still hear a coherent, detailed stereo panorama.

One final point... your monitors are the only part of all your studio equipment that you actually **hear**. Along with good microphones, HR824s are the best investment you can make, no matter what your studio budget. And, like premium mics, HR824 monitors cost more than less accurate transducers.

Each HR824 ships with its own signed Certificate of Calibration attesting to its ±1.5dB 39Hz-22kHz frequency response.

> "The imaging and high frequency dispersion is brilliant. I was amazed at how far off-axis I could scoot my chair and still clearly hear what was going on in both channels."

But if you're committed to hearing **exactly** how your creative product sounds, we know you'll find owning HR824s well worth it.

- Inside, two separate FR Series power amplifiers with a total of 250 watts rated power — the most of any active monitor in the HR824's class.
- On the back, HF Boost/Cut, Acoustic Space, Roll-Off and sensitivity controls, balanced 1/4" and XLR inputs.
- The HR824 cabinet is filled with 100% adiabatic foam. Result: Unwanted midrange reflections from the low frequency transducer are absorbed inside the enclosure.
- Alloy dome is free from "break-up" that plagues fabric domes.
- Power and overload LEDs.
- Logarithmic wave guide propagates high frequencies over a wider area. Result: more precise imaging and a far wider sweet spot.
- Edge-damped 25mm high-frequency transducer is directly coupled to its own 100-watt FR Series™ Low Negative Feedback internal power amp.
- Instead of a noisy port, a passive honeycombed aluminum transducer on the rear of the HR824 almost doubles the low frequency radiating surface.
- Specially-designed 224mm low frequency transducer is servo-loop-coupled to a 150-watt FR Series™ amp providing it with incredibly fast transient response and extremely low frequency output.

* Electronic Musician, October 1997. All quotes are unedited.

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