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JANUARY 1991

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*Geerdes SY77
ST Librarian/Editor*

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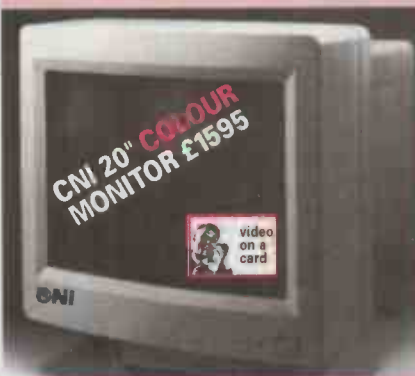
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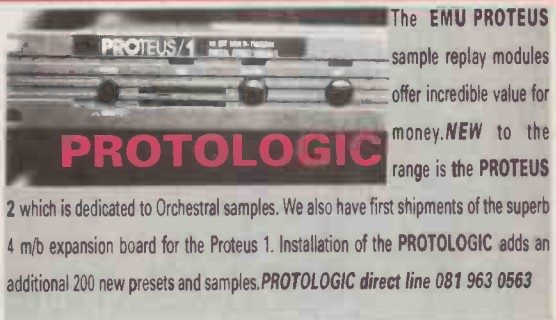
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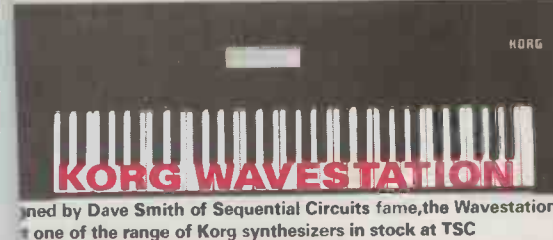
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COMMENT

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While we're used to the constantly-changing face of the music industry, it may surprise you to learn of certain changes afoot in the news trade. Tim Goodyer tells a warning tale of the near future.

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When it comes to news, MT's got the lot - including details of who actually killed Laura Palmer. If we get enough enquiries, we might even put it into print. . .

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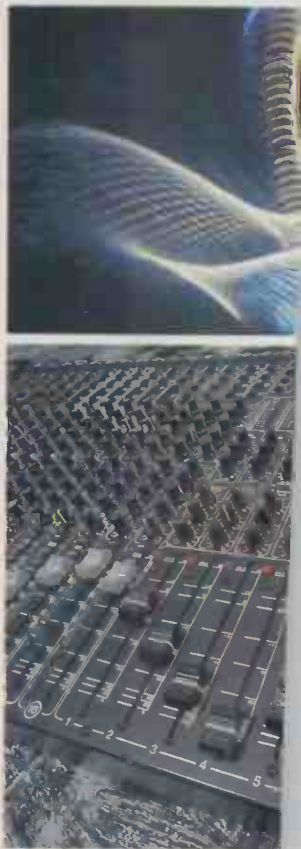
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With the success of E-mu's Proteus sample reader assured, Invision are offering a hardware upgrade that's likely to see the

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Having pioneered the Micro Composer in the '70s, Roland reaffirm the position of the hardware sequencer in 1990 with the MC50. Simon Trask is fatally attracted.

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If you can't afford to be without a fully-featured mixing desk but can't afford the usual asking price, it could be that you haven't checked out Studiomaster's Pro Line Gold. Tim Goodyer has...

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One of the stars of Channel 4's *Four-mations*, Brian Johnson's Improvisations combine musical performance with real-time manipulation of video images. Peter Ridsdale trips on this.



SUBS & DOMS

MARKET FORCES: A byline for the '80s and now the '90s. Roughly translated it should mean that the public get what the public want. Anyone passingly familiar with Paul Weller's 'Going Underground', however, will not have escaped the perspicacity of his line "the public gets what the public wants". What this all amounts to is that cash is king. If something is sufficiently profitable for the parties concerned, it gets their support, but there's no consideration given to any value other than commercial.

Unfortunately for you and me, music is an art. And while certain works of art can be used to realise vast profits, the value of the majority is only in their intellectual or emotional value. This, of course, is nothing new to the average aspiring musician - whether you've had your demo tactfully rejected by the head of A&R at CBS or had it destroyed by your mother in the interests of "peace and quiet", you'll have met up with the thin end of the market forces wedge. The problem presented by market forces revolves around appeal. If your music is widely popular, you're going to find market forces work for you. If, on the other hand, it doesn't, you're fighting them.

Of course, market forces affect many more commodities than music - always to the detriment of the minority. Given that you're probably already making minority interest music, you're also making it in a minority interest way - by far the most popular way of making music is still the old-fashioned way, using drums and guitars. It will come as no surprise, then, to realise you're reading a minority interest magazine - the trade call it a "specialist" magazine.

When it comes to operating under market forces, the magazine retail trade are capable of being just as ruthless as the music biz. One of their current moves is a drive to fill their floor and shelf space with more profitable merchandise (when did you last come across a highstreet newsagent who only sold

newspapers and magazines?). And the trade themselves are predicting that amongst the next couple of years' casualties of this course of action will be many of the "specialist" magazines. Now, I'm not just talking about MT here, I'm not even just talking about specialist musicians' magazines, I'm talking about any magazine that isn't sufficiently popular to make the cash-hungry news trade enough dosh. I'm also talking about magazines you rely on for information and entertainment.

In America the news trade has been led by market forces for many years now and, consequently, there is a course of action we can adopt to protect ourselves. Following America's example (as we seem perpetually destined to), we can turn to magazine subscriptions. These have not previously been as popular over here as they have in the States, largely because they deprive you, the reader, of the right to refuse a particular issue if you feel there's nothing of interest to you, and they require you to put your cash upfront. Fair comment. The alternative, however, is to risk losing access to magazines like MT. But certainly, the casual reader will lose his or her opportunity to buy the occasional issue as a direct result of the news trade's actions.

It's no accident that MT began a "subscriptions drive" last month - it will become a commercial necessity for any magazine not dealing with mainstream issues. And to ease the transition into this phase of capitalism, we are going to make various offers and concessions to you should you subscribe to the magazine - take advantage of them.

Finally, if this editorial steps out of line with MT's usual theme of music, gear and philosophy, it's not as a result of publisher's directives or any other commercial pressures, it's simply an editor's wish to protect an area of journalism he regards as important to certain areas of music and the musicians that make it. Believe it. *Tg*

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Hard times

For PC owners itching to get their hands on a hard disk recording system, one to look out for is the Digigram PCX3. This new card system, for use with IBM PC/ATs or compatibles with suitable hard disk drive, utilises two "ultra-fast" Motorola DSP 56001 processors for real-time data compression "without loss of audio quality", we're told. For every Mb of hard disk memory, the PCX3 will store one minute of mono audio or 30 seconds of stereo audio, sampled at 48kHz.

Software supplied with the PCX3 card consists of digital mastering with editing facilities - including loop, digital gain control, cut, paste, truncate and insert - and juke box application with comprehensive cue list. Software currently in development includes a multitrack capability (with additional cards), SMPTE synchronisation and post-production applications. In addition,

complete MS.DOS handler/driver software is supplied, as is the option to design your own application in any programming language.

If you've a head for figures, you'll be interested in the 20Hz-20kHz frequency response, a signal to noise ratio of 90dB per channel, distortion figures of less than 80dB per channel and 16-bit Sigma-Delta A/D conversion at 48kHz or 32kHz. To this you can add MIDI In and Out sockets, digital input to the AES/EBU format and SMPTE time code In. To run the PCX3, you'll need a PC/AT compatible computer running under MS.DOS, with any hard disk drive, two free 16-bit slots in the computer, a Microsoft-compatible mouse and a graphic screen (VGA, EGA, CGA or Hercules).

More information from UK distributors Soundbits at 48 Galton Tower, Clivic Close, Birmingham B1 2NW. Tel: 021-233 3440. **Dp**

FIRST COMPRESSIONS

If you're a reader of our sister magazine *Home & Studio Recording*, you'll no doubt be aware that the compressor is considered to be an almost essential studio tool for anyone wanting to produce professional-sounding recordings. Sound Technology have sent us news of two more varieties of this particular beast, first of which is the Symetrix SX208 Stereo Compressor/Limiter. Presented in half-rack format, the SX208 forms part of the Symetrix 200 series of half-rack audio devices, and offers quick setting-up, compression ratio, output gain controls and a design which combines the best of both peak and RMS level detection for accurate response to any level changes. The SX208's retail price of £199 compares favourably with other compressors on the market.

Though the Aphex Dominator II is a limiter, its action is very similar to that of a compressor, albeit much more severe. The Dominator II is a stereo multiband peak limiter designed to fit a wide range of audio applications. The use of multiband techniques along with new proprietary circuits means that the audibility of limiting action has been greatly reduced. This in turn means that greater limiting depth is possible, resulting in higher loudness with maintained audio quality. At virtually any limiting depth, the Dominator II is claimed to be free of 'hole punching', 'dullness' and most other effects normally associated with limiters.

More information from distributors Sound Technology, 15 Letchworth Point, Letchworth, Herts SG6 1ND. Tel: (0462) 480000. **Dp**

THE MAGIC MAC

Surrey company 2001 are exclusively distributing a new educational tool from Warner New Media. Warner's *Audio Notes* are reportedly "the first ever presentation of music using a computer as a phonograph", and like ordinary compact discs, are playable on any CD player. Also like regular compact discs, *Audio Notes* contain a central music performance, but then much more.

The remaining, previously empty, disc space is now filled with extra audio including commentary, musical examples, and alternative performances. If you have access to an Apple Mac, the audio is further supplemented by visuals - both text and pictures - which, however, are viewable on a computer monitor only when the discs are played in a CD-ROM player. If you are able to see the visuals, they may consist of song lyrics, translations of the lyrics, background information on the performance or singers, musical notation, explanations of musical terms or pictures of the performers.

Audio Notes titles which carry a "Graphics" logo will also play on CD+G players. Via these players (when linked to a television set) an additional layer of visual information is viewable. Features offered by *Audio Notes* include structural and harmonic analysis as the piece in question plays, a Blueprint to display the complete running graphic analysis of the entire work, biographical, historical and musical "side-journeys" and examples, a Glossary and a Final Exam facility. In order to run the *Audio Notes* CD's with graphics, you'll need an Apple Mac with at least 1Meg of memory and System Software 6.02 or later, a hard disk drive with at least 6.5Meg of free space, a suitable CD-ROM drive, and audio equipment.

The first two titles in the series, Mozart's *Magic Flute* and Beethoven's *String Quartet No 14*, are now available from 2001 at a cost of £59 each including VAT. 2001 can be contacted at 19 Ash Street, Ash, Surrey GU12 6LA. Tel: (0252) 336505. **Dp**

Mr Cheap

Fancy a compact, MIDI-equipped sequencer with 5000-note capacity, PSU and MIDI lead for £39 including VAT? No printing error chaps, that's 39 as in the steps of the same number. The Music Corporation have available a limited quantity of Seiko MR1000 MIDI sequencers, offering facilities which include the recording of velocity and aftertouch information, overdubbing on up to 16 MIDI channels, tape dump

facility and recording of patch change information. Sounds like just the job if you haven't yet ventured into sequencing or would like something exceptionally compact to carry around with you. The MR1000 is exclusive to The Music Corporation and is available mail order from them at Music Corporation (UK) Ltd, Link Mall, The Dolphin Centre, Poole, Dorset BH15 1SQ. Tel: (0202) 684560. **Dp**

THE SHOW GOES ON

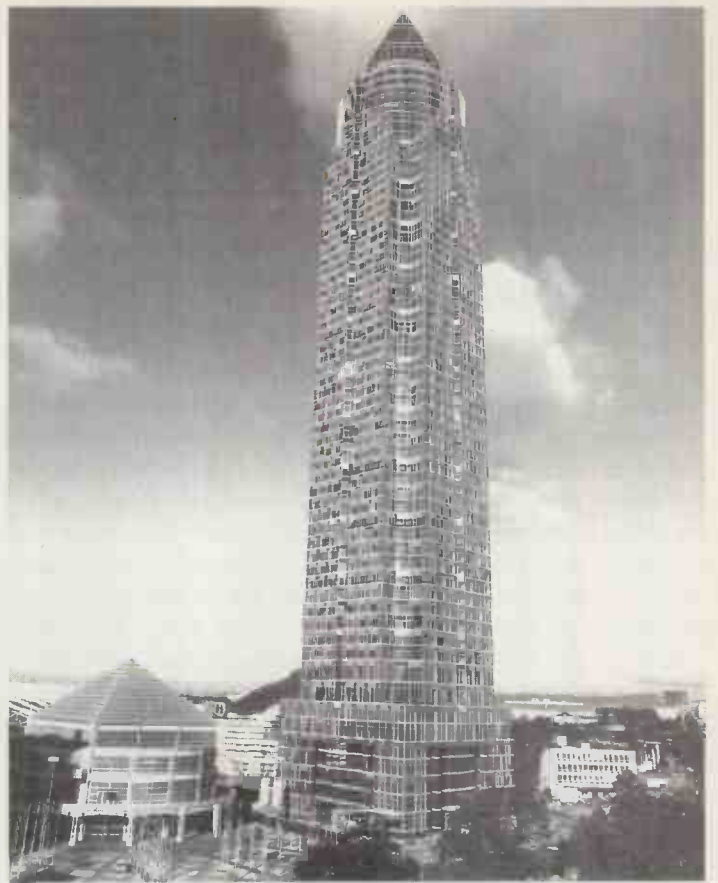
One of the New Year's musical rituals is once again on the horizon. We refer of course to the Frankfurt Music Fair.

This year, the Fair is to take place between Saturday the 2nd and Wednesday the 6th of March. This means a break in tradition in placing the two public days at the start rather than the end of the event. The admission regulations for 1991 are as follows: from Monday 4th March to Wednesday 6th March, only specialist dealers with appropriate identification will be admitted. The price of a day ticket on these days will be DM30. However, on the weekend of the 2nd and 3rd March the Fair is open to the general public, and the price of a day ticket is reduced to DM22.

The organisers are already predicting record-breaking

attendance on behalf of both exhibitors and visitors. The British presence, however, looks like being down on last year, due to the withdrawal of the DTI scheme which previously has helped British companies attend. Earlier predictions suggested that this might see a 50% reduction in the British showing; fortunately, this does not appear to be the case, although there is almost certain to be a lower British profile than in previous years.

At a recent press reception, the Fair's organisers demonstrated their confidence in '91's event - the 11th so far and the first since the reunification of Germany - by wining and dining selected members of the British press. Thanks are due for their hospitality - a good time was had by all. **Tg**



Winners take all

Congratulations are due to three MT readers this month, winners of two of our regular competitions. The winner of our Yamaha TG55 competition is Jackie Smith of Wolverhampton, soon to be the proud owner of a shiny new TG55. First prize in our PC music software competition (IBM software worth £250) goes to Clive Patey of Deptford in London,

with a second prize of software worth £199 going to John Waller of Coventry. All the prizes are on their way to the winners at the time of writing.

Well done to Jackie, Clive and John, and many thanks to Jim Corbett at Yamaha and Mike Partridge at MCM for their generous help in making these competitions possible. **Dp**

THE MIDAS TOUCH

AMG have got their sweaty mitts on yet another range of sampling CD's and are proudly announcing their imminent release. The range in question is the HitSound sampling CDs from Hit Music Productions. The first volume is entitled *Pure Gold Synth* and features some of the best sounds from the Valhala International Gold Series, which were originally programmed by Hit Music Productions. The 490 samples featured include sounds from the Korg Wavestation, M1 and T-series, Roland D70 and D50, Yamaha SY77 and SY55 and Ensoniq VFX, some of which are

not yet available on ROM card. The CD was digitally compiled and edited at DubMaster Studios using a Mac Sound Tools system. Further volumes are expected during the next few months, including a Classic Synth CD, Guitar CD and Big Name percussion CDs. The first volume will be ready before Christmas and will cost £45 inclusive of VAT and delivery.

The HitSound range is available exclusively from AMG and more information is available from them at Hurst Farm Barns, Hurst Lane, Privett, nr Alton, Hants GU34 3PL, or telephone 073088 383. **Dp**

NONOISE IS GOOD NOISE

One of London's leading digital editing and real-time duplication facilities, Chop 'Em Out, is reporting brisk business for its new NoNoise service. The NoNoise procedure is similar to that offered by CEDAR, which you may remember having read about in these very pages (see MT, November '89). NoNoise is able to remove clicks, pops, hiss, hum, camera whine and problems caused by digital under-modulation, apparently without adversely affecting the dynamics and atmosphere of the original recording. NoNoise is actually a software package which runs on a Macintosh-based Sonic Solutions hard disk editing system, and also offers the ability to "intelligently" recreate missing sections of the audio waveform to remove clicks, dropouts and other isolated problems, while in the case of continuous noise such as hiss, the system takes a "fingerprint" of the noise before removing it from the audio spectrum.

An early broadcast client was Thames Television, who used the

system to remove hiss from a performance from the Penguin Cafe Orchestra that was recorded digitally at too low a level. The same problem afflicted a series of lectures recorded by the BBC, and the NoNoise system was employed to render the programme fit for broadcast.

Record company clients include Polygram, Chapel Music Library and Virgin. Bryan Ferry also recently used the service to remove tape hiss from an old compact cassette for use in his latest album project. More unusually, the system is also being used for forensic applications with law firms and police departments, for the purpose of rendering recordings intelligible for use as evidence. The system's high-resolution graphic display of the audio waveform has also been used successfully to demonstrate whether or not a recording of an interview had been edited.

For further information, contact Nick Hopewell-Smith Associates on 071-381 1991 or Chop 'Em Out on 081-960 8128. **Dp**

missing sounds

Here in Manchester we were recently lucky enough to have a visit from the British Music Fair after it had "done London". This gave us all a chance to play the latest instruments, knacker our fingers on the latest drum machines and sample ourselves to death saying "wow!", "mega fantastic guy!" and other expressions of joy.

However, I was very disappointed to find myself getting bored after just an hour of this. It was pleasing to play the new D70, have a go on



the Wavestation and queue up for two hours for the SY77 - but they all sounded the same. So I ask my learned friends: has variety become a dirty word in the synthesiser business?

With thoughts like this in my head, it becomes plain to see why Adamski and A Guy Called Gerald are attracted to analogue machines: they allow you to be different and individualistic. Doesn't the whole spirit of technological music lie in being different - with the machines enabling you to create your own image through music? Shouldn't the ideal synthesiser allow you to create any sound you can imagine, and others besides? And don't you think this is something the manufacturers should be aiming towards? Why, then, when I flick through the the current crop of presets do I get choirs, pianos, basses and so on? Look at the sample wavetables on the Korg T3 (to take an example): there are lots

of sampled pianos, bass noises and string sounds - a few are even a bit weird - but where has the synthesis gone?

Is sampling the answer? Would a very flexible sampler with decent software offer those things the ideal synthesiser should? Yes, it probably would, but finding that answer is expensive. A good-quality sampler like the Akai S1000 would set you back about £2300. Sure there's the Cheetah SX16 or even a secondhand S900, and although both are good, you're making sacrifices in order to save money.

The boat is being weighted down with sample-based systems, and the synthesiser ideal is being slowly pushed overboard to sink into the murky depths where it may be forgotten. Will anybody design and build a decent "pure" synthesis machine? Could such a machine ever hope to compete with the stunning samples already on offer? The manufacturers' current goal seems to be to build a machine that sounds more *impressive* than the competition. Somewhere along the line, the ideal that Mr Moog laid down has been lost.

Unless somebody makes a technological breakthrough on the scale of the oscillator, we are going to be stuck in a "sampled" world. At the moment, technology doesn't offer pure synthesis methods and good sounds in the same box.

**Keir Thomas
Northenden
Manchester**

sampling spirits

Peter Ridsdale's article, *The Sampler and the Soul* (MT, November '90), reminded me exactly why I still buy MT every month. There embedded in an article which could have been simply a "rights and wrongs of sampling" argument, was the same pioneering spirit which characterised that of the early synth players - searching for something different. The lifeblood of musical innovation.

It is sad that, with the advent of the affordable sampler, reliance on what might loosely be termed "presets" has gained just as strong a foothold as it has with synthesisers. How true it is that so many recordings contain samples that are instantly recognisable. The orchestral hits from Roland's sample library must have been played to death within a very short time of their becoming available - which is unfortunate, because they happen to be rather satisfying.

Although more companies are producing libraries of sample "presets", the problem remains that they are available to everyone with a suitable sampler. It was pleasing, then, to read the aforementioned article encouraging experimentation with novel instruments and sounds. How satisfying it can be when the sampler (in my case a humble MKS100) takes on a totally new character, perhaps turning a rather bizarre sample into a different, but nonetheless useful, musical sound. One example is the time I sampled a vacuum cleaner hose blown trumpet-fashion and found that, with judicious use of the MKS's filters, a very unusual and useful breathy choir resulted.

It is exciting to consider the use of purpose-built items for sampling. We are entering an area here which is reminiscent of some

of the work of the underrated David Vorhaus who, in 1969, not only recorded an album which ought to be considered a milestone in synthesiser history (*White Noise: An Electric Storm*), but was also responsible for much innovative electronic gadgetry used to create the extremely complex sounds on the album. Amongst this gadgetry was the Kaleidophon synthesiser, based on the EMS VCS3, which used a controller device likened at the time to "an electronic drainpipe" and almost prefigured the MIDI guitar.

Peter Ridsdale correctly targets the misconception that a sampler is, in itself, worth listening to. It is only as it becomes part of a piece of music that it becomes of value. I couldn't agree more with his comments concerning repetitive use of samples. Like him, I find myself wondering whether the sampler's ease of use removes the "organic" nature of the musical art.

Personally, I still feel uneasy about sampling recognisable portions of other peoples' work. My own scruples lead me to believe it's not quite cricket, and I'm not sure that any composition I've heard which includes such samples has either done justice to the original recording or improved itself by their presence. I also wonder what synth manufacturers feel about samples being taken from their current range of synths.

Finally, I'd be interested to know how many folk intend to use the plethora of "special effect" sounds included on most sampling tapes - selections of bodily function and malfunction noises, gremlins in liquidisers, and so on. Just to get my revenge, I was thinking of ripping a really long sample from Stockhausen's famous silent piece. Any takers?

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TWO NEW MUSIC COMPLEXES IN LONDON

DR T'S TIGER CUB

THAT BASTION OF Amiga music, Dr T's software emporium, has been at the conversion juice again. This time it's the turn of Tiger Cub (review v1.0) the Atari ST incarnation of which was reviewed in depth in our September '90 issue.

Operation is virtually identical to the ST version so swallow your pride, *Amigies*, and read the original review. Of course, where improvements and enhancements can be made to take advantage of the Amiga's extra facilities, Dr T's have done so.

On booting, the program asks how much memory you want to reserve for it, and then you're into one of the two main screens - the Tape Recorder screen.

In case you missed it, Cub is based on Dr T's TIGER graphic editor program but unlike TIGER, Cub is a fully-fledged sequencer with 12 tracks and simple scorewriting facilities.

Editing is performed on a grid editor which is relatively easy to use and quite powerful. The traditional horizontal bars which represent the notes have attached vertical bars which represent velocity. One of the most interesting features is the graphic display of information such as Program Change, Velocity, Pitchbend, Aftertouch, Mod Wheel, Breath Controller, Foot Pedal and Volume. These can be edited, graphically, with the mouse, allowing you to draw in controllers which your transmitting equipment may not possess.

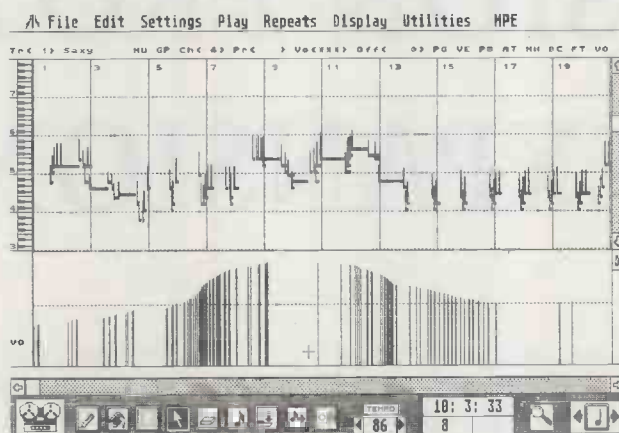
A 13th track is also available from the Edit screen. This is a Conductor track where you can insert time signatures and tempo changes.

Another extremely powerful feature of the program is its ability to select sounds by name. You can create a list of the sounds stored in up to six separate MIDI instruments and enter the number(s) of the MIDI channel(s) they can receive on. If something is recorded on one of the channels, the instrument's name appears in the Instrument column on the recording screen.

Taken a stage further, this would allow you to specify sounds by name rather than by MIDI channel and program change number. A module is already under consideration which will interrogate your system and read the connected instruments so the process will be as automatic as possible.

Dr T's MPE (Multi Program Environment) allows two or more programs to exist in memory at the same time and, if their design allows, to share the same music data. The Amiga version of the MPE can handle up to 18 MPE modules - but you won't be able to load all those in a 1Meg machine. There doesn't seem to be a facility to delete a MPE module, unlike the ST version.

The Quickscore module runs in the MPE although, like the ST version, the supplied program only works with Cub and not from within any other



program's MPE which sort of defeats the object of the MPE exercise, methinks. Although it stops you passing it onto a friend who may have KCS.

I gotta say, too, that I had problems getting Quickscore up and running. It either didn't want to load and sent me back to the workbench (insufficient free memory, I suspect) or it seemed to load but locked out the controls when I re-entered Cub. Accessing the menu bar locked the computer up completely. When

Quickscore did load, the menu options had no effect, not even the Quit option. Either my system was acting up or there's a software problem (I'm prepared to accept either explanation). Having said that, I had problems with the ST version crashing, too.

Quickscore is actually a cut-down version of Dr T's Copyist. It converts music within Cub into music notation. It's purely a display option and any editing you wish to do to the music must be done from within Cub rather than Quickscore, although there are many display options to help get the display right. You can select a treble, bass or drum clef. This uses a set of drum notation symbols corresponding to the note/drum assignments on Roland's MT32.

The other major benefit of the Amiga version is the facility to use the Amiga's sampled sound system to play the music. You do, of course, need a keyboard or MIDI input device to put the music into Cub in the first place (unless you're happy to click notes into it) but if you're short of sounds, the IFFs can help out.

It's worth remembering that these use memory and some files refused to load all the samples with an Insufficient Memory error, even on a 1Meg machine. It's also worth remembering that Quickscore requires memory, too, and if you give it all to Cub on booting, you won't be able to load it. Memory is not assigned dynamically.

The sounds can be handled individually or in banks and there are a couple of cute hip hop demos on the disk. Samples include a dog bark which I thought sounded a bit wuff (all this tiger talk is making me catty).

The same gripes I had about the ST version apply here, too, but the Amiga is not so well endowed with sequencers as the ST so picky criticisms become less relevant.

The main competition comes from some of Dr T's own programs and none is a direct competitor. For a budget-priced program it's extremely well specified and even includes features not found on top-of-the-range sequencers on any machine. Just make sure Quickscore loads into your machine. ■ Ian Waugh

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INVISION PROTEUS EXPANSION

ANYONE WHO HAS heard E-mu's Proteus will appreciate that the sound quality is excellent, although as MT's original review (November '89) observed, there were good sounds waiting to be discovered. Well, a company called Invision have looked at the available selection of tones and added a complementary selection of 70 in the form of their Protologic expansion board.

For those of you not familiar with Proteus' architecture, the structure of the original Proteus is in terms of Tones and Presets. A Tone is a complete sound mapped across the keyboard, while a Preset incorporates two Tones (Primary and Secondary) and various envelope and other programming aspects. The original Proteus contained 125 Tones and 128 Presets in ROM with an additional 64 presets in RAM. The Protologic expansion adds a further 70 Tones including rock organs, electric piano, various synths, fretless bass and 35 keyboard layouts of percussion instruments. Percussion was one particular area in which Proteus was lacking; now it includes bells, steel drums, tablas and looped cabasa, shaker and tambourine. Needless to say, the omnipresent TR808 drum machine sounds have also found their way into the action. So, with the Protologic board installed, a Proteus now holds 195 Tones and 256 Presets in ROM, and will address a further 256 Presets in RAM for you to program yourself.

The quality of the new sounds and their looping is generally very good although you can occasionally hear the modulation caused by crossfade looping. Very few looping glitches are apparent, and the bass end is in keeping with what we have come to expect from the Proteus - the speaker cone-blowing variety.

The Presets in the version under review were not necessarily the final set, but I feel certain that most of them will stay. Some ingenious programming has gone into these - using aftertouch on the 'Fretless Bass' (Preset 12) for pitchbend and the secondary Tone to bring in harmonics at the top end, for example. In fact, 'Fretless' is typical of the useability of Protologic's sounds.

'Performance Guitar' (Preset 8) has tremolo introduced via aftertouch, but uses the modulation wheel to mix in the Secondary Tone of feedback - this is great for those closet guitar heroes amongst you. Similarly, 'L.Guitar' (82) lets you add a fifth by using the modulation wheel - use the wheel for those power chords and then get back to the serious business of soloing without it.

There are also various synth Presets which have a light, metallic nature - like 'Metal Voices' (10) and 'Vector Pad' (27). Only when you look at the Preset information do you realise that Presets sounding completely different often use the same Primary Tone. This is possible because mixing in a Secondary changes the complexion of the sound. For instance, 'Pop Brass' (14) is a mixture of sax section and brass tones while 'Hot Brass' (46) uses a synth and natural brass mixture.

The original Proteus Presets had a good acoustic piano but no electric equivalent. Protologic changes that with 'Electropiano' (35), an ideal sound to record. Meanwhile, 'Dynamic EP' (17) uses two similar Tones, except that the Secondary adds a "twinkle" to the sound at high note velocities. Some Presets use a mixture of original Tones with the new ones. 'Hard Fretless' (34) uses the attack of the existing bass guitar Tone mixed with the new fretless Tone to create a thudding, warm rock bass.

'Echo Drums' (59) makes the Proteus sound as if it has internal reverb - which, of course, it hasn't. Instead, the effect of an early reflection is achieved by using the same keyboard percussion mapping for the Primary and Secondary Tones, with the latter having a lower volume, different pan and a clever bit of enveloping. These really are excellent drum sounds. Another sound worthy of mention is 'VocaloozPad' (72), which is a breathy human "ooh" but without being lightweight. In fact, none of the new presets can be accused of being lightweight; 'Vocal Drums' (73) mixes short "oohs" with a drum mapping while 'Hammond B3' (7) is exactly what it says - a dirty, unmistakable Hammond with aftertouch bringing in the tremolo.

The cost of the Protologic board may, at first sight, appear high, but you should realise you're adding an extra four Megabytes of memory to the Proteus. But perhaps the best news of all is that Invision are not only offering these 128 Presets for the Protologic board, they're also programming several hundred more for later distribution. Opcode are writing an update to their Proteus editor to incorporate the board, and this too will probably be sold with more Presets. ■ **Vic Lennard**

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VISIONS of the FUTURE

ONE AREA OF EXPERIMENTATION CURRENTLY BEING OPENED UP BY ADVANCES IN TECHNOLOGY IS THAT OF INTERACTIVE AUDIO-VISUAL ART; ONE STUDIO INVOLVED IN THAT EXPERIMENTATION IS BRISTOL'S IMAGE LAB. TEXT BY PETER RIDSDALE.

I RECENTLY FOUND myself a witness to the emergence of another aspect of the fast-evolving hi-tech audio-visual arts. In the wake of Videola (see MT, March '90) and Coldcut's dramatic predictions for the future of computer graphics (MT, August '90), it was the turn of Bristol's Image Lab to make a presentation of what they term "Improvisations". The project is the brainchild of composer Edward Williams and electronic image maker Brian Johnson, who have linked up with a team of improvisational musicians drawing on a variety of musical styles. These styles range from the Indianesque vocals of Chloe Goodchild and the inventive violin playing of Stuart Gordon (which neatly escapes any attempts at categorisation), through to the jazzy sax playing of Jerry Underwood and Will Gregory and the Afro-Latin inflected percussion of Simon Preston. Williams and Johnson have also worked with Julie Tippetts, a brilliant singer whose maiden name, Driscoll, was widely known in the '60s when she had a big hit with a Bob Dylan song 'Wheels on Fire' (although I understand that she tries to play this down as much as possible nowadays).

It is difficult in the context of such a presentation to decide whether you are watching the birth of a new art form or merely experiencing one of the interesting endeavours that technology makes possible but that fails to catch on due to the lack of a public platform, the logistical problems involved, or for whatever other reason. That people up and down the country are experimenting at this very moment with new ways to put sound and vision together

in the privacy of their own (often home) video suites and recording studios is certain - all I can say about the Image Lab project at this point is that I have never seen anything quite like it before.

At the time of my visit the process was at the deed-without-a-name stage and labels such as "Videasonics" and "Improvisation" were being thrown around. Since then the neat term Improvisation has been conceived and adopted. The description according to the press release of the day, however, is "Real-time Interactive Video Music Improvisation". Whatever the label, this tentative new art form is a process in which the musician plays to images on a video monitor screen which are partly controlled by the video artist and partly controlled by the musical input itself.

An ovoid shape may, for example, become stretched out by high notes and made circular by low ones, and a colourful abstract pattern within this basic visual "window" may have its blues emphasised by quiet notes and its red components brought out by loud ones. The video artist might then respond to the musicians' gestures and could change, to continue the hypothetical example, the basic ovoid shape into a pulsating string of ellipses with an entirely different colour scheme superimposed on any other image - footage from old movies perhaps, electronically generated Lissajous patterns, images of the musicians themselves as they play or indeed any of the manifold visual resources that Image Lab can offer. Visual ideas may then suggest some kind of sonic analogy to the musician and in this way the process grows and develops.

Johnson stresses that he is not trying to illustrate music or provide a visual counterpart for every single musical gesture in a diegetic sense (what is more commonly known to film music composers as Mickey-Mousing); instead he's more involved with a choreography of images, a kind of visual puppetry that is at times synchronous and at other times tangential to the musical discourse.

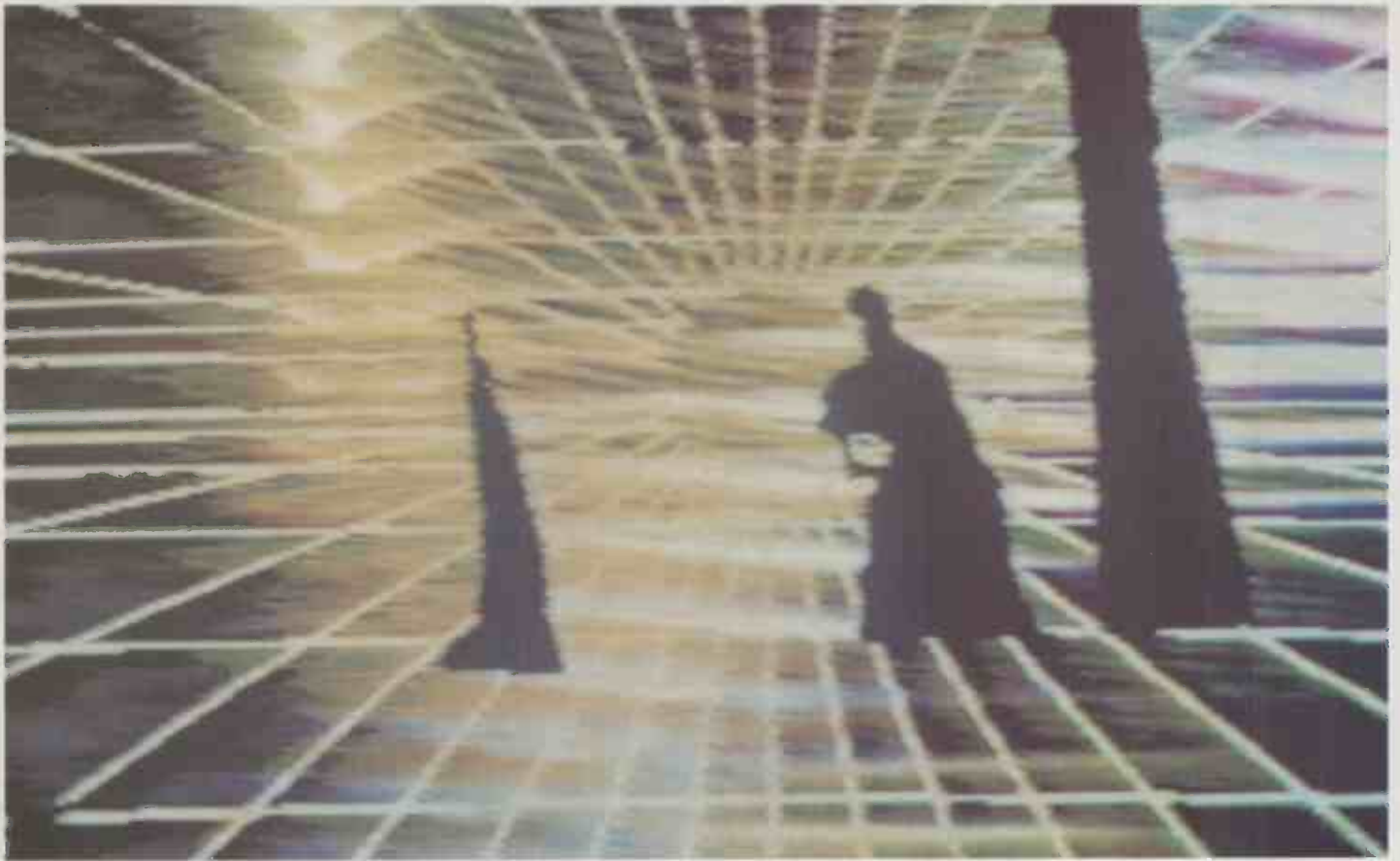
Image Lab is housed adjacent to Williams' recording studio which has a relatively large performance area purposely designed so that dance and movement pieces can be accommodated within. Diligent readers will recall that Williams is an enthusiastic proponent of

the Soundbeam Movement-to-MIDI converter. (See MT, Oct '89.) At the session that I attended Jerry Underwood and Simon Preston were installed in this space facing a large video monitor, two video cameras and a battery of lighting equipment. They were flanked by two of Williams' Trolleys (more about these later) and surrounded by Simon Preston's musical paraphernalia which included balaphons, berimbau, mbiras, frame drums and sundry other percussion instruments lovingly collected from distant corners of the globe. Their signals were being sent to engineer Mark Newbold at the mixing desk in the control booth and in turn sent to Brian Johnson in the Lab.

Walking into Image Lab is a refreshing experience for the jaded techno-journalist who has all but had it up to here with the usual variations-on-a-theme studio facility. This is no place to stifle a yawn as yet another proud studio owner points out the inevitable hi-tech toys. The all-too familiar landmarks are missing in this bewildering Aladdin's Cave of esoteric electronics and guerilla technology. I recognise a VCS3 in one corner but am slightly disconcerted to find that its function in this setup has nothing at all to do with sound - its waveforms are being used to control a dynamic and multicoloured oscillographic display. Now here's another puzzling thought: you are probably aware that oscilloscopes only come in glorious Greenchrome; but here before your very eyes is a multi-hued version.

"Oscillographics had been worked on since the 1950's by people like Mary Ellen Bute and Ben Lapinski", Johnson explains, "but as far as I know I was the first one to do it in colour. . . I converted a colour TV set to do these things so that I could make videos of them. It's a vector scan display which means that instead of scanning across and going down and flying back up as a TV does it actually draws a picture on the face of the tube - rather like waving a sparkler around in the dark."

Johnson is the charismatic Caligarian figure who is the inventor, engineer and architect of this particular laboratory, but it very soon becomes apparent that the essential difference between Johnson and a mad scientist is, to paraphrase Dali, that Johnson is not mad at all. He has worked as a drama therapist, an electronic engineer designing special effects for rock bands and he is now a full-time film and



video maker with a leaning towards education.

Johnson is a passionate believer in what he does and is quite prepared to run his colours up the mast.

"I'm not just trying to titillate your optic nerve. What I'm trying to do is to bring arts and science together, to de-compartmentalise knowledge. I call this room Image Lab because I want it to be a laboratory in a real sense. It's where you investigate being alive. I mean that."

And the last clause is delivered with full eye contact just in case you entertain the smallest of doubts. I don't want to give the impression that Johnson is totally didactic - he has a great sense of dry humour that's difficult to convey in print. He also has strong views about technology both visual and musical, and is not at all impressed by certain current trends. In fact, he is afraid that the widespread use of digital parameter access and the consequent rise in usage of synthesiser presets will result in the disappearance of experimentation. And his fears are likely to be well grounded.

JOHNSON COMES FROM that great British institution, the "biscuit tin" school of electronics and used to believe that the science was "quite useless" until he discovered practical applications for his knowledge using bio-feedback with Special Needs people.

MUSIC TECHNOLOGY JANUARY 1991

Galvanic skin response meters, alpha wave amplifiers and microvolt meters are all still in evidence in the Lab and can all be used as control devices. It would be quite possible, for example, to make music by telling lies whilst hooked up to one of these devices or to have a tomato plant controlling a gradual colour change.

Johnson delights in modifying and recycling obsolete equipment and points out a machine that looks like a reject prop from a very early episode of *Dr Who*.

"At the time I was as poor as a church mouse; these things were old petrol pump control units which I took apart and rebuilt - I couldn't even afford knobs so I got dowelling rod, cut the middle out and stuck it on like that - then I got very wealthy and bought all these knobs."

Domestic-type computers such as the Atari 800XL (which people now find hard to give away) are snapped up and put to uses that their designers would never have dreamed of. "They were so cheap I had to buy them", he pleads.

A BBC Model B with a Gen Lock facility enables images from various domestic video recorders to be overlaid or keyed in with computer-generated colour graphics. "Keying in", it transpires, gives images which look a bit like solarisation and are derived using the same principle as a thermograph.

"It's looking at light levels and cutting off detail. It's rather like looking at a

contour map of a hill and saying, well, we're not going to look at anything below 500 feet - you get one image that way; then if you increase it to 200 feet you get a bigger one. . . it then ascribes a colour to it."

Image Lab is divided up into a number of "workstations" and each one can be photographed or filmed. There's an optical bench where powerful lights or lasers shine down through a motorised assemblage of glass ashtrays, plates, prisms and ornaments and so on. A bench where anything drawn or painted is filmed from below so that the images magically appear in real time, seemingly without the aid of hands and art implements.

There's also a video-microscope which provides access to a visual world invisible to the naked eye. It would be no problem at all to film someone dancing among amoebae, for instance, with a judicious amount of image mixing. There's also a modelling bench where toys and other found objects can be made into dioramas or stage-sets for animation and puppetry. What looks, in 3D, like a post-holocaust landscape in some twisted Legoland with a shameful secret becomes even more sinister when seen as a two-dimensional coloured backdrop.

All in all up to 15 different images can be superimposed at once but Johnson rarely feels the need to go for this kind of complexity.

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"I've noticed with kids, and a lot of teacher friends of mine have also noticed, that attention span is very short. Various people have been doing studies on this and some have said that it isn't true, but the average kid I get in here has the worst kind of TV advert attention span: it's 15 minutes before they have to have a break, and they also want their cortexes plugged in - they want 50,000 images a second and tremendous volume as well. There's a hell of a temptation to make things fast and to fill up the gaps and spaces, but one really meaningful idea, slowly moving but which is communicating something, is better than 50,000 that don't communicate anything. It's like the American attitude towards warfare - throw 3000 bombs at it and you might kill something; but then they invariably miss anyway."

Johnson also has at his disposal domestic titling units which he picked up for £15 each ("I've modified a couple just to be slightly different") and various other devices including digitisers, selectors (which turn images into silhouettes) and the wonderfully named Wobbulator which was invented in the '60s by the Korean/American performance artist Nam June Paik and someone called Abe. This is basically a black-and-white TV monitor with large scan coils from a colour TV mounted around the original coils. Audio signals can be sent through the exterior coils causing the image on the screen to "wobble" to the music.

Many of the above effects can be achieved using a Quantel Paintbox, as many a well-informed visitor to the studio has pointed out, but this is beside the point according to Johnson.

"I'm more interested in the content of the message than whether or not you've got a £15,000 mixer."

BEFORE YOU BEGIN to wonder whether you're reading a magazine called *Image Technology* rather than *Music Technology*, it's time to cover the other side of the equation, - although I feel that many of the concerns expressed by Brian Johnson are pertinent to both disciplines - what about the actual musical interface?

Basically, the sound from a microphone can be used direct or filtered into four separate frequency bands which are converted into voltages used to control the image-processing equipment. To make things slightly more complicated, there's also the possibility of receiving signals from The Trolley. Edward Williams has long been involved with the real-time electronic modification

of acoustic sounds, and to this end has developed equipment racks mounted on trolleys which improvising musicians can control with foot pedals.

"The Trolley started off with the VCS3", he explains, "any sound that you put into a VCS3 can be modified by the treatment modules; a voltage controlled filter, a VC envelope shaper, a VC amplifier and a ring modulator. (You can also have re-enveloping and re-filtering.) I started off by making tape feedbacks and other tape manipulations and then putting them through the VCS3 and the EMS Pitch Shifter. The player would be able to control the output by means of pedals so that he or she could trigger the envelope shaper and bring out a sound that was a mixture of what they'd been playing a couple of minutes beforehand and what they were playing at that moment.

"In our last series of concerts we used a sampler and digital delay line (a Powertran MCS1) which was absolutely ideal for our purpose. The player could use a pedal to freeze the memory so that it would play round and round; you could then change its pitch by means of another set of pedals (to three or four preset pitches) and finally you could emit it via the VCS3 either by triggering the envelope shaper or by a random trigger of some kind. EMS have also got some very good Random Voltage Generators. You could also change the frequency of the input into one side of the ring modulator by means of pedals. We've also been using an ART multi-effects processor."

Both the direct audio signal and the signal from the Trolley can then be routed to the Lab giving a total of eight control signals per musician. Williams and Johnson made a conscious decision to use improvising musicians in the early stages of the project and both are keen that this should be a live medium first and foremost. However, Williams, speaking as a composer, is also keen to try more structured compositions.

"I've spent most of my professional life writing music for images and I would now like to produce some music-led screen pieces. It would seem unreasonable not to expect composers to get their hands on images and screens in the same way that Wagner wanted to get his hands on the theatre. Wagner's aim was to achieve what he called the *Gesamtkunstwerk*, the complete work of art, in which he had control over everything. Now, I'm not particularly interested in total control, but I want to use video as a composer with a need to collaborate with a video artist in order to achieve that. Obviously Brian has

his own separate existence as a video artist and there's no way that I could do what he does - the beauty of the images that he produces, which, however much they are led by music are entirely self-justifying; they are absolutely compelling in their own right."

It's worth pointing out that the photographs accompanying this article hardly do justice to the medium they describe. Stills are inadequate even at the best of times for representing moving pictures, but this is even more the case with Videosonics, especially in its more abstract manifestations. It is only in movement and sound that the medium begins to make sense, and the ideal is to experience a live performance. Seeing the musician playing and the transformation of the musician's image as this occurs, it's possible to follow this thread of visual logic into quite abstract territory whereas a still from these regions would appear as a somewhat haphazard collection of shapes and colours.

One of the main problems with creative video as opposed to video used as promotional material for rock bands on outlets such as MTV, is the lack of a public forum, as Johnson points out.

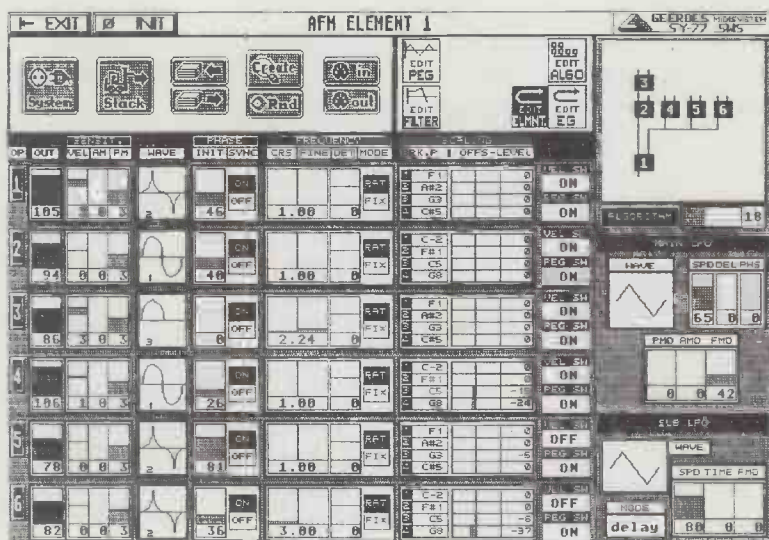
"If someone makes a video, that's it isn't it? You show it to your mates and that's the end of it. You can send it away but who on earth is going to look at it?"

It would seem that there is a growing need for a kind of videola gallery above and beyond the refined and somewhat esoteric limits that are at the moment provided by most of the "multi-media centres" of our major towns and cities. Perhaps the inevitable mushrooming of TV channels and the subsequent "product vacuum" will be the answer. The first public showing of three Improvisations was as part of Channel 4's *Animation Fortnight* (24th November - 2nd December). Williams and Johnson are currently negotiating with the television companies in general and initial responses are encouraging. There is also the possibility of an installation at the forthcoming *Expo* in Madrid.

At present there are no immediate plans for live performances in this country but Williams and Johnson are working towards a multi-media show involving dancers and the aforementioned Soundbeam. They will probably be touring as Uncle Jambo's New Electric Music Hall and will be doing workshops as well as concerts. If you're interested in the area of mixed media I would strongly urge you to check it out. Improvisations are something new and really rather good. ■

SY77

SOFTWARE WORKSTATION



Wise up all you
Yamaha SY77
owners - the
Software Workstation is
the first of the
growing wave of
(Atari ST) software
assistance for your
programming
efforts. Review by
Ian Waugh.

LET'S GIVE THIS program its full name, then we'll know exactly what it does - Yamaha SY77 SWS Multitasking Software Workstation Editor & Librarian Manager. It was the first SY77 editor to be released, although it has been closely followed by Steinberg's Synthworks SY77 and C-Lab's Polyframe is somewhere in the pipeline. SWS (review v1.2) requires an Atari ST with at least 1 Meg of RAM and a hi-res monitor. It uses a dongle for protection and while this is now par for the course for most music programs, I find it particularly annoying with editors.

SWS forsakes GEM (and precludes the use of desk accessories) for its own graphic interface which uses pages and pop-up menus. Screen updates are just as slow as GEM and a giveaway line on the loading screen suggests the programmer used GFA BASIC.

Although the SY77's large LCD is a good aid to programming, the synth contains around 1200 parameters according to Geerdes (I haven't counted them), so if you're serious about programming your SY77, a software editor seems like a good idea.

The first thing the manual hits you with is ICH - Intelligent Combination Handling. This is the program's way of keeping track of the pan settings which go with the voices and the voices which go with the multis. In other words, save a multi and you save

the associated data. Having impressed you with the abbreviation, you can basically forget it, secure in the knowledge that SWS has your best interests at heart.

THE MANAGEMENT

THE MAIN SCREEN around which the program revolves is the Manager Page. This is divided into three parts: on the left is the internal Bank, in the centre is the Stack and on the right is the library. Three switches above the internal Bank column are used to select voice, multi or pan displays. The contents of the three columns reflect the selection. The internal Bank shows the contents of the SY77's internal memory - Banks A to D. Banks can be loaded from and saved to disk and voices can be copied between it and the Stack and the library.

The method of item selection and movement is a little different to GEM's click and drag, but is quite simple. Left clicking on a voice (or multi) selects and highlights it, right clicking deselects it. You can select any number of non-contiguous voices or click, hold and drag the pointer down the list. Another left click on any highlighted voice attaches a rectangle to the pointer which is then moved to the destination area where a further click activates the copying.

Clicking on the voice number in the Bank area lets

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“You can transmit a piece of music from the SY77's sequencer to 1st Track, set it to loop and access the editor to create the multitis - it's a great way to work.”

➤ you decide from which point the voices will be copied. However, this allowed me to copy a four-element voice from the Stack to Bank C. I would have been quite happy with this except, of course, the SY77 rejected it when attempting a transfer and threw up a MIDI error. During some copying operations (from Stack to internal Bank) the program locked up, too.

While the process of selecting, copying and moving voices works well, renaming a voice requires a combined mouse and keyboard operation. No big deal perhaps, but why use such a device when a double click would do? OK, I'm easily niggled, but what irritated me even more was having to hold the left shift key and right click to transfer a voice to the SY77's buffer.

The Stack shows voice, multi or pan data according to what's in the Bank. It can hold exactly the same amount of data as a Bank but as the window is smaller, scroll arrows are used to move through it. You can create a complete Bank on the Stack and transfer it to the internal Bank in one go. The Stack can hold voices with the same name providing their data is not identical. This can be useful during editing if you create several similar voices. It gives you the opportunity to try them and select the best without messing around with names like 'Bass1', 'Bass2' and so on.

Before you can use the library you must open a library file or create a new one. This involves creating files on a disk. There are actually 11 files(!) associated with each library. This is partly because the different voice modes used by the SY77 (1 AFM mono, 2 AWM poly and so on) have different data lengths, but also because different files are also used to store voice, multi and pan index data (for the ICH) and instrumental groupings. Thankfully, this is operationally transparent.

The program moves data between disk and the computer's memory. If a library is stored on a floppy, the program must be free to write to it. If the disk is protected, a GEM dialogue box offering Cancel or Retry options pops up but you can't access the Cancel option. Substituting another disk sends you back to the desktop. Beware.

To help organise the voices in the library, you can create up to 128 Groups. Highlight the items you want to group, click on the Sort In icon, select the required Group and click on it. The data is saved to disk.

Clicking on the Find icon produces three search fields - character (search by letters), voice mode (one for each of the 11 modes) and group (attributes you created using the Group function). While you can use a combined search of all three characteristics, you can't search for an item with two or more attributes. Having found what you're looking for, you can print the list.

The System menu lets you select an auto save routine (every five, ten, or 15 minutes), determine whether the left or right button increments values switch MIDI Thru on or off and set the SysEx channel number.

The Utilities icon accesses miscellaneous functions such as master tune, local mode and

device number. It also contains some controller settings. A foot controller is one. The manual cheerfully explains that further explanations are not necessary but the other controller icons remain cheerfully undeciphered - no, I don't need specs.

THE EDITORS

AND SO TO the editor pages. The layout follows the SY77's arrangement pretty closely. When in Voice mode on the Manager page, clicking on Edit takes you to the Voice Common page. Here you can select one of the 11 Voice modes, the element parameters, controllers and so on. Four lines show collections of functions which make up the four elements of a Voice. If the element is AFM, the left-most symbol is an algorithm and clicking on it takes you to the AFM editor. If the element is AWM, the icon is a waveform and takes you to the AWM edit page.

Next to these are the element level, detune and note shift controls, followed by the note and velocity limits, micro tuning, pan and output section. You can select the pan settings by name and call up a pan edit window which lets you create pans by dragging envelope nodes around a window.

To the right of the elements are edit icons for micro tune, effects, portamento, random pitch and master volume. At the bottom of the screen are the controller settings.

Above the elements are From Stack and To Stack icons. Clicking on From Stack opens a list of the voices in the Stack and selecting one loads it into the editor. However, once this is open, you can't change your mind and cancel so don't click here if you've just created the sound of the century. The switches and controls are functional, generally being represented by numeric values and bar graphs. They are adjusted by clicking on them to "fix" the mouse to them, moving the mouse to select the required value and clicking again.

The AWM editor is divided into three sections - multi LFO on the left, wave data in the middle and the amplitude envelope generator on the right. The LFO waveforms are shown graphically and cycled through by clicking. The other parameters are represented by bar graphics. You select the AWM wave data by cycling through it or from the wave list which is divided into six sections - multi samples, transients, drums and so on. The envelope can be altered by clicking and dragging the nodes or by altering values in parameter bar charts. There are two "traditional" preset envelope shapes in the upper right of the screen which can be put into the generator as starting aids.

There's a local Stack here, too, which stores AWM elements so you can transfer them to other voices. Click on the Pitch Envelope Generator icon and up pops a pitch envelope generator window. This works in a similar way to the amplitude envelope generator.

AFM

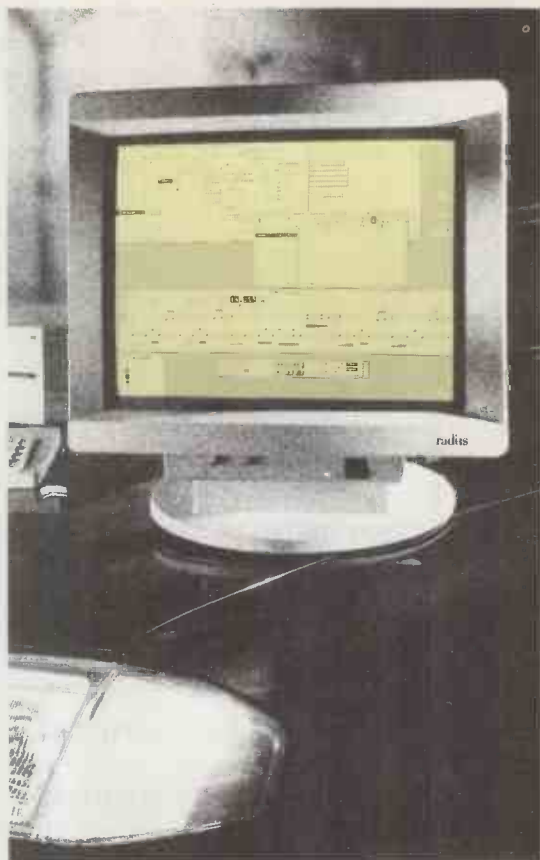
THE AFM SECTION of the SY77 is the most complex and includes hundreds of parameters. The AFM editor is divided into two screens.

FROM A to B



WITHOUT THE STOPS

steinberg



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musical notation facilities are all standard.

The Mercedes too has a high list of standard fittings, but beneath the svelte lines it's like all other cars. - It goes from A to B without stopping.

Not something that can be said of other Mac sequencers.

You may have to wait for some time to get your SL, but there's no waiting for Cubase. With true multi-tasking capabilities, a priority system ensuring unprecedented timing accuracy and all the extras as standard, Cubase gives you all the precision you'll ever need - and then some more.

Cubase

“The Softworkstation is going to be of enormous benefit to anyone doing more than twiddling a few parameters - you're never in any doubt about what you're doing.”

➤ The Operator editor lists the six operators, their sensitivity, phase, frequency and scaling sections, well laid out in table form. The current algorithm is shown in the top right of the screen below which are LFO settings. If you switch an operator off it turns white and the algorithm and operators which modulate it become grey to show that their direct influence on the sound has changed. Neat. One operator's parameters can be copied to another with a couple of clicks. Click with both mouse buttons on the keyboard scaling parameters and up pops a window which lets you set the curve by dragging four nodes around the screen beneath a keyboard. Also neat.

A click on the Edit EG icon replaces the operator display with an envelope display. Parameters are shown in bar graph form and graphically. Clicking on one of the graphs produces a larger graph on which the envelope can be edited directly.

The Algorithm editor lets you add noise, AWM and feedback to an algorithm. It does this brilliantly by letting you drag connectors from a source to a destination. However, the program lets you make connections which are not allowed by AFM architecture and

subsequent accessing of this window will only show permitted connections.

Each element has two filters and, consequently, its own Filter Edit page. You can select band pass, low pass 24dB and free variation mode. Selecting either of the first two options automatically activates the simultaneous edit function which maps the filters to each other.

The Filter editor uses graphs, again in multi-segment envelope format linked to the dozen or more parameters. I sort of think it would be rather helpful if they were actual filter graphs but that would be rather more difficult to program.

DRUMS & FX

SELECTING THE DRUM algorithm in the voice common page and then clicking on it reveals the Drum page. This has a chunky display showing one octave at a time with associated drum parameters. The waveforms are shown as numbers but if you move the cursor over a number, the waveform name appears in the top left of the screen. You can see all the wave allocations by clicking on the View icon although you can't select new waveforms from this display. There are copy options to move data from one octave to another - functional and easy to get to grips with.

The Micro Tune editor has similarities with the Drum page, not least of which are the graphics. Although you can load and save micro tune files, there are no computer aids to help design your own. You can't flip between the two programmable tunings

without first going back to the Voice page.

The Effects Edit page features more bold graphics and is a greatly expanded version of the SY77's LCD effects layout. Select the mode, select the effects, twiddle the parameters and turn the stereo mix on or off.

THE MULTI EDITOR

IN THE MULTI editor, the 16 MIDI channels are listed down the left-hand side, followed by source, voice name, volume, tuning, note shift, pan and output routing columns. You can select the source parameters by scrolling through them or from a voice list. You can load a multi into the editor from the Stack (and save it back again). Another easy-to-use page.

MAKING SOUNDS

LET'S LOOK AT how the program can help create new sounds. There are two aids - algorithmic and random sound creation - although both only work with AFM elements. For algorithmic creation you select three elements which have been saved to the local Stack, give each a range value and select one of five algorithms. These are not to be confused with AFM algorithms but they work in a similar way by using parameters from one source to influence another. You can exclude frequency, envelope and scaling factors from the process.

You can send the result to the Edit page or back to the local Stack. You can create up to 20 sounds in a row but retrieving them is the problem. From the local Stack it's a one-at-a-time job and the screen updates after each access are painfully slow.

Although you can go on to combine the AFM results with AWM for a fuller sound, a fully integrated voice creation process - and one more easily accessible - would have been better.

The program disk contains a utility to convert DX7 sounds to SY77 format. It can read files from a number of editors including C-Lab's X-Alyzer and Steinberg's Synthworks.

MANUAL

THE MANUAL SUFFERS immensely from Germenglish which is intensely annoying. After all these years I am still at a loss to understand why foreign companies don't get English musicians to proof the things. Can they not understand that the manual isn't incidental to the program, but every bit as important. However much our continental counterparts put us to shame with their knowledge of our language, they obviously still can't translate a manual. Sorry chaps.

KEEP ON TRACKIN'

AS A BONUS, the program comes with a 24-track sequencer called 1st Track. It appears to have been written before SWS - and the manual is just as bad, if not worse. However, being a sequencer, it's not too difficult to fathom out.



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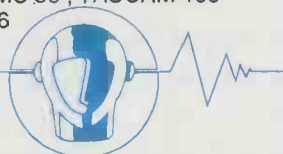
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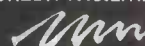
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It has drop in/out functions, cycle mode, locators, internal and external sync, reversible quantise, - all the basic sequencer functions. You can name the tracks, solo and mute them, specify a MIDI channel for each track on playback and name the instrument associated with that channel - fine.

Editing includes move and copy and there's an event editor with a filter for removing unwanted info such as control data from the display. There are step-time input facilities using the ST's keyboard, too, which involves pressing note letters (C, D, E, F and so on) for pitch, numeric keys for duration and the cursor keys to enter velocity. Novel, but it works. It supports MIDI files, too.

1st Track compares favourably with some of the lower-end budget sequencers and could well be used as a stand-alone program. However, its main use within SWS will be to play back music while you fiddle with the voices. In fact you can transmit a piece from the SY77's sequencer to 1st Track, set it to loop and access the editor to create the multis. This is a great way to work.

You can fiddle with the voices, too, although this will put the SY77 into Voice mode. If you've been playing an arrangement from multi mode you'll have to save changes and re-enter multi mode.

areas. For example, it should allow you to go back to the original setting after calling a menu selection option (voices in the multi and voice editors and effects in the effects editors, for example). It should give some aural feedback about the sound from the main screen (1st Track notwithstanding) and it would be useful if it altered values of envelope parameters while you drag nodes around the screen.

Screen updates are painfully slow especially when you have to work backwards or forwards through several pages. It would be reassuring to see a little more "computer assistance" too, apart from that which transfers the SY77's parameters to the screen. In summing up, the word which springs to mind is "functional".

The visual assistance of a software editor is of enormous benefit to anyone wanting to do more than twiddle a few parameters and you're never (or rarely) in any doubt about what you're doing. Some editors can be quite complex. If you don't yet have a sequencer and want something a bit more flexible than that built into the SY77, SWS's combination of editor plus 1st Track for the price of an editor may prove tempting. ■

VERDICT

THE MANUAL AND bugs are an irritation and I do think the program should be more helpful in many

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software

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

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Vkiller, TDM Prodigy, Mididrummer.

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

DISK 2

Flu, Hybrid Arts Ludwig.

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

DISK 3

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

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

DISK 4

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

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

DISK 5

Hybrid Arts EZ Track Plus, Quinsoft Trax studio accessories.

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

DISK 6

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

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

DISK 7

Penicillin, Passport Mastertracks Junior.

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

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

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



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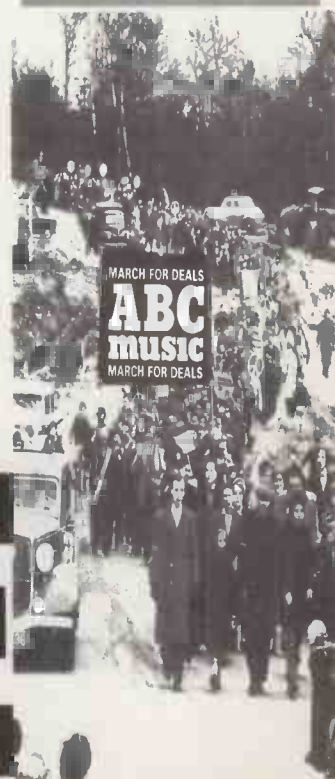
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MC50

Is Roland's latest sequencer - a budget version of the company's MC500 MkII which includes the MkII software and more - a last gasp or a new breath of life? Review by Simon Trask.

IF THERE'S SOMETHING quaintly dated about Roland's labelling of their post-MSQ700 series of MIDI sequencers as Micro Composers, it's perhaps because the term originates from a time when microprocessor-controlled sequencers and the act of composing music with a machine were considered novelties. Back in 1977 Roland introduced the MC8 - a microprocessor-controlled, eight-channel CV/Gate sequencer with a modest memory of some 1200 notes - which introduced the novel idea of sequencing music not from a music keyboard but by numeric entry of note parameters from a calculator-style keypad. Suddenly it was possible for someone outside an academic institution to compose and record music without having to play it - if they had around £4000 to spare. Nowadays, MIDI sequencers are part of everyday music-making for thousands of musicians worldwide. No-one today would consider that sequencers are revolutionary, yet that's what the MC8 was. Developing and releasing the MC8 took conviction and a sense of vision on Roland's part - somehow their old slogan "We Design The Future" made more sense then.

The MC8 wasn't a great success when it first came out, but Roland persevered with it, and within a few years both the MC8 and its cheaper follow-up, the four-channel MC4, made a major impact on the British pop scene as bands like Human League, Depeche Mode and Landscape used them to develop a new type of music based around synths and sequencing. With the ever-growing sophistication and complexity of today's computer-based MIDI sequencing packages, it's worth recalling that it was effectively the limitations of sequencers like the MC8 and MC4 - their "sequencer-ness" - which inspired a generation of musicians and gave popular music a new character which developed through the 1980s, specifically in dance music.

Returning to the subject of labelling, Roland's sequencers went on to become Computer Controlled Digital Sequencers (the CV/Gate CSQ600 and CSQ100) and then Digital Keyboard Recorders (the DCB JSQ60 - the company's first polyphonic

sequencer, using their abortive Digital Control Bus interfacing system - and the MIDI MSQ700 and MSQ100) before reinstating the Micro Composer tag with the MC500 MIDI sequencer in 1986.

But while the names and the interfacing systems have changed over the years, Roland have endeavoured to keep front-panel access on their sequencers straightforward and to concentrate on operational simplicity and immediacy. Perhaps as part of this endeavour they've always kept to a modest complement of tracks - in distinct contrast to today's computer-based sequencing packages, which frequently provide more tracks than mere mortals could ever need. The latest addition to the MC family follows the MC500 MkII in having eight Phrase tracks, one dedicated Rhythm track and one dedicated Tempo track. The similarity is more than coincidental, as the MC50 implements the Super-MRC and Super-MRP system software of the MC500 MkII, plus some extra features. Only where the previous MCs (MC500, MC500MkII and MC300) had to load their system software off disk upon power-up in order to be anything more than a useless piece of hardware, the MC50 holds its system software permanently in internal ROM. In this way it can be operational as a sequencer within about three seconds - and you've no worries about getting to a gig and finding that you've left your system disk at home. Still, strictly speaking it isn't a dedicated sequencer, as, like its precursors, it's able to load other Roland software such as the MRB 500 Bulk Librarian and forthcoming MRM MIDI Song File conversion software. However, it's still dedicated to one purpose: running a MIDI setup. But how well does it fulfill this task, and can it compete against the power and sophistication of even an average computer-based sequencing package?

APPEARANCES

COSMETICALLY, MUCH HAS changed with the latest MC. The rather ungainly appearance of the MC500, 500 MkII and 300 has gone (and with it the chunky buttons which have been a trademark of Roland sequencers since the days of the MC8 and MC4). In their place are low-profile buttons more in keeping



PHOTOGRAPHY: JAMES CUMPSTY

with the new compact, streamlined casing and sober appearance of the MC50. In operation, these buttons have a satisfying feel, requiring a light touch which allows you to move around the front panel very quickly with minimum finger effort. Ah, the wonders of ergonomics. And at an amazingly light 3lb 15oz the MC50 is around half the weight of the other MCs, yet it doesn't feel flimsy.

However, while the appearance might have changed, the ingredients of the front-panel are essentially the same as on the previous MCs, including an alpha wheel and numeric keypad, 2 x 20-character backlit LCD, dedicated track buttons with their own pinpoint LEDs to indicate on/off status, tape transport-style sequence control buttons and Function, Edit, MIDI/Util and Microscope mode buttons.

The MC50's rear panel also provides the same features as the other MCs: MIDI In, Out x 2 (independently addressable) and Thru sockets, metronome output socket and level adjust knob, start/stop and punch in/out footswitch sockets, and tape sync in/out sockets. However, where the other MCs each have a built-in power supply and a standard three-pin connection, the MC50 makes another cost saving by using an external 9V DC psu. Thankfully there's also a cable hook next to the power input to help secure the cable (a feature which is gradually becoming more common) and a power on/off switch.

The MC50's tape sync is referred to by Roland as Tape Sync II, a reflection of the fact that it represents a significant development from the tape sync on the other MCs. It's still FSK, but unlike the sync on the

other MCs it includes Song position data in the signal, allowing it to locate and lock onto any position on tape. In this way, when the MC50 is slaved to tape you can still take advantage of its ability to start recording from any position within a Song.

The one area where the MC50 loses out to the MC500 MkII is that of sequencer memory. The 50 has an internal memory capacity of approximately 40,000 notes, compared to around 100,000 on the MC500MkII and 25,000 on the MC300/MC500. However, as with the other MCs, a 3.5" 2DD data disk used with the MC50 can store around 150,000 notes.

MAKING TRACKS

THE MAXIMUM LENGTH of an MC50 Song is 9999 bars or 87,381 quarter notes, so you're more likely to run out of memory than you are bars. Up to eight Songs can be held in internal memory. Both real-time and step-time recording methods are available for the Phrase tracks, while editing can be at macro ("block" edit) and micro (individual event edit) levels. Maximum record resolution for the Phrase tracks is 96ppqn.

As its name indicates, the Tempo track is dedicated to recording tempo changes. These are measured relative to the initial Song tempo. Tempo changes can be derived from the MC50's front panel (alpha wheel and numeric keypad), MIDI commands (note number, velocity, control change or pitchbend) or incoming MIDI clock or tape sync data. Whenever you mute the Tempo track, playback immediately reverts to the initial tempo of the Song.

The Rhythm track is pattern-based, created by ➤

“You could program a Loop to be a percussion breakdown section, and get into a spontaneous live percussion workout over sequenced backing.”

- chaining together rhythm patterns which have been recorded away from the context of the Phrase and Tempo tracks (see below). You can copy the entire Rhythm track or individual patterns into any of the Phrase tracks, but not vice versa.

The MC50's Phrase tracks are like tape tracks in that you can record continuously into them, starting and stopping at any point in the Song. However, you can't start recording at a point beyond the length of the longest track. One way around this is to create a very long Rhythm track made up of Rest patterns (see below), save it to disk as a Song "template" and then load it back in again whenever you want to start work on a new Song.

There are four methods of real-time recording for the Phrase tracks: replace, mix, manual punch in/out and automatic punch in/out. Replace and mix recording can be initiated by either a two-bar count-in or Key On start (received MIDI note or sustain pedal message). Only Replace recording is available for the Tempo track, but as with the Phrase tracks this can begin within the length of the longest track and end anywhere within the maximum Song length.

Each Phrase track can record and store data on all 16 MIDI channels. The MC50 can record into one track at a time, on all 16 MIDI channels or on a specific MIDI channel, while you can disable recording of such MIDI data as polyphonic and channel aftertouch, controllers, pitchbend and SysEx. Additionally, you can set one or other of the MIDI Outs to soft Thru, and determine for each Out whether or not MIDI clock, All Notes Off and Active Sensing will be transmitted.

When you're playing back a recorded Song, you can mute and unmute the MC50's ten tracks in real time by pressing the dedicated Track buttons; the red pinpoint LED associated with each Track button gives an instant indication of mute status. Any combination of tracks can be muted and unmuted - if you can get your fingers around (or on top of) the Track buttons, the MC50 can do your bidding. In fact, it copes admirably with even the most manic muting - never a note left hanging. The one thing you can't do is sequence your track mutes; perhaps a dedicated Mute track would have been in order.

One area in which the MC50 doesn't score very highly is SysEx recording. It's capable of recording short dumps (individual patch dumps, for instance), but soon gives you a buffer overflow error if you send it a bulk dump of several Kilobytes. Realistically, if you want to send bulk dumps to the MC50 you'll need to buy Roland's MRB500 Bulk Librarian software (pity this wasn't included in the MC50's ROM).

EDITING

ROLAND HAVE BEEN extremely thorough when it comes to macro-level editing. Operations at this level allow you to erase and delete Song data, insert blank measures into a Song, merge two Phrase tracks, extract selected data from one Phrase track into another, transpose Song data, adjust velocity data, change the MIDI channel of a recorded part, quantise note timings, change gate-time values, shift clock

timings, thin out memory-intensive MIDI data, compress/expand, shift and reverse various types of MIDI message (compressing/expanding notes can lead to some interesting results), and copy song data. What really makes these operations useful is the extent to which you can zero in on specific sections of a track, specific MIDI channels, specific types of MIDI data and specific note ranges. For instance, as well as being able to slide the timing of a whole track in units of one MIDI clock, you can slide the timing of notes on a specific MIDI channel, even all occurrences of a specific note on a specific MIDI channel within a particular section of a track - very useful for rhythm parts. The same degree of precision applies to note transposition, so that, for instance, you could transpose all occurrences of a specific note - again useful for rhythm parts, where a conga part can become a bongo part by transposing it up a semitone.

Microscope editing refers to event-level editing. At this level you can modify, erase, create, move and copy individual MIDI messages (operations which have no effect on other MIDI messages), and delete, insert and modify the step time of MIDI messages (operations which do have an effect) in the Phrase tracks. You can also edit tempo data in the Tempo track at this level. Events can be scrolled through in either direction using the alpha wheel and/or the Reset and Skip buttons, and the MC50 plays notes within the selected track via MIDI as they are scrolled through.

RHYTHM

THE MC50 ALLOWS you to record up to 240 rhythm patterns *per Song* and chain any combination of these patterns together to form the dedicated Rhythm track. Although the length of each pattern is one bar, in practice the length depends on what time signature you use. For example, specifying a time signature of 32/2 effectively gives you 16 4/4 bars (but without a metronome accent on bars 2-16 when you're recording). Each rhythm pattern can be given its own time signature in the range 1-32/2, 1-32/4, 1-32/8 or 1-32/16, while individual Instruments within a pattern can each be assigned a quantise value in the range 1/4 - 1/32 note.

Up to 32 Instrument parts (drum sounds) can be recorded within a pattern, using a mixture of front-panel and MIDI input. These Instrument parts are referenced to a "drumkit" which you program in Function mode, where each Instrument can be assigned a MIDI channel and note number, together with a three-character name. When the MC50 is recording patterns via MIDI input, it will only record note numbers which have been assigned to the Instruments. Similarly, when you enter a rhythm part for an Instrument from the front panel, the Instrument's assigned MIDI note number will be transmitted.

The upper row of the Pattern Record screen indicates the current pattern, the time signature, the quantise value of the selected Instrument and the current position within the pattern, while the lower row consists of a series of dots (18 maximum) which

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“Another useful Function allows MIDI transmit channels within each track to be converted in real time during Song play.”

➤ represent steps in the pattern. You can use the cursor left/right buttons to scroll in either direction through all the steps in the pattern.

To enter a “hit” at a particular step, you select the relevant step and then press one of buttons 1-8 on the MC50's numeric keypad. The relevant number is entered in the display at that step and the Instrument's MIDI note number is transmitted when the step plays. The 1-8 number refers to a velocity code which is defined under Function four, where you can assign an actual MIDI velocity amount to each of eight velocity codes.

Front-panel pattern recording can be performed whether the MC50 is running or stopped. To activate real-time loop record mode you hold down the Shift button and press Play. You can then record all your Instrument parts in real-time from a MIDI instrument, and/or enter Instrument parts individually “outside” of real time in the manner described above (a manner akin to that used by Roland on the TR808, incidentally - though not with the same degree of immediacy).

Individual hits can be erased by pressing the zero button on the numeric keypad at the relevant Instrument step, while their volume levels can be adjusted on each real-time pass through the pattern by playing the relevant note(s) again with a different velocity. It's also possible to erase complete instrument parts by pressing a sustain pedal on your master MIDI instrument and then pressing the key(s) assigned to the relevant instrument(s).

This ability to alter the volume of individual hits on each pass through a pattern, and to instantly “drop out” individual parts and then play the same or different parts in again, raises interesting possibilities for mixing sequenced and live performance. There again, the one thing the MC50 doesn't allow you to do is record patterns within the context of its eight Phrase tracks.

If you record into a Phrase track before chaining patterns to form the Rhythm track, the MC50 automatically inserts Rest patterns into the Rhythm track as you record. The time signature of these patterns is derived from the time signature of the first-recorded Phrase track. If you subsequently want to create your own Rhythm track, you can substitute your own rhythm patterns for the Rest patterns. The time signatures of these patterns needn't conform to the time signature of the Phrase tracks. In fact, the time signature(s) within the Rhythm track take precedence over the Phrase tracks, governing both the duration of the record count-in and the accentuation patterns of the metronome bleep. Therefore, if you want to record music which utilises changing time signatures, it makes sense to set up the Rhythm track first, even if you don't want to use any rhythm patterns in your music (each step in the Rhythm track chain where a Rest occurs can be given its own time signature).

In addition to a pattern number, each step in the Rhythm track's pattern chain can be assigned a velocity offset amount in the range ± 99 . This offset is applied to all the Instruments in a pattern for the duration of the step. As it will typically affect the

volume of the Instruments, by applying successively greater or lesser offsets over a series of steps you can create fade-ins and fade-outs - a neat idea.

FUNCTIONS

THE MC50 PROVIDES 14 Functions which, among other things, allow you to select the synchronisation source (internal, MIDI or tape), determine when and with what frequency the metronome will sound, name a Song, specify the recording area for Auto punch in/out recording, specify the area to be repeated for Block Repeat Play, set the initial tempo of a Song, specify up to eight Locate points which can be jumped to (so that you can quickly move to the second chorus or the third verse in your song), and create a memo of up to 99 lines (16 characters each) for all Songs (you could use this as a glorified track sheet, indicating what instruments and sounds should be assigned to each MIDI channel on each Out). Function 11 allows you to define for each Phrase track which MIDI Out(s) the track's data will be transmitted from. Having independently addressable MIDI Outs means that you've effectively got 32 MIDI channels to play with. Another useful Function allows MIDI transmit channels within each track to be converted in real time during Song play, so that for instance the part in track four which is playing a bass sound on one MIDI instrument on channel six could be tried out on another instrument which is receiving on channel eight. This Function also allows you to disable specific MIDI transmit channels within a track, allowing you to mute a specific part or parts within a track - definitely a useful feature.

UTILITIES

UTILITY MODE ALLOWS you to delete one or more Songs at a time, check the playing time of an entire Song or of any section of a Song (with tempo changes in the Tempo track taken into account), copy the settings of Functions 1-14 from one Song to another, copy the rhythm patterns of one Song to another, exchange Song numbers (useful when you want to change the order of Songs in your set), check what types of MIDI message are recorded in a Song, erase rest data, align track lengths, and transmit a MIDI Tune Request message and note messages (all MIDI channels, note A4, velocity 64) via both of the MC50's MIDI Outs.

Disk functions allow you to load, save, delete and rename Song files and compare internal and disk Song file data. Disk utilities allow you to initialise a disk, make a backup copy of a disk, copy Song files between two disks (this adds files to the destination disk, whereas the backup utility deletes all files on it), convert a Song file created on one of the other MCs using MRC300/500 software to a format readable by the MC50, name a disk (up to 13 characters) or start up another system (restart Super-MRC, start Super-MRP, or load other system software such as the MRB500 Bulk Librarian off disk).

The MC50 allows you to store one Configuration file to each disk. This contains, among other things, user settings for what happens when you Stop ➤

(immediate or to end of bar) or Locate Jump (actual position or beginning of bar), what the step and gate times are for each note symbol in step record, what the gate ratio is, and whether or not the MC50 will update MIDI parameters after fast forwarding or rewinding through a Song.

SUPER-MRP

WHEN YOU SELECT the MC50's Super-MRP software instead of its Super-MRC sequencing software, you can create up to 26 Song Banks, each of which consists of a sequence of up to 32 Song files. The total Song data within a Bank mustn't exceed the MC50's internal memory capacity, as all the Song files within a Bank will be loaded together (the MC50 can't load while playing). The idea behind this Song-chaining facility, of course, is to provide a means of automating a live set, with all the Songs (or as many as possible) loaded into the memory and pre-organised in the order you want them in.

With a Pause mark inserted between sequence steps, the MC50 pauses at the end of each Song and waits for you to start the next Song. Alternatively you can specify a fixed time interval (0-240 seconds) or a two-bar metronome count-in between any two successive Songs. If a Song is given a Loop mark, the MC50 will repeatedly play an area in the Song (specified by the Block Repeat Function) until you press a footswitch connected to the Punch in/out socket, when it will play to the end of the loop and then continue through the rest of the Song. Pressing

the footswitch while you're outside of the loop (before or after) causes the MC50 to jump to the beginning of the loop and start playing from there. You could, for instance, program the loop to be a percussion breakdown section, and get into a spontaneous live percussion workout over a sequenced backing. Talking of spontaneity, you can also do live mixes of the Songs by dropping MC50 tracks in and out from the sequencer's front panel. Overall, however, the MRP aspect of the MC50 typifies the "pre-conceived" approach adopted by many sequencers.

VERDICT

ROLAND'S NEW PRODUCT News brochure for Spring 1990 referred to the MC50 as being "destined to be the leading product in a new generation of Micro Composers". Which is strange, because if anything the MC50 represents the culmination of the generation which began with the MC500. As such it's an extremely well thought-out and well-designed sequencer which concentrates on what's important and necessary in implementing the tape recorder/drum machine model of sequencing, and presents it in an accessible, friendly and consistent manner. All in all the MC50 is a real pleasure to use. ■

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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.
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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 6 in the series; P.A. - Portastudios - 8 Track - Financial advice, MIDI and information on our recording and MIDI school. To obtain any of our fax packs just phone or write.

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Tascam MSR 24 plus Studiomastrer trackmix 24 12 24	£8750 + VAT
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Tascam MSR16 plus Saber 16:16	£6499 + VAT
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This list represents only a fraction of our current secondhand and demonstration stock. Call us for a full listing - All prices exclude VAT

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ALESIS Microverb II	£99 + VAT
SECK 1282 mixing desk	£699 + VAT
YAMAHA TC55 Sample player	£345 + VAT
SONY DTC55 A brand new rack size DAT with 32, 44 and 48 Kiloherz sampling with audio, digital and optical in and out	£479 + VAT
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ALLEN + HEATH SPECTRUM - £2899 + VAT
Ever fancied a Saber but felt your budget didn't quite stretch? Now you don't have to wait any longer! The brand new Spectrum 16: 8:16 (32 inputs, all with E.Q and MIDI muting) is crammed with nearly every Saber feature (And a few more besides) including the full on board MIDI computer in a slightly smaller package! This stunning new console produced exclusively for Thatched Cottage in the UK, looks like a Saber but in addition is expandable in units of eight inputs simply by bolting on a module. The most amazing thing about this desk? The price - £2999 + VAT!!! In addition we are packaging it with the Tascam MSR16 for only - £5699 + VAT or the Akai MG14D for only - £ 4250 + VAT. We have full details - just give us a call.

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 £4250 + VAT, the 16 Track is £7,350 + VAT and the 24 Track is £13,500+ VAT. At Thatched Cottage we proved it could be done, and we have helped many new studios to open and start making money - our experience could help you. Give me a ring and have a chat - what have you got to lose? Plus: FREE Thatched Cottage Recording School Course to package buyers!!

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DREAM STATE



**Twenty years
on, electronic
music pioneers
Tangerine
Dream are still
making music -
but have their
ideas kept pace
with the times?
Interview by
Simon Trask.**

TANGERINE DREAM'S MUSICAL IDENTITY in the first half of the '70s was forged out of the possibilities offered by early analogue synth and sequencer technology. Today they are still seen by many people as the archetypal electronic music group, though perhaps inevitably they are no longer the trailblazers they once were. However, neither are they a spent creative force existing merely to recycle their "greatest hits". Over the years they have often confounded their audience's expectations, with the inevitable result that they've lost some fans and stretched the loyalty of others. But equally they've gained new fans along the way - particularly in America, where they've succeeded in selling out three cross-country tours with very little radio airplay or mainstream media attention. Back in 1974, their first album for the then fledgling Virgin Records, *Phaedra*, entered the British Top 10 despite a similar lack of exposure. It seems the group have always been able to survive without the oxygen of publicity. In fact, during their lifetime they have earned themselves five gold records and sold close to seven million albums - not bad going for a group who have never courted mass appeal.

Tangerine Dream's recent UK tour provided an opportunity to talk with founder Edgar Froese (who

today is the only link with the original group) and Paul Haslinger, the classically-trained Austrian keyboard player who had just joined when MT last interviewed the group, back in 1986. Keeping it in the family, the current incarnation of Tangerine Dream is completed by Froese's son Jerome (not present at the interview), who joined in 1990 in time to contribute to *Melrose*, the group's latest album and their third for former Dreamer Peter Baumann's New York-based Private Music label.

The music on the previous two Private Music albums, *Optical Race* and *Lily on the Beach*, represents a significant change in musical style for the group. The music has become more conventional, with accessible melodies and chord sequences supported by driving rock rhythms displaying an American influence. Which is not to say that Tangerine Dream are producing pop songs - for one thing, they remain a resolutely instrumental group - but they have been mining a populist rock/classical vein which has endeared them more to American than European audiences in recent years. The music on the new album, however, displays a lyrical, contemplative sensibility which is more European than American.

Perhaps this mixture of American and European influences shouldn't come as a surprise. Froese grew up

in Berlin during the post-war years, at a time when there were many American soldiers in the city. Consequently he assimilated a lot of American influences, and when he started making music it was American rock that he wanted to emulate.

"I guess I have a huge American influence", Froese confirms when I raise the subject, "starting with early jazz, running through Gershwin, sometimes even light orchestral music, but also including people like John Cage and Steve Reich, Philip Glass's early stuff. . . Now it's everything from heavy metal to Top 40 radio play. If you're in a car, what else do you listen to? It's the whole environmental sound scenery in the States which gives you a view of what happens mentally in the country. We are there quite often, and we lived there for a while, so naturally we've picked up quite a few things and our music will reflect that.

"Music is always a reflection of what you are at a particular time. What we do today was not possible for us to do a year ago, and even that material which we produced a year ago was impossible to think of five years ago. So whatever went on is connected to the actual time period. We would never go back and produce a record like *Rubycon*. Sometimes we love to do it at a gig out of remembrance, but we would never compose a new piece in that way. Why should we do that? Personally I don't look back very much. I don't listen to the old music. A lot of people like to do that, and maybe it's part of the age they're in. People get older and they remember stories about their childhood, they like to go back and remember all the places they went to. I'm not interested. That's boring to me."

Tangerine Dream's approach to live performance in their early days - playing continuously for hours on end in almost total darkness without once acknowledging the audience - was as unconventional as their music. Seeing them play at the Hammersmith Odeon several days after the interview, it became apparent that some things haven't changed: they still perform without a break, letting the music - currently taken mainly from the Private Music albums - establish a rapport with the audience. Each track was smoothly segued into the next, creating a seamless flow of music - only nowadays lasting a more modest 90 minutes. And while the trio were joined by two saxophonists during the latter part of the set, and at one point Froese senior and junior both abandoned their keyboards in order to swap guitar licks, Tangerine Dream are still a technology-based group. The three musicians played live parts using a keyboard "front-line" which included Korg T1s and Wavestations, while each of them had an Atari ST running Cubase (Haslinger maintains that STs are more reliable on the road than Macintoshes) to provide the sequenced backing on their own rack of synth and sampler modules - or that's the way it was made to seem. I suspect that only Edgar Froese's computer setup was functional, the other two setups being there for show and to provide backup units should the main ones go down. One thing that's for sure is that technology is still an essential part of the group's visual appeal. Of course, nowadays the spectacle of what Froese refers to as "blinking lights and keyboards" is by no means unusual - but it wasn't always that way.

"When we performed in '74 the first time with a modular Moog system in Britain, most of the press ridiculed us", Froese recalls. "We said at the time that in about ten years everybody would be using synthesisers on stage, but they didn't believe us. Today everybody has a synthesiser in their bedroom. If you work with hardware and software, subsequently you will come to a decision about what has to come next, but if you get too early onto the streets, people don't understand."

The Hammersmith show was slick and tight, seemingly with little room for improvisation or spontaneity. In part, this can be put down to the influence which today's MIDI sequencers have had on music - in many ways so sophisticated, they don't allow the sort of live interaction which was possible with "primitive" analogue sequencers of the early '70s. However, according to Froese the change in emphasis has also resulted from a desire on the group's part to get away from improvisation - in the early days Tangerine Dream's hallmark.

"The miracle phrase in the old days was 'random control'", recalls Froese. "We worked with that approach for 15 or 16 years and that was fine, it was a great experience. Simply because we didn't know that much about technology back in the early '70s, whatever came about randomly was a big help. If it sounded good then it was like 'Great, where did that come from?'"

"Nowadays we've got the control, so we can aim at something in a way which we couldn't even have thought of in the early days. And simply because we improvised for almost 15 years, to us it's fascinating to become very disciplined and to know exactly what we want to do. So now we do the normal thing of composing a piece from scratch all the way through, but it's not normal for us, therefore it has an exotic aspect."

Froese reveals that finding the right sounds is an important part of the group's compositional approach.

"The sound is always the key point. In creating music we have what we call the sound creative section and then the creative section where we start composing. You can soon feel when you sit down at the keyboard that it's not your day for composition, and in those days we start working on sound research. Then the next day, when we become very creative in composing, we use what we've created in sound research. So it's a combination."

"But on some days you won't be able to compose or to create sounds", adds Haslinger. "Penderecki sat in a Parisian cafe composing his *St Luke's Passion*, so let's go to the coffee-house for inspiration!"

"I've seen Paul in the coffee-house so many times!" Froese jokes.

"But about sounds, the problem is that first of all you have to feel well with the sound", continues >

"When we performed in '74 with a modular Moog system, most of the press ridiculed us - we said that in about ten years everybody would be using synthesisers on stage."

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➤ Haslinger. "A pianist spends about ten years of his life feeling well with the piano sound, and at the end he knows the sound so well that he has every little detail under control. What we do with our sounds, we develop them for a day or so and then we play them. That's what everybody does and it's probably wrong. You have to live with a sound first, then after a certain amount of time and a certain amount of practice I think you start creating a relationship to that sound. Don't ask me how it happens. Every now and then when we're at a dead end, we'll call up a sound that we have a relationship with and we'll start having musical ideas because of the power of this sound. So sound design may seem easy, but I think probably it's one of the most difficult things in the world."

In the past few years, sequenced drum parts have become more prominent in the group's music - particularly on the more up-tempo tracks. However, Froese contends that rhythm was always an essential part of Tangerine Dream's music.

"People quite often say that within the past couple of years we've become very rhythmical", he comments, "and they ask us if that's because we want to be popular or commercial. No, the rhythm was always there from the first record, it just became a different part of what we wanted to say. We always saw our music as being on two levels. The ground level was a train type of thing, something that people could relate to immediately because it was rhythm, heartbeat, and all people around the world are familiar with that. Everything they are not familiar with we put *on* the track: a little house here, a big skyscraper there. . . That gave us the chance to explain a bit about what we wanted to say while people were in rhythm."

Nowhere is rhythm more evident nowadays than in electronic dance music. But while the advent of ambient house music has fuelled demand for Tangerine Dream's back catalogue, the group themselves haven't gone as far as to use dance rhythms.

"We are quite familiar with house music", Froese reveals, "and if there is a need for it - which obviously there is, otherwise it wouldn't be so successful - it's OK. We believe that things cannot exist unless there is a certain demand. And the desire is there for people to move their bodies, to dance. You could say they're just enjoying themselves, and of course they are, but there is a certain force within them to do it. I mean, dance is just a synonym, a symbolic thing for something else. In this period of time, people want to stand up and do something, they're becoming more active than ever, and that kind of willingness to do something must have its counterpart, which is dance music. It's kind of a tool for human beings to get into an active movement. Therefore everything - rap, reggae, house, funk, rock - whatever makes people dance, it's a necessity, it's not something which is there accidentally. It's nothing to criticise."

However, it seems that the dance remixers won't be getting their hands on any Tangerine Dream music if the group have anything to do with it.

"We got asked a couple of times if we would allow remixes", says Froese. "We would not, simply because the way we understand our music means that the music is bonded to a certain atmosphere, to a certain

recording process and to a certain composing process. Unfortunately we cannot allow somebody else to take over the music and do something else with it, no way."

WHILE MANY '70S GROUPS TOOK TO using synthesisers, far fewer embraced sequencing with anything like Tangerine Dream's enthusiasm. Today sequencing is a commonplace part of music-making, no longer confined to "electronic music". The current incarnation of Tangerine Dream uses the sequencing technology of its day, just as the original group did.

"In the studio we use sequencer software for all three popular computer formats: IBM, Apple and Atari", reveals Haslinger. "We have Cubase and Performer on the Macintosh, and on the IBM we use Cakewalk and Sequencer Plus. Because we've worked with Steinberg and contributed to the development of Cubase, it's our main sequencing software. In fact, we use Cubase on both the Macintosh and the Atari. You can now use the Macintosh version with Mark of the Unicorn's MIDI Timepiece, and extend that so that if you have four MIDI Timepieces hooked up you can have a 32 x 32 MIDI matrix. If you connect your SMP24 or Midex on the Atari to the Macintosh matrix you can control Cubase on the Atari from the Macintosh DA."

In an attempt to please all of the people all of the time, programs like Cubase and Notator provide musicians with a bewildering variety of ways to record and edit their music. The temptation is there to utilise all these methods, but Froese feels that it's important to be selective.

"We know people, including ourselves, who rarely use the drum page on Cubase", he says by way of example. "The way we work with drum patterns is completely different, we have our own little philosophy. Maybe other musicians never move into grid edit."

Haslinger acknowledges that the tremendous sophistication of today's sequencing software can pose its own problems.

"The better the system is, the bigger the limitation grows. All these complex possibilities that you have now at the push of a button are, at the same time, limiting you in the sense that they make it much more difficult to be original. It's always the two sides of the coin. But the only sentence you can put over all that is that at all times, with whatever equipment or tools that are available, original music has been made and unoriginal music has been made. The unoriginal stuff has always been 95%, there has always only been 5% interesting stuff. It's very normal and natural that there's a lot of boring stuff around, and you have to look in the little niches to find the original stuff. That's just the way it is. Sequencers don't really change that."

"Everything goes in the right direction as long as you don't forget that you're a human being and

"Because we improvised for almost 15 years, to us it's fascinating to become disciplined - now we do the normal thing of composing a piece from scratch."

➤ become part of the machine", Froese advises.

Haslinger sees computer-based sequencing packages offering even more possibilities to musicians in the years to come.

"Cubase, Notator and many other sequencing packages are going to be expanded to be control systems of time events", he contends. "We hope to be able to control light events and even more complex forms of sound from the sequencer in the future, using something like the MIDI Manager page on Cubase together with new types of controller data."

Froese offers another reason why computers will become increasingly important to musicians:

"Maybe in a year to 18 months we won't be talking about modules in a classical way any more. A sound module will be an integrated part of the computer, and we'll all be talking about sound chips, not sound modules."

Warming to the subject of future technology, he has some further predictions to make:

"The recording system in about ten years' time won't be any bigger than a Walkman. That will be the whole recording unit. Also, the monitor screen will be replaced by glasses that you put on, and you'll have a monitor within the glasses."

Froese also sees music keyboards giving way to other types of controller in the years to come.

"The Theremin kind of approach will be the way forward", he maintains. "Touch sensitivity won't involve touching keys any more. And then the next step, in about 2025, will be to use brainwaves."

If Tangerine Dream are still around then, no doubt they'll be first in line to try out the technology.

Returning to present technology, Froese reveals that the group are investigating the possibilities offered by MIDI data networking using fibre-optic cabling, as pioneered by the Lone Wolf MIDItap system. Clearly Tangerine Dream are still embracing the latest electronic technology - but this doesn't mean rejecting acoustic technology.

"Believe it or not, both of us are the happiest persons if you give us a Steinway grand or an acoustic guitar", says Froese. "A lot of people may think we'd rather have fiddly little computers and stuff. OK, we have that for the job that we're doing, but on the other hand that has nothing to do with music itself."

Tangerine Dream have traditionally had a policy of investing a significant proportion of their profits back into buying new equipment, a policy which has allowed them to keep up with the latest technological developments. However, if Froese's experience over the years of working with technology has taught him anything, it's that ultimately what matters isn't so much what's in the technology as what's in the person who's using the technology - plus the determination to bring it out.

"If you've only got £150 in your pocket you can buy yourself a cheap little Casio keyboard. It's a chance to make music, it's a good chance for the kids. One shouldn't blame anybody for starting out in a poor way, because it can turn out to be big. It depends on the person, on their creativity and craftsmanship. A lot of people overlook the aspect that you've got to be a worker. You won't get anywhere as long as you don't help yourself. You've got to be very hard on yourself, and you have to practice eight, ten, 12 hours a day. If you work that hard then there's no question that you will make it one day, but if you sit around and say 'I could become a superstar, what book do I have to read?', that's stupid. Then you'd better go out there and become part of the 90% of people who don't know any better."

SINCE THE LATE '70S, TANGERINE DREAM have had a profitable "second career" as film music composers, beginning with William Friedkin's *The Sorcerer* and continuing through the '80s with such films as *Violent Streets*, *Risky Business*, *Firestarter* and *Legend*. For British audiences the latest example of the group's film music comes with the film *Miracle Mile*, which was released in America back in 1988 but is only now about to see UK release. It's a frantic, compelling and ultimately bleak film which tells what happens when news of an impending nuclear strike on Los Angeles leaks out via a misdirected phone call. The music provided by Froese and Haslinger is a model of how to write for film, helping to create the overall mood of the film and to underscore the emotions and tensions of particular scenes without ever becoming intrusive.

Froese makes it clear that composing film music is not an occupation for anyone who likes to retain complete control over their music.

"First of all, you have to collaborate with somebody else: the producer, the director. And last but not least there's the film itself. Very often you feel a lot of sympathy with the pictures. You try to do your best, then all of a sudden the producer walks in and has ➤

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"Recording systems in ten years' time won't be any bigger than a Walkman; monitors will be replaced by glasses that you put on - you'll have a monitor within the glasses."

the glasses."

> nothing but a little smile for what it's taken you weeks to do. Or sometimes you know exactly the way the music has to be but nobody else believes you, so you find yourself having to turn it upside down and record it again, and that's not fun. But these things happen, so what are you going to do, get screwed up, get

angry, or just calm yourself down and accept it? The responsibility for what you're doing is not just in your hands. That makes composing for film on the one hand very interesting, but on the other hand very annoying sometimes. But film music has to support a picture, so if you want to do solo work or band work then that's a different story."

A different story it may be, but perhaps some of the disciplines of composing for film have rubbed off on the group's music. Surely it can be no coincidence that Tangerine Dream's music has become both more concise and more obviously structured during the past decade.

"The good thing about composing scores for film is that you have to learn to explain yourself in a short

composition", replies Froese, "and it's much more difficult to do that. If you've just got three or four or five or six minutes to explain whatever you want to explain, it's not that easy, especially with instrumental music. It's a challenge. We used to be into really long pieces of music where for five or six minutes there would be such little climax. Now we have to have something after a couple of seconds which makes it clear where we want to go."

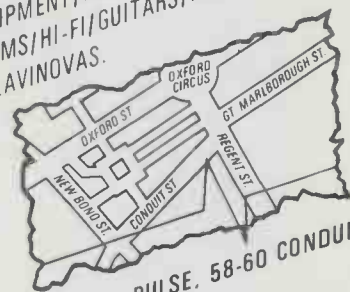
Perhaps it is Tangerine Dream's ability to change with the times yet retain their own musical identity and integrity which has seen them survive into the '90s. How many - if any - of today's electronic music groups will still be around 20 years from now? Only time will tell, but Froese is clear about what it takes to survive - and reveals that Tangerine Dream aren't about to hang up their MIDI leads just yet.

"As soon as we stop changing things, whether drastically or slowly, we'll have reached a dead end. It doesn't matter whether we sell a million records or 100,000. You've got to improve yourself all the time, you've got to take that challenge. We're already planning for next September or October, and at the moment we're working on a couple of things which will be maybe one of the biggest changes we've ever made in our approach to music, to sounds and to presentation. And that's fun."

It's clear that Tangerine Dream intend to remain at the forefront of technology. Perhaps they will yet reassert themselves at the forefront of electronic music, too.



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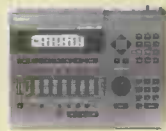
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S3



PHOTOGRAPHY: JAMES CUMPSTY

Korg's latest drum machine achieves workstation status - in the first instalment of this two-part review, we ask: is it opening up new vistas for the drum machine or entering a blind alley? Review by Simon Trask.

AT THE TIME of its announcement at the 1989 Frankfurt Music Fair, Korg's S3 Rhythm Workstation was intended to complement two related and already long-awaited instruments from the company - the S1 sampling drum machine and Q1 dedicated sequencer. Korg subsequently abandoned the S1 and then the Q1, reportedly because they felt both had missed their time, which left only the S3 to make it, finally, into the shops almost two years after it was first announced. So why has the S3 survived? Perhaps its name gives an indication. The Rhythm Workstation is not "just" another drum machine, as it differs from other drum machines in providing onboard eight-track sequencing and digital effects processing. Additionally, it offers a novel approach to creating customised drum and percussion sounds - which makes it a tremendously versatile instrument sonically - and incorporates SMPTE read/write capability together with the ability to transmit MIDI Time Code.

The S3 was originally priced at £1150 (placing it between the Q1 and the S1), but pricing expectations can change a lot in two years. In particular, it's now possible to get a well-specified, 16-bit drum machine for considerably less than £500, whereas its equivalent a few years ago cost anything up to £1000. Accordingly, Korg have brought the price of the S3 down to £899, though this still makes it pricey for a drum machine (at least, of the non-sampling

kind). But then the S3 offers more features than any other drum machine - which is either a tribute to Korg's foresight and technical expertise, or an indication that no other manufacturer considers Korg to have taken the right direction.

NEW OVERVIEW

WHERE DRUM MACHINES normally have what is effectively a single pattern track, the S3 has four Pattern tracks (1-4) and four Song tracks (5-8), allowing you to combine short repeating rhythms with extended percussion parts. More than this, the S3 can function as a general-purpose, eight-track MIDI sequencer, allowing you to record not only drum and percussion parts using the S3's own sounds, but also bass and piano parts, for instance, using external MIDI'd instruments. This is because the S3 doesn't restrict itself to the "pad hit" approach to recording typical of drum machines, but records note and other MIDI performance data in the way that a general-purpose MIDI sequencer does. Both the S3's drum pads and any MIDI performance source can be used to record into the tracks, and each track can be set to play S3 sounds only, MIDI'd sounds only, or both S3 and MIDI'd sounds.

The S3's role as MIDI sequencer is enhanced by its ability to generate and read SMPTE timecode to bit resolution (at 24, 25, 29.97 or 30fps), which should see it slaved to a multitrack tape machine or a video machine in many setups. Both MIDI Outs can be set

to soft MIDI Thru, so you can route the input of your controlling MIDI keyboard through the S3 to slaved instruments and, if required, to a slaved sequencer.

The S3 can generate SMPTE code beginning at any start time, while each S3 Song can be set to begin at an absolute SMPTE time. Additionally, you can define a Song duration in terms of a SMPTE duration and the S3 will calculate the required tempo to the second decimal place. You can also create a tempo track for each Song (with up to 100 tempo changes) in step time from the front panel. Of course, a significant advantage of SMPTE timecode on the S3 is that it allows the drum machine to lock to any position on tape in Song mode (it won't sync with the timecode while in Pattern record or playback, however), so that you aren't limited to recording from the beginning of a song all the time. When set to internal or SMPTE sync, the S3 also sends MIDI Song Position Pointer to a slaved MIDI sequencer or drum machine when it's in Song mode.

The S3 is able to transmit either MTC or standard MIDI sync from each of its two separately-addressable MIDI Outs, opening up the possibility of being able to trigger samples within a hard disk-based recording system from a timecode-based cue list. MTC on the S3 can be referenced to either the SMPTE code off tape or to the S3's own internal clock (so you can take advantage of MTC within a tapeless recording setup).

The S3 also brings 16-bit digital effects processing to the drum machine. Two built-in digital effects processors can each be assigned any one of 28 programmable effects (14 stereo/14 compound, that is separate left and right channel). Sixteen effects programs can be created, each consisting of processor configuration, effect selection and effect parameter values. Effected sounds are routed via the S3's stereo audio outs, but Korg have also provided four non-effected Multi mono outs for those S3 sounds that you want to effect externally and individually.

Where drum machines typically allow you to play a single sound at a time off each pad, the S3 allows you to layer any two of its internal and card samples. What's particularly interesting about the S3's sonic capability is that more than half of its 75 internal samples consist of either the attack or the decay portion of the sampled sound. For instance, one sample might be the initial sound of a stick hitting a drum head, while another sample might be the decay produced by the body of a drum - Korg call them "head" and "shell" samples.

The majority of these samples are of bass and snare drums, but toms, congas and timbales have also received the separation treatment. The S3's manual is more than a little vague on how these samples were derived, but the implication is that harmonic analysis was used to

extrapolate the attack and decay elements of the sounds so that they could be stored separately.

LAYOUT

A SIZEABLE FRONT panel and a slimline wedge shape - 13.5" (W) x 12.5" (D) x 1-2" (front-to-back H) - coupled with Korg's usual black casing and solid build-quality serve to give the S3 a sober yet striking appearance - outwardly paralleling the combination of soberly familiar and strikingly different features which lurk within the machine. Given its dimensions, another striking feature becomes apparent as soon as you pick the unit up: it weighs a surprisingly modest 5.7lbs.

Generous front-panel space and a typically economical use of buttons have allowed Korg to give their new drum machine a clearly-organised, uncluttered front-panel layout. In the upper half of the front panel are a master volume slider, a 2 x 24-character backlit LCD window, four soft function buttons (labelled S1, S2, S3 and S4) immediately beneath the LCD for selecting onscreen parameters and functions, a pinpoint-LED Beat indicator and a data entry wheel together with Exit, Shift, ±, Page L/R and Cursor L/R buttons. The lower half of the panel contains four Mode buttons (Pattern, Song, Instrument and Global), seven "transport" control buttons (FF, Rewind, Pause, Play, Record, Stop, Locate), a pinpoint LED run-time indicator, a Pad Bank/Tempo button and a row of eight velocity-sensitive drum pads.

The rear panel is necessarily rather more cluttered, with a DC 9v power input and a power on/off switch, one MIDI In and two MIDI Outs, SMPTE timecode in/out jacks, two programmable footswitch inputs, a stereo headphones output, L/Mono and R main stereo outs, four Multi outs, one RAM data card slot and two ROM PCM sample card slots. The locations of the three card slots have been labelled on the rear edge of the front panel, reducing the likelihood of you plugging the wrong type of card into a slot.

Power to the S3 is provided via an external adaptor; a thoughtfully-provided cable hook on the rear panel keeps the power lead firmly in place. Rather less thoughtful is the procedure for adjusting LCD contrast, which requires the use of a small screwdriver to turn a recessed screw located in the lower right corner of the S3's bottom panel. However, it's unlikely that you'll need to resort to this procedure, as the LCD provides a strong, clear display which can be read without difficulty from every practically useful angle.

TIMBRES & KITS

THE BASIC SOUND element of the S3 is the Waveform, which is a single sample drawn from the drum machine's 75 internal samples or 80 card samples (up to 40 via each of the two PCM ROM sample card slots). Internal and card samples can be freely mixed. ➤

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> The 75 internal samples include seven bass drum heads and five shells, eight snare drum heads and seven shells, and five tom heads and two shells. "Whole" sounds include a couple of closed and open hi-hats, a couple of ride cymbals, handclaps, cowbell, tambourine, shaker, a couple of bongos and a pot cover. The range of sounds isn't as versatile as that found in Korg's workstation synths, but then there's plenty of scope for widening the range via the two ROM sample card slots. You can also create a much greater variety of sounds by taking advantage of the onboard editing. In particular, the variety of bass and snare sounds can be greatly increased by means of combining different head and shell sounds and altering their pitches. The sounds are clear and sharp, variously with plenty of bite and power where required. However, when tuned down by a large amount (the tuning range is ± 24 semitones) some of the sounds acquire a rougher edge as their noise elements become more prominent and the attack becomes more diffuse. This is where the separate head and shell samples come in, because when you layer them in Kit mode you can tune the shell sample way down but keep the head sample at original pitch, thus retaining a sharp attack. In fact, overall the S3's sound quality has a comfortable balance of clarity and roughness.

An S3 Timbre allows you to select a particular Waveform and reverse it, tune it, apply an amplitude envelope of up to eight stages (with rate and level settings per stage), apply pitch autobend (± 36 semitones with variable rate) and modulate such parameters as pitch, level, and attack level and rate using the likes of note number, velocity and aftertouch.

You can optionally define any one of the envelope stages as a sustain stage, in which case it's possible to control the duration of the Timbre (if it's long enough in the first place) from note-on duration. This can be controlled from the S3's drum pads (just hold the pad down for the required duration) as well as from a MIDI keyboard.

The S3 comes with 80 preset Timbres and allows you to program a further 80 internally and store up to two banks of 80 Timbres on a RAM card. One bank at a time can be played directly off card.

Bearing in mind its ability to play looped samples and its MIDI-based approach to sequencing, the S3 has the potential to play a much wider range of sounds, via ROM PCM sample cards, than its "drum machine" tag might suggest. The internal sounds provide some indication of the possibilities by including a looped synthbass sample and five looped waveforms.

Timbres are combined into Kits, with up to two Timbres per pad. Successive presses of the Pad Bank button (or of an assignable footswitch) switch the unit between two sets of eight Timbre assignments, effectively providing 16 pads although there are only eight physical pads.

The S3 contains ten factory-preset Kits in ROM and allows you to program a further ten internal Kits yourself. Up to 20 further Kits can be stored on a RAM card, in two banks of ten. Kits can be played

directly off card, although only one bank can be available at a time - giving you 30 Kits to choose from at any given moment.

In addition to assigning up to two Timbres per pad you can set the tuning of each Timbre, volume balance the two Timbres, define the velocity response of each Timbre in such a way as to create velocity switching and crossfading effects, and define the output routing of each Timbre (stereo, effect send one or two, Multi 1-4, or Stereo + M1, M2, M3, M4, E1 or E2). Additionally, you can set individual pad level and pad mode (poly/mono, exclusive A/B/off and reserve/normal priority), copy all the parameters of one pad to another and copy whole kits (internal/card).

To be active in a Pattern or a Song, a Kit first has to be assigned to a track. Track pairs 1/5, 2/6, 3/7 and 4/8 each share the same Kit. If you don't want a particular track to play the S3's internal sounds you can set it to Ext, in which case notes recorded into the track will be played via MIDI on the assigned MIDI channel and on the assigned Out(s).

Each of the 16 pads within a Kit can be assigned its own MIDI receive note range (from one note to the entire MIDI range) and MIDI transmit note (which must be within the receive range). The transmit note is recorded into the S3's Pattern and Song tracks, but it's the receive note range which determines what Timbres are played - from the pads as well as via incoming MIDI. And as the receive note ranges can overlap, you can play more than one Timbre from an S3 pad or a MIDI keyboard by setting the receive note range(s) of the layered Timbre(s) to overlap the transmit note of the main Timbre.

The MIDI receive note-range map for each Kit also explains why internal sounds playing back can change if you transpose a track (the MIDI playback number is being changed, not the pitch of the internal sound). It also explains why some pads play no internal sound, and why some patterns disappear wholly or partially, when you select a different Kit for a Pattern track.

Additionally there's a System page called Pad Mode which allows you to select Major, Chromatic or User scale note playback off the eight pads of Bank A. User allows you to assign your own note numbers to the eight pads, while Major and Chromatic allow you to select a start note number from which the other notes are derived. The idea is to facilitate pitched performance off the pads for recording, say, a bassline. In practice, the sounds you get on the pads will be determined by the MIDI receive note range for the selected Kit.

If all this sounds a bit confusing, that's because it is - until you get clear in your mind how the S3 records your sequences and what role the MIDI transmit notes and MIDI receive note-ranges play. Once that clicks, all is clear.

Next month we'll take a look at the structure of the S3's sequencing facilities, its onboard effects section - and, of course, sum up its potential musical applications. Watch this space. . . ■

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In fact, sounds have become a major part of the current hi-tech music scene - using them, programming them, even buying and selling them. Which brings us onto the form a sound takes. Today you can handle sounds in a wide variety of forms: analogue recordings (sample cassettes, CDs and DATs), cards or disks for specific instruments and disks suitable for uploading into a computer and downloading into an instrument, to name but three. And so it is we come to this month's MT competition.

Playing on the generosity of the Advanced Media Group, we've procured a selection of sounds in a selection of forms for your pleasure. More specifically, the winner of this month's competition will receive three sample CDs - one from the highly acclaimed McGill University series, one from the extensive Sonic Images series and one from the unique Masterbits series - of his or her choice. In addition to this, he or she will be able to choose any two ROM cards from the Valhala International Gold series - that includes the incredibly popular Korg M1 cards and cards for Roland's D50, Yamaha's SY77 and Kawai K1 and K4 (to name a few). For the more materialistic of you, that's over 200 quids worth of sounds.

So, questions on sound coming up:

Q1

What is the speed of sound at sea level?

- a) 652mph
- b) 743mph
- c) 768mph

Q2

What is the sampling frequency used for CDs?

- a) 44.1kHz
- b) 48.0kHz
- c) 49.4kHz

Q3

Name the artists responsible for recording the following songs:

- a) Sound of the Crowd
- b) Sound System
- c) Sound Chaser

DON'T WRITE, CALL in your answers on MT's Competition Hotline - **(0898) 100768** - no later than *Monday, 28th January*. Please remember to give your name and address along with your entry. Following the interest shown by the purveyors of multiple entries in being forwarded as candidates for Cilla's *Blind Date*, we've gone one better this time and arranged jolly japes at the hands of Jeremy Beadle in the ever-popular *Beadle's About*. Multiple-enter at your own risk.



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Interview by
Steve Cogan.
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Tim Goodyer.**

LET ME INTRODUCE MEAT BEAT MANIFESTO: a contemporary musical collective encompassing the disciplines of mixed-media presentation and contemporary dance, as well as that of musical experimentation. To date, this manifesto has taken Meat Beat on a course that has encompassed such diverse elements as samples from the childrens' television program *Rainbow* and public screening of hard-core pornography - and the publicity that accompanies such nefarious activities.

The members of Meat Beat Manifesto include Jack Dangers, who has worked as a songwriter in a variety of bands encompassing in a variety of musical areas, Marcus Adams, who is a classically-trained dancer formerly with the Ballet Rambert and an accomplished choreographer, and Craig Marrison, who is in high demand for his skills in set and costume design (having turned down offers from noted designers such as Stefanol of the Vienna Opera). This lineup is augmented by part-time Manifesto member Johnny Stevens, who works with Morrison on costume design for the live shows and videos. The output of this talented and unconventional team is better witnessed than described. The visuals include uncompromising caricatures of the human form, the settings often suggest a setting unlikely to belong to the planet earth, while the music drifts freely between relentless dance and the *avant-garde*.

Waiting apprehensively for Meat Beat Manifesto to arrive at their Soho headquarters, I wonder what sort of people might be responsible for porn videos and photo sessions in meat markets. When Stevens, Dangers and Adams arrive and invite me to their local Wimpy, they are not at all the pretentious arty types *The Face* would have me believe. Instead, the interview gets underway with Adams describing how the Manifesto formed.

"Jack was writing music since he was about 14", recounts Adams. "We were all at school together. I went off to do dance and film, and Jack carried on. When I'd finished training, five years later, I'd been in another band called Perennial Divide with Johnny, and we joined the new style of music Jack had been working on - it formed naturally. Meat Beat Manifesto is a combination of four different people from four different backgrounds, four elements like a co-op."

As Perennial Divide had already been signed by the Sweatbox label, it was as simple as presenting some demo recordings to get the formative Meat Beat Manifesto onto the same label. The resulting debut album, *Storm the Studio* was released early last year on Sweatbox, but since then Meat Beat have moved to the Belgian Play It Again Sam label that also courts experimental acts such as Chris and Cosey and Front 242. A further album, *99%*, subsequently appeared to a good press reception. Just prior to our conversation, a

four-track 12" single entitled 'Dog Star Man' made its appearance.

Travelling down to England's fair capital for this meeting, I refreshed my memory of 'Dog Star Man' - Dangers, MBM's rapper, is in fine form, building his performance up towards the third track. Where the recording cuts to the fourth track, a sample of a "soul brother" apparently extols Dangers' virtues: "In the beginning there was Jack/and Jack had a groooooove, and from this groove came the grooves of all grooves". A catchy beat kicks in, stops, then re-starts with a drum loop that makes your average John Bonham sample sound as clumsy as it is mundane. The music is definitely individual, and obviously not written as an overt attempt to top the charts or achieve fame and fortune. On the other hand, the men now facing me realise that there is a minimum of sales required to ensure they can continue to release their music.

Says Dangers of their change of labels: "We weren't really looking for a label which could give us loads of money, but a label where we had something in common."

It's a philosophy that often benefits both those who observe it, and the record companies that actually care about the artistic aspirations of their signings.

TYPICALLY, MEAT BEAT MANIFESTO prefer not to categorise their own music.

"There are so many angles to look at it from", comes their collective response. "You could look at it and say it's performance art - which is bullshit - it's not a multi-media crossover either. But the Press always have to call it something: Talking Heads and XTC got called punk when they came out, but they weren't. People originally said we were a 'DJ/sampling band'. In America they said we were an 'industrial band', it changes each year. We don't know what we'd term our music as. Labels are destructive and restrictive. If you come and see our show you have to take it as it is, because it's not what you'd expect. And it's the same with the video."

Meat Beat's nearest attempt at classification of their music comes down to "psychedelic western funk folk rock music - which you pogo to".

On their musical tastes, Adams disassociates the band from the current scene in Britain.

"The indie scene in Britain is indie as it always has been. We've got nothing to do with that, we've got nothing to do with new beat and nothing to do with rap..."

Stevens even contests the current media suggestions that there's something new and innovative going on in Manchester.

"Everyone's turning to Factory and shit like that because they've sat on their arse for the last three years,



and they haven't looked further than the end of their nose. And what they're left with is a few thrash guitar bands. They had to hype something because it's the only thing that sells papers. When you read a paper at the beginning of the decade it's like what's new, everyone's thinking what's going to happen for the next ten years, all of a sudden it's the Stone Roses, the Mondays and all other thrash bands. It's amazing - all their albums are totally average.

"It doesn't piss us off because they're doing their own music, it's not their fault if they're getting hyped up to their eyeballs. It's the music press' fault, they're not bad bands, they don't pretend to be gods."

Dangers, meanwhile, believes that the '90s will be a better time for music than the '80s.

"Rock music has always been something you wouldn't be able to play to your mother - rock 'n' roll is bad, the wrong stuff. There was a lull in the early

'70s, then punk came along. Throughout the '80s there was nothing. You can play Stone Roses to your mum, she'd probably like it. It's just music for angst-ridden young students. The worst thing about the '80s was that it was run on adulation."

Rap would appear, in many respects, to embody the spirit of rebellion Dangers is referring to, yet he has some harsh words for certain of its earlier forms.

"It's sexist and it's pathetically macho. It's all based on insecurity, it's like a street sort of voice. Now it's turned into a fashion thing. I can't believe that it's gone on this long now, and I do think that in the next year or two we're not going to see it in the charts like it is now.

"The only decent rap stuff we've heard is the Jungle Brothers or maybe De La Soul. It's going their way anyway, the sooner the macho thing dies the better. There's nothing wrong with energy, raw energy is >

➤ brilliant, it's what re-inspires people to get up and do something. But that macho crap is negative, totally negative.

"Ten years ago the black situation in America could not be voiced, and so when it came through people were buying the records because they heard it through the street not through the industry. Now it's turning into a situation where rap artists are the biggest stars in the industry and the white people have said 'right, there's a load of money to be made, let's promote them'. And it's all got sick."

Stepping well outside the expectations and requirements of a profit-hungry music business, Meat Beat Manifesto have made their live show an integral part of their activities. Adams explains some of the thinking behind the scenes.

"The concept of the show is communication, energy. We don't just stand there 'being Morrissey'. It's different in the videos and the albums have got their own direction as well.

"The show is like a 3D film on stage, except there isn't that magic screen that separates us. We're trying to break through that screen as we perform, so the audience is receiving the energy and then giving back."

Stevens explains that the show is so active that the audience assumes any mistakes are part of the spectacle.

"It's quite a good touring show, it's not too over-the-top technology-wise, or set and stage wise. We were restricted by the shapes and sizes of the stages and we haven't got a massive lighting rig or anything like that. It's

mostly physical things, a couple of times I've fallen over but nobody notices because I'm flying around stage anyway, it seems as if it's in the choreography. It's such an energetic show that it just adds. . . It's like organised chaos."

Accepting the integration of the various media, where do Meat Beat believe their experiments in entertainment are leading them?

"It's going to evolve into a circus act, we're going to be trapeze artists" claims Adams, tongue in cheek. Then, seriously: "No, I don't want to be doing this for the rest of my life. It's a very interesting concept to do and prove that it can work, but we never stay in one channel for long, it's like repeating ourselves. When these bands keep on going on they're only doing it for the money and because they can't be bothered to do something else."

MOVING ON TO THE SUBJECT OF equipment, I discover that here, too, Meat Beat Manifesto have built a reputation for themselves -

primarily one of devastating loudspeakers.

"We've blown Tannoys, all sorts. . .", comes the story. "Once we were sending loads of feedback through a reverb - we were trying to get as low a signal as possible. We blew the high-frequency driver first but we didn't know that at the time, and we kept going for about ten minutes. Eventually we were burning the coil and smoke was coming out of the speaker - it was actually burning into the cabinet.

"At one studio we were doing a night session, and we blew the speaker fuses loads of times. We kept getting the house engineer out of bed in his underpants to replace them. Usually the feedback from the echo unit when you send it through itself is a killer for speakers."

Out of the studio and on to the stage, the emphasis falls on sampling. A fully-expanded Akai S1000 does most of the hard work (Dangers calls it "the brain") in conjunction with a pair of Octapads. Additionally there's a Korg M1, a Yamaha RX5 for certain drum duties, and a Roland MC500 MkII sequencer. In fact, it's the matter of sequencing that is currently giving the Manifesto the most trouble.

"At the moment we're writing stuff on the MC500, which is a bit of a pain really, and not to be recommended", says Dangers, "but we're getting an Atari ST and Cubase. We did the whole album using the code from the RX5, and using the RX5 to drive the sequencer."

The *Storm the Studio* album showcases the use of samples and points towards the medium of television as a source of inspiration and source material - the *Rainbow* sample (where Zippy is heard to say "You're supposed to listen to the rhythm George, the rhythm of the music") being a case in point.

Adams agrees the album was influenced by television: "There's not much else you can do when you're on the dole except watch *Rainbow*", he asserts. "We had to watch it for three years to get that particular sample, we recorded every episode until that good bit came along. You never know what's going to sound good on the finished product, like I recorded my sneaker squeaking on the floor, sampled it, slowed it down so it sounded really stupid. But it could have sounded good."

Samples are collected on a Casio DA1 DAT machine before being transferred to the S1000 - "here it is now", says Adams, spotting an advertisement for the same model in a copy of MT - at a lower price than they had paid for it. This, too, is rock 'n' roll.

Another sample of TV-sourced material on the *Storm the Studio* album is a newscaster saying "a spokesman at the Health Ministry said that to talk repeatedly about AIDS would cause the public to panic, tourism will certainly be affected".

"We sometimes get a track ready on the sampler so that we can sync that with the timecode, then the sampler is cued in so that when you play a record or tune in the television and as the track is running on we can make samples which immediately go in time with the track. That way you can come up with things like that news broadcast, then edit it until it goes in time with the track."

The way in which Dangers and Adams generate ➤

"We put on a very active 3D show with slide projections, dancers, sets and costumes, then at the back we projected some hard-core porn."

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samples incorporates a random element - this makes it stranger still that the samples seem so carefully chosen.

"What happened with the news item was that it was a 'random edit'. We kept it because it sounded like they were more concerned with tourism than peoples' lives. It was something that would make you think, rather than the 'DJ get on down' stuff."

Adams pursues the theme of originality in samples.

"The sample stealers are unimaginative from the point of view of why they're doing it. They do it because it's hip - because Public Enemy do it. When we do it we take things off a record because it's a magpie thing - it's like pop art. The pop artists used to take other peoples' work and make it into their own, and we see sampling as doing that, we don't see it as 'we'll use that because it's a hip sound at the moment'. The Lyn Collins drum loop has been used just to sell records, it's been used so many times. Rob Bass originally did it but it's been so hacked to death that it's killed the original record. It's not his fault that everyone else has done it, but because it's become credible it's turned into a money thing. If we take things from records it's because it's got something in the song, not because it's a hip thing to do - that's why we take things from Captain Beefheart and Frank Zappa.

"The idea is to use things as textures rather than lumps of peoples' songs. Frank Zappa took all his songwriting from composers - Stravinsky and people like that. David Bowie was taking chord structures like 'Starman' - the chorus is from is from 'Somewhere

Over the Rainbow', the string part of 'Starman' is from Stravinsky's *Rite of Spring*. There are only so many notes on a keyboard, so many chords to a structure. . ."

Having spoken to Meat Beat Manifesto, the one thing I'm sure of is that they won't be cashing in by adapting to commercial trends. In the words of Jack Dangers "Don't you tell me what to do/I'll break your fucking back in two".

Finally, there's the issue of pornography - it's not a subject likely to endear Meat Beat Manifesto to many enlightened people. Yet Dangers, Adams and Stevens are obviously intellectually active people, exploring the avenues opened to them by the arts. So why subject their audience to hard-core pornography?

"It was a pure experiment", explains Adams. "When we first started out, we just wanted to see what people were interested in seeing, so we put on a very active 3D show with slide projections, dancers, sets and costumes, then at the back we projected some hard-core porn - to see what people would watch. We'd give them a good piece of art and a bit of dirty porn. Ahh, interesting!

"We got slagged off for ages over that", he recalls. "We were labelled as 'porn kings'. It's the press again, they love 'shock/horror' - it sells papers."

As many artists have found in the past, the lines between art, good taste and exploitation are finely drawn. Then there's the issue of art and censorship: it could be the next item on the Manifesto's manifesto. It could be the next item on yours. ■

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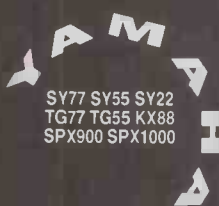
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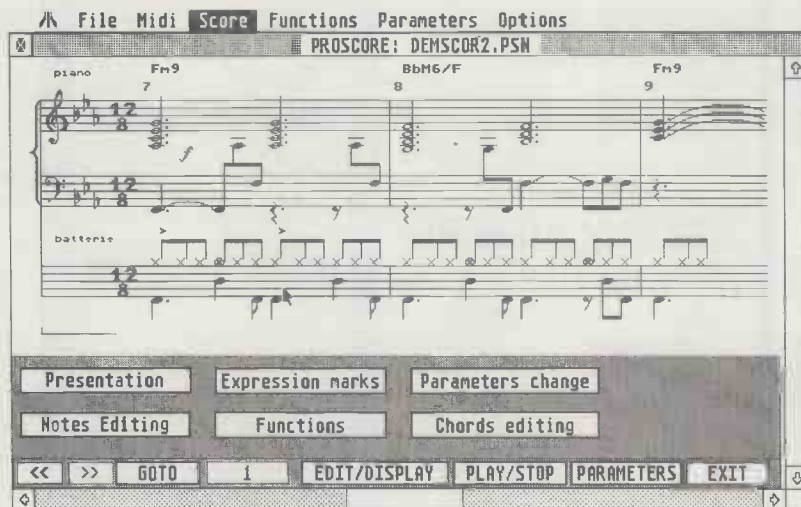
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PROSCORE



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is beyond your
budget, this French
program could be
pour toi.

Review by Ian Waugh.

THIS REVIEW lething of a victory of persistence over reluctance. Proscore version 1.0 was demo'd at 1989's British Music Fair but it was due to be upgraded to version 1.1 in the following August. Rather than dive in with a review which would soon be out of date, MT decided to wait for the new version.

So we waited. And waited. Six phone calls and several promises later it still hadn't arrived. The less objective reviewer would have muttered "stuff 'em" (or similar), and looked for distributors more interested in their wares and getting them reviewed.

Eventually a disk arrived. Not the program disk, you understand, but a demo disk - without a manual. Two phone calls later a manual arrived - with a request to return it when finished.

The problem was that Proscore was distributed by SoundBits which bought in directly from the French manufacturers, Digigram, and they weren't given any review copies. Effectively, any review copies had to be written off at full purchase price as - even if they're returned (would you believe some reviewers try to hang on to review gear?) - they were likely to be unsaleable. To make matters worse the demo disk contained a virus - get your virus killer *now*.

I sympathised, especially as SoundBits are a small company, but how is the great software-buying public to know about these programs if they aren't reviewed? Since this review, however, distribution of Proscore has moved to GFA Data Media. Hopefully, this will ensure Digigram of better UK representation in the future.

Having got six months frustration off my chest, let's begin. The program proper is dongle-protected. It runs in mono and requires 1Meg of RAM. It supports

32 tracks arranged in a format similar to Comus-Digigram's Studio 24. The first 27 tracks are used for notes as per normal, tracks 28 to 31 are used for drum parts and track 32 stores chords.

As you can tell from the name, Proscore is a scorewriter and it will convert a piece of music you record into its sequencer into notation. It can hold a maximum of 2000 bars of music which should be more than long enough for most users.

THE SEQUENCER

LET'S LOOK AT the sequencer first. Each track can be given a generous 20-character name and solo'd and muted during playback. You can select internal or MIDI metronome in which case pitch and channel can be altered.

Recording takes place in 'Omni mode and only notes and velocity are recorded. You can specify the start and end bars to be recorded although the end bar is not compulsory. This is useful for punch-ins. You automatically get a two-bar count-in.

The MIDI transmission channels are set from the MIDI menu. This is its only contribution to the program which seems rather a waste. How much more useful it would be to have this information on the main screen.

The Play menu allows you to allocate each track a Program Change number and two controllers with an associated value. These are sent at the start of playback. Velocity can be scaled (from 0-250%) and an offset applied to it (plus or minus 64). The Transpose menu lets you transpose the tracks but, helpfully, not the drum tracks.

You can copy and merge tracks by clicking and dragging but you can't copy to or from the chord

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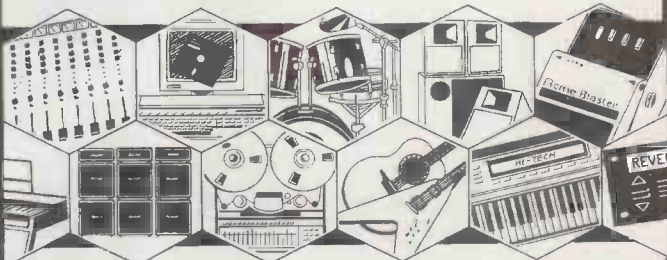
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► track. Block operations in the Functions menu let you cut, copy, paste and insert a range of bars. There are erase and transpose operations here, too.

To help with block operations - which can only be performed on whole bars - you can insert time signatures at any number of places throughout the piece. This would, I suppose, also allow you to create artificially small bars on which to perform an edit.

The sequencer may lack a few of the bells and whistles that you might expect to find on a dedicated sequencer although it is quite up to the production of sophisticated recordings. But Proscore's *raison d'être* is to produce a score and the sequencer is there mainly to let you put the notes in.

The program supports MIDI files, too, and recognises both types 0 and 1 so you could import files from another sequencer. A separate program on disk converts between MIDI files and Digigram's Studio 24, Track 24 and Big Band files.

SCORING

TO CREATE A score, you first select Parameters from the Score menu to determine which tracks the score will contain. As the manual says, "the left column permits either to validate or not the track in the score". The next column sets the key signature. Then you can select one of nine clefs including alto clefs and transposed treble clefs.

Next is the number of staves for the track - one or two - another transpose option and two boxes which indicate on which track the chords and lyrics will be shown, if at all. The on-screen headings for these columns, by the way, are unnecessarily minute.

You can bracket staves together and adjust the vertical space between staves by clicking and dragging. You can alter the height at which the chord names appear above the staff.

The score is drawn in the top two thirds of the edit screen. The lower third is a gateway to six edit menus which take over this lower area although you can remove it in order to see more of the score.

THE SIX MENUS

THE FUNCTIONS MENU house's quantise and note display operations. You can select the range of bars these will affect and whether quantisation is Binary or Mixed. Mixed allows triplets. You can suppress tiny inter-note rests and eliminate very short notes. If a quantise setting doesn't work there's the invaluable Undo button.

I confess I was impressed with how well the system handled some of the stuff I threw at it. It even grouped a piece in 12/8 - something Notator can't do. (C-Lab are aware of the problem but haven't fixed it yet).

Mixed mode has a tendency to "tripletise" note groupings. By limiting quantisation to selected bars you can mix straight notes and triplet groupings in the same track with ease. In practice, however, this seemed to fall victim to an occasional bug. When it stuck I found I had to work from the end of the track back to the start otherwise the notes weren't quantised correctly.

Stems are beamed automatically and although you can un-beam notes, you can't select a specific group for beaming and you can't reverse the direction of the stems. The notes on each track can be shown on one or two staves, and each staff can support one or two voices. The stem direction is used to distinguish between two voices on the same staff. This is a very powerful feature although its use is not explained well in the manual.

The bars space out automatically according to the number of notes they contain. When more than one track is shown, each bar aligns with the widest bar and all the notes line up perfectly. It saves messing around with spacing adjustments, which is fine by me although some of you may prefer to be allowed to adjust the width.

If the durations are too far removed from the ideal you head for the Notes Editing menu. Basically, to edit a note you select an edit function from the list then click on the note or staff. Options include pitch and time edit, shift (block transpose), insert, delete, set duration and modify duration.

This is where notes are entered in step-time, too. This really requires the use of both the mouse and the ST's keyboard. As well as individual note durations, you can also select patterns such as two quavers followed by a crotchet or a crotchet followed by four semiquavers. This is particularly useful for repetitive bass lines and drum parts. Neat.

The Presentation menu is used to determine which notes belong to which voice. The program supports up to four voices over two staves. For example, a single note can be assigned to both voices one and two, and will accordingly acquire both an up and a down stem. Voice separations are fairly easy to do.

The Parameters Change menu (not to be confused with the Parameters page which is used to select the tracks which will be displayed) lets you change the key signature and clef at any point in the score.

The Expression Marks menu contains a fair complement of musical symbols and expressions including *pp* and *ff* marks, crescendo and diminuendo hairpins, phrase marks, articulation marks, an assortment of bar-lines, trills and mordents. A couple of symbols, however were greyed out including the *arpeggio* (Notator also currently lacks this). You can insert bar marks (lettered section numbers in boxes) and symbols can be inserted, erased and moved.

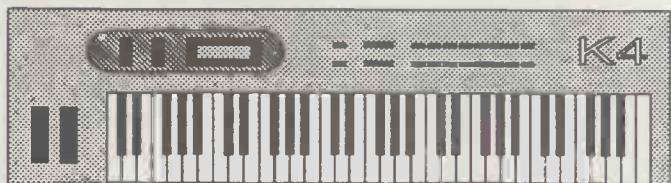
Text and lyrics can be entered anywhere on the screen. In Lyric mode, pressing Tab steps the cursor on to the next note. If the lyrics contain long words, the notes space out to accommodate them. Excellent.

The Chords Editing menu is used for editing chords (well, someone not as bright as you may have picked up the magazine). When you record on the chord track, the notes you play are converted into chord names and these are shown above the track selected in the Parameter page. It recognises dozens of chord types. There are quite sophisticated modifiers, so to your standard major/minor/diminished chord (or whatever) you can add a flattened or sharpened 5th plus a 9th (sharp, flat or natural), plus an 11th (ditto) plus a ►

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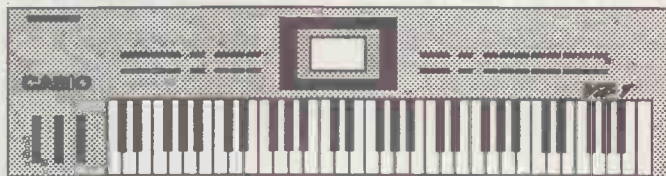


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- 13th. From this menu you can insert, delete, move and modify chords.

The program interprets the chords literally so if you play an inversion it includes the root note of the chord in the name. For example, playing EGC will result in the chord being displayed as C/E. This is correct, strictly speaking, and although you can edit the chord name to remove the bass note, I think I'd prefer the option to work the other way around.

Having to select different edit pages for different edit functions keeps things fairly straightforward but it means you can't click on a note and drag it to adjust pitch and timing all at once. This seems, to me, the logical way to work although perhaps that's because I'm used to programs which do work that way.

QUANTISATION

WHEN YOU FIRST enter the score page the notes have no quantisation. At least they are displayed with the program's finest resolution of 128th-note triplets. But far from welcoming such detail, I'm afraid it only serves to confuse the score, so much so that it's quite possible some bars of poorly-timed notes will contain so many fractional notes that they won't fit onto the screen.

Once you "OK" a quantise setting and leave the page there's no going back. It's very easy to make a real mess of things if you're not careful. It would be far more helpful, I feel, if quantise in the score page only affected the display. That way you could tweak as much as you like and still go back to an earlier or an alternate setting.

DRUMMING & PRINTING

THE FOUR DRUM tracks can support up to 18 drums each. For each drum you set the MIDI note number, the position on the staff (note and octave number) where you want it displayed - these do not have to be the same, the symbol (one of three types) and the voice number from one to four.

Each drum track only changes when you click on the Read box, not when you select a new track. This may seem strange but it lets you "reload" the previous setup if you make a pig's ear of the current one and it allows you to copy one track's setup to another.

There are several printer drivers on the disk including some for 9-pin, 24-pin and laser printers. Different drivers produce different types of printout in different sizes ranging from draft to "instrumental" quality. You can write your own driver providing you have access to your printer's code book. A bit more about this in the manual would have been welcome, although at least one of the supplied drivers will probably work with most printers. The program may take a little while to do the printout but the quality is superb even on a 9-pin printer.

E MANUEL!

THE PROGRAM IS French in origin and the manual suffers in the translation - vertical and horizontal lift

arrows, for example, instead of scroll bars. The program has VALID boxes instead of OK boxes and there are many *Franglais* instructions and clumsily-phrased sentences.

On one hand I'm tempted to say that it's nothing drastic, but some functions are decidedly inadequately explained and a little trial and error is essential. It could be laid out better, too, and more (or even some) tutorial sections would be useful. It dodges about from menu to menu like the Galloping Gourmet. The lack of an index doesn't help.

I'm afraid there really is no excuse for such a sloppy effort. As they've taken the trouble to translate it into English at least you'd think they'd run it past an English musician - or logical Frenchman at least (I'm steadfastly resisting comments about French letters. . .). On the other hand, like the other Digigram programs (Studio 24, Track 24 and Big Band), once the functions are sussed Proscore is quite easy to use. But be prepared for some initial experimentation.

Even though this is a revised version, several options were still not available and were greyed out on the menus. Mostly minor things were missing like preventing the track from accidental erasure, the insertion of header and footers (or Bottom as the menu calls it) so it would appear that yet another upgrade is in the pipeline.

VERDICT

INEVITABLY, COMPARISONS WILL be made between Proscore and C-Lab's Notator, but I don't think anyone would suggest that Proscore is in quite the same league - then again, it is considerably less than half the price.

Proscore attempts to perform an extremely complex process and handle it in a fairly simple manner. To achieve this simplicity it has foregone many of the more sophisticated options found in some other scorewriters. Part of the simplification involves splitting the edit features across several different menus and while this does undoubtedly have the advantage of simplicity there is something to be said for having all options available at the same time.

I must add, too, that I felt some of the features could have been better implemented - showing MIDI channels (and program numbers?) next to the tracks, for example, and having a quantise function which only affects the display. However, I found Proscore relatively easy to use and the results are impressive. I know many potential users will welcome this ease-of-use and will not miss some of the more sophisticated and esoteric functions which it lacks.

If you want sequencer-to-notation facilities with the ability to enter and edit parts in step time directly on the staff, you'll find Proscore well up to the job. In spite of some of my more astringent comments I have no hesitation in suggesting you check it out. ■

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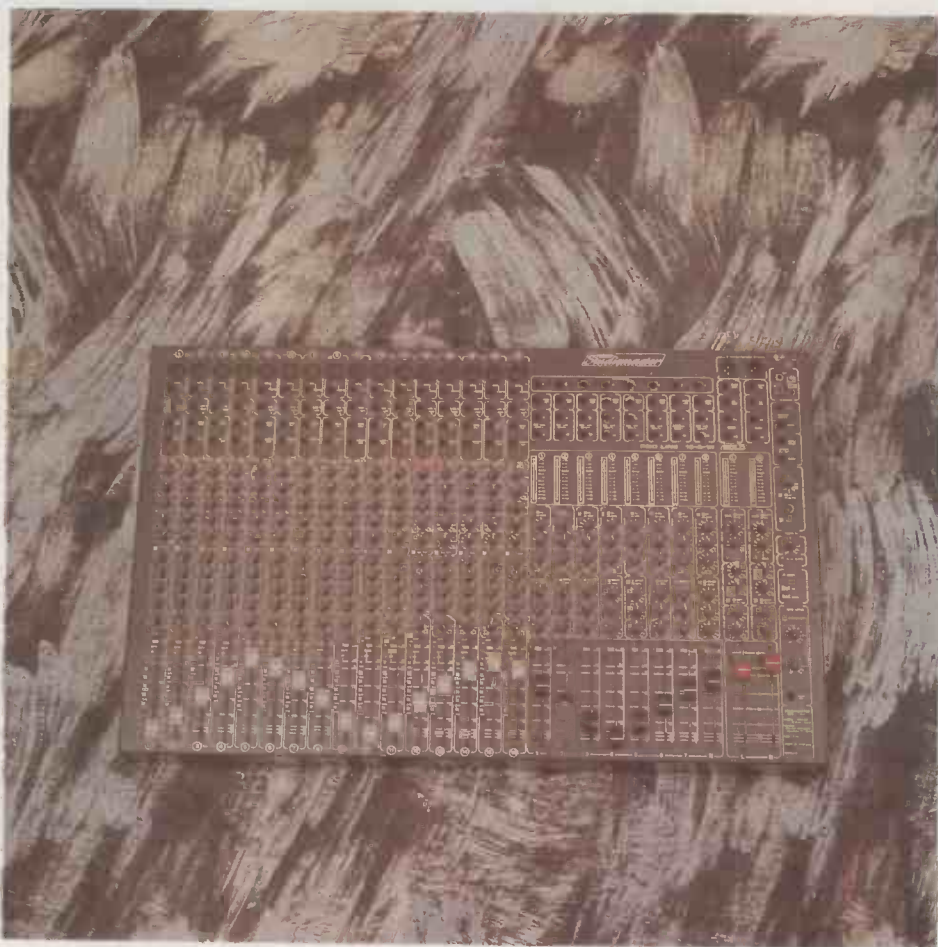
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PRO LINE GOLD



PHOTOGRAPHY: JAMES CUMPSTY

If you're serious about your MIDI studio you'll have realised you need a serious desk. The trouble is, serious desks cost serious money - or do they?

Review by
Tim Goodyer.

WHILE MANY OF today's MIDI studios have evolved from the commercial audio-only setups of yesterday, others are the direct product of musicians' needs - needs which have pushed them in some logical direction intended simply to achieve a musical goal. It is reasonable, then, that a MIDI studio can be anything from a sophisticated hybrid of audio and MIDI technology, through a comprehensive application of MIDI sequencing and automation, to a simple sequencer and sampler setup. And the musical ends to which any of these installations may be put are as varied as the approaches adopted to their configuration.

There is, however, one area of equipment common to all but the most straightforward of (MIDI) recording studios: the mixing desk. Regardless of whether you're furiously overdubbing a pseudo-classical magnum opus, sequencing up a killer dance track, or finalising the route on a journey through some

ambient soundscape, the mixing desk provides the essential control over the levels, tones and treatments of your sounds.

To the old-school studiophile, the desk represents an end in itself; it symbolises the ultimate control exercised by the engineer over the studio. To the musician, however, the mixing desk is more likely to represent a drain on the financial resources that might otherwise have been used to add to the arsenal of sound sources from which he or she may construct music.

There are, of course, other applications for mixing desks besides the recording studio - live music for example. Here a desk may find itself handling the front-of-house sound enjoyed by the audience. Alternatively, it might find itself responsible for the on-stage monitor mix being listened to by the performers themselves. Most likely, in all but larger, professional gigs, the desk will be called upon to provide both.

No easy task, then, designing a mixing desk. It >

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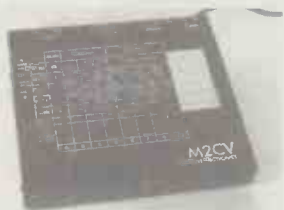
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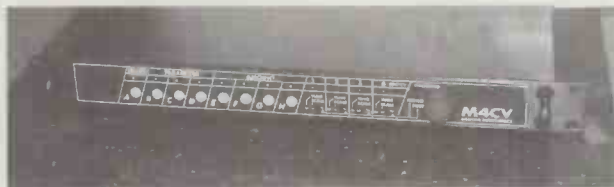
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➤ must be flexible enough to accommodate a wide variety of demanding situations, yet readily understandable to its intended users. And its cost should make it appealing to the musician as well as the technician.

LINE OF ASCENT

WHILE THERE ARE many desks of reduced sophistication (and, hence, cost), Studiomaster's Pro Line series has been designed with all the considerations of a "professional, fully-featured" desk in mind. It has also been brought in on the kind of budget that could see it in the hands of many users who would otherwise be sacrificing flexibility purely in the interests of saving money. The Pro Line itself isn't a new design either, but its recent metamorphosis to the Pro Line Gold series has brought it further refinements such as EQ defeat on all input channels and an internal talkback mic - all of which help to increase its usefulness in a variety of situations.

The Pro Line Gold series sits between Studiomaster's cheaper Session Mix Gold and more upmarket Mixdown Gold series. It also offers the desk in a number of configurations; 8:4:8 rackmount, 16:2 rackmount, 16:4:8 flatbed and 16:8:16 flatbed. Additionally, both flatbed models may have their input capacity expanded in units of eight channels to a maximum of 40 inputs. MIDI muting is also available for all models except the 16:2 rackmount. The model under the spotlight today is an unexpanded 16:8:16 with MIDI controlled muting (MCM).

For those not conversant with the conventions of describing mixing desks, the 16:8:16 tells us that the desk has 16 input channels, eight sub-groups - which might be used to feed an eight- or 16-track tape machine - and 16 monitor channels. The Pro Line

Gold is also described as a "split" (as opposed to in-line) desk, meaning that the monitor returns are situated alongside the input channels. This makes the desk less compact than an in-line desk, but clearer to work with.

Running down one of the input channels we find the following: a latching switch to select between the Line A/tape input and the Line B input; input level; channel EQ (HF, swept mid 240Hz-8kHz, LF, all with 16dB cut or boost); EQ cut switch; aux sends 1-4 (1 and 2 pre-fade, 3 and 4 post-fade); pan pot. Beneath these are a clip LED, solo button, mute and channel status LEDs, channel active switch, routing switches (L-R, 1-2, 3-4, 5-6, 7-8) and a 100mm-throw fader.

Above the channel controls are balanced XLRs and quarter-inch jacks for Line B and jacks for Line A/tape audio inputs, insert points on stereo jacks, and a direct out jack.

To the right of the input channels is the sub-group

and monitor section. Eight 12-segment LED level bargraphs are provided, one for each sub-group. Beneath these are the 16 monitors, each of which features switching between tape return, sub-group monitor and aux line input, and contains level and pan controls and aux send (1-8 to aux 4 only; 9-16 aux 1 for aux line input, aux 4 for tape monitor). At the bottom of the section are solo buttons and 100mm faders for each sub-group, while at the top are the audio tape outputs, insert points for each sub-group and 16 jacks Studiomaster call Aux Line Inputs. More on these later.

Finally, on the extreme right of the desk, there are the stereo master outputs, sundry monitoring facilities and the MCM section. Each stereo master has another LED level bargraph, beneath which are the master send level controls for the four auxiliaries (including mute buttons for sends 1 and 2), two-band EQ which can be applied to either the master outs or the aux 1 and 2 returns, level and pan for aux returns 1 and 2, and the master faders. Above the LED ladders are main outputs on unbalanced XLR connectors, insert points, aux 1 and 2 return jacks and aux 1-4 send jacks. Sitting alongside the master channels are left and right input and output connections for a mastering machine (two-track, cassette or DAT) on phono sockets, monitor output jacks (to studio control room monitors), a stereo aux return pair on jacks, talkback mic and level/1kHz slate tone switch (for lining the desk up to a multitrack recorder), level control for the stereo aux return mentioned above, MCM section, two track monitor switch, monitor level, headphone level and stereo headphone jack.

As all channel, sub-group, monitor and master connections are on the top panel of the desk, the rear panel hosts only the mains connection and switch and the MIDI In, Out and Thru and MIDI channel selector for the MCM system (when fitted).

ON THE LINE

ENOUGH TECHNICAL LISTINGS, what is the Pro Line Gold like to use, and what does it sound like? If you're still of the opinion that it's only the instruments you're using that have a sound, and that a mixing desk is "transparent", let me enlighten you. Any signal processing circuitry is likely to add its own character to a signal passing through it - and what that character is depends upon the quality of the components used and the bandwidth of the circuits. I'm pleased to report, then, that the Pro Line Gold "sounds" good. Perhaps most immediately noticeable on synth string sounds, the desk has a warm character in keeping with an even frequency response (quoted as 30Hz-20kHz), rather than a stronger character suggestive of uneven treatment of the audio spectrum.

In use, once you've taken a little time to familiarise yourself with the layout, the desk is very comfortable to use and should present no problems to anyone either familiar or unfamiliar with mixing desks. The most complex aspects of the Pro Line's use are thrown up by its flexibility, but the organisation and

"It's less a case of the Pro Line Gold's facilities being exceptional or revolutionary, more a case of getting an amazing number of them for your cash."

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Line Gold is the ideal desk
for all but the bigger-
budget MIDI studio.”**

➤ layout are such that these present the minimum of confusion. The input channels are completely self-explanatory, with the routing buttons sending the signal to pairs of sub-groups selected between with the channel pan control. The EQ is smooth and quite musical in use, and the EQ defeat makes it easy to keep track of exactly what you're doing to an input signal - a worthwhile “Gold” improvement over the original Pro Line.

Essential to any self-respecting mixing desk are its effects (or aux) sends - the more the better. The Pro Line Gold has four: 1 and 2 are permanently post-fade (the aux send level varies corresponding to the level set by the channel fader) while 3 and 4 are pre-fade (the aux level remains constant regardless of the channel fader). Usually, post-fade sends are used for effecting a signal, as the effect level will vary with the instrument level. Pre-fade sends tend to be used for monitoring (studio and stage), as a monitor mix can be set up that's not affected by subsequent changes of the “main” mix. Pre-fade sends can still be used for effects, however, if attention is paid when changes are made to the channel level. Each of the four aux mixes has a master level on the right of the desk. Nothing remarkable about that

except that sends 1 and 2 have solo and mute switches associated with them - and the mutes can be placed under the control of the MCM system (more soon). Personally I'd have liked to see aux 3 and 4 switchable between pre- and post-fade, but four sends of any description should meet most requirements.

Another important aspect of a desk's auxiliary facilities is that of returns. To complement the four sends, the Gold has two mono aux returns, each with level, pan and two-band EQ (which can be alternatively switched to the main output busses, if you prefer). Additionally, there's a stereo aux return to be found above the desk's talkback section. This is devoid of any control other than over its level, and is configured to accept a signal on two mono jacks rather than one stereo jack. The beauty of this arrangement is that it can equally easily be used to accommodate the return from a stereo effects processor or to increase the desk's input capacity in a heavy mixing session.

Perhaps the most appealing aspect of the Pro Line Gold to the MIDI studio owner, however, (short of the MCM system) is the availability of the 16 monitor channels for use as auxiliary line inputs. To this end, there are group/tape select switches for monitors 1-8 and aux line/tape select switches for monitors 9-16. These select, sensibly enough, between the tape return on the correspondingly-numbered input channel and aux line in the case of monitors 9-16, and the tape input and corresponding sub-group in the case of monitors 1-8 - unless there's a plug in the aux line input, in which case selecting tape brings up the aux line signal. Rest assured, it sounds more

complicated than it is in use.

During a session with the multitrack, these monitors allow you to monitor up to 16 tape tracks while keeping all 16 input channels free for your gear. In the absence of a multitrack machine (say, you're mastering direct to DAT), the monitor channels can be used as extra inputs from your gear.

The upshot of this is that if you're running your music from a sequencer and recording direct to DAT (or any other mastering medium), the effective capacity of the 16:8:16 is some 32 input channels - more if you use any of the aux returns. The shortcoming of this second set of 16 inputs is that they come sans EQ. They do, however, boast pan pots and access to various of the aux busses (see above).

The unavailability of EQ on aux line ins should present the user of synths, samplers and drum machines with fewer problems than any other - if the signals directed to this section of the desk are carefully selected, the nature of modern electronic instruments will allow the sounds to be created as they're required for use. In other words if you've got a sample that needs EQing, route it to one of the main input channels; sounds that can be perfected within the instrument itself and needing no further treatment (other than any effect that may be added via the aux buss) can be assigned to the aux line inputs. Easy.

GROUP THERAPY

THE PRO LINE Gold's sub-group arrangement is nothing unusual in the world of professional mixing desks. Each input channel can be assigned to the main output buss (L-R) or any pair of the sub-groups (1-2, 3-4, 5-6, 7-8). With the sub-group outs connected to an eight- or 16-track recorder, these provide you with the necessary route to get a signal to tape. If you're working to eight-track, then each group's output will go directly to the appropriate tape input; if you're working to 16-track, split leads will present the signal to pairs of tape tracks (1 & 9, 2, 10 and so on), leaving the final selection to be made on the multitrack itself.

Alternatively, the sub-groups can be used for grouping input channels together for easy control. For example, all the drum channels can be grouped as a stereo pair, enabling the level of the total drum sound to be adjusted with just one pair of faders. Or you might find grouping the whole rhythm section together more useful. . . Groups of sounds can also be effected at this point rather than as individual channels.

CONTROL LINE

PERHAPS THE MOST significant area of the Pro Line Gold, as far as MT is concerned, is its MIDI Controlled Muting system. It's not a standard facility, but can be fitted from new or as a later upgrade.

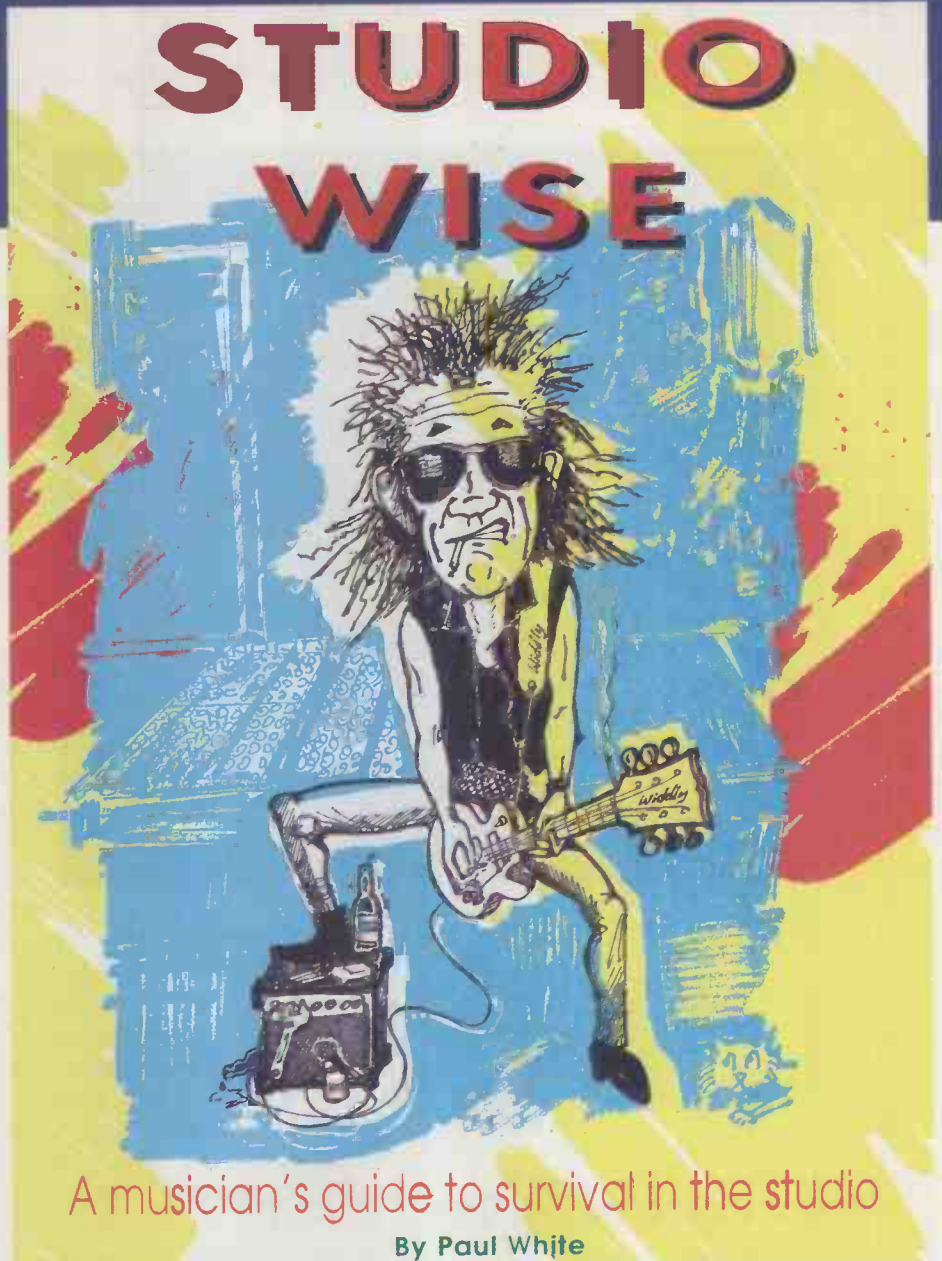
Taking the form of mute automation (rather than full fader, pan and EQ automation), the MCM system is effective and easy to use. Each channel may be ➤

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placed under MCM control, as may the aux send 1 and 2. This control may be exercised either as snapshots of all mutes or as individual mutes sent and received as MIDI note on/offs, and stored as



part of a sequence. The snapshot approach is probably better suited to step-time composition, while individual control of mutes lends itself to real-time sequencing. Muting can be used simply to reduce background noise by killing musically silent channels (a task normally managed by noise gates). More interestingly, it can be put to "creative" use in bringing musical parts in and out of a mix (including effects treatments). Such creative sequencing can be achieved by some sequencing software, but this approach won't help you with those noisy sound modules.

To use the MCM, it must first be switched on. The Reset button clears any information held in the MCM's memory, and you're ready to go. The first option open to you is non-MIDI - that is, by setting a pattern of live and muted channels and switching the MCM off, this pattern can be recalled at will by re-activating it.

The method by which a channel is muted or enabled is through the Ch(annel) button. With it depressed and the MCM on, the green channel LED lights; with it released the red mute LED lights. At all times there's a clear visual indication of channel status.

With the system active, recording a track of mutes is as simple as running your sequencer, muting and unmuting channels as required. This can include such tricks as presenting the same signal on separate channels at different levels and switching between

them to change levels, and unmuting channels to reveal effects treatments at strategic points in the mix. Remember, all this is subject to the usual editing facilities of your sequencer.

Finally, the desk status is constantly re-transmitted over MIDI. Embedded in your sequence, this information ensures that the correct pattern of mutes will be active *within* two seconds of running your sequencer - from any point in the sequence. Of course, you could choose to filter it out to save sequencer memory, but then you'd have to run a song from the top every time, as you do when using basic FSK timecode.

Just one word of warning: the desk retransmits incoming MIDI messages as well as generating its status information during receipt of sequence data. Consequently, MIDI loops are easily set up; you have been warned.

VERDICT

ONE OF THE most significant aspects of penning a review of the Pro Line Gold is that you're forced to recognise just how comprehensive its facilities are. It's less a case of their being exceptional or revolutionary, more a case of getting an amazing number of them for your cash. And if the description makes it all sound rather involved, remember that the desk was designed to be used rather than written about - I know which I find easier.

The importance of the Gold's MCM system shouldn't be underestimated. At a time when MIDI is coming of age in terms of its integration into the whole music making process and in its acceptance in "pro" areas of the industry, the Pro Line Gold represents a highly-specified desk that's readily MIDI-conversant - and shouldn't exceed the budget for pro pre-production suites or serious MIDI studios. In fact, it probably comes uncomfortably close to certain more costly desks for their manufacturers' comfort. Add to this the Gold's facility for expansion, and you've got a desk that you may not be able to afford to ignore.

On the subject of cash, while the Pro Line Gold can't realistically be called cheap, the facilities on offer for the price make it impossible to regard as anything else. It's difficult to see how Studiomaster can deliver such a powerful mixing desk for so little money. Add to this the opportunities for expansion (40 inputs with full MIDI muting?), and the Pro Line Gold is the ideal desk for all but the larger-budget MIDI studio. Given a free choice, I'd have to be in a position to buy a significantly more expensive desk before I'd be tempted to put anything else in my studio. ■

Prices 16:4:8, £1395; 16:8:16, £1645; 16:4:8 8-input expander, £410; 16:8:16 8-input expander, £440; MIDI Mute kit for both desks, £270; MIDI Mute kit for 8-input expander, £125. All prices exclude VAT.

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“More interestingly, The Gold's MIDI Controlled Muting system can be put to ‘creative’ use in bringing musical parts in and out of a piece during the mix.”

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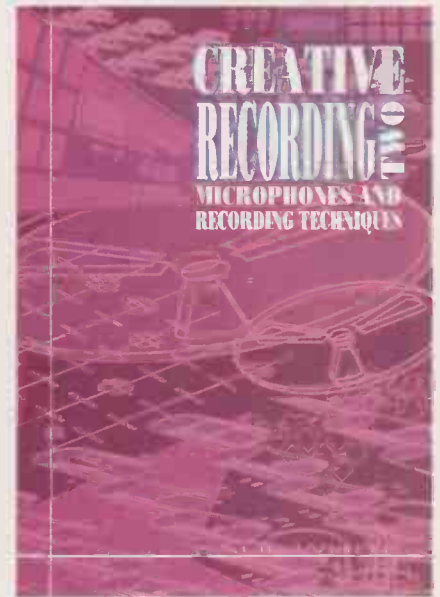
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ROLAND SH101, analogue, great bass synth, £60; Yamaha PSS680 sequencer/synth/PCM drums, £70, both mint. Alan, Tel: 051-677 8696.

ROLAND U20 and wind ROM card, £675; Pro24, v3, £50. Tel: (0502) 731237.

ROLAND U110, D110 and TR626 for sale, £550 for the U110 and the D110, £150 for the TR626. Tel: 071-735 5421.

ROLAND U110, boxed, £325; Yamaha TX81Z, £195; Atari Portfolio pocket PC, £149. Tel: (0342) 717069, answerphone.

SEQUENTIAL Prophet VS, immac cond, flightcase, manual log book, enough sold, £1000 ono. Don, Tel: 031-441 3948, between 6-11pm.

SEQUENTIAL CIRCUITS Pro1 and EDP Gnat monosynths, £175 ono the pair. Paul, Tel: (0323) 892307.

SWAP Korg Poly800 for Yamaha TX7 or TX81Z, possible cash adjustment. Stuart, Tel: (0224) 323737, eves.

TECHNICS digital piano, good cond. Mike, Tel: Southampton 768857, Room Number A311.

TECHNICS KN800 keyboard, 8-track sequencer, digital reverb, full MIDI etc, superb instrument, still boxed, dust cover, stand, cost £950 (Nov 90), sell £800. Tel: (0254) 774902.

WERSI DX350T transportable organ with AMS, immac cond, home use only, £1750. Tel: (0284) 828733.

WURLITZER electric piano, cased, good cond, £225; Moog Opus Three, excellent string-synth, boxed, manual, £75 ono; Carlsbro Cobra 90W keyboard amp, £225. Tel: (0707) 872886.

YAMAHA CS50 analogue synth, good cond, fully working order, £150. Richard, Tel: 081-674 6825.

YAMAHA DSR2000 workstation, 100 programmable voices, 5-track sequencer, RAM pack, perfect cond, £350. Tel: (0582) 599836.

YAMAHA DX5, flightcase, manuals etc, a rare and wonderful beastie, but I've got a DX1 now, £795 ono. Gordon, Tel: (0223) 464117, days; (0638) 720090, eves.

YAMAHA DX7, Mkl, hard case, ROMs, 1000 sounds (Atari disk), £400. Chris, Tel: (0272) 277359, work; 775747, home.

YAMAHA DX7, flightcase, ROMs, manual, old faithful, £500; PSR50, £320; YSR200, £390; RX11 drums, £140. Tel: (0203) 404958.

YAMAHA DX7, £500; ESQ1, £450, both with sound libraries, Kawai K4R rack expander, £525. Tel: 071-837 7912.

YAMAHA DX11, EMT10, £375 - £175; Boss RSD10 sampler/delay, plus pad controller. Tel: (0293) 31676, after 7pm.

YAMAHA DX11 synth, plus Boss DR550 drum machine, both excellent cond, home use only, boxed, manuals etc, would like to swap or p/x for Ensoniq EPS or £500 the pair. Tel: (0564) 784114.

YAMAHA DX21, manual, extra tapes, mint cond, £150. Tel: 071-735 4992.

YAMAHA DX21, with manuals, £250; Kawai R50e drum machine, £215; Casio CZ230S keyboard, £50; Yamaha SH101 shoulder keyboard, £85. Tel: (0831) 317852.

YAMAHA DX27, vgc, breath controller, footswitch, PSU, manuals, boxed, £220. Tel: (0977) 677420, eves and weekends.

YAMAHA EMT10 piano module, £160. Tel: (0296) 81379, after 7pm.

YAMAHA FB01 multitimbral 8-voice module, £125; Cheeta MK5II mother keyboard, £90. Tel: Southampton (0703) 556610.

YAMAHA FB01 multitimbral expander, £100 ono. Tel: (0793) 881209.

YAMAHA PF70 electronic piano, inc stand, ideal master keyboard, home use only, must sell, £600 ono. Tel: 091-529 4788, anytime.

YAMAHA PSS680 FM synth, £120 ono or swap for Roland TR drum machine. Tel: 061-370 6779.

YAMAHA QX21, good cond, £100 ono. Neil, Tel: (0483) 762017.

YAMAHA QX21, including manual, £70; Yamaha EMQ1, including manual, boxed, 20 disks, £150. Tel: (0902) 452487,

eves.

YAMAHA TX7, with software for Atari, £175. Jim, Tel: 041-779 3900, after 6pm.

YAMAHA TX802, boxed, vgc, must sell, owner going overseas, £575. Eddie, Tel: (0736) 796805.

YAMAHA TX81Z, £210; Roland D110, with card, £350, both mint cond. Mike, Tel: Upminster (04022) 21703.

YAMAHA TX81Z, with editing software for Atari, £175. Jim, Tel: 041-779 3900, after 6pm.

YAMAHA TX81Z, mint cond, £200; 8-track Korg sequencer, with leads, only £100. Tel: 081-574 2419.

YAMAHA V50 workstation, synth sequencer, vgc, 7 months old, complete with sound disks, manual, all boxed, £700 ono. Tel: Southampton 692960.

YAMAHA WX7 MIDI wind synth. Tel: 081-514 4798.

YAMAHA YS100 synth, £200; Yamaha RX21 drum machine, £50; Yamaha QX21 sequencer, £90. Parry, Tel: Bodmin (0208) 75090.

SAMPLING

AKAI S950, new, boxed, £1000. Tel: 071-381 3796.

AKAI S950 sampler, one month old, still boxed and guaranteed, £1050. Steve, Tel: (0942) 816015.

AKAI X7000 keyboard sampler, boxed, excellent cond, memory upgrade fitted, 28 disks, £450. Tel: (0592) 774966.

AKAI X7000, memory expansion, plus disks, tapes, software and editor, sell £500 or swap U110 or VZ1 plus cash. Chris, Tel: (06333) 64516.

CASIO FZ1, home use only, boxed, £700 ono. Martin, Tel: (0432) 270178, days; (053186) 358, eves.

CASIO FZ1 sampler, disks, immac, boxed, £650 or swap for Roland U20 keyboard. Tel: West Midlands (0384) 410853.

CASIO FZ1, just 6 months old, home use only, as new, boxed, c/w 2 factory disks, £650. Martin Davies, Tel: (0432) 270178, days.

CASIO RZ1 sampling drum machine, excellent cond, ideal hip-hop machine, £100. Tel: (0703) 220152.

CASIO SK100 portable sampling keyboard, good cond, only £50. Tel: Hornchurch (04024) 44910.

CHEETAH SX16 sampler, boxed, hardly used, £595 ono. Trevor, Tel: (0787) 223450.

CHEETAH SX16, 16-bit stereo sampler, 1 month old, £600 ono. Tel: (0455) 611479.

EMAX, immac cond, boxed, manual, large library of sounds, more than 75 disks, £1050 ono. Tel: (0707) 872886.

ENSONIQ EPS plus 4x memory expander, flightcase, Kwik-Lok stand, high-quality library of over 80 disks, immac cond, £1500. Jason, Tel: (03985) 476.

ENSONIQ EPS 2x memory expander, £50. Chris, Tel: (0222) 485600.

ENSONIQ EPS sampler, crystal clear sounds, £850. Neil, Tel: (0536) 771242.

ENSONIQ MIRAGE digital multisampler rack, full Ensoniq and Stiletto libraries, MASOS and input sampling filter, latest operating system, immac, £595 ono. Mike, Tel: (0337) 31172.

EXPANDED Akai S700, 70 disks, £500 ono; Yamaha TX81Z, £200 ono, vgc, manuals. Phil, Tel: (0604) 20815.

PROPHET 2000 sampler, as new, with full library and flightcase, £395. Tel: Blackburn (0254) 247199.

ROLAND S50 sampling keyboard, home use only, 50 disk library, monitor, £795. Tel: (07048) 74903.

ROLAND S330 sampler, less than 1 yr, with disks (31), monitor and mouse, £850 ono. Tel: (0272) 425051, after 5.30pm.

ROLAND S550 sampler, monitor, mouse, 120 disks, £1195; Korg DRV1000 reverb, £120; Toa D3 mixer, £150; Toa D4 mixer, £200. Tel: 081-517 2967.

ROLAND W30 workstation, only 6 months old, immac, plus over 130 music disks, £1100. Mark, Tel: (0742) 737640.

ROLAND W30 sampler workstation, 6 months old, home use only, with disks, boxed, manuals, £1150. Tel: (0726) 870661.

ROLAND W30 workstation for sale, mint cond, with case and disks, £1300. Tel: (0742) 748020.

SEQUENCERS

ALESIS MMT8 multitrack sequencer, simple to use, mint, boxed, manual and PSU, £160 ono. Tel: (03543) 5239.

ALESIS MMT8, boxed, manual, £160 ono. Paul, Tel: (0323) 89307.

ALESIS MMT8, £140; Akai EX90R reverb, £80, both good cond. Chris, Tel: 081-997 1494.

KORG SQD8 8-track sequencer, 16 quick disks, as new, instructions, £150 ono. Tel: (0429) 263296.

ROLAND MC202 microcomposer, analogue acid synth and sequencer, boxed, manuals, £85. Tel: Lancaster (05242) 62258.

ROLAND MC202, £70; Korg DDM220 percussion, £70; MCP modules, £10 each. Tel: Marlow (0628) 473393.

ROLAND MC300, hardly used, as new, cost £500, best offer around £395. Tel: 081-204 7981.

ROLAND MC300, perfect cond, boxed, manuals, £350. Mark, Tel: Brighton (0273) 696480.

ROLAND PR100, quickdisk, 4-track (infinite with merging), MIDI sequencer, never crashes! £295. Garry, Tel: (0323) 641676.

SWAP SZ1 sequencer plus Roland DR1000 drum box (both MIDI) for small keyboard mixer 6 or 8:2 or sell SZ1, £35; DR1000, £60. Tel: (0454) 772237.

YAMAHA QX21 sequencer, boxed, as new, £120 ono. Tel: (0734) 811449.

DRUMS

AKAI XE8 drum sample expander, mint cond, boxed, manuals, 2 ROM cards. Malcolm, Tel: 081-299 3800.

ALESIS HR16, vgc, boxed, with manual,

£200. Tel: 081-459 4108.

ALESIS HR16, perfect, £195; Yamaha CX5M, with SFG05, large keyboard, extra sounds and software, used as a multitimbral expander, £95. Rory, Tel: 051-733 7078.

ALESIS HR16, as new, boxed, instructions, £200. Pat, Tel: (0525) 290464, eves.

ALESIS HR16, mint cond, boxed, manual, final reduction, £215; Digsound analogue synth, £99. Roger, Tel: Brighton (0273) 670028.

BOSS DR110, (TR606 soundalike), good cond, inc batteries and lead, £70, offers. Graham, Tel: (0736) 755195.

BOSS DR550 16-bit drum machine, excellent sounds, as new, £120. Steve, Tel: 071-253 4791 or 081-346 7201.

E-MU DRUMULATOR, inc pads, additional ROMs, also fitted with MIDI. Norm, Tel: (0453) 548393.

KORG DDD1 drum machine, £150. Tel: (0254) 823871.

KORG DDD1 drum box, with sampling board and ROM cards, in vgc, sell for £245. Paul, Tel: (0302) 538304.

LINN 9000, SMPTE, disk drive, £1000; Prophet VS vector synth, £1050; Yamaha CS80, £500. Tel: 081-675 8115, anytime.

ROLAND R8, as new, £525; Roland R8 sound cards, x5, including US power and percussion, £175. J Kirkpatrick, Tel: Bath (0225) 336273.

ROLAND R8 drum machine, with TR808 sound card, boxed, manuals, excellent cond, £500. Tel: Huddersfield 535024.

ROLAND TR505 drum machine, £140; Yamaha DD5 drum pads, £50; Philip Rees CV-MIDI converter, £100. Tel: (0903) 206409.

ROLAND TR505, good cond, £125 ono. Neil, Tel: Woking (0483) 762017.

ROLAND TR505, inc power supply and instructions, £100 ono. Tel: Staley Bridge (0457) 833577.

ROLAND TR505, boxed, manuals, official PSU, footswitch, mint cond, deliver London area, £120. Tel: 071-281 7198.

ROLAND TR505, boxed, manuals, PSU, excellent cond, £110. Tel: Manchester 061-366 7477.

ROLAND TR626 plus Yamaha DX100, boxed, £270 the pair, will split. Lee, Tel: (0784) 461795.

ROLAND TR707, £160 ono; MC202, £80 ono; Fostex X15, £145 ono; Midiverb, £110 ono; Yamaha REX50, £170 ono; 6-channel mixer, £100 ono. Steve, Tel: (0703) 737338.

ROLAND TR707 and 727 latin percussion unit, £200. Tel: Liverpool 051-260 6675.

ROLAND TR808, boxed, manuals, mint cond, £300. Sean, Tel: (0782) 625513.

SIMMONS SDS7, 5 drums, black, leads and stands, £375; Alligator 200W drum combo, soft case, £375. Ian, Tel: 081-428 6468.

SIMMONS SDS7, SDS8, hardware, 10 pads, mint cond, £525 or swap for DAT machine. Tel: (0981) 240 314.

YAMAHA RX8 drum machine, £250 ono;

Roland S10, disks, flightcase, £360 ono. Tel: 071-677 6793.

YAMAHA RX11 drum machine, boxed, with manual. Jamie, Tel: (0275) 814689.

YAMAHA RX17 drum machine, £90. Tel: (06527) 251.

YAMAHA RX17 drum machine, mint cond, £120 ono. Tel: (0942) 727363.

YAMAHA RX21, £100; Yamaha MT1X portastudio, £220. Tel: (0283) 32983.

YAMAHA RX21, vgc, PSU, manuals, pattern book, £90. Ben, Tel: Pontefract (0977) 677420, eves and weekends.

COMPUTING

ATARI 520STFM, plus Super Conductor, plus games, £215; Alesis Midiverb II, £150; X-stand plus extension, £20. Steve, Tel: (0254) 887145.

ATARI 520STFM, £190 ovno; colour monitor, £200 ovno; second drive, £50, all immac. Chris, Tel: 081-684 2853, eves.

ATARI 520STFM, immac cond, boxed, manuals, £500 worth of games software, £195. Malcolm, Tel: 081-299 3800.

ATARI 1040ST, £274. Gus, Tel: 081-809 5537.

ATARI 1040STFM, SM124 monitor, Steinberg Pro24, TCB tracker, noise tracker, as new, £500. Tel: 081-804 0442.

ATARI SOFTWARE: Tiger Cub, Genpatch, Mastertracks Junior, £50 each, all originals with manuals. Tel: (0992) 550916.

C64: Steinberg DX/TX7 editor plus disk of sound banks, £30. Alan, Tel: Cheltenham (0242) 570261.

C64: C-Lab SuperTracks 16-track sequencer, inc interface and sync unit, £65. Alan, Tel: Cheltenham (0242) 570261.

DIGIDESIGN Sound Designer software, supports most popular samplers, as new, any reasonable offer accepted. Mike, Tel: (0337) 31172.

DIGIDESIGN Sound Designer, universal sampler editor for Atari ST, boxed, unused, £120. Tel: (0242) 514784, after 6pm.

HYBRID ARTS' GenEdit MIDI controller, librarian, editor, edits everything, £95; Roland D10/20/110 voice cards, rhythm and bass, £30, both in original packaging. Tel: 081-877 1868, 24 hrs.

HYBRID ARTS' SyncTrak, 60-track sequencer, £175; Steinberg Synthworks, Kawai K1, £65, both for Atari ST. David, Tel: (0457) 871308 or 870230.

JORETH music system for Commodore 64, MIDI interface plus Composer, Linker, CZ and System 7 editors, cost over £400, must sell, £80 ono. Tel: 091-529 4788, anytime.

PASSPORT Mastertracks Pro sequencer, v2.5, for Atari ST, inc manual, at bargain price, £100. Tel: (0602) 411185.

PASSPORT Mastertracks Pro sequencer for Atari STs, superb, fully featured, with elegant and easy user interface, original, as new, boxed, cost £240, sensible offers considered. Mike, Tel: (0337) 31172.

PLI 45MEG removable hard disk and 4 cartridges, nearly 1 yr old, £800 ono. Tel: 081-965 2377.

STEINBERG CUBASE 64-track sequencer for Atari, with dangle etc, £200. Tel: 081-555 3179.

STEINBERG CUBASE, latest version, never used, boxed, £230; Casio CZ1000, £100; PG300 programmer for Juno2, £45. Tel: (0705) 673602.

STEINBERG TWELVE, £25; Iconix for Atari, very powerful sequencing program, £70; Syncrolab SMC1, SMPTE, box, £65. John, Tel: Guildford (0483) 32802.

XRI MICON package, Spectrum+, Interface One, micro-drive, cartridges, real-time, step-time sequencers, DX/CZ editors, 1000s of sounds, offers. Tel: 071-281 7198.

YAMAHA CX, music computer, with monitor, large keyboard, printer and software, offers. Joy Fielding, Tel: (0200) 23379, 9am-3.30pm.

YAMAHA CX5M package, inc keyboard, voice cartridge, music composer cartridge, all mint and boxed, £100. Tel: (0732) 451802.

YAMAHA CX5M, realtime recorder cartridge, composer cartridge, and voicing cartridge, small keyboard, £130; Roland TR606 drum machine, separate outputs, £75. Nick, Tel: (098685) 354.

YAMAHA CX5M, with voicing and composing ROMs, keyboard and other bits, £120. Tel: 081-660 6667, after 6pm.

RECORDING

AKAI EX90R reverb unit, £150 ono. Neil, Tel: Woking (0483) 762017.

AKAI ME30PII, plus cables, £110; Yamaha R1000, £75; Omnicraft GT44 noise gates, £75; Nikko dual 10-band 19" graphic, £45. Louis, Tel: (0865) 512141.

AKAI MG14D, with auto locator ML12, and £300 worth of free cassettes, all-in price £1500. John, Tel: 01-485 4515, days; 071-284 4317, eves.

ALESIS MICROVERB II reverb unit, £85; C-Lab combiner, T-expander interface, £110; Pandora Korg M1 editor, £50. Tel: 071-485 7324.

ALESIS MIDIVERB III, as new, £110; Studio Research 6:2 mixer, £110. Steve, Tel: 071-253 4791 or 081-346 7201.

BOSS CE2 chorus pedal, brand new, boxed, instructions, guaranteed, bargain at £32 inc p&p. Tel: (0202) 522256.

BOSS ME5 multi-fx, as new, £300. Chris, Tel: Bristol (0272) 277359, work; 775747, home.

BOSS RCL10 compressor, two units with rackmount kit, PSU, £130. Tel: (07048) 74903.

CASIO DA2, £500 ono; Nomad Reddimix, £100. Tel: 051-734 0227.

CASIO DA2 portable DAT recorder, with power supply, battery pack, manual, hardly used, £490 ono. Tel: 081-743 2645.

CASIO DA2, home use only, mint cond, £500. Richard, Tel: 071-267 9336.

CASIO DA2 DAT recorder, excellent cond,

hardly used, £500 ono. John, Tel: Surrey (02518) 3235.

CHEAP MIXER, three stereo plus two mono inputs, £20; Steinberg Pro12, including manual, £15. Tel: (0902) 452487, eves.

FOSTEX 160, plus MN15 compressor/mixer, vgc, boxed, JLC PPS1 synchroniser, all items, £495 ono. Tel: 081-390 3776.

FOSTEX B16, 200 hrs use, great cond, £1450. Tel: (0473) 87418, days; 688615, after 6pm.

FOSTEX B16, excellent cond, one careful owner, recent recondition, £2000. Tel: Harrogate (0423) 520489.

FOSTEX E16, home use only, £2600; Studiomaster Series II 24:16:2, 6 months old, £4200; Roland U110, £350; Yamaha DX7S, £600; Roland MC500 Mkl, £375. John, Tel: 021-523 7727.

FOSTEX E16, 16-track tape recorder, £2750; Studiomaster expanded Mixdown 24:16:2, £2225. Tel: (0248) 713763.

FOSTEX M80, £950; Studiomaster 16:4:2, old style bar graph, £650, both great spec, as new. Tel: (0602) 411185.

FOSTEX X15, £140; Yamaha NS10M monitors, pair, £120; Denon 100W amp, £130; 12-track mixer, £230. Steve, Tel: (0254) 887145.

FOSTEX X26, 4-track recorder, only 5 hrs use, £195. Tel: (06527) 251.

GELF 30:30:10:4 plus 312-way patchbay, Tascam 38, XR300 SMPTE and 36-unit studio rack, with cables, £2500. Louis, Tel: (0865) 512141.

REBIS RACK, 14 units, inc 2 compressors, 6 gates etc, £750; Simmons SPM8:2 MIDI mixer, £200; Yamaha NS1000 monitors, £475. J Kirkpatrick, Tel: (0225) 336273.

REEL TO REEL Revox B77, hi-speed, half-track, completely overhauled, £650 or swap for 4-track reel to reel; Alesis Midiverb III, 1 month old, swap for SPX90. Bill, Tel: 061-928 5946.

REVOX B77, 2-track reel to reel, with tapes, editing block and stand, high speed, £500 ono. Martin, Tel: 081-992 4382.

ROLAND DEP3 reverb/delay, with EQ, plus memories, £260. Neil, Tel: 031-557 1814.

ROLAND SDE2000 rackmount digital delay, (1U), £100. Tel: (0932) 68468.

SECK 62, 6:2 mixer, £200; BBC B with MIDI interface, £150. London delivery. Tony, Tel: (0458) 31444.

SIEL EX80 MIDI expander, excellent cond, with 2-track sequencer, stereo outputs, £80. Phil, Tel: (0268) 694089.

SIMMONS SPM8:2 MIDI mixers (2), boxed, manual, £180 ono each, may split. Paul, Tel: (0323) 892307.

SIMMONS SPM8:2 MIDI programmable mixer, boxed, manuals, immac cond, £200, can deliver. Tel: 071-281 7198.

SONY PCM501 digital recorder, with SLF25 video, excellent cond, little use, very reliable, £550 ono; Yamaha R1000 reverb, £95 ono. Tel: (0742) 879758.

STEREO MIXER, takes 3 mics and 2

stereo line inputs, various effects, pan pot and crossfade, £45. Tel: Corby (0536) 743523.

STUDIOMASTER 6:2:1 mixer, 3-band EQ, excellent cond, £135. Tel: (0323) 644900.

TANTEK RACK and power supply, £35. Pete, Tel: 081-367 1720.

TASCAM 38, £850; Seck 12:8:2, £750; XR300 SMPTE synchroniser, £200; cheap tapes, patchbays, effects, Simmons SDS1 etc, excellent cond. Tel: 071-622 8182.

TASCAM PORTA 01, boxed, as new, instructions, £200 ono. Pat, Tel: (0525) 290464, eves.

TASCAM PORTA 01, 4-track, immac cond, fully boxed, £175; Atari 1040STF and SC1224 monitor, fully boxed, £600 ono. Tel: Stevenage (0438) 723630.

TASCAM PORTA 05 multitrack ministudio, as new cond, boxed, £225 ono. Tel: (0928) 724884.

TEAC quarter-inch half-track, 15" per second mastering machine, £350; MXR 31-band graphics, x2, £200 the pair; Alesis Quadraverb, as new, £295. J Kirkpatrick, Tel: (0225) 336273.

TEAC A3440, 4-track reel to reel recorder, with leads, super machine, as new, must sell, £395 ono. Tel: 091-529 4788, anytime.

TEAC 2A, 6:4 mixer, plus MB20 meter bridge, £150. Alan, Tel: Cheltenham (0242) 570261.

TOSHIBA MINI COOL air conditioning unit, portable, ideal for studio, £450. Tel: (0628) 891003.

WIFE FORCES SALE! Dynamix 20:4:2 mixer, flightcased, phantom, new faders, £500 ono. Simon, Tel: (0332) 553613.

YAMAHA KM802 mixer, 3 auxs, EQ, boxed, as new, £120. Tel: (0787) 62208.

YAMAHA REX50 digital multi-fx with stereo pitch change, manual, £240. Tel: Herts (0442) 873512.

YAMAHA SPX90II, boxed, manual, £360 ono. Paul, Tel: (0323) 892307.

A M P S

300 WATT STEREO SYSTEM. Ideal for keyboards or small PA. Includes Nomad 8:2 mixer, MTR SPA 400 stereo power amp and 2 x birch ply cabs containing 200W drivers (12"), bullet horns and crossover. Only 1yr old, complete system only £550. Will split, ring for details. Tel: (08012) 4017.

CARLSBRO Cobra 90 keyboard combo, 3 channels, 5 inputs, reverb and fx send and return, home use only, bargain at £145. Tel: (08012) 4017.

CARLSBRO 150W keyboard amp, £150; pair 200W 3-way custom sound cabs,

£150; Studiomaster 200W stereo amp, £150; 6U-FF rack, £80. Tel: 081-517 2967.

MTR SPA400 stereo Mosfet power amp, 200W per channel, hardly used, cost £375 new, will accept £225 ono. Tel: (08012) 4017.

MUSIC MAN 2 x 12 75W combo, £195 ono. Paul, Tel: (0323) 892307.

SYMETRIX SX204 headphone amplifier, 4 inputs, £150; Samson BR3 wireless microphone system, with Shure SM58 mic, £500. Dee, Tel: 071-372 2511.

300 WATT stereo speaker system in birch plywood cabinets, 200W drivers and 100W bullets with crossover, good hardwearing cabs, £250 the pair. Tel: (08012) 4017.

PERSONNEL

COMPOSERS required to write film music for video clients waiting. Brian, Tel: 021-704 5215.

EDDIE ALLEN, you've polished your desk. The spirit of rock 'n' roll is indeed dead.

FEMALE VOCALIST needed for dance orientated band with techno influence. Mark, Tel: 051-355 2148.

KEYBOARD player/vocalist for electro bands. Depeche, Front 242 main influences. Bal, Tel: (0254) 62091.

STEVE HILLAGE wanted, ex-Rainbow Dome music, spiritual songs ready. Tel: (0706) 229589, eves.

SYNTHIST into techno, New Order, Fiat Lux, Sicksane, (vocals?), South West London. No Tories please. Al, Tel: 081-942 3063.

SYNTHIST wanted, into instrumental music, ideas, enthusiasm, some basic technical knowledge. Lewis, Tel: 071-609 5750 or 071-826 3264.

WANTED: female vocalist for dance music act. Scotland/North England area. Greg, Tel: (0387) 50748.

MISC

E&MM and Music Technology, all copies August 1983 to January 1990, offers. Tel: Dalton (0482) 801104.

FENDER SQUIER Stratocaster metallic blue plus Boss HM2 heavy metal pedal, £100. Tel: (0932) 68468.

JHS 3-tler A-frame, £50. Tel: Haven (0705) 477275.

JVC KY1900E pro video camera, £950; CR4400E U-matic portable, £450. Alan, Tel: Cheltenham (0242) 570261.

PEAVEY PA speakers, stands, power amp, foldback, mixer, EQ, mics, mic stands and leads, £1100 the lot. Tel: (04867) 6524, eves.

ROLAND D-SERIES ROM cards, PM D10 0.1 (unique D-sounds), PM D10 0.2

(rhythm/bass), PM D10 0.3 (natural variations), each contains 64 x 128 combis, 128 performance patches, £35 each or £100 all three. Andy, Tel: Leeds 430177.

TWELVE-STRING Ovation Glenn Campbell, electric-acoustic 12-string gold-plated hardware, as new, £499 ono; Gordey Red Shift, custom hand-made, 3 pickup, Floyd Rose, gold-plated, as new, £649. Tel: (0625) 22580.

WANTED

AKAI S1000 wanted, Oberheim Matrix 12 plus expander, Prophet VS plus t8, Roland MKS80 plus PG programmer, ART 2600, Korg CX plus BX organ. Tel: 081-761 8013.

AKAI S612 sampler. Tom, Tel: (0727) 56527.

AMIGA - interesting music software wanted - lots to swap - expanders, guitar synth, wanted. Mick, Tel: 051-727 5628.

EXCHANGE S950 fx samples. I like crazy noise, do you? Write: POB 338, KX, 2011, Australia.

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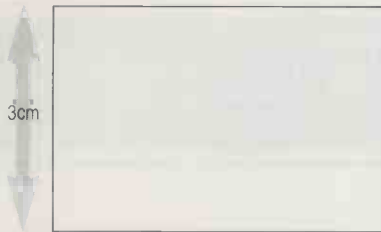
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