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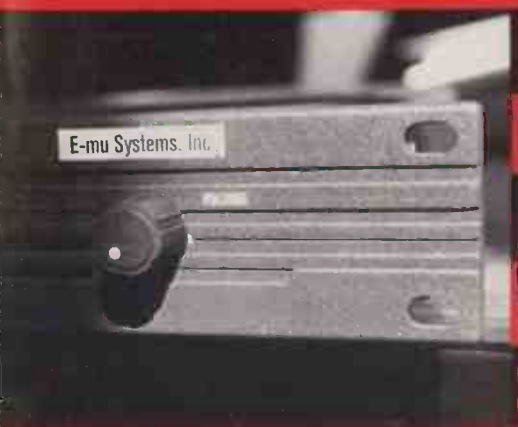

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editorial

MIME ARTISTS

WHAT DO YOU understand by the term "live"? OK, now what do you understand by the term "live" in a musical context? Perhaps you envisage some ambitious stage set with elaborate lighting and a band of real *live* musicians giving their all to a frenzied audience. It could be that your idea of real *live* music is a handful of musicians (any religion - rock, jazz, folk. . .) with music in mind rather than stardom or riches, playing their souls out to a pub audience. If you're in touch with the way artists are taking hi-tech gear into nightclubs and playing *live* the sort of music a DJ might otherwise provide, the picture may well be one of a couple of guys sweating over their gear while the clubbers dance the night away. Let's agree that the key element is that of people being directly responsible for the music being made.

"Studio" music, on the other hand, is made - probably pieced together, rather than "performed" - without the interaction of an audience. Inferior music? Different, certainly. More polished, probably. Again, let's agree that both forms have their strengths and weaknesses.

But what happens when "studio" music has to make the transition to "live" performance? There are many examples of this happening, and almost as many different degrees of success, failure, justification and inexcusability. Genesis sell millions of records - refined from endless studio sessions - and then pack out stadium gigs across the world; Stock, Aitken & Waterman manufacture their chart success and then send out their "stars" to perform in front of hysterical fans...

But Britain's television channels - notably the BBC with *Top of the Pops* - seem to have a unique definition of live music. Only on programs such as this can artists appear "live in the studio", mime badly to their singles and walk away with their integrity apparently intact. Granted, this situation is hardly new, and it's not the first time it's worked against the music being showcased through the medium of television, but it's happening and it's hurting.

Years ago this parade of mime artists was used by a disapproving older generation to discredit the music "they can't even play" was the cry (and in the case of the Dave Clarke Five they were right). Now, with sampling and sequencing playing a major role in popular music, the mime artists are all the ammunition its critics need. And, in part at least, they're right.

Settle down in front of "Europe's biggest pop programme" on a Thursday evening and watch the parade: the girl fronting Black Box miming to samples she has never sung, the drummer behind Jamtronik miming to the beat of a Roland drum machine, the girl fronting JT and the Big Family miming to snatches of Soul II Soul and the Art of Noise. . . If it's a sample we're hearing, why pretend some black model is singing it? And if sampling and sequencing are valid musical forms, why should it be necessary to represent the use of a sampler with a singer? To provide a "performance" for the audience to witness? If so, what sort of performance advertises an artist's inability to produce the music they're claiming responsibility for?

If sampling in this form is to be accepted as a legitimate musical technique - and I'd venture it's as legitimate as any other if it's used creatively - then presenting it in such an insincere and unconvincing way is only going to feed its critics and delay its acceptance.

If, on the other hand, sampling is a musical gimmick whose only purpose is to provide the record companies with another means of conning a public they claim to be serving, let the show go on. *Tg*

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The musician's choice

We asked several top players what they would specify if they had a chance to design their own keyboards. They wanted high quality, modern presets, and the ability to edit and save them, even during performance. A simple and logical front panel, so they could easily get the best out of the instrument. Naturally they looked for recording as well as performance flexibility, with inbuilt effects plus pitch-bend and modulation controllers.

The Rhodes Model 660 and 760 are professional instruments designed to make the keyboard player's life that much easier. Specific performance functions include harmony, chase and arpeggio, while both models employ 24-bit processing, which means genuine recording quality on stage or in the studio. 30-voice polyphony caters equally for split and layered sounds or for six-part multi-timbral patches including drums. The end result? A new realm of keyboard creativity.

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As your MIDI studio expands, MIDI management becomes more and more important. Vic Lennard investigates an 8x8 MIDI patchbay that could make your music more important than your MIDI leads.

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The gear piles up in your home studio, and you realise you can't manage another mix without a decent desk - but how can you afford it? Nigel "Mixmiser" Lord puts Fostex' budget desk through its paces.

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Washington DC is the home of one of the world's most powerful, yet under-recognised dance rhythms. Nigel Lord goes for go-go in MT's unique drum-programming series.

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If you're looking to expand your sampler's vocabulary of drum sounds or your D50 library, Patchworks' Drumtrax sample tape and PA Decoder's D50 Rom Volume III should be worth checking out - start here.

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SCHOOL'S IN

It's nearing that time of year when musicians flock to Brighton, not to indulge in its beaches and piers, but for *Brighton Rock '90* (not edible). This year's Rock and Pop Summer School is being held at The University of Sussex, between the 19th and 24th August.

Brighton Rock is being sponsored by the Musician's Union, with equipment loans courtesy of Roland (keyboards), Akai (samplers), Allen & Heath (16-track recording), Shure (microphones), Remo (drums), TOA (PA systems) and Carlsbro (amplification).

The declared aim of the course is to explore "different ways of playing or singing, working with a variety of approaches to using technology and recording, and understanding a wealth of practical and credible advice on surviving the music business jungle". Course activities include, instrumental classes with professional tutors, tutored band performance, pop and rock song composition and arrangement, music business and media discussions. Named artists, such as guitarist Deirdre Cartwright (of BBC TV's *Rockschool* series), drummer Richard Marcangelo (session player with Chris de Burgh and Chaka Khan) and producer/technologist Mick Parker (Santana), will work with students, with music business and media seminars to be held by John Walters (senior producer at Radio 1) and Mark Melton (Music Business Adviser to the MU), amongst others.

Brighton Rock '90 is now open for bookings from all students 16 years old or above. Residential fees are £210, with a £90 deposit, and non-residential fees (available to students living within 15 miles of the university) are £150, with a £70 deposit. Early application is encouraged as enrolment is limited to 100 students.

For further details ring Angie Oxley (Course Director) on (0273) 678019, or write to Brighton Rock '90, University of Sussex, Arts B, Falmer, Brighton, East Sussex BN1 9QN.

Along similar lines, the Guildhall Summer School are running a variety of music courses between the 23rd July and 3rd August 1990.

The One and Two-Week Jazz, Rock and Studio Music courses include work in jazz and rock bands, big bands, vocal ensembles, improvisation, harmony, and vocal/instrumental tuition.

The Recording Engineering workshop (29th July-3rd August) allows small groups of students to study multitrack and live recording. No previous experience is required and tuition fees are £160.

Enrolment may be guaranteed by full payment or payment of a deposit if applying for one or two week courses. Outstanding fees must be received by the 15th June 1990. Applications after this date must be accompanied by full fees. Bed and breakfast accommodation is available in nearby single or double rooms at £15.50 per night.

For further information contact Heather Swain (Co-ordinator), Guildhall Summer School, Guildhall School of Music and Drama, Barbican, London EC2Y 8DT. Tel: 071-628 2571. *Jm*

SOUND PAINTING

Argents have announced that they will be distributing Deluxe Recorder sequencing software for the Apple Mac from Electronic Arts. Deluxe Recorder offers 16 tracks assignable across 32 MIDI channels, programmable quantisation, internal and external synchronisation, and detailed editing options via different graphic editing windows. The package supports MIDI File format, and recorded files can be exported to Deluxe Music Construction Set, Electronic Arts' music engraving software.

With a retail price of £99, including VAT, Deluxe Recorder looks like a good deal for Mac users (paint brushes ready).

For more information, contact Lindsay Bridgewater, 20 Denmark Street, London WC2H 8NA. Tel: 071-379 6690. *Jm*

MIDIVARIUS

Following MT's recent three-part series on alternative MIDI controllers, *The Performing Art*, readers may be interested to know that Zeta Music Systems' MIDI violin is now distributed in the UK by Harbour Town Distribution Services.

Zeta violins are available in four- and five-string versions, their bodies having traditional contours for playing ease and familiarity, while the Zeta VC225 Violin MIDI Controller (£1173) opens up the world of MIDI to the violinist. It converts the violin's output to a MIDI signal, such that very complex musical scores can be created, recorded and edited on a sequencer in the same way as with synthesisers.

There are four ranges of Zeta electronic violins: The Classic maintains the playing surface and dimensions of the Stadivarius-patterned instrument. The CV214 (four-string) and CV215 (five-string) retail for £1303 and £1477 respectively. The Jazz range is responsive to all playing styles, and designed to facilitate reaching all positions and increasing playing speed. The JV204 and JV205 retail for £1173 and £1303 respectively. The Country CWV204 and CWV205 models are the same as the Jazz in all ways, including their prices, except for the finish, which is a warm gold-to-brown sunburst. Finally, the Journeyman is aimed at those who crave the look, feel and hollow body of the traditional violin. The JMV224 and JMV225 models retail for £738 and £869 respectively.

A Zeta MIDI retrofit kit is also available for traditional acoustic violins, these being the VR204 four string (£330) and VR205 five string (£399). Other Zeta accessories include the VEQ201 Violin Equaliser/Pre-amp (£582), the MFS40 Footswitch, for the VC225, (£199) and the VMC20 Violin Multi-Cable.

Zeta also manufacture a range of MIDI guitars and associated peripherals: The Zeta Mirror 6 MIDI Guitar Controller System is available as standard (£2173) or deluxe (£2782), the deluxe version having the Accelerometer (a MIDI continuous controller affected by the motion of the guitar), Breath Controller Interface, and AmpTrak Synthesiser Dynamics Processor (allows control of a synthesiser's audio output in direct proportion to the decay characteristics of the guitar envelope) installed at the factory. These options are available separately for £77, £77 and £234 each respectively. Bassists need not feel left out since Zeta also have the Prism MIDI Bass System. (All prices exclude VAT.)

Contact: Harbour Town Distribution Services, 71 Thornton Road, Manchester M14 7NU. Tel: 061-225 5647. *Jm*

ATARI SOUND TOOLS

Following the success of the Mac-based Sound Tools hard disk editing system, Digidesign have announced a version for the Atari ST Mega4 - Sound Tools AT. Although the system comes complete with a 16-bit A/D converter, users wishing to keep the signal in the digital domain can use the DAT I/O which will interface with DAT and AES/EBU digital recorders. Sample rates of 32kHz, 44.1kHz and 48kHz are supported and a full sample rate conversion facility is available.

Audio material can be non-destructively edited or "cleaned up" ready for digital mastering. Typically the system requires 10Meg of memory for each minute of stereo audio so a complete CD can be compiled and edited on the system. To communicate with other recording devices, Sound Tools AT syncs to SMPTE via MIDI Time Code allowing the sound file on a hard drive to lock to any SMPTE position.

Sound Tools AT is also expected to be integrated with C-Lab's Notator very soon and although the system will be a force to be reckoned with, it's claimed to be easier to operate than the average synth. Cost of Sound Tools AT is £1995 including VAT.

More news from Digidesign includes multitrack facilities for the Mac version of Sound Tools, a Sound Tools Utilities Disk (STUD!) and a Mac E-mu Proteus card.

For release in May, the Mac Proteus is a NuBus card for the Macintosh II family of computers. It boasts all the same 192 sounds, 32-voice polyphony and 16-part multitimbrality of the original but effectively becomes part of the Mac. Cost is expected to be around £900 including VAT and Opcode's Proteus Editor and EZ Vision sequencing software.

Deck is a 4-track digital recorder for users of Sound Tools and Audio Media hard disk recording systems. The system features automated mixing and muting, DSP infinite track bouncing with no degradation and the ability to import a MIDI File that will allow your MIDI sequences to be played back at the same time as recording and playing audio. Cost - a mere £349 inc VAT.

Finally, STUD brings three utilities to Sound Tools: Masterlist, Live List and DATa. Masterlist allows you to arrange Sound Files (complete with gaps and post-roll times) off one or many hard drives for compiling CDs or records. Live List allows MIDI note commands or keystroke commands to trigger Sound Files. This facilitates easy flying in of audio during recording sessions and live performance. Meanwhile, DATa allows you to store Sound Files complete with edits and EQ on DAT tape via Sound Tools' DAT I/O.

Also brand new at Sound Technology is the EVS-1 synthesiser from Evolution Synthesis. The EVS-1 is a low-cost, rack-mounting module with drum and percussion samples, and will be available from the beginning of June. It is designed to bridge the gap between analogue and digital sounds, and to this end the use of digital technology guarantees tuning stability and freedom from drift , while the use of algorithmic multi-synthesis allows sounds to be created intuitively.

Each EVS-1 will be supplied with

an Atari-based editor/librarian and a large selection of library patches. Add to this eight-part multitimbrality, up to 16-note polyphony and a retail price of £299 including VAT, and you've got what sounds like an interesting package.

More information is available from Sound Technology, 17 Letchworth Point, Dunhams Lane, Letchworth, Herts SG6 1ND. Tel: (0462) 480000. *Tg*

SIMMONS ON A ROLL

"It had to happen" says the MD of Simmons Professional Products Ltd, Jennifer Mallows. The "it" is the creation of a new division of the resurrected Simmons company. The new division has been set up to design and support new equipment for the music industry - including video and film people.

Initially SPP will be concentrating on the mighty SDX (each new SDX will come with 1-2 days free training), launching DSXpander, a hard/software upgrade enabling the SDX to become an 8-track direct-to-disk recording system. Soon to follow is Mini Xpander which is a scaled-down version of SDXpander designed for use with or without the SDX itself, and aimed at both pro and home studio setups. Also on the books is a relaunch of the Silicon Mallet MIDI percussion controller and a ZI-to-MIDI system intended to enable non-SDX users to use Simmons' Zone Intelligent drum pads in conjunction with their MIDI voice modules.

SPP are proposing 24 hours a day, seven days a week support for their clients - now that's professional. *Tg*

THE KEY

Keynote Software have been pretty busy expanding the range of libraries available for their Chameleon universal patch librarian (reviewed MT, December '89). Amongst the many instruments now covered by Chameleon are Yamaha's SY77, Roland's U220, Korg's M1/M1R/M3, Ensoniq's VFX, Kawai's K4, Cheetah's MS6 and E-mu's Proteus XR. And the list is still growing.

Further details, including a complete list of instruments catered for by Chameleon are available from Keynote Music Software, Freepost, Radstock, Bath BA3 3YA. Tel: (0761) 32610. *Tg*

HEAVENLY VOICES

American programmers Sound Source Unlimited have produced 256 new voices on four disks for Yamaha's flagship SY77 synth.

California Collection offers LA studio staples, including strings, pianos, organs, basses, and "mood textures", currently in vogue with bands such as Depeche Mode and The Cure. *Alchemy Collection* offers Fairlight simulations, Synclavier emulations and sounds unique to the SY77. *Manhattan Selection* gives a choice of classic FM-style voices and authentic analogue sounds, complete with filter sweeps. *Platinum Collection* gives a selection of popular LA, AI, and FM sounds, including grand pianos, brass sections, strings, guitars and atmospheric textures. This varied selection is geared towards the professional or semi-pro gigging musician.

Each disk retails for £30 and features 64 voices, 16 multi-voices, and a demo sequence. In addition to these, and available free from dealers, is a library of the best voices from European pro-grammers. The *European Selection* adds a further 64 voices to the growing SY77 disk library.

More information from Martin Tennant, Yamaha-Kemble Music (UK) Ltd, Mount Avenue, Bletchley, Milton Keynes MK1 1JE. Tel: (0908) 371771 Ext 299. *Jm*

SOUNDS RADICAL

Microdeal, manufacturers of the Replay and Replay Pro budget sampling software for the Atari ST, have announced the imminent release of The Radical, a MIDI interface for the Commodore Amiga 500/2000.

This will be available from the 23rd April (at time of going to press) for £24.95, including VAT.

For more information contact Tony Shemmans at Microdeal, PO Box 68, St. Austell, Cornwall PL25 4YB. Tel: (0726) 68020. *Jm*

ATARI BABY

The first ever Atari Show will be happening from the 1st to the 3rd of June this year. It will feature a MIDI Village as well as lots of other attractions, including keyboard manufacturers, demos and workshops, and of course, MT will be there on our own stand. Admission to the show, which takes place at the Hammersmith Novotel, London, is £2 or £4 for a family ticket. The show will be open from 10am to 6pm daily. See you there. ***Dp***

TESTING, TESTING

Bruel & Kjaer have released a special reference CD comprised solely of music recorded using their Series 4000 omni-directional and cardiod microphones.

The 69-minute CD compilation covers a broad spectrum of musical styles from Little Feat to Mahler, and features a series of performances highlighting the individual sonic qualities of guitar, piano, and percussive instruments. The CD also includes a useful range of test tones to check loudspeaker frequency response and phase.

Interested parties can obtain a copy by writing to Ralph Dunlop at Bruel & Kjaer Pro Audio, Harrow Weald Lodge, 92 Uxbridge Road, Harrow, Middx HA3 6BZ. *Jm*

SONIC SOLUTIONS

London's famous Abbey Road studio complex was the venue for the unveiling of a new system that allows audio professionals to edit and mix a master recording and then make their own CDs for a wide range of broadcast, reference, and archiving applications.

Developed as a result of special co-operation between Sony and Sonic Solutions of San Francisco, the system is the first to produce "red book" standard CDs, capable of playback on any domestic CD player. Sonic Solutions are the developers of the Sonic System, a Macintosh-based workstation for digital editing, digital mixing, and CD master tape preparation. To produce recordable CDs, it is coupled with the the Sony CDWW1 CD recording unit, an encoding and recording system developed by START Lab, a joint venture between Sony and Taiyo Yuden. Using the latest Write Once optical recording technology, the CDWW1 is able to produce standard audio discs and also CD ROMs for business and commercial use. The CDs produced by the system can be up to 74 minutes in duration and are recorded in real time.

With the blank disc media costing £29, a basic Sonic System/CD Maker can be configured for under £40,000, excluding the Mac. The CDWW1 and encoder cost under £16,500 and additional CD Makers can be daisy-chained from a single encoder at £10,000 per unit.

Further information from Aldo Liguori, Sony Broadcast & Communications (Basingstoke). Tel: (0256) 483 3366. *Jm*

MIDAS MILAB

MT readers may be interested in a special deal on the new Milab D37 Dynamic microphone, whereby they can be purchased for £99 plus VAT, which is less than half the normal professional user price.

The D37 is ideally suited to many applications and is currently the focus of UK distributors Klark-Teknik's campaign to increase the awareness and recognition of this Swedish manufacturer. This special offer will extend from May to July 1990, so get in while you can.

Other Klark-Teknik goodies soon to be displayed at this year's APRS Exhibition will include: The DN504 quad compressor/limiter and the DN500 advanced dual gate and quad auto gate, offering a combination of variable knee compression, Independent limiter, clipper, and a variable ratio expander/gate. The Midas XL Two auditorium console takes up the minimum of space whilst offering high specifications and is aimed at hire companies and live sound engineers working in broadcast, theatres and auditoriums. It weighs in at a cool £31995 excluding VAT (every discerning MT reader should have one). The rackmounting Midas XL88 Matrix has been designed to complement the XL Two and brings even greater flexibiltiy to users. Price to be announced.

For further information contact David Webster at Klark-Teknik Research Ltd, Klark Industrial Park, Walter Nash Road, Kidderminster, Worcs DY11 7HJ. Tel: (0562) 741515. *Jm*

COLEMAN BALLS

Apologies for boobs in May's MT are awarded to The Synthesizer Company - Zoom Corporation Products are being distributed by sister company MCMXCIX (9 Hatton Street, London NW8 9PR, 01-724 4104/01-258 3454) not TSC as stated - and Digital Music, distributors of Magnetic Music's Prism sequencing package, who can actually be contacted on (0703) 252131. We said we wouldn't mention it but the Twelve Tone Sound Globs composition program was instrumental in the creation of the soundtrack to a forthcoming horror fantasy film *Shocker* (from the same stable as *Nightmare on Elm Street*). From the reaction it's already received in the States, be there and be scared. *Jm/Tg*

TRANS-EUROPE FOSTEX

From 1st May 1990 Fostex UK Ltd, the first wholly owned European subsidiary of the Japanese Fostex Corporation, will commence operation. Fostex UK takes over all sales, marketing and servicing of the Fostex range from Harman (Audio) Ltd after a mutually successful association with the Fostex Corporation.

Located in brand new offices and warehouse facilities in South West London, Fostex UK will kick off with a team of 12, headed by General Manager Oz Hornby. All existing dealers in the network set up by Harman will be invited to re-apply for dealership. New applications will also be welcomed.

The new decade also heralds the launch of new Fostex equipment: the G16, the third generation half-inch 16-track recorder and successor to Fostex's popular E16, is due to be launched at this year's APRS Exhibition. Building on the success of the R8 concept, the G16's front panel tilts and detatches to provide full remote control of every function. It additionally offers an optional, built-in synchroniser with a generator function so the G16 can feed SMPTE at fast wind or play mode to external units, and also responds to MIDI time code commands if required. Price to be announced.

The Model 280 Multitracker is a microprocessor-controlled cassette-based 4-track. It has 8 inputs (channels 5 to 8 being free line inputs), 2 auxiliaries for effects, bar graph metering and employs Dolby C noise reduction. A rear panel serial link to the optional Fostex MTC1 adaptor (price to be announced) provides a direct MIDI time code interface with sequencers, designed to offer integration with the latest in recording and editing software packages - particularly Steinberg's Cubase. The 280 will be priced at £520 excluding VAT.

The Model 812 is a 12-channel production mixer with MIDI. This 12:8:2 unit features in-line monitoring, which doubles up as extra auxiliary sends at mixdown, three bands of EQ, panel inserts at each channel for direct connection to external effects, and is designed to complement the R8 8-track. The 812 will retail for £910 excluding VAT. With the optional 8200 MIDI mute module (price to be announced), the 812 can be partially automated.

Remaining on the mixing front, the 2U-high rackmount Model 2016 Line Mixer is essentially two 8:2 mixers in one unit. Each input features level, pan and two post-fader aux sends. The 2016 has front and rear input jacks and could be used as a stand-alone keyboard mixer or for augmenting existing mixers or multitracks. Retail price is £260, excluding VAT.

The Model 4020 Event Controller is 8-circuit, offering extensive support of event management. It can trigger or switch anything from audio through to lighting, locked up to time code, and will set you back £795 excluding VAT.

Finally, the Model 8320 Intelligent Control Unit is a remote controller offering all the features of Fostex's D20 R-DAT recorder. Price to be announced.

For further information contact Richard Wear at Fostex UK Ltd, Unit 1, Jackson Way, Great Western Industrial Park, Southall, Middlesex UB2 4SA. Tel: 081-893 5111. *Jm*

EMU PROTEUS

Proteus can literally take sounds apart and reassemble them into a limitless number of entirely new sounds. You can combine parts of one sound with another or with any of a selection of digital waveforms also stored in Proteus' ROMs. Proteus sounds aren't just sample "snippets", these are full blown multi-samples.

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In short, it's a simple and inexpensive method of buying selected items. Simply divide the price of any article by 12 and there you have the monthly payment. Through mail order it is even more attractive; without leaving home it can all be done the same way! It must be said that the mail order system is designed to help people geographically "in the sticks" as regards good music shops, and is not intended to "steal" business away from any local store . . . as long as the local store supplies exceedlingly good cakes like ROLAND yummy), E-Mu (scrummy), ENSONIQ (slaver, slaver) etc. . get the drift? PHONE THE BAKERY on 0606-783629 for friendly recipes and advice !

S-770
Linear Digital Sampler

Specifcations
Data Format: 16-bit linear with the DL method ● Sampling Rate : 48k,44.1k, 24k, 22.05k ● Max. Polyphony": 24-voices ● Outputs: 6 indlvidual + stereo, Headphones, Digital Out (stereo) ● Inputs: Stereo in (balanced/unbalanced), Digital in (stereo), Footswitch ● Signal Processing: 24-bit processing TVF (LPF, BPF, HPF) TVA. Ring Modulation ● A/D Conversion: 16-bit ● D/A Conversion: 20-bit ● Wave Memory: RAM Standard 2Mbyte (Max. 16 Mbyte when expanded) ● Max 18Mbyte (RAM and ROM total) ● Disks: 3.5 inch 2HD and 2DD, compatible with S-series libraries, 40 Mbyte, hard disc built-in, SCSI interface (for linking to external HD (80Mbyte, 100 Mbyte etc) CD-ROM system, magnetic optical disk, etc) ● MIDI: In/Out/Thru ● Controllers: Mouse, Remote Controller (RC-100) ● Display: 64 x 240 LCD and direct CRT (320 x 200 dot) connection option ● Options: Expansion RAM (14Mbyte), Expansion Wave ROM (8Mbyte), RC-100 Remote Controller, CD-5 CD ROM Player, Hard Disk Unit, CRT display.

* Specifications and appearance subject to change without notice.

PACKAGE SPECIALIST

(overheard in downtown Northwich . . .)
Fergie . . . "Hey Shuggsie, have ye heard aboot this spankers DIRECT TO DISC thingmyjig what's just come oot on the market? Does this mean I can play my Harry Leuler CD on my auld Dansette record player?"
Snuggsie . . . "Nah, ya bagpipe swallower, it's a mega contraption whit lets ye pit doon all that king awfy music ooyours richt onto a big disc thingmybob, then instead of hackin' away at your tape with your Stanley knife ye can wheeht it all aboot in the computer even tho' ye'll make an awfy mes cos it's non-destructable. . ."
Snuggsie . . ."Nah, Nah, it's all in a dijital dome thing . . . and whits mair ye can EVEN record yur violin straight onto it too!" . . .
Fergie . . ."Whit? See me I'm right confused; I'm goin' richt up to DOUGIE'S MUSIC and ask them galgie white happenin' . . . they've got one of them McApple computers and the software and . . ."
Snuggsie . . ."Haud yer horses, yer no goin' there, are ye? Last time I wiz there I came oot a pooerer man, I've never seen so many keyboards new & used in my life! Mind you that Dougie's a fair man but he drives a hard bargain, ye ken. . ."
Fergie . . . "Aye, I 've seen his car as well. . ." (fade to mumbles)

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SOFTWARE

C-LAB Creator/Unitor/Notator. Steinberg Pro 24/Cubase. Hybrid Arts. Software for ST and Commodore ATARI 1040 STE, Stacy Portable and Amiga Multi-tasking

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TWO NEW MUSIC COMPLEXES IN LONDON

communiqué

LETTER OF THE MONTH

out of the club

I am one of many thousands of Atari 1040 users in Britain running C-Lab's Creator software. I'd like to raise a cautionary point of warning to prospective ST purchasers.

I bought my 1040 STFM and SM124 monitor by mail order from Club 68000 in Kingston last year. After phoning the company to place my order, I was advised to send my cheque quickly as "supplies would be exhausted within two weeks". This I did, after first asking them to reserve a package for me.

Imagine my dismay when I phoned a few days later to enquire after the safe arrival of my cheque and was told that supplies had already run out. I was, however, promised a computer within a week, which satisfied me.

A week later my cheque had been cashed and there was still no computer. To cut a long story short, I waited six weeks for a computer that should have arrived in ten days. When it arrived, only half the "free" software was with it, but even more worrying were the stickers saying "Product of Neth"(erlands). I wrote asking if the warranty was valid: no reply.

To bring the story up to date, it's now six months on and the Atari has packed up. When I contacted Club 68000 there was nobody there, just an answerphone on which I left a message asking them to call me. No reply. I called again, was told that the person I needed was on another line and would call back. Three hours later there was still no call.

When I eventually spoke to Suzanne Brown she told me the computer would have to go back to the suppliers (fair enough) in *Holland* and this would take "about two months". I pointed out that I wasn't playing Space Invaders, but was a professional musician using a 1040 for my living. I asked if I could borrow a computer and was told they didn't sell them any more.

I then asked why it was necessary to send a computer from a UK office to Holland to be repaired and was told that Club 68000 had never dealt with Atari UK! The crazy thing is, Atari UK are willing not only to repair my 1040, but replace it. Club 68000, however, insist that it must go back to Holland. The battle continues.

So, I can only repeat what must have been said a thousand times before:
DON'T think cheapest is best.
DON'T buy grey imports.
DON'T pay until you're sure.
DO remember that after-sales service is worth its weight in gold.

Andy Boucher
Beats International
Brighton

soft going

Firstly, thanks a bundle for a great mag, of which I've been a reader for the past five years.

I am not what you may consider to be a musician. I bought my trusty SCI Sixtrak many moons ago, though it was considered an antique even then. But this chunk of low technology has given me four years of *fun*. I am not interested in gigs or record contracts, I "play" for my own enjoyment, and the faithful old wooden-ender has given me plenty of scope for this.

But times change, and so I decided to upgrade my old heap for a brand new, shiny plastic beast. I've still not decided what to get, the choice is endless (as well you know) but I've been stopped in my tracks by my purchase of a Commodore Amiga. What a brilliant piece of equipment this is, the graphics are incredible and the sound is nothing short of remarkable (alright, I can hear you S1000 owners sneering). So what have I got to moan about? There's no 'kin software for under £150.

As I said, music is just a hobby for me. I don't want to pay £200 for a sequencer, I wouldn't use half the features anyway. Why have Commodore failed to give a computer that is perfectly suited to sequencing applications the backup or software development it needs? Every time I read your mag there's yet another budget sequencer for the Atari. But where's the Amiga?

Gavin Wood
Overdrawn Student
Liverpool

You have my sympathy, Gavin, first Kenneth Clarke gives you a raw deal then Commodore leave you up the creek without a dongle. But you only have so much of my sympathy because choosing a computer is about more than graphics and internal sound chips. Would you buy a revolutionary new hi-fi system if there were no records to play on it? Or a revolutionary car that was still waiting for the fuel to be invented? Then why buy a computer before checking out the availablity of suitable software?

Fortunately for you, a fair number of programs are currently being ported from other machines over to your beloved Amiga (check out Dr T's KCS review in this issue and keep your eyes open for future Amiga coverage).

But why do you suppose the Atari ST has been branded "the musicians computer"? Is it simply because it comes with MIDI sockets already fitted? No, it's because the catalogue of software has built up to cover the needs of a wide variety of musicians. And once that software base is estabilised, it encourages more software writers to devote their efforts to an established machine.

I'm sure you'll find something to suit your needs and means in time, but you'll have to be patient until the software you're looking for puts in an appearance. **Tg**

won't get fooled again

Congratulations are in order to Tim Goodyer for producing what must be the best MT April fool ever.

After buying the mag this morning I read "Music of the Spheres" with great interest and excitement. Imagine actually being able to use the atmosphere as a loudspeaker! I started to look forward to "the first Sunday in April" and went to note it down in my diary - and there at the top of the page was "Sunday, 1st April". Click.

This is the first time I've ever been caught out by an April fool. If I hadn't looked in my diary I'd have been out there in the street at 11.30 waiting to hear music. I wonder if I'd have been in good company?

Andrew Purser
Altrincham
Cheshire

What, better than the the Zlatna Panega and Stig Miölssön? **Tg**

QUINSOFT TRAX

THE MOST ATTRACTIVE aspect of bringing a computer into your music is the flexibility of software. The idea of having a piece of non-dedicated hardware which - with the appropriate software - can be persuaded to perform a wide variety of functions is appealing both on philosophical and financial grounds. After all, why pay more than once for the hardware if you don't need to?

The obvious question that this situation throws up is "what can I get a computer to do for me?". The obvious answers include sequencing, editing and librarianship. Now Quinsoft have another, fresh option for Atari ST users to consider: studio "management".

If you're running your studio on a commercial basis then your accounts are probably just an unwelcome fact of life. But they're another job that your computer can help you with. And along with a selection of intriguing utilities, it's an accounting program that forms the heart of Trax.

Now, without getting into the finer points of accountancy (I've never been unfortunate enough to work in an accounts office), let's say that Trax is intended to be accounting for the musician - that is, it's not overburdened with the finer points of professional accounts packages (stock control, dual ledgers), but concentrates on making those that you need to run a studio accessible and understandable.

Trax comes on two single-sided disks, and will run on anything from a 520ST upwards (so that you could use a second ST to run Trax independently of your main "music" ST). Oddly it's Disk B that contains the Invox accounts program along with an address book (that comes with a very useful music industry listing). Disk A contains a tracksheet program and a program for indexing your floppies. Within these basic programs are contained a wealth of other useful utilities: Tracksheet contains Cuesheet, a Mixdown page and facilities for printing cassette labels and keeping an expenses list (which can be imported into Invox). To make them more useful both the tracksheet and the address book also come as desk accessories so that you can readily access them at any time during a recording session.

Tracksheet presents you with 24 boxes (representing tape tracks) into which you can enter the instrument name, MIDI channel, EQ and effects details, and a short note about anything you might need for reference. The Tracksheet accessory can share files with the main program, and so can be referred to while you're using, say, your main sequencing program for a session. Cuesheet allows you to run through a piece of music or video and enter "hit" or cue points as you go. These hits are stored and can be named to assist the construction of anything from a song to a TV jingle. Mixdown, meanwhile, displays no less than 48 sound sources so that you can augment your tape listing with details of anything from "live" MIDI instruments to a CD player or record deck. Under the heading Timing you'll find a beat calculator (which translates tempi into milliseconds for use with delays), a Time: Bars: Tempo facility (which readily converts between the three units for jingle or video use), video frame settings (24fps, 25fps, 30fps), a countdown clock (just like those you see before a film or TV ad for cueing) and a cue shift for Cuesheet. The countdown clock conforms to the pro video standard, will count down from up to 60 seconds and can be recorded from ST to VCR with the appropriate leads.

The Disk Index Archiver helps you to keep track of the programs and files you've collected on floppy disk - not only by allowing you to list the disk names against their contents, but with search functions and a remarkable ability to identify and list files with any extension you specify off any disk you throw into the computer's drive. In a tight spot during a session this function alone could justify your investment in Trax.

The Address Book isn't remarkable in itself, but it certainly could streamline your working day. In its "full" form (on Disk B) it allows you all the kinds of storing, searching and sorting you'd expect of such a program. But it also appears in Tracksheet as a fully working utility able to share files with the main program. On top of this, as with the Tracksheet accessory, the desk accessory version means you need never be without it as while you're using any GEM program.

Which brings us back to Invox. With this program you can manage all the necessary accounting and invoicing involved in running a small studio business. The program will handle expenses, keep a running record of costs incurred during a session (tape hire, cassettes, disks, tea. . .) and calculate tax where appropriate. What makes Invox so convenient to use for all these financial contortions is its file sharing. Once you've compiled one aspect of your accounts, those figures are available to the rest of the program where required.

Not only does Invox offer some sort of reassurance for the musician who's found him/herself having to deal with the taxman, cashflows and budgets - just because they wanted to run a studio - but the documentation comes with a host of useful suggestions about how to approach your accounting and how to get the best out of Invox. Just two words on the manual: comprehensive and concise.

On the surface Trax is a brave step for a new software company to take. But they've done their homework well and this package could be good news for many studios. If money isn't such a problem to you, Trax may be worth buying for the address book, cassette labelling and disk indexing alone. If in doubt, check out the demo on our software page.

■ ***Tim Goodyer.***

Price *£68 including VAT and p&p*

More From *Quinsoft Ltd, PO Box 68, Tadworth, Surrey KT20 7EP. Tel: (0737) 243066. To order Trax or any other Quinsoft software, contact E.S.P Software, 32a Southchurch Road, Southend-on-Sea, Essex SS1 2ND. Tel: (0702) 600557.*

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YAMAHA

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Yamaha SY77 NEW £1995. THIS IS IT. The ultimate synth that takes technology further than many believed possible. New RCM tone generation sounds incredible, as it is a combination of FM and sampled techniques. Built in 16 track sequencer and floppy drive add to the fun. It's great and at a sensible price. Hurry for a demo - Limited stocks.

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software

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The disks have been arranged to make best use of the available storage space, so the combinations of programs on any disk are a result of this attempt to make the service as friendly and cheap as possible, not for any other reason. Please note that not all the programs will be accessible to the 520ST due to the nature of its disk drive, but the disks will run on all other STs. If you're using a 520ST we will supply each "Disk" on two single-sided disks, thus ensuring all programs are accessible to you.

DISK 1

Vkiller, TDM Prodigy, Mididrummer.

The original virus killing program by George Woodside (written in May '89 and able to cope with almost all viruses currently in circulation). Also includes demos of **TDM Prodigy** (reviewed MT, April '89) and **Mididrummer** (reviewed MT, June '89) with only save routines disabled.

DISK 2

Flu, Hybrid Arts Ludwig.

Flu (written by George Woodside) is a simple program which demonstrates some of the less-harmful screen symptoms of viruses currently circulating. **Ludwig** (reviewed MT, April '89) is Hybrid Arts' powerful algorithmic composition program.

DISK 3

Gajits Sequencer One, Keynote Chameleon, Dr T's Proteus Editor.

All recent software: **Sequencer One** (reviewed MT, March '90) is a comprehensive entry-level sequencer, **Chameleon** (reviewed MT, Dec '89) is a new-style generic patch librarian that will run as a desktop accessory and **Proteus Editor** (reviewed MT, March '89) is Dr T's editor for E-mu's popular sample reader.

DISK 4

Intelligent Music Realtime, Dr T's X-Or.

IM's **Realtime** (reviewed MT, April '89) is an "artificially intelligent" sequencing program which is designed to encourage the gentle art of experimentation; **X-Or** (reviewed MT, November '89) is Dr T's powerful generic patch editor.

DISK 5

Hybrid Arts EZ Track Plus, Quinsoft Trax studio accessories.

EZ Track Plus (reviewed MT, Dec '88) is a budget sequencer which retains the feel of Hybrid's upmarket Edit and SMPTE Track packages; **Trax** is a new nest of studio management programs: track sheet, cuesheet, cassette labelling, address book (including industry contacts), invoicing forms. . .

DISK 6

Hollis Trackman, Quinsoft FB01 & 4-Op FM librarians.

Trackman (reviewed MT, March & Dec '89) is Hollis Research's friendly, cost-effective 32-track sequencer (demo includes fully-working D50 librarian and 500 6-Op FM patches). **Quinsoft**'s *Price is Right* librarians for Yamaha FB01 and 4-Op FM synths (reviewed MT, Feb & March '90 respectively) includes fully-working MIDI channel and controller accessory.

DISK 7

Penicillin, Passport Mastertracks Junior.

Penicillin is a virus killing utility written by George Woodside - it specialises in cleaning the boot sector of infected disks - use with care! **Mastertracks Junior** (reviewed MT, June '88) is a 64-track budget sequencer which retains many Pro features.

Disks cost £5 each (please add a further £1.50 if you want software supplied on two single-sided disks).

NB: This is the library available at the time of writing. More disks will be added to the list as soon as they are ready. This service is for you, to help you try out software before you buy - we will continue to run it as long as the interest is there to support it. This is not a profit-making venture on behalf of MT.

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THE TECHNOLOGY THAT PERFORMS

in brief

ROLAND D70

THE D70 IS the first synth from Roland which can be said to replace the D50 as the company's flagship synth. As its "Super L/A" designation suggests, the D70 represents a continuation of, rather than a break with, the line of L/A instruments which has followed in the wake of the D50. During the past three years, the D50's innovations (the combination of samples and synthesis and the inclusion of onboard digital effects) have been taken to heart by other synth manufacturers, who have in turn taken them a step further - overshadowing the original in the process.

Similarly, the idea of a dedicated "drumkit" section as introduced on Roland's MT32 multitimbral L/A expander has been adopted by other manufacturers, to the extent that it's become a staple of the "workstation" synth. Yes, we've seen the rise of the "workstation", and perhaps now we're starting to see its fall. Roland's contribution to this particular species was the D20, and they could easily have included a sequencer onboard the D70 - but they haven't.

However, Roland's new flagship does incorporate many of the synthesiser developments which have occurred since the D50's introduction. Thus you'll find that the attack samples and sample loops of the D50 and subsequent L/A instruments have been joined by whole instrumental multisamples, and the previously closed sample world of L/A synthesis has been opened out with the introduction of two PCM ROM sample card slots. In addition to dedicated D70 sample cards, the new synth can read SN-U110 Series sample cards, ensuring that it has a sizeable library of samples to draw on from the outset.

The D70 is six-Part multitimbral (five synth parts and one dedicated Rhythm part) and includes 13 24-bit digital reverb, chorus and delay effects. Roland haven't gone as far as fitting individual audio outs, but they have provided both dry and effected stereo outs - a feature previously found on the company's U20 sample player.

Probably the most immediately noticeable thing about the D70 is its 76-note keyboard, for which Roland deserve at least a gold star. So many synth keyboards stop at the five-octave mark that I was beginning to wonder if God had added an 11th commandment: "thou shalt not give any synth a keyboard exceeding 61 notes". The D70's synth-style keyboard is weighted, and is sensitive to both attack and release velocity along with channel aftertouch (the instrument's sounds can also respond to poly aftertouch via MIDI).

Also fairly noticeable is the sizeable 8 x 40-character LCD window which occupies centre stage on the D70's front panel, accompanied by the usual array of function, cursor and inc/dec buttons. What's less usual - and all the more welcome for it - is the inclusion of four front-panel edit sliders and accompanying on/off buttons. In Play mode the sliders allow you to adjust the volume levels of the four Tones which make up a D70 Patch, while the buttons allow you to switch individual Tones in and out. Once you're in Edit mode you can use the sliders to edit such parameters as level, pan, key shift, TVF cutoff frequency, TVF resonance, attack time and release time for the four Tones concurrently, or alternatively edit up to four parameters of a single Tone at the same time. This is what I call moving in the right direction: back to the immediacy of the analogue synth panel.

Talking of analogue synths, the D70 has an Analogue Feel function which seeks to rediscover some of that old analogue warmth by emulating the fluctuating pitch of an analogue oscillator. I kid you not. Rest assured this is something I'll be checking out as soon as I get my hands on a D70 for longer than the typical Frankfurt tryout.

Now, this is all very interesting, you're probably thinking, but does the D70 justify its "Super L/A" tag? Hey, we're talking Advanced L/A Synthesis here, people. The above-mentioned inclusion of whole instrumental multisamples and ability to read further samples off PCM ROM sample cards provide a good starting point. One of the most important differences between the common-or-garden and Advanced varieties of L/A synthesis is that the latter doesn't make the former's distinction between synthesiser and PCM sample sound sources - with the result that you can now pass sampled sounds through the synth's filter section. OK, this is something you take for granted on an M1 or a VFX, but Roland have had a spot of catching up to do (though filtering samples is nothing new to the company's samplers). A newly-developed digital filter provides a choice of low-pass, band-pass and high-pass filtering for each Tone, with resonance, cutoff enveloping and dynamic control of cutoff via velocity and aftertouch. In fact, the Tone architecture follows the traditional oscillator-filter-amplifier model, with each component having its own dedicated envelope while a single LFO is routed to all three components. In expanding the "oscillator" concept to take in entire PCM samples along with waveforms and short PCM loops, the D70 is only catching up with developments which were set in motion by the D50, but this isn't all that Roland have done. They've also introduced something called Differential Loop Modulation, which allows you to define the start point and loop length of a PCM waveform and then, er, modulate it (differentially, presumably) in such a way as to produce integral or non-integral harmonics. The idea is that you can dramatically increase the diversity of your source sounds before passing them through the more familiar manipulations of the digital filter.

There are a number of other features on the D70 which suggest that it will make a good performance instrument and MIDI controller keyboard. Initial impressions of Roland's latest synth suggest that the company have done all they needed to do in order to bring it into line with current expectations of what a top-of-the-range synth should offer. Whether they've also done enough to make it stand out from the crowd remains to be seen. ■ ***Simon Trask.***

Price *£1799 including VAT.*
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C'MON EVERY BEATBOX

DRUM MACHINES: THE heartbeat of the '80s. And the signs as we enter the '90s are that popular music isn't going to need a pacemaker just yet.

If the searing synth solo was the hi-tech signature of techno-rock and the octave bassline was the signature of techno-pop, then the (sampled) drumbeat is the current pseudonym of technology in music. And if drum machines appear to be here to stay, what is sure to change is the sounds they're expected to produce. Unless you're lucky (like all those TR808 owners who've seen their antique beatboxes become the hippest machine in the cosmos over recent years), a drum machine that served you well 12 months ago is likely to sound pretty dated today. Consequently, the current trend in drum machines is to have a variety of sounds so that the musical applications can be as wide as possible. Take the Alesis HR16B: building on the success of the HR16 (an excellent machine for those sweaty, rocky moments) the 'B offered its users a wide variety of interesting and *useable* sounds - everything from tight bass drums to record scratches. And was the HR16B going to compete with its sister for a place in your MIDI rig? Not on your best pang cymbal - because as well as being a pretty neat beatbox in its own right, the 'B will interface with the HR16 to become a single integrated unit with the sounds of both machines and an integrated programming system. Neat, or wha'?

So what are you hoping to win in this month's exclusive MT competition? No prizes for guessing that it's a drum machine - an Alesis HR16B at that, so you HR16 owners haven't any excuse not to enter. It'll even help you to program some of the more exotic rhythms that have appeared in our popular *On The Beat* series recently. Now the hard bit; what are you going to have to do to secure one of the coolest beatboxes in town? How about a few questions on that amusing breed, the drummer?

Q 1

Which drummer had some cosy chart success with a song called 'Dance With the Devil' in the '70s?

Q 2

What was the name of James Brown's much-sampled Funky Drummer?

Q 3

Which drummer adopted Klark Kent as his alter ego before discovering Africa and the Fairlight?

ENTRIES SHOULD BE sent on a postcard, to arrive no later than second post on **Monday, 18th June**. Please remember to include your name, address and a daytime phone number on which you can be contacted. Entries should be addressed to ***"C'mon Every Beatbox", Music Technology, Alexander House, Forehill, Ely, Cambridgeshire CB7 4AF.***

On the intriguing subject of multiple entries, we've decided to run a separate "Multiple Entries Competition". In this unique sporting event you will be invited to submit multiple entries from previous competitions to see who can take the magnificent Multiple Entries Trophy. The winner will be the boy or girl who submits the highest number of thinly-disguised entries. Those appearing to have come from a huge family apparently living at the same address (check your poll tax!), those from names so ridiculous they can only be anagrams and those all arriving in the same post on identical postcards will receive special attention. In the meantime, please hold onto your multiple entries ready for the big event.

Atari Freed From Slavery

Up to now, syncing MIDI gear to tape has meant that your sequencer basically follows a code striped onto one of the tape tracks.But more and more recording set ups are based around a computer.

The new, remarkably inexpensive **FOSTEX MTC-1** MIDI time code processor is a response to this shift in emphasis and means that for the first time a computer sequencer, **STEINBERG'S 'CUBASE'**, will control the transport of a multitrack machine the **FOSTEX R8**.

If, for example, you go to bar 25 on the Cubase sequence, the R8 will chase to the same position and Cubase, in turn, will wait until the recorder catches up before playing. Furthermore, tracks 9 to 16 on Cubase control the R8's eight record selects, enabling automation and editing of punch in/out points for all 8 tracks.

Working exclusively in bars and beats (although you can work from SMPTE times if you prefer) is very fast. It's a natural progression for the musician and in practice gives Cubase eight audio tracks.

Altough we could not confirm a price at the time of going to press, we believe that the MTC-1 will be below £200, and during April and May we will be offering a sensational package price on Atari/Cubase/R8 including as much advice and training as you require.

Call for further details/brochures or just come in for a demonstration.

Dats Fact (& Dats Fiction)

FICTION? The Aiwa HDX mini DAT isn't quite at the price promised, isn't quite here yet ,and isn't imported by Aiwa U.K. But it's still cheap and we should have them as you read this.

FACT Tascam's new **DA-30** professional 19" rack DAT has AES/EBU digital I/O's (which ignore copy prohibit code) as well as coaxial consumer digital I/O's, 44.1 and 48 kHz recording, standby facility, 3 cue/review and 9 search functions, plus a remote. At £1179 this unit will be very popular indeed -

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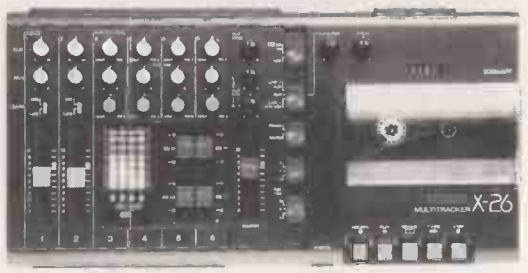

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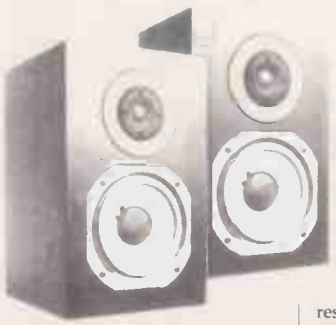
The New Reference Monitor?



Accurate monitoring of music makes enormous demands of a loudspeaker. The prolonged use of full bandwidth samplers and uncompressed bass guitars, for example, calls for substantial power handling and the most ruggedly constructed drivers.

After more than ten years suppling small studio installations we were acutely aware of the lack of an affordable unit properly suited to recording. The available budget 'Studio Monitors' are patently relabelled Hi-Fi speakers that lack the accuracy necessary to ensure that your music sounds as you intended.

The **GS115 Studio Reference Monitor** has been developed by JBL exclusivley for Turnkey to cater for the smaller studio.

The most common complaint of the various brands on offer is the lack of low end response on the smaller monitors and the inablility of the medium/large units to reproduce low frequencies at low volume. The options are near field monitoring that ignores much of the bass drum and bass synth parts, or main monitoring at high levels associated with rapid fatigue.

With this In mind we selected the U.S. made **JBL 115 bass driver**. The voice coil diameter and magnet mass are exceptionally large for a unit of this size.They are resonance matched to a very high density ported enclosure resulting in accurate, punchy bass at high AND low volume levels,which we feel is absolutely unique.

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*The -10dB unbalanced **BBE422 Sonic Maximizer** comes in at £299 and the +4dB balanced 822 version at £499. Both are 19" rackmounting and people tend to fall in love with them -*

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in brief

KORG WAVESTATION

THESE DAYS MANUFACTURERS are practically falling over themselves to avoid using the term "workstation", if not the concept it signifies. But while Korg endorsed the workstation concept wholeheartedly with their M1 and the T-series synths, with their new synth they've done away with the workstation staples of onboard sequencer and dedicated drumkit section. They've also avoided a sample-centred approach to synthesis, instead returning to the more traditional idea of using waveforms as the basis of synthesis - while taking advantage of the fact that digitally-stored waveforms needn't be limited to the sawtooth, triangle and square waves of analogue oscillators. And so it is that Korg bring us not the workstation, but the Wavestation.

At the heart of the new Wavestation lies an internal Wave List of 253 waveforms and 112 samples, expandable courtesy of plug-in PCM ROM cards. One Wave can be assigned to an oscillator and routed through a filter and amplifier configuration, and further modified by a dedicated amplitude envelope, one assignable envelope and two assignable LFOs. A matrix modulation-type setup allows any of 13 sources (including two assignable MIDI controllers) to modulate any of five destinations.

You can use up to four oscillators in a Patch (which would still give you eight-note polyphony, as the Wavestation has 32 voices), and one Patch can be assigned to each of the eight Parts of a Performance. However, a Performance isn't a MIDI multitimbral setup but a sophisticated keyboard configuration in which each Part can be assigned its own note and velocity zones. What's more, each Part can be assigned its own MIDI transmit channel, which means that *(a)* you can "double" your keyboard texture on external MIDI instruments, and *(b)* the Wavestation should make a good MIDI controller keyboard - though the keyboard itself is a standard 61-note synth-style affair, responsive to attack velocity and channel aftertouch.

For multitimbral MIDI performance on the Wavestation from a sequencer you can create 16 Multimode setups, which allow you to assign a Performance to each of the 16 MIDI channels - so, while a Performance can transmit on multiple MIDI channels, it can only respond to one MIDI channel, which does have the advantage that you can sequence quite sophisticated textures on the WS via a single MIDI channel.

As an alternative to a single Wave, a Wavestation oscillator can be assigned a Wave Sequence. There are 96 of these internally (32 preset and 64 programmable) and a further 32 accessible off RAM card. Essentially a Wave Sequence allows you to chain together the Wavestation's waveforms and samples, up to a maximum of 256 steps per Sequence (within an overall maximum of 517 per Bank of 32 Sequences). Each step in a Sequence can be assigned a Wave from the synth's ROM, RAM or card Banks, together with coarse and fine tuning, level, duration, and crossfade parameter values, and you can loop any series of steps and control the start point of the Sequence from velocity. It's worth noting that Wave Sequences can be slaved to MIDI sync, in which case the duration of each step is measured in MIDI clocks - a definite brownie-point earner.

There's no one way to use the Wave Sequences: they can be treated as wavetables in the PPG sense, or used to create rhythms and melodies (within a single oscillator, remember). Because the Wavestation is 32-voice polyphonic, you can have up to 32 Wave Sequences playing at the same time - the creative possibilities are intriguing, to say the least.

Another feature of the Wavestation is vector synthesis, which has its origins in Sequential's Prophet VS synth. Using the front-panel Vector Position joystick you can dynamically control the amplitude mix of the four oscillators within a Wavestation Patch, or alternatively program a four-stage Mix Envelope per Patch which can be looped forward or bi-directionally prior to key release.

Roland's D50 may have introduced the concept of digital effects processing on a synth, but Korg's M1 undoubtedly set the standard for others to follow. The Wavestation keeps up that high standard with 46 effects and multi-fx, and introduces dynamic real-time modulation of selected effect parameters - a feature also to be found on Ensoniq's VFX. As on the M1, the Wavestation's Multi Digital Effector has four inputs arranged as two busses which can be given parallel or serial routing, and the output from these busses can be sent via L/R stereo outs and two individual outs.

All in all, it would seem that the Wavestation has plenty of enticing possibilities to offer the creative programmer. To judge from what I heard of it at the Frankfurt show, it's capable of producing the sort of sounds which have become (over)familiar on post-D50 digital synths. But a new synth should justify itself through offering new sonic possibilities, and the Wavestation looks as if it could do just that.

■ ***Simon Trask***

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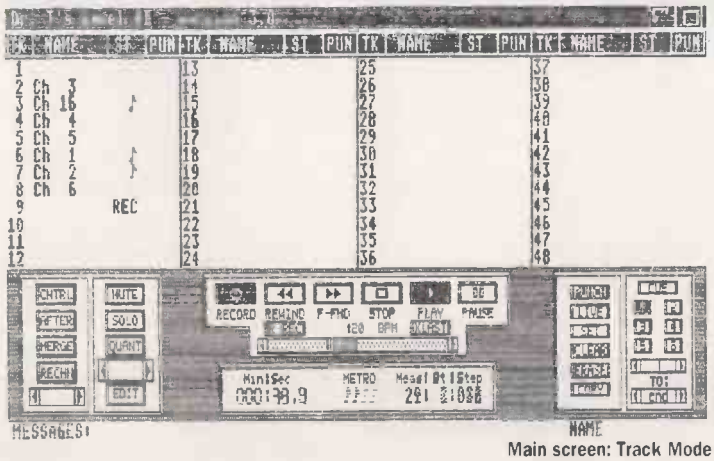

Main screen: Track Mode

DR T'S KCS LEVEL II v3 for the Amiga

DR T'S IS ONE of the most prolific music software houses and Dr T's KCS (Keyboard Controlled Sequencer) has achieved quite a cult following among devotees. And quite right, too - the program is incredibly powerful. But Dr T's programs have shunned GEM graphics and icons in favour of highly numeric, information-packed screens; more for the computer buff than the musician, perhaps, and the learning curve was long. However, recent Dr T's software releases support GEM and the screens have been made more graphically appealing.

KCS Level II version 3 for the Amiga has benefited, too. The most obvious difference over its predecessor is the Track Mode screen which has been redesigned. It's now more graphic and all 48 tracks are shown on screen at once. It also supports pull-down menus although all functions still have keyboard equivalent commands which are listed over five pages of the manual.

Several operating procedures have been changed. For example, there's a slider to alter tempo, the beat display is now in measure/beat/step format (instead of just measure/step), clicking once on the stop button doesn't reset the counter, there are six separate cue points and the Tab key starts the sequencer from the cue point.

Track one has moved nearer to an ideal conductor-track in that TM (tempo value), AC (accelerando), DC (for decelerando but my music dictionary doesn't recognise this term - what's wrong with ritardando or rallentando?) and SM (steps/measure) events are only recognised if they are on track one (I suspect the wise arranger wouldn't scatter them throughout the tracks in any case). In Open mode any sequence can still play a tempo event. Dr T's have further plans for track one and recommend you no longer use it for recording MIDI information.

Many functions and options have now been moved to the Track Functions and Options menus. There are special functions for dealing with the Phantom (Dr T's SMPTE synchroniser) and the Fostex R8 recorder, which can be controlled remotely via MIDI system exclusive messages.

A new Remote Control Mode removes the track display and lowers the transport controls to make it easier to use in a multitasking environment.

The Edit screens have been given a face-lift, too, although their origins are still evident. Many options have been shifted to pull-down menus - the entire Transpose/Auto section has been replaced with the Transform menu. You can enter split points in terms of pitch value rather than MIDI note number, the scroll arrows in the event list have been replaced with a more convenient scroll bar. However, many of the other (basically information) screens still contain the familiar lists of data and information.

The Project menu replaces the Load/Save options and a minor bug which could affect the timing of sync'd drum machines has been fixed. The Help screens have gone (with all the new features something had to).

There are several Stop Press additions too new to be detailed in the manual. These include file handling from the Track Play screen and a New option which clears all memory (every sequencer should have one). Split options let you split note and controller data onto another track (and even restrict the split to a specific MIDI channel), you can remap MIDI data on a specific MIDI channel to another MIDI channel and there's an option to turn the count-in off.

There's also a Raise Priority option which gives KCS preference over any other multitasking program during playback to ensure greater accuracy, particularly when laying tracks on tape.

KCS now includes a special Amiga-specific version of Dr T's MPE (Multi Program Environment) which was originally developed for the ST. It acts as an extension to the computer's multitasking operating system, letting several programs share sequence data. KCS, for example, can record the MIDI output of MPE modules.

An MPE module is loaded like any other Amiga application (by double-clicking on it) and once installed it appears in the MPE menu. The first entry is always the Workbench and up to 19 modules can be installed (memory permitting).

AutoMix is a "virtual slider" MPE module supplied with KCS. It draws a mixing desk on screen, and allows you to create automated mixdowns in real time.

The major omission in KCS, I suppose, is a scorewriter or score edit facilities (these have been included on the ST v3 software). Although MPE versions of Copyist can read scores directly from KCS's Track Mode, 1Meg of RAM does not appear to be enough for the two programs to co-exist in the same machine. Shame.

But for any criticism which may be levelled at KCS regarding layout and presentation, there's no denying the sheer power of the program. Some features, admittedly, are esoteric and others would probably only be used by the advanced user, but there can be few operations that you would like to perform on your music that couldn't be handled by KCS. Funny thing is, once you start to explore some of these functions you actually begin to see how you could use them in your music.

The upgrade, I'm sure, will be welcomed enormously by existing KCS users and Amiga owners in general, demonstrating growing support for the Amiga as a music computer. ■ ***Ian Waugh***

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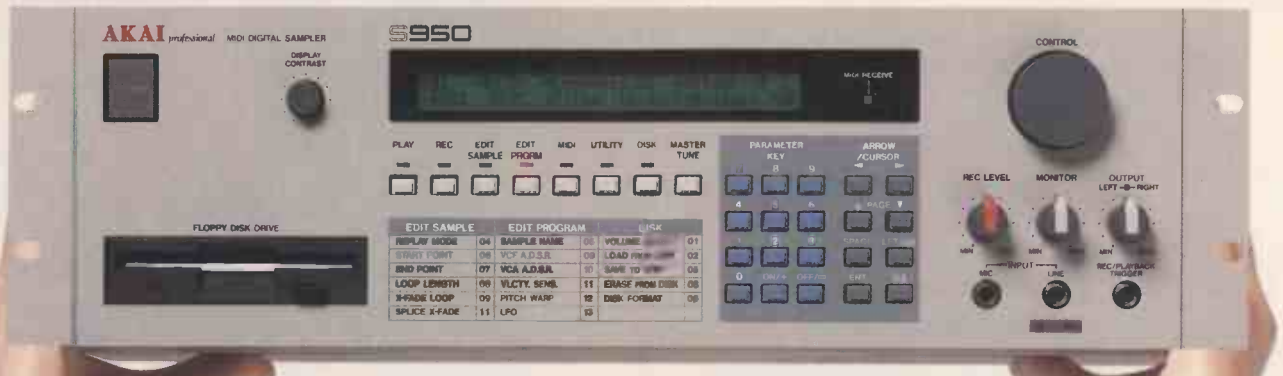

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ON THE BEAT

PART 11

FROM THE GHETTOS OF WASHINGTON DC CAME ONE OF THE MOST IRRESISTIBLE, YET MOST NEGLECTED DANCE RHYTHMS OF THE WORLD - ARE YOU READY FOR GO-GO? TEXT BY NIGEL LORD.

OF ALL THE dance styles which have emerged over the last decade, there can be few which could rival go-go for its immediacy and the sheer infectiousness of its rhythm. Born in the ghetto districts of Washington DC (ironically, only a few minutes drive from the well-ordered calm of the White House grounds), it took as its raw materials such diverse elements as rap, jazz, Latin and even the music of the marching bands which still offer an introduction to playing musical instruments for thousands of kids from the more impoverished (read: black) sections of American society.

Although in no sense socially "inert", go-go has always suffered less from the kind of self-conscious hyperbole that seems to dog most rap and hip hop styles. There certainly appears to be a greater awareness amongst go-go musicians that their primary function is to entertain an audience rather than simply pin it down by the ears.

In the way of most modern idioms (particularly in the States), go-go began as a complete sub-culture with its own bands, its own clubs, its own DJs and radio stations, its own style of dress - even its own language. More importantly from our point of view, however, go-go has its own distinctive rhythm which made it immensely successful as a dancefloor attraction.

This isn't to suggest that every song is played to the same beat. On

ILLUSTRATION: CLIVE GOODYER

the contrary, any study of go-go styles will reveal a number of quite distinct grooves leaning towards jazz and Latin as well as more mainstream pop. There is however, a common strand running through practically all go-go music which gives it its recognisable feel and its undoubted rhythmic appeal. The key to this appeal is our old friend the triplet, and whilst go-go musicians were by no means the first to realise the persuasive qualities of three beats played in the time of two, coming as it did in the mid-'80s after many years of straight four-on-the-floor dance grooves, it was quite a breath of fresh air.

Most live performances (and many on record, too) are characterised by extended arrangements which can last half an hour, an hour - or even longer. Throughout, they are underpinned by relentless and compelling triplet rhythms, which though bowing to necessities of regularity and predictability (the pre-requisites of the dancefloor), leave plenty of room for improvisation and spontaneity. For the most part this is taken up by the instruments drafted in alongside the standard kit such as congas, timbales and even roto toms which provide much of the rhythmic colour of the music, leaving the bass, snare and hi-hat to maintain the interest of the feet.

Obviously, the existence of more spontaneous, improvised parts is somewhat at odds with the structured, repeating patterns of the drum machine, and for this reason (and that of space), I have decided not to try to recreate these instruments with the examples included this month. However, those of you wishing to produce convincing go-go tracks (particularly where extended mixes are involved), could do worse than to spice things up with a few well-choosen lines for the congas and timbales - or any of the other instruments you may have assembled trying to keep pace with Latin rhythms featured over the last three months.

If, on the other hand, you're happy using go-go rhythms as the basis for other dance styles, load these into your machine and see what you can do adapting them to your own needs. And while you're about it, try referring back to the December issue of MT, where we first touched on the triplet as the basis for a number of shuffle rhythms. Though not specifically written as go-go grooves, these have quite a lot in common with this month's examples. It should certainly be possible to mix 'n' match many of the ideas which crop up in both articles, and come up with some interesting hybrids.

In keeping with December's article, I have decided to set the parts for all the instruments on triplet-based grids - even where instruments resolve as 8th or 16th notes. As I pointed out then, this makes the grids less confusing, and makes things easier for those with machines which cannot quantise for triplets on individual instruments. How the three-beat triplet sits within a 4/4 time signature can be seen by the alignment of the vertical lines with the beat numbers at the top of the grids. If you think it looks a little confusing, just thank God you've got a drum machine (which won't give it a second thought), and remember to elevate drummers a couple of notches in your estimation next time you meet one.

To begin this month, we have a delightfully simple pattern comprising nothing more than snare, bass drum and hi-hat and with no complex programming requirements. Despite this, Pattern 1 is a most effective groove with a wide variety of uses and the ability to adapt itself freely to existing basslines and any additional rhythm parts you might care to add.

Instrumentation (such as it is) is also quite flexible, with the choice of ➤

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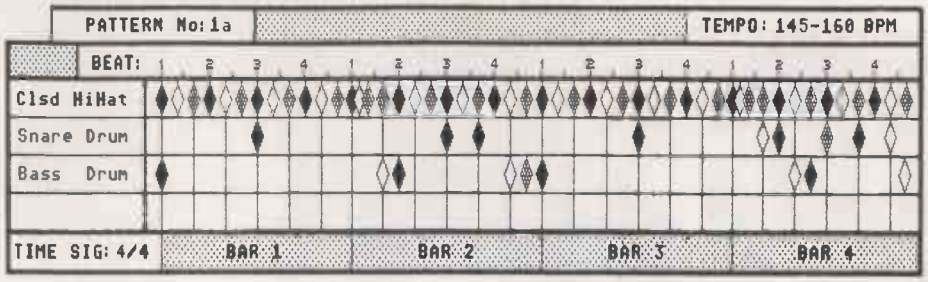

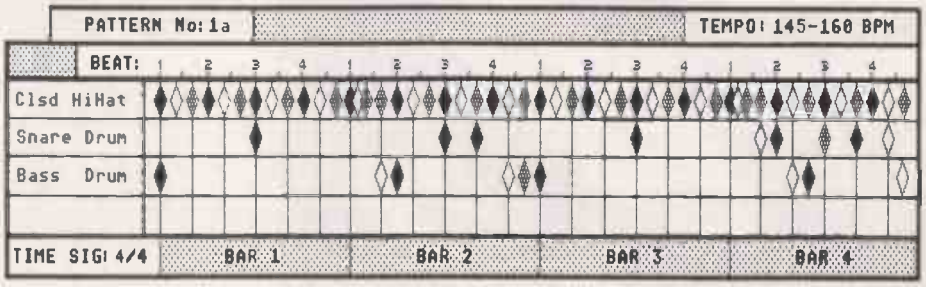

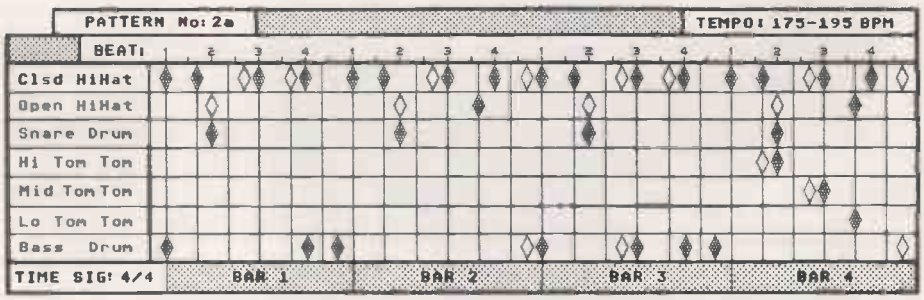

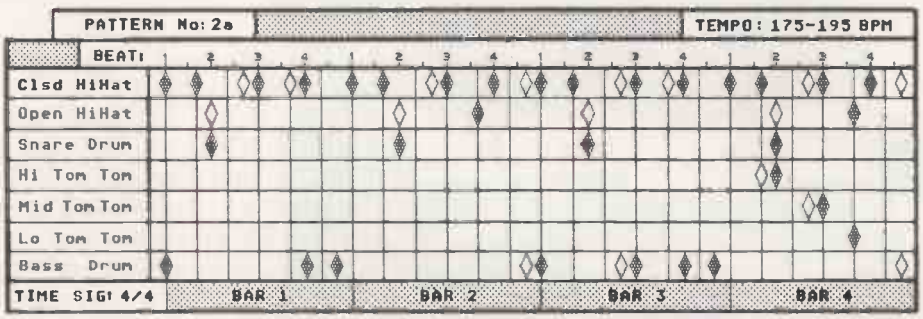

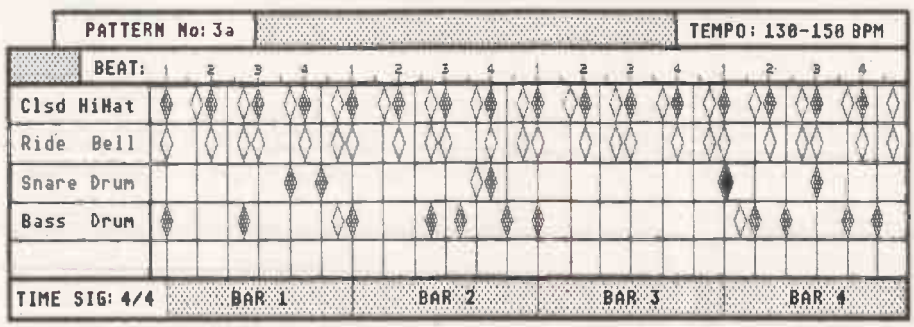

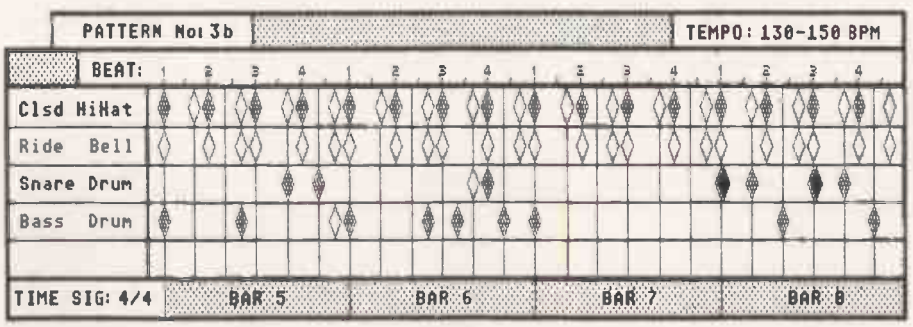

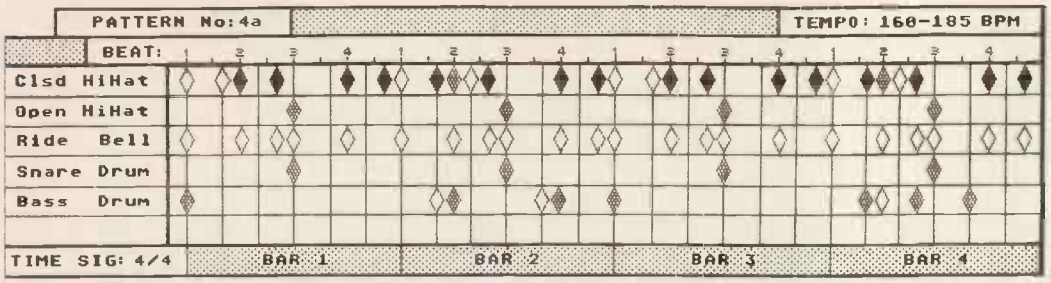

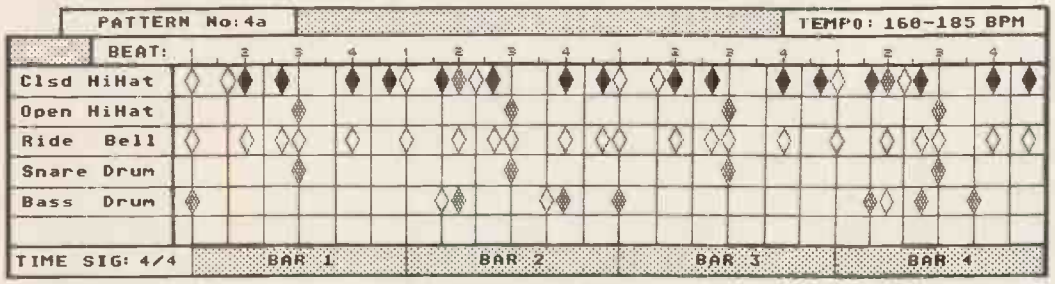

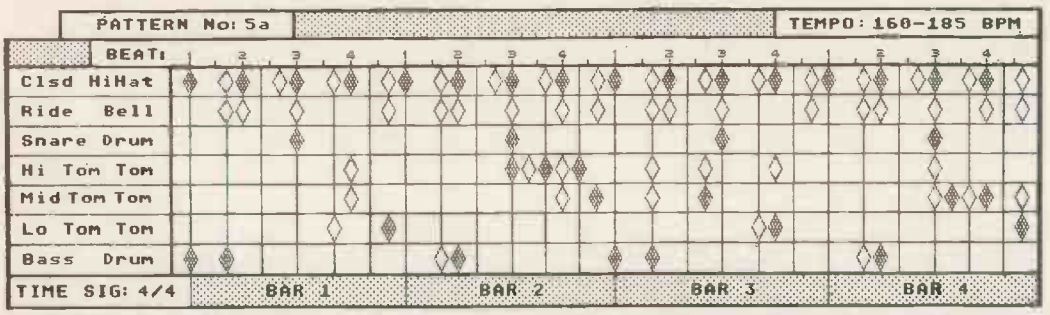

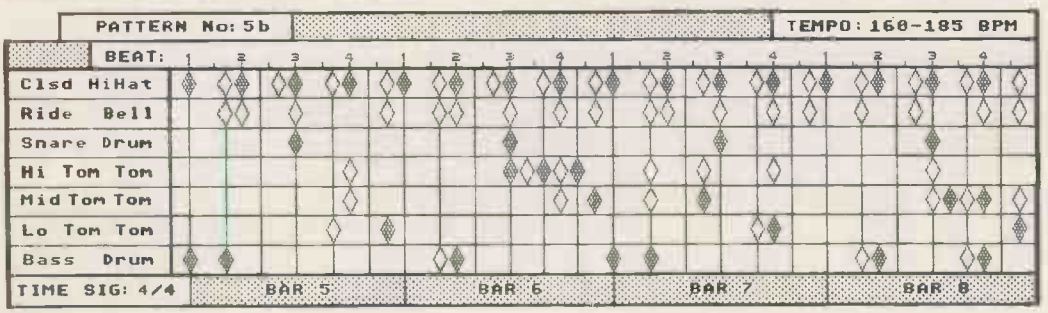

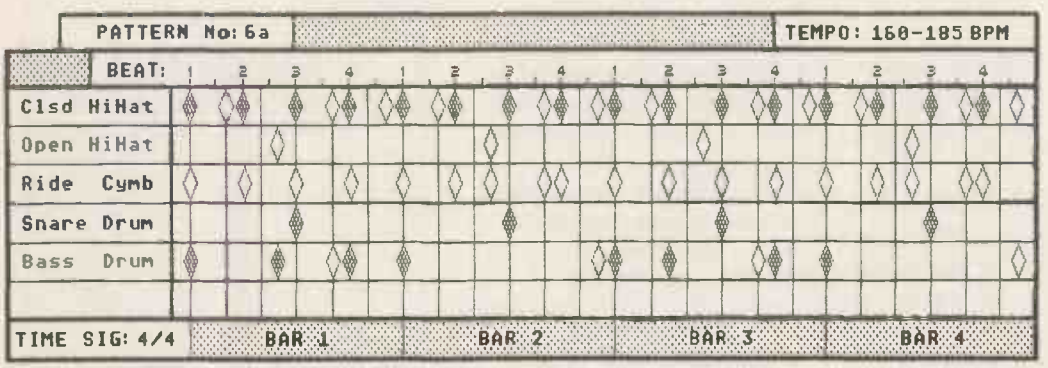

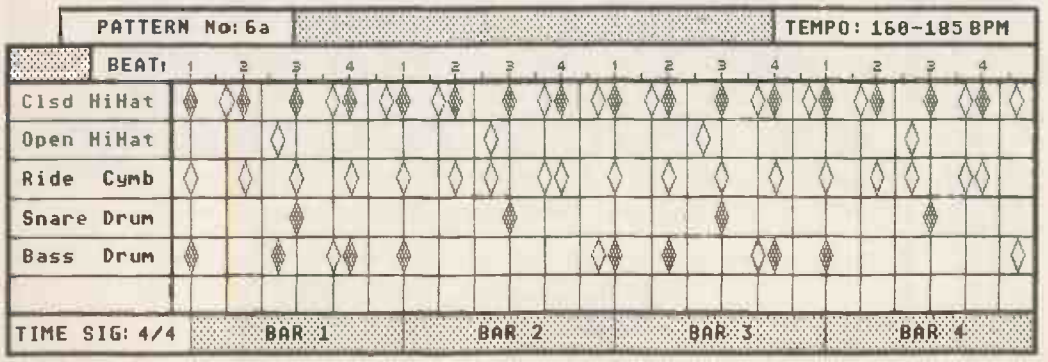

bass and snare drum sounds having a considerable effect on the overall flavour of the pattern. The only stipulation here would be to choose a fairly short duration snare voice (particularly at faster tempos), so that there is no "overlapping" of beats in the final bar.

Though a little more complex in terms of instrumentation, there is still nothing in Pattern 2 which should cause anyone any programming trouble. Probably more recognisable as go-go than the first example (though all the patterns need a complementary bassline if they are to sound as they should), it needs to run at around the 180bpm mark if it is to have the right feel.

The tom-tom figures were conceived as an addition to the main rhythm, and as such, can be considered optional. If you do decide to keep them, it may be worthwhile experimenting with a few different sounds and different tunings. I used quite pure-sounding double-headed drums tuned about a third apart, but toms being what they are (very subjective), I'll leave you to decide what's best in the context you're using the pattern. I will, however, recommend quite definitely that you opt for the heaviest, most "ambient" sounds you have for the bass and snare. This is the type of groove which is capable of supporting really big sounds - particularly those on more recent drum machines like the R8 and the HR16B.

With an extra cymbal part to complement the hi-hat line, Pattern 3 has a decidedly jazzy feel to it which could be used most effectively in the right setting. The cadences built into Bars 4 and 8 probably make the rhythm a little less attractive as a dancefloor groove than the previous two examples, but this could be harnessed by using it as a fill in combination with other patterns.

As you can see, the cymbal line is given over to a ride bell voice (the central domed area of the cymbal) as this produces a cleaner, more penetrating sound which doesn't interfere with the closed hi-hat too much. If you don't have access to this instrument, you can, of course, use the ordinary ride voice, but this should be raised in pitch a little to prevent it sounding too mushy, and maybe have a few accents programmed into it for a

➤ more authentic feel.

For those new to the series, the "shadowed" snare beats in Bars 2 and 4 are flams comprising a low dynamic then a high dynamic note played in quick succession. Exactly how quick you make these will depend on the resolution of your machine. If you've never programmed flams before, or if there isn't a flam function on your drum machine, enter the notes with the minimum possible spacing, then move the second note until you find a time interval you're happy with.

Another classic go-go rhythm, it would be difficult to come up with a more effective dance groove of any kind than Pattern 4. Though I've used a slightly modified version of the ride bell part from the last example, this example has a much more fluid feel to it which gets the foot tapping almost instantaneously. Again, there's nothing to worry about in terms of programming, and again, the pattern is capable of supporting a wide variety of bass/snare combinations - though my comments about heavier, more ambient sounds in the second example would probably also be quite appropriate here.

Moving along, we have, in Pattern 5, a rather different groove than the other examples this month. Based around the tom-toms, this is one of those rhythms which seems to have no obvious start and end point - and which, as a result, you need to run through a few times until you get a line on it.

With such elaborate tom-tom parts, you clearly need to spend a little time getting the sound and the tuning right, though in this example, I would advise you to aim for something fairly dry. You can, if you wish, drop the tom parts altogether - the rhythm certainly holds up without them - but I think you might need to add a little more interest to the bass and snare drum parts if you do.

The last example this month, may, in comparison with the other patterns, strike you as somewhat unremarkable, but I have included it for those occasions which demand a more straightforward rhythm which can be used in conjunction with other percussion instruments or perhaps an elaborate bassline. Alternatively, you could use it as the basis for your own experimentation: it's the sort of pattern which could be steered into any of a number of different directions with a little time and effort. Unlike previous examples, a conventional ride cymbal voice is used to fill out the hi-hat parts, but care should be taken to ensure the two don't overlap and lose their definition.

With the apparent loss of direction of its leading protagonists - bands such as Trouble Funk and Chuck Brown & the Soul Searchers - it does seem that go-go has lost some of its more mainstream appeal of late, but there can be no doubt that along with its derivatives, it is alive and thriving in those areas where the music first took root during the mid-'80s.

Though many bands have failed to capture the urgency of their live performances on record, there is, nevertheless, an impressive legacy of go-go music on vinyl (or whatever the CD equivalent of plastic is), should you need any further convincing. For myself, the image of brother Trask at a Trouble Funk gig punching his fist in the air, shouting "freaky deaky!" along with a roomful of other joyous, sweating punters, will long live in the memory. Go-go for it. . . ■

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MR200

With a MIDI sequencer taking care of most of your music, a handful of tape tracks may be all you need to complete your demos - enter Vestax' budget multitracker. Review by Nigel Lord.

VESTA, VESTA FIRE, Vesta Kozo... *Vestax*. I have to say, if the Japanese manufacturer responsible for the equipment released under each of these labels were a band rather than an electronics company, the first thing I'd advise them to do would be to decide on a name, and stick to it. The second thing would be to decide on an image and stick to that. I doubt if anyone out there has two or more pieces of Vesta equipment which actually match in terms of front-panel layout and graphic design.

That said, it's also unlikely that anyone who's been involved in hi-tech music and home recording over the last few years hasn't either owned, or at least used, equipment with the Vesta prefix on it at some time or other. Since the mid-'80s the Shiino company of Japan have consistently released equipment which set a standard in terms of cost/performance that their more identity-conscious rivals could rarely match. And where there's a chance of saving money without sacrificing quality, who cares about panel lettering?

Knowing comparatively little about the inner workings of the Japanese electronics industry, I'm not entirely sure whether that same Shiino company is behind the present "Vestax" incarnation (the rear panel label refers only to the rather mysterious "Vesta Corporation"). Looking at the MR200 four-track cassette multitracker in front of me, however, I'd say we're in classic Vesta country: obvious mass production without the obvious compromises in design or quality of construction. But, to quote a well-used reviewer's cliche, appearances can be deceptive, so let's take a closer look. . .

It's fair to say that, in common with much Vesta equipment we've seen over the years, technical innovation is not high on the list of priorities here. What we have in the MR200 is pretty conventional multitracker technology: offering few of the kinds of facilities by which manufacturers could honestly lay claim to that elusive "studio in a box" title, but clearly going further than the bare bones designs on which it is just about possible to record a four-track demo.

For example, in keeping with most budget designs, the MR200 restricts you to simultaneous recording on only two of the four tracks. But, with four line and two auxiliary inputs in addition to the main input pair, you can mix a total of eight signals onto each of the tracks at any one time. EQ is not available for Line or Auxiliary signals, but these do have individual Level controls, and also Pan controls in the case of Line inputs.

The full complement of controls for the main input pair comprises input fader, Trim control (to cater for output levels from microphones, keyboards, guitars and so on), and Low and High frequency EQ. These provide cut and boost of around 10dB at 100Hz and 10kHz and are centre detented for flat response. A single Master slider provides control over the main stereo buss both onto tape and to the L/R Line Out sockets - which, like most of the in/out connections on the MR200 are via RCA phono sockets mounted along a recessed panel across the top of the unit. The exceptions to this are the main input pair, Punch-in/out and Phones sockets which are all quarter-inch jacks situated along the front edge.

Amongst the array of phono outputs along the top, are four Tape Out sockets (associated with the four tracks of the tape deck) through which it is possible to mix down using an external desk. This, in the absence of any playback EQ on the MR200 itself, could prove to be an extremely useful feature, and gives you the option of upgrading the mixer at some future date if you're happy with the performance of the recorder.

The onboard mixer is configured so that the Line controls - Level and Pan - double as Track controls during mixdown or whilst monitoring on overdubs. In this latter situation, however, Line Inputs 1-4 cannot be used, so you are restricted to overdubbing via the main input pair and/or the Aux inputs. Bouncing down - or ping-ponging as the Japanese like to refer to it - is also possible, provided the Remix switch (just above the Auxiliary level controls) is switched to Off.

The usual switching functions associated with monitoring are obviated on the MR200 by the simple expedient of leaving all inputs routed through to the main outputs (and headphones) at all times. For the most part, this works well enough, and the beginner shouldn't be left scratching his or her head wondering why the hell everything's plugged in but nothing is coming out. On the other hand, it does mean that if, or perhaps I should say when, you need to listen to a signal in isolation, everthing else has to be turned down or disconnected. And there's also the problem of feedback when using a microphone and monitor speakers. (I'd therefore suggest the use of mics with an integral on/off switch in case you're at the opposite end of the room when the speaker cones hit the front grilles.)

FOUR PLAY

IN COMMON WITH most four-track machines, the record selector buttons take the form of two three-position switches for tracks 1/3 and 2/4 with a Safe

PHOTOGRAPHY: JAMES CUMPSTY

position in between. The MR200 doesn't stretch to individual LED indication of the track(s) currently being recorded (it's left to the switches themselves to reveal a rather indistinct red warning strip), but a flashing LED does alert you to the fact that one (or both) of them is in the Record position, and this stays on continuously when the main Record button isdepressed.

Just above the track selector buttons is the unbiquitous tape counter and reset button, and to their right are switches for the dbx noise reduction circuitry and the meter display. Set to TRK, this displays Track 1-4 playback levels and/or Line 1-4 input levels on the VU meters. Set to PGM (presumably an abbreviation of ProGraM), it displays the main stereo output bus and/or the main input pair on the first two VUs.

And speaking of the VUs, as you can see, the MR200 comes equipped with four good ol' fashioned meters - there isn't an LED ladder in sight. They're fairly small, and they aren't illuminated, but they are real meters and they have needles that move in time to the music - and shoot into the red, if you don't keep an eye on them.

Another feature from yesteryear, though not quite so welcome, I suspect, is mechanical control of the cassette recorder. If I were in a charitable mood, I'd describe these as positive, at any other time I'd have to say they were pretty heavy going - particularly the play and fast forward/rewind controls. Obviously, logic-controlled electronic switching would be out of the question on a machine at this price, but after almost thirty years of cassette technology, I think we've a right to expect mechanical controls to be smoother than this.

And on the subject of cassette controls, there is no provision for cueing in either direction on the MR200, so locating a particular section of a song for punching ➤

"To have had a machine offering this sort of quality at this sort of price would have been considered a minor miracle just a few short years ago."

"With four line and two aux inputs in addition to the main input pair, you can mix a total of eight signals onto each of the tracks at any time."

➤ in, for example, could prove to be rather time-consuming. But this is more than compensated for by the two-speed operation of the cassette deck. Of course, given the dramatically improved audio performance at 9.5cm/s, I wouldn't have thought it likely that anyone would want to record at the standard 4.75cm/s cassette speed unless they're planning a concept album of over 22 minutes 30 seconds (one side of a C90 at twice the speed). But having the slower speed available does make it possible to play standard stereo cassettes on the MR200 - and even overdub them using the two unused tracks, if you wish. (Remember though, that the four-track format allows recording in one direction only, and that the dbx noise reduction included here is quite incompatible with Dolby B or C).

I was also pleased to see that whatever economies had been made in the design of the MR200, they didn't extend as far as the Pitch control. I've always thought pitch variation an extremely useful facility on tape decks of this kind (though this is not always appreciated), and there is certainly considerable creative potential when this extends to ±15%, as it does here.

VITAL STATISTICS

THE MR200 IS set up for "high-bias" tapes only, but of course, this doesn't just mean chrome dioxide any more - there's currently a wide variety of non-chrome, high-bias tapes to choose from which should provide excellent results. In the course of this review I used Maxell XLII cassettes and found them quite suitable for the job, exhibiting none of the exaggerated top end of certain chrome tapes.

This made it much easier to assess the MR200's response which, all things considered, was everything you could reasonably expect. I certainly wouldn't take issue with the quoted frequency response of 40Hz-18kHz at the higher speed - or indeed, of the reduction to 12kHz at the lower speed. However, this clearly illustrates the necessity of running at 9.5cm/s when multitracking - particularly where overdubs are involved.

Equally creditable are the 1% total harmonic distortion figure and the 85dB s/n ratio made possible by the noise reduction circuitry. As mentioned earlier, this is a dbx system and seems particularly well-suited to the MR200. In fact dbx seems to have shaken off the reputation for the unpredictable side-effects it was associated with a few years ago, when, driving it directly from a drum machine (for example), would induce breathing and pumping effects which did little or nothing for your rhythm tracks.

A further pair of phono sockets is provided for the connection of an external Sync device to Track 4. This is designed to bypass the dbx circuitry to prevent it interfering with the sync code. Simple really, but anything which makes striping a track that bit less hit and miss has got to be welcome.

Punching in using a footswitch (...my footswitch; the Vestax unit is an optional extra) proved trouble-and, more importantly, click-free. And notwithstanding the limitations of the system I outlined earlier, the continuous monitoring of all inputs and playback channels means there's no switching to worry about.

In fact, this is in many ways the most straightforward multitracker I've encountered in terms of signal routing and general operation - though given the state of the instruction manual, this is perhaps just as well. It *tries* to be informative and outlines various recording scenarios, but it's badly written, inaccurate and quite inadequate for the job. Any equipment aimed at the beginner's market should be accompanied by a comprehensive manual which anticipates the sort of questions the novice is likely to ask. However straightforward the MR200 might be, signal routing and dual function controls can often be rather confusing until you get used to them. Fourteen-page pamphlets in pidgin English do not help.

And I have another grouch. It is my 'umble opinion that supplying any piece of equipment with its power supply as an optional extra is quite unacceptable in this day and age (unless, of course, it is battery-operated). In the case of the MR200, this is particularly unforgivable as the unit requires a DC voltage of 12-15V, well above the more usual 9V supply. It seems to me that having to shell out extra cash for a power supply (without which you cannot use the MR200), will encourage people to experiment with the adaptors they may already have, and with the proliferation of AC supplies at various voltages, not to mention the non-standard wiring of the two-pole plugs, this could be potentially disastrous.

VERDICT

AS WITH MOST budget multitrackers, the MR200 includes few facilities which could be said to make life easy for the aspiring multitrack recordist. Clearly, that's not what this sort of machine was ever intended to offer. Its budget status has been achieved almost exclusively at the expense of the labour-saving features offered at the "quality" end of the multitracker market. What we have to judge is just how it stands up after each of these facilities has been stripped away. And the answer is, pretty well.

Within its class, it really would be difficult to fault the MR200. At the risk of falling back on another well-worn reviewer's cliche, to have had a machine offering this sort of quality at this sort of price would have been considered a minor miracle just a few short years ago. These days, of course, we've become almost cynical about personal multitrackers - or at least, the demos that are produced on them. But it's as well we remember just what is on offer in a machine like this and how affordable it has been made for us.

All you will ever do with the MR200 is produce reasonable quality four-track recordings, but from a machine that takes up considerably less than a square foot of table space and which won't set you back much more than 300 quid, that is achievement enough. ■

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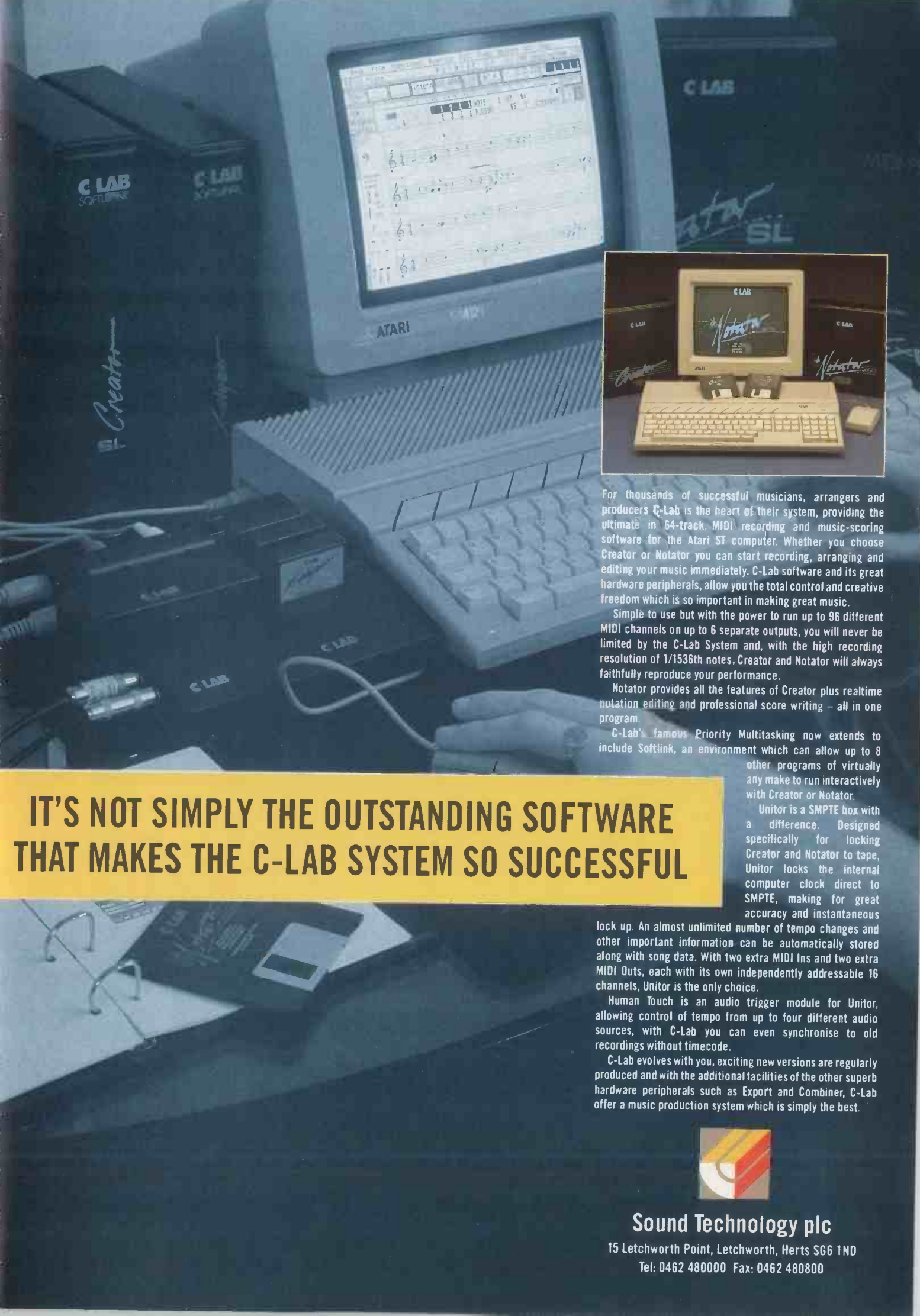

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AGE OF CHANCE

Dance music is regarded by many as a destructive influence on creativity, yet a band called Fluke have put down their instruments, adopted technology and dance, and claim to have rediscovered it.

Interview by Simon Trask.

PHOTOGRAPHY: ADAM JONES

"IF I SAY TO SOMEONE 'I PLAY IN A BAND', THEY'LL SAY 'SO you do gigs down the local pub, do you?'. I don't even attempt to explain what we're doing, because we're not what a lot of the public imagine a band to be."

Mike Tournier is one quarter of a band called Fluke. He used to play guitar, but now he surrounds himself with synths, samplers and drum machines and stares at a computer monitor screen instead. Across the group's home studio from him, one-time bass player Mike Bryant works the mixing desk, tape machine and effects. Jon Fugler is the singer (except that there aren't any vocals in Fluke's music) and is responsible for providing a conceptual overview of the music, while Julian Nugent is the group's manager and also brings to the music his awareness of what's happening on the club and rave scenes.

Where it might be most appropriate to call Fluke a production team who write and produce their own music, under the name Skin they were once a band in the traditional sense of having a vocals/guitar/bass/drums line-up and writing conventional songs. As Skin they used to record pop songs which combined tasteful Go West-style guitar and keyboard arrangements with a raw vocal style and mechanical drum-machine backing - a strange combination, and one which the group never pursued commercially.

Instead they discovered dance music and new creative freedom during the summer of love and acid house parties, axed (so to speak) the guitar, bass and "conventional" songs, changed their name to Fluke and concentrated on developing a relationship with the paraphernalia of musical technology.

"The dance scene revitalised us", Bryant confirms. "It was really encouraging seeing people being able to do things differently. Before, we were writing traditional songs, but we were always interested in doing music that was a bit off-the-wall."

"In dance music now you can afford to go into realms of abstraction that would otherwise not be acceptable", adds Tournier. "We could do that before, but it wasn't really appropriate to the music. Dance was a revelation - we could do anything we liked. In a way we were playing safe as Skin, whereas now we do whatever sounds interesting to us."

"Once you've captured that little spark of inspiration, then a song's got a chance of doing well", continues Fugler. "Often it's got more chance than where someone's spent a fortune to perfectly structure their music. That's why dance music's become so diverse, because all you're doing is picking out people's moments of inspiration."

The group's debut single 'Thumper!' b/w 'Cool Hand Flute' (released as a limited-edition white-label 12-inch to selected DJs and specialist dance music shops last Autumn) was one of the most original and refreshing dance records of 1989. That record created a buzz for the group that the follow-up 12-inch of remixes, lost in the deluge of Christmas records, failed to capitalise on - a shame because these particular remixes are a worthwhile addition to the originals.

At the time of writing, the group have just released a white-label 12-inch, 'Joni' b/w 'Taxi', initially passing it out to selected DJs. In what is fast becoming a time-honoured fashion, the group see this as a step towards a record deal, and are already considering one offer. They're treading carefully, however, concerned not to rush into anything which might be initially attractive but tie them down in the long run.

With its sequenced guitar-led feel (rocky on 'Joni', breezy on 'Taxi'), the new single doesn't readily fit any category of dance music. Fluke have a different angle, not least because their background as a band shows through in their way of thinking about separate instrumental parts and arrangements. Another point in their favour is that Fluke music appears to be a cliche-free zone.

"There is one cliche in 'Small World', which is for all the Soul II Soul 'Happiness' fans, but nothing obvious" adds Fugler. "It seems like a lot of people stop with the cliches because they know they'll work. The thing is with commercial dance music today, that once someone's had a hit record in a particular style, there's no reason why they can't release a song that uses the same samples and has the same feel but is slightly different. You wouldn't have been able to do that a while back."

So what's gone into making Fluke the group that they are today? Tournier outlines their development from traditional band to their present arrangement:

"Jon and I were in a band called Paris Rapide with a keyboard player and a violinist. After a while they went off elsewhere, and Jon and I started mucking around with drum machines and basslines on backing tapes which I could play guitar to and Jon could sing to. We ended up looking for a bass player, bumped into Mike and started rehearsing. From there we developed as Skin and got into four-track recording. We had an old Drumatix drum machine and a Transcendent 2000 synth. Then we got a keyboard player who owned a DX7, and that pushed things along a bit further. Then he bought a Juno 106 and a Yamaha CX5 computer with the eight-track sequencer, and that's what really pushed us into sequencing. When he left, I took over on that side of things, so I was doing the sequencing and the guitar playing. This was about two and a half years ago.

"All the time we were getting more and more into recording with a Portastudio, and that side of things became Mike B's forte; now he does all the mixing. We started to become more based around a drum track and sequenced tracks that we'd play to, as opposed to having a keyboard player who'd accompany us. But we were still a fairly conventional band at that stage.

"By that time we were using a Roland 707 drum machine, a Casio CZ3000 and the internal voices of the CX5. It was pretty basic equipment, but that meant we had to squeeze the last little drop out of it. We were still writing conventional songs, perhaps just starting to cross over into dance music. Then these club DJs asked us to make a record for them."

"We started getting socially involved in the dance music scene, and it changed everyone's way of thinking", Fugler continues. "There was a point where the attitude of everyone in the group had changed to such a degree that everything we'd done previously just wasn't relevant any more."

And at this point Skin became Fluke.

THE RECORDING SIDE OF THE GROUP'S studio is built around a Seck 18:8:2 MkII and Tascam MM1 mixers, Fostex Model 80 eight-track tape machine and Acoustic Energy AE1 and Morden Short monitors. Signal processing is provided by Alesis MIDIverb and Multiverb, Boss RPS10 Pitch Shifter/Delay and recently-acquired Lexicon LXP1. The instrumentation consists of a Yamaha DX7 II, Roland D50 and Korg M1 synths, Yamaha TX81Z and Roland MKS50 synth expanders, Akai S700 and S950 samplers and an Alesis HR16 drum machine. Until recently the sequencing was handled by an Alesis MMT8, but now the group have opted for an Atari 1040STE running Steinberg's Cubase software. When I arrived for the interview, Tournier was in the process of transferring songs recorded on the MMT8 to Cubase via MIDI. He's full of enthusiasm for Steinberg's latest sequencer.

"Cubase is still quite new to us but at the same time, because it's so flexible, it doesn't tie you down to writing in any particular way. Cubase has improved things no end; it encourages you to write musically, not actually think of music in terms of repeating patterns all the time. When we were using the MMT8, the drum beat and the bassline would change far less often ➤

"The ability of a sequencer to loop started all this 'sequencer music' business - the fact that you can run around eight bars and continually build up music."

➤ because it was such a hassle to re-program. The ability of a sequencer to loop started all this 'sequencer music' business, the fact that you can just run around eight bars and continually build up music. That's why a lot of dance music has developed in the way that it has. If you got a bunch of musicians together the music wouldn't have that sort of insistence."

Another reason why sequencer-based music can have an insistent feel is because often it's heavily quantised. Tournier is all for selective use of quantisation.

"If you're talking about 'musical' parts, there's no need to quantise if you've played well in the first place. But if you're thinking in terms of a rhythm part, like on a house track, and it happens that the patch is a piano, then the fact that it's quantised is advantageous in that it's another chugging rhythm part.

"If I played a solo over something I wouldn't quantise it. An unquantised bit on top of a load of quantised parts really does stand out, but as soon as you pull it into time it disappears a little bit. There again, one of the nice things about using a sequencer is that you can shock people by emphasising the fact that it is a sequencer, for instance by combining unquantised played parts with quantised parts that would be impossible to play live."

As Fluke's studio has developed, Tournier and Bryant have gravitated towards very different roles from their original ones of guitarist and bass player.

"Because things are so specialised when you get into the realms of all this technology, you really need someone to know different aspects of it very well", Tournier says. "When we started using a Portastudio, Mike was the one who organised the patchbay and everything. That was at a stage when I could still come in and muck around with the Portastudio and a few effects. Now I'll deal with the musical parts of a track, while the feeling might be largely to do with the way that Mike is handling the sound. But then the actual conceptual feel of the track, if you're talking an overview of the thing, is largely to do with Jon. These are quite vague points, so it's difficult to talk about it on a playing level."

"There's a direction and an attitude that a song must have, and we'll decide that among ourselves", Fugler adds.

Having built up a studio adequate to allow them to record and mix at home (in Mike Bryant's Beaconsfield flat), the group are insistent that DIY is AOK.

"We work our songs up from ideas right through to the final mix all in one go", Tournier explains. "What Mike's doing on the desk feeds back to what I'm doing with the sequencer, so there has to be a continuous stream from conception to finish. It's very important at the writing stage to have the final sound of the song worked out. If we didn't have our own studio then everything would have to be filtered through an engineer. There's an awful lot of music around today that's given the label of being done by a band, and yet what you're really hearing is somebody else's production."

"A lot of records sound very similar because the engineers all end up in a certain frame of mind as to what's right", adds Bryant. "It's like these studio fads, like using NS10s for monitoring."

"There's an awful lot of music around today that's given the label of being done by a band, and yet what you're really hearing is somebody else's production."

"If you're going to do it then you might as well do it yourself", Fugler concurs. "I can't see the point in us writing something and then giving it to somebody who'll say 'well, if we do this then we know it'll sound brilliant', and then it goes out under the name of the remixer. Instead of doing something because we know it's going to be successful, we'd rather try and make something different. If you want music to be your career then the only thing you can do is try to be creative. It's the slowest yet surest way."

Talking of creativity, the group make restrained but musical use of sampling - for instance in the way that Joni Mitchell samples are woven into the textures of 'Joni' and 'Taxi' - and they have a healthy disrespect for synths old and new.

Fugler: "There's a difference between a wise lift and a tacky loop, a dividing line between being creative and taking the rise. I don't think any of us regard the gear as precious: we have a D50 but we don't use it very much because it's so distinctive; you can program sounds on it which do sound like naff old analogue synths, but used to its full potential it sticks out like a sore thumb. This love of analogue stuff can hold you back. I can't see the point of saying you've got to use the old stuff and having a scepticism about the new gear."

"People get too dogmatic about it", Tournier concurs. "You can use a digital synthesiser, stick it through an old guitar phaser pedal and you've got a warm analogue sound. The DX7 II can sound quite thin in the mix. But there are ways of warming sounds up, or making them trashy. We've got a guitar effects pedal board left over from my days as a guitarist, and we use that sometimes. Here you are, you've got a £1200 keyboard and you're stuffing it through an old distortion box!"

"The beauty of analogue synthesisers wasn't about the sound but the fact that you could meddle", Fugler opines. "It's very offputting to look at a little window, and it does take out creativity."

"But with the MIDI Manager page of Cubase we're getting back to moving sliders", adds Tournier. "A lot of the acid house stuff was about taking an analogue synth and mucking about with the filter cutoff and resonance while it was playing, but that needed somebody to stand there doing that till the take was done. With the MIDI Manager you can still do live takes but you can go in and edit them afterwards."

Being a guitarist turned keyboard player, Tournier is aware that playing a realistic instrumental part on a keyboard involves more than using a realistic sound.

"I've got an old Boss Distortion Feedbacker which is great for getting that feedback sound", he says, "but you have to play your patch like a guitar, with the right sort of pitchbend and slides. I can't play a saxophone, but if you listen to how a saxophone is played you can start to pick up the style. You have to use the joystick like mad if you want to play that sort of sound properly, but at least with a sequencer you can play the notes first and add the performance controllers afterwards.

"It's more important to emulate the feel of an instrument than to get the exact sound; if you're going to use a guitar solo played on a synth then you need to

emulate the 'guitar solo-ness' about it."

Nonetheless, a good sample won't go amiss, and when it comes to acoustic instruments Tournier is impressed by the samples on the M1. An M1 acoustic guitar sample figures prominently on the new single. However, preset synth patches, whether on the M1 or any other synth, get the thumbs down from the group.

"You can program synthesiser patches on the M1 which don't sound obviously like an M1; it's only when you use the presets that it becomes readily recognisable", says Tournier. "One thing we do do is layer sounds. For the bass sound on a track called 'Small World' we sampled the Pick Bass sound off the M1 and combined it with a very low bass pulse off the DX7 II and a bass guitar sample, and adjusted all the envelopes so that they sounded like one sound."

Fluke's drum sounds come from a mixture of the HR16 and samples on the S950.

"The HR16 has served us very well because it's got such a good range of sounds on it", says Tournier, "We still use it for percussion, because those sounds are really good and clean, but the bass and snare drums aren't quite right. The S950 gets used an awful lot as a drum expander these days; in fact, we're thinking of getting another one."

But getting a drum machine to sound or feel like a real drummer is not something which interests Tournier:

"'Drum kit' is the very loosest expression nowadays, because you can use any percussive sound you like. If you just call it your rhythm track or your percussion track, that's a much better expression. Not many people try to make dance music sound like there's a real drummer playing away."

Like many groups who have developed their music through working with technology, Fluke haven't put live performances high on their list of priorities. They did drag their gear along to the local wine bar for a gig once - to the surprise of punters more used to hearing a rock band - but Fluke's music is better suited to a club environment. However, this places a different set of demands on them.

"It would be very difficult to put on a show in the traditional way of 'Here is Fluke the band, stand and watch'", says Tournier.

"The obvious way to counter that", Fugler adds, "is to work with a DJ and to not make a statement that there's a band coming on stage now, but just follow the DJ from tune to tune and maybe drift out and then back in again."

"This is where an interaction with sequencers live is going to happen, because that means the evening isn't set", adds Tournier. "The band can be more responsive to the feel of the audience in the way that a DJ is. It's going to have to be like that."

In less capable hands the combination of dance music and technology can be a one-way ticket to a dead end. But Fluke have seized on the creative rather than the re-creative possibilities of the medium and fashioned their own style and sound. If originality and individuality matter at all, they should have a bright future ahead of them. ■

FLUKE EQUIPMENT LIST

SEQUENCING
Atari ST
Steinberg Cubase

INSTRUMENTS
Akai S950
Korg M1
Roland D50
Roland MKS50
Yamaha DX7
Yamaha TX812
Alesis HR16

RECORDING
Seck 18:8:2 desk
Tascam MM1 20:2 desk
Acoustic Energy AE1 monitors
Mordaunt Short MS10 monitors
Fostex M80 8-track reel-to-reel
(Hired DAT for mastering)

OUTBOARD
Alesis MIDIverb
ART Multiverb
Lexicon LXP1
Tanrak system
Assorted footpedals

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PMM88

Even small MIDI studios have now grown to the point that MIDI data management is essential. MIDItemp have added MIDI merging and programmability to an 8x8 MIDI patchbay to provide just such a management system. Text by Vic Lennard.

MIDI SYSTEMS ARE becoming more sophisticated - seemingly by the day. This is good news in many respects, but greater sophistication in the units actually using MIDI data is making MIDI "management" a correspondingly large problem.

Some three years ago the first MIDI patchbays began to appear. The principle behind them was simple: to do for MIDI patching what audio patchbays did for audio signals - and the engineers having to work with them. Instead of having to reach behind racks of equipment to swap a lead from one socket to another, it could be done from a patchbay - saving time and frayed nerves. But MIDI data streams demanded more than their audio counterparts. Merging MIDI data, filtering out unwanted messages and transferring the data appearing on one MIDI channel to another are examples of aspects of MIDI management which had not really been considered when those first MIDI patchbays appeared.

Today the trend in MIDI patchbays is towards units which incorporate merging and filtering facilities along with the ability to store and recall patches in a similar way to that in which synths manage their sounds. One such up-to-date patchbay is MIDItemp's PMM88.

APPEARANCE

THE PMM88 COMES in two parts. The first is a 1U-high rackmounted processing unit in a rather dashing silver-grey colour (makes a change from black). This has 16 MIDI sockets on the rear (eight In, eight Out) and nothing but a power switch and a footswitch socket on the front.

The second unit is a remote control front end which is connected to the "business" half via a nine-pin socket. The standard connection cable length appears to be three metres, although up to ten metre cables are available.

The remote unit has buttons numbered one to eight which have three purposes; to show which of the eight PMM88 channels are set to receive and send MIDI data and, in conjunction with the Mode button, to call up one of eight different processing functions. Each of these buttons has an allocated LED. The "In/Out Select" button selects whether the MIDI In or Out is being examined. Buttons "9" and "0" double up as "up" and "down" and there is a three-character display to show what is currently being edited.

BASIC USE

IGNORING THE ABILITY of the PMM88 to process MIDI data for the present, let's have a look at setting up a basic patch. Pressing Edit followed by In/Out Select allows you to select one of the eight MIDI Ins - which will be coming from a MIDI controller, perhaps a master keyboard. Let's say that In 1 is chosen - the LED above it starts flashing and you are now routing the MIDI data from this keyboard to the sound modules connected to the MIDI Outs. Pressing the select button again and then choosing which MIDI Outs the input is to be connected to, say 3, 4 and 5, completes the operation. The LEDs light up to indicate the routing and you have now set a simple patch which can be saved by pressing Mode and a memory location from 1-128. Selecting a patch is achieved by either stepping through the memories via an attached footswitch, by a MIDI patch change command, or by selecting the relevant patch on the front panel.

When you're not editing, the unit is in Play mode. From here two basic tasks can be performed; using the select button you can toggle between showing the MIDI Ins and Outs set for the particular patch (indicated by the LEDs - a further press of a channel number turns that In/Out off). Alternatively, the Read button lets you see which Ins are patched to which Outs.

THE 3MS

THERE ARE VARIOUS tasks in which merging MIDI data is either desirable or essential - using software to edit sounds on an expander and being able to play the sounds from a controller keyboard (to audition them) for one, controlling one expander from more than one controller for another.

Other MIDI patchbays have dealt with this by allowing you to assign more than one input to a merge process channel but this is invariably limited to two MIDI Ins. If you have a keyboard player, synth guitarist and drummer using MIDI drum pads who wish to play at the same time and record the result on a sequencer, you're going to need something more sophisticated than a simple two-channel merge.

On the PMM88 you can merge together up to all eight MIDI Ins by assigning Ins to the same Outs - in other words, within the scope of the PMM88, there is no limit on the number of channels that may be merged.

Because MIDI is a serial protocol, all connected devices receive all MIDI data. This can give delays and occasional problems like hanging notes and data corruption. The PMM's Multi-converting is a way around this. When selecting Edit mode, a "U" appears on the screen which means that data received at the input about to be set will pass through *U*nchanged. The alternative is to select a

PHOTOGRAPHY: ADAM JONES

MIDI channel by using the up/down keys. Only data on this MIDI channel will be passed through to the selected Out and so to a specific sound module. In this way, MIDI devices receive only the data intended for them when driven from a sequencer or a split/layered keyboard. Neat and tidy.

Manifolding is an extension of this process. An input MIDI channel can be selected and the MIDI data duplicated to any of the 16 MIDI channels. For instance, data received on MIDI channel 1 could be converted to channels one to six - the data will be multiplied six times. A particular use for this is with MIDI mono mode 4 in which a guitar synth can play a different MIDI channel per string. A variety of different expanders could be played per string by this procedure.

PROCESSING

A DOUBLE CLICK on the Mode button (shades of a mouse here) puts the PMM88 into "FUn" mode. No shades of Japanese computer games with sexual overtones here, rather an introduction to the PMM's Function mode.

Taking a tour of the PMM's functions, let's start with Split. Here one or two split points can be set per MIDI In by pressing notes on the connected keyboard. The MIDI channel for the lowest zone is set to the basic transmit channel of the synth, and this is then automatically incremented for the other zones. For example, if the transmit channel is 5, then the lowest zone will be on MIDI channel 5, the next zone on 6 and so on. Using Multi-converting this allows you to decide to which outputs data from each of these zones will go. All MIDI controller data (modulation wheel, sustain pedal and so on) is automatically assigned to MIDI channel 15, so you can decide which of the Outs are to take this data. (This includes pitchbend and aftertouch which are not technically MIDI controllers.)

Transpose allows either the entire input or split zones to be transposed by up to 63 semitones. When transposing zones, the screen shows Lo, CE or Hi for the low, centre or high zone.

Life with the PMM88 starts to get interesting with Velocity-Switch. A MIDI note velocity value can be set so that MIDI data at the input is set to the received channel if the velocity is less than that value or to a channel three greater if it is more than that value. This allows zone splits and velocity switching to be used together - each zone can be split into two regions subject to the velocity of the incoming note data. Because the lower region must necessarily have a lower velocity than the upper region, notes from the lower region sound softer. A velocity value can be added to or taken away from either region before the note data is output to balance up this situation.

A Velocity Limit can be set so that any notes with a velocity above the setting will automatically take that value. Using this with an addition value from velocity switching lets you set any velocity value for either a velocity sensitive or non-sensitive keyboard.

Filtering on the PMM covers the following options:

All data except for note on/off
All MIDI controller data
Program changes
Aftertouch
Pitchbend
System exclusive and common (song select, song position pointer)
System real-time (MIDI clock, stop, start and continue)
Active sensing (input only)
Individual controllers

The PMM88 can filter on either MIDI Ins or Outs. An interesting situation is where you have split zones. As mentioned above, all controllers are assigned to MIDI channel 15 but you may wish to include, say, pitchbend with one Out and sustain pedal with another. Channel 15 would be included with each Out and the relevant data filtered out as necessary.

You can program in MIDI messages up to a total of 88 bytes per patch which will be sent each time that patch is selected as Send Data. You could send a SysEx request to extract data from a module, or a MIDI stop command to an attached drum machine. ➤

"Some of the PMM's facilities are difficult to check out - particularly those pertaining to live performance - but try as I might, I couldn't get it to misbehave."

➤ Probably one of the best uses of this is sending a remote local on/off command to synths which cannot call up the command for themselves and so cannot function as a mother keyboard. One such instrument is the Casio FZ1. Different commands can be sent from the various Outs.

Program Change works in a similar manner to Send Data. Patch changes for individual Outs can be set up and saved per patch and sent out as the patch is called up.

With Volume Control, a preset MIDI volume command can be sent from each Out independently as the patch is called up. This allows you to balance the volumes of your MIDI modules.

> "I found it difficult to believe that some sort of MIDI data thinning wasn't taking place - but using a second computer and MIDI window, I couldn't detect any."

Where would we be without a Panic Button? Should anything untoward happen, like hanging notes or mis-centred pitchbends, this function is guaranteed to sort it out. It should - a total of 4784 bytes are sent out from each Out which turn off all MIDI controllers which may affect performance, individual notes off and every note on every channel. This is a real belt and braces job, though I doubt whether it will often be used because an audible glitch is likely to be heard even though the transmission is gapped to take just over 6 seconds.

MIDI clocks along with start/stop/continue commands can be sent simultaneously from each Out and a tempo can be set via the up/down buttons.

All internal settings for each individual output can be saved to a librarian on a computer (or something like the Alesis Data Disk) using SysEx Dump. MIDItemp have thought of practically everything - there's even the option to set a delay between data blocks. However, I think that MIDItemp have got their maths wrong. The manual states that the data is sent out in blocks of 128 bytes and yet the entire SysEx dump is only 93 bytes.

ADVANCED USES

ALL OF THE above can be set instantly by accessing the function required with a numeric key - the function name is written underneath the number - and by setting any necessary parameters.

There are a number of advanced features which will let you set the PMM88 up to go with the configuration of your equipment. The first of these is to split the 128 internal patches into either two banks of 64 patches, four banks of 32 patches or eight banks of 16 patches. Each bank has a letter assigned to it (A-H). The purpose of this is to allow you to be able to access all 128 patches from a keyboard which can call up a limited number of patches - for instance a DX7. To get to another bank, you simply call it up from the remote.

Easy to set-up? Yes - double click on Mode and press Edit to take you into Installation mode. Generally, all functions can be accessed by three button presses at most.

When two keyboard players are controlling different synths via the PMM88, it would be useful to be able to split the Ins between the two players and so allow them individual access to their own programmed functions. Program split permits this. The eight inputs are split so that one set can call up one patch while the other calls up a different one. This effectively gives each keyboard player total independence within the PMM88. There has, however, to be some compromise in the processing side of the data (otherwise two independent micro-processors would be required), so the output processing only exists for the first set of Ins - although both can use input processing. Also, the second input group can independently set the program changes, volume control and bank changes.

Finally, the PMM offers two other advanced facilities. Some manufacturers allow you to set a MIDI controller other than #7 for volume - Oberheim for example - so that you can set any controller number in place of the default number. Also, the PMM88 automatically sends out an all notes off command each time you change a patch. This can be inhibited so that glitches are less likely to occur although the occasional note may hang if the patch change occurs before a note off has followed a respective note on.

IN USE

MOST REVIEWERS ENJOY testing MIDI patchbays - there's a sadistic streak in most of us that wants to put this poor piece of gear through the kind of treatment that it would never receive in real life. Stick buckets of MIDI data through all Outs to all sound sources and problems are likely to occur with most MIDI patchbays - with the PMM multi-converting cures most, if not all, of these. The ability to select which modules receive each MIDI channel smooths the MIDI flow. Similarly, manifolding greatly eases data congestion when using multitimbral units in mono mode.

Obvious checks like sending a complete Korg M1 SysEx dump (heavy) through the PMM88 caused no trouble, and *excessive* use of a pitchbend wheel and aftertouch were handled admirably. I found it difficult to believe that some sort of MIDI data thinning-out wasn't taking place, but using a second computer and MIDI window, I couldn't detect any.

Some of the PMM's facilities are a little difficult to check out - in particular those pertaining to live performance. But try as I might, I couldn't get the PMM88 to misbehave - not even a hiccup. Most impressive.

Gripes, I've had a few - as Frank Sinatra almost sang. As the PMM88 makes up to eight-way merging feasible, checking the path from a MIDI In to any MIDI Out can be a bit awkward. A better operating system might have involved two sets of different coloured LEDs to indicate routings. Similarly, the buttons have to handle three different functions - numeric keys, MIDI on/off and function select. I can't help but feel that two sets of buttons would have made some areas of operation clearer. And any such additions shouldn't substantially increase the price.

VERDICT

IN A WORD, the PMM88 is excellent. It's a quality unit which can vastly improve the performance of even the most basic MIDI setup. It really is difficult to fault apart from the few points mentioned above.

On the subject of cost, a basic, MIDI-merging patchbay can be bought for half the price of the PMM88 and you're obviously going to have to be convinced that the PMM is going to make a real difference to your setup before investing the extra cash. Also, an 8x8 patchbay is a little small for many MIDI studios - it's certainly a shame that MIDItemp don't have a 16x16 version. Even so, if I had an M1, D110, sampler, computer sequencer and a couple of keyboards, I would be sorely tempted. ■

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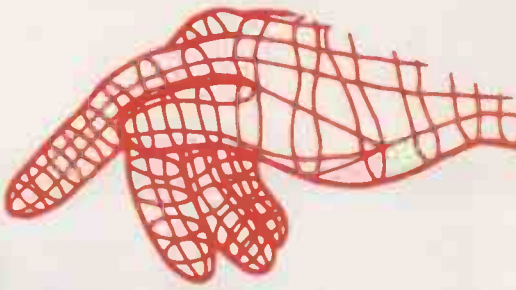

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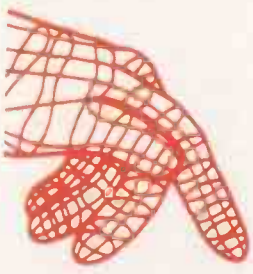

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IN TOUCH WITH TIME

XR10

PHOTOGRAPHY: JAMES CUMPSTY

Is it preset? Is it programmable? In fact, Akai's new budget drum machine is both - does it combine the best of both worlds? Review by Simon Trask.

THROUGH THE UNDOUBTED success of their samplers, Akai have probably done more than any other instrument manufacturer to turn the drum machine into an endangered species. The combination of MIDI sequencer and sampler has become an increasingly common substitute for a drum machine, for those who can afford it. There are significant advantages to creating rhythm parts in a MIDI sequencer as opposed to a drum machine, and significant advantages to being able to draw on your own library of sampled drum sounds as opposed to a collection of sounds provided for you by a manufacturer.

Not that Akai have ignored the drum machine. With the MPC60 they effectively brought the sequencer and the sampler to the beatbox, while the XE8 drum expander dropped onboard sequencing altogether. One thing these instruments have in common is sonic expandability - the MPC60 because it can sample, the XE8 because it can avail itself of a dedicated sample-card library. In contrast, Akai's first drum machine of the non-sampling kind, the XR10, has to rely solely on its 65 internal 16-bit PCM drum and percussion samples, known as Preset Sounds. That's a fairly healthy number to start with, and in practice you can extract a greater diversity of sounds by tuning, reversing and pitch-sweeping these samples. Akai's drum machine also has 32 User Sound locations which can be used as copy locations when you want to create more than one version of a Preset Sound. The Preset Sounds themselves are consistently impressive, and offer a good deal of variety in the kit and Latin percussion departments - though not much of anything else.

The XR10 also has presets of another kind, namely preset rhythms. Akai have elected to make their budget drum machine both a preset and a

programmable instrument, with 50 preset rhythm types and 99 programmable patterns. Including preset rhythms on a programmable drum machine isn't unheard of, but Akai have taken the preset ethos a step further on the XR10 by providing variation, fill-in, intro, break and ending rhythms for each of the 50 Presets and allowing you to select them from front-panel instrument pads. So does the XR10 signal a new direction for the drum machine?

THE OPERATION

OPERATIONALLY THE XR10 is centred around a 2 x 16-character LCD of the non-backlit variety (shame) together with a numeric keypad, yes/no buttons and left, down, up and right arrow buttons of the squidgy rubber variety. The Mode pad in the lower half of the front panel cycles you around the XR10's four modes - Pattern, Song, Sound and Utility - while the Edit pad takes you in and out of the edit pages in Song and Pattern modes. In practice, there are many irritating aspects of the XR10's user interface, but whoever decided that the XR10 should default to Preset pattern 01 every time you enter Pattern mode or return to the pattern play level from the edit level, should definitely be shot. Similarly, having to enter a pattern length and a time signature every time you record a new pattern becomes very laborious (why not allow user defaults?). Still, that's enough on this subject.

The 24 rubber pads spread across the lower part of the XR10's front panel include 15 non-dynamic pads for triggering the Sounds - an already healthy number which is effectively expanded to 150 by the inclusion of *ten* Pad Banks, or "drumkits", the first five of which have fixed Sound-to-pad assignments. Successive presses of the dedicated Pad Bank button cycle you around these ten Pad Banks in Pattern Play, Pattern Record and Song Play modes. Patterns can include Sounds from any of the Pad Banks, giving you a wide range of sounds to draw on within each pattern. For each pad hit, the XR10 records the pad and the Bank it's in. Sound parameters are associated with the Sound rather than the pad, so editing a Sound will affect all the patterns in which it occurs, both Preset and User. The aforementioned User Sound locations can be very useful here, as they allow you to create several versions of a Sound which can then be assigned to different instrument pads.

The XR10's rear panel offers MIDI In and Out connections, a stereo headphones output, Start/Stop and Fill-in footswitch inputs, L/Mono and R/Stereo audio outs, a separate Effect audio out and an Effect Send Level knob. Akai's drum machine doesn't have any individual outs as such, but you can use the Effect output as an individual out if you patch it into a channel on your mixing desk, then remove a Sound from the XR10's stereo outs and route it to the Effect out instead. However, it's principally intended to be used to provide an effects mix of the XR10's Sounds, with the output from the Effect socket being routed to the input of a reverb or multi-fx processor and then on to an effect return on your desk. Each XR10 Sound can be assigned separate Sound Volume and Effect Volume amounts (0-31) which control the level of the Sound at the stereo and Effect outs respectively - so, for instance, to output a Sound only from the Effect output you zero its Sound volume.

SOUNDS

THE XR10 PROVIDES you with ten kicks, ten snares, two rimshots, three hi-hats (closed, mid and open), 12 toms (4 x low, mid and high), two crash cymbals, one ride cymbal, one choke cymbal, handclaps, finger click, four congas, vibraslap, two guiros, cabasa, tambourine, orchestral hit, triangle low and high, cowbell, claves, whistle, squeak low and high, timbales low and high, agogo low and high, and chop (a slapped bass).

Each Preset Sound has 12 parameters: Sound Volume (0-31), Sound Tuning (+25/-26 in 100-cent steps), Fine Tune (+7/-8 in 6.25-cent steps), Pan (31 positions), Effect Send Volume (0-31), DCA Decay (0-31), DCA Hold (0-31), Sweep Decay (0-63), Sweep Depth (0-31), Sweep Polarity (down/up or up/down), Reverse (forward or reverse play), and Velocity Feel (on/off).

Tuning the Sounds down introduces a certain amount of aliasing and noise; personally I think that just makes the Sounds more interesting, but if you're of the opinion that cleanliness *is* next to Godliness, then you won't agree. DCA Decay can be used to shorten the decay time of a Sound, which can be useful when its length isn't quite right either for the rhythm it's being used in or for the sound that results from editing with the tune and sweep parameters. These latter parameters allow you to come up with many variations on the source Sounds, so that in practice the XR10 is a good deal more "open-ended" sonically than its lack of a PCM ROM sample card slot might otherwise suggest. The Velocity Feel parameter effectively changes the perceived "hardness" of a Sound when you're triggering it from an XR10 instrument pad, because, with the parameter turned on, the Sound's attack becomes less percussive at lower velocities - and the pads seem to operate at a fixed mid velocity value, producing a consistent difference which can in some cases be quite, um, striking.

In trying to find a description of the XR10's overall sound, I keep coming back to "gritty and razor-sharp"; the more usual "punchy and tight" are also appropriate. All the samples have plenty of presence and dynamism - you couldn't accuse the XR10 of sounding wimpy, by any stretch of the imagination. Overall it has a very contemporary sound, which means that it doesn't go out of its way to sound like either real drums or a real drummer.

"In trying to find a description of the XR10's overall sound, I keep coming back to 'gritty and razor-sharp', though 'punchy and tight' are also appropriate."

PATTERNS & SONGS

ALL TOO OFTEN the inclusion of preset patterns on a drum machine means a reduction in the number of programmable patterns. Here the XR10 scores by ➤

➤ offering a very creditable 99 of the programmable kind. Of course, whether or not you can actually record that many patterns depends on the amount of memory available and on how minimal or otherwise your patterns are - unless the drum machine adopts a fixed-memory approach to recording (which the XR10 doesn't).

The number of bars per pattern also comes into the equation. The XR10 allows you to record patterns consisting of up to four bars, with time signatures per pattern ranging from 1-4/4 to 1-16/16 (but nothing longer than 4/4, so no patterns in 7/4 or 13/8 - no 'Take Five'). The manual gives no indication of the XR10's note storage capacity, but after indulging in some pattern-copying to fill up the memory I'd estimate it at just short of 4800 notes, which means you're unlikely to be able to record 99 four-bar patterns unless you're into very sparse rhythms.

"Overall the XR10 has a very contemporary sound, which means that it doesn't go out of its way to sound like either real drums or a real drummer."

Now, what if I said to you that you could run out of memory while recording a pattern even if you had plenty of memory left? Well, with the XR10 it's strange but true. This apparent paradox is explained by the fact that Akai's drum machine limits you to 300 notes per pattern - which seems like a lot until you actually reach that limit, as happened to me while I was innocently recording a four-bar pattern. It turns out that the XR10 counts up the notes as it plays through a pattern, including any notes which are being recorded at the time, and when it reaches the 300 mark not only does it refuse to play any more notes but it also wipes out any notes which exist from that point on in the pattern. So it was that I found the second half of the fourth bar of my pattern had disappeared before I could say "Akai". Fortunately, it wasn't as terrible as it could have been, because I'd just previously copied the pattern and was recording into the copy. There's a moral there somewhere.

The XR10's maximum record resolution is 96ppqn. In real-time record you can set the metronome click rate (from quarter to 16th notes or off) and the record quantisation (from quarter to 48th notes or off - maximum resolution); these values can be changed at any time, so you're not limited to one quantisation value per pattern, and you can switch off the metronome after you've put down a beat. Incidentally, the metronome on the XR10 also outputs the metronome beat as a MIDI note (fixed as note 24) on its transmit channel.

The XR10 loops continuously in real-time record mode in familiar fashion, allowing you to overdub new parts on each pass. Erasing instruments is accomplished in a similarly traditional manner, by holding down the Erase pad together with the appropriate instrument pad (one at a time); if you only want to erase a specific beat or series of beats, you only hold down the instrument pad during those beats. When the pattern is Stopped you can use the Erase pad to erase the entire pattern, but not, unlike on some drum machines, an individual instrument part. Talking of erasing things, if you play a ninth note on a beat in real-time record (that is exceed the XR10's eight-note polyphony) the drum machine simply erases the earliest note you played on that beat.

Accents can be recorded per note in the usual drum machine fashion (by holding down the Accent pad when you play the relevant note). Meanwhile, if you hold down the Timing Correct pad and an instrument pad you can record a series of notes at a fixed quantisation (anything from 8th to 96th notes). Rhythms can be recorded into the XR10's User pattern memory using an external MIDI instrument like an Octopad, and the good news here is that dynamics are recorded - though they appear to be quantised to one of 15 levels, in accordance with the way that dynamics are entered in step-time. Also, in order to erase a part recorded in this way, the relevant Sound has to be assigned to one of the XR10's instrument pads first.

In step-time record you tap the relevant instrument pad(s) at each step (1/384th note). Notes are assigned a default velocity value by the XR10, but you can change that value by holding down the Accent pad and tapping one of the 15 instrument pads (each pad plays the currently-selected instrument at a different velocity strength). The left and right arrow buttons move through the pattern one step at a time, the Yes/No button fast-scrolls through the pattern, while the Timing Correct pad advances through the pattern by whatever Timing Correct interval you've specified. Additionally, if you've set Auto Scan to on, the XR10 automatically stops at the next (or previous) note when you're fast-scrolling. The drum machine always plays the Sounds programmed on each step, so with the various scrolling options available to you, it's easy to listen to a pattern in more-or-less real time while you're in step-time mode. I found the XR10's step-time recording easy to get along with, though I wouldn't have minded also having a graphic notation display of individual instrument/pad rhythms, more for transcription than for recording purposes.

Pattern Record mode also allows you to select Copy and Delete options. For Copy you first call up the destination pattern, then select the Copy function (the XR10 only allows you to do this if the destination pattern is empty, which means that you can't overwrite an existing pattern by mistake), and then specify the source pattern. Delete gets rid of the notes and resets the pattern length and time signature parameters (Erase, as mentioned above, just gets rid of the notes); you get a Yes/No choice before the XR10 proceeds with the dastardly deed.

Each User pattern can be assigned its own tempo (40-296bpm). In fact, every time you exit Pattern Record mode you first have to either set a new tempo or agree the currently-set one. Now, as long as you Stop the drum machine between selecting different patterns the new tempo will be selected, but when you change patterns while the drum machine is playing in Pattern Play or Song Play modes the tempo isn't updated. This does rather lessen the usefulness of having pattern-specific tempi - particularly as the XR10 allows you to give each of its Songs an initial tempo but has no facility for introducing tempo

changes during a Song. Of course, if you're slaving the drum machine off a sequencer then this doesn't matter, and having to go through the tempo page each time you exit Pattern Record becomes even more irksome. Roll on the customisable instrument which allows musicians to configure the LCD pages in a way which suits them.

Akai's drum machine can hold up to 20 Songs in memory at any one time. Each Song can have a maximum of 99 steps or 999 bars, with each step consisting of one Preset or one User pattern. As well as being able to repeat each individual step up to seven times, you can bracket any individual step or series of steps and repeat the step(s) within the brackets up to three times; in fact, you can nest up to three levels of brackets, each of which can be repeated up to three times. All this can go on within one Song step if you want, but the idea is more that you can repeat sections within sections within sections of a Song - providing you can keep track of what you're doing. Actually, it's not as complicated as it might seem at first - which is probably a good thing, because if you make a mistake with your bracketing there's no way you can get out of Song mode (short of switching the machine off) until you fix it. A more informative error message than "Oops!" (the XR10's one and only error message, in fact) wouldn't have gone amiss.

The XR10's MIDI settings are handled in its Utility mode. You can set separate MIDI transmit (1-16) and receive channels (1-16 or omni), and define separate Sound-to-note maps for MIDI note transmission and reception. As with playing the XR10 from its own pads, you can only play more than one version of a Preset Sound if you've made User Sound copies of it.

With the "XR10 Sound" parameter set to off, any Sounds which are assigned to the MIDI transmit map will be muted during pattern and song play and pattern write, but their MIDI note numbers will be transmitted. If you select Sounds which you don't want to use internally, you can incorporate external percussion sounds or a bassline, for instance, into an XR10 pattern. The time between MIDI note on and note off transmission is quite short, so you might find that you need to tailor the amplitude envelope(s) of any external synth sound(s) that you want to play in this way. This parameter also comes in useful if you want to replace one of the XR10's Sounds with an external sound.

The XR10 has no provision for either card or cassette storage of its data, but you do get the option of bulk transfer via MIDI SysEx - though, as usual with Akai, the manual is short on SysEx data details (all it provides are Akai's ID number and the XR10's ID number).

MIDI synchronisation on the XR10 is neither comprehensive nor straightforward. I couldn't get the drum machine to sync to an external MIDI device as either master or slave in Pattern mode, despite the manual's intimation that this should be possible in Pattern Write mode when the drum machine's "MIDI clock" parameter is on. In Song Play mode, with MIDI ➤

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clock turned off, the XR10 can act as a MIDI synchronisation source but can't be slaved, while with MIDI clock turned on it will slave to MIDI sync but can't act as a source (in fact, you can't Start a song at all from the drum machine itself). And on the subject of synchronisation, I should point out that the XR10 doesn't send or respond to MIDI Song Position Pointer in any mode, so when you're using it in conjunction with a sequencer it can't follow the sequencer from anywhere but the beginning of a song.

PRESETS

THE NINE RHYTHMS of the current Preset (you get three variations and three fill-ins in addition to the intro, break and end rhythms) can be selected directly from front-panel pads when the XR10 is in Play mode. The intro, break and end rhythms can be selected by tapping the Intro/End and Break/Continue pads, while instrument pads 10-15 become selector pads for the three variations and three fill-ins.

"With some nifty fingerwork on the numeric keypad and the rhythm selector pads you can combine rhythms from different Presets while the XR10 is running in Play mode."

The conventional practice would be to switch between different patterns within the currently-selected Preset, but why stop there? With some nifty fingerwork on the numeric keypad and the rhythm selector pads you can combine rhythms from different Presets while the XR10 is running in Play mode, so that, for instance, you could experiment with dropping a fill-in or a break from a salsa rhythm into a variation from an electro rhythm. With a spot of practice it's easy to mix 'n' match variations and fill-ins or breaks from different Presets. Experimentation is the name of the game - not to mention fun.

The 50 rhythm Presets, which are listed across the XR10's front panel for ready selection, include the Latin rhythm staples of the preset machine - samba, mambo, cha cha, beguine, bossa nova, rhumba and salsa. But, along with these and the likes of waltz, country, march, twist, reggae and jazz rhythms and five rock rhythms, Akai have included a number of rhythms labelled dance, funk, electro, disco and beatbox. It's nice to see that they're acknowledging the existence of such rhythms, but you won't find any classic beats among them, nor any which are particularly riveting, except perhaps for one or two of the dance and electro rhythms. I also have to wonder if whoever programmed the disco rhythms has ever heard any disco music.

The intro, break, fill-in and end rhythms are each one bar long. The variations, which are the main rhythms, are each two bars long, but you can get the XR10 to play either the first or the second bar by holding down the Timing Correct pad and tapping the relevant Variation pad (first bar) or Fill-in pad (second bar). Whereas the variations always start playing from the beginning of a bar, you can drop in a fill-in or break rhythm from any crotchet in the bar. The break rhythm carries on playing until you next tap the Break/Continue pad, and then at the beginning of the next bar the XR10 reverts to the variation it was playing before it went to the break (you can't go from a fill-in to a break, or vice versa).

The XR10 allows a very ready interaction between Preset and User rhythms in both Pattern and Song modes, but sadly this doesn't extend to being able to select User rhythms from the front-panel pads as you can Preset rhythms. Expanding the spontaneity of the preset ethos into the programmable world wouldn't go amiss - and selecting rhythms by tapping a pad certainly offers a more spontaneous alternative to the usual practice of entering pattern numbers via a numeric keypad. While we're on the subject of spontaneity, I'm going to spontaneously suggest that it's about time we had an alternative method of constructing song chains to the usual one of manually entering a series of pattern numbers in an LCD screen. I'd like to see manufacturers give their drum machines the ability to automatically compile a song chain from pattern selections made in real-time in Play mode. What's more, you should be able to do this while the machine is synced to MIDI clocks or MTC, so that you can create the song chain as you listen to, and perhaps record, other parts in the track. End of message.

VERDICT

THE XR10 ISN'T the best thought-out or the best specified drum machine in the world, but it does sound rather good, with a real meaty, beaty, big and bouncy sound. Basically it's more appealing sonically than it is operationally, but then people hear the sounds, not the operation. I'm not sure about the inclusion of preset rhythms - whenever a drum machine adopts this approach, I always end up wishing I had more programmable memory in their place. I might have been more convinced if Akai had sought a more wholehearted, and more innovative, integration of the preset and the programmable - like being able to select User patterns from front-panel pads. But if the XR10 encourages erstwhile preset drum machine owners to begin programming their own rhythms, who am I to argue?

The XR10 is a big improvement on Akai's XE8 drum expander, has its own distinct character, and overall is a welcome addition at the budget end of the market. Will it end up being overshadowed by Cheetah's MD16 drum machine, which is more sophisticated and yet significantly cheaper? Hopefully we'll be able to find out soon. ■

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When it comes to new equipment you may have noticed that we don't say 'phone for the best deal, POA, or "lowest price guarantee" (Ha! Ha! if the prices are so great why don't they just print them and amaze us all). Our bulk buying policy can usually guarantee that a telephone call to us will not be wasted and in any case we can throw in those "hidden" extras – cables with multitracks, patchbays with desks. (By the way, next time a dealer "guarantees" the lowest price and then can't deliver, try reporting them to the local Office of Fair Trading - it will teach them not to waste your time!)
To be honest though, if you spend all afternoon on the telephone the chances are you might find someone somewhere who will undercut us by a pound or two. The difference at THATCHED COTTAGE is if your E16 breaks down on a Sunday morning or your Drum Machine blows up on a Bank Holiday Monday you CAN ring us, we'll be here and we WILL do something about it – 365 days a year. Have you ever needed help and advice outside shop hours? If you are serious about your music you will know that it is quality of service that makes the difference and at THATCHED COTTAGE it's only a phone call away!

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We have expanded our prospectus to take on two new MIDI courses. Each course is held on site, in our purpose built teaching studios with a maximum class of eight,. Basic accomodation is available.
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In order to cater for the increased demand for advanced multitrack systems we have just opened a new division – Thatched Cottage Digital. Housed in a brand new purpose designed building, it handles 24-track analogue (including the new Tascam MSR24) and all digital and leading edge installations (such as the new Yamaha digital Multitrack).
If you are considering any kind of professional set-up and feel that the legendary T.C.A. service value is of interest, contact Rob or Andy on (0223) 208110 or ring the normal T.C.A. number for full details of what we can offer (including our second-hand and ex-demo list)

THE THATCHED COTTAGE CHALLENGE

This suggestion for a wet afternoon takes about 10 minutes, but results are usually worth the effort!
First of all you flick through the pages of this magazine and take phone numbers of every dealer who "guarantees the lowest price" or operates any kind of unique "Best Price" policy. (There are usually around 10!)
Then, pick any item (It helps if you make it difficult – say a Midiverb II, although any popular item will do) pick up the phone and start dialing!!
Points are scored as follows;
1. "That's no longer available Sir" ..... 1 point
2. "No – what you really want is a ..... 2 points
3. "Whoever quoted you that, is lying Sir" ..... 5 points
4. "We can't quote on the phone, but if you come in with cash" ... 15 points
5. "Give us a credit card number and we will quote you" ..... 25 points
6. "Who quoted you that price?" (Just name one of the others) .... 30 points

Anyone who can score over seventy-five points and furnish us with the names of the shops and their answers contained in a vaguely humorous letter will get a free microphone.
Microphones will also be awarded to anyone who encounters a good answer, fob off or excuse we haven't thought of! Good Luck!

SOME SECONDHAND AND EX-DEMO BARGAINS

RSD Mixdown 16:4:8	£1199
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Fostex 260, Portastudio	£499
Atari 1040 plus Steinberg Pro 12 Sequencer	£425
Alesis HR16 B	£289
Oberheim DPX1 sample player	£299
Yamaha S100 monitors	£89
Sony DTC1000 ES DAT	£999
Yamaha FX500 multi effects processor	£250
Aphex Type C	£199
Seck 12-8-2 Mixer, Mint	£699
Fostex R8 8-track (demo)	£898
XR1 X300 SMPTE Generator	£160
Drawmer LX20 compressor gate	£199
Large colour monitors for ATARI computers (reconditioned)	£75
Alesis HR16	£225
Alesis MMT8	£175
Casio DA2 - R-DAT (S/H)	£499
Alesis Quadraverb	£299
Roland D50 plus PG1000 programmer	£899
Korg M1	£950
Nomad Axxeman	£125
Fostex E16 demo as new	£2599
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Roland U110	£399
Yamaha NS10M	£189
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Roland D5	£435
Sansui MR6 rackmount 6-track	£499
Fostex X26	£189
Alesis 31 band graphic eq (2 av)	£125
Yamaha QX5 sequencer	£150
Yamaha MT3X 6 input portastudio	£399
Yamaha DX27 midi keyboard	£199
Tascam 133 AV cassette deck	£229
Casio DA1 DAT (new)	£475
Tascam 103 (3-head mastering cassette) dem	£175
Akai MX76 weighted mother keyboard	£899
Revox B77 (mint)	£699
Tascam DX4D X2 (noise/reduction for T38)	£250
Yamaha QX21 2-track sequencer	£75
Art Multiverb II (four effects at once)	£225
Korg M3R	£599
Seck 6:2 mixer	£225

This list represents only a fraction of our current secondhand and demonstation stock. Call us for a full listing – All prices exclude VAT.

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AKAI S950 ¾ meg memory expansion boards	£125 + VAT
KORG P3 Combo kit card (sax, bass & drums etc)	£25 + VAT
RAUCH DVT25 100 + 100 watt amp	£199 + VAT
SECK 18:2	£525 + VAT
AIWA DAT recorder inc digital in/out, A/D+D/A module + full remote + free tape	£649 + VAT
ATARI 1040STE + monitor + C-lab creator	£645 + VAT
ACCESSIT 2x15 watt amp (ideal for small monitors/headphone systems	£25 + VAT

THATCHED COTTAGE SERVICE

At our fully equipped in-house service centre we can service all types of equipment (esp. 8-16 tracks) Every reputable dealer should have one on site (don't let anyone tell you any different) Believe it or not, some retailers actually sell complex electronic equipment from their front room or garage (nothing wrong with that of course - we all had to start somewhere - when you are successful though, you outgrow it pretty quickly!) It does though tend to suggest a lack of back up facilities. So if your multitrack needs a service or the heads looking at, give us a call before it's too late.

For those of you who are seriously considering starting a commercial studio we've come up with three packages, each containing everything you will need for your first paying session, from the Multi-track Machine right through to DI Boxes and Cables. The price of the 8 Track System is £4,300 + VAT, the 16 Track is £7,800 + VAT and the 24 Track is £15,750 + VAT. At Thatched Cottage we proved it *could* be done, and we have helped many new studios to open and start making money – our experience could help you. Give me a ring and have a chat – what have you got to lose? Plus: FREE Thatched Cottage Recording School Course to package buyers!!

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In case you didn't know, our fully equipped, ABTA/IATA Thatched Cottage Travel Agency has been up & running for some time now, expanding our high standards of service and great value into the travel industry. Whether you are organising a tour, visiting a trade show or simply booking a holiday, just give us a call – what have you got to lose? Contact Gill Scott or Glen Bagnall on 0223 314577 or 0860 450499 (mobile). ABTA no.

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Access VISA TCA

Four years out of the public eye, Tears for Fears have they're back with a new album, new live line-up and a

FEARFUL

"IF WE'D STAYED IN THE STUDIO - LIKE the Pet Shop Boys, say - we wouldn't have had to push ourselves. We wouldn't have had to rediscover ourselves or reinvent ourselves. It took a little time to break from being a synthesiser duo to being a good live act but we decided that it worked for us and it was important to prove that we could do it."

The speaker is Tears for Fears' Curt Smith, caught during the band's recent sell-out tour of the US. Gone are the days of Smith and partner Roland Orzabal helping pave the way for the mid-'80s boom of synth-pop duos. Instead they're now part of a ten-strong live outfit capable of staging the traditional rock 'n' roll spectacle. Well, almost; their current LP, *The Seeds of Love*, was four years in the making - hardly the usual album-a-year rock 'n' roll bandwagon.

But back to Tears for Fears' new-found fascination with "live" music. Was it a tough transition from the sequencer and the studio to the stage?

"Well, it was", begins Orzabal, "because there's a lot of safety involved in making new records. You can't do vocals in the studio, you don't really have to push yourself, whereas playing live is very very physical. It's a bit like being an athlete: you have to use your body, you have to perform."

"And you've got that one chance to do it", adds Smith. "Playing live is a lot different from recording in the studio. On records, you want to make things exact, even though you want them to feel loose. If it feels loose and wrong, then you're going to have to change it. I mean, there was a lot of work that went into doing what you would consider 'live' backing tracks on *The Seeds of Love*. We'd spend two weeks editing together the drum track, and it's all live drumming. We wanted all the best takes on one tape, and they're never on one take - they're on 15 takes - so you have to spend that time putting them all together. There's a lot of work involved."

On stage Smith and Orzabal have enlisted the help of keyboard player Andy Davis, guitarist Neil Taylor, drummer Jim Copley, saxophonist William Gregory, percussionist Carol Steele and backing vocalists Adele Bertei and Biti Strauchan. Additional keyboards and the stunning, soulful vocal that characterised the single 'Woman in Chains' are provided by Oleta Adams.

For the recording of *Seeds of Love* they called upon the talents of musicians ranging from Phil Collins (on drums for once), Pino Palladino (on bass) and Jon Hassell (on trumpet). Clearly they've come a long way since the days of 1982's hit 'Mad World' and the following year's 'Change' and 'Pale Shelter'. Then they met the world as part of the synth-pop boom complete with dubious haircuts and drum machines. Nobody really expected them to be able to reproduce their songs on stage - it would probably have detracted from the image if they could.

But times change, and - wisely - Tears for Fears have sought

rediscovered live music and re-evaluated technology - now world tour. Interview by Dan Rue. Text by Tim Goodyer.

SYMMETRY

to change with them. The change, however, has been cautious and very slow, but has consistently produced music that has seemingly brought Tears for Fears back from the brink of obscurity. A few months ago they were all but forgotten by the fans that had put *The Hurting* and *Songs from the Big Chair* on the map, and completely unknown to a generation of single buyers that had appeared in their absence. Yet in the wake of *The Seeds of Love* they've toured Germany, Italy, France, Brazil, Argentina, Japan, Australia and America. Right now they're lined up to play the annual Knebworth festival along with Pink Floyd and Paul McCartney. Hardly what you'd call a declining career.

Both Smith and Orzabal began their musical careers as guitarists - Smith on bass guitar, Orzabal on six string. But their success has been accompanied throughout by electronic instruments. Back in the early '80s that meant David Lord's Synclavier and Prophet 5 (Lord was Peter Gabriel's producer). There followed a procession of state-of-the-art technology - Roland Jupiter 4, Jupiter 8, E-mu Emulator, PPG Wave, Yamaha DX7, Prophet t8 - culminating in the purchase of a Fairlight CMI Series III. And it was on the Fairlight that much of the songwriting and arrangements were conducted.

Apart from taking an alarmingly long time, the recording of *The Seeds of Love* saw Smith fending off the record company and press while Orzabal did battle with the technology and the music. The process that had served them so well back in 1985 for the *Songs From the Big Chair* album appeared was failing them. Stories circulated about songs being written on the Fairlight, taken to the musicians and rewritten, returned to the Fairlight to be rewritten again. . .

"For ten months we were really directionless", reveals Smith. "We were trying to virtually recreate what we'd done last time around. Last time around the songs had worked, it worked planning it that way, sequencing and those things, they had all been very well thought out. And we knew exactly what we wanted the album to sound like, including what market we wanted to go for.

"This time it wasn't going to work because when we were touring last time we didn't feel very comfortable. We realised that it's all well and good on record, but try taking that kind of stuff out live, and you're very limited as to what you can do because you're tied down to sequences and drum machines. You can't change things, there's no freedom. So this time, after spending those ten months trying to do what we did last time, we knew that we just weren't happy with it anymore.

"We wanted to do something that was more live, and had a bit more soul to it, a bit more heart. So one of the first decisions was to produce ourselves - and we just experimented.

"Technology's a mixture. A lot of the time it makes things easier, the rest of the time it makes things more complicated - especially when you're working in the studio doing an album, because it takes time. And every month something better is ➤

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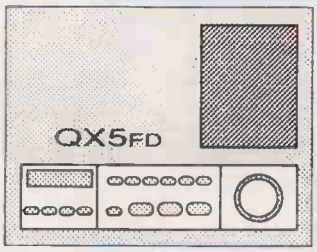

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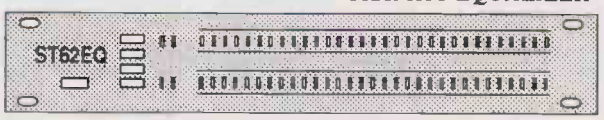

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BARGAIN BASEMENT

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coming out. You can fall into the trap where you keep redoing things, and redoing things. There are times when you should make a decision there and then. We were using 64 tracks and we just kept everything and thought we could leave the decision making until later. There are times when you can be too fussy."

"In '85 we'd made quite a contemporary record in one sense", says Orzabal, "because we looked at the bands who were doing things which we were gawking at at the time and saying 'that's amazing!'. The technology was, or synthesised music was, still a new world. It was amazing, particularly what Trevor Horn and Frankie Goes To Hollywood, Malcolm MacLaren, and the Art Of Noise were doing. And we were very much influenced by that sound at the time.

"We entered the scene when synthesisers were incredibly new and interesting, and really against the established sound of rock music. Now they're the statute and therefore we've gone back to the other areas which we have an interest in, to set ourselves against the norm once again.

"Having to do the *The Seeds of Love*, there was nothing, nothing at all that we heard that made us think 'fantastic!', so we went back to the '60s and '70s and that sort of thing. We let go, we opened up and made it a lot looser. All those things in our then distant adolescence surfaced again."

"I don't know if we're trying to focus on anything in particular", continues Smith. "The things we've used are all things we grew up with that happen to suit the songs. When you've got a song like 'Sowing the Seeds of Love' you get those kind of images."

Regardless of both imagery and the duo's musical youth, the process of songwriting continued to be a game of ping pong between the Fairlight and the live musicians.

"When I first came up with the songs for *The Seeds of Love*, the immediate thing I did was put them into the Fairlight to get a sense of how they would sound with the band playing", explains Orzabal. "The sequence for 'Sowing the Seeds of Love' was nowhere near what we ended up with - it was just like a demo. With 'Woman In Chains', however, the record sounds very much like the initial Fairlight sequence."

In spite of the difficulties in putting the album together, Orzabal is still enamoured of the Fairlight.

"The Fairlight is a wonderful machine" he agrees. "It is really pitted with faults, though, but those idiosyncrasies become quite attractive after a while. It doesn't like time. It's all over the shit - it really is nowhere near as good as most sequencers, in terms of timing. But it is quite simply a delight when you first sit through trying it. The further you go down, the further away from the truth it gets.

"I work with it, because we ended up cutting up songs. Like for instance, the bass drum in 'Woman In Chains' was Manu Katché going 'boom, b-boom-boom'. So, it's like boom, boom-boom - all cut up and then sequenced. See, you get real chopping and changing, some different tones, and that makes the Fairlight sound like a human."

So does the sampled drummer get his credits - or does the sampler get the credit?

"Where he's credited, he actually played the drums", explains Orzabal. "We used what he played and cut it up."

And even alongside the ten-strong live line-up there's still room for the faithful old Fairlight.

"We used Fairlight sequencer on 'Woman' for the flutes and 'Shout' for flutes" he continues. On 'Mad World' we used some samples of the record, and we also use it on 'Working Hour' - but it's just used like a drum machine there."

"Technology is the absolute backbone of everything that's being created at the moment. We're kind of old-fashioned, you might say."

WHATEVER IMAGES THEIR MUSIC MAY have thrown up, that of Smith and Orzabal sharing a stage with a truckload of technology was not one they wanted to push on their audience. In keeping with their return to past musical styles and the heavy turnout of musicians on stage, their current concerts have played down the role of technology in producing the music.

Smith and Orzabal front the band playing bass and six-string guitars respectively, and concentrating on delivering the *songs* to the audience. Behind them the drummer, percussionist, guitarist, saxophonist, and backing vocalists concede nothing to Tears for Fears' techno-pop past. Even the keyboards appear to play a modest part in the proceedings - Oleta Adams' grand piano and Andy Davis' Roland A80 MIDI controller aren't going to get the technophiles sweating.

Yet the technology is there: the innocent grand is, in fact, a Yamaha MIDI grand. Out of sight of the audience are racks of equipment that contain such impressive examples of high technology as Akai S1000s and Yamaha TX816s. And then there's the Fairlight. . . But why try to hide the technology? After all, the preconceptions held by certain music purists that there are musical instruments and *then* there are synthesisers and samplers is sure to be reinforced by this act of concealment. Could it be that Smith and Orzabal believe people regard the electronics as being less than "human" elements in their music.

"No, not nowadays", protests Orzabal. "Technology is the absolute backbone of everything that's being created at the moment. We're kind of old-fashioned, you might say."

So why hide the electronics?

"Well, we don't hide the electronics. It's just that aesthetically it's more pleasing to have an A80 than banks of synthesisers. Oleta plays a MIDI grand and she's actually playing a lot of synthesised stuff out back, but it doesn't look like a synthesiser. There's this lever which she shuts off the piano keyboard, so she's just playing synthesiser, but it's an acoustic image."

"The grand piano is far more. . ." interrupts Smith. "Instead of having a grand piano and some synthesiser clump next to it - or something like that - we have a grand piano that appears to do it all.

"We've got so much damn stuff on stage, that's all we need. I mean, the thing about technology is that it's so far advanced you could do pretty much anything. You're not limited to one keyboard sound and a couple of guitars and a bass and a drummer any more. Even the saxophonist is playing an Akai wind synth, so he's playing sampled instruments."

One concession that has been made is to yesterday's technology - in the form of an old Hammond B3 tonewheel organ.

"We just bought that", says Smith proudly. "It's in immaculate condition, a beautiful instrument."

BACK IN THE STUDIO, THE RECORDING OF *The Seeds of Love* saw Smith and Orzabal using digital recording for the first time - not on the Fairlight, as you might have expected, but on two Mitsubishi 32-track digital tape machines slaved together. Although this gave them 64 tracks to play with, it was digital editing that made the arrangement particularly valuable to them.

"We'd have had to splice analogue tape about 50 times" comments Orzabal. "We wouldn't have been able to do it - the tape would have fallen apart."

The current explosion of digital recording is geared around tapeless direct-to-disk recording systems such as that pioneered by New England Digital in their Synclavier, and more recently

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popularised by Digidesign with their Sound Tools system for the Apple Mac. The speed and accuracy of such systems is a pleasure which still awaits the Tears for Fears pair.

Other digital technology is much more familiar, however. Korg M1s, Yamaha DX1s and Roland D550s have all played their part in *The Seeds of Love*.

"The TX816 is wonderful behind another main sound with lots of reverb", enthuses Orzabal. "For instance, on 'Standing on the Corner of the Third World' its the 'behind' sound, it's the Rhodes and piano sound. It's also behind the keyboard sound in 'Year of the Knife'. We have a TX802, D550 and Korg M1 in the studio at home. The M1 is the main instrument. I spent a long time in rehearsals programming up all the old Jupiter 8 and Prophet sounds on the M1 because it's got, like, pulse waves and all this kind of stuff on it. you can program it like an old analogue synth. It's fantastic."

Both Smith and Orzabal are keen to make the instruments they use as individual to them as possible. To this end they devote a lot of energy to programming their own sounds. There's a succinct message here from Orzabal to other keyboard players: "Stop using the bloody DX7 presets and invent something new of your own."

"The most annoying thing you can get from using a lot of technology is where people listening to records can tell exactly where the song came from", asserts Smith. "It would be nice to think that people were being a touch more creative than just turning their gear on and making albums. They should actually play with it - the boundaries are so wide with these instruments, and people don't even play with them. They just turn on, choose the preset and go."

"People should stop pissing around with synthesisers and make fucking good music", adds Orzabal, bluntly.

"To break the mould would be nice, wouldn't it?", suggests Smith.

Breaking the songwriting mould is something that Tears for Fears have consistently done with each new album. It's a process Orzabal refers to as "reinventing" himself.

If there's anything other than their synth duo image that Tears for Fears are recognised for, it's the depth and intensity of their lyrics - or, more specifically, Orzabal's lyrics. The band's name came from the process of resolving psychological problems by confrontation - an ideal background for an enigmatic lyricist, if ever I heard one. So: the oldest songwriting question in the interviewer's handbook must be "who do you write for, yourself or your audience?". Is it your audience, Roland?

"No, not at all, but I may well do it next time for the first time. I've got to the stage in my writing where I'm in danger of being too cryptic - I can see it going that way. Certain people like trying to get into it and unravel it, but I don't want to get that specialist. I think certain things on this album are intensely cryptic but I think they should be readily understandable to everybody.

"In Europe this album has been incredibly well-received. It's been better for us than the last album in certain territories. It seems to me that a lot of the stuff has coincided with quite a few things - like in 'Sowing the Seeds of Love' it says 'I love a sunflower'. The sunflower is the emblem of the Green party, and Green politics and all that kind of stuff is becoming credibly popular. Things are really changing rapidly. And, believe it or not, although it mixes a lot of things from the '60s and '70s, this album is actually quite forward-looking and futuristic.

"I suppose *Songs From the Big Chair* is quite easy to understand on one level. Things like 'Shout' and 'Everybody Wants to Rule the World' don't require a degree in philosophy to get it.

"Having said that, though, if what you do is really good, it should work on that level as well. I think I'm going to be bearing that in mind when I write again - that things can be simple and direct, and communicate to everybody."

Whether you understand - or believe you understand - the lyrical content of *The Seeds of Love* is something you'll have to decide for yourself. But it might help to have some sort of perspective of the album as a whole.

"I think it expresses a dissatisfaction with the general restriction of society in England. A lot of it's tongue-in-cheek, and a lot of it's aggressive. 'Year of the Knife' is like someone kicking back at the things that make them. And the whole album kicks against the structure of what we were previously - that's why it's so diverse."

The first album does have comments on society with songs like 'Mad World'", suggests Smith, "but the first two albums were a lot more inward-looking. I think this one is a lot more outward-looking, it's happening outside of us."

One obviously personal reference is contained in 'Badman's Song'.

"I wrote that in 1985", explains Orzabal. "We'd just played a gig in Denver and that night there was a party - and it just happened to be in the room next to mine. At about four o'clock in the morning I couldn't get to sleep because everyone was talking - crew members and management - and I put my ear to the wall and I could hear a lot of badmouthing going on. On the one hand I was flattered with the attention I was getting, but on the other hand I was sort of shocked that I wasn't aware of the bad vibes I was putting out.

"It was like a little reflection: what are you? How good are you? How bad are you?

"It's a song about guilt. If you're a self-analytical person, the type of person who checks your behaviour with a third eye or third ear, or whatever, then you're vulnerable to other people's criticism. People who don't regulate their behaviour aren't conscious of what they do and aren't vulnerable to criticism because they're not reflective. So that's what the song is about: guilt and how it's self-inflicted a lot of the time. 'Once in a while I want to feel no shame, and get down on my knees and pray for rain. . .'. It's like, when there's nothing to feel bad about, feel guilty about, feel ashamed of, then something must be wrong.

"It's guilt in the frame of the looking glass. I thought the lyrics were brilliant really."

Apart from the political messages that regularly surface in pop, Orzabal's self-analysis and philosophy make the hardest going lyrics currently in circulation. Is this what pop music is about? Rather than partying all the time, should modern lyricists be attempting to unravel peoples' psyches in a song?

"That's not the way it is", protests Orzabal. "It's not like 'woe is me' and let's write a song, it's more than that. It's to do with accessing a place which isn't readily understood by logical and rational means, and isn't what we call reality. There's so much going on in the heavens - heaven and hell, that kind of stuff. . . What I'm talking about is the unconscious."

Back in the conscious world it's time to draw a close to the interview. It's been a long wait since *Songs from the Big Chair*, are we going to see Tears for Fears taking a similar time to put together their next album?

"No, there's never a need to", replies Orzabal, confidently. "It was very necessary for us to do, believe it or not. It's hard to see from the outside because all you see are little clips where we poke our heads in and say 'hello, we still exist'. But we had lives going on in that period - and they were the best years of mine so far." ■

"The most annoying thing you can get from using a lot of technology is where people listening to records can tell exactly where the song came from."

S770

Roland's debut stereo 16-bit linear sampler offers further evidence that the barriers between digital sampler, recorder and synthesiser are breaking down. Part one of this two-part review asks: is it the complete production tool for the modern studio? Review by Simon Trask.

THE S770 REPRESENTS Roland's first step into stereo 16-bit sampling territory, and as such is also their first sampler to provide the professional 44.1kHz and 48kHz sampling rates. However, I can tell you now that there's nothing in the least bit tentative about this particular first step. Roland could perhaps have hurried something onto the market in order to compete with Akai's S1000 stereo 16-bit sampler - indeed, the S770 first put in a (non-performing) appearance in a back room at last year's Frankfurt Music Fair - but paradoxically they would probably have stood less chance of competing with Akai than they do now.

Akai have consistently made all the running where sampling's concerned, providing first the 12-bit and then the 16-bit studio-standard sampler (S900 and S1000 respectively) and leaving Roland among the runners up in the process. But now, with the S770, Roland could well be setting some standards of their own, and part of the reason is that they've brought all their expertise in digital synthesis to bear on their new sampler. For one thing, the S770 includes the company's latest-generation digital filter as also used on their new flagship synth, the D70 - perhaps another reason why they haven't brought out the S770 sooner. In addition, they've included a sophisticated resampling facility which is as much about synthesis as it is about (re)sampling. But if that doesn't grab you then how about the fact that the S770's sound quality is superb: wonderfully clean and dynamic, with plenty of presence and a powerful, rich bass end which is musically very satisfying - particularly for someone who likes a lot of bottom end (er, perhaps I'd better rephrase that). Add to this a wealth of features which are both well thought out and well presented, and you've got a major-league instrument which is going to be a big success for Roland. Excuse my upfront major-league enthusiasm, but working with the S770 inspires such a response - not least because one of the most sophisticated instruments on the market also happens to be one of the most user-friendly, particularly when you take advantage of its rear-panel RGB output to hook up a colour monitor in place of the built-in LCD.

The S770 doesn't come cheap, and unless you're obnoxiously rich it's unlikely to be a purchase you'll consider making lightly. For this reason, and because there's just so much to take in on it, this review is being split over two months so that we can give it the attention it deserves.

ADDING ON

THE S770 COMES in 3U-high, 19-inch rackmounting format and weighs 12kg with fully-expanded memory. It also comes with 2Mb of sample RAM fitted as standard, upgradeable to a maximum of 16Mb in 2Meg increments. The optional RAS770 memory board provides the sockets for the extra memory, as well as the first extra 2Mb of RAM. You can then add on (or in) up to six OMS770 2Mb upgrades to take you to the full complement of 16Mb. Bringing your S770 up to the 16Meg max will cost you almost as much as the sampler itself; however, as the S770 can apparently accept standard SIMM (Single In-Line Memory Module) RAM chips, you could always do your bank balance a big favour by fitting these instead of the OMS770 (2Mb-worth of SIMMs though a computer dealer or mail-order operation will cost you around £140-180, compared to £550 for the OMS770 upgrade); there again, if money is no object then you might feel safer if you stick with Roland.

The S770 provides you with a choice of four sample rates: 22.05, 24, 44.1 and 48kHz. These give you, respectively, 45, 41.3, 22.5 and 20.7 seconds of mono sampling time with the standard 2Mb of memory fitted; the lofty heights of 16Mb give you the loftier sampling times of 363.6, 334.1, 181.8 and 167 seconds respectively. If you're sampling in stereo all the time then you'll need to halve these figures, of course. However, the S770 gives you complete freedom in mixing 'n' matching the different sample rates and mono and stereo samples, so you should treat the figures as guidelines. Stereo samples also reduce the S770's polyphony, as they actually consist of two samples - one for each "side" of the stereo spectrum - and therefore require two voices for each note. The S770, which has a respectable 24-note polyphony, is thus 12-note polyphonic as soon as you play a stereo sample. When reading about the number of multitimbral Parts you can create and the number of samples you can layer on the keyboard, it's worth doing a few quick calculations to see what the polyphony of the S770 will actually allow you to do.

Also fitted as standard on the S770 is an internal 40Mb hard disk - though I should emphasise at this point that the S770 is *not* a direct-to-disk sampling system - along with a 3.5" floppy disk drive which can accept both 2HD and 2DD (double-sided high and double density floppies - the sampler automatically detects which type of disk is inserted in the drive). 2HD disks provide 1.6Mb of storage each, 2DD disks a more modest 640K.

If you're thinking of using floppies to back up your treasured samples, you'll need to be aware that this can often involve two or even three floppies - and that's just for the standard RAM. Fortunately, the S770 is aware of this, too, and leads you smoothly through the necessary procedure with the aid of a few prompts; it even handles disk formatting from within the save procedure, should you find that you've run out of formatted floppies along the way.

The S770 is operable from its front panel, and includes a 64 x 240-dot backlit LCD screen, with contrast readily adjustable from a front-panel knob, for this very purpose. If you don't want to be bothered with the sampler's buttons, you can plug either a Roland MU1 mouse (which comes included with the sampler) or the company's RC100 remote controller (which doesn't) into the Ext Control socket and use them instead. The labelling of the RC100's buttons corresponds to S550 functions, but apparently you can get a function overlay sheet which provides S770 function labelling instead.

The S770's sizeable backlit LCD window is a welcome and necessary inclusion, but given the choice between working with a colour monitor or the LCD there's no competition. Put another way: if you're forking out close on five grand for the sampler, you'd be foolish not to invest in a high-quality colour monitor when there's an RGB output lurking on the sampler's rear panel. It's to Roland's eternal credit that they've always, er, seen a colour monitor as a necessary option for their samplers. But where on previous Roland samplers the mouse merely duplicated the front-panel cursor buttons' actions, moving the cursor around the parameter fields in a pre-determined order, on the S770 it can move freely around the screen *a là* Apple/Atari - a big improvement, to my mind. The S770 also sees Roland using a windows approach to good effect, though no icons and pull-down menus - presumably they were dragged to the R&D trashcan. Although the sampler's LCD also takes advantage of the new environment, it has neither the size nor the crispness and clarity of a good colour monitor, and has to act as a "virtual" window on the full screen size - with the result that the display is constantly scrolling up and down when you're working, which is irritating because it flickers as it scrolls.

"The S770's sound quality is superb: wonderfully clean and dynamic, with plenty of presence and a powerful, rich bass end which is musically very satisfying."

The S770 has a rear-panel monochrome monitor output in addition to its RGB output, but personally I'd go for a colour monitor, not least because Roland use a certain amount of colour coding in their displays. I was lent an excellent Roland DG colour monitor for the purposes of this review, but apparently the company are no longer selling it in the UK. Instead they recommend either a Commodore 1084 or a Philips CM8833 monitor, both of which apparently give equally good results. Either will set you back around £300, but it'll be money well spent.

The S770's rear panel is also home to balanced XLR L/Mono and R(ight stereo) inputs with switchable lo/mid/hi input gain, while the more usual jack inputs are to be found on the front panel, where there are also dual concentric L/R rec level knobs, an input ➤

➤ sensitivity adjustment knob and peak level indicators for each input channel. Returning to the rear panel, we find L/Mono and R(ight stereo) audio outs and six polyphonic individual audio outs, MIDI In, Out and Thru sockets, a standard 25-pin SCSI connector for hooking up additional hard disks, Roland's CD5 CD ROM drive and their new MO7 Magnetic Optical Disk Unit (which, incidentally, can store 540Mb of data to a removable 5.25" double-sided read/write optical disk).

Also fitted as standard are both optical and coaxial digital in/outs. These allow you to sample digitally off, say, a CD player fitted with suitable digital outputs (apparently, the S770's digital I/O format is compatible with the standard format for consumer digital equipment). You can't use the optical and coaxial connections simultaneously, however - a rear-panel switch allows you to select one or the other.

"Fitted as standard are both optical and coaxial digital in/outs - these allow you to sample digitally off, say, a CD player fitted with suitable digital outputs."

Also located on the S770's rear panel are the vents for the cooling fan which keeps the internal hard disk from overheating. The fan makes a gentle whirring sound which is relaxing rather than irritating. However, if it becomes intrusive when you're using a microphone to sample nearby the S770, you can set a system parameter which will shut the fan down while you're on the Sample Execute page. The cloud to this particular silver lining bursts if you leave the sampler sitting on this software page while you pop out to the pub for lunch.

Normally the heads are positioned over the hard disk surface so they can read data at any time. What you don't want to happen is have the heads touch the disk surface and damage it - a possibility if the S770 is, say, dropped in transit. For this reason, the sampler allows you to "park" the heads to the side of the disk, out of harm's way. I developed the practice of always parking the heads before switching the sampler off, even if it wasn't going to be moved in the meantime.

STARTING OUT

S770 SYSTEM INITIALISATION off hard disk takes 35 seconds from power-up, during which time the sampler auto-boots the system software and performs checks on the SCSI ports and the internal sample memory - in the process giving you such information as the version number of your system software and the amount of sample memory fitted.

System software updates come on floppy disk, and can be loaded by placing the disk in the S770's floppy drive before switching the machine on. The first thing the sampler does on power-up is check the floppy drive for a system disk, and if it finds one then it loads the software off that disk in preference to the system software on its internal hard disk; you can then save the new version software to the hard disk in place of the existing software.

The S770 defaults to the Performance Play page once the initialisation procedure is finished. An S770 Performance is a MIDI multitimbral setup of 32 Parts, and the highest-but-one organisational level on the sampler. The highest level of all is the Volume, which "contains" all the data in the sampler's memory - a maximum of 64 Performances, 128 Patches, 255 Partials and 512 Samples. The internal hard disk, in comparison, can store up to 128 Volumes, 512 Performances, 1024 Patches, 4096 Partials and 8192 samples - or rather, the sampler can distinguish this many, but whether you can or would even want to store this many on one 40Mb hard disk is another matter.

The S770 allows you to set an Initial Volume system parameter to load a Volume off its internal hard disk on power-up, following the system initialisation procedure. In this way it should be able to load the multitimbral arrangements for all the songs in a live set, say, along with as many samples as the memory will take; the Performance which was selected when the Volume was saved to disk is automatically called onto the Performance Play page - an obvious candidate being the first song in the set, or the song you're currently working on if you're in the studio.

MOVING UP

IF YOU OWN one of Roland's 12-bit samplers and you're thinking of upgrading to the S770 - or perhaps just hiring one in for a studio session - then you'll be very pleased to learn that Roland haven't left you (or, rather, your sample library) out in the cold. A Convert Load facility on their new sampler allows you to load S550, S330 and W30 data off floppies and (in the case of the S550) hard disk into the S770, from where you can save it as S770 data to floppy disk, the internal hard disk or a SCSI-connected storage device. Unfortunately, S50 data disks can't be Convert Loaded directly to the S770; instead you have to Convert Load them to an S550, S330 or W30 first.

In addition to entire floppy disks, individual Patches and Tones can be converted; however, while sample data and loop points are transferred intact and some parameters are converted automatically, the difference in parameters and parameter organisation means that not every parameter can be converted. It's also worth bearing in mind that, since the playback frequency and analogue circuitry are different (as in superior) on the S770, sample data which has been Convert Loaded may sound slightly different on the new sampler.

You should also bear in mind if you already use a Roland CD5 CD ROM drive that existing CD ROM sample libraries for the S550 and W30 have to be Convert Loaded into the S770 before you can use them. However, you can also expect to see CD ROM disks specifically for the S770 being brought out by Roland and third-party developers.

While we're on the subject of data transfer, the

S770 implements MIDI transfer of sample data using the MIDI Sample Dump Standard, opening up the possibility of sample transfer to another S770, a Standard-compatible sampler (an S1000, perhaps) or generic sample editor/librarian software such as Avalon or Alchemy. And because the MIDI Sample Dump Standard only allows the transmission of sample data and associated sample information such as loop points, the S770 also provides for separate SysEx transfer of all its other parameter information.

Roland's new sampler implements both one-way and handshaking data transfer, the latter being quicker for large amounts of data - not because it uses a faster transmission rate but because the S770 doesn't have to pause between sending each data packet. Handshaking involves two-way MIDI communication and, of course, requires that the other device be able to keep up its end of the conversation.

Because a stereo sample on the S770 is actually two samples, and Sample Dump transfer doesn't distinguish between mono and stereo samples, you have to use the sampler's Set Stereo function to re-unite the two "halves" of a stereo sample received as individual samples via MIDI. A bit laborious, but then MIDI sample dumping itself is a laborious process. As an example, transmitting a four-second 44.1kHz sample using the (admittedly slower) one-way transfer method takes an unbelievably long seven minutes.

SUMMING UP

IT'S NOT REALLY fair of me to give a verdict on an instrument when you haven't had a chance to read all about it for yourself, but what I can say is that while the S770 may not be cheap it is a very well specified, professional-quality sampler with plenty of add-on potential. It's also software-upgradeable with the insertion of a new system floppy disk, and in addition to various minor tinkerings with the software you can expect to see more significant additions - most notably, time compression and expansion of samples, to bring the S770 into line with the S1000.

Assuming Roland don't get this together in time for next month's thrilling instalment of The Review That Wouldn't Lie Down, you'll still be able to discover what all those words you didn't understand in this month's instalment really mean, whether sampling on the S770 is a pain or a privilege, and whether you really can use Roland's most sophisticated sampler to date as an all-in-one digital sampler, synth and recorder ■

Price *S770, £4860; RAS 770 memory board, £899; OMS770 2Mb memory, £550; M07 Magnetic Optical Disk Unit, £5225; CD5 CD ROM drive, £1340; RC100 Remote Controller, £250. All prices include VAT.*
More from *Roland (UK) Ltd, Amalgamated Drive, West Cross Centre, Brentford, Middlesex TW8 9EZ. Tel: 081-568 1247.*

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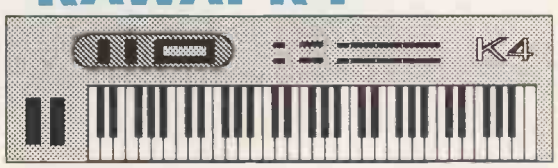

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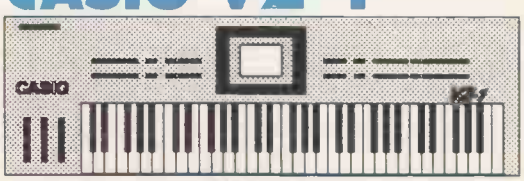

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PATCHWORKS
Drumtrax 1 Sample Tape

Old drum machines: love 'em or hate 'em, you can't avoid 'em in the current climate of recycled technology. What was a piece of junk one day becomes *the* hip machine to use a month later - as long as it's appeared on the right record, of course. The cost of a machine gaining "hip" status rockets accordingly, of course; great if you're selling, a bitch if you're buying. But why buy when you can sample? All you need is access to the machine in question - or a sample tape like Drumtrax, perhaps.

Patchworks' Drumtrax 1 features the sounds of a selection of yesterday's beat boxes - Boss DR110 Dr Rhythm, Roland TR606 Drumatix, Boss DR55 Dr Beat, Korg KPR77, Soundmaster SR88 and Dr Bohm - presented ready for sampling. But rather than present the sounds simply as they appeared on these machines, they've been recorded dry and effected with a variety of treatments including reverbs, phasing, flanging and echo. The idea is that your sampler provides the "produced" drum sounds you require rather than tying up your outboard gear in the process (sorry). So, what we got?

Well, each of the machines appears in turn and offers up a selection of its sounds in both the dry and effected forms mentioned above. The tapes make uninspiring listening, but quickly demonstrate that someone has put a lot of time into assembling Drumtrax 1.

On the plus side, this tape *does* offer you the opportunity to assemble a finished drum section from the (many) sounds in the collection. And obviously, this assembly of sounds can be as eclectic as you wish - each sound can come from a different machine and have a completely different treatment applied to it. On top of this, many of the treatments are already in stereo, so your "drum kit" can be a complex beast. Because of this, Drumtrax 1 is a very cheap way of summoning up considerable drum machine and effects resources.

On the down side, the cassette version of Drumtrax 1 carries the hiss associated with all Compact Cassettes (negligible on DAT) but this is largely masked by the sounds themselves. Where a reverb unit or DDL will allow you to adjust, say, the speed of a repeat echo to suit the music, a sample with echo already on it will not. Neither will it let you adjust the decay time of reverberation or the depth of a phase.

But there are hidden advantages to the situation. Taking those sounds with echo, it is possible to create rhythms that use the echos while the sampler treats the sample as simple sounds - and makes them very manageable, therefore. Pitch shifting a sound will alter repeat rates (and reverb decays) along with the drum pitch; this is not a good way of recreating the sound of the original machine, but does offer access to the most extraordinary rhythm sections you can imagine.

Finally, the review copy of Drumtrax 1 was pre-release and didn't have any of the details necessary to help you navigate your way through a C90 full of bangs and crashes. I'm assuming (trusting) that the documentation will come up to scratch, otherwise organising a drum kit from so many options could rapidly become a nightmare. Given this, Drumtrax 1 is a cost-effective way of gaining access not only to the sounds of classic drum boxes, but to some potentially unusual sounds too. And even on DAT, the cost is more in line with hiring one of these relics than buying its sounds. ***Tg***

Prices *£12.50 cassette tape; £25.00 DAT tape.*
More from *Patchworks, Frederick House, 211 Frederick Road, Hastings, East Sussex TN35 5AU.*

PA DECODER
D50 ROM Vol III

In the last three years a whole industry has sprung up around the Roland D50 - editors, librarians, multitimbral upgrades, RAM cards and ROM libraries. While many players have moved on since investing in their D50s, many more have stuck with the L/A flagship because of its quality and playability, and for the range of distinctive sounds that it produces.

When it comes to producing ROMs for the Roland LA synths, no-one has been more prominent than German company PA Decoder who, in addition to those produced for the D50, also supply ROM cards for the D10, D20 and D110. But with a four-year old synth and two previous ROM cards, just how innovative can the Vol III sounds be? And can anyone still justify shelling out £100 for 128 voices?

Externally, PA Decoder ROMs are easily identifiable in their sturdy black plastic boxes. Internal packaging, however, isn't PA's strong point - crumbling expanded polystyrene, plastic bags, and a photocopied voice sheet. The ROM itself comes in a neat plastic wallet but this is the only protection it gets - PA don't cover the terminals of their cards. As a consequence, there could soon be a lot of blown ROMs with the PA name on them. There's simply no excuse for risking electronic armaggedon by leaving the contacts so exposed.

The voices are arranged into two banks of 64 voices - one on each side of the card. Side one is primarily comprised of "pop" sounds (my description not PA's) and side two, "electronic instruments". Side one is definitely the more impressive of the two with a wide range of strong, and occasionally attention-grabbing, sounds. 'Toto Afrika' and 'Gabriel's Hammer' provide ethnic interest; 'Mezzoforte' 1, 2 and 3 offer analogue-style brass and flutes; 'W. Houston 1' is a real M1 beater, while 'Chicago Background1' and 'Grace Jones Back1' are strong pads. Basses are represented by 'King' and 'Pastorius' and there are dozens of other patches worthy of note - 'Level 42', 'Foster', 'J Jackson', 'Franky Goes to..'. You get the general idea.

Side two is, in comparison, a disappointment. A few voices stand out ('Carol' 1 and 2, 'Horror Background', 'Synclavier Orch1'), but in general, the range of pianos, effects, and attempts to emulate classic digital and analogue timbres fail to inspire. That's not to say that the patches aren't useable, but I can't see them becoming classic D50 sounds.

The real winners of this collection (all from side one) have to be 'Fairlight 2' (arguably the richest string ensemble yet heard from a D50), the range of 'Bach' organs and choirs (will the real Mr Wakeman. . .), and (at last) an electric piano worth considering in preference to your favourite DX7 patch - 'Matt Bianco 1', which captures the essence of the latin/salsa Bianco groove.

Getting the best from this ROM requires time. I found myself warming to the voices as I experimented with Chase, Portamento, and the full MIDI key range. In addition, a little judicious manipulation of choruses and reverbs was starting to get rather interesting when I ran out of playtime and had to put pen to word processor. However, in these days of falling prices, and with the D70 just around the corner, a hundred smackers is starting to look steep for 128 D50 patches, no matter how good some of them are. All in all, it's a qualified (rather than unqualified) hit. Check it out. ***Gordon Reid***

Price *£99.95 including VAT.*
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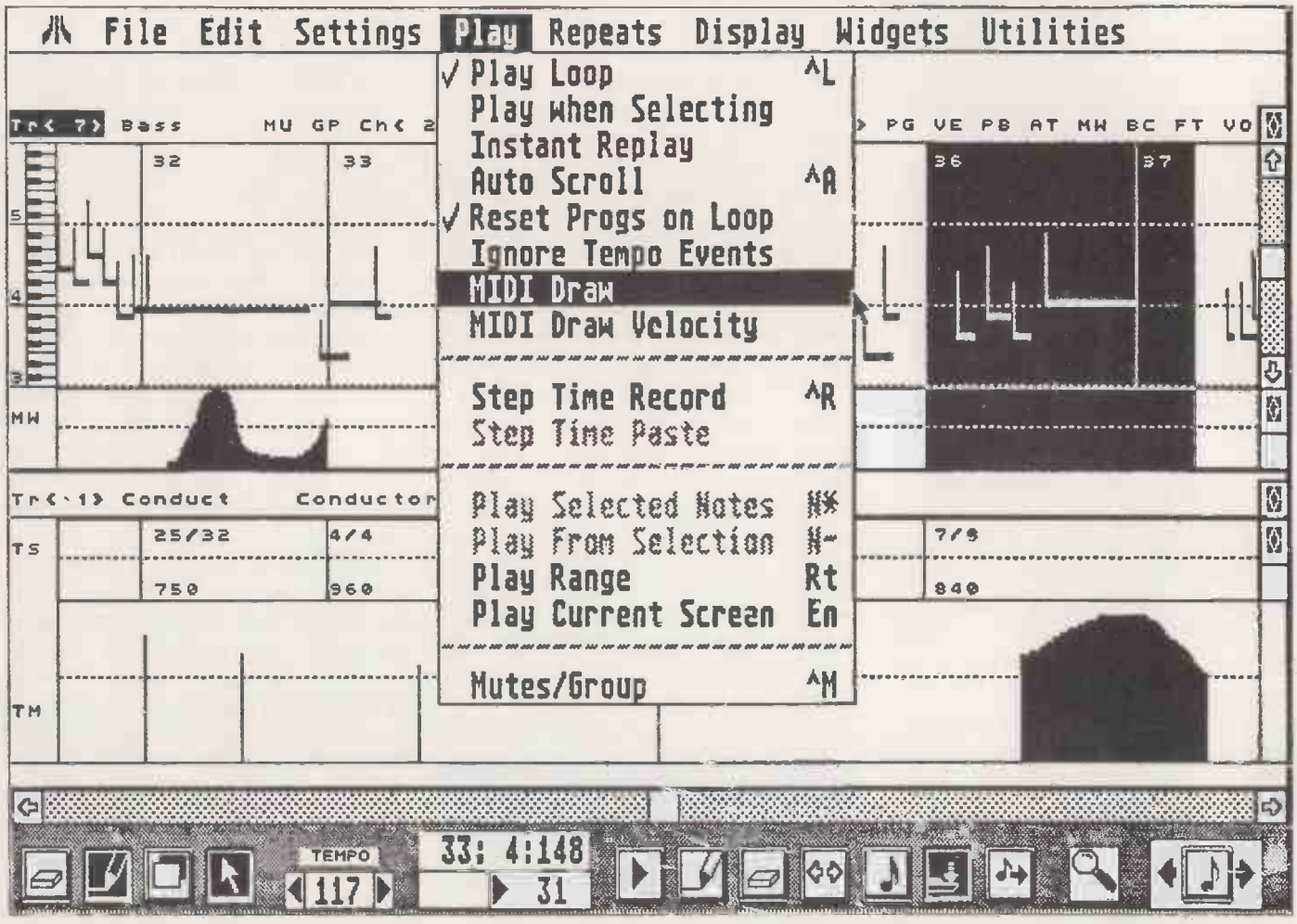
TIGER



If you ever find yourself wishing your sequencing software offered a little more in the way of editing facilities, TIGER is one way of adding them without having to learn a new sequencer. Review by Glen Darcy.

TIGER, 1. A large carnivorous Asian cat having a tawny coat and black stripes; 2. A hip term used as a pick-up line in '60s American films, as in "hey Tiger, wanna see some action?"; 3. A graphic editor from Dr T's Music Software.

Dr T's TIGER (The Interactive Graphic EditoR) is a graphic sequence editor that is designed to make the tiresome task of editing sequence data easier. It does so by displaying note and controller information in a graphic format as opposed to the standard text listings found on most sequencers. The program will work in its own right or it can be used with any sequencer that stores its file information in standard MIDI File format. I used it with Dr T's KCS v1.7 sequencer, which, with their Multi Program Environment (MPE), amounts to a very neat and complete system.

Although it can be run on its own and record MIDI events, TIGER is not really a sequencer as we've ➤

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come to know them. Its major purpose in life is to be an editor, so we'll consider it as a companion program for other sequencers.

GENERAL FEATURES

THE SCREEN DISPLAY looks much like other graphic editors on the market (those included within a sequencer, that is), although it seems a little less cluttered than most. One problem I've had with other programs is that they get icon-happy and fill the screen with functions that aren't used very often. With your monitor at any distance over three feet, you can't tell what you're doing or where you're clicking. TIGER makes use of icons and pull-down menus in a way that makes good sense and keeps you from squinting when your computer monitor can't be kept within arm's reach. And while TIGER will run on a monochrome or colour monitor, the owners' manual suggests that you use a monochrome screen.

I didn't find the program instantly intuitive. You can't get away with not reading the manual (of course, you always thoroughly read your manuals) but it is well written, and includes a good tutorial that will get you going fairly quickly. I found after reading just this section alone, I was able to get around TIGER pretty well and could work out a lot of the functions not covered in the tutorial. Between the contents and index, I was able to find an answer to all my questions quickly. Each of the pull-down menus and icons are described in detail and there is a chapter describing different ways of utilising the program. In the back are also some useful MIDI charts and quick reference tables for most of TIGER's functions.

TIGER allows real-time editing of note, controller, tempo, and time signature data. Loop points can be set so that you can hear and edit a phrase without having to re-run it. And if you really mess something up you can hit the Atari's Undo key and the last edit will be undone. Multiple Tracks can be brought up on the screen at one time, and each of these Tracks can be edited in real time. I personally liked this because I record my drum parts on separate tracks and it's very helpful to be able to see where every drum strike is, in terms of time and velocity.

TIGER's playback functions are fairly extensive. Tracks can be solo'd, individually muted, grouped together for selective playback, or you can press the space bar to hear all tracks from the beginning (muted ones excepted). I appreciated being able to point the mouse at a measure, hit a number on the numerical keypad, and hear that many bars played. For example, point the mouse at bar 12, hit "3", and bars 12 to 14 will play in an endless loop. Up to six cue points can be set and recalled. If you're using KCS v1.7, modifying these cues in TIGER will also modify them in KCS and vice versa.

THE DISPLAY

AS STATED EARLIER, the display is typical of many graphic editors. Notes are displayed as L-shaped characters - the stem height representing velocity (note stems can be set to a uniform height for legibility) and the length representing duration. Controller data is displayed as vertical lines, with height representing a value between 0 and 127. Controllers such as pitchbend, whose values are offset (0 being equal to +63), can be centered or balanced around the value of +63.

At the top of the note display is a text area that reveals things such as active track number, MIDI channel number, group on/off indicator, mute indicator, program number, initial volume level, and track offset (the time at which the first event happens). To the left of the note display is a vertical keyboard. This can be used as a reference during note entry or you can click the mouse on a selected key and it will transmit a note on the track's selected MIDI channel. Standard GEM scroll bars allow you to move vertically (pitch) and horizontally, allowing you to move forward or back in time.

IN-DEPTH EDITING

THE GOOD NEWS is that TIGER is loaded with features, large and small. The bad news is that there isn't enough space in this review to cover all these features thoroughly. I'll try to cover the ones I found most useful.

You must first select the note or notes you wish to edit. TIGER offers many methods of note selection. Individual notes can be selected by pointing the mouse and left-button clicking on the desired note. Multiple notes or phrases can be selected by pointing the mouse, holding the left button and dragging the mouse to the desired end point. Separate note ranges can be selected in this way by limiting the vertical distance of the mouse (selecting notes between C5 and C4 will select only those notes that fall within that range). By selecting Widgets (a pull-down menu), you can select notes in a global manner for the current track. This menu allows you to select notes by pitch (all D#3s in track 4), select all notes below or above a certain pitch, select by pitch class (all D#s regardless of octave), select pitch range, and select all.

Once the required notes have been selected, you must select the attribute or attributes (pitch, duration, velocity, value, and so on) that you want to edit. Pitches can be transposed, set to a fixed value or inverted around a specified pitch. Velocities can be increased, decreased, inverted, set, and scaled by a selected percentage. Velocities can also be clipped to fall within a specified range or deleted if they fall below a specified value. Note durations, pitchbends, and any selected controller can be similarly modified.

Many sequencers allow certain functions to operate globally on an entire track, such as quantising. With the ability to select a note range on which to perform the edit function, many possibilities are open to you. And speaking of quantising...

The quantise functions within TIGER include all the standard functions found in most sequencers, plus some extra options, such as Quantize With Offset. With this function, you can set your quantise value to the normal values (quarter, eighth and sixteenth notes), but then you can specify an offset (in clock pulses) to push everything ahead or behind the quantisation value. There is also a Quantize With Swing option with a variable swing amount, and a ➤

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➤ Quantize To Sequence function that uses another track as the reference. Selecting this will quantise the selected note range to the timings of another track.

All standard cut, paste, move, erase and copy functions are supported in TIGER, with the addition of a Fill command that duplicates the selected range of data to the end of the track, and a copy/transpose function that is pretty self-explanatory. An interesting command that I liked was the Stretch/Shrink function. This allows you to expand or contract, in time, the currently selected notes.

VERDICT

MUSIC SOFTWARE IS an odd concept. It should be simple to use in order to facilitate quick, easy work without interfering with your creative whims, yet it has to be extremely flexible and allow intricate fine-tuning of your music. Finding both these qualities in one package has been my software quest for some time now - and TIGER fulfils both these wishes.

I used the program with a WX7 wind controller which transmits pitchbend, aftertouch, and MIDI volume in mass quantities. I usually have problems with the WX7 sending extraneous Note On messages if my fingering isn't perfectly accurate, causing note glitches and multiple triggering. I found TIGER invaluable for editing the kind of complex controller and note data that I transmit. It allowed me to fine tune my sequences in real time with a minimum amount of effort. It did take some getting used to, but as I mentioned before, once I read the manual it was very easy to get around the program. Since it can read standard MIDI Files, TIGER will improve the efficiency of the sequencer that you're already familiar with, and can stay with you if you ever decide to buy another sequencer program.

The only feature I had any problems with was the Zoom Screen function. There were times when I wanted to zoom in or out three or more times. The problem is that, after you click the mouse, TIGER immediately begins redrawing the display without waiting to see how many times you want to zoom. This can be time-consuming when you have a controller or two displayed with dense note data. One way around the problem is to use a feature that allows you to store different screen displays in RAM and instantly recall them with the function keys. Another problem I experienced was that the smallest zoom window gets extended as the pulse per quarter note resolution decreases. In other words, the lowest zoom time may display no fewer than four or five bars if you've imported a MIDI File that was recorded at 24ppqn, as opposed to displaying only one bar in a sequence recorded at 96ppqn or higher.

Nonetheless, these minor modifications would probably be the only things I would change in TIGER. All in all, I liked it very much and would highly recommend it to anyone interested in making their editing life easier. ■

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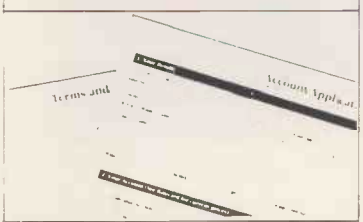

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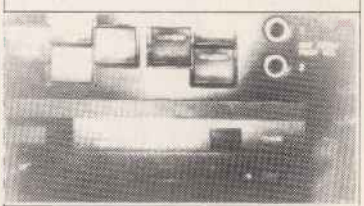

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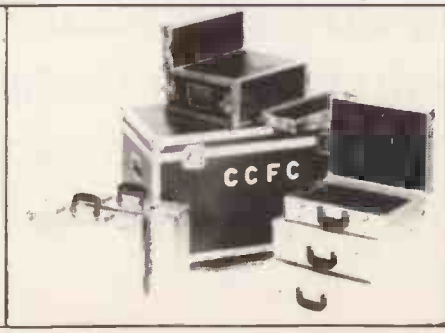

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AS MIDI BECOMES A MORE INTEGRAL PART OF EFFECTS UNITS, THE POSSIBILITIES FOR COMPLEX USE ARE OPENING UP. USING MIDI YOU CAN CREATE THE SORT OF EFFECTS YOU'VE PREVIOUSLY ONLY ASSOCIATED WITH BIG STUDIOS AND BIG BUDGETS. TEXT BY VIC LENNARD.

AS WE ENTER the 1990s, it would be true to say that MIDI has become a way of life for the vast majority of technology-conscious musicians. We plug in MIDI cables in much the same way as their audio counterparts, and go about the setting up of Omni mode, the various MIDI channels and filters with relative ease. OK, understanding exactly how pitchbend information is stored as MIDI data may not be everyone's cup of earl grey, but we can all use it in the course of recording our music.

And it's not only the keyboards, drum machines and sequencers that we're familiar with that boast MIDI ports. These days nearly all modern effects units have the mandatory MIDI sockets on the rear - and yet this aspect of them is rarely used to any great advantage. In order to better understand what use these signal-processing animals can make of MIDI, let's divide the matter up - four distinct areas should cover it nicely.

PATCH CHANGING

IF YOU HAVE used the MIDI on an effects unit, then it's likely that you've used it for remote changing of the unit's current program. By sending a MIDI program change command from a keyboard, sequencer or other MIDI device capable of transmitting one, you can select which patch - and hence which effect - you want to use for a particular song. The time taken in sending this MIDI message is a little over half a millisecond so you are unlikely to spot a delay.

The problems which usually occur here concern the different numbering systems used by different manufacturers. MIDI can handle 128 program changes but always numbers them from 0 to 127. Most

ACTION

effects devices number their patches from one upwards and most keyboards do likewise, so sending out program 5 from the keyboard on the correct MIDI channel will change the unit at the other end to patch 5 as well. Sequencers are slightly different; most of them give the number of the MIDI program, so selecting 0 will give patch number 1 and so on. This situation has been the cause of more than the odd problem before now. The situation is made worse by manufacturers numbering the buttons on their keyboards in blocks of eight or 16. Roland's D50 has eight banks of eight sounds, and can be set up so that selecting a patch sends out a program change to connected devices. Bank 1, sound 1 will select patch 1 (or MIDI program 0) - fine. But what does Bank 5 sound 3, correspond to? The answer is patch 35 (4 x 8 + 3). Now, if only I cut off my two thumbs I could count in eights - it would probably improve my keyboard playing. . .

Consider this situation. You have two effects units which you want to change at the same time, and are both on the same MIDI channel. The problem is that you want program 15 on one unit and 23 on the other. What do you do? Most effects units have a program change table built in which lets you set up a table to select a specific internal program on receiving a particular patch change number. For instance, in our case, we could assign the two programs on the different units to patch change number 4. When this is received, the units will select their respective programs.

Some devices actually offer both of these facilities, including Alesis' humble MIDIverb II. Own up, how many of you MIDIverb II users didn't already realise?

PARAMETER DUMPING

SOONER OR LATER you're going to have filled up all the user memory locations in your effects unit - what now? If you could copy the contents of the memory into a MIDI librarian of some sort then you could start to fill the unit's memory locations over again. And again, most of the newer units offer just this facility. By coding it as System Exclusive information, the data can be sent to any device which can record SysEx - either sequencers (most sequencers will store SysEx information) or specialist MIDI data recorders such as the Elka CR99 or the Alesis Datadisk.

Alas, no solution is ever perfect. Firstly, the chances are that you will only be able to save the entire memory and not individual patches - this is dependent on the device. This is not a helpful situation, especially if you want to organise various patches together for use in a song or set of songs. Unfortunately, one of the most powerful methods of organising synth patches - using a librarian software - can't be used to help us out as very few units are supported by such visual editors. Secondly, some effects units cannot actually dump their internal data without receiving a "request" command from a librarian. Finally, there's the problem of early MIDI-equipped effects units. Take Yamaha's SPX90 - it has SysEx dumping information listed at the back of the manual, but doesn't have a MIDI Out port. For those of you still unaware of its existence, there's a switch inside which changes the MIDI Thru port to a MIDI Out. Without going into the dreary details, suffice it to say that you can dump individual patches or the whole lot. It is possible that other devices without a MIDI Out may possess similar features, but it is rare for them to be documented. A great shame.

MIDI ADDRESSING

NOW WE COME to the more interesting stuff. The first area we looked at - that of remote patch changing - used to be the only way to change sound processes in real time, apart from actually twiddling the knobs. Using this approach, however, all the parameters in a program are altered, even if all you actually need to do is change a reverb decay time. This is because you're updating the whole program rather than altering the parameter in question. Not only is this a clumsy way to modify a program, it invariably gives audible glitches. The alternative approach is to be able to change values of selected parameters via MIDI.

This can be achieved in one of two ways. The first is by using what are called MIDI controllers - the information MIDI uses to implement mod wheels, sustain pedals and so on. Some of these are essential to the general running of a keyboard (certainly the above two), but controllers such as the soft pedal and portamento switch/time are less frequently used and so offer themselves for other purposes. You can select functions on suitably-equipped effects units and assign MIDI controllers to them. The type of MIDI controller and the parameter should match up - there is little point using a MIDI switch to change delay time, for instance. So, in this way, soft pedal can be used to change the type of reverb from hall to reverse and portamento time can be used to alter the reverb delay time or the pre-delay. Yamaha's FX500 is a good example of a "co-operative" MIDI effects processor, as you can select two functions from the 28 on offer and use any of 83 MIDI controllers along with note velocity and aftertouch to modify them. Alesis' Quadraverb allows you to control up to eight functions simultaneously over MIDI, and includes the use of the pitchbend wheel. There are some devices on the market which let you "inject" MIDI controllers in case your controller keyboard lacks them. The Anatek Pocket Pedal allows you to add a MIDI switch and a MIDI pedal to your armoury, while JL Cooper's Fadermaster gives you eight faders, each of which can send out any MIDI info that you program for it. In fact, there is immense scope here and some of the more expensive units really go to town. Eventide's Ultra-Harmoniser H3000 (reviewed MT, April '90) allows you to set its delay time to the period of an incoming MIDI clock, which effectively ties up the delay time to the sequencer tempo. By using this, any tempo change produces a proportional change in delay times.

"NEW MIDI EFFECTS UNITS ARE LIKELY TO HAVE MIDI CONTROL BECAUSE THE EQUIVALENT UNIT FROM ANOTHER MANUFACTURER HAS - FOR ONCE THE MARKET IS WORKING FOR THE MUSICIAN."

The second way in which some units use MIDI to change internal parameters is via System Exclusive messages. ART's Multiverb is one unit that offers this facility. However, control of functions is very difficult to achieve from a standard sequencer, and a dedicated computer ➤

➤ editor is probably what's necessary. Another unit capable of utilising MIDI parameter control is the Lexicon LXP1. This unit has a separate controller (the MRC1) which outputs SysEx directly to the LXP1 but which practically doubles the cost of an otherwise budget reverb unit. There is a solution here, however, as generic software patch editors - such as John Hollis' MIDIman and Dr T's X-Or - can be used as a cost-effective alternative.

MIDI RECORDING

YOU'RE MIXING DOWN your latest MIDI masterpiece; you decide it would be a neat idea to put the entire stereo output through a 180° pan to create the effect of turning the image inside out and back again. Allowing for the time in which this effect must occur, you calculate that a 1.36Hz modulation rate is required only to discover that none of the available units can produce this particular value. The only alternative is to try and create this pan on a live mix manually. As usual in such circumstances, the panning effect is required towards the end of the song and if you muck it up, you're back to the top of the mix to begin again.

The perfect solution would be to record the front panel changes of the pan on a sequencer and then edit these to produce the precise effect. Is this technology with us? The answer is a qualified yes - it's here, but at a price which puts it well beyond the scope of budget effects units.

The Drawmer M500 Dynamics Processor is up to the job, but it doesn't come cheap. Nevertheless, put into master mode, any panel modifications are sent out in an intelligible form to any device capable of recording MIDI controllers. Changing the M500 over to slave mode and replaying the sequence will reproduce those front panel movements. It's certainly a powerful machine, handling compression, gating, fading, panning, de-essing, limiting and expansion - with all parameters for these effects being MIDI controllable. Eventide's H3000 mentioned previously is also a member of this group of elite effects units.

Without going into details as to how these units work, suffice it to say that within the MIDI spec there are MIDI controllers designed for coping with the data. MIDI controller No. 6 tells a device that data entry is about to take place, controllers 98-101 can select a particular parameter and controllers 96 and 97 are for data increment and data decrement respectively. Some controllers have no specific definitions and so can be used by a manufacturer for a purpose they see fit. These include controller Nos. 70-79 and 84-91, while controller Nos. 80-83 are so loosely defined (general-purpose controllers) as to be effectively included within this group.

Controlling your effects unit via MIDI opens up a wealth of possibilities in the MIDI studio - of almost any size. Even patch changing can be used to good effect if intelligently applied.

New MIDI effects units are likely to have MIDI control of parameters simply because the equivalent unit from some other manufacturer already has - for once the market is working *for* the musician, so make the most of this: check out the relevant section in the manual before buying.

Once you're used to incorporating this aspect of MIDI in your music you'll find the benefits are twofold. You will be able to obtain a level of sophistication in sound processing you thought would only come with a rack full of expensive outboard processors and you'll feel that your equipment grows with your music, rather than restricts it. It's a nice feeling. ■

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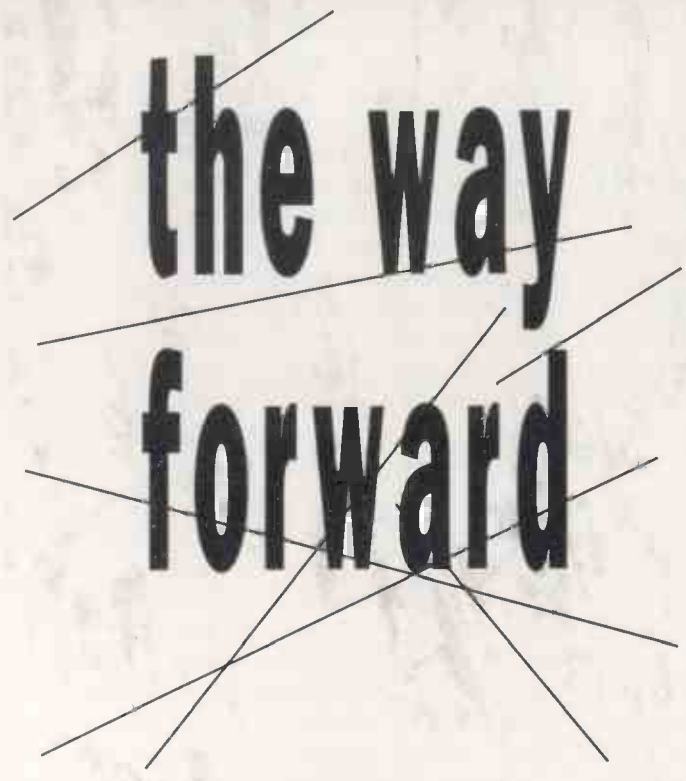

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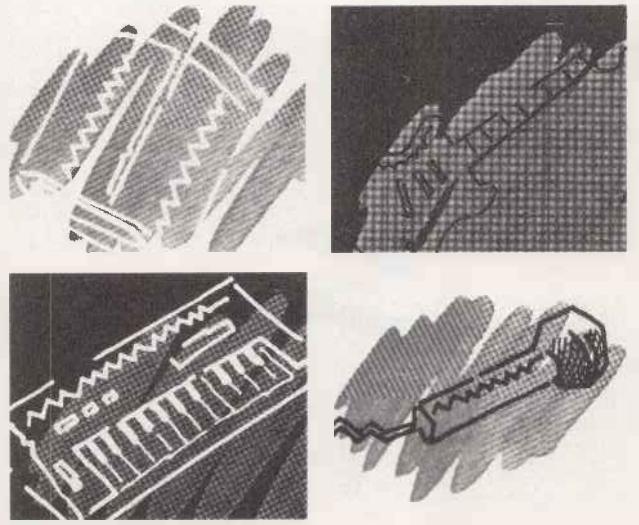

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454

The gap between live and studio musicians has almost disappeared; nowhere is this more apparent than in the rise in importance of the audio mixer. Could the Fostex 454 be the missing link from your setup? Review by Nigel Lord.

WITH THE RECOGNITION of the mix, and more recently, the *remix*, as quite distinct elements in the production of contemporary music, there has emerged a new breed of musician/producer/studio engineer whose skill in tailoring a piece of music for use in specific environments has elevated the mixing process into something of an art. Up until recently, of course, this usually involved optimising a track for the dancefloor or over the airwaves. But with an increasing number of reputations being forged on the basis of songs which have been dismantled, rearranged, cut together and rebuilt, awareness is growing of a much more radical approach to mixing which some would argue puts it on a par with the songwriting process itself.

From this, it follows that the principal instrument of this new art is the mixing desk, and recent designs have clearly reflected a shift in emphasis to accommodate its changing role. These days, we are provided with far more control of outboard equipment through the use of auxiliaries and insert points, and with the inclusion of facilities such as parametric equalisation, we can even begin to explore the creative potential of the desk.

But given the kind of surgery to which a piece of music may be subjected these days (and the hours of patient knob twiddling this usually entails), it's hardly suprising that we have come to regard our mixing desks as much more than mere signal routing devices. What is perhaps suprising is that manufacturers have been so reluctant to take on the (relatively simple) task of including a MIDI interface in their designs. Indeed, it could be said that the mixer has come to represent the final frontier in terms of the "MIDIfication" of the recording process. Only recently have we begun to see the emergence of a number of desks, which like instruments and outboard equipment before them, can be brought to heel by a few well-aimed MIDI data bytes.

But what has started as a trickle will almost certainly turn into a flood, and I'm sure that within the next 12 months or so, MIDI will become standard issue on all the better quality desks - no matter what the format.

APPEARANCES

SO WHY, YOU might ask, have Fostex decided that this is an opportune moment to introduce a non-MIDI mixing desk onto the already overcrowded market? I must confess, I don't really know, but with its 8:4:2 format this is clearly the kind of mixer which is destined to find its way into home MIDI setups throughout the country. I can't help feeling it would have been nice had it been given the power of communication with the equipment with which it will almost certainly be surrounded.

But ours is not to reason why (is it?), ours is to look at the facilities which are included and make up our minds on the strength of them. And strength is not an inappropriate word here, since in the 454 we have a well-thought out and eminently usable mixing desk which could hold its own amongst much more costly rivals.

It's also a very attractive machine. Though not straying too far from conventional mixer design, it has that air of individualism about it which makes you want to get to know it better. Functional and elegant, the layout and graphics spell quality in a quietly understated way, and this is borne out by the standard of construction, which is uniformly excellent.

The spacing of the knobs, for example (so often a compromise on larger desks), is just about perfect here. And the four-and-a-half inches of travel afforded by the input faders together with their logarithmic scaling and deeply concave buttons doesn't leave much room for improvement either. The raised LED meter panel, besides looking very imposing, really does makes life easy when the mixer is in a horizontal position and you're trying to keep an eye on it from a distance. Similarly, the recessed connection panel (replete with graphics which can be read from the rear) has obviously been designed to make those tedious (re)connecting sessions that bit less of a drudge.

In fact, my only criticism of the machine ergonomically, would be the rather limited travel of the push buttons: if you're looking directly over the desk, it can sometimes be difficult to ascertain whether these are switched in or out. And if you think that sounds like a rather desperate attempt to introduce a little balance into this part of the review, I won't attempt to deny it.

FACILITIES

DOES THE 454'S internal design match up to its winning looks? Well, I think the first thing you'd have to say is that with one exception (which we'll come to in a moment), we're looking at pretty standard mixer technology here. But of course, this needn't be any sort of disadvantage if the price is right - and those of you who have already checked this out at the end of the review will know that it is. Opting for a tried and trusted format offers many distinct advantages over more radical designs - not the least of which is ease

of use. And the 454 is indeed very easy to use. But I'm getting ahead of myself. Let's take a look at the facilities on offer. . .

The eight identical input channels are sectioned off into five control areas. The first of these (at the top of the unit) comprises: an input Trim control to optimise signal levels for anything from mics (-60dB) to line (-10dB), a selector to switch between the Channel inputs on quarter-inch jacks (and balanced XLRs) on the rear panel or Tape inputs on phonos on the recessed top panel, and the send control for the first Auxiliary - a mono signal which is sent out post-fade and post-EQ.

In the second section we find the controls associated with Auxiliary number two, and first, we have the selector switch which determines whether the signal is sent Pre-fade (but Post-EQ) or Post-fade (and Post-EQ). In its third position, it is used to connect the Tape input for that particular channel to the second Auxiliary buss, making it useful as a tape monitor when overdubbing.

Just below this is the Gain control which determines the send level of Auxiliary 2 and just below this is the Pan pot, which as I hope would be pretty obvious, means that this is a stereo auxiliary we're looking at. Of course you could, at a pinch, use it to provide separate mono inputs for two different external processors. This would mean the Pan pot acting as a sort of balance control between the two send signals, but it would allow you to use three ➤

"Functional and elegant, the layout and graphics spell quality in a quietly understated way, and this is born out by construction, which is uniformly excellent."

PHOTOGRAPHY: JAMES CUMPSTY

➤ separate processors with the desk in addition to those connected through the Insert points for each channel.

The main channel Pan pot is situated in the next section along with an Assign switch which determines whether the eight channels are sent to output busses 1-2 or 3-4. Thus, in combination, the Pan pot and the Assign switch make it possible to direct channels 1-8 to any of the four main outputs.

We come now to the EQ section - and it is here that we find the rather innovative design work mentioned earlier. Instead of the usual static high and low controls with a sweepable mid range, the 454 features two sweepable EQs - ranging from 60Hz-1kHz and 400Hz-6kHz respectively - and a static 10kHz control for the treble. Rather than being labelled low and mid, the two sweep EQs are referred to (somewhat confusingly) as Hi Mid and Mid Lo, but between them they cover the audio spectrum right up to 6kHz with plenty of overlap.

"Even at high settings of gain and EQ, the 454 remained transparent in operation, imposing little of its own character on signals on their way to tape."

As anyone familiar with recording will know, this covers all the likely "trouble spots" associated with modern instruments and mics, and with a generous ±15dB to play with (many mixers offer only 12dB), it should be possible to handle most eventualities. I must, however, take issue with the instruction manual here: these are not, as is stated, *parametric* EQs, as they do not feature a "Q" control by which you can adjust the breadth of frequencies which are to be boosted or cut. They are more correctly described as *sweep* equalisers as they simply allow the frequencies affected to be shifted up and down the audio spectrum. Sorry to be pedantic, but this is becoming quite a common "mistake" these days and I feel it is not one which should be encouraged.

Finally, just below the EQ section, we find the PFL (Pre-Fade Listen) or solo buttons, and, on the main fader panel itself, eight perfectly formed red LEDs advising us of an overload condition in the pre-amp or EQ stages, *or* the fact that a PFL button has been depressed.

Over on the right-hand side of the 454, we find the four level faders associated with each of the output busses, and immediately above them their respective PFL (solo) buttons, Pan pots (for mixing down to stereo) and Buss In gain controls. These latter pots do not, as you might imagine, adjust the overall gain of the four output busses, but are used to match signal levels arriving via four Buss In phono sockets on the recessed panel. Typically, these would be used as returns for effects and processors, but they can be used as a means of connecting other mixers and external gear, should the necessity arise.

Monitoring facilities, though comprehensive, are kept quite straightforward on the 454 (if only this were true of all mixers). Along with level controls for output and headphones (two pairs may be connected), a single row of push-button switches allows you to select the signals you wish to listen in to. In addition to the four output busses, these include Auxiliary 2 send, the Master Stereo out and 2 Track in (from a stereo mastering machine). You can, of course, select these in combination if you need to monitor more than one signal at a time, and where this involves two or more of the four output busses, the 454 automatically pans 1 and 3 to the left, and 2 and 4 to the right.

An overall level control is provided for the PFL (solo) function, and there is of course a Master level control for main stereo out - not, sadly, a fader (or pair of faders), but a humble rotary control situated near the bottom right-hand corner of the meter panel. As is often the case on small desks, the four LED ladders which form the bar graph display are dual function and their operation is determined by a push button switch just below the Master level control. In the "out" position, signals from the four output busses are displayed. In the "in" position, the first two meters display the main stereo out level, while the second two can be used to keep an eye on the signals from the two Track in sockets over on the top right-hand corner of the desk on the recessed rear panel.

A further switch also situated (for some strange reason) on this panel, is used to select between normal PPM displays and peak hold readings - the hold time being approximately one-and-a-half seconds. And to round things off we have an extra PFL warning LED built into the raised meter display (next to the Power On LED), and this ties in with an extra function for the fourth meter display (on the far right) which switches it over to monitor PFL levels whenever one of the solo buttons is depressed.

Mentioned earlier were the balanced XLR connectors for the main inputs, and it is through these sockets that the 454 provides a 24V power supply for phantom-powered mics. A small switch at the very top of the desk is used to (universally) switch this supply on or off, and though the manual is probably correct in stating it should be left in the off position when using conventional mics, this doesn't make any allowance for situations where both types of mics are used. The only solution would seem to be checking thoroughly the wiring of all mics with XLR connectors to ensure they comply with the pin layout on the sockets on the 454.

Incidentally, although primarily used for balanced mics, the XLRs will also accept unbalanced signals, provided the plugs are wired in accordance with the pin layout shown in the manual. Conversely, the quarter-inch jack inputs, though normally used with unbalanced signals, will accept balanced lines (via stereo plugs) with the "hot" and "cold" wires connected (respectively) to the tip and ring of the plugs. Again the manual tells you everything you need to know.

With the exception of the input sockets and Insert, Monitor and Auxiliary 1 out sockets - which are on quarter-inch jacks on the rear of the desk - all other connections (including direct outs from each channel) are via phonos mounted on the recessed panel. This, though not exactly standard practice on mixers, does make the 454 more compatible with Fostex's own tape machines, and also means that there isn't the usual array of huge, ungainly jack and XLR plugs sprouting from the top of the desk.

VERDICT

IN USE, I really couldn't fault the 454. With any mixer at this price, there are bound to be certain facilities which have been omitted or which you'd like to have more of. But I found myself coming up against few real restrictions - and even fewer that couldn't be got round with a little thought.

In terms of frequency response, noise and distortion, performance was examplary. Even at high settings of the gain and EQ controls, the 454 remained virtually transparent in operation, imposing little of its own character on signals as they made their way onto tape. Using it in conjunction with a Fostex Model 80 tape deck, it was quite apparent that the two sat very happily side by side - as I'm sure would be the case with later (and earlier) Fostex machines.

A study of the spec for impedance and signal levels reveals nothing that would prove problematic for any other machine either, and I could certainly see a role for the 454 as a replacement for the often limited mixer sections in many cassette multitrackers where you're happy with the performance of the tape deck and don't want to lose your shirt selling on the secondhand market. Equally, as the manual points out, there is nothing to stop you using the 454 in a live situation - the desk is certainly portable enough. A monitoring (foldback) system could be set up using Auxiliary 2, leaving Auxiliary 1 for use with the main reverb/effects unit. And of course, you could always connect a tape machine if you want to save your performance for posterity.

The manual is comprehensive enough, but the translation leaves you wondering just how arms reduction treaties between different nations ever see the light of day. Try this for size: "The Model R8 multitrack recorder's input is 8-channel. But each of 4 INPUTs 5 to 8 of Model R8 has a connection switch connected parallel to INPUT 1 to 4. But when nothing is connected to 5 to 8, the same signal is each sent to the INPUTs 1 & 5, 2 & 6, 3 & 7, 4 & 8. . .". If there's anyone out there who can speak Japanese and has a good working knowledge of hi-tech equipment, there's a fortune to be made out of the electronics industry in Japan.

One of the advantages which a company like Fostex will always enjoy is the fact that a proportion of people who have (or are about to) invest in one of their tape machines will always feel happier buying a mixer which has come from the same stable. And of course, where there's a tape deck, there always has to be a mixing desk, so there's a guaranteed market here. But you'd be hard pressed to find a more suitable companion for any four- or eight-track studio setup. Despite my reservations about the absence of MIDI on what is a new contender in the mixing stakes, the 454 deserves the most serious consideration by anyone looking for a desk for use in a small studio environment. ■

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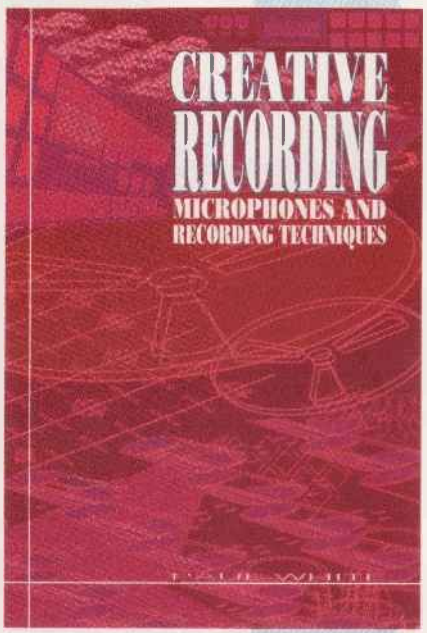

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AKAI S612+, £250; Yamaha TX81Z, £150; Yamaha RX21L, £70; GBS3, £40. Dave, Tel: 01-323 3255 X261.

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AKAI S900 sampler, plus library, vgc, £800 ono. Tel: (0272) 221881.

AKAI S900, plus sample disks, £750; DX7, with lots of extras, £450; Roland D110, £250. Tel: (0283) 790842.

AKAI S1000, v2 software, mint cond, £2075, library available, delivery may be possible. Tel: (0803) 844774.

AKAI X7000 sampler, dynamic keyboard, Atari sample editors etc, £480. Steve, Tel: 051-526 0235.

AKAI X7000, £540; Cheetah MS6, £230; Cheetah MQ8, £200; Alesis HR16, £240. Adrian, Tel: (0928) 60047.

CASIO FZ1 sampler, inc disks, mint cond, only £600. Tel: (0530) 37277, after 4pm.

CASIO FZ1, brilliant! £750, with library (unopened) and extra disks. Steve or Lisa, Tel: 01-749 1264.

CASIO SK100, 10 rhythms, 12 voices, 2 sampling pads, 49 mini-keys, £85 or swap for SH101. Tel: Hornchurch (04024) 44910.

EMAX sampling keyboard, substantial library, home use only, £1350 ono. Tel: (0603) 698355, days; (0603) 611144, eves.

ENSONIQ MIRAGE, 30 disks, manuals, £400 ono. Tel: Guildford (0483) 574325 X224, office hours.

ENSONIQ MIRAGE sampler, MASOS, advanced sampling, plus disks, £500. Mike, Tel: 01-601 5989, days; (0923) 228224, eves/weekends.

HARD DISK, 150Meg SCSI drive, use with samplers, computers, only £800 or swap. Richard, Tel: (0293) 542312.

OBERHEIM PROMMER, slightly tatty but works perfectly, £85 ono, owner upgrading. Michael, Tel: (0271) 862485.

ROLAND S10 sampler, plus 10 boxes of disks, £350; plus Juno-1, £150. Kevin, Tel: 01-540 6807.

ROLAND S10, with flightcase, disks and stand, excellent cond, £450 ono. Tim, Tel: 091-273 2500.

ROLAND W30, 3 months old, thirty disks, swap for M1 or £1150. Mick, Tel: Woking 722607.

ROLAND W30 sampler, 16-track sequencer workstation, hardly used, mint cond, bargain at £1350 ono. Lee, Tel: (0594) 24902.

ROLAND W30 owner seeks others for sample swapping. Peter, Tel: Dublin 0001830673, after 6pm weekdays, anytime weekends.

SEQUENCERS

ALESIS MMT8 sequencer, boxed, as new, £170. Geoff, Tel: (0742) 556101 X5114.

ALESIS MMT8 sequencer, £175; Casio CZ101, £90, both with PSU, excellent cond. Tel: (0904) 653554.

CASIO SZ1, 4-track digital MIDI sequencer, £50; Realistic 5-channel mixer, £40. Tel: (0703) 220152.

KORG SQ8 8-track MIDI sequencer, a real bargain at £50. Dave, Tel: Southend 337699, after 6pm.

KORG SQD8, brand new, unused, was £395, best offer near £249. Neil, Tel: (0707) 44427.

KORG SQD8 8-track sequencer, disk drive, disks, £160. Steve, Tel: (0742) 306854.

KORG SQD8, reliable, easy to use, disk drive, boxed, PSU, disks, £199 ono, swap 520STFM. Tel: (0254) 823871.

KORG SQD8, basic 8-track sequencer, c/w PSU, 13 disks, manual, £250. David, Tel: (04022) 29961, eves.

ROLAND CSQ600, gate CV, vgc, ideal for basslines, £100; Roland CR78, £95. Tel: Bristol 511493.

ROLAND MC500, with performance, librarian, and turbo software, £440. Wanted: 24:2 mixer. Tel: (06333) 65758, eves and weekends.

ROLAND MC500, £425; D110, £400; Akai MX73 master MIDI keyboard, £350. Tel: Burton (0283) 701120.

ROLAND PR100, 4-track sequencer, manuals, disks, power supply, home use only, excellent cond, £175 ono. Tel: 01-994 9860.

ROLAND RS09, £150; SH09, £120; MC202, £90; TB303, £80; Korg DDM110, £80. Tel: 01-992 6484.

YAMAHA QX1, mega sequencer, still the best, £750; TX816 rack synth, £1950. Dave, Tel: (0283) 790842.

YAMAHA QX7, excellent cond, never gigged, boxed, manual etc, £80 ono. Tel: (0283) 760564.

YAMAHA QX7, manual, leads, 8100 notes, £100. Tel: Derby (0332) 701289, after 6pm.

YAMAHA QX21 sequencer, £100; Korg DDD5 drum machine, £210, immac cond, boxed. Mike, Tel: Upminster (04022) 21703.

YAMAHA QX21, excellent cond, £100. Pier
s, Tel: (0753) 652332.

DRUMS

AKAI XE8 MIDI drum expander, still boxed, perfect cond, £200 ono. Don, Tel: (0272) 425714.

ALESIS HR16 drum machine, hardly used, mint cond, boxed, £239. Sky, Tel: Brighton (0273) 670028.

ALESIS HR16, new, boxed, unused, £280 ono. Tel: London 081-808 2344.

ALESIS HR16, mint cond, boxed, manuals etc, quick sale hence £200. Greg, Tel: (0483) 723997.

ALESIS HR16, as new, boxed, £175. Paul, Tel: (0626) 65756.

CASIO RZ1 with 121 samples, SH101, SDS1 and chips, MR30, 4-track, offers. Tel: Barnsley (0226) 297507.

CASIO RZ1 sampling drum machine, tapes, manuals, separate outs, home use, immac cond, £150. Tel: Yeovil (0935) 862573.

CASIO RZ1, £85; Drumulator, £75. Tel: (0268) 584752, after 6pm.

KAWAI R50 and R50e! Expansion board, maximum four chips, bargain at £250. John, Tel: (0532) 576289, after 7pm.

KAWAI R50, with extra (atomic) chip, £200; Oberheim programmable monosynth, knobs galore! £150. Tel: (0602) 411185.

KAWAI R100, 24 tunable electro/acoustic sounds, separate outs, home use, perfect cond, £190. Tel: Yeovil (0935) 862573.

KORG DDD1, 9 ROMs, 1 RAM card, £300. John, Tel: 01-472 6718.

KORG DDD1, with ROM card, great cond, £250. Neil, Tel: (0707) 44427.

KORG DDD1, £175; Alesis Microverb II, £95; Akai ME10D delay unit, £45. Neil, Tel: (080 83) 353.

KORG DDM220, £50; Marlin l/h guitar, £90; SK5, £40; Music 500, £30. Tel: (0296) 431883, eves.

LINN 2, with extra tom-tom chips, vgc, £600 ono. Paul, Tel: (0942) 55233.

LINN 9000, ultimate drum machine/sequencer, disk drive, sampling library, £1000. Roger, Tel: 01-482 1440.

OBERHEIM DX plus Prommer and extra chips, £450 or offers, will split. Graham, Tel: (0256) 58717.

OBERHEIM DX, custom chips, £120; Garfield Nanodoc sync unit, £50; Roland TR808, vgc, offers. Tel: (0342) 323094.

ROLAND CR78, programmable, vgc, as used on 'Enola Gay', partners TR808, £95. Tel: Bristol 511493.

ROLAND R5, boxed, manuals, as new, £325. Wanted: Roland 808. Mark, Tel: 061-834 3113, days; 061-225 7859, eves.

ROLAND R5, new, boxed, £295; rackmounted Sony 501 PCM and video, £345. Tel: (0977) 557560.

ROLAND TR505, vgc, £100 ono. Tel: Leicester (0533) 824579.

ROLAND TR505, boxed, manual, PSU, £100: bargain! Guy, Tel: (0322) 526358, eves.

ROLAND TR505, excellent cond, hardly used, £100. Matt, Tel: Somerset (0458) 50594.

ROLAND TR505, boxed, manual, plus 8 separate outputs, mint cond, £149. Tel: 01-570 5435.

ROLAND TR505, digital drums, poll tax necessitates sale, £100. Tel: 091-386 7807, after 6pm.

ROLAND TR505, as new, bargain at £95. Tel: 01-204 7981.

ROLAND TR606, house drum machine, boxed, manual, vgc, £80. Paul, Tel: (0257) 426925.

ROLAND TR626 drum machine, great sounds, unused, leads, manuals, silly price: £200 ono. Nick, Tel: (0772) 740514.

ROLAND TR626, £165. Tel: (0282) 74167, eves.

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YAMAHA RX17 drum machine, as new, with manual and leads, £150. Trevor, Tel: (0993) 702539.

YAMAHA RX21, power supply, boxed, £120; Vesta reverb, 2-channel stereo limiter, 3-band EQ each channel, £120 ono. Paul, Tel: (0483) 571281 X2637; (0483) 505314, eves.

COMPUTING

AMIGA A500: Future Sound, A-drum, £1500 worth of software, immac cond, £650. Stuart, Tel: 01-524 8923.

AMIGA 500, Music-X, MT32, Korg DRV1000, will split, offers invited. Tel: (0926) 612225. Midlands area.

AMSTRAD CPC464, good cond, inc joystick and over £100 of games, £150 ono. Tel: (0604) 843536.

APPLE III, monitor, 3 drives, printer, software, £100. Andre, Tel: (023 065) 473, after 5pm.

ATARI 520STFM, 1Meg memory expansion, mouse, manuals, leads, boxed, will post! £250. Tel: (0491) 574943.

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ATARI 1040ST and SM124 mono monitor, never been used, boxed, with manual, pristine cond, bargain at £400. Graham, Tel: (0353) 665577, days; (0279) 414942, eves after 7pm.

ATARI 1040STFM, computer, monitor, C-Lab Notator, Juno 106, Akai S700, £1100. Bruce, Tel: 051-734 0064.

ATARI 1040STFM, mono monitor, under warranty, loads of software, £445; Pro24, business, games etc, negotiable with above. Paul, Tel: (0483) 571281 X2637; (0483) 505314, eves.

ATARI MEGA File 60, hard disk drive, £520; Seiksha printer for 1040ST, £100. Tel: 01-858 3213.

BBC B micro, disk drive, S.RAM, Music 500 synth, software, £280 ono. Adrian, Tel: (0792) 298214.

BBC computer, UMI 2B, 16-channel sequencer, plus Opus disk drive, £150. Mark, Tel: 01-640 2079.

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COMMODORE 64 computer, power pack, datacassette, joystick, 100+ games, £140 ono. Steve, Tel: (0622) 726661.

COMUS Track 24 for Atari, £35; ST Replay Pro, £100. Tel: (0772) 734949.

DR T's KCS Level II sequencer, for Atari ST, £100. Caroline, Tel: (0663) 45676.

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EZ-TRACK PLUS, £30; EZ-Score Plus, 2 disks, £55; Mididrummer, £45. Tel: (0642) 490467, 6pm-8pm.

STEINBERG PRO24, v3, complete with dongle, manual, also TX7 voices. Tom, Tel: (0706) 44410.

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UMI 35 sequencer for BBC Micro, as new, box etc, also BBC Model B, offers? Tel: (0388) 772385.

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FOSTEX M80, excellent cond, owner moving to 16-track, £850. Brian, Tel: (02518) 3231.

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SECK 12:2, and flightcase, £360 ono; Roland S10 sampling keyboard and library, £390 ono; Yamaha DX27, £190 ono. James, Tel: 051-727 0110.

SECK 18:8:2, boxed, mint cond, virtually unused, £850. Chris Day, Tel: 081-467 2281, days; (0732) 451802, eves.

SONY PCM701 digital recording processor, £350; Sony SLF25 Beta recorder, £100. Roger, Tel: 01-482 1440.

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TASCAM PORTA 1 4-track studio, 2 months old, hardly used, as new, £300 ono. Kevin, Tel: (0708) 747740.

TEAC A3440, 4-track, £395 ono; Studiomaster 8:4, £395 ono, as new, must sell. Tel: 091-529 4788.

24:16:24 Bell console, alps faders, it recorded a gold album! £1200. Chris, Tel: (06284) 5363 or (0628) 91003.

VESTA FIRE RIX digital reverb pedal, as new, boxed, PSU, £70. Tel: Brighton (0273) 493659.

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auxs, EQ and panning, almost new, boxed, manual, excellent cond, £160. Tel: (0787) 62208.
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SRC Mkl synchroniser, offers, almost new. Phil Andrews, Tel: (0225) 444002, before 10am.

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ALESIS QUADRAVERB, £250; Yamaha SPX900, £250, must be in vgc. Bobby, Tel: 01-435 7598.
KAWAI K1 II, editor/librarian for Atari STFM, also memory cards and voice patches. Martin, Tel: (0905) 773509.
KORG TRIDENT II, good cond, cash waiting. Gordon Reid, Tel: (0223) 247111, days; (0638) 720090, eves.
MIDI/CV interface, Roland MPU101 or similar. Caroline, Tel: (0663) 45676.
OBERHEIM MATRIX 6/6R manual or photocopy needed, will pay. Patrick, Tel: 081-764 4583.
ROLAND CSQ600 desperately wanted, will pay £50. Caroline, Tel: (0663) 45676.
ROLAND MC300 sequencer, will pay £200-300 or p/x Korg SQD8. David, Tel: (04022) 29961, eves.
ROLAND MKS80 and programmer wanted, also Jupiter 8, Prophet VS, Prophet t8, Memory Moog. Tel: 01-675 8115, anytime.
ROLAND MPU101 MIDI-to-CV converter, or similar, cash waiting. Andrew, Tel: (0325) 466319. Now!
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SEQUENTIAL Pro One manual or photocopy. Philip, Tel: 081-863 2156.
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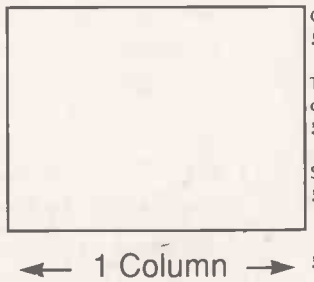

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