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# Music Technology

THE WORLD'S PREMIER HI-TECH MUSIC MAGAZINE

JUNE 1991

£1.50



## THE ORB

ambient house  
tricky disco

### ON TEST

*Kawai Spectra  
PCM Synth*

*Quinsoft VZ-ED  
Casio VZ*

*ST Editing Software*

*Passport Encore  
ST Scorewriting Software*

*Soundcraft Spirit  
Studio 16:8:16  
Mixing Desk*

*Philip Rees PSP  
Percussion Sample-Player*

ORGANISING MIDI  
*general midi & roland g3*

ROLAND JD800  
*digital synthesis goes analogue?*

**WIN**

*digitech dsp 256x1 multi-fx*



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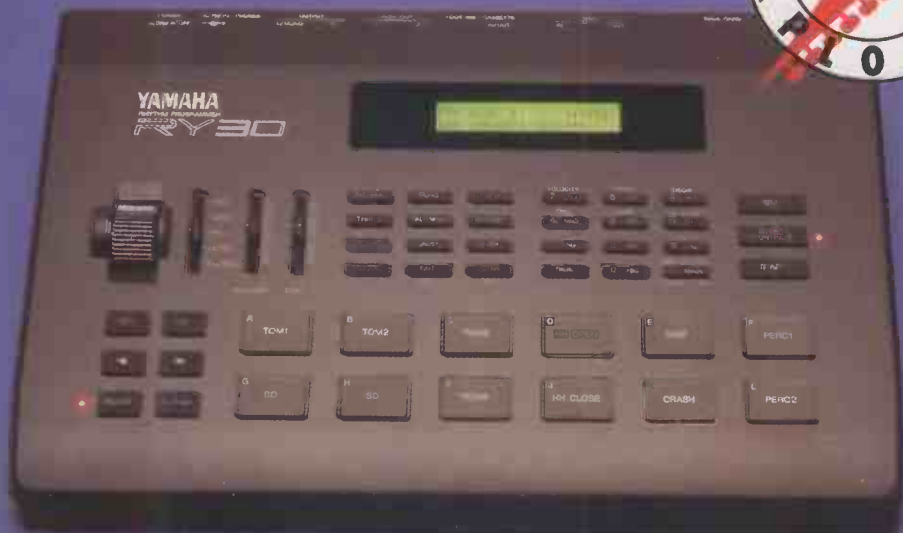
Although help is at hand if required, in the form of plug-in data cards including Signature Series voicings and patterns by leading artists.



RY30 Signature Series artists, Dave Weckl and Peter Erskine

Of course, the RY30 has the things that other drum machines have – loads of stunning sounds, full velocity sensitivity, assignable outputs and an elephantine memory capacity.

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The imitation of acoustic instruments has become an increasingly important role for synths and samplers, but are sounds as important as the way they're played? Tim Goodyer questions the progress of synth design.

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Dear MT: I'm into flagellation, necrophilia and bestiality, am I flogging a dead horse? Love, Jim.  
Dear Jim: no, just a very old joke.

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Effects processors: you can't get enough of 'em - and there's no better way of getting your hands on a Digitech DSP 256XL than winning it in MT's latest exclusive competition.

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The economy is in recession, the art market in decline, even Ratners have marketing problems - but MT's Readers' Classifieds are gaining popularity. Indisputably the biggest and best in the business.

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Just as it was about to fade from popular memory, Kawai's PCM/DC synthesis is revived in the new Spectra synth. Ian Waugh asks if it's been missed or simply missing.

## ROLAND JD800

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Roland's latest synth combines the power of digital synthesis with the interactive approach of analogue programming. The pleasure of synthesis returns to the player - and to Simon Trask.



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## PASSPORT DESIGNS ENCORE 35

Already proven on the Macintosh, Passport's popular scorewriting program makes the transition to the humble ST. Ian Waugh likes the score and goes back for more.

## QUINSOFT VZ-ED 62

If you've been forced to treat your Casio VZ as a "preset" synth because of its programming system, VZ-ED could bring it back to life. Gordon Reid witnesses the VZ resurrection shuffle.

## PHILIP REES PSP 68

More than a beatbox, less than a sampler, the Percussion Sample Player appears to be a unique rhythmist's instrument. Simon Trask looks at the pros and cons of a dedicated drum sampler.

---

## MUSIC 42

### THE ORB

Riding the ambient house wave, The Orb have released a concept album that mixes dance beats with new age textures. Tim Goodyer tunes in to Alex Paterson and Thrash as they chill out with technology.

## BASSCUT 56

Neatly sidestepping the monotonous beats and cliched melodies that typify too many dance acts, this Swiss-American collaboration are making refreshing music. Simon Trask and Heinrich Zwahlen share a technical obsession.

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## Studio

## SOUNDCRAFT SPIRIT STUDIO 50

As more mixer manufacturers turn their attention to the home and pre-production studios, the cost-effective quality mixer becomes a reality. Tim Goodyer discovers that there's even room for luxury.

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## Technology

## HEY, MR TAMBOURINE MAN 14

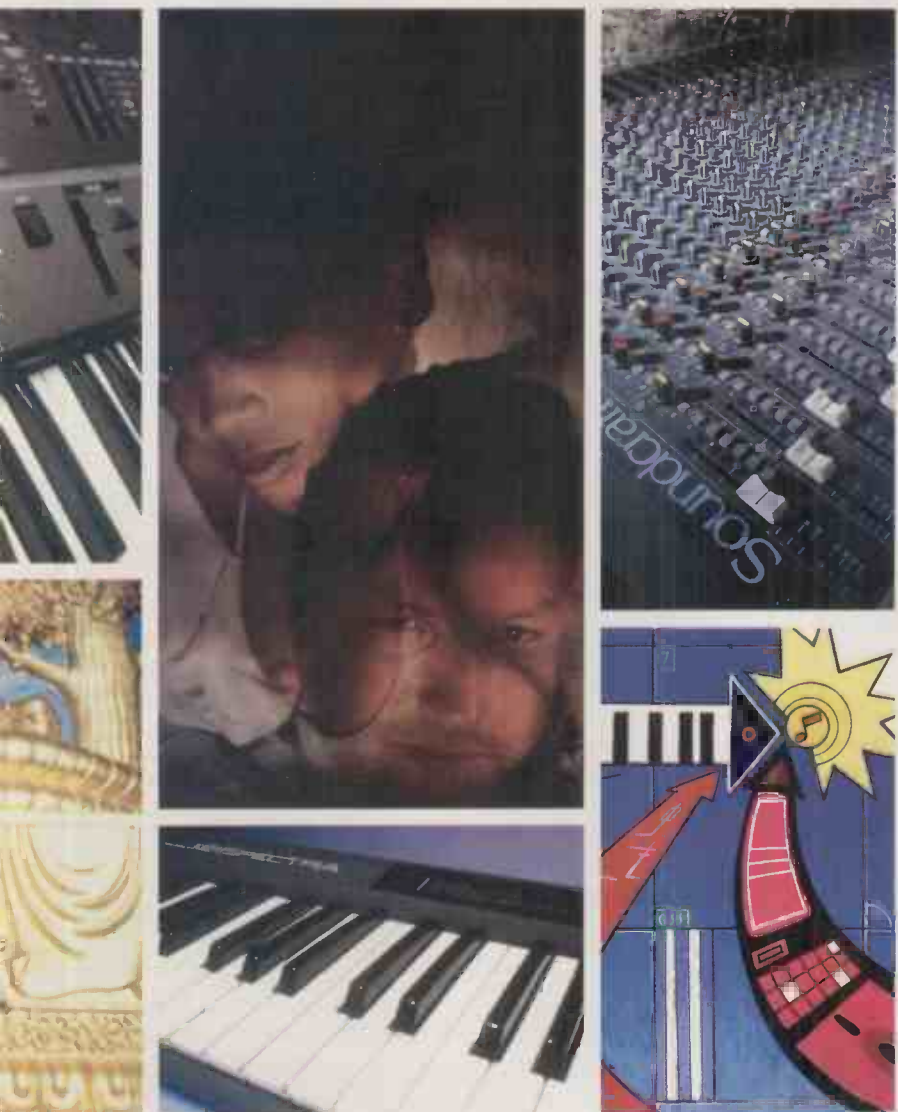
Such a simple thing, a tambourine line, yet it's one of the lines drum machines can't handle. The Sample Workshop's Tom McLaughlin explains how to make convincing samples.

## ON THE BEAT 16

The beat goes on: this month Nigel Lord's essential drum programming series takes him into the deep south of the African continent, and into deep rhythm.

## RAISING THE STANDARD 72

As MIDI expands its influence, guidelines for improved compatibility between instruments are emerging. Vic Lennard examines the new General MIDI spec and Roland's proprietary GSS system.



# FIRST IMPRESSIONS

WHEN THE FIRST synthesisers appeared, they offered tantalising glimpses into a world of new sounds. These were the sounds of oscillators and filters; sounds never before available to the musician. In the years that followed, a new element was to have a tremendous impact on the design and use of these revolutionary instruments - somewhere (not too far) down the line, we started using them to imitate existing instruments. Why we - as musicians - felt this necessary is another argument, but today it's an important aspect of almost every synth. Samplers too, although capable of furnishing us with unimaginable variations on sounds we record into them, are often judged on their libraries of instrument samples.

Accepting that we want synthesisers to sound like instruments that have been around for hundreds of years, how well are we doing?

With early analogue systems, few convincing sounds were available to the synthesist - passing impressions of flutes and oboes were about the medium's limit. The first quantum leap came in 1983 with Yamaha's DX7, and FM synthesis. For the first time the synthesis system followed acoustic rules - layers of sine waves are, after all, the way natural sounds are composed.

The second leap forward came with Roland's D50, and LA synthesis. The D50 used short samples combined with pure synthesis to achieve its results. The theory is that the ear (brain) relies more heavily on information from the early part of a sound to interpret it. By using a sample of a real flute "chiff", say, the ear then accepts a synthesised tone as being the "real thing". LA inspired a generation of imitators (Kawai's K1, for example) all of which used

a combination of synthesised and sampled tones.

The other major player in the field of imitation is, of course, the sampler. Here recordings of real instruments are replayed under the control of a keyboard or other MIDI controller. What could be simpler?

In a limited sense, all post-analogue imitators can convince the average listener that they're listening to acoustic instruments. Or can they?

Objectively there's no difference between a piano playing middle C *ff* (very loud) on a record, and a sample of a piano playing middle C *ff* on a record. But where an acoustic piano can readily play the same note *pp* (very soft) with the appropriate harmonic adjustment, the sampler plays the same note with the same harmonics at lower volume. Equally, the piano will readily give you the A below middle C *pp*, while the sampler will give you an *ff* middle C slowed down and played quietly. Similar compromises are to be found in all imitative instruments - the shortcomings being directly related to the harmonic variation of the original instrument.

As the '90s get underway, technology gives us electronic instruments that imitate acoustic ones *under certain conditions*. As long as you play the sounds in a certain way the imitations are good. But try to elicit the kind of performance associated with the genuine instrument and the differences quickly become apparent. It's as if we've taken some sort of cross-section of acoustic instruments - we've mastered the sounds but not the dynamics. Now we know where to go, perhaps we can expect the next breakthrough in synth design to be the Dynamical Synthesiser. **Tg**

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# Studio M. Infernal sounds and a sink for making taps.



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## YO HO HO YAMAHA

In the process of moving to their new premises in March, Yamaha warehouse staff unearthed a cache of forgotten treasure - in a seldom-opened store cupboard they discovered 100 YMC2 dedicated MIDI controllers for the Yamaha MT2X personal multitracker. This unit enables MIDI synchronisation with sequencers, MIDI computers, synths and rhythm programmers, providing improved interfacing and ease of connection.

The YMC2 originally retailed for £57, but in a bid to clear the cupboard, Yamaha are offering them at the remarkably low price of

£11.99 including VAT and delivery. So first come, first served - the first 100 MT2X owners to send in a cheque get the goods. The only slightly bad news is that by the time you read this, stocks may have been depleted somewhat, so you'll have to be quick and keep your fingers crossed if you want one.

Interested parties should write to the Pro Music Division at Yamaha-Kemble UK Ltd, Sherborne Drive, Tilbrook, Milton Keynes MK7 8BL, enclosing a cheque or postal order for £11.99, made payable to Yamaha-Kemble Music UK Ltd. Good luck! **Dp**

## DECODER: NO ENIGMA

AMG now have a selection of ROMs and RAMs from well-known German sound developers PA Decoder. The sounds on offer are generally for discontinued instruments (for which support can often be hard to find), but as you and I know, in this climate of rapid obsolescence, there are lots of DX7s, D50s, ESQ1s and their like in frequent use in bedrooms and studios all over the UK, and they still need to be fed, don't they? (Unless of course, you're given to that most rare of anti-social habits, programming your own sounds.)

Levity aside, here's what AMG have available:

Yamaha Vario RAM (256-sound Generic RAM) for £129; TX802 512-sound ROM for £99 and a variety of DX7 and DX7II ROMs and RAMs priced from £85 to £109.

Ensoniq SQ80 160-sound RAM for £75; ESQ1 Double Brain (320 ROM/80 RAM) for £99; ESQ1 ESX1 160-sound RAM for £69.

AMG also have available PA Decoder editors for both the Kawai K5 and the Roland D50, at £85 each. All prices include VAT and delivery.

More information from AMG at Hurst Farm Barns, Hurst Lane, Privett, near Alton, Hants GU34 3PL. Tel: (0730) 88383. Fax (0730) 88390. **Dp**

## RE-HARMONISE YOURSELF

Let us introduce you to the latest in the Digitech range of harmonisers - The Vocalist, a new unit which uses "unique processing techniques" to pitch-shift whilst retaining "the original timbre of the fundamental tone".

Designed specifically to produce vocal harmonies, the Vocalist will take a fundamental tone and produce up to four "superbly natural pitch-shifted harmonies" - at least, that's what the hype says. More specifically, the Vocalist offers Intelligent scalar, chromatic

and programmable custom harmonies. In addition, the new unit will produce natural ADT, chorusing and other linear effects, with real-time pitch-shifting also being possible.

The Vocalist also features large LCDs, extensive MIDI implementation, 24-bit VLSI processing, 128 factory presets and 128 user-programmable memory locations.

More information from John Hornby Skewes and Co Ltd, Salem House, Garforth, Leeds LS25 1PX. Tel: (0532) 865381. **Dp**

## DECEPTIVELY SPACIOUS COTTAGE

More on the Roland RSS Sound Space system is that Thatched Cottage Digital have announced that they will be handling the system. One of the first people to use RSS at Thatched Cottage Digital's Hertfordshire HQ was the bleached and moody Adamski, who

will be featuring effects from the system on the album he is currently recording. Further info on buying or hiring the RSS is available from TCD, North Road, Wendy, nr Royston, Herts SG8 OAB. Tel: (0223) 208110, Fax: (0223) 207952. **Dp**

## MEMORIES ARE MADE OF THIS

An optional memory upgrade for Roland's MV30 Studio M workstation is now available. The modification, which increases internal memory capacity from 50,000 to 120,000 events, is carried out by Roland at their Swansea Service Centre. The cost is a *tres* reasonable hundred notes, inclusive of VAT, and Roland guarantee turnaround within two working days (excluding delivery time). If you have an MV30 and would like masses more memory, contact John Bright on Swansea (0792) 700139.

More news on the MV30 front is that additional sample data for the unit has also just become available. The two-card set,

catalogue number SN-MV30-01/02 (catchy names, doncha just love 'em?), features new percussion and orchestral sounds and sells for £139.

If you don't have a Studio M, but are considering buying one, you might be interested in the new Roland Video manual, designed to get the user up and running as quickly as possible. The manual is included free with every MV30 purchased and Roland dealers may be willing to lend you a copy for 24 hours if you're considering making this move.

More info on the above from Roland (UK) Ltd, Rye Close, Ancells Business Park, Fleet, Hants GU13 8UY. Tel: (0252) 816181. **Dp**

## UK-E: THE NEXT GENERATION

It's coming round to UK Electronica time once again, with news just having reached us of the roster of acts planned for the 1991 event, which takes place at the Astoria Theatre, Charing Cross Road, London, in September.

Following a "successful UK Electronica 1990" in Sheffield, this year's event will be supervised by AMP records and will be the largest to date.

While UK Electronica 1991 will present many acts never before seen in the UK, familiar performers from past shows are by no means excluded and are being encouraged to contact AMP Records if they would like to participate in this year's show. All

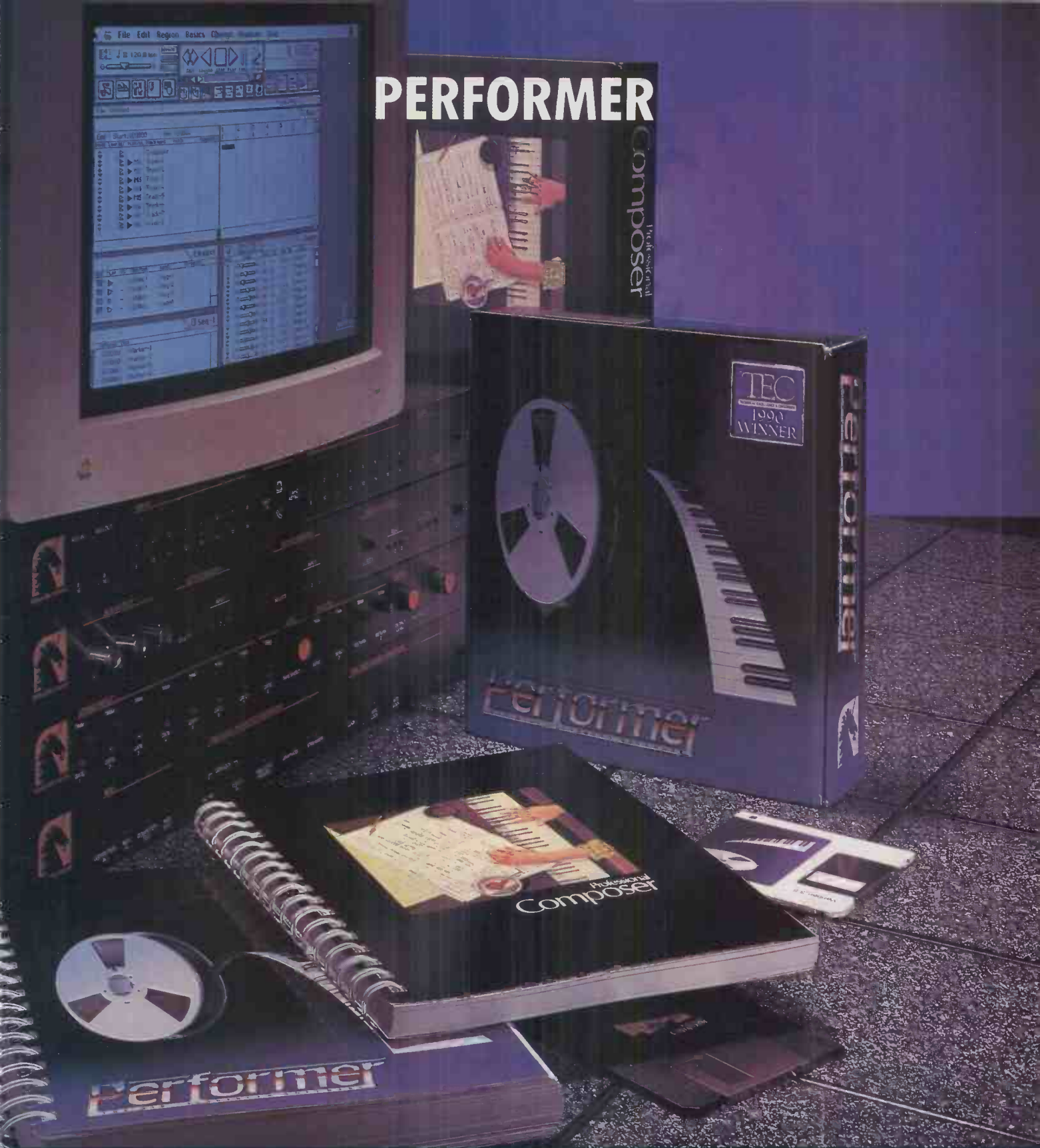
technical exhibitors from past shows who wish to book stand space should also confirm their interest as soon as possible.

Artists performing at the 1991 show include Tim Blake (ex-Gong and Hawkwind synthesist); Clifford White; synthesiser rock ensemble Medium Green; Nick Ashron, Nigel Shaw and Steve Jay from the New Age Music Association, and from Europe, "master of space music" (whatever that means), Michael Einhorn.

All details are subject to confirmation, but more info can be obtained from AMP Records, PO Box 387 London N22 6SF. Telephone and Fax: 081-889 0616. **Dp**



# PERFORMER



Performer, is quite simply, the best Apple Mac MIDI sequencing package you can buy. It has a friendly, graphic interface which produces the ultimate, interactive working environment that won't hinder your creativity. Performer can handle an unrestricted number of tracks, songs and sequences. In fact all the limited functions you find a problem on other sequencers have been comprehensively solved, as Performer lets you decide what you need and has the capability to address 32 MIDI channels (expandable to 544 by the addition of Mark of the Unicorn MIDI Timepieces). It features all the real and step-time functions you could ever wish for. Powerful, easy-to-access editing features and even the ability to customise screens to your own requirements. Plus there's on-screen help whenever you need it, as well as music notation editing.

Performer extends a bird's eye view of all tracks, simultaneous display of all selected functions, and should you need to be able to print a full musical score to publication quality, then add Professional Composer – with all the functions you should ever need

including dot matrix, laser and typesetter outputs.

Performer is also supported by an impressive range of hardware: *MIDI Timepiece* expands the system to 128 MIDI channels and provides full SMPTE-to-tape synchronisation while *Video Timepiece* enables Performer to be locked to video systems running either linear or vertical time code (VITC). *MIDI Mixer 7s* is a software controlled mixer with seven stereo inputs channels, two-band EQ, and stereo FX sends offering MIDI controlled mix automation while the 3-in, 15-out *Video Distribution Amp* offers a simple solution to the video routing and signal splitting problems encountered in small A/V studios.

If you want to add digitally recorded sounds to your sequences, look no further than *Digital Performer* which works with the Digidesign Sound Tools Hard Disk Recording System, allowing digital audio to be manipulated alongside your MIDI sequence data.

Choose Mark of the Unicorn for technical excellence and a vigorous update policy, ensuring that you will have a great partner in music for years to come.



# INTERNATIONAL BRIGHT YOUNG THING

Summertime is Showtime, with the International Music Show (nee British Music Fair) gearing up for another fun-packed and successful exhibition. This year the show runs from the 10th-14th of July, with the public being admitted on the 12th, 13th and 14th, and takes place in the usual venue of Olympia 2, London. Admission for 1991 is £6. If a party includes children, the first child under 14 accompanied by an adult will be admitted free,

with other children admitted for £3. The OAP and disabled rate is also £3. Trade visitors who pre-register for the show will be admitted for £3, but if you don't pre-register, you'll have to buy a season ticket at the door for a fee of £6. Educationalists who pre-register will pay £3 to enter the show on Friday the 12th July, which is Education day, and accompanied school parties will be admitted free of charge on this day.

Visitors to the show are promised an especially entertaining time, with plans for the Live Entertainment programme progressing well. Negotiations are underway for major names to perform during the public days at the show, and some performances will take place in a Gig room situated in the Apex Suite on the Gallery level of the National Hall. For quieter, more traditional performances, the Addison Suite on the ground floor of the National Hall

has been reserved. The programme of performances will be released as soon as it has been confirmed, and the possibility of a seminar programme is also being investigated. And while you're at the show you might even like to drop in on the Music Maker Publications stand to meet members of the world's best-respected hi-tech musicians' mag. We'll be pleased to see you.

For further information or for pre-registration details, contact Westland Associates Ltd, 23a Kings Road, London SW3 4RP. Tel: 071-730 7852, Fax 071-730 6017. **Dp**

## LEARNING BY LETTERS

ABC Music have set up a new Education Division to deal with all school and educational enquiries. The new division is headed by Tim Walter, himself an ex-music teacher, and staff will be happy to provide a friendly and personal service.

As well as supply of keyboards,

recording gear, software and all hi-tech equipment, ABC offer installation and on-site training for pupils and teachers if required.

For a copy of the ABC Education catalogue, contact ABC Music Education Division, 85 High Street, Esher, Surrey KT10 9QA. Tel: (0372) 468114. **Dp**

## APRS UPDATE

As promised in last issue's Newsdesk, here's more info about who will be exhibiting at the APRS recording show (5th-7th June, London Olympia) this year. We've had press info from Allen & Heath, who will be showing their range of mixing desks on stand 161 on the first floor. Plasmeq Systems (Stand 025) will be showing the much talked-about ADAS range of low-cost hard disk recording and editing systems, with some "new and exciting developments" promised in time for the show, as well as their range of high-quality routing systems for analogue audio and video applications.

On the Harman Audio stand (number 033), you'll find, amongst other things, a comprehensive range of JBL loudspeakers, studio monitors and electronics. Stand number 159a is home to Fostex, where you'll be able to see the launch of the 2412, a new compact 24:12 production console, as well as Fostex multitrack recorders with Dolby S noise reduction. HHB Communications can be found on

Stand 035, where they'll be showing a range of DAT recorders from various manufacturers, and ScreenSound, the powerful hard-disk editing system from SSL - expect it to be good but not cheap! Also on show will be the Roland Spatial Sound system, as recently seen on *Tomorrow's World* (and in the pages of last month's Newsdesk), as well as a host of other audio and recording goodies. Other exhibitors are far too numerous to mention, but include Roland (stand 152), Sony (stand 034), Sound Technology (stand 163A), TEAC UK (stand 134A), Thatched Cottage (stand 157), Akai (stand A29), Yamaha (stand A02) and Soundcraft (stand 031), to name but a few.

Of course, this is only a small taste of what will be on show at APRS - again you'll have the opportunity to meet the staff of MT and our sister magazine Home & Studio Recording on stand number 014 on the ground floor. MT and H&SR editorial bodies will be happy to see any readers who feel like coming to say hello (or pick our brains). **Dp**

## A NEW PRO

While the last few weeks has finally seen the beginning of wider availability of DAT machines in consumer hi-fi outlets, it's also seen the introduction of yet another professional-spec machine, this



time the result of a collaboration between DAT specialists HHB and manufacturers Aiwa.

The new machine rejoices in the moniker HHB1 Pro, and looks to be based on the Aiwa HDS1 - with various pro modifications, of course.

At £995 plus VAT, the HHB1 Pro is one of the lower-priced pro recorders, and is just as compact and portable as the Aiwa HDS1 (if you've ever seen one of these, you'll know just how compact this

is). The new machine measures a mere 94x34x185mm, and weighs 0.9kg without its battery pack. Supplied accessories consist of the PB20 rechargeable battery, AC-746K universal power supply and battery charger, a wired remote control, carrying case, XLR5- 2x XLR3 splitter lead, and a digital interface lead.

Internally, the HHB1 Pro offers "a wealth of professional features", according to the press information. These include record sampling rates of 48kHz, 44.1kHz and 32kHz (analogue/digital input at 48kHz, digital only at other two rates), sample playback at all three rates, digital ins and outs to both AES/EBU and SPDif formats, and the ability to record Absolute Time (A-Time) on tape.

More information about the HHB1 Pro and DAT in general from HHB Communications Ltd, 73-75 Scrubs Lane, London NW10 6QU. Tel: 081-960 2144, Fax: 081-960 1160. **Dp**

## NICK NICKED

A company called Sixteen-Track Hire have had some equipment stolen, and have asked MT to help try to recover it. The gear was stolen on 8th April and is alleged to have been sold on or around 18 April to a young man in the South of England.

Three items were stolen - a Fostex E16 recorder (s/n 0700044); Fostex 4050 remote (s/n 0700438) and a Seck 18:8:2

mixing desk (s/n HSI8821369).

The serial numbers were etched onto the machines, so it should be easy to spot if anyone has attempted to remove or alter the numbers in any way. If you have any information which would be of assistance, please contact Thames Valley Police on (0753) 506000 and ask for Ascot Police, or let us know in the MT office. **ids**



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Effects and Percussion sounds.

As you can see, there are so many different, exciting and useable sounds inside the Matrix-1000 you may never have need for another analogue synth again.

Step into your nearest MCM authorised outlet today and hear for yourself how the Matrix-1000 houses the World's favourite analogue sounds.

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## KEYBOARDS & MODULES

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Yamaha D555.....	£300
Korg M1 .....	£860
Korg T3 .....	£1700
Korg Wavestation.....	£1120
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## keeping account

Accountants seem to be getting a bad press in MT at present. Both the March editorial (Money Whores) and a long letter in Communique from "Jacques" appear to blame us for most of the current problems in the music industry.

While I do agree with the basic arguments in both cases, I feel that the following points need to be made:



An accountant

1. An accountant can be a musician. I played saxophone long before I took up accounting, and it still remains my first love.
2. In the average small to medium-sized organisation the accountant is usually the most computer-literate person on the staff. Accountants are more likely to understand the mechanics of sampling, sequencing and such like, than the marketing or production people.
3. If an accountant "controls" a company, it is usually due to lack of good management in the other

functional areas. Every organisation needs accounting skills, no matter what its objectives are - as Jacques will soon find out if his project is at all successful.

Give us accountants a break - we can rock 'n' roll as well as everybody else.

**Len Morphew FCAA**  
**Farringdon**  
**Oxon**

*Accountants do it with VAT, eh Len.*  
**Tg**

## offended musician: flourishing species

With regard to the recent article, *Performing Musician: Endangered Species?* (MT, March '91), Steve Wright has totally neglected some of the greatest joys of either playing or listening to "live" music. I'm talking about improvisation, expression, the ability to communicate with other musicians and the audience.

Mark Morgan, in his interview in the same issue, is closest to the truth when discussing his dislike of sequencers for live use: "Although you have to sound close to the record during live performance, perfection is not quite as important as the level of energy and degree of intensity". Perhaps Steve does not understand such natural occurrences!

New technology should not always be there to replace what has gone before, but should be used to enhance or improve existing conditions. I agree that sequencers are now invaluable in a studio environment and can be used to good effect in a performance

situation, but going as far as Steve suggests is downright silly.

Rather than implying that "we underestimate its (sequencing's) impact", I suggest that Steve Wright underestimates the impact of a live performance, and its effect on both musician and audience. I look forward to his next article on the benefits of using robots to perform Macbeth.

**James Thomson**  
**Dundee**  
**Scotland**

*Actually, Steve's next article is about fractals. You must have been speaking to another Steve Wright.*

**Tg**

## pc clubbing

For various reasons relating to work and the problems of having two computers, I have recently decided to start using my PC compatible for musical applications.

Having seen the potential of the Atari ST, I steered clear of PC-based software for a long time. But having got started, things have gone more smoothly than I at first expected - although with all the new jargon (MPU, UART) and concerns about the technical aspects of the PC (IRQ, Memory Management) it sometimes gets a little confusing. Is life really that much simpler with an Atari?

**Graham Owen**  
**Basingstoke**

## expanding universe

We've been in the music biz for about eight years now, and in this time we've been stitched up several times. "Record company B&Stards", you cry, "stitching up fellow musicians". But I'm actually

referring to hi-tech equipment manufacturers.

Sitting comfortably? Then I'll begin: we bought an SH101, JX3P and a Compu-rythm - all Roland, no problem, no expandability. Then along came the digital age and our first piece of "expandable" kit, the SCI Drumtraks. Besides the fact that it was constantly having fits and retuning itself, Sequential's idea of expandability was to release about 15 dodgy alternative sound chips and that was it. We got rid of it.

As a replacement we bought the Sequential Tom, because it promised *real* expandability with cartridges instead of chips. Sequential released about three cartridges and discontinued the Tom. Thanks. Then they released the Studio 440 - we avoided it, the company folded.

So we waited, cautious about what to buy. Eventually we decided to spend a bit more cash on a really good machine made by a well-established company, so as not to be let down again. We plumped for the Yamaha RX5. Yamaha released three prehistoric sound cartridges and discontinued the RX series. Now we've given up on drum machines and are using a W30 to do the job.

I believe that, if companies claim "expandability" of the instruments they sell to us, then they should support it. I can't find any reason why Yamaha have chosen not to support the RX5 - there are thousands of owners out there. I know Metro have produced two cartridges for the machine, but unfortunately they've decided to sample the TR808 instead of the highly-fashionable TR909, and they cost £100, so it's hardly worthwhile. I rest my case.

**Andy Smith**  
**SGMc Productions**

*Funny thing is, Andy, the 909 ain't expandable either - and you haven't slagged it off.* **Tg**



PHOTOGRAPHY: JAMES CUMPSTY

WHATEVER HAPPENED TO Kawai? The K1 burst onto the music scene three years ago followed by module and rack-mount versions. Then came the K1 Mk II and the K4: it was all good gear. But after that, Kawai's development of PCM instruments seemed to have ceased. More recently (at last year's British Music Fair, in fact) the company announced an addition to the range - the Spectra.

The Spectra uses 16-bit PCM and DC (Digital Cyclic) waveforms. There are 128 of these, although some seem to be variations on each other rather than totally new sounds. The sonic variety, therefore, is not as great as it might at first appear to be. There are 64 presets and 32 programmable sounds onboard, each termed a Patch.

Sounds are reminiscent of the K-series instruments, though not, I'd venture, quite on a par with them. But the Spectra retains the K-series' Multi Patch setup. This allows four Patches to be played at the same time, greatly increasing sonic versatility.

The Drum section is independent of the voice section and contains 36 preset rhythm patterns. There are intros, endings and fill-ins, too. You could use these as the foundation for a song and you can switch from one pattern to another during play. Most are in a modern idiom and you could create a reasonable drum track by mixing the rhythms. You can also play the drum sounds manually from the keyboard. You can record these via MIDI to create your own drum tracks. When you start layering sounds, however, you must be aware of the polyphonic limit of ten notes for the voices and four notes for the drums (five using the keyboard percussion).

Although the Spectra doesn't have the automatic chord backing you find on portable keyboards, it does have an interesting arpeggiator which arpeggiates chords held in the lower part of the keyboard. There are five groups of functions which allow you to edit the sounds. These include volume, chorus, waveform, vibrato and auto bend parameters. Intriguingly, you can apply two envelopes to a waveform, so while there is no ADSR delay function to help produce crossfades, you can create double strike effects. You can adjust the key scale factor (how

the envelope responds according to the pitch of the note) and you can choose from four velocity response curves. The keyboard is velocity sensitive but it does not support aftertouch.

In Multi Patch mode you can determine whether the Patch in a section responds to the Spectra's keyboard, incoming MIDI messages or both. Patches can be detuned, transposed and their volume adjusted. They can also be assigned to specific areas of the keyboard, allowing zones to be set up.

In Multi mode, incoming program changes can be made to change the voice in any Multi section, while program changes on channel ten will select different rhythm patterns. This seems to reinforce one of the Spectra's major functions as the "sound" end of a workstation setup, albeit with only five tracks. In fact, it's only the lack of a sequencer which denies it a "workstation" title.

You can filter out the reception of pitchbend, modulation, velocity and System Exclusive data. You can dump Patch, Multi and Drum data via SysEx messages. Save it to your sequencer and you'll be able to store all your music info in one file or at least on the same disk.

Niggles? You can always find something to niggle about, especially on budget equipment, and given the price, it's only natural that compromises have been made. The sounds are workmanlike rather than outstanding, although the Multi Patches are capable of producing some good combinations. In a mix, the sounds can be very effective, as proved by the three built-in demo tunes. But there are no filters, no signal processor and aftertouch isn't supported, even via MIDI. An LCD would certainly be more informative than the LED and, to be honest, it is rather a pain having to look up all the numeric settings in the manual to see what they mean. A few extra pounds for an LCD would have been well spent. As a gesture towards user-friendliness, there is a pull-out card under the keyboard which lists the presets and major editing functions.

The Spectra is undeniably a budget-priced instrument and when it comes down to value for money, it's difficult to complain too loudly about the Spectra's spec. So who is it aimed at? If you're a newcomer to sequencing and on a very tight budget but needing a range of voices and drum sounds, then it could be the instrument for you. In fact, there's really nothing quite like it at the price. Its nearest competitor is probably a Yamaha portable keyboard (which will have built-in drum rhythms and accompaniment patterns) or Kawai's own (and more expensive) K1 or K4 (which don't).

While not everyone is going to rush out and buy a Spectra (as they rushed out and bought the K1), it does seem to have defined its own particular niche in the marketplace. And if you inhabit that niche, I can conclude in time-honoured reviewer fashion by saying - check it out. ■ **Ian Waugh**

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# HEY, MR TAMBOURINE MAN

**ADDING PERCUSSION SOUNDS TO A DRUM PATTERN CAN MAKE THE DIFFERENCE BETWEEN A RHYTHMIC CLICHE AND A KICKING GROOVE, BUT IT MAY BE HARDER THAN IT SOUNDS - UNLESS YOU KNOW A FEW SAMPLING TRICKS. TEXT BY TOM MCLAUGHLIN.**

IF THERE'S ONE thing I can't stand it's listening to sampled tambourines. Tambourine samples tend to be nothing more than one sample of one shake which is somehow intended to convince you that it's someone actually *playing* a tambourine. And as you'll probably agree, it doesn't work. Sure, you can get away with samples like these, if they're mixed well back into a busy track, but they can't withstand the attention they receive if they're mixed up front or in a solo situation. Loud or soft, it's still the same sample.

Listen to a real tambourine being played and you'll find there's a lot more going on. With the more common un-skinned variety there's usually an accent played by hitting the rim on the player's palm, an "up" shake and a "down" shake, each with a distinctly different sound. Often there will be varying dynamics of these as well.

Sampling an entire pattern is certainly one way to get a more convincing result, but you'll find yourself locked into the pattern and the speed at which the take was played. You can only transpose the sample so far flat or sharp of the original pitch - to match another tempo - before your tambourine starts sounding like a tray of cutlery or a swarm of gnats. Varying the sampled pattern is next to impossible.

The trick is to sample an entire pattern and, with editing scalpel in hand, dissect that pattern into its constituent hits. With each mapped to adjacent drum pads or keys on a MIDI keyboard, you can play each hit in any order, while retaining a natural sound over a broad range of tempi.

## EDITING

FIRST, SAMPLE AN entire pattern and save to disk, possibly naming it Pattern to avoid confusion later. In the case of a tambourine playing a standard 4/4 or 8/8 pattern, this would include Palm, Up 1, Down, and Up 2

hits (although you could probably get away without the second up hit). For velocity-switched sample sets you will need to sample soft and loud versions of the pattern.

Next truncate the pattern so that you only hear the first hit and maybe just a little bit of the following hit. Fade the very end if you have the facility to do so. Re-name as Tamb Palm and save to disk.

Now re-load the Pattern sample from disk and repeat the above with any other hits you require. Name these as appropriate - Tamb Up 1, Tamb Down, Tamb Up 2, and save them to disk.

## MAPPING

TO MAKE A sample map, create a "program" and within the program - a "voice" for each type of hit (Palm, Up 1 and so on). Then layer soft and loud versions upon one another for velocity switching sets. Adjust switch point velocity and sensitivity to your liking. Next assign each hit to a separate MIDI note on a keyboard or drum pad. (The Kat and Octapads are excellent for this.) Finally, tune all samples to play the recorded pitch before saving the map to disk.

All this takes a bit of effort, but once the editing and mapping are completed, you'll have a set of samples that allow you to not only "play" your tambourine at pretty much any speed you require, but additionally enable you to re-arrange the dissected hits into any patterns you require - all with a realism you've never heard coming from a drum machine.

This technique works well with a whole family of rhythm instruments that seldom sample well (for the same reasons as the tambourine) including maracas, shakers, castanets and fish. Have a go and see if it doesn't add another dimension to your music. ■

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# ON THE

# BEAT

## Part 20

**IN THE SECOND PART OF THIS  
STUDY OF PROGRAMMING  
AFRICAN RHYTHMS, WE'RE  
HEADED SOUTH TOWARDS  
ZIMBABWE AND SOUTH AFRICA  
ITSELF - BRING YOUR BEATBOX  
AND COME ALONG.  
TEXT BY NIGEL LORD**



CONTINUING OUR INVESTIGATION of African rhythm from a couple of months ago, we find ourselves moving south to the states of Zimbabwe and South Africa. Here, thanks to the influence of Western pop culture, there is a much wider use of conventional percussion voices in the music currently attracting international attention. ("Conventional", that is, from a Western perspective.) This situation has come about through the adoption of the standard acoustic

drum kit by many southern African percussionists (a result, presumably, of its convenience for the working musician) who in recent years have adapted many traditional rhythms into a form suitable for the snare, bass drum and hi-hat.

Needless to say, from our point of view, this makes life a lot easier. Unlike the rhythm of the North African states used as inspiration for the last On the Beat article, it should be possible for us





ILLUSTRATION: CLIVE GOODYER

to create patterns with an authentic African flavour, without having to "modify" the sounds of an ordinary beatbox. And certainly, if the popularity of bands like The Bhundu Boys and The Four Brothers is anything to go by, African rhythm played on a conventional drum kit is quite acceptable to the public at large - even if this does involve some dilution of its original form.

In this sense, it's perhaps

somewhat paradoxical that the further one descends through the countries of Africa (and, by implication, the further one is removed geographically from European and US influence), the more closely the rhythmic form begins to resemble that of Western music. Thanks to the sorry history of British colonialism, this is indeed the case. It has to be said that, from a cultural standpoint, we are in many ways the richer for it. Indeed, the more

accessible music of the southern states has provided a "way in" to African music for many people in recent years, and purely as an influence on Western pop culture it has been one of the few rays of light in an increasingly stagnant market.

Despite the more straightforward instrumentation involved, I've opted once again for a fairly eclectic approach to selecting examples for this month's article - in much the same way as for last month's. In other words, these patterns are intended to reflect the rhythmic feel of southern African music rather than provide examples of specific rhythms. As such, they serve more as an introduction to the subject than an advanced lesson - though given the complexity of patterns I could have drawn on for inclusion, this is perhaps no bad thing.

Throughout, you'll find examples of techniques used consistently in rhythms of the region, and it's on these that I have relied to provide each pattern with a flavour which is unmistakably that of southern Africa. Amongst them are four-to-the-bar bass drum parts, repetitive, off-beat hi-hat/shaker patterns and the use of the snare drum as a means of accenting a particular beat rather than providing a steady rhythmic pulse (as in Western music). Listen closely, and you'll probably hear the origins of reggae in a number of these examples, and in Pattern 6, you'll almost certainly detect a "military" influence - which is quite common in music throughout central and southern Africa (. . .another legacy of colonial rule).

To produce complete rhythm tracks you will need to blend these patterns with instruments which preserve the >

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> ethnic feel of the music (unless you're engaged in a crossover project of some kind). Happily, with the proliferation of voices offering a very creditable imitation of instruments such as the marimba and mbira (the African thumb piano) available on most FM synths, this shouldn't prove to be much of a problem.

To facilitate their use in a wide variety of contexts, I have again tailored each rhythm to fit into a neat 4/4 pattern, though in a couple of examples, you'll probably notice three-based rhythmic parts resolving themselves over the four bars of the pattern's duration. Needless to say, you'll need to take this into consideration if you're planning to write complete rhythm tracks using any of my examples where this occurs.

As for the instruments themselves, they are, as I said, quite conventional, with most of the patterns built round the hi-hat, bass and snare drum. A little care, however, should be exercised in the selection of the other instruments. The shaker, for example, can be provided by any suitable instrument - from the cabasa to the maracas - but this should be fairly low-pitched, so be prepared for a little detuning. And the same is true of the side stick, which in these examples is cast more in the role of a wood block. The open conga voices do not necessarily have to be produced using that particular instrument, but where an ordinary drum (such as a tom tom) is used, try to opt for a more mellow, "musical" sound with a definite pitch and the instruments tuned about three semitones apart.

Though I personally wouldn't recommend it, the bongos are also interchangeable with tom voices, but here, a much drier, high-pitched sound should be sought with a greater pitch interval between the two instruments. As in all programming, try to select voices which are complementary to one another and tune them so that each has its own space in the frequency spectrum. In certain cases, you'll also need to adjust your tuning to that of the accompanying music (or vice versa) - a fact which is often overlooked when first making the crossover from purely rhythm voices to those which have a pitch component too.

After some 20 instalments of this series, I can envisage no real programming problems with this month's offerings. As usual, the four dynamic levels (from low to high) are represented by open, lightly-shaded, heavily-shaded and solid diamonds, and beats to the bar are divided into eight (or six in the case of triplet rhythms) for clarity. Flams are >

PATTERN: 1a		TEMPO: 110-140BPM			
BEAT:		1	2	3	4
Clsd HiHat		◆	◆	◆	◆
Open HiHat		◆	◆	◆	◆
Shaker		◆	◆	◆	◆
Side Stick					
Snare Drum					
Open Conga Hi			◆		◆
Open Conga Lo		◆		◆	
Tom/Bongo Hi		◆		◆	
Tom/Bongo Lo			◆		◆
Bass Drum		◆		◆	
TIME SIG: 4/4		BAR 1			

PATTERN: 1b		TEMPO: 110-140BPM			
BEAT:		1	2	3	4
Clsd HiHat		◆	◆	◆	◆
Open HiHat		◆	◆	◆	◆
Shaker		◆	◆	◆	◆
Side Stick					
Snare Drum					
Open Conga Hi			◆		◆
Open Conga Lo		◆		◆	
Tom/Bongo Hi		◆		◆	
Tom/Bongo Lo			◆		◆
Bass Drum		◆		◆	
TIME SIG: 4/4		BAR 2			

PATTERN: 1c		TEMPO: 110-140BPM			
BEAT:		1	2	3	4
Clsd HiHat		◆	◆	◆	◆
Open HiHat		◆	◆	◆	◆
Shaker		◆	◆	◆	◆
Side Stick					
Snare Drum					
Open Conga Hi			◆		◆
Open Conga Lo		◆		◆	
Tom/Bongo Hi		◆		◆	
Tom/Bongo Lo			◆		◆
Bass Drum		◆		◆	
TIME SIG: 4/4		BAR 3			

PATTERN: 1d		TEMPO: 110-140BPM			
BEAT:		1	2	3	4
Clsd HiHat		◆	◆	◆	◆
Open HiHat		◆	◆	◆	◆
Shaker		◆	◆	◆	◆
Side Stick					
Snare Drum					
Open Conga Hi			◆		◆
Open Conga Lo		◆		◆	
Tom/Bongo Hi		◆		◆	
Tom/Bongo Lo			◆		◆
Bass Drum		◆		◆	
TIME SIG: 4/4		BAR 4			

PATTERN: 2a		TEMPO: 100-110BPM	
BEAT:		1	2
Clsd HiHat	◆	◆	◆
Open HiHat		◆	◆
Hand Clap			◆
Snare Drum		◆	◆
Open Conga Hi			◆
Open Conga Lo	◆	◆	◆
Tom/Bongo Hi	◆	◆	◆
Tom/Bongo Lo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 1	

PATTERN: 2b		TEMPO: 100-110BPM	
BEAT:		1	2
Clsd HiHat	◆	◆	◆
Open HiHat		◆	◆
Hand Clap			◆
Snare Drum			◆
Open Conga Hi			◆
Open Conga Lo	◆	◆	◆
Tom/Bongo Hi	◆	◆	◆
Tom/Bongo Lo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 2	

PATTERN: 2c		TEMPO: 100-110BPM	
BEAT:		1	2
Clsd HiHat	◆	◆	◆
Open HiHat		◆	◆
Hand Clap			◆
Snare Drum		◆	◆
Open Conga Hi			◆
Open Conga Lo	◆	◆	◆
Tom/Bongo Hi	◆	◆	◆
Tom/Bongo Lo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 3	

PATTERN: 2d		TEMPO: 100-110BPM	
BEAT:		1	2
Clsd HiHat	◆	◆	◆
Open HiHat		◆	◆
Hand Clap			◆
Snare Drum			◆
Open Conga Hi			◆
Open Conga Lo	◆	◆	◆
Tom/Bongo Hi	◆	◆	◆
Tom/Bongo Lo		◆	◆
Bass Drum	◆		◆
TIME SIG: 4/4		BAR 4	

indicated by a letter "F" inside the relevant beats, and triplet rhythms are marked with a letter "T" just after the time signature.

Of this month's patterns, only Pattern 5 is a true triplet rhythm; Pattern 6 is simply notated on a triplet grid to facilitate programming the triplet notes of the hi bongo in bar three. If your machine can cope with triplet programming of individual instruments, by all means program the rest of the instruments in straight 4/4. Finally, make sure you choose a fairly short duration voice for the snare in Pattern 6. As mentioned earlier, the pattern has a distinct military feel to it, thanks largely to the "parade ground" snare figures which rely on the instrument having a short, tight voice. An African rhythm with a military beat? Now that's what you call crossover. . . >



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PATTERN: 3a		TEMPO: 120-135BPM	
BEAT: 1 2 3 4			
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Shaker	◆	◆	◆
Side Stick	◇	◇	◇
Snare Drum			◇
Open Conga Hi		◇	◇
Open Conga Lo	◇		◇
Tom/Bongo Hi			◇
Tom/Bongo Lo	◇	◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 1		

PATTERN: 4a		TEMPO: 160-180BPM	
BEAT: 1 2 3 4			
Clsd HiHat	◇	◇	◇
Open HiHat			◇
Shaker	◇	◇	◇
Hand Clap			◇
Side Stick	◆	◆	◆
Snare Drum			◇
Tom/Bongo Hi	◇	◇	◇
Tom/Bongo Lo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 1		

PATTERN: 3b		TEMPO: 120-135BPM	
BEAT: 1 2 3 4			
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Shaker	◆	◆	◆
Side Stick	◇	◇	◇
Snare Drum			◇
Open Conga Hi		◇	◇
Open Conga Lo	◇		◇
Tom/Bongo Hi			◇
Tom/Bongo Lo	◇	◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 2		

PATTERN: 4b		TEMPO: 160-180BPM	
BEAT: 1 2 3 4			
Clsd HiHat	◇	◇	◇
Open HiHat			◇
Shaker	◇	◇	◇
Hand Clap			◇
Side Stick	◆	◆	◆
Snare Drum			◇
Tom/Bongo Hi	◇	◇	◇
Tom/Bongo Lo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 2		

PATTERN: 3c		TEMPO: 120-135BPM	
BEAT: 1 2 3 4			
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Shaker	◆	◆	◆
Side Stick	◇	◇	◇
Snare Drum			◇
Open Conga Hi		◇	◇
Open Conga Lo	◇		◇
Tom/Bongo Hi			◇
Tom/Bongo Lo	◇	◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 3		

PATTERN: 4c		TEMPO: 160-180BPM	
BEAT: 1 2 3 4			
Clsd HiHat	◇	◇	◇
Open HiHat			◇
Shaker	◇	◇	◇
Hand Clap			◇
Side Stick	◆	◆	◆
Snare Drum			◇
Tom/Bongo Hi	◇	◇	◇
Tom/Bongo Lo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 3		

PATTERN: 3d		TEMPO: 120-135BPM	
BEAT: 1 2 3 4			
Clsd HiHat		◇	◇
Open HiHat		◇	◇
Shaker	◆	◆	◆
Side Stick	◇	◇	◇
Snare Drum			◇
Open Conga Hi		◇	◇
Open Conga Lo	◇		◇
Tom/Bongo Hi			◇
Tom/Bongo Lo	◇	◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 4		

PATTERN: 4d		TEMPO: 160-180BPM	
BEAT: 1 2 3 4			
Clsd HiHat	◇	◇	◇
Open HiHat			◇
Shaker	◇	◇	◇
Hand Clap			◇
Side Stick	◆	◆	◆
Snare Drum			◇
Tom/Bongo Hi	◇	◇	◇
Tom/Bongo Lo		◇	◇
Bass Drum	◇		◇
TIME SIG: 4/4	BAR 4		



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**PATTERN: 5a** TEMPO: 120-140 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Shaker	◆	◆	◆	◆
Side Stick				◇
Snare Drum				
Open Conga Hi	◇	◇	◇	◇
Open Conga Lo			◇	
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum		◇		

TIME SIG: 4/4T BAR: 1

**PATTERN: 6a** TEMPO: 130-150 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Hand Clap				◇
Side Stick	◇	◇	◇	◇
Snare Drum	◆	◆	◆	◆
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum	◇	◇	◇	◇

TIME SIG: 4/4T BAR: 1

**PATTERN: 5b** TEMPO: 120-140 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Shaker	◆	◆	◆	◆
Side Stick				◇
Snare Drum				
Open Conga Hi	◇	◇	◇	◇
Open Conga Lo	◇	◇	◇	◇
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum		◇		

TIME SIG: 4/4T BAR: 2

**PATTERN: 6b** TEMPO: 130-150 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Hand Clap				◇
Side Stick	◇	◇	◇	◇
Snare Drum	◆	◆	◆	◆
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum	◇	◇	◇	◇

TIME SIG: 4/4T BAR: 2

**PATTERN: 5c** TEMPO: 120-140 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Shaker	◆	◆	◆	◆
Side Stick	◇	◇	◇	◇
Snare Drum				
Open Conga Hi	◇	◇	◇	◇
Open Conga Lo	◇	◇	◇	◇
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum		◇		

TIME SIG: 4/4T BAR: 3

**PATTERN: 6c** TEMPO: 130-150 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Hand Clap				◇
Side Stick	◇	◇	◇	◇
Snare Drum	◆	◆	◆	◆
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum	◇	◇	◇	◇

TIME SIG: 4/4T BAR: 3

**PATTERN: 5d** TEMPO: 120-140 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Shaker	◆	◆	◆	◆
Side Stick				◇
Snare Drum				
Open Conga Hi	◇	◇	◇	◇
Open Conga Lo	◇	◇	◇	◇
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum		◇		

TIME SIG: 4/4T BAR: 4

**PATTERN: 6d** TEMPO: 130-150 BPM

BEAT:	1	2	3	4
Cisd HiHat	◇	◇	◇	◇
Open HiHat	◇	◇	◇	◇
Hand Clap				◇
Side Stick	◇	◇	◇	◇
Snare Drum	◆	◆	◆	◆
Tom/Bongo Hi	◇	◇	◇	◇
Tom/Bongo Lo			◇	◇
Bass Drum	◇	◇	◇	◇

TIME SIG: 4/4T BAR: 4



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# JD800



PHOTOGRAPHY: JAMES CUMPSTY

Front-panel knobs and sliders make a welcome comeback on Roland's latest professional synth. But does the JD800 really have anything new to offer?

Review by  
Simon Trask.

**I**N THE YEARS since Yamaha launched the DX7, digital synthesis and digital parameter access programming have seemingly become inextricably intertwined - leaving the old analogue style of programming, with its dedicated knobs and sliders, consigned to the dustbin of history. Yet, let's face it, when the knobs and sliders disappeared, a lot of the fun disappeared from programming along with them. Synth players traumatised not only by the rigours of FM synthesis but also by the intricacies of Yamaha's programming system began turning to computer-based editor/librarian software, and a new industry was born.

In the ensuing years, manufacturers have tried many variations on the digital parameter access formula, and with practice it's possible to move around today's editing systems with great speed - but most synth players would agree that there's simply no substitute for the immediacy of dedicated knobs and sliders, which not only provide equal and immediate access to all synthesis parameters, but allow you to adjust more than one parameter at the same time. In programming, getting the sound you want typically involves constantly moving to and fro

between different parameters, fine-tuning them against one another. By forcing you to focus on one parameter at a time, digital parameter access systems aren't well-suited to this approach - and as a result you have to waste a lot of time and energy poking away at buttons to move you around different parameters in an LCD page, climb up and down hierarchical programming levels and jump between selected pages. We've all been there.

The result is that, for most synth players today, "getting the sound you want" doesn't involve programming so much as hunting through an ever-growing library of pre-programmed sounds provided by the manufacturer and/or third-party companies. The so-called "preset mentality" has taken hold - yet not to the extent that musicians don't still yearn for a return to the old analogue-style front panels. Such yearning isn't the sole preserve of the old-timers, either. Today's young dance musicians cut their teeth on MC202s, SH101s, Juno 106s and the like, and have been equally vocal in calling for a return to the knobs and sliders. Manufacturers may have hoped that the clamour would die out, but musicians just wouldn't let it lie.

In the past there may well have been technical



restrictions which made it impractical to provide simultaneous access to all synthesis parameters on digital synths. But in the past manufacturers have also responded to requests for a return to dedicated knobs and sliders with claims that "it would cost too much" and "there are far too many parameters these days for it to be practical" - claims which never really rang true.

The JD800 is proof that if the will is there, so is the way. Not only is Roland's new synth no more expensive than other professional synths on the market, but the company have managed to fit knobs, sliders and switches for every synthesis parameter onto its front panel - and they haven't had to simplify the synthesis architecture in order to do so, either.

But while the JD800 (Jupiter Digital, perhaps?) gets full marks for its "resuscitation" of analogue-style programming, is there really anything else new about it, or have Roland merely taken the opportunity to dress up an all-too-familiar instrument in new clothes - and, if they have, does it matter when the JD800 has such an appealing dress sense?

## OF KNOBS AND SLIDERS

THE JD800 MAKES 69 synthesis parameters available on dedicated front-panel knobs, sliders and switches. These are all the parameters which make up its synthesis architecture of oscillator, filter, amplifier plus related envelopes and two assignable LFOs - collectively known as a Tone.

However, if you take into account the fact that these 69 parameters are duplicated across the four Tones which make up a JD800 Patch, the total number of parameters accessible in this manner is 276. The four Tone buttons located on the synth's angled System/Patch control panel, near the left-hand end of the synth's front panel, allow you to very quickly assign any Tone or combination of Tones to the knobs, sliders and switches for editing purposes. Successive presses of these buttons assign and deassign each Tone, with pinpoint LEDs built into each button blinking to indicate that the relevant Tone is assigned. When you're up to speed on these you can assign a new Tone or combination of Tones within a couple of seconds.

The Tone buttons also have a second function, Tone muting. In this case, successive presses of the four buttons turn the Tones on and off, while the built-in LEDs indicate the on/off condition of each Tone. A button labelled Layer/Active, handily located just below the Tone buttons, allows you to switch between the two functions. So that you can tell which function is selected, the LEDs for the mute function don't blink when lit.

The on/off status of each Tone for both mute and assign functions is automatically stored when you Write a Patch into memory, and recalled whenever you subsequently select the Patch. So, for instance, if you know that you want to do a live sound edit on one of several enabled Tones within a Patch, you can set Tone assign to default to that one Tone when the Patch is selected. Equally, if you want to be sure that a Patch can't be changed during performance (by

accidentally knocking a slider, for example) you can deassign all four Tones.

Knob, slider and switch settings on the JD800 are absolute, which means that editing a parameter causes all assigned Tones to be set to the same value. This comes in useful if you want to program the same amplitude envelope for several Tones - by assigning the relevant Tones to the front panel you only need to set the envelope parameters once. Incidentally, all your front-panel synthesis edits can optionally be transmitted via MIDI as SysEx data, and so recorded into a MIDI sequencer for subsequent playback.

Tucked away in the upper left-hand corner of the main editing panel are four sliders collectively known as the Palette. D70 owners will be familiar with the term. These sliders are assigned to Tones 1-4, and allow you to edit each Tone individually, regardless of which Tones are assigned to the dedicated parameter sliders (knob and switch parameters can't be edited from the Palette). Because the Palette sliders aren't dedicated to a particular parameter, you have to select which one you want to edit; there are several ways of doing this, but on balance the best way is to use the Page up/down buttons to "scroll" to it.

Palette and dedicated sliders take effect the moment you move them, causing the parameter value to jump from the programmed value to whatever value is indicated by the physical position of the slider. Depending on the parameter and on how far apart the two values are, this jump can be quite noticeable. But at least something happens immediately. By contrast, a D70 Palette slider only starts to work once you've passed it across the programmed value - you avoid the jumps, but at the expense of immediate response.

Inevitably on any programmable synth the physical positions of the sliders aren't going to bear any relation to the actual programmed values when you call up a different patch. On the JD800 this applies even more so because you can call different Tones onto the sliders within a Patch. In fact, as you switch between different Tones while programming, it's all too easy to forget which Tone, if any, the physical position of a slider refers to. For some reason it's still tempting to think that the slider positions do actually correlate to the programmed values, but, when you call a Patch up, the sliders tell you as little as a digital parameter access synth does.

Dedicated sliders which can set positive and negative values helpfully have a centre detent to help you identify the zero (central) position, though in some cases they're so slight that you can easily miss them. The sliders themselves have just the right degree of resistance in their movement, giving them a solid but responsive feel and allowing you to make subtle value changes by nudging them.

## DIGITAL ACCESS

THE JD800'S STRENGTH lies not just in its return to analogue-style programming but in the way that it combines this approach with digital parameter ➤

**"It's not only the knobs and sliders which recall synths of old, the JD800's architecture bears a remarkable resemblance to traditional analogue synthesis."**

➤ access. While the knobs and sliders take care of the sound programming, digital parameter access deals with the other aspects of the modern synth, such as MIDI and multitimbral setups. However, there is one aspect of sound programming which isn't on the knobs and sliders: effects programming.

Running along a strip just above the keyboard are some familiar features of digital parameter access: an Exit button, a data entry slider and

**“The JD800's filter is extremely powerful - check out the resonance in particular - and to my mind the best digital filter around at the moment.”**

increment/decrement buttons, a two-digit LED display for the currently-selected program number, two backlit LCD windows, Page up/down and Cursor left/right buttons, an Int/Card selector button, eight Bank and eight Number buttons for Patch selection, and buttons providing direct access to Compare, Copy, Manual,

Write and Data Transfer functions.

Using Compare you can check on the unedited parameter values, while Copy allows you to copy all the data of a Tone to any of the other Tones, and Manual allows you to copy the parameter values determined by the current physical positions of the front-panel knobs, sliders and switches to any of the four Tones. Unfortunately, Copy and Manual don't allow you to limit their operations to selected synthesis components (amplitude envelope only, for example).

The right-hand LCD window is reserved for displaying the four Tone values of the currently-selected synthesis parameter. You can use the Page up/down buttons to scroll through the parameters which, for instance, allows you to select a parameter for the Palette sliders or check on the programmed values of a parameter without having to move the relevant slider or knob.

The left-hand LCD window normally displays the mode (Single or Multi), the currently-selected Patch and the MIDI transmit channel (together with the Part number in Multi mode). However, this LCD is also used for displaying parameters associated with some of the buttons on the angled control panel mentioned earlier. These include Patch Edit Common and Effects, and Multi Part Edit, Special Setup and Effects. When you select these modes, the Page up/down buttons allow you to step through their software pages, while the data entry controllers allow you to edit the parameters. In most cases there's one parameter per page, but where there are more the Cursor left/right buttons come into play. All in all, Roland seem to have found a good balance of function buttons and software pages, so that the different functional areas of the JD800 are clearly presented and you don't have to get too deep into hierarchical levels or endless reams of software pages - not something which can be said for all Roland's instruments.

Perhaps someone at Roland has been studying colour psychology, because the company have taken

the unusual step of using orange pinpoint LEDs (associated with the front-panel switch parameters), an orange two-digit LED and orange LCD backlighting. Apart from being easy on the eyes, the resulting orange glow - particularly from the LCD windows - conveys an impression of warmth. Couple this with the associations of old-style analogue programming and you begin to wonder if you're being manipulated on a subconscious level. Or maybe I'm just being cynical.

## ANALOGUE REBORN?

LET'S GET ONE thing clear. The JD800's front panel may be laid out “analogue-style” but the actual synthesis processing it employs is wholly digital. Yet it's not only the knobs and sliders which recall the analogue synthesisers of old. The JD800's synthesis architecture bears a remarkable resemblance to the traditional model of analogue synthesis. But this is no return to a former way of doing things. In truth, the classic architecture of oscillator, filter and amplifier with envelope and LFO modulators has always remained at the heart of the synthesiser. Yamaha with FM synthesis are the exception, of course - except that even they introduced digital filters when they designed their SY77 flagship synth.

The real developments in sonic flexibility over the years have taken place at the oscillator stage of the synthesis chain, made possible by the introduction of digital oscillators. From synths like the Casio CZs and Korg DWs which expanded the vocabulary of waveforms, through the D50 with its sampled attacks, to the M1 with its multisampled instruments and the Wavestation with its wave sequences, it's the sound source which has created the real changes. In the case of the SY77, it could be said that FM synthesis is actually a glorified oscillator stage!

Of course, the synthesiser has developed in many other ways. Increases in polyphony, increases in the number of oscillators playable by a patch, the steady development of multitimbrality, MIDI controller facilities, the advent of the workstation synth with its onboard sequencing, drumkit sections and digital effects processing. . . All have played their part in changing the synthesiser over the years.

The JD800 is firmly of its time in terms of its polyphony (24 voices), multitimbrality (five Parts and a drumkit-like Special Part), digital effects processing (not only chorus, delay and reverb but also distortion, phasing, spectrum and enhancer) and wide choice of source sounds (108 Waveforms). It's also perfectly timed to pick up on a desire which seems to be in the air at the moment for a return to “creative” synthesis.

In the Roland scheme of things the JD800 picks up on the D70's Super LA Synthesis, the first significant development of LA synthesis since the days of the D50. But there are a number of differences between the two instruments other than obvious ones like the front panel layout (the JD800 attains what the D70 was reaching for) and the span of the keyboard (61 notes on the JD800, 76 on the D70). For example, the JD800 has two LFOs to the D70's one, 24 voices



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to the D70's 30, more sophisticated effects processing, a different collection of source sounds (and six less), and omits the D70's Differential Loop Modulation and Analogue Feel. Considering that the JD800 is supposed to be about reaffirming the values of creative sound synthesis, the absence of DLM is particularly disappointing. I hope Roland aren't going to let it drop after just one instrument.

Lurking somewhere under the Waveform knob on the JD800 are its 108 source sounds - in fact, a mixture of waveforms, attack samples, percussive samples and looped samples. These are divided into ten categories: "analogue" waves (13), digital waves (22), samples (10), percussive sounds (16), enhanced overtones (9), pianos (4), attacks (17), winds (6), noise (9) and effects (2). Further sounds can be played from a plug-in Waveform card (SO-JD80 series). As befits a "real" synthesiser, the emphasis is on sounds which can be used creatively rather than recreatively - no endless samples of pianos, guitars, string sections and bass guitars. There are plenty of waveforms and plenty of percussion and percussive samples and odd noises. And, bearing in mind the possibilities for combining up to four sounds within a JD800 Patch, there are source sounds well-suited to adding a splash of high-end digital shimmer to a Patch.

At the heart of the JD800 is Roland's latest-generation digital filter, as used on the D70, S770, MV30 and S750. This provides a choice of low-pass, band-pass and high-pass filter modes and resonance control (which can drive the filter into self-oscillation) together with envelope amount and polarity, key follow, LFO select, and LFO and aftertouch mod amount parameters. Coupled with these parameters are a five-stage envelope "hard-wired" to the filter, and velocity, time velocity and time key follow parameters for modulating the envelope settings. This array of parameters typifies the sort of detailed programming you can get into on the JD800. The filter itself is extremely powerful (check out the resonance in particular), and to my mind the best digital filter around at the moment. Shame you can't also modulate resonance on it, though (the Microwave is the only modern instrument I can think of which allows resonance modulation).

The two LFOs each provide a choice of five waveforms (triangle, saw, square, sample and hold, random) together with rate, delay, fade,  $\pm$  offset and key trigger on/off parameters. Fade is interesting when applied to amplitude for allowing you to create "cyclic" crossfades between different Tones, a la vector-type enveloping (Wavestation, SY22). All in all, the two LFOs coupled with the modulation routing options provided for them add greatly to the creative programming flexibility of the JD800.

Roland's latest synth also includes their most sophisticated and flexible implementation of digital effects processing yet. In Single Mode you get two Effects Sequences, A and B, per Patch. Sequence A allows you to program up to four effects processes: distortion, phaser, spectrum (sort of an equaliser, but more for twisting sounds out of shape than for tweaking bass, mid and treble) and enhancer. Not

only that, but you can program the order in which the effects occur. Sequence A can then be routed into Sequence B, which consists of three effects: chorus, three-tap delay and reverb. Again, you can program which of these effects you want to use and the order in which you want them to occur. None of the effects are overburdened with parameters, but they're flexible enough to greatly enhance the sonic versatility of the JD800. Also included is a three-band equaliser at the output stage for boosting and cutting low, mid and high frequencies.

In Multi mode the situation is rather different. For a start, you lose Effect Sequence A - so, for instance, that wild distorted guitar Patch turns into a wimpish whine. There's no getting around the fact that if you want to use the JD800 multitimbrally you're going to have to do without the sort of wildness that the distortion, phaser, spectrum and enhancer can bring. More positively, you can set an effect level for each Part and choose whether it will be routed dry, through reverb only, through chorus plus reverb or through delay plus reverb. In addition, for the Special Part - which allows you to assign a different Tone to each note, drumkit-style - you can set the effect routing and level per Tone/note. One set of effect parameter values can be programmed for all six Parts of the Multi setup.

Incidentally, a distinct lack of regular kit and percussion samples in the internal Waveforms means that the JD800 isn't best suited to conventional rhythm parts as it stands - though perhaps a Waveform card will provide these sort of sounds at a later date. There again, the Special Part can be put to much more interesting uses.

## PATCHES MULTIS & MIDI

THE JD800 HAS 64 onboard RAM Patches and can play a further 64 from a plug-in data card. The 64 factory-programmed Patches which come with the synth are stored in onboard ROM and can be called back into the RAM as a bulk transfer at any time.

In addition to the Tone structure and the synthesis parameters already described, each Patch can have a number of Common parameters programmed for it. You can set a 16-character name, an overall Patch level, an independent note range for each Tone (within C1-G9), a bender range (up: 0-12; down: 0-48), aftertouch bend sensitivity, solo switch on/off, solo legato on/off, (monophonic) portamento on/off, portamento mode (normal or legato) and portamento time. The last five parameters all relate to the Solo and Portamento buttons located to the left of the keyboard, near Roland's familiar bend/mod controller.

There are also a series of MIDI transmit parameters which can be programmed per Patch: mode (whole, split or dual), splitpoint, upper and lower transmit channels, MIDI patch number(s) to be transmitted on the relevant channel(s) when the Patch is selected, and Hold pedal transmit (Upper, Lower or Both). As these MIDI settings function independently of the internal Tones, you can, for



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instance, turn off all the Tones within a Patch and use the JD800 purely as a MIDI controller.

The JD800 has only one Multi setup in its internal memory, while another one can be stored on a data card. However, when you're slaving the synth from a MIDI sequencer you can send it patch changes on the relevant MIDI channels to call up different Patches per Part.

The synth's voices are allocated dynamically across the Parts, and Patches can overlap one another within a Part (selected internally or via MIDI). Presumably this is due to the Sequence A effects being absent in Multi mode, because Patches can't overlap one another in Single mode - selecting a new Patch cuts short any active notes.

Each Part in Multi mode can be assigned a MIDI receive channel (1-16 or off), a volume level (also editable in real time via MIDI using controller seven), a pan

position (L30-R30), an output (either the synth's Mix or Direct stereo audio outs - the latter bypass the internal effects) and, as mentioned earlier, an effect mode and effect level. In the case of the Special Part, each note/Tone can be given its own ten-character name, a mute group assignment (off, A-H - for setting up mutually exclusive sounds), an envelope mode (sustain until note off, or one-shot), and a pan position (L30-R30) together with its own effect mode and effect level settings. Internal and Card Tones can't be combined within a Special Setup, but otherwise you have complete freedom in deciding what Tones you want to put together on the keyboard.

Front-panel Part  $\pm$  buttons allow you to step through the Multi Parts. The Patch which you've assigned to each Part is automatically called onto the keyboard when the Part is selected. Also, very usefully, you can edit the currently-selected Patch from within Multi mode, and so tailor it within the context of other Patches - though Tones within the Special Part can't be edited in play mode.

There are two more functional areas of the JD800, again accessed via dedicated buttons on the System/Patch control panel: Tune/Function and MIDI. Both of them set global parameters. Tune/Function allows you to set master tuning, transpose switch on/off (referring to the Transpose button next to the Solo and Portamento buttons), transpose amount ( $\pm 12$ ), the internal parameter

controlled from a footpedal via the rear-panel Ext Cont jack (volume, mod, pan or aftertouch), bass, mid and treble cut/boost amounts for the Mix Out filter, and chorus on/off, delay on/off and reverb on/off. Global MIDI parameters include local on/off, SysEx unit number, receive channel (for Single mode), SysEx parameter edit transmission on/off and selective enabling and disabling of patch change, aftertouch, volume, breath controller and Exclusive reception. And as you should have realised by now, although the JD800 reintroduces knobs and sliders it doesn't skimp on the features expected of a modern synthesiser.

## VERDICT

WHAT IT COMES down to is this: the JD800 is a pleasure to program and a pleasure to play. The immediacy and spontaneity that come from programming with dedicated knobs and sliders lead you off in different, more imaginative directions, encouraging you to be experimental and to just have fun. You can make it sound wild and weird or calm and peaceful - there really is a lot of diversity to be had from it (especially when you add in the digital effects).

The JD800 not only makes you want to program, it also makes you want to carve out your own sonic identity on it. Roland have pitched the instrument's synthesis capabilities at a comfortable level - not so deep that you give up trying to fathom its complexities, but not so shallow that you soon start to feel constricted by it.

On the other hand, just because there are knobs and sliders galore on the JD800's front panel and the synthesis architecture looks familiarly analogue, don't think that you've found a modern-day replacement for your treasured Jupiter 8 or JX8P. The JD800 is a digital instrument and at best it can sound analogue-ish but not analogue, if you see what I mean. You can also make it sound very digital and you can combine the digital and the analogue-ish. The JD800 is best considered as a '90s synth designed in the spirit of its distant predecessors.

Looking at the broader picture, the JD800 could be the start of something good. Roland have shown that it's possible to put a large number of sliders on a digital synth, that it can be done without appreciably adding to the cost of the instrument, and that knobs 'n' sliders and digital parameter access programming can complement one another very effectively, thank you. It's the moment of reckoning: musicians have pleaded long enough for a return to analogue-style programming - will they now respond by embracing or turning their back on the JD800? If they embrace it, other manufacturers will have to start thinking seriously about how they're going to present their synthesis systems to musicians in future. And that can only be a good thing. ■

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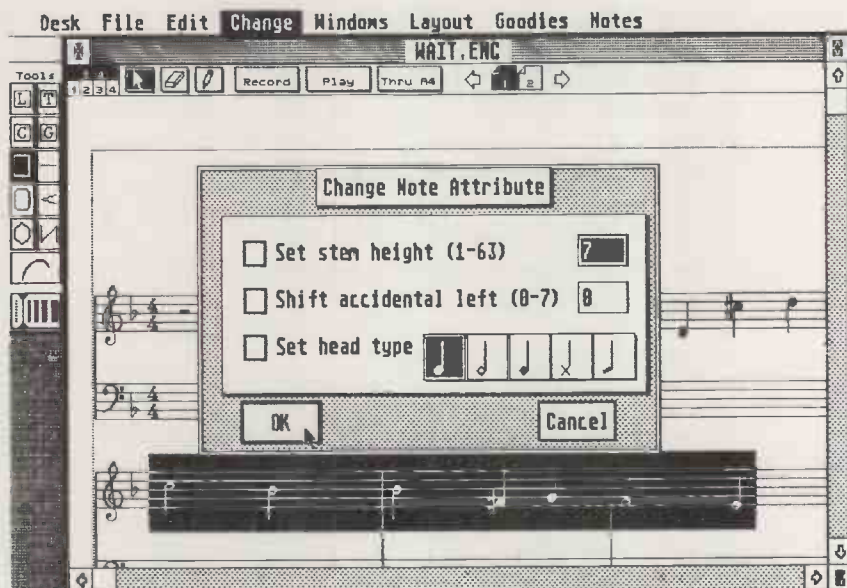
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# ENCORE



Already a well-established and capable package for the Apple Mac, Encore has found its way onto the Atari ST - have its power and user-friendliness survived the journey? Review by Ian Waugh.

**E**NCORE (REVIEW VERSION 1.3.5) is a scorewriter - or music composing software as it calls itself. It began life on the Apple Mac and has since been ported to the ST and the PC. Its spec is impressive - it can handle up to 64 staves per page, each with four voices and it can play back the score over MIDI - over 32 channels if you have the Passport MIDI Transoft Interface (which plugs into the modem port).

But before you rush to the shops, you'd better make sure that your computer can handle it. You'll need an ST with at least 1Meg of RAM although 2Meg is recommended - essential if you use the Atari SLM804 laser printer. You also need a hi-res monitor and a hard drive with 2.5Meg free. If you only have floppy drives, start saving.

## INSTALLATION

THE PROGRAM COMES on three disks and has to be installed before use. The process is virtually automatic unless you hit a snag, in which case you'll need to know something about GDOS and the Assign.Sys file. Encore uses GDOS to display special fonts on the screen (some DTP packages do likewise). Having said all that, you're unlikely to have any problems.

Encore prints files in PostScript format and it uses UltraScript, the PostScript interpreter for the ST, to do this. UltraScript is installed separately. If you have enough memory, Encore will run UltraScript for you

and allow you to match up GDOS screen fonts with UltraScript fonts - another reason why more than 1Meg of RAM is recommended.

Passport have taken the brave and unusual step of not copy-protecting the Encore disks. No dongle either - 12/10. I don't know about you, but I strongly resent being forced to pay for a multi-dongle holder just to run two programs - especially when they're both from the same company. Even the key disk system is a nuisance when you're running from a hard disk.

## NOTES IN

YOU CAN ENTER notes in four ways - click them in with the mouse, play them in from a MIDI keyboard in real-time, enter them from a MIDI keyboard in step-time or import them from a MIDI file or from a Master Tracks or Trax file. You can combine any of these methods within a score.

Before you start it's a good idea to set up the basics, such as number of staves, clefs, key and time signatures. The default is a Grand Staff, 4/4 time and the key of C. There are two main windows on screen: the score window and the palette window. The score window displays the score (in case you were wondering) and the palette holds the tools you need to enter it. There are six palettes which you cycle through by clicking on the name: Notes, Tools, Clefs, Dynamics, Marks and More Marks.

The palettes are easy to use - click on the required object then click it into the score. Time to enter some music.

**“You can enter notes in four ways: click them in with the mouse, play them real- or step-time from a MIDI keyboard or import them from a MIDI file.”**

➤ You can select the note duration from the Note palette or by pressing the numeric keys on the ST's keyboard. The program gives you complete freedom to plaster them anywhere on the screen. This is exactly what you don't want - not at this stage anyway. So click Auto Space in the Goodies menu and as long as you get the notes in the right order, the program will space them proportionally. You can enter chords by clicking in the same vertical space as existing notes. The notes play over MIDI as you enter them, and you can audition them before entering them by holding down the Control key. You can remove the last note entered with the Backspace key and delete any symbol with the eraser tool. Dots can be added along with a single or double sharp or flat or a natural.

Step-time entry from a keyboard is just as easy. You may find you develop a preference for one method or the other although both have their uses. If you can click durations with one hand and play notes with the other, you'll find it very quick.

## GUESSTIMATES

THE CONVERSION OF real-time note entry into a score is probably every musician's ideal. But if you've used a sequencer for even a short while you'll know that its literal interpretation of everything you play is not conducive to a good score.

In Encore, music entered in real-time appears on the screen as “raw data” - just the note heads, no stems or rests. The Record Options let you filter out data such as program changes, pitchbend, aftertouch and so on. These are required for playback via MIDI only and don't appear on the score.

The next stage is to run through Encore's Guess Durations process. It may sound rather hit-or-miss, but it works quite well. You can select the whole score or just a part of it and Guess Durations will add stems, flags and rests. Complex scores score here (sorry!) as they can be handled a section at a time.

Of course, the accuracy of Encore's guessing is entirely dependent on the accuracy of your playing. After the Guess, you can edit the durations - the chances are you'll have to edit to some extent - using keys on the ST's keyboard or the Change Durations function. When the durations are correct you can beam the notes. You can beam them on the beat automatically throughout the score or beam a selected group of notes. By clicking and dragging a beam you can adjust its slope, straighten it out and adjust the distance between it and the note head. You can flip stems, too. If the notes or beams threaten to encroach upon another stave, you can alter the spacing between the staves.

Undo and Redo functions help you rectify small problems, and the ability to change a section back into raw data can help you out of most big ones. However, occasionally after heavy editing you may not get back exactly what was once there, so the best advice is - as always - save before you start editing.

You can alter an individual note by clicking on it and dragging it. As you move it, the program senses

if you're altering the pitch (vertical axis) or the spacing (horizontal axis) and locks you onto that direction so that, while adjusting one attribute, you don't have to worry about accidentally changing the other. Neat.

Encore can support up to four voices on a stave. Sheet music often uses two voices per stave. Classical pieces rarely use more than three so you're well covered.

The voices are assigned to notes by highlighting them and selecting the voice number from the Notes menu - easy. You can view the voices on the score all together or individually, in which case the other voices will be greyed out. This makes it easy to edit individual voices.

## KINDEST CUTS

EDITING FUNCTIONS INCLUDE copy, cut, paste and clear. You can add ties, miniaturise note heads to produce grace notes, and force slightly out-of-line notes into a chord. There are nudge left, right, up and down functions which move selected symbols by a small amount to help fine-tune the placing.

A Mix Data function will superimpose the contents of the clipboard (acquired from a cut or copy operation) onto an existing part of the score. You can change the length of a note stem and move an accidental associated with it further to the left. You can also change note heads to hollow and filled diamonds and a cross. This is useful for drum notation but a drum mapping facility would be far more useful.

Hidden under the Measure Setting menu (only mentioned in the Reference Section) are the repeat bars and 1st, 2nd and 3rd time endings. Trying to stretch an ending over more than one bar, however, is a somewhat convoluted affair not fully explained in the manual. Repeat marks don't have any effect on MIDI playback.

You'll have to hunt under the Measure Numbers menu to define an *anacrusis* (pick up) but this only affects the numbering of the bars - it doesn't remove leading spaces from the first bar.

You can split staves, add them, delete them, connect them - all the sorts of stave manipulation functions most users are likely to need.

## SPACED OUT

ONE OF THE major problems you'll encounter is that of note spacing (this goes for virtually all scorewriters). Encore defaults to three bars per System - that is, three bars on a line - although this can be set to any value from one to eight. Using three bars, a first transcription containing 16th notes and accidentals will be cramped to the extent that the accidentals will be sitting on the previous note. Even an “average” use of 16th notes will require two bars per System for clarity. In fact, I found the overwriting of accidentals a constant problem. Even when using two bars per System, Encore delights in jamming



accidentals hard up against the previous note. Ideally, on insertion of an accidental (or any symbol) the other symbols in the bar should be spaced automatically to accommodate it. If you have a busy and a quiet bar next to each other, therefore, you might like to share the space by moving the bar line.

You can adjust the size of the staves by changing the size of the font they're displayed in. There are four options - 14-point, 18-point, 24-point and 36-point type. The default is size three (24-point). Size two helps ease congested staves, although I found size one a touch too small for comfortable editing. Size four produces jumbo print.

## MAKING MUSIC

PLAYBACK VIA MIDI works well - most of the time. The Staff Sheet, which resembles the track window in MasterTracks and Trax, lists the staves (tracks) and the MIDI channels on which they're set to transmit. You can solo a staff, give it a program change number, velocity setting and transpose it. Each of the four voices on a staff can have its own MIDI channel.

You can set the tempo for any specified range of bars, alter it by a percentage of the current tempo and program smooth tempo changes. This is only used during playback.

You can rearrange the order of the staves on the Staff Sheet simply by clicking and dragging them to new positions.

When editing, you must make sure that there are the correct number of beats in each bar otherwise the music won't play correctly (a beats-per-bar check would be handy).

A Measure Alignment function will change the MIDI data to reflect the notes shown on the screen - or vice versa. This is particularly useful if a staff contains more than one voice.

On several occasions after editing, some notes wouldn't play at all or they wouldn't play correctly, even though the durations were correct. I even copied one bar which played correctly to a bar I was having trouble with, but it still wouldn't play correctly.

Scores can be exported in MIDI File format, and on examination of one file the problem seemed to be related to a missing note-off instruction. I don't know how I lost that in a program which doesn't let you mess about with such things.

Encore didn't like being asked to record lots of data from an external sequencer and bombed out. I solved this by removing my TSR programs (patch fixes, mouse and GEM speeders and the like) but then it wouldn't do a Guess on what had been recorded - only 12 bars - and bombed out again, although it would Guess small sections at a time.

This was pretty busy stuff, so I suspect there were a few more notes than Encore is used to dealing with. The good(ish) news is, I recorded the piece into another sequencer, saved it as a MIDI File and loaded it into Encore and it handled it perfectly - playback, too.

**“Operational idiosyncrasies apart, Encore is capable of producing professional-looking scores, even on a dot matrix printer.”**

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> It's worth bearing in mind that Encore is first and foremost a scorewriter - look upon MIDI playback as a bonus and not its *raison d'etre*.

the data into a smaller area. You can preview a page before printing.

There are three types of output. UltraScript and From Memory both use the UltraScript program. The first option exits the program and enters UltraScript (but takes you back on completion). The second prints from within Encore but you need lots of RAM. The manual suggests 4Meg but it worked on my 2.5Meg machine. I suspect this is left-over from the Mac manual - incidentally, the diagrams are Mac screen dumps, too.

The third option prints to a PostScript file which can be printed from UltraScript at a later date or sent to a bureau for a professional printout.

There are three print resolutions - 240 x 216, 120 x 216 and 120 x 144 - which must be set in the UltraScript program. Even the lowest produces excellent draft quality. The highest (as you can see) even with a 9-pin dot matrix printer, is superb although it does take an age to print. However, using my humble but trusty Epson FX80, the default settings wouldn't print the end bar lines of the Systems until I dragged them a touch further from the margins. This really shouldn't have been necessary.

Only the Lucinda and Crescendo (symbols) fonts are supplied, although you can add other Imagen proprietary (UltraScript) fonts and type 3 PostScript fonts. Encore has a Tiling function too: if a System extends below the bottom margin the program will print the page within the margin and a second page containing the staves outside. It assumes you want to paste the two together - like tiles - to create a longer score.

**“Undo and Redo functions help you rectify small problems, and changing a section back into raw data can help you out of most big ones.”**

## GETTING STARTED

PUTTING THE NOTES in is only the first part of creating a score. Unless you're producing music in busker book format, you'll want to add dynamics and other instructions. There are 11 dynamic markings in the Dynamics palette ranging from *ppp* to *fff*.

The Tools palette is used to insert text, lyrics and chord symbols. You can enter text anywhere on the score, select font type and size and align it left, centre or right.

Lyrics should be the last thing you enter as they can be spaced to follow the notes. Unfortunately, however, you're stuck with the note spacing you've been working so hard to perfect. The notes will not open up to accommodate long words as they do in some scorewriters. Unless you plan the whole composition, layout and lyrics meticulously and space the notes accordingly, the auto lyric feature is nigh on useless.

You can enter chord names above the staves from a multiple-choice menu. These will be transposed automatically if you transpose the notes. Both lyrics and chords sit on a line (visible only during entry) which ensures even horizontal placement. There's no provision for entering the guitar chord symbols you sometimes see on pop music.

You can enter slurs, hairpins (crescendos and diminuendos) and pedal marks although the pedal markings aren't the "Ped" and "\*" symbols we're used to, but a sort of long Z on its side. You can also draw straight lines, boxes, oblongs and ovals and even select the line thickness.

There are two Marks palettes which include trills and ornaments, accents and staccato marks, fermatas and bowing marks. A curious omission - and quite a major one at that - is lack of DS, DC and Coda signs. Very odd.

## MAKING NOTES

THE ULTRASCRIP DRIVER supports most Epson printers, HP LaserJet and Deskjet, IBM Graphics and Proprinter. You can extract and print individual parts from a score. What the manual doesn't tell you, however, is that the part is extracted to another file (window) and only four files can be open at once. So if you try an extraction with four files already open, you won't be able to do it. Unless you're aware of the limit you'll wonder why it doesn't work. There are options to design a title page and insert headers and footers. These can include the date, time and page number automatically.

The Page Setup window lets you select the paper size, the scale of the printout, the orientation (horizontal or vertical) and the type of output required. The scale of the output is selected as a percentage. If you reduce the scale, you'll scrunch

## VERDICT

THE QUICK AND accurate production of good, clear music scores is the sort of function at which a computer should excel. However, it's a complex job and the software hasn't quite caught up with the computer's potential - although Encore tackles the problem very well indeed.

A function to tidy up and auto space edited notes (and lyrics) would be a great addition. This is an area in which scoring programs should really be doing all the work. I don't believe users want complete freedom to place symbols anywhere on a score - they want the computer to format the score automatically so it looks like professionally-set music. At the moment Encore expects you to do a little too much work, especially on complex scores, although this is true of virtually all other scorewriters, too.

Operational idiosyncrasies apart - and omissions notwithstanding - Encore is capable of producing professional-looking scores, even on a dot matrix printer. If that's high on your list of priorities then Encore must be near the top of your shopping list. The output is simply beautiful. ■

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competition

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- b. Mickey Rourke
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- a. Chris Isaak
- b. Randy Quaid
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*Thanks to John Hornby Skewes for providing this month's competition prize. Further information on the Digitech range can be obtained from JHS on (0532) 865381.*



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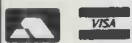
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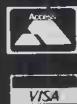
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# ABC music







# TUNE IN, TURN ON, CHILL OUT

**Ambient house - much discussed but rarely heard outside certain nightclubs - has just had its second LP release. On it The Orb chart areas of consciousness unknown even to Brian Eno. Interview by Tim Goodyer.**

AS THE LAST DECADE OF THE 20TH century gets underway, the emergence of a new musical form is at least as unlikely as at any other time in musical history. Perhaps the most recent "new" musical form is rap - although even in the form we now recognise it, it's over ten years old. The electronic music which grew out of German studios is the next most recent arrival, dating back to the early '70s - but owing much to the work of Karlheinz Stockhausen back in the '50s. New Age music owes almost everything to Brian Eno's ambient style which emerged in the late '70s. And world music, while new to most Western ears, has been alive for generations in its native countries. Even tracing the roots of rock back to the rock 'n' roll of the mid-'50s leaves us asking embarrassing questions about just how much it was new, and how much directly lifted from uncredited black blues and R&B artists.

None of this is to say that there haven't been plenty of recent developments in the field of popular music, however. If we accept fresh combinations of existing musical forms as being "new", then the list is long indeed - in the '70s rock paired itself with everything from jazz and folk to the classics, while the late '80s/early '90s have seen house going through similar contortions. Recently we saw the Beatmasters and Kool Rock Steady rowing it out over who invented hip house. Now we're being asked to welcome ambient house.

On the surface, the unrelenting beat characteristic of house music couldn't have less in common with the floating, arhythmic textures of ambient music. Where house pounds itself into your awareness, ambient music works almost subliminally, suggesting an atmosphere. Could they ever find themselves elements of the same piece of music, and if so how?

To date, only two ambient house LPs have been released. Last year the KLF released *Chill Out* (KLF Communications), 45 minutes of unrelated sounds and samples slowly drifting in and out of the mix. Nowhere else could you expect to find Acker Bilk sharing vinyl with Peter Green's Fleetwood Mac and train sound effects. As you read this, the second ambient house album will just have been released. It is *The Orb's Adventures Beyond the Ultraworld* (Wau Mr Modo/Big Life), it runs for a little under two hours and it's the work of The Orb.

Closer examination of the project reveals it to be the brainchild of Dr Alex Paterson - one time partner of the KLF's Jimmy Cauty. Although the ideas behind the project date back over two years, the recording itself was a fairly swift affair conducted late last summer with the help of ex-Killing Joke Youth, (re)mix engineer Thrash and a list of musicians which includes Steve Hillage, Sunsonic's Ben Watkins and (appropriately enough) latter-day Pink Floyd bass guitarist, Guy Pratt. Taking a break from mixing material for a new band calling themselves Ultimate Bob, Paterson and Thrash have a date with MT.

Two Orb singles pre-date the release of *Adventures Beyond the Ultraworld*: 'A Huge Ever

Growing Pulsating Brain that Rules from the Centre of the Ultraworld' and 'Little Fluffy Clouds' made an impact on America's Rockpool chart as well as London's clubland last year, and a track called 'Peace (in the Middle East)' was released earlier this year under the name Apollo XI as a reaction to the Gulf war. Currently another track off the LP, 'Perpetual Dawn' has been seriously re-recorded and remixed to become a third Orb single. But it is only in the context of long-playing vinyl - or better, Compact Disc - that the true nature of the music is revealed. The opening cut, 'Little Fluffy Clouds', is typical of half the material, featuring house drum beats overlaid with ambient textures and (in this case) a monologue in which Rickie Lee Jones describes scenes from her childhood. (Eno meets Frankie Knuckles?) The remainder of the material is ambient, relying purely on textures and sound effects.

A bizarre marriage of material in theory, it all starts to make sense when you consider Paterson's background. Once a drum roadie for Killing Joke, he subsequently became an A&R man at EG Records - Eno's label at the time - and then went on to become a DJ.

"Working for EG and being a house DJ, it seemed all very obvious - to me, that was, although not to a lot of other people at the end of 1987/88", he declares. "It's only this year that people have accepted it; last year it was all techno and the German stuff, the Italian stuff."

Alex Paterson - his "doctorate" status due to manipulation of his initials rather than a stint in the educational establishment, incidentally - admits to being heavily influenced by Eno and his ambient experiments.

"I was 19 when I first heard an album of his", he recalls. "It was *Music for Films*, and it had just come out. I was in Germany on the 11th floor of a council block looking over the Ruhr at these huge foundry works pumping steel. It looked like a huge fire in the distance. I was also under the influence of hallucinogenics at the time, and I spent a day-and-a-half just listening to that album. I was working with Killing Joke who had just signed to EG, and I found out Eno was signed to them too. It seemed the perfect opportunity to get into it. From there I discovered that a lot of the albums I had previously been into - like Ultravox' first album, Bowie's *Heroes* and *Low*, two of my all-time favourite albums - were produced by him.

"I then got a job as an A&R man at EG", he continues. "EG are famous for their compilation albums, so it would be 'would you like to compile an ambient collection?; would you like to compile an Eno CD-only boxed set?'. So for weeks I'd be working on different tracks, looking at the chords, and I found he relies a lot on that 'singular note that stands out' theory. But he never took it far enough for me.

"Then house came along and I was being asked to DJ at all sorts of events - fashion shows and things - and I started putting the two sides together."

➤ Originally The Orb project involved Paterson and Cauty. The partnership was ill-fated, however, and left Paterson to continue on his own. Three singles and an LP suggest it was the right decision.

"Chill Out was a direct idea of my own and Jimmy's DJing together", explains Paterson of the KLF's venture into ambient house. "It's very much like a session I would do when I was DJing two-and-a-half years ago. I think it gave a lot of people a lot of ideas and cleared the way for The Orb album. It opened a lot of peoples' heads up. The KLF - bless 'em - thought there might be a little bit of money in sticking out an ambient house album when there was such a big buzz about it. They did that on their label, KLF Communications. At the time that *Chill Out* was released, Jimmy and I were actually setting up a deal as The Orb with Big Life, but Jimmy and I split up, so I had to re-think the whole Orb idea - whether to go on, whether to invite somebody else to join me. Through my experience with Jimmy I decided to do it on my own. I had to get the whole thing out of the way and see what happened, and this is what's happened. Now I'm fed up of arguing with myself, so I've got Thrash to argue with."

Where *Chill Out* appeared as a meandering collection of unrelated sounds, *Adventures...* - which went into the album charts at No. 26 as this was being written - contains pleasing combinations of beats, textures and even melodies.

"It's not a dance album as such", proclaims Paterson, "it's a crossover album, if you need to file it under something in your record collection. I wouldn't even say it's contemporary - it's in a different world."

The viability of ambient music has been adequately proven by the burgeoning new age catalogue - but why should ambient music have a place in club culture?

"It works in a club in a chill out situation", comes the confident reply. "Without drums, you can do what we're doing - sitting having a conversation. It gives you a bit of social space to work your ideas out, work deals out."

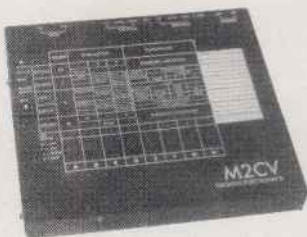
Outside the club, the word "concept" looms large. The Orb itself seems to have acquired a character of its own in Paterson's awareness - he frequently refers to the "Orb style". Meanwhile *Adventures Beyond the Ultraworld*, complete with a cover shot of Battersea power station reminiscent of Pink Floyd's '77 album *Animals* sleeve design, is undeniably a concept album.

"Yeah, it looks like it", concedes its maker with a broad grin. "This is the word."

"Who else is doing one?", he challenges. "Who else has got an idea of selling an album? Everybody reckons you've got to have a single on an album to sell it, but we thought why not make an album and sell the album for what it can do. A lot of people are calling it a 'progressive rock' album, but that's because nobody's done anything like that since the '70s, so that's all they've got to point their fingers at. But that's great for me because there are an untold number of people saying 'I wonder what that's going to be like if it's like Pink Floyd?'. In that respect, I've done just under two hours of tracks in varying musical styles, and linked them all up as an album. I'm very proud of that. And our next album is going to be equally progressive in different directions."

**BEFORE ANOTHER EQUALLY PERPLEXING ORB album appears, however, there's the small matter of how this one found its way onto vinyl. Essentially it's a simple musical formula - easier, even, than house to work with (as the**

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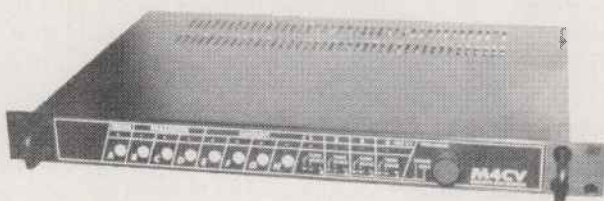
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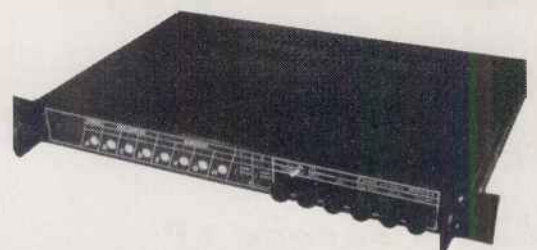
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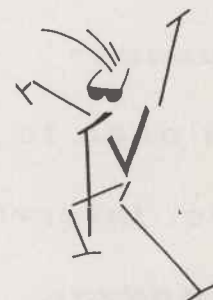
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Paterson explains the working relationship behind *Adventures Beyond the Ultraworld*: "Thrash handles the drums and I get the ambient feel on top, the textures. From there we can get rid of the drums and just have the textures, or we can get rid of the textures and just have the drums. We've got the beauty of all these ways to work. It's almost like we're tripping over things without realising it - but at the same time, we *do* know what we're doing. It's like 'yeah, we'll take *that* bit for this'. You know what I mean by take that bit or take this bit. . . We'll take the rest of it too!"

"It's like a jam, in a sense", offers Thrash, joining the conversation for the first time.

"It is, really", Paterson continues. "A Huge Ever Growing. . .' was done in a day-and-a-half. The ideas were there two weeks before but the mix itself only took 20 minutes - it was completely live.

"Thrash and I met putting together an EG Editions remix. He was only 16. Now he's just turned 19, I'm 31 and we work so well together, that's the incredible thing. I was watching a thing on 808 State last night, and it's two on two - two old ones and two young ones. It's almost like a mini-808 we've got here. We work together really well."

Paterson is happy to admit to being a DJ and specialising in "hearing ideas" rather than possessing conventional musical skills. Similarly, Thrash claims simply to "like turning knobs and pushing buttons". But the duo are anxious to point out that *Adventures*. . . also contains the work of a variety of very talented, old-style musicians.

"I've put them onto the album in an A&R production style", says Paterson. "I've gone back to the old days of being an A&R man, and going into the studio with the musicians. Obviously, with 11 musicians there are going to be a lot of musical directions and a lot of confusion - but on the album there is a certain string of attachment that binds it all together. That is myself - that's why I did the album on my own. The next album will be a unison of two people. We'll probably have a few more arguments, but I'm looking forward to working with Thrash. We can beat each other up, it's not a problem."

Anyone who can manage 11 musicians in a studio environment must have something going for them. But as with the KLF's *Chill Out*, the conception of *Adventures Beyond the Ultraworld* is based on Paterson's activities as a DJ rather than some exotic musical theory.

"When I'm DJing at Oz, we might have four channels going plus our own DAT player as well", begins Paterson, describing a typical night behind the turntables. "That's five channels of sound. There might be a couple of sound effects records, an Eno record, and 'E2=E4' by Manuel Gottsching. Then there are tapes of people talking that I've made up especially - the same tapes have also been used on the album. And you can do a lot of this at home if you've got a couple of decks and a tape recorder, which a lot of people have these days because we're looking at the '90s, not the '70s."

Take the above ingredients, mix carefully and you've got ambient house. But what goes in and what gets left out? How do you make *good* ambient house?

"It's called a feeling: knowing how far you can go with a certain rhythm before you get bored with it yourself. I mean, we've had this album finished since the end of

August/beginning of September, so we've had it for nearly six months and we're moving on to new things already.

"A lot of the actual material comes from various places around the world", reveals Paterson. "You've got to have. . . not really a big record collection, but you've got to have records you know you can cover with other samples to make a sort of mish-mash.

"A lot of the drum samples have come from hip hop records because they get these amazing drum sounds together and then do something unintelligible over the top. So we take the drum sounds."

But then there are also those "real" musicians to consider. Although he now lives in New York, ex-Killing Joke drummer Paul Ferguson also found himself providing drums for a track called 'Into the Fourth Dimension'.

"As a favour he agreed to play drums for us", recalls Paterson, "but he didn't play drums to a track, he *played drums*. I'd say give us a break. . . give us a Soul II Soul type break. . . He is the perfect drummer.

"I've now got a whole library of live sounds and live patterns, some of which I've yet to use. Paul played drums live for an hour-and-a-half and we put it down onto quarter-inch half track.

"With Killing Joke we spent days making the most incredible drum noises. I spent a month in Connie Planck's studio in Cologne in 1985/86 experimenting with drum sounds. We'd do things like build 50 yards of tunnel, put a mike at the far end of it and maybe one on the bass drum. That's another direction, a totally un-ambient direction, we could go in."

So much for the elements of ambient house, but are they fitted together into a single piece of music?

"Shall we talk through a particular track?", suggests Paterson. "The next single, 'Perpetual Dawn' is very musical, we've even got a singer on it. Eddie Manasseh came up with a demo of a reggae track which we liked. To that we added drums, kept the bass guitar, and added samples of vocals from the West Indies - and we created an ambient reggae track. From there we did a remix ourselves using various choirs and a toaster called Jeffrey.

"Then Andy Weatherall came in and did exactly what we did - added his own samples, his own ideas, his own textures and used Jah Wobble as a bass player. Then we took it a stage further because we really wanted to use a singer called Shola, but she was stuck in with Frazier Chorus doing their stuff. Then Youth came along and did a 'Shola version' using the drums from the mix we did and Jah Wobble's bass from the mix Andy did, and he added his own 'Youthfulness' to it. The end result is a track that's got two vocalists in it, a Jah Wobble bassline and a Youth mix. And that's what's on the seven-inch and the 12-inch."

It transpires that the original demo was not on tape, but in a C-Lab Creator sequencer file.

"He'd programmed a lot of stuff at home, brought it in and we developed it", explains Thrash, when Paterson's technical knowledge fails. "We used loads of new sounds, sampled drums and stuff, and built it up from there."

"A lot of people have been trying to get me into computers", says Paterson, in his defence, "but my head's elsewhere. I'm into listening to things like chains being pulled and the sound that would make if they were sampled. Or birds flapping in System 7 (another project). Any abstract noises - that's all down to myself; the logistics of using the computer I leave to Thrash."

**“. . .there might be a couple of sound effects records, an Eno record, and 'E2=E4' by Manuel Gottsching, then there are tapes of people talking. . .”**



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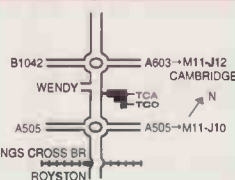
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**“...a different day, a different mix, a different track, so during two weeks of August 1990 we completely produced five tracks of a double album.”**

> Mention of further technicalities demonstrates the relative unimportance of the gear as compared to the music it's being used to create. Most of the recording was based around Creator and numerous Akai S1000s, but there's plenty of talk (from Thrash) about “some Moogs. . . some Oberheims. . . a Prophet 5 - loads of analogue synths. . . a phenomenal amount of outboard, from Lexicons to Quadraverbs”. Apart from endless enthusiasm for a now-discontinued unit called the Dytronic Cyclosonic panner - an elaborate panning unit that claimed to make sounds move in three dimensions (they used three) - there are few specific technical details to be gleaned, however. One of the main reasons for this is the time scale of the recording: two years of musical ideas committed to tape in a matter of weeks.

“In demoing up the album, we did five tracks in five days”, says Paterson. “Then we did another five days of mixing them in the 24-track. A different day, a different mix, a different track. So during two weeks of August 1990 we completely produced five tracks of a double album. It's very difficult to try to remember what was going on.”

One item that has stuck in the memories of both DJ and mixer is the modular Moog system used by Miquette Giraudy on ‘Supernova at the End of the Universe’ and ‘Back Side of the Moon’. Paterson calls it

“one of the early birds. It's a really early Moog synth that she's painted - so it's become this piece of art with knobs on.”

Perhaps more encouragingly, the duo talk unprompted about setting up a studio of their own. In addition to the musical freedom a studio would bring, there's also the financial angle to consider.

“We did this album as a daily routine”, says Paterson. “That whole double album was done within a month - minus ‘A Huge Ever Growing’ and ‘Fluffy Clouds’. The budget we were given was 20 grand and it came in under. You don't get many of those around these days.”

THESE DAYS, FEW POPULAR MUSIC INTERVIEWS would be complete without covering the issue of sampling and the copyright problems it throws up. In the case of The Orb, much of the sampled material is simply spoken word - over which there is no copyright. Of the copyrighted material Paterson claims to be clever enough to manipulate most of it to the extent that it becomes “an original sound”. There are still passages in *Adventures*. . . which are readily identifiable though, most obviously a long section of

Minnie Ripperton's ‘Loving You’ spun into ‘A Huge Ever Growing Brain that Rules from the Centre of the Universe’.

“That's been cleared”, Patterson reveals. “But we didn't use it in the way it was used as a commercial song anyway, we used it as part of a 23-minute ambient piece that slipped in at nine minutes and came out at 11.”

“Jimmy and I had worked a lot on that track and by the time we thought ‘if we use this we're going to get into a hell of a lot of shit’ it was too late. Also, at that time Jimmy had gone through the Time Lords saga with ABBA and he was very reluctant to go through that shit again. We did a version without Minnie Ripperton and everybody said ‘what the fuck are you doing?’. They didn't realise that we couldn't say ‘we can't use the Minnie Ripperton sample or we'll get sued to fuck’. It got to 76 in the charts and stayed in the independent charts for five or six weeks, so it wasn't that much of a disappointment. But the Minnie Ripperton version went on the album because it's a classic track.

“We've cleared some of the stuff, but other stuff is so impossible to recognise that there's no point. Look at the credit for ‘A Huge Ever Growing. . .’ and you'll get some idea of what we've had to clear. It was because of that that we didn't make it obvious that another sample is 18 seconds of Grace Jones.

“Big Life have already had to deal with this issue with Coldcut and De La Soul. In this day and age we can get around copyright problems by paying the artist a fee if they realise it's their sample. But within the album there are musicians playing too, so it's not as if it's a ‘sampled’ album. We've just used what we think are the best things for the music - in an Orb style.”

So what of the future of ambient house? Although relatively unexplored on vinyl, the term has been used and abused in clubland to the point that the tag itself is threatening to handicap any future releases. Paterson confidently predicts that it will undergo a name change, but quite what it will become is a matter for speculation.

“There are rumours of calling it mellow techno”, he says, “but it could be picture music, atmospheric music, '90s music. . .”

When questioned about the significance of the style he is in no doubt that there is much ground still to be covered.

“Last weekend I was taken around to various peoples' houses in Europe who were doing things very similar to The Orb: taking six or seven things and mixing them to a drum loop. That's not dissimilar to the way I started when I was using the William Orbit ‘Prepare to Energise’ track in the clubs. In Japan there are loads of ambient clubs, and they have chill out rooms on top of all their clubs - because they're highly stressed-out people. So they've taken to the two Orb singles like ducks to water. The album is being released in July. In America ‘Little Fluffy Clouds’ is in the Rockpool charts at No. 6 and it's climbing up the dance charts. The best review I've ever had was a Rockpool review: it said at the end ‘this track changed my life, I'm happy now’. That really touched me - if that's what I'm doing, it can only be a good thing. What can you say? Also through our fan club I'm receiving a lot of mail from prisons - I've never been to prison, but if you're cooped up in there for two years and you can put The Orb on. . . It's repetitive, but it's easy on your ear and it doesn't do unpleasant things to your head.”

If not ambient house, Music for Prisons, perhaps? ■



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# SPIRIT STUDIO



PHOTOGRAPHY: JAMES CUMPSTY

As the recording industry recognises the growing importance of pre-production suites and home studios, more cost-effective, yet good-quality mixing desks are sure to appear; Soundcraft's new Spirit is both.

Review by Tim Goodyer.

**A**S YOUR ARSENAL of synths, samplers, drum machines and effects processors grows, you'll come to an inescapable conclusion about your gear - you can't manage without a decent mixing desk. Without it, the whole process of recording, gigging and even rehearsing becomes hopelessly over-complicated. Somehow you've got to get all those outputs plugged into some

form of tape recorder or amplifier, and the whole business of multitimbrality and multiple outputs only serves to make the problem more acute.

Where recording is concerned, one possible solution to the problem is to opt for a combined tape recorder and mixer - something descended from the first Portastudio or the many cassette-based multitrackers that have since appeared. Alternatively you could keep your options open by buying a mixing



desk which allows you to use it with the tape recorder of your choice, or even as part of a live setup. Unfortunately mixers don't come cheap - not the sort that will ably handle 16 or so inputs, offer flexible routing to a multitrack recorder and have the sort of equalisation and auxiliary routing facilities needed to get the most out of today's hi-tech instruments (or yesterday's, for that matter). Happily, you and I aren't the only ones coming to the conclusion that there's considerable demand for "serious" yet "affordable" mixing desks. The same conclusion has been reached by certain manufacturers in a position to put such a desk on the market.

Before we go any further, let's establish what we mean by "affordable". Obviously the amount of hardware and labour involved in building, let's say, a 16-input, eight-group desk is going to prevent it from being "cheap" in any sense other than when compared to a fully-pro studio console. Let's also say, then, that something which costs around the price of a serious synth or sampler represents a significantly better buy than the studio desks of only a couple of years ago. Specifically, let's agree that, at around two grand, Soundcraft's Spirit Studio 16:8:16 makes a very attractive proposition.

## IN THE SPIRIT

THE SPIRIT STUDIO comes in two frame sizes - containing either 16 or 24 input channels - and has a sister line in the Spirit Live series of desks. Here we'll be looking at the smaller of the Studio desks, but the review also adequately describes the larger desk.

The physical layout of the Spirit offers little in the way of surprises: 16 identical input channels make up the left-hand side of the desk, the right-hand side being given over to the eight group and single master faders, auxiliary returns and routings, monitors master levels, metering and so on. One surprise the Spirit does have in store, however, is its hybrid split/in-line format. Traditionally, a split desk separates the input channels from the group routing and monitoring controls, while an in-line desk incorporates these to sit "in-line" with the input channels. While the group faders are to be found on the right of the Spirit, the tape monitors are in-line with the input channels.

Specifically a Spirit input/monitor channel runs as follows: from the top there are separate send and return jacks for connection to a multitrack machine, insert point, line input (balanced; stereo quarter-inch jack), mic input (balanced; XLR), 48V phantom powering, Direct button (routes input channel direct to corresponding multitrack channel), tape trim pot, line/mic selector (-20dB attenuation on line input), gain pot, channel/monitor input reverse button, high and low EQ pots, EQ-to-monitor button, two-band quasi-parametric EQ (500Hz-16kHz and 50Hz-1.6kHz bands with 15dB cut or boost), foldback 1 send, aux 1 and 2 sends, foldback 2 send, aux 3 and 4 sends, aux 3 and 4 routing button, monitor pan, monitor level, monitor PFL button, peak indicator LED (red),

monitor on button and LED (green), channel pan, channel PFL, peak indicator LED (red), routing buttons (Mix, 1-2, 3-4 5-6, 7-8), channel fader (100mm throw).

The Group section contains jack connections for the eight group outputs, an insert point for each group, and the four aux sends and four pairs of aux returns. Beneath these are eight 16-segment LED ladders (one per group), master aux sends with PFL buttons, trim pots for the aux sends, high and low EQ for each of the aux return pairs, four pairs of FB1 and FB2 pots for sending aux return signals to the monitor busses, aux pan and return levels for each of the four aux mixes, AFL buttons for each aux mix, routing buttons for fx-to-group and fx-to-mix, routing buttons for group-to-mix and group-to-mono, PFL buttons for each group, and the eight group faders.

Finally there's the Master section of the desk. Here there is a connection for the external DC power supply, jack connections for control room monitors, monitor amps, return from a two-track machine, mix out and insert points for the stereo mix. Sitting beneath these are two further LED ladders (for stereo mix, PFL or AFL levels), a tape line-up oscillator (1kHz/10kHz), foldback 1 and 2 master levels (with AFL and link buttons), a level pot for feeding the control room sound source onto the foldback busses, select button for selecting mix or two-track return, PFL/AFL active LED, trim pot for PFL and AFL monitoring, control room/headphone level, mono button, talkback mic and level, non-latching routing button for mixer mic (groups and stereo mix or foldback busses), headphone jack, and single, stereo master mix fader.

## BLITHE SPIRIT

WHILE THE SPIRIT Studio isn't a particularly large desk, the in-line configuration ensures there's enough room around all the controls to give it the feel of a larger desk. No concessions have been made on the size of the controls either, and even the input channel routing buttons (which sit between the faders) have enough space to allow you to operate them with comfort. There are other aspects of the desk that make it physically comfortable to work with too - the provision of a scribble strip (for marking channel usage) under the faders is usually one of the first casualties when it comes to "economy"; this is not the case with the Spirit. Another early casualty is the arm rest that adorns the front edge of a professional desk. While the Spirit rest has no padding, it does at least keep your hands and elbows out of the way of the faders - and also doubles very neatly as a carrying handle which makes the (fairly heavy) desk reasonably manageable by one person. In fact, this attention to detail is something Soundcraft have pursued in the Spirit's electronics too, as we'll see ➤

**"Given Soundcraft's considerable experience in designing professional mixing desks, it's interesting to see exactly what they've chosen to include on, and exclude from the Spirit."**

➤ shortly. The result is that, once you're involved in the details of a mix, you can quite easily forget you're using what's supposed to be a "budget" desk.

Given Soundcraft's considerable experience in designing professional mixing desks, it's interesting to see exactly what they've chosen to include on, and exclude from the Spirit. The first notable inclusion is the direct routing facility. This enables you to patch an input channel directly to the correspondingly-numbered tape track at the touch of a single button. Another convenience is the single-button method of bringing a tape track up on an input channel and substituting the instrument plugged into that channel on the monitor channel. The option to switch the shelf EQ between the input channels and monitor channels is extremely useful too - you can opt for comprehensive EQ on an input channel, or have quite reasonable EQ on both input channel and monitor channel. Remembering that the Spirit is a budget desk (and, therefore, isn't going to be blessed with

full EQ on both input channels and monitor channels), it's an excellent application of resources. Similarly, the ability of aux sends 3 and 4 to be switched between input and monitor (foldback) channels allows you to make good use not just of the Spirit's aux busses, but of a limited number of effects processors. Also, with sends 3 and 4 switched to the input channel, and the foldback busses used as pre-fade effects sends (for such uses as auto panning),

you're working on a desk with a very generous six effects sends. Other inclusions are equally pleasantly surprising and useful - the inclusion of phantom powering (selectable per channel) for those mics needing it, is going to save many users time and hassle, and the provision of tape trims eliminates the need to reset input levels when switching between an instrument and tape input, for example.

## SPIRITUAL GUIDANCE

THE ROUTING FACILITIES offered by Soundcraft's new desk are pretty comprehensive. In addition to the direct routing of channels to tape tracks, splittable EQ and assignable aux sends, the Spirit will let you tie it in almost any type of knot you wish.

Input channels are routed to group busses in the usual way - select a pair (or pairs) of busses from the routing buttons on the channel and then use the channel pan to select which of the two groups you wish to use.

The groups can readily be set up as effects returns by assigning the only effects to a pair of groups (with the FX To Group buttons) and muting their feed direct to the mix out buss by releasing the FX To Mix buttons. Of course, a combination of directly-routed and group-routed effects are equally easily set up.

The provision of a "mono" facility is another thoughtful inclusion on the Spirit. Provided on both the main mix buss and each pair of group busses, the Mono button gives you the ability to check almost any section of your mix for phase cancellation effects, such as those caused by effects units that give a "stereo" output by simply inverting the phase of one of the channels - in mono the effect cancels itself out.

## SPIRITUAL LIMITATIONS

NO PIECE OF hi-tech gear is without its shortcomings, and anything built to a budget can reasonably be expected to have plenty. All of which makes the Spirit appear all the more of a masterpiece of R&D. The designers of the Spirit appear to have cut strategic corners instead of indiscriminately pruning away useful features. The net result is that the desk will either suit your needs admirably, or it won't. For a start, the desk is not expandable in any way, so you need to be sure the Spirit has enough input channels and groups for your needs (the eight group busses can be used to feed a 16- or 24-track machine by doubling up on assignments - group 1 feeds tracks 1, 9 and 17, group 2 feeds tracks 2, 10 and 18 selectable on the multitrack - but you might aspire to a desk with a full 16 or 24 busses). You certainly don't want to buy a desk only to find you need to update it in a few months, say, taking onboard the inconvenience of installing a new desk and losing cash in the process. Similarly, there's no option for adding any sort of automation internally (MIDI muting, for example). But the Spirit makes plain what it will do, and generally does it very well indeed. The high quality of the Spirit's electronics deserves a mention here - as evidenced by the unit's low operating noise.

The one exception to this performance of duty is the lack of EQ bypass switches. If you've ever tackled a tricky EQ job with EQ defeat available, you'll appreciate just how valuable this can be. To be fair to Soundcraft, while no self-respecting pro desk would be without EQ defeat, it's an uncommon luxury in a budget desk.

The only other area in which the Spirit fails to fully capitalise on its potential directly concerns the musician using MIDI sequencing as his/her first line of musical composition, with tape second. Given that the desk possesses 32 channels (16 input, 16 monitor) with a healthy allocation of EQ and effects sends, only 16 of these are readily available as instrument inputs. Use of the tape inputs as additional instrument inputs is possible, but far from ideal. Apart from the inconvenience of substituting instrument leads for tape return leads, the tape returns are matched differently from the line inputs, and tend to require that the tape Trim pot be wound up high enough to give a poor s/n ratio. As an alternative, a second set of input jacks and the ability to switch between them and the tape returns could have been provided, making maximum use of all the ➤

**“The lack of padding on the arm rest is always going to remind you that you're not mixing in Peter Gabriel's Real World, but the Spirit may have you believing you're closer than you actually are.”**



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➤ Spirit's channels. Not only would this have made good sense to you and I as users, but it would have been quite in keeping with the Spirit's otherwise exhaustive capitalisation on its facilities.

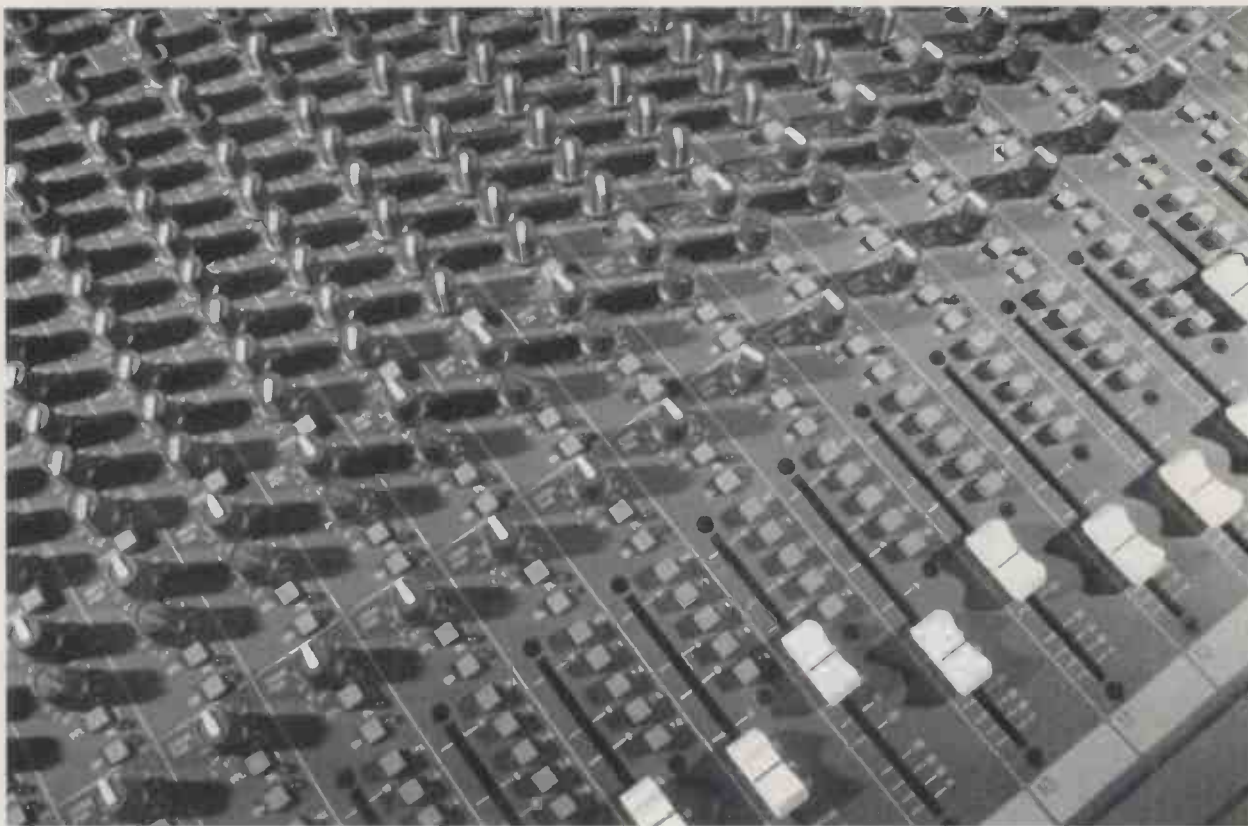
## VERDICT

IN SUMMING UP, the first thing that needs to be reiterated is the feeling of physical comfort the Spirit Studio gives when in use. OK, the lack of padding on the arm rest is always going to remind you that you're not mixing in Peter Gabriel's Real World studio, but the desk's ease of use and the impression of space in which you're working may have you believing you're a lot closer than you actually are.

It's probably a tribute to the experience Soundcraft have clocked up with desks which have to cut the ice

this impression of honesty the mixer purveys - adding MIDI would introduce additional complications (what should be controlled and how?). Then there's the matter of having to leave the actual control of the desk to a third party (a variety of manufacturers of sequencers and sequencing software) producing systems which vary wildly in facilities and reliability, isn't in keeping with the spirit of the Spirit. Finally, there's the issue of cost: keeping the price of the desk down and leaving the option of adding an automation system of your own choice has a lot to be said for it. The lack of MIDI is a sad omission in many ways, but an understandable one. The obvious solution to those seeking MIDI control is to use one of the stand-alone systems which operate via the desk's insert points. This, naturally, the Spirit will support comfortably.

The introduction of the Spirit Studio represents a



with the professionals, that the company have so accurately identified the elements that make the Spirit so appealing to use.

Another commendable aspect of the design is its honesty - if, after reading this review and spending ten minutes studying the physical layout of the desk, you feel the desk is right for your needs then it almost certainly is. The Spirit makes no implied claims to be what it's not, or do what it can't, it's simply a damned fine desk for the asking price.

Of course it's easy to point out that expandability and MIDI muting would have added significantly to the potential of the desk, especially in the current climate of ever-expanding MIDI usage. It's difficult to speculate why the Spirit isn't expandable (although it may have to do with build quality - the Spirit is a very solid piece of work), but the question of MIDI almost certainly comes down to three things. First there's

significant change in at least one of the attitudes of the established professional mixer manufacturers. Soundcraft have recognised that times are changing, and that much music is now being made in pre-production and home recording suites that simply cannot bear the cost of an up-market mixing desk. In (possibly) swallowing their pride and bidding for a place in this market, they're not only likely to cream some profit out of a new area of the market, they're providing quality mixing desks to that area of the market at a price it can reasonably be expected to bear. Well done, Soundcraft. ■

**Price** 16-channel Spirit Studio, £1651; 24-channel Spirit Studio, £2381. Both prices exclude VAT.

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IN THIS DAY AND AGE, NOT MANY MUSICIANS would be prepared to spend four years honing their songs to perfection before committing them to vinyl. Yet this is exactly what Basscut have done. Singer Elisa Burchett, a native of the US' New Jersey with a Pentecostal church music background, and Heinrich Zwahlen, a Swiss-born electronic musician who, since 1985, has been living and working in New York, met in 1986 and subsequently decided to collaborate. However, it was only earlier this year that they released their first single, 'Say You Love Me' b/w 'Pampa', on 10 Records. The duo's second single, 'My Obsession', is due in June but the release date for their debut album has been put back not once, not twice but three times - currently to September. Still, what's four months after four years?

There may yet be dangers ahead for Basscut, though. Sublimely soulful yet not exactly soul music, enticingly rhythmic yet not exactly dance music, their music cannot readily be categorised, targeted and marketed. Nor does it sacrifice substance and depth for the sake of instant appeal - it doesn't hit you immediately, but it sure as hell grows on you with repeated listenings. Burchett's compelling voice, at times taut and anguished, at times dreamy and fragile, reaches out to a place rarely touched in popular music. Zwahlen's lush electronic textures - subtle, finely-detailed, understated arrangements which wrap themselves seductively around Burchett's voice without ever overwhelming it - are similarly out of the ordinary. It's a combination of purity and sensuality which is

almost religious in nature. But the sound of the moment it isn't.

"Our sound is something maybe not so easy to sell right now", admits Zwahlen, speaking on the phone from New York. "But then I'm more going for something timeless, I'm not interested in creating some new hype. I would rather produce something that has a quality that stands out of the time when it's made and has a certain solidity to it."

When the softly-spoken musician - who moved to New York because "just being in Switzerland was getting a little boring, you know?" - began working with Burchett, he was using a far more modest equipment setup than the one he has now.

"I had my Atari computer, Dr T's KCS software and two Casio samplers", he recalls. "I'd put the music onto a cassette four-track and Elisa would take it to her room and make some overdubs. That's how we did a lot of stuff, just to put down ideas, and it worked really well."

Around two years ago, Zwahlen formed a production company, Spike Records, with two other partners and set about putting together an in-house 24-track studio (see equipment list). With this new studio he switched to a new sequencing package, C-Lab Notator, which he felt was better suited to controlling the new array of synths and samplers he had at his disposal. And with this equipment setup he was also able to approach the songs he'd worked on with Burchett from a fresh perspective.

"I took the sequences from KCS and transferred



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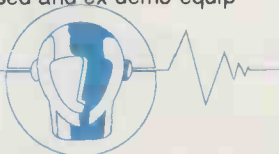
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them to Notator using MIDI Files”, he explains. “Then using the new equipment, I started to work on details, on textures - on fine arrangements, basically. I try to give this stuff some depth. There's a lot of little things happening that maybe you don't realise in the first moment. There should be two levels: on the one hand a very simple, catchy element, but then if you keep listening, maybe you see a certain depth to it, details, or textures. So even though the songs are simple, you can listen to them more. Combining simplicity and complexity was one of our goals.”

**ZWAHLEN BEGAN HIS MUSICAL CAREER IN** the '70s in his home town of Zurich, playing guitar in local punk bands. Tiring after a while of what he saw as the limitation of the guitar sound, he first experimented with putting his guitar through “all kinds of effect devices and feedback - crazy setups” before turning in the late '70s to the synthesiser and electronic music. Zwahlen saw in electronic musical equipment not only a source of new sounds but also an opportunity to escape what had, for him, become the confines of the band situation.

“I was really getting fed up with having to work in a band and having to argue with other band members”, he confesses. “In some ways your creativity can become cut short in such a situation.”

And so he began creating what he refers to as “minimalistic, rhythm-oriented electronic music” using a Roland MC4, a Roland System 100M, an ARP Odyssey and a Roland TR808.

“I was not a keyboard player, so the parts had to be very minimalistic!” he says. “Also, I was very naive in the way that I worked with the equipment, because I was not a synthesiser player, I just figured that I could do it.”

As well as playing live shows with his electronic setup, Zwahlen bought an eight-track and started doing production work for other musicians in Zurich. However, after visiting a friend in New York he was so taken with the city that he decided to move there.

“I liked the whole vibe”, comes his explanation. “It was and is just much more inspiring. Zurich is OK for its size, but how much can you expect from a small town?”

Zwahlen's arrival in New York coincided with the early days of Chicago house music, which he cites as the main influence on him at that time.

“I liked the minimalistic formula of the music, with the combination of the steady kick and the spacey parts. Also, sound was very important, because the music was linked very much to sound as compared to maybe very complicated people parts, musical parts. It's more like just sound, bass. . . I think that's still a very powerful concept: raw rhythm and sound, and simple parts. Atmosphere, too. I was totally fascinated by the sound systems like the Paradise Garage, the whole atmosphere in those places.”

In order to support himself, Zwahlen set up a small eight-track demo studio. Being in New York, he found himself doing a lot of hip hop pre-production work, spending much of his time sampling and looping breaks and programming drum rhythms.

“That was when I really got into drum programming, much more than on this music now”, comments the keyboard player. “I've always really liked drum machines. At that time I had an E-mu SP1200. I still like that machine, but for a long time I've been playing drum parts from a keyboard, which I think works OK. My concept was that I could sequence drums in the same way I could sequence everything else. To be honest with you, I missed drum machines a little bit until I started using the Hyper Edit page in Notator. That actually brings it back to the old feeling where you can see things better, like on the 808.”

From working with breaks and beats, Zwahlen's musical direction took a different turn when he met up with Burchett.

“I was actually very much getting into dance music before I met her”, he recalls, “but I didn't really pursue that any more, probably because Elisa was not so much interested in that kind of material. I guess it was just what came out of working with her.”

“I remember when we first got together, I had some tracks and she came into the demo studio and immediately put down some vocals. She had ideas really quickly and she could perform them and arrange them. She was writing in the studio as she heard the music. I like the spontaneity of that situation, and just this kind of collaboration where we communicate but everybody stays in their own field, like I had what I thought was a finished track and she added something to it that took it somewhere totally else and made it actually complete. It's like a communication, in a way, with other means.”

And was this the model for their subsequent collaboration?

“Elisa comes up with all the vocal melodies and the vocal arrangements, and all the lyrics, of course”, Zwahlen replies. “But I would say maybe half the music for the album was developed without her being around. For other songs I came up with a rough idea and she was maybe in the next room, because we used to share a place, and she heard something so she came over and said ‘I like this’, and I started to focus on ideas that she reacted to. And she of course gave her input in terms of the final song structure.”

Zwahlen's earlier comment about having to play minimalistic parts because he wasn't a keyboard player has relevance for Basscut's music, in which the emphasis is on sophisticated arrangements built from simple parts. Does he see himself as more an arranger than a performer?

“I do deal a lot with arrangements, like finding the right sound for the right part”, he explains. “You can either try to perfect your performance by practising and really being a virtuoso, or you can do something very simple but with the exact right sound, or instrumentation, and it does the job too. Not being a good keyboard player, I'm more into that simple approach; I don't deplore it, really, because I don't think it's necessary to be a virtuoso to make good music. Many times, very simple musical parts work if they have the right sound - there has to be a unity between the sound and the part.”

Perhaps unsurprisingly, then, in many cases for Zwahlen it's a sound which sparks off a song.

**“Very simple musical parts work if they have the right sound - there has to be a unity between the sound and the part.”**

## EQUIPMENT LIST

### INSTRUMENTS

Alesis SR16 Drum machine  
Casio FZ20M Sampler  
Casio VZ10M Synth Module  
E-mu Systems Emulator III Sampler  
(with Light Wave and In.Vision sample libraries)  
JL Cooper Synapse MIDI Routing System  
Oberheim Matrix 6R Synth Module  
Roland Super Jupiter Synth Module  
Roland PG80 Programmer  
Waldorf Micro Wave Synth Module  
Yamaha TG77 Synth Module  
Yamaha TX802 Synth Module

### SEQUENCING

Apple Macintosh IIcx Computer/  
650Meg Hard Disk  
Atari Mega2 Computer  
Atari Mega4 Computer/80Meg Hard Disk  
C-Lab Notator ST Software  
C-Lab Unitor SMPTE Interface  
Dr T's KCS  
Passport Studio 3 SMPTE Interface

### RECORDING

DDA AMR24 (56 Input) Mixing Desk  
Tascam ATR80 2" 24-Track Multitrack  
Digidesign Sound Tools Digital Editing  
System (DAT I/O; 1 Hour Recording)  
Hafler Monitor Amps  
Panasonic SV3500 DAT Recorder  
Tannoy PBM65 Monitors  
Teac V670 Cassette Deck  
UREI 1-813C Monitors  
Yamaha NS10M Monitors

### OUTBOARD

Alesis Quadverb Effects Processor  
Aphex Expander/Gate  
BBE 422A Sonic Maximiser  
Eventide H3000S Ultra Harmonizer  
Yamaha SPX900 Effects Processor  
Yamaha SPX1000 Effects Processor

➤ "Touching a keyboard and hearing a sound actually starts to suggest a part to me", he says. "If it's a bass sound then it'll probably be a bassline. I kind of try to find the right part for the sound. It goes in a circle. The sound can suggest a certain part, then I play the part and fine-tune the sound to suit the part. But for me it's definitely playing with the sound in the first place, rather than having a musical idea and then finding a sound for it.

"Also, rhythm is definitely important. As a whole, with these songs I see that all the parts work together like one rhythmic pattern. It's not just rhythm section and then overdubs, it's one big machinery, in a way - one integrated structure. I like to make patterns. I really like to make patterns and then just jam with the patterns and experiment. It's not so much premeditated, it's more like you try out different orders and then all of a sudden you have a song."

**ZWAHLEN IS NOT ONLY RESPONSIBLE FOR** composing, performing and sequencing all Basscut's music but also for recording it. His approach to date has been to record only Burchett's vocals to tape and run everything else live in the mix from the sequencer.

"I didn't even need a 24-track tape machine, it was like total luxury, in a way", he admits. "I could have used an eight-track, almost. The reason why I didn't put more parts to tape was because I wanted to be able to keep working on the sequences - even in the mixing stage. I find having that flexibility is very important. But maybe in the future for some parts - I'm just speculating - I will start to put more parts to tape because it can do something good to the sounds. Tape compression can make the stuff sound bigger and warmer."

Like many professional recording musicians these days, Zwahlen mixes straight to DAT. However, his DAT mixes are not the final result, but instead raw material for a further creative stage involving digital audio editing.

"I really got a little bit stupid with Sound Tools last year", he reveals. "I like Sound Tools because I really like sampling. I was sampling a lot for rap productions, looping breaks. . . For two years I was just doing that. So when Sound Tools came out I kind of got addicted to sampling everything and cutting it up. I have no automation on my board, so I figured I would be able to do it in the editing process by recording the song without drums, the song without bass, without vocals. . . I recorded everything to DAT and transferred it digitally to Sound Tools via the DAT I/O box. Then I cut everything up. For some songs I made hundreds of regions. It was like a puzzle, trying out combinations. Sometimes you find good combinations, but many times it's hard to find meaningful combinations. It's a very time-consuming way of working. It sounds interesting, but I tell you, you can really get lost!"

Zwahlen's E-mu Emulator III has provided him with a salutary lesson of a different kind.

"I have to talk badly about the EIII", he says. "I like the sound quality, the software is great, the design is interesting, but the hardware is just not on the level.

Maybe I just had a bad machine, but I'm really a little bit pissed off. It broke down about ten times in the last year and a half. For a machine at this price that's really upsetting.

"Now I'm going to get maybe the Digidesign SampleCell card for my Mac. I think that's maybe the way to go - build a workstation. If you have a Mac II you can plug in a few of those cards, then you're all set. Some friends of mine are already doing work using Studio Vision, Sound Tools and a couple of SampleCell cards at the same time."

Ever the undaunted sampling fan, Zwahlen has plans for bringing Burchett's vocals into the world of digital recording.

"I really want to start sampling Elisa's vocals onto hard disk", he reveals. "It's the way to go. I've sampled her vocals before. I remember for one song 'Over and Over', the vocals were sampled on the Casio at 36kHz. Everything including vocals was done on two Casios, four meg of memory! Also I did a remix of 'My Obsession' where I cut the whole thing up and sampled the vocal track, and I triggered this off with LiveList, which is an additional file in Sound Tools. You can load in Sound Tools files and trigger them from MIDI notes, so I triggered the samples from Notator. There's a slight delay, but you can compensate in Notator by triggering slightly early. I'm really looking forward to figuring out a better system, maybe Studio Vision or the new version of Notator with hard-disk recording."

But how does Zwahlen square this enthusiasm for tapeless recording with his earlier comments about wanting to use tape more?

"I think there are two sides to it", he responds. "For writing purposes I think it's better to sequence and sample, because you can edit things and loop things. It's easier to work that way. But once you have everything down, once you know that it's the way you want to have it, just for production purposes to put some parts on tape might improve the sound - almost like using the tape machine as an effects device. You could buy 24 tube compressors, but that costs a lot of money, so maybe it's cheaper to get a tape machine!"

It's apparent that Zwahlen not only feels comfortable with the technological paraphernalia of the modern recording studio, he positively enjoys working with it.

"Working in the studio is an activity that I like, rather than just a means to record something", he confirms. "It's like another person maybe plays on a guitar, I like to play on my machines. I think that machines are not just a tool, they're something inspiring. What I said earlier about how a sound can sometimes suggest a part, the same thing can be true with a set of machines. You play with machines and they give you ideas, it's not like your ideas come out of a void - you interact with the machines. Also, on another level, the mixing board is a musical instrument. In fact, for me my whole studio is like a big D50, you know! I can mix different things together, like I have a sampled portion, I have digital sounds, I have outboard. . . Working in the studio is something playful."

In which case, long may he continue to play. ■



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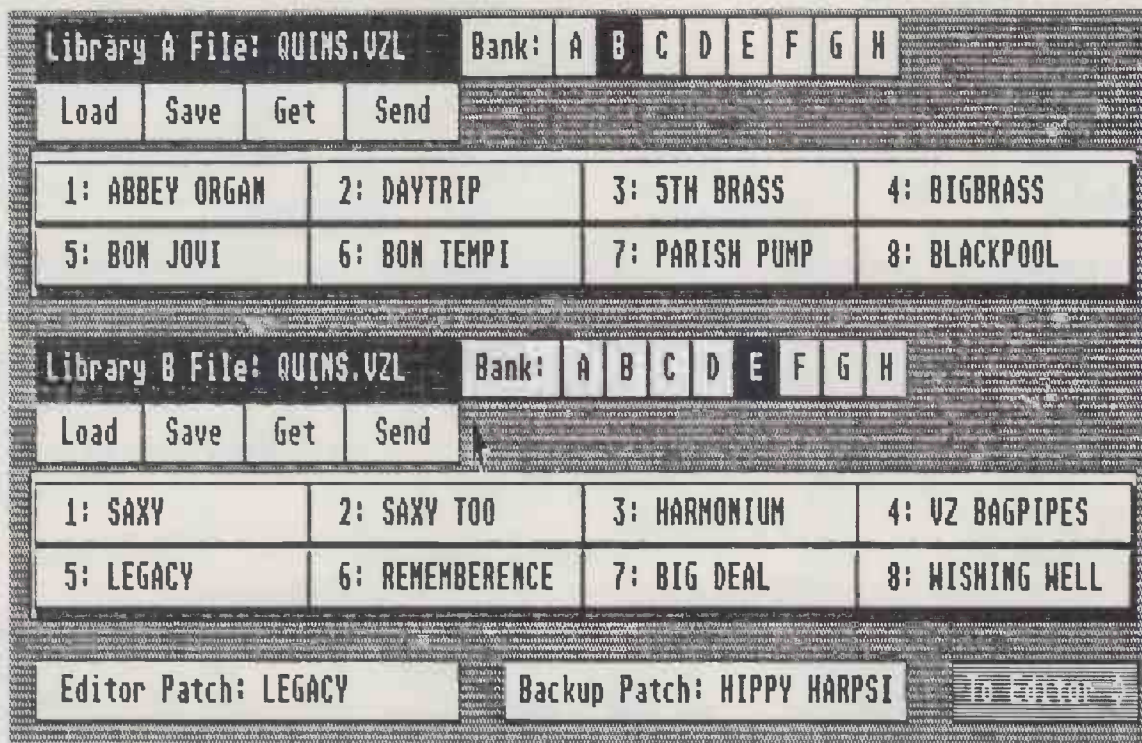
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# VZ-ED



When a synth fails to captivate the imagination of musicians, can something as unexciting as a software editor rescue it from obscurity? Casio's VZ and Quinsoft's ED may have the answer. Review by Gordon Reid.

**M**ANY SYNTHS HAVE come and gone over the years. Some were destined to become classics, others to fade into obscurity. Three less fortunate instruments are the Casio VZ1 (keyboard), VZ10M (rackmount), and their less powerful brother, the VZ8M. Despite a positive MT review in September '88, the VZs died on the streets. In only two years the asking price for a VZ1 crashed from £1299 to about £350, while the VZ10M dived from £899 to little over £200. In the States, the VZ10M is now selling for \$239 (£120) and the VZ8M for \$189 (£95). Even in a fashion-orientated industry, prices slashed to that extreme are, well, extreme. In comparison, Korg's flagship M1 was launched at almost the same time as the VZ1 and priced around the £1500 mark. Today it sells for £1200.

Something must be seriously wrong with a series of synths for them to fail like the Casios did. Yet the VZ1 is, on the face of it, a useful synthesiser. It features a pleasant, velocity- and pressure-sensitive keyboard, 192 patches and 192 combinations on-line at any given time, extensive performance controls, and enormous editing possibilities. Even the sound, which is built up from "modules" to "voices" which then become "operation memories" (patches to you and me) is worth a second, or even a third, listen.

A great deal of the blame for the VZ's failure must be attached to their operating system. Trying to find someone who regularly edits their VZ is like searching for the Holy Grail. The VZ is crippled by the most infuriating and unusable firmware ever incorporated within a musical instrument. To make matters worse, its MIDI specification is awful. Consequently, there is a total lack of software for the VZs and, until very recently, a complete dearth of third-party voices. And, in these days of instant musical gratification, that's a formula for disaster.

If the VZs are such lame ducks, why bother writing about them? The answer lies in the sound of the VZ. If you take a very deep breath, ignore the factory presets, and dive deep into the system, you will discover a powerful, expressive, and unusual synthesiser. iPD is a unique method of synthesis; potentially more powerful than any LA synth (with perhaps the exception of the D50/D70), warmer than FM, and richer in texture than synths such as the Kawai or cheaper Ensoniqs. The problem with the VZs isn't the sound, or even the hardware - it's the onboard (firmware) editor. Enter UK software house Quinsoft with their VZ-ED Editor/Librarian. If you've got a VZ waiting to be carted off to the Oxfam shop, or even if you're in the market for a cheap expander, VZ-ED could be exactly what you've been waiting for. ➤



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## ➤ STAR OF THE SHOW

QUINSOFT HAVE ALREADY found favour within these pages for their Yamaha 4-op librarians, and the initial impression given by VZ-ED is also positive. Many low-cost packages feel, and look, cheap, but this one does not. The hard plastic video-style case containing the floppy disk and manual should be proof against coffee spillages and other accidental damage. The manual itself is brief (16 pages) but well laid out, clear, and to the point. However, it's certainly not a tutorial on the use and programming of the VZ itself. While every effort has clearly been made to achieve simplicity and aid intuitive operation, (three pages of the manual are devoted to explaining something of the synth's programming quirks) it will still be necessary to understand something of the VZ's operation. Tough.

VZ-ED (which runs on any ST from the 520 upwards) can be used in two modes - full handshaking, and MIDI echo. Full handshaking requires two MIDI connections between the synth and the Atari (VZ Out to Atari In and vice-versa) whereas MIDI echo enables the VZ10M and VZ8M modules to be edited using one connection only (Atari Out to VZ In), while a second connection (controller keyboard Out to Atari In) is used to play the module. Clearly, MIDI echo does exactly what the name implies - sends all MIDI information received at the Atari's In port to the VZ module on the appropriate MIDI channel - but has the disadvantage that you're unable to dump sounds back from the VZ to the computer.

A single VZ voice contains ten modules (eight sound modules, a pitch envelope generator, and a rate-scaling section) plus various global parameters such as LFOs and tuning. Consequently, while each voice contains over 500 parameters, most of these are duplicates of each

other. Because of this, it's possible to reduce the number of parameters needed on-screen at any given time to just those associated with the module being edited. This still amounts to 60 parameters at a time, but the whole editor can now be crammed into a single screen. The top of this screen contains the Global parameters - patch name, tuning, volume and so on. Below these are the Module parameters - waveforms, envelopes, detune - and, at the bottom, the module selectors/enables, plus the program control boxes - Load, Save, Get, Send, and Backup. One helpful feature is 'Get Backup' which will swap the edit buffer with a copy of the unedited voice. This enables you to edit a voice, compare it to the original, and return to the edited version for further tinkering if desired. It is, of course, a computer implementation of the compare/recall function. Apart from the above, there are two other areas defined on screen. The first of these, on the far left, is the parameter value slider, the action of which is duplicated using the Atari's "+" and "-" and cursor up/down keys. The other is the Extras button which takes you to a subsidiary page containing options for MIDI control, copying parameters between voices, initialising the editor, and printing out the librarian buffers.

VZ-ED has clearly been designed with the shortcomings of the computer mouse in mind because all its functions can be controlled from the keyboard. However, in common with some other editors, the mouse can be used to preview an edited sound. Click on the right-hand button and the current voice will sound. Move the mouse left or right and the pitch changes. Move it towards or away from yourself and the MIDI velocity changes. Finally, press the left-hand button, and 50% modulation is also applied.

The VZ1 and VZ10M have large bit-mapped LCD screens capable of displaying graphic envelopes as well as module cross- and ring-modulation arrangements. Therefore it's surprising that the computer-based editor lacks these facilities. The manual explains that there is no room on screen for graphics, and that such graphics are often misleading and therefore undesirable. Nevertheless, many programmers and synthesists are hooked on graphic envelopes, and will feel uncomfortable returning to numerical editing. Since many Atari editors offer both methods, there's no reason why this one shouldn't. It would be relatively straightforward to hide the graphics behind the main editing page and call them up, module by module, as and when required.

Despite the above, VZ-ED is surprisingly simple and quick to use, and most of the barriers which prevent you from getting a decent sound out of your VZ disappear as soon as you start playing with the editor. Waveform selection, EGs, modulation - everything falls quickly and easily to hand, and modifying voices (or even building sounds from scratch) becomes quick, simple, and fun. Within a few minutes I was creating sounds that I wasn't aware that the VZ could produce at all. Unfortunately "live" editing is impossible because the VZs will only accept whole patches dumped over MIDI (500 parameters every time) and there's a significant delay while the editor sends, and the synth receives, all that data. Nevertheless, once you've used VZ-ED you'll never want to do without it.

Now the problems: the VZ patch structure is similar to that of an LA partial-based synth, and the voices (made up from four quasi-partials each comprised of two modules) are only the third stage in a five-stage patch creation process. Beyond the voices lie the Operation Memories (Casio's unwieldy name for patches which include more than one voice) and above this level lie the multitimbral setups. The OMs are undoubtedly where the real power of the VZ lies but, due to yet another deficiency in the VZ MIDI spec, VZ-ED cannot access or edit these. Consequently, the top two layers of editing are completely missing from the Quinsoft package, and you still have to build your performance patches using the front panel of the synth. Minus marks for Casio's R&D department.

**“VZ-ED comes supplied with two banks of 64 VZ voices - these are possibly the only known examples of VZ libraries available on disk.”**

## THE CO-STAR

IF YOU'RE NOT a programmer by nature, a patch librarian may be your only way of extending a VZ's use. It's common for an editor to include a librarian ➤







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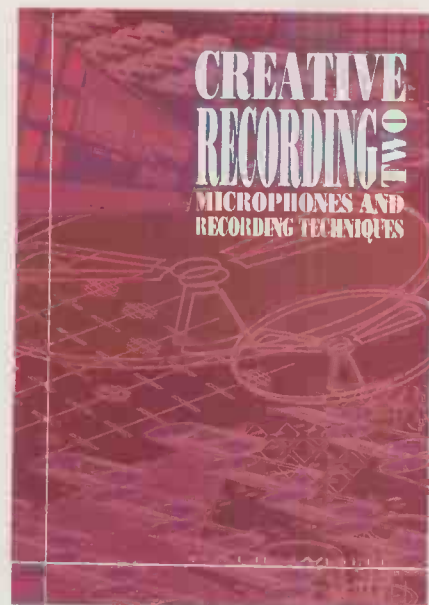
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➤ but, to its credit, the VZ-ED Librarian is perhaps one of the best laid out, and the simplest to operate yet. Clicking on the To Library box in the main editor screen takes you directly to the librarian, and presents you with areas for two banks of VZ voices (64 voices numbered A1-H8), Load, Save, Get, and Send controls for each, and two patch bank-select boxes. The final box on this screen is labelled To Editor and this, not surprisingly, returns you to the editor. Using the librarian is simplicity itself, and having two banks in memory (and on screen) at the same time enables you to compile new libraries without having to involve the VZ itself. For example, you can load an existing library into Bank A and drag the sounds you want from it into the desired locations in Bank B. Then load a second library into A, and drag the sounds you want from that one into the vacant areas in B, continuing in this fashion until you have compiled a completely new voice bank. Dragging the voices could not be simpler or more intuitive. Simply click on the patch name and drag the icon to a new location in the voice bank displays.

Load and Save perform exactly as expected - they load voice banks from disk, and save to disk when required but, in common with most operations associated with the VZ itself, the Get and Save operations are much more tedious than they should have to be. To perform a bulk dump on a VZ, you have to update three of its menus before requesting, or transmitting, the data. With admirable consideration, the program prompts you with on-screen advice until the operation is completed.

The Librarian also allows you to audition individual voices. Clicking on a voice name in the patch bank displays will send it to both the VZ-ED patch buffer and the VZ's internal edit buffer. The voice can then be played normally from your synth or master keyboard. Unfortunately, just like the editor, the librarian can't handle Operation Memories. Consequently, dumping a new bank of voices into the Casio's internal RAM yields some very un-musical results on the OM level because the voice allocation within the OMs remains unchanged. The effect is the same if you modify all the partials in a D50 without modifying the patches themselves. On the positive side, the librarian works (within its limitations) faultlessly. A checksum is performed after every Get and Send operation and, to both Casio and Quinsoft's credit, I never saw a bad transmission or bad reception warning.

## BIT PLAYERS

A DESK ACCESSORY called Loader is also included with VZ-ED. This contains the Load and Send algorithms and can be used alongside many sequencers as well as other Atari ST programs. However, because of the size of VZ voice dumps, it may impede sequencers running on limited memory. In addition, Quinsoft do not guarantee its operation when used in conjunction with non-standard operating systems such as those supplied by Steinberg and Dr

T's. The Loader isn't copy protected, so you can copy it onto any other disks that you may be using.

VZ-ED is supplied with two banks of 64 VZ voices. Quinsoft and their distributor, Patchworks, each supply one bank, and these are possibly the only known examples of VZ libraries available on disk. It's always good to see libraries included with librarians because it gives your humble reviewer something with which to experiment but, more importantly, because the libraries are worth serious money, and do much to offset the price of the editor/librarian itself. Some of the VZ-ED voices are quite good, some (the manual states that "too many knock-em-dead sounds can spoil a perfectly good piece of music") are tedious, and one or two are really rather exciting.

## VERDICT

IT'S THREE YEARS since the launch of the VZ series, and it's quite possible that we've seen the last of Casio's pro-orientated synthesisers. Was the VZ1 designed by robots intending it to be sold to computers, or was it a disaster that should never have been allowed to happen? Either way, Casio undermined the reputation they had built with the CZ101 and, perhaps, permanently removed themselves from the serious hi-tech arena. Yet the VZ is not a bad synthesiser, it's just that it's impossible to use without additional software. VZ-ED is a significant step in the right direction, and probably makes programming the VZ as simple as it can be. Most importantly, it makes you feel as if you have, at last, some measure of control over the instrument. Bearing in mind the operating system of the synth itself, Quinsoft deserve much credit for reducing the mountain of parameters and graphics to two such usable screens.

Should you rush out to buy VZ-ED? In the absence of any serious competition, and unless you've managed to come to terms with the synth as it is, the answer has to be "yes". In addition, a librarian is always worth owning if you're serious about a keyboard. Floppy disks are a lot cheaper than RAM cards, and a single ROM card can cost just as much as the VZ-ED editor, librarian, desk accessory, and free voice banks.

Finally, if you don't already own a VZ, should you now be thinking of buying one? The answer this time depends on the rest of your gear and your financial resources. Just remember, the VZ10M now represents excellent value at around £200, and you need to add only another £50 for the editor and librarian. ■

**Price** £49.95 including VAT

**More From** Patchworks, Frederick House, 211 Frederick Road, Hastings, East Sussex TN35 5AU. Tel: (0424) 436674.

**“The VZ isn't a bad synth, just difficult to use without additional software - and VZ-ED makes programming as simple as it can be.”**

# PERCUSSION SAMPLE PLAYER



PHOTOGRAPHY: JAMES CUMPSTY

Inexpensive, easy to use and able to draw on a growing library of sample cartridges, is the PSP a beginners' toy or the ideal percussive add-on for your MIDI setup? Review by Simon Trask.

**F**OR THE PAST six to seven years, British company Philip Rees have devoted themselves to producing MIDI routing boxes of various kinds, ranging from MIDI Thru units to MIDI patchbays. While other companies have chosen to produce sophisticated MIDI processors with expensive prices to match (the Axxess MIDI Mapper, Audio Architecture's Function Junction and MIDItemp's PM88), Philip Rees have carved their own niche in the market by keeping the emphasis on simplicity and affordability.

It's an emphasis which they've carried through to their first sound-generating box, a MIDI drum expander. With only two controls to be mastered - the on/off switch and a MIDI channel selector knob - the Percussion Sample Player could hardly be simpler to use. No fiddly button-pushing, no poky LCD - but also no sound editing and no programmability. This strictly no-frills approach, which has served the company well in the past, has allowed them to make the PSP one of the cheapest sources of sampled drum and percussion sounds available. But has their pursuit of

operational and functional simplicity on the PSP resulted in an instrument which is simply too inflexible to be useful - and is its affordability therefore in truth a false economy?

## EXTERIORS

THE PSP COMES in the same 1U-high, half-rack casing used by Philip Rees for their 5X5 MIDI Switch, X5X MIDI Switch Expander and MCV MIDI-to-CV Converter - though of course the front and rear panel layouts differ. In addition to the aforementioned power on/off switch and MIDI channel selector knob, the PSP's front panel contains a power on/off LED, a MIDI activity LED and a slot for a ROM sample cartridge. The free space in the right half of the front panel has been put to good use with a diagram providing a ready indication of which incoming MIDI note triggers which PSP sample.

The PSP's rear panel contains a MIDI In socket, a MIDI Thru socket, Left/Mono and Right stereo output



jacks and four monophonic separate output jacks; when you plug a lead into one of the separate outputs, samples routed to it are automatically removed from the stereo pair. The PSP has a built-in power supply together with an integral mains lead which comes ready-fitted with a plug.

The ROM sample cartridges available for the PSP cost a very affordable £19.95 each, and contain eight to 12 samples. As of writing, there are nine cartridges available; a further four are scheduled for June availability, with others planned to follow.

These aren't the slimline credit cards that the Japanese produce, but they're still a fairly compact 1.5" x 1.5" x 0.5", with an edge-connector which protrudes half an inch from the main body. It's this connector which you have to insert (with a firm hand) into the front-panel slot. If the PSP isn't firmly secured in a rack, or you haven't used the four enclosed self-adhesive anti-slip "feet" to secure it to a flat surface, you'll need to anchor it with one hand while you insert or remove the cartridge with the other. Once you get the hang of it, you can change cartridges in three to four seconds - and, once made, the cartridge connection is certainly secure.

Plugging in or unplugging a cartridge can sometimes produce a click on the PSP's audio output, usually slight but sometimes much more noticeable.

Your quick cartridge swaps may be hampered slightly in a live or recording situation by the need to drop the PSP's volume beforehand if you want to err on the side of caution (the expander has no volume control of its own, so you'll have to make any level adjustments on your mixer or amp). This is to prevent extraneous clicks appearing in the music rather than protect your speakers. However, switching the PSP on or off does produce a very noticeable click, so it's advisable to make sure that either your amp is off at the time or that the volume is down on your amp or mixer.

## PANNING OUT

SO FAR YOU'VE had the good news. But not all is rosy in the Percussion Sample Player's rhythmic garden. The PSP is only four-voice polyphonic, and has just five internal samples: ride cymbal (cup), crash cymbal and closed, open and pedal hi-hats. Taking internal and cartridge samples together, you can draw on from 13 to 17 PSP samples at any one time, depending on which cartridge you're using - but of course only four of them can be playing at any one time.

The internal samples only respond via MIDI when a cartridge is plugged in - which means, among other things, that you can't have sequenced cymbal parts playing while you change cartridges. Fortunately, when you buy a PSP you get one cartridge free with it, so you can be up and running without having to fork out an extra 20 quid first.

The PSP can be set to receive on any one of MIDI channels 1-16, and responds to MIDI velocity, with actual values being scaled to 16 response steps.

MIDI note assignments for sample triggering are preset. MIDI notes 72-76 (C-E above middle C) trigger the five internal samples, which are panned centrally in the stereo image or routed to separate-out four if an audio lead is plugged into that output socket. Each cartridge sample, however, is assigned to the same note in three consecutive C-C octaves below note 72, and the sample's stereo pan position (left, centre or right) or separate output assignment (one, two or three) is determined by which octave you trigger it from. Because these settings are determined by which notes you play, you can select them spontaneously for each "hit" during performance, and also store and edit them within a MIDI sequencer as part of each sequenced rhythm - change the octave of a hit and you change its pan or output setting.

The PSP provides two methods of allocating samples to its four voices. In Fixed allocation mode, triggering a sample from within a particular MIDI octave will always send it to a particular pan position or separate out, in the process cutting short any active sample triggered from the same octave. This is because each octave always uses the same voice, and each voice is "hard-wired" to the relevant separate out and its related stereo pan position. For example, the lowest octave uses voice one, which is routed to separate output one or to the left stereo pan position.

In Auto allocation mode, however, a sample only cuts short an active sample which has been triggered from the same octave if there's no other voice spare - if there is a spare voice, the PSP reallocates the newer sample to that voice instead. Of course, this has the effect of changing its output routing and pan position - as if it had been triggered from the octave associated with the voice to which it's been reallocated.

Cartridge samples can only be reallocated among voices 1-3 - voice four is reserved for the internal samples. So that reallocation doesn't get too out of hand, there are a couple of restrictions: a sample retriggered from the same octave always interrupts itself, and a sample is only reallocated if its default voice is being used by a sample triggered from the same octave.

Of the internal samples, only the closed hi-hat can be reallocated - and then only if either the ride cymbal or the crash cymbal is sounding when it's triggered and there's another voice spare (if there's no voice spare, it cuts short the ride or crash rather than a cartridge sample).

Plugging in a cartridge causes the PSP to switch to one or other of these two modes (the factory-preset choice is stored in the cartridge's memory and read by the PSP). You can also get the PSP to switch to a different mode at any time by sending it MIDI controller 126 (Fixed) or 127 (Auto). While this method has certain advantages - like being able to automate allocation-mode changes as part of a MIDI ➤

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> sequence - it's not a lot of good if you're triggering the PSP from a MIDI controller which doesn't allow you to send the required controllers. For the sake of simplicity and immediacy it's a shame there isn't also a dedicated mode-switching button on the PSP's front panel.

## THE SOUND OF MUSIC

THE PSP'S PCM samples are eight-bit companded (giving a 72dB dynamic range, equivalent to a 13-bit linear system), and sampled at 31.25kHz. The five built-in cymbal sounds have a neutral (you could say characterless) quality which allows them to blend in

together with their MIDI trigger notes, a description of each sample, and several example rhythm patterns printed in a grid format. Additionally, each cartridge has a handy diagram printed on its upper face which tells you not only what samples the cartridge contains but also which MIDI notes trigger them.

The Analogue Drum Machine cartridge is dedicated to sounds from the TR808. The three 808 cymbal sounds are absent, and there are two rather than three each of the congas and toms, but interestingly, the standard bass drum is joined by a more clipped version which has been pitched up a bit - something you can't do on the 808 itself. For a number of reasons it would be too simplistic to say you're getting a TR808 on a cartridge - or that you're getting



with the variety of percussive sounds found on the various cartridges. The longer cymbal samples both succumb to the lack-of-memory syndrome, though as always a touch of external reverb processing can help out.

In addition to the MIDI notes which trigger the internal samples, MIDI note 77 triggers a "choke" function. Pressing this note while one of the cymbal samples is playing causes the cymbal to be choked with a realistic decay rather than just cut dead. This is particularly effective on the crash cymbal, where you could be forgiven for thinking there was a hand inside the PSP damping the cymbal.

The nine cartridges available as of writing are (with number of samples indicated in brackets): Neutral Kit (7), Tight Kit (9), Analogue Drum Machine (12), Techno Kit (7), Latin Kit (10), Power Kit (8), Metal Kit (8), Snare Collection (8) and Tabla (12).

Each cartridge comes in a small plastic box, with a transparent plastic lid which can be clipped securely into place and a piece of foam in the base to help prevent the cartridge from getting knocked about. Also provided in the case is a small fold-out leaflet which includes a list of the samples on the cartridge

a TR808 for 20 quid - but you are getting a well-recorded selection of 808 sounds.

You could be forgiven for expecting the Techno Kit samples to be TR909 sounds, but this isn't the case (a 909 card is on the way, though - see below). Instead you get bass, snare and four tom samples which go heavily on the gated reverb, giving them a sort of industrial quality. The only other sample is a rather flaccid, mechanical-sounding handclap, so there's not a lot of variety on offer. You have to really like the overall quality of these samples to want to buy the card.

The Tabla cartridge is the only one of the nine which concentrates on the subtleties of a single instrument - in fact, a pair of hand drums, the tabla (higher-tuned, right hand) and the duggi (lower-tuned, left hand). There are five duggi samples and seven tabla samples, covering different types of strike on each drum. It's a valiant attempt which somehow doesn't quite come out right - the samples lack the crisp sound of the real thing, and there's a lot of extraneous noise on some of the more resonant samples, while the short percussive slap samples fail to capture the proper tone and end up sounding more



like mechanical clicks. Yet somehow the end result works very well on its own terms, making the Tabla card quite appealing so long as you don't want to fool anyone that they're listening to real tabla.

The Tabla cartridge defaults to Fixed allocation mode (the only one of the nine cartridges to do so), which makes a lot of sense because it allows you to keep the natural separation of the two drums by playing their samples from two different octaves. The accompanying leaflet provides some background information on the tabla - but sadly no rhythm patterns.

The Latin Kit cartridge is one of the most appealing of the nine, with some crisp, vibrant percussion sounds (including high and low congas, claves, timbale and cabasa) combining very effectively with a woody bass drum and a bright, snappy snare. The other cartridges, mainly variations within the standard kit layout, meet with varying degrees of success (to my mind, Metal Kit and Tight Kit are the least successful). Some samples appear on more than one cartridge - the Neutral, Power and Tight Kits have the same tambourine and the same cowbell, while the flaccid handclap mentioned earlier - which sounds like a pitched-down sample of several typewriter keys clacking together - appears on no less than six of the nine cartridges. Of course, if you only buy one cartridge you won't notice this, but if you buy several you may wonder why you're paying several times for the same sound.

Upcoming cards are Advanced Analogue Drum Machine (TR909 samples), Small Analogue Drum Machine (TR606 samples), Congas (including open, closed, shell and edge variations) and Bongos (as per Congas).

## VERDICT

FOR THE MIDI beginner putting together a budget sequencer-based setup, the PSP scores with its operational simplicity and low price. But its four-voice polyphony could very quickly become restrictive if you're relying on it to produce all your rhythm parts, unless all you want it for is to lay down a basic kick, snare and hi-hat accompaniment with perhaps some tom fills or a single percussion part.

With only five internal samples - and those all cymbals - the onus is on the PSP's plug-in sample cartridges to provide both the substance and the variety in the sound department. While these cartridges do offer a sort of sonic expandability, in that you're not restricted to a fixed set of built-in sounds, you can draw on at most 17 samples at a time. To combine samples from more than one cartridge you'd need to sync your sequencer to multitrack tape, then lay the rhythm parts associated with one cartridge to tape, thus freeing up the PSP so that you can plug in another cartridge. If you prefer to sequence all your rhythm parts live in the mix, you could consider buying two PSPs, which would allow you to use two cartridges at the same time - and give you eight-note polyphony (divided as 4 + 4), two stereo output pairs and eight separate monophonic

outs. There again, this takes you into a price bracket which opens up new choices: for example, a Cheetah MD16 drum machine with money left over to put towards a sample cartridge which should offer considerably more than 12 samples, or a secondhand Akai S700 sampler which will give you the freedom to sample and combine whatever sounds you want. An S700 and a £30 Mega Beats sample CD could give you all the drum-machine sounds you want (including those of Roland's famous dynamic duo).

Alternatively, for around £30 more than the cost of a single PSP - less than the cost of two PSP sample cartridges - you can buy a Boss DR550 drum machine, which will give you 48 built-in samples and 12-voice polyphony, if not the sonic "expandability" and the separate outs. The DR550 is also straightforward to use - especially if you trigger it from a MIDI sequencer instead of using its onboard sequencing facilities.

All in all, the DR550 probably makes a better budget starter machine. The PSP is more likely to find a role for itself as an add-on to an existing setup. If you want to extend the sonic capabilities of your rhythm setup without having to replace your existing (non-expandable) drum machine and without having to spend big bucks, the PSP could be the best way to go. And in a situation where it's providing selected parts rather than having to shoulder all the rhythmic burden, four-voice polyphony may be adequate.

Ultimately the PSP's value (or lack of it) lies in its sounds. Philip Rees have managed to make a reasonable library of samples available from the outset, but it needs to grow and to be more adventurous. As for quality, these are clearly not the 16-bit 44.1kHz samples which we're coming to expect these days - for instance, they lack the top-end clarity and sparkle and overall vibrancy of such samples. In general the sounds are tight, dry and very upfront, and can sound a bit lifeless - they really need some ambience to help them breathe.

No doubt when the company first thought of producing the PSP they also thought they'd be stepping from one uncrowded budget market into another.

But a lot has changed in the meantime, to the point where there's now a glut of affordable boxes which go bump in the mix. The PSP is the cheapest, but it has limitations to match. Perhaps its greatest strength is its sample library. However, from the perspective of PSP as add-on, the existing sample cartridges perhaps concentrate too much on kit sounds and not enough on the sort of percussive sounds you might want to complement an existing setup. This is something Philip Rees need to address if they want the PSP to secure a niche for itself. ■

**Prices** PSP, £169.95; each sample card, £19.95. Both prices include VAT (17.5%)

**More from** Philip Rees Modern Music Technology, Unit 2, Clarendon Court, Park Street, Charlbury, Oxford. Tel: (0608) 811215. Fax: (0608) 811227.

**“Interestingly, the standard TR808 bass drum is joined by a clipped version which has been pitched up - something you can't do on the 808 itself.”**

# RAISING THE STANDARD



ILLUSTRATION: CLIVE GOODYER

could be made, however, and that's in the compatibility of song files between different synths. There's little point in recording a song onto your sequencer using, say, an acoustic piano sound, when playback on another system produces the same tune apparently played by an Irish piper on acid.

More seriously, you may run into problems such as insufficient polyphony because the synth you've used has 16 notes available while the house synth at the studio where you're recording only has 12-note polyphony. There's every likelihood that you've used MIDI Program Changes in your song which correctly select the sounds on your synth, but call up a totally different selection on a different unit. That marvellous slurred brass stab with the four-semitone pitchbend now slides over an octave due to the different pitchbend range. And how about playing back a drum track with bass drum and snare drum and getting cowbell and crash in their place? The problems are practically endless.

## **IF YOU HAVEN'T SEEN THEM ALREADY, PREPARE TO HAVE TO DEAL WITH TWO MORE MIDI ABBREVIATIONS - GM AND GS - BECAUSE THEY'RE ABOUT TO CHANGE THE WAY WE USE MIDI. TEXT BY VIC LENNARD.**

THE ORIGINAL REASON Dave Smith (then Sequential's president) was inspired to invent MIDI was to enable a number of synths to be connected together so that one could be used as a master controlling a number of slaves. It seems a pretty unambitious start to a system that now forms the heart of most of our musical setups (we're now inclined to take it for granted), but the alternative methods of the day were various Control Voltage and Gate systems and manufacturers' proprietary communication busses. Result: complete incompatibility between different companies' instruments.

MIDI has come a long way since its invention in 1983, especially when considered in the context of multitimbral synths. It's doubtful whether a 30-note polyphonic synth module capable of playing eight different parts on different

MIDI channels, along with a full drum kit and onboard effects, could even have been envisaged in those days, but today it's a reality.

There has been much talk of a "MIDI 2" system over the years, but it's worth taking into consideration that MIDI is fast enough to fool most of us into believing that five notes being played as a chord on a keyboard is actually a chord - even though the sound source is actually playing a very fast arpeggio. Unless a high degree of aftertouch or pitchbend are being used, it is rare to hear delays in MIDI (many sound modules have a reaction time in excess of 15 milliseconds or so, masking any MIDI delay). In fact, the micro-processor on most multitimbral units is under such strain that switching between screens causes an audible glitch.

There is one area where improvement

## **GM PHILOSOPHY**

A PROPOSAL DEFINING a minimum capability for synths has been fine-tuned over a period of time and finally proposed and passed by the MIDI Manufacturers Association (MMA) in America. Called General MIDI (GM), it's aimed at improving the above situation, and also opening the MIDI format for commercial exploitation. Historically, MIDI has limited appeal, due partly to its relative complexity against, for instance, a CD player where you simply place a disc in a slot and press Play. If MIDI Files adhered to some standard and a MIDI File player could be used to play them in a similar way to a CD player playing CDs, a new market could be created around MIDI File disks.

## **GM FEATURES**

AS GM HAS only been passed by the MMA and is currently being scrutinised by the Japanese MIDI Standards Committee (JMSC), in-depth details cannot be revealed just yet. However, a reasonable overview can be given.



First, and most superficial, a synth which conforms to General MIDI will have the GM logo on its casing. General MIDI is intended to be a mode which can be turned on, meaning that there can be more features to a synth which could be used outside of GM. In fact, there's already a MIDI message for turning GM on and off.

GM has no dictate over the method of synthesis. Analogue, digital, FM, LA - this aspect of an instrument, correctly, remains completely in the hands of the manufacturer. What is specified is the polyphony of a GM unit - this is currently 24 voices, dynamically allocated to save the problems of having to set reserves for the parts playing. Depending on the manner of synthesis, the drum part may effectively be a separate unit within the sound module, so there is the option for 16 of the voices to be dedicated to the synth parts and eight voices to the rhythm section, or to have all 24 voices accessible by both the melodic and percussive sounds. Obviously, all 16 MIDI channels must be accessible, with different instruments available on each. While it's currently undecided whether specific MIDI channels will be designated for specific types of sound, MIDI channel 10 will always be used for key-mapped percussion.

On the hardware front, GM synths are likely to be quite sparse, with a master volume on the front, MIDI In/Out/Thru connectors and stereo audio out on the rear, plus a headphones socket.

The mainstay behind GM is the tone mapping. There are 128 timbres, or instruments, available and each can be accessed via a specific MIDI Program Change numbered 1-128, not 0-127 as is the norm with MIDI. For example, Program Change #17 might call up a flute, but that doesn't mean that the flute sound has to be sound #17 in a synth. The proviso is that it is assigned to MIDI Program Change #17, so manufacturers can tailor the order of the internal sounds as they wish. Consequently, if this Program Change is selected within a song, it will always call up a particular sound on a GM synth. A similar situation occurs with key-mapped percussion. Single instruments are designated for a range of keys and include Latin percussion.

A further problem is the manner in which the different timbres respond. For this, there is a Voice Definition Table which specifies the MIDI key range, velocity range and envelope characteristics for each timbre. This prevents the situation arising where the instrument is correctly named, but has the wrong response. For example, having played in a lead line on a

synth sound with a fast attack, the last thing you want is to have playback on a similar sound but with a slow attack. The entire line would sound out of sync with the song. To help in this department, the table will also include the relative loudness at a given MIDI volume level.

The more common of the MIDI Controllers have been specified, and the likes of Pitch Bend range and Volume have definite default values. Whether the manufacturers who use an All Notes Off command after a Sustain Pedal Off (to make the sustain pedal work as a hold pedal) will be allowed to continue with that practice remains to be seen - personally, I hope they will not.

## ROLAND GSS

WHILE GM IS intended to be perfect for the consumer market, due to its inherent simplicity, it has severe limitations, not least of which is the total number of timbres. As a result, Roland have already implemented their extension to GM and called it GSS (General Synth Standard). This has the ability to have up to 128 banks each of 128 timbres through the recently-defined MIDI Bank Select command.

The first bank of timbres are called the Capital Tones and coincide with the GM bank. To prevent the limitation of one instrument being represented by one tone, there can be up to seven other tones which are variations on their Capital Tone in terms of certain parameters like envelope or brightness. If the differences are going to be more substantial, then Sub Capital Tones are also defined, again based on a specific Capital Tone. For example, you could have a synth bass as the Capital Tone and a different synth bass as the Sub Capital Tone. The way in which Capital, Sub Capital and Variation Tones are distributed among the banks is in a fixed manner so that should you record a song using a GSS synth and playback on a GM synth, the MIDI Program Changes will point back to the relevant Capital Tone.

One important aspect of GSS is the use of Non-Registered MIDI Controllers in place of System Exclusive for the editing of Tone parameters such as filter and envelope. Provisional GSS equipment has already been shown at this year's Frankfurt Music Fair. The first is the SC55 Sound Canvas, a 1U-high, half-width sound module with remote control, 315 LA sounds, nine drum kits and built-in digital reverb and chorus. It even includes an audio input which can be mixed with the sounds being generated internally and output from just one pair of

outputs. The SB55 Sound Brush is a Standard MIDI File record and playback device using 3.5" disks.

## MIDI FILES

IT IS BECOMING common practice for companies to offer MIDI sequences and songs on IBM PC format disks. These are compatible with the Atari ST and can also be loaded into the Apple Macintosh by using the Apple File Exchange program. Caution should be exercised with these, however, as any of these disks will have been programmed before the precise details of GM were known, and so they are unlikely to have the correct tones assigned to the MIDI Program Change numbers. Depending on your playback unit, this may not matter too much, but it's likely that we'll see MIDI File playback devices appearing on the market at around the same time as the first GM devices and the ability to edit on these *will* be severely limited. Even if you can alter the Program Changes, it's very unlikely that you will be able to change the drum mapping without using a serious piece of sequencing software on a computer - hardware sequencers just aren't cut out to handle that type of editing.

While the powers that be have some control over the contents of a synth containing the GM logo, they can't stop non-members from abusing the system. It would be nice to think that correctly-produced disks for General MIDI will also have the GM logo on them but, again from a personal standpoint, I doubt it. The best approach when dealing with these is to be prepared to ask.

## THE FUTURE

IF GM IS nurtured correctly, the word MIDI could be on the lips of millions of people within a couple of years. The idea of a MIDI File player resembling a CD player is not all that fantastic - remember, 3.5" disks cost a lot less than CDs.

Various technologies are currently within our grasp. CD+MIDI is one such innovation. Here MIDI information is encoded within a disk to provide combined playback of audio and MIDI information. Satellite MIDI is another concept under discussion. Here the equivalent of a radio plays back MIDI songs, and anyone will be able to select which of their GM synths are used for the playback of particular songs. Satellite MIDI may sound a little far fetched right now, but it may be the acceptance of this and similar concepts that will take MIDI into the 1990s and beyond the year 2000. ■

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## KEYBOARDS

**ARP AXXE** monosynth, inc carry case, no manual but vgc, £150. Tel: (0507) 606956.

**CASIO AZ1** remote keyboard, £200; Simmons SPM8:2 programmable mixer, £490 ono. Richard, Tel: (0869) 249995.

**CASIO CZ1** synth, 5-octave keyboard, with velocity response and aftertouch, good MIDI controller, comes with CZ sounds and sequencer on Atari disks, £250 ono. Tel: (0536) 743523.

**CASIO CZ101**, inc power switch, ST editor, hundreds of sounds on disk, £110. Tel: (0732) 847533.

**CASIO CZ101**, £90; Yamaha RX21 drums, £90, both boxed, with psus and manuals. Gary, Tel: (0582) 414275.

**CASIO CZ3000** multitimbral synth, split and layering facilities, £220 ono. Dean, Tel: (0202) 764438, days only.

**CASIO CZ3000** phase distortion synth, 16-note polyphonic, boxed, as new, £230. Bill, Tel: 081-856 5306.

**CASIO CZ5000**, excellent cond, flightcase, cartridge, 200 extra voices, £275; TR707, £125. Both for £375. Andy, Tel: (0203) 615308.

**CASIO VZ1**, velocity, aftertouch responsive, on-screen graphical editing, 6 months old, £240. John, Tel: 081-871 4191, eves.

**CASIO VZ10M** multitimbral synth module, ROM card, Roland PC100 MIDI keyboard controller, both mint and boxed, bargain at £180. Andy, Tel: (0865) 242277.

**CHEETAH** Master Series 5V controller keyboard, as new, with hard case, £235. Martin, Tel: (0729) 822415, days; (0524) 241619, eves.

**ELKA MK55** mother keyboard, 5-octave, ROM cartridge, software etc, never gigged, home use only, £300. Tel: 071-511 1120, 24 hrs answerphone.

**EMS AKS**, serviced and upgraded by EMS, £550 or sensible offers. Tel: (0670) 855123.

**EMULATOR II**, manual, case, 156 disks, £2000; TB303 bassline, £150; Prophet 600, £300; Korg MS10 monosynth, £80; Yamaha RX11 drum machine, £125. Kevin, Tel: 041-339 3457.

**E-MU PROTEUS XR** sound module, £650. Nick, Tel: (0483) 722607.

**ENSONIQ ESQ1**, latest software, 3.5 sequencer, flightcase, RAM and ROM, £500. Eddie Graham, Tel: 021-456 3950.

**ENSONIQ SDP1** sampled digital piano, cased, vgc, £500 ono, or swap for Toa MR8T. Dave, Tel: (0244) 818565.

**ENSONIQ VFX**, with v2 software, as new, boxed, £850. Tel: (0909) 566695.

**EVOLUTION EVS1** multitimbral synth module, boxed, never gigged, complete with software editor, £200. Tel: (08012) 4017.

**HOME STUDIO CLEAROUT:** Roland D550, £595; Korg M1R, £785; Oberheim Matrix 6R, plus editor, £400; Oberheim Matrix 6, £450; Prophet 5, Rev3.0, non-MIDI, £475; Yamaha QX3, 16-track, £425; Amcron DC300A, £260; Roland TR808, £300; Tannoy Devon Monitors, £275; Quad 50E power amps, pair, £150; Quad 306, £150. Tel: 071-372 3724.

**KAWAI K1**, excellent cond, with box, over 200 sounds on Atari disk, Korg P3, with card, offers please. Richard, Tel: (0536) 746113.

**KAWAI K1**, MkII, delicious sounds, digital effects, drums, RAM card, hard case, £450. Ashley, Tel:

Southampton (0703) 618912, eves.

**KAWAI K1M**, excellent cond, card with sounds, leads, manual, boxed, will deliver, £225 ono. Chris, Tel: (0929) 553158.

**KAWAI K1R**, RAM card, psu, boxed, manuals, home use only, £230; Korg EX800, no manual, hence £110, both £325, consider exchange for Alpha Juno 2 or MKS50 with PG300. Nigel, Tel: (0437) 762661.

**KAWAI K3**, velocity, pressure, 32 waveforms, analogue, 2 oscillators, effects, stereo, bargain, £250. Martin, Tel: (0268) 766110.

**KAWAI K4**, excellent cond, never left home, £525 ono; Yamaha SY77, excellent cond, never left home, plus software, £1350 ono. Graham Cochrane, Tel: (0204) 652323.

**KAWAI K5** synth, 2 RAM cards, £750; Roland MKS70 module, with 1 ROM and 1 RAM card, £750; Korg Poly800 synth, with X-frame stand, £150; Kawai R50 drum machine, with extra sound chip, £150. Chris, Tel: (0296) 81379, after 7pm.

**KORG DELTA** analogue synth, Jen SX1000, £100 for both; Steinberg Pro24 sequencer, £50. Tel: (0463) 223527.

**KORG DW8000**, £250; Roland U220, boxed, as new, £450; Cheetah MK5V master keyboard, £100. Rob, Tel: (0392) 71917.

**KORG M1** music workstation, 2 PCM program data cards, carrying case, £899. Mark, Tel: (0222) 866437.

**KORG M1R**, £695 ono; Yamaha TX802, £520 ono; Yamaha TX81Z, £150 ono; Roland D110, £320 ono; Roland S550, plus mouse and disks, £925 ono. Keith, Tel: 021-355 6639.

**KORG POLYSIX**, with manuals and flightcase, home use only, perfect cond, offers around £200 or swap for VZ10 or VZ1 with cash adjustment. Chris, Tel: (06333) 64516.

**KORG POLYSIX**, mint cond, with case, £200; Elka 100W rotary cab, portable, £100. Tel: (0983) 873561.

**KORG POLY61**, classic analogue synth, boxed, manuals, £180; MTR 6:4:2 in-line mixer, £150; JHS rackmount spring reverb, with EQ, £40, all good cond. Glenn, Tel: (0276) 71673.

**KORG POLY800**, vgc, £135 ono; Kawai K5M, vgc, £325 ono, part exchange for Yamaha SY22 with cash adjustment. Nick, Tel: Hull (0482) 228135.

**KORG T1**, 3 months old, ungigged, absolutely perfect, fantastic sound, gorgeously weighted keyboard, sequencer, disk drive etc, extremely reluctant sale, £2745. James, Tel: 071-727 6082.

**MOOG MICROMOOG**, full-size keyboard, plenty of inputs and outputs, good cond, £95 ono. Tel: Leeds (0532) 866808.

**MOOG PRODIGY** analogue synth, £110; Boss DR550 drum machine, as new cond, £135. John, Tel: (0778) 347673.

**MOOG ROGUE**, boxed, mint cond, with manual, £130 ono. Spencer, Tel: (0705) 755242, eves.

**MOOG ROGUE**, classic 2 oscillator analogue monosynth, with manual, excellent cond, £120. Tel: (0785) 222674.

**BERHEIM MATRIX 1000**, classic analogue sounds, £330; Yamaha TG55, plus cards, £150; Yamaha EMT10, great piano sounds, £160, all boxed, manuals, home use only. Tel: Brighton (0273) 692237, eves.

**ORLA DMK8**, 88-note weighted



mother keyboard, full MIDI spec, built-in flightcase, £500. Tel: 071-837 7912.

**ORLA DSE9**, MIDI sound expander, 198 sounds, 99 fully programmable, immac cond, boxed, leads, £80 ono; X-frame extension, £10. Gavin, Tel: (0602) 732979.

**RD200** SAS digital piano, good cond, much loved but progress forces sale, £500 ono. Tel: (08012) 4017.

**RHODES** Mk1 stage piano, 88-note keyboard, vgc, with flightcase, £250 ono; MXR Phase 100 phase pedal, excellent, £25. Richard, Tel: (0865) 52164 or 730815.

**RHODES 760** PCM sample keyboard, plus free ROM cards, all new, £850 ono. Chris, Tel: 081-533 6273.

**ROLAND D5**, boxed, manuals, part exchange for D10. Ian, Tel: (04023) 70981, after 7pm.

**ROLAND D5**, 3 months old, boxed, 2 manuals, £370 ono. Alan, Tel: Wirral area 051-677 8696.

**ROLAND D10**, £400; Yamaha TQ5 module, £150, home use only. Mike, Tel: (0744) 35567.

**ROLAND D10**, excellent cond, home use only, £450. Paddy, Tel: 051-263 6936.

**ROLAND D10**, plus RAM card, £495; U110 module, plus 2 ROM cards, £395, both with manuals, can deliver. Nick, Tel: (0926) 842356.

**ROLAND D10** synth, with amp, excellent sounds and rhythms, boxed, home use only, travel forces sale, thus £500 ono. Tel: (0604) 33765.

**ROLAND D110**, £300; Alesis Quadverb, £300; Casio CZ3000, £150. Ken, Tel: (0203) 559329.

**ROLAND D20**, mint cond, latest ROMs, £720; full flightcase, £35. Richard, Tel: Reading (0734) 668709.

**ROLAND D20**, manuals, ROM and hard case, £800; TR606 and TB303, £150. Neil, Tel: (0252) 711703.

**ROLAND D50**, perfect cond, boxed, plus manuals, classic synth, £585. Graham, Tel: Luton (0582) 451260. el: Sunderland 091-548 6124.

**ROLAND D50**, flightcase, extra ROMs, programmer, £600; DX7, extra ROMs, voices on disk, £400; TX7, £150; TX802, £600; TX81Z, £150, all with manuals, home use only. Martin, Tel: 081-756 1918, days.

**ROLAND D70**, 6 months old, cased, excellent cond, £1150 ono.

Tel: (0524) 414395.

**ROLAND JUNO 2**, excellent cond, brilliant programmable 5-octave analogue synth, with manual and case. Tel: 061-440 8027.

**ROLAND JUNO 6** polyphonic synth, vgc, with manual, £140 ono. Dave, Tel: (0244) 683471.

**ROLAND JUNO 6**, JSQ60 sequencer, £250. Tel: 091-526 9235.

**ROLAND JUNO 60**, with Groove MIDI, JSQ60 sequencer, manuals, all perfect cond, £350 ono. Tel: (0904) 628755, eves.

**ROLAND JUNO 106**, manuals, good cond, £350 ono. Steve, Tel: 091-258 3852.

**ROLAND JUPITER 6** MIDI synth, excellent cond, manual, full pro flightcase, £450. Tina, Tel: Flat 7 051-733 2684.

**ROLAND JUPITER 8**, £500; Casio CZ5000, £225. Brad, Tel: (0602) 873896.

**ROLAND JX3P**, great bass sounds, analogue sounds, warm strings, good cond, £275 ono. Sean, Tel: (0480) 459290, eves or weekends.

**ROLAND MKS20** digital piano module, £400; Akai MX73 master keyboard, flightcase, £300; Alesis MMT8 sequencer, £150; Kawai R50, £150. Tel: Tyneside 091-264 4021.

**ROLAND MKS70** rack, mint cond, includes ROM cartridges, £650 ono. Robin, Tel: (0522) 752458, eves only.

**ROLAND MT32** LA sound module, vgc, only £190. Asif, Tel: 081-205 4318, anyday.

**ROLAND MT32** multitimbral sound module, 128 sounds, excellent drum section, plus reverb, complete with Steinberg voice editor and extra sound library, as new, boxed, with manual, £250. Tel: 071-736 5842.

**ROLAND RD1000** digital piano, home use only, £1500 ono. Mark, Tel: Telford (0952) 630357.

**ROLAND SH101** analogue monosynth, perfect cond, with manual, £100. Martin, Tel: 071-226 4244.

**ROLAND SH101**, MC202, £275 the pair; Hammond DPM48 drum machine, inc Simmons-type pad interface, £145, all boxed, home use only. Brian, Tel: (0822) 612136.

**ROLAND U20**, as new, boxed, manuals, home use only, £500. Steve Horrill, Tel: (0734) 351835.

**ROLAND U20**, multitimbral RS-PCM synth, £600 ono. Tel: 021-704

1944.

**ROLAND U220**, 3 ROM cards, £390; Yamaha DX11, £270; Yamaha FX500, £200, all immac, home use only. Matt, Tel: (0705) 251779.

**SEQUENTIAL PROPHET VS**, £950; Linn 9000, £850; PF85, £700; Tascam 38, £650; LX20, £170; CS80, £250; Cubase v2, £50; Hammond X5 and Leslie, £400; Clavinet D6, £250. Tel: 071-733 0204.

**TECHNICS KN400**, plus stand, expression pedal, 3 months old, £500, no offers. John King, Tel: (0268) 698158.

**YAMAHA CLAVINOVA CLP650** digital piano, mint cond, cost £1800, will sell £1250 ono. Tel: East Sussex (0892) 662939.

**YAMAHA CP70B** electric grand piano, £600; Yamaha DX7I, with Syco MX1 upgrade and breath controller, £450; Tascam 246 4-track, £425. All excellent cond. Jonathan, Tel: 051-356 0019.

**YAMAHA CP80**, classical live piano, flightcase, good cond, offers; Ensoniq ESQ1, spare RAM cartridge, manual, good cond, offers around £520. Terry, Tel: (0784) 483852.

**YAMAHA DX5**, mint cond, £550 ono; Yamaha EMT10, £100; Roland DR220, £70; Korg SQD1, £125; Roland D110, £250. Darryl, Tel: (0706) 54756.

**YAMAHA DX7IID**, new cond, original box, £750 ono; QX5 sequencer, £150 ono. Hugh Rance, Tel: (0491) 875028.

**YAMAHA DX7IIFD**, with flightcase, RAMs, disks, £685. Steve, Tel: 081-390 5636.

**YAMAHA DX7IISD**, ROM, disk drive, loads of sounds, excellent cond, home use only, £700 ono. Adrian, Tel: (0484) 427855.

**YAMAHA DX11**, TQ5 sequencer, MS202 monitor speaker, plus stand, manuals and leads, limited home use only, £500 the lot. Tel: (0827) 66831.

**YAMAHA DX100**, plus extras, boxed, good cond, £110. Ivan, Tel: (0823) 321486.

**YAMAHA EMT10**, £150 ono; Roland MT32, £225 ono; E-mu Proteus 1, £565 ono; E-mu Emax, £875 ono; Yamaha RX5, £285 ono; Tascam 58, excellent cond, £1725 ono. Derek Richardson, Tel: 081-462 6261.

**YAMAHA FB01**, vgc, £100 ono. Dan, Tel: (0633) 858904.

**YAMAHA K5M**, 1000+ voices, Atari

editor, £380. Pere, Tel: (0273) 203817.

**YAMAHA PSR48**, as new, with full MIDI spec, with manuals, all leads, £300 ono. Mark, Tel: (0536) 520969, after 6pm.

**YAMAHA PSR4500**, £550; Yamaha RX21 drum machine, £100; Yamaha EMT10 sound expander, £120; Yamaha EMQ1 disk recorder, £120; Philip Rees MIDI V10 MIDI thru unit, brand new, boxed, £20. Tel: (0705) 376700.

**YAMAHA PSS790**, boxed, £130. Tel: 081-398 5958, leave message.

**YAMAHA SY22**, 2 months old, boxed, manual, £600; Yamaha SPX90I, as new, £225. Graham Wright, Tel: 081-348 0701.

**YAMAHA SY55**, 16-part multitimbral synth and sequencer, brand new, must sell, £700 ono. Andy, Tel: (0865) 242277.

**YAMAHA SY77** synth, vgc, boxed, manual, 1 yr old, £1350 ono. Tel: (0902) 23738.

**YAMAHA TX816**, contains 8 DX7-type sound modules, 128-note poly, vgc, £1150 or sensible offers; Yamaha EMT10, £170. Tel: 081-997 2179, eves.

**YAMAHA V50** workstation, plus flightcase, 4 additional sound disks, Korg P3 MIDI piano module, to be sold separately or together, £700 both (guide price). Jeff, Tel: (0480) 300845.

## SAMPLING

**AKAI S612**, 8-second MIDI sampler, with disk drive, perfect cond, £250 ono. Tel: 081-556 6827 or 081-530 4770.

**AKAI S900**, v2 operating software on disk, including crossfade looping, DCS envelope, pre-trigger recording. Tom, Tel: (0706) 44410.

**AKAI X7000** sampler, as new, can include around 2000 sounds, boxed, with manuals, well cared for, £450 ono. Mark, Tel: (0772) 792280.

**AKAI X7000** keyboard sampler, boxed, excellent cond, memory upgrade fitted, 28 disks, £400. Tel: (0592) 774966.

**CASIO FZ1**, plus memory expansion, over 50 disks, £850. Matt, Tel: (0203) 312491.

**CASIO FZ1**, boxed, sound disks, manual, £650; Boss RRV10 digital reverb, £80. Tel: 081-954 5275.

**CASIO FZ1** mega sampler, with manuals, box, stand, mic and pro library (worth £180), mint cond, all for £700 ono. Paul, Tel: (0536)

761014.

**CASIO FZ10M**, 2Meg sampler, with editing software, sequencer, library, £820, no offers. Tel: 071-511 1120, 24 hrs answerphone.

**EMAX** hard disk, rack sampler, flightcased, complete with manual, 120-disk sound library, £795. MJ Burns, Tel: Woking (0483) 715553.

**EMAX** sampler keyboard, £1050; Roland D5, £370. Tel: Grimsby (0472) 693479.

**EMAX HD**, ex-Depeche Mode, full TSC overhaul, 36 banks of sounds, very powerful, £1400. Gareth, Tel: (0727) 873673, eves.

**EMAX SE** keyboard, complete with flightcase, large library and Steinberg editing software, £1100. Paul, Tel: (0532) 621396.

**EMULATOR E3**, rackmount, 40Meg hard disk, 4Meg memory, 16-track sequencer, £3500. Peter, Tel: 071-221 4627.

**ENSONIQ EPS** keyboard, 4x memory expansion, great library, £1250 ono. Adrian, Tel: 081-947 9770.

**ENSONIQ EPS** sampling and sequencing keyboard, with 2x memory expander and excellent disk library, perfect cond, home use only, £850. Tel: Brighton (0273) 870560.

**ENSONIQ EPS16+**, 3 months old, perfect cond, £1300. Gary, Tel: (0403) 66657.

**ENSONIQ MIRAGE** rack, with loads of disks, sounds brilliant, £495. Phil, Tel: (0734) 774757.

**ROLAND S10** sampling keyboard, with stand and huge library, £400. Tel: (0827) 58913.

**ROLAND S50**, v2 software, manual, A1 cond, boxed, great sounds, £750 ono. Chris, Tel: (0883) 625750.

**ROLAND S220**, 12-bit, individual outs, detune, delay and arpeggio, mint cond, 30 factory and own disks, upgrading, £390. Steve, Tel: (0533) 811422.

**ROLAND S550** digital sampler, with fully-loaded 80Meg hard disk, £1500. Richard, Tel: 071-937 3004.

**ROLAND S770**, 24-voice, 40Meg HD, Synclavier quality sampling, extensive analogue "fat" synthesis (w/resonance), controllable in real time, unique instrument, stunning sound, library, user interface, £3300 ono. Tel: 071-435 7498.

**ROLAND W30**, 5 wks old, £1250 ono. Jeff, Tel: (0202) 722217.

## SEQUENCERS

**AKAI MPC60** sequencer/sampler, latest software, mint cond, £1350 ono. Tel: Cheltenham (0242) 575607, anytime.

**ALESIS MMT8**, boxed, with manual, hardly used, £130. Andy, Tel: (0378) 560341.

**ROLAND MC50**, brand new, excellent cond, plus 10 disks, £400 ono. Graham Cochrane, Tel: (0204) 652323.

**ROLAND TB303** bassline, manual, £190; Yamaha RX11 drum machine, manual, home use, £120. Tel: 081-394 1540.

**YAMAHA QX1**, 8-track, disk drive, 80,000-note memory, vast editing facilities, £320. Andrew, Tel: (0485) 600513.

**YAMAHA QX1** MIDI sequencer, 8-track, massive memory, £275 ono. Alan, Tel: (0323) 767089, eves.

**YAMAHA QX5**, boxed, as new, £120. Alan, Tel: 081-519 3874.

## DRUMS

**ALESIS HR16**, excellent cond, boxed, manual, £200. Joe, Tel: (0255) 434217.

**ALESIS SR16** drum machine, brand new, quick sale, £250. Phil Clarke, Tel: (0203) 382125, days only.

**BOSS DR220A** drum machine, 12 instrument voices, 64 rhythms, boxed, as new, bargain at £65. Robin, Tel: (0602) 253916, after 6.30pm.

**BOSS DR550** drum machine, mint cond, manual, £150. Tel: (0983) 613843.

**CASIO RZ1** sampling drum machine, includes 800 drum samples from the Roland 808 and 909 drum machines, £150. Steven, Tel: 051-260 8752.

**KORG DDD5**, home use only, 2 ROM cards, £150 ono. Liz, Tel: (0734) 418998.

**PEARL** 7-piece, mllrrr-chrome, export drum kit, Paste Zildjan cymbals, all hardware, only £675. Tel: Bournemouth (0202) 581141.

**PEARL DLX 6**-piece drum kit, with drum rack, mic stands, Zildjan and Paiste cymbals, offers. Tel: (0695) 632239.

**RHYTHM BOX**: Conn Minomatic with foot switch, old, out of date and tacky but it works and it's fun. Only £20 (including p&p). Tel: (0843) 32357.

**ROLAND** digital drum machine, with MIDI, swap for your SH101 or TB303, must be good cond. Max,

Tel: (0867) 74416.

**ROLAND CR1000** drum machine, plus a free combo, £50 ono. Tel: (0454) 772237.

**ROLAND PAD5**, £100, no offers. Mark Hagen, Tel: Northampton (0604) 37280.

**ROLAND R5** drum machine, still boxed, mint cond, with manual, £350 ono. Tel: Bournemouth (0202) 581141.

**ROLAND R8** human composer, as new, £450. Rob, Tel: (0392) 71917.

**ROLAND R8M**, with percussion, 808 and power drum sound cards, 3 months old, £600 ono. Robbie, Tel: (0628) 22883, after 6pm.

**ROLAND R8M** drum module, with 2 ROM cards - both worth £45 each, still under guarantee, excellent sounds, reluctant sale, £400, no offers. Tel: 071-511 1120, 24 hrs answerphone.

**ROLAND SPD8**, as new, £300 ono. Tel: 091-273 6687.

**ROLAND TR505**, excellent cond, £95 ono; Roland SH3A monosynth, good cond, £65 ono. Tim, Tel: Rushden (0933) 50821.

**ROLAND TR606** Drumatix, perfect cond, £75; Roland M64C memory expansion cartridge for TR707 etc, £25. Tel: 071-354 3041.

**ROLAND TR707**, home use only, boxed, manuals, £120. Phil, Tel: Sunderland 091-548 6124.

**ROLAND TR727**, £125. Tel: 071-602 1908.

**ROLAND TR808**, good cond, £300 ono; Korg Poly800 synth, £150 ono. Tel: (0742) 750419.

**ROLAND TR808**, with Groove MIDI retrofit, £300; Roland Juno 60, with Groove MIDI, £300; Ensoniq ESQ1+, with RAM cartridge, £400; Roland Pad5, £75, all as new, with manuals. Jerry, Tel: 071-481 0841.

**SEQUENTIAL CIRCUITS** Drumtrax, bargain at £165. Phil, Tel: (0734) 774757.

**SIMMONS SDX**, 8Meg, 10-piece kit, internal hard disk, full library, studio use only, A1 cond, offers invited. Tel: (0545) 560164.

**SLINGER LAND** 5-piece kit, 24", 16", 14", 13", 6.5", Zildjans, Yellow Jacket hardware, some cases, pro kit, £550. Tel: (0732) 847533.

**YAMAHA RX5**, home use only, £400; BIT 1, plus flightcase, £300. Write: Ole Overli, Dyneklgt. 9C 0569, Oslo, Norway.

**YAMAHA RX17** drum machine, excellent cond, £140; Atari ST, with many games, software sampler,

boxed, £220. Dave, Tel: 081-597 4845.

**YAMAHA RX17** drum machine, hardly used, boxed. Tel: Bournemouth (0202) 517588.

**YAMAHA RX21L** Latin, excellent cond, manuals, psu, £150. Joe, Tel: (0255) 434217.

## COMPUTING

**AMIGA 500**, plus 0.5Meg upgrade, MIDI interface In, Thru and Out, MIDI software, original games, must collect, offers over £320. Tel: 091-234 0931.

**AMIGA 500**, with MIDI interface, loads of software, MIDI leads etc, needs new internal drive, £280 complete. Sean Vincent, Tel: (0438) 313865.

**APPLE MACINTOSH SE30**, with 40Meg internal drive, the lightweight, powerful, compact Macintosh for the MIDI musician, bargain at £1500. Matt or Rob, Tel: 081-943 4377.

**ATARI 1040ST**, with music, business and games software, vgc, £300 ono. Dan, Tel: (0633) 858904.

**ATARI 1040ST**, SM124 hi-res monitor, Steinberg Cubase, v2, with manual and dongle, £300 each or £500 the lot. Daniel, Tel: (0494) 670351.

**ATARI 1040ST**, SM125 monitor, Star LC24-200 printer, Steinberg Pro24 and MasterScore, £475. Tel: (0842) 890088.

**ATARI 1040STF**, £200. Tel: 071-480 5705.

**ATARI 1040STFM**, Triangle 50Meg hard drive, SM125 monitor, 5 1/4 and 3.5" external drives, printer, £1000s worth of MIDI business and leisure software, £750 cash or will swap for Korg M1, DX7IIFD or S950. Dave Coleman, Tel: 091-521 0780.

**DR T'S KCS** sequencer, latest version, £85 ono; Music-X, latest version, £85 ono, these items are not pirates, both are for Commodore Amiga A500 computer. Clyde, Tel: Deptford 081-691 8227.

**GREENGATE DS3** MIDI sampler/sequencer, with Apple IIe computer, monitor, keyboard, disk drive, manuals, disks etc, vgc, £250 ono. John, Tel: Guildford (0483) 32802.

**HYBRID ARTS' SMPTETrack II**, £300; Gen Edit, £100; Atari 1040STFM, SM124, £350; Roland W30, boxed, large library, £1250; D50, 3 cards, £650, all immac. Tel:



Devon (0364) 661420.

**INTELLIGENT MUSIC REALTIME**, 256-track sequencer, £100; Dr T's X-OR, multi-generic editor, £150, both latest updates with manuals. Tel: (0545) 560164.

**MICROVITECH** colour monitor, never been unpacked, swap for Atari SM124 monitor plus £25 cash, or £125 ono. Kevin, Tel: (0376) 520247, anytime.

**PASSPORT MASTERTRACKS PRO** sequencer, v2.5, for Atari ST, fully featured, professional, easy user interface, original, as new, boxed, cost £240, any reasonable offer accepted. Mike, Tel: (0337) 31172.

**SONY TRINITRON** TV/monitor, 14", fast text, SC/ART etc, brand new, ideal colour Atari monitor, £230. Matt, Tel: St Albans (0727) 57525.

**STEINBERG CUBASE**, as new, £250 ono. Tel: 091-273 6687.

## RECORDING

**AKAI EX75N**, two noise reduction units, £100; MXR comp/lim, pro rackmount unit, £140, no offers. Tel: 071-511 1120, 24 hrs answerphone.

**AKAI MG14D**, 12-track recorder, vgc, £1400. Tel: (0545) 560164.

**AKG D80** dynamic microphone. Boxed, mint, little used. £18. Tel: (03543) 5239.

**ALESIS MICRO LIMITER**, hardly used, boxed, Tascam 244, boxed, instructions, little used, £350. Tel: Bournemouth (0202) 517588.

**ALESIS MICROVERB II**, £140 ono. Nigel Milligan, Tel: Rochdale (0706) 58769.

**ALESIS QUADRAVERB**, £275. Tony, Tel: Brighton (0273) 686637.

**ALLEN & HEATH** System 8, 16:8:2 mixing desk, plus stand, good cond, £700. Bruce, Tel: Leeds (0532) 780954.

**BOSS BX80** mixer, £95; Simmons SDS9 brain, £250; Simmons EPROM blower, £85; Korg P3 piano, plus card, £120; Alesis Microverb II, £60. Mike, Tel: Oxford (0865) 728745.

**BOSS RBF10 FLANGER**, micro-rack, mint cond with psu and box, only £60. Tel: (0843) 32357.

**DOD** programmable distortion, £80; MXR 10-band graphic EQ, mains driven, £65. Jon, Tel: 051-228 1157.

**FOSTEX 350**, 8-channel mixer, perfect cond, £300. Tel: 081-556 6827 or 081-530 4770.

**FOSTEX A8**, with remote, vgc, £600. Paul, Tel: (0246) 852765.

**FOSTEX M80**, 8-track recorder, mint cond, 30 hrs use, £850. Tel: (0602) 411185.

**FOSTEX MODEL 80**, 8-track, home studio use only, regularly serviced, £750 ono. Mike, Tel: (0273) 720653 or 690218.

**FOSTEX MTC1** controller, unwanted competition prize, still in unopened parcel, £110. Tel: (0485) 210668.

**FOSTEX R8**, £1000; Studiomaster Proline Gold 16:4:8, £1000; Yamaha FX500, £225, 6 months use. Tel: (0902) 23738.

**FOSTEX X15**, psu, battery pack, box, good working order but needs minor repairs so only £120. Tel: (0843) 32357.

**FOSTEX X30**, 4-track recorder, less than 6 hrs use, Dolby B and C, Fostex MN15 mixer, Realistic 42/2108 stereo reverb, all items £240 or swap video recorder with audio dub. Tel: (0622) 812357.

**FRONTLINE X8**, 8:2 stereo rackmount mixer, £50. Rob, Tel: (0392) 71917.

**ITAM** 16-track, 1" tape recorder, full remote and auto locator, 3-speed operation, 7.5, 15, 30ips, £2000 ono. Pete, Tel: 081-889 6558.

**JBL** Control 5 studio monitors, boxed, vgc, 175W per channel, excellent sounding, £260 ono. Clyde, Tel: Deptford 081-691 8227.

**JBL 77VX** Radiant Series speakers, £150; Teac A3440 4-track, plus dbx, £350. Ivan, Tel: (0823) 321486.

**M&M 8:2** PA mixer, pro flightcase, £120 ono. Del, Tel: 081-397 1567.

**NOMAD REDDIMIX**, 8-channel, 3U rackmount mixer, as new, £150; Alesis Mdiverb II 16-bit effects unit, unused, boxed, manuals etc, £140 ono. Tel: Tyneside 091-253 2460, eves.

**PROTON** cassette deck, Dolby B, Dolby C, excellent cond, £30. Tel: (0695) 632239.

**REALISTIC ELECTRONIC REVERB**, boxed, mint, analogue, max 95ms decay, sounds crap, but very cheap. £12. Tel: (03543) 5239.

**ROLAND M160** rackmount mixer, 16 channels, 3 stereo sends/returns, 1 aux, mint cond, plus manual, £360. Tel: (0726) 66715, eves.

**SECK 12:8:2** mixer, £650; Studiomaster Sessionmix 16:2, £600, both excellent cond. Gorwel, Tel: (0407) 810742.

**SECK 12:8:2** mixer, Tascam MM1, £480; Boss BX600 mixer, £80; Korg Poly800I, £150; Korg

DW8000, £250; Ensoniq Mirage, £350; Roland D110, £299; Yamaha TX81Z, £150. Offers, most of above flightcased. Mark, Tel: Ealing area 081-997 9097.

**STUDER A810**, 2-track recorder, plus manual, £3500; Telefunken 251 valve mic, plus power pack, £900, both excellent cond. Ray, Tel: (0752) 894457.

**STUDER/REVOX PR99**, about 20 hrs use only, £650. Alan, Tel: 081-519 3874.

**STUDIOMASTER UFEX**, gate, compressor, parametric EQ, IDP1, MIDI mute processor, digital delay, all unused, mint cond, Studiomaster Studio 4-track tape recorder, Teac A3440. Chris Holland, Tel: (0734) 794493.

**STUDIO RESEARCH 6:2** mixer, Yamaha A100 amp, pair Yamaha NS10 monitors, £500 ono, all new. Chris, Tel: 081-533 6273.

**TASCAM 144**, with brand new 244 heads, just had complete service, vgc, manuals, £225. Si, Tel: (0274) 661674, eves.

**TASCAM MM1**, 20-channel keyboard mixer, £500; Casio VZ10M synth, £180; Yamaha TX81Z, £170; Alesis HR16, £200; Roland TR727, £150. All vgc. Tel: (0577) 64354.

**TASCAM PORTASTUDIO**, £370; Alesis HR16 drum machine, £170; Yamaha DD5 drum machine, £55. Malcolm, Tel: 081-898 0954, eves and weekends.

**TASCAM PORTA 01**, excellent cond, very little home use only, psu, operator's manual, £250 ono. Andy, Tel: 061-443 1061, after 6pm.

**TASCAM PORTA 01** multitrack tape recorder, plus power supply, mint cond, boxed, £200. Tel: (08675) 5726.

**TASCAM PORTA 02**, mint cond, boxed, £400. Wanted: Sansui WSX1. Tel: (0909) 566695.

**TASCAM 38**, with remote control, all manuals, £850; Allen & Heath mixing desk, 16:8:2, £350; Roland TR626 digital drum machine, £140. Carl, Tel: (0253) 873424.

**TASCAM 244** portastudio, good cond, £250. Andy, Tel: (0865) 242277.

**TEAC 3340** 4-track reel-to-reel, and Teac 3300SX master, swap for Atari 1040 with monitor. Jerry, Tel: (0259) 51702.

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**YAMAHA MT2X**, 4-track, 6 input, high performance, twin speed, cassette recorder, immac cond, boxed, manual, £250 ono. Frank, Tel: 081-868 9833.

**YAMAHA MT3X**, 4-track cassette recorder, excellent quality due to double tape speed, virtually new, still under guarantee, £390. Martin, Tel: 071-226 4244.

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**SOUNDCRAFT SA600** power amp, £250; Roland Splrit 30 guitar combo, £50; Kudos K666 speaker, £100; M&M 6:1 mono rack mixer, £50; 12U rack, with wheels, £50. Mark, Tel: Luton (0582) 420332.

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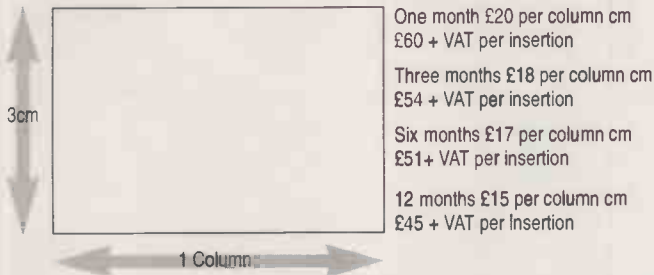
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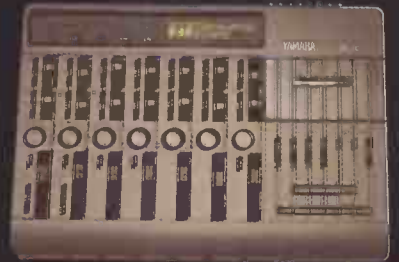
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