

February 1990  
£1.50

# Music Technology

THE PERFORMING ART  
*midi for musicians*

**WIN**

*yamaha's new TG55 expander*



**CHEETAH MQ8**  
*budget sequencing sophistication*

**Prince Paul**  
producing  
the daisy age

## ON TEST

*E-mu Emax II Sampler*

*Sansui WSX1 Multitracker*

*SDA Topaz Digital Recorder*

*Musitronics MEX D50 upgrade*

*Quinsoft FB01 Librarian Software*

*Clares Armadeus Archimedes Sampler*



9 770957 660008

A photograph of a musician playing a saxophone over a Rhodes piano. The scene is dimly lit, with a large, glowing light source in the upper left corner. The saxophone is in the foreground, and the piano keyboard is visible below it. The word "Rhodes" is printed on the piano's console.

The  
musician's  
choice

**Rhodes**

A Division of Roland (UK) Ltd

Amalgamated Drive  
West Cross Centre, Brentford  
Middlesex TW8 9EZ  
Fax: 01-569 9532  
Tel: 01-569 9840

# TSC DEALS

ALL ITEMS ARE SECONDHAND AND CARRY A 28 DAY TSC WARRANTY

- S/H PLI INFINITY 45 REMOVEABLE HARD DISK £745.00
- S/H AKAI S900 SAMPLER £799.00
- S/H MEMORYMOOG POLY SYNTH £899.00
- S/H OBERHEIM OB8 ANALOGUE POLY SYNTH £850.00
- S/H ROLAND DRUMATIX & BASSLINE £280.00
- S/H APPLE MACINTOSH 11 £1595.00
- S/H STATUS SIX STRING GUITAR £799.00
- S/H S1000 PLAYBACK £1499.00
- EX DEMO ROLAND R880 REVERB £1399.00
- EX DEMO ROLAND D5 SYNTHESIZER £475.00
- S/H ROLAND D110 MULTI TIMBRAL MODULE £345.00



## CD-ROM DRIVE

diki DEVICES

**CROWAVE** The incredible sound of the PPG for an unbelievable **£999.00**

**diki DEVICES** A range of low cost removable **hard disks** and **CD rom units** purpose built for the musician

**01-258 3454** TSC DEALS are being constantly updated call us for the very latest bargains and for our **FREE CATALOGUE**



**MU-PROTEUS** 16 bit Sample player, XRs and standard models in stock. EMAX 11 and E3



**AKAI** We now have a 500 m/b soundlibrary for the S1000 on both **PLI** removable cartridge and **INVISION** Cd Rom. Version 2.00 software on rom and ram expansion from as little as **£395.00**



**MIDIMOOG** Original minimoogs repackaged, modified and modified into a 19" rackmount. Also available **OBERRACKS** and coming soon the **PROPHET V** rackmount.



**CASIO DAT** If you're looking for DAT give our **DAT SHOP** a call. Prices start from as little as **£545.00**

# S1000 CD ROM

The ultimate in sound libraries loads in seconds like a hard disk

INVISION VOL 1 & 2, OMI VOL 1 & 2

## £299.00

**AT TSC** We can offer you the complete service however large or small your requirement. Our team of 15 experts can answer all your questions to make your purchase easier. Our central London showrooms are permanently equipped with the very latest in **DIGITAL** and **analogue technology**. On display we have a fully functioning digital studio based around the **Soundtracs IL48 series recording console** and the **Akai DR1200 digital multitrack**, a variety of effects processors for you to compare and contrast, and of course as a fully authorised **Apple Macintosh dealer**, the very latest in **hard disk editing/recording and music software**.



**APPLE** Mac Portables, 11ci, 11cx, SE30, Plus, SoundTools recording, Vision sequencing, Music Prose notation, Alchemy. **MAC PACKS FROM £995.00**



**ROLAND** U20 sample player, GP16 and GS6 guitar processors, A80 mother Keyboard, U220, P330 rackmounts, M16E, R8 and R5 drummachines

**PROFESSIONAL ADVICE AT THE RIGHT PRICE**

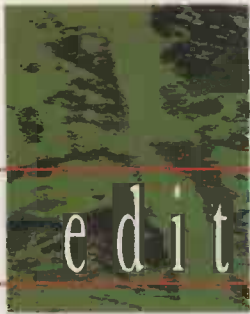
# TSC



**KORG** M3 M1 M1R T3 T2 T1

# THE SYNTHESIZER COMPANY LTD

9 HATTON STREET LONDON NW8 9PR TELEPHONE 01 258 3454 FAX 01 262 8215



# editorial

## THE EQUALISER

IF THERE'S ONE thing Thatcher's ten years have made us all aware of more than anything else, it is material wealth. It's been a good time for some - those who've had the money to play her game - it's not been so good for others. Not that Britain has the only unfair society in the world: who would choose to be black in South Africa, Aboriginal in Australia or Chinese in China?

Fortunately for us musicians, artistic talent doesn't discriminate between nationalities, colours, sexes or the rich and the poor. Being black and poverty-stricken didn't prevent the negro slaves in 19th century America from laying down the roots of jazz. Being bald and wearing sackcloth dressing gowns didn't stop Benedictine monks from creating beautiful choral music. And being white, female, middle class and fairly wealthy hasn't stopped Kate Bush from being a major musical force here in Britain over the last 15 years or so. You could call music the equaliser.

Although music recognises none of these distinctions, the musical equipment industry imposes one of its own. It's true that owning an instrument - no matter how good or expensive - will not provide you with any talent you do not already possess, but the lack of the instruments

you need to realise your musical goals places severe restrictions on your music. I'm certainly not advocating the use of gear as a substitute for talent, but there's no doubt that the technology you and I both celebrate through the writing and reading of this magazine imposes its own kind of discrimination upon us all: those who can afford it and those who cannot. Which class do you belong to - the élite Synclavier Set, the Atari bourgeoisie or the secondhand, MC202 hoi polloi? I'm not about to offer any profound solutions to this situation, I wish I could. Instead I just want to draw all of our attentions to the fact that nature has given us a sporting chance in music, and mankind's enquiring mind and materialistic nature has neatly counteracted it.

Perhaps the light at the end of the tunnel is that as technology has advanced, it has tended to make itself more freely available. Take the example of digital samplers: they were once available only to the Synclavier Set, now the Atari bourgeoisie have them securely in their grasp and they're beginning to filter down to the MC202 rabble. The gap only widens when people's ingenuity outstrips - or even equals - the pace of technical innovation. Fortunately for creativity, that's not too often. **Tg**

MUSIC TECHNOLOGY (ISSN 0957-6606) is published by Music Technology (Publications) Ltd, a subsidiary of Music Maker Publications (Holdings) plc, Alexander House, Forehill, Ely, Cambs CB7 4AF. Tel: (0353) 665577 (all departments). FAX: (0353) 662489 (PAN: Musicmaker)

MUSIC TECHNOLOGY (US) is published by Music Maker Publications Inc, 22024 Lassen Street, Suite 118, Chatsworth, CA 91311. Tel: (818) 407-0744 (PAN: Musictech).

Linotronic 300 Bureau Services, by Camset, Ely.

Colour Reprographics by CLE, St Ives. Printing by Worcestershire Web Offset, Droitwich, Wores. Distributed by AGB Impress Ltd, London. Tel: 01-253 3456.

All material is subject to worldwide copy protection, and reproduction or imitation in whole or in part is expressly forbidden without written consent from the publishers. All reasonable care is taken to ensure accuracy in the preparation of the magazine, but Music Technology (Publications) Ltd cannot be held legally responsible for its contents. The publishers cannot assume responsibility for the return of unsolicited manuscripts, photographs or artwork.

Copyright 1990 Music Technology (Publications) Limited. Cover Photography Jayne Wexler

### EDITORIAL

#### EDITOR

*Tim Goodyer*

#### ASSISTANT EDITOR

*Simon Trask*

#### PRODUCTION EDITOR

*Debbie Poyser*

#### FEATURES EDITOR

*Nigel Lord*

#### EDITORIAL ASSISTANT

*Italia De Santis*

### ART STUDIO

#### DIRECTOR

*Stuart Catterson*

#### DEPUTY DIRECTOR

*Sam Masters*

*Sam Gilbert, Darryl Tooth, Hilary Reed,  
Chris Brennand*

### PHOTOGRAPHY

*James Cumpsty, E, Melodie Gimple, Tim  
Goodyer, Adam Jones, Normski, Matthew  
Vosburgh*

### ADVERTISING

#### ADVERTISEMENT MANAGER

*Colin McKee*

#### AD PRODUCTION

*Emma Ambrose (Manager)*

*Charlotte Cartwright (Assistant)*

### IN AMERICA

#### EDITOR

*Scott Wilkinson*

### ADMINISTRATION

#### MAIL ORDER

*Cheryl May, Amanda Bushell*

#### GROUP PRODUCTION MANAGER

*Mike Stapleton*

#### EXECUTIVE DIRECTORS

*Mike Marsh, Lester Johannes (Financial)*

#### MANAGING DIRECTOR

*Dennis Hill*

#### CHAIRMAN

*Terry Day*

## THE 64 TRACK SEQUENCING SOFTWARE FOR HIGH FLYERS



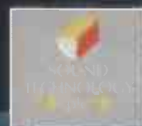
For an increasing number of successful musicians, arrangers and producers C-LAB provides the ultimate sequencing & music scoring software for the Atari ST computer. Why? Because whether you choose Creator or Notator, these brilliant systems allow the total control and creative freedom which

is so important in the music industry. Creator is the multi-track recorder/editor & realtime processor

for any MIDI device. Simple to use but with the power to run 96 different instruments simultaneously at the very high resolution of 1/1536th notes.

Notator provides all the features of Creator plus realtime notation editing and professional score writing - all in one program. C-LAB's famous Priority Multitasking now extends to include SOFTLINK; an update which allows up to 4 programs of virtually any make to run interactively with Creator or Notator.

With the additional facilities of the superb hardware peripherals Unitor; Export; Human Touch and Combiner C-Lab offer a music software system which is simply the best. Contact Sound Technology now for our free brochure.



CREATIVE STUDIO TECHNOLOGY  
Sound Technology plc

6 Letchworth Business Centre

Avenue One, Letchworth, Herts SG6 2HR

Tel: 0462 480000 Fax: 0462 480800 Telex: 826967

# C O n t e n t s

## COMMENT

2

In a world of divided people, music is regarded as being one of the great equalisers - but that's only as long as you've got the cash for the gear. How equal are you?

## NEWSDESK

6

Better informed than *The Chart Show*, better dressed than *The Clothes Show* and a better read than *The Media Show*. If it's news it's in Newsdesk.

## COMMUNIQUE

8

The anti-sexism activists call Tim Goodyer to account for articles written and comments passed. Grievances aired in MT's readers' writes.

## COMPETITION

70

No sooner unveiled than up for grabs in an exclusive Music Technology competition. This is your chance to grab a piece of Yamaha's latest synth action in the form of their new TG55 expander - for free.

## FREE ADS

84

If the last-minute Christmas shopping has drained your patience and your wallet, put your feet up with MT's Free Classifieds and pick out a bargain buy at your leisure.

## Appraisal

### SDA TOPAZ

10

One of the prime forces for the '90s is sure to be digital recording and editing - as found in TOPAZ. Simon Trask previews a powerful new system from Steinberg Digital Audio.

### MUSITRONICS MEX

20

When your favourite keyboard starts to look a little out of date, do you remain faithful to it or sell it? If it's a D50 you could give it multitimbrality, more waveforms and extra memories. Gordon Reid installs the MEX.

### CHEETAH MQ8

38

Latest in their line of cost-effective gear is Cheetah's MQ8 sequencer. Simon Trask investigates a budget sequencer that incorporates some of the features of the Zyklus MIDI Performance System.

### E-MU SYSTEMS EMAX II

66

One of the most popular keyboard samplers of recent years is E-mu's Emax, now its place is to be taken by the Emax II. But will it prove as popular? Dave Richardson gets the 'Max.



VOLUME 4 NUMBER 3 FEBRUARY 1990

## QUINSOFT FB01 LIBRARIAN

74

When you're on a limited budget it's important to get the most out of every piece of gear you own. Gordon Reid checks out budget software aimed at getting the best out of your FB01.

## CLARES ARMADEUS

80

The Archimedes computer continues its bid for musical acceptance with Armadeus - a hardware/software package that allows it to sample sound. Ian Waugh goes soft on sampling.

## WBTM MUSIC

60

Take two classically trained musicians, a studio full of hi-tech gear and a will to survive in the commercial world of music and you've got WBTM Music. Claire O'Brien learns how to be a musician *and eat*.

## OUT TAKES

78

More commercially-cut vinyl rubs shoulders with readers' bids for musical recognition in this month's OutTakes column.

## Technology

## ON THE BEAT

14

In the early '70s reggae was the star of the pop charts; these days its profile is lower but its influence almost inescapable. Nigel Lord looks at programming Ja rhythm.

## THE SOFTWARE SYNDROME

26

This week a new virus appeared on IBM computer - "AIDS" - how long before one appears in your music system? Vic Lennard looks at viruses and how you can avoid them.

## THE PERFORMING ART

46

One of the consequences of MIDI recording is the loss of musical performance. In the first of a short series, Ollie Crooke and Simon Thomas look at the performance applications of MIDI controllers.

## MACWORLD '89

54

The Atari ST may currently be the most popular music computer, but a lot of music software is still being pioneered on the Apple Mac. Mike Collins visited MacWorld '89 for the latest musical developments.

## THE JUPITER LEGACY

56

Not only did Roland's Super Jupiter make a worthy replacement for the Jupiter 8, it is still a sought-after instrument today, as Steve Howell is happy to report.

## PATCHWORK

72

Reviews of Stiletto's patches for the Roland D-series and Casio's CZ synths find themselves alongside a selection of readers' own programming feats in this month's Patchwork.



## Music

## PRINCE PAUL

30

Already an established musical force from his work with Stetsasonic, Prince Paul has gone on to produce De La Soul's brilliant debut LP. Steven Daly talks technology and sampling ethics with a Prince.

## Studio

## SANSUI WSX1

50

Already established in hi-fi, Sansui have made their musical debut in the form of a number of multitrack cassette machines, among them the WSX1. Nigel Lord reckons the "studio in a box" is finally here.

## DAT'S VERY SMALL

Miniaturisation continues apace with the introduction of the Aiwa HD-X1 DAT recorder, a very small but full-featured DAT recorder which can also record still video pictures.

The HDX1 is not much larger than the DAT tape itself and fits into the palm of the hand - one recently came into the office and it really does look like a Walkman - making it eminently portable. Still



pictures can be recorded simply by detaching the A/D converter and connecting a video adaptor.

Prices for the HDX1 start at a fairly miniature (for DAT) £350, which must make it the cheapest DAT recorder currently available in the UK. More info on availability from Stirling Audio, Kimberley Road, London NW6. Tel: 01-624 6000. **Dp**

At distributors MCM they've been having babies. To be more specific, they've recently taken delivery of a couple of entry-level MIDI sequencing programs from Opcode and Dr T's.

From Opcode comes EZ Vision (£115) for the Mac, a scaled-down version of their renowned Vision sequencer. Features include an Edit/Record window with graphic display and editing of MIDI events on a 'piano roll' display, a Pencil tool which allows you to draw controller values as straight and curved lines, a Mixing window where you can use on-screen graphic faders for real-time recording of MIDI volume, velocity and pan information, and an Arrangement window which allows you to link different sequences together.

EZ Vision uses icon-based windows, is Apple MIDI Manager-compatible, has a resolution of 480 ppqn (the same as Vision), provides you with Loop Record, Overdub and Punch Record modes, allows you to see and edit multiple tracks simultaneously, and provides you with a Scrub knob (but the less said about that the better, don't you think?).

Opcode now make three different MIDI interfaces for the Mac: Professional Plus (£99) gives you one In and three Outs, Studio Plus 2 (£249) gives you two Ins and six

## TIGER CUBS, VISIONS AND MIDI

Outs, while Studio 3 (£399) provides you with two Ins, six Outs and SMPTE capability. Meanwhile, Dr T's are proud to announce the birth of Tiger Cub (£99), a 12-track sequencer with name and comment fields for each track, large tape recorder-style controls on-screen, 384 ppqn resolution, cue points and familiar GEM-style menus. Graphic real-time editing is implemented and allows you to edit notes while the sequencer is running. A Tempo Map allows different time signatures to be used, down to tick level (eg. a bar can be 453 ticks long). Discontiguous notes can be selected for editing, Instrument/Drum maps can be stored to disk, and real-time muting, soloing and grouping is available. The program also allows you to see on-screen and print out up to 12 staves of music notation, supporting HP Laserjet Series II and Plus, Atari SLM804 laser printer, HP Deskjet and Inkjet, NEC and Panasonic 24-pin and Epson FX/LX-compatible dot-matrix printers.

Tiger Cub implements Dr T's Multi Program Environment, allowing you to load other Dr T's programs and instantly switch between them and share musical data. Music files

created in Tiger Cub are not only compatible with other Dr T's programs such as KCS Level II, MRS, Copyist and the Caged Artist series of synthesiser editors but also, via MIDI Files, with any other company's MIDI software which implements the MIDI Files standard and runs on the same computer. Tiger Cub is already available for the ST, and will be available for the Amiga shortly (in both cases requiring a minimum of 1Meg of memory to run).

Dr T's cheapest sequencing software, the eight-track MIDI Recording Studio (see review in MT July 89), has obviously been a big hit with Commodore UK, as the company have purchased a staggering 10,000 copies of the program for their new educational package 'Class of the 90s'. This package consists of an Amiga 500 and Dr T's MRS1.1 as well as various other bits of software.

Turning to hardware, the new MP44 MIDI Player (£899) from German company MIDItemp is a rack-mounting MIDI processor with a built-in 3.5" disk drive. The MP44 has four main functions: Merge Matrix (4x4 MIDI In and Out, with merging of all four Ins and routing

configurations storable in 256 programs which are selectable via MIDI, footswitch or the front panel), expander controller (providing controller keyboard-type facilities such as split, velocity, transpose, MIDI clock and filtering), sequencer and MIDI data monitor.

The built-in disk drive is 100% compatible with Atari ST and PC MS-DOS v3.3 disk formats, so that songs created using sequencers running on these computers and saved in Standard MIDI Files format can be loaded into and played from the MP44; similarly, sequences created on the MP44 can be played back within sequencing programs which can read Standard MIDI Files.

The MP44 can record MIDI data on all four Ins simultaneously, and play back on all four MIDI Outs. It also functions as a universal SysEx storage device, complete with the ability to send request messages. With onboard RAM expandable to 4Mb, there should be plenty of memory for sequences and patch data.

All of which, in case you hadn't already guessed, should make the MP44 an ideal piece of gear for any musician who uses an ST in the studio for sequencing and patch storage, but wants to go out on the road with something more rugged.

All prices include VAT.

More information from MCM on 01-258 3454, Fax 01-262 8215. **St**



What would you call a guy who fits out a pair of gloves with triggers and links it by radio transmitter to Marillion's live keyboard rig? You'd be best off calling him Steve Hogarth, because this is exactly what the band's new singer has done.

"Because I'd been playing keyboards during the writing and recording the album, there were areas in the live show that needed an extra pair of hands", says Steve. "I didn't want to get tied down to keyboards at the back of the stage and this was a practical way to play a few lines 'on the run'."

The system is the result of two or three months close co-operation between Steve and Kenton Electronics boffin John Price.

"The original idea was for a jacket, but that proved to be impractical. But with a pair of gloves I could do anything at all. I ran the idea past John - gloves with ten switches, could it be done? Yes. Could you then radio transmit the information? Yes. And by June or July last year we had

# THE TOUCH



the prototype."

The system uses ribbon cables inside Steve's sleeves to connect the switches to a trigger-to-MIDI box and on to a guitar radio transmitter. The ten notes form a scale rising in tones from middle C on the left-hand little finger. If anything outside this range is needed, the signals are transposed.

Having got it into rehearsal and used it, Steve realised it could have interesting visual possibilities: "I thought it would be interesting if there was a glass screen I could play against, then I could play towards the audience. Now we've got lights shining across it so the gloves light up in different colours."

At the back of the stage, the

radio receiver feeds straight into Mark Kelly's keyboard rig as another MIDI controller. Presently Steve is accessing Mark's Akai S1000, Roland D50 and Korg M1.

When asked about the commercial possibilities of the system, Steve is more reserved: "It's so quirky, I don't know if would be of any use to anyone else. It's not terribly expensive - we spent a lot of time developing it but, in terms of components, the cost is considerably under £1000. We may be marketing the radio system, because that could be useful to a lot of players using MIDI controllers strapped around their necks. I remember seeing Andrew Roachford using a remote keyboard and dragging a multicore around, and I thought this might be useful to him."

Whether or not the system turns out to have commercial potential, it's a novel way of using MIDI not only as a musical system but as part of a live concept. In the meantime Steve reports all is going well in the Marillion camp. **Tg**

## THE THREE FLOORS OF ARGENTS

When keyboard player Rod Argent opened his own music shop, Rod Argent's Keyboards, at 20 Denmark Street in the heart of London's West End in 1977, he was acknowledging that times were changing. Keyboard instrument technology was developing at a rapid pace, and as a keyboard player himself he realised that a shop dedicated to matters hi-tech was needed. He was right.

Today, just over twelve years later, Argents is located at the same address but has recently undergone a complete rethink on what a hi-tech music shop should be. After all, musical technology has multiplied and diversified at an alarming rate in recent years, and so Argents decided on a complete redesign and refurbishment of the shop, based around a three-tiered approach to selling technology, with ground, middle and top floors fulfilling different functions. At the same time the dingy, cramped and generally uninviting atmosphere of old has been replaced by an invitingly bright, spacious and

modern interior design, while Argents' home keyboard-oriented Key West shop, which was previously only accessible from neighbouring Denmark Place, is now accessible from Denmark Place and from the main shop. So now the home keyboard beginner can literally walk a few steps into the realm of more sophisticated technology - while the more



sophisticated technology user can keep an eye on the latest in auto-accompaniment technology!

Argents' three floors allow them to accommodate the casual punter-off-the-street in a traditionally informal setting on the ground floor while adopting the more person-

alised appointment-only approach pioneered by the likes of Syco on the middle and top floors. The ground floor includes two demonstration studios which offer a measure of tranquillity away from the general melee of the front-of-shop area, and a more personal service without the need to book an appointment. These studios take on 'themes' which will change from time to time; as of writing, one is given over to Atari ST software while the other is a 'Roland room'.

But if it's extra loving care and attention you want, plus the opportunity to investigate various configurations of gear in more detail, you can make that appointment and ascend to the middle level. Furthermore, Argents' long-standing service centre, which deals with both old and new gear, is still in effect and now located on the middle floor.

In the latter half of the '80s, Argents stuck by the Apple Macintosh in its various guises while the Atari ST became the computer of choice for most MIDI

musicians in the UK (in the US the Mac has always enjoyed widespread popularity among musicians). Now with new digital audio recording systems like Digidesign's Sound Tools and Steinberg Digital Audio's forthcoming Topaz both being based around the Mac II, a new area of opportunity is opening up for the Mac. Accordingly, Argents have teamed up with UK Macintosh suppliers Quadrant to present a Mac II-based computer music suite on the Top Level where, once again by appointment only, customers will be able to investigate a wide range of Mac software, including Digidesign's Sound Tools.

Finally, Argents now publish The Argents Advantage, their own regular newsletter (produced on a Mac, of course) whose purpose it is to keep you in touch with what's coming and going at the shop. Argents have been serving the needs of hi-tech musicians for many years. Now it looks like they'll be doing the same for many more years to come. **St**



# communiqué

## sex...

Oh dear, poor Tim Goodyer. Not only does he have to produce articles of 650 words that inform and entertain us, but he now gets criticism of his journalistic style, and never a word of thanks. If we're not careful, he'll take his ball away and refuse to play altogether.

It's true, few people would consider "thanking" MT for giving us articles on women or black people in music. Neither would I thank a baker for selling white and brown bread, or a garage for selling a car that worked. I would expect it. Having said this, it's also the case that the specialist press, especially that with a concentration on technology of any sort, tend to ignore the moral and socio-political implications of both the technology they cover and their own style of journalism. It may be just as unrealistic to expect an expression of political awareness in MT.

However, many of MT's readers are at home in the world of the arts, and are, therefore, aware of the wider social and political developments there. MT need not be afraid of losing readers by refusing to appeal to the common denominator.

Tim Goodyer suggests that, rather than criticise the way he writes his comments, we do something more practical to bring more women into the field. This shows ignorance of the way the language we use, both in style and content, can affect attitudes and aspirations. Think of words such as "housekeeper", "nurse", "engineer" and "accountant" and you'll see what I mean. Is it surprising that there are so few women engineers when our immediate image of them is male?

Ideally MT would confront the matter positively - by using "she"

where "he" would usually be found. Even if this policy were adopted in half the articles it would help. It may be more realistic to hope that MT will simply stop being negative and offer a neutral alternative.

On a more positive note, I find Tim Goodyer's writing, and the magazine in general, informative, entertaining and friendly - and this included this particular article. For once I will offer my thanks.

Finally, I am currently working with the Northampton-based *Outrider Cooperative* who will be opening a new studio early in 1990. With the support of East Midlands Arts and Northamptonshire County Council we will be running introductory training courses, one of which will be reserved for women. Bursaries will be available for those who cannot afford the full (but reasonable) fee, or who otherwise might be denied access to technology. Further details are available on (0604) 714053.

**David Howard**  
Northampton

## ...and more sex

Tim Goodyer put my nose out of joint with his stinging rebuttal of Rob Baylis in the December issue of MT (Sex Crime). I feel this is a problem all writers should try harder to solve.

I am no great grammatical genius, but it has often struck me that surely the word "their" can be used instead of his/her, and your other example "A&R men" can be written just as easily as A&R people. Yes, they do look strange but that is because we are accustomed to the old type of phrasing. It's our responsibility to make new phrasing look just as normal through constant usage. Another common form used by

women writers who wish to include the other 50% of the population is "s/he". Again, it only looks clumsy because we're not used to seeing it. You must agree that these forms do push into our male consciousness - we always assume we are talking to other men.

If you still feel that this is all very trivial, how about always using she and her for the next few issues, then we can all experience how it feels to be implicitly excluded.

I also feel that you should not be congratulated on featuring black and female artists as it is your job to cover talent wherever it arises, though I do thank you for your coverage of all minorities - musicians, synth buyers and so on.

As for Rob (and me now, for that matter) directing our energies towards complaining to other people, how do you know we don't? You miss the implication that I enjoy and care about MT, and feel it is important that your editorial should get it right. Will you now do an article on women record producers and engineers so you can enlighten us as to how many and who they are?

I think Rob hit home with his criticism. To challenge him to write the editorial is a cheap shot, you don't have to be Dickens to know a good novel when you read it. Come on, Tim, have the guts to rethink and publish this letter in full.

**Sean Sanderson**  
Spectrum Music Group  
Lancaster

*Well, I've certainly stirred up the otherwise placid MT readership over this one. Am I sorry? Not a bit of it. I am glad that you feel so strongly about the issue - I just wish it were as easy to provoke a response to matters of musical importance.*

*While you seem happy to take for granted that MT gives equal credence to artists of any colour, nationality and sex, I wonder if you're aware of how much of the press does not - it's not as easy to recognise from the outside as you might believe. Last April we substituted women's names for men's and men's names for women's on the magazine's staff listing (it seemed like an amusing idea at the time). Apart from the desired result, we subsequently dealt with a remarkable number of phone calls and letters intended for "Wendy" Goodyer, "Simone" Trask, and so on. It seems that people are quite happy to accept that a magazine of the nature and standard of MT could be produced by a team (predominantly) of women. Draw your own conclusions.*

*Moving on to politics, should MT have an overt political stance? Having our own political views and dealing with matters of politics where they directly affect music is healthy enough, but do you really want us to try to influence the outcome of the next general election through a music technology magazine?*

*Incidentally, Rob Baylis and David Howard did accept the challenge to re-write my editorial. David's strayed so far from the point I was trying to make that it really wasn't an alternative, while Rob's read in exactly the way I'd tried to avoid it reading. I mention these not to gloat, but to avoid accusations of exercising unfair editorial license. In other circumstances I'd have been happy to use "A&R person" and so on (watch and see), but this time it just didn't seem to work. Which brings me to my final point: did anybody actually pay any attention to the content of the editorial rather than its style? Tg*

# NORTH-WEST ENSONIQ PRO-DEALER EVERY MODEL IN STOCK!

MIRAGE

ESP PIANO

ESP-M MODULE

ESO-1

SQ80

VFX \*

VFX SD \*



\* See specifications elsewhere in  
this magazine of ENSONIQ G B

PHONE  
FOR  
PRICES

MOST  
ACCESSORIES  
+ LOADS OF  
NEW SOUNDS

EPS \*  
EPS (M) \*



**E-MU  
PROTEUS  
E-MAX II  
IN STOCK**

# Roland and



1/57 CHESTER ROAD, NORTHWICH, CHESHIRE  
TELEPHONE (0606) 782522/783629  
OPEN 10am-6pm LATE NIGHT THURSDAY  
THE DEDICATED KEYBOARD CENTRE



OFFICIAL  
NORTH-WEST  
DEALER

S770

W30

RA 50

E5

PAD T3

**KORG**

M1

M3R

DF1

A3

EYE CATCHERS  
KEYBOARDS . . . . .

**ROLAND**

Juno 2 (+ PG300) .....	£450
Juno 6 .....	£169
Jupiter 8 .....	£699
Juno 106 .....	£399

**KORG**

Polysix .....	£175
Poly GI .....	£225
DW6000 .....	£275
DW8000 .....	£450
M1 .....	£1150

**OTHER**

Casio CZ-1 .....	£499
ESO-1 .....	£599
Technics PX5 .....	£699
Yamaha C570M .....	£250
Rhodes ST54 .....	£199
Rhodes ST73 .....	£299
Emax SE K/Bd .....	£1399
Akai AX73 .....	£399
Yamaha DX7 .....	£599
Cheetah MQ8 .....	£215
Oberheim Matrix 1000 ...	£175
Oberheim Systemizer.....	£99
Navigator .....	£99

JUST COZ IT'S OLD DON'T  
MEAN IT'S COLD! ALWAYS  
A GREAT SELECTION  
OF S/H WARM SYNTHS

ALL NEW  
PRODUCTS  
IN STOCK

e.g. U-220  
RHODES  
MK80  
etc.

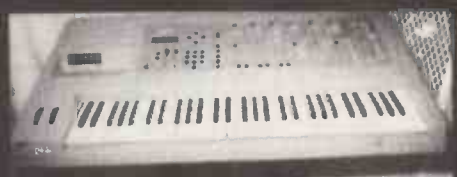
ALESIS  
ARIA  
ATARI  
ART  
BEYER  
CASIO  
CHEETAH  
EMAX  
ENSONIQ  
FENDER  
FOSTEX  
GIBSON  
HYBRID ARTS  
KORG

KURZWEIL  
LANEY  
NOMAD  
OBERHEIM  
PEARL  
PEAVEY  
ROLAND  
SABIAN  
SOLO  
SONOR  
STEINBERG  
SHURE  
SOUNDBITS  
TANNOY  
XRI

SOFTWARE SELLOUT  
H. ARTS SYNCTRACK  
SMPT  
VIRTUOSO C-LAB  
STEINBERG  
PHONE 0606-783629



E111



ALWAYS IN STOCK

preview

# STEINBERG TOPAZ

## Computer Controlled Recorder



DURING THE PAST decade we have seen sampling begin as expensive dedicated computer music systems like the Fairlight CMI and NED Synclavier, and end up as mass-market technology which has exerted a powerful influence on popular music.

The '90s equivalent is set to be computer-based digital audio recording. While dedicated systems such as the AMS Audiofile have been on the market for several years now, systems based around a general-purpose computer, which have only begun to emerge in the past year, look set to become increasingly significant. And none more so than Steinberg Digital Audio's Mac II-based stereo/two-track Topaz, which is due to be launched in February. At around the same time (and this is one reason why computer-based systems will be so attractive), Steinberg will also be launching the Mac version of Cubase, which will be able to run concurrently with Topaz under M.ROS, the company's multitasking operating system. This integrating of digital audio recording and MIDI sequencing is ultimately where the future of recording lies, and by combining the two in a single integrated environment Steinberg have placed themselves at the forefront of recording technology.

The extent of this integration is unclear at present, but obviously the two programs will be synchronised automatically by M.ROS. They have very similar Transport windows, suggesting that you'll be able to fast forward and rewind both from whichever program you're in. Conceptually it would make sense if Topaz were treated as tracks within Cubase, with global cut and paste editing affecting both alike, but we'll have to wait and see. One very significant feature of Topaz is its ability to perform time compression and expansion of recorded material in real time, so that, theoretically, tempo-change edits should present as little problem in the audio as they do in the MIDI domain.

What will set Topaz apart from other computer-based systems like Hybrid Arts' ADAPII (for the ST) and Digidesign's Sound Tools (for the Mac II and Mac SE) is its ability to be expanded to a 16-track system with the addition of up to seven further Topaz units. Steinberg are planning to make the multitrack version available in the summer (of 1990, dear reader). Although the additional Topaz units will cost less than

the initial unit, a 16-track system still ain't gonna be cheap (see below for preliminary pricing details).

The Topaz electronics, mass storage units and backup medium are housed in a 6U-high 19" casing, but by itself this "black box" is pretty useless. Topaz requires a Mac II, IIcx or IIx with at least 2Mb of RAM to act as the user interface and controller. Communications between computer and Topaz unit are carried out via RS422 interfacing. For multitrack applications, a fast networking system known as Arcnet will be employed.

Timecode synchronisation for both Topaz and Cubase will be handled by Steinberg's MLTC synchroniser, a 1U-high 19" unit which can read and write all timecode formats and provides two MIDI Ins and two MIDI Outs (in addition each Topaz unit has MIDI In, Out and Thru - you just can't get away from the demon five-pin DIN). AES/EBU interfacing will be available for digital transfer of audio data (necessary for such applications as DAT editing and CD mastering).

The hardware for the Topaz unit consists of a processor module with a 68000 processor as well as 2Mb RAM and a network controller, a Direct Memory Access module with SCSI interface and 2Mb RAM, a DSP module with up to eight Texas Instruments TMS320-C25 processors, an I/O module and an analogue converter module. The modules are connected together using a fast parallel bus. Topaz will be delivered with 16-bit linear A/D and D/A converters as standard, although for purely digital applications it will be possible to buy the system minus converters. The A/D converter utilises high-quality analogue anti-aliasing filters and the D/A converter uses four times oversampling and digital filtering. All analogue inputs and outputs are electronically balanced, and automatic de-emphasis is available in the D/A section.

Each Topaz unit comes with a 320Mb hard disk built in, allowing 84 minutes recording time at a sample rate of 32kHz, 60 minutes at 44.1kHz and 55 minutes at 48kHz. You'll be able to double the memory using a second hard disk, giving you around two hours of stereo recording at 44.1kHz. For backing up data, a built-in cassette streamer with a storage capacity of 150Mb per cassette will be provided, though at additional cost a faster streamer

will be able to back up as much as 2Gbytes three times faster than real-time to 8mm cassette.

As you might expect, the Mac II software front-end is window-oriented, and you'll be able to create your own configuration of the Master, Transport, SMPTE and Directory windows. As well as offering on-screen master volume faders for each channel, the Master window also provides a graphic layout of a triple parametric digital EQ with high- and low-pass filtering. The overall design of this window is reminiscent of a channel on a mixing desk, while the Transport window is modelled on the transport controls you typically find on a tape machine - all of which helps to give an impression of familiarity. However, while the basic operational principles of analogue recording and computer-based digital recording may be the same, the latter allows you to do things that would either be impossible or extremely difficult with tape. Being able to change the duration of a recording but not its pitch, and the pitch but not the duration, are obvious examples, as is the fact that you can jump to any location in a track virtually instantaneously.

Unlike tape editing, which requires you to physically cut up lengths of tape, editing computer-based digital audio is "non-destructive". What this means is that the recorded data isn't disturbed in any way. Instead, the points where you "cut up" your digital audio track are held as a list of memory locations, and Topaz' control software merely has to refer to this list and jump to the relevant memory locations at the appropriate time.

The basic audio element of Topaz is a mono or phase-locked stereo digital Recording; you can create up to 4000 of these. A Recording can be assigned to one or more Programs, of which you can have up to 7000. As each Program has Start Point, End Point, Volume, Pan, Speed, Pitch and Time Correction playback parameters, it's clear that the same digital audio data can be used in different contexts through being assigned to more than one Program.

An Event Decision List, which is presented in text and graphic forms, controls the order and start-times of the Programs, with up to 1000 events possible per track. Not unlike the type of organisation employed by MIDI sequencer programs, eh? In fact, Topaz EDLs should fit readily into the type of track display employed by Cubase (surprise surprise).

Topaz users will be able to download software updates from a central computer in Hamburg via modem communication. Topaz is an open-ended system, and Steinberg intend to add digital effects such as compression, limiting, chorusing and flanging at some point in the future.

We've been dealing with a lot of figures in this preview, but there's one figure we haven't touched on yet: the cost. Well, one Topaz unit with built-in 320Mb hard disk will cost around about £16,000, which means that when you add on the cost of a Mac II, Ilcx or Ilx and Cubase (think integrated) you're talking in the region of £20,000, or roughly the cost of a Fairlight CMI Series II ten years ago. But just look at the sophistication of what you're getting (or dreaming about, if you're like me) compared to the Fairlight, both in terms of the digital audio and the sequencing

(and at around 2.5% of the total cost, Cubase starts to look like extremely good value for money). What's more, a £20,000 price tag is lower in real terms than it was ten years ago.

While the standard recording medium for computer-based digital audio systems is currently the hard disk, read/write optical disk storage is waiting in the wings, and in the long run should be a cheaper, more compact recording and storage medium. We can also expect to see recording times quadrupled by methods of compressing digital audio which are being worked on at the moment (though whether SDA are working on audio data compression I don't know).

Obviously computer-based digital audio recording is going to be considerably more expensive than analogue tape recording for some while to come. It may also be that we'll see a period of ascendancy for "budget" digital multitrack tape machines before the computer-based alternative becomes widespread - after all, DAT has fairly quickly become the two-track mastering medium of choice for many musicians on the basis of quality and price. But at the end of the day (end of the decade?) computer-based digital audio recording must win out on sheer flexibility - not only in terms of what you can do with the audio data once it's in computer memory, but also in terms of the range of applications it's well suited to. For one thing, you can't edit DAT tapes as such, but you can transfer your DAT recordings to a computer and edit them there, then transfer them back to tape - all within the digital audio domain (thanks to AES/EBU). CD mastering, remixing, film and video post-production, editing of recorded material such as interviews and plays for radio broadcast, and recording of announcements, jingles and the like for radio and TV are all possible applications which should ensure that computer-based digital audio has a healthy future. The implications of time compression/expansion are wide-ranging and profound. Used in conjunction with pitch-shifting, the potential exists for surreal musical combinations which haven't been possible before (the *real* sampling revolution, perhaps?). But there are other, less obvious and perhaps more sinister possibilities. For instance, imagine that you're the producer of a radio show and you've got an interview which lasts three minutes but you want to fit it into two minutes and thirty seconds. The temptation to apply time compression would obviously be strong, but would it be right to use it? I suppose this is akin to "retouching" a film using the sophisticated computer-based digital video editing techniques available nowadays. What price "reality"?

But getting back to music and back to Topaz (you'll have to excuse me, it's nearly Christmas as I write this and the drinks are on the Editor). What should really ensure the future of computer-based digital audio recording in musical circles is the fact that it allows audio data to be manipulated with the same degree of flexibility and ease as a sequencer allows MIDI data to be manipulated. Well, that's the theory. When Topaz arrives with Cubase in tow, we'll be able to see how the theory translates into "reality".

■ **Simon Trask**



# SOUNDS LIKE THE ONLY CHOICE.



The Ensoniq EPS and rack-mount EPS-M have become the most popular sampling workstations in the world. Why? Because Ensoniq promises to make your EPS continue to grow in value. And musicians appreciate that.

## Sounds

Every EPS sound disk is a fulfillment of that promise. Ensoniq has pioneered the use of top industry players,

engineers and producers to capture "hit" sounds for the EPS sound library, including our highly praised Signature Series.

From new acoustic instruments and Holophonic™ sound effects to imaginative synthetic creations, Ensoniq gives you thousands of sounds to choose from. And more to come. With each new disk the EPS becomes a new instrument. That's a benefit only a sampler-based workstation can offer, and only Ensoniq delivers.

## Features

Without question the EPS and EPS-M have set the standard for ease-of-use. Sixteen-track sequencing, MIDI auto-mix, innovative SCSI implementation as well as our exclusive Patch Selects and Poly-Key™ Pressure keyboard give you unparalleled power for music performance and composition. Want a sampling workstation? There is no other choice than the Ensoniq EPS/EPS-M.

## OTHER SOUND CHOICES.

### The Ensoniq VFX— The Ultimate Synthesizer

Fat, animated sounds coupled with 24-bit dynamic effects and advanced MIDI control.



### The Ensoniq VFX<sup>SD</sup>—The First Music Production Synthesizer

All the power of a VFX with an advanced 24-track sequencer, disk drive, additional drum/percussion waves and multiple outputs.



Whether you need a synthesizer or sampler, look to the award-winning American company that makes technology more musical—Ensoniq.

**ensoniq**®

THE TECHNOLOGY THAT PERFORMS

IF YOU WANT TO KNOW WHERE TO SAMPLE THE WORLD'S BIGGEST SELLING SAMPLING WORKSTATION WE'LL TELL YOU WHERE TO GO...

CALL PAUL ON: **0268 561177**

# Touch the Inspiration

**ensoniq**<sup>®</sup>

THE TECHNOLOGY THAT PERFORMS

Presents

**ENSONIQ**

*Performance*  
SPRING '90 Tour

Join us for an evening of Sounds

Features, Music and MIDI to inspire your music

featuring

**PETER-JOHN VETTESE**

producer/performer/writer/programmer

Peter is the man behind the

sounds of: Carly Simon, Clannad,

Cutting Crew, Foreigner, Frankie Goes To Hollywood,

Go West, Jethro Tull, Johnny Hates Jazz, Pet Shop Boys, The Bee Gees

etc. If you want to know how to write hits and make sense of MIDI Peter will

demonstrate the sounds that make gold and show you how to: 'Have Fun Making Hits'

Plus

## 'The Samplers Guide To The Galaxy'

Renowned studio programmers show you how to make the most of sampling and sample libraries.

Creative editing and sequencing for fun and profit. What's legal and what's hot! Featuring samplers who have worked their magic for Stevie Wonder, Vangelis, Jean Michelle Jarre and more.

This is a 'must see' Ensoniq event so contact the store nearest you for tickets priced £1 now. Hurry because venues have limited capacity and it's first come first served.

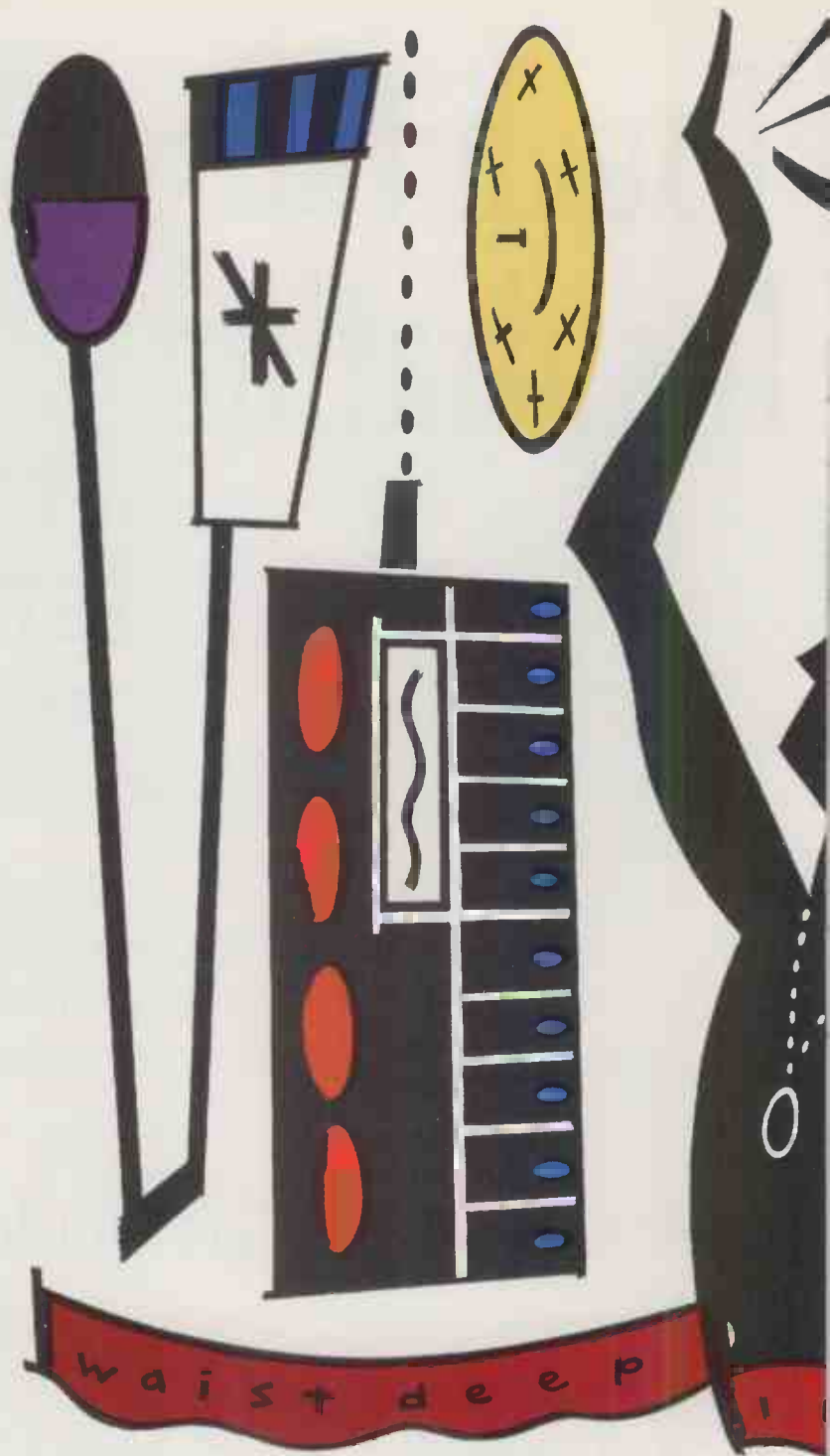
<i>date</i>	<i>city</i>	<i>contact</i>
Monday 19th February	GLASGOW	McCormacks 041 332 6644
Tuesday 20th February	EDINBURGH	Rainbow Music 031 557 5848
Wednesday 21st February	LEEDS	Carlsbro 0532 405077
Thursday 22nd February	MANCHESTER	Streetwise 061 835 2127
Monday 26th February	CARDIFF	Livewire 0222 373576
Tuesday 27th February	DERBY	Carlsbro 0332 48156
Wednesday 28th February	BIRMINGHAM	Musical Exchanges 021 236 7544

# ON THE

# BEAT

## PART 7

**IN THE '70S REGGAE ARRIVED ON THE BRITISH MUSIC SCENE AS ONE OF THE MOST REFRESHING INFLUENCES OF THE DECADE; IN THE EARLY '80S THE POLICE MADE IT THE BASIS OF THEIR SUCCESS; IN 1990 IT APPEARS IN "ON THE BEAT"... TEXT BY NIGEL LORD.**



WITH THE (NOW) widespread acceptance of African music amongst audiences both in this country and the continent, and the successful assimilation of hip hop into the charts as well as the dancefloors, it is perhaps time someone acknowledged the part reggae has played in shaping our understanding of contemporary pop.

In addition to extending cultural horizons beyond simply the music of Britain and America, reggae's refreshingly different rhythmic emphasis was possibly the first serious challenge to Western preconceptions about

popular dance rhythm in nearly two decades. And with mid-'70s toasters from U-Roy onwards laying down what can only be described as the prototype rap tracks, tracing a direct line of descent to present day hip hop and house styles would not prove a particularly exhausting task.

Sadly, with a few notable exceptions, reggae has all but disappeared as an overt musical force in this country: a victim of its own resistance to change. During its flowering in the second half of the '70s, however, one of the most striking aspects of its popularity was its



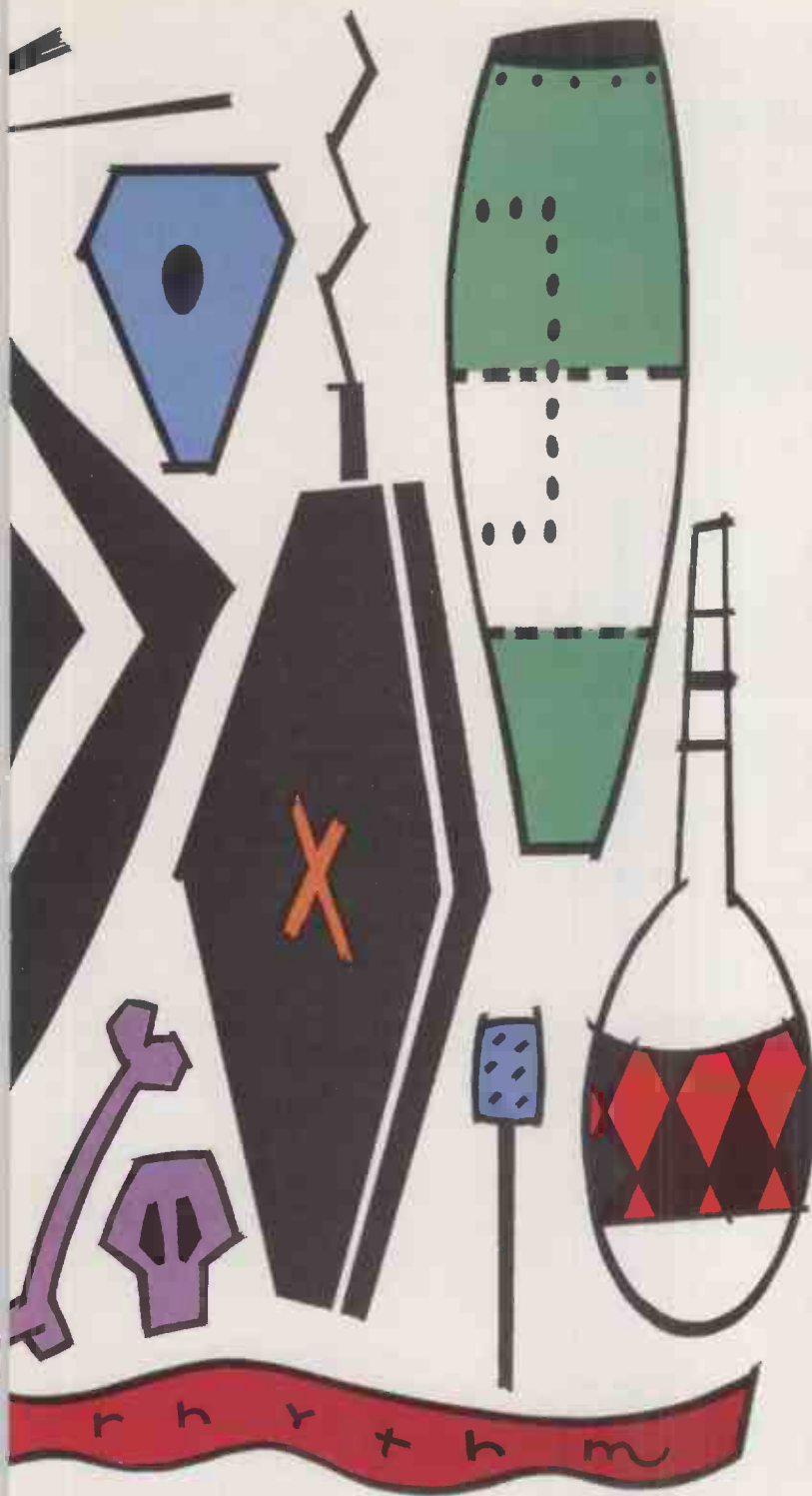


ILLUSTRATION: CLIVE GOODYER

ready absorption into mainstream pop - both culturally and rhythmically. As so often happens, the common perception of what constitutes reggae music was coloured to a considerable extent by the unselfconsciously plagiaristic tendencies of many white musicians. Of course, when we're talking about bands of the calibre of the Police, this poses no problem at all, but I can remember a time (round about '77-'78) when seemingly every gigging band decided they had to introduce a reggae track into their set - often with some pretty dire results.

Speaking of the Police, few drummers

(reggae or otherwise) would deny the huge influence Stewart Copeland has exerted within the skin-bashing fraternity. His style, though never a model of technical excellence, is, nevertheless, wonderfully fluid and shows great feel. No-one in pop music can punctuate a song quite like Copeland, his use of accents and intricate hi-hat patterns is often quite inspired. Certainly, there's more than a passing nod in his direction in many of the figures which serve to embellish this month's patterns - and I would be the last to wish to conceal the fact.

Part of the reasoning behind this is

that, stripped down to its bare essentials and removed from its rightful position alongside a complementary bass line and clipped guitar chords, the quintessential reggae drum track is somewhat less than remarkable - often comprising nothing more edifying than a 4/4 bar with the bass drum on beat one and a snare on beat three. As you might imagine, in a series which cannot rely on programmers being able to call upon the services of the extra musicians which a style like reggae ultimately demands, it has been necessary to synthesise a reggae feel to the patterns included, using, wherever possible, the trademarks adopted by reggae drummers (Copeland among them) over the last couple of decades.

This includes of course, certain stipulations about the drum sounds themselves, which in general should be fairly tight - and in the case of the snare drum, quite highly tuned and "ringy". This latter point is actually pretty important if you are to achieve a convincing effect. In fact, you could try substituting a timbale for the snare drum if one is available, or better still combine the two to get the inherent ringiness of the timbale with the depth of the snare.

Incidentally, as a general rule, I've found that simply raising the pitch of a sample (on those machines where this is possible) doesn't provide very convincing results. It may just be the machines I've used, but it seems that changing the pitch of percussive samples, though quite interesting in its own right, falls some way short of recreating the effect of physically raising or lowering the pitch of the acoustic instrument. Perhaps one of our more erudite American authors will write a 16-part series on the subject, one day. . .

As you will see, extensive use is made of the accented snare beat combined with a crash cymbal stroke, and this is particularly effective within reggae patterns, especially when played as off-beats, as they mostly are here. It should be noted however, that in all cases the dynamic level of the cymbal needs to be much lower than that of the snare: as I pointed out last month, it isn't possible to notate dynamic levels between instruments in a way that would have any meaning for every type ▶

PATTERN No: 1a		TEMPO: 115-130 BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Crash Cymb																	
Snare Drum																	
Side Stick		◆	◆			◆	◆			◆	◆			◆	◆		
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 1				BAR 2				BAR 3				BAR 4			

PATTERN No: 1b		TEMPO: 115-130 BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Crash Cymb																	
Snare Drum																	
Side Stick		◆	◆			◆	◆			◆	◆			◆	◆		
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 5				BAR 6				BAR 7				BAR 8			

PATTERN No: 2a		TEMPO: 110-135 BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Snare Drum																	
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 1				BAR 2				BAR 3				BAR 4			

PATTERN No: 2b		TEMPO: 110-135 BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Snare Drum																	
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 5				BAR 6				BAR 7				BAR 8			

PATTERN No: 3a		TEMPO: 140-180BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Crash Cymb																	
Snare Drum																	
Side Stick		◆				◆				◆				◆			
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 1				BAR 2				BAR 3				BAR 4			

PATTERN No: 3b		TEMPO: 140-180BPM															
BEAT:		1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
Clsd HiHat		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat																	
Crash Cymb																	
Snare Drum																	
Side Stick		◆				◆				◆				◆			
Bass Drum		◆				◆				◆				◆			
TIME SIG: 4/4		BAR 5				BAR 6				BAR 7				BAR 8			

► of machine, so you'll need to experiment. Once you've established the correct proportions however, you should find it possible to stick to them - as indeed you should for the instruments in all the patterns included here.

Of all this month's examples, Pattern 1 probably has the most obviously reggae feel to it. It rolls along at a fairly sedate pace in that characteristically lilting reggae groove, until... blat! Right at the end of bar six there's a hard, uncompromising accented offbeat to spice things up a little. The snare flams in bars two, four and six should also be accented: that is to say, the second of the two notes should be considerably louder than the first (if you have no flam facility, program these as consecutive 64th notes).

As with all rolls, if it is to sound convincing, the snare figure in bar eight really needs to be given some care when programming. In case it isn't clear, the first three notes should be played in the space of one quarter of a beat (half of one square on the grid), and should be comprised of a low, then two medium dynamic notes.

By itself, pattern two isn't immediately recognisable as a reggae groove; it's one of those fairly conventional patterns which really do need a well-chosen bassline if they are to succeed as a rhythm track. Having said that, it does have rather an interesting hi-hat part to recommend it: the timing is more or less the same as the snare figure in the last example, but the levels are somewhat different. Once again, an accent on the second beat of the flams would make all the difference, and don't forget the higher dynamic on the last open hi-hat note in bar eight.

Speaking of open hi-hats, pattern three features a quite prominent open hi-hat part which fits nicely around the fairly rigid bass/snare lines. An altogether faster groove, this one needs to run at over 140bpm for best effect, but once again, there's plenty of space to slot in other rhythmic instruments - particularly chopped guitar chords on the second and fourth beats of each bar. The side stick could easily be replaced by other, short duration instruments, but it's a sound which fits nicely in a reggae groove and provides considerable rhythmic interest. It's also a sound traditionally used by reggae drummers.

Pattern four is a further example of what can be done with other instruments even if bass and snare drums are anchored down to their traditional positions in the bar. The three tom toms provide what are, perhaps, the most distinctive figures, and for this reason need to be kept well down in the mix. And the same is true of the crash cymbal, which, in this ►

# Call in Confidence

01-769 5681

01-690 8621

## KORG T3

Extra PCM samples, 200 programs, Disk drive, 56,000 note memory sequencer, dual MIDI outs (32 channels). £2,300 RRP

## KORG M3R

M1 Module equivalent, in a 1U module. 16 note poly, 4 separate outs, dual FX. £849 RRP

## ROLAND U20

Sample player keyboard with FX. 6 instruments and 4 separate outputs, 31 note poly, New D to A sound filter offers improved Signal to Noise ratio and cleaner sound. Great guitar sample. Expandable by PCM card library. £1,050 RRP

## ROLAND U220

Rack module version of above. £699 RRP

## KAWAI K4

16 bit samples, filter, built in FX, sounds superb £899 RRP

## KAWAI K1 II

Based on the ever popular K1, with the added bonus of a separate drum sound section and effects £665 RRP

## DYNACORD ADS rack sampler

16 bit stereo sampler, 20K bandwidth, 2 Meg standard, expandable to 8 Meg, reads S900 disks, 16 note poly, SCSI interface, sound fusion, FX send, separate outs, etc. etc. £1,850 RRP



## ATARI 1040

STE the latest addition to the Atari range enhanced features: call for details

## SOFTWARE BLITZ

For the latest in Music, Multi Media and Business software, talk to the soft boys – Atari ST (an industry standard), Stacey (portable), Amiga (multitasking), Archimedes (32 bit power speeds to town).

CLAB NOTATOR, Steinberg CUBASE, Virtuoso and Dr T in stock.

BLITZ – price slash on Hybrid Arts software for the ST and Commodore C64 software.

Sequencer Accessory PD disk only £5.60

## YAMAHA MT3X

6 into 4 Multitrack Cassette Recorder, 2 speed with DBX £549  
 YAMAHA Q100 Stereo Graphic £125  
 YAMAHA MV100 Mic Line mixer £145  
 YAMAHA GSP100 Guitar Processor £145  
 YAMAHA A100 Amplifier £190  
 YAMAHA FX500 Effects £349  
 YAMAHA SPX900 multi effects £599

## CHEETAH

HOT PRODUCTS  
 MQ8 Sequencer, 8 track, 20,000 event £249  
 MD8 Drum Machine £299  
 7P Master Keyboard, 7 octave, weighted £690  
 SX16 Sampler  
 BIG LIBRARY AVAILABLE AT CATFORD

## QUICKIES

EX-DEM and USED  
 YAMAHA RX120 Pre set Drum Machine £195  
 Yamaha RX8 (Catford) £POA  
 KORG POLY 61 MIDI £290  
 ROLAND D50 £999  
 YAMAHA YS100 £449  
 KORG SDD3300 Triple Delay £399  
 IBANEZ DD1000 Dual Delay £199  
 KORG GR1 Reverb £149  
 TEAC 144 (Catford) £195

## RECORDING SPECIALISTS

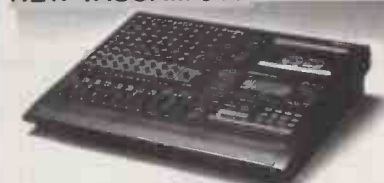
48/16 & 24 TRACK SYSTEM PACKAGES  
 TAILORED TO YOUR SPECIFIC REQUIREMENTS

## TASCAM MSR24

24 Track Recorder on 1" tape £8,399 inc VAT



## NEW TASCAM 644



Tascam 644 dual speed 4 track. 16 inputs. 2 aux sends. Onboard MIDI tape sync. Real channel mute and much more £999

## NEW TASCAM 688



Tascam 688 High speed 9.5cms. 20 inputs. 2 aux sends, 4 aux returns, unique scene display shows system set. Peak LED meter bridge. 3 Band EQ with mid sweep 8 tape + 8 group outputs under 2K. Phone for details. £1999



XL  
 EXTRA LARGE

86/88 MITCHAM LANE  
 LONDON SW16  
 01 769 5681/6496  
 20/22 RUSHEY GREEN  
 LONDON SE8 4AB  
 01 690 8621/8622  
 FAX: 01 769 9350

TWO NEW MUSIC COMPLEXES IN LONDON

PATTERN No: 4a				TEMPO: 100-130 BPM				
BEAT:	1	2	3	4	1	2	3	4
Clsd HiHat	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆				◆			
Crash Cymb	◆							
Snare Drum		◆				◆		
Hi Tom Tom			◆	◆				
Mid Tom Tom								
Lo Tom Tom								
Bass Drum	◆				◆			
TIME SIG: 4/4	BAR 1		BAR 2		BAR 3		BAR 4	

► pattern, goes beyond the role of simply accenting the snare as in previous examples. Incidentally, if your machine only has two toms available, combining the mid and low parts together shouldn't prove too much of a compromise to the overall sound, and neither would accenting the high tom beat in bar eight rather than programming a flam.

Though moving away from the classic reggae structure, pattern five has, nevertheless, an undeniable reggae feel to it which is quite

PATTERN No: 4b				TEMPO: 100-130 BPM				
BEAT:	1	2	3	4	1	2	3	4
Clsd HiHat	◆	◆	◆	◆	◆	◆	◆	◆
Open HiHat	◆				◆			
Crash Cymb	◆							
Snare Drum		◆				◆		
Hi Tom Tom								
Mid Tom Tom								
Lo Tom Tom								
Bass Drum	◆				◆			
TIME SIG: 4/4	BAR 5		BAR 6		BAR 7		BAR 8	

PATTERN No: 5a				TEMPO: 110-130 BPM				
BEAT:	1	2	3	4	1	2	3	4
Clsd HiHat	◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb								
Snare Drum			◆	◆		◆	◆	◆
Side Stick	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆				◆			
TIME SIG: 4/4	BAR 1		BAR 2		BAR 3		BAR 4	

PATTERN No: 5b				TEMPO: 110-130 BPM				
BEAT:	1	2	3	4	1	2	3	4
Clsd HiHat	◆	◆	◆	◆	◆	◆	◆	◆
Crash Cymb								
Snare Drum			◆	◆		◆	◆	◆
Side Stick	◆	◆	◆	◆	◆	◆	◆	◆
Bass Drum	◆				◆			
TIME SIG: 4/4	BAR 5		BAR 6		BAR 7		BAR 8	





PHOTOGRAPHY: JAMES CUMPSTY

The trouble with investing money and time in a modern synthesiser is that you know it'll soon be out of date. You can only hope that someone designs an upgrade for it - like the MEX board for the D50. Review by Gordon Reid.

**A**LTHOUGH THE ADVENT of the modern breed of hybrid sample reader/synthesiser instruments was heralded by Roland back in 1987, the D50 has, in just two years, been dramatically superseded by synths such as Korg's M1 and Ensoniq's VFX. Without entering into an argument about the relative merits of these instruments, the Korg and the Ensoniq certainly boast better MIDI and performance facilities than the D50. Since many D50s and D550s now spend their lives in MIDI rigs, it's time someone updated them. Roland haven't, so German manufacturer Musitronics have grabbed the opportunity to launch their MEX (MultiMode Expansion) board (for D50 and D550).

The MEX offers 64 extra onboard memories, two eight-channel multitimbral modes, the ability to create

multi-voice sounds, and expanded master keyboard functions. The ads also mention six LFOs, two chorus units, two equalisers, and a reverb section, which is a trifle strange, because these are part of the basic spec of the D50. Perhaps what Executive Audio mean to say is that these facilities can be put to much better use with MEX - as we will see.

### MISE EN SCENE

THE D50 REMAINS the most sophisticated synthesiser that Roland have yet produced. Its characteristic sound, which is created from a combination of PCM samples (generally of the attack portion of a sound) and sounds created within its conventional analogue-style synthesiser section, is still highly sought after. Two of these basic sounds, (Partials), form a group known as a Common Block and these may be chosen freely from the PCM and synth sections. A Common Block, plus a number of other parameters makes up a Tone or Voice, and two Voices constitute a Patch. There are 100 PCM samples in the D50, some of short duration (one-shot), and some loops. There are also PCMs formed of other samples, some looped, some not, and these are included to help create the more obscure special effects of the D50.

A patch can be layered on the keyboard in a

MUSIC TECHNOLOGY FEBRUARY 1990

number of ways. The most common structure is Dual Mode - all four partials play across the whole keyboard - giving the classic D50 sound, but restricting you to eight-note polyphony. Whole Mode allows 16 notes to be played but the synth is then restricted to one voice (two Partial) across its keyboard. A little more flexibility is offered by the various Split Modes, but in all of these you are still limited to four partials, split two by two and allocated either side of a keyboard split point. For use with sequencers there is a Separate mode, which enables the two Voices in a Patch to be played on different MIDI channels, and this gives a crude multitimbral capability - but limited to two eight-note polyphonic voices. Chorus and EQ can be separately defined for both voices, but there is only one onboard digital reverb which can be selected to act on just one voice, or the whole patch.

## ENTER MEX

THE MEX COMES in a box containing the board and a 30-page manual. The manual is well presented although it suffers from occasional attacks of Germish, and there's one major typo where the end of an explanation is missing. But these are minor quibbles. Work steadily from page to page and you'll learn how to safely install and use the MEX.

You have to remove 20 screws which hold the base in place. If the Operating System ROM is inserted into a socket on the main D50 processor board, installation of the MEX is extremely simple. Remove the OS ROM, solder one wire from the MEX to the motherboard, and insert the expansion into the empty socket. With a regular D50 it's unlikely that you'll come to any grief but, if your synth is one of the 10% whose OS ROM is soldered to the main D50 board, get an authorised service centre to install the upgrade.

## THE PLOT

THE MOST OBVIOUS benefit of the expansion is the extra memory space - 64 traditional D50 patches or 64 MEX multi-patches, or any permutation of the two. The immediate impression gained after installation is that the expanded D50, with 128 memories, is much more flexible and more satisfying to work with. The MEX also has a spare socket which will take a further S-RAM chip and give the synth 192 internal memories. Unfortunately, Executive Audio were unable to say when this will be available, or how much it will cost.

Using the Internal button in conjunction with patch bank buttons 1 and 2 switches between the memory banks which are now named 'I' and 'X'. You can also move freely between banks using MIDI commands, and these are clearly laid out in the manual. The addition of 'X' doesn't adversely affect the patch facilities of the D50 in any way, and "Write"s and "Copy"s between Tones and Partial are also unaffected. Memory cards can still be accessed using Card, and patches or complete banks may be moved between the currently selected internal bank

and the card itself. Bulk dumps over MIDI seemed equally unaffected, and "Load"s and "Save"s act on the current internal bank - be careful which is selected before you do anything you might regret. I only found one bug within the MEX software. In certain menus Shift types a "9", yet still fulfils its usual function.

The biggest selling point of the MEX board will be the full multitimbral capabilities it gives the D50. In a roundabout sort of way, this has been available from Roland for some time because, shortly after the launch of the D50, they released their MT32, which in many respects is a multitimbral D50 expander. The MT32 is a 32-note polyphonic, 128 onboard preset memory, 64 programmable memory (although these are volatile and have to be reloaded each time the unit is switched on), velocity (but not aftertouch) sensitive, eight-channel multitimbral L/A module. Got that? The 128 timbres supplied are of comparable quality to D50 voices, and the MT32 is able to play 32 notes simultaneously, of which each note is a single D50-type Partial. Of course, you can also build up full D50-type voices consisting of four partials each, or even go beyond this and (eventually) create a single 32-partial monophonic patch. So the MEX not only has to offer comparable facilities but, because the MT32 can now be purchased for under £300, should challenge the power and flexibility of a D50/MT32 combination.

Unlike the MT32, the basic architecture of the D50 only allows a maximum of 16 notes to be output at any one time, even if the MEX is playing a full complement of eight voices. Since the D50 can only hold two Common Blocks in its working memory, the MEX has to poke sounds directly out of the main RAM memory when required to play three or more voices simultaneously. This has no consequences for the sound, but because the buffer is not being accessed, edits have to be Saved to RAM before updates to voices within a multitimbral patch can be heard.

A multitimbral patch is organised as follows. A Master Patch (which would otherwise be a basic D50 Patch) is defined as a multitimbral patch using the key-mode button. This consists of the Upper and Lower Master Common Blocks which contain the EQ, Chorus and Tuning data that will be required by voices within the patch. However, instead of creating or copying four partials into the Upper 1&2 and Lower 1&2 partial memories, you allocate Multi-Tones within the Multi-patch memory locations. Eight Tones may be defined within a patch, and these can be played on any MIDI channel. There are no limitations on how many or how few Tones can be accessed by a given MIDI channel other than the limit of polyphony of the instrument. Each Tone within a Multi-Patch has four parameters associated with it: MIDI channel, volume, pan (left or right), and tuning. The appropriate parameter windows are accessed by pressing Patch twice, and editing, scrolling between windows, and all other control functions follow the methods used on the unexpanded D50. When a Tone is used within a Multi-Patch its own EQ, chorus and LFO parameters become inactive and are controlled by the Common Block. Sorry, it has to be like this - otherwise there ►

**“One of the criticisms of the D50 was its inability to use further PCM samples, so the ten new PCM waveforms in MEX come as a pleasant surprise.”**

► just aren't enough EQs, LFOs, and Chorus to go round. This, then, places limitations on which Tones can be combined to best effect - for example, you can't successfully mix a heavily chorused Hammond with a flute. But this is a common problem for all synths with onboard effects - you just have to think more carefully about your Multi-Patches than would be necessary if you had 24 LFOs, eight parametric EQs, and eight chorus/flangers. . .

## THE SUB-PLOT

THERE ARE TWO Multitimbral modes - MULTI and MLT-D (Multi-Dual) which can be selected by incre-(decre-)menting the key mode button, just as you would to select Dual, Whole, or any of the other key modes. In Multi, all eight Tones are fed to the upper master common block. This means that only one set of EQ and Chorus, and three LFOs, are utilised for all eight Multi-Tones. However, all 16 notes can then be dynamically allocated by the software. In Multi-Dual four Tones are allocated to each of the upper and lower common blocks, and dynamic allocation is limited to eight notes, although there are two groups

of eight to play with. In addition, both sets of EQ and chorus, plus six LFOs are now available.

Unfortunately, using a D50 Editor/Librarian isn't painless any more, because these have all been written for the basic D50 system, and can't cope with Multi-Patches and Multi key modes. SonicFlight's D50 Capture! translates the Multi and MLT-D modes to Whole and, understandably, loses all the information regarding Multi-Tones and their associated parameters. Dumping Multi-Patches will therefore require a Generic Editor with a D50 template modified to include the MEX. I suspect that most users will have to resign themselves to storing Multi-Patches in the synth itself, since RAM cards won't handle them either. Still, what else were you going to use those 64 extra memories for? The manual includes five appendices giving MIDI transmit and receive data, and a complete listing of the Patch, Common, and Partial data types. Perhaps this information will be used to create a D50/MEX template in the near future.

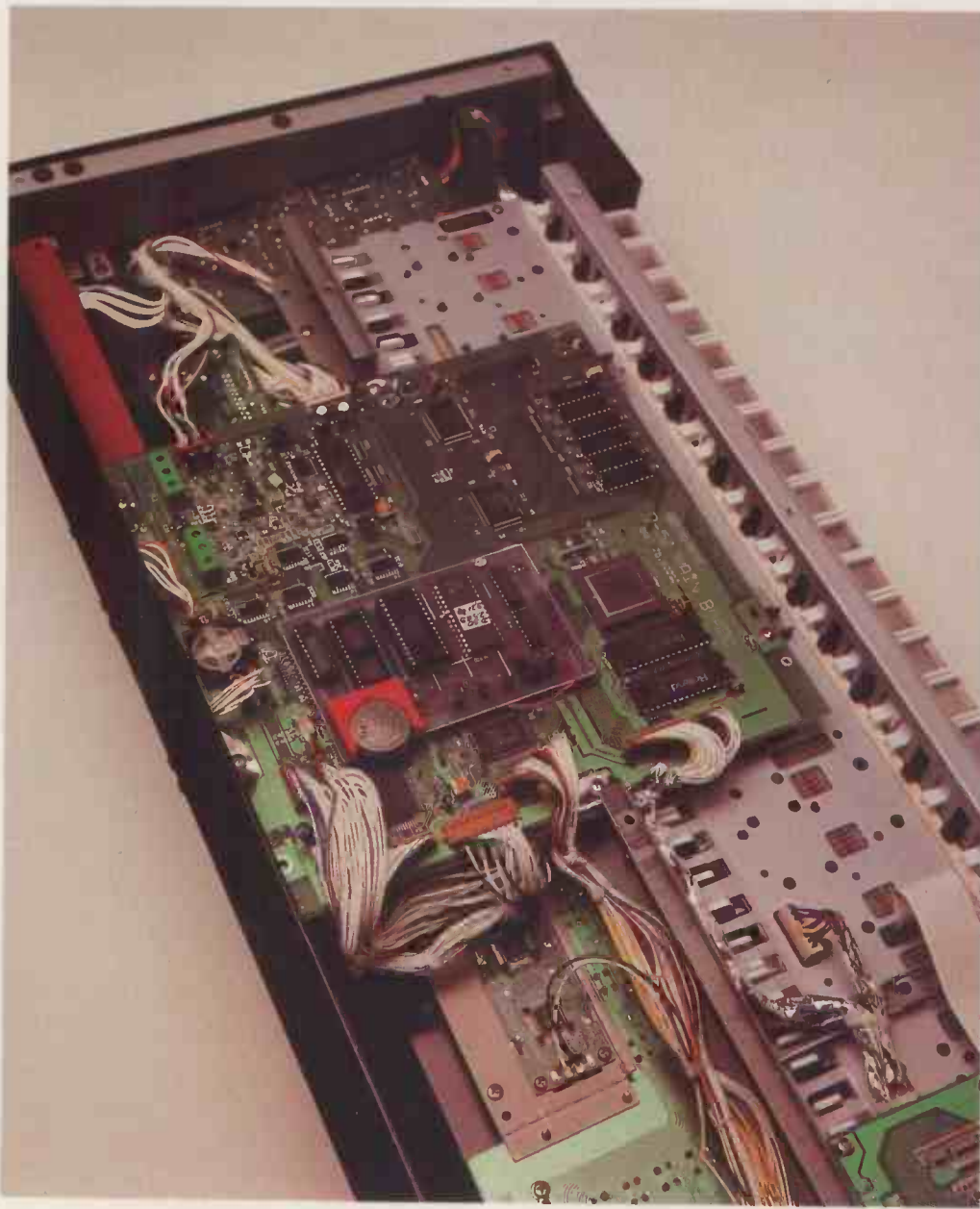
Another important benefit of the MEX is Unison Mode. This isn't mentioned in the literature, nor in the adverts, which is strange, because the lack of

unison is one of the major shortcomings in the D50 spec. This is how it works.

Two new facilities, Transmit Upper and Transmit Lower, defined by Split Point parameter, enable the D50 to perform like a controller keyboard with an eight-channel expander attached. True Unison can be created by saving a voice to four memory locations and detuning it by slightly differing amounts in each memory. The Multi-Patch can then be built from these four almost-identical voices. Because of the conflicting detunings, this is almost as good as having eight analogue oscillators, and it certainly reaches parts that no other digital synth can. The physics of the L/A generation system (as implemented in the basic D50) will never let the un-expanded synth be a window rattler. But with the MEX, keep the gains down. In fact, the eight voice/16 Partial unison mode puts us firmly into Kawai K4 territory.

Key Windows are another aspect of the MEX. These define the range in which a Tone will play and, if you've defined all eight Tones to play on a single MIDI channel routed internally, you can have eight distinct areas on the keyboard, each of which plays a different sound. Complex overlays and crossfades can be created using pairs, or even higher combinations of sounds, and since all the Tones are independently tuneable and volume-able there are almost unlimited combinations possible.

When MT first reviewed the D50 (May '87) one of the criticisms was the instrument's inability to take further PCM samples into its memory. So the ten new





---

**IF YOUR  
EIGHT-TRACK  
RECORDER  
ISN'T OUT OF  
SIGHT,  
IT'S OUT OF  
DATE.**

---



In the future, multitrack recorders won't be stuck at the centre of recording studios, reels revolving for all to see.

They'll be tucked away discreetly. To be touched only when the tape needs changing.

In the future, engineers won't waste their time dodging between desk and tape deck.

Because all the recorder's functions will be controlled from a compact remote panel, sitting on top of the console.

And in the future, thanks to the power of microprocessors, that control will be exercised with awesome speed, absolute precision and a power never seen in today's recorders.

When will this future begin? As soon as you get yourself an R8, the first of the next generation of recorders from Fostex.

Ask your multitrack dealer, or write to Fostex, Mill Street, Slough SL2 5DD for all the essential information.



**FOSTEX**

PCM waveforms in MEX come as a pleasant surprise. These have been created by combining some of the original 100 PCMs in new ways. The ten PCMs, named Loop 25-34, can be accessed as PCM numbers 101-110 and offer an assortment of strange combinations of instruments looped together - such as Clarinet and Plucked Guitar, and metallic percussion and piano. The most complex of these is Loop 34 (PCM No. 110) which has 17 separate one-shot PCMs combined into a complex rhythmic and melodic loop. (Interesting, but can you think of a use for it? Musitronics don't seem to be able to, because they haven't used it in any of the 64 patches they supply on the board.) Of more interest are the further 15 PCM waveform slots (111-125) which are enticingly named Extend. It would be nice to see 15 genuinely new PCM samples in these slots, which would be of far more use than 15 weird and wonderful loops.

The first thing that most musicians do when confronted with a new synth is to play all the presets, and make sagacious comments such as, "This'll blow your q\*\*\*ing K1 away". In many ways the MEX changes the D50 into a new instrument, so many prospective purchasers will, if they can get their hands on an upgraded machine, do exactly the same thing.

This is where the fun starts: some of the 64 new patches are among the best D50 voices yet heard. Worthy of special mention are the Hammond patches - 'And J Lord is lost behind this Hammond' (15) and 'Smell the dust on the old B3 Hammond' (56) (the factory names, honest). Amongst the basses, 'Mr Big Boom Boom plays the jazz bass' (13) is particularly good and Jan Hammer freaks will enjoy the expressive 'Distorted Paul' with its harmonic overtones creeping in as the note sustains. Patch 55 is a meaty analogue polysynth - 'Who stabbed the Oberheim Mr Roland', and 'Prophet T8' (85) combines an atmospheric digi-logue pad with a chunky synth-bass speaker-rattler. For genuine early '80s syn-drums try 'Mr Simmons why did you do THIS to us hmmm' (74), and for atmospheric 'GlassWorld in Fear' (81) and, finally, the patch that deserves a mention for its name alone - 'Do you speak Alpha Centaurian we seek a bar' (88). Names apart, these really are worth having, especially since most of them are Whole mode voices - two partials per patch - so they can be used as Multi-tones within Multi-patches. There are a number of factory-set Multi-patches supplied - most notably 'The band that scared the death away' (71) which includes Simmons drums, ride cymbal, bass, lead, and various brasses and pads. You can construct a whole track from this patch alone, without running out of voices.

To make the best use of its multitimbrality the MEX offers four further output modes (giving eight in all) which are new output combinations of upper and lower voices, reverb input, and reverb output allocation. These are selected using Mode

values 5-8, and add that extra bit of flexibility for users who can't rearrange their Tones because of EQ and Chorus considerations.

The final touch is a button which sends MIDI All Notes Off to all Tones in the D50: a panic button.

## VERDICT

GIVEN THAT YOU want to drag your D50 kicking and screaming into the '90s, there are many reasons why you might want to buy an MEX. But £300 is a lot to pay for a small upgrade board that offers only 64 extra memories (DX7 expansions have as many as 320), multitimbrality, and one or two other bits and bobs. However, this is one of those times when the whole is definitely greater than the sum of the parts. The convenience of the MEX, the simplicity of operation, the lack of MIDI cables and signal leads aren't facilities that you can justify in wonga. Executive Audio (MEX's distributor) claim that they can't get enough, and I believe them. For the die-hard D50 user - and there are a lot about - there's much to recommend the MEX, and I can see a lot of people digging into their pockets.

In the period that's taken us from the S10 sampler to the S770, the D50 has stood still. We've seen the D5, D10, D110, D20, MT32, and a host of newer, computer-oriented, L/A modules from Roland, but the original (and arguably the best) L/A synth hasn't moved an inch. Are Roland going to let the D50 fade away, or do they already have the D50 version II tucked away? If they haven't, they've a lot to thank Musitronics for, since without further development the D50 would disappear underneath piles of VFXs, M1s, K4s, and SY77s.

As in the microcomputer industry, where the open architecture of the IBM PC enabled IBM to outsell every competitor (many of whom had developed superior machines), music manufacturers need to offer upgrades, if only to reassure the punter that his pride and joy isn't going to be made obsolete at the next trade show. If the original manufacturers are unwilling to shoulder the responsibility, they should be grateful to those who are.

If you own a D50 or D550, should you be thinking of buying an MEX? You probably should. Although you can pick up a second-hand MT32 or even a Kawai K1R for less, the addition of multitimbral modes, Unison, keyboard splits and 64 memories make the D50 into a new synth. And there are many players for whom the D50 is an essential part of their life. The rest of us have to decide between a VFX, a K4, and a D50/MEX. Tough, isn't it? ■

Price £299.95 including VAT.

More From Executive Audio, 159 Park Road, Kingston-upon-Thames, Surrey KT2 6DQ. Tel: 01-541 0180/5789.

ANOTHER ARGENTS ADVANTAGE

# 6+2

## EQUALS A NEW KIND OF HOME STUDIO

With a **SIX-TRACK** cassette machine and an **EIGHT-CHANNEL** mixer, the new **SANSUI WSX1** is a snip at only **£1299**. Add a **built-in TWO-TRACK** mastering machine, digital **REVERB**, and **Dolby B/C NOISE REDUCTION** into the equation, and you've got an **UNBEATABLE** package. Make tracks to **ARGENTS** and see how it **ALL ADDS UP**.



Argents, 20 Denmark Street, London WC2H 8NA  
 ☎ 01-379 6690 (sales) 01-240 0085 (service)  
 01-240 7696 (fax)

# THE SOFTWARE SYNDROME



ILLUSTRATION: SALLY COCHRANE

**ONE OF THE HORRORS OF THE '80S THAT'S GOING TO BE WITH US THROUGH THE '90S IS THE COMPUTER VIRUS; IT AFFECTS EVERYONE USING COMPUTERS IN BUSINESS AND AT HOME. YOUR ONLY PROTECTION IS KNOWLEDGE; NOW READ ON. . .**  
**TEXT BY VIC LENNARD.**

COMPUTER VIRUSES HAVE hit the headlines again recently. Apart from the panic-mongering of Conservative MP Emma Nicholson, there was the recent Friday 13th panic - which hit the Blind society (to name just one casualty) last October. As many of you who read MT use computers for making music, the time is ripe for your name to be added to the list of casualties. Incidentally, the subject of computer viruses and the damage they can do to people's work and businesses is not, as yet, covered by British law. You're on your own.

Most common on the Atari ST is the Signum virus. If you're less than convinced that viruses are a real danger to any computer user, let me give you a quick

rundown of what this piece of programming does.

When you boot up with a Signum-infected disk, it immediately checks on to your system. In order to be able to write itself into your computer, it needs to know what position it can write itself into, and this will depend in part on which operating system your ST has. It copies itself into the ST's memory and ensures that it can check all disk accesses - it "knows" whenever you put a disk into the drive and can "see" whether that disk is write protected or not. When the virus is executed, it simply clones itself into the boot sector of the disk which you have just put into the drive and accessed information from - opening a folder to

check for a file is sufficient.

Before copying itself to a disk, Signum checks the first two numbers in the boot sector. If these are 60 38 in hexadecimal (Signum's calling card), then it assumes that the disk is already infected and leaves it alone. Otherwise it copies itself, ensuring that it changes nothing else about the disk so that you are given no warning.

Signum is of the "sleeper" variety of virus. It duplicates itself to each disk and sits there waiting for a second code (the "key") to appear on a disk in the drive - identified by 10 92 (hex) in the boot sector. It then checks a further two bytes to ensure that it has indeed been activated and then executes this key disk. It would appear likely that once this has carried out its dastardly deed Signum erases itself, because no-one has yet tracked down a copy of the key code. Whatever it does, the final command of the program is "only do it once". The only person who knows for certain what this second program does is the person who wrote it. Obviously, he or she is not likely to come forward for fear of meeting people who wish to discuss the pros and cons of capital punishment (or worse), but if the programmer would like to drop a line to me, I really would like to know.

Signum has already appeared on a variety of disks - in some cases these have been "legitimate" copies of programs as supplied by the companies manufacturing or distributing them. Examining just how this situation has arisen though, is outside the scope of this article. One area of the business of dealing in commercial software that is a particularly unhealthy breeding ground for viruses is the software duplication facility - once in, a virus *could* appear on all sorts of programs. However, such copying plants survive on the master programs they are given to duplicate. . .

The moral of the story, however, is that you should not assume any disk to be free of viruses unless you've checked it yourself - and remember a virus doesn't have to be active from the moment you receive it, it may be biding its time before destroying your work.

Music software isn't the only area hit by Signum; Games such as Lombard RAC Rally and Star Command have been issued with Signum on board. Most duplicating establishments now check carefully for viruses.

A wander around London's principal music stores showed that a lot of Soho Soundhouse's copies of master disks, which they use for demo purposes, were

Signum infected. This would not affect the software that you actually buy from them, but could be present on any copies taken from their computers. Through running a company called MidiHELP (plug, plug) which offers a disk data recovery service, I personally have come across a lot of disks containing Signum over the past six months, and all suffer from the same problem - a confused FAT (File Allocation Table) leading to files being overwritten.

## OTHER ST VIRUSES

SOME VIRUSES ARE innocuous and have obviously been written as a practical joke. The Ghost virus keeps count of how many times it has been transferred and after the fifth copy it reverses the vertical motion of the mouse - up becomes down and vice versa. The Mad virus uses a similar counter and then selects one of eight different routines. Seven of these cripple the screen display while the eighth creates a tune. These routines cause delays and may cause your computer to crash but no permanent damage is done.

Other viruses are not as friendly and have a more sinister intent. A virus called ACA keeps a ten copy counter and then destroys the boot sector, FAT and Directory of every disk inserted into the computer. Another called BHP wipes the boot sector and then leaves its calling card - "VIRE 87".

Some viruses check the ROM of the computer and only become active when they find one with a particular date. Consequently they will only be found when working with certain computers. Anything to add to the randomness of the situation which makes it more difficult to check the spread of a virus.

## ENTER THE KILLER

TOWARDS THE END of 1987, the Virus Destruction Utility (VDU) appeared. This was a program which could check for the calling cards of several viruses and erase the program code. Any such program would have to deal with two problems; how do you tell the difference between the virus program in the boot sector and an executable program which is part of the main data on the disk, and how can you immunise a disk so that it cannot be hit by the same virus again?

The first is simple. Wipe all code from the boot sector and then re-write the code that should be there. The latest version of VDU (now distributed by CRL in the UK and called Virus Killer) can repair over 150 boot sectors from commercial software -

typically games.

Immunising a disk is more difficult. You need to know precisely what a virus is looking for when it determines whether or not to duplicate itself. In the case of Signum, leaving the first two bytes on the boot sector fools it into believing that the rest of the code is still on the disk when it has actually been erased. CRL's Virus Killer can currently recognise and destroy 24 known boot sector viruses, five link varieties and can check the internal system of your computer to tell you whether a virus is lurking in there.

George Woodside in America has been tracing and destroying viruses for some years now and also has a piece of public domain software written by himself, called VKiller. This program not only allows you to check your disks for viruses but will also give you the format of the disk - sides, number of tracks and sectors and so on. It does have two shortcomings - it doesn't recognise a boot sector containing the Atari operating system for those who boot up their Atari from disk (it tells you the disk may be dodgy - too true) and it doesn't immunise a disk once it has evaporated the code for the virus. Nevertheless, it is extremely easy to use and can be obtained through Music Technology - refer to the end of this article for details.

The biggest problem with both these programs is that they cannot check the boot sectors of hard drives. Certain viruses, including Signum, will write themselves to your hard drive if they have had the chance to virus the disk that you keep in the floppy drive when you boot up.

## PRECAUTIONS

THE OBVIOUS PRECAUTION to take against "contracting" a virus is to keep the write protect tab on your disks open. Unfortunately, this makes saving data to disk a bit awkward. Alternatively, the thing to do is to get a virus killer and check your *entire* disk collection, "killing" whatever viruses you may find there. This must be followed up by checking every new disk which is to be loaded into your computer before you load it. Alternatively, you can keep a boot-up disk which you know is▶

**"IT WOULD APPEAR LIKELY THAT ONCE SIGNUM HAS CARRIED OUT ITS DASTARDLY DEED IT ERASES ITSELF, BECAUSE NO-ONE HAS YET TRACKED DOWN A COPY OF THE KEY CODE."**

► clean and always start with this. If necessary, turn the computer off for 15 seconds or so to ensure that anything held in memory has been erased.

To put it in a nutshell, unless you boot up with a virused disk the virus cannot execute itself and so is very unlikely to be

## "A WANDER AROUND LONDON'S PRINCIPAL MUSIC STORES SHOWED THAT A LOT OF COPIES OF MASTER DISKS, WHICH ARE USED FOR DEMONSTRATION PURPOSES, WERE VIRUS INFECTED."

able to copy itself into your computer. A clean boot disk is imperative.

While too many people are apathetic about the danger of computer viruses, others are inclined to cry "Virus!" whenever anything unusual happens to their computer. Imagine that you are booting up with your usual disk and that when the desktop appears, the names under the icons are gibberish. A virus?

Probably not; it's more likely to be a faulty disk - perhaps surface coating is bad or it's been affected by a magnetic field. This type of occurrence is far more likely and could give the same results. Software copy protection could also be the culprit. A standard disk has 80 tracks but can be formatted with up to 83 on some computers. However, Atari only guarantee 80 tracks for their disk drives. For example, Steinberg's Twelve sequencing software used track 81 for its copy protection, meaning that some computers couldn't load up the program. Dr Tirric - a cheap, speech-synthesised piece of software - has a routine built in which will burn out one of the Atari ST chips if you attempt to run a pirate copy.

## I N F E C T I O N

ONE OF THE most efficient devices for spreading viruses is the modem - this effectively networks a group of computers together. An American software house, on hearing that a hacked version of one of their programs was on a bulletin board, downloaded it via modem for examination and promptly wrote a virus to their hard drive.

There is little doubt that computer

viruses are here to stay. What is needed is public awareness of the situation - hence this article. The problem is certainly expanding. George Woodside estimates that he gets around 40 disks a week from people who suspect that they have discovered a new virus. If only a small proportion of these are accurate then we have trouble with a capital "T" because to protect against a virus, you need to know what that virus does. The worst possible attitude is one of complacency.

Now that the research for this article is complete, I can re-connect my hard drive...

Thanks to George Woodside for help in compiling this article. ■

VKiller is available from Music Technology at a cost of £3.50 (to cover duplication and postage). Please send a cheque/postal order (made payable to Music Technology (Publications) Ltd) to Vkiller, Music Technology, Alexander House, Forehill, Ely, Cambs CB7 4AF.

Virus Killer is available at a cost of £9.95 from CRL, 7D Kings Yard, Carpenters Road, London E15 2HD.

Reading: Computer Viruses - a high-tech disease by Ralf Burger. (Abacus - Data Becker) £17.45.



25 MIDDLELEAZE DRIVE, WEST SWINDON, SN5 9GL  
Tel: (0793) 882108 Fax: (0793) 882109

### FOR THE ROLAND D50/D550

192 Voices by Leister Productions (Vol 1) £29.99  
192 Voices by Leister Productions (Vol 2) £29.99  
128 Pro British Voices £19.99  
128 Pro Sweden Voices £19.99  
64 Specialist Voices (Vol 1) £14.99  
64 Specialist Voices (Vol 2) £14.99  
All the above sounds are available on Self-Loading Atari ST disks.  
★ Voice Crystal 256D RAM Cards 1-6 £49 each  
★ Voice Crystal Blank 256D RAM Card £45  
PA-Decoder Double ROMS 1, 2 or 3 £99.95  
Metrasound ROM £55.00  
\*NEW\* D50/MEX Multi-Expansion for the D50/D550 £299.00 IN STOCK

### FOR THE ROLAND D20/D10/D110/D5

128 Voices by Leister Productions £29.99  
128 Pro-British Voices Volumes 1-2 £29.99 each  
The above packages are available on Self-Load Atari ST disk, and PC disk.  
PA-Decoder D10 or D110 ROM £99.95

★ D20/D10/D110 Voice Crystal 256D RAM Cards 1-3 £49 each

### FOR THE ROLAND MT32, LAPC1, CM32L and CM64

128 Voices by Leister Productions (Vol 1) £24.99  
128 Voices by Leister Productions (Vol 2) £24.99  
Both of these packages are supplied on self-load Atari ST or PC disks

### FOR THE ROLAND JUNO 106

128 Sounds by Quasar Software (tape) £19.99

### FOR THE ROLAND KORG M1/M1R

100 Voices + 100 Configurations by Leister Productions £29.99  
Available on Self-Loading Atari ST and IBM-PC Disk.  
100 Voices + 100 Configurations by Leister Productions on ROM Card £49.99  
★ Voice Crystal M1/MIR RAM Cards 1-3 £65 each

### FOR THE KORG M3R

★ Voice Crystal RAMS 1-3 £65 each

### FOR THE KORG POLY800 Mk1

64 Voices by Leister Productions £9.99  
128 Voices by Quasar Software £14.95  
Both sets available on ST-Self-Load Disk, Data-Cassette. Leister sounds also on Sheets.

### FOR THE KORG DW8000

64 British Voices £9.99 (Data Cassette)

### FOR THE NEW ENSONIQ VFX

60 Voice RAM Cartridge £79  
60 Voice ROM Cartridge with new sounds for only £39

### FOR THE KAWAI K1

128 Voices by Leister Productions £29.99  
Available on Self-Loading Atari ST and IBM-PC disks.  
Voice Crystal RAM Cards 1-5 £37 each

### FOR THE ENSONIQ ESQ-1

120 Pro-U.S.A. Voices £19.99  
240 Voices by Leister Productions £29.99  
The above are on Data Cassette or Self-loading Atari Disk  
Blank Voice Crystal RAM £29.99  
Voice Crystal EEPROM with sounds 1-3 £39.99 each

### FOR THE ENSONIQ SQ/80

All the above ESQ1 products are compatible with the SQ/80.  
The following are exclusive to the SQ/80  
SQ/80 Voice Crystal disks 1-2 £24.99 each

### FOR THE YAMAHA TX81Z, DX11, DX21, DX27, DX100 and FB01

48 Pro Canada DX100/27/21/FB01 Voices £9.99  
64 Pro Canada TX81Z/DX11 Voices £12.95  
The TX81Z/DX11 set includes 48 performances  
288 Voices by Leister Productions £29.99  
TX81Z/DX11 Version includes 24 performances and some brand-new effects data.  
64 DX21 Voices £7.49  
Designed for use in Dual Mode on a DX21.  
216 British DX100/27/21/FB01 Voices £17.99  
120 DX100/27/21/FB01 Voices by Quasar Software £9.99  
224 British Voices + 168 Performances £16.99  
Programmed for the TX81Z without use of Velocity-Sensitivity.  
96 Pro British TX81Z/DX11 £12.95  
96 FB-01 Voices by Leister Productions £14.95  
All voices in this category are available on Self-Loading Atari ST disk and Data Cassette formats. (FB01 on Atari & IBM-PC)

### FOR THE YAMAHA CX5

96 British Voices (Vol 1) £13.95  
96 British Voices (Vol 2) £13.95  
96 British Voices (Vol 3) £13.95  
Only available on Data-Cassette

### THE MISCELLANEOUS BIT

Coloured MIDI Leads 6m=£4.75, 10m=£7.95  
10x2 8" Quick Disks £22.99 (£2.50 each)  
10x3 5" Disks DD/DS £10  
All Phillip Rees MIDI Routing Boxes £Phone

### FOR THE CASIO CZ SYNTHS

320 Voices by Leister Productions £29.99  
Available on Data Sheets, Atari ST and IBM-PC Self-Load disks.

### HOW TO ORDER

Send a cheque/Postal Order/Cash to the above address clearly stating your name, address and the goods which you require. Please state which format is required when ordering sounds.  
We now accept ACCESS/VISA Credit card orders by telephone for fast turnaround. Simply phone in your order.  
PLEASE ADD 50p FOR POSTAGE & PACKING (£1.50 if ORDERING BULK CASSETTES OR MIDI LEADS)

### FOR THE YAMAHA DX7 Mk1

288 Voices by Leister Productions £29.99  
192 Pro-British Voices £24.99  
20 Super-Pro Voices (incl Grandpiano & Rhodes) £10  
240 Pro-U.S.A. Voices £14.95  
32 Pro U.S.A. Pianos & E. Pianos £5.99  
Available on Data Sheet or Self-Load Atari-ST disk.  
Steinberg YAM RAM (w/256 sounds) £ POA  
FOR THE YAMAHA DX7 Mk11  
320 Voices + 160 Performances by Bill Coopland £27.99  
Available only on FD disk or Atari ST disk for Steinberg Synthsworks and Gangpatch.  
64 Pro-British Voices on FD disk £9.99

### FOR YOUR SAMPLER

Sound Cells 50 disk library with lockable case £249.99  
Available for OBERHEIM DPX1/KORG DSS-1/PROPHET 2000-2002/AKAI S-900. Available for £9.99 each.  
Ensoniq EPS Voice Crystal series £19.99  
9 series available, 3 disks per series, 3 full sounds per disk  
Roland S50/S550/S330/W30 Voice Crystal series £19.99  
4 series available, 3 disks per series, 3 full sounds per disk  
12 Sample Disks for Ensoniq Mirage £69.99 (£7.99 each)  
10 Sets of Akai S700/X7000 Sample disks £99.99  
50 MIDI Music S50/S550/S330/W30 disks £199.99  
Available for £7.99 each.

Sonic Images Sample CD £44.95 288 percussion sounds  
Masterbits Sample CD £24.99 Over 500 sounds  
Masterbits Sample CD £29.99 Over 800 sounds

### FOR YOUR ATARI-ST

We stock all Atari-ST Sequencing, Scoring and Editing/Librarian software by Steinberg, C-Lab (Narrator/Creator), Hybrid Arts, Hollis Research (Trackman), The Digital Muse (Virtuoso), Dr.T, Passport, Keynote (Chameleon) etc.

Star Buy...

Steinberg Tube £75.00  
Steinberg Pro24 £150.00

### FOR YOUR IBM-PC & COMPATIBLES

We stock all the sequencers, scoring and editor/librarians for the IBM-PC. Titles stocked include Personal Composer System/2, Passport Score, Mastertracks Pro, Promidi (direct-to-disk sequencer). We are also major stockists of all Voyetra hardware and software.

Star Buy...

★ Voyetra Sequencer + Mk1 + V-4001 MIDI Interface £199.95

### FOR YOUR COMMODORE AMIGA

Music-X £175  
MIDI Interface £34.99  
We also stock Dr.T Editor/Librarian software.

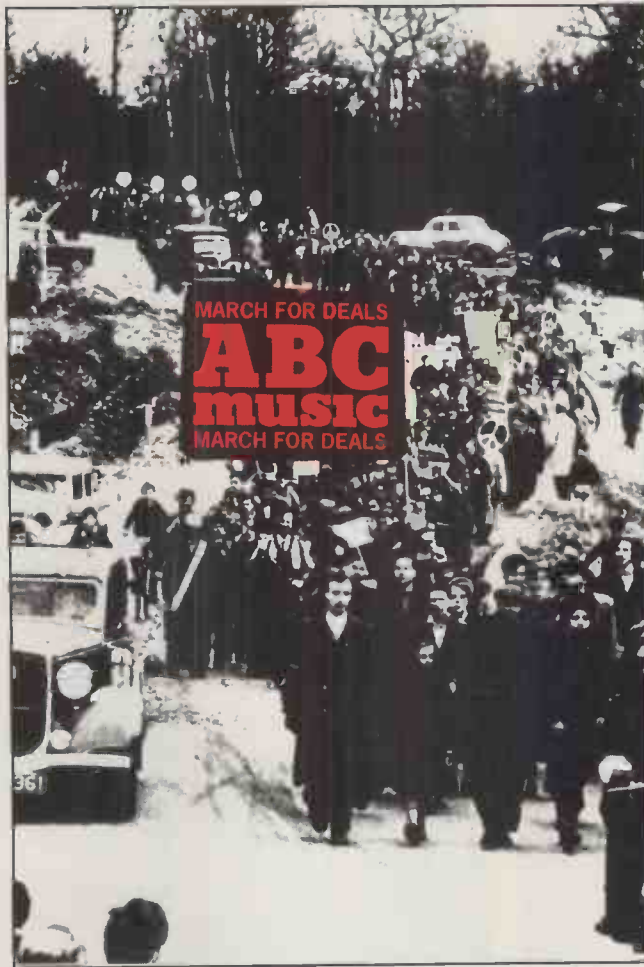
### NEW ROLAND PRODUCTS

ROLAND CM-32 LA SOUND MODULES £369.00  
ROLAND CM-32P PCM SOUND MODULE £445.00  
ROLAND CM-64 LA/PCM SOUND MODULE £789.00  
ROLAND LAPC-1LA SOUND CARD FOR IBM-PCs AND COMPATIBLES £379.00  
U110/CM64/CM32P ROM Cards £POA  
\*All the new Roland Computer Music Products are now available from us\*

CALL (0793) 882108 NOW FOR OUR FULL CATALOGUE

# THEY'RE GOING

S  
A  
L  
E



S  
A  
L  
E

## ARE YOU?

Prices cut to the bone.

Look at these examples. Many More in store

		Was	NOW
CASIO	VZ1 Mega Synth	£999	£399
CASIO	VZ8M Synth Module	£399	£229
CASIO	HT3000 MIDI Synth	£399	£169
ROLAND	TR505 Drum Box	£295	£155
BOSS	DR220A Dr. Rhythm	£169	£99
ROLAND	D10	£785	£649
ENSONIQ	EPS Module	£2200	£1500
EMAX	Rack FD	£2000	£1399
	Amazing Sequencing Package		
Atari + Mon + Cubase + D10		£1884	£1449

# ABC music

Bristol. 32 Alma Vale Rd. Clifton.  
Kingston. 56 Surbiton Rd.  
Oxford. 44 St. Clements.  
Slough. 324 Farnham Rd.  
Addlestone. 14-16 High Street. Surrey.

Tel:0272 238200  
Tel: 01 546 9877  
Tel:0865 725221  
Tel:0753 822754  
Tel:0932 854877



# SOUL SONIC FORCE

*Two of the most influential and successful hip hop acts around have the talents of one man to thank for at least part of their success.*

*The acts are Stetsasonic and De La Soul; the man is Prince Paul. Interview by Steven Daly*





**THE EIGHTIES SAW HIP HOP MOVE** from marginal artform to mainstream staple, with superstars of its own and an impact on contemporary music beyond the imaginings of even the most arrogant of its early exponents. In America, where house music has failed to match its British pre-eminence, hip hop is *the* main influence on the dance music which dominates the Top 40 - its techniques co-opted by pop and its beats putting a new spring in R&B's step, via stellar producers like Teddy Riley, LA and Babyface, and Jam and Lewis.

The hard-core rap scene was, of course, free of such miscegenation, but despite the oft-expressed coda of no sell-out, no compromise, success came to speakologists such as Public Enemy and NWA anyway - on their own terms. Amid their all-consuming frenzy with its ever more rigorous standards of sonic and verbal toughness there emerged a troubling question. What next?

The answer came from an unexpected quarter, three teenagers from suburban Long Island whose group De La Soul nudged hip hop off its axis with the 1989 debut album *Three Feet High and Rising*. An unhurried collage of hook-laden gems, quirky miniatures and goofball dialogue, this 23-track affair was no-one's crossover blueprint but crossover it did, delighting rap fans, pop kids and critics alike, the latter making extravagant comparisons with *Sergeant Pepper* and Frank Zappa's Mothers among others. (Just for the record I'd add Todd Rundgren's 1973 opus *A Wizard, A True Star*).

In the wake of De La Soul's benign confidence and surefire material, all but the most skilled rap practitioners looked, well, a little sad and dated and in the light of their production values (very few) a lot of the decade's more extravagant technology suddenly seemed to resemble excess baggage. Unmistakably, rules had been bent, stereotypes broken and maybe there had been a few clues to the '90s laid down.

Producer of this benchmark idyll, Prince Paul (born Paul Huston) had seen his share of favourite ink when his group Stetsasonic released their *In Full Gear* debut LP in 1988, but nothing on this scale. And De La Soul did what that outfit failed to - parlay uniformly rave notices into platinum record sales.

At the end of the '70s Paul's earliest attempts at DJing had led him to form the Eveready Crew then, some years later and less tentatively, the Soul Brothers (whose MC Donald Newkirk has recently emerged as a singer on Def Jam's OBR offshoot). But it wasn't until 1985 that his career moved into first gear as he lent his spinning talents to the nascent Stetsasonic. The group soon expanded to a six-piece before signing to Tommy Boy to make the aforementioned well-received, if patchy, album.

Producing a handful of tracks for Stetsasonic was, with a college course in audio engineering, the sum total of Prince Paul's studio experience when De La Soul DJ Pacemaster Mase approached him with a tape of his group. It was, rather, Paul's local hero status on Long Island which prompted the request for advice while the pair worked on demos for a mutual friend.

"You could hardly hear their rhyme style there was so much distortion", remembers the amiable 22 year-

old, "but straight off I was overwhelmed by the uniqueness of their thinking as far as rap was concerned; like me they were trying to do something outside of the mainstream. The tape wasn't even four-track, it was made on two cassette decks, but it had a certain feel, you just knew it was really good."

Suggesting that a well-recorded demo might bring De La Soul a record deal and serve as the master for their first record, obviating the usual re-recording delays, Paul pooled his money with theirs and took them into Manhattan's 24-track Calliope studios. Thanks to some intensive pre-production they managed to cut three tracks for under \$1000 and, with the help of Paul's fellow Stetsasonic member Daddy-O, they secured a deal with Tommy Boy. (Their album is now the label's biggest selling record, topping Africa Bambaataa's pioneering *Planet Rock* from '82.)

'Plug Tunin', from those sessions, was the group's debut single.

"At that stage my role wasn't to make them more commercial, just a little bit more understandable", says Paul. "On 'Plug Tunin'" that meant speeding up the track from 88 to, like, 92bpm and adding the Billy Joel pieces on the breakdowns which had just been straight up drumbeats. I also put another breakbeat loop in the background to direct the track a little and get a better feel so they could relax putting their vocals on."

The success of that single and, subsequently, of 'Jenifa' meant that an LP was expected; with very little material written, the band still managed to deliver the record after just two months in the studio (including a three week break while Paul toured with Stetsasonic). Again, pre-production was the key.

"They'd come up with ideas and give them to me, that's when I started flexing more of *my* musical ideas, going home to add stuff and figure out how they should rhyme to it. We'd all get together for meetings after that, then we'd go in and just do it."

On the agenda at those meetings was not only De La Soul's musical direction but their evolving philosophy, the way they wished to be perceived.

"The frustration of stuff sounding so similar was what gave us the idea to break different. A lot of what was going on was down to peer pressure, y'know. I like this person because he's hard and I wanna be hard, but there's people out there who don't really identify with that, people who see a group being themselves and realise that they can too without being ashamed of it."

"And if you've noticed, there's a large percentage of people out there who've stopped wearing those gold chains and doin' a lot of those things within the past year because they've realised it's not all about that."

The concept was ambitious and to realise it so quickly on vinyl took discipline, as Paul explains.

"In the studio I developed a homework sheet - after we'd listened to everything, I'd work out everybody's tasks for the next day, get them to work on lyrics or find things to go along with the track. I kinda lead things off but all of the group are involved in the production and I don't try to hinder time. If an idea works it works, if not you just erase it and put something else down."

"What's so cool about De La Soul is they don't argue or doubt anything and I haven't led them wrong ►

► yet, so they have no reason to disagree with me. It seems like we were meant to work together - our families are religious, moralistic people so we often have the same values or feeling which happen to manifest themselves in music."

**"Some people are so concerned about their image that they think they've gotta use James Brown, but with us if it sounds good and if we think nobody else would use that, then we use it."**

This is plainly not your standard artist/producer relationship: in addition to helping fund the group's demos Paul has a speaking part on the album (his sleeve credit reads "Prince Paul (The Mentor)" and he provides studious introductions to the videos for 'Me, Myself and I' and 'Buddy'.

**DISTINGUISHING THREE FEET HIGH and Rising**, especially in hip hop terms, was that it sounded so relaxed, and effortless. This, it transpires, was because making the album *was* relaxed and effortless. . .

"The sound developed out of laziness and impatience as much as anything", says Prince Paul. "Not too much thought went into the actual recording. Once we put it together, if it sounded good me and Pos would just say 'That's good enough' and move on.

"We'd use messed-up, cracked old 45s, which no one else was doing at the time, so there's hardly any clarity on the album, and none of the scratching is perfect, plus there's mixes where we just got too lazy to rewind the tape and do it over. But the whole thing is, if the listener hasn't heard the record before, how would they know if we missed a punch or whatever, it doesn't really matter."

This laissez-faire approach extends to Paul's choice of equipment and he expresses a preference for just a few basic tools of the trade.

"We only used drum machines on two or three tracks because we rely mainly on the Akai S900 sampler but I love the Casio RZ1 for its dirty, noisy sound. Also, it was discontinued so you don't hear it on many other records. On 'I Know' we used the SP12 but you can't really identify it because it's on top of a drum loop; sometimes we'll match the machine to the sample, other times things'll just happen to fit together. That's pretty much it for equipment, plus, as I said, a bunch of old records."

Sales of *Three Feet High* (850,000 and rising) have afforded the producer the opportunity to upgrade his home studio, which he has done - slightly.

"I used to have the same basic setup as the band, a couple of cassette decks, a mixer, two turntables, and a Casio SK1 and SK5. To me that was good enough until we got into the studio. Since then I've gotten a

second-hand four-track - a Ross which is even cheaper than a Portastudio - and a Digitech guitar delay with eight-second sample. That was in the display case, the last one in the shop, so I got it cheap!

"I bought a Sequential Tom drum machine for \$100 off a friend and recently I've added the Alesis HR16, the only thing I really spent money on. I like the clarity of the Alesis but most times the rawness of a sampled record sounds incredible next to a machine. You can programme swing but the spillage from, say, the snare drum to the kick drum can't be replaced by digital reverb or echo, it's not the same, not natural."

De La Soul's loping grooves and spaced oddities show a consummate musical literacy, sampling a bewildering gamut of sources from Steely Dan to Liberace, from Johnny Cash to Walt Disney. How were these assembled?

"It could be from your parents' record collection, something that made you go 'Wow - maybe I can use that in hip hop form'. The record on 'Jenifa' for example was something that Posdnous' father played which he grew to like. Or sometimes it's from going out and buying records - you could see an album with lots of Brothers in Afros on it and think 'This must have something on it!' or you'll see the title 'Funky Something' and pick it up. Then there's stuff I get which nobody else would really buy - my philosophy with De La Soul or with any production is to try anything and see what happens.

"I think that separated us rhythmically from other artists in rap: the fact that we weren't scared to use certain records. Some people are so concerned about their image that they think they've gotta use James Brown or this or that, but with us it's more or less if it sounds good and if we think nobody else would use *that* then we use it. It doesn't matter if it's a hard core beat, it doesn't matter if it's a hip hop beat at all, if it's pleasing to the ear we'll have it - we'll take the Grateful Dead if we like it."

One of the quirks of *Three Feet High and Rising* is a mock TV game-show running through the LP. It seems this vehicle for some of the group's more out-to-lunch humour didn't arrive until the very last moment.

"When we were sequencing the album it sounded so bizarre that I thought we needed a spoken intro to make it more visual and keep your interest the way Parliament-Funkadelic used to. When I suggested a gameshow they all looked at me like I was crazy but we put it together and I think it ended up being a big part of the record's appeal; it seems like you know the people because we're talking to you directly, it's not like everything's too synthetic and perfect or like it's too far away from you."

Not that the creative process on *Three Feet High* was entirely composed of inspired guesswork; we have corporate intervention to thank for one of the record's most inspired moments: "The record company were asking us for something more mainstream to balance out the weirdness of the rest of the album, so Mase came up with the idea of using 'Knee Deep' and being a big Clinton fan I was like 'Cool'. But when I added the drumbeat and the arrangement for 'Me, Myself and ►

*Chelsea*

Future Music Chelsea  
 202 New King's Road, London SW6  
 ☎ 01 - 736 4771/01 - 731 5993

# We Promise...



**...The best deals around!**

*Tired of seeing £POA, BEST PRICE, SALE? Well so are we. So we're going to make everyone an offer.*

*Go to your local music store, or phone around to get your best prices - Then come to us!*

*We will promise to match or beat any genuine quote!*

*We are authorised dealers for all the equipment made by the manufacturers listed on this page. Our service back up is second to none, plus expert advice is willingly given.*

*Don't forget we are always the first for all new products from the best manufacturers, so why not try us for all your hi-tech needs. You'll find us refreshingly different.*

*Look forward to seeing you.*

## **NEW PRODUCTS**

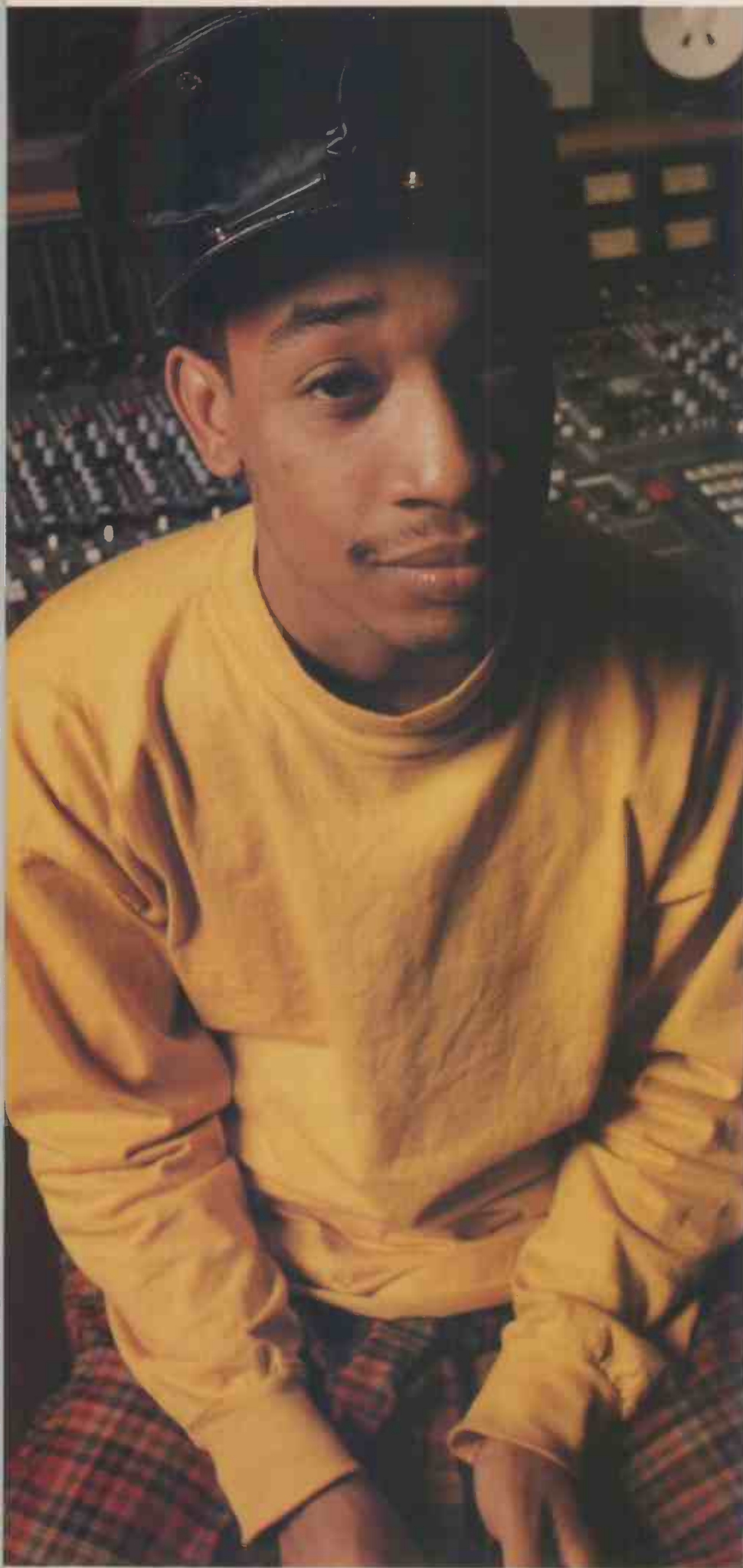
*Roland U20, Korg T1, Roland S770, Casio DA2, Emu Proteus, C-Lab Human Touch, Korg M3R, Kawai K4. Trackman, Midiman. Cheetah SX16 stereo 16 bit sampler, plus Cheetah MD16 & MD8 now in stock. Call for price and information.*

A superior selection of equipment from:-  
 Akai • Roland • Yamaha •  
 Fostex • Teac • Tascam •  
 Korg • Casio • Shure • AKG •  
 Sennheiser • Ensoniq • Alesis  
 • C-Lab • Atari • Steinberg •  
 Aphex • Oberheim • Symetrix  
 • Seck • Session • Carlsbro •  
 E-Mu • Drawmer • Signex •  
 Tannoy • Yamaha Electronics  
 • Revox • Lexicon • AHB •  
 Soundtracs • JBL • Boss •  
 Sony • ART • Digidesign •  
 Hybrid Arts • Dynamix • RAM  
 • Cheetah • Ultimate Support  
 • Stand Innovations • Flight  
 Cases.....



ACCESS•BARCLAYCARD WELCOME.  
 INSTANT FINANCE AVAILABLE.  
 WORLDWIDE MAIL  
 ORDER SERVICE.

*See you soon!*



► I' and played it to Trugoy and Pos their initial reaction was 'Naah, too commercial'. Of course it turned out to be the biggest song on the album even though it didn't take that much time and effort. I just laid it down to please Tommy Boy.

"Hopefully now that De La Soul have built a name, the company will accept the music for what it is", adds Paul.

#### BEING IN THE VANGUARD OF HIP HOP

style is one thing, but the band now find themselves in a less enviable position - the front line of the legal debate over payment due for use of sampled works. A \$1.7 million lawsuit has been brought against De La Soul by ex-Turtles Mark Volman and Howard Kayman over part of their composition 'You Showed Me', which appeared on De La's 'Transmitting Live From Mars'. (The offending track consists of 66 seconds of the four-bar Turtles loop, plus overdubs, played under a French language instructional record.)

The merits and the amount of the claim are debatable but, Prince Paul stresses, litigation should have been avoided.

"When we handed the album in we also gave the record company a list of all the samples we used along with labels, publishers, everything. We did say if there's anything you can't get permission on just remove the song from the record because with so many tracks on there it wouldn't matter. So they cleared what they thought was appropriate and the more bizarre stuff I guess they took for granted, so we suffered."

"I'm kind of discouraged but you learn from your mistakes and I'm a lot further on than I was before, lawsuit or not. I felt the album could go gold but since it went beyond that the money we made was unexpected, so I'm thankful for what I have."

The warlike stance of many rap producers on the sampling issue is not one that Paul shares. Stetsasonic were among the first to remunerate a sampled artist (Lonnie Liston Smith, who received a \$3,000 flat fee when his 'Expansions' track was used on Stetsasonic's superb *All That Jazz*) and maintains this willingness to accommodate.

"If I take a measure or two of drums or a bassline I can't really see a fee for that, but if it's something substantial that sounds really good in context then I'll give up whatever money, points or publishing I have to because it's more the music than the money. Obviously the amount varies a lot, but my lawyer's not stupid and I trust his advice on these things; if he says they want X dollars or X publishing, that's excessive, then he'll ask me if the sample can be replaced. If it can be he'll suggest I do so, if not I'll decide what to do."

Such a decision was forced on Paul's production of the De La Soul/Queen Latifah collaboration on the latter's debut album. The song 'Mama Gave Birth To The Soul Children' originally featured on its chorus the title line from Sly and The Family Stone's 1971 hit 'It's A Family Affair', the copyright of which is now owned by one Michael Jackson.

"When we applied for permission to use it they demanded 100% of the publishing and that the song be ►

# 3 GOOD REASONS

# CLASSIFIED

# SPECIAL OFFERS

## Hot Tech....

**AKAI S1000 KB** The industry standard sampler now has a keyboard. 61 note, with aftertouch. Available with 40 or 80 Mbyte hard disk. New standard for live work.

**MICROTECH R45 MASS STORAGE** A SyQuest 45 meg removable hard disk drive for only £85. Compatible with S1000, Emu, Emox series, Casio FZ20M, Roland W30, S550 and Ensoniq EPS samplers.

**KODAK 20 PLUS MASS STORAGE** Removable super floppy disk drive at an amazing price. 120 Mbyte floppies cost £35 each! 20 Mbyte formatted, SCSI compatible for all samplers with SCSI interface. Kits also available for IBM XT/AT PS2 and Atari ST. Comes complete with 1 disc of samples you choose and SCSI terminator. £699.

**S1000 2 MEG** memory boards only £299  
**SYNTH AXE** Exclusive dealer for the only true MIDI guitar controller. Bending, Hammer-ons, pull-offs. Keeps up with Allan Holdsworth. Used with C-Lab/Cubase guitar playing writers/arrangers can repay the investment in a month. Call Paul Coghill.  
**EMU PROTEUS XR** The now famous Proteus with user memory upgrade.

**EMU EMAX II** 16 bit stereo sampler, with 16 voices, polyphonic outputs, and fitted scs card. Both rack and keyboard versions will come in two versions: 1 meg Ram/FDD or Turbo/4 meg Ram/HD40, and are at unbelievable prices.

**YAMAHA C1**. See one elsewhere in this issue.  
**DIGIDESIGN SOUND TOOLS**: 16 bit CD quality mastering for the MAC. Incorporates Sound Designer II for cut/paste editing, digital E.Q., mixing, panning and SMPTE. V.I. You now have stereo time-stretching, an improved scrubbing tool (greater resolution), and 51000 Midi/SCSI implementation.  
**ROLAND S770** Secret sampler.... please call us!

**MEX BOARD FOR ROLAND D50/550** Does what the Gray Matter E1 board did for the DX. - two different 8-part multi-timbral modes - freely definable Key Windows for achieving multi-sample sound - expanded master keyboard functions - memory expansion of up to 128 patches - At £299.00, a must for all D50/550 owners.

**KORG M3R M1R** without the Sequencer. Also new T-series synthesizers.

**KORG M1/M1R** PCM upgrades in stock!

**YAMAHA SY77** The synth of 1990? This new product has 2 megawords of 16 bit 48 Hz AWM2 samples with a 6-operator, 45-algorithm AFM synthesizer, 32 note polyphony, 16 part multi-timbral, up to 8 real-time digital filters per voice, 4 DSPs, with 40 reverb programs, and a 16 track sequencer with 16,000 note capacity... and theres more! Call for details.

**YAMAHA TG55** All the AWM2 features of the SY77 in a 19", 1U rack, 1 megaword of samples with 2 card slots, and 4 DSPs offering 34 different FX.  
**AKAI DRUM MACHINE** 16 bit, 8 voice drum machine, with 450 preset patterns and 20 user patterns.

**TASCAM MSR24** New generation 24 track 1" tape with built in DBX type 1 noise reduction.  
**TASCAM 688/644 MIDISTUDIOS**. The new generation portable studios. The 688 is an 8 track cassette recorder/mixer (20 inputs, 2 aux sends, 4 aux returns & 3 band eq) with midi mixing and built in tape sync. The 644 has the same amazing features in a 4 track, 16 input format. Very competitively priced.

**TASCAM MM1** A rack mounting, 20 input keyboard mixer with Midi mixing. Once again keenly priced.  
**ALESIS MIDIVERB III** Basically, this is a cut-down Quadraverb - the bandwidth being cut-down to 15kHz, the display cut down in size, and most importantly the price being cut-down to £317.00.  
**ALESIS DATA DISK** The ideal stocking filler or at least for those with big feet.

**SANSUI WS-X1** Revolutionary 6 track recorder 1 Comes not only complete with built-in 8 channel mixer, but amazingly a stereo recorder to mix down onto. Can also be synchronised to the MR-6 slave unit to give 10 tracks. We also have the full slave range in stock, including the WS-G10 graphic and MX-12/2 mixer.

**ATARI STACY** At last the 1040 laptop with a choice of 1 or 4 Mbytes of RAM and 20 or 40 Mbyte internal HD hard drives.

**ATARI TRACK BALL** Tense nervous arm ache? 7 Mouse fatigue? No place to put your mouse? Try using this with Creator/Cubase and you'll wonder how you did without it! £39 inc P&P

**AMIGA** in stock. Running Music X and Pro 24 Great prices.

**18A SOHO SQ. LONDON W1**  
(100 YARDS FROM  
TOTTENHAM CT RD TUBE)  
TEL 01-434 1365/6

01-437 3195  
FAX: 01-494 1883  
TELEX: 261507 ref 2027

Unlike our competitors we carry every product from all the major manufacturers on **PERMANENT DEMONSTRATION**. Comparing the bass drum from 11 different drum machines - through 15 different reverbs is routine. Our air-conditioned demo-booths are integrally wired for MIDI-purpose built to enable the rapid set-up and demonstration of complex systems by our highly trained specialists.

Despite what you may read elsewhere, Soho Soundhouse, over the last 6 years have consistently offered the lowest prices **WORLDWIDE**. We operate our legendary **PRICE SMASH** policy in-store and from credit card telephone callers. Our breadth of product coverage and experience from MIDI hardware and software to recording equipment makes us the No. 1 **PACKAGE** specialist.

We offer demonstrations outside normal hours, equipment installation, studio design consultancy, various trial/rental purchase options. **Instant 0% No Deposit H.P./Part Exchange**. We Routinely Ship Worldwide - **VAT FREE EXPORTS** a speciality. We welcome Musiccard holders. Home credit scheme. No visit to us required.

<b>ROLAND</b>	<b>ALESIS</b>
<b>AKAI</b>	<b>TASCAM</b>
<b>YAMAHA</b>	<b>SECK RAM RSD</b>
<b>EMU</b>	<b>FOSTEX</b>

<b>CASIO</b>	<b>Vesta/DigiTech</b>
<b>KORG</b>	<b>EV TANNY JBL</b>
<b>ensonia</b>	<b>AKG SHURE</b>
<b>Oberheim</b>	<b>QUAD SONY</b>

<b>kurzweil</b>	<b>APHEC dbx lexicon</b>
<b>Cheetah</b>	<b>audio-technica Sennheiser</b>
<b>SIMMONS</b>	<b>SUBBU CRASBRO TOA</b>
<b>ATARI LAB</b>	<b>SOUNDTRIX</b>

<b>Steinberg Dr T</b>	<b>JILSCOOPER digiolution</b>
<b>apple</b>	<b>LINK COMPAG</b>

<b>ROLAND RESEARCH</b>	<b>KEYBOARD/LIVE RECORDING MIXERS</b>
------------------------	---------------------------------------

## SPECIAL OFFERS

Remarkable range of professional, stereo (into 2) consoles. Available in 6, 12 or 16 channel versions. Very quiet, great sounding E.Q., rugged steel construction for good shielding etc. Each channel has: 1/4" line & balanced XLR input, gain, high, mid & low E.Q., 2 auxiliaries, pan & long throw fader. Auxiliary master gain, E.Q. & pan. Bar graph metering, headphone monitoring etc.

The range of applications for stereo mixers is growing fast e.g. Multitimbral synth/sampler/drum machine mixing. Live main/sub mixing (12 channel 700W P.A. systems complete for under £900). Mix your Atari/synth arrangements direct to DAT for C.D. quality demos.

Available at a fraction of the list price. Exclusive Ltd stocks. Includes: **FREE** monitoring headphones and 24 hour carriage.

**PACKAGE PRICES**

6:2	£169	plus VAT
12:2	£259	plus VAT
16:2	£319	plus VAT

NEW BOXED

**YAMAHA DX11 SYNTH**  
Fully programmable 80 note multitimbral Velocity & aftertouch. RRP £679

inc Carriage plus VAT	£347
inc Carriage plus VAT	£260
inc Carriage plus VAT	£347

**TQ5** Synth module  
**QX5FD** d.d. sequencer

### 40% OFF • SECOND

**SYNTHESIZERS**

Yamaha V50	£750	COMPUTERS & SOFTWARE Cont	
Yamaha DX7 IID	£999	Coda Finale (M)	£499
Yamaha DX11	£339	DiGDesign Q sheet#183	
Korg M1 sh	£1043	DiG TurboSynth	£232
Korg M1R	£260	EFFECTS	
Roland Juno 1	£260		

**COMPUTERS & SOFTWARE Cont**

Midivert II S/H	£185
Aphex type C sh	£149
Yamaha SPX60D	£249
Yamaha FX500	£303
Yamaha SPX900	£434
Yamaha H100	£129
Yamaha SPX1000	£675
Yamaha DSD201	£249
Yamaha DSD20	£197
Nomad Akexam s/h£139	
Dod DSP128	£243
Kawai K11 kbd	£378

**ROLAND MKS70 24 osc synth New £599**

Roland D5 sh	£379	Midivert II S/H	£185
Roland D110	£421	Aphex type C sh	£149
Roland D50 sh	£626	Yamaha SPX60D	£249
Roland D20 sh	£765	Yamaha FX500	£303
Ensoniq ESQ1	£475	Yamaha SPX900	£434
Ensoniq VFX sh	£399	Yamaha H100	£129
Casio VZ10M d	£250	Yamaha SPX1000	£675
Casio VZ8M	£190	Yamaha DSD201	£249
Ensoniq S080	£650	Yamaha DSD20	£197
Ensoniq ESQ1	£400	Nomad Akexam s/h£139	
Kawai K11R new	£326	Dod DSP128	£243
Kawai K11 kbd	£378		

**Casio FZ10M Sampler new £690**

Cheetah MS5	£217	R.S.D. 1DP1	£260
Oberheim M1000	£279	Art SGE	£520
		Valley People Gate	£39

**SAMPLERS/PLAYERS**

Lexicon PCM70	£950
Lexicon LXD1	£299
Lexicon LXP1	£299
Roland 20K R/W7	£260
Roland SDE 3000	£365
Roland RB00 sh	£1550
Boss BE5	£173

**Akai X7000 Sampler keyboard new £460**

EMU Proteus INSTOCK	Akai 70C Comp G1E39		
Emax SE rack	950	Symmetrix 525	£320
Emax HD rack	£1299		
Emax sh guarantee	£4500		
Fostex X25	£260		
Fostex 160 ed	£299		
Fostex 260 ed	£499		
Yamaha M1100 + Atari	£1199		
Tascam MIDI STUDIO 25	£1042		
Yamaha MT2X	£260		
Akai MG614 sh	£550		

**RECORDING**

Yamaha WX7 MIDI Wind inst new	£215		
Casio MB10 exp	£179	Porta RB + RAM 1082	
Kurzweil K1000	£1260	Flite + Proline 1648	£1465

**MOTHER KBDS**

Fost 1E16 Seck 1882	£1999
POA	
E16 + Midown 1816	£6250
M16, mnt	£2750
AKA MG614 sh	£1699
Rem 1E16 + rem 1E16	£1999
Fostex EB	£1499
Seck 18.8.2	£899
Seck 12.8.2	£750

**PIANO KBD MODES**

Yamaha TX81P sh	£260
Yamaha EMT110	£173

**Cheetah MK5V £150 MK7VA £240**

Yamaha PF1500	£847	Tascam TSR8	TBA
Roland RD2005	£869	Tascam 238 sh	£769
Roland RD3005	£1040	Tascam 32	£565
Roland P230 new	£319	Tascam MSR16	£3250
Casio CSM 10P	£119	238 + Seck 1282	£1565
		RSD 16.8.2	£565
		Soundscape MK4	£500
		RSD 16.16.2 SII	£2300
		RSD 10.8.2	£650
		RSD 10.8.2 - new	£499
		Casio DA2	£350
		Casio DA1	£499
		Sony DTC1000ed	£999

**DRUM MACHINES**

Yamaha RK5	£247
Yamaha RK7	£299
Yamaha RK8	£250
Yamaha RK21	£79
Yamaha RK15	£160
Alesis M1R16 sh	£250
Akai MPC60 dem	£1477
Akai XE8 new pack	£260

**ROLAND P330 19" SAS Piano new £319**

Roland TR626 new	£187	Fostex 4050	£399
TR620A	£86	Fostex 4030	£875
TR120	£130	Fostex 4035	£90A
Emu SP12 sampling	£995	XI 300	new
Cheetah M08	£39	JL Cooper PPS1	£132
Ob. DX expander	£60	JLC PPS 100 SMPTE/	£250
		MTC	£250
		Yamaha MSS1 new	£216

**SEQUENCERS**

Yamaha OX5FD	£370
Yamaha OX3	£477
Yamaha OX5	£173
Korg SDD 8	£200
Roland MC300sh	£369
Roland MC202	£129
Kawai O8D	£390

**UTILITIES**

ASK 70 X7000 exp	£49
32 way patch bay	£30
D7X Expander	£179

**MIXERS**

Seck 6.2	£249
----------	------

**New Roland TR626 £187 TR605 £149**

COMPUTERS & SOFTWARE (M) mac	Seck 12.2	£399
Seck 24.2	£599	
Alan 1040/Pro 12	£430	
Alan 1040 + Mon	£430	
Alan 1040 + Mon	£650	
Alan 1040 + Mon	£410	
Apple Mac Pro	£1195	
Pro 24 v3 new	£129	
Alan Trackball	£20	
Yamaha MS10M pre15E	£125	
AR Pwr Prints	£125	
Yamaha A100 amp165	£112	
JBL TLX3 pr	£112	
Tanley Range	£0A	
Carlsbro 45 comb	£149	

**New Atari Packages - See Computers**

Cubase	£435	MICROPHONES	
Avalon	£174	Shure SM58 new	£79
Opodoe Vision	TBA	Shure SM57 new	£69
Opodoe Cuel (M)	£99	Electrovoice PL80	£69
Opp. MIDI pack	£185	AKG Senn. Neum EOA	
Opp. D50/DX editor	£99		
Opp. Timecode	£132	AUTOMATION	
H.A.Ris ed track	£104	Megamix 24 ch dbx	£895
H.A.Ris Genpatch	£99		
St big DM77 ed.	£65	WIND	
St big DX17 ed.	£77	Yamaha WX7	£199
St big EMAX ed.	£65	Akai EV1 sh synth	£413
St big Mstr Score	£89		
MOTU Composer (M)	£99	MIDI GUITARS	
Yamaha GRS0/GK2/POA	£170	Casio MG310	£280
DigDesign Soft synth	£202	Yamaha G10/10C	£866
Dig Snd Des Emox	£202	Roland GM70/GK1	£280

**ALL PRICES EXCLUDE VAT**  
**FREE 24 Carriage on ITEMS BELOW 25kilo**

**40% OFF • SECOND**

**ALL PRICES EXCLUDE VAT**

### FOSTEX 160 PROFESSIONAL HIGH SPEED FOUR TRACK PACKAGE

Probably our best deal yet for the first time real to real quality full facility four track has been available at a truly affordable price.

Tape speed is the key multitrack specification. The servo assisted double speed transport means that music signals are recorded onto twice as much tape enabling more bounce downs before the tape saturates, substantially reducing wow, flutter and noise but most importantly giving the extra high end frequency response to make your recordings bright, clear and master ready. Dolby C, the noise reduction of first choice for multitrack, has the highest noise integrity, no side effects and reduces the S/N ratio to a remarkable 70db.

The versatile, well laid out mixer is typically FOSTEX and unmatched on competitive machines. Long throw fader, no band eq, pan and aux per channel with fader switching & operation like 8 channel mid/down with 4 channels from tape leaving 4 inputs free for sequenced synth parts etc. Highly flexible monitor buss and auxiliary routing - full size barographs - mic inputs etc. All in all a feature packed 4+2 that easily doubles as a first rate keyboard mixer.

This 160 package represents a real quality price breakthrough. We have a strong writer/player and demand well far exceeded supply. Orders will be supplied on a first come first served basis. Package includes F557 headphones and PS U.

**PACKAGE PRICE**

£319	plus VAT
ADD £6	carriage
NEW BOXED	

**ART PROVERB 200 16 BIT STEREO REVERB/MULTI-EFFECTS PROCESSOR**

From the best selling range of U.S. made effects and the unit of 1st choice for the high quality natural sounding reverbs associated with American studio processors costing thousands rather than hundreds (algorithms uniquely structured to eliminate the harshness and brittleness of the other budget units).

200 programs including 120 REVERBS (from Early Reflections, Phases, Studio and Live Vocals, huge Halls (up to 25 second decays) and Rooms, all in a wide range from warm to bright, to Reverse and 20 various Gated/Companded Gated, STEREO IMAGING, PAN and SPECIAL EFFECTS. • COMBINE multiple effects - 16 bit, full bandwidth processing, 800b dynamic range (extremely quiet) - 16bit MIDI spec. MIDI PROG numbers assignable to any program. 16 MIDI channels or ONMI, complete your own patches etc. Control from kbd or seq. or use footswitch/MFC05 for live program advance/reverse random selection respectively - 19' rack mounting.

The EXCLUSIVE offer represents an unrepeatable opportunity to purchase a beautifully natural sounding commercial quality reverb at a fraction of the cost. We expect to sell out very quickly.

RRP £345

**NEW BOXED**

**AKAI XE8 16 BIT DRUM SAMPLE PLAYER**

The Akai S1000 and MPC 60 are by a long way the most common source of drum sounds in professional live/recording environments. In these situations price is often of little concern. We can now offer every writer/player a choice of these sounds at around one tenth of the cost.

The Akai XE8 - 1 meg int. memory of 16 16bit samples + 2 FREE 1 meg Roms (16 sounds each - kits, percussion, orchestral blasts etc.) - use two cards simultaneously (two slots) - Store any 16 samples in one of 32 programs - assignable key rolls 0-127 - play 16 samples. Cymbals become gongs etc. - 4 band EQ - assignable level of pitch shift on string bending (up to 1 octave) - Transpose (±1 octave). Individual string sensitivity adjust. Onboard quartz tuner for guitar and synth - much more. Hurry. We have limited quantity. Specify £260 plus VAT. Add £8 carriage. RRP £545.

**NEW BOXED**

**CASIO MG510 WITH TREM GUITAR MIDI CONTROLLER**

Widely accepted as one of the most playable systems at any price - with superb tracking and no miss/triggers. The MG510 - Maple neck, Rosewood 1/2 board, 22 frets. Strung trem. 1H, B, 2 S.C pickups, coil tap. Torque adjusting machines. Great MIDI spec. Assign strings to different MIDI channels/synths. Select 36 synth patterns. Cymbals become gongs etc. - 4 band EQ - assignable level of pitch shift on string bending (up to 1 octave) - Transpose (±1 octave). Individual string sensitivity adjust. Onboard quartz tuner for guitar and synth - much more. Hurry. We have limited quantity. Specify £260 plus VAT. Add £8 carriage. RRP £545.

**NEW BOXED**

**YAMAHA MFC05 MIDI foot controller**

Two banks of five foot switches give instant access to any 10 programs/patches - bright LED's for stage use - Control any MIDI effect via std MIDI cable - Chain up any number of effects for multiple program changes - Ctr. synth patches - plus VAT. Add £4 Carriage. £60

**NEW BOXED**

**AKAI PROFESSIONAL EX SERIES EFFECTS.**

**EX85P PARAMETRIC EQ**

Four bands, - 18 db sweep - Variable Q (bandwidth) - 10 db O.K. - S/N 85 db - Foot-switchable - Tailored E.Q. to emphasize required parts of music and eliminate unwanted components - Ideal for live mixers with auxiliaries but no E.Q. - Use with any mixers/Portastudio - great for guitars etc. RRP £139.

This is strictly limited offer. These effects are less than half the price of any comparable units. Hurry. 19' Rack adaptor (holds two units) available £16 inc P&P.

**ALL NEW BOXED UNITS. PRICES INC P&P. ADD £6.95 FOR P&S U.**

## MAIL ORDER DEPARTMENT

Our long established mail order department documents your order from receipt to despatch. Send cheques, postal orders, Access or Visa orders, Bankers draft, Building Society cheques, Cash in reg. env. to SOHO SOUNDHOUSE FREEPOST 38 LONDON W1 60Z. NO STAMP REQUIRED. (10 day clearance for personal cheques). All other forms of payments - 24 hr despatch. Telephone Orders Welcome.

NAME & ADDRESS	GOODS REQUIRED	CREDIT CARD NO.	TOTAL £
----------------	----------------	-----------------	---------

**"People say  
De La Soul was  
big in terms of  
influence but  
it's not like we  
tried to change  
everything -  
people who  
are really  
successful are  
those who do  
what they like  
and do it  
the best."**

► the first single from the album", says the producer with a wry smile. "I might talk about money being unexpected but I'm not stupid! Sure, the hook was a big part of that record's popularity so I was willing to give half, but 100% was just too much. Michael Jackson's a wealthy man, I don't know what his problem is. . ."

The first single from Latifah's album, *Dance With Me*, featured on its chorus the title line from Sly Stone's 'Dance To The Music', with composer credits to Sly, Latifah and producer DJ Mark. As they say in New York, go figure. Add to that the minor irony that the propellant in Janet Jackson's 'Rhythm Nation' single was the guitar riff from Sly's 'Thank You (Falettinmebemyselfagain)'.

Among the artists with whom sampling agreements were reached on *Three Feet High* were George Clinton, Steely Dan's Becker and Fagen, and Hall and Oates - the latter apparently less than gracious about the situation.

"It's all through the grapevine but I heard they were displeased with the whole thing. They couldn't be too upset, they got paid", Paul laughs. "People view sampling different ways", he continues. "George Clinton loves it when someone samples his music, Barry White too, because they love rap music, but if a person's anti-rap they might tend to get all uppity and want more money."

Paul's lawyer Eric Greenspan, of LA firm Myman, Abell, Fineman and Greenspan, had an amusing angle on this greyest of legal areas, suggesting that rap's often multi-layered use of samples could lead to scenarios not unlike Mel Brooks' film *The Producers*, with numerous claimants all fighting for their 50% of the same thing.

#### SINCE DE LA SOUL'S SUCCESS PRINCE

Paul has mixed tracks for, among others, the Fine Young Cannibals and Living Colour, recently getting a call from the other Prince about Paisley Park artist George Clinton.

Production-wise there have been contributions to the albums of Latifah, Big Daddy Kane, Def Jam signing 3rd Bass and lately to LL Cool J's follow-up to 'Walk With A Panther'. To see a whole album through would, he insists, require a particular type of involvement.

"I've been doing one or two cuts here and there because ideally I'd like to be in a situation where I can think about developing the artist, figuring out how to make them work. I'll be working with a guy called Mike Teelucksingh who was in the Soul Brothers with me. Mike's really talented and I hope to capitalise on his weirdness; he's engineering here at Calliope now and doesn't want to make an album real bad and make a lot of money, so if he does record it'll be just for the fun of it, which is a lot easier for me.

"One reason I'm not keen on working with developed artists is that people always compare what you do with their previous work, and someone like Kane has made some great records. I just had to put that aside and focus in on what I like about him personally. He was the first person I worked with on a

professional artist/producer basis and, having become successful, he had his own concepts and ways of doing things while I had my ideas. We didn't clash but it wasn't as relaxed as with De La Soul who were my friends before we worked together.

"The whole thing with them happened so casually that it's like a dream. I'm just waiting for someone to slap me and say wake up, time to go to work. People say 'What's your secret?' but I'm like, Yo - it happened. There is no secret. I don't know how long I'll be into the whole production thing, I guess when it stops being fun I'm gonna quit regardless of demand. I like it but I'm not really fighting to stay in it - what I'd really like to do after this is find some part in a record company, maybe A&R or whatever just to stay in touch with the music part of it."

It doesn't tax the imagination too much to see Prince Paul heading his own label at some point in the future, and you get the sense that even he'd be taking it easy.

With Daddy-O also enjoying a burgeoning production career (Sly and Robbie, Third World, Latifah and mixes for the B-52's, the Red Hot Chili Peppers and Keith Richard) there have been considerable delays in recording Stetsasonic's second album, not to mention growing internal tensions. The wait, however, is almost over and Paul is, he says, happy for the moment with his role as the group's DJ. That commitment fulfilled, it's straight to work on the new De La Soul LP.

Having forced back the boundaries of hip hop once the anticipation for this record will be formidable.

"I can't wait to see what happens - it kind of scares me in a way, I just hope it's as comfortable as the first album. The philosophy will be the same but the music won't: we're probably gonna utilise live drums and other instruments, maybe sax or keyboards but something awkward like the ukelele. It definitely won't be your average musician coming in. . ."

Very little editing took place on *Three Feet High*, strange since hip hop has made the editing block the focus of much of its creativity. But, explains Paul, "We just arranged the tracks as we wrote and only started learning what edits could do as we went on. So this one should be a little more advanced on that side and with technology as a whole. But not much," he emphasizes.

"We won't jump on our own bandwagon, so no Steely Dan, gameshows or George Clinton just because 'Me, Myself and I' hit; we'll do what we like. People say De La Soul was a very big group in terms of influence and changing the sound of rap but it's not like we *tried* to change everything, it's just that the people who are *really* successful are those who do what they like and do it the best.

"People copy Teddy Riley, or Kane and KRS1's rhyme styles, or Public Enemy's politics but if they started to do their own thing there might be more De La Souls to change the course. The less people copy others and the more they go with their gut feeling the more music will advance.

"But, hey, if people keep on doin' the same old same old I'm not gonna complain - it just makes it easier for me!"

# THE JANUARY "TURKEY-FREE" SALE!!

Yes folks it's January Sale time again and dealers everywhere are unloading all the turkeys that they've been talked into by smooth tongued reps during the year.

Because we are a specialist company and understand the market we haven't ended up with a shop full of Guatamalan Samplers and MIDI compatible trouser presses.

This means that in OUR sale you'll have to make do with the very latest 1990 models at huge reductions. There were enough turkeys around at Christmas, surely?

*The following instruments are ex demo but usually unmarked and boxed with a full 12 month warranty.*

## SYNTHS

ENSONIQ ESQ1 SYNTHESIZER	£599
ENSONIQ VFX SYNTHESIZER	£CALL
KAWAI K1 SYNTHESIZER	£440
KAWAI K4 SYNTHESIZER	£795
KAWAI K5 SYNTHESIZER	£690
KORG T3 SYNTH WORKSTATION	£CALL
ROLAND D10 L.A. SYNTHESIZER	£699
ROLAND D20 LA SEQ/SYNTH	£949
ROLAND D5 L.A. SYNTHESIZER	£499
ROLAND D50 SYNTHESIZER	£1,150
ROLAND U20 MULTI TIMBRAL KBD	£899
YAMAHA B200 SYNTHESIZER	£449
YAMAHA DX 11 SYNTHESIZER	£425
YAMAHA YS200 SYNTHESIZER/SEQ	£449

## MODULES

CASIO VZ 8 SYNTH MODULE	£279
CASIO VZ 10M IPD SYNTH MODULE	£450
EMT 10 AWM EXPANDER MODULE	£230
KAWAI K1 RACK SYNTH MODULE	£329
KAWAI SYNTH K1M SYNTH MODULE	£329
KORG M3R 19" SYNTH MODULE	£799
ROLAND D110 SYNTH MODULE	£499
YAMAHA TQ 5 FM SYNTH MODULE	£349
YAMAHA TX 81Z SYNTH MODULE	£249
KAWAI K4R RACK SYNTH MODULE	£599
KORG M1R SYNTH MODULE	£999

## PIANOS

CASIO CPS300 ELECTRIC PIANO	£299
RHODES MK 80 88NOTE PIANO	£1499
RHODES MK 60 ELECTRONIC PIANO	£1000
ROLAND HP 2000 PIANO	£799
ROLAND RD 300s DIGITAL PIANO	£999
YAMAHA CLP 350 DIGITAL PIANO	£999
YAMAHA CLP 550 DIGITAL PIANO	£1,250
YAMAHA TX1P PIANO MODULE	£299

## SAMPLERS

AKAI S1000 STEREO SAMPLER	£CALL
AKAI S950 SAMPLER	£1199
ROLAND S330 SAMPLER MODULE	£995
ROLAND U110 SAMPLE PLAYER	£499
ROLAND W30 SAMPLER WORKSTATION	£CALL

## KEYBOARDS/COMPUTERS & SOFTWARE

ROLAND E20 LA-MIDI KEYBOARD	£799
YAMAHA PSR 2500 KEYBOARD	£399
YAMAHA PSR 27 DASS KEYBOARD	£179
YAMAHA PSR 37 DASS KEYBOARD	£249
YAMAHA PSR 4500 DASS KEYBOARD	£750
YAMAHA PSS 780 W/STATION K/BOARD	£170

## EFFECTS

AKAI EX80E ENHANCER	£75
ALESIS MICROVERB	£150
ALESIS QUADRAVERB	£395
KORG A3 SIGNAL PROCESSOR	£699
YAMAHA BSP100 BASS PROCESSOR	£99
YAMAHA DP100 DYNAMIC PROCESSOR	£99
YAMAHA GQ1031B GRAPHIC EQ	£150
YAMAHA Q100 GRAPHIC EQ	£99
YAMAHA R100 REVERB UNIT	£150
YAMAHA SPX 900 MULTI FX UNIT	£499

## MISC

C LAB HUMAN TOUCH	£149
CASIO DH100 DIGITAL HORN	£85
CASIO MB10 FZ1 MEMORY EIP BRD	£200
CASIO N1-CAD DA1 BATTERY PACK	£75
CLAB UNITOR SMPTE GENERATOR	£349
QUIKLOK ADJUSTABLE BENCH	£30
ROLAND EMR2 MT32/PR100 STAND	£10
ROLAND EXPRESSION PEDAL	£55
ROLAND HKC 1 PIANO KBD COVER	£27
ROLAND OCTAPAD	£499
ROLAND PG10 PROGRAMMER	£199
STEINBERG KEY EXPANDER	£89
XR 300 SMPTE CONTROLLER	£249
YAMAHA ADP 1 CARTRIDGE ADAPTER	£16
YAMAHA BREATH CONTROLLER	£30
YAMAHA FC 7 PEDAL	£49
YAMAHA FC5 SUSTAIN PEDAL	£15
YAMAHA MCS2 MIDI CONTROL UNIT	£199
YAMAHA RCX 1 REMOTE SPX 900	£175
YAMAHA RH 5M MONITOR HEADPHONE	£39
YAMAHA YME 5 MIDI THRU BOX	£49

C LAB EXPLORER MT32/D10 EDITOR	£99
C LAB NOTATOR SEQ/SCOREWRITER	£440
CREATOR MIDI SEQUENCER	£260
DRUMWARE S700 SMD FILER	£130
PASSPORT MASTERTRACKS PRO	£195
STEINBERG CUBASE SEQ-S/AWARE	£300ex
STEINBERG D10/20/410 EDITOR	£99
STEINBERG D50 EDITOR	£99
STEINBERG M1 EDITOR	£99

## RECORDING

CASIO DA2 II DAT TAPE RECORDER	£750
YAMAHA MT 100 4 TRACK CASS REC	£279
YAMAHA MT3X MULTI TRACK	£495

## SEQUENCERS

ALESIS MMT-8 MIDI SEQUENCER	£199
SEIKO DIGITAL SEQUENCER	£69
YAMAHA QX5FD SEQUENCER	£399

## MIXERS

BOSS 16 CHANNEL MIXER	£440
DEL COOPER FADERMASTER (MIDI)	£260
KAWAI M18SR 8CH STEREO MIXER	£299
YAMAHA AM 602 MIXER	£160
YAMAHA AM 802 8:2 MIXER	£250
YAMAHA MR1642 RECORDING MIXER	£999
YAMAHA MV100 MIXER	£99
YAMAHA MV1602 19" RACK MIXER	£599

## AMPS

AMPRO STEREO COMBO AMP	£230
CARLSBRO COLT 65 COMBO KED AMP	£230
CARLSBRO X150 POWER AMP	£140
JBL CONTROL 5 SPEAKERS (PR)	£250
ROLAND MS30 BK 30W SPEAKER	£89
YAMAHA A100 POWER AMP	£160
YAMAHA MS202 MONITOR SPKR	£115
YAMAHA P2150 2 X 150W AMP	£395
YAMAHA S20 X 150W SPEAKER	£115

the  
keyboard  
shop

135-136 Shepherds Bush Centre,  
Rockley Rd., Shepherds Bush Green,  
London W12 (⊕ Central Line)

01-749 2326



# MQ8



PHOTOGRAPHY: JAMES CUMPSTY

With sophisticated computer-based MIDI sequencing becoming an ever-cheaper option, is there still a place for the dedicated hardware sequencer? Review by Simon Trask.

**T**RUE TO THEIR aim of providing affordable hi-tech gear, with the MQ8 MIDI Sequencer/Performance System, Cheetah have come up with the cheapest option for anyone who wants to get into MIDI sequencing. While there are cheaper computer-based software sequencers which are more sophisticated than the MQ8, once you've added on the cost of the computer (even a 520ST) and monitor, they work out significantly more expensive. There again, a computer such as the ST provides you with access to a wide range of software, both MIDI and non-MIDI. It also has a built-in disk drive, whereas the MQ8 has a tape interface and the (costly) option of

remote storage via MIDI SysEx. So are you better off spending an extra £200-250 on the entry-level computer-based option?

## OVERVIEW

THE MQ8 IS an eight-track MIDI sequencer which allows you to record up to 256 sequences (20,000-event memory permitting) and chain them together to create up to 16 songs, each of which can have up to 22 steps. Each of the sequences doesn't consist, as you might imagine, of eight tracks but of a single track. Outside of an MQ8 Song you can specify up to seven sequences as accompaniment sequences to whichever sequence you're currently recording; within a Song you can group up to eight sequences as a Part, and then assign a Part to each Song step (you can create up to ten Parts per Song). To make an analogy with tape, it's like assembling a multitrack tape which has not only been chopped into eight-track segments but also into individual tracks - except that piecing together an MQ8 Song is considerably less fraught with problems.



Cheetah's sequencer allows both real- and step-time recording, with overdubbing and manual and automated punch in/out options for real-time recording, but it isn't "just" a MIDI sequencer. The Performance System bit of its label refers to a range of seven performance effects which allow you to manipulate sequences in real-time - shades of the Zyklus MIDI Performance System.

## THE BOX

THE MQ8'S SLIMLINE wedge-shaped casing, reasonably compact dimensions (13.5"x11") and light weight make it eminently portable, though the external power supply weighs about as much again. Centrally situated on the front panel is a 2x16-character backlit LCD, while 20 squidgy rubber buttons provide the operational front-end; while they're not particularly firm, they do seem to be reliable. The bottom row of buttons and two on the next row provide a numeric "keypad", while other buttons provide Start, Stop, Inc, Dec, Punch In/Out, Left arrow, Right arrow, Edit Sequence, Edit Song and various secondary functions, all labelled on the relevant buttons. I wish Cheetah would stop using dark blue lettering to indicate the secondary functions, as it's hard to read in subdued lighting - how about bright yellow instead?

The rear panel contains two MIDI Ins, MIDI Out and MIDI Thru sockets, Data In and Out mini-jack sockets, Stop/Start footswitch jack (which can also be used for Punch In/Out from a second footswitch if a stereo jack is plugged in), power on/off switch and power-supply connection.

The parameter structure is based around 53 Edit Levels which are grouped conceptually into five categories: Record functions of individual sequences (00-07), Record functions of all sequences (10-19), Playback functions of individual sequences (20-33), general utility functions affecting the whole sequencer (40-49), and Song functions affecting individual Songs (50-60). Cheetah themselves provide a particularly effective spatial model of this parameter structure in the MQ8's manual, so I'll reproduce it here:

"Imagine all the function levels are floors in a huge building and you are in a lift. The floor number may only be changed when Edit Level is showing in the top line of the display ie. when you are in the lift. Use Inc/Dec or direct number entry on the number keys to move the lift to each floor. When you have arrived at the required floor use the Right arrow key to visit the various rooms (screens) on that floor (Edit Level). Press Edit Seq to exit back to the lift."

What more can I say, except that it's the fastest lift I've ever travelled in? I'll just add that the Left arrow button moves you back towards the lift (but not into it) while onscreen left and right arrows indicate which direction(s) you can move in from any given screen, and the Edit Song button takes you directly to floor 50, the first Song floor (this is getting silly) via a screen which lets you choose the Song you want to edit. If you can imagine a 53-storey building inside the MQ8's slender casing

then you've been watching too much *Dr Who*.

## RECORDING

TO RECORD A sequence in real-time, select Edit Level 00. Stepping through the various screens at this level using the arrow buttons allows you to select the sequence and set the sequence length (either a fixed length from 1-255 bars, or open-ended - whenever you decide to press the Stop button), the record start bar (anywhere within the defined sequence length, or the maximum possible length if you've selected open-ended) and the record mode. You get a choice of four possible record modes: overwrite, build, punch in/out and preset punch in/out. Overwrite is the standard recording mode, while build allows you to overdub a new part on each pass through the sequence in drum machine-style (except that the MQ8 stops at the end of each pass rather than loops continuously). If you've selected punch in/out then you can drop in and out live using the Punch In/Out button, while preset punch in/out uses punch-in and punch-out "tabs" that you can position anywhere within a sequence in step-time mode, leaving your hands free for playing.

Once you've finished recording a sequence, you have to step back through several screens to the Test Play Solo screen before you can listen back to it. Once you've come up with something you're happy with, you need to go to Record and Accompany (Edit Level 2), where you can assign the sequence to any of tracks 2-8 and select a new sequence to record in track one. When you've recorded your new sequence while listening to the accompanying sequence, you can assign it to another of the accompanying tracks and go on to record further sequences in the same way, until you have all eight tracks filled. You can use overwrite, build, punch in/out and Manual and preset punch in/out options as per Record (Edit Level 1). Test Play Solo and Test Play Ensemble screens on this Level allow you to play back the current sequence (track one) by itself or along with the sequences in the other tracks.

The MQ8 offers a number of record options: filtering out various types of MIDI data at the record stage, changing MIDI channels after recording (this re-routes channels rather than sequences, so two sequences on the same MIDI channel can't subsequently be routed to different MIDI channels), specifying recording of velocity to be as played or a fixed value, and setting internal or external sync, metronome on/off and a time signature for the sequence. The metronome beep is played through an internal speaker, but is also routed through the Data Out socket so that it can be put through external amplification.

You can begin recording either after a one-bar metronome count-in, immediately (as soon as you press Start) or with the first note played (after pressing Start). Record Soft Thru can be set to All Off, As Record Filter or All On, while Soft Thru Channel allows real-time changing of MIDI channels during record and play (allowing an instrument which transmits on a fixed MIDI channel to control ►

**"Vector Chord is like the one-finger play function on home keyboards, except that you can create any chord with however many notes you like."**

**“Cheetah have crammed an impressive number of advanced features into their MQ8 sequencer - especially considering its budget price tag.”**

► instruments receiving on any one of the 16 MIDI channels).

The MQ8 offers you both pre-quantise (in fact, as-you-record) and post-quantise options, with values ranging from whole note to 1/48th note including triplets; the MQ8's maximum record resolution is a relatively low 1/96th note, which is MIDI clock resolution. On a positive note, you're given the option to undo the result of post-quantisation (before leaving the post-quantise Level) if you don't like what you hear.

Other editing functions allow you to copy/merge sequences (preserving their MIDI channel settings if required), tag one sequence onto the end of another (or itself), copy a whole Song into a single sequence, and delete a sequence. You can also call up a set of default sequence-record settings (such as 16 bars, 4/4 time, overwrite mode, one-bar count-in).

Cheetah haven't forgotten step-time entry and editing. There are two step-time screens, normal and MIDI Expert, which you can alternate between at any time using the "8" button. The normal screen tells you in plain English what the current event type is, what MIDI channel it's on and what the actual data is. But what if you want to know whereabouts in the sequence you are? Flip to the MIDI Expert screen and the MQ8 tells you, in bar-and-clock format (no beat), together with the values in hexadecimal of the current MIDI status byte and data byte(s) for anyone who wants to read the raw data. Trouble is, because this screen is deemed to be the "computer-level" screen, the bar count begins from zero instead of the more natural (for musicians, anyway) one, so you have to mentally add one to the count all the time.

A number of the front-panel buttons take on alternative functions: for instance, the Inc and Dec step you forward and backward through the events, while the Start and Stop buttons become Event Insert and Delete. Events are transmitted over MIDI as you step through them, so that, for instance, notes are played and patch changes are sent. In addition to virtually every type of MIDI data you could possibly want (including SysEx, Song Select and Tune Request) you can insert a tempo change at any point (which doesn't mean you can have different tempos going at the same time in a Song). Individual events can be switched on or off (indicated in the top left-hand corner of the screen by a diamond or a north-south arrow respectively), and you can change the MIDI channel of any event. The MQ8 forces you to work in a very literal and cumbersome way, specifying the position of a MIDI event not by an absolute bar/clock position but by time differences between successive MIDI events (so that, for instance, instead of entering an absolute note length and leaving the sequencer to sort out the note off, you have to enter a note off for every note on, and define its position not in absolute terms but by calculating how many MIDI clocks the note duration is. This gets even more tricky when other events intervene, plus if you reduce the time between two events then you have to increase the time after the second event, otherwise all subsequent events are shifted. A Time Split function eases the process of inserting an event by

allowing you to specify the number of clocks between the preceding event and the new event, then working out for you the requisite number of clocks between the new event and the succeeding event. In case you hadn't gathered, step-time editing on the MQ8 isn't the most enjoyable of pastimes. It could have been easier, but to be fair there's no way a 2x16-character LCD can compete with the monitor-sized graphic approaches of today's computer-based sequencers.

## EFFECTS

THE MQ8 OFFERS a choice of seven performance effects: Arpeggio, Vector Chord, Vector Arpeggio, True Echo, Fixed Echo, Embellish and Embellish Repeat. These are performance effects because they allow real-time triggering of sequences during playback of a Song.

Each sequence can be assigned one effect (or alternatively set to normal play) together with values for several associated parameters; consequently, when you put a Song together you can have more than one effect in use at the same time. Conveniently, you can try live triggering of a sequence from the screen on which you select the effect, allowing you to select which effect you want quickly and before you go anywhere near Song mode.

There are three ways in which an effected sequence can be controlled. Sound Always means that the sequence will loop continuously from the moment Start is pressed (and so will automatically be synced to the other sequences in the Song), Note On means that it will loop continuously when triggered by a note on the keyboard, and Sound Gated means that the sequence will only play while the trigger note is held down. With Arpeggio, Vector Chord and Vector Arpeggio you can choose which method you want, while for the other effects the method is preset.

All the effects play back a sequence at a transposition which is determined by the trigger note's distance from a root note (the note from which the sequence will be played back at original pitch), which you can program for each sequence. You can also choose a fixed transposition value for a sequence (to a maximum of  $\pm 99$  semitones in semitone steps), set a trigger delay of any value up to 255 MIDI clocks (just over two-and-a-half bars), specify the range of notes which will trigger the sequence (outside this range, the keyboard will play normally) and choose whether the sequence's notes will play back at their recorded velocities or proportionally to the velocity of each trigger note (allowing dynamic control over the sequence).

Arpeggio loops a sequence continuously from the first-received trigger note (or Start), transposing notes accordingly at the current point in the sequence whenever a new trigger note is received. If you've selected Sound Gated mode, the sequence will effectively "play silently" whenever no trigger note is active, resuming at the current position in the sequence when a new trigger note is received.

Vector Chord plays all the notes in the sequence as one chord directly the trigger note is received (or after ►

# Holiday MUSIC Limited

**FREE Securicor delivery (UK mainland)!!**  
**All items despatched within 24 hours!**  
**Unbelievable Part Exchange Deals Available**  
**- Upgrade Your Gear Now!**

**0% FINANCE AVAILABLE**

**Buy now with Interest Free Mail Order Credit**

## Keyboard



- |   |                        |
|---|------------------------|
| Korg M1 Workstation                                     | £1499                  |
| Korg T2 Workstation                                     | £2999                  |
| Korg T3 Workstation                                     | £2399                  |
| Korg 707 Multi timbral synth                            | £389                   |
| Korg Poly 800 Mk II                                     | £249                   |
| Korg DW6000   | Special deal see below |
| Korg DW6000   | £399                   |
| Roland A50 Mother keyboard                              | £1395                  |
| Roland A80 Mother Keyboard                              | £1650                  |
| Roland Pro E  | £999                   |
| Roland KW30, SCSI for W30                               | £139                   |
| Roland HD-5-IF, Hard disk interface kit for S550 (SCSI) | £200                   |
| Roland W30 Workstation                                  | £1650                  |
| Roland U20 RS PCM Multi timbral keyboard                | £1050                  |
| Roland D20 LA Workstation                               | £1275                  |
| Roland D10 as D20 less sequencer                        | £1275                  |
| Roland D50  | £1499                  |
| Roland D5 multi timbral keyboard                        | £599                   |
| Roland FC100 foot controller                            | £199                   |
| Roland Jupiter 6  | £599                   |
| Roland Juno 6   | £275                   |
| Roland Juno 2   | £399                   |
| Roland PG1000 D50 programmer (SPECIAL DEAL SEE BELOW)   | £299                   |
| Roland PG300 JX3P programmer                            | £ 95                   |
| Roland RC100 Remote editor for S330/550                 | £250                   |
| Roland PG10 programmer for D110                         | £248                   |
| Yamaha V50  | £1099                  |
| Yamaha PF1500   | £1335                  |
| Yamaha PF85   | £1099                  |
| Yamaha B200   | £549                   |
| Yamaha YS200  | £449                   |
| Yamaha DS55   | £349                   |
| Yamaha DX27   | £250                   |
| Yamaha DX11   | £449                   |
| Yamaha DX9  | £399                   |
| Yamaha PS56100  | £495                   |
| Casio PT87  | £59                    |
| Elka Rhapsody 490 strings                               | £59                    |
| Wurlitzer Electric piano                                | £175                   |
| Moog Opus 3   | £149                   |
| Ensoniq Mirage  | SPECIAL DEAL SEE BELOW |
| Ensoniq SQ80 Cross wave synthesizer                     | SPECIAL DEAL SEE BELOW |

## Roland Pianos

- |               |       |
|---------------|-------|
| Roland RD250S | £1299 |
| Roland RD300S | £1499 |
| Roland RD1000 | £2599 |

## Korg Sampling CDs

- |                      |      |
|----------------------|------|
| Volume 1, Orchestral | £ 27 |
| Volume 2, Piano      | £ 27 |
| Volume 3, Percussion | £ 27 |

## Special Deals

- |  |       |
|--|-------|
| Korg DW6000; free MEX8000 memory expander, leads, keyboard stand                           | £425  |
| Ensoniq Mirage; free input sampling filter, sequencer expansion cartridge, box of 10 disks | £795  |
| Ensoniq SQ80 cross wave synthesizer; free expression pedal, stand, leads, Box of 10 disks  | £1099 |

## Keyboard Stands

- |                             |      |
|-----------------------------|------|
| Quick Lok QL606 Single tier | £ 25 |
| Quick Lok QL622 Double tier | £ 50 |
| Quick Lok QL625 Treble tier | £ 75 |

## Keyboard

### DCI Music Videos

- |  |        |
|--|--------|
| Chic Corea - Keyboard Workshop               | £26.95 |
| Chic Corea - Electric Workshop               | £26.95 |
| George Duke - Keyboard & Vocal Accompaniment | £26.95 |
| George Duke - Keyboard Improvisation         | £26.95 |
| Richard Tee - Contemporary Piano             | £26.95 |
| How To Play Piano 1                          | £26.95 |
| How To Play Piano 2                          | £26.95 |
| How To Play Piano 3                          | £26.95 |

### Books

- |   |        |
|---|--------|
| Expressive FM applications, by Sal Galina (inc. audio cassette)           | £ 15   |
| Chic Corea - Light Years  | £11.95 |
| The Yamaha DX7 IID/IIFD   | £ 8.95 |
| Ferro Music Technology MIDI Resource Book                                 | £11.95 |
| The Secrets of Analogue and Digital Synthesis (inc. 120 minute VHS video) | £ 54   |
| The MIDI System Exclusive Book  | £ 19   |

## Expander



- |                                  |       |
|----------------------------------|-------|
| Casio CSM1 Module                | £99   |
| Ensoniq Mirage Rack              | £399  |
| Korg M1R Module                  | £1340 |
| Korg M3R The Affordable M1!      | £899  |
| Korg P3 Piano module             | £399  |
| Korg Symphony Module             | £399  |
| Roland D110 Multi timbral Module | £599  |
| Roland A880 MIDI patch bay       | £229  |
| Oberheim Matrix 1000             | £499  |
| Tascam DX2D                      | £260  |
| Tascam DX4D                      | £340  |
| Tascam PE40 Parametric Equaliser | £449  |
| Yamaha TX81Z                     | £399  |

## Effects

- |  |      |
|--|------|
| Accessit Auto Panner   | £ 29 |
| Accessit Dual Parametric Equaliser                                 | £ 29 |
| Alesis Micro EQ  | £130 |
| Alesis Micro Gate  | £130 |
| Alesis Micro Limiter   | £130 |
| Alesis Micro Enhancer  | £130 |
| Alesis Micro Cue Amp   | £130 |
| Alesis Microverb 2   | £169 |
| Alesis Midiverb 2  | £258 |
| Alesis Midiverb 3  | £369 |
| Alesis Quadriverb  | £439 |
| Alesis Data Disk: Buy one for your M1, or anything that has MIDI!! | £290 |
| Akai EX85P Parametric EQ   | £125 |
| Akai EX65D Digital Delay   | £125 |
| Akai EX75N Noise Reduction   | £125 |
| Boss BMR5  | £ 55 |
| Boss RAD10   | £ 22 |
| Boss RBF10   | £129 |
| Boss RCF10   | £190 |
| Boss RDD20   | £199 |
| Boss RGE10   | £120 |
| Boss RPH10   | £146 |
| Boss ROD10   | £120 |
| Boss RPD10   | £155 |
| Boss RSD10   | £199 |
| Boss RRV10   | £199 |
| Boss RPW7  | £ 69 |
| Yamaha SPX900  | £629 |
| Yamaha SPX1000   | £999 |
| Yamaha GC2020B Mk II   | £24  |

## Effects

- |                                      |      |
|--------------------------------------|------|
| Korg SDD100 Dig. Delay with Sampling | £275 |
| Yamaha TX1P                          | £629 |
| Yamaha R100 Digital Reverb           | £189 |
| Korg GR-1 Gated Reverb               | £ 99 |
| Digilec DSP128                       | £425 |

## Sequence

- |   |      |
|---|------|
| Alesis MMT8   | £258 |
| Yamaha QX5FD  | £499 |
| Yamaha TQ5 - Is it a sequencer or an expander? No its both! | £289 |
| Korg SQD8 (Free box of disks)                               | £399 |
| Korg SQD1 (Free box of disks)                               | £349 |
| Roland MC 202   | £ 95 |

## Software

**C-Lab Clinic**  
 We are holding a C-Lab clinic on Monday February 19th 1990 at 8 p.m. Why not come along for hints, tips and demonstrations of the very latest in music software!



- |   |      |
|---|------|
| C-Lab Creator   | £299 |
| C-Lab Notator   | £499 |
| C-Lab Unitor-Notator pack                             | £834 |
| C-Lab Unitor-Creator pack                             | £648 |
| C-Lab X-alyser, DX7 editor                            | £175 |
| C-Lab Export  | £114 |
| C-Lab Creator to Notator upgrade                      | £200 |
| C-Lab Creator to Unitor C upgrade                     | £349 |
| C-Lab Notator to Unitor N upgrade                     | £349 |
| C-Lab Editors   | £110 |
| C-Lab Explorer MT32                                   | £ 89 |
| C-Lab Explorer 1000                                   | £110 |
| C-Lab Explorer M1                                     | £599 |
| C-Lab Mouse mat                                       | £165 |
| C-Lab Combiner 4 key expansion interface              | £149 |
| C-Lab Human Touch audio trigger expander (for Unitor) | £149 |

## Roland D110 Rom Cards

- |                   |          |
|-------------------|----------|
| Natural Variation | £55 each |
| Unique D Sound    | £55 each |
| Rhythm & Bass     | £55 each |

## U110 Sample Cards

- |                          |          |
|--------------------------|----------|
| Pipe organ & Harpsichord | £45 each |
| Latin Percussion & FX    | £45 each |
| Ethnic                   | £45 each |
| Electric Grand & Clavi   | £45 each |
| Orchestral Strings       | £45 each |
| Orchestral Winds         | £45 each |
| Electric Guitar          | £45 each |

## Roland R8 & R5 Drum Machine Cards

- |                         |          |
|-------------------------|----------|
| Contemporary Percussion | £45 each |
| Jazz Brush              | £45 each |
| Sound Effects           | £45 each |
| Electronic              | £45 each |
| Jazz                    | £45 each |
| Ethnic                  | £45 each |

## Yamaha YS100/200 & B200 Cards

- |              |          |
|--------------|----------|
| Contemporary | £45 each |
| Traditional  | £45 each |

The above products comprise of a selection of new, ex-demo and secondhand equipment

## Software

- |                            |        |
|----------------------------|--------|
| <b>Disks</b>               |        |
| 3.5" Disks Box of 10       | £15.00 |
| 2.8" Quick Disks Box of 10 | £33.00 |

## Recording

### Portastudios

- |                  |      |
|------------------|------|
| Akai U5          | £125 |
| Fostex X26       | £299 |
| Fostex 160       | £525 |
| Tascam Porta One | £449 |
| Tascam Porta Two | £489 |
| Tascam Porta 05  | £289 |
| Yamaha MT100     | £349 |
| Yamaha MT3X      | £555 |

### 2 Track

- |                          |      |
|--------------------------|------|
| Fostex Model 20, ex-demo | £550 |
|--------------------------|------|

### 8 Track

- |   |       |
|---|-------|
| Fostex R8 + SECK 12/8/2 mixer + 2 looms + Ext cable | £2774 |
|---|-------|

### 16 Track

- |                                  |       |
|----------------------------------|-------|
| Fostex E16 with 4050 Autolocator | £4995 |
|----------------------------------|-------|

### Mixers

- |   |       |
|---|-------|
| Studiomaster pro line 16 2 R. Also can be used as (12-4-2)! | EPOA  |
| Studiomaster Series 2 16/8/2                                | EPOA  |
| Tascam M106   | £169  |
| Yamaha KM602  | £169  |
| Yamaha MV802 rack   | £339  |
| Yamaha KM802  | EPOA  |
| Roland M16E   | £1299 |
| Roland M24E   | £1599 |
| Roland M120   | £ 379 |
| Roland M160   | £749  |
| Roland M240   | £999  |

### Monitor Speakers

- |                      |           |
|----------------------|-----------|
| Yamaha NS10MC        | £389 pair |
| Yamaha S100          | £145 pair |
| Yamaha MS202 powered | £129 each |
| JBL Control One      | £179 pair |
| Celestion DL4        | £144 pair |
| Celestion DL6        | £172 pair |

## Digital Drums

**SPECIAL OFFER!!!!**  
**YAMAHA RX7 New, boxed, RRP £649**  
**Special Price £299**

- |                               |      |
|-------------------------------|------|
| Akai XE8 Drum expander        | £499 |
| Roland TR606                  | £225 |
| Roland TR505                  | £199 |
| Roland R5                     | £429 |
| Roland R8                     | £665 |
| Boss MPD4 MIDI pad controller | £149 |
| Roland Pad 5                  | £159 |
| Korg DDM110                   | £ 69 |
| Korg DDM220                   | £ 69 |
| Yamaha RX7                    | £399 |
| Yamaha RX8                    | £369 |
| Yamaha RX120 (PRESETS)        | £225 |
| Alesis HR16                   | £399 |
| Alesis HR16B                  | £399 |
| S/H Korg DDD5                 | £295 |

# Holiday MUSIC Limited

579 HIGH ROAD, LEYTONSTONE, LONDON E11 4PB

01 - 558 2666  
 01 - 558 3773



**“In fact, the MQ8 might make a worthwhile addition to an existing sequencing setup, purely on the basis of the performance functions.”**

► a delay, of course, if you've set a trigger delay); as you play different trigger notes the chord will be transposed accordingly. In effect it's like the one-finger play function you find on a number of home keyboards, with the difference that you can create whatever chord you like, with however many notes you like (limited, of course, by the MQ8's playback polyphony of 16 notes, and polyphony of the instrument playing the chords). Additionally you can use "modifier keys" to activate alternative sequences - different chords. Basically, you set a modifier span of up to eight consecutive semitones anywhere on the keyboard (at the bottom end is a good idea), and program a different chord for each of up to eight consecutive sequences, starting from the sequence for which the effect is being programmed. Each trigger note within the modifier span will now trigger the relevant chord (if the span is C-G, C could play a major 9th, C sharp a diminished 7th, D a minor 9th... through to a dominant 13th flattened 9th on G). With Modifier Latch set to on, each chord will continue to play (depending on the envelope of the sound being used) until another modifier key is pressed. With Modifier Delay set to on, the MQ8 waits until the end of the current MIDI event before switching to a different sequence, so as to avoid possible "glitches".

Vector Arpeggio is the same as Arpeggio, except that it allows you to use modifier keys as per Vector Chord (only in this case playing a sequence of notes rather than a chord).

The above three effects only respond to one note at a time, but the remaining four effects can all respond to multiple notes, allowing not only any type of chord to be built up on single notes but also complex rhythms to be built out of a single sequence. True Echo and Fixed Echo both play a sequence through once for each trigger note, at the transposition of that note relative to the root note you've programmed; the only difference between them is that Fixed Echo plays the sequence notes using their original durations, whereas True plays them with the duration of the trigger note.

Finally, Embellish plays a sequence through once for each trigger note, while Embellish Repeat plays the sequence continuously (in both cases with relevant transpositions), but only for as long as the trigger note is held down; for Embellish, this means that a trigger note held down for longer than the sequence lasts won't have any effect on it.

Each sequence can be given its own playback MIDI channel and a separate trigger MIDI channel, allowing different sequences to be triggered independently within a Song by different musicians (you can use the MQ8's two MIDI Ins as a means of hooking two musicians to the sequencer). Alternatively you can use an already recorded track as a trigger source for an effected sequence which is running parallel to it; to do this, you need to route the MQ8's MIDI output back to one of its Ins (either via the Thru socket on one of your expanders or on a MIDI Thru box) and select the controlling track's MIDI channel as the trigger channel for the effected sequence - at the same time ensuring that Song Soft Thru is switched off, otherwise you'll get MIDI feedback. You can use

the same track to control more than one effected sequence at the same (assigned to different tracks but with the same trigger channel), or use different tracks to control different effected sequences at the same time (different tracks, different trigger channels). You can also control another effected sequence live from your main keyboard, which is of course plugged into the MQ8's other MIDI In. And of course, when you've found a good sequence of notes for controlling an effected sequence, you can go into Record, or Record and Accompany, and record it as a non-effected sequence which can then be incorporated into the Song.

## SONGS

THE FIRST THING you need to do when creating a Song is prepare a Part. This means assigning up to eight sequences to the MQ8's eight tracks. You can create up to ten such groupings of sequences for each Song. The next stage is preparing a Song Step, which involves not only assigning a Part to a Step but also deciding how many bars it should play for, how many times it should repeat (up to 255), whether any of the eight tracks should be muted, and whether the Step should be transposed (unfortunately, as you can't remove specific tracks from transposition, you run into problems if any of the tracks are drum tracks, as transposing these means that your bass drum could end up as a cowbell and your snare drum as a tambourine - or nothing at all).

The ability to mute tracks per Song Step effectively increases the number of Parts at your disposal; for instance, in one Step all tracks except the drum track could be muted, then in the next Step you could use the same Part but unmute the bass and guitar tracks.

The Step length takes precedence over the length of any individual sequences, so that sequences longer than the Step length will be cut short while those that are shorter than the Step length will simply stop playing. This gives you such advantages as being able to introduce a bar's rest into a Song by setting the relevant Step length to one bar longer than its constituent Sequences, or use only the first four bars of a Part in one Step but the full number of bars in another Step. On the other hand, you can't combine, say, four occurrences of a four-bar sequence with one occurrence of a 16-bar sequence; instead you have to tag the four-bar sequence to itself three times to create two 16-bar sequences, which means creating extra data.

You can also switch a Step off, in which case the Song will pass over it when playing, or set it to Stop, which will cause the Song to stop playing when it reaches that Step. Additionally you can specify internal or external timing control, and a global time signature for the Song which determines the number of beats per bar and therefore the actual length of each Song Step. The options available are 2/4, 4/4, 3/4, 6/8 (as either two or six beats per bar), 12/8 (four beats per bar), 5/4 and 2/2.

You can turn MIDI Song Select receive on/off, and program a MIDI Song Select command to be sent out each time the Song is selected (for instance, to call

up a chain of rhythm patterns programmed on a drum machine - if the drum machine implements MIDI Song Select, of course). You can also program an initial patch change for each of the 16 MIDI channels, so that the MQ8 will automatically select the sounds you want for the beginning of a Song; in addition, the channels not being used for playing back sequence data could be assigned to call up effects on your MIDI'd signal processors. Last but not least, the MQ8 allows you to recall a set of default Song settings.

## STORAGE

THERE ARE TWO ways of storing the MQ8's sequence data: to cassette tape, or to a remote storage device via MIDI SysEx. Like Alesis' MMT8 and Yamaha's cheaper QXs, the MQ8 forgoes an onboard disk drive in favour of a budget price tag. Fortunately, the contents of the sequencer's memory are preserved through power-down, so you can at least avoid saving data until you've used up all the memory (the standard practice of making backups notwithstanding). In this respect the MQ8 is better than the early generation of home computers, which not only relied on cassette-tape storage but lost their memory contents when switched off. Speaking as someone who had to contend with cassette-based data storage on such early computers, I have a particular aversion to it - and it seems a trifle odd that, whereas these days no computer manufacturer in their right mind would bring out a new computer which relied on tape rather than disk storage, Cheetah and Alesis have done just this with their sequencers.

Still, at least a cassette recorder has the virtue of being cheap. The MQ8 and my Elftone Compucorder with Automatic Level Control, which cost me just under £12, worked reliably together once I'd turned the Elftone's playback volume level up high. Still, it takes four-and-a-half minutes to save the MQ8's entire memory to tape and another four-and-a-half minutes to verify what you've just saved (always a good idea, which is why a Verify routine is included on the MQ8). Good storage practice, whether you're using disk or tape, dictates that you should make a backup copy of each file, so that's another 9-10 minutes taken up. Then, if you decide that you want to fill a tape with files, you also have to fast forward and rewind the tape to find the start of each file (keeping a record of start points indicated on a tape counter is essential here). Not a lot of fun, but maybe some inconvenience is a small price to pay for a budget introduction to sequencing. There again, cassette tape as a storage medium doesn't necessarily work out any cheaper than 3.5" floppies these days.

MIDI SysEx data transfer gives you the option of using an external "universal" SysEx storage device such as Alesis' Data Disk (reviewed last month), Yamaha's MDF1 (2.8" Quick Disk) or

Korg's new DF1 (3.5" floppies). But you need to be careful here, as a bulk dump of the MQ8's entire memory may overflow the data buffer on such devices. Unlike Alesis' MMT8 sequencer, the MQ8 also allows you to save and load individual sequences, but only bulk transfer allows you to store all of the MQ8's data. Here you'll be safe with the Data Disk, as it saves incoming data directly to disk and therefore is restricted only by its 800Kbyte disk storage capacity, whereas the others are limited by internal buffer size (60K on the MDF1, 62K on the DF1). Transferring the MQ8's entire memory via MIDI takes a more reasonable 70 seconds, while disk is an inherently more convenient storage medium than tape.

A combined setup of MQ8 and Data Disk would set you back all but £650, which rather knocks the "budget sequencer" ideal on the head. At this sort of price you can consider Kawai's 32-track Q80 (£595) and Yamaha's eight-track QX5 FD (£599), both of which have built-in 3.5" disk drives. The Q80 sets aside 64K of memory for sending and receiving multiple SysEx data files, which should be adequate for bulk data dumps from synths and effects devices. On the other hand, having the MQ8 and a device which is dedicated to the task of SysEx storage, ie. the Data Disk, might make for a good combination for live work.

## VERDICT

THE MQ8 ISN'T the most immediate or intuitive of sequencers, nor what I'd call the friendliest introduction to sequencing for the newcomer. Yet once you start to familiarise yourself with the way it works, and learn how to navigate your way around its "multi-storey" structure, it becomes clear that the MQ8 has been well thought through overall. Cheetah have managed to cram an impressive number of features into the sequencer considering its budget price - you certainly don't get the impression that you're being short-changed. The performance functions make an intriguing and (for the experimentally inclined) versatile addition to the sequencing side; in fact, the MQ8 might make a worthwhile addition to an existing sequencing setup, purely on the basis of these functions.

If you're piecing together a MIDI setup on a budget, and you feel that the extra money the computer-based alternative would cost could better be used on another item of gear such as a synth, drum machine or reverb, then the MQ8 is ideal. If you feel that you can afford to investigate the computer-based alternative, check out Gajits Music Software's new Sequencer One running on a 520ST and see which approach you prefer. ■

Price £249.95 including VAT

More from Cheetah Marketing Ltd, Norbury House, Norbury Road, Fairwater, Cardiff CF5 3AS. Tel: (0222) 555525.

# uni

## SOUND



HIGH TECH ROCK 'N' ROLL



## YAMAHA SY77

PERFORMANCE SYNTHESIZER

- 61-note keyboard (C1-C6), Velocity and Aftertouch sensitive.
- 16-note polyphonic AWM2, 16-bit linear 32/48kHz sampling.
- 16-note polyphonic AFM, 8 operators, 45 algorithms, 16 waveforms.
- Realtime digital Filters (up to 8 per Voice).
- 128 preset Voices, 64 user memories.
- 16 preset Multis, 16 user Multis.
- RAM card and floppy disk storage.
- Sequencer: 15 tracks plus dedicated pattern track, 99 patterns, 1 song, 32-note polyphony, 16,000 note capacity, real/step-time recording, punch-in.
- 4 separate Effects Processors, 40 Reverb programs, 4 Modulation programs
- 2 pairs of stereo outputs (4 individual outputs).

**YOUR WILDEST  
DREAMS  
AVAILABLE NOW!**



**TG55 TONE MODULE**


*More than just music*

215 Kilburn High Rd,  
London NW6 7JG  
01-624 3900

48 High Street,  
Chatham,  
Kent ME4 4DS  
0634 844068

Fax: 0634 829459





# SHOCK OF THE NEW.

The 1980's was the age of the DX7 and the 1990's are going to be the age of the SY77.

And with good reason.

Yamaha have revolutionised tone generation technology yet again.

We're talking about a totally new dimension in synthesis that's light years beyond 'sample plus synthesis' tone generation that others regard as the state-of-the-art.

The SY77 not only offers advanced versions of our renowned AWM and FM synthesis technologies (AWM2 and AFM), but also it heralds brand new sound architecture that allows sampled and FM sounds to interact. RCM - Real-time Convolution and Modulation tone generation technology - promises to bring you sounds you never even dared to imagine. The 16-bit sampled waveforms can be used to modulate advanced FM operators to produce warm, naturalistic yet inventive sounds that give you a world of possibilities for real-time expression.

You'll hardly be surprised we call the SY77 'a performance synthesizer', with its three wheels, velocity switching and real-time digital filtering on each voice. As well as 6-operator AFM synthesis (with eight real-time digital filters per voice), four on-board signal processors, and a 16 track/16,000 note/32 voice real-time and step-time sequencer.

The SY77 is no less at home with ready-made sounds thanks to its 128 pre-set voices, 64 on internal RAM, and two card slots for voice parameter and waveform data.

Add the SY77's generously sized, back-lit LCD display and 61-note velocity and pressure sensitive keyboard and you'll soon see why it's the one synthesizer you need to see and hear. And that's as simple as visiting your local Yamaha Hi-tech dealer.

## YAMAHA

YAMAHA-KEMBLE MUSIC (UK) LTD.  
MUSICAL INSTRUMENT & PRO AUDIO  
DIVISION. MOUNT AVENUE, BLETCHLEY,  
MILTON KEYNES MK1 1JE.  
TELEPHONE: No: 0908 371771.

# THE PERFORMING ART

## Part One



**ONCE YOU HAD TO BE A  
KEYBOARD PLAYER TO USE A  
SYNTHESISER, NOW YOU CAN  
CONTROL SYNTHESISED AND  
SAMPLED SOUNDS FROM GUITARS,  
SAXES, VIOLINS, DRUMS - AND ALL  
IN REAL TIME. TEXT BY OLLIE  
CROOKE & SIMON THOMAS.**

THERE ARE PROBABLY very few people who program entirely in step time, and so it may seem strange to those of you with sequencers that you're reading an article on "live" MIDI recording. Let me explain (Manuel): we're actually talking about sequences where drums are played by drummers, guitars by guitarists as well as keyboards by keyboard players. In short, we're talking about the actual use of all those weird and wonderful non-keyboard MIDI controllers that have come onto the market recently.

Since opening a pre-production studio seven months ago (Thomas Crooke, in London), Ollie Crooke and Simon Thomas

have been actively involved in this area - using a Simmons SDX for drums, The Wal MB4 MIDI Bass, a Yamaha G10 Guitar controller, a Yamaha WX7 Wind Controller as well as countless other MIDI gizmos.

The idea of this series of articles is to discuss MIDI instruments other than keyboards and drum machines and how best to sequence them, to give a few pointers about the general principle and problems of recording various types of controllers into various types of sequencer and to discuss an actual session that took place involving the SDX and the MIDI bass. This will demonstrate a few of the sort of problems you're likely to encounter



and some methods of getting around them. This, then, is their story. . .

## IN CONTROL

AS FAR AS we at Thomas Crooke are concerned, the main criteria for judging MIDI controllers of any form are threefold. Firstly there is the question of how like "the real thing" it is; drum pads are always harder and therefore more bouncy than a stretched skin; a drummer needs to adapt to this in exactly the same way as a pianist has to play more accurately on an unweighted synthesiser keyboard. Guitarists, a notoriously conservative (and oft-derided) bunch, are frequently horrified to discover that the strings on a Yamaha G10 MIDI guitar are all the same thickness. The more unlike a normal instrument the controller is, the more practice the player will need to get the parts right. This also overlaps with the second point which is how accurate it is. Obviously, any delays, glitching or lack of sensitivity are problems encountered both while playing and recording. The third question is one of flexibility; just what can you do with it? Is it easy (and relatively natural) to add modulation, pitchbend, aftertouch and so on, and to change patches?

All these criteria overlap to a certain extent and all controllers are compromises to a greater or lesser extent in their combination of these factors. For example, the G10 makes up for having all its strings the same thickness by tracking better than any of the more guitar-like instruments. In fact, the G10 is a very good example of a controller which has gone a long way towards accuracy and flexibility but which as a result has sacrificed a lot of "guitariness". It's a remarkably sensitive and versatile MIDI controller, but guitarists hate it when they first pick it up. At the other end of the spectrum is the Wal MB4 MIDI bass which is a bass guitar as well as a MIDI controller, so there's very little culture shock for players coming to it for the first time. Then again, all it sends is MIDI Note On and Off and Velocity information (there's no string bend information for instance).

We've recently been putting some sounds together for Steve Levine's SDX and for Courtney Pine's WX7 and we took the opportunity to pick their brains for any input they could give us on this subject.

As far as MIDI guitar controllers go, Steve had found that most guitarists felt more comfortable with the Stepp guitar controller than the SynthAxe, especially

when the Stepp was playing its own sounds, in which case it was "really very, very good". However when it was playing sounds from an external synth, the tracking and general playability took a bit of a tumble. For a similar reason we had, a few months previously, decided not to buy the Casio PG380 MIDI guitar - great for its own sounds but not for any others. The problem with most guitar systems is the same as for any pitch-to-MIDI converter - it needs to receive a whole cycle before it can ascertain the pitch of the note and, with low notes, it can take a relatively long time for a whole cycle to arrive at the pickup. Steve had similar feelings towards the Akai EWI wind synthesiser which, in effect, has its own sounds which it plays beautifully but didn't really cut it as a MIDI controller.

Steve also recommended the use of an Atari Mega ST, especially for instruments which generate a great deal of controller information, a point which Courtney endorsed, saying that he was fed up with his Dr T's KCS sequencer running out of memory whenever he plugs his WX7 into it - the WX7 puts out a continual stream of Breath Control information, MIDI Volume and Pitchbend whenever it's played. So save up for those Mega STs, everybody.

Courtney is getting on very well indeed with his WX7 as far as playability is concerned - as he demonstrated brilliantly when he came to the studio. He didn't really like the Akai EWI either, but he knew several people who did. Apart from the problem with Dr T's KCS (he has just got a copy of C-Lab's Creator, though), his main gripe was with the actual sounds. Despite the continuous stream of Breath Control data spewing forth from his instrument, he found that there was disappointingly little that he could do with all this information, although he was happy with the sounds he was able to achieve using a Korg M1 and the Yamaha WT11 in his recent appearances on the Pet Shop Boys tour. The WT11 is the new Yamaha sound module built specially for the WX7 and WX11. Simon has been working on some weird and wonderful noises for Courtney on the DX7II to improve this situation using Notator's real-time mapping of system exclusive messages.

Ollie then remembered that an old friend of his, David Cross, has a MIDI violin. (Some of you might recognise David's name from King Crimson record sleeves.) Dave has always been a technologically-minded violinist, having had several electric violins made for him, and put them through as many effects boxes

as possible, getting some really unusual sounds in the process. (Hear them on his solo LP *Memories From Purgatory*). He had heard that the Californian company Zeta Systems made a MIDI violin, and was sufficiently excited by the thought to order one without even seeing it. Appropriately

## **"COURTNEY PINE WAS HAPPY WITH THE SOUNDS HE WAS ABLE TO ACHIEVE USING A KORG M1 AND THE YAMAHA WT11 IN HIS RECENT APPEARANCES ON THE PET SHOP BOYS TOUR."**

enough, it arrived in the Christmas post, and since then he has been playing it constantly, mainly through a Korg M1R, which he is happy with "especially on the brass sounds".

The instrument itself is superb, with five strings, producing an electric violin sound as well as the MIDI signal. Being a pitch-to-MIDI conversion system, the tracking suffers when played at speed on the lower strings, though it's excellent on the top two. The beauty of an instrument like this, though, is that synth voices take on an entirely new dimension when played by an instrument with the expressive capabilities of a violin. The interface offers quite comprehensive MIDI facilities including some rather clever ways of dealing with slides and pitchbends.

The best and the worst? A personal and subjective choice would put the Simmons SDX as the best all-rounder (which it should be for £10,000), and the Digigram MIDIMic as the worst (but great fun). And the strangest? Well there's a lot of it about as they say - the Silicon Mallet, the MIDI Chapman Stick, violins, flutes. Perhaps the MIDI accordion is the strangest. But the best idea for a new one came from Martin Rex (who has engineered for Neneh Cherry and the Beatmasters recently) and who wanted some MIDI shoes for tapping in bass drum parts. . .

## SOUNDS

WE WON'T GO too far into the subject of getting the right sounds for your MIDI instrument in this article (you'll find it in a later one), except to say that we have found that at least half of the playability of ►

▶ a MIDI controller is determined by the sound that it's playing. It is not possible to simply transfer a keyboard patch onto another controller and expect it to play perfectly without any adjustment. Guitar controllers generally work better with a

**"THE BEAUTY OF THE ZETA VIOLIN IS THAT SYNTH VOICES TAKE ON A NEW DIMENSION WHEN PLAYED WITH THE EXPRESSIVE CAPABILITIES OF A VIOLIN."**

separate voice for each string (on a different MIDI channel) and preferably with each voice in Mono mode - which precludes them from use with a surprisingly large number of synths. Also, and here's a tip for all you manufacturers out there, we have only managed to find one sampler that goes into MIDI mode 4. This means that when two notes overlap the attack portion of the second note is

not played and so a slur occurs. Courtney Pine lent us his Yamaha TX16W sampler to experiment with this and, on the version 2 software we were indeed able to get it to go into Mono Mode 4. One of the problems with the TX16W is that it takes one minute forty seconds to load a sound in and that it is about as user friendly as a Polaris Missile. We're still experimenting with it and trying to decide if the hassle of using it is worth the money and Mono mode 4 - maybe if we were to write an editor. . .

**MUSICIANS**

THE IDEA OF all this hardware is ultimately to get a more "human" feel into a sequencer, and so it's probably worth pausing for a word or two about humans. Basically they are the opposite of synthesiser modules; they should not be screwed in 19" racks and they do like coffee and lager. The object is to get a performance out of the person and so try to make life as easy as possible for them (even if it happens to be you), and make the sound that they hear as they perform as good as possible. (It's suspiciously like

a recording engineer's job, really.)

You'd be well advised to take some time editing the sound in use to minimise the glitching before you sequence the part rather than accepting second best and hoping to edit it afterwards. The better it sounds to the musician, the better will be the performance you get out of them. As far as you possibly can, you should make the technology transparent to keep the relationship between the player and the noises as close as possible. Sort out all your technical stuff before the session starts - get your MIDI patching arranged to minimise the button pushing and make sure any MIDI merging that you want to do is going to work - before we got C-Lab's Notator we merged through a Philip Rees box which used to heat up over the day and get blocked, especially when we merged a MIDI clock with an instrumental performance containing lots of controller information. The most important thing, of course, is to make sure that it all works before the session starts, because it can be very embarrassing to find that the Best MIDI Wind Controller Solo In The History Of The Known Universe was still patched to the TX802 and not to your Atari ST. ■

**NOW PHONE THE LARGEST MUSIC STORE IN ESSEX!**



**108-110 SOUTHCHURCH RD. SOUTHEND-ON-SEA,**

**Superstore SOUTHEND (0702) 619615**

**YAMAHA Keyboards**

SY77 New mega synth.....	£1999
YS-100 Synthesizer.....	£299
DS-55 Synthesizer.....	£399
DSR 1000 Programmable Keyboard.....	£325
DSR 2000 Programmable Keyboard with Sequencer.....	£425
B-200 with Sequencer.....	£499
V-50 Workstation.....	£999
PF-1500 Piano inc. stand.....	£1250
Full range of PSS, PSR & Clavinovas.....	EPhone

**YAMAHA Hi-Tech**

FX500 Multi Effects Processor.....	£349
SPX900 Multi Effects Processor.....	£499
REX 50 Multi Effects Processor.....	£299
QX5FD 8 track Sequencer.....	£445
RXS Rhythm Programmer.....	£399
RXB Rhythm Programmer.....	£359
RX-120 Rhythm Machine.....	£225
WT-11 with WX11 Wind Synth System.....	£545
GC202B compressor/limiter.....	£249
GO1031B 31 band graphic.....	£199

**YAMAHA Home Recording**

MT3X Multitrack Recorder.....	£549
MT-100 Multitrack Recorder.....	£299
R-100 Digital Reverb.....	£179
DR-100 Digital Reverb.....	£139
O-100 Stereo Graphic.....	£109
DP-100 Dynamics Processor.....	£129
BSP-100 Bass Sound Processor.....	£129
A-100 50Watt Stereo Amplifier.....	£179
S-100 2way Speakers, pair.....	£129

**KEYBOARDS**

Ensoniq ESQ Crosswave Synthesizer.....	£599
Korg 707 Touch Sensitive Synthesizer.....	£299
Casio HT3000 Programmable Keyboard.....	£199
Casio CZ1000 Synthesizer, Used.....	£199
Casio HZ600 Synthesizer, Used.....	£199
Roland W-30 Work station, Used.....	£1099
Roland Juno 106 Synthesizer, Used.....	£299
Yamaha DX7 Synthesizer, Used.....	£599
Yamaha DX21 Synthesizer, Used.....	£235

**KAWAI**

K1-M Expander synth Module.....	£395
K1-R Rack Synth Expander.....	£435
K1-II Separate Drum Section & Multi-Effects.....	£599
K4 16 Bit Samples with Multi-Effects.....	£799
K4-R Rack Version.....	£695
O-80 32 track Sequencer.....	£499
R-50E Rhythm Programmer.....	£275
PH-50 Keyboard.....	£275
PHM Expander.....	£275

**TASCAM**

TSR-8 8-track 1/2 inch Recorder.....	£1999
38 B-track 1/2 inch Recorder.....	£1250
68B 10-channel, 8-track Cassette.....	£1999
644 B-Channel, 4-track Cassette.....	£999
238 B-track with Free Microweb.....	£1299
102 Stereo Mastering Cassette.....	£199
Porta 2, new hi-speed model 6 channel, 4 track Studio.....	£549
Porta 05 new hi-speed model Mini Studio, inc. PSU.....	£329
M208 Recording mixer.....	£549

**SANSUI**

WS-X1 6-track Workstation, features include built-in 8 channel Mixer, Digital Echo/Reverb, Plus 2-channel Master Recorder.....	£1295
MR-6, 6-track Rack Mounted Unit.....	£675
MX-12, 12-6-2 Recording Mixer.....	£675
WS-G10, 10-band Stereo Graphic/spectrum.....	£265
SY-1 Remote & Sync/Midi Converter.....	£175
CD-M12, 12 Disc Automatic CD Player.....	£465
Rack Adaptors & Carrying Cases.....	POA

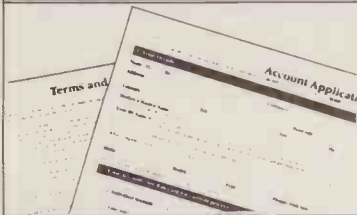
**RACK EQUIPMENT**

DIGITECH DSP 128 Multi-effects.....	£349
PEAVEY Univorb Digital Reverb.....	£159
CASIO VZ-8M Digital Synth-Expander.....	£299
CHEETAH MS-6 Synth Module.....	£249
APH-EX ALURAL Exciter, Type C.....	£245
AKAI VX90 Analogue Rack Expander.....	£299
KAWAI K3M Analogue Rack Expander.....	£249
ROLAND Pitch to Voltage Rack Synth.....	£199
AXEMAN Guitar Multi-effects.....	£199

REVOX B77 Hi-Speed, Recorder, fully reconditioned.....	£599
TASCAM 246 4 track Cassette Recorder.....	£599
IBANEZ HD-1000, Harmonizer/Echo Unit.....	£175
ROLAND PR100 Sequencer.....	£179

KORG MEX 8000, Memory Expander.....	£125
CASIO CSM1 digital sound module.....	£129
CASIO CSM10P Piano sound module.....	£149
ALL PRICES INCLUDE FREE DELIVERY, ACCESS/VISA WELCOME	

## 0% FINANCE



Some companies just shift boxes – we don't. At BABEL we like to offer you as much help in buying equipment as possible. Apart from advice and personalized demonstrations we can offer you help with finance, from interest free credit to lease rental for companies. We also accept ACCESS, VISA, AMERICAN EXPRESS and DINERS CARD. Why not drop in for a cup of tea and we can talk through your requirements.

# BABEL SYSTEMS



## THE ONLY THING MISSING FROM THIS PICTURE OF OUR DEMO SUITE IS YOU

Because when you book a demo at BABEL, that's exactly what you get. A one to one hands on trial with no interruptions. To arrange an appointment please call us on 01 749 8222

## HIRE PURCHASE

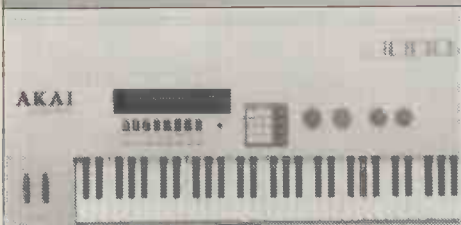


Our hire before you buy policy allows you to check out the item in your own environment for a couple of days. On return of the item you can either pay the hire fee or purchase the item, and we won't charge you for the hire.

## AKAI S1000

We have the entire range in stock and on demo. We also have the IB104 digital output for the S1000

## AKAI S1000KB



- KEYBOARD VERSION OF S1000
- 16-BIT SAMPLING
- EXPANDABLE MEMORY
- SCSI COMPATIBLE

## EMU PROTEUS



- 16 BIT
- 32 VOICE
- 8192 SAMPLES
- SIMPLY SUPERB – IN STOCK – ON DEMO

## KORG M1



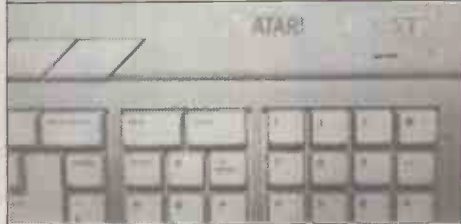
- 16 VOICES, 16 OSCILLATORS, 16 BIT QUANTIZATION
- TWO DIGITAL MULTI EFFECTS PER PATCH
- 10 SONG, 100 PATTERN SEQUENCER
- ALSO IN STOCK, A3 EFFECTS UNIT AND M3R

## ALESIS DATA DISK



- MIDI DATA STORAGE, 800K ON 3.5" DISK
- 53 MIDI DATA FILES PER DISK
- STORES HR16B AND MMT8 DATA
- ALSO MIDIVERB III AND QUADRAVERB

## COMPUTERS



- ATARI 1040STFM AND MEGA SERIES
- APPLE MAC
- COMMODORE AMIGA
- IBM PC

## SOFTWARE



- C-LAB CREATOR/NOTATOR AND SMPTE LOCK UNITOR
- STEINBERG CUBASE/PRO 24/SMP24/EDITORS
- MUSIC X, Dr. T, OPCODE, PASSPORT, HYBRID ARTS
- INTELLIGENT MUSIC, MARK OF THE UNICORN, CODA

## RECORDING



- FOSTEX X26 FOUR TRACK
- FOSTEX R8 AND E8 EIGHT TRACKS
- FOSTEX E16 SIXTEEN TRACK
- FOSTEX 4000 SYNCHRONISERS

## MIXING



- SECK MIXING DESKS, 6, 12, 18, 24 CHANNEL
- MIMIX 16 TO 24 CHANNEL DESKS
- WIRING AND INSTALLATION TO YOUR SPECIFICATION
- ALSO MONITORS FROM JBL AND UREI

## EFFECTS



- ALESIS QUADRIVERB MULTI-EFFECTS, MIDIVERB II
- KORG A3
- ART MULTIVERB, PROVERB 200
- UREI, BSS, LEXICON, FOCUSRITE

**TEL: 01 749 8222**

7 GOLDHAWK MEWS (OFF DEVONPORT ROAD) HAMMERSMITH LONDON W12 8PA

# WSX1



PHOTOGRAPHY: JAMES CUMPSTY

With the first personal multitracker came the phrase “a studio in a box”, but Sansui's WSX1 may be about to claim the tag for itself.

Review by  
Nigel Lord.

**I**T DOESN'T HAPPEN very often. Just every once in a while there's a genuine buzz of excitement surrounding a machine whose design represents a significant departure from that which we've come to expect in a particular area of technology. At these times, the very act of lifting the equipment from the security of its packaging becomes a moment charged with expectancy which even the years surrounded by such equipment cannot dampen. The Sansui WSX1 six-track multitrack recorder provided just such a moment.

OK, since we're halfway there, let me fly in the face of the traditions of objectivity and impartiality established by technical journalists over the years by not pretending to be “reviewing as I write”. I already know what I think of this machine, and I'm quite happy to tell you, here, in the second paragraph: it's wonderful. If you're on the verge of buying a multitracker, but are worried by the inherent

limitations of a four-track format, this is the machine to go for. At the present time, there's nothing else quite like it.

There, that should have thwarted all those who drift straight to the conclusion at the end of the review. Now, if you'd like to find out why, read on. . .

## BOXED IN

AS MANY OF those who've made the plunge into home multitrack recording will know, the claims of a number of manufacturers to have produced “a studio in a box”, whilst not actually misleading, are some way from telling the whole story. Quite simply, the mixer and four-track recorder which comprise the vast majority of these specimens, can scarcely be passed off as a studio in this day and age - no matter how good the basic quality of these machines is. Running (usually) at twice the normal cassette speed and being composed (obviously enough) of four separate

MUSIC TECHNOLOGY FEBRUARY 1990

tracks, recordings have to be transferred to a standard speed stereo format if they are to be, ahem. . . "enjoyed" by the rest of the world. So a mastering machine of some kind has to be added to the setup. And, if it's to do the music justice, this usually needs to be something better than the average (hi-fi) MIDI system cassette recorder.

A further problem on some multitrackers is their inability to record more than two tracks at any one time; recording two or more instruments simultaneously invariably involves some form of sub-mixing - which with multisynth/sampler setups so common, would seem to be essential for most keyboard players. Equally important would be some form of digital reverberation. This need not be particularly elaborate (most studio owners settle down to using no more than a handful of basic presets), but in the present music climate it really has to be considered essential.

So how much have we already had to add on to the basic price of the multitracker - £400 or £500? And we haven't even addressed the problems of monitoring yet. Clearly, the short-cut to reasonable quality demos which multitrackers appear to offer isn't quite the short-cut in terms of outlay it may at first seem. So how is Sansui's WSX1 any different? Well, with a full-function, eight-channel mixer allowing recording across all tracks simultaneously, an integral stereo recording/mixdown cassette deck, a built-in, high-quality digital reverb unit, and of course, the six-track cassette deck itself - the WSX1 could much more fairly lay claim to "the studio in a box" title which, if they're honest, has eluded most other manufacturers. And I haven't even mentioned the many features whose inclusion serves to make the machine such a delight to use.

Of perhaps greater importance to anyone for whom a machine like this would represent a long-term investment (and I think that would include most of us), is the simple fact that the WSX1 has an underlying feeling of quality about it. Beautifully laid out, I would be hard pressed to fault its basic ergonomics (oh, all right, some of the push buttons aren't mutually cancelling, which is a bit of a pain), but despite its complexity, few concessions have been made to the pressures of space. The central display strip which runs right across the unit packs a huge amount of information, and though somewhat novel in its choice of colours (predominately orange with areas of yellow and red), it's clear, easy to read and looks quite imposing.

## THE LAYOUT

SITUATED IN FOUR main areas to the top/bottom and left/right of the display are the principal sections of the machine - the mixer with associated monitoring and effects controls, the individual and master fader/panning section, the two cassette decks, and the tape transport and track recording controls section. Some of the connecting sockets are situated along the front edge (the eight unbalanced mic/line input jacks, the punch-in footswitch jack and the headphone jacks) but most are situated on the rear

panel and we'll come back to these later.

Of the eight available mixer channels, six provide standard unbalanced mic/line input facilities (switchable to individual tape inputs from the six tracks of Deck A). The other two, in addition to providing balanced XLR inputs on the rear panel, may be used as a stereo pair for the connection of auxiliary input devices such as CD players or external cassette decks. (Now why would anyone want to mix CD recordings with their own music?) Controls for each channel comprise Trim (gain), High/Low EQ, Reverb Send, Effect Send, Pan, and channel fader, and in addition there's an Overload indicator and Solo button.

A side effect of the non-cancelling push buttons, I mentioned earlier, is that the selectors for Tape (channels 1-6) and Auxiliary (channels 8-9) act as mute buttons if depressed when Mic/Line inputs are selected - and vice versa. I don't know if this is deliberate: certainly, no mention is made of it in the manual, but then, no mention is made of a number of things in this particular manual (and if you think you've spotted an area in which I'm somewhat less than glowing in my opinion, you're right).

The channel faders, though a little on the stiff side, have a good three inches of travel in which to do their work, and even with their generously-sized buttons are spaced a respectable distance apart. Certainly, they're leagues ahead of many multitracker offerings. Also to be commended are the extensive headphone monitoring facilities. Here, besides being able to monitor the output from both cassette decks and the main stereo out via headphones, it's also possible to listen in to the internal reverb and external effects sends. Not only that, but all these options are available in combination as well as individually, and there are sockets for two sets of cans just in case anyone else needs to listen in too.

As far as visual monitoring is concerned, the WSX1 doesn't stretch to individual meters for each input channel (but then, neither does my 18-channel Seck), so you have to keep a watchful eye on the overload LEDs. What it does provide, however, is meter indication of each of the six record or playback signals associated with Deck A or indication of the main stereo L/R buss, the external effects send buss, the internal reverb send buss, the cue out and sync out levels. In other words, the six LED meter ladders are dual purpose and are provided with a push-button switch to select between either mode.

Next to this switch, there's another push button whose purpose in life is to make ready track six for recording an external sync track. It does this by the simple expedient of disabling the Dolby NR circuit from that particular track, which it also mutes from the mix during playback. No more Lewis gun sync pulses blasting your speaker cones into oblivion as you fight to get to the fader. . .

Two rotary controls and three small push buttons might not seem to offer the sort of facilities for creating the perfect ambience for your latest *magnum opus*, but between them these simple reverb parameters are capable of producing some very useable effects - from bright "ringy" bathrooms ►

**"Besides being able to monitor the output from both cassette decks and the stereo out, it's possible to listen in to the internal reverb and external effects sends."**

► through to dark cavernous halls.

Besides rotary control over time and level there are three basic reverb types selected by the push buttons and described in the manual as recreating a small room (1) simulating a larger room (2) and recreating a mid-sized conference room (3). Now quite why reverb two "simulates" rather than "recreates", I'm not entirely sure, and neither is it clear why conferences have to be held in the room selected for reverb three.

All I know is, despite their being mono effects, the basic quality is excellent throughout the entire reverb range. There's a noticeable difference in frequency response between the three settings (effect two being slightly brighter than effect three, which, in turn is slightly brighter than effect one), and this, in combination with the time control can produce a surprising breadth of variation. Occasionally there's a slight "boom" when switching from one effect to another, and there is a noticeable delay as the

new setting is switched into operation, so it's not really feasible to be altering reverb type during recording. But as a basic workhorse providing good quality reverb with a minimum of fuss (and therefore freeing any external device for other duties), it cannot really be faulted.

Of course, you'd imagine that switching off all three push buttons would leave you with no effect at all - whoever wrote the instruction manual certainly did, and as a result, there's no mention of a digital delay effect which is automatically selected whenever the other three are not. Being adjustable from a few milliseconds to (I'd estimate) just over a third of a second, it doesn't cover a vast range - and it does autopan continuously from left to right - but it certainly came as a welcome surprise *after* I'd spent half an hour trying to work out where the hell it was coming from. . .

Finally, in this section we have the two rotary controls for (master) send and return of the external effects loop. Damned if I can think of anything very creative to say about them.

## ALL HANDS ON DECK

THE TWO CASSETTE decks, clearly labelled A and B occupy the top right-hand section of the WSX1, and share a common lid (not a very technical-sounding word, that). With the lid raised there is plenty of room for both cassettes and fingers, which presumably makes up for the fact that neither deck is equipped with an eject mechanism. The principal differences between the two (besides the obvious one of tracks)

is the running speed of Deck A which at 9.5cm per second is twice the standard cassette speed of Deck B, and the fact that only C60 chrome or "high" position tapes maybe used in Deck A whilst Deck B will accept normal or high position cassettes up to C90 in length. I have to say, the warning issued in the manual against using C90 cassettes in Deck A seems rather unfounded in this day and age. I'd have thought there were enough high quality types around which exhibit no tendency to stretch even at the reduced thicknesses demanded by the C90 format. But what the heck, you'll just have to avoid recording concept albums which run to over 15 minutes a side (remember: this deck runs at double tape speed).

And on the subject of high-quality cassettes, I'm not entirely sure if the omission of a metal tape position can be regarded as any kind of serious disadvantage. I'm damned if I've ever heard any subjective difference between metal cassettes and the very best quality non-metals. But I suppose that's an argument for the pages of the hi-fi mags.

One final difference between the two decks is the option of switching to Dolby B on Deck B which isn't available on Deck A - it's permanently set up for Dolby C. And curiously, the switch to disable the NR altogether is situated on the top panel (next to the B/C selector switch) for Deck B, but appears on the rear panel for Deck A. An afterthought perhaps?

Despite the decks themselves being located at the top of the machine, the transport buttons (all logic controlled) are conveniently situated down in the bottom right hand corner. In addition to the standard Play, Record, Stop, Pause and Fast Forward/Rewind controls, both decks include cueing functions (pressing fast forward/rewind whilst in Play mode), whilst Deck B features an extra button labelled Mixdown. When selected, this sets up the decks ready for mixdown (Pause on Deck A and Record/Pause on Deck B) and starts both when either Play button is pressed. A nice touch.

The electronic tape counter within the main display panel is situated in a central position relative to the decks for the good and simple reason it is shared by both. A selector button located just under the main stereo output meter displays is used to switch between the two, and next to it is a Reset button which sets the counter back to zero. In conjunction with this, there's a Zero Return button, whose function should, I think, be self-explanatory, and also a repeat play facility dubbed Rehearsal which allows you to set up a loop for continuous play. Another of those neat facilities which really do make all the difference during a long recording session.

Incidentally, Deck A also comes equipped with a pitch control which covers a very respectable  $\pm 20\%$  range, and I suppose could almost be regarded as a creative feature in its own right.

Under the general title of Aux Input (we're now over on the far right of the machine) are five switches: two to switch into circuit a couple of extra audio processors which may be connected in line with the mixer output (graphic or parametric equaliser or digital delay, for example) and three to select each of the Auxiliary inputs which may be connected to the



**“Mechanically it's hard to fault the WSX1 - the controls are positive and smooth, and the logic-controlled tape buttons give it a decidedly professional feel.”**

stereo pair provided by channels seven and eight.

Determining where the signal from each input channel ends up is the work of the track record selector switches situated immediately above the the tape transport controls. In addition to sending each channel to its corresponding track on Deck A, it is also possible to direct them to a Left/Right buss, making it possible to record straight onto a stereo pair (the Pan controls determine the position of each instrument within the stereo field). Alternatively, you could, for example, record four separate instruments on tracks one-four, then mix them down to stereo on tracks five and six, leaving the first four tracks free for further instruments.

Just above the Track Selector Buttons are the corresponding Cue controls which allow you to set up a monitoring mix when overdubbing or punching in to an existing recording (this is, of course, dependent on Deck A being selected over in the monitor section). Finally, back in the centre of the WSX1 we have a pair of Master Level L/R faders which control the level of the signal reaching Deck B and a Stereo Master which determines the level of the main stereo output feeding the external amp/speaker system.

Rounding things off at the back of the machine are the XLR sockets for the balanced inputs on channels seven and eight and phono sockets for the connection of the external processors, auxiliaries, individual tape outs, stereo mixer outs, main stereo outs and sync in and out. The effect return loop is on standard jack connections as is an extra composite signal from the six Cue controls - presumably for foldback in split room studio applications. And last but not least is a 5-pin DIN socket to which is connected the MR6 expander unit. Expander? Sorry, didn't mention it? Well Sansui, it seems, have decided that the humble WSX1 is as well worth upgrading as any other piece of equipment these days, and rather considerably have designed a six-track expander for it, giving you access to ten tracks simultaneously (each recorder uses one of its tracks for a sync signal). Now that's what I call a home multitracker.

## VERDICT

AH, BUT CAN you make high quality recordings with the WSX1? I think it's fair to say there's currently an implied standard behind the phrase "Portastudio demo" - and it's not a particularly complimentary one. But that has more to do with the person using the equipment than with the quality of the equipment itself. Having heard excellent results from the owners of some very modest machines, I am left to conclude that with the WSX1 in their hands, these same people could work minor miracles. From an audio point of view, it's a first-class machine: noise levels are impressively low and distortion is all but inaudible. The quoted frequency response of 40-15,000Hz for the decks is more than acceptable

MUSIC TECHNOLOGY FEBRUARY 1990

for cassette format recordings (let's not forget that the six tracks share considerably less than an eighth of an inch tape width), and with separation held to a creditable 65dB, it seems you're not paying the penalty for that extra couple of tracks.

Mechanically too, it's hard to fault this machine. The controls are all positive and quite smooth, and the logic-controlled tape buttons help give it a decidedly professional feel. I have to say, I've never been keen on cassette mechanisms which leave the capstans running permanently - and with a machine like the WSX1, which is likely to be used for a considerable part of its life simply as a mixer - this seems rather hard to justify.

Also hard to justify is an inadequate instruction manual on a piece of equipment costing in excess of 1200 quid - particularly when there are areas of its operation which aren't even covered in the text. The internal signal routing of mixers and multitrackers can often be confusing, and with the kind of advanced features included on the WSX1 (and, of course, with the extra cassette deck), this is especially true. I spent a considerable period of time, for example, trying to unravel the workings of the monitoring system - the fact the mixer provides two different sets of output signals, each of which may be routed through its own external processor, was an area which took quite a bit of sorting out initially. Yet nowhere does the manual attempt to clarify matters. If anything, it caused more confusion, which even the inclusion of a rather sketchy block diagram could not dispel.

But it would be churlish to allow this to take anything away from the machine itself. A little time spent investigating its potential and it wasn't long before I'd started putting together some excellent six-track recordings. The WSX1 represents a significant leap in home multitrack technology, which is all the more noteworthy for it being Sansui's first foray into this market. Of course, the good thing about a new company like Sansui is that they're not new at all - they've been plying their trade in the hi-fi biz for many years now. So despite the novelty of the WSX1, there's little chance of being left high and dry with a broken machine and a firm which went out of business two years earlier.

This is a hugely desirable piece of equipment. With an eight-track reel-to-reel system at home and no real use for the WSX1, I nevertheless kept looking over to my sadly under-used system and thinking to myself, when was the last time I actually used more than half a dozen channels simultaneously on that 18 channel desk? Do I actually need all eight of those tracks? I can think of no higher recommendation. ■

Price £1250 including VAT.

More From *Fabulous Audio Technology, Units 7/8, Bonders Business Centre, London Road, Baldock, Herts SG7 6NG. Tel: (0462) 896262.*

# A.D.S.

## IS IT THE LAST WORD ON SAMPLING?

From one of EUROPE'S MOST MODERN music factories, ARGENTS brings you the DYNACORD ADS, a 16-bit stereo sampler with 20-bit D-to-A conversion, 2Mbyte internal memory (EXPANDABLE to 8Mbyte), SCSI connection, and DIGITAL MIXING. There's also a keyboard version, and both machines come complete with one of the BEST SAMPLE LIBRARIES in the business. Hearing IS believing.



Argents, 20 Denmark Street, London WC2H 8NA  
☎ 01-379 6690 (sales) 01-240 0085 (service)  
01-240 7696 (fax)

# MAC WORLD

**CONSIDERED THE  
ROLLS ROYCE OF  
MUSIC MICROS, THE  
MACINTOSH HAS  
OFTEN SEEN MUSIC  
SOFTWARE  
DEVELOPMENTS  
BEFORE OTHER  
MICROS. WHERE  
BETTER, THEN, TO  
KEEP UP TO DATE  
THAN THE  
MACWORLD EXPO?  
REPORT BY MIKE  
COLLINS.**

ACCEPTING THE "AFFORDABLE" popularity of the Atari ST, the Apple Macintosh Computer is one of the front-runners when it comes to Musical applications. Which makes the annual Boston MacWorld Expo just about the best place to get the most up-to-date info on new developments. The show ran for four days from the 9th to the 12th of August last year and had quite a lot to say on behalf of the Mac.

The big news at Boston was that the MultiMedia revolution is about to hit us. MultiMedia is a "coming-together" of graphics, pictures, text, live or pre-recorded video signals, animation, dialogue, sound effects and music. These elements may all now be assembled using the Macintosh on your "desktop", or in your studio, and the final results may be replayed from the Mac, recorded onto a VCR, projected onto a screen using a variety of projection systems, transmitted via modem, broadcast on TV, or

whatever. John Sculley, the charismatic Chief Executive Officer at Apple, predicts that the 1990's will see an explosion of this DeskTop Media similar to the DeskTop Publishing phenomenon which began on the Macintosh just a few years back.

Sculley and others demonstrated some of the most exciting new developments at a series of Keynote Addresses each morning at the Wang Centre for the Performing Arts in the centre of Boston - realistic animations (such as the one showing a lifelike animated snake moving at different speeds on three different windows on screen); new MultiMedia software from the BBC Interactive Television Unit in London; new CD formats controlled interactively from the Macintosh from Warner New Media and others; Videodiscs from ABC News Interactive and WGBH-TV, and from Harvard Interactive, all controlled from HyperCard on the Mac; Remote Control software for the Mac via modem; voice control of the Mac using a system called The Voice Navigator (and this really works - imagine telling your Mac sequencer to "record", "play", "stop", "rewind", "drop in", and so on, with no hands except on the notes you want to play on the keyboard); demonstration and presentation software called MacroMind Director which can even control MIDI equipment... Particular references were made to various developments which Apple felt were significant and important for the future. These included the newly-launched read/write optical disk storage media from Mass Microsystems (and others) which allow relatively cheap storage of hundreds of megabytes of information. Both sound and video files eat storage space, so these new optical systems will be of great interest to anyone wanting to make internal software links between several programs running in a pseudo-multitasking way on the

Mac. You can send data internally from one program to another, as was demonstrated from Director to Vision to play sequences, or you can merge data from several programs and output it from one or other of the Mac's output ports. Newer versions of the Midi Manager software should work even better. Chris Hallaby reckoned Opcode were aiming to provide more and more integration of their programs, as well as allowing them to work with other people's via the Midi Manager. It's currently possible to link all their synth editor/librarian packages together to create one general controller for your MIDI equipment. A free desk accessory is now available to allow patches to be sent to and from your MIDI gear while running any program on the Mac. And Vision will work with the patch programs in a consistent way, allowing the instruments defined in the sequences to be linked to actual patch data, not just names of synths and patches, so that you always get the same sounds back when you come back to a piece of music at a later time. You can also map the relationships between note names and instruments in Vision, which is extremely useful when working with drum machines, samplers, or many of the multitimbral units currently available.

And talking of Vision, this just has to be the hottest sequencer around at the moment. It has both event list (like Performer) and graphic note editing (like MidiPaint) available. The new version of the program will scroll the note displays as the sequence runs, although a rather amusing "bouncing ball" traverses the graphic editing window following the music while the sequence plays at the moment. Algorithmic composition is included, along with an incredible number of useful features like pop-up help boxes, and on-screen faders which can send MIDI Volume (Controller 7) messages to your MIDI gear for



# EXPO REPORT

automated MIDI "mixing". More features than just about any other program, in fact - Opcode are definitely onto a winner here.

Warner New Media had two products on show at a Boston hotel hosting interactive videodisc and CDs. The first was a series of CD-Audio/ROM disks called Audio Notes. These playback on the new Apple CD-ROM player which can switch between the two formats (Audio and ROM). One of the first in this series was based round Mozart's *Magic Flute* opera, and a Hypercard program running on the Mac allows interactive control by the people working with either of these media on the Mac.

There were seminars each day at the World Trade Centre and at the Bayside Exposition Hall, ramming home the MultiMedia message even more, and the Music Conference on the Saturday with Dave Oppenheim of Opcode, Peter Gotcher of DigiDesign, and MIDI expert Paul Lehrman, amongst others, was no exception. Sound Tools from DigiDesign looks all set to become a very important system for musicians, recording engineers, and other professionals working with MultiMedia on the Macintosh. There is an A/D convertor to allow you to input/output analogue audio, and a digital I/O unit to allow you to input/output almost any professional digital audio format, from DAT to CD to Mitsubishi/Sony tape formats. An Audio Accelerator card with a powerful Digital Signal Processing (DSP) chip slots into your Mac II or SE, and allows direct-to-hard disk recording, auditioning, DSP, and subsequent output or playback of sounds from the Mac. The controlling software is a new version (version II) of the popular DigiDesign Sound Designer sample editor for the Mac. This will also allow you to import sounds from virtually any sampler on the market for editing or librarian purposes, either via MIDI or via SCSI. Special software is included to allow you to

play back 16-bit, 44.1kHz sounds in Macintosh "snth" resource format, from a range of Macintosh applications including HyperCard, MacroMind Director, and many others. These "snth" resources cause the sounds to be replayed via the Sound Accelerator card rather than by the Mac's central processor, and consequently don't involve any usage of precious Mac RAM, and free the central processor to handle tasks such as animation more readily. As a result, it is now feasible to record hours of professional-quality dialogue, effects, or music, to be synchronised with a HyperCard or Director presentation. The only limitation on recording time is storage space - and that's where the new optical disks come in.

Opcode's Chris Hallaby and Dave Oppenheim were very excited about the new Midi Manager and Midi Driver software which Apple have recently released to program developers. They had a beta test version of Vision on show at their stand, and Dave reckoned he had tested this running concurrently with MacroMind Director under MultiFinder. MacroMind Director can send MIDI Start, Stop, Song Position Pointer, and Continue commands to a MIDI sequencer to run dialogue, sound fx, and music in sync with visuals from the Mac. The Midi Manager software allows you to Audio on the CD using the ROM data which was transferred to the Mac.

The second format was no less exciting: CD+ Graphics+ MIDI. A new CD player is available from JVC with a video output to a TV screen, and a MIDI output to your MIDI gear. Some albums are already on release in America - such as Talking Heads' *Naked*, which includes graphics - and further albums are about to be released which include MIDI data as well. Examples could include using the MIDI data for "music minus one" sessions, where you drop out an

instrument and play that part yourself for practice. Or there might be an album containing a selection of original Top 40 hits, with synthesised versions as alternative audio recordings, and then with simplified sequence data, optimised for a common multitimbral instrument like the Roland MT32, for people to make what they will of at home, where the sequence data could be transferred to a home sequencer, say on a Mac. The graphics on the disk could include details of how to set up the MIDI instruments, and lyrics to sing along with - Karaoke style. Both of these new formats look set to generate a lot of interest both sides of the Atlantic.

The *piece de resistance* for me at the show was the HyperCard software developed in London by Max Whitby and Mark Wilson at the BBC Interactive Television Unit, in association with Apple Computers. This is called MediaMaker. They describe it as a "tool that enables users to create their own multimedia sequences, synchronising moving pictures and graphics with commentary, music, and sound effects". Elements of a MultiMedia "production" can include material sourced from Video 8, videodisc, CD-ROM, digital audio (16-bit via Sounds Tools or 8-bit via MacRecorder). These can be easily assembled in the desired sequence, and then replayed from the Mac, for a corporate presentation for instance, or the final result could be output to a Video Cassette Recorder, allowing you to make your own "DeskTop Video". This reminds me of MIDI sequencing and sampling (which could both be used in some ways anyway) but with the video and graphics tool. Will we now spawn a "Stock, Aitken and Waterman" of the multimedia scene? And what about the copyright situation now, with text, graphics, artwork and video all involved? Let's see what tomorrow brings... ■

**"APPLE  
PREDICT THAT  
THE 1990'S  
WILL SEE AN  
EXPLOSION OF  
DESKTOP  
MEDIA  
SIMILAR TO  
THE DESKTOP  
PUBLISHING  
PHENOMENON  
WHICH BEGAN  
ON THE MAC  
JUST A FEW  
YEARS BACK."**

# THE JUPITER LEGACY



**IT'S NOT OFTEN THAT THE INSTRUMENT A MANUFACTURER INTENDS TO TAKE OVER FROM ONE OF ITS CLASSICS SUCCEEDS IN DELIVERING THE GOODS, BUT ROLAND'S FOLLOW-UP TO THEIR JUPITER 8 CERTAINLY LIVED UP TO ITS NAME - THE SUPER JUPITER. TEXT BY STEVE HOWELL.**

WHAT MAKES A great synth? For that matter, what makes a great instrument? What actually makes a Fender Strat a professional instrument and a cheap copy a poor substitute? They're both planks of wood with six strings, some electromagnetic pickups, volume and tone controls, a switch for pickup selection and an output jack - so they should both

sound the same, right? Obviously not: the copy will have a sound readily identifiable as an electric guitar but it won't have that "quality" that makes the Strat an individual instrument. Does the same principle apply to synths? The answer lies with whether or not a synth can possess a quality that goes beyond its technical spec - and I reckon the answer is "yes".

Let's take an example: an analogue synth with two voltage-controlled oscillators (VCOs), one highpass filter, one voltage-controlled lowpass filter (VCF), two ADSR envelope generators (EGs), one voltage-controlled amplifier (VCA) and two low-frequency oscillators (LFOs) in a 19" module. The description fits many synths - Cheetah MS6, Bit One, Oberheim Matrix 6 or Matrix 1000 - but the sound of each is quite distinct. And, as you've deduced from the header at the top of the page, we're talking about the Roland MKS80 Super Jupiter analogue synth module here.

The Super Jupiter doesn't have an amazing specification when compared with, say, an Ensoniq ESQ1 or Oberheim Matrix 12, and you could be forgiven for assuming that the aforementioned MS6 or

Bit One could produce identical sounds. And up to a point you'd be right, if it weren't for that intangible "quality" mentioned earlier. We're talking Strats, Telecasters, Les Pauls, SGs here - but electronically so.

Like many of the classic synths examined in these pages in issues past, the MKS80 Super Jupiter has that certain "something" that can't be easily put into words - although I'm about to try.

The MKS80, introduced around 1985, was intended to be the 19" MIDI version of the Jupiter 8 with bits of Jupiter 6 thrown in for good measure. Many Jupiter 8 owners would agree that the MKS succeeds in being its replacement, though some JP8 die-hards certainly wouldn't. For my money, the Super Jupiter has all the qualities I associate with the Jupiter series - it's warm, rich, fat, and all the usual analogue clichés - but it is also detailed and has a clarity that old Roland synths always seemed to have, yet other designers failed to capture.

The Super Jupiter has the fast 'n' responsive envelopes Roland are noted for, and its filters are clear and

transparent. The oscillators never seem to overload the filter unduly, creating a naturally clean sound, and any "filth" can be carefully controlled using cross modulation between the oscillators. The result is a synth that is as full of character as the old Prophets and Moogs but, to me at least, the MKS80 is more versatile.

Being a 19" rack-mount unit, the Super Jupiter doesn't have the same hernia-inducing factor as the Memorymoog, OBXa or even the JP8... And being rack-mounted, you'd guess the expander lacks the control panel immediacy of a "complete" polysynth. And, again up to a point, you'd be right: the MKS80 does use parameter access but it was also the first Roland synth module to have an optional programmer available for it. This takes the form of the MPG80 (which is also rack-mounted) and gives you all the knobs and sliders and switches you need for even the most laborious programming session. You have, therefore, the best of both worlds.

## GET TECH

LET'S GET DOWN to basics and see what the MKS offers in more detail. The two oscillators are almost identical. Each offers sawtooth, triangle, square and pulse, with oscillator two offering white noise as well. Each or either VCO can be modulated by LFO1 and/or EG1 in varying amounts, and these control signals can be inverted at the inputs of either oscillator if required. Pulse width modulation (PWM) is similarly flexible, with LFO1 and/or EG1 being routable to either or both oscillators' pulse wave circuitry. Again, these control signals can be inverted and the net result of this is very rich ensemble sounds indeed.

Key Follow is switchable to affect either VCO1 or VCO2, but not both simultaneously. Using this control it is possible to set fractional scaling for the one VCO and, although this isn't a facility that you'll use every day, it can be very handy for creating interesting waveshapes that depend on keyboard position when the two oscillators are synced together. PWM can also be controlled using keyboard position, which again throws up many interesting possibilities.

Cross modulation exists such that VCO2 can be used to modulate VCO1 for "pseudo-FM" and other tonal possibilities. Furthermore, cross modulation amount can be controlled by Envelope one for "shaped" FM effects. Both oscillators can be sync'd either way (VCO1 to VCO2, or VCO2 to VCO1) which is a curious facility but not without its uses. Both oscillators

can be tuned and detuned in large or small amounts for intervals and chorus effects. All these facilities add up to a tremendously large palette of textures, tones and waveshapes, and a synth that's significantly more advanced than any analogue synth you're likely to find these days.

An oscillator mix control balances the two oscillator levels before they pass onto the high-pass filter. This is a static filter (it cannot be dynamically controlled from any modulation source) and its basic task is to remove excessive bottom end from a patch. It's not something you're going to find yourself using too much when programming, but it can be indispensable when you're trying to separate sounds in a mix.

The VCF offers manual control over cutoff frequency and resonance with modulation from LFO1, ENV1 and the keyboard. The MKS80 follows the Jupiter 8 tradition in that the filter does not self-oscillate at extreme resonance settings. This is a limitation, as there are some things for which oscillating filters are essential - those long Tangs filter sweeps and acid house rhythm tracks, for example. Envelope modulation is invertable, allowing a far greater range of noises to be made and the filter can be controlled using either envelope.

As well as the expected control via envelope two, the VCA can be modulated using LFO1. This is not a facility found on any of the Super Jupiter's competitors, and it allows a wide range of tremolando effects as well as many special effects to be created.

The two EGs take ADSR format (attack, decay, sustain level and release) and also offer variable rate scaling and control of dynamics. Both envelopes have a switch for velocity on or off and overall dynamic range (velocity amount) is governed by a non-programmable control in conjunction with a programmable control. In practice it's best to leave the non-programmable control at full and program everything. Dynamics can also be used to control attack time, and a programmable control is provided to govern

exactly by how much. I suppose the only limitation with the way in which the MKS80 handles velocity and dynamics is that the Time and Level controls affect both EGs identically. But then it's never presented me with any problems...

LFO1 offers the usual sine, sawtooth, square and random waveforms for modulation. You have control over rate and delay, with depth being set at the input stages of the VCOs, VCF and VCA. There is another LFO but more on this later.

Now all this constitutes what Roland called a Tone. A tone can be stored in any one of 64 locations (eight banks of eight) and a further 128 can be stored in an optional cartridge, the M64C.

You'd think that all these parameters would be enough for creating good sounds, but there's even more you can do with a Tone once it has been created. It's possible to set five play modes on the Super Jupiter: Poly 1, Poly 2, Unison 1, Unison 2 and Solo. Furthermore, you can set splits (with freely assignable split point) and layers of two sounds on the same or separate MIDI channels. Of the play modes, Unison 1 was designed to kill - all 8 voices are layered on one key. Also associated with the Unison modes is the Unison Detune control which sweeps from a slight phase shift to out-and-out nasty. Solo mode turns the MKS80 into a standard monophonic synth which is useful, as the name implies, for solo lines. Triggering for Unison 1 and Solo can be either single or multiple depending on whether the Env Reset button is switched on or off in Tone Edit.

There's also an octave shift variable from -2 to +2 - handy for transposing a sound without having to retune oscillators. Next, there's a glide control for setting portamento. Glide, unlike some synths of this era, is available in all play modes, Poly, Unison or Solo. You also have control over pitchbend amount on each oscillator and a second LFO can be called upon for vibrato. Unlike LFO1 with its multiple ▶





Cheques/P.O. to:

28 Dennison Avenue  
Withington  
Manchester  
M20 8AF

# Sequencer One

Now Available From Music And Computer Shops.

- \* 32 Tracks
- \* Real & Step Time Recording
- \* Graphic Note Editor
- \* Graphic Song Arranger
- \* Very Fast & Easy to use
- \* Tape Deck Style Controls
- \* Loop Mode Recording
- \* Extensive Editing

- \* Quantize, Cut, Paste Strip, etc
- \* Real Time MIDI Remap
- \* Multitasks with Gajits NEW Patch Editors
- \* Editors Available for: D5, D10, D20, D110, MT32, CM32L, CM32P & CM64
- \* Standard MIDI Files
- \* For any Atari ST
- \* MIDI Helpline and much more

Order NOW on our CREDIT CARD HOTLINES: 061 446 2304/061 434 2768

Interested dealers should contact Hugh Symons Distribution Services. (0202 745744) or Gajits for more information



▶ waveforms, LFO2 only outputs a triangle wave and this is introduced either via the mod wheel or aftertouch. You have control over LFO2's rate and maximum modulation amount which goes to both VCOs simultaneously. The beauty of having two LFOs is that one can be used for vibrato whilst the other deals with PWM, filter sweeps, sync sweeps and so on, and Roland's decision to make LFO2 a simple one makes sense. A switch labelled VCF does not, as you'd assume, route LFO2 to the filter – instead it routes the mod wheel or aftertouch to the filter for real-time control of the cutoff frequency using these two controllers. This can be very effective for brass and other swell effects.

These parameters constitute a Patch in Roland parlance. The beauty of this system is that one Tone can become several other sounds. One Tone could be in a Patch played polyphonically with glide. The same Tone could be used in another Patch, the same Tone could be combined with another Tone in a layer or a split. Lots of possibilities for the creation of sounds exist in Tone Edit but in Patch Edit, even more things are possible.

## REMOTE CONTROL

ALL THIS PROGRAMMING power is available through the MKS80's parameter access. But getting around it with four buttons is not recommended. Enter the MPG80, which effectively endows the Super Jupiter with knobs 'n' faders. To use the MPG, simply connect the MIDI Out of your master keyboard to the MIDI In of the MPG80 and then take the Programmer Out (a special Roland lead) from the MPG to the Programmer In on the MKS80, match up the two units' MIDI channels and away you go. There's an interesting possibility opened up by this setup, as the information coming from the MPG is echoed by the MKS80's MIDI Out and so can be recorded as part of a sequence (via a MIDI merger into your sequencer). This allows sound parameters to be modified in real time during the sequence. If this appeals to you, however, beware of a few things – firstly, watch for MIDI feedback loops and secondly, watch that the amount of SysEx data coming out of the MKS doesn't clog up your sequencer.

The net result of all this? To use the phrase, "all you'd ever want" of an analogue MIDI synth module sounds so passé that I won't use it. But it's true. Rich strings and pads, big brass sounds, killer basses and leads (especially in Unison 1), detailed metallic noises and a myriad

special effects are all part of the Super Jupiter's vocabulary. And all from one convenient 19" box.

The optional but highly desirable programmer puts all this at your fingertips. What's more, unlike many of the MKS80's contemporaries, it's very reliable and requires only occasional pressing of the Autotune button to keep it in tune.

I speak as a long-time admirer of the MKS80 – I wanted one for years but couldn't afford one. Instead I tried the Bit module, the Cheetah, the Oberheim and other synths but have never been totally happy. After the instrument was discontinued, those who had them kept them. Recently, however, a chance glance through the classifieds in *Melody Maker* saw me penniless but happy. Now, my Super Jupiter has replaced nearly all my

analogue synths because it is *that* versatile. In fact, you'll soon see some of my old synths in the MT classifieds.

I don't know whether the MKS/MPG80 was a huge commercial success for Roland. All the people I speak to who have one love it with a passion, but I don't think Roland sold skiploads of them. Perhaps the two grand price tag and the fact that people weren't used to the idea of paying that sort of money for a 19" box put some people off. Nowadays, I'd venture to say that if Roland dusted off their production line and re-introduced this little beast, they could do very well with it. The only modifications I'd suggest would be greater polyphony (say, 16 voices) and multitimbrality – on the condition that the actual voice circuitry remained exactly the same.

And talking of prices, you can expect to pay anywhere between £1000 and £2000 for an MKS80 and an MPG80 second-hand even today – making it one of the few old instruments that has really retained its value. In fact, in relative terms, it's gone up. That must say something about the quality of the noises it makes.

Despite my admiration for the Prophet 5, the Memorymoog, the Oberheims and other classic analogue polysynths, I have settled with the Super Jupiter and programmer as *the* classic analogue polysynth. Whether you play acid house or heavy rock, funk or cabaret, reggae or new age, there's a place for the MKS80 in your music. The MKS80 is a serious investment, and one that would never be out of date in your rack whatever musical trends come and go. Is it the ultimate analogue polysynth? I can't account for your personal taste but I'd say that if any synth is going to win such an accolade, the Super Jupiter does it for me. ■

**"ALL THESE FACILITIES ADD UP TO A SYNTH THAT'S SIGNIFICANTLY MORE ADVANCED THAN ANY ANALOGUE SYNTH YOU'RE LIKELY TO FIND THESE DAYS."**

# JANUARY SUPER SALE NOW ON!!!

## HUNDREDS OF NEW EX DEMO AND S/H BARGAINS!!!



# FUTURE MUSIC PACKAGES

### KEYBOARDS

- OLAND Roland U20 in stock £1050 FMS
- oland D5 in stock £999 FMS
- oland D10 in stock £899 FMS
- oland D20 in stock £1100 FMS
- oland D50 in stock £1349 FMS
- ROLAND ISM Roland E5 new £780 FMS
- Roland E20 ex demo £999 FMS
- KAWAI Kawai K1 special £699 FMS
- Kawai K1 MkII special £899 FMS
- Kawai K4 new £1499 FMS
- Korg M1 in stock £3699 FMS
- Korg T1 new £3300 FMS
- Korg T2 new £2399 FMS
- YAMAHA Yamaha DS55 special £325 FMS
- Yamaha VS100 special £440 FMS
- Yamaha VS200 special £549 FMS
- Yamaha VS50 in stock POA FMS
- Yamaha VS777 new POA FMS
- Yamaha VS100 £700 £390 C
- Yamaha VS200 £789 £399 C
- SIH KEYBOARDS Kawai K1 £549 B
- Roland D10 £499 B
- Espeung Mirage DSX £899 C
- Yamaha B200 £425 C
- Kawai K1 £179 C
- SIH Korg M1 £165 C
- Casio C25000 synth £199 S
- SIH Casio CZ 2505 £499 S
- Yamaha DX100 £499 S
- SIH Honner EK61 Piano £725 P
- Korg DW8000 Ex demo £299 P
- Technics AX7 Ex demo £349 P
- Yamaha PSR 63 Ex demo £699 SB
- Roland JPS Shand £499 SB
- Yamaha B200 - Ex demo £149 C
- Yamaha VS 100 Ex demo £129 C
- Yamaha PSR160 £199 C
- Ex demo Roland D10, D20, W30, DS £599 C
- SIH Grunier Riosky Piano £375 B
- Ex demo Roland HP5000 £199 C
- SIH Yamaha DSR2000 Call
- Openman Matrix 1000 £500 B
- Ensoniq VFX £199 B
- Roland JPS Shand £199 B
- Ensoniq ESQ 1 Mini £99 B
- Yamaha DX8 Shand £1199 £Phone
- Roland SH95 Shand £1199
- Roland W30 in Stock
- SIH Yamaha DX711 FD

### PIANOS

- CLAVINOVA IN STOCK - CALL £1299 FMS
- RHODES Rhodes MK50 in stock £1799 FMS
- Rhodes MK80 in stock £904 FMS
- Rhodes Model650 new £899 FMS
- ROLAND Roland KR33 in stock £904 FMS
- Roland KR500 new £1429 FMS
- Roland KR3000 new £1899 FMS
- Roland 1000s new £2200 SB
- Roland 2500s £2200 SB
- Roland 3500s £2200 SB
- Roland 4000s £2200 SB
- Roland 5000s £2499 FMS
- Roland 6000s £2499 FMS
- YAMAHA Yamaha P2200 £999 B
- Yamaha PF85 £999 FMS
- SIH Yamaha CP30 £259 C
- SIH Honner EK61 piano £129 C
- SIH Hammond organ £109 C
- SIH Korg EP51 Piano £199 C

### CYMBALS

Hundreds of bargains in new and used cymbals by Sabian, Zildjian, Paiste - Call.

### SOUND MODULES

- KAWAI Roland D110 in stock £599 FMS
- Roland U220 new £904 FMS
- Korg M3R new £899 FMS
- Korg M1R in stock £499 C
- Roland MT100 Call
- Protus in Stock Call
- Roland U220 New! £899 C
- Korg M1R in stock £325 B
- Kawai K1R SH £299 SB
- Yamaha TX812 Ex demo £899 C
- Roland MKS12 Ex demo £289 C
- E-Mu Protus In Stock £1299 C
- Yamaha TX812 £899 C
- New II Protus and XR in stock £299 C
- New Yamaha RX802 £349 C
- Korg Symphonic £149 C
- Roland MT32 £149 C

### SEQUENCERS

- Roland MC500 in stock £904 FMS
- Roland MC200 Mail £449 B
- Roland MC500 SH £999 FMS
- Akai ASO10 in stock £349 C
- New Roland PR10 Call C
- Roland MC500 II £751 C
- SIH Roland CS2000 £599 C
- Ex demo Roland MT100 £149 C
- SIH Yamaha OX5 £1499 S
- Emars SE New £1150 B
- S-50 SHand £1299 S
- Yamaha DX8 Shand £1199 C
- NKS 100 SHand £599 B
- Ensoniq Mirage New £599 B

### SAMPLERS

- ROLAND Roland S50 special £599 C
- Roland W30 in stock £199 C
- Roland S10 - Case + complete library £1199 C
- Roland W30 £1399 FMS
- AKAI Akai S950 in stock £2999 FMS
- Akai S1000 in stock £3999 FMS

### DRUM MACHINES

- ROLAND Roland R8 in stock £665 FMS
- Roland R5 in stock £399 FMS
- Roland TR626 special £249 FMS
- Roland TR505 special £199 FMS
- Roland DR220a special £149 FMS

- Alesis HR115 spec call
- Alesis HR115B new £599 B
- SIH Drumtraks £599 B
- Yamaha RX15 £549 B
- Yamaha RX17 Ex demo £499 B
- Yamaha RX5 Ex demo £249 B
- Yamaha RX17 Ex demo £249 B
- Akai XSR Ex demo £199 C
- Summons SDS 1000 Brain £299 C
- New Roland TR505 £199 C
- SIH Alesis HR115 £199 C
- Ex demo Kawai R50 £175 C
- SIH Roland CR6000 £175 C
- SIH Yamaha RX15 £125 C
- New Roland DR220A £125 C

### DELAY/REVERB/EFFECTS

- Yamaha RX15, SH Special Drumtraks SH £175 C
- New Yamaha SBX 1000, SBX 500 IN STOCK £149 B
- Alesis Quadverb IN STOCK £199 C
- Alesis Microverb IN STOCK £199 C
- SIH MXR Flanger/Double £199 C
- Europa Pacific Board £199 C
- Echoport II £149 C
- Yamaha R1000 reverb sh £199 C
- Yamaha KMS61 deg reverb sh £199 C
- Special Midverb II £199 C

### COMPUTER MUSIC

- Yamaha CX5M £249 C
- Virtualos £299 C
- Prology £129 C
- Dr Prology £129 C
- Special II Pro 12 £49 C

### COMPUTERS

- Stenberg Pro12 £491 C
- Ex Demo Alan POA C
- Greenapple & Apple Computer £449 B
- Alan 1040 STF & Monitor Ex demo £449 B
- New Apple IIE - double disk + software £299 C
- Alan 1040 + Memo - C-Lab Specials £299 C
- Quibus - C-Lab Notator/UPM in stock £299 C
- Ex demo Alan S20 STFM - Pro12 + Pro Pack £299 C

### RECORDING GEAR

- Ex Demo Sony DT10 portable DAT £1099 C
- Casio CAS £899 C
- Sony DT1000E Dai £1149 C
- Sansui WY51 £1149 C
- New E13 Automatic POA C
- Rba 12/8/2 POA C
- Fostex R8 £399 C
- New Sansui 8 Track+ Focus and Seek all in stock, phone for deals £399 C
- 8' Keuper gitar + rack sh £299 C
- SIH SH 162 mixer £425 C
- SIH Hand Tascam Porta One £299 C
- Second user Porta Two £399 C
- SIH Hand Fostex 160 £199 S
- SIH Hand Tascam M308 £249 B
- SIH Hand Tascam M106 £249 B

### MONITOR SPEAKERS AND AMPS

- Akai MS200 par. £149 B
- Yamaha NS-100 par. £215 B
- Taney DC-100 par. £190 S
- Yamaha P2075 £285 S
- Yamaha PC2602 £249 C
- Yamaha PC2602 £249 C
- SIH Kustom PA Amp/Graphic + speakers £599 SPC
- Yamaha S-250X par. £225 B
- Revoxy Triflex shand £449 B
- Carstbro PX115 ex-demo par. £499 C
- OHM ES200 Par. £899 C
- Par Yamaha 250X £399 C
- Par Yamaha A4115M Power Cats 1 x Yamaha NS-531 Powered Cab £399 C

- MIXERS Studiomaster Rackmount 6/2 mixer new £249 C
- SIH Dynamic 12/2 £299 C
- Seck 242 £899 C
- Roland RA112 ex h/w £799 £599 C
- Ex Demo Roland CP1M20 II £199 C
- SIH Yamaha KM802 £199 C
- New Despatch 6/2 8 chan Yamaha ML47 £175 C
- Ex Dem Roland 8 chan SIH Bost KRM600 £199 C

### GUITAR SYNTHS

- SIH Honner Stenberg £199 C
- SIH Mann Sidenwider £70 C
- SIH RGX 112 Yamaha £125 C
- New Takamin acoustic/electric Bass £699 C
- SIH Hand Roland GM70/GK1 £699 C
- Roland GR50/GK2 £699 C

### PIANO MODULES

- Roland TX1P Piano mod £399 C
- Roland TX1P £399 C
- Korg P3 £149 C
- Yamaha EMT 10 sh £199 C

### RACK EFFECTS

- Alesis S150 Ex demo £150 B
- Akai EX 855 Ex demo £99 B
- Akai EX 75W Ex demo £49 B
- Yamaha R1000 SHand £199 B
- Yamaha Rev 7 Ex demo £499 V
- Aphex Type C Ex demo £185 B
- Am Proverb Ex demo £199 B
- Art Proverb Ex demo £499 B
- Yamaha SPX500 SHand Alesis Midverb II £199 B

### MIDI CONTROLLERS

- Cheerish MK 7VA £299 B
- Cheerish MK5 £99 B
- Cheerish MK5 £1199 B
- Akai MK75 Ex demo £99 C
- Roland AS01AB0 £99 C
- Cheerish MK5 £99 C

### AMPLIFICATION

- SIH Carstbro Coil 45B £150 C
- SIH Session S175 £299 C
- SIH Carstbro Combo £80 C
- Roland DAC10 £669 C
- SIH Kustom PA Amp/Graphic + speakers £299 C
- SIH Kustom SDC Amp £399 C
- Ex demo Yamaha P2150 £195 C
- Carstbro CP 250 Stereo Power amp £425 B
- SIH Mann Bass Head and Cab £199 S
- Carstbro MK300 Ex demo £249 B
- Traynor 6400 Mixer Amp £200 C
- Carstbro 1-150 Amp Ex demo £125 C
- Fender Twin sh £199 C
- SIH Marshall 100W Bass/head head £249 B
- CARLSBRO, SESSION, FENDER, LANEY ALL IN STOCK £125 C

### SAXOPHONES

- SIH Weimar Alto £399 C
- New Champion Alto £499 C
- New Berkley Alto £499 C
- Seimer Bundy alto sh £399 C

### MICROPHONES

- Calrec Soundfield £1999
- Nady Wireless Mikes £1999

### MASTER KEYBOARDS

- Akai MK75 Ex demo £1299 FMS
- Roland A50 new £904 FMS
- Roland A80 new £904 FMS
- Yamaha KX88 special £904 FMS

C = Chelmsford, P = Portsmouth, S = Southampton, B = Brighton, FMS = Future Music South Shops

## FUTURE MUSIC PACKAGES

<b>ATARI 1040+ NOTATOR/UNITOR</b> £1299	<b>KORG SYMPHONY MIDI MODULE+ KORG CONCERTO 8-TRACK SEQUENCER</b> NORMAL RRP £950 SPECIAL £499	<b>KX88 + TQ5 TONE MODULE</b> £1299	<b>ROLAND U20 KEYBOARD + ALESIS MMT8</b> £1199
<b>ATARI 1040+ CLAB NOTATOR</b> £899	<b>YAMAHA WX7 + YAMAHA TX81Z</b> £549	<b>YAMAHA PF 2000+ P3 PIANO MODULE</b> £1249	<b>KAWAI K1 KEYBOARD + ALESIS MMT8</b> £625
<b>ATARI 1040+ CLAB CREATOR</b> £799	<b>R8+ SECK 12/8/2 + MIDIVERB2</b> £904	<b>KORG C2500 PIANO+ROLAND MT100</b> £1499	<b>EMU PROTEUS=KX 88</b> £1899
<b>ATARI 1040+ CUBASE</b> £899	<b>FOSTEX E16+ AUTOLOCATOR</b> £904	<b>PEARL EXPORT COMPLETE WITH CYMBALS</b> £525	<b>YAMAHA A100 AMP+ YAMAHA NS 10M's</b> £399
<b>ATARI 1040+ CREATOR/UNITOR</b> £1099	<b>FOSTEX X26+ MICROVERB</b> £904	<b>KAWAI K1 KEYBOARDS + ATARI 1040+ PRO 12</b> £999	<b>TOA MR8T + TASCAM M308</b> £1649

**FREE CARPHONE OFFER!!**

YES! FOR A LIMITED TIME ONLY PARTICIPATING FUTURE MUSIC STORES ARE OFFERING A HANDS FREE CARPHONE WITH EVERY ADVERTISED DEAL OF £500 OR OVER! NO CATCH! LOOK

\* HANDS FREE CARPHONE\*  
\* REPUTABLE MAKE\*  
\* INSTALLATION FREE\*  
\* 30 SECOND BILLING\*

Call for further information and availability!!

# MAIL ORDER

WE ACCEPT CHEQUES, POSTAL ORDERS, BANKERS DRAFT, BUILDING SOCIETY CHEQUES, ACCESS & VISA AND CASH IN REGISTERED ENVELOPES.

EQUIPMENT REQUIRED \_\_\_\_\_

NAME \_\_\_\_\_ £ \_\_\_\_\_

ADDRESS \_\_\_\_\_ £ \_\_\_\_\_

TOTAL \_\_\_\_\_

CREDIT CARD NO. \_\_\_\_\_

SIGNATURE \_\_\_\_\_

- 10 BADDOW ROAD CHELMSFORD, ESSEX ☎ (0245) 352490 (0245) 353878
- 85 ST MARYS STREET SOUTHAMPTON HAMPSHIRE ☎ (0703) 226798 (0703) 227683
- 44/46 PRESTON ROAD BRIGHTON, SUSSEX ☎ (0273) 675983 (0273) 675984
- 125 ALBERT ROAD PORTSMOUTH HAMPSHIRE ☎ (0705) 820595

# COMMERCIAL GAIN



PHOTOGRAPHY: ADAM JONES

***Take two classically-trained musicians, a businessman, a PR man and a will to make music in a brutally commercial world. WBTM is four mens' guide to survival in the 1990s' music biz. Interview by Claire O'Brien.***

SERVING THE MUSICAL NEEDS OF THE image-mongers of the '90s has become a full-time occupation for the dozens of hi-tech cottage industries which have sprung up in the wake of Steinberg and Sampler. With a full orchestra no longer a necessity for even the most ambitious orchestrations, the work of the small production suite has expanded to service everyone from in-house training film makers, record companies and ad men to directors of full scale feature films.

WBTM Music is one such cottage industry, now fast gaining a name for versatility, speed and quality, in this competitive sector of the business. Situated in a smart

basement suite in a quiet backwater near London's Olympia, WBTM is an equal partnership between two musicians in their mid-20s, Magnus Fiennes and Steve Milne-Sharples, and their mentor and business angel John Fitzsimmons. A PR man and secretary complete a self-contained working unit where purpose-built studio and office happily co-exist.

The easy atmosphere is evident as soon as you walk in the door; while Fitzsimmons makes deals on the phone and PR Jonathon organises coffee and doughnuts, the composing team slouch across armchairs, cracking wry jokes at each other's expense.

Once the questions start, keyboard player Fiennes,

dark and quiet, thoughtfully cradles his coffee mug in both hands, content for the most part to remain in the background while fashionably long-haired blond guitarist Milne-Sharples explains at length how WBTM came about.

"The two of us come from almost identical backgrounds, it's almost uncanny. We're both classically trained, but we chose to go with private tutors - we both made a conscious decision not to go to music college, to stay independent. . . I studied orchestration for a while, then played with various bands, as did Magnus. I was in a band called The Academy who were with RCA.

"We didn't really have much success. We did tours, TV, radio, the whole bit. The Academy was very much a fashion band. It was six years ago now, but the way I look at it, it was the best education I could have had in the business."

But the guitarist's career was to improve dramatically after meeting Fiennes:

"We found we both wanted to do the same things", he continues, "we wanted to be involved in the songwriting and production side as opposed to the whole band image thing. So we started working towards setting up a situation like this - a production company that would also be involved with film and TV work. We work well together, bounce ideas off each other, fill up each other's gaps. Magnus is more on the keyboards side, more of a player, while I'm good with scores and orchestration. Sometimes we work separately - it makes sense sometimes to split the studio time, with one of us on one project and the other doing something else - but we're a team for about 80% of the time."

So you've worked hard, you've found people you like working with, you're ambitious, you're young. . .

"It's just a vicious rumour!"

. . . you've got good contacts, you're talented, classically-trained. . . just like hundreds of others all over the country still playing with Portastudios in their bedrooms. Why are you the ones with your own successful production company? What makes you different?

"Our trousers?", comes the reply. "I don't know. An understanding of how the industry works? We feel we can predict what people's requirements are going to be - we've been through both sides of the business and gained a lot of experience. We also started very young, both of us were 16, so we've already been through a lot of hard times."

Fiennes breaks his thoughtful silence. "Also I think it's our versatility. I don't want to get into comparisons with other people working in the same area, but we can do an acid house track in the morning and then on the same day, turn out an orchestral piece."

Milne-Sharples agrees. "It just gives us the edge. We've had situations where someone's rung up at 12 and wanted something by the end of the day. We once did a 60-second commercial for a fast food restaurant in just 45 minutes - an hour including the mixing."

For a company less than a year old, the WBTM CV is already beginning to look impressive. Complete projects include full scores for American films *The Dress* and *Recoil*, music for a corporate video for the Central

Electricity Generating Board, a single for 'wild child' Emma Ridley and numerous TV commercials and jingles including a witty Chicago house track to help sell high-street pizzas. Songs can be written to order for all kinds of clients, and the publishing arm of the business, Drumdeal Ltd, administers the rights to all Fiennes' and Milne-Sharples' compositions.

No music production company would survive without clients - how do the WBTM team attract their custom?

Milne-Sharples: "Most of it's by word of mouth - people come back after we've done something for them, or we're recommended by someone. We got a major new job yesterday that came about from a little coffee advert we did."

Then there's lot to be said for being in the right place at the right time.

"Yes, for John as well as for Magnus and I. We handle the music side, but when it comes to business, John speaks for us. Together we've made ourselves into a commodity - we can produce stuff very quickly, cleanly and efficiently, but without skimping. That's our motto, really."

The main drawback with making music to order rather than the music you'd choose to make is the lack of opportunity for self expression. Is the WBTM partnership a creatively limiting arrangement?

Milne-Sharples again: "One of the reasons Magnus and I work so well together is that we're not self-indulgently creative, we don't walk around banging ourselves on the head going 'Be quiet, I'm dying'. It's pointless. While you're working, you have to keep a clear head. When you're writing, you have to be two people - one composing, one listening. When you're doing something like mixing, it's like painting a 3D portrait. You have the depth coming from the effects, and you have left and right, and you have the height - you know where it sits in the mix - and you have to give everything a separate box, which takes objectivity."

Fiennes thinks for a moment. "It's actually much easier working to a brief, because you've got guidelines. They usually come in the form of some kind of outline, maybe a storyboard, or sometimes a script. Then the director will discuss his requirements. We're usually involved in the writing of the music, not just the production, so it's an ongoing thing. The hard work starts when you get down to the edit. . ."

It sound as if the whole arrangement is both financially and artistically rewarding, but it's very much a case of getting out what you put in, as Fiennes confirms.

"A lot of our work is 'to order'. It has to be, because this isn't a hobby. Everything we do we treat as though it's the biggest thing we've done, and we do it for its own sake. The main thing we get out of it is the fact that someone is paying us for what we produce and liking what we do. It does give you that burst of adrenalin, you feel three feet off the ground sometimes."

Milne-Sharples nods violently. "Regardless of whether you like it or not, actually, that's secondary. The hard thing to do is to produce music that lots of people can listen to for a long time - and that's more of ▶

***"The hard thing to do is to produce music that lots of people can listen to for a long time - that's more of an achievement than doing something experimental."***

**"There's a compositional block with using a computer because it thinks in sequences, so you end up with a lot of repetition and cyclic stuff."**

► an achievement than doing something experimental. A lot of the motivation for writing that kind of stuff is purely selfish. There's a lot of self-indulgence about."

Fiennes continues: "I mean, you have to be happy with your own mental processes while you're writing the music, be in touch with your own psychological processes, but you can take it all too far and end up ostracising the listener. The best music is the music almost anyone can enjoy - That's why Vivaldi's *Four Seasons* sells so well, because it's clean and simple. . ."

"...and has more suspended fourths than anything I've ever heard! . . .", Milne-Sharples laughs. "Everyone has restraints, anyway, even Mozart and Beethoven had restraints, they didn't just 'express themselves'. They were working to order a lot of the time, to a formula. Like Stock, Aitken and Waterman."

Fiennes sips his coffee. "I think you know when something's intrinsically right, when you've caught whatever it is you have to catch in the music. Beyond that, it's self-indulgence. We're supplying a product, basically, so why should we be any different from the guy who manufactures toothpaste tubes?"

Are you often asked for something in the style of someone - say, Satie?

"All the time", replies Fiennes. "We did the score for a Foreign Office film selling Britain to foreign investors, and the brief was for something reminiscent of Elgar. It can be quite fun, because you don't go so far as actually ripping off a particular piece of music. There's no point in doing that. There is a certain style, but then it's all derivative. Every style is made up of parts of other people's styles."

**WHILE HIGH TECHNOLOGY CAN PROVIDE** the answers to a lot of today's music production requirements, there's still no substitute for real musicians - session musicians. . .

"We have used session players", comments Fiennes, "obviously, if the budget would stretch to an orchestra, we'd use one. Often we do a full score before we record something anyway. There's a certain block with using a computer because it naturally thinks in sequences, so you can end up with a lot of repetition - cyclic stuff - and scoring prevents that happening. It really just comes down to practicality - working to time and budget. If a situation really necessitates getting in session musicians, we'll do it; we have arrangements with larger studios, so that if we have to we can do the pre-production here and the rest somewhere else. But the stuff we have here is adequate for most of the things we do. We're working towards a tapeless studio - we tend to only record things like played guitars and vocals. We've got the Fostex 8-track sitting there, but there have been so few times we've used tape for anything instrumental."

What kinds of sounds are you using for most of your work?

"We're very fussy about sounds. Part of the secret is not trying to do things that will sound obviously 'sampled'. I mean you can use muted orchestral strings or French horns and 99% of people listening won't be able to tell it from the real thing, but you have to be more careful with some of the more limited sounds,

like bow strokes. It's all a matter of being pragmatic - you don't try and overstretch things. Even in the best string samples you tend to get that horrendous loop - though you can usually smooth it out by not using the direct signal, just the effects return. You can get a really good muted string sound that way. Flutes are reasonably good, especially on the Yamaha TX16W sampler, but clarinet and oboe usually present problems with the intonation, you can tell it hasn't been played."

On the subject of samples, do Fiennes and Milne-Sharples do their own sampling or rely on other peoples'?

"We do a fair amount of our own" comes the guitarist's reply, "good breaks, things like that. And we do a lot of orchestral samples and mess around with them. You can do some really interesting things - you have to use your imagination and combine things. *The Firebird*, for instance. . ."

Isn't that what everybody uses?

"Ah, but they don't use it the way we do. We combine it with stabs from the *Rite of Spring*. Sometimes there might be four layers of samples - and we'll slightly delay the follow-on, you can do that inside the Akai S1000, which is bloody handy - it's quite a nice toy, that. There's the Mozart Adagio and Fugue in C minor - an incredible open C cello which really builds - it's so horny, you know? Combine that with something really sweet and toppy, and chuck in something middly - maybe a D50 sound - and it's a punctuation, rather than sounding like a tropical hackneyed orchestra stab."

Fiennes agrees. "At the end of my recording of the *Rite of Spring*, there's this massive bass drum, which I've never heard anyone use yet. It's got more of the actual bass drum percussion - it sounds brilliant, it's got such a massive full sound."

"A lot of the time when we're doing orchestral stuff we don't use stabs at all. We build it up as it would be, that gives you a lot more freedom. If you're doing something in the style of Elgar, you can't use a Stravinsky stab - you have to build up something that sounds more like what Elgar would really have done. It sounds far more effective, more live, a hell of a lot less contrived, because it's part of the flow."

It's playing up to people's expectations, really, then?

"Yes, you have to work within the idioms, whether romantic, classical, whatever, keep within the various schools of orchestration. But that's the whole thing about music, it's tension and release. . . expectation and going against the expectation."

**TIME TO GET DOWN TO THE DIRTY SIDE** of making music. Exactly what keyboards and sound sources do the partnership use in the course of their activities? Fiennes runs through some of the gear on the A-frame and rack:

"The Roland U110 - really handy. The D50. And I still use the Juno - I've got a real thing about Roland gear, I've always used it. Even when it sounds crappy it does it in a useful kind of way, you know? And the Oberheim Matrix 1000 is brilliant - we tend to use that almost exclusively for bass sounds on dance records. ►



It's a pity that more retailers don't copy our ideas (instead of just our ads), free courses with packages, faulty goods replaced and money refunded are all part of a service to which customers are entitled. It is a shame that more retailers do not realise this. By the way, have you noticed how some shops are incapable of giving you a price on the telephone? (Frustrating, huh?) Next time a shop respond with "How much have you been quoted already?" say "Why - are you too thick to think of a price yourself?" They'll soon learn!

### NEW STOCK

Whilst we do not pretend to carry EVERY item from EVERY manufacturer, (as some shops seem to - ever tried putting it to the test?), all new equipment is tested in one of our three working studios, and if we like it, our buying power can usually ensure that we have it in stock at all times (even when your local dealer might have run dry!). In addition, if we recommend an item, we will REFUND YOUR MONEY if you do not agree with us. In fact we are the largest pro audio dealers in Britain for Alesis, Korg, Drawmer, Casio, Fostex, Seck, Yamaha, TOA, Tascam, Studiomaster, Allen & Heath, C-Labs and a good many more! (Last year we sold nearly 600 new 8 & 16 track packages and around 200 s/h machines!). It's always worth ringing us for a quote on new equipment and if you're still unconvinced, ask yourself why we became the biggest in such a short time (or better still ask the rest!)

If you are bewildered by the vast amount of multitrack recording products currently on offer, Thatched Cottage fax packs should make the job of choosing the right equipment that much easier. There are 5 in the series; P.A. - Portastudios - 8 Track - Financial advice and MIDI. To obtain any of our fax packs just phone or write.

### Concert Grand Piano - £173 + VAT

The Korg P3 sampled piano module is widely acclaimed as one of the most realistic, full spec grand piano modules on the market today. With full MIDI spec and switchable octaves. In addition to the Steinway and Bechstein grand pianos, extra sound cards are available (e.g. orchestra, with super brass, strings, flutes, timps etc) making it one of the most versatile sampled (as opposed to P.C.M) sound sources on the market today. It was good value at nearly £500 when it was introduced; because of a once only purchase we are able to offer it at the unbelievable price of only £199 inc VAT. Whatever your MIDI keyboard set-up we reckon that another grand piano will never go amiss. Give us a call!



When it comes to new equipment you may have noticed that we don't say "phone for the best deal, POA, or "lowest price guarantee" (Ha! Ha! if the prices are so great why don't they just print them and amaze us all). Our bulk buying policy can usually guarantee that a telephone call to us will not be wasted and in any case we can throw in those "hidden" extras - cables with multitracks, patchbays with desks. (By the way, next time a dealer "guarantees" the lowest price and then can't deliver, try reporting them to the local Office of Fair Trading - it will teach them not to waste your time!)

To be honest though, if you spend all afternoon on the telephone the chances are you might find someone somewhere who will undercut us by a pound or two. The difference at THATCHED COTTAGE is if your E16 breaks down on a Sunday morning or your Drum Machine blows up on a Bank Holiday Monday you CAN ring us, we'll be here and we WILL do something about it - 365 days a year. Have you ever needed help and advice outside shop hours? If you are serious about your music you will know that it is quality of service that makes the difference and at THATCHED COTTAGE it's only a phone call away!

### 8-TRACK DEALS

Fostex R8 plus RSD mixdown 16:4:8	£2199 + VAT
Tascam TSR8 plus RSD mixdown 16:4:8	£2599 + VAT
Fostex R8 plus RSD pro-line 16:4:8	£1975 + VAT
Tascam 238 8-track + RSD pro-line 16:4:8	£1675 + VAT
Tascam 238 8-track plus Nomad Reddix 8:2 mixer	£960 + VAT

### THATCHED COTTAGE RECORDING SCHOOL

In response to popular demand we now run a one-week recording course, designed specifically for those of you who feel they can make a go of running a professional 8, 16 or 24 Track Studio. The emphasis will be largely on the practical side and topics covered are finance, premises, running a recording session and hints and tips on every aspect of recording. Class sizes are limited to eight at a time and guest speakers will cover relevant areas. The price is just £200 for the week, including accommodation. Interested? Telephone or write and we'll tell you more. We also run "arranging courses", useful for samplers, call for details.

### DEAL OF THE DECADE!

Midverb II..... £173 + VAT  
For the last two years the best, highest quality, most versatile budget reverb has been the award-winning Alesis Midverb II, 99 echo + reverb programmes, full band width plus comprehensive MIDI spec. All this for only £173 + VAT? Wow!

### THATCHED COTTAGE DIGITAL (T.C.D)

In order to cater for the increased demand for advanced multitrack systems we have just opened a new division - Thatched Cottage Digital. Housed in a brand new purpose designed building, it handles 24-track analogue (including the new Tascam MSR24) and award-winning Allen & Heath Saber, all digital and leading edge installations (such as the new Yamaha digital Multitrack).

If you are considering any kind of professional set-up and feel that the legendary T.C.A. service value is of interest, contact Rob or Andy on (0223) 208110 or ring the normal T.C.A. number for full details of what we can offer (including our second-hand and ex-demo list) What have you got to lose?

### THE THATCHED COTTAGE CHALLENGE

This suggestion for a wet afternoon takes about 10 minutes, but results are usually worth the effort! First of all you flick through the pages of this magazine and take phone numbers of every dealer who "guarantees the lowest price" or operates any kind of unique "Best Price" policy. (There are usually around 10!)

Then, pick any item (It helps if you make it difficult - say a Korg P3 or a Midverb II, although any popular item will do) pick up the phone and start dialing!

Points are scored as follows:

1. "That's no longer available Sir" .....1 point
2. "No - what you really want is a" .....2 points
3. "Whoever quoted you that, is lying Sir" .....5 points
4. "We can't quote on the phone, but if you come in with cash" .....15 points
5. "Give us a credit card number and we will quote you" .....25 points
6. "Who quoted you that price?" (Just name one of the others) .....30 points

Anyone who can score over seventy-five points and furnish us with the names of the shops and their answers contained in a vaguely humorous letter will get a free microphone.

Microphones will also be awarded to anyone who encounters a good answer, fob off or excuse we haven't thought of! Good Luck!

### SOME SECONDHAND AND EX-DEMO BARGAINS

Seck 12-8-2 Mixer, Mint	£750
Seck 18-8-2 Mixer (black)	£899
Tascam 22 2-track mastering	£399
Fostex R8 8-track (demo)	£999
XR1 X300 SMPTE Generator	£199
Aphex Type C Exciter	£2999
Tascam MSR16 16 Track	£575
Roland D10	£699
Yamaha TX16W 16 voice sampler inc library	£899
Yamaha TX616	£350
Yamaha DX11	£799
Korg MIR	£75
Akai EX90 R reverb	£75
Nomad P2M MIDI trigger	£2850
Fostex E16 demonstrator mint with full guarantee	£75
Nomad SMC1 MIDI/SMPTE converter	£699
Toa MR8T 8-track (demo)	£199
Drawmer LX20 compressor gate	£5999
Allen & Heath Saber large frame 24:16:24, as new	£75
Yamaha R1000 reverb	£399
Yamaha MT3X	£99
Large colour monitor for ATARI (reconditioned)	£250
Alesis HR16	£2250
Soundcraft 1" 16-track with autolocate just serviced by Soundcraft	£175
Alesis MMT8	£399
Casio VZ10M	£299
Atari S20 plus Steinberg Pro 12	£550
Casio DA2 - R-DAT	£899
Fostex M80 Mint	£999
Tascam 38	£799
Akai S900	£299
Alesis Quadverb	£1500
Allen & Heath C.M.C. 32 MIDI desk (32 inputs)	£650
Revox B77	£99
Seck meter bridge for 18:8:2	£50
Sound shaper 2x10 graphic equalizer	£299
Digitac DSP128 multiprocessor (5 things at once)	£999
Ashley SG33 stereo noise gates	£199

We usually have large stocks of used + demonstration equipment, call us for our comprehensive list.

### SPECIAL OFFERS (ALL NEW)

NOMAD AXEMAN - the Ultimate Guitar Processor	CRAZY PRICE £199 + VAT
NOMAD BASSMAN - the Ultimate Bass Processor	CRAZY PRICE £199 + VAT
SECK 18-2 desk (exclusive to us)	£649 + VAT
TANNOY DC100 monitors (per pair)	£150 + VAT
MEMORY EXPANSION boards for AKAI S1000 (2 meg)	£260 + VAT
ALL NEW ART Multiverb II (Includes harmonising)	£345 + VAT
ART SGE Ultimate guitar processor	£429 + VAT
AKAI S950 1/2 meg memory expansion boards	£125 + VAT
CASIO FZ1 sampling keyboard	£775 + VAT
BEL 8-TRACK DBX noise reduction	£299 + VAT

### THATCHED COTTAGE SERVICE

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

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

### SANSUI 6 TRACK PLUS NOMAD REDDIMIX £640 + VAT

If you buy the brand new Sansui MR6 rack mounted 6-track recorder for £675 inc. vat, we will give you a Nomad 8:2 reddmix for only £50. If you are considering an upmarket 6 track, why not buy an upmarket 6 track for the same money. Great Value!



# Thatched Cottage Audio



Telephone (0223) 207979 Fax (0223) 207952  
Thatched Cottage Audio, North Road, Wendy, Near Royston, Herts.

► Oh, and the Yamaha TX81Z. Most of the drums come off the samplers, though we have a Yamaha RX21L for percussion and an old Roland TR707."

The house computer is an Atari 1040, industry standard now for those who couldn't afford a Macintosh in the early days of music software. Running the impressive C-Lab Notator, it's complemented by the intriguing Trackball by Med1, a static device rather like a games machine accessory that lets you manipulate the cursor far more efficiently than by skidding the mouse off the table.

"The Trackball's fantastic, especially if you hate mice", explains Fiennes. "We chose the Atari because

Milne-Sharples, "even though it's possible to mute channels direct from the C-Lab. But I could have done with a strip along the bottom to scribble with a chinagraph!"

The outboard rack includes studio stalwarts like the Drawmer Dual Expander/Compressor and Dual Gate, the Alesis Midiverb and Yamaha SPX900. Mastering is direct to Casio DA1 DAT or alternatively an old Teac quarter-inch which Milne-Sharples finds "useful", though he finds DAT far superior to both analogue and PCM mastering.

"There are far fewer problems with dropouts - even with the PCM system that used to happen. And the DAT takes up less space."

Monitoring is via a pair of JBL TLX speakers, with Yamaha NS10Ms for nearfield work. There's a stereo video (the JVC HAV750 with computer sync) for linking music to visuals.

"We need that because some of the time we don't get code put down, so we have to put code on one side of the audio channel and stay on the right hand side for vocals."

Is synchronisation to visuals ever a problem? Some people seem to work by matching the music to the action practically frame by frame.

"Not really. We don't usually have a lot of problems with hit points, things like that. You can get into the realm of 'Mickey Mousing' with cue pointing, where every little move onscreen will have its bang or squelch, like a cartoon. Totally over-punctuated. I mean the big guys doing feature films - the Maurice Jarres, John Williamses, Carl Davises, have to do much more dramatic things. Our stuff tends to be more thematic, so we have a bit more freedom. But it varies from film to film what's needed."

Though justifiably proud of their work so far, WBTM are ambitious to move further into the realm of full scores for films and TV. A studio upgrade next year will give them more facilities, and better working conditions. The music itself is professional, functional and well-crafted material, with the upcoming single for Ten Records,

'Really Love You' with vocals by Frankie Madrid (released Jan '90) standing out in terms of commercial potential.

The slogan on WBTM's headed paper is "never knowingly undercomposed". With the kind of competitive edge and shrewd business sense that any cottage industry needs to make it in amongst the big boys, Fiennes, Milne-Sharples and their stable seem assured of a bright career. ■

***"I've got a real thing about Roland gear, I've always used it. Even when it sounds crappy it does it in a useful kind of way, you know?"***



at the time it seemed to have more software available, though in certain aspects it doesn't come up to the Mac. We're very happy with the C-Lab, especially with its scorewriting facilities, and we've got another Atari out the front which we use purely for the office word processing, and as back-up in case this one goes down."

The desk is a Studiomaster Pro-Line 24-channel model, with MIDI muting. "That's really handy", says



# EMAX II



The latest in the long and successful line of E-mu samplers is the Emax II - taking over from the original Emax, it features 16-bit sampling, 16 stereo voices, and a host of other significant improvements.

Review by  
Dave Richardson.

**I**T'S HARD TO believe that three years have passed since the American company E-mu Systems introduced the Emax keyboard sampler. Many samplers have come and gone since, but the Emax has survived. Its large, readily available library is one good reason to consider owning one, and owners can thank E-mu for having kept the updates coming - first in the form of internal hard disk retrofits, and eventually with the arrival of Transform Multiplication in the Emax SE software upgrade.

But E-mu have now decided that the Emax' time is up, and in its place are offering us the Emax II. Same shape, same front panel, same rack-or-keyboard configurations. However, the Emax II is not simply an updated Emax. In fact, comparisons with the Emulator III are more in order. Here's why.

## FEATURES

THE EMAX II is a 16-bit linear sampler. It employs an 18-bit DAC (digital-to-analogue converter) for playback, and includes a user-selectable "headroom" control which helps optimise signal-to-noise performance without the risk of digital clipping when too many notes are played simultaneously.

The Emax II samples at rates of 20kHz, 22kHz, 28kHz, 31kHz and 39kHz, and also features sample rate conversion utilities to achieve other sample rates

(such as 44.1kHz for the AES/EBU-minded). Thanks to a new fixed sample rate playback scheme, the Emax II can transpose samples over a ten-octave range (up or down five octaves).

The Emax II doesn't short-change you in the voice department either; 16 stereo voices see to that. While 16 stereo voices might seem the equivalent of 32 mono voices, the Emax II's polyphony is limited to 16 voices even with monophonic samples. It seems that the Emax II's processor can't generate 32 envelopes, so it applies identical envelopes to the left and right channels of each stereo sample - a compromise that most of us can live with. However, you can still taper each channel's sample individually by editing the samples themselves.

The original Emax's analogue filters have been replaced by digital filters in the Emax II. The new filters sweep and resonate in exactly the same manner as their analogue counterparts. Four pairs of polyphonic quarter-inch jack audio outputs (Main, Sub A, Sub B, and Sub C) replace the Emax's eight monophonic outs. This is a particularly welcome improvement, especially when you're dealing with 16 voices - polyphonic outputs are pretty well essential. A monophonic mix and stereo headphone output join the polyphonic submixes on the back panel. To top it all off, the Emax II uses the same output system as the Proteus - that is, each Sub output employs a

stereo jack that can act as an effects send and return by connecting the send to the tip and the return signal to the ring of the jack.

The Emax II library consists of sample banks from the Emulator III sample library. The MIDI Sample Dump standard is supported, allowing stereo samples to be copied into the Emax II over MIDI.

A Stereo Voice control selects stereo or monophonic operation. When Stereo Voice is off, the primary and secondary voices use their respective voice parameters. When the Stereo Voice facility is switched on, the Emax II plays stereo sample presets by assigning the left and right sample channels to primary and secondary samples (E-mu's standard layering method), and then applies the primary voice parameters to the primary and secondary samples. The catch in this scheme is that the primary and secondary samples must have the same original key and sample rate, and both must be assigned to the same keyboard range.

Supermode (E-mu's way of allowing polyphonic, multitimbral playback from the internal sequencer or over MIDI) and the multitrack sequencer have been preserved from the original Emax. As before, the sequencer's capacity is determined by the amount of remaining sample memory.

Two MIDI ports (In and switchable Thru/Out) are the Emax II's link to external controllers and sound modules. For interfacing with analogue controls, two footswitch inputs, a footpedal input (which accepts variable resistance or voltage), and a sequence clock input and output cover the common bases.

## THE LOOK

THE EMAX II looks exactly like an Emax, except for an attractive black chassis with hot pink lettering and subtle differences in the front panel silkscreen. All the controls are exactly where they were before, with only slight variations in control names and function lists (Analogue Processing is now called Dynamic Processing, for example). The liquid crystal display viewing angle is adjustable as well.

Speaking of the display, it would have been nice if E-mu had used a larger LCD, like those currently found on many other samplers.

In operation the Emax II is almost exactly the same as its predecessor, with one or two additions and enhancements - so if you already know your way around the Emax operating system, you'll have a very shallow learning curve ahead of you. While I don't want to leave anyone in the dark, time and space do not permit a full review of the Emax II's user interface - if you need more information, you'll find a full review of the Emax in MT, Jan '87.

The basic Emax II comes equipped with 1Meg of sample memory. The Emax II Turbo, on the other hand, comes standard with 4Meg of memory and an internal 40 megabyte hard disk. The Emax II can accommodate up to 8Meg of sample memory, but memory expansions only come in chunks of 2Meg. To expand the basic Emax II, you have to add a 1-to-3 megabyte expansion board before you can add any more 2Meg expansions. On the other hand, the Emax II Turbo requires no expansion board.

## STORAGE & BACKUP

EMAX II INTERNAL hard disks use SCSI ID 1, leaving SCSI ID 0 and IDs 2 through to 7 available for other SCSI storage devices such as E-mu's RM45 removable media hard disk unit. Eventually, third-party software packages (sample editors, and the like) will communicate with the Emax II over SCSI. In the meantime, existing systems (such as Digidesign's Sound Designer on Atari ST and Mac) and Blank Software's Alchemy (on the Mac), or Optical Media's CD-ROM drives can communicate with the Emax II by way of the RS422 serial port.

Of course, you can store your work on 3.5" floppy disks, but given a four or eight megabyte sample memory, floppies are best reserved for backup purposes only. The Emax II includes a utility for backing up hard disks to floppy or other hard disks. You can backup specific banks or only those banks which have been created or modified since the last backup. You can even establish a custom backup method to keep things simple.

## SAMPLING & EDITING

THE EMAX II accepts audio input from a quarter-inch monophonic jack on the back panel. Although the sampler is designed for stereo sample playback, it does not sample in stereo. You can sample stereo sources one channel at a time (if, for instance, the source material is on tape), but it's not quite the same as the real thing. (Rumour has it that E-mu are waiting for a specific type of integrated circuit to come to market before adding stereo sampling capabilities to the Emax II.)

Sample editing features on the Emax II are impressive. Not only can you splice, mix, reverse, truncate and otherwise mutate samples, you can perform transform multiplication (TM) on any two samples. For the uninitiated, TM is the synthesis technique that E-mu Systems introduced on the Emax SE. TM synthesis imposes the harmonic characteristics of one sample upon a second sample to create a new sample. At present, TM is pretty much unexplored territory.

## PERFORMANCE

TO THESE EARS the Emax II sounds impressive. As is always the case with samplers, what you get out of it depends on what you put in, but E-mu have ported the Emulator III's sound library over to the Emax II, so a very large collection of high-quality samples is already available.

Original Emax banks also sound better when loaded into the Emax II. Banks of 1Meg or less can be saved in a compressed form which the original Emax recognizes. However, you'll probably want to get in there and tweak a few parameters. For instance, the new filters respond differently to the old analogue filters, so you may have to adjust the cutoff frequency. Due to the Emax II's ten-octave sample transposition capabilities, you can make your old ▶

**“Thanks to a new fixed sample rate playback scheme, the Emax II can transpose samples over a ten-octave range - up or down five octaves.”**

► presets do things you couldn't do before (such as covering the entire five-octave range of the keyboard).

Transform multiplication works much more satisfactorily on the Emax II than it did on the old Emax - it took ten minutes to turn a guitar pluck and human voice into a hybrid sample, but the result was well worth the wait. With all the Resampled pluck plus sustained breathy voices synthesis cluttering the airwaves these days, it's encouraging to see E-mu continue to support this relatively new type of synthesis.

## VERDICT

OVERALL, THE EMAX II is a very impressive instrument. The sound quality is excellent, and sampling and programming are very easy. The four stereo output pairs make the Emax II convenient for a wide variety of applications - from on-stage use to use in an audio-visual studio. And, considering the 16 stereo voices and dynamic low-pass filters, these features are not likely to go wasted.

So is the Emax II at the top of the low end, the bottom of the high-end, or somewhere else? If your main interest is sound quality rather than price, there's little point in comparing it to the 12-bit sampler market.

Comparing a fully-expanded Emax II Turbo with a similarly equipped EIII, the Emax II system comes in at £6828 against the EIII's £11,898 retail. If the ability to sample in stereo is low on your list of priorities and if you already have an external sequencer that suits your work, the Emax II is certain

to be the more attractive choice.

On the other hand, once you start sampling in stereo, it's hard to go back to sampling in mono. If you already have a stereo sampling system such as the EIII, the Emax II makes an ideal expander. Thanks to the Emax II's intelligent handling of MIDI sample dumps, porting banks from the EIII to the Emax II is simple - a factor which you'll appreciate after transferring several large 16-bit samples over MIDI. If you rely heavily on third-party sample libraries, then owning an Emax II places an incredible assortment of sounds at your disposal. If you already have an Emax sample library, then stepping up to an Emax II is a logical move.

Based on pricing and features of other 16-bit samplers on the market, the basic Emax II with 1Meg of memory represents good value, but the Emax II really comes alive when you reach Turbo status. With 4Meg of sample memory, multiple polyphonic outputs, 16 stereo voices, and E-mu's huge sample library, the Emax II makes stepping up to 16-bit sampling a sensible move. The bottom line is that E-mu really do deserve extra points for cramming so many good features into a single instrument. ■

**Prices** Emax II: £2850; Emax II Turbo: £5290; 1-to-3Meg Memory Expansion for Emax II: £899; 2Meg Memory Expansion for Turbo, or 3Meg Emax II: £769. All prices include VAT.

**More From E-mu Systems UK, PO Box 1, Prestonpans, East Lothian, EH32 0TT. Tel: (0875) 813330.**



**Live music: Workshops/Performances by top musicians**

**Manufacturers: exhibiting the latest gear**

**Demonstrations: hands-on!**

**Just a few of the things you'll miss if you don't come to our 1990 exhibitions! Note the dates now!**

**February 17 & 18**

*The Music Show - North East*

Eldon Square Recreation Centre

Newcastle Upon Tyne City Centre

**Late Spring (date to be announced)**

*Wales & West Music Show*

Cardiff

**October 13 & 14**

*The Home & Studio Recording Show*

Kensington Town Hall, London

**May 19 & 20**

*The Northern Guitarist Show*

UMIST, Manchester City Centre

**September 1 & 2**

*The Scottish Music Show*

SECC, Glasgow

**November 3 & 4**

*The London Guitarist Show*

Novotel, Hammersmith

**For further details please contact: Music Maker Exhibitions, Alexander House, Forehill, Ely, Cambs CB7 4AF. Tel: 0353 665577**

# Ladbroke Computing



## International

"The Country's Leading 16 Bit Specialist"



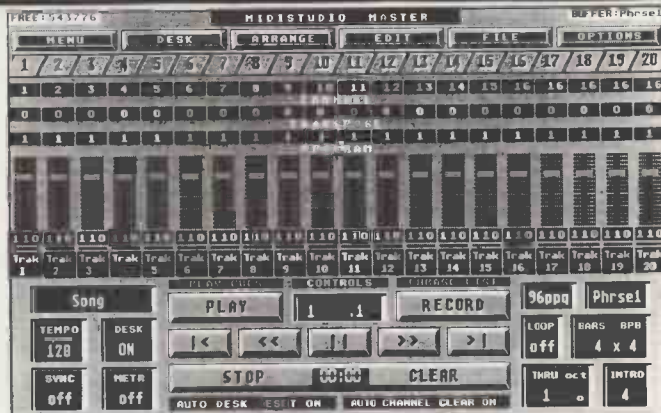
33 Ormskirk Road, Preston, PR1 2QP  
Open Mon - Sat. 9:30 am to 5:00 pm  
Dealer enquiries welcome.

## You Can't Afford to Shop Elsewhere All Prices Inc. VAT

This company has given years of full support to computer users from their premises at 33 Ormskirk Road Preston. Now from their Mail Order premises they can offer this "second to none" service to users countrywide. All Software/Hardware is ex-stock and fully tested prior to purchase to ensure that returned goods are now a thing of the past. All hardware is supported by our on-site engineers so that quick turn around on all repairs is guaranteed. There are no hidden extras WYSIWYG. ALL PRICES INCLUDE VAT AND DELIVERY on orders over £100 (Mainland UK next day delivery +£5). All prices are correct at time of going to press and are subject to change without prior notice. Phone for latest prices, information advice (we are always happy to help.)

## Midistudio Master, over 30 new features £129.99

- 100 tracks storage, 20 outputs.
- Up to 240 ppqn input scan speed with 96 ppqn output.
- Midi soft keys.
- Realtime Mix-down via mouse.
- Realtime screen update to show progression of play.
- Runs Gem accessories, Installable modules, run other programs from within.
- Tracks
  - Solo, Mute/Normal playback modes.
  - Faders for individual relative volume control.
  - Assignable Midi channel 1-16 and Multi
- Individual Midi program Number eg. 0-127, 1-128, all-b88, a01-b64, A1-D8
- Multi channel record. Full Midi implementation inc after touch.
- Midi Sync, 5 modes including external.
- Phrases
  - Copy, merge, split, append, transpose.
  - Velocity editing including humanize and fading
  - 11 levels of quantize. Full Midi controller editing.
  - Undo last edit or record.
  - Phrases may be freely copied to any tracks on the Arrange page.
  - 100 Phrases max each up to 682 bars.
- Any or all kinds of Midi filters, plus Auto filters.
- Runs on any ST in High and Medium resolution from any drive.
- Text editor for making notes and hardcopy facility.
- Comprehensive Manual, backup service and help-line. Demo £3.99

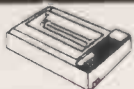


The 20 track Midi sequencing package offers ease of use coupled with powerful, professional facilities at a realistic price. At last serious Midi music processing is within reach of the home user. Midistudio incorporates instantly recognisable tape transport and mixing desk controls in it's main screen. Parameters such as transposition, Midi channel and Midi program number can be increased/decreased by just clicking left and right mouse buttons. Control is possible from the mouse. The software supports full step time editing which can be performed on a track phrase and note level right down to the most minute detail, even the Midi controllers and events are editable. Midistudio uses the increasingly popular phrase arrangement method making major restructuring simple. Quantizing can be carried out at a number of resolutions. There is a scaled controller facility which allows insertion of any controller number and it's range at intervals throughout the phrase and so control faders, stereo panning, modulation etc. Full control of Song Position Pointer and Song Select is available. There is a comprehensive manual and with Midistudio you won't be left stranded as we offer a customisation service and helpline.

## Original Midistudio, New Low Price £49.99

### New Low Price Printers

Star LC-10	£159.99*
Star LC-10 2	£189.99*
Star LC-10 Colour	£199.99*
Star LC 24/10	£239.99*
Epson LQ 500	£319.99*
Citizen 120 D	£134.99*
SLM 804 Laser(ST)	£1099.99* Includes 90 days on site warranty



\* Includes 12 months on site warranty (UK mainland) and cable.

### Hard drives

Vortex 40(MB/ST & Amiga)	£499.99
Megafix 30 (ST)	£474.99
Megafix 60 (ST)	£599.99
Supra 30MB (ST)	£474.99
Third Coast 65 MB (ST)	£599.99
(Amiga)	£659.99



We are offering a range of high quality ST hard drives at ridiculously low prices. All have the following specification. Full metal case-same size/colour as Mega ST. 60 watt PSU, room for second mechanism. The low power controller is full SCSI and allows up to 8 drives on one controller. The software includes Autopark. Autofoot from any partition. partition size up to 1 Gigabyte, any number of partitions. 100% AHDI 3.2 compatible driver, write protect any partition.

40HD 42 Mb formatted, 11Ms average access time, 64K on board cache memory	£549.99
50HD 48 Mb formatted, 30Ms	£499.99
85HD 83 Mb formatted, 28Ms	£699.99
180HD 180 Mb formatted, 20Ms	£1299.99

### Disk drives

Cumana slim 1Mb (ST)	£89.99
Ladbroke's 1Mb (ST)	£74.99
Cumana internal 1Mb(ST kit / fitted)	£74.99
Please note ST's case requires modification for above internal drives.	
A/B boot switch (fitted)(ST)	£24.99
Cumana 1 Mg Drive, disable switch, through port(Amiga)	£74.99
Ladbroke's 1Mb, disable switch, through port(Amiga)	£69.99



### Monitors & Peripherals

SM 124 Mono	£109.99	Joysticks from	£4.99
SC 1224 Colour	£279.99	PRO 5000 joystick	£9.99
Phillips 8833 Colour	£249.99	Deom autolite joystick	£9.99
Phillips 15" FST Remote		Trak ball (ST-Amiga)	£24.99
Scarl input, Teletext TV		ST Clock cartridge	£24.95
with 60 tuner presets	£259.99	80 / 100 disk box	£9.99
Hawk scanner	£1249.99	Dustcovers from	£2.99

All monitors come with scart to ST/Amiga

### Quality 3.5" Disks

All disks are quality Sony, Maxcell or Kao products. All disks carry an unconditional lifetime guarantee. Add 60p P&P for each 10 disks.

Quantity	Loose	Boxed	Sony Boxed
10	£6.99	£7.99	£9.99
100	£64.99	£74.99	£89.99

**Akai S900 (ex-demo)** £1099.99  
**Akai S950** £1399.99  
**Akai S1000** £2899.99  
**Akai ASO-10** £1599.99  
**Akai Effects Units** £phone

**Music Equipment and Software**

We are official Akai dealers. Phone for Akai sound libraries for the S900 and S1000, PRO 24, Midistudio, C-LAB creator and notator, EZ-TRACK Plus. Phone for others. Send SAE for full catalogue.  
 1 Mg upgrade ST and Amiga phone for details. £249.99  
 2.5 Mg upgrade (ST) phone for details £499.99  
 4 Mg upgrade (ST) phone for details £499.99

### Phone for best prices. We will try to Match any price.

<b>Midistudio Pack 1</b> Includes 520 STE, Mouse, Midistudio	£339.99	<b>520 STE Explorer pack</b>	£299.99	<b>Amiga A500 Batman pack</b>	£369.99
<b>Midistudio Pack 2</b> Includes 520 STE, Mouse, SM 124 Mono Monitor, Midistudio.	£439.99	<b>520 STE Power pack</b> Includes 520 STEFM, Mouse, Tutorial disk.	£399.99	<b>Amiga Batman + pack</b>	£399.99
<b>Midistudio Pack 3</b> Includes 1040 STE, Mouse, SM 124 Mono Monitor, Midistudio.	£639.99	<b>1040 STEFM Business Pack</b> Includes 1040STE with 1 Mb memory, Mouse and business pack consisting of Word processing, spreadsheet, Database & Basic.	£519.99	<b>Mega ST 1 + Mono</b>	£599.99
<b>Master pack 1</b> Includes 1040 STE, SM 124 Mono Monitor, Midistudio Master.	£709.99	<b>Amiga 2000</b>	£phone	<b>Mega ST 2 + Mono</b>	£899.99
				<b>Mega ST 4 + Mono</b>	£1199.99



(0772)203166 Fax 561071

Ladbroke Computing International is a trading name

To assist us in processing your order quote this code

SS1.5



competition

## VINTAGE '55



LOOKING BACK OVER the last ten years, a handful of hi-tech instruments stand out as having played a crucial part in shaping popular music. Love it or hate it, one such instrument is Yamaha's DX7. The trouble with being the manufacturer of an instrument as important and successful as the DX7 is that it's not very long before both musicians and the trade in general expect you to follow it up with another innovation of similar importance.

It's taken a while, but Yamaha's SY77 synth and TG55 tone generator look as if they might be about to do just that. (For a full review of the SY77 see MT, January 1990.) In this exclusive competition, Music Technology is able to offer you the chance to get in on Yamaha's latest revolution at the ground floor - by winning a TG55 expander worth a cool £699.

In order to walk away with the TG55, all you have to do is dig out the answers to a few questions. Instead of the usual crop of product-related teasers, this month we thought you might like to try something a little different. As Yamaha's new expander bears the number 55, we've based the competition on the year of 1955 - if you're too young to remember it yourself and too lazy to look up the answers in a book, you might find a new use for a benevolent member of the family. However you approach it, good luck.

1. Which one-man-band, born in 1955, had his first UK hit with 'New Song'?
2. November 1955 saw a collection of comets at the No. 1 single spot - whose were they, and with which single?
3. A 20-year old American R&B singer was beginning to enjoy the fruits of "the Sun sessions". Who was he?
4. 1955 saw a change of Prime Minister in Britain; name both the two ministers that held office.

ANSWERS SHOULD BE sent on a postcard only please, to arrive no later than second post on **Monday, 5th March**. Entries should be addressed to "**Vintage '55**", Music Technology, Alexander House, Forehill, Ely, Cambs CB7 4AF. Please include your own name, address and a daytime phone number on which you can be contacted should you win. The winner should be available to attend a presentation at the Music Technology offices.

The recent congestion of the postal service due to Christmas mail was, once again, exacerbated by multiple MT competition entries. The appropriate government agencies have been informed and the Americans have promised full tactical support should Her Majesty's government decide to mobilise against the offenders.

*Thanks to Jim Corbett at Yamaha (UK) for providing this month's competition prize.*



# DON'T MAKE AN EXPENSIVE MISTAKE FOR THE BEST DEALS PHONE US NOW!!!

## SYNTHESIZERS & KEYBOARDS

KORG T1 Workstation                      KORG M1 Workstation  
 KORG T2 Workstation                    KORG M1R Expander  
 KORG T3 Workstation                    KORG M3R Expander  
*(All New Korg Products Now Available!!)*

YAMAHA YS100 Synth £339    YAMAHA DX11 Synth £399  
 YAMAHA YS200 Synth £339    YAMAHA B200 Synth £399

ROLAND D5 Synth P.O.A.                ROLAND D20 P.O.A.  
 ROLAND D10 Synth P.O.A.              ROLAND D50 P.O.A.

**8 TRACK MIDI RECORDING SYSTEM**  
**KAWAI K4 Synthesizer & YAMAHA QX5FD Sequencer**  
 R.R.P. £1545 - E.M. PRICE £1059!!

KAWAI K4 Synth In Stock    KAWAI PHM Expander £219  
 KAWAI K1 II Synth In Stock    KAWAI K1R Expander £299  
 RHODES MK80 Piano & RHODES MK60 Piano £ P.O.A.

## EXCLUSIVE DEALS

KAWAI K1 Synthesizer & Yamaha QX5FD Sequencer £745  
 ROLAND D10 Synth & YAMAHA QX5FD Sequencer £975  
 ROLAND U20 Synth & YAMAHA QX5FD Sequencer £1150

**THE ULTIMATE MIDI PACKAGE**  
**CASIO VZ1 Synthesizer & YAMAHA QX5FD Sequencer**  
**& YAMAHA RX7 Drum Computer - Combined Orig. R.R.P. £2623**  
**EDDIE MOORS SPECIAL PRICE £1059!!**

## SUPER DEALS

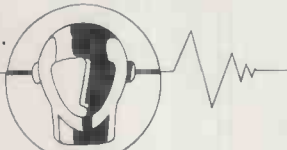
ROLAND TR505 Drum Computer £169 ; ROLAND TR626  
 Drum Computer £229 ; ROLAND U110 Sample Module £415 ;  
 KAWAI K4R Synth Module £499 ; ROLAND S330 Sampler  
 £899 ; CASIO FZ10M Sampler £749 ; CASIO VZ8M £229 ;  
 KORG M1R Digital Synth Expander £899 ; YAMAHA TQ5  
 Expander/Sequencer £289 ; ROLAND W30 Workstation POA ;  
 ATARI 1040ST & Monitor & PRO-12 Software £499 ;

## BARGAIN BASEMENT

*(All units are either USED or EX-DEMO)*  
 KAWAI K1 MkII R.R.P. £695    E.M. price £499  
 ROLAND D10 R.R.P. £899    E.M. price £699  
 ROLAND D5 R.R.P. £599    E.M. price £475  
 CASIO VZ1 R.R.P. £1299    E.M. price £399

## RECORDING EQUIPMENT

Our Cottage may not be thatched but our prices can't be matched!  
 If you're interested in FOSTEX, TASCAM, YAMAHA, STUDIOMASTER, SOUNDRAFT, ROLAND, MTR, ALESIS, DRAWMER, SONY, DBX, ARCHIMEDES, STEINBERG, C-LAB, SANSUI, AKAI, SOUNDTECH, BOSS, KORG, CASIO, SONY: then we offer the best possible deals.

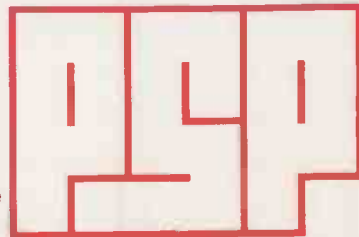


(0202) 35135 EXT. 125  
**EDDIE MOORS MUSIC LTD.**  
**THE SOUND INVESTMENT**  
 679 Christchurch Road, Bournemouth BH7 6AE  
 THE LARGEST MUSIC SHOP ON THE SOUTH COAST

# Philip Rees

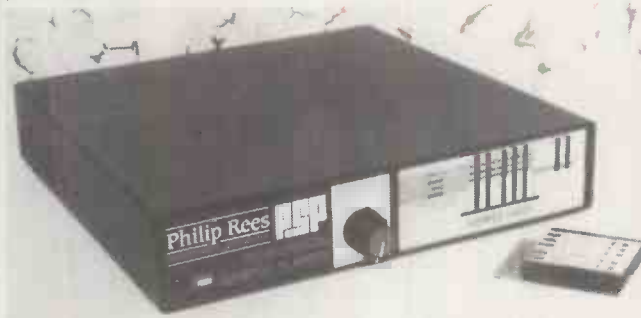
## MODERN MUSIC TECHNOLOGY

## Fantastic forthcoming attraction



The new **PSP**, which will very soon be available, is an easy-to-use MIDI drum sound module for just £169.95! It uses a range of inexpensive plug-in ROM cards featuring high quality digitally recorded percussion samples.

PERCUSSION SAMPLE PLAYER



Five percussion samples are held permanently within **PSP**, and up to twelve more are provided by each of the sample cards. Each **PSP** is supplied with one card containing sounds recorded by Jonathan Miller at the world famous **CTS Studio One** in London.

The **PSP** has a dynamic range of 100dB including the velocity response. The MIDI control system is articulate and straightforward and the response speed to MIDI is unsurpassed. Stereo, mono and four individual assignable outputs are provided.

The neat half-rack case and internal power supply eliminate clutter.

## Essential MIDI accessories

These popular devices solve many MIDI routing and interfacing problems and are excellent value for money.

<b>V3 MIDI Thru Unit</b> £12.95	<b>2S MIDI Selector</b> £12.95
<b>3B MIDI Selector</b> £25.95	<b>5S MIDI Selector</b> £25.95
<b>9S MIDI Selector</b> £35.95	<b>V10 MIDI Thru Unit</b> £35.95
<b>W5 Dual Input Thru Unit</b> £49.95	<b>2M MIDI Merge Unit</b> £79.95
<b>5X5 MIDI Switch Expander</b> £79.95	<b>5X5 MIDI Switch</b> £89.95
<b>MCV MIDI to CV Converter</b> £169.95	<i>All prices are inclusive of VAT.</i>

All these products carry our **three-year parts and labour guarantee.**

See your dealer or order now direct from the manufacturer. There is **no additional charge for carriage.** You can order with your **Access** card, give us a ring on **Croughton (0869) 810948**, or you can use the coupon below. Allow up to 28 days for delivery. **Money back if not satisfied** - just return the goods undamaged within seven days for a full refund.

Philip Rees, Unit B, Park End Works, Croughton, BRACKLEY, Northants NN13 5LX

Name \_\_\_\_\_  
 Address \_\_\_\_\_

I wish to order: \_\_\_\_\_ Total £ \_\_\_\_\_

I enclose my cheque for the above amount   
 or please debit my **Access/Mastercard** account - number:

\_\_\_\_\_



Expiry date: \_\_\_\_\_ Signature \_\_\_\_\_

Please send me more information about your products including **PSP.**

Send to: Philip Rees, FREEPOST, BRACKLEY, Northants NN13 5BR  
 NO STAMP REQUIRED



# patchwork

Structure 1&2: **6**    Structure 3&4: **1**    ENV Mode: **norm**

WG		1	2	3	4
Pitch	Coarse	C3	C5	C4	C4
	Fine	+04	+04	-05	+05
	KF	1	1	52	52
LFO	Rate	00	00	64	62
	Depth	00	00	26	29
	Mod	00	00	49	35
	Bend	OFF	OFF	on	on
Waveform	Form	SQU	SQU	SAW	SAW
	PCM B	1	1	1	1
	PCM No	33	34	1	1
PW	PW	0	0	0	0
	Velo	0	0	0	0
Pitch ENV	Depth	0	0	0	0
	Velo	0	0	0	0
	TKF	0	0	0	0
	T 1	0	0	0	0
	T 2	0	0	0	0
	T 3	0	0	0	0
	T 4	0	0	0	0
	L 0	0	0	0	0
	L 1	0	0	0	0
	L 2	0	0	0	0
	End L	0	0	0	0

TVF		1	2	3	4
TVF Frequency	Freq	0	0	81	81
	Reso	0	0	19	19
	KF	0	0	3/8	3/8
	BP	<A1	<A1	<A1	<A1
	BL	0	0	0	0
TVF ENV	Depth	0	0	100	100
	DVelo	0	0		
	DKF	0	0	0	0
	TKF	0	0	0	0
	T 1	0	0	0	0
	T 2	0	0	36	36
	T 3	0	0	0	0
	T 4	0	0	100	100
	L 1	0	0	53	53
	L 2	0	0	39	39
	Sus L	0	0	39	39

TVA		1	2	3	4	
TVA Level	Level	100	100	90	90	
	Velo	+38	+38	+19	+19	
	BP 1	>D#6	>83	>D6	>C6	
	BL 1	-D5	-11	-05	-05	
	BP 2	<C4	<A#3	<C3	<D3	
	BL 2	-12	-06	-05	-05	
TVA ENV	Velo T 1	4	4	0	0	
	TKF	0	0	0	0	
	T 1	0	0	32	32	
	T 2	100	100	66	60	
	T 3	0	51	100	100	
	T 4	71	69	67	67	
	L 1	100	100	75	75	
	L 2	100	100	98	98	
		Sus L	100	85	0	0

## ROLAND D10 ROMANCE Edward Tilsley, Middlesex

I can see 'Romance' having a long and useful life ahead for many D10 users, being a string and piano combination which can also be split into a two-partial piano and two-partial strings. Edward admits that he finds this patch perfect for "those romantic, mellow moments between my keyboard and myself". (If you say so, Ed.)

## CASIO CZ1 BLUES GUITAR Mick Robbins, Norwich

This is an excellent recreation of an electric guitar, played in fine style on Mick's demo. The overdriven edge of this patch, and Mick's liberal use of the pitchbend wheel add greatly to its authenticity, but I can imagine that it would be even more convincing put through a Rockman-type preamp. And Mick's demo proves once again that there's no substitute for studying the playing style of the genuine article and using it to really deliver your own patches or samples.



LINE SELECT <b>1+2</b> <small>(1,2,1+2,1-1)</small>	MODULATION RING NOISE <b>on</b> <small>(ON/OFF)</small>	DETUNE +/- OCTAVE NOTE FINE <b>+ 0 00 03</b> <small>(+/-) (0-3) (0-11) (0-25)</small>	VIBRATO WAVE DELAY RATE DEPTH <b>1 00 10 00</b> <small>(1-4) (0-39) (0-99) (0-99)</small>	OCTAVE +/- RANGE <b>+ 0</b> <small>(+/-) (0-1)</small>
---	--	--	--	---

<b>1</b>	<b>2</b>
<b>DCO 1</b>	<b>DCO 2</b>
WAVE FORM FIRST SECOND <b>4 5</b> <small>(1-8) (0-8)</small>	WAVE FORM FIRST SECOND <b>4 0</b> <small>(1-8) (0-8)</small>
VELOCITY <b>00</b> <small>(0-15)</small>	VELOCITY <b>00</b> <small>(0-15)</small>
E N V (PITCH) STEP 1 2 3 4 5 6 7 8 RATE <b>50</b> LEVEL <b>00</b> SUS/END <b>END</b>	E N V (PITCH) STEP 1 2 3 4 5 6 7 8 RATE <b>72 75</b> LEVEL <b>20 00</b> SUS/END <b>env</b>
<b>DCW 1</b>	<b>DCW 2</b>
KEY FOLLOW <b>6</b> <small>(0-9)</small>	KEY FOLLOW <b>4</b> <small>(0-9)</small>
VELOCITY <b>03</b> <small>(0-15)</small>	VELOCITY <b>03</b> <small>(0-15)</small>
E N V (WAVE) STEP 1 2 3 4 5 6 7 8 RATE <b>97 51 37 58</b> LEVEL <b>92 77 65 00</b> SUS/END <b>SUS END</b>	E N V (WAVE) STEP 1 2 3 4 5 6 7 8 RATE <b>99 19 31 58</b> LEVEL <b>95 75 82 00</b> SUS/END <b>SUS END</b>
<b>DCA 1</b>	<b>DCA 2</b>
KEY FOLLOW <b>4</b> <small>(0-9) (0-15)</small>	KEY FOLLOW <b>4</b> <small>(0-9) (0-15)</small>
LEVEL <b>13</b> <small>(0-15)</small>	LEVEL <b>15</b> <small>(0-15)</small>
VELOCITY <b>04</b> <small>(0-15)</small>	VELOCITY <b>02</b> <small>(0-15)</small>
E N V (AMP) STEP 1 2 3 4 5 6 7 8 RATE <b>93 10 08 58</b> LEVEL <b>99 72 00 00</b> SUS/END <b>SUS END</b>	E N V (AMP) STEP 1 2 3 4 5 6 7 8 RATE <b>99 10 08 58</b> LEVEL <b>99 72 00 00</b> SUS/END <b>SUS END</b>

COMMENT:



# GATEWAY

THE SCHOOL OF RECORDING  
AND MUSIC TECHNOLOGY

- ONE YEAR FULL TIME COURSE IN MUSIC TECHNOLOGY, RECORDING AND MUSIC BUSINESS STUDIES
- ONE MONTH FULL TIME COURSES IN RECORDING TECHNOLOGY
- ONE YEAR PART TIME COURSES IN RECORDING AND MUSIC TECHNOLOGY
- ONE AND TWO WEEK INTENSIVE COURSES IN RECORDING AND SEQUENCING SYSTEMS
- SPECIALIST WEEKENDS IN SAMPLING AND SYNCHRONISATION TECHNOLOGIES
- RHYTHM PROGRAMMING
- LIVE MICROPHONE TECHNIQUES
- THE ESSENTIALS OF P.A. ENGINEERING

EUROPE'S  
LEADING  
MUSIC  
INDUSTRY  
SCHOOL

FOR MORE DETAILS OF THESE AND OTHER COURSES CALL

## GATEWAY

01-549-0014

GATEWAY IS A MEMBER OF THE MUSIC INDUSTRIES ASSOCIATION  
AND THE SOUND AND COMMUNICATION INDUSTRIES FEDERATION

THE SCHOOL OF MUSIC, KINGSTON HILL CENTRE, SURREY KT2 7LB.

## Computer Products for Musicians at Computer Industry Prices

### FLOPPY DISCS

3.5" DSDD	@	£1.00 each
	10	£.90p each
	50	£.80p each
3.5" DSHD	@	£1.85 each
	10	£1.75 each
	50	£1.60 each
		(P&P £1.20)

Larger quantities phone

45mByte Removable media Hard Drive for  
AKAI S1000 etc (S.C.S.I)

Same performance as PLI £681.20  
(P&P £4.50)

45mByte Removable media for above £89.00  
(P&P £1.20)

All prices exclude V.A.T.

## DATALINE TECHNOLOGY

P.O. Box 420 Watford WD1 4AN

Tel: 0923 243801

# THE ATARI 1040ST E MIDI PACK

THE ATARI 1040ST E IS NOW THE MOST  
POPULAR MIDI COMPUTER ON THE MARKET!!

With a built in MIDI interface, 1 Megabyte of RAM and 720K capacity disk drive the Atari 1040ST E has a wealth of software available covering all aspects of computing. All MIDI requirements have been met including software for Voice Editing, Sequencing, Score Writing etc.

### OUR SPECIAL MIDI PACK IS AS FOLLOWS :-

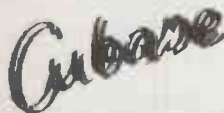
Atari 1040ST E computer with Atari SM124 High Resolution  
Monochrome Monitor, 10 Blank Disks, Disk Box, 2 x Midi Leads and  
the Practical Midi Handbook.

- 1040 MIDI PACK WITH C-LAB NOTATOR/UNITOR
- 1040 MIDI PACK WITH C-LAB CREATOR/UNITOR
- 1040 MIDI PACK WITH C-LAB NOTATOR
- 1040 MIDI PACK WITH C-LAB CREATOR
- 1040 MIDI PACK WITH STEINBERG CU BASE
- 1040 MIDI PACK WITH STEINBERG PRO24 Ver.3.0
- 1040 MIDI PACK WITH DIGITAL MUSE VIRTUOSO
- 1040 MIDI PACK WITH DR.T KCS Ver.1.7MPE

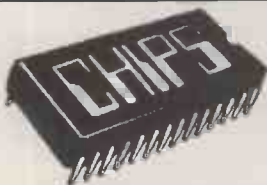
other packs are available on request. Please call for prices.



WE SELL  
COMPUTERS -  
NOT  
SYNTHESISERS



DETAILED  
DEMONSTRATIONS BY  
APPOINTMENT ONLY



DATA DIRECT LTD  
53 RUGBY ROAD  
WORTHING  
WEST SUSSEX  
BN11 5NB

Telephone (0903) 700804



OFFICIAL DEALERS FOR ALL TOP  
SOFTWARE PACKAGES.

MAIL ORDER AND SHOP CALLERS  
WELCOME.

THE MIDI / COMPUTER EXPERTS  
CALL US NOW !!

# FB01 LIBRARIAN

Desk Voice\_Data Config\_Data Voices Extra

Select a voice to move or play, or select a menu option

Voice File: [icon] [icon] [icon] [icon] [icon] [icon]					
Clay 1	Clay 2	Clay 3	Clay 4	Clay 5	Clay 6
Clay 7	Clay 8	Clay 9	Clay A	Clay B	Clay C
Harpsi1	Harpsi2	Harpsi3	Harpsi4	Harpsi5	Harpsi6
Harpsi7	Harpsi8	Harpsi9	Honky 1	Honky 2	Honky 3
Snare 1	Snare 2	Snare 3	Snare 4	Snare 5	Cowbell
Cowbel2	Cymbal1	Cymbal2	Cymbal3	Cymbal4	BasDrum1
BasDrum2	Timpan1	Timpan2	Tomtom1	Tomtom2	Tomtom3
AfDrum1	AfDrum2	AfDrum3	AfDrum4	AfDrum5	AfDrum6
Voice File: [icon] [icon] [icon] [icon] [icon] [icon]					
Nylon 1	Nylon 2	Nylon 3	Nylon 4	Nylon 5	Nylon 6
Guitar1	Guitar2	Guitar3	Guitar4	Guitar5	Guitar6
Guitar7	Guitar8	Guitar9	GuitarA	JazGit1	JazGit2
JazGit3	JazGit4	RokGit1	RokGit2	RokGit3	RokGit4
Koto 1	Koto 2	Sitar 1	Sitar 2	Sitar 3	Sitar 4
Harp 1	Harp 2	Harp 3	Harp 4	Harp 5	Harp 6
Banjo 1	Banjo 2	Banjo 3	Mando 1	Mando 2	Mando 3
Crash 1	Crash 2	Crash 3	Crash 4	Crash 5	Crash 6
Config File: [icon] File					

The FB01 is possibly the weakest application of FM synthesis to appear from the Yamaha stable. Quinsoft's librarian could help to redeem it as a useful budget synth.

Review by  
Gordon Reid.

**T**HE YAMAHA FB01 was eagerly awaited when it was first launched in 1984. Its specification was impressive and, for its time, the price/performance ratio was even more so. In the days when a DX9 cost £1000, and a Juno 6 nearly £800, here was a neat module that used FM synthesis (this was the hey-day of the DX7), offered 324 patch locations, 96 user-programmable memories, 20 user-configurable performance memories, was eight-note polyphonic and, to ice the cake, was multitimbral. The specs were interesting enough in themselves, but the price of the unit (£299) was extraordinary. The FB01 arrived, sold a fair number of units, and then quietly died, having singularly failed to set the world alight. Today you can pick up a virtually unused second-hand FB01 in perfect condition for about £120. And they don't just appear occasionally - you can find them in MT's Free Ads every month. So what led to the downfall of what is, even today, a well specified expander, when far more limited systems such as the Korg EX800 seem set to stay in use for some time to come?

Something like 90% of synths that ever find their way back to their manufacturers still have the factory presets intact in memory. That means that most of us have never even bothered to try to program our synths. Consequently, all the wonderful gear on the market - FM, LA, AI or Analogue - is being judged on the quality of the factory preset sounds. But, and here's the rub, the FB01 presets weren't thrilling five years ago, and by today's standards most of them fall somewhere between bearable and diabolical. To make matters worse, the FB01 is not programmable from the front panel. To edit patches or to create new ones from scratch, you have to use a computer. So even those die-hards who would otherwise take the trouble to get the best from the system are unable to do so without £500 worth of Atari and software - that's a big investment just to program a £299 synth. The problem really comes back to those awful presets. The FB01 gained an unenviable reputation for sounding like a wet f\*rt, and very few people make the effort to see if anything better can be obtained from it.

Three years after the FB01, Yamaha released the  
MUSIC TECHNOLOGY FEBRUARY 1990

programmable multi-waveform TX81Z, and the fate of the earlier unit was sealed. The FB01 became the ultra-cheap FM expander for hard-up musicians who quickly got bored with them, and ended up advertising them in the second-hand columns for peanuts. And that's a shame, because there's more to the FB01 than meets the eye (or ear), and it actually has facilities that are lacking on the TX81Z, V50, and all their modern siblings. In fact, the FB01 relates more closely to the original DX7 than to Yamaha's other 4-op synths. So what's needed is a package that allows you to get the best from your FB01, and actually achieve the potential that's tucked away inside it.

There has been editor/librarian software available almost since the unit was released, of which the most successful of these was probably Steinberg's FB01 Synthworks. This combines powerful editing capabilities and a full-function librarian. But Synthworks retails for £100, and that's far too much for most people - many of whom didn't pay much more for the expander itself. In addition, the original FM programming system was a nightmare, and prior to Yamaha's "Easy-FM" system (as implemented in the V50 and TQ5) the very thought of programming in FM sent most sensible synthesists diving for cover. So, five years after the launch of the FB01, there's still a requirement for a package that allows you to get good sounds from your FB01, is easy to use, and doesn't cost the earth. This, finally, brings us round to the Quinsoft FB01 Librarian which, at £25, has to be worth a look.

## WHAT DO YOU GET?

THE FB01 LIBRARIAN comes in the now standard plastic wallet with a single 3.5" disk and a concise 20-page manual. Only one disk again - this wouldn't matter if you could make a back-up of the master disk, but you can't. Dongles are expensive, and certainly out of the question for a £25 package, but if a manufacturer is going to protect the master disk itself, he should supply a backup. And unfortunately for Quinsoft, my master disk wouldn't load. Nothing would persuade the program to start and with no backup I was, to say the least, inconvenienced. Quinsoft were very helpful when contacted, and the problem was eventually tracked down to the copy protection mechanism having a bout of indigestion over my version of the operating system (TOS 1.14). Quinsoft now claim to have sorted this one out.

The Librarian itself is (as you will read) very easy to use, so the manual comes as a bit of a surprise. Many purchasers will find it easier to just load the program and get on with a bit of trial-and-error experimentation, than decipher the manual. It's nicely enough produced, but it's confusing - no mean feat when you consider the simplicity of the program. Most purchasers of a program like this are going to be novices, so the manual is an important part of the overall package. There are no graphics to be found anywhere in the package. It doesn't cost much to supply a few diagrams or screen dumps of the right program, and Quinsoft should sort this out as quickly as possible.

## THE SOFTWARE

CALLING THIS PIECE of software a librarian doesn't really do it justice, since it comes complete with a number of voice files containing 480 FB01 voices. In fact, a pure librarian for the FB01 would be useless since you still wouldn't be able to edit your voices - just move them around in memory in endless combinations. Quinsoft would do better to advertise the program as a Voice Library with full memory management capabilities.

The Librarian offers you two memory banks into which you can load sounds. The sounds may be selected from the 480 supplied with the package, or MIDI dumped from the FB01 itself. Each memory bank can hold 192 voices, and is split into four voice blocks of 48 voices each. These blocks are equivalent to the memory blocks of the FB01 itself. On loading the software you are presented with a well laid-out screen with five menu bar options, two voice banks (each of which display the names of the 48 voices in the selected block) and two sets of control boxes which select the voice blocks within the two memory banks. To select a different block just press the mouse button with the pointer over the appropriate block number. Sounds complicated? Don't worry, it's a cinch. With eight blocks of 48 voices you can have 384 voices loaded into the Atari's memory simultaneously, although in practice you would want to leave at least one block empty for manipulating data and building up your own voice/memory configurations.

The Voice Data menu option enables you to Load a block from disk, Save it back again, or Send or Get a block from the FB01. This is as much as many users will want from the program, and enables you to use the 96-voice programmable memory of the synth to excellent effect. Just keep the program disk at hand and you have all 480 voices quickly available (although not, of course, all at the same time). A hint for twin drive users: loading the voices from drive B: frequently crashes the system, so don't do it. For advanced users, a good way to use the two memory banks would be to load the voices you want into Bank A, and then arrange your most frequently used sounds into two blocks in bank B. Voices are moved by "picking them up" with the mouse and depositing them in whatever new location is required. These blocks can then be sent to the FB01. The program has a number of additional options to make life as easy as possible. You can rename voices and sort them into alphanumeric order, swap two voices in memory, and print the voice list. All in all, nice 'n' easy. The other commands are to clear a block out, and to invert the screen colours if you wish.

The FB01 Librarian can handle performance data as well as voice data. The FB01 can store 20 configurations which detail voice assignments, MIDI channels, and pitch, detune, and modulation settings. Configuration files can be Loaded, Saved, Got and Sent, in exactly the same way as voice files. ►

**“Calling the FB01 Librarian a librarian doesn't really do it justice, since it comes complete with a number of voice files containing 480 FB01 voices.”**

# A MAC SEQUENCER YOU CAN AFFORD

ARGENTS present  
*DELUXE RECORDER* by  
ELECTRONIC ARTS.  
A Macintosh software  
SEQUENCER for just £99.  
With 16 tracks assignable  
to 32 MIDI channels,  
PROGRAMMABLE  
quantisation, and all kinds  
of *EDITING OPTIONS* and  
displays, it is the equal of  
its competition in all areas.  
EXCEPT PRICE.



Argents, 20 Denmark Street, London WC2H 8NA  
☎ 01-379 6690 (sales) 01-240 0085 (service)  
01-240 7696 (fax)

## THE VOICES

ASSUMING THAT YOU have an FB01, no editor, and no voices other than those supplied by Yamaha, the Librarian wouldn't be worth a penny without the 480 voices that are supplied with it. Therefore the real crux of the review is: "how good are the voices?". The ten banks of 48 voices are grouped into loose families - pianos, strings, plucked instruments - you know the sort of thing. And each family has a number of sub-groups - PianoX, EpianoX, and so on (where X is a number) - and this makes voice selection much easier than a random arrangement. (Have you ever tried finding a patch of the Oberheim Matrix 1000 when you've forgotten the voice number?).

There are two ways to test a voice using the Librarian. Firstly, pointing at a voice on screen selects it, and subsequent presses of the right-hand mouse button play the sound. Move the mouse to the right and the pitch goes up, move it away from you and the velocity increases. The converse are, of course, also true. Alternatively, you can connect a MIDI keyboard to the MIDI In of the FB01 or the Atari (which echoes all MIDI commands straight through to the FB01). Unfortunately, to use the librarian you have to connect the Atari in handshaking mode - that is, MIDI In of the Atari to MIDI Out of the FB01, and vice-versa. This makes life quite tricky if you want to test voices with a MIDI keyboard and you haven't got a MIDI merge box, because it's no fun pulling out, and inserting, MIDI cables every time you want to try a new sound out.

The strength of early FM systems lies in their ability to produce precise transient sounds such as harps and chimes. There's no escaping from the fact that sustained voices really do sound like a wet. . . OK, so I've already said that, but don't hold out too much hope for the flutes, clarinets, oboes and so on, on these disks. Brass voices fair a little better, and some of the tubas are rather good, but the trumpets and saxes are weak and the brass stabs are abysmal. Vibes are much more useable, and the mandolins and banjos are almost exciting. The harpsichords are very useable and the clavinetts are definitely worth a play - both open and muted voices. Most of the pianos and harpsichords are reminiscent of the Roland MKS10, and one of the grand pianos is the best I've heard from 4-op FM. In fact, I've heard far worse analogue-based pianos. There are the expected crop of electric organs (weak) and pipe organs (better) and also some interesting sample and hold voices (called RandomX) which sound quite unusual coming from an FM synth.

Quinsoft have certainly thought about the voices and some interesting tricks have been used to try to overcome the limitations of the FB01. Modulated slow envelopes have been

used to simulate ambience (which is seriously lacking on the factory presets) and vibrato has been used creatively as an effect rather than just as a characteristic of a given voice. The Tremolo-ed Rhodes is a pleasing example of this. In addition, velocity sensitivity has been maximised, and the range of dynamics (especially on some of the bass sounds) can be exceptional. Finally, there are some interesting drum sounds. The Timpani are quite expressive, and there's a curious collection of sub-TR808 basses, snares, and toms. If all this sounds rather positive, bear in mind that there are 480 voices on this disk and most of them haven't been mentioned. You could try using the multitimbral configurations to fatten up the weaker voices with de-tune, but do you really want to have only four- or even two-note polyphony? Funnily enough, my favourite sound on the disk is one of eight 2-op voices in the library (only using half of the synth's oscillators). It's warm, smooth and eminently useable. I'm sure that there's a lesson in there somewhere.

The Librarian comes complete with a desk accessory called Bulkload which, in principle, allows you to load memory blocks direct to the FB01 from the floppy disk, even while another program is running. Designed for use with sequencers, Quinsoft do not guarantee it to work with all packages. There is no Atari standard for DAs, and therefore it's not always possible to predict how other manufacturers' software will react to having a MIDI dump performed during their own execution.

## VERDICT

QUINSOFT'S FB01 LIBRARIAN is a small package, written by a small company, for which you pay a small sum of money. As such, it has an aura of "cheap and cheerful" about it. There's nothing wrong with that, and there's no practical reason not to buy the package. Unlike in polite society, where methane-induced sounds are quite unacceptable, there is a place for such sounds in music. The FB01 is far from everyone's cup of Assam, and if your idea of bliss is a Minimoog, a Jupiter 8, or a Prophet 5, forget the FB01, or sell it if you already own one because this package is not going to change the way you feel about 4-operator FM synthesis. However, if you have an FB01, have no wish to edit it, and are tired of the presets, £25 is a small price to pay for so many new options. Let's face it, in the last analysis most things in life are worth a shot if the price is right. And that includes this FB01 Librarian. ■

Price £24.95

More From Quinsoft Ltd, PO Box 68, Tadworth, Surrey KT20 7EP, Tel: (0737) 243066.

# Reach for the phone and stretch your imagination.

Imagine vocal chords you can strum or a piano you can blow. Sounds incredible doesn't it? With Technics new digitally synthesised AX7 keyboard however anything's possible. Ring the number below and hear what we've been plucking our trumpet about.

## Technics

# 0898 666144

Calls cost 25p per min. cheap rate, 38p at all other times.



## JOIN THE REVOLUTION

CHAMELEON is the only programmable universal patch librarian for the Atari ST. It revolutionises the way you work.

**You can keep several complete libraries for all your instruments in memory...**

**... and access them instantly with the display groups ...**

**... while using your sequencer.**

CHAMELEON combines powerful features in a fun, attractive and easy to use package. Join the revolution, send us the coupon now:

Please send me: CHAMELEON (£89.95)   
 CHAMELEON demo - saving disabled (£3)   
 I enclose a cheque payable to KEYNOTE MUSIC SOFTWARE

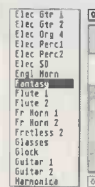
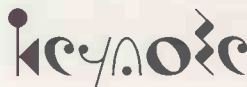
Name .....

Address .....

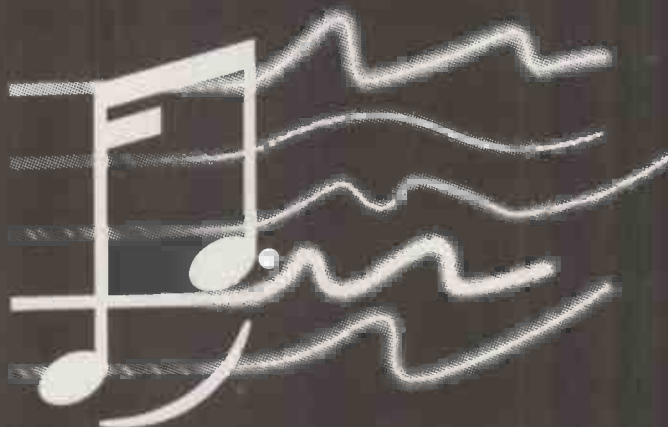
KEYNOTE MUSIC SOFTWARE, FREEPOST, RADSTOCK,  
 BATH. BA3 3YA Tel: 0761-32610.



CHAMELEON works  
 on any Atari ST



MUSIK  
 MESSE  
 FRANKFURT



H  
E  
A  
D  
S

# "Let's go."

To the International Music Fair Frankfurt '90. To find out what's happening and to place orders. Six stirring days of music: setting the tone for the trends of the 90s. With over 900 exhibitors from more than

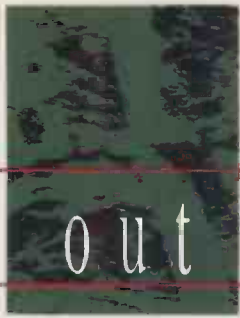
30 countries. With new products to try out from all over the world, prominent professionals to talk shop with and amazing technology. With old-timers and newcomers, tips and trends, notes and acces-

sories. There will also be workshops to take part in, concerts to inspire you and a thousand other good reasons for coming. So let's go!

Trade days:  
 21st-23rd March and 26th March 1990

Open days:  
 24th and 25th March 1990





# out takes

## V I N Y L T A K E S

### 808 State

90

### ZTT/WEA LP

808 State return with their distinctive blend of electro, techno and house styles and effortless mix of old and new (and mainly Roland) technology. What is remarkable is how much they've developed since *Quadrastate*. If *Newbuild* and *Quadrastate* were a brilliant adolescence full of potential then *90* represents a newfound maturity and confidence, both in terms of musical ideas and production quality. Yet although the group are now signed to ZTT/WEA, they've stuck to their old haunts, recording and mixing *90* at Spirit and Square One respectively, thankfully avoiding the temptation to get lost in Trevor Horn's studio never to be seen again.

True to their word, they've also avoided multiple rehashes of 'Pacific State', and instead have gone ahead and done their own experimental thing. 'Pacific 202' (from the recent single) is included as the closing track of side one, which might seem strange when you consider that many people who buy the album will already have the single. Yet musically it sits very comfortably in the context of

the other tracks.

Aside from 'Pacific 202', the shimmering textures and female vocal of the opener 'Magical Dream' make it probably the most accessible track on the album, while 'Ancodia' has an altogether punchier, funkier feel and a beefy sound which should ensure it plenty of dancefloor action. 'Cobra Bora', which first appeared in short form on the 'Pacific 12", now gets an extended workout which kicks along at a relentless pace, shifting gears through a variety of textures yet always underpinned by dense percussion and solid basslines.

The oddly-titled 'Donkey Doctor', which opens side two (unless you buy the CD, that is), finds the group drawing on early '80s electro, complete with angular bassline and spiralling synth lines and including a "Welcome to Techno City" vocal sample, taken from Cybotron's seminal electro track 'Techno City', which acts as a refrain. However, in general the group use sampling in an unobtrusive way which is far more convincing than the lazy aural signpointing use to which it is sadly all too often put these days.

'8080808' is a relentless, pounding techno track full of screaming synthesisers over gruff, farting basslines, though it perhaps displays more surface agitation than depth. 'Sunrise', on the

other hand, is a lengthy atmospheric, spacy house track (probably destined to be tagged with the incipient "ambient house" label) complete with a deep, mellow bassline, a slow, meditative flute solo (taken from a Paul Horn album, perhaps?) which unfolds through the track, and a variety of sustained, almost ambient noise-sounds. The melody of 'Do You Know The Way to San Jose?' floats almost incidentally over the music at a couple of points, played on a bell-like D50 sound; it fits in perfectly in a strange organic way. In fact, one of the intriguing aspects of 808 State's music is that it manages to sound synthetic and organic at the same time.

In dance-music terms 'Sunrise' is weird stuff, but not as weird as the spiky, clattering percussion of the short dosing track 'The Fat Shadow (Pointy Head Mix)', which suggests more than it delivers: a possible dance-music-goes-avant-garde direction.

*90* is dense, intricate, evocative, hypnotic, invigorating dance music, whose sophistication belies the short time and modest circumstances of its recording. The group may draw in part on '70s music, but their down-to-earth attitude and awareness, through the club scene, of their audience ensures that they are experimental without being self-indulgent. 808 State are leading dance music into the '90s. **St**

### House of God

### House of God

CD

This apparently self-produced and self-financed four-track CD offers up a selection of tasteful, melodic, well-crafted pop/rock songs from the Go West-styled 'Vow of Silence' to the Blue Nile-ish 'That Uncertain Feeling'. Taken together, these four tracks are satisfyingly varied while having a unifying thread running through them. Best points are the subtle and thoughtful keyboard voicings and arrangements and a strong melodic sensibility, but the singer's poor projection (nothing a few lessons couldn't cure, I suspect), a lacklustre, one-dimensional production and a tendency to rhythmic stiffness in the music let the side down a bit.

Having said this, there's still something very satisfying about the music, particularly on an

emotional level; I've found myself returning to all four tracks quite often, and each time I can't help but sing (well, maybe hum) along to the melodies. If you want to check House of God's music out for yourself, the contact number given on the CD insert is 01-527 0777. **St**

### Precinct 13

### Listen to your

### Heartbeat

### Living Beat Records

12"

This is the sort of dance record I fervently hope we'll be hearing less of in the following months. Apparently it's a hot Italian import which Living Beat have snapped up in the teeth of opposition

from several other UK record labels. In fact it's a predictable and uninspired sample dance record, at most the sort of record which might find fleeting popularity on the dancefloors before disappearing into oblivion. But then what do record companies care? They've made their money out of it.

So what do you get? A crass, plodding bassline, unimaginatively-realised house beat, a robotic voice repeatedly instructing you to listen to your heartbeat, an M1 choir-type sustained backing, a sample from R-Tyme's 'R-Theme' looping away quietly in the background to boring effect, and a mish-mash of samples which are present for no other reason than that people will recognise them, for instance a Todd Terry whooping siren, Lolletea Holloway's "oh-oh" scream as used by Black Box, the birdcall sample from 'Pacific State' and 'Sueno Latino', the Peter Gabriel shakuhachi. . . So what? It's about time we said goodbye to cynical, unimaginative records like this. **St**



It's not easy, in the season of Christmas spirit - the 86% proof kind, not that carol singing business - to suspend the festivities just to feed demo cassettes into a machine and draw informed and useful conclusions for you poor sods out there in readerland. But just for you, **Richard Jay**, I'll try.

Richard, you see, has managed to use evil Auntie Maggie's YTS scheme to get him into not one recording studio, but two - both 24-track and both prepared to let him record his own work. So he's sent three tracks to me for a "second opinion". Are you ready, Richard?

'Midnight Avenue' must have sounded great in the studio over those huge monitors, but it translates rather badly to the average (or worse) hi-fi. Presumably it was while Richard was recording this stuff that the house engineer was explaining the use of those little boxes on top of the desk marked "Auratone". So instead of the impressive mix our man thought he was giving us, we've got lots of bottom, lots of top and not much else (bit like Maria Whittaker, really). In fact, we've got so much top that sounds that you wouldn't normally regard as being in direct competition with each other are fighting for the same space. Very nasty.

Underneath the misguided production we've got some music - nice idea. It's harmless and inconsequential enough until the synth solo comes along. This, frankly Richard, is the worst solo I've heard in a long time. It's the old "tortured monosynth" affair with so many off-key notes that even liberal doses of pitchbend can't rescue it. A few words of advice: if you can't get it right, leave it to the widdly-widdly men.

Fortunately for us (me, anyway) things start to pick up a bit with 'Piece '89' and 'Devil's Child'. The first is a competent atmospheric piece with little to commend it except that it is blissfully solo-free. The second combines the atmosphere of the first with some new elements - some well-programmed sounds and a few musically interesting ideas. I can't say whether the sounds are Richard's own or whether the *slightly* off-key string line is intentionally that way, but it adds both atmosphere and interest in a way not entirely unsuited to film or A/V work. That in itself is convenient, as Richard's declared aims are to take his engineering and musical knowledge and turn them into "a record contract followed by a few film scores". I'd put a hold on the record contract if I were you.

One of the many problems with trying to break into film work is that the music rarely works well on its own - listen to the vast majority of film soundtrack LPs and you'll see what I mean. So just how do you make your music attractive in the absence of any pictures? The easiest solution is

to provide the pictures yourself - either by lifting something from the TV and adding your own music or by building a small A/V suite instead of a "conventional" home studio. It shouldn't be too difficult given that you've managed to collect an Atari ST, Mastertracks Pro, a Roland M240 desk, Kawai K1, Roland MKS50, Kawai R50e, two Akai parametrics and a Yamaha R100 reverb - whilst on a YTS scheme. . .

And one thing that seems to be eluding **Jon Sidwill** at the moment is a studio of any description. At present he appears to be in possession of an Atari ST, EZtrack Plus and buggler-all else. Not much of a production facility. In his recently-concluded student days at Warwick university, however, someone lent Jon a Korg M1 and some recording gear - and with it he produced *Jon's First Demo - Rough at the Edges*



Jon Sidwill

*With Nowhere to Go*. Actually it's not particularly rough at the edges, more a bit soft in the stomach.

Although Jon regularly attempts to play down the role of his ego in all this, anyone who can write (in the third person) a newsletter about himself and include it with a review tape has got a problem. In case you're not convinced, I quote "Acoustic thingame" - one of Jon's current favourites (favorites for the American readership). Featuring sampled brass and string instruments to create a realistic neo-classical Renaissance disco folk rock sound." I'd dismiss it as tongue-in-cheek if there wasn't so much of it. No lad, you've got a problem.

And it is 'Acoustic Thingame' that opens this five-track demo. Neo-classical Renaissance disco folk rock sound? Bollocks. Jon reckons it's one of his faves because it shows how good the Korg samples are but apart from the fact that it doesn't, what sort of reason is this to be making music? What happened to the rock 'n' roll rebellion, artistic satisfaction or even teenage angst? Instead we've got a sub-standard manufacturers' demo on a tape that's meant to be showing what a talented individual our aspiring muso is.

And so it continues - through 'Modal Sax' to 'Bruce' which was inspired by a Bruce Hornsby CD picked up in WH Smith. I ask you. . . No, I'll tell you: 'Bruce' proves that Jon can play, but it also suggests he hasn't found an outlet for his talent. If you're going to play and record for your own amusement, that's fine - but forget the newsletter and the pretentious hype. If you're serious about it, you'd better make other people realise it. Far more tapes are discarded on the strength of the presentation and covering note than ever find their way into the cassette players they were intended for. And poor old Jon is presently too caught up in the wonders of modern musical technology to wonder about his musical aims.

Less bogged down by technology is York's own **Jed Woodhouse**. Although he's working in a similar way to friend Jon, he's managed to keep at least some of his attention on the music. That said, this lengthy (both sides of a C45) demo is obviously not intended for the eyes or ears of anyone with a music industry cheque book. If it was, presumably it wouldn't have tracks like 'Test I' ("Example of a synth trying to sound like real instruments. . .") and 'Test II' ("Example of a synth sounding like a synth"). It certainly shouldn't, anyway.

Jed's sights are set on much the same target as Richard Jay's: television and radio. And on the evidence of these two tapes, Jed's a lot closer to hitting it.

Although the ten tracks here are rather inconsistent, one or two show promise. Worthy of mention are 'Stark', which was inspired by Ben Elton's book of the same name, and 'Marathon'. 'Stark' opens with some rather tired vocal samples before driving off at a pacy 220bpm for an interesting tour of other ESQ1 sounds and intriguing musical lines. 'Marathon', meanwhile, brings Harold Faltermeyer's 'Axel F' quickly to mind.

Apart from the music, Jed's demo showcases an interesting technical situation - working only with his ESQ1 and a tape deck, Jed has managed to produce a quality demo with very little equipment or hassle. But he's also been limited to the sounds it will give him. Take 'Test I' - it's not so much a synth trying to sound like real instruments, it's Jed trying to make the ESQ1 do something it doesn't really want to do. It's far better at producing the space invaders sounds of 'Space'. But then, being primarily interested in TV and radio, Jed should be able to work around this limitation - in which case, given some of the musical ideas here, he could be working at something he enjoys, with few overheads and a modicum of artistic integrity. I hate him. **Skum.**

# ARMARDEUS



PHOTOGRAPHY: ADAM JONES

Still looking for credible software to establish it as a musically useful computer, the Acorn Archimedes should welcome the arrival of this budget sampling package.

Review by Ian Waugh

**G**IVE A PROGRAMMER a 16-bit machine and he'll produce a sampler for it – just notch up the number of sample programs available for the Atari ST and Commodore Amiga and you'll see what I mean. So give a guy a 32-bit machine and what does he do? Yep, he produces a sampler for it.

Sampling requires lots of speed and a large memory capacity, and Acorn's Archimedes – currently the fastest micro in the world – is ideally suited to sampling applications. A new operating system called RISC OS has been developed for it (giving rise to many media puns about risky business) which is a multitasking system with a WIMP front-end. Operation is mouse-based and you basically point, click and drag your way through a program. It's nice.

Armadeus is a pun on ARM (standing for Acorn RISC Machine). RISC is an acronym for Reduced Instruction Set Computer and OS stands for Operation System, as you probably know. The bits

deep down inside the machine which tell it what to do (the operating system) is made up of a smaller than average set of commands – RISC – which makes the computer work faster. Terrible when you have to explain the jokes, isn't it?

## THE HARD & THE SOFT

**BUT BACK TO** business. The software will recognise the Armadillo A448 and A448b sampling hardware, the Unilab A-to-D interface and the Wild Vision ADC 1208 board as well as its own sampler hardware (which, incidentally was designed by Wild Vision). The Armadeus board has phono line in and line out sockets and a microphone jack socket. It uses 8-bit A-to-D conversion and is mono in operation although the program has a pseudo stereo option.

The software comes on three disks: a system disk and two disks of samples. These aren't protected – my customary 11 out of 10 for this, Clares – which means they can easily be copied to your hard disk.

The programs are coded with serial numbers however, so play the game and don't give them away.

Let's start with some easy stuff. When Armadeus is activated, the Waveform window appears on the screen (under RISC OS, windows can be drawn, removed, resized, repositioned and so on). To play a sample you can simply double click on its icon or drag it to the Waveform window. When it loads, its waveform appears in the Waveform window – of course.

Icons to the left of the window let you play or record a sample and zoom in and telescope out of sections of it. You can easily mark parts of the sample by clicking and dragging with the mouse.

The program can load samples from EMR's Creations disks and those created with the EMR SoundSynth program. In fact, it will load any file as a sample although it warns you if it doesn't recognise it. It can even read an ST disk which is very useful (especially if you have an ST) as there are lots of ST sample demos around. It reads *everything* from the disk and you have to remove the non-sample bits – but that's no problem. Arch samples are stored in linear signed format and the program can convert the ST's linear unsigned format to linear signed. It can also convert logarithmic samples into Archy format.

## VITAL STATISTICS

THE STATISTICS WINDOW holds lots of useful information. Here you can alter the replay and sampling rates and the sample buffer size by dragging sliders across the screen (you can type in exact values elsewhere in the program). You can click on buttons to select 41.6kHz, 20.8kHz, 13.8kHz and 10.4kHz sample and replay times.

As you alter the values, you'll see the maximum replay and sample times change accordingly (calibrated in 1/100ths of a second). Similar information is also given about any marked area of the sample.

Samples can be loaded, appended to the end of an existing sample, inserted at a marker position and overlaid onto an existing sample.

On playback you can listen to the whole sample or just the marked area, and both can be made to loop. Markers are easily set and adjusted and they can even be positioned with a mouse click during real-time playback. You can alter markers on the fly and looping helps you to position them accurately. The program doesn't give a numeric indication of where in the sample you are, so this is important.

An alternative playback screen allows you to see a FFT (Fast Fourier Transform) of the sample or a VU meter display. While in VU Meter mode, you can use the cursor keys to move backwards and forwards through the sample, and you can freeze it too.

## ME 'N' U

ARMADEUS USES THE standard RISC OS convention for accessing menus. When the mouse is in the Waveform or Statistics window, pressing the middle button causes the main menu to appear. Select an

option by moving the mouse up and down and then move to the right to access a sub menu. Sub menus may have sub menus of their own which are accessed in the same way.

It's easy to find your way around Armadeus, although some of the sub menus seem to be in odd places. For example, a marked section is deleted from the Processing menu, not the Markers menu and the Trigger is set from the Miscellaneous menu, not the Sampling menu. Perhaps it's the way my logic neurones are connected.

There are many ways of processing the sample once it's in the computer. You can process the entire sample or just the marked area. A favourite operation is to reverse it. You can add echo, too, and create fade ins and fade outs. There are cut, paste, move, replace and overlay functions, so editing is quite comprehensive.

Processing tends to reduce the volume of the sample and there are Scale and Gain functions which try to boost it up again. However, once a sample starts to deteriorate it's very difficult to recover the quality.

## TAKING A SAMPLE

IF YOU HAVE a sample board you can create your own samples. You can set a threshold level which the incoming signal will have to reach before sampling begins. You can use the VU meter screen to set the level of an incoming signal before you sample it.

Once sampling starts, you can't stop it until the sample buffer is full. At silly (low) rates (in fact, as low as 3921Hz) and with a large sample buffer this could take 15 minutes – yep, one quarter of an hour's worth of sampled sound. At super rate – 41.6kHz – you'll get around 25 seconds.

The quality of the sample depends on several factors – sample rate, quality of original signal and so on – and with a little care you can produce good samples. There are high and low pass filters to help tidy things up. The low pass is especially useful for dampening unwanted noise.

There's a Resample function which reduces the size of a sample by reducing the number of sample points. In fact, if you're tight on space it's often a good idea to sample at a high rate and then resample down (it's a bit like oversampling).

A draw option lets you draw your own waveforms but, as sample-users know, this is of limited practical use. If you have a suitable printer driver you can print out the waveform.

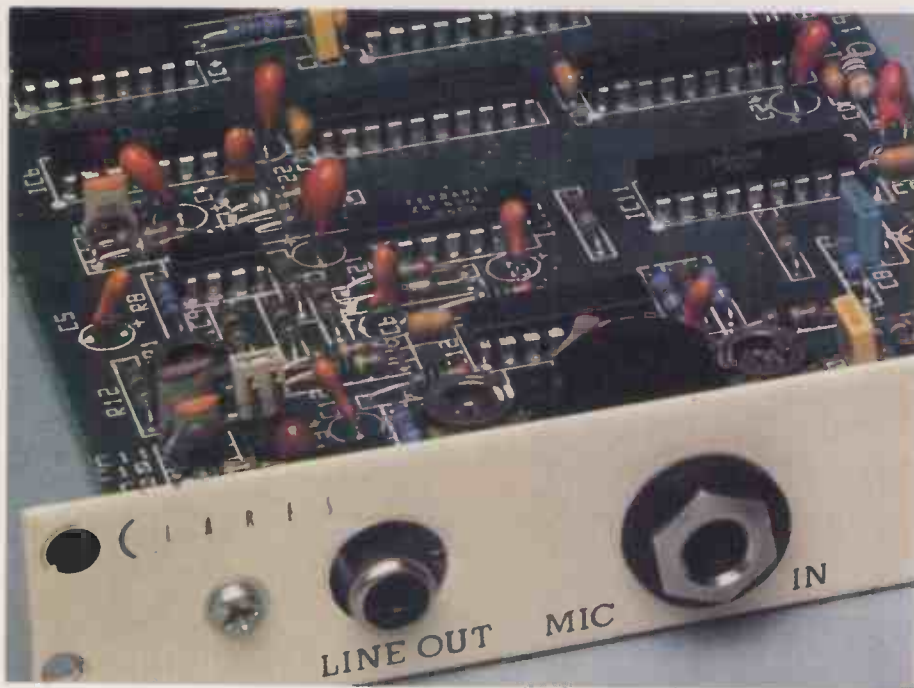
## GIMME GOOD LOOPIN'

ONE OF A sampler's most important functions is its ability to create a good loop. With Armadeus you can create up to 100 loops anywhere within the sample and each loop can be named and made to repeat up to 9999 times. Loops can overlap and you can alter the playback pitch of each one, although this is done with a slider and the deviation is shown in hex.

Each loop you create is put into a Song list and loops can be inserted and deleted within the list. When you play the song the loops play in order. ▶

“If you're into sound manipulation you can produce rap and scratch 'records' using the loop and song functions – there's a lot of power in them thar loops.”

► The program doesn't actually help you to create seamless loops (for example, by letting you line up the beginning and end of a loop) so you may have some judicious clicking to do. But the looped sections need not run consecutively. You can create "spaces" between samples and load several into memory to be played back according to the song list.



It's a very neat idea and it works well, although sometimes it would be useful to hear the section you're editing in context with the rest of the song/sample.

It takes quite a bit of effort to produce a good song but it can be done, and one of the demos is an absolutely brilliant example of looped song construction. Unfortunately, it uses music from a show hosted by one of the media's most obnoxious people – James Whale. Nice demo, shame about the source.

## INS 'N' OUTS

IF YOU HAVE an Acorn MIDI interface fitted you can play the samples via MIDI. I must confess I found this didn't work very well. At the time of writing, nobody could shed much light on why this might be, though both Acorn and Clares are looking into it.

You can also play the sample from the computer's keyboard without any problems.

Output defaults to the computer's internal speaker, although you can route it through the sampler board's line out socket and into an external amp and speakers. The quality is vastly improved (with a much-improved bass response) and altogether quite impressive, although I don't reckon it's going to give Akai any sleepless nights.

You can't toggle external play on permanently, it must be selected each time you want to play back; an action which requires a total of three mouse clicks and movement through two menus. This is annoying in the extreme. External playback ignores a repeat

play setting – which is probably just as well because once it starts you can't stop it – a real shame, as it is much better to work with sound when it's playing through a good speaker.

You can save all of a sample or a marked section of it and you can save a song, too. You can also create a Module from a sample or song. This can be loaded

**“The home studio owner could have fun with Armadeus, although it really isn't a substitute for a 'proper' sampler – but then it is about a tenth of the price.”**

into any Archy software which supports Modules (such as the Maestro music program which is supplied with RISC OS) allowing you to create and use sounds of your own in other programs.

There is a helpful tutorial section in the manual which leads you through the basic operation procedures. The rest of the manual explains the functions of the various menu options and altogether it's quite friendly.

## VERDICT

SO WHAT CAN you do with Armadeus? Well, you can create samples and save them as sound Modules for use in other Archimedes music programs. The manual includes a short example of how you can play them from your own programs in basic.

If you are into "sound manipulation" you can produce rap and scratch "records" using the loop and song functions – there's a lot of power in them thar loops.

The home studio owner could have fun with it, although it really isn't a substitute for a "proper" sampler (but then it is about one tenth of the price).

I can see educational establishments (schools, you know) having fun with it, too, especially as it's intrinsically easier to create music with someone else's bits and pieces (as our worthy Ed pointed out in November's editorial – see, someone reads it) than to create it all yourself.

In fact, I can see lots of people having fun with Armadeus. I had lots of fun with it! If you're in the market for a sampler for your Archimedes, Armadeus is one you've really got to see. ■

**Prices** Armadeus, £79.95; Armadeus software plus Sampler Podule, £149.95.

**More from** Clares Micro Supplies, 98 Middlewich Road, Rudheath, Northwich, Cheshire CW9 7DA. Tel: (0606) 48511.

MUSIC TECHNOLOGY FEBRUARY 1990

## SPECIAL OFFER TO OUR READERS.

Whether you're a keyboard player, guitarist, drummer, or a home recordist, the chances are that you will be looking to buy some new equipment in the coming months.

Apart from finding the cash, one major problem still faces you – how do you find out exactly what's available, what is does and how much it costs?

Answer – The 1990 Musician's Buyers' Guide

The only magazine with all the products, all the spec, and all the prices.

The 1990 Musician's Buyers' Guide is packed with page after page of product information guaranteed to take the pain out of purchasing.

And the best news of all is that you can buy The 1990 Musician's Buyers' Guide now for only £1.50 – and we'll take care of the post and packaging!

But hurry, this offer must close by December 31st 1989.

### A MUST FOR ANY MUSICIAN BUYING NEW EQUIPMENT!

I need information, so please send me..... copies of **THE 1990 MUSICIAN'S BUYERS' GUIDE** at the special price of £1.50 inc. postage and packaging. I enclose a cheque/postal order made payable to Music Maker Publications, or please debit my access/visa card, account number:

--- / --- / ---

Name.....

Address.....

..... Post code.....

Send to: **1990 Buyers' Guide offer, Music Maker Publications, Alexander House, Forehill, Ely, Cambridgeshire, CB7 4AF.**

# THE 1990

# MUSICIAN'S

# BUYERS' GUIDE



Comprehensive listing of price and specifications on 16 markets, including guitars, synthesisers, samplers, drum kits, basses, cymbals, amps, sequencers, microphones, 4-tracks, mixers, effects units, drum machines and more...

THE ULTIMATE MUSIC ACCESSORY



**MUSIC TECHNOLOGY's free classified section** is the biggest of its kind in the business. Every month, we carry more ads for synthesisers, samplers, computers, signal processing gear and assorted other goodies than any other monthly magazine. So when musicians and studio engineers are on the lookout for some extra gear to update their line-up, they turn to these pages *first*.

If you're a private seller, advertising in the back of MUSIC TECHNOLOGY really couldn't be simpler. And if you're searching for a specific piece of equipment or looking for other musicians to fill a gap in your band, we can help out there, too.

Just fill in the form at the end of this section, indicate which sub-section you'd like your ad to appear in, and send it to us by the date specified.

We'll do the rest – and it'll cost you no more than the price of a postage stamp.

If you buy and sell musical equipment as part of a business, you'll have to use the regular classified section on the last page. And we regret we can't answer any queries regarding free classifieds published in MUSIC TECHNOLOGY.

## KEYBOARDS

**AKAI AX73** 6-octave synth, as new, £400; C-Lab Notator, £350; Roland U110, £450. Tel: (0909) 566695.

**AKAI AX73** 6-octave analogue synth/master keyboard, with stand, boxed, immac cond, £399. Simon, Tel: 01-771 1171.

**AKAI AX73** 6-octave analogue synth/mother keyboard, home use only, £300. Tel: Reigate (0737) 243066.

**BIT ONE**, touch-sensitive polysynth, MIDI, keyboard split and layer, case, £195 ono. Dave, Tel: (04024) 44352.

**CASIO CZ1** synth, four RAM packs, patch books, £500 ono. Tel: (0935) 814911.

**CASIO CZ1** and cartridge, unrigged, £325; HT700, £110; Boss CE2.PED, £20; Ibanez CS9, PED/stereo chorus, £45. Tel: 061-620 0058.

**CASIO CZ101** multitimbral synth, 435 sounds/software on Atari disk, £110. Tel: (0761) 32610.

**CASIO CZ101** synth, boxed, manuals, mint cond, £120; Yamaha YMC10 MIDI sync-to-tape unit, £50. Mark, Tel: (0663) 43388.

**CASIO CZ101**, boxed, manuals, PSU, cartridge, two editors. Any offers? Mark, Tel: 01-461 0247.

**CASIO CZ101**, boxed, manuals, good cond, great sounds, £100. Tel: Eastbourne area (0323) 422086.

**CASIO CZ101** MIDI synth, £120; XRI sequencer hardware and software, DX7 editor/library, £60. Tel: (0733) 268785.

**CASIO CZ230S** MIDI synth, drums, 4-track sequencer, multitimbral, excellent cond, boxed, £180 ono. Mark, Tel: (0707) 373077.

**CASIO CZ230S**, multitimbral, 4-track sequencer, drums, 100 sounds, manual, £145. Bennet, Tel: Sheffield (0742) 670385.

**CASIO CZ1000**, mint cond, boxed, RAM, manuals, books, £170. Mick, Tel: (0302) 882719.

**CASIO CZ1000**, hard case, manuals, RAM cartridges, mint cond, £190. Daniel, Tel: (077 389) 658, after 6pm.

**CASIO CZ1000** editing software, Steinberg sequencer for Atari or CBM64. Bargain at £185. Tel: 01-509 1873.

**CHEETAH MK5** mother keyboard, as new, £90 ono. Robert, Tel: Derby 382096.

**ENSONIQ ESQ1** V3.0 software, good cond, £595 ono. Tel: Woking (0483) 760841 or 771380.

**ENSONIQ ESQ1**, cartridge, seq expansion, manual, boxed, excellent cond, delivery possible. Offers? Tel: (0395) 516768.

**ENSONIQ SQ80** synth, voice cartridges, loads of sounds, £850. Pete, Tel: 01-367 1720.

**ENSONIQ SQ80**, cartridge and patches, £850; Tanteq complete rack, £350 or split. Pete, Tel: 01-367 1720.

**ENSONIQ VFX**, brand new, most brilliant synth this year. Andy, Tel: (0273) 822556.

**FOSTEX X26**, £250; Korg DW8000, £500; Roland Jupiter 6, £500; Roland Juno 106, £375. Simon, Tel: (0423) 887977.

**HAMMOND C3** and Leslie, £699; Yamaha CP80, inc flightcase, £799; Minimoog, £399; Alesis Quadraverb, £359; Yamaha KX1, £349. Tel: (0782) 723101.

**JVC KB800**, 5-channel MIDI keyboard, composing cartridge, built-in effects, built-in stereo/amp/seq, £400. Tel: 061-620 0058.

**KAWAI K1**, 8 months old, excellent cond, boxed, stand, £395 ono. Tel: Hartlepool 862162.

**KAWAI K1**, £325; Roland SH101, £80; Yamaha EMT10, £175. Neil, Tel: (0483) 762017.

**KAWAI K5M**, mint cond, £500 ono; Korg DSS1, mint cond with plush flightcase, £750 ovo; Atari 520 with software and £1000's games, all £1600. Tel: (03917) 2937.

**KAWAI PPM** expander, brilliant, boxed, might swap for keyboard with transposer or ? Tel: Darlington (0325) 310397.

**KORG 707**, £330; Poly 800 II, £250; EX800, £125; Roland JX3P, £270; Yamaha YPR9, £250. Tel: 01-997 2179.

**KORG DW8000**, excellent cond, superb sounds, easy to program, manuals, home use. Tel: (0388) 730512, after 4pm.

**KORG M1/M1R** pro comb cards, brand new, 4 in all, £200. Steve, Tel: 01-476 0718, after 6pm.

**KORG M1**, home use only, £1200 ono. Tel: Herts (0992) 445308.

**KORG MONO/POLY**, good cond, manual, £140 ono. Tel: (04023) 70981, eves.

**KORG P3** piano, £180 ono; Yamaha QX21 sequencer, £120 ono. Both in perfect cond, boxed. Chris, Tel: 01-748 2767.

**KORG POLY 800**, manuals, adapter, home use only, good cond, £210. Tel: (0272) 876297.

**MOOG OPUS 3**, excellent string organ bass synth, fully polyphonic, great cond, manuals, £140. Tel: 01-868 1143.

**MOOG PRODIGY**, great sound, 2 oscillators, good cond, manual, £120. Tel: (03543) 5239, eves and weekends.

**OSCAR SYNTH**, hardly used,

manual, mint cond, with stand, £220. Tel: Harrogate (0423) 524092.

**ROLAND ALPHA JUNO 1**, excellent cond, boxed, manuals, £250. Tel: South Wales (0443) 205344.

**ROLAND D10**, with flightcase, Dr T's editor, £595. Also ME30P wanted. Tel: South Wales (0633) 365758, after 6pm.

**ROLAND D10**, as new, boxed, £625. Consider S900/950 in part exchange. Tel: (0545) 580539.

**ROLAND D10**, perfect cond, £580 for quick sale. Tel: 01-998 8149. West London.

**ROLAND D10**, excellent cond, home use only, boxed, manuals, etc, £550. Tel: (0423) 569361.

**ROLAND D20**, swap for your D10 plus £350 cash. Tel: Halifax (0422) 356214.

**ROLAND D50**, flightcase, £800; Yamaha DX7, flightcase, £500. Home use only. Tel: 01-361 0949.

**ROLAND D50** and PG1000 programmer, both immac cond, also extra memory card, home use only, £960. Tel: Chester (0244) 677690.

**ROLAND D110**, £400 ono plus new sounds; Matrix 1000, £350 ono. Or swap for D550. Tel: Southport (0704) 66628.

**ROLAND D110**, unused, offers around £425. Exchange Kawai Q80. Tel: (0702) 219723.

**ROLAND D110**, plus sound card, excellent cond, £380 ono. Chris, Tel: (0883) 717657.

**ROLAND E20**, as new, with stand and music, £950. Tel: (0252) 725900.

**ROLAND JP8**, MC202, CR8000, Fostex X15, amp, 150W. Emigration forces sale. Mike, Tel: 01-907 4755.

**ROLAND JUNO 106**, £300 or exchange for a Cheetah MK5V and/or Yamaha TX81Z. Charlie, Tel: (0482) 564182.

**ROLAND JUPITER 8**, MIDI, flightcase, £749; MT32, £299; MSQ700, £125; QX1, £375; PG800. Malcolm, Tel: 091-565 4334.

**ROLAND JX3P** programmer, cased, £300; Yamaha RX21, £100; Moog Rogue, £75. Offers? Matthew, Tel: (0206) 271145.

**ROLAND JX3P**, flightcase, Carlsbro 20W amp, perfect cond, £400. No offers. Seth, Tel: 021-421 4148.

**ROLAND JX8P**, unused, still boxed, inc manuals, MIDI leads, £450. Neil, Tel: 01-572 4599.

**ROLAND JX10**, the ultimate analogue/digital synth, flagship, dual/split 6-octave keyboard, sequencer, inc ROM/RAMS, new cond, £770 ono. Tel: 091-281 4662.

**ROLAND JX10**, good cond, flightcase, cartridge, £800. Tel: Glasgow 041-423 5485.

**ROLAND MKS7** Super Quartet, £100. Tel: (0450) 75081. Write: Mr Scott, 26D Harden Place, Hawick TD9 7BY.

**ROLAND MT32**, £200; TX7, £250; E-mu II+, two disk drives, SMPTE, etc, flightcase, library, £2500. Tel: (0706) 78141.

**ROLAND MT32**, multitimbral expander, with drums, reverb, boxed, £275 ono. Gavin, Tel: 041-339 1452, after 7pm.

**ROLAND SH101** synth plus 102 expander, £140; touch sensitive electronic piano, £80. Clive, Tel: (0442) 871870.

**ROLAND SH101**, mint cond, boxed, manual, PSU, £95 or part exchange Korg KMX8 mixer. Tel: (0642) 470680.

**SEQUENTIAL PRO ONE**, classic monosynth, excellent cond, manual, £125. Tel: (03543) 5239, eves or weekends.

**SEQUENTIAL CIRCUITS** Sixtrak, analogue polysynth, multitimbral, updated MIDI, £250. Trevor, Tel: (0268) 43815, after 7.30pm.

**SIEL DK80** polysynth, manual, vgc. Tel: Bradford (0274) 591642, after 6pm.

**SOLINA** string machine, classic string synth, £65. Tel: (09277) 66664.

**TECHNICS EX50L** home organ, half price, £1100 or exchange with C300 portable. Tel: Somerset (0458) 42740.

**VOX** Continental organ, £100; DX21, £250; TX7, £180. Tel: 051-648 1668.

**YAMAHA CS80**, not fully working, offers? Will swap for synth or guitar. Tel: Oxon (08675) 71909.

**YAMAHA DSR2000**, good cond, cost £900, sell for £450; Siel expander 80, £70. Tel: (0384) 56296.

**YAMAHA DX7**, manuals, ROMs, Yamram, stand, case, breath controller, Boss flanger, disks (Atari), £590. Tel: 01-868 1143.

**YAMAHA DX7**, back-lit, super-max, upgrade MIDI controller, arpeggiator stacks, delays, 100's of voices, £650. Tel: 061-620 0058.

**YAMAHA DX7**, 3 ROMs, hard case, £495; also 3 RAMs, £30 each; TX7: offers? Tel: (0990) 25900, eves.

**YAMAHA DX7**, home use only, offers around £500. Tel: (0702) 219723.

**YAMAHA DX11**, immac cond. Neil, Tel: (0536) 771242, eves.

**YAMAHA DX11**, a TX81Z with velocity and aftertouch sensitive keyboard, mint condition with RAM card and manual, £380. Hard case for the above or similar synth, £35. Both £400. Tel: (03543) 5239, eves and weekends.

**YAMAHA DX21**, mint cond, £245 ono; Prophet 600, full MIDI, similar to Prophet 5, big sounds, £425 ono. Tel: 01-485 6441.

**YAMAHA DX27**, digital synth, as new, £260. Tel: 01-868 3371.

**YAMAHA DX27**, good cond, £250; Korg EX800, £80; Roland TR505, £100. Simon, Tel: 01-504 3260.

**YAMAHA DX100**, boxed, mint cond, plus BCI breath controller, £185. Tel: Harrow area 01-427 5681.

**YAMAHA PF85** electric piano, home use only, £825. Kathy, Tel: (0252) 521902.

**YAMAHA PSR6300**, top keyboard, £500 ono. Or exchange for Atari/Amiga computer. Tel: (0785) 662896.

**YAMAHA TX7**, fully fledged DX7 in a little box, 16-note

polyphonic, nothing cheaper at £200. Tel: 061-620 0058.

**YAMAHA TX7**, backlit, £245; Roland PG10, £90; Akai EX65D delay, £125. Fred, Tel: (0633) 266647, eves.

**YAMAHA TX7**, £150; TX5, £199; CX5M, large keyboard, DX7 editor, composer, Bit 2, etc, £170. All mint cond. Consider swap. Tel: (0895) 443142.

**YAMAHA TX81Z**, FM expander, boxed, £195; Casio CZ101, £100. James, Tel: (0786) 78655.

**YAMAHA TX81Z**, boxed, guaranteed, £245; MEP4, boxed, as new, £225. Essex, close M25. Tel: (04022) 23345.

**YAMAHA TX81Z**, £160; Dr T's KCS, £90; Roland 8:2 submixer, £50; Alesis HR16, £250. Tel: (0325) 481154.

**YAMAHA YPR6** portable piano keyboard, 5 preset sounds, £200. Tel: (0793) 729256.

## SAMPLERS

**AKAI S700** sampler, 10 disks, 7 sample tapes, newer version, crossfade looping, a giveaway at £400. Rick, Tel: Leeds (0932) 505359.

**AKAI X7000**, 64 disks, £450; Casio CZ101, £140; Roland TR707, £200; Sony 501, £300. Tel: (0359) 31800.

**ENSONIQ MIRAGE** MkII, complete with case, MASOS and large sound library, immac cond, £525. Don, Tel: 031-441 3948.

**ENSONIQ MIRAGE** plus large library with MASOS software, good cond, £450 ono. Tel: (024 027) 310, anytime.

**FREE ROLAND S10**, boxed, mint cond, when you buy my 150 disks, bargain at £480. Tel: (0732) 354311, eves.

**KORG DSS1**, immac, £950; Tascam 38 and Bel, £1100. Tel: (0308) 863137, days or (0300) 20220, eves.

**ROLAND S10**, multitimbral, velocity sensitive sampling keyboard, £420; Korg P3 piano module, £230. Tel: 01-997 2179.

**ROLAND S330** sampler, vgc, £850. Tel: 01-743 6600.

**ROLAND U20** keyboard, 1 month old, £875; Yamaha R100, boxed, £85. Tel: Haverhill (0440)

707610.

**ROLAND U110**, £450; Casio CZ1, £450. Both immac cond, boxed, manuals. Tel: Runcorn 718655.

**ROLAND U110**, £400; K1M, £250; X15/MN15, £150; SPM 8:2, £200; SDE, £100; QX21, £100; MD8, £50. Swap £950 of above for EPS. Tel: (0748) 5481.

**ROLAND U110**, with hard case and 4 PCM cards, £449. Tel: Farnborough (0252) 521902.

## SEQUENCERS

**ALESIS MMT8** sequencer, boxed, as new, £170. Tel: 01-348 3307.

**ALESIS MMT8** 8-track sequencer, new, boxed, £149; Wanted: speaker amp for organ. Tel: Surrey (0932) 844646.

**CASIO SZ1**, good cond, £70. Tel: Burton (0283) 33458.

**ROLAND MC202**, £90; TB303, £80; TR606, £70. All boxed, manuals. Clive, Tel: (0442) 871870.

**ROLAND TB303** Bassline, PSU, £80; MC202, PSU, £80. Tel: (0904) 653554.

**YAMAHA QX3**, 16-track, disk drive, DX7 syco, Roland Jupiter 6, £399 each. Tel: 01-446 3098.

**YAMAHA QX5**, home use only, vgc, boxed, manual, etc, £190 ono. John, Tel: (0483) 32802.

**YAMAHA QX21**, good cond, manual, cassette lead, £110. David, Tel: (0981) 240 314, 4-5pm.

## DRUMS

**ALESIS HR16**, manuals, boxed, as new, touch-sensitive pads, home use, £250 ono. Dan, Tel: 01-958 7012.

**ALESIS HR16**, hardly used, perfect cond, boxed, £275 ono. Chris, Tel: 01-748 2767.

**BOSS DR220A**, boxed, as new, £85; JHS bassbox, multi-effects, personal amp, £85. Tel: Sussex (0273) 493659.

**BOSS DR220E**, LCD display, step and real-time programming, boxed, manuals, perfect cond, £60. Tel: 091-483 8110.

**CASIO RZ1** sampling drum machine, slightly marked case, £180 ono. Cal, Tel: Basingstoke (0734) 811449.

**CASIO RZ1** sampling drum machine, manuals, tape etc, boxed, mint cond, £170 ono. Tel: 01-348 3307.

**KORG DDD1**, £225; Yamaha RX17, £150; Shure headset mic, £45. Neil, Tel: (080 83) 353.

**ROLAND CR8000** drum machine, preset and program, good cond, manual, £90. Charlie, Tel: (0274) 682532.

**ROLAND TR505**, £125; Yamaha QX21, £100. Neil, Tel: (0483) 762017.

**ROLAND TR606** Drumatix, £65 ono. Wanted: CX5M accessories. Andrew, Tel: (0726) 624158, days or (0726) 815461, eves.

**ROLAND TR626**, manual, power supply, home use only, boxed, mint cond, £170 ono. Carl, Tel: 061-436 7144.

**ROLAND TR707**, as new, manual, £200. Neil, Tel: (0977) 517672.

**ROLAND TR707** drum machine, boxed, manuals, PSU, MC64 cartridge, £250. Nick, Tel: (0902) 755561.

**SCI DRUMTRAKS**, MIDI, plus extra soundchips, £160; Oberheim DMX hip-hop drum machine, £160. Tel: (0342) 323094.

**SIMMONS SDS1000**, 5 pads and rack, as new, £450 ono. Tel: 061-998 3494.

**YAMAHA RX7** digital drum computer, plus effects, perfect cond, £375. Tel: (0203) 501521.

**YAMAHA RX11** drum machine, mint cond, 12 separate outputs, 9 snares, 3 bass drums etc, £165 ono. Tel: 01-485 6441.

## COMPUTING

**ATARI 1040**, SM124 monitor, Dr T's KCS 1.5, fast basic, £460. Mark, Tel: (0566) 85 645.

**ATARI 1040STF**, Iconix, SMI25, £395 ono. Martin, Tel: 01-697 1387.

**ATARI 1040STFM**, new, boxed, £400; Ensoniq Mirage plus library, £450 ono; C-Lab Creator, £200. Tel: (024 027) 310, anytime.

**COMMODORE 64**, disk drive, printer, datacassette, Modem, lightpen, FM/synth keyboard, sequencer, £900;

Business/leisure software/utilities, £270 ono. Andy, Tel: 021-433 4066.

**COMMODORE 64**, MIDI interface, sequencing software, FM sound expander, full size 5-octave keyboard, joystick, games, excellent cond, £170 ono. Mark, Tel: (0707) 373077.

**DR T's KCS** for the Amiga, original plus backup, manuals, etc. Offers? Tel: (0702) 219723.

**DR T's** Tunesmith interactive composing program for the ST, £95, plus other software. Also Atari 520ST, £250; Pandora M1 editor, £80 ono. Alex, Tel: (0603) 698355, days or 611144, eves.

**MUSIC-X** for Commodore Amiga, cost £220, will accept £175. Mike, Tel: (0274) 671387, after 6pm.

**STEINBERG CUBASE**, genuine, with key, manual. Poverty forces sale, £345 ono. Tel: Berkhamsted (0442) 862373.

**STEINBERG PRO24** version 3.0, genuine, £150. Tel: (0706) 815912.

**STEINBERG PRO24** V3.0, £180; Bokse SM1, SMPTE, £150; Yamaha FB01, multitimbral, £130. Phil, Tel: 01-464 2940 or (0634) 42470.

**STEINBERG PRO24** V3, only £160. Ronnie, Tel: (0382) 552768.

**STEINBERG PRO24** V3, manual, disks, as new, £190. Tel: (0392) 876675, after 9pm.

**XRI** sequencer interface, real and step-time software, DX7 editor, massive DX7 library, £60; Casio CZ101, £120. Tel: (0733) 268785.

**YAMAHA CX5M**, 8-track, MIDI, Composer, Voicing, small keyboard, boxed, manuals, perfect cond, £150. Tel: 091-483 8110.

## RECORDING

**AHB CMC24**, 24:16:2, computer/MIDI automated muting/routing desk, 6 aux, superb EQ, mint cond, £1825. Tel: 01-361 1337.

**ALESIS MIDIVERB** and Midifex, both racked together, perfect cond, £325 ono. Tel: 01-485 6441.

**ART PROVERB**, £150 ono;

Roland PG1000 programmer for D50, £175 ono. Tel: 01-281 1918.

**AUTOMATED MIXING!** Simmons SPM 8:2, 64 mix memories, £225; Akai MB76 MIDI programmable mix-bay, £195. Tel: (02576) 2609.

**DESKTECH 16:2** mixer, excellent cond, boxed, manual, home use only, £320 ono. Tel: (0703) 849662.

**DOLBY A360**, two, £275 each, or £500 pair; Neumann KM84 mic, £195; 2" tape, used once, £100/reel! Or offers considered. Tel: Hemel Hempstead (0442) 862373.

**FERROGRAPH MODEL 631** with abridged operating instructions, plus the manual of the Ferrograph Series 6. Any sensible offers to Bristol (0272) 635499, after 5pm.

**FOSTEX A4** 4-track, reel-to-reel tape recorder, 7.5/15ips, takes 7" reels, little use since recent overhaul and service, very good heads, £375. Tel: (03543) 5239, eves and weekends.

**FOSTEX 250**, 4-track recorder/mixer, reasonable cond, £250 ono. Mark, Tel: 01-517 0530.

**FRONTLINE** 8-channel rackmount mixer and reverb unit, £150 the two. Tel: (0222) 889049, eves.

**FRONTLINE X8** line mixers, £50; 18-unit rack, £50. Paul, Tel: (02357) 4108, days.

**JL COOPER** PPSI time-code generator, song pointers, SMPTE to MTC, £125. Tel: (0903) 32174.

**MULTICORE/STAGEBOX**, 40 metres, brand new, 12 sends, 4 returns. Tony, Tel: (0438) 720143, eves.

**ROLAND DIMENSION D** chorus, £400; Revox A77, 15ips, £250; Great British Spring, £50. Tel: (0359) 31800.

**SIMMONS SPM 8:2** MIDI mixer, 3-band EQ, 2 aux, 1U rack, £180. Tel: (0903) 32174.

**SIMMONS SPM 8:2** MIDI mixer, £200; Fostex 3070 comp/lim expander, £170. Both vgc. Tel: (0222) 549 350.

**TASCAM 34**, £430; 6:4 mixer, £160; Kawai K1, £360; pair Calrec capacitor mics, £130. Tel: 01-997 2179.

**TASCAM 38**, 8-track, plus Bel 8 channel noise reduction, £125C ono. Tel: (0460) 57386.

**TASCAM 38**, £990; D110 and editor, £430; K1 and editor, £350; Digitech IPS smartshift, £520. Alan, Tel: 051-339 1167.

**TASCAM 38** recorder, Seck 18:8:2 mixer, remote, loom, only 20 hrs use. Tel: (0223) 354302.

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

## AMPS

**FENDER 185** pro amp, flightcased, Yamaha MS6 standard guitar, Boss BE5, Nady cordless, mint cond, extras. Tel: 01-555 1922.

**SALE:** Yamaha PC2002M power amp, £450; Sony C48 mic, £425; Drawmer DL221 comp/lim, £235. Tel: (0935) 25333.

## PERSONNEL

**GREENGATE DS3 USERS!?!?** The user group doorway is open to all. Free membership! Chas, Tel: 01-584 6733, days; 01-360 1348, eves.

**KEYBOARD SONGWRITER** seeks genuine record company with financial support for major project. Craig, Tel: (0472) 79264.

**KEYBOARDIST/PIANIST/COMPOSER** familiar with modern studio techniques seeks opportunities in Wiltshire/Avon. Angela, Tel: (0793) 729256.

**KEYBOARDS/SYNTH** player needs inspiration. Kraftwerk, New Order, Front 242, 808 State. Chris, Tel: Ringwood (92) 478435. No hippies please!

**MUSICIAN, 29** home recording mystical sound, no stage band, seeks deep-minded female/male keyboard player. Tel: Barnsley 748907.

**PERSONS** wanted for voice over work. No experience required. For information, Tel: 021-766 7822, anytime.

**ROLAND D5/10/20/110** Users Group. Recently formed. Tim, Tel: (0621) 892 682.

**SOUND ENGINEER, 21** seeks position in top studio as assistant engineer. Tel: (0865) 66358.



## MISC

**AOMEL** professional draughtsman's board, weighted motion, wooden top, white iron frame, wonderful piece of equipment that will last forever, £200 ono. Tel: Crawley (0293) 551297, eves.

**BOSS MZ2** digital metalizer, as new, never gigged. Tel: Walton-on-Thames (0932) 231617.

**DENON DRM20** cassette, £250; Bokse SM9, SMPTE, £300; Yamaha MEP4, MIDI processor, £250. All mint cond. Yamaha CS10 and CS30, £150 ono. William, Tel: West Yorkshire (0924) 469439.

**ELECTRONIC** Music Network tapes. Send SAE to Penga, 85 Silver Street, Kings Heath, Birmingham, B14 7QT. Tel: 021-444 0298, after 6pm.

**E&MM AND MT** from 1985 to 1989. Excellent cond. Offers. Tel: (0702) 587431, after 6.30pm.

**FLIGHTCASE**, suit DX11 or similar, £35. Tel: (03543) 5239, eves and weekends.

**JHS ROCK-BOX** effects unit, chorus, delay, overdrive, distortion, two clean channels, boxed, manual, £60. Tel: (02357) 3160.

**JVC HRD565** hi-fi stereo video recorder, good cond, £260. Chris, Tel: (0883) 717657.

**KORG MS20**, manual. Offers. Tel: Leeds (0532) 866848, eves.

**MPC** kit and clap require very slight attention, cost £400! A joke at £30; Yam RAM mega cart, £30; DX Mkl, (Steinberg). Tel: 061-620 0058.

**RICKENBACKER** bass guitar, model 4001, £450; Honor electric guitar, £125; Yamaha PSR36

keyboard, £275. Tel: (0303) 49309.

**ROLAND MKS20** digital MIDI piano module with M16C RAM cartridge, as new, £300. Tel: 051-260 6675.

**ROLAND MPU101** 4-channel MIDI-to-CV interface, mint condition with manual, very useful and not often available, £230. Tel: (03543) 5239, eves and weekends.

**SYNC/MIDI** interface, £30; patchbay, 32-way, £30; Peavey 40W bass combo, £75; chorus pedal, £35. Tel: (0342) 323094.

**TAKAMINE EF340S** electro-acoustic guitar, good condition, EQ, with lockable hard case, £240. Tel: (03543) 5239, eves and weekends.

## WANTED

**A-FRAME** wanted, 3-tier, must be in Bradford area-ish. Steve, Tel: (0274) 672898.

**AKAI S950**, Casio DA2. Cash waiting. Tel: (0743) 240226.

**CHEETAH MS6**, Matrix 1000, Cheetah MK5V, Kawai K1M, Korg Poly 6 or similar synth. Pete, Tel: 01-367 1720.

**EIGHT-TRACK** tape machine and desk wanted. Must be reasonable price. Tel: 051-648 1668.

**FLIGHTCASE** for RD250S, (1242 x 461 x 133mm). Tel: (0707) 323960.

**MINIMOOG** and Moog Taurus bass pedals, £300 and £200 offered respectively. Nick May, Tel: (0243) 512257.

**MOOG MODULAR** synths, 15, 35, 55, Ilc. Please write with description and price. Write: Ulrich Druhmann, Hertzstr. 28,

2900 Oldenburg, West Germany. **BERHEIM DSX** sequencer, operator's manual or photocopy. Electro-Harmonix, 16-second digital delay. Tel: 021-420 3295, eves.

**PURNELL, PARNELL** Nick from Birmingham, now in Chester area. Tel: 021-420 3295, eves.

**ROLAND D10** or possibly D20. Cash waiting. Tel: Reading (0734) 668709.

**ROLAND D110** plus Akai ME30P wanted. Tel: (06333) 65758, after 6pm.

**ROLAND D550** module, good price offered, cash waiting. John, Tel: 01-995 2147.

**ROLAND PG300** programmer for Alpha Juno. Will buy or borrow. Please help! Steve, Tel: (0753) 40243.

**ROLAND TB303** Bassline and 808 drum machine. Cash waiting. Paul, Tel: (0733) 77234.

**STUDIOMASTER** Series II, 8-channel expander. Tel: (0296) 688491.

**TELEX** audio cassette duplicator, model CD4 (1.1 or 1.3) or similar fast copier. Dave, Tel: Naylor (0788) 890305.

**VOCODER**: Korg DVP1 or similar, in good cond. Carl, Tel: Wigan (0942) 716800.

**WANTED** badly: a Roland TR909. Will pay £300 and collect. Alan, Tel: (0375) 676817. Now!

**WANTED**: guitar synth, Roland GR50. Will collect. Tel: (0204) 387650.

**WANTED**: old drum machines, Roland, Oberheim, Linn and seq circuits. Tel: (0342) 323094.

**WANTED**: sounds for Ensoniq ESQ1 and Juno 106 buy or swap. Data tape only. Tel: (0642) 479789.

## ad index

ABC Music.....	29
Argents .....	28, 58, 76
Babel Music .....	49
Brixton Exchange Mart .....	19
Chips .....	73
DataTechnology .....	73
Dougies .....	9
Eddie Moors Music .....	65, 71
Ensoniq.....	12,13
Future Music (Chelmsford).....	59
Future Music (Chelsea).....	33
Gajits Music Software .....	58
Gateway .....	73
Gigsounds .....	17
Harman.....	24, 25
Holiday Music .....	41
Honky Tonk Music .....	48
Keyboard Shop .....	37
Keynote Software.....	77
Korg U.K. ....	O.B.C.
Ladbroke Computing .....	69
Midi Music .....	28
Music Messe .....	77
Philip Rees .....	71
Roland U.K.....	I.F.C.
Soho Soundhouse.....	35
Sound Technology .....	3
Thatched Cottage Audio....	63
The Synthesiser Company.....	1
Trilogit.....	65
Unisound.....	43
Yamaha .....	I.B.C, 44, 45

## MUSIC TECHNOLOGY FREE CLASSIFIED ORDER FORM

Fill in the form to a maximum of 15 words (one in each box), and send it to: **MUSIC TECHNOLOGY Free Ads, Music Maker Publications, Alexander House, Forehill, Ely, Cambs CB7 4AF**. Please print clearly in BLOCK CAPITALS. The ad must reach us on or before **Monday, 22nd January** for inclusion in the March 1990 issue of MUSIC TECHNOLOGY – late arrivals will be printed in the next available issue.

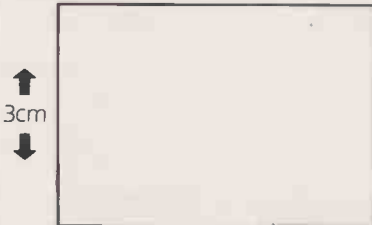
Please include this ad in the ..... section.

MUSIC TECHNOLOGY FEBRUARY 1990


# CLASSIFIED

## CLASSIFIED ADVERTS

A classified advertisement can cost you as little as £20 per month\*. You choose how long you want to advertise, for one month, three months, six months or 12 months, the following is an example:



One Month £15 per column cm  
£45 + VAT per insertion

Three Months £13 per column cm  
£39 + VAT per insertion

Six Months £12 per column cm  
£36 + VAT per insertion

12 Months £10 per column cm  
£30 + VAT per insertion

← 1 Column →

To advertise please send your copy + a cheque (including VAT) for the first advertisement to:

Music Technology, Alexander House,  
Forehill Ely, Cambridge, CB7 4AF.

\*Based on a minimum size 2cm X 1 Column advert booked for 12 Months.

## tangent

Tangent Sampler Tapes are superb quality chrome cassettes featuring over 200 great sounds. Tape 1 features Rock/Latin percussion sounds from the World's Top Drum Machines including Linndrum 707! whilst Tape 2 contains multi-sampled instruments and Sound Effects (Fairlight, Emulator, JPB etc) Studio quality you can afford at £7.50 each or £12.50 the pair.

Further details from Tangent Musical Services.  
152 Victoria Road, Scarborough, Yorkshire,  
YO11 1SX. Tel: (0723) 370093/583899

## FZI SAMPLE DISCS BEST OF KORG MI

10DSDD Disc Set £30 inc. post  
Over 60 sounds including drum  
25th Floor, PO Box 74  
Poole, Dorset BH15 2BA

## IMW SCHOOL OF RECORDING

Midi-Programming  
and 24 Track  
Engineering Courses  
Call now for details on  
01 608 0231  
IMW 44, Peartree St.,  
London EC1

## AKAI S900/950 SAMPLE SETS

Vol 1. 25 disks mixed selection A  
Vol 2. 25 disks mixed selection B  
Vol 3. 25 disks Drums & Cymbals  
Vol 4. 25 disks Percussion. FX. Stabs. etc  
Price per set only £79.95 including VAT, insured  
postage and full replacement guarantee.  
All samples/programs are professionally  
produced and are of the highest quality.

Details from/Cheques payable to: VALLEY  
STUDIOS, Pant Byrlip Farm, New Quay,  
Dyfed, SA45 9TU. Tel: (0545) 560164

## EPS. S900, FZI, MIRAGE SAMPLE LIBRARIES

We offer superb pro-quality, computer-edited samples, all of which are taken from "state of the art" samplers and synths. Our EPS library is the largest in the world, and our other libraries are catching up fast.

ALL DISKS £8.50 INC P&P 5 DISKS £40.00 10 DISKS  
£70.00 DEMO TAPE £0.80p  
PHONE NOW FOR FREE CATALOGUE (SPECIFY WHICH  
LIBRARY)

### SAMPLE TAPES

Our sample tape collection currently features six high quality  
chrome cassettes, jam-packed with multi-sampled sounds.  
VOL 1 "CLASSICS 1", VOL 2 "DRUMS & PERCUSSION",  
VOL 3 "CLASSICS 2", VOL 4 "ORCHESTRA 1", VOL 5  
"CLASSICS 3", VOL 6 "SOUND FX 1", VOL 7 "HOUSE  
ATTACK", VOL 8 "CLASSICS 4", VOL 9 "World Music 1"  
Our latest release VOLUME 10 "DRUMS & PERCUSSION  
2" features Drum sounds from the latest generation of Drum  
machines and Samplers.

ONLY £6.50 EACH INC P&P OR ANY 5 FOR £28.00.  
OR THE WHOLE 9 FOR £150.00

WRITE/PHONE NOW FOR FREE TAPE CATALOGUE  
MAKE CHEQUES/P.O.S PAYABLE TO  
DESERT ISLAND.

20 EDINGTON ROAD, MILTON OF CULCABOCK,  
INVERNESS, IV2 3DB.  
TEL: 0463-221488. (7 DAYS)

## Do you need to learn about MUSIC, COMPUTERS and MIDI? WHY NOT USE YOUR ST COMPUTER TO TEACH YOU?

If you have a MIDI system, then The Music Matrix MIDI-Disk Magazine can help you  
Dedicated to the MIDI user on the ST, Educational by design, covering every aspect of the MIDI and MUSIC  
data available for the ST computer. Each issue has files with Synth Editors, New Voices, Original Sequences  
(most are in MF5), e.g. Erico Passaga (Issue 5), News, Reviews, MIDI tutorials, MUSIC tutorials,  
MASTERTRAKS PRO sequencer demo (Issue 3) and even complete Sequencers (Issue 1, 7).

Available now - Issue 7 has a new 8 track Sequencer which supports MIDI THRU,  
MULTIPLE VOICE RECORDING and EDITING also a full K1 EDITOR with New Voice Banks  
EDITORS Roland D10/D20/D110 Tone Editor - Issues 2, 5, MT32 Editor - Issue 3  
Yamaha FB01 Editor - Issue 4, Korg M1 50 Vax & Librarian - Issue 5, M1 50 Combi & Combi Editor - Issue 6.  
KAWAI K1 Editor + 2 New Voice Banks.

NEW VOICES Roland D10/D20/D110 (128) - Issue 6, Yamaha FB01 (96, 48) - Issue 3, 5,  
Korg M1(50) - Issue 5, Kawai K1, 2 New Banks - Issue 7

The Matrix is released Bi-Monthly and is in Dual Format after Issue 6  
Single Issue Price is £10. Any 4 Issues may be bought for £35.

New! High Quality Audio Cassette featuring the KORG M1 and Roland D110 Modules.  
Original sequences using many custom voices to let you hear and appreciate the sounds of  
these mellifluous instruments. The sequences are also available in MF5 format onn disk along  
with extensive files. Cassette £4.95 / Disk £9.95



The Music Matrix is ONLY available from  
The Music Matrix, Jongleur House, 14 Main Street,  
East Wemyss Fife KY1 4RU. Phone 0592 714887



# FOR CLASSIFIEDS CALL COLIN MCKEE ON (0353) 665577

## \$900 \$950 USERS!!

Samples Galore at Low Low Prices  
Ready made or tailored to suit your needs  
Send s.a.e. for free listing of modern quality  
samples to:  
Amadeus Ltd, 16 Woolton Close, Ashton-  
in-Makerfield, Nr. Wigan, Lancs. WN4 0LT  
(0942) 722508

## HAVE YOU FELT IT?

AKAI S900/S1000 AND CASIO FZ1 USERS -  
AVAILABLE NOW!

Presenting a selection from our latest catalogue:

WORLD 1 - Instruments and sounds from  
WORLD 2 - sources Worldwide including  
WORLD 3 - Africa, India, China, Australia  
Disks £8.50 each or all 3 for only £20.

JB DRUMS 1 - The funkiest drum sounds  
JB DRUMS 2 - to man brought together  
DDDDRUMS 1 - in a unique collection  
DDDDRUMS 2

Disks £8.50 each, 2 for £16.00 or all 4 for £30  
INDUSTRIAL 1 - Neu Age Noise  
INDUSTRIAL 2

Disks £7.50 each

Our classic "House" collection, now on 6 disks! Disks  
£7.50 each, 4 for £25.00, 6 for £35.00.

Also available: TR808, TR909, LINN MKII, Moog,  
TR303, Prophet 5 etc. etc. - Please send for full  
catalogue, or call 01-840 700, ask for 039 0326 and  
leave your name and address. Please state make of  
sampler when ordering.

The Soundfile  
48 Dorset Street, London W1H 3FH

## Steinberg Pro24 Price Crash! All Music Software At Reduced Prices!

We have the worlds favourite Software based Sequencer in  
Stock at its lowest ever price! You can now own the same  
Sequencer used by the World's top recording musicians. Call us  
for our latest price list giving details of this and other amazing  
offers. Steinberg Cubase and all Steinberg Editors must  
increase in price this February... call us for the last of our  
stock at the pre-increase price. Emu Proteus Editors now  
available and the fantastic X-OR!

TANGENT  
The Computer Music Specialists  
152 Victoria Rd, Scarborough, Yorks. YO11 1SX  
Tel: 0723-370093  
Your 1st Choice for Music & Computers. Demo By  
Appointment Only.

ARRANGING COURSES at Right  
Track Studios. Beginners to advanced  
with accommodation in lovely  
Herefordshire surroundings. Courses  
tailored to your requirements,  
based on David Etheridge's arranging  
series in H&SR. Phone him on  
0432-72442 for details.



## IF AN ADVERT IS WRONG, WHO PUTS IT RIGHT?

We do. The Advertising Standards Authority ensures  
advertisements meet with the strict Code of Advertising Practice.

So if you question an advertiser, they have to  
answer to us.

To find out more about the ASA, please write to  
Advertising Standards Authority,  
Department X, Brook House,  
Borrington Place, London WC1E 7HN.



This space is donated in the interests of high standards in advertisements.

## ADVANCED SOUND RECORDING & PRODUCTION

One-Year Full-Time Diploma Course in Modern 24-Track Studio and 32/48-Track Digital Studio  
Digital Audio Concepts, DASH and PD Formats, Analogue/Digital Recording, Processing, Mixing and Editing Automaton  
and Synchronisation, MIDI and SMPTE Time Code, Computerised Sound Mixing Consoles, Analogue/Digital Sound  
Synthesis and Sampling, Working with Various Bands and Individual Artists, Music Writing, Song and Orchestral  
Arrangements, Radio Jingles and Commercials, TV/Film Sound Tracks, Local Radio Operation, Introduction to Pop Promo  
Production, Business Practice in Music Industry.

Three-Month Intensive or Six-Month Part-Time CERTIFICATE Courses in  
ANALOGUE SOUND RECORDING AND PRODUCTION  
Modern 24-Track Sound Recording and Production, Introduction to Digital Audio, Analogue/Digital Sound Synthesizers and  
Sampling Keyboards, Studio Work with Bands and Individual Artists, Music for TV and Film, Song Arrangements for  
Record Release.

DIGITAL SOUND RECORDING AND PRODUCTION TECHNOLOGY  
Digital Sound Recording, DASH and PD Formats, Digital Multi-Track Operation, Sony PCM-3324 and Mitsubishi X-840,  
Rotary Heads, Digital Recording, Tapeless Recording, Audiophile and Synthesizer, Digital Synthesis/Sampling including  
FAIRLIGHT, Digital Audio Processing mixing Electronic and Manual Editing, Computerised Sound Mixing Consoles,  
Automation and Assignable Consoles, MIDI and SMPTE Time Code their Practical Application in Creative Music  
Production, MIDI Controlling Networking, Triggering and Sequencing, ATR/VTR Synchronisation.

CREATIVE MUSIC RECORDING AND PRODUCTION TECHNIQUES  
Music Notation and Song/Music Writing, Rock, Funk, Jazz, Soul, Reggae, TV/Film Theme and background Music, Song  
and Orchestral Arrangement Technique, Arrangements for Strings, Brass Section, Woodwind etc. Creative use of  
Instruments and Microphones, Working with Bands and Individual Artists, Recording Vocals and Choirs, Local Radio  
Operation.

Many Former Students are now employed in TV/Video and Audio Industries.

MEDIA PRODUCTION SERVICES  
BON MARCHE BUILDING, 444 BRIXTON ROAD, LONDON, SW9 8EJ  
Tel: 01-737 7152 01-274 4000, Ext 328.



# Now there's a better way to expand your synthesizer.

It's easy to outgrow your synthesizer but not so easy to do something about it.

Or that was the case until today.

The new Yamaha TG55 AWM2 Tone Generator Module lets you expand your repertoire of sound capabilities with breathtaking clarity.

In the space of a standard 19" rackmount unit you have the latest technology that has to be heard to be believed.

The TG55 offers advanced versions of our renowned Advanced Wave Memory (AWM2) synthesis with real-time digital filtering and features 16-voice multitimbral operation and 16-note polyphony with Dynamic Voice Allocation.

Thirty-four high quality programmable effects are built-in. Two megabytes of sampled waveform memory are

in internal ROM and two card slots are provided enabling future use of additional voice parameter and waveform data libraries.

The 24-bit internal processing and high quality 22-bit digital to analogue convertors give the same sparkling clarity as our new SY77 synthesizer. And that has taken the music world by storm.

It all adds up to a specification that is simply unparalleled. So when it comes to expanding your synthesizer there's only one place to go.

Your local Yamaha Hi-Tech dealer.

## YAMAHA

YAMAHA-KEMBLE MUSIC (UK) LTD.  
MUSICAL INSTRUMENT & PRO AUDIO DIVISION, MOUNT AVENUE, BLETCHLEY,  
MILTON KEYNES MK1 1JE. TELEPHONE: No. 0908 371771.





*It's  
a  
bit  
arty..*

*T1, T2, T3*

*Three*

*new*

*Masterpieces*

*from*

PLEASE SEND ME DETAILS OF THE  
KORG T-SERIES

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KORG UK,  
8-9 THE CRYSTAL CENTRE, ELMGROVE ROAD  
HARROW, HA1 2YR. TELEPHONE 01427 3397

**KORG**  
MUSIC POWER