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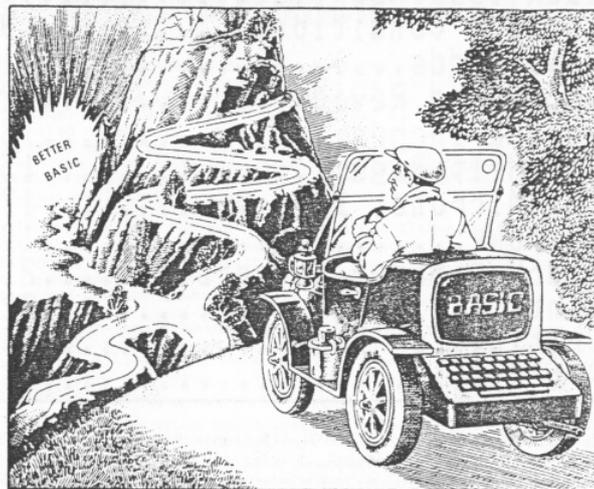
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FORMAT

A Magazine from INDUG
For DISCIPLE & PLUS D Users

ISSUE #12 - JULY 1988



ON THE ROAD TO BETTER BASIC

INDUG.

CONTENTS

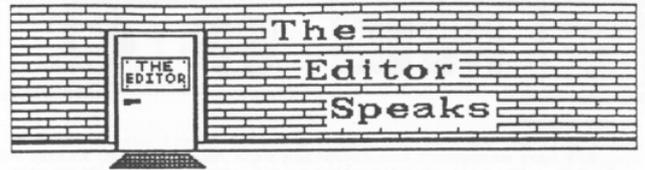
ISSUE #12 - JULY 1988

The Editor Speaks.....	3
News On 4.....	4
Your Letters.....	5
Hack Zone.....	6
Back Issue Service.....	8
Logical Conditions.....	9
Small Adds.....	11
Lettahead Review.....	12
Feet & Inches.....	13
The Help Page.....	15
The Micronet Page.....	17
Snapoke.....	19
Stock Manager Conversion.....	21
Hints & Tips.....	22
Writing For Format.....	23
Art Spot.....	23

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Sorry last months issue was a little late, it was partly delays at the printers and partly due to poor preparations on my part. For the first time I had to send out renewal notices with an issue, I failed to realise how big a job that was. Still the computer program is now written so everything should run a little smoother in future.

Already the renewal slips are flooding in and its interesting to note the answers to the questions:- Which three articles have you enjoyed MOST in past issues and which three have you enjoyed LEAST. Its funny to find the same articles appearing on both lists. Still, not everyone has the same tastes. I will give a full run-down in a later issue.

From your phone calls over the last few weeks it seems that a few of you have had problems with the DISCIPLÉ and PLUS D DOS upgrades printed in the last two issues. For those still having problems, and for those of you too lazy to type them in, I have a limited number of tape copies available. Send a stamped addressed envelope (to hold the cassette) and 3 x 18p stamps (to cover the cost of the tape). State whether DISCIPLÉ, PLUS D ROM 1 or PLUS D ROM 1a. Overseas members include envelope and 4 International Reply Coupons.

In this months issue we welcome Ken Elston, with his first article on improving you Basic programming skills. I'm sure this will prove very popular with lots of you. Steve Nutting is back with yet another extension to the operating system, this time he gives you on-line poking similar to Multiface.

Some time ago I asked for someone to write an Adventure page for FORMAT. Surely there must be an Adventure fan out there who can write a little bit each month on his/her favourite subject? Come on, give me a ring, I will give you all the help I can to get things started.

Holidays are coming round again, and after the hectic pace of the last few months I do need one. So I will be away for the second week in August (6th-14th). During that time, if you have any real emergency, MGT will try to help you.

Next month sees our first birthday issue, its going to be B I G. There's lots of the usual mix, plus some extra special items including the latest news on SAM.

See you next month.

Bob Brenchley. Editor.



MGT DIRECT

MGT have announced the formation of a new division, called MGT Direct. It will handle their own products together with a growing range of third party hardware and software by mail-order.

Alan Miles said "In preparation for the launch of SAM it was decided that a separate sales division was needed. With the exception of a handful of carefully selected dealers, all UK sales of the PLUS D and our other products will now be handled by mail-order only."

When asked why the emphasis was being placed on mail-order Alan said "As both the designers and producers of the PLUS D we feel that we can offer better support and better prices if we handle sales ourselves." He went on to say "SAM is being aimed at the mail-order market and this change will enable us to prepare our sales and marketing structure. We never had the room in Cambridge otherwise we would have set this up from the start."

AMSTRAD GAMES PC

Trade press sources are announcing that Amstrad are about to launch a games orientated PC. A single board, with no expansion slots, single 3.5" disc drive and TV modulator makes this a very cut-down machine. With no indication of the amount of memory, nor the type of graphics it will have, it is difficult to predict how compatible the machine will be with existing software. It is predicted that the computer will be priced at £299 in the UK although without a monitor this seems a little high.

It is also rumoured that the new machine will carry the Sinclair logo and maybe even the Spectrum badge?

KEYBOARDS AVAILABLE

ALBATROSS SOFTWARE have launched two new keyboards for Spectrum users. Both are produced in Germany by the same company that made the Saga keyboards.

The Commander (ex Saga 2+) sells for £54.99 +p&p and the Commander+ (ex Saga Elite) is £79.99 +p&p. Both come with full and clear fitting instructions, all necessary screws etc, and a 12 month guarantee.

Albatross Software Ltd, 'Paramount', Stow Road, Magdalen, Kings Lynn, Norfolk, PE34 3BT. Tel: 0553 811428.

STOP PRESS.. STOP PRESS.. STOP PRESS..

No sooner are MGT settled into their new Swansea premises than thieves strike. Four colour LC10 printers and some monitors were stolen, but they missed the development version of SAM so they cant have very good taste...

Dear Editor,

I have been trying to get a keypad for my 128k Spectrum since I got it at Christmas. My local dealer and local WH Smith branch say the keypad is no longer available, but someone has told me that they are still made in Spain. Can anyone help me track down a supply?

Yours Sincerely, Simon Gray.

Dear Editor,

HELP... does anyone know where I can get an EPROM programmer for the Spectrum. I've found adverts in old magazines but all the companies seem to have gone out of business. I can afford to pay up to £50 or £60.

Yours Sincerely, Dan McLean.

If anyone can help track down these items please contact me and I will pass on details. Ed.

Dear Editor,

I really missed seeing you at the last ZX Microfair, I do hope you have recovered from your illness. Would it be possible to arrange an INDUG get together, perhaps to coincide with the next Microfair? I think lots of members would enjoy meeting each other and your stand gets so crowded at shows it is often very difficult to talk.

Yours Sincerely, Mark Richards.

Not a bad idea Mark. I would need to find somewhere in London to hold the meeting and I would need some idea of the numbers who would like to come. So, if anyone else is interested or has an idea where we could hold a meeting, lets hear from you. Ed.

Dear Editor,

Thanks for my latest copy of Format, it just gets better and better, I really like the mix of articles. Over the last couple of months I have read with interest the Micronet Page. It has encouraged me to send of a subscription to Micronet which I hope will be the start of a new turn in my hobby.

Yours Sincerely, Dan McLean.

Dear Editor,

Last year you said that a disassembly of the DISCiPLE's ROM would be available. Has this been published yet?

Yours Sincerely, N.Mason.

Sorry to say the answers no. With 2 ROMs (2 & 3) on the DISCiPLE and 2 (1 & 1a) on the PLUS D its just too complicated to publish a book to cover them all, and uneconomic to print separate DISCiPLE & PLUS D versions. Ed.

Letters printed may sometimes be edited for length or clarity.

HACK-ZONE

By: Hugh J. McLenaghan.

First this month a few corrections to the POKE-FIND program published last month, printing somehow managed to scramble a few lines.

```
80 LET N$=N$+"10 spaces "( TO 10-LEN N$)
140 NEXT S: NEXT T: PRINT N$;" not on this disc.""Press any key."
: PAUSE 0: RUN
250 LET T=PEEK 40510: LET S=PEEK 40511: LET SECTORS=SECTORS-1:
IF SECTORS<>0 THEN GOTO 240
```

And now for the promised amendments to make it work with Version 2c DOS. Most of the program is the same but the following additions/changes have to be made:-

```
110 GOSUB 8000
240 GOSUB 8000
260 GOSUB 8000
8000 REM This is the load sector routine.
8010 IF PEEK 60000=17 THEN GOTO 8050
8020 LET A=60000: RESTORE 8040
8030 READ Z:IF Z<>999 THEN POKE A,Z: LET A=A+1: GOTO 8030
8040 DATA 17,0,0,207,63,243,219,187,17,64,156,1,0,2,33,0,26,237,
176,211,187,251,201,999
8050 POKE 60001,S:POKE 60002,T:RANDOMIZE USR 6E4
8060 RETURN
8100 REM This is the save sector routine.
8110 IF PEEK 61000=243 THEN GOTO 8150
8120 RESTORE 8140: LET A=61000
8130 READ Z:IF Z<>999 THEN POKE A,Z: LET A=A+1: GOTO 8130
8140 DATA 243,33,64,156,17,0,26,1,0,2,219,187,237,176,211,187,17,
,0,0,207,62,251,201,999
8150 POKE 61017,S: POKE 61018,T: RANDOMIZE USR 61000
8160 RETURN
```

N.B. Where last months program said LOAD @ you must use GOSUB 8000, and replace SAVE @ with GOSUB 8100.

CHEQUERED FLAG.

For all those people that are finding Chequered Flag hard to copy here is the solution. You do not have to Snapshot the game, just put a disc in drive one then enter the following commands:- LOAD ""SCREEN\$:SAVE d1"Chequer1"SCREEN\$ <ENTER> After the screen has loaded it will be copied to disc. Now type:- CLEAR 23999: LOAD ""CODE <ENTER> and start the tape to load the main code has loaded now save it with:- SAVE d*"Chequer2"CODE 24000,38400 <ENTER>. Now type in this loader:-

```
10 CLEAR VAL "23999": LOAD D*"CHEQUER1"SCREEN$: LOAD D*"CHEQUE
R2" CODE: RANDOMIZE USR VAL "52646"
```

Now type- SAVE D*"CHEQUERED" LINE 10 <ENTER>. You can now play Chequered Flag from disc. Using this method also uses up less disc space than you would using the Snapshot button.

DELTA WING.

The same thing can be done for Delta Wing. The commands are:-

```
LOAD ""CODE 16384: SAVE d*"Delta1C1"SCREEN$
CLEAR 24575: LOAD ""CODE: SAVE d*"Delta1C2" CODE 24576,40944
```

LOADER:-

```
10 CLEAR 24575
20 BORDER 0: PAPER 0: INK 0: CLS
30 FOR N=23232 TO 23295: POKE N,0: NEXT N
40 LOAD d*"Delta1C1"SCREEN$
50 PRINT AT 0,0: PAPER 5: INK 5: BRIGHT 1
60 LOAD d*"Delta1C2" CODE
70 RANDOMIZE USR 24576
```

Then: SAVE d*"DeltaWing" LINE 10

3D STARSTRIKE.

This game is hard to copy using the above method as it is a very long program, so we have to use machine-code to do the loading and saving for us. Program 1 loads up the main code then saves it to disc. Program 2 is the loader which must be used to play the game. Here are the listings:-

PROGRAM 1

```
10 LET A=65400: RESTORE 30: LET T=0
20 READ Z: IF Z<>999 THEN POKE A,Z: LET A=A+1: LET T=T+Z: GOTO
20
30 DATA 49,255,255,221,33,230,255,17,17,0,175,55
32 DATA 205,86,5,58,230,255,254,3,32,237,221,33,0,64
34 DATA 17,4,191,62,255,55,205,86,5,221,33,167,255,207
36 DATA 53,237,91,185,255,237,75,183,255,207,55,207,56,199
38 DATA 1,0,0,100,4,83,116,97,114,115,116,114,105,107,49,3
40 DATA 4,191,0,64,0,0,255,255,999
50 IF T<>9196 THEN PRINT "ERROR IN DATA": STOP
60 CLS
70 PRINT "START TAPE."
80 RANDOMIZE USR 65400
```

PROGRAM 2

```
10 LET A=65400:RESTORE 30: LET T=0
20 READ Z: IF Z<>999 THEN POKE A,Z: LET A=A+1: LET T=T+Z: GOTO
20
30 DATA 221,33,156,255,207,59,17,171,255,6,9,207,60,18,19
32 DATA 16,250,237,91,174,255,237,75,172,255,207,61,49,176
34 DATA 94,175,211,254,195,0,255,1,0,0,100,4,83,116,97,114
36 DATA 115,116,114,105,107,49,3,4,191,0,64,0,0,255,255,999
40 IF T<>7025 THEN PRINT "ERROR IN DATA": STOP
```

MATCH-DAY 2 (128K Version).

Match-Day 2 has the same protection as Tai-Pan, so type in the Tai-Pan listing then change the following lines:-

210 LET D=32
240 POKE 40093,201

Now you can play the game and Snapshot it at any point. The coding of the Match-Day 2 protection is slightly different, but its of the same type. Instead of outputting 229 to channel 15 of the sound chip, they output 94.
POKES_FOR_CYBERNOID.

POKE 36687,0 :- Infinite Lives.
POKE 36617,195 :- Invincibility.
POKE 31818,0 :- Infinite Weapons.
POKE 30377,0 :- To stop gaining lives. (Use with inf. lives)
POKE 25941,n:- To start with 'n' lives.
POKE 36587,0: POKE 36588,0: POKE 36589,0 :- These pokes will stop you from being killed if you wait in a room too long.

NEXT MONTH.

Next month I will be doing Part 1 of a conversion of KARNOV to disc, the game uses over 300K.

If anyone has problems with software of one kind or another then write to me, c/o FORMAT, as I may be able to help you (given a little time) through these pages.

* - * - * - *

BACK ISSUES

For members who have missed past issues of FORMAT (or perhaps worn theirs out through constant use) we run a back-issue service.

The cost is 65p per issue (85p overseas) which includes postage. Your copies will be sent out as soon as possible but, in order to keep printing costs down, it may take up to 28 days for us to dispatch. Make cheques, drawn on UK bank (or Euro-Cheques, cash, P.O.) payable to INDUG.

Available Issues

All issues are available starting with Issue #1 - August 1987.

Please WRITE YOUR ORDER ON A SEPARATE PIECE OF PAPER. DO NOT include correspondence with orders and remember your membership number or orders will be delayed.

BETTER BASIC

Logical Conditions

By: KEN ELSTON.

This is the first of an irregular series which, I hope, will help many people improve their basic programming skills. Each article will usually deal with one aspect of basic. If there are any areas you would like to see explained, why not drop me a line and I will try to cover it in a future article in FORMAT.

A conditional statement is one in which we use the statement IF...THEN. IF a statement is true, THEN do something. They form the real power-house of Sinclair Basic and are far more flexible and powerful than those supplied in most other basics.

In practice, they allow the computer to make decisions based on information it has or is given. Using <>, <=, >= and the logical operations AND, OR, NOT, some very powerful statements can be made, giving multiple choices in one line.

You should be familiar with the mathematical symbols above by now, but to be sure:

A<B means A is less than B
A>B means A is greater than B
A=B means A equals B
A<>B means A is not equal to B
A<=B means A is less than or equal to B
A>=B means A is greater than or equal to B

A simple demonstration of this might be:

```
10 PRINT "ENTER A NUMBER IN THE RANGE 0 TO 100"  
20 INPUT A  
25 PRINT A  
30 IF A>=100 THEN GOTO 100  
40 IF A<=0 THEN GOTO 100  
50 PRINT "CONGRATULATIONS, GENIUS"  
60 STOP  
100 PRINT "NITWIT, TRY AGAIN"  
110 PRINT  
120 GOTO 10
```

Lines 30 and 40 determine whether the number you entered falls within the parameters set.

Now lets look at the logical operators.

AND: A statement is true if both one relation AND another relation is true.

OR: A statement is true if either one relation OR another relation is true.

NOT: A NOT statement is true if the relation is false, or false if the relation is true, in other words it reverses the logic of what comes after.

Those are three mouthfuls, but let's illustrate them. Firstly combine lines 30 and 40 of the above program to become:

```
30 IF A>=100 OR A<=0 THEN GOTO 100
```

Delete line 40. If either relation is true then the parameters are not met and we jump to line 100 which advises us to re-examine our basic mathematical premises. Alternatively, we could say:

```
30 IF A<100 AND A>0 THEN PRINT "WELL DONE BRAINY": STOP
40 PRINT "WRONG, TRY AGAIN"
50 PRINT
60 GOTO 10
```

If both relations are true then the computer gives due credit to our elevated IQ and stops with an error message 9 STOP statement, 30:2. If either of the relations is not true the program 'falls through' line 30 and continues. As you see, this takes up less programming space than our first version and its more readable as well.

To illustrate NOT, we could say:

```
30 IF NOT A<100 OR NOT A>0 THEN GOTO 100
40 PRINT "CONGRATULATIONS GENIUS":STOP
100 PRINT "NITWIT, TRY AGAIN"
110 GOTO 10
```

The way the computer checks what it should be doing when it comes to these logical operators is to assign the value 1 to an expression if it is true, and 0 if untrue (false). It then compares the two (or more) expressions using the logical operations and decides whether to continue along the line or drop through before the end of the line:

```
1 AND 1 continues
1 OR 1 continues
1 OR 0 continues
0 OR 1 continues
NOT 0 continues
Any other relation falls through.
```

From this it can be seen that AND can act as =. Look at the following program:

```
10 LET A=INT (RND*11)
20 GOTO (50 AND A=10) + (60 AND A <> 10)
50 PRINT "A=10": STOP
60 PRINT "A<>10, A=";A
```

Line 20 gives the computer the choice of 2 lines to go to. If A=10 then the first expression is true and the program jumps or

goes to line 50. The second expression would be untrue if A=10 and thus the expression is 0 - 50+0=50. Alternatively if A is not 10 then the first expression is untrue and thus equals 0 and the second is true and equals 60. The line could also logically be written:

```
20 GOTO 50*(A=10)+60*(NOT A=10)
```

Since if A=10 then the expression A=10 is equal to 1 while NOT A=10 is equal to 0. So 50*1+60*0=50, rather than having several lines of IF A=? THEN GOTO... you can combine them into one line. Remember that if none of the expressions are true, you GOTO 0, or the beginning of the program.

Now try these lines and see what you get:

```
10 LET A=(NOT 1=1) and 10 LET A=(1=1)
20 PRINT "A";A 20 PRINT "A";A
```

Also, if you ever need to check whether a variable is 0, you can say:

```
10 LET A=INT (RND*3)
20 IF A THEN PRINT "A IS EITHER 1 OR 2", "A=": STOP
30 PRINT "A MUST BE 0", "A=";A
```

In line 20 the statement IF A THEN can continue only if A is true, ie, A is not 0. If A is 0, it falls through and prints the next line.

Finally try this line:

```
10 PRINT "This is "; "NOT " AND RND>.5; "the end...": GOTO 10
```

And I'll leave you to think of what you can do with a powerful feature like that.

SMALL ADDS.

HELLO I'm a German Spectrum/Disciple user. I'm seeking a British person who is using a Disciple/Plus D and is willing to correspond with me, if possible in German (this letter was translated by a friend). My Address is Paul Webranitz, Borgasse 16, 5561 Kinheim, West Germany.

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LETTAHEAD

By: JOHN WASE.

LETTAHEAD PLUS is an old favourite which will produce letterheads, labels or small tickets in a variety of typefaces. It is now available in a version that is fully DISCIPLINE PLUS D compatible. The new version loads with the standard menu: select "1" for interfaces and you get an impressive screenful of options - now up to 15 interfaces supported including, or course, DISCIPLINE / PLUS D (already selected).

Back to the main menu - choose "D" for Design and either Heading or Label: select Pen and away you go: letters of the typeface and size you have chosen typed in appear on the screen exactly as they will eventually look. Five fonts are initially loaded in a block: you can alter height or width before you type them in. A further twenty faces (in four more blocks of five) are instantly available to load and you can have up to five fonts, assorted from different blocks if you like, in memory at any one time. And if you don't like these there is also a built-in font editor so that you can design your own.

You can print to any part of the screen, box a part or the whole screen, invert (white on black) or erase an area and scroll any part of the screen sideways or up and down (type first, centre it afterwards). One or two additional crude artwork facilities are there for making logos for letterheads or labels (arc, circle, plot draw and rapid fill) but this is not a graphics program. It will, however, accept pieces from graphics programs which can be loaded as SCREEN\$, edited, merged and generally manipulated using the scratch-pad provided.

The "Print" menu is comprehensive, allowing dumps to the printer in a variety of sizes (labels can be printed in rows of three) and the program is designed for a range of printers with hints and patches for the more awkward ones. The main weakness and strength of Lettahead Plus is that much is written in Basic. It is user friendly and although not totally error-trapped, can usually be recovered with "GO TO 1". Customisation is thus easy (remember Tasword 2) but the program tends to be slow. A great deal of thought has gone into the design however, and the manual is excellent.

I find it a thoroughly practical and useful utility and would recommend it as being very good value. One final point - the DISCIPLINE review discs were neatly labelled using Lettahead. I like a firm with faith in their own products!

PRICE £9.50 cass £10.50 disc (inc P&P) from Bradway Software, Hillset, Up Pudley, Grindleford, Sheffield

FEET & INCHES

By: Paul Stack.

If, like me, you went through school before METRES ruled supreme (pun intended) then you probably still prefer to work in FEET and INCHES. Now computers are great at dealing with decimal numbers but I have never seen one that works in base twelve which is what I really need to add-up columns of figures in feet and inches.

This small program is my somewhat feeble attempt to solve my problem. I don't profess to be a good programmer, but it does work, which I believe is the real test. When run, it waits for a number to be input. Whole numbers are taken as feet, decimal numbers as feet and inches i.e. 3.6 is read as 3'6". After each entry the value is printed on the screen. Pressing enter without a value will cause the program to print the running total, that is indicated on screen by ** to the right of the number. Entering 'c' (upper or lower case) will clear the screen and reset the total to zero.

This was fine, but I needed to work to eighths of an inch and that took some time to work out. The following table will serve to explain the input method I adopted.

ENTER	TAKEN TO MEAN
5.4	5'4"
3.11	3'11"
2.12	2'0:1/2" - 2feet and half an inch.
10.1014	10'10:1/4" - 10feet 10 and a quarter inches.
-3.58	-3'0:5/8"

Note how fractions are entered and that negative figures are allowed. After inputting a number the program decodes the line (be warned there is little error trapping) and then displays it in the correct format. If anyone can come up with a more versatile program I would love to see it published.

```
1 REM ** FEET & INCHES ADDER.
2 REM ** PAUL STACK. 1988.
10 LET B$="-1/8-1/4-3/8-1/2-5/8-3/4-7/8"
20 LET T=0: REM zero total
30 CLS
40 INPUT LINE A$: REM get value
50 IF A$="" THEN GOTO 280: REM go print total
60 IF A$="c" OR A$="C" THEN GOTO 20: REM clear and restart
70 LET S=0
80 IF A$(1)="-" THEN LET S=1: LET A$=A$(2 TO ): REM negatives
90 LET X=0
100 LET Y=0
110 LET N=0
120 FOR I=1 TO LEN A$
```

THE HELP PAGE

Problems with your DISCIPLE, PLUS D or Spectrum. Dont worry, let the HELP PAGE sort them out. Note! One question per letter please.

PAPER FEED

I have just bought a second hand Amstrad DMP2000 dot-matrix printer to use with my PLUS D. When I use it to LLIST programs I keep getting about 10 blank lines appearing at random, sometimes in the middle of a page. Whats going wrong? Is the printer faulty?

S.G.Mali. Kent.

I dont have a manual on the DMP2000 so I cant tell you exactly what to do to cure your problem, but I can tell you whats going wrong and point you in the right direction.

All printers have a set of 'dip switches' that control various functions and in your case one or more have been set in what is for you the wrong way. First the gap in your listings is being caused by a switch setting to give a 'SKIP OVER PERFORATIONS' function. This normally skips about one inch at the bottom of the page but if you dont line up the paper, before switching on the printer the gap will appear one page length from the starting position.

If you still want the Skip function, but find its not coming in the same place on each page, you should check the switches that set 'FORM LENGTH'. These normally tell the printer how long (in inches) a sheet of paper is. If set to the wrong length the Skip Perforation or Form Feed (CHR\$12) are not much use.

So look up the dip switches in your manual and you should be able to work things out

AUTO FIRE

I have tried several joysticks, with Auto-Fire options, on my DISCIPLE but I cant get one to work. Why.

Steve Coller. Liverpool.

A simple question Steve, but not quite a simple answer. As you probably know joysticks work by sending a voltage down one line, then finding which, if any, of the return lines carries the voltage back. The joystick is therefore just a collection of switches with a common supply line. Fine, but the returning voltage must be high enough to be detected by the chips in the DISCIPLE. With the vast majority of joysticks there is very little difference between the output voltage and the input, but on joysticks with auto-fire circuits the drop can be quite large. In otherwords the auto-fire circuit is taking too much power and the DISCIPLE cant do its job.

A long time ago I saw an auto-fire joystick with a battery to power its works, Perhaps a reader could come up with a source?

```
130 IF A$(I)="" THEN GOTO 170: REM found point
140 NEXT I
150 LET X=VAL A$: REM its a whole number
160 GOTO 200
170 IF I>1 THEN LET X=VAL A$( TO I-1): REM get whole part in X
180 LET A$=A$(I+1 TO ): REM lose whole part
190 GOSUB 900+(100*LEN A$): REM go work out fraction
200 IF S THEN PRINT "-";
210 PRINT X;" ";Y;: REM print feet and inches
220 IF N THEN PRINT ":";N;" ";D;: LET Y=Y+N/D; REM fraction
230 PRINT """"
240 LET W=12*X+Y:REM store in W
250 IF S THEN LET W=-W
260 LET T=T+W: REM add into total
270 GOTO 40: REM go get next value
280 LET W=T
290 GOSUB 310: REM go print total
300 GOTO 40
310 LET Z=ABS W
320 LET X=INT (Z/12)
330 LET Y=Z-12*X
340 LET Z=Y-INT Y
350 PRINT " " AND W<0;X;" ";INT Y;
360 IF Z THEN LET N=INT (32*Z+.1): PRINT ":";B$(N-2 TO N);
370 PRINT """" **: REM flag total line
380 RETURN
1000 REM whole inches
1010 LET Y=VAL A$:
1020 RETURN
1100 REM two digits after point
1110 IF VAL A$<12 THEN GOTO 1000
1120 LET N=VAL A$(1)
1130 LET D=VAL A$(2)
1140 RETURN
1200 REM three digits after point
1210 LET Y=VAL A$(1)
1220 LET N=VAL A$(2)
1230 LET D=VAL A$(3)
1240 RETURN
1300 REM four digits after point
1310 LET Y=VAL A$( TO 2)
1320 LET N=VAL A$(3)
1330 LET D=VAL A$(4)
1340 RETURN
```

VARIABLES USED.

A\$ Input String.
B\$ Fractions for printing.
X Feet.
Y Whole Inches and Decimal inches.
N 4 * number of eighths.
Z Inches with fraction expressed as decimal.
W Last value displayed (Decimal inches).
S Sign: 0=+ 1=-
T Total (Decimal inches).
I Counter.

SHORTED MACHINE

I have had an accident with my 48k Spectrum. It was pulled off the table, when it was switched on, and the PLUS D was knocked off the back. Now the computer still works but the PLUS D wont, although it will still work on my 128+2. What have I done?

Jim Preston. Cardiff.

First take the cover off your 48k and examine the edge connector, one of the tracks may be broken. If not, the problem is almost sure to be the the M1 line on the Z80. A +12v (unsmoothed) line is right next to it on the edge connector and when the PLUS D parted company with the Spectrum, it may well have shorted the M1 line. You will need to send it away for repair or try replacing the Z80 chip yourself.

- - - - -

SPEAK TO ME

I have tried for some time to get my old Currah Microspeech unit to work with my PLUS D. It will connect, using the Microslot, but I cant get the combined system to power-up. Any ideas to help me?

Kevin Brown. Plymouth. Kent.

Sorry Kev but the Currah Microspeech wont work. It grabs control of the spectrum at several points and gets very confused when the PLUS D is on at the same time. However, when the Two-Face is released by MGT you should be able to get round the problem by having only one interface switched on at a time.

Meanwhile, if anyone out there knows who designed the Microspeech, I would like to hear, it was once one of my favourite toys and I'm sure it only needs a little redesign to make it work.

- - - - -

FIND THE BOOK

I have found several references to the Spectrum ROM Disassembly book by Ian Logan but can't find it in local bookshops? Can you help me track one down.

Al Little. Manchester.

The book you are after was published by Melbourne House, ISBN 0 861611 116 0. Melbourne House no longer seem to be publishing in the UK but you may be able to order the book (and every machine code programmer needs one) from larger bookshops.

- - - - -

More from the HELP PAGE next month..

Remember, for a quick answer to your problem use the HOTLINE.

THE MICRONET PAGE

A MONTHLY FEATURE

By: Patrick McMahon.

The news on Micronet is as you might expect mainly computer related, recent stories have been the Prince Philip/Prestel hack and other associated things such as the Germany Hackers. I will not go into details now as you have probably heard about them from countless other sources. There are, however, other stories on the news section totally unconnected to computers so the individual with little or no knowledge of computers can gain something from the service.

The news items are usually replaced every week, giving you plenty of time to read each and every one, there is almost always a new news item every evening so its worth checking the news index each time you log-on. The news index can be reached from the Micronet front page or by keying *NEWS#.

By far the most important news area on Prestel, as far as many are concerned, is Prestel's Citiservice which provides up to the minute information on stocks and shares. A recent addition to the companies already operating part of this service is Whiteaway Laidlaw who offer customers an account facility and the chance to withdraw their money while on Prestel. The interest on the accounts is currently running at 3.6%. The service is accessed via a Gateway on Prestel and is well worth a look.

A completely new news service is now emerging called the 'Dow Jones Retrieval Service'. This offers a wide variety of information (see below) and is expanding.

Information available via Dow Jones Retrieval service:-

- News - Washington Post
- Japan Economic Daily
- Dow Jones News
- News/Retrieval World Report
- Newsnet Newsflash
- Wall Street Journal Highlights
- Weekly Economic Update
- The Business Library
- The Business Dateline

- Busines & Finance - Economic and Foreign Exchange Survey
- Wall Street Week Online
- Real Time Quotes
- Historical Dow Jones Averages
- Tracking Service
- Future Quotes
- Insider Trading Monitor

Company Information - Corporate Earnings Estimation
Disclosure II
Fidelity Investor's Express
Investext

Markets - Media General

General - Official Airline Guide
Cinema Movie reviews
Magills Online Book Reviews
News Retrieval Sports Report
News Retrieval Weather Report
Symbols Directory
Petersons College Guide
Medical and Drug Reference

The weather coverage on Micronet is also quite reasonable, being updated at regular intervals, and is surprisingly reliable. With maps and forecasts the service is similar to the teletex equivalent on BBC/ITV but a little more extensive, and can be accessed by keying *WEATHER# from any page on Micronet.

If anyone has any comments or problems, I can be contacted through my Micronet mailbox. The number is 702712746.

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SNAPPOKE

ENTER POKES IN 48K OR 128K WITH THIS SYSTEM FILE EXTENTION

By: Steve Nutting.

The REM listing below is to be used in conjunction with the DATA COMPILIER (see issues #7 and #10).

First you need to type the Basic REM program in, if you are a:-
DISCIPLÉ User miss out lines 200 onwards.
PLUS D owners miss out line 180 and 190.

Next we need to save the Basic temporarily just in case the DATA compiler should crash for some unusual circumstance. So type in:- SAVE d1"temp" Next load in the DATA COMPILER Machine code routine, type CLEAR 64511: LOAD d1"datacomp" CODE: RUN

If there are no errors type PRINT PEEK 30816 if it does not display 201 then check lines 140 and 150 for correct numbers of zero data. Disciple users type :- RANDOMIZE USR 30817: SAVE d1"SYSNAP" CODE 0,6656 PLUS D users type :- RANDOMIZE USR 30832: SAVE d1"+SYSNAP" CODE 8192,6656

Now that we have a new altered system file its now possible to enter POKES for commercial games i.e. infinite lives etc. You can find such POKES in most computer games magazines usually under the name of MULTIFACE POKES. So to test the Snapshot routine. Load in a game, either from Tape or Disc, which you have the pokes for. Press the Snapshot button and then key 0 if you are a PLUS D owner or key 1 for the DISCIPLÉ. The game will halt, and you will notice displayed at the top of the screen a bar with 3 values. The first is the interrupt value, next the machine stack pointer and finally the jump address where the game will continue when you abort the Snapshot menu. These values will be of great use to advance programmers and hackers. To enter Pokes one simply types in the address (23296 to 65535) and then the value between 0-255 there is no need to press ENTER in any of the inputs but the actual poke byte must be a 3 digit number for example if you need to POKE 32768,3 you would type in 32768 003 another example POKE 41561,62 type in 41561 062. To abort the Snapshot menu at any time press SPACE.

DISCIPLÉ owners please note: like the Tape-Disc system file do not use the Printer in any way.

```
1 CLEAR 29999: RANDOMIZE USR 64512
5 REM s30000
10 REM 237,115,4,25,33,32,64,17,196,24,1,32,0,237,176,49,63,64,
62,63,237,71,237,86,1,126,18,205,207,23,33,0,88,17,228,24,1,32,0,
237,176,33,0,64,6,8,197,229,84,93,19,1:4275
20 REM 31,0,54,0,237,176,225,36,193,16,239,33,0,88,17,1,88,1,31
,0,54,121,237,176,205,16,25,33,0,64,221,33,6,25,6,5,205,179,22,2
```




HINTS & TIPS

Readers Hints & Tips to help everyone get the most from their computing.

Send your Hint or Tip for the DISCiPLE, PLUS-D or Spectrum to the address on page 2. Try to keep them short and sweet so we can get as many in as possible.

KEMPSTON MOUSE

For anyone who is interested, here are the pokes to get the DISCiPLE version of the Kempston Mouse working with the OCP Art Studio. The original mouse was read with IN 223 while the DISCiPLE version needs IN 247 to work.

40831,24,53
 40946,62,251,24,12,62,255,24,8,62,250,219,247,246,252,60,201,219,247,201
 31994,4 (0=Keys, 2=Kempston Joystick, 4=AMX Mouse)
 31844,100,135,110,135,110,135,111,135,12,0,175,201
 31862,207,57
 31993,1 (Scalling Factor 1-5)

If you did the conversion to disc (issue #8) then load the code file, do the pokes, and resave. If you still work with the tape version, go through the set up, press caps-shift/6 when asked if you want to save, then enter the pokes. For the Extended Art Studio use the following pokes.

39796,62,251,219,247
 39816,62,255,219,247
 39835,62,250,219,247
 31944,5

Now can anyone help me with The Artist?

P.Webranitz. West Germany.

PREVENTING OVERFLOW

A few issues ago there was a question in the Help Page about line overflow when printing E,#,(c) and UDG's. It was explained that this was because they were printed in Bit Image Mode. On the DISCiPLE / PLUS D this is normally 'Single Density' (Epson code 27,75) so the characters are wider than the standard ones. But if you use 'Double Density mode' (Epson code 27,76) the characters are narrower so, although you still get a ragged edge, you dont get overflow.

Jack Tate. Bournemouth.

Writing for FORMAT

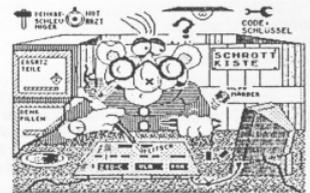
Contributions from FORMAT readers are always very welcome. We like to publish articles on any subject relating to the SPECTRUM, DISCiPLE, PLUS D or computing in general.

Some points to bear in mind

- * Ideally submit your article as a Tasword 2, The Last Word, or similar text file (with a printed copy). We can accept disc (5.25 or 3.5) or tape.
- * Any graphics or diagrams should be drawn, in black, at twice (2x) normal size for reduction. Pack well, Do Not crease.
- * Mark everything with your name, address and telephone number.
- * Keep a copy, DO NOT send your only version, the post office is not that good (and nor are we).
- * Remember to say which version of the DOS your program/article was written for and if 48k or 128k Spectrum.
- * Feel free to contact us with your ideas before committing yourself to writing that long article. We will help you in every way we can.
- * DO NOT COPY ITEMS FROM OTHER MAGAZINES.

Remember we pay for all articles and programs published in FORMAT, so get writing.

ART SPOT



Both the pictures in this months ART SPOT come from Paul Webranitz in West Germany.

They were produced with the OCP Art Studio.

Pictures for the ART SPOT should be printed using a good black ribbon. Send them flat, do not fold.

