

What's new in Pro Audio

THE GUIDE TO THE LATEST PRODUCTS AND EQUIPMENT

ISSUE No6 Summer 1999



Calrec Alpha



Alesis MasterLink



Micron UHF

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FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

C 4000 B

PERFECT IN THE MIX

For recording studios, project studios, radio stations, and musicians, the C 4000B has got what it takes: versatility, outstanding price/performance, and a classic large-diaphragm condenser capsule. Also, the microphone uses advanced solid-state technology to support the typical sound of a large-diaphragm condenser microphone AND an unprecedented price/performance ratio. Thanks to its selectable cardioid, omnidirectional, and hypercardioid polar patterns, the C 4000B is the perfect choice for just about every studio and live sound application. A transformerless output stage ensures outstandingly accurate low-frequency response.

In short, the C 4000B provides rock solid performance at an unprecedented price.

EXPERIENCE THE WARMTH OF THE AKG SOLID TUBE FOR YOUR RECORDINGS.



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AKG Acoustics GmbH, Lemböckgasse 21-25, P.O.B. 158, A - 1230 Vienna/AUSTRIA
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Reader Response No. 001



A Harman International Company

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NEW

GS3000

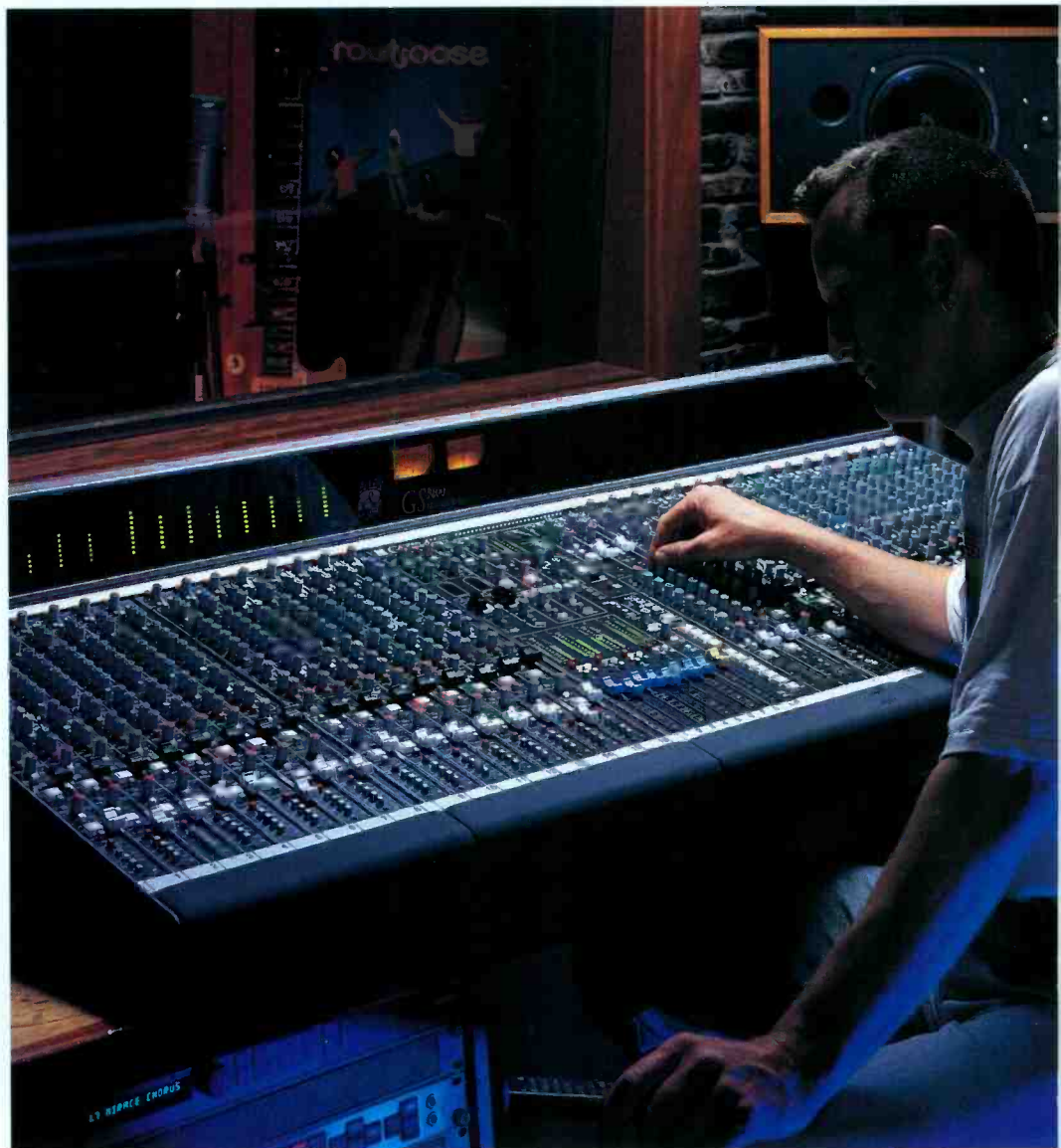
OK... or Outstanding?

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

SVT VALVE PREAMPS



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



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



H A Harman International Company

ALLEN & HEATH
Kernick Industrial Estate,
Penryn, Cornwall TR10 9LU, UK.
Tel: +44 (0)1326 372070
Fax: +44 (0)1326 377097
<http://www.allen-heath.com>
email: sales@allen-heath.com

**ALLEN
&
HEATH**

Reader Response No. 003

Going steady

The adoption of a new technology or a repackaging of an existing one must endure all the trappings and rigours of the popular romance. It starts with the first encounter. A chance meeting, the peculiar combination of circumstances that causes the two worlds to collide, or the introduction, by a friend, who tells you that the two of you ought to get along really well.

After a brief period of appraisal and indecision things either fade to grey or they move on to the next game level and the whole thing is swept along by waves of interest, mystery (learning is essential to progress and the requirement to learn is progress), and discovery and the fact that it does something for you. If you stay upright on the surfboard and meet the challenge with just enough concentration, you glide to the beach better for the experience and if the enjoyment factor has remained high then you become comfortable with the situation and will persist with it.

Admittedly you can flip off the surf board at any time but the whole process runs to completion based on a very short appraisal period, the wave builds and the decision to go with a good one must be made fairly quickly. Yet the implications are longer term and the danger is that you develop a passion just for surfing.

So much of what we buy is triggered by marketing influence. We live in a society where our prowess as consumers has reached new heights. From the heavily branded children's toy to the definitive multi-designer labelled casual outfit, the temptation to desire what we are told is desirable is overwhelming.

It is difficult to accept it but we must at least acknowledge that pro audio also encourages us to consume. Sometimes it's natural and sensible, but often it's illogical but oh, so attractive. How comfortable do you feel when someone questions your use of an item on a session that neither qualifies as 'a classic' or as 'the latest'? Do you take it personally because you believe it reflects on your abilities of judgement?

Yet we all do it, whether it is chuckling at that old non-Pentium 200 computer, that largely forgotten condenser, those curious old dual concentrics or the never that fashionable 2-inch. And this is despite the fact that they're all up to spec, the user is clearly comfortable with them and has arrived at the decision not because of financial reasons but after a prolonged period of appraisal and courtship. They're going steady.

A publication like this illustrates the phenomenal rate of new product output, but we have to keep reminding ourselves constantly of what we do and what we need rather than what there is and what we prefer. And there is no harm done in jumping off that surfboard every now and then and swimming to the beach and just thinking about it.

Zenon Schoepe, executive editor

What's new in Pro Audio

Editorial

Executive Editor:

Zenon Schoepe

Production:

Avant Garde (Croydon) Ltd

Contributors:

Zenon Schoepe, Simon Croft, Dave Foister

Publishing Editor:

Joe Hosken

Advertisement Sales

Executive Ad Manager:

Chris Baillie

Ad Manager:

Phil Bourne

Ad Executives:

Sue Gould and

Richard Lawn

Advertisement

Production:

Desrae Procos

PA to the Publisher:

Lianne Davey

Publisher: Steve Haysom

Managing Director:

Douglas G Shuard

Circulation

Circulation Manager:

Caroline Sharpe

Tel: 0171 940 8500

Fax: 0171 921 5942

Miller Freeman UK Ltd

8 Montague Close

London SE1 9UR, England

Tel: 0171 940 8500

Fax: 0171 407 7102

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USE OUR FREE ENQUIRY SERVICE – SEE PAGE 59 FOR HOW IT WORKS

Hafler C-Series amplifiers

US manufacturer Hafler has three new ranges of amplifiers known collectively as the C-Series and differing in a few application-specific details. CCA contractor amps have 70 and 100V line outputs; CX cinema amps have electronic crossovers that can be customised to the install; and LSA live sound amps are the most basic models, with crossovers available and digital control circuitry in the pipeline. Power outputs go as high as 1200W per channel using switching power supplies, surface mount, and Mosfet.

Hafler 603



Roland powers up new lightweight amp design

Roland has introducing the SRA-200E Dual Channel Power Amplifier, the first to employ ECOS technology for improved efficiency and lightweight design.

ECOS (Efficiency Control Operation System) uses a control circuit that simultaneously mon-

itors signal level and amp operating conditions to 'intelligently' optimise power. The result, says Roland, is a high-efficiency amplifier that consumes half the power of a conventional unit while generating only one third of the heat.

This allows the SRA-200E to be

much lighter and more compact than previous power amps while maintaining a high level of clean output power.

Power outputs are 100W, 150W or 300W (bridged mono). Features include balanced inputs and a limiter circuit.

Roland 604

DL SERIES
PROFESSIONAL AMPLIFIERS

Tailored to the needs of the most demanding professionals:

- Modular design
- Toroidal transformer
- Bipolar transistors
- 2 Ohms load function
- Soft Start
- Automatic breaker
- Suppressor mains filter (C.E.)
- HP and LP filters
- High efficiency protections
- Bridge mode
- Front panel gain controls
- Suitable dimensions
- Balanced inputs
- Speakon outputs

...and the most important:

Clip limiter!! because on the verge of the year 2000 an amplifier without limiter cannot be qualified as a professional.

If you are very demanding you will get to MASTER

MASTER
audio design

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3 ANOS / 3 YEARS / 3 ANS
GARANTIA / WARRANTY / GARANTIE

Three from QSC

There are three introductions from QSC, with two new amplifiers and a 100V output accessory for the CX302 amplifier. New to the PowerLight range is model 6.0, which delivers 1,500W per channel at 8 ohms, 2,500W per channel at 4 ohms, or 3,000W at 2 ohms. According to the manufacturer, the PL6.0 shares the same power supply and output circuitry as the award-winning PL9.0.

Incorporating PFC (Power Factor Correction), the PL6.0 is said to draw 40% less average AC current, thereby reducing strain on the AC system. State of the art high speed components and large-die N-channel Mosfets are apparently combined with a four-tiered DC supply to yield efficiency comparable to Class D designs, while operating in the linear mode for lowest distortion and noise.

The IT-42 output transformer for the CX302 amplifier adds two channels of isolated 25V, 70V and 100V outputs. In addition to driving lines loaded up to 400W per channel in stereo or parallel mode, the system can be configured bridged-mono to drive lines loaded up to 800W at 140V or 200V. This is the latest addition to a line of eight sound contracting amplifiers.

QSC 607

DAS Energy series power Amps

Using CAD for both electrical and mechanical design, the Energy series amps from DAS use the company's DMAT concept. Discrete Monolithic Amplifier Technology couples a number of self-managed amplification cells with Parallel-Bridge Topology to form a single output. Each cell includes an active limiting circuit and a full set of protection circuits that are claimed to make the amplifier virtually indestructible by voltage oscillations, short circuits, thermal runaway and instantaneous temperature peaks. Four models are available from 125 to 650W rms.

DAS Audio 601

Reader Response No. 004

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Chameleon

UK's Best Kept Pro Audio Secret

NEW



3750DP/2 - 3750 Watts 2U 15.8 Kg (35 Lbs) Ideal Touring Size and Weight



2000DP/2 - 2000 Watts 1U 14 Kg (31 Lbs) Ideal Touring Size and Weight

Reader Response No. 005

Rugged Construction



Our power supply capacitor network, shown above, ensures the utmost reliability.

FWT² Flat Wire Transformer Technology



Our innovative Flat wire wound highly efficient transformer - A major reason for our 'sonic' reputation

5 way protection

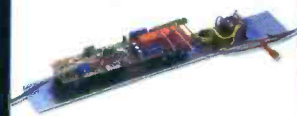
Our SAFETY CIRCUIT protects against:



- Overload
- Overheating
- Loudspeaker damage
- Electronic malfunction
- AC Power faults

Hi-Tec Surface mount

Hi-Tec Surface mount technology is used to improve audio performance and reliability.



B-Polar Class A-B

Output Stages are Bi-Polar class A-B for reliability, and audio fidelity. Output module for a Chameleon amplifier.



utilising our high density mounting technology, coupled with our original mounting and heat dissipation formula.

Chameleon customers in over 30 countries worldwide keep buying our amps. They tell us they sound so good it gives them an edge over the competition and they want to keep it to themselves!! Until now, Chameleon amps have kept exclusive company, 'quietly' working on tours throughout the world and with leading recording studios.

Having expanded our purpose built UK manufacturing facilities, we can now not only meet our customers increasing demands, but also service yours!

If you will not compromise on sound quality and want to join a team that is dedicated to the ever changing quest for sonic excellence, Chameleon amps are for you. You will be impressed by the outstanding specs and low weight to high power ratios. Don't take our word for it, compare our THD and damping factor specs for example to leading Quality Switchmode Competitors... you will see Chameleon is right there among the world leaders. The best test you can do of course is an A/B sound check. We guarantee you will be amazed.

World class manufacturing techniques and attention to detail, allow Chameleon® to reproduce the most demanding sound sources imaginable, without colouration or distortion. Make your system a world beater by installing Chameleon® and let the secret speak for itself.

Our range of products also includes specialist:

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CHAMELEON AUDIO LTD a division of ATMC Ltd Whimsy Industrial Estate, Steam Mills, Cinderford, Gloucestershire, GL14 3JA, UK. Tel. 44(0)1594 827602 Fax. 44(0)1594 823915 e-mail. chameleon@tech.co.uk

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RECORD COMPANIES

Virgin
Warner
EMI-Positiva
CORPORATE CLIENTS
Eidos Interactive
Walt Disney Television Animation
Psygnosis (Sony)

Sound Foundation Recent Tours

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Howard Jones
Suzie Quatro
Johnnie Howard Orchestra
Average White Band
Beverly Knight
Rose Royce
Katrina and the Waves
Shola Ama

Thanks to Sound Foundation +44(0)118 986 6566
and Forge Studio +44(0)1691 658550

TACT

The next generation of Tact Audio's digital room correction system, the 2.0 Century, is aimed to appeal to professional and home audio users and follows in the footsteps of its RCS 2.2 room correction system and the Millennium fully digital integrated amplifier.

Designed by Tact Audio founder Peter Lyngdorf, the Tact 2.0 is a fully digital unit that comes with a microphone for measuring room acoustics at a much lower price than its 2.2 predecessor. The RCS system, which needs only to be hooked up to a PC and a mic, compensates for all room related distortion to the signal, eliminating colourations, frequency deviations and reflections. The company promises a dramatic cleaning effect, with absolute correction precision within 1Hz.

Tact 2.0 can be customised to individual requirements and upgraded with analogue interfaces, has DSP power in excess of that required for its 192kHz sampling rate and can be daisy chained to other units.

TACT**613****Yamaha**

Yamaha has launched the X Series of mid-price professional power amps, designed for permanent installation and sound reinforcement. The range includes the XH150 (150W per channel) high-impedance amp and the XS250 (250W) and XS350 (350W) low-impedance models. All models have oversized heat sinks and power, clip, protection and signal indicators.

Yamaha**612****McGregor**

V8D and V8P are stereo mixer amplifiers with a power rating of 500W RMS per channel into 4 ohms. There are four balanced or unbalanced mic/line inputs with volume, treble and bass. In addition there are two stereo channels with line inputs and an additional unbalanced mic input. Both output channels have switchable active clip limiters and outputs are on Speakon connectors.

V8P comes with a digital effects processor offering 64 effects setting with memory and footswitch operation. V8D has a simpler digital delay instead. Either model is available with a vinyl sleeve, rack mounting or in a flight case.

MTR**610**

Two additions from QSC Audio

Two additions to the QSC product range are a new PLX series amplifier and a plug-in processing card for the same range.

PLX 3402 is rated at 700W into 8 ohms, 1,100W into 4 ohms and 1,700W into 2 ohms. Using QSC's PowerWave switching power supply, the device is mounted in a 2U chassis and weighs 9.5kg.

Hum and noise are said to be -110dB 20Hz-20kHz and THD just 0.03% at rated power into 8 ohms.

Proportional clip limiters are provided for reduced distortion while maintaining dynamics. There are also low frequency filters for speaker protection.

Standard inclusions are XLR and 1/4-inch balanced inputs, Speakon and Binding post outputs, plus comprehensive LED level and status indication.

The BSC-3 Buscard accessory adaptor adds a two-channel crossover filter and input isola-

tion transformers, plus input attenuation for excursion processors which require less than 32dB of gain. The filter can be configured as a two-way active crossover, bandpass filter, CD horn equaliser, subsonic or ultrasonic filter. It features 4th order Linkwitz-Riley filters with selectable crossover frequencies and independent configuration of the two channels.

QSC**602**

Nagra's new amplifiers

AMosfet and a valve power amplifier for audiophile and professional applications have been launched under the Nagra brand by Swiss manufacturer Kudelski.

The Nagra MPA Mosfet power amplifier is a 250W per channel device with a PFC (Power Factor Correction) power supply. The manufacturer says that this significantly improves sonic performance by eliminating detrimental power spikes inherent in traditional transformer-based designs. The unit can be bridged to deliver 500W mono.

A retro-fittable option provides wireless remote control over volume, balance, mute and selection of four sets of line inputs. The

device can be operated vertically or horizontally and rack ears are also available.

The Nagra VPA vacuum-tube power amplifier is described as a pure Class A 50W monoblock amplifier, based on a pair of directly heated, thoriated tungsten 845 output triode valves for each channel. Full rated output power can apparently be achieved from 30Hz-40kHz with minimal distortion due to the use of Nagra-designed output transformers. Zero negative feedback is used in the output stage, enabling the amplifier to work with difficult loads such as electrostatic speakers and low impedance dynamic speaker designs.

Nagra**606**

Proel amps

Designed for use with the Templar Flying speaker range is the Proel PRL power amplifier series, a range of professional amplifiers engineered for sonic value and reliability on the road and in fixed installations. The series features four models, the PRL1300, PRL900, PRL500 – all 2U – and the PRL250 1U. All contain a bipolar device in a complementary configuration, two independent channels with separate oversize power supplies for superior bass performance and damping factor value. A sense limiter gives an undistorted output signal

in any input signal or AC power supply condition, tracking the available headroom and driving the amplifier to the maximum output without clipping.

All models can operate in stereo, parallel or bridged mono modes, and the rear panels feature XLR and Jack for input and NL4 Speakon and Binding-post for output.

The PRL1300, PRL900 and PRL500 amps feature heavy-duty custom chassis with two frontal handles and two rear 'low-noise' cooling fans for quiet operation, while the PRL250 amp uses a convection cooling system.

Proel**600**

D&B's version 2

Version 2 of D&B's E-PAC amplification system now drives an enlarged range of the manufacturer's speaker enclosures. As well as driving models E3, E12 and E18 – and retaining a linear mode for MAX enclosures – it is now capable of powering the C6 and E9 cabinets.

The various equalisation settings are selected with dip switches on the rear of the unit. A separate set of switches allows the new integral delay to be activated. Delays of up to 170ms can be programmed using either the RIB or ROPE packages.

D&B**611**

ARX Systems

The second model in a series of dual channel power amplifiers, the ZR550 is rated at 200W per channel into 8 ohms and 270W per channel into 4 ohms. It uses a new generation of Lateral Mosfet output devices and a toroidal transformer-based non-switching power supply. Plug-in processing for the amplifier includes ISC loudspeaker processors and active crossovers.

The ZR550 also features ARX1 new Headroom Enhance circuitry, said to allow maximum output without clipping. The unit is fitted with jack and XLR inputs, with outputs on Speakon connectors. The package is 2U high.

ARX**609**

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BALANCE OF POWER.



With the widest range of powerpoints available, the PowerLight™ series offers the perfect alliance between speaker and amp. And thanks to PowerWave™ technology, PowerLights are the best sounding, most reliable amps anywhere. That's why more top touring companies are switching to PowerLights. So don't settle for a limited choice, where the imbalance of power could cause conflict in your system. Choose PowerLight.



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Features / Applications

- All PowerLights include QSC's exclusive PowerWave technology for superior sonic performance.
- Ultra-low THD (0.01% 20 Hz-20 kHz).
- Studio-quality signal-to-noise performance (-108 dB).
- High-efficiency stepped linear outputs on most models reduce wasted heat and AC current draw by greater than 40%.
- Built in computer control Data Port.
- PowerLight 1.0HV is ideal for midrange and high frequency drivers.
- PowerLight 1.5X and 1.6HVX are tailor-made for bi-amping your monitors or mains.
- PowerLight 2.4MB is a mono block amp that delivers 2400 watts @ 2ohms while operating from a single 15 amp circuit.
- PowerLight 9.0PFC is 9000 watts, making it the most powerful amp available. And at 3RU, 59 lbs it's easy to take on the road. Using Power Factor Correction the current draw of both the 9.0 and 6.0 is lowered by over 40%, making them the most efficient amplifiers available.

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HEAR THE POWER OF TECHNOLOGY.

Reader Response No. 006

MODEL	WATTS PER CHANNEL		
	8Ω	4Ω	2Ω*
1.0	200	325	500
1.0HV	300	500	nr
1.4	300	500	700
1.5X	Ch-1 200	325	500
	Ch-2 450	700	1000
1.6HVX	Ch-1 300	450	nr
	Ch-2 725	1100	nr
1.8	400	650	900
2.0HV	650	1000	nr
2.4MB Mono	1000	1550	2400
3.4	725	1150	1700
4.0	900	1400	2000
6.0PFC	1500	2500	3150
9.0PFC	1800	3200	4500

20 Hz-20 kHz, 0.1% THD, *1 kHz, 1% THD, nr=not rated

New 96kHz digital from

Audio precision



System Two Cascade

The Audio Precision System Two has become the acknowledged Industry Standard in audio analysers across the world.

Now the System Two Cascade provides higher speed and enhanced facilities to keep pace with state-of-the-art audio systems. It has all of the features of the System Two plus:

- Continuous digital I/O compatibility from 8kHz to >100kHz
- Single and dual connector operation at 96kHz
- Digital switcher function at 48kHz
- Greatly increased DSP power to give higher speed to all standard System Two functions even at 96kHz
- Dual "Function Reading" meters for two channel distortion and band-pass measurement in one sweep
- Increased signal memory giving greater FFT capacity
- Improved INTERVU with 80MHz sampling and the lower frequency limit extended to 50Hz.

The System Two Cascade is available in 3 versions: Analogue+DSP, Dual Domain, and Digital-only.

Typical new-technology application areas include:

- PC Audio, DVD Audio
- AC-3, DTS, MPEG, etc
- Downloadable Sounds (DLS)
- Reduced Bit Rate Systems
- Audio Quality Standards
- 3-D Audio
- Automotive ICE
- Digital Cell Phones
- DAB Radio
- Internet Comms

Audio Precision is exclusively represented in the U.K. by TTI. We offer full advice and support and we will be delighted to demonstrate any Audio Precision product to you.



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THURLBY THANDAR INSTRUMENTS

Reader Response No. 007

Six from Carver

Following the release of three new amplifiers, there are now a total of six units in the Carver PX series: PXm250, PXm450 and PXm900.

The model numbers denote the power rating when in bridged mode into 8 ohms, therefore the units deliver 125W, 225W and 450W respectively, per channel into 4 ohms.

The manufacturer states that the PX series is designed to provide an entry level to its products without sacrifice in sonic integrity, features or manufacturing quality.

Extensive protection circuitry is provided, along with switchable high pass filter, selectable high pass filter cut-off frequency, selectable clip limiter and selectable input sensitivity. A variety of connection options are available.

Carver 605

Pulse amps

C Audio has developed the Pulse amp range, with 2 x 650W amplifiers and 4 x 300W amplifiers (into 4 ohms). They use switched mode power supplies with an associated weight reduction and two massive heatsinks with variable speed fans and open channels for easy cleaning.

Microprocessors monitor operation and control their protection

systems and Pulse amplifiers are compatible with C Audio's Connect remote control system, which allows a PC to control more than 100 amplifiers over standard Category 5 twisted-pair cable.

The PC can monitor input and output signal levels and output current, as well as operating temperature, and can remotely control gain and mute for each channel.

C Audio 581

ANCILLIARIES



EAR designs a better earplug

EAR says that it has tackled the problem of the uneven absorption of traditional earplugs, notorious for blocking highs more than lows, with its Ultratech plugs.

The acoustic damping net-

work is patented and is claimed to give a more even and natural balance of sound while still offering good levels of protection against damaging SPLs - typically a greater than 20dB reduction.

Music Shipping Co 628

Switchcraft QG

Switchcraft's QG Twist is a new XLR-type cord connector that comprises two components - a handle with integral strain relief and a front shell fitted with a captive male or female insert. To assemble QG Twist, the user simply has to push the cable through the handle, make solder connections to the terminals and screw the handle on to the front shell.

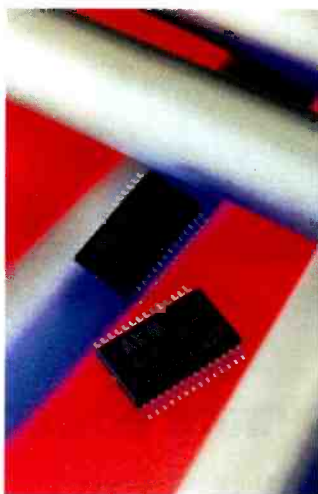
Also new is Switchcraft's range

of High Power Connectors (HPC) offering amplifier and loudspeaker manufacturers an alternative supplier to existing sources. The HPC range is available with rectangular and round panel receptacles, cord connectors and an in-line connector for making extensions. In addition to screw and Faston terminals, HPC receptacles can also be supplied with straight or right-angle PCB connections.

Switchcraft 615

USE OUR FREE ENQUIRY SERVICE

New codec chips from AKM



The AK4524 is a high-performance, 2-channel, 24-bit CODEC for use in 96kHz recording systems. The ADC section features 64x oversampling and Single-End Inputs. The DAC has 128x oversampling and a 24-bit x8 digital filter and uses AKM's newly developed Advanced

Multi Bit architecture that achieves low outband noise and high jitter tolerance by use of SCF (switched capacitor filter) techniques.

Applications for the device include MiniDisc, digital VTR systems, musical instruments and professional mixers.

The AK4526 is a 20-bit multi-channel codec with a dynamic range of 100dB, designed for digital surround sound and car entertainment systems. Input formats include IIS and the device includes two channels of A-DC and six channels of D-AC. The A-DC section has an enhanced dual-bit architecture featuring a wide dynamic range and 64x oversampling.

The D-AC uses switched capacitor filter techniques which achieve low outband noise and high jitter tolerance. The AK4526 requires a single +4.5 to 5.5V power supply for the analogue and digital circuitry.

The AK4393 is a high-perfor-

mance, 24-bit, 96kHz sampling, stereo D-AC complying with DVD standards. With a dynamic range of 120dB, it will sample at 32, 44.1 and 48 as well as 96kHz. Packaged in a compact 28-pin VSOP package, its serial interface MSB and LSB is justified as well as I2S, making it compatible with a wide range of digital audio systems. The AK4393's outputs are filtered in the analogue domain by on-chip, switched capacitor filter (SCF) circuitry, which has a high tolerance to clock jitter and eliminates the need for any external components.

AKM has announced the AK5393, an enhanced dual-bit, delta-sigma, 24-bit A-DC, designed for professional digital audio applications. The 128x oversampling device has an S(N+D) figure quoted at 105dB. The sampling rate is from 1 to 108kHz and there are full differential inputs.

AKM 616

Ultrasoneradiation-less headphones

Ultrasoneradiation-less' headphone, the HFI-200, is based on research conducted by Ultrasoner's Florian Koenig into the health-impairing effects of headphones through nearfield electro-magnetic radiation.

Tests showed that the magnetic flux mean value of over 38 headphones from different companies was near 845nT (nano Tesla), which is over four times higher than the TCO'95/NCRP recommended maximum of 200nT for 'radiation-less' computer screens/monitors. Furthermore, the German recommendation VDE-DIN 0848 part 4 (for living/sleeping rooms) is 100nT. Infra Red or FM technique headphones gave the worst results in testing, according to the company. The measuring procedure was to calibrate all headphones at a SPL of 70 dB, with the magnetic flux being measured in front of the speaker coil.

The tests also showed that lower priced, high impedance and supra-aural headphone types had mean magnetic flux values above 1200nT.

Ultrasoner 630

Quiller's new joysticks

Claimed to be more rugged and to outperform existing inductive coil and potentiometric joysticks, the HFX range of Hall Effect magnetic joysticks from Quiller Electronics is designed to be a retrofit replacement and fits in to the same mounting holes and panel cut-outs.

Benefits include the fact that the devices are virtually impervious to RFI and EMI and with only one active component for each axis they are more durable.

Available with a choice of six handles, six shapes of limiter plate and four output options, the HFX series can be configured in single, dual and three-axis configurations and with one or two buttons to control other functions.

The output can be programmed with varying output voltages with or without fault detection and also in a mode that is compatible with standard potentiometric output.

Quiller Electronics 619

Smart patching from Isopatch

The Smartpatch audio routing controller with the new Smartpatch Commander program allows control of multiple Smartpatch arrays and can reconfigure the inputs and outputs of a single Smartpatch to create matrices of different shapes (e.g. 4 to 24, 30 to 1).

Recently redesigned after 15 years, the Isopatch A-gauge patch panel combines the best features from its predecessor now with 48 jacks in a 1U panel and a new, totally enclosed jack design to help keep out the contaminants that shorten contact life.

In response to the many low-cost patch panels now available, Isotrack has cut the cost

of the Q Patch and made it part of the Signex range.

The Q Patch also has a new jack socket and panel and modules can be now be purchased separately.

Probably the most popular panel in the Signex range is the Isopatch Bantam, now at a lower price point and with a new PCB design offering versions with 25-way D-sub connectors (wired to the Tascam 38/88 pattern) or direct solder rear terminations.

A new Toslink optical adaptor has been added to the Universal panel range together with lower pricing and a revised discount structure.

Isopatch 614



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Reader Response No. 009



Furman supplies more power

U.S.-based power conditioning and distribution specialist Furman has expanded several of its existing product lines. The established, balanced AC power range now has a new top model, the IT-1230 30-Amp isolation transformer.

The new ASD-120 sequenced AC power distribution unit sequentially powers up or down six 20A circuits and can also control Furman MiniPorts, PowerPorts, PowerLinks, and the

PS-PRO and PS-8R power sequencers. The same sequencing features appear in the simpler PowerLink remote AC power sequencer.

Conditioning sees another new model, the AR-1230 voltage regulator, delivering a stable 120 +/-5VAC as long as the input line voltage is between 97 and 141V, with a maximum output current of 30 Amps. Spike and surge protection and EMI/RFI filtering are included.

Furman 625

Analog Devices is first with 192kHz D-AC for DVD Audio

Semiconductor company Analog Devices has announced a 24-bit stereo audio D-AC that represents the industry's first standalone solution to enable OEMs to meet the DVD-Audio 192kHz sample rate standard. Designated the AD1853, the IC combines proprietary data conversion technology with the industry's first multibit sigma-delta convertor core to deliver significantly improved audio performance at every sample rate from 32kHz to 192kHz.

Previously, DVD OEMs have been required to either consider 96kHz sample rate D-ACs, add

special digital filters for an expensive multichip solution, or wait for a monolithic IC like the new Analog Devices D-AC. The AD1853 is a complete high-performance, single-chip stereo digital audio playback system.

Key design features include a 117dB signal-to-noise ratio (A-weighted stereo) and 120dB (A-weighted mono), not muted, at 48kHz; total harmonic distortion of -104dB/-107dB THD +N (stereo/mono); 115dB stopband attenuation; and programmability through an SPI-compatible serial control port.

Analog Devices 629

Delta interfacing boxes from 3dB

A range of interfacing boxes, the Delta series of units has an adjustable gain of 30dB, with input and outputs which can be balanced or unbalanced. Designed to meet a number of needs in studio and live sound environments, the units are available in several specific configurations.

Delta420 is a four input, 20 output distribution amplifier with a switching matrix capable of handling mono and stereo feeds.

Delta44 and Delta4 are reciprocal balanced/unbalanced convertors designed to accommodate domestic equipment within a professional environment. Delta45 is a bi-directional unit aimed at the same application.

The manufacturer plans a number of further units, including an opto-isolated mains switcher for recording lights and a multi-channel stereo balancing unit.

3dB 633

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Belden's cable

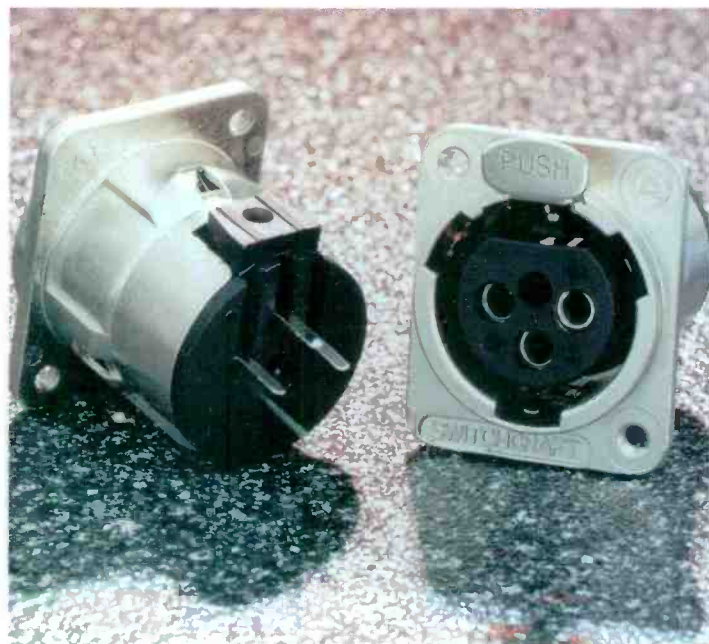
HDTV coaxial cable 1855A is a low loss design for serial digital video transmission, recommended for high definition applications. The design uses gas injected foam high density polyethylene insulation for optimum crush resistance and is effectively shielded with Duofoil and braid for low attenuation, as well as maximum signal integrity. Belden states that the cable is 100% sweep tested for SRL. The cable is compact and lightweight, using BNC type connectors from Kings or ADC. Belden suggests mobile units, studios and patch cords as suitable applications.

Belden 631

Profusion

LA 3607 is a single channel, 7-band graphic equaliser on an IC. Available at 52p each for quantities of 500+, the devices can be customised by using capacitor and resistor networks to set the centre points of the bands at frequencies between 60Hz and 15kHz. Cut and boost is typically ± 12 dB. Audio distortion is quoted as typically 0.02% with a typical output noise voltage of 7 μ V. Units may be connected in series for greater resolution.

Profusion 634



Switchcraft plugs upgrade

Switchcraft has introduced two ranges of chassis XLR connectors.

The E Series have quick release inserts to facilitate part-assembly manufacturing processes and have various improvements including reshaped ground springs, a redesigned latch, and subtle changes to the body functionality and appearance.

Complementing these are the EMI/RFI shielded F Series, incorporating a ferrite material to provide excellent shielding and filtering characteristics.

This is intended to reduce material and labour costs and free up board space by eliminating a number of discrete components normally associated with EMI/RFI protection.

Switchcraft 624

Cirrus Logic

The latest D-A converters in the Crystal series are available in quantities of 1,000 for \$1.95 each. They will accept data at audio sample rates from 2kHz-100kHz and incorporate a patented power on/off transient control technique, said to eliminate pops or clicks. The new chips bear the part numbers CS4340 and CS4341.

Cirrus Logic 634

Millennia amp

Millennia media has released the MM-990 high performance amp with complete compatibility with Jensen/Hardy 990 and API 2510/2520 modules and is a pure Class A, all-discrete J-FET amp. Frequency response is stated as being down 1dB at 355kHz and 0.3Hz while maximum output level is +25.5dBu into 600 ohms.

Millennia Media 615

Studio Suite V4

Ingenium's studio management software, Studio Suite, has seen a major upgrade to Version 4. The package offers a comprehensive set of modules to handle all aspects of studio management from bookings to personnel, recall sheets (with over 130 standard sheets included), label printing, inventories and invoicing.

Ingenium 627



MB Quart headsets

MB Quart offers headsets for a variety of professional applications.

Heading the field is the MBK 448 ACS which is a synthesis between MB Quart's acoustically open high-end headphones QP 400 and the goose-neck microphone boom MBC 648 AS equipped with a studio condenser unit.

MB Quart 618

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- George Petersen, Mix Magazine

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Profusion

Offered as a way of reducing development cycles, the STK4050V amplifier module is said to offer savings in board space and assembly time. The single channel device is rated at 200W into 8 ohms and is offered in a compact SIL package. Maximum distortion is quoted at 0.08% with a bandwidth of 20-50kHz. LA3607 is a single channel IC containing a 7-band equaliser. The centre points of each frequency can be customised with capacitor and resistor networks.

Profusion 632

SCORE V4

San Andreas Press SCORE, the music notation program for PCs, is now in version 4 which provides a completely new menu system. The intention is to bypass the necessity to resort to the manual or memorise commands to offer far easier access to the power of the program's functionality. SCORE is said to be the standard for music engraving software, capable of notating anything from rock to the toughest avant garde classical.

New Notations 623



Svetlana expands range of valves

Manufactured in St Petersburg, Russia and marketed in the States, Svetlana's valve range is joined by the SV300B power triode, a modern replacement for the original 300B. Care has been taken to duplicate the virtues of the original in terms of its construction,

materials and classic sound, and the ruggedness is improved by a thicker glass envelope. Comprehensive ageing and testing allow individual test results to be supplied with each valve and STM (Svetlana Tested and Matched) pairs to be available.

Svetlana 626

MTR doubles the splits

MTR, well-known for handy problem-solving boxes, has introduced a doubled-up version of its established PS-4 passive splitter. The PS-8 has eight outputs on stereo jacks, mounted on an internal PCB. Each output has overload protection and a link on the board can be moved to convert the unit to mono operation. The obvious application is feeding multiple headphones from a single source.

MTR 622

CAIG chemicals

CAIG Laboratories has a range of chemicals and soldering apparatus for the electronics industry.

The company is expanding its environmentally-safe product line. Among these are a variety of new, environmentally-safe aerosols and a range of non-aerosol applicators for aerosol-sensitive customers. These include pump spray, wipes, pens, precision dispensers and brush applicators.

CAIG 620



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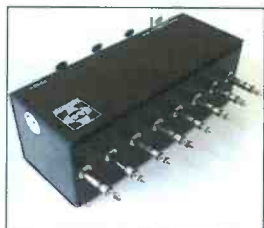
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Reader Response No. 011

Audio Service's Phantom release



company's Digital Audio Interconnection System is a patchbay format converter, signal distributor, and digital audio routing system and uses Yamaha YGDAI interface cards to provide the inputs and outputs.

Audio Service has released the 02R Phantom power adaptor for the Yamaha 02R and a fader update for the 02R manufactured by Penny & Giles. The

Installing a mixture of YGDAI cards in the DAIS frame permits any digital or analogue source to be connected to digital audio mixers. Alternatively, by routing directly between the I-O cards, signals may be readily converted to and from the various analogue and digital formats.

Inputs may also be routed to multiple outputs enabling the same signal to be distributed to several different destinations simultaneously.

Audio Service 617

Rapid response

ISS launches digital graphic

ISS has added a graphic equaliser to its Opal series. The PE2000 is based on constant technology which maintains 80dB wide bandwidth of fader gain. Separate HF and LF controls. Filters are provided along with a sweepable 18dB/octave high pass filter. Output level is monitored by LED meter and a clip warning LED. On a re-electronically balanced with transformers an auto



Drawmer digital

Drawmer has introduced digital products for 24/96 processing and analogue-digital conversion. Three products will offer refined analogue sound quality to DDB, ADAT, SPDIF and AES/EBU interfaces plus a host of features. The DC2470 Digital Mastering Processor has 24/96 inputs and outputs and the inclusion of E-RAM card slot allows settings and parameters to be non-volatile and recalled on any Drawmer DC2476 or Drawmer DC2485 unit. The Drawmer DC2485 Three-Screen Processor is a digital mastering 2U-high processor with the additional features of twin mic

Audio Design hits brick wall

First developed for Carlton TV in the UK, DBL-1 is a digital broadcast transmission limiter, described as the ultimate brick wall level controller. Also new from Audio Design is the DDM1 Professional Four-channel digital fade and mix box provides the post-production engineer with sample rate conversion, audio delay relative to picture, gain, phase inversion, EQ and level reassignment and M6 coding/decoding.

Free enquiry service

Sony's WRR-805A

A new portable UHF receiver, the WRR-805A can be mounted on a wide variety of professional and semi-pro camcorders. It is priced to reflect the latest generation of affordable cameras.

The compact receiver provides access to 64 frequencies using PLL synthesised tuning, and has built-in intermodulation-free plans for multi-channel operation.

Audio cables are included with the receiver, offering the option of balanced XLR or 3.5mm jack connections. The WRR-805A boasts a headphone-level monitoring output, as well as visual indication of battery status and elapsed time. Just two AA-sized batteries are required to provide six hours' continuous use, reducing running costs to a minimum.

The WRR-805A's lightweight, weather-proofed ABS case uses a hotshoe mount or velcro straps and an indexed pivot system for secure mounting. As an alternative, the receiver may be worn as a belt-pack, for use as a cost-effective presenter's earpiece feed.

Sony 599



Neutrik connectors

Neutrik has introduced a 're-invented' BNC connector family, comprising three different versions, each optimised for its particular application: Push/Pull for ergonomic operations; a twist-lock bayonet version, closest to the classic BNC; and a non-locking version for frequent connections and price sensitive applications.

Neutrik 621



COMPONENTS FOR ENGINEERING SOLUTIONS



When offering a range of electro-mechanical products to the market, Devlin's objective is to provide OEM's with quality components that contribute to an effective solution to an engineering problem. Sourced from manufacturers in Europe, Japan and the Far East, these devices combine the benefits of high quality manufacture supported by UK design and engineering. Devlin understands switching technology and will provide advice and assistance to customers on a wide selection of types including:

- Coded switches standard or half pitch (DIL or Rotary).
- Illuminated switches for PCB or panel mount.

- Slide switches with variety of actuators, styles and colours.
- Toggle switches including sealed versions to IP65.
- Push switches, stand alone or interlocking, snap/momentary/alternate action.
- Programmable LCD switch system with simple serial bus control.

Also available is a range of industry standard miniature relays with signal and power switching in sealed and high sensitivity versions. Devlin also supplies a range of latest technology connectors plus full travel and miniature keypads with a comprehensive keytop moulding and legending service.



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Unit D1, Grafton Way, BASINGSTOKE, Hampshire RG22 6HZ, England
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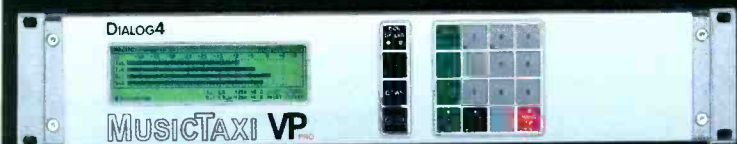
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FM 23387

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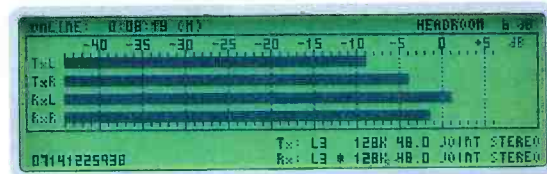
The Dialog4 MusicTAXI range is one of the most comprehensive codec packages on the market today. It contains all the standard ISO/MPEG audio coding algorithms in common use today such as Layer 2 and Layer 3, as well as CCITT G.722 for high grade voice bandwidth connections, and G.711 so it can talk to a plain old analogue telephone line, too. Connectivity features include upto three ISDN terminal adapters and X.21 port, for operation up to 384kbps. Dialing is quick and easy using the 96 entry directory.



The range of network protocols included means that it can be taken to virtually any part of the world. In the studio the audio i/o can be analogue or digital (AES/EBU & S/PDIF interfaces are both provided). The aux data channel enables embedded control data to be sent alongside the audio, and the unit can be controlled remotely from a PC or the external Remote Panel if desired. Most importantly automatic sensing of the codec at the other end of the call means that it sets itself up to communicate with the most commonly used systems in use today, i.e. Telos Zephyr, CDQPRIMA, Glensound and



others without complicated manual programming. Operationally the buttons are large and straightforward to use, while the illuminated LCD display gives a clear indication of what is going on at all times. No noisy internal cooling fan to worry about in quiet studio conditions. The Remote Panel can control a MusicTAXI from over 500m away via the RS422 interface. The online menu indicates online time, send-level, receive-level, adjusted headroom, Rx and Tx audio configuration, SYNC flag of MusicTAXI at the other end.



Tapeless recording and transmission on the spot is the answer to the enhanced requirements of correspondents. The CTAXI is the solution and is set to become the standard for mobile recording and transmission, because it satisfies the users demand: stereo recording, editing, file-transmission to computers, realtime-transmission to all well known codces. The CTAXI is, of course, child's play to operate. You can use it as telephone, walkman, audio recorder, mobile editing station, transmission device. The size is as small as today's cutting



edge technology allows: 58 x 239 x 150 mm, the weight is 1150 g including 2 x Li-ION batteries. The charger is inbuilt and allows uninterrupted operation. PCMCIA flash cards or hard drives can be used for stereo recording. BWF format is supported.

We are not American or British. We don't belong to a big industry corporation. So we have to work that little bit harder. We started 8 years ago with advanced MPEG integration into Audio Codecs and have dedicated ourselves to making them as user-friendly as possible. Our product know-how covers ISDN and satellite transmission, recording, editing and storage. Add our experience, research capabilities and production expertise and you have the legendary German Quality that keeps us one step ahead. For more information, call our UK distributor Charlie Day at THE UK OFFICE, Tel. +44 (0) 1442 870103, or contact our headquarters in Germany.

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Libra Post from AMS Neve

Libra Post is described as an advanced and cost-effective multiformat postproduction console. A dedicated panel provides monitoring and matrix/processing inserts for up to 8-channel surround. The console benefits from a shared automation system with the DFC and features automated joystick panning. Multimachine control and integrated hard disk recording/editing are optional.

The Capricorn now has improved facilities for mixing for DVD, including a multiformat monitor panel plus rapid busing and monitor configuration for work in all audio formats. Other new features include surround sound panning, MIDI Out capability, automated routing, VCA coalesce and path swap.

The Libra's reputation for multitrack mixing has been enhanced by an additional two control sub-layers enabling up to 192 fully-featured audio inputs to be accommodated in a 48-fader frame. New software features include a defaults manager, hot

key access to control screens, a Desk Editor for fast access to console status and configuration tools, Collect Touch for 'Scene Change' automation, plus machine control enhancements.

Libra Live new hardware additions include a Flash RAM card enabling the rapid boot of console and configurations, DTV-oriented surround sound monitoring options and GPI support.

For the DFC, Version 2.5 of Encore automation software includes automated routing/busing and Partition Designer, a feature which enables customised division of console sections on multi-operator desks.

The Logic 3 now features a range of WorkFlow multistudio integration options plus the Media Toolbox which is designed for use with standalone or networked AudioFiles. Media Toolbox takes the up/downloading of projects and sources off-line, freeing AudioFiles for use exclusively on the editing of projects.

AMS Neve 637

Octagon enhancements

D&R has launched the Airlab radio on-air console for local community and hospital radio. An original feature of the console is the ability to program various set-ups of the console and store these on a chip card. This allows engineers and DJs to configure the console to their personal requirements using their own card.

D&R has introduced a Stereo Dual Line module for the Octagon film console. The module features two stereo line signal paths with motorised 100mm faders. Each signal path has 4-band swept EQ with fully parametric mids. Twelve Auxes are available, the first four of which are stereo pairs.

Inputs can be assigned to the main eight master buses as well as the 48 group output buses.

D&R 657

Chilton in double debut

Chilton's CAD200 is a self-op on-air desk with solid state switching, +26dB headroom throughout and stereo PFL on input modules. Operation parameters and options such as the number of channels with phantom power, pre/post settings and fader starts are all done on jumpers. This means the unit can be set at the factory or an engineer can set the parameters. What can't happen is the user changing the settings by accident because they are all inside.

Also new is a studios to transmitter switch unit, which enables the on-air signal to be selected from any of four studios, without any modification to existing equipment.

Chilton 649

Soundcraft Series 15

The Series 15 broadcast audio mixing console has been designed for on-air use and general production in local and national radio stations. Available in 16/24/32 module frame sizes, the desk is fully modular and offers 4 stereo groups, insert points and comprehensive monitoring. Mono and stereo inputs, and outputs, are provided in broadcast and production versions, and there is a choice of Stereo Telco Input Modules.

More than 35 module options are available with various forms of Mono, Stereo, Telco, Group, Master, Communications and Monitors, along with all types of metering.

Soundcraft 640

Sonosax mixer

Sonosax's SX-S portable mixing console for professional mobile and studio applications offers six, eight and 10 channels and accompanies the SX-PR for ENG applications, the FD-M4 remote control mic preamp, the SX-M2 mic preamp and SX-DA2 portable professional 20-bit D-A convertor and analyser.

Sonosax 647

Sony Oxford GML plug-ins

The first in a series of plug-ins for its OXF-R3 Oxford console is the implementation of the DMSK-R3001 software module which recreates the sound of GML's analogue 8200 equaliser and 8900 dynamic range controller. Developed in collaboration between George Massenburg and Paul Frindle from Sony R&D, the plug-in combines functions from both processors and is supplied in addition to the Oxford's standard EQ and dynamics features.

Sony 643

The 7.1 standard
Octagon

Headquarters
D&R Electronica b.v., Rijnkade 15b
1382 GS Weesp, The Netherlands
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D&R

AMS Neve has ESP

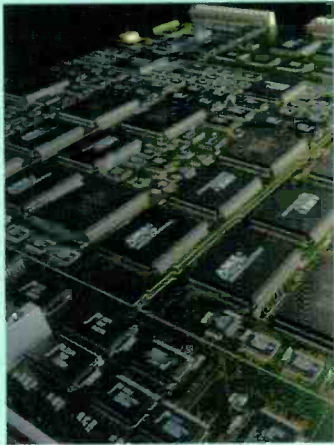
AMS Neve has announced a new digital processing platform for its range of consoles as the third generation of proprietary processing platform the company has developed.

Known as ESP, the processor cards make use of the latest 0.6 micron technology chips and feature 21 AMS Neve custom ASICs to turbocharge 9 DSP chips.

Designed to meet the processing requirements of the DFC, which can have 500+ audio paths, this scaleable processing architecture has now been incorporated across the majority of the company's console range ensuring that all ESP-based consoles are 96kHz-ready.

AMS Neve

636



Roland delivers VM, modular total digital mixing environment

Following on from the success of its V-Studio digital recording workstations, Roland is introducing the VM-7000 series modular V-Mixing System. Described by the company as offering the world's first affordable separate-component digital mixers, the VM series consists of the VM-7200/7100 V-Mixing Processors and VM-C7200/C7100 V-Mixing Consoles, give users many console/processor configuration options, with up to 94 channels of digital mixing (48 recording, 46 additional simultaneous mixing, with 24-channel

maximum simultaneous recording) and eight stereo effects processors when fully expanded.

The V-Mixing System employs a worksurface with quiet motorised faders, and an expandable 3U rackmount processor which contains all inputs, outputs and effects. The benefit of the separate-component design, says Roland, is the elimination of long, heavy multichannel audio cables between the stage or studio and the mixing console.

The V-Mixing Processors come with two stereo multi-effects processors, and can be expanded with three additional VS8F-2 Effects Expansion Boards for up to eight stereo or 16 mono channels

of automated effects processing. In addition to high-quality dynamics processing, studio reverb, delay, chorus, and multi-effects, the VS-1680-quality effects include COSM mic simulations and a speaker modelling algorithm which allows audio output to sound as if it's playing back through a variety of popular nearfield studio monitors, as well as television/radio speakers and sound reinforcement cabinet simulations.

The V-Mixing System also offers Roland's best 24-bit A-D and D-A converters, 5.1 surround mixing capabilities, 'FlexBus' and 'virtual patchbay' functions, SmartMedia storage capability, an ADAT/Tascam interfacing option, and a Real-time Spectrum Analyser.

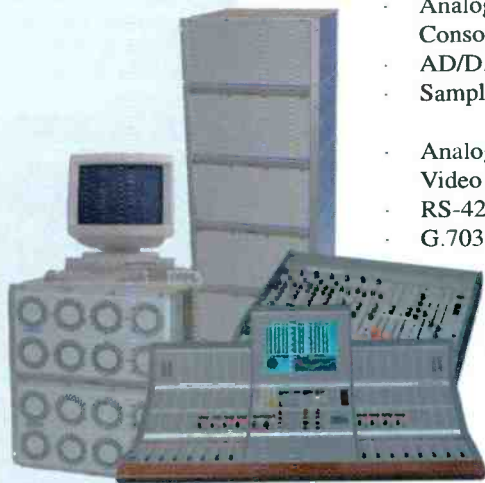
Roland

641



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Reader Response No. 015

What's new in Pro Audio

Next issue
due Winter
1999

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The Digital Mixing Revolution, Circa 2000.

For Home Studios

The V-Mixing Stations give you 24-bit digital automated mixing and control over tape-based digital multitracks like the Alesis® ADAT® and Tascam® DA-88™. These mixers can also serve as the "front end" and control surface for computer-based recording software.

For Live Performance

The V-Mixing Stations are great for live performance, thanks to their full MIDI mixer capabilities and Scene memories—instantly changing levels of MIDI gear, acoustic instruments, and even vocals via program change messages.

For V-Studio Owners

The VM-3100 and VM-3100Pro can be used as submixers for Roland's own popular V-Studio workstations—adding additional inputs and effects while keeping signal transfer in the digital domain.



For Guitarists

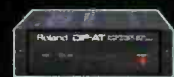
With their direct hi-Z Guitar Input and powerful COSM-based guitar preamp models and guitar multi-effects, the V-Mixing Stations give guitarists a convenient, great-sounding way to enter the world of digital mixing and recording.

24-bit Sound Quality
2 Stereo Effects Processors ("Pro" Model)
Full Digital Mixing Capabilities
MIDI Mixer Functions



The VM-3100Pro and VM-3100 V-Mixing Stations offer professional digital mixing capabilities and superb, noiseless 24-bit sound quality in compact and affordable desktop mixers. The VM-3100Pro can mix up to 20 channels (using the RMDB-II interface for 8) to 8 busses and also has two high-quality onboard stereo effects processors, powerful Scene memory capabilities, MIDI mixer functions, and an optional external ADAT®/Tascam® interface box, the DIF-AT. The VM-3100 model, on the other hand, gives users 12 channel/8-bus/24-bit digital mixing with an onboard stereo effects processor at an incredibly affordable price. Both models boast amazing COSM Mic Simulator capabilities, a direct hi-Z input for guitarists, and guitar multi-effects onboard, and the 3100Pro model even offers new COSM Speaker Modelling technology.

VM-3100 / VM-3100 Pro
V-MIXING STATION / V-MIXING STATION



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Reader Response No. 016

SL9000 J Series software upgrade

Version 4 of the SL 9000 J software offers new features in several areas.

Machine control facilities are extended, with revisions to parallel machine control and automatic identification and configuration for controlling serial machines.

Additional project management tools are incorporated, including automatic file version handling and a simplified user interface. New operational features include additional automation functions, timecode masking and offsetting, and increased grouping flexibility, which enhances 4-channel panning, extending the creative control of 5.1 mixes.

Solid State Logic 653



Yamaha 3-way powered mixer

Yamaha's EMX680 ST powered mixer goes literally one better than the established EMX640 by adding an extra power amplifier, giving two for FOH and one for monitors.

All three are 135W EEEngine designs, and the left and right channels can be bridged to deliver 400W into 4 Ohms.

Yamaha 650

Amek DMS Plus Pack

Amek's Digital Mixing System consoles see a major upgrade in the form of the Plus Pack add-on. This comprises the DMS-XP audio expander, increasing the capacity of the DMS to 96 mix inputs all with EQ, and the Channel Panel, offering control-per-function operation of all channel parameters using 48 rotary encoders and 32 switches.

At the same time the software reaches Version 3.3, with simultaneous Dynamic and Snapshot automation, Pan/Divergence editor and Multiple Operators Mode.

More new hardware includes 24-bit analogue I-O featuring improved convertors, which can be retrofitted by existing users.

Amek 651



Soundcraft premieres digital on-air board

Soundcraft has launched the RM1d digital on-air radio console which is designed for self-op studios and combines an all-digital signal path with the simplicity of analogue-style control. A pool of digital and analogue inputs are provided, any of which can be assigned to any fader, and two frame sizes together with an input extender sidecar enable varying numbers of sources and different physical layouts to be accommodated.

Features include 6-fader and 12-fader plus script tray frames, plus a 12 fader extender unit, 2 mono mic/line inputs with selectable 48V and insert point (4 on 12-fader) and 2 x analogue stereo line inputs (4 on 12-fader). There are 4 AES-EBU inputs plus an SPDIF input (8 x AES-EBU, 2 x

SPDIF on 12-fader frame). Four analogue clean feed outputs (6 on 12 fader) allow telco operation (spare AES-EBU outputs can be used for cleanfeeds).

Analogue outputs are provided for main programme (x2), Aux, PFL, talkback, control room and studio monitors, control room, studio and guest phones and there are four stereo analogue External Monitor Source inputs plus 2 x AES-EBU and SPDIF outputs (4x AES-EBU and 2x SPDIF on 12-fader)

Each input channel has gain trim, 3-band EQ, two mono/one stereo Aux and Pan control, via a central assignable strip.

Comprehensive remote machine start interfaces are provided.

Soundcraft 639

LEM launches Falcon console

The latest manufacturer to offer a digital mixing desk is LEM, which has entered the market with the futuristically styled Falcon.

Based around a proprietary RED208 DSP with 40-bit internal processing, Falcon offers 12 inputs. These are configured as six mono mic/line channels, two stereo channels and a AES-EBU or SPDIF stereo input.

Input channels are equipped with hardware controls for mute, cue four auxiliary sends and equalisation. The hardware controls work in conjunction with a compact LCD, providing information on the action of the selected process.

As many as four effects are available at any one time, with 12 types available in all. The master fader is motorised and can be used to write moves for automation. An external MIDI processor will allow snapshot and dynamic automation of all parameters.

For multitrack applications, an ADAT interface is offered, which also adds another eight channels and extra effects processors. The manufacturer says that the real-time control over the Falcon also makes it suitable for live applications.

Availability is scheduled for third quarter of this year with a projected price of US \$1,495.

General Music Corp 661

TOA ix-5000B

TOA has launched the ix-5000B console. A descendant of the first ix system launched in 1990, the 5000B has a much smaller footprint plus an alleged simpler, user-friendly operation system. Called a Mixing System because it incorporates operating console, interface and DSP racks running on MCL (Mixing Control Language), the ix-5000B uses TFT colour touch-screens (as featured on all ix consoles) and operation from centre section and channel strips, touch sensing knobs, intelligent motorised faders, snapshot automation, 20-bit A-D/D-A convertors, sampling rate convertors and external equipment control via MIDI Machine Control.

TOA's proprietary H-Bus (Hybrid Bus) system local area network allows multiple consoles, interfaces, DSP racks and external control units to be placed in remote locations as required.

TOA has also announced the launch of the ix-5000S for post-production work. This console carries additional features including full dynamic automation on SMPTE, MTR send and receive, and Quad and 5.1 surround outputs.

TOA 643

Four launches from Amptec

Amptec Digital Technology has launched an automated version of its Boulder analogue broadcast console, an input module with compressor, a monitor source selector and a range of interface cards.

Boulder OB1 Recall console is designed for OB vans, as well as television or radio production studios. It features stereo and mono inputs, 4-band equalisation, 10 auxiliary sends, eight groups, VCA groups, cleanfeed and matrix facility. There are also two stereo and one mono programme output, two monitor and one communication module, along with many broadcast-specific features such as fader start and transformer balancing.

The Stone snapshot system has been specially adapted to broadcast use. It addresses motorised faders and 16 switches.

Electronic circuitry uses new state of the art designs and all in and output stages are electronically balanced.

The final version 1.00 software for the Stone-D001 digital mixer is now available.

Amptec 648

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installed

DPC-II

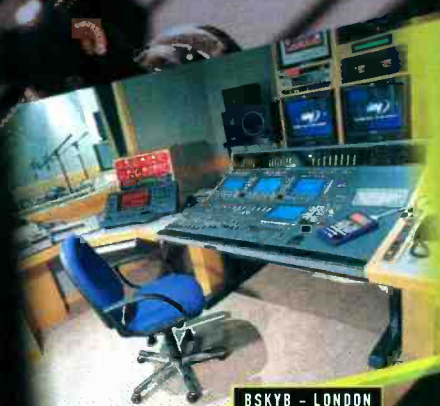
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- 96kHz operation
- Stereo. LCRS. 5.1, 7.1

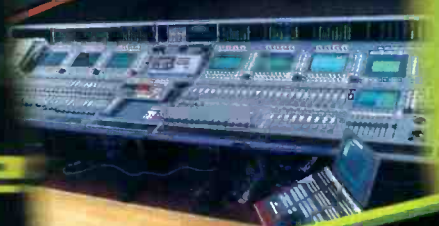
ADMIN
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Reader Response No. 017

Midas heritage 2000

Second in its new Heritage series of consoles, the Heritage 2000 aims to offer a cost-effective alternative to the 3000 with which it shares all the advanced features and automation except bus structure.

It has 12 groups, 12 auxes, three masters and 8 matrix buses with automation of input fader levels and mutes and the ability to create LCR mixes. A broadcast comms module is included yielding one mix minus output per channel. More than 60 orders for the 3000 have already been taken.

Midas 645

Harrison debuts live desk

The Live Performance Console was jointly developed by Harrison and Showco for theatre and fixed venue sound reinforcement applications. Integrated MIDI control is available to access outboard effects or lighting cues from the console Cue recall. An LPC with IKIS instant recall will replace multiple consoles in festival concert environments, according to the company, and provide the power to incorporate larger and more complex sound design in theatre.

GLW 638



Dateq broadcast console

Dateq's BCS 25 console has been designed for postproduction rooms, OB vans, on-location transmission studios and second studios.

The BCS 25 frame comes with eight input channels (with an equaliser being optional), Power Supply section and an extensive Master section with LED PPMs. The Universal Input Channel features three inputs (Line 1, Line 2, Mic), a Gain control, a 3-band equaliser (optional) and a Balance control.

Communication facilities are integral to the console. Among these is the ability to route the communications signal to the PGM Output.

Dateq 656

Roland introduces new desktop digital mixers



The VM-3100 and VM-3100 Pro V-Mixing Stations from Roland are aimed at the desktop digital mixing market. The compact digital mixers offer professional mixing capabilities, flexible signal routing options and powerful onboard effects processing at what the company terms 'a surprisingly affordable price'. As such, says the company, they will

suit MIDI musicians, modular digital multitrack owners looking for digital mixing capability, and V-Studio owners who want to add more inputs and effects to their workstations.

The VM-3100 offers a 12-channel/8-bus design with 24-bit resolution (20-bit on inputs 9-12) and a single stereo multi-effects processor offering compression,

reverb, delay, and various multi-effects.

The Pro version, meanwhile, offers a 20-channel/8-bus design and a dual onboard stereo effects processor including high-quality dynamics processing, studio reverb, chorus, delay, guitar/vocal/keyboard multi-effects, COSM mic simulation, and new Speaker Modelling technology; in addition it offers an RMD8 II port with 8-in/8-out 24-bit digital audio transfer, and an optional ADAT/Tascam TDIF interface.

Both models provide Scene storage of all mixer, routing and effects settings. Flexible signal routing on both mixers allows them to be configured as 8-buss mixers via stereo main, auxiliary, bus and monitor analogue outputs. Digital outputs include A and B buses, bringing the total number to 12.

Channel inputs include two balanced mic/line inputs with phantom-powered XLR or standard TRS jacks, six unbalanced mic/line inputs (including a Hi-Z input for direct guitar connection), and four Line inputs. Other features include an SPDIF coaxial/optical connection, MIDI data functionality, a 136 x 22 backlit graphical LCD, and illuminated buttons.

Roland 663

Klotz Digital expands digital desk range

Klotz Digital Audio has introduced a digital audio console for live broadcast and production applications. The Spherion is based on Klotz's 3d router technology, which enables a number of control rooms to share sources, logic, control and DSP functions. Produced at what the company calls a 'moderate price point', the desk is intended for organisations with multiple control rooms and individual stations making the

transition to digital consoles.

Spherion is available in two frame sizes: a 12-fader version and a 20-fader console with DSP production features. Sources include microphone, stereo analogue line and various formats of digital line inputs. These can be routed to any fader and it is possible to have unlimited expansion of sources and outputs. This is handled in increments of two stereo channels at a time.

The desk has been designed so that machine control logic follows each source regardless of its channel assignment, while clutter has been reduced by eliminating the need for keyboards or computer monitors. By using Klotz Digital's DiAN fibre optic network option, multiple consoles can be integrated throughout a facility, sharing audio sources, logic facilities, intercom and other functions.

Klotz Digital 658

Gemini launches DJ mixer, radio mics and amps

New from Gemini are a DJ mixer, a series of UHF radio mics, a CD player and power amplifiers.

The PS-525 Pro Platinum series mixer has punch in buttons for each channel and a crossfader reverse switch for unusual effects. The UX series of UHF wireless mics are offered with a choice of three receivers: single channel, true diversity or dual channel.

There are also now available three belt-pack transmitters, for lavalier, headset and instrument

applications, as well as a hand-held unit with unidirectional capsule. Gemini offers a similar line of products in its VH series of VHF units.

CD-9500 Pro III is a dual CD player with precision cueing, scan dial, variable pitch and pitchbend functions. It can display time remaining, track time remaining and time elapsed. Dust and protection features are built into the design, which also uses components including 1-bit 8-times oversampling conversion and a new Sony laser.

The XPM series of stereo Mosfet power amplifiers currently comprises three models offering 22W, 280W and 360W per channel into 8 ohms. The amplifiers can also be run in dual mono and bridged mode. Protection includes clipping, thermal, short circuit and sub/ultrasonic frequency. Cooling is via two-speed fan. Inputs are balanced XLR and jack, with binding posts and Speaker connectors on the output.

Gemini 659

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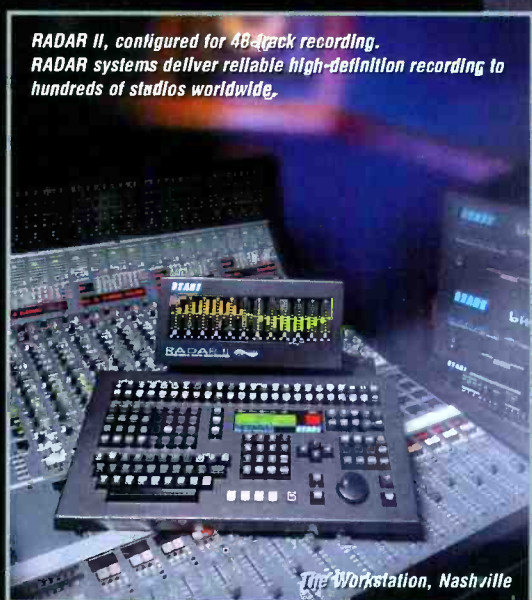
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Soundcraft Series Four

The Series Four FOH desk is fully modular and VCA equipped and follows the layout of the existing Series Five but with a smaller footprint. Available in 24, 32, 40 and 48-frame sizes, each has four stereo inputs.

Stereo mic/line inputs have full EQ (two fully parametric mids and swept shelf/peak HF and LF) and can be substituted instead of mono inputs and the desk has 8 VCAs and 8 mute groups.

There are 10 auxes, four of which are mono/stereo switchable and have direct access to a 16 x 8 matrix. Showtime automation through a PC can be added for snapshot control of some console functions as well as Visual FX and Virtual Dynamics.

Soundcraft 646

Rapid response

BSS launches Opal graphic

BSS has added a graphic EQ module to the Opal series. The EQ module is based on a 100kHz filter with a 100kHz bandwidth. The EQ module is available in mono and stereo versions. The EQ module is available in mono and stereo versions. The EQ module is available in mono and stereo versions.



Drawer digital DC Line

The DC Line is a digital audio interface for the DC Line series. It is a digital audio interface for the DC Line series. It is a digital audio interface for the DC Line series. It is a digital audio interface for the DC Line series.

Audio Design hits brick wall

Audio Design has launched the Brick Wall series. The Brick Wall series is a digital audio interface for the Brick Wall series. It is a digital audio interface for the Brick Wall series. It is a digital audio interface for the Brick Wall series.

See back of book



Calrec digital Alpha 100

An all-new version of the Digital T Series shown at NAB last year, the Calrec Alpha 100 digital audio production console has a maximum configuration of 96 stereo/48 mono channels, a two layer design for channel path per fader or dual path operation, 8 stereo or mono groups, four main outputs plus 5.1 capability and a mix minus output per channel.

Other features include 48 multitrack outputs, 20 auxes, dynamics, EQ and filters on all channels all the time, and dynamics on groups and main outputs.

The system will boot in 15 seconds, has full control surface reset without disruption of audio, a high level of redundancy, hot card and panel switching and a PC-based memory system.

Calrec 644

Rane enhances and enlarges DJ mixer range

Upgrades have been announced for three Rane DJ mixers, which now carry z suffixes. There are also two completely new DJ units, the TTM 54 and TTM52 Performance Mixers.

The MP24z is now fitted with a 'no loss crossfader' with unity gain in the middle position, while MP22z adds a contour control to the crossfader. This allows the user to choose between conventional crossfade, overlap or scratch characteristics, as well as settings in between.

New for the MM8z mixer are a contour control, plus pre and post assignments on channels 1 and 4. The manufacturer suggests the post crossfader setting as useful when adding drum beats, samples or the output of another mixer.

TTM 54 has two programme input channels and a mic channel, all with two band equalisation, plus the same crossfader contour arrangement found in other Rane mixers. TTM 52 is aimed at a lower price bracket.

Rane 660

MTA's new Series 924

Malcolm Toft Associates (MTA) has launched the Series 924 24-bus low cost analogue console aimed primarily at the project studio market.

The Series 924 is designed as an in-line and features include: balanced mic/line inputs with individually switchable phantom power, phase reverse, 4-band sweep EQ plus high pass filter on

inputs, 8 auxiliary sends, stereo AFL, channel pan and mute, Alps K series 100mm faders, signal present and peak LEDs, and 24-track assignment switches. The in-line monitoring features group trim control, high/low shelving EQ monitor level and pan, monitor mute and stereo AFL. In addition, auxiliary sends 3-8 can be shared between chan-

nel and monitor.

Four dedicated effects return channels are provided with high/low shelving EQ, 8 auxiliary sends, stereo AFL, mute and 100mm Alps fader.

The master section provides talkback facilities, a studio playback system, line up oscillator, master controls for the aux sends with solo function, an alternative speaker system and control room monitoring facilities. A stereo 100mm Alps fader is pro-

vided for control of the LR master outputs.

An integral meter bridge is provided as standard, fitted with LED bargraphs above each input module for monitoring the group output or tape return, plus bargraphs for the LR master outputs. Frame sizes are 24, 32 and 40 inputs providing 52, 68 and 84 inputs on mixdown.

The console can be supplied fitted with VCA automation.

MTA 654

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Reader Response No. 020

Fostex mixer

The VM200 Digital Recording Mixer from Fostex, which has been designed for use in project and private studios, offers 32-bit processing and mixing, superior digital effects via two dedicated Fostex ASP (Advanced Signal Processing) effects processors, and a high-quality audio specification.

The mixer gives instant access to often-used features without resorting to complicated recall operations, by means of a dedicated rotary pan control on each channel, while a given channel's entire EQ can be accessed via 12 rotary controls with interactive graphic on-screen representation of EQ patterns.

Features such as analogue input level, ADAT In, Effects Return, Effect Send, and Aux Send can all be recalled on 60mm moving faders.

The VM200 is also totally controllable via MIDI, while a handy Auto Indicate facility and self-illuminating switches allow you to see at a glance the configuration of the whole mixer. Furthermore, the 100 mix scene memories and 50 EQ preset library mean that mix settings are just a button-push away.

Fostex

664

**Audient analogue console**

Continuing to fly the flag for the virtues of analogue mixing, Audient (formed by DDA co-founders David Dearden and Gareth Davies) has launched the ASP8024 High Resolution Analogue Mixing Console.

This is a full feature in-line design with 80 inputs and 24-bus routing. The emphasis is on ana-

logue circuitry to outperform digital, with minimum path topology and advanced microphone preamps offering performance normally associated with expensive outboard devices. This is coupled with a familiar simple control surface and easy serviceability.

Audient

652

Yamaha compact live console

Yamaha has introduced the compact GF-Series 12-bus live consoles which are available in 12, 16 and 24 channel configurations (GF12/12, GF16/12 and GF24/12 models, respectively).

The consoles feature 12 output buses consisting of six aux sends, four group outputs and a main stereo pair. Mono output is also available, derived from the stereo bus as either pre- or post-fader, making the units capable of a number of routing and mixing configurations.

All channels on the GF-Series mixers feature 3-band EQ with sweepable mid-range. Insert points are also provided on all mono channels and the main stereo bus, and each desk features two stereo channel inputs for stereo sources or effects return tasks. Balanced XLR-type connectors for stereo and mono outputs are also provided.

Four switchable bargraph meters are provided with meters one and two monitoring the stereo bus or group buses one and two, while meters three and four monitor the PFL/AFL bus (or tape inputs) or group buses three and four.

Yamaha

642

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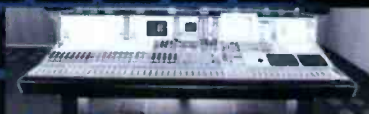
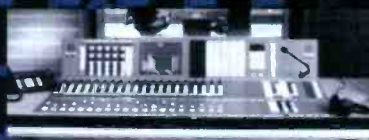
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Reader Response No. 022

Peavey

New from Peavey is a large-scale monitor console. The SRM 2410 sound reinforcement monitor console has 24 built-in transformer splits, 4-band equalisation with two sweep mids and eight mono sub groups.

There is also a dedicated stereo pair with pre/post switching, plus an LR bus, mute and PFL on every input. Each mono sub-master has adjustable HP filters as well as two tuneable notch filters, with visual tuning aids. A similar system is used on each input to warn of incoming feedback. A durable flight case is included in the package.

Peavey 662**Oram Series Pro Four**

Oram BEQ Series Four Pro small-format console features 4-sub masters, stereo and mono outputs, 5 aux sends, 5 aux returns, a line-up oscillator, 100mm faders, Littlite output with power save dim function and full communication talkback system.

Applications include theatre, broadcast, studios and can also be used for mobile location and surround-sound mixing. It is available with 8, 10 or 12 input channels and optional input transformers and PPMs.

Oram 596**Mackie digital console gets Fat**

The Real Time OS 2.0 software upgrade for Mackie's Digital 8 Bus mixing console, downloadable for free from the company's web site, includes support for new hardware, a new Graphic Automation Editor, and a new Fat Channel Overview window.

The PD18 8-channel AES-EBU card can now be added for connection to other devices supporting AES-EBU format, and allows for real-time sample rate conversion on its inputs and Apogee's UV22 on its outputs. The Graphic Automation Editor is a new window for viewing and graphically editing curves for all automation

functions over time; edit tools include three timecode displays, a pointer tool for creating and moving new or current automation nodes, a highlighter tool for selecting data by time and channel, and a magnifier tool for expanding selected data views.

The new Fat Channel Overview window combines three DSP windows (EQ, Gate and Compressor) into a single window which shows the exact state of a channel at any given moment and allows recording and playback of dynamic automation. There are now four user-selectable EQ types - British H/P,

British EQ, 4-Band Parametric, and 20/02 EQ - with unlimited save and recall of presets, and three choices for the current Fat Channel's compressor and gate meter operation displays, reflecting either the input signal, output signal, or the reduction (opposite going) metering.

A three-way selection knob is located to the right of each of the meters in the Fat Channel.

Also introduced are Solo Latch, Solo Isolate, Surround Bus Solo Isolate, Record Safe, a Channel list that includes MIDI send and receive commands on all 97 faders over 4 banks, and the ability to link multiple consoles.

Mackie 665**Studer's soft upgrades**

Studer has demonstrated its On-Air 2000 Digital Continuity Console with Version 2.0.2 software which is designed to provide greater functionality when interfaced with Computer Assisted Broadcast.

The interface allows for an automation system to take full

control over the On-Air 2000, including fader settings. A further planned upgrade for the On-Air 2000 will feature configurable master faders, more mix-minus buses and 'further configurable possibilities'.

Studer has also announced Version 2.0 software for the D950

Digital Mixing System.

Features include comprehensive project management facilities, advanced control group functionality, enhancements in the Virtual Surround Panning (VSP) package, advanced panel strip assignment and simplified control function selection modes.

Studer 598**Graham-Patten's surround mixer**

Graham-Patten Systems' D/ESAM 8000 8-bus surround sound mixer is designed to fulfill the needs of facilities that produce programs for release on DVD, DTV, and other digital delivery systems.

The console accepts up to 96 inputs, digital or analogue, in groups of 16. In addition to standard two channel AES inputs, the system also accepts TDIF inputs. The system has 18 motorised faders with 100mm throw.

Multichannel sources may be assigned to a single fader or to multiple faders on a channel per fader basis.

The motorised faders together with an 8 x 18 array of illuminated channel select pushbuttons give mixer status.

Graham-Patten 597**CONTROL****Digital paging reaches nexus with Salzbrenner**

SAAVS Friedrich Salzbrenner specialises in the installation of audio, paging and intercom systems in theatres, congress centres and big multipurpose buildings, while subsidiary Salzbrenner Kommunikationstechnik, founded in 1997, develops and manufactures intercom and paging products.

The main product from the subsidiary company is the digital paging system NexPage. Developed specially for large-scale applications, NexPage handles up to 1024-user stations and up to 4000 audio outputs, and implements comprehensive paging functions including dynamic allocation of user station priorities and free programmability of the stations.

System management is supported by an on-screen graphic display of the entire system, allowing the operator to see the



system's status information and any faulty components at a glance.

The 'Nex' part of the name is derived from the system's hard-

ware aspect, the Nexus digital router from SAAVS subsidiary Stage Tec, which forms the core of the signal distribution.

SAAVS 676**RTW**

RTW's range of audio vectorscopes has been expanded by the addition of an 8-channel, dual-screen desktop version. The new model uses one screen as an 8-channel peak program meter and the other as a 2, 3 or 5-channel audio vectorscope.

Its main application is in surround sound music production, handling phase relations between the five microphones in an surround array, with four phase meters for LC, CR, LR and SL/SR and a multichannel audio vectorscope display.

RTW 690

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Introducing the
MTA Series 924

Who Says Serious Consoles
Have To Cost Serious Money?



A Serious Console...

...for silly money

24 x 24 Bus Console
Shown

Malcolm Toft Associates' new Series 924 console is set to meet the demand for a small no-compromise 24 bus analogue console that is suitable for serious facilities, while keeping within limited budgets.

- ~ 'In-Line' Design
- ~ Compact Size
- ~ 24 Bus
- ~ Same Mic Pre/EQ as the Large Format MTA Consoles
- ~ Switchable Phantom Power
- ~ Phase Reverse
- ~ Four Band Sweep EQ & High Pass Filter on Inputs
- ~ 8 Auxiliary Sends w/Mutes
- ~ Alps K Series 100mm Faders
- ~ In-Line Monitoring with High & Low Shelving EQ
- ~ 4 Effects Returns with EQ & 8 Aux Sends
- ~ Oscillator
- ~ INTEGRAL Meter Bridge Standard
- ~ Optional VCA Automation
- ~ 8 Channel Expander
- ~ +28 dBu Signal Handling
- ~ Semi-Modular Design
- ~ Rear PANEL Connections
- ~ Frame Sizes: 24, 32, & 40 Inputs
- ~ 52, 68, & 84 Inputs on Mixdown
- ~ Starting at UNDER £8,000

MTA Mixing consoles are the creation of Malcolm Toft, a former recording engineer, who founded Trident Audio.



Reader Response No. 023

Malcolm Toft Associates Ltd,
The Old Farmhouse, 27 Ash Hill Road,
Ash, Hampshire, GU12 6AD
Tel: (01252) 318700 • Fax: (01252) 345546
or visit our website at

www.Toft.co.uk

Soft radio

Audio Export has new software modules for RadioMAX and CoRA. RadioBASE is the new powerful database-concept for RadioMAX, allowing a seamless integration of any other software application such as music scheduling or commercial planning into the automation system. It is based on a SQL-Database like Microsoft SQL-Server or Oracle.

Audio Export 675

Magtrax

MusicBox is described as a powerful, problem-solving surround sound monitoring controller, which will handle formats including Dolby Surround and 7.1. Suitable for use with digital and analogue equipment, MusicBox is said to deliver to the monitors consistently balanced and correctly located signals, for stable, error-free audio images.

Magtrax 710



Modular metering

DK-Audio master stereo displays include the MSD600M, the only unit to feature a modular design so the user can configure or upgrade a unit from two to four to six to eight channels, in inputs and outputs. The unit has found particular popularity in the 6-channel configuration for use with 5.1 surround formats.

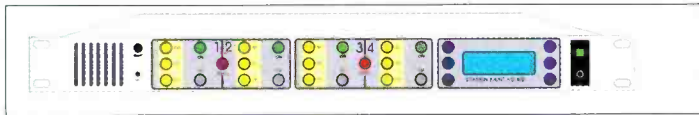
DK Audio 674

Clear Com

Clear Com has launched two intercom products for professional broadcast applications. The MTX-L8 card for the Matrix + III Systems allows intelligent linking of Matrix systems, while the MTX-D8 card facilitates digital, for Matrix transmission on a single pair, or coax between Matrix Frame and Stations. Also new are a range of pushbutton intercom stations for the European market. The ICS-1016 offers 16 pairs of keys while the ICS-1008 is an 8-pair version.

Clear Com 669

Prokom's station identification



Prokom's station identification unit KG 402 is designed for installed and mobile use in professional TV and radio broadcasting. The generated signal in each of the four output channels consists of any combination of the three components: Recorded Messages (four messages per channel, each up to 12 seconds long), Sine Waves (sequences of five different sine waves are pro-

grammable using any combination of five standard levels, five standard frequencies and variable length between 2 and 20 seconds) and External Signal (via +6dBu balanced line input or the optional AES-EBU input).

The sine wave and speech components are generated internally and require no external devices. The messages can be recorded using either the built-in micro-

phone or the +6dBu line input. Each channel output can be monitored at the push of a button using the built-in speaker.

In stereo mode, it is also possible to generate a stereo 3-level test signal (in accordance with ITU recommendation 661-1) widely used as a header for professional VTR tape. Other user-defined sequences can be ordered.

The menus for editing individual settings are displayed on a large, backlit LCD display. The Digital option (KG 402 D) offers two stereo ident outputs and one stereo AES-EBU external signal input in addition to the analogue I-Os.

Prokom 678

NTP checks out digital audio analyser

Ensuring the validity of a digital audio signal is an important issue and NTP has produced an audio analyser for this purpose. The pocket sized unit is designed to give quick access for analysing digital audio signals.

AES-EBU inputs are received on a balanced XLR connector, while SPDIF signals come via an unbalanced RCA-phono. Once a

digital signal is connected to the unit, the available channel status bits and any errors will be displayed on the front LED panel.

A stereo peak meter displays the audio bits, while the analyser also includes a high quality D-A convertor to allow the signal to be monitored through headphones. Incoming signals are measured and the accuracy of

the sample frequency is indicated within two ranges of accuracy: (400ppm or 4%).

Battery operated, the unit is supplied with an AC adaptor for recharging. Other accessories include headphones, SPDIF adaptor, adaptor for mini-jack, RCA-phono connector and user manual.

NTP 684

MAYAH updates SendIt software

MAYAH Communications has announced the release of version 3.1 of its SendIt software. This new release introduces automatic audio codec detection with fast synchronisation. SendIt can recognise CCS CDQPRIMA, Roadrunner, Telos Zephyr, Dialog4 MusicTaxi VP, VP-Pro with layer two and three mono and stereo, over one and two ISDN B-channels - with the provi-

so that it must have basic knowledge about the algorithm mechanism, which might not be the case for very old or very new firmware releases, says MAYAH.

SendIt supports BWF, the broadcast extension of the Wave file format, as well as Musifile, a format specified by Digigram. All supported formats can be exchanged between two comput-

ers running SendIt. Live transmission is supported with MPEG layer two and layer three mono and stereo. SendIt can also be used in conjunction with the Flashman Digital Linear/MPEG Audio Recorder and the MP3 (layers two and three) editor software EditPro. Together these elements form the FlashCast Studio package for audio recording, editing, production, playback and transmission.

Mayah 700

Telex's Merlin

New from Telex are a multi-function digital processor, a digital intercom system and a range of intercom user-stations.

The Merlin ISP-100 is a 1U device aimed specifically at broadcasters. Capable of providing crossovers, delays, routing, combining, a wide variety of equalisation filters, compression and limiting, Merlin has I-O options including AES-EBU and SPDIF 20-bit convertors are used. All I-O configurations are available on separate cards, so that the unit can be updated as required.

Merlin can be controlled and programmed via RS232 using the QuickMAP and QuickSET programming environments. The system accepts up to eight dry contact closure inputs for switching programmed presets.

The RTS Zeus 2400 DSP matrix intercom system is based on the

ADAM Advanced Digital Audio Matrix, and is designed to deliver 24 channels of 44.1kHz 20-bit audio in a 2U package.

Zeus-Edit, a Windows-based configuration package, is included with the system, allowing on-line and off-line user configuration capabilities. Zeus-Edit comes with a library of standard preset system configurations allowing an end user to immediately get Zeus up and running.

The system is apparently compatible with existing Telex matrix keypanels and 4-wire inputs and outputs for program and IFB feeds. Zeus offers eight GPI inputs and outputs to trigger external devices.

There are also new key-panel user stations, described as cost effective, for the ADAM and Zeus matrix intercoms systems. The user stations include programmable units suitable for rack, wall box and portable mounting options.

Telex/EVI 707

Lindos

The portable LG1 AES-EBU portable audio generator and matching LM1 monitor are battery powered, with rugged metal housing. Suggested for OB and field service use, they are also said to be priced to meet 'almost any budget'. The LG1 generator supports 32kHz, 44.1kHz and 48kHz as well as external clock, with 24-bit wordlength. It also has 1kHz and 400Hz modulation with selectable digital and analogue output levels, plus channel ident on CH-B digital and right channel analogue. Validity-bit selection for audio/data identification is also provided.

LM1 monitor supports the same sample rates and has a headphone output with volume control. Accurate level indication is given for digital and analogue inputs, plus digital status and error monitoring.

Lindos 716

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE

New generation switchers from System Two Cascades from Audio Precision

Audio Precision has expanded its System Two analyser range with the launch of the System Two Cascade, a new series of additions to the System Two family.

This new model has a companion in the System Two+ DSP (SYS-2422A), which also features new platform improvements but not digital I-O. In addition there is the Cascade Digital Only model SYS-2500A.

The new products are part of a complete new range of 96k audio analyser products and options. Of the new products, the Dual Domain unit features two or four connector 96kHz sampling rate interfaces and extends all of System Two's measurement capa-



bilities to the new higher rates.

The Cascade DSP platform offers increased processing power and is designed to cope with any future enhancements. The first units are currently being

delivered but Audio Precision stresses that the new products extend the family and do not replace existing System Two models.

AP 687

AVT updates MAGIC ISDN



The MAGIC ISDN audio transmission system manufactured by AVT Audio Video Technologies has received a new software update, taking the system to version 7.50.

The update includes six ISDN B channel capability conforming to ITU-T Recommendation J.52, which permits a high quality audio transmission of ISO/MPEG Layer II coded signals over ISDN at a data rate of 384kbps. Due to the J.52 rerouting and continuous delay compensation procedures, this new ITU-T J.52 standard (tested by the EBU) prevents a loss of the audio signals when one or more ISDN B channels fails. In addition to J.52 support, inter-

working is possible with the proprietary protocols used by CCS (CDQPrima Series) and Dialog4 (MusicTaxi VPPro), facilitating 128kbps stereo transmission between MAGIC and most other codecs presently available on the market.

Additionally, a keyboard with backlight display has been introduced to permit simple cost-effective control. Up to 100 short-dial numbers with assigned configuration can be stored, and direct dialling can also be utilised. A new capability is the control of multiple MAGIC ISDN Codecs in a LAN network. Supplied MAGIC Windows Commander software enables any terminal in the LAN to control the setting up of calls by the MAGIC ISDN system. Using MAGIC ISDN together with an audio crossbar from R. Barth KG, a full-feature audio transmission network can be implemented.

AVT 695

Audio Follows connects with DDO-NT

A new product from Audio Follow enables broadcast organisations to connect a number of remote radio stations with a central headquarters. The DDO-NT range of audio digital products covers all operational aspects of radio broadcasting, including editing, music and advertisement scheduling, on-air control, surveys and archiving.

Complementary tools include the crossfade manager, CD cue, voice superimposer and the associated data editor. These enable the installation of an entirely digital radio station. It is also possible for stations to manage an interactive Internet site and assist the DJ while on air by providing information associated with a title (dates of concerts, album release dates).

Audio Follow 679

Riedel

Riedel's latest broadcast intercom technology based on the IBT System named UNICOM provides 2 and 4-wire solutions to suit all requirements for broadcasters, theatres and large event applications.

Solutions include newly developed key panels with character-display all-in-one buttons; radio belt packs with local and European PTT approvals; PC software with user friendly desktop design; wireless intercom systems; headsets, handsets, earbuds and telephone hybrids; 2-way radio interface; and fibre optic transmission equipment.

Riedel 671

ASL belts up

ASL Intercom new products include a range of belt packs in metal cases for the company's Pro Series partyline intercom system; a 12-channel Cue Light Master Station which obtains up to 144 cue light channels by linking master stations on standard mic cable and XLR-3 connectors, a paging system for use in theatres, conference centres; and utility applications which includes a paging master station with inputs for programme, paging and emergency audio signals.

ASL 673

Leader

LG3226 is a 100kHz-2GHz signal generator with AM and FM modulation modes. It can provide simultaneous modulation of AM/FM, DC/FM and dual-tone (internal/external). Frequency switching is said to take less than 50ms, making the device ideal for production test applications.

TTI 704

digital audio
analogue audio?
NOW MONITORING BOTH IS SIMPLE



With the Audionics SC1D there's no difference between monitoring digital audio and monitoring analogue audio. Just plug it in, the SC1D takes care of the rest.

- six stereo inputs (rear panel XLR's) accept AES/EBU, SPDIF or analogue audio
- automatic digital input sensing and front panel sample-rate indication
- remarkable sound quality from electronically equalised front panel speakers
- 48 segment bargraph PPM with phase indication LED
- front panel test input jacks
- 24 bit D-to-A converter



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PETRE DRIVE, SHEFFIELD S4 7PZ UK
TELEPHONE +44 (0)114 242 2333 FAX +44 (0)114 243 3913
Email info@audionics.co.uk <http://www.audionics.co.uk>

NTP

Best known for PPMs, NTP has launched a new generation of its 625 Digital Multinorm Audio Switcher which offers high density and multinorm I-O facilities, together with the built-in security and unlimited expansion of the switching system. The basic unit in a 625 system is a 4U 19-inch subrack with space for 16 I-O cards. Each contains four I-Os, making for a possible total of 64 I-Os in one subrack. The system can be further expanded with further subracks, either locally, using coaxial cable, or decentrally by means of optical fibres. Each optical fibre can handle 128 channels, making for easy installation. The 16 I-O cards can be a mixture of analogue and digital cards, all equipped with a DSP Processor. The 625 system can be controlled from a PC or other control panels using a dedicated Ethernet connection and specific software.

NTP 685**Dolby's big E**

Dolby has a system for distributing the multichannel audio feeds of digital television broadcasts. Dolby E has been developed to carry multiple channels from broadcast centres to the transmitter. The system enables eight discrete audio channels to be carried by a conventional AES-EBU pair or on two tracks of a digital video tape machine. In this way the manufacturer claims that Dolby E offers a convenient and economic way for surround sound to be passed around DTV facilities, without the need for major new equipment or cabling.

Dolby 682**Upgraded reference generator from NTP**

NTP has introduced an improved Audio Reference Generator. The type 570-200 is designed to keep all digital equipment in sync and can be used as a stand alone unit or as a part of a bigger synchronisation system. The 570-200 provides AES11, SDIF-2 Word Clock and composite (PAL/SECAM) video synchronisation signals and runs on its own Grade 1 oscillator. Aside from this the unit can be locked to external sync.

NTP 686**AVT delivers Compact MAGIC hybrid system**

The MAGIC Compact i2-7kHz system from Audio Video Technologies (Booth xxx) has been designed to provide a cost-effective ISDN Telephone Hybrid. The

system converts the telephone signal into an analogue signal with nominal level.

A unique feature allows the two available ISDN BRI interfaces

(four ISDN B channels) to be used for Call Selection among up to four subscribers. In addition to the standard G.711 telephone mode, audio transmission according to the G.722 standard with an audio bandwidth of 7kHz is possible.

The MAGIC Compact is compatible with AVT's 7kHz ISDN Telephone and all 7kHz audio codecs using J.52 and Statistical Recovered Timing (SRT).

AVT 696**AEQ serves up radio management system**

AEQ is offering what it terms 'the most advanced audio management and automation system for radio broadcasting'. The Mar4Win native 32-bit system for Windows 95 and NT provides audio, text and image integration, up to four audio processing boards plus an additional prelis-

tening output with low-cost audio board, simultaneous access to several databases, user-configurable screen appearance, and drag-and-drop operation.

A number of optional applications are available for the Mar4Win system. Mar4news is the module developed by AEQ for

managing news bulletins and storing them in Mar4Win. The server application can receive information from up to 16 news agencies; this information is then made available at the client applications depending on specific needs.

AEQ 695**TTI debuts 5MHz generator**

TG550 is a 5MHz function generator with a frequency locking system said to give it a level of stability unmatched by conventional analogue function generators.

Once a frequency has been set, pressing a lock key engages a measure and correct circuit which compensates for small thermal and mechanical drifts. The frequency is compared to a crystal-controlled reference and is said to be maintained to an accuracy better than one digit on the LCD.

TG550 generates sine, triangle, pulse and ramp waveforms from 0.005Hz to 5MHz. A built in sweep generator provides linear or logarithmic sweeps with periods ranging from 20ms to 20 sec. AM capability is also incorporated with a choice of internal or external modulation from 0% to 100%.

The LCD on the unit shows frequency and output level. Auto-ranging reciprocal frequency measurement is said to give four digit resolution with rapid update down to 2Hz. Below this

frequency, the measurement mode is changed to a three digit resolution. TTI states that compared to products using fixed gate-time meters, TG550 provides higher accuracy and faster display update across the whole frequency range.

The output display can be selected to show any of three values: peak-to-peak amplitude; RMS amplitude or DC offset. The decimal point and units are changed automatically, displaying the true amplitude regardless of attenuator setting.

TTI 714**AVM-IRP teleconferencing**

A new DSP-based teleconferencing system, TC6400/TC6200 combines 2/4 wire convertor and adaptive echo canceller. Optimised for integration into the existing line of Voice-Matic automix systems, the new products can provide full duplex interconnection of multiple, simultaneously speaking participants.

The manufacturer states that the integral echo canceller requires no calibration before a

conference but adapts to varying acoustical conditions.

In order to allow the temporary extension of a conferencing system, or the rapid relocation of a system, IRP now offers wireless UHF system WCS800. The system's compact mic-stations automatically dial into unoccupied UHF channels, up to a maximum of 16 channels. The number of available channels is dependent on the number of DJ-4161 UHF receivers but there is no limit to

the number of mic-stations that can be used.

Key building blocks in IRP's latest offerings are the DP7228 and DP7448 DSPs. These provide programmable functions such as routing, 28-band parametric equalisation, high and low pass filters, gain controls and limiting. All functions can be configured using MicroGRAPHICS PC software via RS232. Settings can be stored in the DSPs themselves. DP7228 provides two I-Os compared to the four of the DP7448.

AVM-IRP 708**Lake People**

Lake People has a range of small DC or battery operated A-D and D-A converters, packaged in a steel case measuring 130 x 44 x 160mm.

Other new products are the ADC C74, a 2-channel A-D convertor. The analogue inputs are balanced via XLR connectors, while

two rotary faders on the front panel allow level adjustment. Conversion is 24-bit with up to 115dB dynamic range. Sync can be derived from internal quartz oscillators or externally via WCLK input. Two digital outputs are provided, balanced via XLR and unbalanced with cinch socket.

The DAC C76 is a 2-channel D-A convertor. Two digital inputs are

provided, balanced via XLR and unbalanced with cinch socket. Like the ADC C74, conversion is 24-bit and a rotary fader on the front panel allows level adjustment, and analogue outputs are balanced via XLR connectors. An enhanced version, the DAC C78, incorporates an additional headphone amplifier.

Lake People 668

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Opticom's OPERA first

Opticom's OPERA - Objective Perceptual based Analyser is claimed to be the first commercially available tester to incorporate PEAQ, the ITU-R recommendation for measuring perceived audio quality.

OPERA can assist broadcasters, network providers and equipment manufacturers to objectively evaluate and monitor the sound quality for almost any application from system design to live on-air operation. As opposed to traditional audio measurement methods, the new

systems will be able to simulate the subjective evaluation of a single subject or even complete listening tests in the daily operational environment. This is because the systems, which work in the same way as the human ear, are able to distinguish between imperceptible and annoying transmission errors.

The OPERA family of measurement equipment comprises a PC-based workstation with Pentium II processors, state-of-the-art audio interfaces, and runs Windows NT. This allows for easy interchange of



measurement results with data bases, as well as convenient programming of automatic quality assurance applications.

Opticom 688

Zenon Media broadcasts

Zenon Media's All In One Audio is an integrated digital radio concept. Zenon's Air Check Player allows playback of audio sequences archived as Real Audio or MPEG Layer III files. Users can go through the archived data and select any part of it by entering its date and hour. Parts can be played back, extracted and saved as a separate file. Archived audio can also be played back from any PC in the network using a Soundblaster compatible audio card.

The AirCheck Layer III is a standalone product allowing the

archiving of incoming modulation for documentation purposes, depending on hard disk capacity. The audio data is recorded using a Soundblaster or compatible audio card using a compression algorithm.

Cart32 is a virtual Cart machine onto which sound files from a database can be dropped. Up to 16 cart slots can be defined on each cart machine, and up to 16 cart lists can also be used. The number of lists is also restricted to 16.

CD-Grabber is an application capable of reading tracks from an audio CD and converting them as

an MPEG-Layer II for storage onto a PC hard disk.

Phone answer is a telephone answering machine able to deliver a welcome message and record an incoming message on a hard disk. Different messages can be played back depending on the time of the call, and the name of the caller, date and time will be stored on the hard disk.

Finally, Audio-Cast is a complete one-channel broadcast automation system allowing users to generate and broadcast complete radio programmes for the whole day or as intermittent broadcasts.

Zenon 672

Telos develops MPEG-2 AAC

Set for imminent release, Telos has developed the world's first audio codec to employ MPEG-2 AAC (Advanced Audio Encoding). A joint development of the Fraunhofer Institute, AT&T, Sony and Dolby Laboratories, ACC is the most advanced MPEG endorsed technology.

It is said to have a performance twice as good as MPEG-2 Layer 2 and about 30% better than MPEG-2 Layer 3. This means that less bits can be used, or greater audio fidelity can be achieved for the same bitrate.

The new Telos codec is a 1U device which accepts analogue, AES-EBU or TCP/IP connection.

Outputs are via RS-232, X.21 or TCP/IP.

For initial demonstrations of the codec, it was connected to a software decoder running on a PC. A companion hardware decoder has been developed, with immediate availability. AAC encoding and decoding plug-in cards for PCs and software-based PC decoders are said to be 'in the works'.

Telos 706

CobraNet goes 24 bit

Peak Audio's CobraNet Ethernet-based audio networking technology now has full support for 16, 20 and 24-bit operation. This applies to all CobraNet products now on the market, which are all capable of transmitting audio up to the resolution of

the convertors used. In addition, all CobraNet compatible products can receive audio up to 24 bits regardless of the convertors used, giving full compatibility across all the products from the various manufacturers licensing the technology. Currently these include

QSC, Peavey, Crown, Level Control Systems, Rane, EAW and Crest, and all their CobraNet products are software upgradeable, ensuring continued compatibility in the future. Developments on the way include support for Gigabit and Switched Ethernet, ATM, and SNMP management.

Peak Audio 691

AEQ launches new multiformat ISDN audio codec

The ACD-5001 from AEQ is a dual multiformat audio codec for ISDN lines, with terminal adaptors built-in, offering all the combined utilities needed for establishing either two independent mono audio channels plus auxiliary data, or one stereo link with the highest possible audio

quality.

AEQ's new codec is equipped with a full-duplex intercom for simple and independent communication with both audio channels, without external wiring and operations. Digital audio codecs supported are G.711, G.722 (statistical and H.221/H.242), LD-

Extend and ISO/MPEG, for mono, dual or stereo transmission, at 64 and 128kbps.

The ACD-5001 is designed with the same features as the MPAC-02 digital communications unit for remotes, making them natural interconnect partners.

AEQ 694

DTS

The new decoder DTS-ES adds a third surround channel to the digital cinema sound format.

According to the developer, the extended surround decoders are 'fully compatible with all digital, multichannel playback systems on the market today'. The format is intended to extend the realism of special effects, by allowing directors to place the audience in the middle of the action and to give new dimensions to spatial pans.

DTS 715

VMB

Combining three way digital crossover, independent dynamic control for each signal path, equalisation and phase alignment, the C2-DAC is a digital audio controller based on a 40-bit DSP engine. The crossover filters employ a 40dB per octave Linkwitz-Riley emulation, while the equalisation provides for up to 30 filters. Individual multiband noise gates are also provided.

The units' convertors are 20-bit oversampling delta-sigma.

VMB 712

Thurlby Thandar

The DS360 is described as a high-performance, low distortion sine, square and two-tone waveform generator, providing frequencies from 1MHz to 200kHz. The frequency range is said to be 25 parts in 106: far better than conventional analogue ultra-low distortion oscillators.

In addition, the DS360 includes white, pink and band-limited white noise generation. Two-tone outputs can be specified as a combination of two sine waves or a sine wave plus a square wave, to create standard SMPTE, DIM and CCIF two-tone signals.

TTI 711

Cloud

The Z-8 zone mixer accommodates six music sources with two microphones and a paging facility, all of which can operate in any combination in eight separate zones.

Contractor facilities include preset assignable priority, individual gain trims, rear panel equalisation and balanced outputs. Remote selection and volume control for music sources is standard, with an optional wallmount control allowing adjustment in each zone. Also available is Z-4, a unit with similar facilities but addressing four zones rather than eight.

Cloud 709

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Lake DSP thinks big

Lake DSP's Audio Display Tools provides a set of utilities for creating, manipulating and replaying complex 3D audio presentations over large speaker arrays. The tools run on Lake's audio workstation, which also has options to support acoustical research and interactive 3D audio for virtual reality software. Although Lake has developed the tools to create what it terms as spectacular animations in speaker arrays for theme-parks, it also provides precision, convolution-based equalisation devices and has products aimed at consumer, as well as professional, applications.

Lake DSP 667

Tektronix

The TDS2MM measurement module for the Tektronix TDS200 series of oscilloscopes adds parallel port, RS-232, GPIB programmability, FFT capabilities with three windows and four automatic measurements. These are risetime, falltime, positive pulse width and negative pulse width. The TDS2MM has been added to the TDS200 range to allow the viewing of waveform frequency components. Examining the frequency components of a waveform can reveal important information that might not be apparent in the time-domain display seen on a standard oscilloscope. Also available is a new GPIB interface option for the Audio Precision Portable One range of audio analyzers. This is an option on both the Access and Portable One Dual Domain versions of the product.

TTI 703

Audio Follow

AIR Lite is aimed specifically at small stations with low budgets, offering all vital functions for production, scheduling and on-air management on a single platform. Directly derived from the current systems, this workstation provides facilities for recording, audio editing, and live assist or automated broadcast.

Audio Follow 680

AudioGraph

PowerCube is designed to measure an amplifier's dynamic output at 20 different resistive, capacitive and inductive loads down to 1 ohm. The results are presented as 3D graphs for easy analysis and comparison.

Audiograph 702

Drake and Sono's desk-mounted commentator unit

UK-based talkback system manufacturer Drake Electronics, together with the German system house Sono Studiotechnik and the MCI subsidiary of Studio Hamburg, have developed a 3-in-1 desk-mounted commentator unit designed for international broadcasting and conferencing requirements.

Featuring three configurable modes in one package, the Commentator Unit is intended for conventional commentating at large and small events, provision

of simultaneous translation at multilingual venues and traditional high-quality talkback.

The Commentator facility supports broadcast quality audio in a portable format. This plug-in module allows the user to mix programme and intercom feeds to two separate ear-pieces, providing individual volume controls for mixing together with a master volume control for each headset.

A desktop version of the unit is available for talkback only appli-



cations, but can be upgraded to a fully featured Commentator Unit as necessary.

Drake 689

Scheck provides new-generation signal analysis

Scheck Audio has unveiled a new generation of Digital Signal Analysers with the Alphonon DSA-2000, a battery-driven hand-held digital interface tester for professional and consumer formats, including the 88.2kHz and 96kHz 'double frequency' formats.

The unit features an AES-EBU receiver and transmitter to test the quality of digital audio signals of

75 and 110 ohms impedance and sampling frequencies between 25kHz and 96kHz.

The AES transmitter generates a triangle wave with fixed frequency and level to enable the user to send a test signal through the line; the XLR output supports sampling frequencies of 48kHz and 96kHz. In addition, the DSA-2000 is equipped with a high-quality 20-bit D-A converter for

headphone monitoring of the received signal, and a volume control sets the level at the output jack.

Easily readable LEDs display channel status (such as professional, consumer, copy, emphasis), sampling frequency, error report (including validity bit, confidence flag, CRC, parity, biphase coding), and battery status.

Scheck Audio 701

AEQ provides complete remote ISDN PACKage

AEQ is offering what it terms 'the complete ISDN solution' for ISDN remotes. The new MPAC-02 is a multifunction, dual-channel, portable audio codec aimed at providing the best possible audio and data connections together with a user-friendly interface for the journalist and full features for the technician.

Offering two-way communication in two independent audio channels on a single ISDN line (the two B-channels can be used independently), the MPAC-02 enables the setting up of simultaneous Programme and Co-ordination circuits. Meanwhile, its

built-in Digital Hybrid with Frequency Extender enables connection to a standard analogue telephone line.

An auto-start system means that the reporter can just switch on the MPAC-02 and it will automatically carry out the dialling, calling and synchronisation with the audio codecs at the other end of the line, connecting both Program and Co-ordination using the stored configuration. The available codings are G.722, G.711, ISO/MPEG LII and LD-Extend for mono, dual or stereo transmission via ISDN.

In addition, the equipment is

programmable, enabling easy upgrading.

The MPAC-02's mixing capacity allows three commentators and one guest, and each reporter has independent mix level control.

Also provided are auxiliary inputs and outputs for local sound. An LCD user interface provides all the necessary operational information, including phonebook, VU meter, status, and menu options.

AEQ also produces a stationary partner for the MPAC-02, in the form of the ACD-5001.

AEQ 693

MAYAH moves into MPEG-2 AAC

MAYAH Communications has shown the world's first professional MPEG-2 AAC software recorder, the AAC-Recorder, which will be introduced in the broadcast and audio markets as well as the multimedia market.

MAYAH also plans to add AAC mono and stereo support with

sampling rates from 8-48kHz in its EditPro and SendIt software.

However, AAC will raise the bar on minimum computing power - the computational horsepower needed for MAYAH SendIt to run AAC in real-time is greater than a 400MHz Pentium. Compared to MPEG-2 layer two, MPEG-2 AAC

(Advanced Audio Coding) achieves half the bit rate with no loss of subjective quality, providing a significant cost reduction. Transparent mono is possible with only one ISDN B-channel, and transparent stereo with only two B-channels i.e. one standard ISDN BRI connection.

Mayah 699

New version of DigAS from DAVID

After a period of beta testing, DAVID's Multitrack Editor V2.0 is now in production and features a number of improvements over the 1.0 version.

These include: a user interface based on a common screen lay-

out, with a number of 'pages' and dockable toolbars; the ability to customise the system using loadable, user-specific keyboard shortcuts; automatic audio format conversion, so that different audio formats can be used in a single

edit session; integration of an Edigas page for less complex editing; a redesign of the Reporter Box; and full rich text.

All registered users of version 1.0 can download the new release through DAVID's DigaMailbox without charge.

DAVID 681

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AVT pre-announces future ISDN Telephones

Audio Video Technologies has announced that its successful and widely used 7kHz ISDN Telephone will be replaced at the end of this year with a new generation 7kHz ISDN Telephone unit. In addition, a new 15kHz ISDN Telephone will be introduced into the market, incorporating 3.1kHz, 7kHz and 15kHz (stereo) audio signal transmission capability.

The G.711, G.722 and ISO/MPEG Layer III coding standards will be supported. In addition, the 15kHz ISDN Telephone will be ready for the new Advanced Audio Coding (AAC)

MPEG standard, and the J.52 signalling standard previously used in all AVT audio products will be implemented. The success of the 7kHz ISDN Telephone is substantially due to its simple user interface, says AVT. Consequently, this will be an important feature of the new 15kHz ISDN Telephone.

The price of the 15kHz ISDN Telephone will be in the same range as the existing 7kHz ISDN Telephone. Customers who presently order a 7kHz ISDN Telephone will automatically receive an upgrade certificate, which will enable them to upgrade their units to the 15kHz



ISDN Telephone at a specially discounted prerelease price. All previously delivered 7kHz ISDN Telephones can be upgraded to 15kHz.

AVT

697

CCS launches FlashCast portable audio studio

CCS Europe's FlashCast Studio is designed to bring the broadcast studio on the road and to hide complex technical procedures from the user. The FlashCast Studio package consists of the Flashman Linear/MPEG Audio Recorder for portable recording, Mayah EditPro software, and the Mayah SendIt transmission software for real-time and file transmission to studio and broadcast destinations.

The Flashman recorder can record linear as well as MPEG

layer two and layer three (MP3) audio on CompactFlash cards providing many hours of storage. The EditPro software edits MPEG layer two and layer three files, with cut, copy, paste and fade functions supported, while SendIt transmits MPEG layer two and layer three in real-time and as files via ISDN, PSTN, GSM, Musifile and BWF. SendIt unifies four real-time functions - Record and Store, Record and Send, Send Live, and Receive and Record - as well as supporting file-based transfer. It

can mix up to four channels (two file and two live feeds) and then record or send the master output to the chosen destination.

FlashCast technology provides full automatic recognition of the remote audio codec, removing the need for the user to make the appropriate settings. And, says CCS Europe, the technology allows SendIt to recognise the audio codec in nearly the same time as hardware codecs of the same type connect to each other.

CCS

698

Aeta scoops new radio products

Aeta's Hifiscope 3 LL is designed to deliver broadcast quality audio over permanent digital links, working with a range of compression algorithms. Transmission can be carried out at rates from 64kbps to 384kbps.

Other features include full duplex operation, up to 20kHz stereo, dual 7kHz mono mode (with independent V11 inter-

faces), auxiliary data channel and optional remote supervision software.

The product is presented in a rackmount and is intended for distribution of audio from studio to transmitters, interconnection of regional stations to a central radio station, contribution links for big, on-off events and remote contribution into studio discussion programmes.

The Hifiscope 3 ISDN is designed to deliver broadcast quality audio over ISDN lines. Like the 3 LL, it has a choice of transmission rates but can run at bit rates of up to 384kbps on ISDN or V11/V35 interfaces. Incorporating Reed Solomon (J52) error correction, the unit is intended for high quality contribution links and automatic back up of leased lines, as well as functions also handled by the 3 LL.

AETA

683

Metro Audio enhances MA-SMAC

Designed for stage managers, the MA-SMAC system now has new audio control features. Built into the stage manager's desk, the system interfaces with paging and intercoms from one mic or headset and provides control over other paging and music inputs.

Other features built into the system include a digital 24-hour clock and stop-watch, as well as four separate outputs to operate various effects.

The unit has six prioritised inputs. These comprise: stage manager's headset mic; FOH and stage door paging mics; two

show relay mics and an aux input which can be used for voice evacuation. These signals can be routed to four outputs in either Day or Show mode, as set by the front panel key-switch.

The stage manager can route the headset mic via two zone selector switches, which also operate Push-to-Talk circuitry, in addition to activating 24V volume restoration to the appropriate zone.

The intercom system may be accessed by the stage manager's headset via a latching Comms-on switch.

Metro Audio

713

Mackenzie

MacFi is an 8-message digital audio record/play system designed for use in environments such as railway stations, exhibition venues and amusement parks.

Available with durations of eight or 16 minutes in total, MacFi uses a dynamic message length system, so that initial and replacement messages can be of different duration. Messages can be recorded directly to the system, which can also be triggered directly or by remote control across a network. A Flash EPROM memory system protects messages during power failures, without battery back-up.

Mackenzie

705

PC-based audio analyser

Kirchner Elektronik's ATB Precision is a PC-based audio analyser which takes advantage of the increasing power of standard desktop computers. The measurement system is a black box with USB or a PC card and the software is designed to run under Windows 95/98 or NT. The specifications are dual channel for line or mic inputs with 110dB dynamic and 20-bit precision.

The impulse response measurement is said to have a 100dB dynamic range and uses a special MLS+ signal, similar to pink noise, pink noise and 20-bit resolution.

Kirchner

666



Audionics

The SC1D Digital Audio Monitor unit offers aural and visual monitoring of six stereo audio sources via high quality loudspeakers and a bargraph PPM.

The company claims that the unique feature of SC1D is that each of its inputs will accept AES-EBU or analogue audio.

Audionics' second new digital product is the DA210D, an AES-EBU distribution amplifier with frame synchronising and sample rate conversion facilities and an analogue output for convenient monitoring.

Audionics

670

AEQ provides stereo audio monitor rack unit

The AM-03 self-amplified stereo audio monitor from AEQ is designed for professional work in VTR rooms, OB vans, radio and television main controls, and multimedia systems. The 1U 19-inch unit has three selectable stereo audio inputs, balanced inputs and outputs, XLR connectors, and two stereo channels for middle and treble plus one mono channel for bass.

A phase-meter display incorporated on the front of the equipment allows perfect input signal control. All other controls are also mounted on the front panel, including the headphone output, which incorporates automatic loudspeaker disconnection for increased operator convenience.

AEQ

692

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Spectral Design

The established AudioCube mastering and restoration workstation has been given an additional boost in performance with the use of two Pentium III processors and software which is said to be especially optimised for this processor. The SurroundMaster real-time AudioEngine enables SurroundCube to process eight channels of audio simultaneously in real-time, thereby making the SurroundCube suitable for mastering of DVD and multichannel projects.

Spectral Design 722



Rorke Galaxy Series of Fibre Channel RAID

Rorke's leading edge storage range now includes the Galaxy Series of solutions ranging in capacity up to 3Tb. Three models are included; the Galaxy 50 is a Fibre Channel to Fibre Channel RAID solution, the Galaxy 5 a Fibre Channel to SCSI (LVD) solution, and the Galaxy 100 a Storage Area Network centralised storage solution with simultaneous Fibre Channel connectivity to up to eight servers.

Rorke Data 728

DSP Factory AX16

Latest addition to Yamaha's DSP Factory, the AX16-AT PCI card allows transfer of 16 tracks of audio to and from the DS2415 audio card. It has two pairs of ADAT optical ports. The news coincides with the imminent launch of Mac drivers for the DS2416 card.

Yamaha 735

SEK'D makes a small conversion

SEK'D has what it says is the world's smallest 24-bit/96kHz A-D/D-A converter. The ADDA 2496 S is an inexpensive unit that supports sampling rates from 44.1 up to 96kHz with 24-bit audio resolution and greater than 100dB dynamic range. Designed for use in a professional audio environment, it offers XLR analogue I-Os and AES-EBU and SPDIF digital I-Os.

SEK'D 751

HDA shows archive transfer

Hauptert Digital Audio has an automated transfer system, which is designed to take bulk analogue and other audio archives into a unified digital domain as efficiently as possible.

Badged as Quadriga, the AudioCube Solution, the system was developed in close co-operation with the IRT in Munich.

According to the developers, Automatic supervising of feeding devices, tape recorder, CD-drive,

DAT recorder and turntable, frees the operator from monotonous transfer work. At the same time sophisticated digital audio analysis and supervising systems are used to log any errors which occur. The audio material is then stored in BWF (Broadcast Wave Format) together with associated meta data.

The resultant files are said to be suitable for use in many kinds of archive systems, including robotic, CD-R, and Exabyte-based schemes.



Quadriga supports all commonly used sampling rates up to 96kHz, with a wordlength of 24-bit and ATM, FDDI and Ethernet network systems.

HDA 721

Two new from E-MU Systems

New from E-mu Systems are a PCI-based audio and MIDI system, plus a new Ultra standard for its samplers. This includes upgrade boards and V4.0 software for upgrading existing samplers E-6400, E-Synth Rack, E4Z and E4XT. E-MU's Audio Production Studio is designed to run on a PC under Windows, providing 64 dynamically allocated voices, with internal digital mixing and effects processing. Voices can be samples or hard-disk based audio streams. There is support for two internal MIDI ports plus a built-in 16 channel external MIDI interface. The PCI E-Card contains the MIDI connectors,

SPDIF I-O and four channels of analogue I-O. It also contains the processors required to support multiple sample playback and real-time effects processing. The system supports recording and playback at eight sample rates between 8kHz and 48kHz using 8-bit or 16-bit length.

In addition to supporting the .WAV file standard, the Audio Production Studio uses E-MU's SoundFont format, giving access to a large library of sounds. Included with the system is an E-Drive, actually an audio I-O module which sits in an empty drive bay in the front of the PC, giving easy access to four

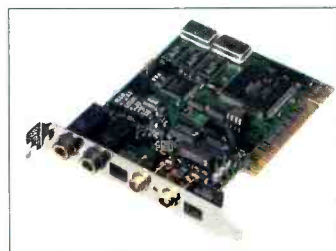
channels of digital I-O four analogue inputs and two analogue outputs, plus a headphone socket.

Ultra1 samplers are based on a new 32-bit ColdFire processor. They offer 128 voice polyphony, 32 MIDI channels, dual 24-bit effects processing (on 32 channels), 128Mb RAM, 96Mb sound ROM/Flash RAM and ADAT interface. Mac and PC software editors are included.

There are 22 six-pole filters per voice, allowing filter types including high pass, low pass, band pass, flanging, phasing and morphing. An internal patching system allows more than 60 modulation and real-time performance controls.

EMU 737

SEK'D budget 24/96



SEK'D, a pioneer of 24-bit 96kHz PCI sound cards for personal computers, has presented what it calls 'the next step in the natural evolution of sound cards designed for use in home, project and professional recording studios.'

At around US\$500, the Prodif Plus, which was previously announced as the Prodif 32 ADDA, provides 24-bit, 96kHz digital audio and 20-bit, 48kHz analogue audio, with I-O connections

for SPDIF, AES-EBU and ADAT machines.

Supported audio resolutions are 8, 16, 20 and 24-bits, while analogue sampling in the range 11.05-98kHz and digital sample rates of 32, 44.1, 48, 64, 88.2 and 96kHz are supported. A-D/D-A conversion is 20-bit, and signal/noise ratio is quoted at 90dB.

Features of the Prodif Plus include full duplex support for simultaneous recording and playback, sample-aligned simultaneous start of record and playback in Record While Play mode, automatic hardware testing on power-up, zero latency monitoring, and hardware pitch support.

Initially, only Windows 95/98 drivers are available, but SEK'D says that Windows NT, Macintosh and ASIO drivers are due soon.

SEK'D 717

Two PCI boards from Frontier

The Frontier Design Group has released two PCI boards which bring digital audio interfacing, MIDI and synchronisation capabilities to a desktop computer.

Dakota has two sets of ADAT connectors, giving channels of digital I-O. A breakout cable terminates in RCA jacks for SPDIF audio

and 9-pin connector for ADAT sync. There are also two MIDI inputs and outputs, plus an internal CD-ROM connector for direct transfer of audio from CD.

Montana can be used alongside Dakota to double the ADAT I-O to 32 channels. In addition, Montana offers synchronisation features.

AudioFile

AudioFile now provides 32 tracks of 24-bit audio with the advanced track capacity available as a plug and play upgrade to existing 24-bit systems.

AMS Neve's WorkFlow group of multistudio integration technologies provide access to three domains of facility integration: audio distribution, control and AudioFile/hard disk project management. Combining 4 x 100 Mbit fibre-optic audio networking with A/V Mail and Project LAN technology, StarNet enables a managed workflow of audio sources and projects at facilities with multiple AudioFile hard disk editors. DNA (Digital Networked Audio) is an audio and control networking system which enables multiple consoles to share I-O, tape machines and other resources.

AMS Neve 718

An RCA input synchronises the computer to an external PAL or NTSC video signal, or external audio word clock. Video sync can also come from an internal header for direct connection to a digital video board. Montana is fitted with PCI and ISA connectors, to maximise the configurations in which it can be used.

Frontier 738

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MOTU 1224

Mark of the Unicorn has followed its 2408 Hard Disk recording system with the 1224, an I-O system that can be used as expansion for the 2408 or as an independent core system. The full system includes the PCI-324 card, Audiodesk software and drivers for all major Mac and Windows audio applications. The 1224 features eight pro-spec analogue inputs and outputs, 24-bit converters both ends, stereo 24-bit AES/EBU and a dynamic range of 116dB. Up to three interfaces can be connected to a PCI-324 card in any combination of 2408s and 1224s, offering a flexible selection of analogue and digital connectivity.

MOTU 729**Merging PCI**

Merging Technologies' Mykerinos PCI card is claimed to be 'the most powerful single processor PCI board ever built'. You get a choice of modular I-O boards and it uses 32-bit floating point with 24-bits and 192kHz. It'll give 64 tracks of playback with 64 simultaneous tracks of record and eight cards can be chained together.

There's a matrix mixer and effects including EQ, dynamics and reverb all with a claimed latency of under 4ms.

Merging 595**Sadie OMF**

Studio Audio & Video has demonstrated direct OMF support for SADiE 3.8 software which allows removable media containing EDLs and audio to be transferred directly from an Avid to SADiE, where the EDL appears without the need for any audio file conversion.

It is available as an option for all SADiE platforms from the SADiE 2496 upwards. DirectX is now also supported.

SA&V 594**Soundscape Dolby**

Soundscape has a Dolby Surround Encoder/Decoder plug-in for Soundscape workstations and the Mixtreme PCI Card. The plug-in is the result of collaboration with Dolby Labs and licenses Dolby's DSP code, developed for the Motorola 56301 DSP used in the Soundscape V2 Mixer environment. Both Encoder and Decoder plug-ins can run on one DSP in the Soundscape V2 Mixer environment.

Soundscape 593**360 System's multichannel hard disk recorders**

New from 360 Systems are the 4-channel TCR4 and 8-channel TCR8 synchronous digital audio hard disk recorders. Designed specifically for broadcast, video production, and video postproduction applications, these new models offer 24-bit audio quality, massive internal hard disk storage, high-density removable disks, random access hard disk storage, complete time-code implementation, and VTR emulation.

Editing features on both models include user-selectable cross-fade length, dynamic edit mark features, and pre-roll, edit in, edit out and post-roll.

Rehearse functions allow for full simulation, and the RMW (Read-Modify-Write) feature provides layering and mixdown capability. All units include analogue and digital I-O, a large display



screen, built-in keypad for cut titling and organisation, and a number of remote control options including P2 (9-pin), RS422 and GPI connections.

360 Systems see the TCR4 as a cost-effective replacement for timecode DAT machines, with its two additional channels providing increased compatibility with VTRs that have multichannel audio

capability.

Meanwhile, says the company, the TCR8 – which can provide several hours of 8-channel random access audio – is ideally suited to surround sound and DTV applications requiring additional audio channels for 5.1, LT-RT mixes and multilanguage broadcast production and playback.

360 Systems 741**DAR in a Storm**

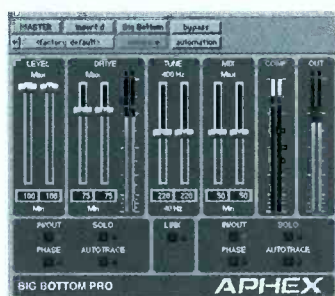
DAR has unveiled its latest generation Storm processing platform accompanied by the first in a new range of SoundStation audio editing systems – the SoundStation Storm – featuring a brand new high resolution colour touchscreen and available in a vibrant range of colours. The company claims Storm processing sets a new standard for editing functionality, processing performance, track

capacity (32-track) and speed.

An open architecture provides a common interface between the user and the range of resources available to him while the orthogonal core design enables 128 channels of audio to be routed seamlessly and in real-time between multiple drives, disk to disk, and across the network.

The processing core of Storm has the equivalent power of 16 of the company's previous-generation cards on a single board and

can accommodate up to 700Mb of RAM. SoundStation Storm supports sampling rates up to 192kHz, plus 16- and 24-bit operation, with the ability to incorporate segments of different bit depths in the same Reel. The 100Mbit D-net network port comes as standard as does all the current DSP capability. The system is capable of handling extremely large projects – with over 10,000 segments per project.

DAR 590**Plug-in excitement available from Digidesign**

Digidesign is distributing TDM plug-in versions of two of Apex's most popular products, the Aural Exciter and the Big Bottom Pro. Both are optimised for maximum performance with

Digidesign Pro Tools|24 MIX systems (Mac only). Using the same presence-enhancing, detail-restoring technology as the patented Aural Exciter hardware, the Apex Aural Exciter TDM plug-in enhances clarity, speech intelligibility and detail without significantly increasing peak output. Easy-to-use, intuitive controls help users quickly achieve the desired results, and many parameters are automatable.

Big Bottom Pro is a bass enhancement TDM plug-in for Pro Tools. Modelled on the Big Bottom circuit first made available in the Apex Model 104, Big

Bottom Pro works on bass end frequencies to add low-end presence and punch without adding peak level, resulting in increased bass presence that won't overload systems or blow out speakers.

Aural Exciter and Big Bottom Pro can be used together to enhance the entire audio spectrum. Aural Exciter delivers six channels per DSP chip on Pro Tools|24 Mix systems (six mono or three stereo), while Big Bottom Pro delivers 11 channels. These plug-ins are also compatible with classic PCI-based DSP Farm cards and NuBus-based DSP Farms.

Digidesign 746**Soundscape's R.Ed about to ship**

Soundscape's R.Ed DAW is expected to ship in the summer and uses 32-track, 24-bit hardware with 28 inputs and 32 outputs per unit running on Windows NT, 95/98.

Prices for a 32-rack system with 24 digital I-Os starts at £3395 + VAT and supports two fixed and two

removable EIDE drives per unit to a maximum of 137Gb per disk.

It has two AES-EBU inputs and four AES-EBU outputs plus 24 digital I-Os via three TDIFs. The TDIF ports can be connected to three Soundscape SS8IO-1 audio interfaces for analogue interconnection and TDIF/ADAT conversion.

Recording, editing and playback runs from enhanced Version 2 software from the company's SSHDR1-Plus system. Synchronised high-quality nonlinear picture can be played via video capture cards and R.Eds can be linked together for a larger system with the Mixtreme PCI card providing an expandable mixing engine.

Soundscape 732

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—The Tapeless Studio

"Suddenly, features that were the sole purview of companies like SADIE and Sonic Solutions have become standard issue for Cakewalk."

—AudioMedia

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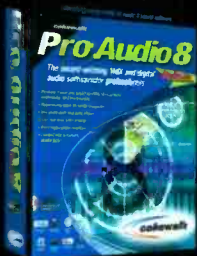
"The addition of non-destructive gain and pan envelopes, non-destructive MIDI effects, flexible mixer console and 24-bit/96 kHz sampling rate make Cakewalk Pro Audio a bona fide production powerhouse."

—Pro Audio Review Magazine

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Reader Response No. 027

Alesis MasterLink



Alesis has moved in to hard disk recording/editing with the MasterLink ML-9600. This is described as a mixdown and mastering system that combines hard disk recording and editing, digital signal processing and CD creation in a single standalone unit but has the distinction of being able to burn stereo 24-bit, 96kHz audio on to standard CD-Rs, in a CD24 proprietary format, in addition to traditional Red Book format.

The Alesis CD24 employs the

ISO 9660 disc format and AIFF audio files on standard CD blanks that can be played back on 9600 machines and accessed by and archived to by DAWs. MasterLink has a 3.2Gb internal hard drive and a 4X CD-R drive. The system includes an internal sample rate converter allowing high resolution files on the hard disk to be used to create Red Book CDs. Editing is accomplished using front panel controls, which allow users to audition and edit start/end points.

Editing features allow the user to reorder tracks, adjust gain, build playlists, trim heads and tails of programs, set start times, preserve best takes and delete tracks before committing the material to CD. Join and Split permit material from multiple mixes to be resequenced. Onboard DSP includes equalisation, compression, normalisation and peak limiting.

Analogue and digital I-Os are provided on XLRs and phono. Convertors are 24-bit and at maximum resolution the 3.2Gb drive stores 95 minutes of audio although the machine can be configured for combinations of 44.1, 48, 88.2, and 96kHz sample rates and 16, 20 or 24-bit word lengths. Firmware is updated through the internal CD drive.

Alesis 868

Digi's interactive Bruno/Reso

Digidesign's Bruno/Reso package includes two interactive cross-synthesis TDM Plug-Ins that provide synthesiser/vocoder-like processing.

SoundReplacer is an AudioSuite Plug-In that replaces on-screen audio with samples.

Bruno and Reso use cross-synthesis, a technique that uses an

audio input (in this case, the Pro Tools track) to generate new sound textures. The Plug-Ins are interactive and a MIDI keyboard can be used to 'play' the Plug-In.

SoundReplacer is said to be 'ideal' for drum hit replacement or triggering new sounds from a Pro Tools track. The Plug-In uses replacement sounds from a sound

library to replace or add to the original track. The original performance is retained, since SoundReplacer automatically adjusts the dynamics of the replacement file to match the level changes on the original track and three different samples can be loaded and triggered from separate adjustable amplitude threshold zones.

Digidesign 864



SEK'D debuts workstation

SEK'D's latest contribution to high-resolution digital audio recording is the Callisto Modular DSP Audio Workstation. The base system of a PCI card equipped with two state-of-the-art DSPs and two high-speed interfaces can be connected to a variety of associated 19-inch rackmount I-O modules using 100MHz network technology, and several Callisto cards can be installed in a PC for access to more modules. The Callisto card and the modules handle the required processing by themselves, without drawing on the host computer.

The Callisto audio workstation has its own freely configurable software mixing console, but with the appropriate drivers can also work with programs such as Cubase VST, Logic Audio and SEK'D's Samplitude. Callisto also supports ASIO, Direct Sound, and the AudioX standard. An open architecture facilitates the integration of plug-ins, and SEK'D says that other manufacturers have agreed to support Callisto.

SEK'D 750

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Merging extends the reach of ADAT

Designed to overcome the 10m distance limitation of ADAT plastic fibre optical cables, the Onouris Long Distance convertor from Merging Technologies is a cable interconnect and convertor box which allows the 2-way optical data link to be extended using glass optical cables. On the front panel of the unit are two sets of three optical connectors, one set converting from plastic to glass cables and the other from glass to plastic, with two outputs running in parallel in each case.

This allows ADAT cable runs to be extended to 600m or 1000m with a small internal resistor change. Merging can supply glass optical cables in 20m or 50m lengths, as well as longer lengths built to order.

Merging

757



Sadie Artemis

Studio Audio & Video's Artemis DAW is capable of 192kHz editing and mixing, surround panning and can be configured for 24 I-Os. All internal processing uses 32-bit floating point and each system has time code support and four channels of RS422. The supplied breakout box 800 includes 8 channels of digital I-O, XLR digital reference input, and 8-channels of unbalanced analogue I-O. The 800B adds balanced analogue I-O and all systems include on-board SCSI interfaces. It runs Sadie 3 software.

SAV

723

Orban shows version 2.5 software for Audicy DAW

Orban Audicy version 2.5 software extends the DAW's networking capabilities. The unit can now support TCP/IP and Novell networking, enabling the workstation to work beyond local area networks and connect to wide area networks. Additionally, the Audicy can also embed the necessary traffic and continuity information directly into sound clips, so it can send finished audio productions directly to on-air delivery systems.

Orban

734

360 Systems' Short/cut follows upgrade path



360 Systems' Short/cut Personal Audio Editor, a self-contained 2-track digital audio editor, has received a software upgrade which includes enhanced file interchange options useful for studio and location work.

Short/cut 099 supports file formats common to most DAWs, news servers and automation playout systems, including .WAV,

.BWF and AIF, and can read and generate sound files that can be transferred via the Internet as email attachments.

Other new features include the ability to generate fades and cross-fades, perform gain changes within files, sync to external source, and D-NET echo. In addition, Short/cut 099 supports Iomega's Jaz 2Gb and Zip removable media

formats - the former offering over 2.5 hours of audio while the latter provides cost-effective storage of sound effects, shorter projects or archive material.

Short/cut 099 also comes equipped with 360 Systems' D-NET file transfer capability. D-NET provides electronic transfer of audio files and related information such as cut names and running times, and enables transfers of single cuts or even an entire disk drive from Short/cut 099 to 360 Systems' Instant Replay, DigiCart/II and DigiCart/II Plus. Short/cut 099 is designed to replace reel-to-reel tape machines by offering users an intuitive editing tool with all the advantages of digital technology in an easy-to-use, portable format, and includes keyboard, speakers, large waveform display, scrub wheel and tape-style transport controls.

360 Systems

742

Digidesign MIXes up high-end audio recording

Pro Tools/24 MIX and MIX PLUS, the latest high-end digital audio recording systems from Digidesign for Mac OS and Windows NT computer platforms, provide all the audio production capabilities of Pro Tools/24 combined with extra tracks and more on-demand mixing and processing power. The single-card Pro Tools/24 MIX offers up to three times more DSP power than Pro Tools/24, while the two-card MIX PLUS system offers more than double the DSP power of the MIX version. Digidesign give an example capability for MIX PLUS of a

48:32:2 mixer and 32 simultaneous disk tracks with 4-band EQ, dynamics and five sends (1 stereo, 4 mono) on every track, plus two reverbs and 10 delay-based effects.

Both MIX systems include a new DSP Manager capability, which works transparently to allocate DSP power automatically whenever it recognises a shortage that can be eliminated. The latest version of the Pro Tools software also introduces a new technology called MultiShell, which makes it possible for compatible plug-ins to share the same DSP chip.

Every Pro Tools/24 MIX system consists of a 'DSP fortified' MIX Core PCI card capable of providing 64 simultaneous audio tracks, digital mixing, DSP processing capabilities, and up to 16 channels of I-O; a selection of TDM and AudioSuite plug-ins bundled at no extra charge; and the latest version of the Pro Tools software.

The MIX Plus system has the same track count as the MIX version, but also features a MIX Farm card for additional mixing channels and/or real-time processing capabilities.

Digidesign

744

Sound cards from Digigram



New from Digigram are the VX222 Linear Sound Card and the PCX222np/PCX221np High Quality Stereo Sound Card.

The VX222 is a versatile insert that offers balanced analogue inputs and outputs, together with 24-bit converters and digital I-O in AES-EBU or SPDIF formats. The VX222 has been designed to work with the range of applica-

tions that are available for Windows 95/98 and NT4.0 and for Mac OS 8.X.

The card can be programmed using Digigram's Virtual PCX audio resource modules, Microsoft's WAVE protocol or the Mac OS Sound Manager.

The PCX222np/PCX221np are the company's newest full power stereo cards. They offer 24-bit A-D and D-A converters, Wordclock and timecode inputs, together with a programmable sampling frequency of up to 96kHz. Also offered are an input for direct recording from a PC's built-in CD-ROM; MP3 playback and mixing; AES18 support; AES11 synchronisation; and a headphone jack for monitoring inputs or outputs.

Digigram

733

SEK'D cleans up with DirectX

SEK'D's DirectX-based Declicker Plug-in removes clicks and crackles from records and impulse-like disturbances from audio files contaminated during recording due to switching, digital crosstalk, or thyristor buzz.

The Declicker consists of two main parts: the declicking filter and the decrackling filter. While the declicking filter is normally used to remove heavy clicks from old vinyl records, or switching noise arising from analogue or digital audio equipment, the decrackling filter removes any remaining, mostly small but dense, clicks i.e. crackles.

Control is accomplished by two fader controllers, one for declicking and one for decrackling.

SEK'D

752

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WaveFrame paves the way

In preparation for the launch of the recently-demoed WaveFrame 7.0, the company is shipping V6.5 software to significantly enhance the power and utility of its DAWs. Support is included for the WaveFrame 7.0 DSP engine as a mixer add-on with plug-ins from Waves, Wave Mechanics, Q-Sound, Antares, Aphex and VocAlign. Also new is import/export of Broadcast WAV file format, MIDI time code, recording on 8 tracks for each SCSI bus, and support for the new E-mu sampler card option. New editing features include reversing regions, allowing designated sections to play backwards while the rest still plays forwards.

WaveFrame 726

Digidesign budgets for project studios

The Project II Studio suite from Digidesign has been designed to provide a complete, professional-quality audio production solution in a single, competitively-priced package.

The bundle includes the Project II PCI card, a Digidesign Audio Interface (the 882120 I-O or ADAT Bridge I-O), SampleCell II Plus, MasterList CD, Logic Audio AV, and a CD Recorder. The Project II PCI card provides up to 16 channels of high-quality I-O; depending on the software and interface used, it supports 16- or 24-bit recording. The SampleCell II Plus PCI card provides MIDI-controlled sample playback with 32Mb of onboard RAM, 32 dynamically-allocated voices, eight polyphonic outputs and CD-quality sound; two sample CD-ROMs are included.

Digidesign 748

Opcode interfaces now available

Opcode's new line of USB (Universal Serial Bus) ports is beginning to appear, with the first three now shipping. These allow USB-compatible computers running Windows 98 to interface with SPDIF devices (DATport), SPDIF and analogue (SONICport), or Toslink SPDIF and analogue (SONICport optical). 16 and 24 bit audio are both supported at rates to 48k, and the analogue interface has 20-bit D-ACs. Alongside these are 32, 64 and 128 channel MIDIport interfaces and the STUDIOport AMX audio and MIDI interface, with 2 in/4 out analogue connections, SPDIF I-O and 64 channels of MIDI.

Opcode 725

Waves gets into a bundle

Plug-in specialist Waves has announced four new bundles of processors, two each for TDM and native Windows/Mac environments. TDM II and Native Power Pack II are essentially similar, offering additional plug-ins to the existing bundles. Both contain the new equaliser and compressor from the audiophile Renaissance series, plus the DeEsser and MaxxBass plug-ins, and the TDM bundle also features the PS22 Stereomaker and

MultiRack, offering real-time DSP processing using the Waves plug-ins. Pro-FX is a bundle of three specialised plug-ins now available for TDM systems, comprising the UltraPitch 6-voice formant-corrected pitch shifter, Meta Flanger for vintage tape flanging and phaser emulation, and MondoMod's selection of AM, FM and panning modulations. The Gold Native bundle consists of Pro-FX plus the Native Power Pack II selection, the



L1 Ultramaximizer, the full C1 dynamics, EQ and effects package and WaveConvert Pro.

Waves 724

Steinberg's new Mac Cubase VST

Steinberg Cubase VST 4.1 for Macintosh incorporates the new VST 2.0 Plug-In interface, enabling software synthesisers and software samplers in Plug-In format to be integrated into the VST architecture. VST 2.0-compatible plug-ins can also be controlled in real-time via MIDI controls, and utilise multiple Audio I-Os if avail-

able. With ASIO 2.0 now all compatible drivers can provide direct hardware monitoring with zero latency and multi-application support, while the new ASIO Positioning Protocol allows source and destination device to sync with sample accuracy.

The Cubase VST/24 Mixer/EQ

section now includes five new real-time processing modules. A number of VST elements can now be controlled remotely via external devices such as the Yamaha O1V. Cubase VST/24 4.1 for Macintosh also supports Yamaha's DSP Factory Audio Card, bringing the Mac version in line with Cubase VST/24 3.6 for Windows.

Steinberg 754

Frontier's Tango

Tango24 is an eight channel A-D and D-A converter, which now has 24-bit resolution. The upgraded product is fitted with ADAT Lightpipe I-O, as well as +4dBu/-10dBV switchable analogue I-O on 1/4-inch TRS jacks. Word clock input and output are on BNC connections, allowing multiple units to be synced or for the Tango24 clock to be locked to an external master. Front panel switching selects word clock, ADAT optical input or 44.1/48kHz internal crystal. Tango24's front panel also includes eight sets of level meters, switchable to input or output.

Separate LEDs indicate signal present, -3dB below full scale and clipping for each channel.

The 1U system can be mounted as much as 10m away from the computer or other recording system when using the ADAT I-O. There is also an ADAT Thru port for archiving to ADAT MDM without recabling. Tango24 can be connected to any ADAT equipped computer card.

Frontier 740

Publison OMF

The Totalstation audio workstation with integral video capability now has an advanced OMF import function which can work in background mode. Approximate import time for an hour of audio is said to be five minutes and there is the option of a display for elapsed time, with an estimate of remaining time as well.

According to Publison, the system will automatically recognise DOS, Windows NT or Macintosh hard disk formats and can also be

networked with these platforms. Gains, fades, crossfades, overlaps and start/end points are imported in virtual mode.

Also available is a control surface with dedicated buttons, pen and writing tablet, scrub wheel and motorised fader, as well as a QWERTY keyboard. It can also be used to control as many as four external transports. All editing functions can be applied to single or multiple tracks and there are 40 macro keys for storing multiple stage processes as a single action.

Publison 739

Merging rings in the changes

The Audio Magic Ring from Merging Technologies is an audio file conversion application for Windows 95/NT designed to make it simple to convert any number of files between different formats, wordlengths or sample rates.

Supported file formats include WAV, BWF, OMF, AIF, AU/SND, and PMF (Merging Technologies' own Pyramix Media Format).

Users can drag and drop files onto icons which represents sets

of conversion settings, with simple or multiple processes. Any number of files can be batch converted, and the program can handle folders nested within folders.

Audio files are automatically converted, in the background if required, and stored in a user-specified directory.

Users can create as many Audio Magic Rings as they need, one for every conversion requirement.

Merging 756

Digidesign lines up latest guitar amp plug-in

The latest version of the Digidesign/Line 6 Amp Farm guitar recording plug-in for Pro Tools systems adds more amp models along with Plus 24-bit and PT124 MIX support. Amp Farm's TubeTone technology provides physical models of classic amplifiers, making it the essential tool for recording guitars in the Pro Tools TDM environment. The

plug-in can be used to process live guitar inputs or tweak the amp set-up for prerecorded tracks.

Amp Farm lets you adjust your amp tone right up to the final mix, with full automation of all controls, including Amp Model selection.

The TubeTone Amp models were developed from in-depth studies of several different amplifiers: a Fender Twin, Fender

Blackface Deluxe Reverb, Fender Bassman, Marshall JCM 800, Marshall Plexi, Marshall JTM45, Vox AC 30, and Vox AC 30 with top-boost. The latest version (v1.5) adds support for five new Amp models based on: Mesa Boogie Dual Rectifier and Dual Rectifier Trem-o-verb, Soldano SLO and X88R, and Matchless Chieftain.

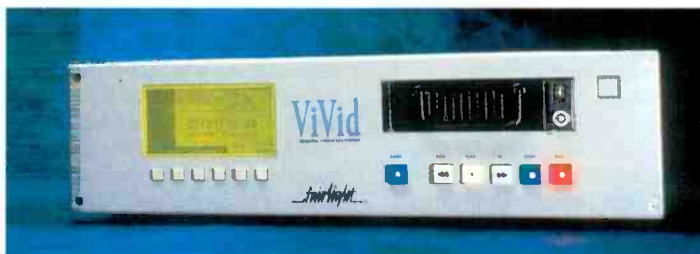
Digidesign 745

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Fairlight adds to DaD and gets non-linear video

Fairlight has introduced a Plus version of its Digital Audio Dubber, adding multiple simultaneous bit rates and multiple format capability, as well as enhanced sonic qualities and automation interface. There is also a new visual interface for the system, providing important machine status information on a Windows PC. It can show project data from up to 24 connected dubbers in a variety of formats.

For use with the MFX-3 and FAME systems Fairlight has also



introduced the ViVid non-linear digital video recorder, offering selectable data density in a random access system to follow non-linear editing activity. Highest

quality is said to be indistinguishable from digital Betacam while low data rates can fit four hours of video storage on a 4Gb drive.

Fairlight 730

Digidesign drives Pro Tools storage optimisation



The DigiDrive from Digidesign has been designed to take the guesswork out of Pro Tools storage compatibility. Optimised for certified compatibility with Mac OS and Windows NT Pro Tools systems, the DigiDrive has been developed by Digidesign to deliver the speed,

capacity and reliability required for the most demanding projects.

The 9Gb DigiDrive provides enough storage space for 1700 track minutes of 16-bit, 44.1kHz audio (70 minutes of 24-track recording), or 1100 track minutes of 24-bit audio (45 minutes of 24-track recording).

The drive has been designed for removable rackmounting and interlocked stacking, supports fast/wide SCSI transfer, and uses special Digidesign/Avid QuietDrive technology to reduce drive noise by up to 15dB. Its

10,000rpm speed outpaces previous-generation drives by up to 40 per cent in data transfer rate and 33 per cent in seek time. Tuner software included with the DigiDrive optimises the drive for Pro Tools usage.

Up to four DigiDrive enclosures can be vertically interlocked, while an optional accessory kit allows two drives to be mounted side-by-side in a 2U space. Digidesign customer support includes guaranteed 24-hour replacement.

Digidesign 747

Steinberg shows Windows Cubase VST

Steinberg Cubase VST 3.7 for Windows incorporates the VST 2.0 Plug-In interface, which enables software synthesisers and software samplers in Plug-In format to be integrated into the VST architecture. VST 2.0-compatible plug-ins can also be controlled in real-time via MIDI controls, and use multiple audio I-Os if available. With ASIO 2.0, all compatible drivers can provide direct hardware monitoring with zero latency and multi-application support, and the new ASIO Positioning Protocol allows source and destination devices to sync with sample accuracy.

The VST Channel Views Menu now allows users to select and specify visible VST Mixer channels, helping them to organise the virtual studio for different production situations. The Cubase VST Mixer/EQ section now includes an extension with five new real-time processing modules: Compressor, Limiter, Auto Gate, Auto Limit and a Soft Clip. Other new features include support for the Mixman TRK file import format, and remote control of a number of VST elements from external devices such as the Yamaha 01V.

Steinberg 753

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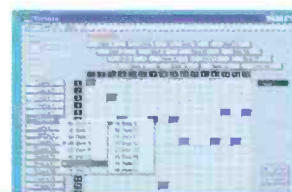
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Reader Response No. 030

Kind of Loud surround

SmartPan Pro from Kind of Loud Technologies is a surround sound panning plug-in for the Pro Tools platform, said to be the first product to bring discrete six-channel surround sound capabilities to Pro Tools. It supports all major surround sound formats, including 5.1, 7.1 and LCRS, allowing users to create professional mixes for Dolby Digital, DTS, DVD video, DVD audio and game formats.

The designers have taken an innovative approach to surround panning with the implementation of a Polar Joystick, using a circular paradigm for panning, and with SmartKnob, a controller that places sound and controls at its width or spatial extent.

Kind of Loud Tech 727

Peavey recorder/editor

Peavey has co-operated with Cakewalk to produce the StudioMix combined recording and mixing system for PC. It plays eight simultaneous tracks of audio, with additional tracks archived and the software supports real-time audio and MIDI effects processing and mixing, SMPTE/MTC synchronisation and staff notation editing and printing. A hardware control surface has nine motorised faders, 14 soft buttons, and 18 rotary encoders and users can configure these as desired. The multitrack software is compatible with DirectX.

Peavey 592

Remote

Akai has previewed the RE32 hardware multitrack remote for its 24-bit hard disk range for control of 128 tracks complete with SuperView graphics. The control surface has 32 track keys in four banks and the sort of dedicated controls required to get the most from the systems.

Akai's DR16Plus hard disk system is externally similar to the DR16 but adds features from Akai's workstations and dubbers and 24-bit/96kHz capability. The machine records in native Akai format and supports Mac Pro Tools and Ms-Dos B.Wav formats. A new sync system has been developed for multimachine use and ethernet linking to a DL1500 remote is standard. Optional cards include 16-channel EQ, SMPTE, MIDI, 8-in/16-out AES-EBU, and 8 I-O TDIF and ADAT. Existing DR16s can be upgraded to plus status with a Kit-DR16.

Akai 591

Fostex on track

New from Fostex is the VR800 Digital Multitrack Recorder, which can simultaneously record eight tracks of digital audio to a variety of internal and external 3.5-inch media. Designed to be simple to use, the VR800 can be connected to any digital mixer supporting ADAT optical connections, such as

Fostex's own new VM200 mixer.

Features include Fostex's ADAC technology which offers increased recording time on removable media, an extra 16 recordable tracks, audio scrub with envelope display, intuitive audio editing and sophisticated MIDI and Word sync facilities. The VR800 offers up to 44.1kHz 16-bit fidelity.

Fostex 719



CreamWare sets out the SCOPE

SCOPE is a powerful computer-based system, which runs on a plug-in PCI board consisting of 15 Analog Devices SHARC DSP chips, and provides a virtual studio environment which can also integrate an existing studio set-up thanks to extensive I-O options.

The initial software suite for SCOPE includes a variety of synthesisers, effects and mixers along

with a professional, industry-standard compatible sampler. While SCOPE can be viewed as an upgrade to any existing studio, it is also capable of handling all sampling, synthesis, signal processing and mixing work required in a professional production by itself. A huge library of pro-quality virtual devices for mixing, audio processing, effects, sound generation

and sampling facilitate the creation of any desired studio set-up.

The developers have also opened up the system to allow creative audio developers to construct their own 'device modules' from a huge library of generic building blocks, while a graphics package allows users to design their own creative, functional and ergonomic virtual control surfaces.

Creamware 743

Steinberg's designs on mastering

The Mastering Edition from Steinberg is a collection of six high-quality Mac and PC plug-ins for VST, DirectX and WaveLab host-based applications.

Loudness Maximizer is a dynamic processor which is specifically optimised for lifting the effective loudness of any audio material without adding typical artefacts like 'pumping' or

'breathing', and with guaranteed no clipping. Spectralizer gives a mix more clarity and presence by adding 2nd and 3rd harmonics, while MultiComp is a multiband compressor with up to five bands.

FreeFilter is a linear phase real-time 1/3-Octave Equaliser, designed to process the audio signal without 'colouring'. Critical

frequencies can be easily detected and corrected due to the plug-in's ability to display the input and output spectral frequency shape and the chosen filter curve, while a Learn function enables the user to transfer the particular sound of a reference recording to a second recording.

PhaseScope and Spectrograph complete the Steinberg Mastering Edition with two analysis tools.

Steinberg 755

Aardvark's Aark TDIF PCI card

Aardvark's Aark TDIF card is a PCI card that has Tascam's industry-standard 8-channel TDIF format port.

It has exactly the same architecture as the popular Aark 20/20, so they can both be used in the same computer, stacked together in any combination of up to four cards. Both cards are compatible with software applications including Cubase VST, Cool Edit Pro,

Samplitude and Gigasampler.

The TimeSync II is an accurate and versatile Master Clock Synchroniser which generates a very low jitter digital audio master clock referenced to any timecode source. A proprietary Jitter Reduction Module keeps the generated clock jitter below 2ns per audio frame, and consequently the synchronised audio as pure as possible, even when the source is

something as unstable as LTC or VITC from a VCR.

In addition to digital Word Clock output, the TimeSync II can also generate clean, quarter-frame accurate MTC and can be set to give 256 Superclock. It locks to LTC or VITC, and will handle varispeed +/-10%.

The TimeSync II can be used with Digidesign Pro Tools and other workstations, digital mixers and analogue tape machines.

Aardvark 731

Solo for DAWs

The Seasound Solo PCI interfaced digital audio recording system provides a variety of common functions required by the digital-audio musician: pre-amplification for microphones and low-level instruments, line-level input controls, input mixing, monitoring, and 24-bit/96kHz

conversion of audio signals to/from the digital domain.

The Solo features a pair of dual impedance universal preamps with 65dB of gain while the low level inputs include insert I-O jacks and two line level inputs on separate 1/4-inch jacks.

The four inputs are mixed into two channels using individual level and pan controls and the

combined inputs are converted into two digital record channels. The digital audio playback data from the computer is converted into two line level feeds driving the separate phone jacks for main output and control room monitor. A headphone amplifier output with two jacks has been added for convenience on the front panel.

Seasound 736

Lexicon enhances Studio System

Lexicon has launched the latest enhancement to its Studio System. The LDI-10T interface is an analogue I-O solution for hard-disk systems.

The LDI-10T features ten simul-

taneous audio channels, eight analogue (TRS balanced 1/4") and two digital channels of SPDIF (coaxial RCA) switchable input gain (+4/-10dB), 24-bit A-D and D-A conversion and a timecode input.

Lexicon is also offering the LX3 Multi-Interface adaptor, which allows as many as three LDI-10T's to be linked together providing 24 channels of 24-bit analogue, balanced I-O and three sets of SPDIF I-O, all usable simultaneously.

Lexicon 720

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Reader Response No. 031

Milab

Milab has unveiled the DM-1001 digital microphone and a flexible microphone system, VM-44 which is a further development of the established condenser microphone VM-44. The DM-1001 has AES-EBU and SPDIF outputs, and uses Milab's rectangular capsule. The two capsule membranes have their own A-D converters. Milab's VM-44 is further developed with the release of the model VM-44 LINK, and VM-44 Gooseneck. In both VM models the electronics are separated in an active capsule.

Milab 758

Pearl

The latest model from Swedish microphone manufacturer Pearl is the MSH10 which has electronics that are the same as the well-known MS 8CL, but has a hypercardioid pattern in M-channel. A new version of the WCM 90 microphone specially for saxophones has been released and while previous models in this line had separate preamps, these are now connected directly to the mics.

Pearl 771

Micron UHF handles 100 Channels

The Micron 700 series of UHF diversity receivers and transmitters from Audio Engineering incorporate frequency-synthesis technology and offer full program-mability across 100 channels. The series includes the camera-mounting wireless microphone SDR700 miniature diversity receivers and belt-pack TX700 transmitter units, which can be used individually or combined into multichannel OB and location recording systems.

Also included is the 100-frequency MDR740 modular diversity receiver, available in 4-, 6- or 8-way modular racks for mobile or fixed-site installations and is designed for rapid reprogramming across a very large RF bandwidth.

Operational features of the Micron 700 series include microphone phantom powering facilities for the transmitters, and a choice of line or microphone level working on transmitters and receivers, via multipin LEMO connectors.

The TX700 and SDR700 units can be powered internally or externally, while frequency selec-



tion between the 100 available channels is achieved by means of two 10-way screwdriver-operated switches – mounted flush with the products' rugged, hand-made stainless steel cases.

Also new is the Micron range of 8-frequency VHF diversity receivers and pocket transmitters,

including the TX501.8 transmitter and SDR570.8 small diversity receiver, which offer the same quality of construction, signal integrity, input/output arrangements and powering facilities as their 100-frequency UHF stable-mates.

Audio Engineering 759

What are your highest expectations?



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Reader Response No. 032

Beyerdynamic debuts electrets

Beyerdynamic has introduced the MCE-90 range of microphones using an implementation of electret-condenser loading but without the cost penalties associated with true condenser technology.

All the MCE-90 series mics incorporate a special large diaphragm electret element and have electronically balanced outputs into XLR-3 connectors. They can work with phantom power voltages ranging from 12-48V.

The range's flagship is the MCE90, a side-fire design primarily intended for vocal recording in studio and on-air broadcast environments. It offers a linear frequency response from 50Hz to 18kHz and can handle very high sound pressure levels. The microphone amplifier has a low-noise floor of -72dB and is fitted with attenuator switching and low-pass filter.

The MCE 91 is a hand-held end-fire variant of the MCE 90 and is designed for live performance recording and broadcast applications.

The MCE 93 and MCE 94 are



probe-style versions of the MCE 90 and are intended primarily for instrument recording. Both models come with shock-mounts and the MCE 94 can be used with phantom power or powered from a single AA battery.

Beyerdynamic 762

USE OUR FREE ENQUIRY SERVICE

Shure Beta 91

Designed for live performance and recording applications, the low profile Beta 91 and the miniature Beta 98D/S are the latest additions to Shure's Beta family of professional sound reinforcement microphones.

The Beta 98D/S is a miniature supercardioid condenser unit designed expressly for toms, featuring a maximum SPL rating of 160dB and a frequency response tailored for this application.

A detachable preamplifier to facilitate rapid cable/preamp replacement or repair is supplied along with windscreens, together with the new A98D flexible goose-

neck drum mount which can be used in either horizontal or vertical configurations on drum rims, cymbal stands, or any typical stage hardware.

The Beta 91 is Shure's successor to the SM91, the mic that popularised the use of condenser boundary microphones on kick drums.

Outfitted with a cardioid capsule, the mic's minimalist design and extra-slim profile is best utilised without hardware, simply resting on a pillow or blanket within the kick drum. Like the Beta 98D/S, it comes standard with a detachable preamp section and durable connecting cable.

Shure

763

Rode Classic II

Rode's Classic valve microphone has been upgraded to the Classic II. Central is a new edge-terminated 1-inch gold sputtered diaphragm replacing the centre connection, and a redesigned power supply and microphone circuit design resulting in lower noise.

The cable has been replaced with a starquad type, and the mounting arm gives way to a new glass fibre reinforced nylon shock-mount. Retained from the original are the hand-selected military spec GE 6072 valve and the Jensen output transformer.

HHB

768

Rode NTV

Designed for high end recording and said to be especially effective on vocals and acoustic instruments, the Rode NTV is a condenser unit with a 1-inch diameter capsule. The diaphragm is made from Mylar with a 24 carat gold sputtered finish and is six microns thick. The 'minimum signal path' valve preamp is said to be made from the finest components and features a custom output transformer manufactured by Jensen. The microphone casing is machined stainless steel. The kit includes power supply, 10m cable, shock mount and adaptor, in a heavy duty flight case.

HHB

775

Lectrosonics' Europe presence is Raycom

Lectrosonics has appointed Raycom Broadcast Ltd as UK and Eire distributor of Lectro radio microphones and IFB systems following type approval.

The 300 Series permits 256 user-selectable synthesised UHF frequencies which are PC-programmable by authorised service centres to meet frequency allocations of countries. Belt-pack and hand-held transmitters are available for any microphone together with a compact receiver for several applications.

The Studio receiver is a half-rack configuration supplied with LecNet software and RS-232 computer interface. Extensive audio signal processing includes dual-band compressor, wide range input limiting, wide deviation and adjustable low frequency roll-off for ultra low distortion and noise.

To meet wireless IFB requirements, the Lectrosonics design provides 256 spot frequencies. The base station transmitter provides DIP switch configuration for direct interface with Clear Com and RTS intercom systems, balanced microphones, or line level signals via a rear panel XLR connector.

The belt-pack transmitter features a 5-pin input jack for positive or negative biased electret lavalier mics, dynamic mics and line level signals, with a user-adjustable low frequency roll-off, and input gain control and LEDs.

Raycom Broadcast

764

Pastega offers improved pocket UHF

A new design for Pastega's UHF pocket transmitter features a PLL synthesiser with 16+16 switchable frequencies in a broad switching-range of 25MHz, a high and steady output power and state-of-the-art audio processor.

The modulation input can accept audio signals coming from dynamic as well as 2-wire or 3-wire electret microphones, which can be selected by an external switch.

Pastega

766

Works of Art

...These little gems compare very favorably to the U-57. They have the same warmth and a similar presence. Here at 1/6th the price, the choice is practically a no-brainer! ..."

David Miles Huber
(Modern Recording Techniques, and Professional Microphone Techniques)




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Reader Response No. 034



EV wireless systems gets in pole position

Electro-Voice's new offerings include three wireless systems and two specialised wired microphones. The ENG 618 is an integrated boom-pole/shotgun system with a back-electret microphone permanently attached to a K-Tek telescopic graphite pole.

The base of the pole incorporates batteries for power, LF roll-off, output connector and even a headphone amplifier. At the other end of the size scale is the RE90L ultra-miniature lavalier condenser, again using a back-electret capsule to give smooth omni response up to 18kHz.

Top of the wireless systems is the MS3000 UHF

diversity system, with the MR3000 receiver handling a choice of handheld and body pack transmitters and a wide range of microphone capsules.

A similar selection is available for the more affordable R200 system, also UHF diversity but operating in a narrower range.

Lastly the R100 system is a new VHF diversity package with similar options. All use E-V's Secure-Phase circuitry that uses the signal from both antennae at all times rather than simply switching between them.

EVI/Telex

767

Sennheiser UHF range

Complementing the existing range of UHF radio microphone products, the EM 3532-U dual channel and EM 3531-U single channel receiver offers more control through proprietary S-MCD software. This allows units to be integrated into systems of up to 132 channels controllable from either a single or multiple, networked PCs. As a result, the new devices can be integrat-

ed with EM1046 systems.

Up to 36 programmable frequencies can be stored within a 24MHz bandwidth. A scan function surveys the local RF environment and reports the presence of any signals likely to cause interference.

Further advantages to the new units are said to include a highly ergonomic fascia with headphone jack, volume control and large backlit LCD. HiDyn plus noise reduction is said to allow for a S/N ratio of 116dB(A).

Sennheiser

776

Rycote in suspense

Rycote Microphone Windshields has launched a Modular Suspension which 'combines all the successful elements of the 4-point suspension with a new high-precision modular frame'. The result is a lightweight, more effective and fully adaptable suspension that will fit a wide range of microphones - all in one box.

The mount consists of a bar, available in four modular lengths, and hoops fitted onto a bracket and attached to the familiar pistol grip or boom adaptor. It is fully compatible with existing Rycote Windshields.

There are apparently a number of improved components to make handling and usage easier

in difficult conditions and it will now be possible to slip a foam gag on and off without obstruction if a cantilever-style arrangement is used.

Rycote has also introduced Connbox, an optional extra that can be fitted to the Modular bar to isolate and eradicate cable-borne noise. The Connbox acts as a transition connector and anchor point for the microphone tail. Available in mono or stereo versions it has a flexible starquad output cable that terminates in a 3 (or 5) pin XLR at the pistol grip. The input cable is an ultra thin plug-able tail fitted with an XLR socket that has a special locking ring to prevent rattle. The cable needs no special dressing or positioning.

Rycote

772

Microflown Technologies

The Microflown is a patented type of particle velocity sensor based on wafer technology. It is claimed to be the smallest microphone ever. The Microflown is described as both a directional microphone (figure of eight) with some unique acoustical features, as well as a bidirectional anemometer. Since it measures particle velocity instead of pressure, a Microflown based 3-D

sound intensity probe has been built and shown to work. Without any change in spacings, a wide band frequency between 1kHz and 5kHz can be covered. Given its acoustical properties, the Microflown offers background noise suppression in nearfield surroundings, thus improving the clarity of speech, particularly with regard to handheld telecom and voice-driven applications.

Microflown

770

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Royer: new brand in ribbon mics

US company Royer Labs has two ribbon mics including a stereo model.

The R-121 is described as a modern ribbon microphone designed to meet the demands of today's studio environment and with sensitivity levels surpassing those of classic ribbons, the element's smooth frequency response and phase linearity are said to make it well suited to digital recording. The heart of the R-121 is its pure (99.99%), low mass, 2.5 micron thick aluminium ribbon.

The Royer/Speiden SF-12 stereo coincident ribbon microphone is described as a 'classic' ribbon design with no audible diffraction effects or cavity resonance. An SF-12 is actually two matched microphones placed one above the other, each aimed 45 degrees from centre. The frequency response is said to be excellent regardless of the angle of sound striking the ribbons and off-axis coloration is negligible. When held vertically, connector down, the upper microphone is the left channel and the lower micro-

phone is the right channel. The SF-12's extension cable comes with an adapter which splits into separate left and right XLR connectors.

The two 2-micron ribbons are of pure aluminium (99.99%), each weighing approximately 1/3 milligram. The magnet/polepiece structure allows a wide uniform frequency range with no substantial peaks or dips. The case is ingot iron and forms part of the magnetic return circuit, an effective system with low leakage flux which accounts for the relatively high sensitivity in a trim package.

Royer 774

Audio-Technica UHF

Audio-Technica's UHF-7000 Series multichannel UHF system provides a 700MHz operating frequency band, a choice of multi-PLL-synthesised channels and InvisibleLink circuitry, which is designed to eliminate interference. The system comes as a body-pack or a handheld system. The ATW-7375 UniPak Transmitter System is made up of the ATW-R73 true diversity receiver and ATW-T75 body-pack transmitter. A wide selection of Wireless Essentials mics and cables are available for the ATW-7375 UniPak system including lavalier, headworn, gooseneck and installed-sound microphones.

AT 773

Shure UHF

Now available in the UK is the UT series of low cost UHF microphone systems.

Available on four fixed frequencies within the UK Channel 69 band, the systems are available with handheld or body pack transmitters. The handheld units are supplied with either SM58 or BG3.1 capsules, while the body packs have either WL93 mini-lapel condenser, dynamic WH20 headset or flying lead for use with musical instruments.

Shure 777

Kit Cool boom

The Kit Cool boom support is attached at the operator's waist and is held vertical by an elastic strap, taking the weight off the operator's arms.

Freedom of movement is assured and the articulated tube holding the boom is fixed to the vertical tube by a 3/8-inch thread.

Foam covered rollers are used for silence of operation. The set up weighs 450g and the support tube can be adjusted to between 55cm and 1m above the operator's waist.

Boom Audio 765

ADK mic

Built in China but based unashamedly on what the company describes as 'German design features', ADK's A51 is a large diaphragm condenser microphone. It is made from 'aircraft grade machined brass' and comes complete with a premium flightcase and shockmount.

The unit boasts a cardioid 1-inch, low micron, gold sputtered capsule and discrete FET electronics, complete with a 85Hz roll-off and switchable 10dB pad.

ADK 773

AT 898 launched

New to Europe is Audio-Technica's AT849 stereo condenser boundary microphone, designed to provide full, natural stereo ambience and sound reinforcement. It is an XY stereo microphone with full mono compatibility, and features two wide range UniPoint elements giving a frequency response of 30Hz to 20kHz and SPL handling to 137dB.

Audio-Technica 769

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DPA omni

A new omnidirectional mic from DPA Microphones, the Type 3541 is suitable for solo recordings such as vocal performances, strings and wind instruments and is based on the company's 4040 gold hybrid mic. Supplied with suspension mount, windscreens, pop-filter, HMA4000 and mic cable in a Samsonite carrying case, the 3541 introduces a new modular capsule and preamplifier system. The capsule can be separated from the mic preamp and the preamp can be changed, giving an engineer the choice between the musical distortion of the MMP4000-T tube preamp or the transparency of the solid state preamp MMP4000-S, both of which are included in the package.

DPA 760**Portable conference mic by DIS**

Danish Interpretation Systems has launched the 4410 series portable conference microphone. Compatible with the DIS CDS4000 Conference Discussion System in use all over the world, the 4410 mic combines a state-of-the-art design with rugged mechanical construction in order to meet typical requirements from hotel conference centres, A/V rental companies, press centres, and event organisers for whom portability is a key requirement.

The 4410 features a very bright illuminated red ring on the microphone head, designed to show the active/inactive status during a discussion session. A high-quality loudspeaker is built into the microphone's compact but sturdy aluminium base. The construction features a slim gooseneck micro-



phone with double rubber suspended capsule, allowing the mic to be acoustically isolated from the base and from the table on which it is placed, so that sounds such as finger tapping and items being placed on the table won't be distributed out into the room.

DIS 778**Neumann mics**

Neumann predicts that its Series 180 will appeal to economy-minded production and home recording studios.

With patterns designed to satisfy the demands of wide-ranging studio applications, the series is said to benefit from optimised mechanical construction and the conscious omission of modularity, a cost-saving measure.

The KM 183 omnidirectional and KM 185 hypercardioid microphones are based on Neumann's KM 184 cardioid microphone. All Series 180 mics are available with either a matt black or nickel finish.

The microphones come in a folding box with a windshield and two stand mounts that permit connection to the microphone body or the XLR connector.

Neumann 761**OUTBOARD****Summit MPE-200 slave and mic pre launch**

Latest in the Summit Rupert Neve-designed Element 78 Series is the MP-4X four microphone preamp which offers four all-discrete, Class A, transistor and transformer-coupled mic preamps. Each section offers high and low pass filtering in addition to coarse and fine gain controls, phase invert and dynamic range exceeding 133dB.

The MPE-200S slave mic preamp and 4-band equaliser has also been previewed, which is designed to extend the power of the digitally controlled MPE-200 Master for the creation of a high-end mic/EQ system using slave units.

Summit 782**IDT broadcast sound**

IDT is continuing its practice of regularly releasing upgrades for its Sound Design broadcast sound processor with the introduction of the new version 4 update. With this latest version, users have access to the parameters of each individual band of the AGC. Furthermore, the V4 update has totally different algorithms, designed to give the user an even punchier sound with still more loudness. At the same time, the new update is compatible with presets from earlier versions.

IDT say the new functionality is in response to requests from users.

IDT 780**Apogee join SSL**

Apogee Electronics has announced five significant developments to its line of converters and interfaces. This includes the launch of an SSL HiWay interface card for its popular AD-8000 conversion system allowing interconnection with SSL digital consoles and a special hot rod edition of the converter.

An Apogee Multimedia Bus (AMBus) card, which fits into one of the four slots in the back of the AD-8000 8-channel, 24-bit converter, the SSL HiWay card uses BNC connectors to carry eight channels of digital audio in each direction, between the converter and an SSL digital desk.

The new card, which can be used with all SSL A series consoles, carries a suggested price of US \$995. Other cards available for the AD-8000 interface include AES-EBU, SDIF-II, Pro Tools, ADAT, TDIF and ST Optical. Another introduction for the AD-8000 is an AMBus SDIF-II card and wiring harness for DASH format multi-track recorders, such as the Sony 3348. Apogee points out that the HR version of this recorder can be bought without converters, making the AD-8000 particularly attractive to potential purchasers.

AD-8000SE is a special edition of the AD-8000, said to benefit from significantly upgraded analogue components. Specified at the time of order, the special edition costs an extra US \$2,000 and existing units can also be upgraded.

Apogee Electronics 784**dbx set at all levels**

The dbx Quantum is designed as a studio mastering tool with sampling rates up to 96kHz and a 48-bit digital signal path.

Patented dbx dynamics processing is split into four bands, and each band can be individually gated, compressed and limited. The manufacturer says that its patent-pending Type IV conversion system allows the user to retain the warmth and body in a signal while adding punch and depth, giving a big sound.

Analogue material can be converted to the digital domain with TSE tape saturation emulation as a further aid to capturing 'analogue' warmth.

An intuitive operating system

and 5-band parametric equalisation are offered as further evidence that the Quantum can produce professional masters when patched to the outputs of a console or digital workstation.

Signals can be dithered to 24-bit, 20-bit or 16-bit resolution the sync input/output uses proprietary dbx chips for what is said to be extremely low jitter sync.

Continuing the high resolution theme, dbx now offers the 704X, an A-D converter which is said to be the first to offer 48-bit internal processing. The device is intended for use with either the dbx160S/160SL compressor or the 786 precision preamplifier.

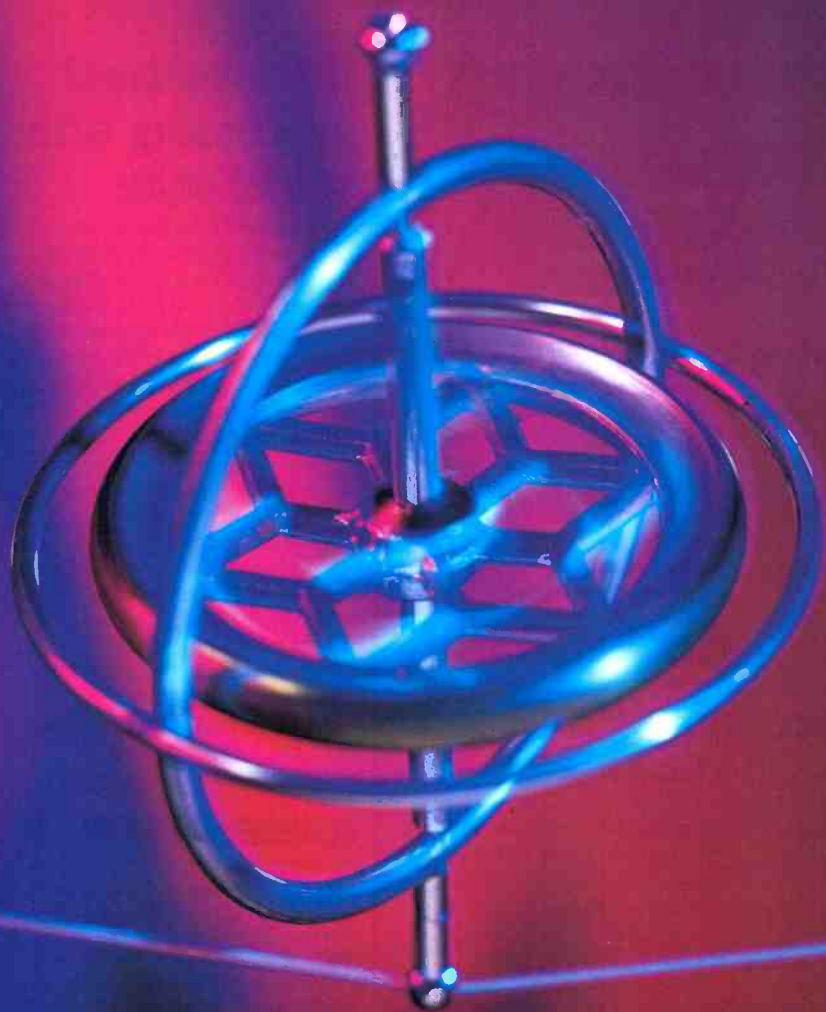
DBX 783**JoeMeek C2 compressor launched**

Claiming to offer the home recordist the same big sounds that the JoeMeek compressor has been offering professionals, the new C2 additionally has new technology of its own which have allowed the unit to be smaller and cheaper at £199 inc VAT UK.

Features include stereo photo-optical compression, floating

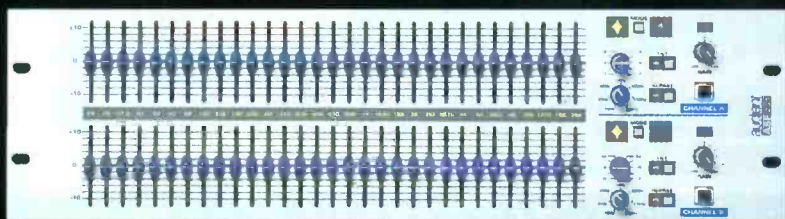
balanced inputs and outputs, a Dynamic Image control for maintaining stereo image integrity even under extreme compression, an 8-LED 'smooth response' input meter, 5-LED compression meter and automatically variable ratio to input gain link.

JoeMeek 792**FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE**



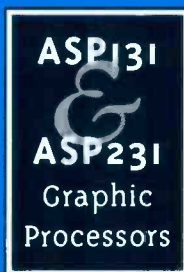
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Cedar's X+ launched

Cedar Audio has a range of affordable restoration modules, Series X+. The two rackmount modules - the BRX+ debuzzer and AZX+ azimuth corrector - have been designed to complement the company's Series X declicker, decrackler and dehisser. Both are based on their equivalent Cedar for Windows module. Cedar has announced version 2 of its flagship NR-3 noise reduction process and version 2 of Cedar for Windows with free upgrade for existing users. A real-time Spectral Analyser; an upgrade for the DCX declicker and Cedar De-Click for the SADiE digital audio workstation are also available.

Cedar 788

2-channel Apogees

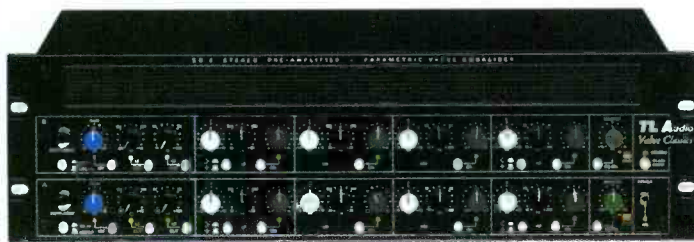
Apogee has also launched PSX-100 and Rosetta AD 2-channel converters. PSX-100 is a well specified A-D and D-A converter, with sample rates up to 96kHz and a range of industry standard digital interfaces included. Rosetta AD is a two channel A-D converter. It supports the same range of interfaces as the PSX-100 and operates at 44.1/48kHz, with the option of an 88.2/96kHz upgrade. Aimed at the project studio market, it has a suggested price of US \$1,295 for the basic version.

Apogee Electronics 785

8-channel preamp

The Precision 8 8-channel mic preamp from True Audio Systems has built-in MS decoding, two active high impedance instrument inputs, and 5-segment level indicators with dual mode peak hold and selectable peak reference. Each channel has switchable phantom power and phase reverse plus variable input gain.

True Audio Systems 794



More TLA valve classics

TL Audio has released the EQ-2 dual parametric and PA-1 dual pentode preamp in its Valve Classics range.

Improvements over the originals include raven-blue 6mm CNC milled aluminium front panels, gold-plated ceramic valve bases and General Electric US military spec ECC83 valves.

EQ-2 circuitry has been refined and adds peak/shelf switching on the LF and HF and drive/peak LEDs to monitor level. The PA-1 has circular back-lit VU meters and drive/peak LEDs and circuitry has been improved around the valve stages with extra output gain for easier interfacing.

TL Audio 787

TC pitches processor on key

TC Electronic's Intonator is a stand-alone vocal intonation processor with pitch correction, de-essing and a special adaptive lo-cut filter designed specifically for vocal processing.

Based on TC's DARC-chip technology, the Intonator preserves the vocalist's personal touch by allowing vibrato, initial intonation and limited correction individually, all at 96kHz internal processing and 24-bit resolution.

A 'Do-not-process-anything-but-this-note' setting can be achieved via an internal custom scale feature. A pitch window allows the user to specify when a note will be considered out of tune, whereas the amount control limits the level of pitch correction added to the audio. Analogue Dual I-Os enable simultaneous recording of processed and unprocessed vocal signals.

Also new from TC Electronic, the D22 is a digital delay designed specifically for broadcast and offers up to 1300ms of delay per channel (on two channels) and features 24-bit A-D/D-A converters and AES-EBU, SPDIF, and Wordclock BNC 75Ohm.

Seamless delay updating eliminates audio clicks, pitch changes and other unwanted artefacts and internal sample rates of 44.1 and 48kHz are supported with external rates of 32, 44.1 and 48kHz. Programmable set-ups can be stored for instant recall, additionally a User Interface Lock mode is provided for 'Set & Forget' purposes.

The company now has a 24-96 I-O card for its flagship M5000 processor and has unveiled a similarly equipped Finalizer 96kHz for high resolution environments.

TC Electronic 786

IDT broadcast processing with sound style

The Sound Style broadcast sound processor from IDT has been designed as an easy to use, low-cost integrated system with four bands of processing. It shares many of the same features as the flagship Sound Design processor and uses the same modular approach, which means that it can be upgraded from four to five or seven bands. Each Sound Style processor can be fitted with optional 96kHz AES-EBU I-O.

Any Sound Style unit bought for use in an FM station comes complete with IDT's high-performance integrated Stereo Generator. The company says that it guarantees absolute stability and total respect of the broadcast authority standards, and has made overshoots a thing of the past.

IDT 779

Sony SRP-CD5

The new SRP-DC5 combines two 24-bit A-D converters and two 20-bit D-A converters in a 1U device. Sony claims that its converters out-perform the integral converters of many record and play units. The input stage of the device provides user selectable 44.1/48kHz operation and the on-board sample rate converter can also process AES-EBU or SPDIF format digital signals, with jitter elimination. Analogue audio inputs are balanced XLR with a 20-segment peak-holding meter. Input and output can be 16, 20 or 24-bit word length.

Sony 810

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Masterflow



masterflow by drawmer

The Drawmer DC2476 is designed to be the most flexible, best sounding all-in-one programmable mastering tool available. However, there's more to the DC2476 than technical specifications, impressive though they are - the Drawmer design team, headed by Ivor Drawmer, have combined their expertise in tubes and analogue circuitry with an enlightened approach to digital technology to create a mastering processor of unequalled musicality that's exceptionally easy to use.

DC2476 - 24 bit/96kHz digital mastering processor



- 24 bit A/D - D/A conversion
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- multi band expansion & limiting
- five band digital EQ $\pm 18\text{dB}$
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Reader Response No. 038

White Instruments

The latest in a long line of equalisation devices from the US manufacturer, the Paramedic Code Pink is a pink or white noise masking generator with equalisation. The 1U device is said to combine dual 32-bit noise source of 'nearly gaussian characteristics' with a pair of one third-octave equalisers. Also available from the device are parametric equalisation, high pass and low pass, plus shelving filters. The manufacturer states that all levels within the Paramedic Code Pink are adjustable in repeatable steps of 0.1dB, with filter frequencies adjusted in 1Hz steps.

White Instruments 806

Junger Accent

Junger Audio's latest products offer 96kHz/24-bit processing and are the Accent1 and Accent2. These feature a configurable audio chain for expander, compressor, filter, de-esser and limiter. The manufacturer cites powerful signal processing, menu-driven user-friendly programming, and multifunction level display.

The digital Vamp3 voice processor is a dual-channel removable high performance microphone preamp combined with sophisticated digital voice processing. It complements the existing Vamp1 and Vamp2 digital voice processors.

Junger 799



Quantec Yardstick

Quantec 2402 Yardstick reverb processor is a compact 1U that employs simplified QRS (Quantec Room Simulator) algorithms, variable high cut filter, digital I-Os, and preset and firmware handling via RS232 or MIDI. There's also a remote and blank panel slave version.

Quantec

589

Behringer multifunction signal processor has SHARK bite

The SHARK DSP110 from Behringer is an automatic feedback destroyer, ultra-variable delay line, ULN microphone preamp with phantom power, automatic noise gate, and variable low-cut off filter.

The SHARK features an intelligent Learn Mode which automatically tunes the unit into the PA system. Its search algorithm ensures that feedback frequencies are attenuated within fractions of a second, using single-shot filters with a bandwidth of up to 1/60 of an octave.

Delay time on the SHARK, intended to compensate for timing differences resulting from speaker positioning, can be set in metres, feet or milliseconds. Behringer's multifunction unit has servo-balanced XLR and TRS line inputs and outputs, but can also be switched to Mic Mode. The adjustable microphone preamp with switchable +48V phantom power has been designed to ensure a minimum of noise. The SHARK can also be used as a level translator.

Two anti-parallel 20-bit A-D and D-A converters are used while a high-performance 24-bit DSP is at the core of the internal signal processing.

Behringer

805

A Dual Classic TUBE-TECH CL 2A



The TUBE-TECH CL 2A is a dual opto compressor with the same features as two of the well renowned TUBE-TECH CL 1B, but only taking up two units of rackspace.

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Reader Response No. 039

Peavey graphics

Three new graphic equalisers from Peavey offer dual 15-band, dual 31-band and single 31-band configuration. Q215FX, Q431 FX and Q231 FX all boast constant Q topology, FLS feedback locating system above the frequency band and 25Hz-16kHz equalisation range with 18dB cut and 12dB boost. CEL2 is a combined compressor, limiter and expander based on That VCAs. The soft knee compressor section has threshold, attack, release and ratio controls, while the hard limiter and downward expander have a separate threshold control. Also provided are stereo link switch, side chain jacks with front panel switches, plus LED VCA gain and output level meters.

Peavey

808

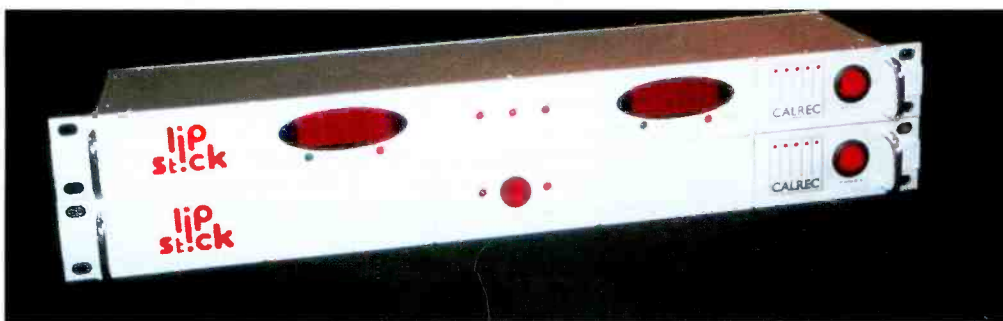
**What's new
in Pro Audio**

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Calrec makes up delays with Lip Stick

Calrec has launched a novel system for dealing with the increasing problem of mistiming between audio and video signals through complex signal paths.

Lip Stick is claimed to remove the need for subjective operator estimation of the mismatch between picture and sound, instead using an objective method of delay measurement. Details

are not divulged, but it uses a transmitter and receiver pair to measure the delays incurred through any video path including MPEG links, and even when different paths are used for audio and video.

Accuracy is quoted as +/- 2ms, and the whole system is dual-standard NTSC/PAL.

Calrec 802

Orban shows new upgrades for Optimod

Orban version 2.0 software for the OPTIMOD-AM 9200 offers preset formats for high frequency short wave broadcasting, which can also be used by AM-band broadcasters to extend coverage, thereby protecting the signal during low power transmissions during the night.

PC interface software for the OPTIMOD-FM 8200 can be used to control and fine-tune a station's sound from a number of remote locations using a modem. This means the transmission output can be altered from the studio, the engineer's home or even a car.

Orban 797

Presonus preamp

Presonus's MP20 2-channel discrete mic/instrument preamp use Class A, discrete input buffers with Jensen transformers, twin servo gain stages, and no capacitors in the signal path. Features include phantom power, phase reverse, -20dB pad and 80Hz filter while an IDSS process 'adds warmth by adding even order harmonic distortion.'

Any channel can be assigned and panned to an additional stereo summing bus and the device has a headphones output, 1/4-inch instrument inputs on the front panel, and full output metering.

Presonus 793

Remote preamps

To continue the recent spate of multichannel mic preamp outboard boxes, Aphex has the 1788 8-channel remote controlled mic preamp. This uses MIDI to control up to 16 units. There are two separately trimmable outputs for each channel allowing feeds to be split while an optional digital output module permits simultaneous output of 24-bit AES-EBU, TDIF and ADAT optical for a total of five independent outputs per channel.

Channels have mute, phantom power, 20dB pad, phase reverse, limiter and 75Hz cut.

Aphex 795

Grace on location

Grace Design has branched into location recording with the release of the portable Lunatec V2 mic preamp which is based on the solid state transimpedance circuitry of the Models 201 and 801 preamps.

The preamp sports 11-position precision gain control switch with 5 dB steps, a 10dB output trim, MS decoding, two-position high pass filter, phantom power and signal peak indicators in an elegant machined aluminium package than runs from 6-12V DC.

Grace 796

Euphonix convertors

Euphonix has a range of multichannel convertors said to offer high-quality 44.1/48/96kHz, 24-bit signal paths and 'setting a new standard in per-channel price performance for the digital broadcast market with 28-channel modularity'.

Configurations include analogue-AES-EBU; AES-EBU-analogue; AES-EBU-MADI; MADI-AES-EBU; MADI-analogue; analogue-MADI; analogue-analogue via MADI (snake) and AES-EBU-AES-EBU via MADI (snake).

Features include on-demand sample rate conversion and bit reduction per AES-EBU stream and auto-detection of external sync.

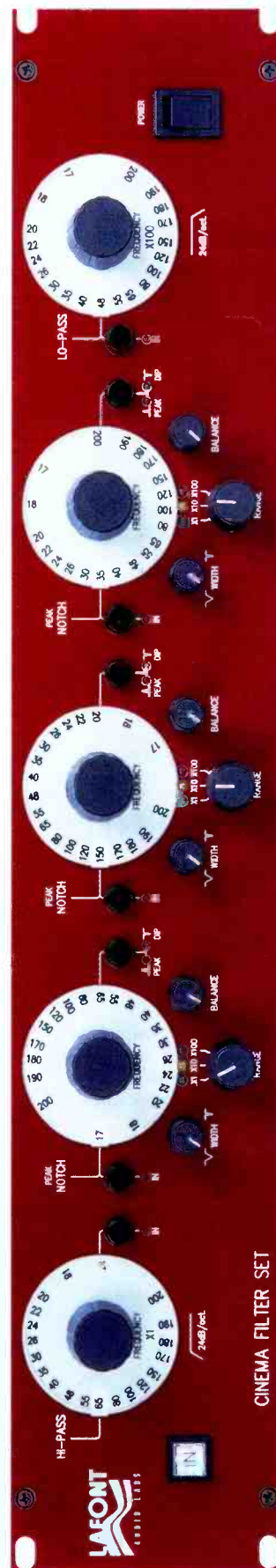
Euphonix 798

Sintefex Audio

The Replicator uses patented technology to store and reproduce the effects of traditional analogue equipment, allowing the simulation of effects from valve compressors and equalisers, through analogue tape saturation and amplifier distortion 'repeatedly and reliably in the digital domain'.

By sampling real analogue effects, it claims to bring 'an unmatched realism' to the simulation process. Its state-of-the-art DSP array technology also provides full equalisation, compression and other effects and operates up to 96kHz and is available in stereo or as a 5.1 or 7.1 surround sound unit.

Sintefex 801



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Reader Response No. 040

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KT DN422M

Klark Teknik has introduced the DN422M dual-channel 4-band parametric equaliser with mic preamp. Channels boast variable high pass filters, XL4 mic preamps and electronically balanced I-Os and switchable inserts.

Klark Teknik 790

Antares mic modeller

A studio DSP processor, the AMM-1 mic modeller is claimed to make any 'reasonably full-range microphone to sound like virtually any other'. Company engineers have created digital models of a wide variety of mics, and the combination of selecting models for the source and target mics processes the incoming signal.

According to the developer, the process can also be used at mixdown to 'change the mic' on an already recorded track. New mic models will be available for download from the Antares website as they appear. In addition, Antares has recently released Auto-Tune VST LE for Apple Mac, Auto-Tune TDM Version 2.0, and Auto-Tune MAS for MOTU Mac.

Antares 791

Audio Design

A range of 24-bit A-D, 20-bit D-A and 20-bit Sample Rate converters on 160mm plug-in Euro cards are designed as a cost-effective solution where installation budget and space are limited. These units offer up to eight channels of A-D and D-A plus SCR conversion in 1U for as little as £199 UK per channel. The housing rack will accommodate up to four modules.

Audio Design 781

TC Electronic M5000 option

Available for the M5000 studio signal processor is the ADA 24/96, a 24-bit 96kHz A-D and D-A converter card.

According to the manufacturer, the new converters constantly run at double clock speed, along with a powerful 100MHz processor which is dedicated to up and down-sampling. It is possible to select between a number of filter types, optimised for various applications.

In addition, the soft clipping functions of the M5000 are said to be further improved by the card, which suppresses aliasing products by using the higher sample rate.

Also cited is the very high level-handling, with analogue pre and post scaling. The card includes six relays with gold plated contacts. These control levels, bypass and balancing configurations.

TC Electronic 809

**MindPrint**

MindPrint comes from the same stable as HK Audio and Hughes & Kettner products.

The first offering is the En-Voice combined compressor, equaliser and microphone pre-amplifier. Fitted with balanced mic input (48V switchable), plus balanced/unbalanced line I-O, the valve-equipped MindPrint is described as an ideal front end for hard disk recording. It has a comprehensive equalisation section

with sweep frequency high and low sections, plus a fully parametric mid range. The tube compression section incorporates a saturation control. The attack and release times are preset but there is a secondary 'slow' range as well.

Available as an option is an SPDIF interface. MindPrint has also released preliminary information on the AN/DIpro 24-bit stereo A-D converter, with switchable 44.1kHz, 48kHz and 96kHz operation.

MindPrint 807

Eventide: 'most powerful ever'

Eventide has introduced Orville, the latest in its line of Harmonizer brand effects processors which it describes as 'the most powerful standalone audio effects processor ever made', with eight times the signal processing power of the DSP4500.

Designed for DVD and surround-sound production, Orville offers multichannel operation, supporting up to four analogue

and four digital inputs and outputs simultaneously, with full 'anything-to-anything' routing capability.

The unit's architecture is an A/B configuration with two DSP processors, allowing the user to process two completely independent multichannel effects simultaneously. Orville provides 96kHz sampling at 24 bits.

The unit comes standard with a

Prism ADA8

Prism's range of converters is joined by its first multi-channel offering, the ADA-8. The unit offers eight channels of 24-bit 96kHz conversion both ways in a single unit, with interfaces for many formats including ADAT, Tascam and Sonic Solutions. A comprehensive range of features includes MR-X word-mapping for recording high-definition audio across multiple tracks of a 16-bit MDM (all the way to stereo 24/96 using all eight tracks); Prism's DRE system for getting 24-bit performance out of 16-bit media; Prism's SNS noise shaping for straight 16-bit recording; selectable 'Overkiller' fast limiting; and flexible patching, monitoring and metering facilities.

On the analogue side Prism has introduced the MMA-4 microphone preamp, seen as an ideal front end for the AD-2 stereo ADC. It joins the Maselec Master series of processors and offers four preamps with frequency response from 1Hz to 200kHz, very low noise and distortion, and all the essential features such as 3dB gain steps, bargraph PPMs, switchable phantom, phase reverse and mute.

Prism 802

built-in sampler, allowing recording up to 174 seconds. On-board software includes Eventide's pitch shifters, reverbs and effects plus the new UltraShifter programme module.

New programs can be created on a PC, using Eventide's effects module building-block approach. Orville's software can also be updated via the Internet. The unit also offers backwards compatibility with almost all Eventide's 4000 series presets and cards.

Eventide 800

VT-2 Dual-Channel Vacuum Tube Microphone Preamplifier

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Roland reverb allow dynamic spirit pr
 The latest effects units to emerge from Roland are the SRV-3030 and SRV-3030D Digital Reverb Processors, which use 24-bit A/D and D/A converters and digital signal processing. The processors include R88, flanger/chorus, phaser and reverb/chorus effects. The SRV-3030D adds coaxial digital inputs and outputs, and at the heart of the processors is a new Dynamic Separation Algorithm which can separate signals and send them

RECORDERS, PLAYERS & MASTERING

Sony 1U MDW
 Sony's MDS-E11 MiniDisc recorder is a 1U that boasts a full complement of professional facilities. It connects via balanced XLRs and coaxial SPDIF. Remote control is achieved through an infra-red handset or RS-232 serial link, which is compatible with automation controllers. A programmable parallel connector is provided, which may be interfaced with fader starts, remote pause or other controls, with full tally. For continuous payout or logging, multiple MDS-E11 units can be linked to provide 'relay playback/record'. Recording functions comprise CD Sync, Music Sync and timed recording, along with full TOC Edit functions, including: **Sony** 688

NEATO for DAT
 Having made its name with its CD labelling kit, NEATO now expands its labelling range with a kit of labels and insert cards for DAT cassettes. Each kit contains 20 labels and inserts plus practice sheets, along with MediaFACE design software for Macs and PCs, including copyright-free images.

It's really that easy!

DS800

Active Mic/Line Distribution System

Building on the phenomenal success of the DS400, the DS800 continues the reputation for reliability, build quality and superlative sound quality in a uniquely ergonomic package.

The DS800 is an 8 input, 32 output self contained audio distribution system. In standard format each input is split into two transformer-isolated outputs and two actively balanced outputs. The unit can be internally reconfigured to give more than the

standard four outputs from each input up to a total number of 32 outputs. Each input features remote activated pad, adjustable gain, mic/line switch, 48V phantom power, 5 segment LED metering, 'listen' facility.

A headphone output and associated gain control are also provided. When using multiple units the 'listen' facility can be cascaded such that any input channel may be listened to via a single headphone output.

FEATURES

- ◆ Self-contained, 8 input 32 output unit with auto switching power supply, will work down to 60V mains voltage, 50/60Hz, no external power supply needed.
- ◆ Ergonomically designed front panel with recessed controls resulting in a 'cable and connector free' control area.
- ◆ 5 segment LED meters on every input giving instant indication of input levels and or clipping.
- ◆ Exceptional dynamic range.
- ◆ Headphone 'listen' facility, which can be expanded when using multiple units.

DS800 ACTIVE MIC/LINE DISTRIBUTION SYSTEM

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White Instruments

ParaMedic 26 and ParaMedic 24 equalisers have 'matrixable' inputs and outputs and presets which can be triggered from external equipment. ParaMedic 26 has a 2x6 matrix, while the ParaMedic 24 has a 2x4 matrix. Both units have 12 memories and/or 31 presets, which can be triggered via the logic inputs. Also common to both units are a digital crossover and limiter, plus delay which is provided for inputs and outputs.

White 863



Roland reverbs allow dynamic split processing

The latest effects units to emerge from Roland are the SRV-3030 and SRV-3030D Digital Reverb Processors, which use 24-bit A-D and D-A converters and 30-bit internal processing. The new processors include RSS,

flanger/chorus, phaser and resonator effects. The SRV-3030D adds coaxial digital inputs and outputs, and at the heart of the processors is a new Dynamic Separation Algorithm which can separate signals and send them

into independent reverb paths via its dual processor design.

A Preview mode allows users to audition reverbs using audio phrase samples (including user-sampled phrases).

Roland 804

RECORDERS, PLAYERS & MASTERING

Otari's high speed archiving solution

Otari's new archiving system tackles the problem of transferring analogue archives to digital formats with a means of reducing the vast amounts of time required. Various high speed reel to reel and/or cassette playback transports are available, transferring up to four audio channels simultaneously to an A-DC unit that incorporates level and machine operation controls. The resulting digital audio is temporarily stored on a removable medium (hard disk, MO or DVD-RAM are available) for later downloading to external mass storage systems, or alternatively it can be transferred directly via SCSI. The system requires no specialist operating skills, and as with other digital archiving schemes it expects that defects in the sources will be dealt with later in the digital domain when the material is required. Also new from Otari is a CD to cassette duplication system that runs at 8x or 16x speed and can either incorporate two CD drives for simultaneous copying of the two cassette sides or automatically break the copying across the sides from a single source CD.

Otari 823

Rapid response

BSS launches Opal graphic

BSS has introduced a graphic equaliser for the 19" rack format. The Opal 1000 is a 10-band graphic equaliser with a frequency response from 20Hz to 20kHz. It features a high resolution 10-bit digital filter and a 24-bit digital-to-analogue converter. The Opal 1000 is available in a rackmountable format or as a desktop unit.



Drawer digital DC Line

The DC Line is a digital-to-analogue converter for the 19" rack format. It features a 24-bit digital-to-analogue converter and a 24-bit analogue-to-digital converter. The DC Line is available in a rackmountable format or as a desktop unit.

See back of book

Sony 1U MD

Sony's MDS-E11 MiniDisc recorder is a 1U that boasts a full complement of professional facilities. It connects via balanced XLRs and coaxial SPDIF. Remote control is achieved through an infra-red handset or RS-232 serial link, which is compatible with Sony's BMS playback and editor systems as well as third-party automation controllers. A programmable parallel connector is

provided, which may be interfaced with fader starts, remote pause or other controls, with full tally.

For continuous payout or logging, multiple MDS-E11 units can be linked to provide 'relay playback/record'. Recording functions comprise CD Sync, Music Sync and timed recording, along with full TOC Edit functions, including Divide/Combine/Undo. The machine will shortly be joined by a professional 1U CD player.

Sony 588

NEATO for DAT

Having made its name with its CD labelling kit, NEATO now expands its labelling range with a kit of labels and insert cards for DAT cassettes.

Each kit contains 20 label and insert sets plus practice sheets, along with MediaFACE design software for Macs and PCs, including copyright-free images. The labels are designed for clean removal to allow easy updating.

NEATO 826



Verity VS600 creates 100 CDs

Capable of producing 100 CDs without supervision, the VS6000 duplicator is specifically suggested for organisations which may be interested in processing discs outside normal working hours.

Programmable for single discs

or batches, the VS6000 has a 'pick and place' mechanism which is said to be simple and reliable. The system supports all current CD formats. An internal 4Gb hard drive can be used to store regularly required master data.

Verity 814

Doremi has MPEG2 recorder

The V1-MPEG2 recorder features MPEG2 compression with up to 50Mbps throughput, and the rackmount product has full front-panel controls, including jog/shuttle wheel, autolocator, and audio input level controls.

The V1 Video Server gives multiple users fast access to large

libraries of recorded video and can be networked to every workstation, and provides complete control and monitoring facilities. The File Server can be connected to V1s using a selection of interfaces (SCSI-3, or newly added 100 Base-T Ethernet).

Doremi 819

Tascam DA40

Tascam has superseded the shuttle-wheel equipped DA30 mkII DAT machine with the DA40. The new studio recorder boasts trim controls for the analogue XLR outputs, character pack recording and playback, two memory locate points, variable auto ID time setting, auto end ID setting, variable record mute time and programmable repeat times.

Tascam 587

Microboards Technology

Now available is an eight bay CD-R replicator with a US price of \$7,995. Manufactured by Hoei Sango and distributed by MTI, the new DSR8800 is a single tower loaded with seven CD-R drives and one 12X CD-ROM drive. An upgrade to DVD is also possible, due to three Versatile Media Interface Channels, each of which will support two external DVD recorders.

DSR8800 is fitted with a Direct SCSI interface, which records directly from a PC to the target writers in the DSR, thereby eliminating the cost of an external CD recorder. The unit can also be employed in master/slave configuration, with up to three, seven-drive slave units.

MTI now has a four drive version of Cedar Technologies' desktop CD-R publisher at a US price of \$9,995. The package includes four 4X CD recorders, a Fargo signature CD colour printer, autoloader, two CD holders, plus a range of related accessories and all necessary software for CD production. MTI claims a package as comprehensive as this would have cost \$25,000 until now.

Microboards 829

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TASCAM DAT

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TASCAM DA-45HR

The new high resolution DA-45HR offers all of the same improved build and operating features of the DA-40, with the added performance of 24 bit analogue to digital conversion and digital i/os and a unique 24 bit High Resolution recording mode, supporting the latest TASCAM digital mixers and advanced hard disk and computer based recording and editing systems.

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ENTER
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DATA SHUTTLE

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A WHOLE WORLD OF RECORDING

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DA20MKII



DA302



DAP1

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CopyTrax Technologies

The Art Master Auto CD-R printer is said to be capable of printing up to 50 discs in one session with photo-quality results. A combination of fast drying inks, plus input and output hoppers, allow for a fully automated system which will run unattended. The photo-quality is achieved through a full colour process with a printing resolution of 1,440dpi.

CopyTrax 828**HBB CDR850 Plus**

HBB's Plus version of its CDR850 professional CD recorder/player has been specifically modified for use in 'all digital' applications and adds a Word Clock which enables the machine to be locked to a master clock source during playback.

A set of dip switches on the rear panel enables the CDR850 Plus to reference its master clock source via the Word Clock input and also via its AES-EBU digital input, the coaxial and optical SPDIF digital inputs, or its own internal clock. The CDR850 Plus also gains a balanced digital output on XLR.

HBB 815**MediaFORM offers 175 discs a time**

MediaForm's CD-3706P can duplicate and print up to 175 discs before having to be refilled. Copying may be started immediately from the keypad, and the controller automatically recognises the disc format. The system also detects defective blank media, rejecting any faulty discs to a separate spindle.

Internal software creates exact copies of audio CDs including all PQ subcodes and ISRC information, and full bit-for-bit verification of audio CD copies is provided.

Optional features include Easi Dat and Easi Audio for import of audio from nearly any digital or analogue source.

Personalised label designs can be created on a PC using Windows-based Editor software. Designs are then saved to a diskette which is inserted into the CD-3706P. When a diskette is detected, the system will automatically print during the duplication process. If no diskette is present, the system defaults to duplication only.

Mediaform 817**Quad DAT recording**

The QCI quad-channel interface from Ambient converts a DAT recorder into a four discrete channel audio recorder. The unit uses an encode/decode process and the signal can be decoded to give four analogue or two AES-EBU outputs. There is no compression and the noise floor is better than 85dB.

There is a reduced frequency response of 15.5kHz and the code form is transparent between

machines as long as no compression or digital level changing is used. Timecode facilities will not be changed by the format allowing tapes to be transferred in postproduction using a normal timecode DAT recorder and the QCI box as decoder.

The Clockit Box is a miniature timecode generator with clockit specifications for use on film camera recorders where no sync signal is required.

The Logger Box is a remote box which fits on a betacam or audio recorder and records timecode in/out logs. These logs can then be downloaded into a laptop to give an edit list of the tape in a standard format.

This list can be edited with prints comments. The logger has a built in Clockit timecode generator which allows record run time to be logged against times of day allowing co-ordination of multi-camera shoots to a common time of day.

Ambient 812

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Tascam Dubber developments

Tascam's MMR-8 and MMP-16 dubber range was shown at NAB with new developments designed to broaden its appeal and its integration with third party systems.

On show was Rorke Data's Galaxy 5 RAID array storage, which the Tascam units were

sharing with a Pro Tools system, Tascam connected via SCSI and Pro Tools remotely via Fibre Channel. Tascam intends that this kind of centralised shared storage across platforms will increase work flow by removing the need to physically move disk drives.

Also new is software Version 3.2, adding support for Sonic Solutions format audio. This allows the Tascams to play 16 and 24-bit audio projects from Sonic Studio and convert them to WaveFrame, Pro Tools and OMF formats.

Tascam 820

Discmatic autoloading CD duplicator

ONYX from Discmatic is a tabletop multidrive CD duplicator with new autoloading features that improve CD handling.

It supports up to four 8x drives with a capacity of 100 discs, and its autoloading mechanism picks up each disc by its rim, lifting it off the spindle and loading it into any of the recorders.

All contact with recording and printing surfaces is avoided. Further streamlining is provided by a batch copying feature that allows several masters and blanks to be stacked and automatically copied in sequence.

Discmatic 822



Discmatic

MDX7000 and MDX3000 are tower CD copiers with seven and three drives respectively.

The manufacturer states that a newly designed SCSI bus allows a faster data transfer rate and the copying of up to seven discs at once.

In addition, both units can copy directly from CD, eliminating the need to load material onto the hard drive first.

The core logic for both units is said to be stored on flash ROM, which is said to be a more reliable alternative to storing the information on PC. It also permits upgrading of internal firmware via CD or web site. Discmatic says it will soon offer the option of connecting up to eight duplication units via SCSI, creating systems which will make up to 56 discs at once.

Discmatic 821

TDK CD-RW

TDK has introduced its CD-RWXG rewritable disc which is compatible with consumer recorders, players and DVD players. Other developments include data and audio CD-Rs, DVD-R and DVD-RAM discs.

TDK 816

Total

SONY

Reclaim your Rack Space



The MDS-E11 is the latest edition to the Sony range of professional Mini Disc machines. It's space saving design features analogue and digital I/O as well as comprehensive remote control connections. The MDS-E11 can be used in all professional applications where rugged construction and space constraints are critical. The machine has a list price of £495 + VAT.

To order or find out more about Sony Professional Audio Products Contact:

Total Audio Solutions Limited, Stockwood Business Park, Stockwood, Worcestershire B96 6SX
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EMTEC Magnetics



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Reader Response No. 046



RCF Performer Series

RCF's new range of Performance Series loudspeakers comprises four models employing the latest RCF premium grade technology loudspeaker materials. All feature a multi-layered wood casing and scratch resistant vinyl, and RCF's Sonic Dynamic Protection System to protect the HF driver while maintaining the overall balance of sound to eliminate distortion.

RCF 844

Rapid response

Major audio equipment is by now sold on a 30-day warranty. It can also be returned to the manufacturer for a refund. This is a significant step towards the brick wall that has been built up by the manufacturers. As a result, the CD150 one inch compression driver. Other leaflets are set to follow.

See back of book

PMC debuts floor unit

Closing the gap between home theatre and postproduction with DVD in mind, PMC has unveiled a floorstanding version of its TB 1S compact/nearfield monitor. Designed for workstation-based rooms, the new monitor features PMC's established transmission line technology to achieve a 25Hz LF response and can be ordered in a vast array of different veneers.

Following logically from the TB1 variant is the new XB1 subwoofer. With a 19Hz bottom end and 120dB SPL capability, it forms a partner to the new floorstander and is available with or without internal 12dB/octave filtering.

PMC 846

Fane DIY

To help professional cabinet builders and DIY enthusiasts, Fane has produced a leaflet covering the Colossus or Crescendo 12-inch drivers, used in conjunction with the CD150 one inch compression driver. Other leaflets are set to follow.

Fane 855

T+M goes monitoring

Thum+Mahr has the KS digital range of digitally controlled studio monitors for which it is the world-wide exclusive distributor. The KS digital product range consists of the ADM 2, ADM 3 and ADM W. The impulse response of the range's key product, the ADM 2, is measured and corrected by FIRtec (finite impulse response technology). The ADM 3 is the latest product to join the KS digital range. Like the ADM 2 it offers an AES-EBU input.

Thum+Mahr 835



Roister offers acoustic control

Studio monitor manufacturer Roister claims its ranges cover all professional and semiprofessional active monitoring requirements. They include the H-series, which targets the semipro user, and the S-series which targets the professional end of the market with high quality build and sonic characteristics. All the monitors feature a rigid birch ply cabinet and a no-compromise amplification section.

Roister's fully active monitors

can be driven by the company's speaker and room correction processor, the Acoustics Compensator. This device promises to improve control room acoustics by applying complex time domain digital removal of early reflections.

Current versions of the Acoustics Compensators employ an optional 24-bit analogue input in addition to a large set of standard digital inputs.

Roister 838

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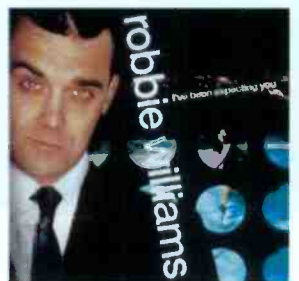
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'I've been expecting you' the album: Mastered and listened to in Robbie's front room on PMC

Reader Response No. 049

JBL maximises the output

JBL has announced the 2012H 10-inch and 2020H 12-inch Maximum-Output cone midrange transducers for direct radiating and horn-loaded applications. An innovative magnet structure aims to reduce harmonic distortion by means of a larger magnetic gap with a symmetrically-placed copper shorting ring, producing a flat impedance curve over the entire pass band of the transducer. The smaller driver has been used in JBL's custom midrange horns in the Venue Series, while the 2020H has been used in special custom systems on tour and in stadium installations.

JBL 842

New ATC for millennium

ATC's new SCM70 SL may be targeted at the home market, but that hasn't stopped the company's loudspeakers finding homes in pro surroundings before. The new design is heralded as the most radical speaker in the company's history as its outward design breaks with tradition in both shape and materials.

The cabinet is made from a combination of aluminium, MDF and Corian and incorporates gentle curves where straight lines might be expected, although ATC stresses that

the shape is driven by sonic demands rather than aesthetics. As is usual for ATC designs it is self-powered, driven by a new triamplifier with 2nd order filters using discrete circuitry. Sophisticated features include isolated secondary power supplies, programme sensing, auto power off and infra red control. All the drivers are new, and comprise a 234mm Super Linear bass driver, a Mk2 midrange dome with improved waveguide, and a 25mm tweeter reaching beyond 20kHz.

ATC 840



Peavey Impulse

Now available: the Impulse 500 sound reinforcement enclosure combines a 15-inch bass driver with a compression driver on an integral 90° x 45° horn. Appointments include integral stand adaptor, mounting points, plus Speakon connectors, all in a weather-resistant polypropylene trapezoidal enclosure. Peavey also offers the Eurosys 500XT, with similar components but in a carpet-covered cabinet and with an impedance of 4 ohms, rather than eight.

Peavey 849

THE BODY

From the mysterious night here is the rising beauty of MaxX: a tough and smooth body.

Polypropylene enclosure

Entirely made in gas injection moulding of polypropylene, ultra-low weight (15 Kgs MaxX 4a - 11 Kgs MaxX 4), extremely sturdy and compact.

Custom Horn (90°x60°)

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- Maximum flexibility of applications in all sound reinforcement systems.
- Asymmetric profile for stage monitoring.
- Four lying points to install MaxX to wall or ceiling.

THE SOUL

The heart of MaxX pulses with the rage of an animal. The perfect combination of power, body and tremendous technology.

MaxX 4a Configuration

- 2-way bi-amplified system
- 300W rms for the LF woofer
- 100W rms for the HF driver/horn
- Sensitivity (@ 1W/1m) 98 dB
- Frequency response (@ -5 dB) 50 Hz - 20 kHz

Components

- Ultra-light custom B&C 12" LF woofer with "neodymium" magnet (50% less than a traditional technology woofer).
- 1" compression HF driver with aluminium flat wired voice coil.

Power

- 300W rms PWM technology amplifier for the LF woofer allows an incredible reduction of the weight in a relation of 1:3. The efficiency obtained is 3 times higher than a traditional technology amplifier.
- 100W rms class AB amplifier for the HF driver.

ADAPT

- Processor for total protection of the transducers and improvement of the acoustic response.

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- MaxX 4: passive version 8 Ohms
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Reader Response No. 050

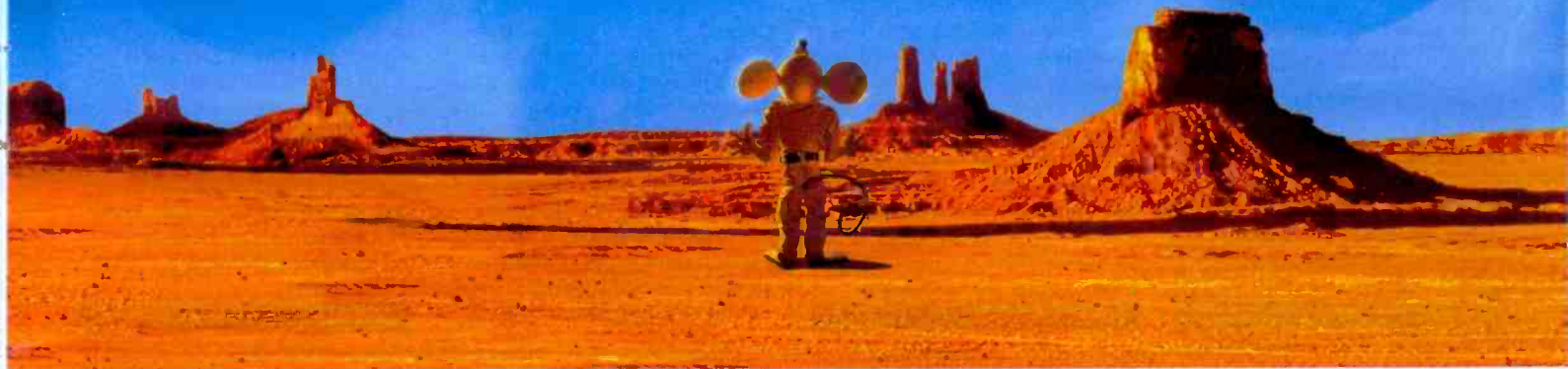


Tannoy self-powered Reveals

Claiming to be the most affordable self-powered professional monitor, the Reveal Active from Tannoy follows the success of the passive Reveals. The blue cabinet with 40mm curved baffle contains a long throw 6.5-inch bass driver and a 1-inch soft dome tweeter, both magnetically shielded. Each is driven by its own 50W amplifier delivering continuous SPLs up to 114dB with a frequency response from 65Hz to 20kHz.

Tannoy 841

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Reader Response No. 051

KRK V6 active

KRK's V6 active monitors cost \$799 (US) and use two separate amplifiers and a true electronic crossover with 60W to the woofer and 30W to the tweeter. They employ a 6-inch kevlar woofer in an anti-resonant frame, a cross-braced cabinet, Neutrik combo connectors and video shielding.

KRK**836****Radian LF chassis**

Model 2216 is a 15-inch low frequency component with a diecast aluminium frame, Kevlar impregnated cone and edge-wound 4-inch voice coil. Power handling is rated at 1,200W continuous, or 600W RMS with a sensitivity of 96dB (1W/1m). Maximum SPL is said to be 131dB peak and the frequency response is quoted as 38Hz-2kHz.

Radian**858****Meyer UPM-1P launched**

Newest product from Meyer is the UPM-1P, which is a self-powered and upgraded version of the UPM-1. The new system is seen as suitable for under-balcony, front-fill and small live sound uses.

Meyer**848****Eliminator**

Electro-Voice is re-introducing the Eliminator loudspeaker system which was popular on the live circuit back in the Sixties. The new Eliminator, aimed at gigging bands and rental companies, is based on the original model which helped to establish Electro-Voice in the marketplace. The new version has been redesigned to incorporate modern-day, improved EV components and Ring Mode Decoupling (RMD) technology.

The Eliminator uses EV's concert-proven DH2010A titanium diaphragm compression driver and High-Q 60x40 constant directivity horn for extended mid-range and HF reproduction, coupled with EV's 15-inch DL15BFH speaker, which employs cast-aluminium frames for added durability and heat dissipation. Long-term power handling is rated at 300W, with a frequency response of 50Hz-20kHz. To give the full low-end response expected of a concert system, there's also an 18-inch sub-woofer version, the 400W Eliminator Sub, which includes a passive crossover, allowing it to be paralleled with the 2-way system without expensive bi-amping.

Telex/EVI**845****Genelec aims at centre**

Genelec has introduced a dedicated centre channel 1034BC speaker for 3-channel and Surround Sound systems.

The speaker complements the two-speaker Genelec 1034B monitoring system. To ensure complete tonal compatibility the 1034BC and 1034B all use the same mid and treble drivers and feature Directivity Control Waveguides. The monitors and amplifiers are matched as a complete calibrated package.

The DCW aids stereo imaging and frequency balance even in difficult acoustic environments while fast-acting, low distortion amplifiers are capable of driving a stereo system to peak output levels of in excess of 125dB at 2 metres, with programme signals.

The 1034BC compact cabinet can be sited above, below or even vertically to one side of a video monitor or screen if the DCW is rotated to suit.

The centre speaker is designed for flush mounting though it can be free-standing while the amplifier unit is built into a rack-mounted chassis with vibration isolators. Treble, midrange and bass amplifiers each produce 120W, 350W and 2 X 400W respectively.

Bass frequencies are reproduced by two long-throw 12-inch drivers loaded with a 160 litre vented box while the midrange is reproduced by a proprietary 5-inch direct radiating cone driver and high frequencies are handled by a 1-inch metal dome.

Genelec**834****COLOSSUS****THREE NEW SOLUTIONS****12MB-450 • 15B-600 • 18B-600****Fane Acoustics Ltd.**

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Reader Response No. 053

The Meyer Sound Self-Powered Series

Since the 1995 introduction of the Self-Powered Series, over 13,000 units have been sold. With the advent of this new innovative series, Meyer Sound took a huge technological leap beyond all existing loudspeaker systems. Listen to what some of audio's top professionals have to say about these powerful, industry-defining tools...

"We really nailed it! Our new Self-Powered cabinets give us the flexibility to adapt to any environment on tour, and we now have the best stadium sound I've ever heard."

Jeff Thomas ◦ FOH Engineer, The Dave Matthews Band

"Self-Powered speakers mark a new beginning for both Meyer and the live sound industry."

Mark Frink ◦ MSL-4 Review ◦ Mix Magazine, August 1996

"Only Meyer Sound's Self-Powered Series guarantees us a world-class sound system preferred by most artists and producers."

Marcio, Nelson & Marcos Pilot ◦ Loudness Somoriza, Brazil

"Setting up 18 stages in one week... we never could have done it without the Self-Powered Series. Nothing is easier to use, easier to maintain, or sounds as great."

Miguel Lourtie ◦ Systems Engineer - EXPO '98 ◦ Lisbon, Portugal

"The sound was amazing, incredible... the music almost came at you in 3-D! ...Simply, I have never experienced speakers like these before."

Mike Klasco ◦ UPA-IP Review ◦ DJ Times Magazine, May 1998

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Meyer Sound

Reader Response No. 054

Peavey

The revamped HiSys XT series of sound reinforcement enclosures features curved grey steel grilles to protect the components and continues with the use of a carpet covering for the cabinets. Technical features are otherwise unchanged.

Peavey 857**Adamson**

Designed for outdoor use, the Hydra series of enclosures covers four models. There is a choice of 10-inch or 12-inch waterproof Adamson woofers, with a 1-inch throat compression driver and horn combination. The internal crossover is passive. In addition, the cabinets are available in either weather-resistant finish or an extreme weather version which is covered in fibreglass. All external fittings are stainless steel. Omnimount, pole mount or, optionally, NC rigging points are provided.

Adamson 850**Galaxy Audio**

There is a new, higher powered version of the Hot Spot powered monitor/one piece PA. Still housed in a compact casing which can be mounted anywhere along a mic stand, the Galaxy Core PA5X140 contains a 146W (4 ohm) amplifier and is said to produce an SPL of 114dB.

Galaxy 856**Meyer DS-4P**

Meyer Sound has introduced the DS-4P self-powered mid-bass loudspeaker system which 'provides high power and extremely low distortion'. It was developed to supplement the 70-200 Hz band in full-range systems, affording additional mid-bass headroom. It is said to be most effective when used in multiples within an array, and it can easily be incorporated into conventionally powered or self-powered systems.

Meyer 865**Master Europe**

VS12 and VS15 are additions to the Granit Line range of speakers. Based around co-axial units with an on-board crossover, the enclosures are designed for power of 350W and 400W RMS respectively, with a quoted sensitivity at 1W/1m of 100dB. The manufacturer recommends the enclosures for stage and low to mid level applications, such as bars and discotheques. Cabinets are black-painted Finnish birch with a metal speaker top-hat.

Master 854**Roland monitoring goes 24-bit**

New from Roland are 24-bit digital DS-90 Powered Monitors. These near-fields employ 24-bit digital inputs in addition to analogue inputs. They also provide the reference standard for Roland's COSM Speaker Modelling capability as introduced on the company's V-Mixing and V-Studio products (and also available as a software upgrade for the existing VS-1680 and VS-880EX workstations). Instead of switching between multiple pairs of monitors at mixdown, VS/VM users can use a single set of DS-

90s in conjunction with this Speaker Modelling feature.

The DS-90 monitors feature a custom-designed bi-amplifier system with discrete circuitry, while a 6.5-inch polypropylene woofer and 1-inch soft-dome tweeter are incorporated into a bass-reflex cabinet. The speakers are driven directly by a 60-Watt amp for the woofer and a 30-Watt amp for the tweeter, using a fourth-order active crossover. Speaker response is adjustable via HF and LF controls on the rear of the monitor.

Roland 860**How low can Genelec giants go?**

Genelec has blown the covers off a new and extremely powerful monitoring system known as the 1036A which goes lower in frequency than any other Genelec monitoring system.

Designed for large control rooms, the 1036As can produce peak sound pressure levels in excess of 136dB and bass frequencies are reproduced by two long-throw 18-inch woofers in a vented, dual-chamber configuration that yields a -3dB point at 20Hz.

The midrange frequencies are reproduced by two 5-inch high sensitivity direct radiating cone drivers while the high frequency driver is a 1-inch throat compression driver with a -3dB point at 22kHz. Mid and high frequency drivers have field replaceable diaphragms and are mounted in a DCW.

The system consists of two 738 litre speaker enclosures and two 19-inch electronics racks containing active crossovers, 3-channel power amplifiers, plus sophisticated protection and diagnostic circuitry. Treble, midrange and bass amplifiers respectively pro-



duce 300W, 600W and 2 x 1100W.

Bass, midrange and treble controls are included to allow the speakers to be matched to the acoustic conditions of different control rooms.

The system can be set up vertically or horizontally simply by rotating the DCW unit. It is designed to be flush-mounted though it can be free-standing.

Genelec 833**Proel flies its Templar series**

Proel's Templar Flying Series is the company's installation line of loudspeakers with facilities allowing the speakers to be flown with commercial 'eyebolt' or arrayed with safety kit.

A low-profile floor monitor is also available. Suitable for applications where compact speakers are required are the TFL10, TFL12 and TFL15 models, which can be used in combination with the TFL15SP subwoofer. For medium and large spaces the high power TFL212 and TFL215SP subwoofer are a more suitable choice. The range's new loudspeaker and

compression driver allow high performance and reliability, providing a series of speaker cabinets for a variety of professional applications.

The loudspeakers are designed for true concert sound and include a high-power 'sandwich' voice coil with Kapton former for a good power compression value, igroscopic proprietary cone and Nomex surround. The cabinet is constructed from plywood, finished in cinder carpet and incorporate a metal grill, stand adaptor and reliable handle.

Proel 839**Radian coax**

The 5208B from Radian Audio Engineering is a full-range coaxial chassis loudspeaker. It has a round, cast aluminium frame, plus completely new spider, cone and edge-wound voice coil for which the manufacturer claims a sensitivity of 96dB at 1W/1m. Frequency response is quoted as 65Hz-20kHz, with a 200W RMS power rating.

Crossover frequency is 1.8kHz. The manufacturer also claims that the Mylar suspension of the compression driver's diaphragm is 'virtually indestructible'. The driver itself has one-inch exit and is rated at 30W.

Available in its own right is the 475PB compression driver. Specification is as above, with a usable frequency response quoted as 800Hz-21kHz. Five threaded holes are used, allowing incorporation into either 2- or 3-bolt systems.

Radian 851**Quested VS now mklls**

The following changes have been made to the electronics of the Quested VS2205 and VS2108 monitors. Input sensitivity is now controlled by a 10-position rotary switch in 2dB steps for 8dB extra gain on the VS2205 and 4dB on the VS2108. Monitors can be balanced more easily against a sub-bass.

Contour selection is now via two 3-position switches for LF and HF trimming, the HF has flat, lift and cut positions and the LF now has an off position that reduces LF extension but increases headroom. Other changes include a power switch and enhancements to the amp module design and protection circuitry.

Quested 837**Yamaha F cabs**

The Yamaha F Series professional cabinets are intended for small scale touring, clubs and installations. Features include 12, 15 and 18-inch cast frame LF drivers, built-in fly points and castors and a 1.4kW peak handling capability.

Yamaha 843

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Reader Response No. 055

DAS Audio

DS-8T is a 100V transformer version of an established installation speaker. Based on an 8-inch speaker and a compression driver, the enclosure has a power rating of 150W. The frequency response is quoted at 60Hz-20kHz, with a sensitivity of 93dB. 'Virtually indestructible', the polypropylene cabinet measures 440mm x 270mm x 230mm and the assembly weighs 10.35kg. Available in black or white, the DS-8T has wall and flying brackets available.

DAS Audio 853

**CV sub**

The SUB-15 is a compact direct-radiating 15-inch subwoofer. A rugged diecast woofer frame provides rigidity and precision and the oversize magnet structure maximizes magnetic and electrical efficiency. A 1/2-inch, 8lb steel top plate and a 3-inch voice coil gives reliable operation at high power levels while Cerwin-Vega's venting system results in a 3 to 6dB increase in bass response. Multiple vents on the bottom of the cabinet work with adjacent walls as well as the floor, permitting maximum bass loading regardless of where the cabinet is placed.

Cerwin Vega 866

FAR's AV6

FAR's 2-way active AV6 features amplifiers that deliver 120W (180W peak) for the low frequencies and 70W (110W peak) for the high frequencies. The compact monitor will generate 120dB from 45Hz to 21kHz. The woofer is a high-power 8-inch device able to reproduce high output without distortion.

The Av6 also benefits from optional electronic 'curves' that include a simulation called 'car' that reproduces the sensations felt in the best car installations.

FAR 847

Mackie activates new PA monitor

Mackie describes its new SRM450 active sound reinforcement monitor as 'the only PA speaker accurate enough to be called a monitor'. The first in a planned series of speakers developed with RCF, which has 50 years of speaker experience, the SRM450 features a 2-way bi-amplified, optimised active system, built-in monolithic FR Series 300 and 100W amplifiers, precision 24dB/oct Linkwitz-Riley crossover, and a high-output precision titanium compression driver.

Other features included are a studio-quality maximum dispersion horn design, along with servo

feedback-controlled woofer, high SPL output allied with low distortion, and electronic time correction, phase alignment and equalisation.

With a high-impact composite enclosure and handles on both sides and on the top, the monitor has been designed to be easy to carry.

The SRM450 can be pole-mounted, flown, or used as a floor wedge. Its asymmetrical geometry and wide-dispersion, studio-quality horn provide unobtrusive sight lines and optimised stage monitoring performance.

Mackie 861

Sound through the looking glass

NXT, developer of Surface Sound flat-panel loudspeaker technology, has announced a transparent speaker technology called SoundVu which makes possible the design and construction of ultrathin, see-through loudspeakers.

Designed to enable television and computer screens to function simultaneously as loudspeakers, with no need for separate speakers, SoundVu technology can be used in

conjunction with all current LCD and video screen materials, from substrate polycarbonate plastics to laminated and toughened glass. Because of its ability to be incorporated into so many transparent materials, SoundVu can enhance the functionality of virtually any product containing a visual display - from cellular phones and PDAs to large-screen TVs.

NXT 862

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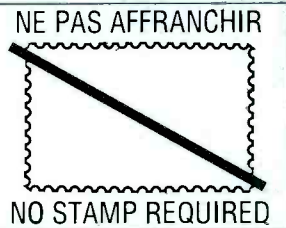
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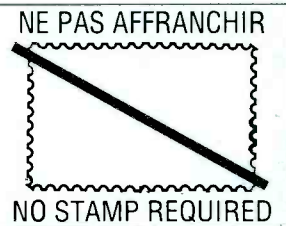


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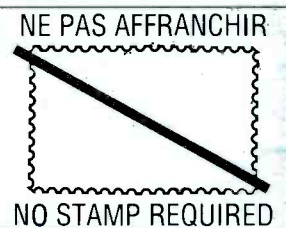


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808M

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408S

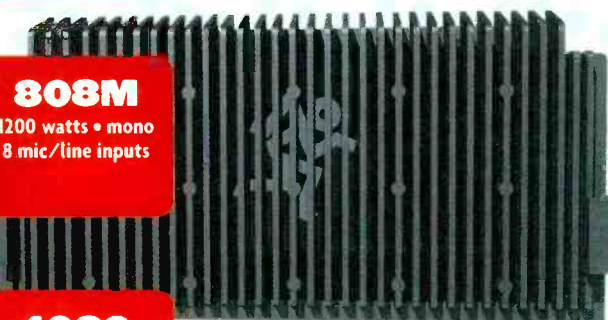
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8 mic/line inputs

408M

500 watts • mono
8 mic/line inputs

406M

500 watts • mono
6 mic/line inputs



Inside each PPM™ Series mixer are two FR Series high-current power amps with a massive toroid transformer, huge storage capacitors and tough fiberglass circuit boards. The entire mixer back is a custom-cast heat exchanger that ensures effective cooling and ensures reliability in conditions that would shut any other powered mixer down.

*All power ratings are in to 2-ohm loads which is not fudging cuz almost every PA speaker has impedance dips this low.
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808S

All Mackie Professional Powered Mixers feature:

- 1 Sixteen studio-grade 32-bit EMAC™ digital effects with two variable parameters per effect
- 2 plus EFX Wide spacial expander
- 3 4 The best mic preamps found on any powered mixer
- 5 Separate phase-accurate 9-band graphic equalizers on mains and monitors (true stereo on 808S and 408S mains)
- 6 3-band active EQ on every channel at musical frequencies
- 7 Separate 75-Hz, 18dB/oct. low cut filters on mains and monitors to cut stage rumble, wind noise and P-pops
- 8 FR Series amps switchable as mains or main +monitor
- 9 Dual line inputs on chs. 7 & 8 (stereo on 808S/408S; N/A on 406M)
- 10 Way-cool Break Switch mutes mic inputs on chs. 1-6 during breaks
- 11 Input gain control with LED on every channel to make level setting fast and easy, maximize headroom and minimize noise
- 12 Soft-knee compressor to maximize output levels without distortion — great for vocals and percussion PLUS High-impedance mic/line inputs
- 13 and inserts
- 14 on channels 1-6,
- 15 EFX to Monitor,
- 16 globally switchable phantom power for condenser mics,
- 17 external EFX sends & returns plus footswitch jack,
- 18 tape inputs and outputs with separate level control
- 19 for pre-recorded accompaniment, music during breaks or karaoke,
- 20 monitor and effects gain level controls on each channel,
- 21 sealed rotary controls,
- 22 front panel is gently tilted to make access easier
- 23 Impact-resistant, injection-molded case.



MADE IN WOODINVILLE, WA, USA BY GENUINE MACKOIDS



www.mackie.com • UK 0 1268 571 212
France 0 3 85 46 91 63 • Germany 0 2572 96042 0