

The disk system for MGT's SAM Coupe arrived close to last month's deadline, so I have carried on testing it this month. Alan Miles' Dos manual runs to 30 A5 pages. It explains all the Dos commands clearly, and has a two-page index, but lacks low-level information for programmers. Editions 1 and 2 use dot matrix print, but typesetting and cartoons are planned.

SAMDos is loaded from disk, and occupies 16K of memory at the top of SAM's 256K or 512K map. You load it with the command BOOT, followed by CALL 229385 for 256K, or CALL 491529 on a 512K machine. Loading is almost immediate, but the two-step process is a little clumsy. The BOOT command is programmed on function key F9, but you must type the CALL in full whenever you reset the system.

Version 11 of the Coupe Rom is being tested; BOOT loads and initialises SAMDos in less than two seconds, with no need for the CALL. You can check your Rom version with PRINT PEEK SVAR 9 - the first release was issue 10.

SAMDos has its own system variables, accessed with DVAR. PRINT PEEK DVAR 7 gives the Dos version; we tested version 9 pre-release, then version 12, introduced at the Microfair on 10th February.

The DVARs include configuration data, recording the number of drives, tracks and sides on your system, and controlling optional border flashes as sectors are loaded. Once you've configured SAMDos you can save the new version as a 10K CODE file to suit the BOOT command.

BOOT sets the default device to drive 1, so file commands refer to that drive unless you put 'D2:' before the name, to pick drive 2. DEVICE changes the current default.

DIR shows the disk file catalogue. The default 'short' form just shows file names, in columns across the screen. A variant uses a single column, with full details of each file including sizes, start lines or addresses. Output can be directed to any stream:

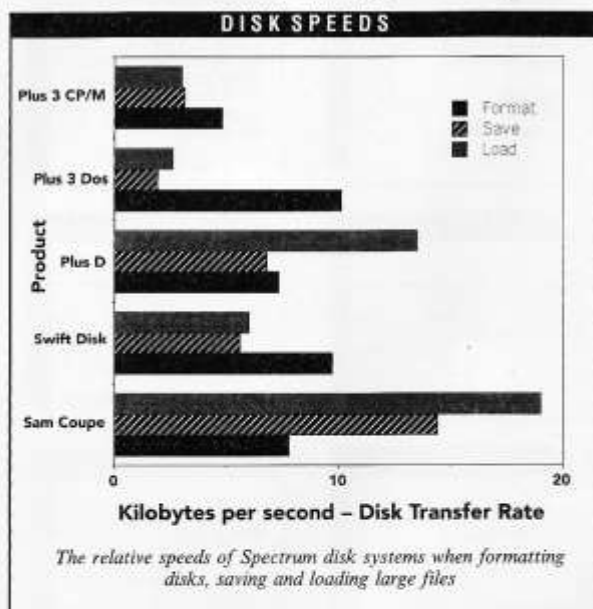
RECORD TO FS DIR #16,1

stores the full directory of drive 1 in the string variable FS. HIDE allows individual files to be concealed so DIR does not show them.

You can SAVE or LOAD code, screen, Basic and variables to disk, as with tape or the network. Lazy typists will approve of the way you

Sinclair Scene

Timothy Green surveys the world of Spectrum and QL compatibles



can LOAD files by number. LOAD 5 loads the fifth file in the directory, without scanning the others and with no need to type the file name or parameters. PRINT/INPUT files are not supported in SAMDos 12, but MGT plans to allow random access files in an enhanced version of Basic, to be supplied on disk later this year.

If you try to save a file using a name that is already in use, SAMDos asks if you want to erase the existing file - you type Y or N. PROTECT lets you protect individual files from change or erasure. The command SAVE OVER can overwrite any file without a message.

Speed test

The figure *Disk speeds* shows the relative speeds of Spectrum disk systems when formatting disks, saving and loading large files. Figures for SAM, Plus D, Amstrad's Plus Three Dos, CP/M Plus and Sixword's *Swift Disc* are comparable, as measurements are in Kilobytes per second.

A Coupe with two drives can back up disks faster than the chart might suggest. MGT gives each drive its own disk controller, so

the SAM can run both at once. SAMDos 12 can format, read and write 800K in two minutes 50 seconds. The command FORMAT TO "D2:" puts an exact copy of the disk in drive 2 onto an unformatted disk in drive 1.

The COPY command in SAM Basic transfers files one at a time, alternately loading and saving. It can write to disks that are already part-full, with the option of overwriting existing files with the same name.

COPY "D1:*" TO "D2:*" copies all files from drive 1 to drive 2. It took two minutes and 7 seconds to copy 21 files, totalling 308K, from MGT's master disk to a formatted disk in drive 2. The 'wildcard' characters '*' and '?' also match names in ERASE, RENAME and DIR.

SAMDos is optimised for fast loading, but like the Plus D (see *Shopper* January) SAM gets slower as the disk directory fills up. It takes 10 seconds to scan the entire directory, even though it is limited to 80 files. MGT and the user-group INDUG are working on ways of speeding this up; it should be easy to upgrade the Dos as it runs in Ram.

Snapshots

SAMDos can transfer 48K Spectrum programs and screens to either drive. Once the Spectrum emulator is loaded you can pause programs with the 'break' button at the back of the machine. Key 2 restarts the emulator, while 3 saves the screen to disk, and 4 saves the whole 48K program area. SHIFT selects drive 2.

X returns you to SAM Basic, so you can load another 48K 'snapshot', enter Multiface POKEs or change the palette of colours. The command CALL MODE 1 restarts the emulator.

Dos compatibility

In principle, SAMDos is compatible with the Spectrum +D and Disciple. It has the same 20K directory and 780K file space, allocated in 512 byte sectors. In practice SAM can read Spectrum disks, but the Spectrum can't make sense of Coupe files.

The problem is that SAM programs and CODE files can be up to 512K long, and have extra attributes like 'hidden' and 'protected' status. The Spectrum isn't able to make sense of this extra directory information, although it should be easy enough to write a small ZX Basic program to decode the new information and convert SAM files.

In most cases it's just a matter of converting the file header. Spectrum-style MODE 1 SCREENS will need extra work as SAM saves palette settings along with the pixels and colour attributes. *Flash* can convert MODE 2, 3 and 4 screens to MODE 1 format, setting the attributes as best it can. MGT is working on software to allow the Coupe to read and write PC, ST and even QL disks. Program code is not compatible, but it will be possible to move source files, documents and DATA back and forth in ASCII form, with automatic conversion of line-end characters and other esoteric differences between machines. ▶223

Next month we'll take an in-depth look at SAM Basic, the elegant block structured interpreter built into the Coupe.

News

All-formats Microfair

The recent Microfair at London's New Horticultural Hall was a mixed affair; MGT took the main stage, showing the new SAM Coupe for the first time at a public show. This was billed as an 'all formats' fair, so PC, ST and Amiga products were much in evidence. Prices were low, as ever. The QL and Spectrum put up a strong showing, supported by Betterbytes, Bruce Publishing, EEC, INDUG, Miracle Systems, TF Services and UK Home Computers. There was a surprising amount of ZX-81 hardware and software on sale, including stick-on moving keys for people unhappy with the original flat vinyl keyboard.

Punters were less impressed by the £3 admission fee, especially as a third of the hall was empty. The catalogue listed PDQL, but it didn't turn up. Care Electronics left early; it had hoped to sell the first copies of QJump's *Q-Pac 2*, and included discount vouchers for it in the catalogue, but the package missed the show deadline.

Music Writer

The Spectrum 128 has Midi output and a three-channel sound chip, yet it lacks a good music package to take advantage of these features. Garry Rowland has been working on *Music Writer* for 18 months, and expects to fill the gap with a three-part score writing package that uses conventional musical notation.

The display shows three staves – two treble clefs and one bass. Once you've stuffed in your music, complete with crescendos and other inflection, you can edit it, save to disk or tape, or hear your composition played through the Spectrum sound chip.

The program is entirely written in machine code with HiSoft's *Devpac*. It is supplied on tape, with a utility to move it onto Plus Three disk. The code runs on any 128K Spectrum, and allows access to the Ram disk.

Garry has promised to send us a review copy of *Music Writer* in the next few weeks. The first version will cost £19.95. The first release will not use the Midi or printer ports, but he intends to add modules with those features, including printouts at a higher resolution than the display.

QL workshops

The large QL and Thor club Quanta will hold its Annual General Meeting on Sunday 25th March at the Kingsthorpe Community Centre, just outside Northampton. Prospective members are welcome at the workshops on Saturday and Sunday, when they will be able meet other enthusiasts, hear presentations from amateur and professional QL product developers, and see the latest gadgets in action.

Members will vote on plans to pay committee members, and elect seven people to the new committee. The contact address for the group has changed. In future, correspondence should be sent to Phil Borman at 62 Prospect Avenue, Rushden, Horthants NN10 9DH.

Spectrum wizardry

The Spectrum hosts its own multi-player telephone adventure game, thanks to enthusiast Tarim, one of the deities from the cult *Gods* game. *Loads of Wizzes* runs on a humble 48K Spectrum, although Tarim says the code and data would fit in a 16K machine. The idea – as usual in such games – is to become a wizard.

A ZX Basic control program communicates via the Interface 1 serial port to The Butler, the telephone control computer at the Lap of the Gods. Tarim points out that the serial port on interface 1 is unusually well-implemented, by Sinclair standards, and copes well with bi-directional communications – unlike the serial port of the Spectrum 128, which can control a printer but is good for little else.

In theory, the game could be played by up to 31 people at once, but the Lap is limited to 16 incoming Telecom lines. *Loads of Wizzes* is said to be a simple game, but still a challenge. It was a popular diversion at a recent adventure convention.

To find out more, hook up your modem to the phone and call The Lap of the Gods on (01) 994 9119. The display is scrolling text, rather than Prestel-style frames, so you'll need some sort of terminal emulator if using a VTX-5000 modem. The *Fireterm* scrolling software should be suitable; it's in the Public Domain, and you can download it from Micronet and some bulletin boards.

SAM supporters

The list of software developers promising to support the SAM Coupe is growing steadily. In mid-February it included Activision, Alternative, Anco, Atlantis, Audiogenic, Betterbytes, Creative Codeworks, Datel, Domark, Goliath, HiSoft, Bo Jangeborg, Kemsoft, Lerm, Microprose, Mirrorsoft, Ocean, PCG, PDS, Synclavia, System 3, Tasman, Thalamus, Trojan, US Gold, Virgin Mastertronic and Zeppelin.

Microdrives found

Last month's reports of an impending shortage of microdrive cartridges may have been premature, if Boots in Croydon are any indication. In February its computer counter boasted a stock of hundreds of cartridges. It is rumoured that Boots bought much of the production run made last year, so it's worth giving the Cash Chemists a try.

QL clone (again)

Yet another QL-compatible system has been promised, this time by QView, the publisher of the *Minerva* QL Rom upgrade. Details of *Medusa* (ugh!) are few and contradictory, to date, but it sounds as if we can expect a four megabyte 68008-FN or 68020-based machine with interfaces for SCSI hard disks and 1.44Mb (RLL) 3.5" floppies.

The hardware will use a mixture of off-the-shelf parts and Sinclair chips. Lawrence Reeves has prototyped a version of the *Minerva* Rom which runs on the 68020. Stuart McKnight says the name is meant to imply that *Medusa* "Turns the competition to stone".

QL clone reports are two-a-penny these days. Tony Tebby's QLT developed into Sandy's Futura and then vanished. CST's Blackberry gave way to the Thor 1 (a QL in a bigger box), the Thor 20 (a QL in a big box with a 68020 tacked on), then the Thor XVI – genuinely new 68000 hardware which works well enough to attract dire threats from would-be competitors.

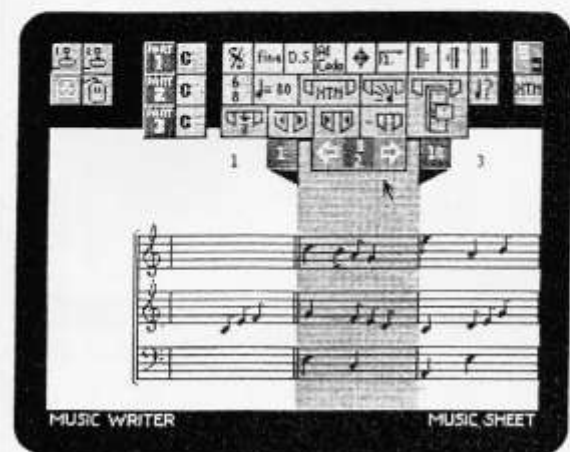
The ebullient Danes from Thor International are booked to attend Quanta's Bristol Workshop early in March, confounding rumours of Thor's demise (or not). The enigmatic Germans from ABC Electronic are also expected, bringing first-hand news of ABC's cheap hard disk interface and long-promised Enigma QL clone.

So far, the most successful QL clones have been the Anglo-Danish Thor and the ST QL Emulator, developed in Norway. The latest and cheapest contender is Rainer Kowallik's Public Domain QL Emulator for the Amiga. This is shaping up very well, and may give the other contenders a hard time, if rough edges in its disk and keyboard handling can be tidied up. I shall report on it again soon.

QJump's last fling

Veteran QL supplier QJump has pruned its product range, dropping *QMON 2*, the *QPTR Toolkit*, and replacing the original versions of *QRam* and *QTyp*. Upgrade work on the ST QDos emulator is underway at the time of writing, and QJump intends to ship version 'C' of its device drivers at the end of February.

The new version is a small step in the direction of SMS-2, Tony Tebby's oft-promised replacement for QDos. It will support subdirectories on QL floppy disks, and allow access to ST hard drives



Music Writer lets you save your music to disk or tape, edit it, and play it through the Spectrum sound chip

from within the QL emulator.

QTyp is dead – long live *QTyp 2*! That's the message from QJump's second newsletter, but there's not much information to back up the claim. *QTyp 2* is a spelling checker which can check text from a file or interactively, as you type. Dictionaries are available in English, German and Dutch, with around 40,000 words in each.

QRam has been superseded by *QPac 2*. This has most of the original *QRam* features, apart from the Ram disk and screen printout software. The package includes *Hotkey 2*, allowing tasks to be selected by any keystroke. It also features 'buttons' – small graphic symbols which can be selected with the pointer, calling up tasks beneath the current display.

All the windows can be moved and changed in size, with the data shuffling around to fill the space.

QPac 2 also supports 'things' – shared areas of memory – and sub-directories on QL hard disks, which *QRam* could not handle.

QPac 2 is unexpectedly expensive, at £49.90 plus £1.50 postage in the UK (£2.50 in Europe, or £5 elsewhere). *QRam* owners get a notional £20 discount, so the upgrade price is the same as that of the original *QRam* package. We have asked for review copies of *QPac 2* and *QTyp 2*, and hope to test both in future columns.

Colour SCREENS

Recently, reader Les Harding bought a Star LC-10C, which can print in eight colours – but he has been unable to track down a routine to send a colour screen from his Spectrum to the printer. He remembers seeing one on sale at the ZX Microfair a couple of years ago, but recent enquiries have drawn a blank.

We called a couple of dealers. Microsnips was aware of the application but could not track down a program to suit. Lion Computers promised to investigate and phone back, but we have not heard from it since.

Bradway Software advertises *Dumpy* as all the screendumps you will ever need for your Spectrum, but did not respond when we left a message on its answerphone asking about colour dumps. I called INDUG user group boss Bob Brencley, who told me that as far as he is aware *Dumpy* will not print in colour, although it will do almost anything else with an Epson-compatible printer.

Miles Gordon Technology used to sell a colour dump routine for the Star, and that's probably the program Les saw at the ZX Microfair. MGT still sells the printer, but the software sold out a couple of months ago and went out of

stock for a while, in the rush to finish the SAM Coupe.

The MGT code is now back in stock, and costs £8.95, plus £2 postage and packing. MGT warns that it has only been tested with the Disciple and Plus D printer interfaces. Les has written to us three times, but – like many correspondents eager for technical help – he still hasn't said what interface he is using.

The November 1989 issue of *Format* (volume 3, number 3) contained a review of the MGT software, and a Basic listing to enhance it. The listing adapts the code to work with any printer interface that accepts LPRINT and PRINT #3 for all character codes. That should cover most interfaces, although you may need to use a POKE or print a special sequence to prevent Basic keyword tokens being expanded into sequences of letters.

The package sounds quite easy to use. First you load the Basic and machine code of the dump routine, then the SCREENS file saved from your graphics package. The machine code takes about five minutes to print a colour screen, and you can fit two pictures onto an A4 piece of paper.

Timothy Green is a Boots the Chemist aficionado

CLUB CONTACT

This part of *Sinclair Scene* lists user groups of particular interest to Sinclair users, with contact names and addresses. The list is updated each month. Most of the clubs charge a membership fee of a few pounds a year, entitling you to advice, a regular journal and access to their software library.

The clubs have members all over the world. Wherever you live, they can tell you useful things you'd be unlikely to find out any other way. Send a stamped addressed envelope to the address shown to find out more about groups that interest you. If you are in any other group that you think we should be listing, please ask the organisers to send details to *Sinclair Scene*.

Spring cleaning

Italian QL enthusiast Eros Forenzi has written in with the latest issue of *QItaly*, his QL disk magazine. The 3.5" disk was well packed in cardboard and watertight polythene, but it seems to have become corrupt en route through the post. Overseas letters are often subjected to intense X-rays, and this can render disks unreadable.

After lengthy deliberation, my QL disk test program concluded that just 14 out of 160 tracks were readable. There's not much point trying to recover a disk when over 90 per cent of the data has been wiped.

Markings on the package do not necessarily prevent damage, although it is a good idea to write 'FRAGILE MAGNETIC MEDIA – DO NOT X-RAY' in appropriate languages, in big letters on both sides of a package.

If that's ignored, disks are protected to some degree by aluminium

kitchen foil, wrapped all round them. This shows up as a square smudge on the X-ray machine. Hopefully the operator will ignore it, or fish it out for further examination and read the markings; but sometimes they just turn the power up and up until the X-rays blast their way through both the layers of foil and the disk inside.

Eros points out that *QItaly* is a disk newsletter, rather than a club in itself, so we have changed the details in *Club Call*. It seems that his pal Roberto Orlandi has the Italian QL club scene stitched up – Roberto's Club-Ware has published a bimonthly Italian QL magazine since 1987, and offers club services to around 100 members.

The newsletter *News-Ware* runs to 20 neat A5 pages, produced with *Text 87*. The issue I received contains news, reviews, and background information about the QL ROM, *Text 87*, *Minerva*, SMS-2, Amiga QDos, the Thor XVI, PC emulation, and *QPro* updates. If you'd like to check out the Italian QL scene, write to Roberto at Via Breccia 26, 25039 Travagliato (BRESCIA) Italy.

The *BetaBasic Newsletter* is not listed this month, as Andy Wright has decided to concentrate his efforts on the SAM Coupe when he has finished the next issue. Back issues of the newsletter, and *BetaBasic 3* and *4*, will remain available from Betasoft at 24 Wychie Avenue, Kings Heath, Birmingham B14 6LQ.

I have been trying to contact QL SUB for a couple of months, but have not been able to reach the group by telephone. I have therefore taken its details out of *Club Call* for the time being; if all is well, I shall re-instate QL SUB when it gets back in touch with *Sinclair Scene*.

Outlet – the Spectrum drive magazine

Chevron Software, 605 Loughborough Road, Birstall, Leicestershire LE4 4NJ.

Outlet is a well-presented magnetic magazine, now available on Amstrad Plus Three disk. Contact: Brian Cavers.

Spectrum Discovery Club
57 St Saviour's Road, West Croydon, Surrey CR0 2XE.

A non profit-making, independent club for users of the Opus Discovery Spectrum disk interface. The Discovery Club has over 500 members worldwide.

The club administers a software library, 'helpline', repair service and a bimonthly newsletter distributed on 3.5" disk, containing articles, conversion notes, tips and members' programs. Contact: Brian Mumford.

Network – the Disciple/Plus D tape magazine
38 Kings Drive, Gravesend, Kent DA12 5BJ.

This monthly magazine is supplied on Spectrum cassette, although it contains tips and programs for MGT disk users. *Network* has about 150 subscribers, and has been published every month since August 1988. Back issues are good value at a quid a copy. Contact: Barry Martin.

The Plus Three Users' Group
Garner Designs, 57 Lover's Walk, Dunstable, Beds LU5 4BG.

This club for users of Amstrad's disk Spectrum was launched in the summer of 1989. Members receive *Plus Three Contact*, a monthly A4 newsletter, and have access to a library of Public Domain software and Plus Three versions of the magnetic magazine *Enigma*. Contact: Daniel Garner.

CONTACTS

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