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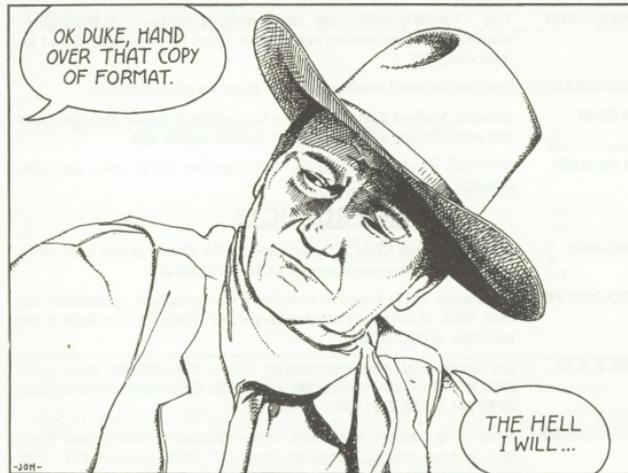
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FORMAT

FOR SPECTRUM AND SAM USERS
(Incorporating Sinclair & Sam Computing)



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ALL FORMATS GET CHEAPER

The All Formats Shows, which have been costing you £3 to get into if you used the discount tickets we've sent out quite frequently, are now going to be a little cheaper to get into. If you enter after 2pm (remember they are open to 4pm) they will only cost you £2 at the door.

In addition there is a new concession to the disabled computer user. Wheelchair users will in future be able to get into all the show FREE. Not bad Bruce, now all you need to do is cut back a little on the number of shows and we will all be happy.

DTP FOR SAM

Steve's Software are about to launch a major new product onto the Sam market - a full DTP package.

Little is known about the features at the moment, Steve Nutting is being fairly tight-lipped about it, but it is hoped the program will be ready for release in mid-February.

Keep reading Format for more details.

48K KEYBOARDS - THE END?

The news for 48K Spectrum users who's keyboard membranes are on their last legs is bad.

It would appear that the last stocks are now out in the market place and when these dry up completely (which they are doing fast) then that is the end.

If anyone knows where there are some please give me a ring - I will pass the details on. In the meantime let's hope someone starts producing a replacement soon.

SAM AMATEUR RADIO SHAREWARE

Short-wave listeners and other radio amateurs with Sams at their disposal may be interested in the DJOHF SUITE of programs [I do wish these radio

people would use proper names].

These multi-mode amateur radio package consists of a comprehensive log (including real-time entry) together with the Amrad program for transmitting and receiving CW, RTTY, SSTV, FAX and an additional TNC control module.

To use all the features requires a SAMBus as well as MasterDOS and MasterBasic. As the program is still being developed the registration fee of £5 covers free exchange for future updates from the author.

The pack is supplied on 3.5" disc with full documentation and can be obtained in the UK from F.Harrop, 15 Keymer Road, Hollingbury, Brighton, BN1 8FB.

SUGAR LOOSES VOTE

Alan Sugar has lost in his bid to buy back the company he founded - AMSTRAD. Following a rather acrimonious meeting he failed to get the necessary 75% of the votes required to allow the company to remove itself from the Stock Market.

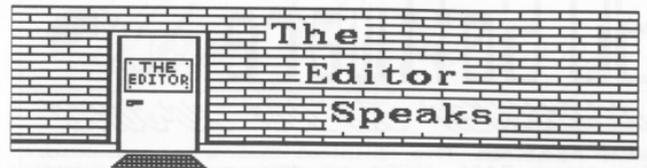
The meeting, which was somewhat heated at times, was packed with small investors who were angry that Sugar was only offering 30 pence per share. However as Amstrad shares are now below that figure on the market there seems little hope of shareholders getting a better offer in the near future.

Alan Sugar is said to be considering a massive cut-back on the scope of Amstrad product range in order to bring the company back into profit.

News Credits:

Dave Plate, Harold Lanson. Brian Gaff.

URGENT we need your news. Anything you think other people should know about. Items printed earn contributor 3 month extra subscription (please claim when renewing).



Happy 1993 everyone, thanks for all the Christmas cards, they helped brighten the office, hope you all had a restful holiday.

West Coast Computers are now fully up and running, having moved into a new unit in South Wales that they are sharing with Blue Alpha - the company they have contracted to build the SAM. As I write this I am also helping them to produce a big mail-shot, to over 6000 SAM owners, giving details of availability etc.

Format Publications has also been contracted to provide technical support to end users by extending our successful telephone hot-line service to new SAM owners for the first 90 days from purchase. Meanwhile Blue Alpha Electronics have got production underway and by early January the SAM and all its interfaces should be back into full production.

Already the SAM scene is looking rosier than it has since the start of 1992 but there is still better news coming. Revelation are about to release their new spread-sheet program (which will be available for both SAM and Spectrum) and there are several new games due for release in the first quarter of 1993. Disc drives are now available again - the first real supplies for over a year. Fred Publishing are also leading the games field with several new releases already and more to come. Also, look out next month for a new DTP package for SAM.

The Spectrum scene is also looking quite good. There are rumors of a new disc interface (using UNI-DOS as standard) and Revelation plan several

Spectrum products.

As usual this issue is smaller than our standard, it being January. It has been put together in a little over a week - even less than I get most years. The shortage of time was mostly due to an armed-robbery, doing my duty and sitting on a jury that is, and the extreme pressure we were under from the mass of orders you sent in. As I write this (15/12/92) Jenny is still slaving away packing orders and trying to get everything out before Christmas. I have told her that if she is good she can have Christmas day off but must be here bright and early on December 26th to start packing this issue so you get it as early in the new year as possible.

Now, SITUATIONS VACANT. I am looking for someone with experience of selling advertising space to work on a freelance basis selling space in FORMAT. You won't get rich, although we will pay a commission on all sales. In addition to earning a little money you will also be helping FORMAT to grow in size. As it is the maximum size of an issue we can produce is 40 pages - any larger and we would jump into the next postage bracket and add 10 pence to the cost of posting each copy. That, added to the extra printing bill means that we need to expand advertising before we can expand the page count. I want FORMAT to double in size - I hope to find someone among you who will help make this come true.

Finally, if Mark Lambert is reading please give me a ring. I've lost your number and need to get more Hacker's Corner articles sorted out.

Bob Brenchley, Editor.

SD Software



REVELATION SOFTWARE

SPECMAKER The simplest Spectrum emulator for your SAM. 1000s of 48K programs work without the need for any conversion. Most other programs need only minor changes. All the extra SAM keys work in Spectrum mode. Uses SAM's parallel printer port and up to 360K of SAM memory as a RAMDISK. PLUS D and all OPUS disks* can be loaded into SPECMAKER and saved to SAM disk. Can now convert files between Messenger & SPECMAKER format and so save on valuable disk space. Supplied on 3.5" disk *Master Dos & Master basic required for single density OPUS

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nb. Not a PC emulator.

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The Secretary

REVIEWED

By:- Carol Brooksbank.

A good word processor is the one piece of software Sam users have wanted more than any other, and now, thanks to Revelation Software, it is here.

This is a really versatile program, packed with features. And its author understands how important it is for a word-processor user to be able to customize the program to suit his own printer, and his own preferences.

THE SECRETARY allows you to redefine all the printer codes to suit your printer, and there is an optional toggle on/off code left for you to use as you like. If there are existing printer codes you don't want to use, you can redefine those too. The default list is very comprehensive - all the usual italics, bold, underlining, super- and subscript, elite, pica, NLQ fonts and so on - and it even supports colour printers so that you can change colour in mid-line.

The keyboard keys can also be redefined so that foreign accented letters, Greek letters, or mathematical symbols can be introduced. Page and form length are under the user's control, as are line length, margin and tab settings. A personalized version can be saved, in which your preferred settings are stored and are in operation when the program loads - or you can make temporary changes which you do not save, but use only with the current document. Tab and margin settings, page length and printer set-up are saved with the document and overwrite any in force when you re-load it.

You can change the on-screen colours. Two page widths are available - 64-col. maximum and 85-col. maximum. The keyboard reading is fast enough to

keep up with the fastest typing I could produce, though if Wordwrap and Justification are in operation, it occasionally lost an odd letter or two at the start of a new line, while it was sorting out the previous one. This only happened when I was deliberately typing as fast as I could, without any pause for thought. Insert and overwrite modes are toggled by a keypress, and there is a facility for inserting or deleting one or more lines, and deleting from the cursor to the end of the line. The cursor can be moved one letter, one word, one line, one paragraph, one screen, or one page at a time, though curiously you cannot move from the beginning of one line to the end of the previous one, unless you are deleting. This was irritating until I discovered that by setting a tab at the last character in the line, you could move up a line and tab to the end - much quicker than moving the cursor all along the line.

Block manipulation is excellent. A block of any size can be defined, and the text within it grabbed into memory. It can be copied elsewhere as many times as you like, scrolled, aligned left, right or centre, or deleted. The block need not be the whole width of the text - the dimensions are up to you.

Five stores are provided for both headers and footers, in each of which up to ten lines can be stored and reproduced on any page or range of pages. Page numbers are put in the same position on every page as you place the cursor when you select the numbering option. Numbers always start from 1, which could be a drawback. Even though the program can cope with 88 A4 pages, I can see some documents needing more than one file.

The option which lifts this program

The Secretary

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**Revelation
Software**

REV-LA

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into a class of its own for me is Graphics. Lines and boxes can be drawn on screen and printed, so long as your printer has the capability. All the IBM graphics characters are available on screen and in print. If you need a lot of symbols, or produce forms needing lines and boxes, these are invaluable. You can even draw simple diagrams right there on screen, knowing that what you see on screen is what you get on paper.

Word count, find word, and search and replace are all there, and if you have the SAMbus with its clock, the date and/or time can be printed on your documents with a keypress each. Search and replace did the job properly, but seemed to corrupt the program slightly, so that odd copies of lines appeared when I used RETURN to start a new line at the end of a paragraph. However, I saved the document, reloaded the program, reloaded the text, and everything was perfect again - no permanent damage.

The printing option allows the user to specify whether a linefeed is to be sent with each carriage return; the left margin on the paper; number of copies; whether a form feed is to be sent after each page; the range of pages to be printed (there is a single keypress if you want to print only the page with the cursor in it, otherwise you enter the start and finish page numbers); and the depth of the linefeed, expressed in n/72". Unfortunately, if you change the linefeed depth you must also set a new number of lines per page for the form depth. This can be a nuisance because the program overrides the printer default form length setting too. Most programs allow you to set the form length in 12/72", and subsequent changes of depth of linefeed will leave the form length untouched. It is something I hope Revelation will take a look at in future upgrades.

Other than that, the printing is excellent. If you are doing multiple copies, there is a continuous display of which page of which copy is currently being sent to the printer.

You can break in at any point and stop the printing.

File handling is also versatile. Text files can be saved with or without the page and printer set-up information. File merging allows another file from disc to be merged into the current one at the cursor position. Files from other word processors can be imported, with or without their printer codes. Files in 64-column format, like Tasword, need no attention, but those from programs like Wordmaster which are not divided into 64-character lines may have words split at the end of lines, and need quite a lot of editing.

You can load THE SECRETARY files into SPELLMASTER for spell-checking, though if you make any alterations and have to save the file from the spell-checker, you have to import it back into THE SECRETARY. The embedded printer controls can be preserved, but page and print set-up conditions have to be set before you save it again as a SECRETARY file.

The only facility which really does not work acceptably in THE SECRETARY is the auto-move facility, an insert mode which reforms the paragraph as you go along. The reforming is done after every letter, and is abominably slow. However, it is not an essential facility, because it is easy to insert a few lines, type on them and then reform the paragraph, all of which is quick and smooth.

Insertion and deletion take a bit of getting used to, because inserting a line will move the whole document down, but deleting a line will only move up the lines on the current page. Once you get the feel of it you realise that you should leave putting in the page numbers, headers and footers until the document is finished. You then go through making sure that there are blank lines wherever a header, page number etc. is to fall. If you put them in at an early stage, insertion and deletion will upset them, but they are not needed as you go along anyway, because

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there is a constant display of page, line and column numbers for the cursor position.

I like this program very much, and it has wooed me away from WORDMASTER for general word-processing work which does not require Typeliner DTP printing. It is easy to use, and yet has a wide range of facilities, a sensible well-presented manual, good on-screen help, and even a simple mail-merge (see my article last month) is available. True, there are one or two things I would like to see polished, but Revelation are asking for feedback from users before bringing out an upgrade, so these things will almost certainly be taken care of in the future.

It is already a high-quality workhorse, and I am very comfortable with it. Don't wait for future version, Revelation are including a user questionnaire with the program, and anyone who takes the trouble to send it back saying what they like and dislike about THE SECRETARY will be eligible for a free upgrade as soon as the program is enhanced.

The price, at £14.95 including postage (£12.95 to INDUG members) is very reasonable indeed for a program with so many features. Buy it and enjoy it.



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70! (And A Bit For PC)

By:- New Young.

If you can remember as far back as the sixth anniversary issue, then you will know that I threw down a challenge to anybody to calculate factorial 70 in under 30 minutes using only basic. I have waited until the end of November to give anybody who wanted a go a chance to try and have now received some half dozen entries. Those who sent a stamped envelope should have got their discs back by now.

The Spectrum entries were converted to Sam basic and all entries run on my Sam with a Sambus and Masterbasic. The time instruction being used to give the final timings. This meant that all programs had the same chance.

The results are as follows:-

Andrew Thompson	14 mins
R Curson	8 mins 46 secs
F Evans	prog 2 5 mins 22 secs
F Evans	prog 1 4 mins 18 secs
Ton Voon	3 mins 22 secs
G.Jackson.	2 mins 10 secs
Clive Eatough	1 min 17 secs
Steve Warr (no prog supplied)	25 secs
Etrick Thompson	prog 1 37 secs
Etrick Thompson	prog 2 18 secs
Etrick Thompson	prog 3 12 secs

£5 should have been sent to each of the above (next time I set a challenge only the best wins OK).

The fastest program for the benefit of all mankind is:-

```
1 TIME "000000"
10 REM calculate 70!:
20 LET f$ = "0024"
30 FOR i = 5 TO 70 STEP 2
40 PRINT "*";
50 LET c=0
60 FOR j = LEN f$ TO 1 STEP -4
70 LET q = VAL f$(j-3 TO j)*!(i+1)+c
```

```
,c=q DIV 10000,f$(j-3 TO j)=(STR
$(10000+q MOD 10000))(2 TO )
80 NEXT j
90 IF c>0 THEN LET f$=(STR$(10000+c)
)(2 TO)+f$
100 PRINT "70!:";VAL f$( TO 4);f$(5 T
O)
120 PRINT: PRINT: TIME
```

Now for something completely different. I have had lots and lots and lots of people ask me how to get Tasword 2 and Tasword 128/+2 files onto a PC. So here is the program that I use. The disc must be an 80 track dual sided and contain ONLY Tasword 128/+2 type files (Opentype). All the files will be transferred to the PC hard disc. This program was written using Turbo C 2.0

Tasword 128 and Tasword +2 both use the same file format, you should be able to make an Opentype file from most other types of file. If you have different disc formats then I'm afraid it's up to you to sort out the changes.

```
#include <bios.h>
#include <stdio.h>
#include <process.h>
```

```
int fnum,trk,sec,tmp,result;
int htr[81],hse[81];
```

FILE *fout;

```
struct fnames
{
char name[14];
} fnames[81];
```

```
struct headr
{
char ftype;
char fname[10];
char fsec[2];
char ftrl;
char fsel;
```

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```

char frest[241];
) headr[2];

void movefile()
{
int mhead,idx,newf;
struct dbuf
{
char mchar[510];
char mtrk,msec;
} dbuf;

newf=1;
dbuf.mtrk=htr[fnum];
dbuf.msec=hse[fnum];
fnames[fnum].name[8]='.';
fnames[fnum].name[9]='T';
fnames[fnum].name[10]='X';
fnames[fnum].name[11]='T';
if ((fout = fopen(fnames[fnum].name,"
w"))=NULL)
printf("Could not open file %s\n",&
names[fnum].name);
else
while (dbuf.mtrk)
{
mhead=0;
if (dbuf.mtrk > 79) /* for 80 trac
k disc */
{
/* set track to side two */
mhead=1;
dbuf.mtrk -= 128;
}
biosdisk(2,0,mhead,dbuf.mtrk,dbuf.ms
ec,1,&dbuf);
/* skip past any headers and footers
if present */
newf = ((newf) && (dbuf.mchar[0]==0x
FF));
/* copy data to new file */
for (idx=(newf*259);idx<510;idx++)
{
if ((dbuf.mchar[idx]!=0x0D)) /* lo
se CRLF */
{
fputc(dbuf.mchar[idx],fout);
}
}
newf++;
}
fclose(fout);
}

main()
{
for (tmp=1;tmp<81;tmp++) /* read
all file headers */

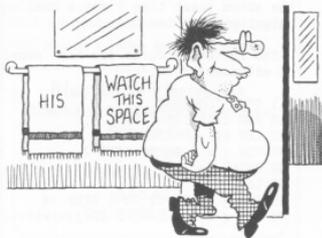
```

```

{
htr[tmp]=0;
hse[tmp]=0;
}
fnum=0;
fprintf(stderr,"\n");
for (trk=0;trk<4;trk++)
{
for (sec=1;sec<11;sec++)
{
result = biosdisk(2,0,0,trk,sec,1,&
headr);
for (tmp=0;tmp<2;tmp++)
{
fnum++;
if (headr[tmp].ftype)
{
htr[fnum]=headr[tmp].ftrl;
hse[fnum]=headr[tmp].fsel;
fprintf(stderr,"%2.2d %10.10s
",fnum,headr[tmp].fname);
strcpy(fnames[fnum].name,headr[tm
p].fname);
}
}
}
}
/* now copy the files */
fnum=0;
printf("\n");
for (fnum=1;fnum<81;fnum++)
if (htr[fnum])
{
fprintf(stderr,"%2.2d %10.10s
",fnum,fnames[fnum].name);
movefile();
}
}

```

I hope this gives many hours of pleasure to anybody brave enough to try it. I hope it is obvious that the PC here reads the PLUS D disc directly which should be in drive A:



12

FILE TRANSFER

FACT OR FANTASY...

By:- John Wase.

I noticed from a survey Bob once did that many of you wanted information on file transfer. Now, I'm not sure exactly what you mean by file transfer. If, for instance, you are talking about transferring programs, then my experiences won't help you. However, I do have a lot of hassle with word processors, and my principal problem is to transfer files to and from different formats - to and from MSDOS, CP/M, my Z88, my Spectrums and Sam...

My principal machine is an old grey Spectrum+2 connected up to a Discovery disc drive with a 5.25" double sided 80 track drive as drive 2. This is the ultimate acceptor of all my files, which are filed on (incredibly cheap) 5.25" coloured discs in duplicate in an enormous filing drawer, holding around 250 discs. Everything else I've got links into that. Additionally, I use a Spectrum+3 pretty regularly and also a Z88 (or did do until it recently had a fit). For both of these, I can transfer down the RS232. However, I'm perhaps going a bit fast for those who aren't used to these sorts of capers.

Let's start by considering word processors. As you know, the objective is to organize things on-screen so that eventually you can send a series of ASCII codes to the printer. Those above 32 represent real characters; those below are interpreted by the printer as commands to alter formatting, type spacing or whatever. So if I type in the line to the Computer LPRINT "ME"; provided the printer driver has been activated (consult your interface book if you don't know how to do this), the printer will print ME. You can also achieve the same result by typing in LPRINT CHR\$ 77; CHR\$ 69;. Of course, this is only what your word processor

does anyway: you type in ME and ask it to print it. You can also ask it to store it on disc or cassette. So what's the problem? Well, each word processor has a different way of representing things on screen. Chi-writer, the scientific processor, actually prints a dot on the screen instead of a space between each word and the next. Other processors have complicated conventions for hard and soft spaces. Hard and soft spaces? Well, if you're doing tabular work, or want to leave a gap between words for insertion of a date, you can insert hard spaces and the processor will interpret them accordingly, and not close the space up on reformatting the text, although eventually in each case the processor will send CHR\$ 32 to the printer.

The conventions for carriage return, line feed, and, worst of all, control codes; those wretched things that make the printer vomit yards of paper when you've got them wrong, but which should control things like double height and width, font type, italicisation and so on, are different for every word processor. Even for versions of the same processor running on different machines. And these funny instructions are saved on the disc. The Spectrum/SAM series of word processors varies in the way files are saved. Some are saved on disc as opentype files (e.g. Tasword3, +2, +3) and some use code (e.g. Wordmaster, Tasword2). Consequently, just to be able to read a disc from another machine is not good enough. If you don't believe me, find a mate with a Spectrum +3 and try and read an old Locoscript 40track disc into Tasword+3. Just a simple letter will give you umpteen pages of garbage.

Bob is much cleverer at this sort of thing than me, and can manage to

13

Software for the SAM COUPE

£12.50 SC ASSEMBLER

If you have been reading the much praised article in the Format magazine 'Machine Code Without The Tears' by :- Carol Brooksbank and are new to the fascinating world of Machine code.

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extract and modify ASCII code from most discs: I hope that he'll write a little article on how to do it in the fullness of time. Meanwhile, I find that the best way to get things sorted out is to get at the messages the Word Processor is sending to the printer. For however tortuously the screen is laid out and the control codes are manipulated; in the end, the printer has to print ASCII codes.

Let's look at one or two examples.

My first task was to transfer Z88 files to disc. I did this through the RS232 (serial) port for two reasons. Firstly, it's simpler. And secondly, that's the only sort of port that the Z88 has got. So it's Hobson's choice. The first thing is to make up a lead. I was foolish enough to buy a QL lead. Since the QL has a printer port which takes the same sort of plug as a Spectrum, and since the QL port diagram is the same as the Spectrum's, I was foolish enough to assume it would work. Six months later, I found out what was wrong - the QL has two ports. One, intended for input, is a mirror-image of the printer port. The lead was configured for this port. So, the lead has to be made up with the following connections:

Z88	Spectrum+2
5	5
4	4
3	3
2	2
7	1
8 & 9	shorted

Now we need to deal with the ASCII codes which the source computer is sending down the line. In this case, the source is the Z88. We will assume that you have a piece of text active in "Pipedream" (the Z88's built-in wordprocessor). Call up the panel by typing square-S. The default transmit/receive rate is 9,600 baud (the number of bits the thing sends a minute) - just the same as for the Spectrum and QL. Fine. The Xon/Xoff protocol needs changing to "No", to make sure the protocol matches the

Speccy. Now we need a receiving program.

The following program is set up for the PLUS D and will work on the +2: I can't see why it shouldn't work on the 128, either.

```

1 REM *****
2 REM *****fromz88t+2*****
3 REM *****
9 PRINT INK 1; FLASH 1;"SURE YOU'VE
   GOT FORMATTED DISCS? (KEY)": PA
   USE 0
10 CLS : PRINT INK 1; FLASH 1;"DO PO
   KE @ 11,1 - THEN NEW AND RERUN":
   PAUSE 0
15 CLS : PRINT INK 1; FLASH 1;"SURE
   YOU'RE IN 128K MODE? (KEY)": PAU
   SE 0
20 CLS : PRINT INK 1; FLASH 1;"INSE
   R FORMATTED DISC; PRESS KEY" : PA
   USE 0: CLS
40 INPUT "Filename ";NS
50 IF LEN NS>10 THEN GOTO 40
59 REM open file to disc
60 OPEN #4:d1;NS OUT
65 CLS : PRINT INK 1; FLASH 1;"NOW P
   RINT FILE FROM Z88"
68 REM now print file from z88
69 REM read and detect each charac
   ter
70 LET AS=INKEY$#3: IF AS="" THEN GO
   TO 70
74 REM filter out initial jargon
75 IF CODE AS = 27 THEN GOTO 200
79 REM end of page or end of doc
   ument?
80 IF CODE AS = 12 THEN GOSUB 300
89 REM print character to open
   file on disc
90 PRINT #4;AS;
100 GOTO 70
110 SAVE #1;"fromz88t+2" LINE 10
150 CLOSE #4: STOP
190 REM *****
191 REM **filter out initial**
192 REM *****jargon*****
200 LET AS =INKEY$#3: IF AS = "" THEN
   GOTO 200
210 IF CODE AS = 64 THEN GOTO 70
220 PRINT "Problem occurred": CLOSE #
   * 4: STOP
290 REM *****
291 REM *Subroutine to detect**
292 REM **end of Z88 file*****
293 REM *****
300 FOR z = 1 TO 500
    
```

```

310 REM This might need to be change
    d if you are using a narrow
    column.
320 LET AS =INKEYS#3: IF AS="" THEN G
    OTO 340
330 RETURN
340 NEXT z
350 PRINT "All finished": CLOSE #* 4:
    FOR b= 1 TO 10 : BEEP .1,b: NEXT
    b: STOP

```

Now, the PLUS D grabs hold of stream 3, the normal printer output stream, diverting it through its parallel port. We want to use the serial port, so we want to disconnect it. That's the point of the initial poke, before the computer is reset: it has to be reset before control is relinquished! After that, it's all plain sailing.

The program has a lot of REM statements to tell you what it's doing. The key line is 70: this looks for a character coming in to the computer on stream 3. If it can't find one, it looks again: if it can, it runs through several checks. If these are OK, it sends the character to the disc buffer, having already opened a file OUT on stream 4. The Z88 sends some junk, including an "g" at the beginning of a file. This is filtered out (see line 75). If it sends a form feed, then the program looks to see if there's nothing but space following. After about 7 lines of space (500 CHR\$ 32's), it assumes that that's the end of the file, so it closes the output stream to the disc (stream 4), closing the buffer, emptying it onto the disc and closing the file. You now have an opentype file on disc which will load straight into Tasword+2.

If you modify the program for the Discovery, it's even easier: you don't need to mess about poking and resetting. So just leave that bit out and alter the syntax. In any case, I have no problems in converting Tasword+2 files between the Discovery and the PLUS D: I have duplicate setups, each with a +2, and merely record a file on cassette, transferring it from one machine to the other. Crude, time consuming (though not as slow as my Basic serial

transfer program) and effective. The same files will also go onto the +3, particularly with the new Sony TCM818 cassette recorder recommended for SAM, using the T2T3 utility on the Tasword +3 disc.

Suppose you want a code file instead. Instead of opening a file to the disc, CLEAR an area of RAM, and poke each address in turn with CODE AS. Then save the code. You might have to modify things for differing word processors. Useful tricks are to look for a space (CHR\$ 32) after, say, 50 characters in an ASCII file, and insert a carriage return (CHR\$ 10) instead of the space. You might have to fill the area with CHR\$ 32 first - I found that you did for Tasword2.

Fine, so far. I've done it on a Discovery, saved the code to cassette. How do I get it into CPM machines, like the Amstrad 6128. Easy. Tasword on the 6128 reads Spectrum+3 discs. Load the cassette into the +3, using the T2T3 utility on the +3 disc, save it out again and send it to your mate. I get copies of papers to and from various former students like this. The Spectrum+3 will save to discs previously formatted on the 6128 (these are essentially CPM), and Tasword 6128 will read the files in directly. There's a little problem in that the Tasword 6128 control codes are different - they appear on the Spectrum screen as interesting characters which the printer doesn't quite know how to print. Apart from this, it's fine. Suppose I want to get it into Chi-writer on the University network: this is essentially MSDOS. Fortunately, my +3 disk B (to give it the CPM American spelling; ugghh) is a 3.5" disc. Save the file onto that, take it to work and use a program there that we've equally fortunately got, called UniForm-PC. This will enable exchange of information from various versions (yes, there's several) of CPM and MSDOS. (I have to do it that way because we've no 3" drives at work hooked up to MSDOS machines). And, provided I've formatted my discs on my Spectrum, Chi-writer files transfer like magic.

Details of this program from Timatic systems on 0329-239953.

Finally, one more problem. The +3 Basic won't deal with opentype files, nor will the +3 save to cassette. But the brute has a serial port. British Telecom to the rescue. You need a six-core cable telephone extension lead, item code 870105. The plug on this so nearly matches the Spectrum RS232 hole that all you need to do is to file down a ridge. Hold the plug in front of you, wire to the bottom, plug sticking up, contacts away from you. It's the right hand ridge, facing you, which needs filing. If you are feeling flush, get two of these. Cut off the sockets. Connect the wires together (I used a barrier strip connector) as follows.

+3(OUT)	+2(IN)
Orange	Orange
Red	Blue
Blue	Red
Green	White
White	Green
Black	Black

Run the program given above for the Spectrum+2. Ensure Tasword+3 is configured to use the serial port and Print the file that you've just fed in. Down it goes!

Now, all this is a little crude, but it all works. It takes time, but that's an excuse for a cup of coffee. Perhaps one day, Bob will give us a more sophisticated run-down of how he passes files through his Spectrum and into his BEEP, but until then, I'll carry on using it.

"And what about SAM?", I hear you anguished SAM users cry. Tough. I've got RS232. I've got the program. But, there's no point until I can get a really good word processor. Wordmaster SAM is just like the Spectrum one - I don't like the characters, and the embedded control codes are insufficient for my purposes. Enigma still haven't produced theirs; when they do, then I'll see. Meanwhile, if anyone has experience of transferring files to and from other computers why not jot down a few notes and send them in to FORMAT.

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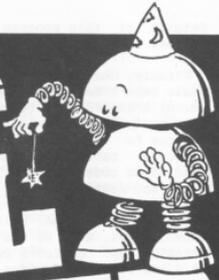
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For The SAM Coupe

18

ANIMATE

By:- Steve Warr.

If you've ever tried to produce moving graphics then you will know the importance of testing your animation before you include it in a program. This program was written for this purpose and runs on a 48k Spectrum - 128k users can use it but may want to upgrade it to use the extra memory.

Your frames of animation should be saved as screen shots and loaded in turn into the program. It then displays the screens in turn to produce the animation. Because the program uses a data compression technique, you should be able to fit 12 or more complete frames in memory at once, depending of the complexity of your frames. The disadvantage of the data compression is that the animation does tend to be a bit flickery, but at least it does give you an idea of how well your animation works.

The first step is to type in listing 1 and run it. This sets up the machine code used by the main program and saves it on disc. With it safely on disc you should reset your computer and type in the main program (listing 2). Type this program exactly as it is printed because it uses memory saving techniques* to leave maximum space for your frames. Now type RUN 999 to save and run the program. From now on, you can break out of and restart this program using RUN without losing any of the frames already stored in memory.

Once the program is running it displays the amount of memory still available to it and the number of frames currently stored in memory. By pressing the relevant keys and following the prompts you can access the various parts of the program:-

'a' to replay or animate your frames,

'c' to clear all frames,
'e' to erase a single frame,
'l' to load a frame,
'd' to display a single frame.

The only one needing further explanation is the animation option. After pressing 'a', you are asked to enter an animation speed, 1 is the fastest and anything above 10 isn't really worth using.

Smooth computer animation of even the simplest graphic is a complex business and involves quite a bit of theory. This program barely scrapes the surface but perhaps it will increase your interest in the subject. Bye for now.

LISTING 1

```

1 CLEAR 39999
10 READ A: LET L=1010: LET B=0
20 RESTORE L
30 PRINT AT 0,0;"Reading line:";L
40 LET S=0: FOR F=1 TO 20
50 READ D: POKE A,D
60 LET S=S+D: LET A=A+1
70 NEXT F: READ C
80 IF C=B THEN PRINT "Line ";L-10;"
Missing or Repeated": STOP
90 IF S<>ABS C THEN PRINT "Error in
Line ";L: STOP
100 LET B=C: LET L=L+10
110 IF C=0 THEN GOTO 20
120 PRINT "Insert a disc in drive 1":
PAUSE 0
130 SAVE d1"Anim_Code"CODE 40000,327
140 STOP
1000 DATA 40000
1010 DATA 0,0,0,27,0,64,227,100,33,227
,100,34,162,99,175,50,156,99,201,
243,1997
1020 DATA 42,160,99,237,91,158,99,217,
229,17,2,0,217,126,1,0,0,3,197,79
,1974
1030 DATA 35,27,122,179,121,193,40,3,1
90,40,242,217,42,162,99,25,56,55,
217,4,2069
    
```

19

```

1040 DATA 5,32,58,65,79,254,199,40,52,
120,254,4,48,46,197,217,193,113,3
5,19,2030
1050 DATA 16,251,217,122,179,32,202,21
7,42,162,99,27,27,115,35,114,35,2
5,56,13,1986
1060 DATA 34,162,99,33,156,99,52,225,2
13,217,193,251,201,225,217,1,0,0,
251,201,2830
1070 DATA 191,197,217,193,54,199,35,19
,40,7,119,35,19,54,0,35,19,113,35
,19,1600
1080 DATA 112,19,24,194,205,197,100,24
3,237,91,160,99,78,35,70,35,62,19
9,190,40,2390
1090 DATA 7,237,160,234,58,100,24,23,1
97,35,126,35,70,35,4,5,40,16,18,1
9,1443
1100 DATA 16,252,193,11,11,120,177,
194,56,100,3,251,201,78,35,70,35,
229,18,2061
1110 DATA 98,107,19,11,237,176,225,193
,11,11,195,83,100,58,157,99,167,2
00,79,33,2259
1120 DATA 227,100,58,156,99,167,200,71
,197,65,118,16,253,175,211,254,1,
1,0,11,2380
1130 DATA 120,177,32,251,62,7,211,254,
205,47,100,193,175,219,254,47,230
,31,192,16,2823
1140 DATA 223,24,212,205,197,100,229,7
8,35,70,35,9,84,93,42,162,99,237,
82,68,2284
1150 DATA 77,225,235,40,2,237,176,237,
83,162,99,33,156,99,53,3,201,209,
33,156,2516
1160 DATA 99,1,0,0,58,157,99,167,200,5
5,158,208,213,134,33,227,100,200,
71,94,2274
1170 DATA 35,86,35,25,16,249,201,0,0,0
,0,0,0,0,0,0,0,0,0,0,-647

```

LISTING 2

```

1 CLEAR : LET Z=NOT PI: LET X=SGN P
I
2 LET M=VAL "10": LET B=VAL "25500"
5 POKE VAL "B+3",VAL "27"
10 LET AS=""
20 LET F=VAL "65535-PEEK (B+6)-256*P
EEK (B+7)"
30 PRINT #X:AT Z,Z;"Bytes: ";F,AS,"F
rames: ";PEEK B,,
40 IF AS<>" THEN BEEP VAL ".5",-M
50 LET AS=INKEYS: IF AS="" THEN GOTO
CODE "2"
60 RESTORE : FOR F=0 TO VAL "5"
70 IF AS<>"aceld"(F) THEN NEXT F: GO

```

```

TO CODE "2"
80 BEEP VAL ".1",M: GOTO F*M+M
100 INPUT "Animation speed: ";F: POKE
B+X,F
110 RANDOMIZE USR VAL "B+213": CLS :
GOTO M
200 LET BS="CLEAR": GOSUB VAL "800"
210 IF F THEN RANDOMIZE USR VAL "B+8"
220 GOTO M
300 GOSUB VAL "700": LET BS="ERASE #"
+STRS F: GOSUB VAL "800"
310 IF F THEN IF NOT USR VAL "B+263"
THEN GOTO M+M
320 GOTO M
400 CLS : INPUT "Filename: "; LINE AS
410 LOAD D*:AS SCREENS
450 LET AS="Out of memory"
460 IF NOT USR VAL "B+19" THEN CLS :
GOTO M+M
470 CLS : GOTO M
500 GOSUB VAL "700": IF NOT USR VAL "
B+144" THEN GOTO M+M
510 PRINT #X;"Frame: #";F
520 PAUSE Z: CLS : GOTO M
700 LET AS="Invalid Frame"
710 INPUT "Enter frame number: ";F
720 POKE B+O,F: RETURN
800 INPUT "": PRINT #X;BS;" Are you
sure? (y/n)"
810 IF INKEYS="y" THEN LET F=X: RETUR
N
820 IF INKEYS="n" THEN LET F=Z: RETUR
N
830 GOTO VAL "810"
900 CLS #: CLEAR 25499
910 LOAD D*"Anim_Code"CODE 25500
920 RUN
999 SAVE d1"Animation" LINE 900

```



"I'm not sure what happens next. I've never managed to get inside a house before!"



YOUR LETTERS



Dear Editor

The history of my subscription to S&S is as follows:-

I bought the first copy at an ALL FORMATS and then subscribed for 3 issues i.e. up to issue 4. I also paid for the S&S EXTRA tapes for Spectrum and discs for the Coupé. These were supposed to include the software listings that had been published in the magazine. After all this time my memory is rather hazy, but I think that the total came to about £13.

I received the 3 issues but none of the S&S EXTRA tapes/discs. (There was a disc of SAM demos but this was free to all subscribers and was not part of the S&S EXTRA).

I am NOT looking for a cash refund nor for the tapes but if you have a back issue of issue number 5 it would be very much appreciated.

If you can determine from their records how much I am owed please add the sum to my previous donation to the WEST COAST Sam rescue fund.

Good luck with the expanded FORMAT. I hope that you will take the opportunity to introduce some new contributors. The regular writers in FORMAT do maintain an astonishingly high standard of interesting articles and it must be a great help to be able to rely on their input but I did find the articles by previously unknown writers in S&S to be very refreshing. A wider range of contributors will help to maintain everyone's enthusiasm in the next 10 or 20 years.

Yours sincerely, Bob Bates.

There is still much confusion over S&S as we are getting no cooperation from Daniel Garner at all. Having helped him out of what could have been an expensive hole that he had got himself into (by blatantly taking on a task he was not capable of - that of publishing S&S) he has now gone into

hiding to avoid his obligations under the contract he signed with us. We have had no reply to our letters or telephone calls. However we are still persevering. Ed.

Dear Editor,

First I would like to thank you for a great monthly magazine and to say that I enjoy reading it every month. I own a 512K Coupé and a 48K Spectrum (Saga Emperor keyboard) and although I never use the Spectrum now, because I sold my DISCIPLE so that I could buy a disc drive for my Coupé, I do enjoy the Spectrum content of FORMAT as much as the SAM content. In my opinion you have a well balanced magazine.

I am renewing my subscription to FORMAT as I believe the Sam and Spectrum still have a place in our lives. It is good to see that something British is still being used after ten years.

I also own a Sega Master System games console and have known for a while that the screen dimensions are the same as the Sam and Spectrum, which has led me to purchase the excellent SCADS program by GLENCO Software. My favorite Sega game is SONIC The Hedgehog, which I have started to convert to Sam, using SCADS, to practice programming.

In November's FORMAT you had a letter from Ingo Wesenack, who noted these similarities and I was wondering if an interface could be made to enable SAM users to play Master System games on SAM. Perhaps Adrian Parker, Bruce Gordon or West Coast Computers could design a cartridge converter called the Sam Master converter, similar to a Master Gear converter for the Game Gear.

Keep up the good work with FORMAT and INDUG, have a Merry Christmas and a Happy New Year.

P.S. Enclosed is a little puzzle for you and Jenny to play with courtesy of

Simba Print, where I work as a repro artist.

P.P.S. Thank you Jenny for helping me to trace my copy of Samprint.

Yours sincerely, Ewen Wilby.

I really think that an interface to run grossly overpriced console games would be a non-starter on Sam. There is, I'm glad to say, a lot of good Sam games already on the market and many more coming. And thanks for the little game you sent, we have not had time to play with it yet but I'm sure we will soon. Ed.

Dear Editor,

I have been subscribing to FORMAT for a couple of years and more and I look forward each month to its arrival through the letter box. I find it to be interesting, informative and stimulating and sometimes when I am browsing through it I wonder how it is all put together.

It would be interesting to learn how you gather together the articles from contributors like Carol Brooksbank, John Wase and the many others and prepare them for presentation in the magazine. In what form do you receive the articles, sketches etc., and how are they transformed into the published form? What kind of time scale is involved in producing an issue of FORMAT? How many people are involved and how is the edition presented to the printers?

Perhaps in some future issue you could include an article giving the answers to these questions. I am sure that all of your readers would be very interested to learn how their favorite magazine is produced.

Yours sincerely, Allen Vernon.

Well you see its like this, there is this miracle woman called Jenny who..... But seriously, one day, when there is nothing better to fill these pages with, I might just bore you with all the gory details of long hours hunched over the keyboard with Jenny standing over me (bull-whip in hand) making sure I keep up the relentless slog. Ed.

Dear Editor,

So where did the year go? It seems but a moment since I penned the last note with my renewal notice. I've still not managed to write anything for you though I have sent a few ideas to Short Spot. The present project - half completed of course - is a shopping program which stores the contents of a local Safeways. It allows easy construction of a shopping list by isle. Next moves are to buy a printer and add a top level procedure which presents a list of meals from which a shopping list is automatically constructed from an ingredients list. There are some interesting pit falls. Ultimately you could add stock control - errors on the larder shelves! I'll try to complete it over printer and write it up.

Keep up the good work. Format is still about the best thing that falls through my letter box each month.

Yours sincerely, Alan Harper.

No, you keep up the good work. If you can get that sort of program to work, and get the lady of the house to use it, then I can't wait to see it. Ed.

Dear Editor,

I would like to join in the debate regarding the processing of cheques by the banks.

I bank with Barclays and recently received a new cheque book which had the dreaded words "A/C Payee Only" printed across each cheque. Having read in the October 92 issue that these cheques were no longer acceptable by you I decided to go to my local Barclays to ask for a cheque book that was simply crossed. I was told I would have to fill a form in and that I would get a new cheque book in a week. When it arrived low and behold it was the same as the previous one I had received complete with "A/C Payee Only" printed on each cheque.

I returned to the branch and told my "Personal Manager" what had occurred and she wrote out another form saying that I would get another book shortly. I next received a note from the bank saying that they no longer issued

crossed cheque books without the message. I visited the bank and was told there should be no problem with the new type wording, but said it might be a good idea to ask about it at my Building Society. I did this and was told that so long as it was made out to a named account or to the Building Society being used there should be no problems.

Yours sincerely, Reg Brooks.

Your final comment goes right to the heart of the problem Reg. That is that the cheque will need to be made out to the EXACT name of the account.

Now at this moment in time the banks, and therefore the Building Societies, are not enforcing this rule - but they may in the future. What would you then do with a cheque made out to Mr R.Books? Yes just one letter missed out, but when the banks start to get padantic you will have to go to the expense of returning the cheque and asking for another.

I don't condone cheque fraud - I was once the victim one. But the answer to the problem lies with the banks - all they need to do is to vet people opening accounts. They used to do it - they should do it NOW. It is up to all of us to stand up and demand that we are not inconvenienced for the sake of the bank - they should serve us not the other way around.

As I've said, at this time there appears to be no problems - we will just have to wait and see what the banks do next. Oh, and by the way, Giro are still issuing normal cheque books, I got one this morning. Ed.

Dear Editor,

The September Special Anniversary Issue finally arrived three days ago. With the postmark of 16th September 1992 and AFTER the October and November issues. Now, I have sent you a letter, which may or may not have arrived yet, about a minor alteration to my subscription, regarding that particular issue. Just bin it.

By the way, that was the best issue of FORMAT so far. The recollections of your contributors were fascinating. I especially liked Andy Wright's hard

decision to switch from medical research to Spectrum programming. Some people talk about it and some just go out and do it.

On another subject, I got the impression that regular articles get heavily edited. Am I right? And, assuming the handwriting is legible, do you prefer handwritten or printed letters?

Yours sincerely, Petros Davakis.

It looks as if you'll now have two copies of the September issue, we're so efficient here that we dealt with your first letter before we got this one. Jenny.

And no, I try not to edit too heavy, I let authors carry on and if it gets a little too long then I split it over two months. Ideal submissions would be on disc but letters can come on paper provided Jenny can read them, if the writing is too bad she will be demanding that I pay for her to have a new pair of glasses. Ed.

Mmmm, not a bad idea. Jenny.

Dear Editor,

Thank you for the SAM memory expansion board, received this morning and already safely installed.

If you ever need to reprint the explanatory leaflet, may I offer you the following comments:-

(i) The fourth paragraph says " ...take out the screws and remove the label." Now it may be because I have an early SAM, but my label was stuck very firmly to the metal surround with something like Evostik, and I had to take a broad-bladed penknife and ease it off fairly carefully to avoid breaking it.

(ii) I realize the problem you have, because the connection plug is not polarized, in describing which way up to put the board, but I do not think your explanation is as 'user-friendly' as it might be. I would rate myself moderately skilled in putting bits of electronics together, but I had to read your words several times before I understood what was meant, and even then I was not 100% certain. One

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possibility would be to say that 'you should hold the board so that you see its bottom, not the components....', or else you could invest in a small bottle of red nail varnish and put a spot of it in the appropriate corner of the board: the instructions would then say 'hold the board so that you can see the red spot in the top right hand corner and

(iii) Although I was fairly confident that I had got things right, when I unconnected up and switched on, I was within microseconds of hitting the on/off switch in a panic when the copyright etc., message appeared. The point is that the initialising sequence is much longer for 512k - presumably because the RAM is being checked - than we (ex)256k owners are used to, and it is worrying the first time it occurs. To save people's blood pressure, I suggest that you might include a brief comment on this matter.

All best wishes, Alan Cox.

All I can say is that the instructions have been the same ever since the launch of SAM. I've never encountered anyone else who had any difficulty in following them. Ed.

Dear Editor,

I and the rest of the family would like to thank you for your help in getting our SAM Coupé up and running. For the first time in my life I experienced the pleasure of programming the idiot proof (the idiot being myself), sensible, usable, sophisticated, simple and all round user friendly computer for myself. The graphics are superb as is the sound quality, and even down to the plastic casing. I found thorough satisfaction in all aspects of the Coupé.

I still have a +3, although I don't usually use the Spectrum for playing games any more, it is now primarily used for programming and word processing.

This brings me to my most recent acquisition - Specfile +3 - Salutations and a good old pat on the back also go to Nev Young of SD Software for the creation of this undoubtedly simple and spectacular

database (unlike the complex and mind boggling ones we use at school on Amstrads). I've only had it a couple of days and I entered the first file without the aid of the manual. Well done Nev! Sam version soon please?

My final gratifications go to the whole of the Format team and everyone involved with the SAM. I know that so much effort went into getting SAM back on it's feet and back into production. The SAM Coupé is often criticized by my friends even though 99.9% have never even seen one let alone use one. I'm sure if more people were given the chance to use one they would soon change their opinion or even better, buy one. The Coupé is a unique computer and should be given more credit. I'm pleased that everyone is working hard to get SAM going again and if there is anything I can do, let me know.

Format's as good as ever and I look forward to it every month, thank you ever so much **FORMAT!** "Live long and prosper....." (Spock - Star Trek 2, The Wrath of Kahn).

Yours sincerely, Robert Cull.

Nice letter, we get a few like this I'm glad to say, they make life worthwhile. Jenny reckons that if she had a son who could write as good as you she would consider herself lucky. Aefvadh rekkhai. Ssuej-d'ifv? [Rihanssu - if you need a clue] Ed.

Dear Editor,

Please can you help with a silly little problem!

When I boot up some of my discs - I get the error message 'No Dos' - in spite of the fact that the Dos is there. I've had this happen to discs which have previously been OK - even erasing the Dos program and "reserving" doesn't cure it - only reformatting seems to work!

Yours sincerely, V.H.Taylor.

Ref my recent letter re "No Dos" problem I think I have found the answer to my problem.

Quite by chance I was scanning through some early SAM Supplement

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Discs and on Disc 7 I found a tip from Dave Tonks headed "Missing Masterdos".

Dave explained that if Masterdos was saved to a disc which was already half full then the Masterdos would be loaded partly on side 2 and would then not boot properly. This is probably what happened to me.

I do apologize for bothering you with the problem.

Yours sincerely, Vic Taylor.

No bother Vic, we had just typed one letter in for publication when you turned the second one.

I must say it is not a problem that I have come across before but the explanation could be right. Anyone out there with any other ideas? Ed.

* * * * *

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