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.
THE NEXT GENERATION OF DIGITAL AUDIO RECORDERS STARTED WITH SOME VERY GOOD IDEAS: YOURS.

INTRODUCING THE TCR® FAMILY OF SYNCHRONOUS DIGITAL RECORDERS.
We started with solid engineering and some innovative ideas from real hands-on engineers and editors like you. Then molded that thinking into the TCR®8 and TCR®4: Two professional production recorders, ideally suited for the edit bay, the studio or the field. Not just a designer's dream, but yours.

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Reader Response No. 002
OK... or Outstanding?

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

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

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

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.

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.
UK's Best Kept Pro Audio Secret

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 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:
- Mixers, 160V Line equipment, headphone distribution systems and speakers. Contact us today for your info pack and spec sheets.

"HEAR the difference Chameleon® makes"

You are in good company when you use Chameleon® Amps

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- Studio Mktng
- Roy Castle & Culture Club
- Guitars
- Black Studio
- Lotus
- Bitty Bevian

CORPORATE CLIENTS
- Walt Disney, Television Animation
- Philips (Dents, Toys)

Sound Foundation Recent Tours
- Johnnie Howard Orchestra
- Average White Band
- Beverley Knight
- Rose Royale
- Kalima and the Waves
- Shola Ame

Thanks to Sound Foundation +44(0)718 986 6566

Reader Response No. 005

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**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 weights 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, Speaker 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 isolation 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.

**Nagra's new amplifiers**

A Mosfet 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, thoriaated 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.

**D&B's version 2**

Version 2 of D&B's F-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.

**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 ICS 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.
With the widest range of power points 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.

For complete specifications and a list of PowerLight users call (800)854-4079. www.qscaudio.com

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<tr>
<th>MODEL</th>
<th>WATTS PER CHANNEL</th>
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<tr>
<td>9.0PFC</td>
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**Features / Applications**

- All PowerLights include QSC’s exclusive PowerWave technology for superior sonic performance.
- Ultra-low THD (0.01%, 10 Hz-20 kHz).
- 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 1.5X and 1.6HVX are tailor-made for bi-amping your monitors or mains.
- PowerLight 2.2HV is a mono block amp that delivers 2400 watts @ 2 ohms 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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Reader Response No. 006
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**

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.

**Six from Carver**

Following the release of three new amplifiers, there are now a total of six units in the Carver PX series: PXm1250, 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.

**Pulse amps**

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

**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 Ultracech 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.

**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 Faslon terminals, HPC receptacles can also be supplied with straight or right-angle PCB connections.
New codec chips from AKM

Multi Bit architecture that achieves low outband noise and high jitter tolerance by use of SMC (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-performance, 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 AK3393, an enhanced dual-bit, delta-sigma, 24-bit A-DC, designed for professional digital audio applications. The 12x8 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

Ultrasone radiation-less headphones

Ultrasone ‘radiation-less’ headphone, the HFI-200, is based on research conducted by Ultrasone’s Florian Kenning into the health-improving effect 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 WHO’s recommendation maximum of 200nT for ‘radiation-less’ computer screens/montors. 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.

Ultrasone 630

Quiller’s new joysticks

Claimed to be more rugged and to perform 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 immune to RFI and EMI and with only one active component for each axis they are more durable.

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 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
Furman supplies more power

US-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 30Amps. Spike and surge protection and EMI/RFI filtering are included.

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 convener 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 -94dB; 107dB THD+N (stereo/mono); 115dB stopband attenuation; and programmability through an SPI-compatible serial control port.

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.
Belden's cable

DTV 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.

Profusion

A 3607 is a single channel, 7-band graphic equaliser on an IC. Available at £29 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 ±12dB. Audio distortion is quoted as typically 0.02% with a typical output noise voltage of 7μV. Units may be connected in series for greater resolution.

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.

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 of 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.

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.

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.

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.
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 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.

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.

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.

We have the solutions

Couple that with 30 years of market knowledge, technical support and customer service and you’ll find that, whatever the application, Roxburgh can help you design a better solution. For more details call the Alps Sales Team on 01724 281770 now.

Audio Component Problems?

If you’ve got a component problem, Roxburgh has the solution. As the UK distributor for one of the world’s largest component manufacturers, Alps Electric, we have an unrivalled portfolio of products. Encoders, faders, potentiometers, switches, alarms, you name it, we stock it.

Reader Response No. 011
Audio Service’s Phantom release

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 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.

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, weatherproof 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.

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.

FREE ENQUIRY SERVICE

WHATS NEW IN PRO AUDIO
Choosing the right audio Codec.

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 codecs. 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 Coders 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.

Reader Response No. 013

DIALOG4 GmbH, Monreposstr. 55, D-71634 Ludwigsburg, Tel. +49-7141-22660, Fax +49-7141-22667 · http://www.dialog4.com · email: info@dialog4.com
**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 multi-space integration options plus the Media Toolbox which is designed for use with standalone or networked AudioFiles. Media Toolbox takes the up/download of projects and sources off-line, freeing AudioFiles for use exclusively on the editing of projects.

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**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 DI's 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 a 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.

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**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 stars 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.

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**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 Tele 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.

**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 converter and analyser.

**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.
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 scalable 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.

Professional Equipment for Broadcast & Telecom

- Analogue & Digital Mixing Consoles
- AD/DA Converters
- Sample Rate Converters
- Analogue & Digital Audio and Video Routers
- RS-422 Data Routers
- G.703 HDB3 Routers
- Summing and Conference Systems
- Distribution Amplifiers

Next issue due Winter 1999

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USE OUR FREE ENQUIRY SERVICE
For Home Studios

The VM-Mixing Stations give you 24-bit digital automated mixing and control over tape-based digital multitracks like the Alesis® ADATe 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 VM-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.

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-310C 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.

For V-Studio Owners

The VM-3100 and VM-3100Pro can be used as summers 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 VM-Mixing Stations give guitarists a convenient, great-sounding way to enter the world of digital mixing and recording.

Make it with a Roland

Reader Response No. 016

For details of this and other new Roland products call the Roland Brochure Helpline: 01792 515020
or use the Roland (UK) Fax-Back service: 01792 515041
Roland (UK) Ltd, Atlantic Close, Swansea SA7 8NJ, UK web site: http://www.roland.co.uk
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 EEngine 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 addition. 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.

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

Amek 651

Soundcraft premieres digital on-air board
Soundcraft has launched the RM1 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

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 converters, sampling rate converters 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 digital automation on SMPTE. MTR send and receive, and Quad and 5.1 surround outputs.

TOA 643

Four launches from Amptec
Amptec's 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 trim 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-1001 digital mixer is now available.

Amptec 648

For further product information use our free enquiry service

SUMMER 1999

WHAT'S NEW IN PRO AUDIO
For the past two years, every couple of days one of the World’s leading audio facilities has become a convert to a Soundtracs digital console.

Their decision to go digital may vary but their reasons for selecting Soundtracs appear to be unanimous.

Whether for post-production, broadcast or music, there isn’t a more cost efficient digital production console offering the features and facilities with the high level of automation and sonic integrity than that provided by Soundtracs.

These facts, reinforced by the Soundtracs premier software and hardware support, is simply enabling them to stay ahead.
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.

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.

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.

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 BMDB 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 SPHDF coaxial/optical connection. MIDI data functionality, a 136 x 22 backlit graphical LCD, and illuminated buttons.

Klotz Digital expands digital desk range
Klotz Digital Audio has introduced a digital audio console for live broadcast and production applications. The Spheron is based on Klotz's 3rd 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. Spheron 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.

Gemini launches DJ mixer, radio mics and amps
New from Gemini are a DJ mixer, a series of UK 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 UK 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 lavaliar, headset and instrument applications, as well as a handheld unit with unidirectional capsule. Gemini offers a similar line of products in its VII series of VHF units.

CD-9500 Pro III is a dual CD player with precision cueing, scan dial, variable pitch and pitch bend 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.
Otari’s HDR Series represents a dramatic breakthrough in operational convenience and sonic quality. Combining the familiarity of a traditional multitrack with the speed and efficiency of a removable hard drive, the new RADAR II offers 24 or 48 tracks of 24-bit record/replay at a price that won’t break the bank.

Sonic Excellence • Random Access Editing • Familiar & Fast User Interface • Engineered for Versatility • 24 or 48 Digital Tracks • Open Architecture • RADARVIEW GUI Interface •

Contact us now for full details.

24-Bit, 24 Carat.
Swept shelf/peak
Stereo and footprint.

Follows The Series Four Soundcraft hits brick wall B:::

Opal Rapid functions have mono EQ individually switchable balanced mic/line inputs dio market. Aimed primarily at the project stu-

MTA's Soundcraft launches Nine 924 stop

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-hand 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

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 con-
sole 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, dynam-
ics, 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

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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 provided 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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The console can be supplied fitted with VCA automation.
With the D950B Digital Mixing System, Studer has introduced a product that sets new frontiers in the realm of digital audio. The D950 uses state-of-art technology and highly flexible DSP power balancing to satisfy the needs of the audio professional. The console can easily be reconfigured to match the specific needs of various applications.

And now, the new revolutionary D950S Surround Version is available, comfortably supporting all Surround monitoring formats and featuring the unique Virtual Surround Panning™ (VSP) software. The D950S easily takes care of all the aspects of Surround production and postproduction in a modular and advanced fashion!

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http://www.studer.ch

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 EQ pan control on each channel, while a given channel’s entire rotary controls 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.

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**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.

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**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 analogue 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.

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**TLA® Audio**

The Classic Valve Console

TL Audio Limited, Sonic Touch, Iceni Court, Iceni Field Way, Letchworth, Herts SG6 1TN, UK

Telephone: +44 (0)1462 680888
Facsimile: +44 (0)1462 680999
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Full modular in-line format
Configurations from 16 channels to 56 channels
Optical patchbay (internal or external), fader/mute automation and comprehensive meter bridge
Four band EQ with fully parametric mids, one stereo and six mono aux sends, and faders on both channel and monitor signal paths
A truly unique multitrack console

http://www.tlaudio.co.uk

Reader Response No. 021
Distribution Contribution Production

The Distributed Studio Network DSN
Real time linear audio via ATM
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/I/ 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.

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.

Graham-Patten's surround mixer

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 illuminating channel select pushbuttons give mixer status.

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CONSOLES

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 four sub-masters, stereo and mono equalisation, aux sends, 5 aux returns, a line-up oscillator, 100mm faders, Littile 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

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 console and this introduces a new Graphic Automation Editor. 

Graham-Patten's digital routers

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.

Graham-Patten 597

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 SLSR and a multichannel audio vectorscope display.

RTW 690
Introducing the MTA Series 924
Who Says Serious Consoles Have To Cost Serious Money?

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.
**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 programmable using any combination of five standard levels, five fixed 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 microphone 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.

In stereo mode, all 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.

**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-phonos. Once a digital signal is connected to the unit, the available channel status bits and any errors will be displayed on the front LCD panel.

A stereo peak meter displays the audio level, while the analyser also includes a high quality D-A converter 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%).

For delivery, the unit is supplied with an AC adapter for recharging. Other accessories include headphones, SPDIF adaptor, adaptor for mini-jack, RCA-phone connector and user manual.

**MAYAH updates Sendlt software**

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

Sendlt supports BPFL, the broadcast extension of the Wave file format, as well as Musfile, a format specified by Digigram. All supported formats can be exchanged between two computers running Sendlt. Live transmission is supported with MPEG layer two and layer three mono and stereo. Sendlt 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.

**Lindos**

The portable LG1 AES-EBU portable audio generator and monitoring 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 1 kHz and 400Hz modulation with selectable digital and analogue output levels, plus channel identification in 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.

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**SUMMER 1999**

**WHAT'S NEW IN PRO AUDIO**
New generation switches 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-2500.

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 capabilities 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.

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 384kaps. 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 fail. In addition to J.52 support, interworking is possible with the proprietary protocols used by CCS (CDQPrima Series) and Dialog! (MusicTaxi/VPpro), facilitating 128kaps 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 Codex 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.

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).

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, earphones and telephone hybrids; 2-way radio interface; and fibre optic transmission equipment.

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.

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.

TTC

Reader Response No. 024
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.

AEQ serves up radio management system

AEQ is offering what it terms the most advanced audio management and automation system for radio broadcasting. The MarWin native 32-bit system for Windows 95 and NT provides audio, text and image integration, up to four audio processing boards plus an additional prelistening output with low-cost audio board, simultaneous access to several databases, user-configurable screen appearances, and drag-and-drop operation. A number of optional applications are available for the MarWin 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.

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.

A new DSP-based teleconferencing system, TC6400/TX6200 combines 2/4 wire converter and adaptive echo canceller. Optimised for integration into the existing line of Voice-Matic autotmix systems, the new products can provide full duplex interconnection of multiple, simultaneously speaking participants.

Lake People

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

The MAGIC Compact i2 is a 2-channel A-D converter. The analogue inputs are balanced via XLR connectors, while two digital inputs are connected to the front panel and 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 converter. Two digital inputs are provided, balanced via XLR and unbalanced with cinch socket. Two digital inputs are provided, balanced via XLR and unbalanced with cinch socket.
Opticom's OPERA first

Opticom's OPERA - Objective Perceptual based Analyser is claimed to be the first commercially available test to incorporate PEQA, 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 Pentagon 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.

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.

Cart62 is a virtual cart machine on 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-Graber 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.

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.

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 able to transmit audio up to the resolution of the converters used. In addition, all CobraNet compatible products can receive audio up to 24 bits regardless of the converters 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.

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-712, and S-16, with all four zones. Contractor facilities include preset assignable priority, individual gain stems, 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.

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.

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 inverters of the filters employ a 40dB per octave Linkwitz-Riley emulation, while the equalisation provides for up to 30 filters. Individual multisignal noise gates are also provided. The units' converters are 20-bit oversampling delta-sigma.

Thrulby 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, SM and CCIF two-tone signals.

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 stems, 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.

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WHAT'S NEW IN PRO AUDIO

SUMMER 1999
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 TD522M measurement module for the Tektronix TD5220 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 TD522M has been added to the TD5200 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 analysers. This is an option on both the Access and Portable One Dual Domain versions of the product.

TTI 703

Audio Follow
AirLite 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, capacitative 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 commenting 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 applications, but can be upgraded to a fully featured Commentator Unit as necessary.

Drake 689

Schech provides new-generation signal analysis
Schech 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 ohm 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 set the level at the output jack.

Schech 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 multiformal, 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 codec at the other end of the line, connecting both Programme 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.

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 MPE-2 layer two, MPEG-2 AAC 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.

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

DAVID 681

FOR FURTHER PRODUCT INFORMATION USE OUR FREE ENQUIRY SERVICE
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 1.52 signaling 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.

### 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, MacroEditPro 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, Mobile and BWE. Sendit utilizes 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 run 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 recognize the audio codec in nearly the same time as hardware codecs of the same type connect to each other.

### Aeta scoops new radio products

Aeta's Hitiscoop 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, 7kHz mono mode (with independent V11 interface), 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.

### 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 of 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 accesses. 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.

### 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 8 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.

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 MPX signal, similar to pink noise, pink noise and 20-bit resolution.

### Audionics

The SC10 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 SC10 is that each of its inputs will accept AES-EBU or analogue audio. Audionics' second new digital product is the DA2100, an AES-EBU distribution amplifier with frame synchronising and sample rate conversion facilities and an analogue output for convenient monitoring.

### AEO provides stereo audio monitor rack unit

The AM-03 self-amplified stereo audio monitor from AEO 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.
HDA shows archive transfer

Houpert 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.

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 drivers for the Eaton's P60, E-400, E-Synth Back, E4Z and EAXT. E-MU's Audio Production Studio is designed to run on a PC under Windows, providing 24 dynamically allocated voices, with internal digital mixing and effects processing. Voces can be selected from 16-channel external MIDI interface. The PCI-E Card contains the MIDI connectors, SPDF 1-0 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 8/16 Hz and 48/96 kHz using 8- 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 for analogue inputs and two analogue outputs, plus a headphone socket.

Ultra samplers are based on a new 32-bit GoldFire processor. They offer 128 voice polyphony, 32 MIDI channels, dual 24-bit effects processing (or 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.

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 multi-processor 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.

For further product information use our free enquiry service.

SEK'D budget 24/96

Sek'd is a pioneer of 24-bit 96kHz PCDI 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 studies. At around US$500, the Prodigy Plus, which was previously announced as the Prodigy 32 ADDA, provides 21-bit, 96kHz digital audio and 20-bit, 48kHz anaologue audio, with I-O connections for SPDFI AES-EBU and ADAT machines. Supported audio resolutions are 8, 16, 20 and 24-bit, while analogue sampling in the range 11.025 to 96kHz and digital sample rates of 32, 44.1, 48, 64, 88.2 and 96kHz are supported. A/D-A conversion is 20-bit, and signal/noise ratio is quoted at 90dB. Features of the Prodigy 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.

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 ICA jacks for SPDFI 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.
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360 System’s multichannel hard disk recorders

New from 360 Systems are the V-line 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, mass storage capability, high-density removable disks, random access, and complete timecode 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. Releasable functions allow for full simulation, and the RMW (Read-Modify-Write) feature provides increased compatibility with OTKs 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 playout.

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 drivers, 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 file. The 100Mb 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.

Plug-in excitement available from Digidesign

Digidesign Pro Tools/24 Mix systems (Mac only). Using the same presence-enhancing, detail-restoring technology as the patented Aural Exciter hardware, the Aphex 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 Aphex 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 Farn cards and NuBus-based DSP Farns.

Recording, editing and playback runs from enhanced Version 2 software from the company’s SS1DR1-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.
"A host of new high-end features add more flavor to an already delicious cake... The real-time MIDI effects are totally new and very cool."
—Electronic Musician

"Those who've used Cakewalk (Pro Audio) for years will appreciate the new tools and features and will wonder how they got along without them."
—Maximum PC

"This product deserves its status as an industry standard, and is highly recommended."
—The Tapeless Studio

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

"Incredible price/performance ratio."
—Game Developer

"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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Alesis MasterLink

Alesis has moved into 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 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.

Converters 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.

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.

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 manufactures have agreed to support Callisto.

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360 Systems’ Short/cut follows upgrade path

Designed to overcome the reach of ADAT
Pro Tools24 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 Tools24 combined with extra tracks and more on-demand mixing and processing power. The single-card Pro Tools24 MIX offers up to three times more DSP power than Pro Tools24, while the two-card MIX Plus system offers more than double the DSP power of the MIX version. Digidesign gives 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 reverb and 10 delay-based effects.

Digidesign MIXes up high-end audio recording

Every Pro Tools24 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.

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 applications that are available for Windows 95/98 and NT 4.0 and for Mac OS 8.x.

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 decracking 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 decracking 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 decracking.

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WaveFrame paves the way
In preparation for the launch of the recently-demoned 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.

Waves gets into a bundle
Plug-in specialist Waves has announced four new bundles of plug-ins, 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 Multitrack, 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 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 01V. 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 for Windows.

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 available.

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.

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. This bundle includes the Project II PCI card, a Digidesign Audio Interface (the 822/10 or ADAT Bridge I-O), SampleCell 2 Plus, MasterList CD, Logic Audio 7, 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 2 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.

Cipher Tando
Tango 24 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 47dB/100V switchable analogue I-O on 1/4-inch TRS jacks. Word clock input and output are on BNC connectors, 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 44.1/48K internal crystal. Tango 24'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 11U 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 MD4 without recabling. Tango24 can be connected to any ADAT equipped computer card.

Frontier

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 PT24 MUX 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 recorded 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 AC30, and Vox AC30 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

Public 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 Publisson, 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.

Steinberg

Publisson
The Audio Magic Ring from Merging Technologies is an audio file conversion application for Windows NT/95 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 FMF (Merging Technologies' own Pyramik 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

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What's new in PRO AUDIO

The Waveframe card is shipping with reverb, delay, and convolution algorithms.

Frontier

Digidesign

Op-code interfaces now available
Op-code'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 up 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 input and 4 output connections, SPDIF I-O and 64 channels of MIDI.

Op-code

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

Waves

Digidesign

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SUMMER 1999

WHAT'S NEW IN PRO AUDIO
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 dubs 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.

Digidesign drives Pro Tools storage optimisation

The Digibridge 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 Digibridge has been developed by Digidesign to deliver the speed, capacity and reliability required for the most demanding projects.

The 9Gb Digibridge provides enough storage space for 1700 track minutes of 16-bit, 48kHz 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 rack mounting 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 Digibridge optimises the drive for Pro Tools usage.

Up to four Digibridge 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.

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 drives 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 visualise 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 O1V.

Steinberg 753
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 VM2000 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 by 16-bit fidelity.

CreamWare sets out the SCOPE

SCOPE is a powerful computer-based system, which runs on a plug-in PCI board consisting of up to 16 Analogue 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 synthesiser, 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.

Steinberg's designs on mastering

The Mastering Edition from Steinberg is a collection of six high-quality Mac and PC plug-ins, including the Mastering Edition 20/20, VectorX, WaveLab Pro, and Pro Tools 8.1. The Mastering Edition 20/20 is a powerful mastering tool that can be used in the computer, stacked together, in any combination of up to four cards.

Steinberg's Pro Tools 8.1 is a comprehensive digital audio workstation, which offers professional-quality audio recording, editing, and mixing facilities. It 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 Spectrum Graph complete the Steinberg Mastering Edition with two analysis tools.

Aardvark's Aark TDF PCI card

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

It has exactly the same architecture as the popular Aardvark DR32, so it can 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, and Samplitude and Gigasound.

The TimeDomain II is an accurate and versatile Master Clock Synchroniser which generates a very low jitter digital audio master clock referenced to any timecode source. It is a proprietary jitter Reduction Module, and the generated clock jitter below 50ns per audio frame, and consequently the synchronised audio as pure as possible, even when the source is a digital audio playback data.

Solo for DAWs

The Seaside Solo PCI interlaced 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 1-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.

Lexicon enhances Studio System

Lexicon is also offering the LX3 Multi-Interface adaptor, which allows as many as three LD-10Ts to be linked together providing 24 channels of 24-bit analogue, balanced 1-O and three sets of SPDIF I/O, all usable simultaneously.

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Reader Response No. 031
**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 miniaturity 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 IF band-width.

Operational features of the Micron 700 series include microphone phantom power 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 selection between the 100 available channels is achieved by means of 2-10-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.

**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 18Hz 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-mouts and the MCE 94 can be used with phantom power or powered from a single AA battery.

**What are your highest expectations?**

MILAB

Pearl

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.

**Pearl**

The latest model from Swedish microphone manufacturer Pearl is the MSH10 which has electronics that are the same as the well-known MS BCL, 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**

**Audio Engineering**

**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 tomms, featuring a maximum SPL rating of 148dB 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 A88D 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.

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 LectroNet software and RS-232 computer interface. Extensive audio signal processing includes dual-band compander, 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.

Pastega offers improved pocket UHF

A new design for Pastega's UHF pocket transmitter features a PLL synthesiser with 16 switchable frequencies in a broad switching-range of 258kHz, 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.

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 shockmount. Retained from the original are the hand-selected military spec GE 6072 valve and the Jensen output transformer.

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.
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 RE901, 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.

Rycote in suspend

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 also has 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 rattling. The cable needs no special dressing or positioning.

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 headend telecom and voice-driven applications.

Reader Response No. 034
**Royer: new brand in ribbon mics**

U.S 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 microphone 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.

**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 BQ3.1 capsules, while the body packs have either WL93 mini-lapel condenser, dynamic VH120 headset or flying lead for use with musical instruments.

**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 of 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 weight is 450g and the support tube can be adjusted to between 55cm and 1m above the operator's waist.

**ADK mic**

Built in China but based unashamedly on what the company describes as 'German design features', ADK's AS1 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 an 85Hz roll-off and switchable 16dB pad.

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Reader Response No. 035

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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-735 UniPak Transmitter System is made up of the ATW-773 true diversity receiver and ATW-T75 body-pack transmitter.

A wide selection of Wireless Essentials mics and cables are available for the ATW-735 UniPak system including lavaliers, headset, goosenecks and installed-sound microphones.

AT U898 launched

New to Europe is Audio-Technica's AT898 stereo condenser boundary microphone, designed to provide full, natural stereo ambience and sound reinforcement. It is an X/Y stereo microphone with full mono compatibility, and features two wide range UniPoint elements giving a frequency response of 30Hz to 20kHz and SPL handling at 137dB.

Audio-Technica 769
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, AV 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 goose neck microphone with double rubber suspended capsule, allowing 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.

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.

Apogee join SSL

Apogee Electronics has announced five significant developments in 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 B-channel, 24-bit converter, 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$895. Other cards available for the AD-8000 interface include ADESBU, SDFD-2, Pro Tools, ADAT, TDIF and ST Optical. Another introduction for the AD-8000 is an AMBus-SDIF-2 card and wiring harness for DASH format multitrack recorders, such as the Sony 33-18. Apogee points out that the HR version of this recorder can be bought without converters, making the AD-8000 particularly attractive to potential purchasers.

The 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.

JoelMeek C2 compressor launched

Claiming to offer the home recordist the same big sounds that the JoelMeek 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 photonic 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.

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 invar 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.

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JOE MEEEK 1999

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Reader Response No. 036
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, decracker 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 decliker and Cedar De-Click for the SADIE digital audio workstation are also available.

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 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 Valves 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.

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 TCX'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 L-Os enable simultaneous recording of processed and unprocessed vocal signals.

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.

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 96kFz AES-EBU 1-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 onboard 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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Reader Response No. 037

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SUMMER 1999
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
- 32, 44.1, 48, 88.2 or 96kHz in/out sample rate
- multi band 'Bootstrap' compression
- multi band expansion & limiting
- five band digital EQ ±18dB
- multi band variable tube modelling
- de-essing • auto fades
- dynamic EQ with full band compressor
- gain normalisation for maximum loudness
- three band stereo width
- expert factory patches & user memory
- PCMCIA slot for parameter transfer
- word clock in/out • midi in, out & thru
- AES/EBU, SPDIF digital in/out • XLR analogue in/out
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 TU 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 0.1 dB, with filter frequencies adjusted in 1 Hz steps.

Junger Accent

Junger Audio’s latest products offer 96kHz/24-bit processing and are the Accent1 and Accent2. These feature a figure eight audio chain for expander, compressor, filter, de-easer 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.

Quanteck Yardstick

Quanteck 2402 Yardstick reverb processor is a compact 1U that employs simplified QRS (Quanteck Room Simulator) algorithms, variable high cut filter, digital I-0s, and preset and firmware handling via RS232 or MIDI. There’s also a remote and blank panel slave version.

Behringer multifunction signal processor has SHARK bite

The SHARK DSP10 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.

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.

A Dual Classic

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.

World wide representation:

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Reader Response No. 039

What’s new in Pro Audio

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Winter 1999
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FREE ENQUIRY SERVICE

WHAT’S NEW IN PRO AUDIO
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.

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.

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.

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.

What's New in Pro Audio

USE OUR FREE ENQUIRY SERVICE

Reader Response No. 040
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.

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 M11X 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 (or '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.

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 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 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 back-up compatibility with almost all Eventide's 4000 series presets and cards.

Reader Response No. 041
How the What's new in Pro Audio service can benefit you

It's more than a new product digest

1 'Short and sweet' stories give an instant product overview

2 Each story is accompanied by a unique identifying code

3 Use the card at the back to enter the numbers you are interested in, plus your contact details, to receive details

It's really that easy!

DS800

Active Mic/Line Distribution System

Building on the phenomenal success of the DS800, 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 gain 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 clipping.
- Exceptional dynamic range.
- Headphone 'Listen' facility, which can be expanded when using multiple units.
**White Instruments**

ParaMedic 26 and ParaMedic 24 equalisers have 'matr ixable' 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.

**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, phase 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).

**Sony 1U MD**

Sony's MDS-E11 MiniDisc recorder is a 1U that boasts a full complement of professional facilities. It can send 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 playout and edit 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 play out 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.

**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.

**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.

**Doremi has MPEG2 recorder**

The V1-MPEG2 recorder features MPEG2 compression with up to 50Mbs 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).
TASCAM DAT

2 new performance standards for studio professional DAT.
2 new professional DAT recorders.
2 choices of digital resolution.
2 choices from the first name in professional DAT recording.

TASCAM DA-40

The amazing new TASCAM DA-40 introduces higher levels of performance for 16 bit digital mastering at a more competitive price than ever before. Powerful new menu driven operating software, extensive analogue and digital inputs and outputs, and a brand new high performance servo controlled proprietary transport.

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/o's 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.
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

HHB CDR850 Plus
HHB'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.

HHB 815

MediaFORM offers 175 discs a time

MediaFORM's CD-3706P can duplicate and print up to 175 discs before having to be refiled. Copying can 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 Easy Dat and Easy 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.

Quad DAT recording

The QCI quad-channel interface from Ambient converts a DAT recorder into 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 tape 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 clock 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 Clockkit 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

Perfect Partners for production and live use

DN-M1050R MiniDisc Recorder/Player

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

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

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

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

DN-C680 CD Player

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HAYDEN LABORATORIES, CHILTERN HILL, CHALFONT-ST-PETER, BUCKS SL9 9UG. TEL: 01753 880109 FAX: 01753 886447
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.

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.

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
Telephone: 01386 793699 Facsimile: 01386 793688 Email: totalaudio@aol.com

Sony is a registered trademark of the Sony Corporation
Fostex releases rack CD-R/W

The CR300 from Fostex is a rackmount CD-R and CD-RW recorder featuring professional features such as 4 CD-RW erase modes, digital fade in/out, three modes of copy bit selection as well as support for FDMS (Fostex Disk Management System) backup. A full complement of digital 1-Os including AES-EBU input and SPDIF is provided, together with a built-in sample rate converter, for making CD masters from DAT or MD media.

Trace Services CD printing

Direct printing on to CDs is catered for by the latest addition to Trace's range, the Affex CD Artist, designed for high quality six-colour low-volume desktop CD printing. Its electronic sensors and unique tray loading design ensure registration accuracy of +/-0.005 inches and can print 72 CDs per hour at 360dpi on a 25% coverage. The resolution goes as high as 1440x720dpi for photo-quality imaging.

Nagra-kudelski DSP-2 for ARES

Nagra-Kudelski has launched DSP-2 for the ARES-C and C-PP solid state recorders, so updating a number of functions. Principal improvements include an extension in recording time to beyond two hours, due to support for 64M+ PCMCIA cards.

Simultaneous live speech encoding and playback are now possible, allowing commentary to be mixed with previously recorded material for ISDN or phone transmission.

DSP-2 also automates selection of the most suitable compression standard, and adds titling and time/date stamp capabilities.

The new processor board and software update is standard on new models and can be retrofitted to earlier models. The C-PP variant of the Nagra recording system offers the PCMCIA recorder and editor features of the ARES-C, integrated with an ISDN codec.

HFB 80 minute MiniDisc debut

In acknowledgement of the strides made by the MiniDisc format, HFB is now offering the first 80 minute MiniDisc available outside Japan and the first 80 minute professional audio MiniDisc anywhere.

The MD80 achieves its extended running time by reducing the groove width and pitch by 0.1 microns each while remaining fully compatible with all recorders and players of whatever age. Performance specifications remain the same as for the MD74, including the block error rates which are claimed to be ten times better than some consumer discs.

Otari copiers

Believed to be the first, new DP-10 series of copiers allow 8x or 16x copying of audio cassettes from CD, eliminating the need for more expensive digital sources such as hard disk or large-scale RAM. The standard machine has two CD-ROM drives to allow simultaneous duplication of the A and B sides but there is also a reduced cost model with one CD-ROM drive and an automatic break point between the two sides. The standard model buffers read from the CD before feeding it to two cassette copy drives. If read errors are detected, the DP-10 will re-read the offending section until readout is successful. Providing the buffer does not run out of capacity, the duplication process will not be interrupted. Standard audio CD or CD-ROMs recorded with wave files can be used.

DP-10 will apparently connect to all Otari in-cassette copiers and the new system is said to be as easy to use as the more conventional copiers.

Stellamaster

Sonosax has introduced the Stellamaster, the first postproduction DAT machine to be compatible with the StelladAT II and including Sony 9-pin protocol. The 19-inch, 2U rackmount is fully compatible with two or four tracks and 44.1, 48, or 96kHz sampling rates. A variety of new options are available for the StelladAT II portable DAT recorder which is available in 2 or 4-track versions with a 4-channel mixer and features optimised for film.

For further product information use our free enquiry service.
Using BASF ADAT Master you can bring out the best in your system: excellent recordings and – thanks to preformatting – a time-saving. BASF ADAT Master is the preferred choice when it comes to good running properties and extreme reliability when performing critical edits. The antistatic shell reduces tape contamination and offers precise tracking. In addition the patented erase-lock tab protects your valuable recordings longterm from accidental erasure. Give your studio recordings more format – with BASF ADAT Master! Available in 40 and 60 minute lengths.

Further Information from EMTEC Magnetics UK, tel. 07990 546900 or on the Internet: www.emtec-magnetics.com

Reader Response No. 046
PMC debuts floor unit

Closing the gap between home theatre and postproduction with DWD 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 T81 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.

Rooster 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.

Rooster'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.

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 Filttec (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.
'I've been expecting you' the album: Mastered and listened to in Robbie's front room on PMC.
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.

New ATC for millennium

ATC's new SCM70 SLI 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, programmsensing, auto power off and infra red control. All the drivers are new, and comprise a 234mm Super Linear bass driver, a Mk2 midrange done with improved waveguide, and a 25mm tweeter reaching beyond 20kHz.

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.

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.

Reader Response No. 050

WHAT'S NEW IN PRO AUDIO
ACTIVATE YOUR VISIONS

Welcome to an oasis of real satisfaction, where your thirst for the Whole Truth and Nothing But the Truth will finally be quenched.

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

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

In the U.S: please contact: Genelec Inc. 39 Union Avenue, Sudbury, MA 01776 Phone 508/440-7520 Fax 508/440-7521 International enquiries: Genelec, Olvitie S, FIN-74100 Ilisalmi, Finland, Phone +358-17-813311, Fax +358-17-812267 Web: http://www.genelec.com

Reader Response No. 051
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 DHZ210A titanium diaphragm compression driver and High-Q 60x40 constant directivity horn for extended mid-range and HF reproduction, coupled with EV’s 15-inch DL15FHE 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.

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 10348 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.

COLOSSUS

THREE NEW SOLUTIONS

12MB-450 • 15B-600 • 18B-600
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 Sonoriza, 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

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Mike Klasco • UPA-IP Review • DJ Times Magazine, May 1998

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Reader Response No. 054
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 midtown, 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.

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 vested, dual-chamber configuration that yields a -3dB point at 20Hz.

The midrange frequencies are reproduced by two 5-inch high sensitivity direct radiating core 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 produce 300W, 600W and 2x 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 TFL115SP 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 cabinet variations 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, igrosscopically precise and Nomex surround. The cabinet is constructed from plywood, finished in cinder carpet and incorporates a metal grill, stand adaptor and reliable handle.

Proel 839

Radian cox

The S208B 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-ward voice coil for which the manufacturer claims a sensitivity of 96dB at 1W/m.

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 47SP/B 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

Questa 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 trimmings, 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.

Questa 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 casings and a 1.4kW peak handling capability.
The DS-15 has become a unique loudspeaker system, adaptable to any sound reinforcement application, from fixed installation to PA.

Using an advanced injection moulding technique, D.A.S. Audio has achieved what most are still dreaming of: to combine a functional and attractive design with exceptional sound and performance.

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Reader Response No. 055
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 RCE which has 50 years of speaker experience, the SRM450 features a 2-way biamped, 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 unobstructed sight lines and optimised stage monitoring performance.

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 ultra-thin, 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.

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