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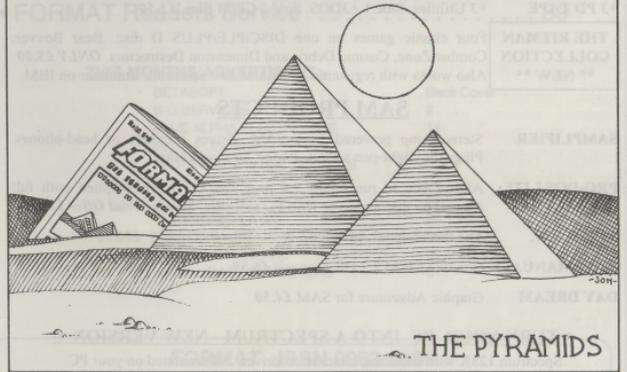
Vol.7 N°10.

June 1994.

FORMAT

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BGS110

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NEWS ON 4

SAM ELITE LAUNCHED

The big news this month is of course the SAM elite. Just as we went to press last month West Coast Computers announced that they would be launching a new version of SAM at the Gloucester Show which was held on the 30th April. Well those of you lucky enough to make it to the show will already have seen the new SAM elite as the computer is known.

The elite is reviewed elsewhere in this issue so we won't take up too much space here, but suffice it to say the crowds were impressed.

MOVE UPDATE - FINAL ROUND

Blue Alpha's new address and telephone number were confirmed in time for the Gloucester show and the big move is now complete. The new address is: Blue Alpha Electronics, 18, Maesybont, Glannanan, Ammanford, Dyfed, SA18 2AY. This address should be used from now on for all mail and for sending off repairs. Their new telephone number is 0860 157618.

SPECTRUM GAMES PACK

B.G.Services have released a disc compilation of Spectrum games called *The Ritman Collection*. The pack includes the classic games Bear Bover (a platform game), Combat Zone (a Battlezone clone with wireframe graphics), Comic Debris (a really good Asteroids game) and Dimension Destructors which pits your wits against many waves of alien craft.

The cost is £5 on disc for DISCIPLE/PLUS D and the games also work with

the registered version of the Z80 Emulator on IBM type machines.

If this compilation is successful then B.G.Services promise more in the future. It is good to see some classic software returning in this way.

NEW IMPROVED SECRETARY

No, don't worry, I've not traded Jenny in for a new model, she is too valuable to part with. But Revelation have announced a new version of their highly successful SAM word-processor - *The Secretary*. The new version has several new features and has had several sections re-written to speed up things like keyboard response. The setting of printer control codes has also been made much easier.

The new version (1.5) is available now at £14.95 (Indug price £12.95) and registered users of earlier versions can upgrade by following the instructions in Revelations advert. A full review will appear next month.

ADVENTURE PROBE REACHES EIGHT

Adventure probe, as far as I know the longest running magazine covering the computer adventure scene, is eight years old this month. Happy Birthday Folks.

Now published monthly, the mag covers most computers including a healthy helping of Spectrum and a little SAM as well. It is compiled by a very dedicated bunch of people headed by Barbara Gibb who acts as editor for the magazine. Each issue costs £2 and if you want more details then send an SAE to Adventure Probe, 52, Burford Road, Liverpool, L16 6AQ. Or better still order a copy and see for yourself.

COMMODORE GOES BUST

Commodore International, the parent company behind Commodore UK, has been placed into liquidation.

Makers of the VIC 20, C64 and more lately the Amiga range of computers, Commodore have been in financial trouble for several years. Several subsidiary companies have already been closed down or sold off in the last two years but now the parent company have been unable to secure a re-financing deal with their major creditors and so have been forced to close their doors for good.

It is expected that Commodore UK and many other sections of Commodore's world wide business will be sold off, as going concerns, over the next few weeks. However, the future of the Amiga computer still hangs in the air as we go to press.

Several companies, including Amstrad, have been rumoured as registering an interest in taking over parts of the Commodore empire but it may be some time before a decision is made.

Many retailers are already scaling down stocks and it is known that staffing levels on most of the Commodore based high street magazines is being cut - or at the very least frozen until the uncertainty is over.

POP RETURNS

Prince of Persia, one of the best games to come out from Revelation while it was a division of SAMCO, is relaunched this month.

Revelation have repackaged the program and cut the price by £5 to £9.95 although Indug members get their usual £1 discount.

PoP sold very well under SAMCO but, due to contractual problems only the 200 left in stock when SAMCO closed have been sold since, mostly at shows or through special offer leaflets in **FORMAT**. Now the wider SAM audience

will have a chance to play PoP, and, at the new low price it is a bargain that will be difficult to miss.

STAR PRINTER CUTS

Star Printers have announced dramatic cuts in the price of many of its current range of printers.

Dot matrix, laser and thermal printers have been reduced in price, some by over £100.

The LC-100, LC24-30 and LC24-100 have all been cut by £50 so that the recommended retails are now £149, £249 and £159 respectively. The biggest drop is to Star's top of the range LS5-TT laser printer which comes down from £999 to £749. These prices may often be lowered even further by mail-order suppliers and are seen as an aggressive attempt to further Star's reputation for value for money printers.

SCADS TAKEOVER

Revelation Software seem to be filling News On 4 this month and their latest press release came through just in time to include it this month.

SCADS, the arcade games development system formally marketed by Glenco Software has not been advertised for some time due to other commitments on the part of the author/publisher Glen Cook. After long negotiation SCADS has been purchased to add to Revelation's line-up of advanced SAM software which already includes DRIVER, The Secretary and Champion. This latest acquisition confirms Revelation as one of the top companies in the SAM software field and proves their dedication to the market.

SCADS will be relaunched next month so look out for Revelation's July advert.

Credits:
URGENT we need your news. Anything you think other people should know about. Each item printed earns the contributor 3 months extra subscription (please claim when next renewing).

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Below you will find details of the full range of SAM hardware now available.

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E. & O.E.

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Write your order clearly on a reasonable sized piece of paper, state your name; address and phone number. Cheques, Postal Orders, Euro-cheques, should be made payable to **West Coast Computers Ltd.** We will try to dispatch your orders as quickly as we can - however please allow 28 days to be on the safe side. Some items have to be produced in batches and where this may cause a longer delay we will write to you as quickly as possible.

RAM SHORTAGE. Given the current shortage of RAM chips we may only be able to hold the current prices on SAMs, 256K upgrades and 1meg memory packs for short time. Any order received by 1st September will be accepted at the above prices - thereafter please see our next advert.

IMPORTANT NOTICE

To order any of the above items please send your order to:-
West Coast Orders, Format Publications, 34 Bourton Road, Gloucester, GL4 0LE.
 Make cheques payable to West Coast Computers Ltd.

The Editor Speaks

The first Gloucester Spectrum & SAM Show, held last November, took place on one of the most miserable, wet and windy days you could imagine. The second show, on April the 30th, took place amidst record temperatures and dawn to dusk sun (yea, that funny yellow thing that floats in the sky - you remember, we had it a few days last year). Anyway. A big thank you to all who braved the bank holiday traffic to get to Gloucester. The crowds were even bigger than last time and the caterers sold out of canned drinks by lunch time and had to send out for more supplies.

I promise we will do another show, probably mid-October but I will let you know the date as soon as it is fixed.

Last months issue caught lots of people out by being so early. I wanted to get one last plug in for the show as well as getting things cleared out of the office so we could have a bit of a rest after the show. OK, I didn't get a rest, but I did try.

Last month I told you story about a disc that refused to work for a Revelation customer despite the original disc being re-recorded (even though it worked fine for us) and then, after he sent it back again, the a replacement disc producing the same fault. In the end Revelation very kindly gave the customer a credit note, as it had become clear his machine would never run the program.

Well, bearylly was the ink dry on that issue than Royal Mail went and dropped us in it with some other customers. One batch of discs (various programs), sent out on one particular day, started coming back with complaints of 'wont load'. On testing we found massive corruption,

sectors and tracks all over the discs were faulty. We then tested every single disc in stock, which had the same batch numbers as the returned discs, and found no faults whatsoever. The conclusion then was that something in the postal system must have affected the discs. Royal Mail are still investigating.

One thing that should be bourn in mind though. If you have any problems then please remember, always ring us before returning anything. We can then give full advice and, if it is necessary to return something, tell you how to do it so that you get things back as quickly as possible.

Moving on to much happier things now. The first review of the new SAM élite appears in this issue. Having got them here is stock for West Coast I can see why they are going so fast. Read the review and see for yourself and I think you will agree that it is the most important step that has been taken since West Coast took over from SAMCO. Production is now in full swing with both single and dual drive machines selling well. The world shortage of DRAM chips may still cause the odd problem but the near fatal drive shortage is now a thing of the past.

On the subject of disc drives, Blue Alpha are already reporting a good response from existing Coupé owners wanting to upgrade their disc drives (see West Coast's advert in last months issue). If you want to know any more then give me a ring.

Until next month.

Bob Brenchley, Editor.

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SHORT SPOT

YOUR HINTS, TIPS AND PROGRAMMING IDEAS

Edited By:- John Wase.

The mowers are buzzing, my wife is cussing, the garden needs doing. It's no good; got to get indoors and finish June Short Spot. So let's start with something for most of us. John Marshall of 7 Clarborough Drive, Arnold, Nottingham, writes that he was adding the final touches to SAM and Spectrum versions of his 'GO' oriental boardgame which he sells for only £2.99 when he realised that he needed some break-protection. I mean, if someone (mistakenly? maliciously?) presses the BREAK key after a couple of hours play, the positions are lost for ever. So here are his break-disable routines for both SAM and Spectrum. It makes either machine just ignore the BREAK: a much better idea than crashing the game. Both methods are tested and work on a SAM or a Spectrum 128 respectively.

```
2 REM SPECTRUM BREAK DISABLE
5 REM FROM YOUR SINCLAIR 5/9
0 DAVID ROBERTSON
10 CLEAR 59999: FOR F=60000 TO
60026: READ A: POKE F,A: N
EXT A
20 DATA 33,15,0,167,237,74,229
,193,42,61,92
30 DATA 113,35,112,201,237,123
,61,92,33,58,92,54,255,195,
125,27
40 RANDOMIZE USR 60000:REM TUR
N BREAK DISABLE ON. ANY RUN
-TIME ERRORS OTHER THAN BRE
AK WILL CRASH THE COMPUTER
50 REM ROUTINE MUST BE RE-ENAB
LED WITH RANDOMIZE USR 6000
0 AFTER LOAD OR SAVE
60 REM CAN BE RELOCATED ELSEWH
ERE IN MEMORY
70 CIRCLE 127,87,INT (RND*87):
GOTO 70
```

100 REM SAVE THIS PROGRAM BEFOR
E RUNNING IT

And for the SAM:-

```
10 POKE 22081,1: REM DISABLES
ESC KEY
20 DPOKE 23264,0: REM DISABLE
S BREAK BUTTON AT BACK OF
SAM
```

John didn't send these on disc, so I've just typed them in. Hope they work for you.

Now for Miles Kinloch of Edinburgh. Miles has found, would you believe it, a whole raft of bugs AGAIN in BetaDos, and a couple in G+DOS for good measure. Not one fat envelope, but two have bounced on the mat since the previous Short Spot was written. I don't want this to take over the entire column, so I'll leave it for a month or two, and if he's found no new bugs to add to the list, I'll give you an update. Meanwhile, here's a *real* Short Spot (well, two, actually) from Miles.

When I last saw Dave Tonks (the Discovery Club and SAM disczine man), he was bemoaning the fact that members' Discoveries were at last wearing out, and that spares were no longer available. I was able to let him have a couple of spare pcb's, for which he was very grateful. However, the inevitable is happening: and when this does, those with this obsolete, spare-less drive are going to have trouble. Enter Miles. Take a disc with your version of G+DOS on it. Now do: POKE @1712,0: POKE @1713,0: POKE @1714,0: POKE @1735,10

Dunnitt? Good. Now save your

modified DOS to a spare labelled disc. When you run it, your PLUS D will recognize the shortened Microdrive syntax normally used by the Discovery, for instance LOAD*1;"file" or SAVE*1;"file". So it will also recognise VERIFY or MERGE short syntax, and all these commands will now work. I suggest you save them to a special disc, since they disable the ordinary Microdrive syntax. Alas, the Discovery versions of OPEN#, MOVE, FORMAT, etc., are not recognised as the Opus handles these quite differently from the PLUS D. These POKES will work on G+DOS or BetaDos.

And for those still happy with good ol' G+DOS, here's a quick 'un. You know the autocat that you always get when you use capital D? Well, in lots of situations, it's more of a nuisance than a help. If you POKE @1358,195: POKE @1359,1148 it's gone. Howzat!

Many thanks, Miles.

I'm still getting lots of little palette rumbles for SAM. Peter Alleston of Sudbury, Suffolk, has sent me a little program to make it cycle, just like in FLASH!

```

10 MODE 4: CLS#
20 INPUT "INPUT SCREEN:";A$
30 LOAD a$ SCREEN$
40 DIM Y(16)
50 FOR Z=1 TO 16
60 LET PAL=PEEK (21976+Z-1)
70 LET Y(Z)=PAL
80 NEXT Z
90 LET A=2
100 FOR X=0 TO 15
110 IF X>=16: PALETTE X,Y((X+A)-16): GOTO 130: END IF
120 PALETTE X,Y(X+A)
130 NEXT X
140 LET A=A+1: IF A=18 THEN LET A=2
150 GOTO 100

```

And if you want the palette to cycle the opposite way, then change lines 90 and 140 to:-

```

90 LET A=17
140 LET A=A-1: IF A=1 THEN LET A=17

```

Peter also has a little program which is similar to the demo on the SAMDOS main disc: it makes a cube rotate. On the program listed below, however, you can have as many frames as you like, using the BLITZ command. Here it is:-

```

10 MODE 4: CLS#
20 PEN 15
30 INPUT "NO OF FRAMES:"; FRA
MES
40 LET FX=128, FY=40, WD=50, HT=68, Q=0.15, F=1, ST=PI/2/FRAMES
50 RECORD TO A$
60 FOR A=0.02 TO PI/2-0.02 ST EP ST
70 FACE A+1.75*PI
80 IF F>1 THEN FACE A+1.25*PI : LET X2=XX, Y2=YY
90 PEN 0: FACE A+1.75*PI: FAC E A+1.25*PI: PEN 15
100 LET F=F+1: NEXT A: RECORD STOP
110 REM ANIMATE
120 BLITZ A$: GOTO 120
130 DEF PROC FACE A
140 LET A2=A+PI/2
150 PLOT FX+WD*SIN A*(1+Q*COS A), FY-HT*Q*COS A
160 DRAW 0,HT*(1+2*Q*COS A)
170 DRAW TO FX+WD*SIN A2*(1+Q*COS A2), FY+HT*(1+Q*COS A2)
180 DRAW 0,-HT*(1+2*Q*COS A2)
190 DRAW TO FX+WD*SIN A*(1+Q*COS A), FY-HT*Q*COS A
200 LET XX=SIN A2*WD+FX-7, YY=F Y+HT*(1+Q*COS A2)-15
210 END PROC

```

Many thanks for both those bits, Peter.

I don't know if Peter's got a disc drive on his machine, but both his letters came typed. Please, if you have a drive, send me a disc; they're only 20p each from the Microfairs, less than the cost of the stamp. These programs have been transcribed twice, with probable errors, and I don't know if they work or not. It also takes me an awful lot of time, and this is a commodity of which I'm short. So far, every bit of this Short Spot has

been typed in by yours truly, and I'm no professional. So please help me if you're able; if you haven't a drive, though, please don't let me stop you from sending stuff in.

While I remember, I had a program from Peter Morgella a little while ago, and he'd had to use a Spectrum emulator on SAM, cos his Speccie was poorly. To our undying shame, I couldn't translate it, and when I sent it to Bob, neither could he, and then he sent the disc back to me, and then it got lost...

Please, Peter, if you've had your Spectrum mended.....

Over to Lee Willis. First, a cockup. Again, it's the transcription gremlins that have got hold of us and that I'm trying to avoid. In typing the 'Fancy-end' (twice; once each), an error was introduced. It should be:-

```
POKE ((DPEEK 23200)-16384),255,255
```

Sorry about that.

Next is his REMHIDER program, which makes REM statements invisible in program listings. That don' 'arf confuse de punters, 'cos you can't tell which are words and which are procedures. Here's a complete listing with a demo to show you how it works. All you have to do is place colons after the REM and before the text, about ten in all, merge this routine in and type the magic word: RemoveREMs. The REMs, which can be anywhere, will vanish. You can renumber the routine to sit anywhere in your program, high numbers are probably best then you can MERGE the routine into any program you are developing.

```

1 REM REM HIDER PROGRAM
2 REM By L.Willis Oct '93
3 REM Original concept coded on a BBC Master By Me
4 REM NOW ON SAM
5 REM

```

```

10 DEF PROC RemoveREMs
20 LET x=(DPEEK 23200)-16384
30 PRINT AT 0,0;((PEEK x)*256)+PEEK (x+1)
40 LET x=x+4: IF PEEK x=183 THEN RemFound: GOTO 80
50 IF PEEK x=183 AND PEEK (x-1)=58 THEN RemFound: GOTO 80
60 LET x=x+1
70 IF PEEK x<>13 THEN GOTO 50
80 LET x=x+1
90 IF PEEK x=254 THEN END PROC : ELSE GOTO 30
100 DEF PROC RemFound
110 LET x=x+1
120 IF PEEK x=13 THEN END PROC : ELSE IF PEEK x=58 THEN POKE x,12
130 GOTO 110

```

Many thanks, Lee.

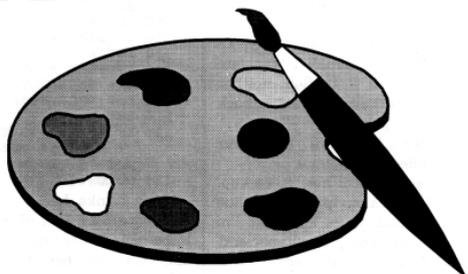
Over to Alan Cox of St Clears, Dyfed. Hope your PC is behaving itself, Alan. I had an unruly beta test of one piece of software, which wouldn't install properly, together with an upgrade of Office 4, which also wouldn't, and they wrote all over my autoexec.bat, config.sys, and win.ini files, and then departed, leaving everything all cocked up, and it took me ages and ages to get it right again. Oh for a nice simple system like a SAM. So I'm so glad to see that you haven't abandoned us altogether, but have indeed sent in a nice little tip for the very computer.

A little while ago, Alan mentioned that in SAM Basic, GET picks up both single numerals, and also letters (not distinguishing between lower and upper case). Indeed, this is in the manual. What is not specifically in the manual, however, is that GET also picks up the cursor keys, specifically:-

Key	Returns
UP	212
DOWN	211
LEFT	209
RIGHT	210

Nice one; many thanks.

SAMPaint



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We could spend page upon page quoting from Carol's review or listing the features of SAMPaint.

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For SAM Coupé
With 512K Memory

12

In addition, Alan mentions that so far, we haven't published any Lissajous programs, so he's sent me one:-

```
10 REM program to draw Lissajous figures
20 INPUT "Enter x frequency "; xf
30 INPUT "Enter y frequency "; yf
40 LET delta =0.002
50 LET deltax=2*PI*delta/xf
60 LET deltay=2*PI*delta/yf
70 LET a=0, b=0
80 PLOT 128+80*COS a,78+60*CO S b
90 LET a=a+deltax, b=b+deltay
100 GOTO 80
110 STOP
120 DEF PROC sv: SAVE "lissajous": END PROC
```

Many thanks, Alan.

I've had a lovely letter from Chris Ingram of Malawi, to whom I sent some discs when his had failed and replacements from Bob had failed to arrive. Chris was in point of fact being overly hard on Bob: there has in the past been a definite problem with post to and from Gloucester, particularly around the end of 1988; I have certainly had problems on occasions. Doesn't say much for the Royal Mail does it; it's less than 50 miles between us and it takes me only three quarters of an hour down the M5 in the car.

However, all that's well ends well.

You remember that Etrick Thomson sent me a disc with lots and lots of goodies: some we featured in March, some in April. Now here's the last instalment. Who knows anything about the theory of probability? You do? So they did in the 19th Century: indeed, even then they had ways and means of visualising this sort of thing. One of these was Galton's Quincunx, which was a sort of big pinboard thing which was laboriously built. On this pin-table, a ball rolls down from top to bottom, impinging symmetrically on a series of pins; at each

pin it must be diverted either to left or to right. If the board was made accurately and there was no bias at the pin, there is a 50:50 chance of its going left and a 50:50 chance of its going right. There are six rows of pins, so the ball eventually emerges in one of 7 exits. The process is really just the same as tossing a coin six times, and getting one of seven results - 6 heads, no tails; or 5 heads, 1 tail; or 4 heads, 2 tails; or 3 heads, 3 tails; or 2 heads 5 tails; or 1 head, 6 tails; or, finally, no heads, 6 tails. Now, the crucial bit for a physical model is "...there was no bias,..." but it's easy to simulate this with a computer, and that's what this program does. The program rolls 64 balls, recording the number of times each of the seven outcomes happens (in the real simulation, the balls fall into 7 vertical slots, and you end up with a bar-graph which is literally a load of balls, but there isn't enough room in the simulation for that).

Finally, it prints the average numbers, as predicted by probability theory. The 50:50 chance is simulated by the $RND < 0.5$ of Line 140, which can therefore be altered to give, for instance, a biased coin or a 'bent' pin-table. If this is done, the average values will be wrong. The program will run on either a Spectrum or a SAM, but for the Spectrum, delete the "MODE 1" in Line 10. Type it in and see...

```
5 REM Galton's Quincunx
6 REM Etrick Thomson
10 MODE 1: RANDOMIZE : DIM h(7)
20 PRINT "Galton's"; TAB 24;"Quincunx"
30 PRINT AT 2,0;
40 FOR i=1 TO 6: PRINT TAB 16-i;
50 FOR j=1 TO i: PRINT "^ ";
60 NEXT j: PRINT ",,: NEXT i
100 FOR i=1 TO 64
110 LET c=15: LET cp=c
120 PRINT AT 1,15;"o"
```

13

```

130 FOR r=0 TO 11: GOSUB 400
140 LET c=c-1+2*(RND<0.5)
150 LET r=r+1: BEEP 0.005,5: G
OSUB 400
160 NEXT r: GOSUB 400
170 LET n=(c-7)/2
180 LET h(n)=h(n)+1
190 PRINT AT 14+(n-2*INT (n/2)
),c-1;" " AND h(n)<10;h(n)
; AT 13,c;" "
200 NEXT i
210 PRINT AT 17,0;"Average"; T
AB 9;"1 15 15 1","Valu
es"; TAB 11;"6 20 6"
220 STOP
400 PAUSE 5
410 PRINT AT r,cp;" "; AT r+1,
c;"o"
420 LET cp=c: RETURN

```

Many thanks, Ettrick.

In spite of getting my wrists slapped by Ettrick the other month, John Ewing's contribution in February has sparked off still more ideas. For instance, Stuart Hughes of Holywell, Clwyd, has found a method of predicting the effects produced by the statement's third term. However, his efforts, which include lots of illustrations, are too big to go into Short-Spot. So, as soon as I have time, and Bob has the space, we will run them as a separate article.

And that's all for another month. Please keep all your snippets coming to me; without them I can't put a column together. I am particularly looking for a bit more Spectrum material.

Please send your contributions (programs on disc please) to:-

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See you next month.

14

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The NEW

SAM elite 512

An Exclusive Review By:- Ken Elston.



The NEW SAM elite 512

I first laid hands on a SAM Coupé just before Christmas 1989. It boasted 256K of memory and I had the external disc/printer interface so that I could use my PLUS D drive (I was then, and still am, a great believer in getting things to do as many jobs as possible, in other words I'm tight). Anyway, since then SAM has been a constant source of enjoyment for me.

So, when I got a call from the **FORMAT** office and the question was put "would you like to do the review on the new SAM elite?" I jumped at the chance.

The first change is that the machine now has a new West Coast Computers logo on it, both on top and on the underside of the machine. Just above and to the right of the keyboard is a small sticker saying **SAM elite 512**. I

understand that there is also a SAM GameStar 512 but more of that later.

The second surprise is that the first disc drive is now on the right-hand side of the machine. It confused many people that the SAM Coupé's box showed it with a drive on the right but when you opened up the box the drive was on the left - well now the elite has the drive on the proper side. Of course, the drive is one of the new type that there has been so much publicity about over the last few months. It looks nice, even though the drive is no longer encapsulated in a special plastic case, West Coast have taken great care to keep the appearance clean and tidy. The front fascia of the drive is a slightly different colour than the SAM's case, but it doesn't look odd. Being fitted on the right is in fact slightly better for

15

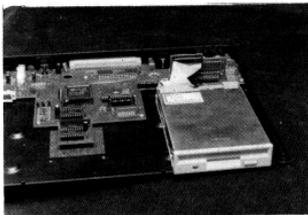
right-handed people although it did take me a while to get used to it. The drive has a nice positive action when you insert or remove discs, much better than the old style drives, and to me the new drive also seems smoother in operation.



A close-up of the new drive in place.

I understand that a second drive now needs fitting at the factory, but that if they ever go wrong in the future it will be easier (and cheaper) to fit a replacement.

Inside, the new disc drive controller board looks quite neat and, in general, it does not look like it has been added as a mod - it looks like it was supposed to be there right from the start. West Coast and Blue Alpha should be congratulated on this workmanship. The drive is connected to the controller by a short length of ribbon cable (see picture).



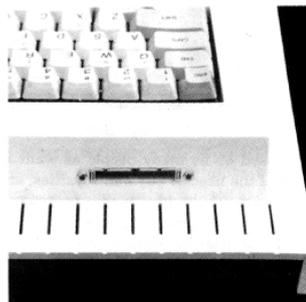
A SAM elite drive fitted neatly onto the base-plate of the machine.

The start-up screen now has a copyright sign for West Coast Computers and shows the ROM version number as 3.5, I was unable to track down any changes in the ROM and West Coast do not include any info on this subject. However, every bit of software I tested worked just as normal so there should not be any incompatibility problems between the older ROM 3.0 and the new version. It is also nice that you don't have to type PRINT PEEK 15 just to see what version of the ROM you have.

The elite comes with SAMDOS and FLASH as usual, although the SAMDOS front-end program has been rewritten and now includes a much better Backup utility which only requires four disc changes to copy a complete disc.

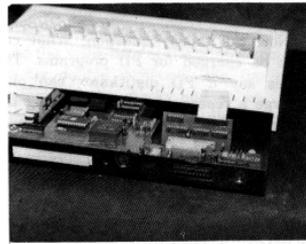
At the moment there is still the original SAM User's Guide, but West Coast are promising a new manual later in the year. [By the way, in talking to Bob Brenchley as I wrote this, he tells me that he has had virtually no response to his request for little routines to put into the new manual. Come on readers, give a little help.]

Now to something completely new - always save the best bit to last they say. There is now a new connector on the back of SAM, at last SAM has a built-in parallel printer port. No more hanging an SPI on the rear, it is all inside. The port uses the DISCiPLE/PLUS D/SAM/BBC standard printer lead so it is fully compatible with all that has gone before. The socket is mounted in the raised plastic part of the top casing, just above the scart socket. It is easy and convenient to use - not getting in the way of any important bits on the back. I found it quite easy to insert the ribbon cable by feel alone, so it can't be hard to locate.



The new printer connector.

In use there is nothing really to say about the SIPI (that is what is on the board inside, I understand it simply means Sam Internal Printer Interface) it works just like every other SAM printer interface, working well with SAMDOS, MASTERDOS and everything else I have thrown at it.



How the SIPI fits inside.

Having the printer interface built-in also has the side effect of reducing the cost of upgrading your memory with the

1Meg RAM Pack. Until now any serious user, who would of course already have purchased a printer interface, would have needed a TWOP adaptor to allow both interface to be attached at one time. Even at the discounted price of £19.95 that still made the 1meg a bit pricey. Well now, with the rear expansion port free, all you need is a 1meg interface and away you go (Dear West Coast, could we please have an internal 1 mega byte next? Or even better - 4 meg on one board).

Conclusions. Well, given the better drives and the internal printer interface, the SAM elite represents the first major step forward for SAM since the original failure of MGT. At £199.95 it is still a good 'value for money machine' for anyone who wants a user-friendly computer with affordable software. It is the logical upgrade for Spectrum owners, but I think West Coast should also start pushing SAM as the ideal 'first' machine for people. Anyone who enjoys programming (or who would like to learn) will find SAM ideal.

The new elite is just *that bit* better than the old Coupé that it makes the re-design worthwhile but at the same time all the existing software and hardware has total compatibility with the new machine.

At the same time as the launch of the SAM elite West Coast have also announced the SAM GameStar, this is a re-badged Coupé, there is no printer interface inside, and it is being bundled with games software to appeal to the people who would buy a consol. Games software being so much cheaper on SAM this is a very good ploy, I think West Coast have a large potential market to tap here. More news on the GameStar when we have it.

By:- Bob Brenchley.

"What is PD software?" A simple question that is often asked. Well, there is no simple answer. The PD world has become very muddy over the years, but, if you stick with me, I will try to explain.

PD stands for Public Domain. When something is in the Public Domain anyone can do (almost) what they want with it. The term originates in the world of books. Someone could place something into the Public Domain simply by saying at the start of an article or book that they were so doing. Anyone could then reprint the item without needing to pay the author and without requiring his express permission. Public Domain also applies to books that have passed out of copyright (which lasts for the life of the author + fifty years after his death). The publisher must attribute the work to the original author though, he can't pass it off as being his own, nor must he make substantive changes to the work.

Computer software differs somewhat. For a start, copyright only lasts 25 years from the date the program is first published. Also it is more likely that the author is not known because the copyright message on the packaging has the publishers name. But don't be deluded into thinking that, just because the publisher went bust several years ago, the copyright no longer counts - it does, and you can't go copying those old Spectrum games and calling them PD.

With computers a real PD program is something that the programmer wants to

see used by as many people as want it, free of the need to pay him royalties, and with the only limitation that you cannot modify the program (except for your own personal use) or remove his name or comments from the program listing.

Anything else ain't PD.

Shareware is the most common type of software that, because of the way it is distributed, is often mistakenly called PD. With shareware you obtain a FULL working copy of the program which the author licences you to use for a set period (often 30 days). If you like the program and want to continue to use it you have to pay the author or his agent a registration fee.

There are many more types of 'limited distribution-rights' software, if I can I may cover some of them in a future article.

Now the thorny question. What can you be charged for PD programs. The rules say a PD distributor can only charge a reasonable fee for copying the program plus a small allowance to cover his overheads. Now many companies (especially in the IBM world) have charge levels that allow them to make a profitable business out of PD. This is wrong, charging £10 per disc for a handful of MS-DOS utility programs, that have no support and little documentation, should be stopped. I have to say that in the Spectrum/SAM field the charges are much more reasonable.

Continued Next Month.

Reviewed By:- Carol Brooksbank.

Steve's Software's *SC_MONITOR* has been on the market for quite a while now, but it has just been re-issued bundled with another monitor program - Simon Owen's *TURBOMON*, to make up the publisher's *SC_MONITOR PRO* pack.

Why two monitors in one software pack? Well, they are slightly different, and so complement each other. Of course, they have a great deal in common as well. Both can be loaded at the start of more or less any convenient RAM page, though with *TURBOMON* you are restricted to odd-numbered pages. Both have a separate panel screen, leaving the normal SCREEN 1 for use by the program being tested if it prints to screen. Both have a panel displaying disassembly of the code around the byte pointed to by the Program Counter; contents of registers and flags; the byte at the address pointed to by double registers; the top eight values on the stack; and so on. Both continually update this display while single stepping through code. Both have a continuous display which slow-runs the code while SCREEN 1 is displayed, with the panel being updated when the running is completed or interrupted by the user. Fig. 1 shows the *TURBOMON* display panel, and Fig. 2 the panel for *SC_MONITOR* (note that because both use Mode 3 screens, the dumps came out a little peculiar). Both have a disassembly mode, both will let you edit

the code, poking numbers in hex, decimal, binary or ASCII, and both will search for a sequence of bytes. Both let you alter the contents of registers, alter the flags, push values onto the stack and so on, and both let you toggle the display between denary and hex.

I have a slight preference for *TURBOMON*'s panel display. It displays a few more lines of the disassembly, and it also displays the contents of single registers as well as double. The absence of single register display in *SC_MONITOR* does not matter to those who work in hex, but those working in decimal have to work out the LSB and MSB of the double register contents for themselves. *TURBOMON* displays the HMPR, LMPR and VMPPR status by labelling them H,L and V, whereas *SC_MONITOR* expects you to remember which port number is which. *SC_MONITOR* also has a continuous display of the numbers held in the memory addresses, and their ASCII characters. A similar display is available by calling it up in *TURBOMON*.

SC_MONITOR requires you to type in commands, while *TURBOMON* has keypress operation. *TURBOMON* lets you change the mode of SCREEN 1 from within the program, but you must exit to BASIC to do it with *SC_MONITOR*. And *SC_MONITOR* has an irritating habit of returning you to address 32768 when you enter the disassembler or return from BASIC, whereas *TURBOMON*

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LQ 110 cpi Depth 221mm Printer smaller than Sam



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```

000 LD B,0
001 PUSH BC
002 PUSH HL
003 LD HL,6
004 PUSH C
005 LD HL,(DE)
006 INC HL,R
007 INC DE
008 POP BC
009 POP HL
010 POP C
011 DJNZ 32189
012 POP HL
013 INC C
014 INC B
015 DJNZ 2185
016 LD HL,2253
017 CALL 2253
018 POP C
019 DJNZ 32181
020 LD HL,38912
021 I 000 R 000 000000
022 IN 1 EI 000000
ctrl-Quit Status Txt Num Dis Find Graph Copy Eval Mode L/H/V/Apr

```

Fig 1.

changes nothing when you change modes.

But there are more fundamental differences which justify supplying the two programs together. *TURBOMON* has less sophisticated breakpoints - in fact, it has only conditional running modes - execute instructions until the Program Counter holds a given address; until the contents of a given location change; until the address in the Program Counter is outside given boundaries; and so on. *SC_MONITOR* allows a similar range of conditional breakpoints, including stop at a particular address on a particular page, but up to 10 can be in operation - 1 - *SC_MONITOR PRO* at once. They are displayed on the panel. The program can also be configured to exit to BASIC after every instruction is executed, to allow you to set up any tests

you like.

Both programs will print to the printer if the program under test does that, but *SC_MONITOR* can also send disassembly listings and screendumps of panel information to the printer. A special screendump routine must be loaded from the disc to enable the dump printing.

TURBOMON's strength is that it can run quite large programs in slow-run mode, at a slightly faster speed than *SC_MONITOR*, enabling you to pinpoint the area where problems exist, or to explore other people's programs. It will also run PlusD/Disciple Spectrum 48K snapshots. They must first be converted to a special form - the .SNA form used by some PC Spectrum emulators - and a program is provided on the disc to make the conversion. (Although the handbook

000 31	00011111	IX 0	243 195 50155		
001 30	00011110	IX 0	243 195 50155		
002 30	HL'0	HL 32755	0 0 0		
003 43210	DE'0	DE 32001	0 0 0		
004 00000	BC'0	BC 1635	209 13 3537		
005 00000	AF'0	AF 16555	0 0 0		
006 00000	R'0	R 0	00000000		
0 32185	PC 32185	32185 15	243 225 36 193	...	...
32185 DJNZ 32189	SP 32000	32200 15	209 225 205 253	...	...
32187 POP HL		32205 125	193 16 228 33	...	...
32188 INC H	32755	32210 0	152 54 228 17	...	...
32189 POP BC	3243	32215 1	152 1 225 0	...	...
32190 POP HL	32755	32220 237	178 225 0 26	...	...
32191 DJNZ 32185	765	MEM 1	32758		
32192 POP HL	32755	32755 0	0 0 0		
32193 CALL 32553	MON	32770 0	0 0 0		
32195 POP BC		32775 0	0 0 0		
32197 DJNZ 32151		32780 0	0 0 0		

FIG 2.

does not say so, this program runs under MASTERDOS only.) You can even run BASIC programs on *TURBOMON* - though painfully slowly.

My impression is that *TURBOMON* is an easier program to get to grips with and to use, and most of the time it will give the machine code programmer all the test tools he needs. But where the bugs are very stubborn and hard to eliminate, you would probably use *TURBOMON* to identify the area giving trouble, but turn to *SC_MONITOR* to help you pinpoint the exact problem. The beginner would probably get on better with *TURBOMON* at first, graduating to *SC_ASSEMBLER* as his programming became more ambitious. Certainly, the *TURBOMON* handbook is much clearer, and easier for the beginner to comprehend.

Either program can co-exist with *SC_ASSEMBLER* on a 512K Sam, giving a complete machine code developing and

testing environment. *TURBOMON* occupies less memory than *SC_MONITOR*, leaving at least one extra RAM page for source code in *SC_ASSEMBLER*. The suite is completed by a database of Z80 opcodes which is provided on the *SC_MONITOR PRO* disc.

This is a useful package, and although two very similar programs in one package may seem odd at first glance, it is handy to have all the facilities they offer between them. A single program which provided all the options these two have would take up much more memory than either of these do.

SC_MONITOR PRO costs £15.00. Upgrades are available from the original *SC_MONITOR* at £10.00, or if you want the complete machine code package, £24.00 will get you the two monitor programs bundled together with a copy of *SC_ASSEMBLER*. See Steve's Software's advert for ordering details.

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BASICally Speaking...

Part 7.

By:- David Finch.

This month we are going to do a bit of maths with the data, and then use it to draw the chart. This is done with the procedures `processdata` and `drawchart`.

You may remember that at the start of inputdata we defined an array to take the information for all the sectors, `DIM n(sec, 6)`, with `sec` being the number of sectors. In inputdata we allocated the first number, `n(a,1)` where 'a' is the sector number, as the actual value that the sector represents. The second number, `n(a,2)`, is a flag (1 if true, 0 if false) indicating whether the sector is 'off set' (pulled out). This leaves us with four other numbers per sector to place other useful numbers (won't that be fun!).

`n(a,1)` is the sector value before, becomes angle enclosed in sector.

`n(a,2)` is the off set flag.

`n(a,3)` is the angle between the zero position and the start of the sector.

`n(a,4)` is the angle between the zero position and the end of the sector.

`n(a,5)` is a flag indicating if the previous sector is off set.

`n(a,6)` as above but for the next sector.

So, let's start of the procedure:-

```
1010 DEF PROC processdata (SAM)
1010 REM processdata (Spec)
1020 LET total=0
1030 FOR a=1 to sec
1040 LET total=total+n(a,1)
1050 NEXT a
```

The above simply adds up all the sector values by looping round one value at a time and adding it to the total. The next bit converts the value that the sector

represents to an angle enclosed within the sector (since we will be using angles, not raw data). Note, we will be using degrees at this point. We will need to use radians when we actually draw it (more about that later).

```
1060 FOR a=1 to sec
1070 LET n(a,1)=INT ((n(a,1)/tot
a1)*360)
1080 NEXT a
```

I have used the function `INT`, which is short for integer. An integer is a whole number, so the function `INT` removes any fractional part and leaves only the whole part. (Eg. `INT 2.7=2`). I am only interested in whole angles for this program, you will see why later. The equation inside the brackets converts the value into an angle. For example, is you have three sectors; 4, 1 and 3. Their total would be 8 so for the first sector the value `n(a,1)/total` gives `4/8`, a half. ie. half a circle for the 4 wedge. Multiply this by 360 degrees and you get 180 degrees, the angle enclosed (I apologise to mathematicians who may find that obvious). I have used brackets because the brackets are always calculated first.

If you remember the word `BODMAS`, you will always remember the order in which calculations are made. It means Brackets (Order), Division and Multiplication, Addition and Subtraction. For example: $2 \times (3+4) = 2 \times 7 = 14$ Because brackets come before multiplication $2 \times 3 + 4 = 6 + 4 = 10$ Because multiplication comes before addition.

```

1090 LET n(1,3)=0
1100 FOR a=2 TO sec
1110 LET n(a,6)=n(a-1,2)
1120 LET n(a,3)=n(a-1,1)+n(a-1,3)
1130 NEXT a
1200 LET n(1,6)=n(sec,2)

```

Line 1110 sets the 'previous off set' flag to whatever the previous sector's offset flag is. Note that we don't do this with sector 1 (the loop goes a=2 to sec) since sector one's previous sector is the last one, hence line 1200. The n(a,3) holds the total angle from the zero to the start of the sector. To obtain this value we take the this value from the previous sector and add on the angle enclosed in the previous sector.

```

1140 FOR a=1 TO sec-1
1150 LET n(a,4)=n(a+1,3)-1
1160 LET n(a,5)=n(a+1,2)
1170 NEXT a
1180 LET n(sec,4)=0
1190 LET n(sec,5)=n(1,2)
1210 END PROC (SAM)
1220 RETURN (Spec)

```

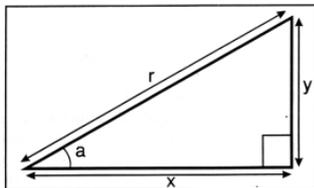
These last few lines simply set the next off set flag and the total angle from zero to the end of the sector. And that concludes processdata.

When we draw the chart, we need to draw all the pixels for the edge of the pie, plus all the radii and make sure that the off set sectors are drawn out of the main pie. We are doing this by plotting each pixel on the rim individually using PLOT. We can't use CIRCLE because we need the off-set sectors. Since we are using individual PLOTS, we need to have a finite number of plots to do. I have chosen to make it 360 (one for each degree). There is no reason why I couldn't have used a different number (400 for example), but 360 seemed a fine number for this time of year. That is why all the angles are in integer degrees.

Also, please remember that we are calling the reference (zero) angle

horizontal from the centre to the right of the circle.

I'm afraid we are going to have to do a bit of trigonometry. When you do trig on your computer you have to use radians instead of degrees. If you've never used radians before; don't worry, I'll look after you. 360 degrees is a full circle, and also 2π is a full circle. They are simply different units of angle, like yards are different to metres (mathematicians and scientists like them because they confuse normal people). The diagram below shows the trig relations that we will be using. If you don't understand them then just accept them.



'a' is the angle enclosed, and r is the hypotenuse of the triangle (the radius of our pie in this case), then we can say;

$$x = r \cos a \text{ (r times the cosine of a)}$$

$$y = r \sin a$$

```

830 DEF PROC drawchart (SAM)
830 REM drawchart (Spec)
840 LET s=1
850 FOR a=1 TO 360
860 LET x=59*COS (2*PI*a/360)
870 LET y=59*SIN (2*PI*a/360)
880 LET xos=128: LET yos=86

```

The variable s is the next sector to be drawn (initially sector 1). The loop starting at line 850 sweeps round all 360 degrees so that we can plot all the edges and radii as it goes. Lines 860 and 870 set the x and y displacement from the centre to the edge of the pie. ($2*PI*a/360$) converts our degrees to

radians, but if I had decided to have 500 pixels to make up the edge of the pie, we would make the 360's in lines 850,860 and 870 into 500's also. Line 880 sets the origin for the centre of the pie. This really sets the origin on SAMs, but we will have to take account of it when we PLOT on Spectrums because the origin remains at 0,0 at all times.

```

890 IF n(s,2) THEN LET angdeg=n
(s,4)+n(s+(s<sec),1)/2: LE
T angrad=2*PI*angdeg/360: L
ET xos=128+(15*COS angrad):
LET yos=86+(15*SIN angrad)

```

This line just relocates the point of the sector IF it is an offset sector. You should be able to work out what is happening from what I have said so far. If not, don't worry.

```

950 PLOT x,y: PLOT x,y-10*(a>18
0) (SAM)
950 PLOT x+xos,y+yos: PLOT x+xo
s,y+yos-10*(a>180) (Spec)

```

These lines plot the edge of the pie. If the angle is greater than 180 (ie at the front of the pie), second points are plotted which make up the bottom edge which you see at the front.

```

960 IF n(s,2)<>n(s,6) AND a=n(s
,3)+1 THEN PLOT 0,0: DRAW x
,y: DRAW 0,-10*(a>180)

```

(Spec: Change the PLOT 0,0 to PLOT xos,yos)

This line draws in the radii where necessary. Also it draws a side edge to the pie if it is facing the front.

```

970 IF a=180 OR a=0 THEN PLOT x
,y: DRAW 0,-10

```

(Spec: Change PLOT x,y to PLOT x+xos,y+yos)

This line draws side edges on the very left and the very right, between the bottom edge and the top edge.

```

980 NEXT a

```

All that is left to do is to place sides on all the offset pies where necessary. We

will use another procedure to do this drawing bit.

```

1220 DEF PROC side
1230 PLOT 0,0
1240 DRAW 0,-10: DRAW x,y: DRAW
0,10
1250 END PROC

```

Or for Spectrums:-

```

1220 REM side
1230 PLOT xos,yos
1240 DRAW 0,-10: DRAW x,y: DRAW
0,10
1250 RETURN

```

Then to draw the edges when necessary:-

```

900 IF a=n(s+(s<sec),3) THEN PL
OT 0,0: DRAW x,y: DRAW 0,-1
0*(a>180): LET s=s+(s<sec)
910 IF a=n(s,3)+1 AND n(s,2) AN
D (a<90 OR a>270) THEN side
920 IF a=n(s,4) AND n(s,2) AND
(a>90 AND a<270) THEN side
930 IF a=n(s,4) AND n(s,5) AND
(a>90 AND a<270) THEN side
940 IF a=n(s,3)=1 AND n(s,6) AN
D (a<90 OR a>270) THEN side

```

Spectrum: Change the PLOT 0,0 in line 900 to PLOT xos,yos. Change all the 'side's to GO SUB 1220.

And to finish off the chart:-

```

990 PLOT 0,0: DRAW 59,0: DRAW 0
,-10 (SAM)
1000 END PROC (SAM)
990 PLOT xos,yos: DRAW 59,0: DR
AW 0,-10 (Spec)
1000 GOTO 60 (Spec)

```

Once you have created your pie chart, I suggest you load it into Flash! or Artist 2 to tidy up any odd pixels and to add necessary shading and text.

Cheerio for now.

"Mum! What does this say?"





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By:- Henk van Leeuwen. Edited by:- Adrian Russell.

As users of UNI-DOS will know CREATE files are used to add new commands and functions which can be used in your own Basic programs. The CREATE files, when loaded, are stored in the Basic memory space and they must be written to be relocatable (because you don't know in advance exactly where UNI-DOS is going to put them).

This months CREATE file is much the same as a previous one, only with this one you can SAVE just the variables (VARS) from any Basic program in memory to disc. This is very useful. For example, if you are running out of space when writing a program you could create and save the variables as you want them to be when the program starts running. Then there is no need to set them up with lines of Basic that take up valuable room in memory. All you need is a line which says:-

```
CLEAR : MERGE d1"Startvars"
and off you go. Right, here is the
assembler listing you have got an
assembler by now I'm sure).
ORG 60000
; EXP <OVER> DATA ;D<drive> "Nam
e....."
; EXP <OVER> DATA ;D<drive>, a$
START DEFB 1 ;only one syntax
DEFB 185 ;SAVE keyword
DEFW EXP_LEN
L_EXP RST 24
DEFB 115 ;OVER.SYN
CP 228 ;use 'TO'
RET NZ
RST 40
```

```
CP ";" ;use ';'
RET NZ
RST 40
AND 223 ;capitals
CP "D" ;use 'D' for drive
RET NZ ;if wrong reject
RST 40 ;end of this syntax
RST 24 ;get drive number
DEFB 120 ;DR.NUM
RST 24 ;next char "'or',''
DEFB 112 ;SEPARATOR
RET NZ ;if wrong reject
RST 24 ;get the filename
DEFB 123 ;GET.NAME
RST 24 ;end of part one
DEFB 13 ;SYN.END
RST 24
DEFB 111 ;check.dr
LD HL,(23641) ;E-LINE
LD BC,(23627) ;VARS
SBC HL,BC
LD (15889),HL ;to HDOB
LD HL,0
LD (15893),HL ;to HDOF
LD HL,(23627)
LD (15891),HL ;to HDOD
LD A,1 ;directory descript
ion
LD (15877),A
LD A,"D" ;device type
LD (15876),A
LD A,0 ;file type
LD (15888),A
RST 24 ;Opens a write file
DEFB 61 ;OPEN.FILE
RET NZ
RST 24 ;save 9 byte header
DEFB 44 ;SAVE.HEAD
LD HL,(15891) ;start addr
LD DE,(15889) ;length
LD (15274),DE
RST 24 ;saves DE bytes
DEFB 39 ;SAVE.BLOCK
RST 24 ;close write file
DEFB 66 ;CLOSE.FILE
RST 24 ;end of part two
DEFB 14 ;COM.END
EXP_L EQU $-L_EXP
```

And again the DATA Basic lines.

- 80 DATA 1,185,88,0,223,115,254,228
- 81 DATA 192,239,254,59,192,239,230,223
- 82 DATA 254,68,192,239,223,120,223,112
- 83 DATA 192,223,123,223,13,223,111,42
- 84 DATA 89,92,237,75,75,92,237,66
- 85 DATA 34,17,62,33,0,0,34,21
- 86 DATA 62,42,75,92,34,19,62,6,2
- 87 DATA 1,50,5,62,62,68,50,4
- 88 DATA 62,62,0,50,16,62,223,6,1
- 89 DATA 192,223,44,42,19,62,23,7,91
- 90 DATA 17,62,237,83,170,59,22,3,39
- 91 DATA 223,66,223,14

When finished typing this program save it as:-

SAVE d*"EXPvrcode"USR 60000,92

Hope you find this latest addition to your UNI-DOS library useful. Back soon with some more routines.



"I tried nicotine patches, but they're too difficult to light"



"I'm very good in a crisis - I'm just not very good at the rest of life"

SMALL ADS

WANTED Any software on Campanology (bell ringing) for SAM. I've been ringing for nearly 2 yrs and would like to learn more. Write to Mrs P.A.Dale, 8 Castle View, Todmorden, Lancs, OL14 6LN.

FOR SALE Mastering Machine Code On Your ZX Spectrum by Toni Baker £5, Spectrum Machine Language for Absolute Beginner by William Tang £5, Delving Deeper into you ZX Spectrum by Dilwyn Jones £5. Phone Steve on (0782) 321812 and leave a message.

WANTED Fastword Plus for PLUS D, as sold by Betterbytes and advertised in *FORMAT* circa 1989. Petros Davakis, Themistokleous 12, 153 42, Athens, Greece.

HELLO We are looking for Spectrum friends all over the world. Contact Harald Lack, Heidenauer Str. 5, 83064 Raubling, Germany.

SAM Coupé (512K) with 2 internal drives, comms interface, Star stx80 printer, joystick splitter, 2 joysticks, MasterDos, Pro-Dos with CP/M discs, Taswórd 2, The Sound Machine, games and PD discs, all leads and the SAM Tech manual. Yours for only £265 (incl postage). Will split. Phone Mark on 0438-361686 after 5.30pm.

WANTED PLUS D interface (no drive) for Spectrum. Phone Steven or Robert after 6pm (not Thursdays) on 0776 840202.

FOR SALE ZX81 £6, Spectrum 48K £9, Spectrum+ 48K £12. All include PSU, leads, manual. Centronics E Interface £4, All postage extra. Phone Peter on 0992 465428.

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YOUR LETTERS

Dear Editor,

I note with interest in my first receipt of 'FORUM' the comments in reply to Mr Tillotson's remarks about membership numbers.

In my case the number should be surely 0494, the number I have been given 0294, was before I wrote to you.

Please rectify this matter immediately.

Yours sincerely, T.Couldwell.

Funny, but several people make the Freudian slip of calling us 'Forum'.

Anyway, Jenny made a slip (this time of the keyboard type) - which I then failed to spot - she put 0294 instead of 0295. Correction now made, as you will see from the label this month. 0295 means that your membership runs out at the end of February next year so your last *FORMAT* is the March '95 issue. Hope that keeps things straight. *Ed.*

Dear Editor,

What are the chances of you producing a directory of the contents of *FORMAT* from the very first issue, similar to that produced by FRED.

I would do it myself if I knew how, but I don't. I would think that it is the kind of program that the likes of Ettrick Thomson could knock out between rising and breakfast!

I find the FRED directory to be very useful and the proliferation of articles in *FORMAT* is now such that it becomes quite a labour searching for an article

that appeared some time ago.

I am quite prepared to do some donkey work scheduling the various articles if that would be of any help.

I wonder how many members would appreciate a directory?

Yours sincerely, A.L.Vernon.

There was an index to *FORMAT* produced some time ago but the author stopped selling it because there was not enough interest. The problem with any index is how detailed to make it - just the article title, subject, keyword or phrase. If anyone would like a go at writing a program to control an index, or if someone would like to produce a printed index, then I will co-operate as much as I can. Now I'm past forty the old grey cells are getting a little forgetful. *Ed.*

Dear Editor,

I already have a copy of the Z80 emulator and I am transferring my tape programs to hard disc. Since this is for my personal use only, I am legally entitled to do so. However, it would be much simpler if all old Spectrum software were in the public domain. Amstrad have realised that there isn't much profit to be made from a product you've stopped producing, so why can't publishers (who are no longer interested in the Spectrum) follow suit. Then a company, such as Zenobi, could run a PD library and distribute all that old software in DISCiPLE/PLUS D format.

I also have some problems for your help page. When using the Z80 emulator, how can I load in all the parts of a multi-load program from tape? How can I save a file from within a Spectrum program? How do I use .TAP files? I'm having difficulty in loading some programs, especially those that came on the cover-tapes with Sinclair User and Your Sinclair. Are there any hints that aren't in the documentation? Alternatively, since I already own licensed copies of the software, could someone else supply me with snapshots on disc.

I've asked before, Bob, but could you list all the main articles that are in volumes 1 to 4.

Yours sincerely, B.Chima.

You can only transfer copyright material to disc if you retain the original tapes. Should you ever part with the originals then the disc copies must be erased. It would be illegal for anyone to supply you with snapshot copies - even if you prove you own the originals. Multi-loaders can never be transferred to disc without a reasonable knowledge of hacking. As to the other questions on the emulator, can anyone offer advice? And finally, see previous letter. **Ed.**

Dear Editor,

I have just read your 'Editor Speaks' bit and I have a program that I would like to see out again. I bought it in the early days of Speccy, in versions 1 and 2 days, and I used it, and I liked it a lot then and would like to again. But, ever since my rubber keyed Speccy broke and I had it repaired, the program has never worked again. Then I bought an issue 3. No luck. Then a 48+, no luck. 128+ and the same! The program loads alright in all the machines until you press the start

key, and then the cursor does a nervous twitch to the bottom of the screen and stays there twitching. I have been told rightly or wrongly that it is to do with the different versions of Speccy?!

The program I am woffling on about is Buttercraft Power Graphics. I still use the same method to get drawings on to the screen using cellophane paper, even on Sampaint. Its' still a good program. I have written twice before but nobody responded.

Yours sincerely, Wilf Stone.

By *Power Graphics* do you mean *PowerPrint*? That is the only program I can find in my list. *PowerPrint* should work on any Spectrum in 48K mode but I can't find the instructions so I can't fully test my copy. Can any reader out there help Wilf? **Ed.**

Dear Editor,

I'm a fan of SAM but I'm far, very far away from England, so it's very difficult to get news of SAM. For this I want to thank all who make **FORMAT**. Thanks very much.

I had a very big problem with my SAM, it has an old ROM. When I type PRINT (PEEK 15)10 it indicates 2.1, so I have some problems with certain programs, like *Samdisk 2* of Lerm. Please, can you inform me how can I get a new one? For example, the *SC_Autoboot*, is it a new ROM?

To end my letter, thanks for all, and for **FORMAT**. Thanks.

P.S. I forgot one thing, do you know if there is any club in Portugal dedicated to SAM?

Yours sincerely, Joaquim Batista.

Portugal is not *that* far from England, we have members in Australia and New Zealand - now that *is* far.

Anyway, on the ROM front, I'm surprised that a program as old as Lerm's will not work on a version 2 ROM but if you want the latest ROM it costs £12.95 + £1 postage and packing (£3 overseas) from West Coast. That gives you the latest chip (easy to fit) and the latest version of SAMDOS. *SC_Autoboot* is another option.

Anyone in Portugal who would like to contact Joaquim can write to him via the **FORMAT** office and we will pass your letters on. **Ed.**

Dear Editor,

Could you please tell me what is wrong with the people in the SAM world at the moment? It seems that if anyone dares to mention a product that is designed to improve the computers capability, they are told that there is no chance of it happening!

Nick Xylas's letter from the April issue was obviously answered without any research, whatsoever. Right from the start he was told that things, such as the 20 Mhz accelerator board and the hard drive could never work on the SAM.

If you had looked into things before answering Nicks letter you would have realized that not only has the Hard Drive almost been completed, but that also, thanks to Simon Cooke and Andy Wright, a new DOS designed to cope with this is in the process of being written.

You seem to think that there is only a small market for an improved sound board and enhanced graphics interface. If this attitude had been taken in the PC world, IBM compatible machines would still be using CGA graphics and the internal speaker. The way to make the boards marketable is to have support in future games/utilities that use the

advanced features. After all, that's what happened in the PC world!

Lets face it - if you're going to stop these third party 'bright sparks' from producing their products, any hope of the SAM living is lost. We need bright ideas to allow the SAM to keep up - every other machine now has 24 bit graphics. Come to think of it, every other machine has an accelerator board, Hard Drive, Sound board and graphics board - why should the SAM be any different?

If only FRED and West Coast Computers had supported Bruce Gordon's new ASIC chip, instead of denying the ideas existence, we could all have better machines that could try to compete in this industry.

If I sound a bit annoyed, it's because I am. I just want people to let third party developers come up with new ideas, and then support them when they are produced.

If this attitude continues, my paranoia might get the better of me. Are FRED Publishing, West Coast, and **FORMAT** in a cartel together? Is this a conspiracy?

You may laugh? But whether it is true or not (and I know that its not), attitudes like the one you expressed will soon remove this machine from existence.

P.S. I have been asked by Simon to query why you suggested, that West Coast Computers removed the second disc controller chip. The removal of this chip has meant that software already written to use this is now incompatible. Bit of a stupid move, even if it does reduce the cost by 5 quid.

Yours sincerely, Lord Blackadder.

At first I thought "Why should anyone who labels himself 'Lord Blackadder' be taken seriously". Some people are just so

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childish. However some of the points raised in this letter do deserve an airing and sensible answers. So here goes.

First, the hard drive. There has been rumours since just after SAM came out. I have never seen any working prototype - however crude. The truth is that the hardware is not a real problem but writing an operating system is. Conservative estimates would be six man-months of work. If a viable operating system is written then I'm sure there is a market for a hard drive (I would love one for a start) but even Bruce Gordon abandoned his effort.

There is no market for an improved sound board - SAM's sound chip is already too advanced to make that worthwhile for the small improvements in quality people would get. Graphics, well, yes, there would be a market but which comes first, the hardware or the software? SAMCO tried to get the Kaleidoscope adopted and failed and they were the manufacturers of the computer. I remember several graphics boards for the Spectrum that sold in fairly high numbers but never had any software support. If a new graphics standard was to be built into a new SAM then that would be a different thing altogether. In the meantime what would people pay for a new graphics card £50? £100? £200? Knowing the price of producing something like that it would require several thousand pounds just to get a small first batch done - where does the money come from? And does every other machine have 24 bit graphics? I would say that the vast majority of computers in use today only tend to work with, at most, 8 bit graphics.

Now to quash a lie. There *never* was any attempt by Bruce Gordon, or any other person, to design or fabricate a

new ASIC. The costs involved would be astronomical. The same goes for an accelerator card. It just would not work without very fast memory and other chips - the ASIC would need to be re-done to cope with the higher speed, in fact you would have to build a whole new computer because you just can't run the existing chips at that sort of speed, anyone with even a limited knowledge of digital electronics will confirm that.

And finally, the disc controller chip - the 1772. What software are you talking about? All the commercial software tested has worked. As for saving five quid, it is more like twenty. 1772 chips now cost £14.95 + vat and that rises almost every time West Coast buy another batch. If West Coast had not opted for the new single controller design the SAM would have had to go up in price - something nobody wanted.

Yes, we need bright ideas to boost SAM, but they have to be realistic ideas. Let's exploit the machine we have, convert people to SAM and the other things we want will come in time. **Ed.**

Dear Editor,

I do not recommend trying a Sega Megadrive joystick on a SAM Coupe, as Tim Dudderidge speculates. Amongst other things, the power supply connections are different and something could well be damaged.

Can anybody technical give me details of the Spectrum mouse connections, as I would like to check how compatible it really is with Sega?

Also, I remember a Speccy emulator for the Acorn Archimedes was once written, but Amstrad refused permission to sell it. From what I read in Arc magazines, the author does not appear to know that such things can now be sold

legally. Is the author or anyone who knows him/her out there?

Finally, help! I am trapped inside St Bride's School! Can anybody tell me how to get out, in The Secret of St. Bride's?

Bob, why don't you start a Games section? I am sure that if you appealed, you would get enough questions, hints, news, etc. to make it viable. And now that new games are so rare and hard to hear about, how about the odd mini-review too?

Yours sincerely, Guy Inchbald.

There were several different mouse interfaces for the Spectrum but I don't have any of the connections listed. Can anyone help with this and Guy's problem with St. Bride's? *Ed.*

Dear Editor,

My husband has a Sam Coupé computer and has talked me into putting all my research onto disc. I am a genealogist, and for the past 20 years have built up a lot of research. I tried first, using the word processor but honestly it's not really what I want. Bob tells me you did produce a "family tree" disc but can't remember where to get it from. Can you help?

I have been reading up a little about family history discs and the Pedigree seems ideal for what I want. Another would be the PAF (Personal Ancestral file) as second choice. Are these available for the SAM?

Well thanks very much for your time, I look forward to hearing from you.

Yours sincerely, Carol Burdge.

There seems to be a growing number of women using SAMs these days and they all want to put their SAMs to good use. This is one of several letters asking for programs on family trees, knitting

patterns and one on campanology (bell ringing to you). Anyone out there know of any software available? Spectrum or SAM (cos Spectrum could be converted) just drop us a line. *Ed.*

Dear Editor,

For the past nine months I have been a PC user and to that end I could not do without my valuable Speccy after all those years.

Through the Advertisements in your mag I contacted B.G. Services and I now have the Speccy Emulator on my PC. I have converted all my PLUS D files and I have the best of both worlds.

My son has now taken over my humble 48K Speccy and we will both be looking forward to the next years issues of **FORMAT**.

Keep up the good work.

Yours sincerely, Les Moorhouse.

Dear Editor,

I enclose my cheque for a further helping of **FORMAT**. I have looked through the last twelve to fifteen issues to see if I can find 3 articles that I have enjoyed or disliked most and I find it a very difficult task.

I think that the person to get the most credit over several years is Carol Brooksbank. I find it amazing the amount of articles she produces for us and she is always so informative and interesting. Full marks for Machine Code Without Tears and all the others too numerous to mention.

Recently there has been many excellent series like Basically Speaking, Printers - What are they? Problem Solving and the Hardware Design Course. With Short Spot, the Help Page and many other one off articles of interest it is hard to choose three

favourites.

I don't believe I can honestly say there is anything in **FORMAT** that I do not enjoy, I only wish I had more time to type in more of the programs and routines offered.

Thanks to Jenny and you Bob and all those who contribute and help to produce an excellent read each month. Keep up the good work.

Yours sincerely, Colin Rouf.

No, thanks to you Colin, without readers we would not get very far. *Ed.*

Dear Editor,

I was interested to read the story on page 5 of the May issue of **FORMAT** (the one about a dissatisfied customer who still couldn't read one of your discs after the umpteenth try), because exactly the same thing happened to me a while ago.

I had promised to send a friend some software that I had written myself, so duly saved the program in question to disc, and after satisfying myself that it re-loaded OK, posted it off to him. So I was a bit surprised when it came back with the comment that it was unreadable. I then tried it again in one of my own drives, and it loaded OK.

Having examined this disc to see whether it was damaged in any way, and finding nothing visibly wrong with it, I duly re-formatted it, saved the program to it again, and sent it off once more.

Back it came again, still 'unreadable'.

This time I took no chances. I selected a brand new disc, formatted it, saved the program to it, checked to confirm that the program re-loaded OK, and posted it off yet again. And still once more, back it came with the by now familiar comment!

Well, we might have gone on like this forever if we had persevered with discs.

But as this was a QL program, and the QL still has those relics of the Steam Age - Microdrives - we decided that it would save a lot of hassle if I saved the program to microdrive and got it to him that way. And sure enough, this worked!

(Thinks) this must be one of the few recorded instances of Microdrives proving more reliable than discs!

Yours sincerely, J.H.Ree.

In computing I've learnt to live by the old adage "if anything can go wrong it always will, and at totally the wrong time". *Ed.*

Dear Editor,

I was interested to read the letter from Tim Duddridge in last month's issue of **FORMAT** wherein he expressed his interest and involvement in MIDI, the computer control of musical instruments.

I am sure there must be other readers who are or might become involved in this subject. Some months ago I submitted a program on disc to you which provided MIDI control of keyboard instruments. Since that time I have worked with another **FORMAT** reader in the further development of the program to the control of electronic pianos.

You did suggest in my last contact with you, that I wrote an article on the subject of MIDI and my particular sequencer. This has been delayed because of other activities but I hope to get back on this project and produce something in the near future.

I shall be interested to see what response there is among **FORMAT** readers.

Yours sincerely, P.J.Williamson.

Thanks, look forward to reading the

article. And just to explain for other readers - MIDI is not of interest to more than a minority so, rather than print large programs taking up many pages I suggested to Mr Williamson that he wrote an article ABOUT the programs, telling you how they work and how they were written, and then offer you the chance to get the software from him on disc if you wanted. Now, Mr Williamson, you are committed, the whole world knows your article is on the drawing board. **Ed.**

Dear Editor,

On reading the letters of the May issue of **FORMAT**, one letter from Mrs Gallagher interesting though it was, taking up nearly a whole page. Your reply the best part of half a page. The next letter from Mr Tim Duddridge although it covered three quarters of a page, at least he was asking relative queries to **FORMAT**, about whether he should buy a SAM or carry on using his Spectrum for MIDI use. Your reply was just six lines referring him to MIDI sequencer which you believe is available. Surely you could show more enthusiasm for a subject that has not been written about in **FORMAT** since I have been reading it.

Is the MIDI interface a flop on the SAM? I was hoping that it was on par with the Atari, where many commercial programmes have been written. Surely some readers have had success with the SAM's MIDI in machine code. If they have I would like to hear from them. Please make my address available. 72, Oakmount Road, Chandlers Ford, Eastleigh, Hants, SO53 2LL.

Yours sincerely, Jack Kenrick.

Mmmmm, well, now. I gave the nice lady here-say for two reasons. One she

was a nice lady and we get far too few ladies in these pages. And two, cos what she had to say was interesting.

As to your MIDI question, first see my comments to the previous letter, a lot of the problem is the lack of interest from SAM users in the MIDI subject. Secondly, SAMCO did sell Midi Sequencer Software but I've never been approached to carry adverts for it and I don't know where you could now get it. **Ed.**

Dear Editor,

Please help. I have lost the colour code card from my 'Jet Set Willy'. Can anyone out there send me a copy so that my son can play the game that was always a favourite of mine. Thanks.

Yours sincerely, Lin Rhodes.

Dear Editor,

I run a SAM coupe, 512K computer, I would like to know the cheapest Modem to be able to connect to the telephone system via the Expansion Port, 64 pin.

Also I would like to change to colour Monitor instead of using a colour TV Monitor, so could you advise the best model for the SAM and likely price range.

Yours sincerely, B.Jewell.

There is no modem at the moment for SAM. Although one is being developed, it is the old problem of getting software written to go with it that is holding things up.

Monitors are very much down to personal choice. So readers, how about a few letters telling us what monitors you are using. **Ed.**

Letters may be shortened or edited to fit on these pages.

Please try to keep your letters short so we can fit in as many as possible. Please write clearly or type your letters.

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