

Einstein Magazine

& ALL MICRO NEWS

Number 92

Published for users of Einstein (and other) computers
by RPM Society.

Publisher and Secretary:-

A E Adams, Ivy Cottage, Church road, New Romney,
KENT TN28 8TY

EDITOR: Ted Cawkwell

9 King Street Winterton N.Lincs. DN15 9RN

SHOWS, SOFTWARE LIBRARY and USEFUL BITS

Steve Potts 85 Thorold Ave, Cranwell Village, Lincs.
NG34 8DS



Great Moments in Computer History: 1
The Einstein Boffin searches for the Millennium Bug



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AND WHAT'S WRONG WITH BASIC?

by John Marriott

As my interest is towards programming and "useful" hardware add-ons, it seems a waste of time to me in playing games on a £400.00p computer (says he, playing PINBALL on his Spectrum+3 and SOLITAIRE on his Amstrad 3286 PCI) when it could be controlling a building's energy systems, monitoring alarm circuits - all at a fraction of what a Manufacturer would charge for a "special but limited function product" which can't be upgraded/reprogrammed other than by expensive replacement! BUT - there is also the computer program which in trying to be "many things to many people" becomes over-complex and EXPENSIVE!

The last Company I worked for before I took early retirement ran BORLAND'S PARADOX on its PC. A very good program, a very complete program, BUT expensive to buy, a library of manuals, the program only about 5% utilised - with most of the Staff who should have been using it finding every reason why not!

At that time the "Maintenance Logbooks" for the Area Building Complexes were being altered/re-furbished/changed & etc. with a Foreman Fitter solely responsible for that work AND he should have been using PARADOX! Look that word up in the dictionary and ponder on BORLAND'S choice of word! Well, this Foreman had enough skill to turn on and load his Spectrum+2 and play a game - badly - but that's no judgement against a highly skilled Fitter, just that his training in that area was extremely limited! Probably because I was of equal/sideways grading to him and a lot of my Building Control Systems were computurish based, but he sought my help and advice...

...the outcome was that his Spectrum+2, 12" mono TV and a very old 132 column CENTRONICS dot matrix door-stop of a printer (with a Serial Interface which the Manufacturers claimed they'd never made, but seemed to know a lot about!) appeared in his office (the printer courtesy of an Advertiser in good old MICRO MART and mileage to collect it 35 miles "up the road" charged to the Government) with a rather early Database program. It doesn't matter "whose" or "which" data-base program - sufficient to say that to "sort" 2500 records would take about 11 days NON-STOP! It also had some other "funnies" which made life with the printer difficult, so I, no - we, decided that something should be done BUT to change to another database program wasn't easy seeing as how many "records" had already been entered.

At present, the program was not "memory dependant" - this is where the program, or a section of the program HAS to be at a certain place in memory - come what may! A simple programming trick used on the Sinclair ZX81 was to put any machine code program right at the START of a BASIC program...

...e.g.

```
10 REM *****
```

```
20 CLS: PRINT AT etc.
```

This RESERVED memory and the code could be POKED into the *'s and then a RANDOMIZE USR<memory number><enter> call would RUN it. This could also be used in the Spectrum, for IF the section of the BASIC program which did the POKEing was at say LINE 9500 to 9600 with a STOP Command, RUN 9500<enter> would POKE that code in, those lines could then be deleted and the WHOLE program SAVED off! A sneaky form of hybrid programming without the delay of having to reLOAD both BASIC and Machine Code programs AND the delay involved if things needed to be "set up".

Mind you, LISTing such a program did result in a "funny" LINE 10, and trying to print/list it could drive your printer daft! The fact being that whatever happened, YOU KNEW where that code was - provided you didn't enter any LINE less than/equal to 10!

In Spectrum BASIC, the VARIABLES follow on from the BASIC Program - which means that you'll never know where they are in ROM, where they start or finish! Seems a daft way - except it doesn't use/waste memory unnecessarily and there is a little "pigeon hole" called VARS and Spectrum BASIC has a clear way of defining different VARIABLES e.g. DIM a\$(9,9) a=1 x=5 DIM a(20) etc. Once you've decided that the BASIC portion of your program is stable/complete, this fact can be exploited, both for copyright protection and making the program memory dependant as well as speed.

Going back to BORLAND'S PARADOX - most programs try to be everything to every-body and fail miserably. This is being typed on an APRICOT XEN-i 286 PC running TASWORD PC - now the Einstein version of TASWORD is a poor thing by comparison, although I felt the more expensive KUMA WORDPRO pathetic ... and sent it back! On the PC version there's a mail-merge, spell checker, note book & etc. ALL of which I paid for, ALL of which gets loaded, NONE of which I've any use for! So, with the Einstein version I use 85% of what I paid for, the PC version 30%, and when I looked at the DATABASE Program being used on the Spectrum I realised that if I cut out ALL the SOUND, COLOUR and FLASH Commands, used the PAUSE 0 Command (which waits for any key press!) and then check which key had been pressed, and send the program bac k

in a loop if the wrong key, cut the program by a third! Then switching the "set-up" part of the program to the end improved the running speed by a good 50%. I then looked at the CLS Command - for this was usually followed with a lot of PRINT AT Commands, and even if made as a long STRING gave RAM use penalties, especially as Spectrum BASIC has a "strange" way of coding numbers in BASIC Line settings - which is another way to protect/copyright/ memory dependant your program (perhaps more later?).

The compromise was - if at Screen Position 5,10 the word EINSTEIN was used, then <line>PRINT AT 5,10;" (10 spaces)"<line end> would psuedo-CLS just a bit of the screen, and that gave me about a 10% extra speed.

Up to now I'd really done nothing out of the ordinary - other than think! All the records so far typed in could still be accessed as the BASIC program was re-built around an actual running program ... yes, the Spectrum may get knocked, may not have the best BASIC, but it has a robust SYNTAX which is checked BEFORE being accepted as functional into the main body of a BASIC Program!

As this DATABASE Program saved EVERYTHING off, blank DIMensioned cells and all, I looked at what we(!) only wanted the program to do - which turned out simply to be just three fields ... Book No. ... Group No. ... Serial No. all being numerical of 6, 2 & 4 characters in length. This would easily permit 2500 files, which was felt to be excessive until out of the blue the Plymouth Area's log- books were part of Exeter's "update" routine...

...sometimes you don't even have to volunteer!

Taking a calculated gamble - for as I've stated earlier, if you have a BREAK whilst running a Spectrum Program and without thinking type RUN<enter>, ALL your VARIABLES are lost and with the MEMORY BANK SWITCHING which the 128K Spectrums have, earlier and simpler 48K ERROR Traps can't be used/are difficult, as I wanted the Spectrum+2 to stay in 128K MODE so that I could use the RS232 PORT for that Serial Interfaced Printer, and I'd got the Foreman to automatically use GOTO<line number><enter>, I felt that as the VARIABLES had already been set up and were SAVED off with the functioning program, then some of the ORIGINAL set-up LINES could be safely deleted ... sounds a bit penny-pinching, but when you're using cassette media SAVE/LOAD speeds - 15 seconds is for ever!

The next piece of penny-pinching was "printing to screen or printer" routine, as PRINT#3 "Einstein" is the same as LPRINT "Einstein" to the Spectrum, so with PRINT#p with the VARIABLE p being given a value of 2 by the S-key press, or 3 by the P-key press I'd thought I'd saved more lines/memory/time ... except Spectrum BASIC, because of a bug, sticks a CARRIAGE RETURN in, so fouls up print-outs!

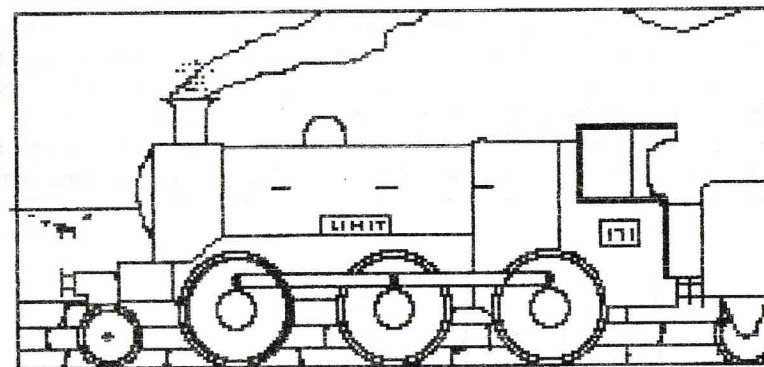
END OF PART ONE. Continued next issue.

SKETCH

A drawing program with colour printing option.

by Ted Cawkwell 1998

This is an advanced version of the SKETCH in Einstein Magazine No. 86 and gives the option of printing 3 colour separations to a suitable printer,



TRAIN.OBJ

where they are superimposed. The one I use is the Canon BJC4100, but all of the present 4000 range will work. It will very likely work with colour Dot Matrix Printers if they have a good sheet feeder, though the Escape codes for the printer may need amending according to make.

The choice of subject for the demonstration print was because I needed a picture with large areas of single colour and circles to show the program's mastery of the usual egg shapes, plus the fact that I just like trains!

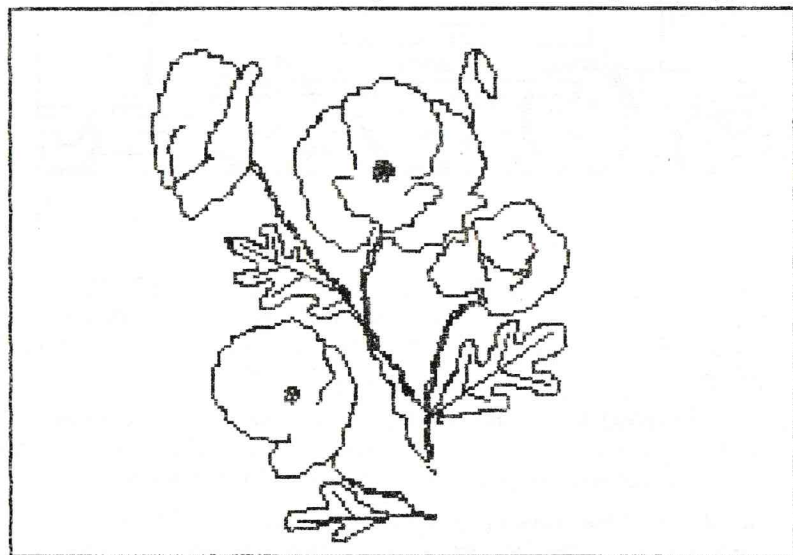
First, a run down of the drawing program. The cursor can have one of three shapes, an arrow, a smaller arrow or a cross. These are obtained by pressing D, U or R respectively. (Draw, pen Up and Rubout). Pen up moves fastest and doesn't draw at all. Rubout is quite slow. Pressing S when using D or U slows down the movement to allow greater precision of setting. Finally, M selects the Menu; if M seems reluctant to work immediately, hitting D or U followed by M will do the trick. (I am still trying to sort this odd bug!)

The menu appears at the bottom of the screen, the capital letter of each command being the one to use. I had to use K for colour as C is used for circle. The Function Keys are programmed for the colour values to save having to look it up. They range from F2 med green to ShF/7 (the 15th key) white, i.e. the same numbers used for BCOL etc. A card for above the keys is easy to make.

The commands for ellipses and polygons (Cir and Box) are perhaps a bit strange at first. You are asked to input three digits in a certain range according to the aspect of the figure, as shown in the command line.

Normally, if you draw a circle or square you will find it a different shape when you make a print - an egg or rectangle. By using the correct number it is possible to ensure that the shape is printed correctly.

To get a correctly PRINTED circle on screen you must input 1.5 for printers that use 10 cpi (some use 12cpi) and note that the screen image is slightly flattened. The correct input for a 12cpi printer e.g. TP80, is 1.4. For a circle on SCREEN you must input 2.0. Note that the decimal point counts as a digit, it is possible to input .01 or 999 or anything in between, though in practice 6.0 or 7.0 is about the largest useable. Nothing will happen until

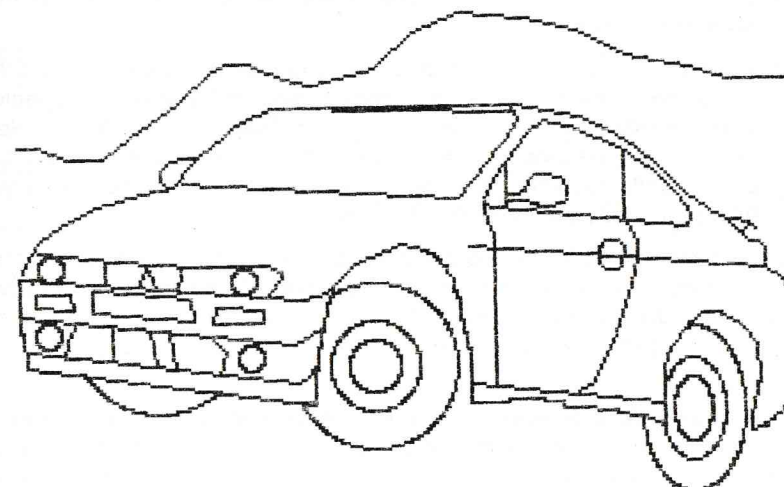


POPPY.OBJ

the third digit is entered. The drawing is stopped using SPACE. Values less than 2 will give horizontal figures and above 2 vertical ones. A bit of practice will soon make things clear.

For mathematicians, reference to ELLIPSE (or POLY) in the Manual gives T, the ellipse qualifier, a default value of 4/3, the aspect ratio of the screen. What I have done is to divide the value input by 1.5, thus an entered 1.5 becomes 1.0, giving a correct printed circle, and an entered 2.0 becomes 2/1.5 or 4/3 for a correct screen appearance. Clearly easier than trying to correct by 1.333333333333333!

The other menu commands are straightforward. Note that the Text option will only work across to the 32nd column and also that it makes a good



CAR.OBJ

giant rubber, but be careful with it. The idea is to bring the cursor down the left side and type a title or whatever under the picture. The text is really too large for labelling within most drawings.

Drawing.

The D cursor draws from its last position to its present one, so some care has to be used not to zoom it round and press fire. you will get lines you did not intend. Always use U to zoom around and change to D when you get where you want to be. Selecting U resets the origin to the new cursor position.

The R cursor will also plot points when the fire button is pressed. Fire and move away to leave a dot, or series of dots. Only the centre of the cross

rub out when using the R cursor. The cursors are all coloured grey so that they can be seen on a white background.

Using Separation Prints.

The technique of using separation prints is not new but takes a bit of getting used to unless you have been a keen photographer or a printer in a former life. The idea is to start with a B/W outline drawing and then make from it 3 more drawings containing only the pixels required for the Cyan, Magenta or Yellow parts of the finished picture. When these are superimposed in printing a full colour picture is formed.

This takes a bit of thinking about because you need to bear in mind that cyan plus yellow = green, cyan + magenta = blue and yellow + magenta = red, to give the other printable colours. Cyan + Magenta + yellow = black, but black can often be overlaid separately with advantage. Another thing is that you are really working on a negative, the black background of your screen being the white paper of the final print.

It pays to remember that any colour pixel on the SCREEN will be printed, I therefore, always work in white on black, though it is sometimes handy to use colour to identify certain pixels. In the TRAIN drawings I used red and yellow for the sparks coming from the funnel, so that they were easily picked out.

When you have decided which areas to fill in your drawings it is essential to make sure that the outline is fully complete. The fill has an embarrassing way of leaking out and ruining the work. Likewise, make sure the cursor is INSIDE the area to be filled.

One difficult action is to get small white objects in a large coloured area, like the sheep in the green field in the demo. If you look at the sep. drawings you will see that I had to outline the shapes completely so that they would not be filled. As they were on 2 seps, cyan and yellow for the field, it would have been very difficult to pick the shapes out twice in exactly the same positions AFTER the fill.

It should be obvious that the seps are titled TRAINC, TRAINM and TRAINY to show that they are the cyan, magenta and yellow copies respectively, but any system of your own will serve as well. You are required to declare the three files before the printing process starts.

The saved drawings take 12k of disk space EACH so I would recommend putting the necessary files on a DD disk of their own, it is very easy to fill up a 188k side of a 3" disk.

The files needed are:-

SKETCH.XBS SCRNSL.OBJ JOYS.OBJ GDUMP.OBJ

The TRAIN series, if you want to try your hand, and possibly the Doc. file.

Always change drive to the one you are working from as Sketch makes frequent access to the machine code (OBJ) files which must be on the drive in use.

In passing, it is probably worth noting that a Colour Monitor is not needed to produce your colour prints but is essential if you wish to make colour screens for your programs - a quite different technique.

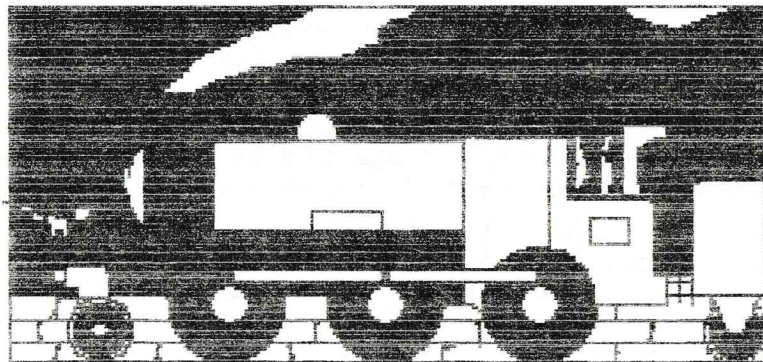
To make the colour pictures more realistic I am currently experimenting with overprinting the same colour to give denser parts of the image. If NIL is input when the colour print routine requests, for example, a file for Cyan image, which is not required when the intention is to reinforce the RED parts of the picture, then the program skips to the next file. NIL may be used for any of the three files, so that you can choose your overlay colour. Using the BJC4100, if the print is made in High Speed mode a draft print is made with each alternate colour spot missed (saves ink too) so it is possible to lay another lot of the same colour in parts of the original to give a 2 tone effect. I find that prints in High Quality mode are a bit overpowering but have acquired some High Gloss paper to eventually try the full monte when I produce something that is worth it.

The accuracy of registration of the 4100 is the key to this process but I find it pays to be careful. Rather than just slipping the sheet back on top of the pile in the feeder, I always make sure I have a dozen or so sheets in the feeder and take them out and square up with the replaced one on top and carefully put them back before hitting the space bar for the next run. I get very few failures this way. I also use A5 paper as there is less waste. I can reverse the paper to get two images on each sheet. So far, I have managed to do as many as seven superimpositions using this method, with only barely visible lack of registration in the lines round the picture.

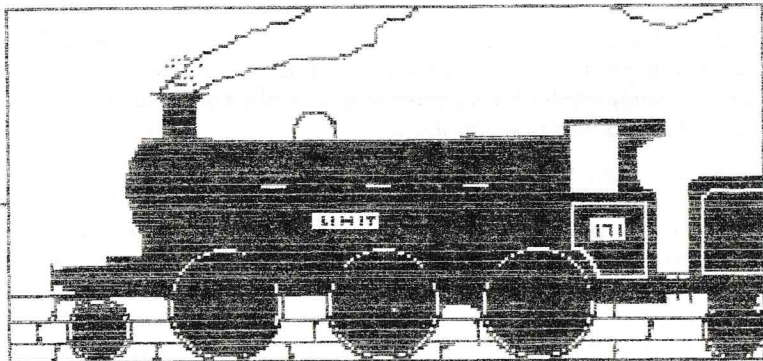
On the next page are prints of the three separation drawings for the Train picture. Original drawings are scattered through the article.

The program is available from Steve or me on a 3" or 3.5" disk you provide with a suitable addressed stamped return envelope plus 50p. It is also on the 3.5" DOS 3 disk "My Way with the Einstein" available from the same sources for £1.50 plus P and P.

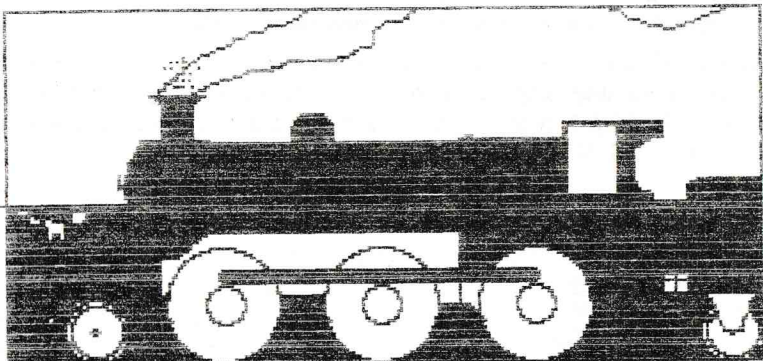




TRAINC.OBJ



TRAINM.OBJ



TRAINY.OBJ

MORSE TRAINER

David Williams is noted for his immaculate programs and the good news is that he has found a few more of them for EM readers. They will be spread among future issues. In the meantime we are trying to get some input from David explaining the thinking and use of Xbasic in the programs.

Morse is about the simplest of the bunch and straight-forward in its programming, so is the first to be featured. It will be very helpful to beginners for learning the basics but as a radio ham I must warn users that it doesn't sound anything like morse code as we know it! In the real thing the dots and dashes in each word are run close together with a space between words, and of course, the numbers are essential, though not included in this tutor.

```

5 REM MORSE TRAINER by DAVID WILLIAMS FOR EINSTEIN SEP '95
10 SHAPE130,"000000007C000000"
20 SHAPE131,"0000000010000000"
30 BCOL14:TCOL1,0:GOSUB270:DIM A$(26)
40 FOR A=1 TO 26:READ A$(A):NEXT
50 PRINT@4,20;"Input a few words then key ENTER"
60 PRINT@0,3;:INPUT" MESSAGE:";Z$
70 X=0:Y=5:L=LEN(Z$):IFL=0THENRUN
80 FORA=1TOL:B=ASC(MID$(Z$,A,1))
90 IFB>32ANDB<65ORB>122ORB>90ANDB<97THENGOSUB270
:GOTO290
100 NEXT
110 FORA=1TOL:B$=MID$(Z$,A,1):X=X+1
120 PRINT@X,Y;B$:IFB$="" THENY=Y+1:X=0
130 NEXT:TCOL1,15:X=10:Y=5
140 FORA=1TOL:B=ASC(MID$(Z$,A,1))-64:IFB>32THENB=B-32
150 IFB=-32THENY=Y+1:X=9:GOTO220
160 FOR C=1 TO LEN(A$(B)):X=X+1
170 V=VAL(MID$(A$(B),C,1))
180 IF V=2 THEN BEEP4:PRINT@X,Y;CHR$(130)
190 GOSUB 260

```



```

200 IF V=1 THEN BEEP-
:PRINT@X,Y;CHR$(131)
210 GOSUB 260:NEXT C
220 X=X+1:NEXT A:TCOL1,0:
PRINT@2,20;MUL$(" ",40)
230 PRINT@14,18;"AGAIN (Y/
N):";
240 A=INCH AND 223:IF A=89
THEN RUN
250 IF A=78 THEN
BCOL4:RST:END:ELSE 230
260 FOR N=1 TO 50:NEXT N:RE-
TURN
270 CLS:PRINT@11,0;"MORSE-
CODE TRAINER"
280 GCOL1,0:DRAW66,183 TO
174,183:RETURN
290 PRINT@1,6;"Morse-Code
uses only the 26 letters of"
300 PRINT@1,7;"the alphabet.
No other characters have"
310 PRINT@1,8;"any meaning
and are therefore rejected."
320 PRINT@6,16;"Press ENTER
key to continue:";
330 Z=INCH AND 223:IF Z=13
THEN RUN:ELSE 320
340 DATA
12,2111,2121,211,1,1121,221
350 DATA
1111,11,1222,212,1211,22,21
360 DATA
222,1221,2212,121,111,2,112
370 DATA
1112,122,2112,2122,2211

```

INCIDENTALLY...

Readers will be aware that the active coating of disks contains iron oxide. This is obtained from the rotting carcasses of Fiats and VWs but the new craze for recycling the things is likely to result in a shortage of the chemical.

But never fear, Montanso is on top of the problem. They have genetically modified the well known sulphur-eating bacterium so that it now eats copper! Their idea is that Fools Gold or iron pyrites is well distributed in nature (not to mention goldmine tailings). Iron pyrites is CuFeS_2 , so, when exposed to the voracious appetites of the sulphur and copper eating bacteria the leftovers are finely divided iron.

As in motor cars, iron does what comes naturally and very shortly becomes - you've got it - iron oxide! So everybody is happy - or are they?

How sterile is a 3.5" disk? (3" are no longer made so will be OK.) I wonder what exactly we will be trustingly introducing into our drives in the near future? The thought of these hungry bugs getting loose inside Albert I is this the moment of truth rather earlier than expected?

WOULD YOU PUT ONE IN YOUR DRIVE?

Eincomber

A KEYBOARD AABBBBAA SWITCH

(For those too posh to push?)

The use of the User Port is always a popular theme with Members and after finishing the article in the last issue I was mulling over the possibilities subconsciously I suppose, because I found myself looking at analogue switch ICs in the Maplin catalogue. I had in mind the CMOS 4066 type but, to my surprise, I found a variant which was capable of being used as a DPST (double pole/single throw, or changeover) switch.

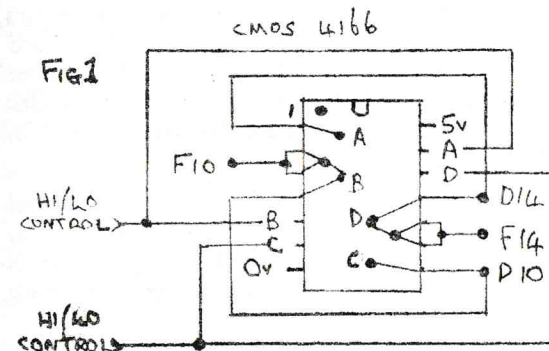
The 4166 is laid out just like the 4066, four single pole on/off switches with a control pin for each, which are labelled A,B,C and D. In the 4066 the switches are open when the control pin is low and closed when it is high, but the 4166 has the B and C control reversed so that the switch is ON when the control pin is LOW, and vice versa. By wiring the chip as in Fig.1 we have a pair of DPST switches. This is equivalent to one row of six pins on

the push switch in the original article, so 2 of these ICs would be the same as the full switch. If we can persuade the User Port to operate these two ICs we are in business!

There is one slight penalty to pay in using these 4166's and that is that, unlike most CMOS chips, they are not protected from the effects of static elec-

tricity. This means that they must be treated with great respect, (NEVER touch the pins), with the full monte of earthed work surface and earthed wrist strap. As with other CMOS chips the use of DIL sockets is required, and they are only removed from their protective foil when about to be installed in the socket. Once in the socket (after all the soldering is finished) they are safe enough. I would expect anyone prepared to tackle this project would have the appropriate know how, but if not - read the Maplin cat!

About the only problem to be overcome in the circuit is to arrange for a CONSTANT low or high signal on the control pins. Normally digital chips merely give a brief pulse HI/LO or LO/HI and this will not do, so we have



to use a LATCH chip which will do what we want. Fortunately Dave Arts has already done the work for us in EM 1/8 page 4 'The Einstein User Port' in which he controls four electric motors using relays driven by latches.

Referring to the circuit diagram Fig.2, 7 pins of the user port give positive and negative lines to the PCB and four inputs to the latch plus one pulse to the 4011 gate wired as an inverter. The other side of the latches are routed to the 4166 control pins.

The drawing in Fig. 2 has some short cuts to keep things fairly simple. The pin numbers shown for the latches are not in fact in the positions shown, pins 2,3,4 and 5 are actually on the left side and 10,11,12 and 13 on the right. Also the dotted lines across the 4166's show pins which are connected together. This is all sorted out on the drawing of the PCB, Fig.3, which is veroboard of 0.1 inch pitch. The board has 15 veroboard pins soldered in to connect the various wires from the User Port (P), the FDC (F) and the disk drives (D). All of the pins are far enough from the ICs to mean there should be little to fear in respect of soldering to them, but even so, soldering should be done as quickly as possible. All unused inputs are taken to ground.

Making up the PCB is not difficult but the number of interconnecting wires will be rather time consuming. Put in the IC sockets first then the capacitors and all the wires, and finally the veroboard pins. Then turn over the board and make all the breaks in the horizontal copper tracks, using the proper tool or a 1/8th drill bit. Then take a magnifier and check every solder connection and break. When you are satisfied, carefully put in the ICs, taking precautions against static charges.

The intention is to install the board inside Albert taped to the 34 pin lead between the main PCB and the first drive. It has to be there for reasons in the previous article. The 6,10,12 and 14 leads can then be separated from the main lead and brought up over the board to be attached to their appropriate pins.

The cable to the User Port is approximately 12 inches of 16 wire IDC cable and must be passed through the slot above the port to reach the socket. The plug should be attached with the marked (red) wire to the right looking at the back of the machine. At the other end only the wires 2,4,6,8,9,10 and 15 are needed, so the others can be chopped short. Take care removing the insulation, the wires are very easily cut when you don't want them to.

Programming the port.

All signals to the user port go via the Programmable In/Out chip (PIO) on the main PCB and it requires first Control signals to configure the port, and then data signals to do the required job. Control signals go to port &33 and data goes to port &32. (port nos. are always in hex notation, more

info under INP in the Reference Manual) There are four ways to set up the PIO, Modes 0 to 3 and for our purposes (and not least because Dave Arts has already done this for us and I know it works, having used it myself) Mode three is the one to use.

A control or data signal consists of one byte, and the arrangement of the bits it contains decides what the instruction means. The byte to select Mode three looks like this:-

Data bit	D7	D6	D5	D4	D3	D2	D1	D0
Binary	1	1	0	0	1	1	1	1
Hexadecimal	C				F			

&CF is the hex value of the byte.

Next we have to select which bits are input and which are output (a 1 is input and a 0 is output) as follows:-

D7	D6	D5	D4	D3	D2	D1	D0
1	1	0	0	0	0	0	0
C				0			

therefore &C0 is the value wanted.

Because of the way the PIO works we have to configure two ports A and B although we are only using B. The A port is involved with the printer port. So, to configure our user port we do in XBAS :-

10 OUT&33,&CF :REM port A

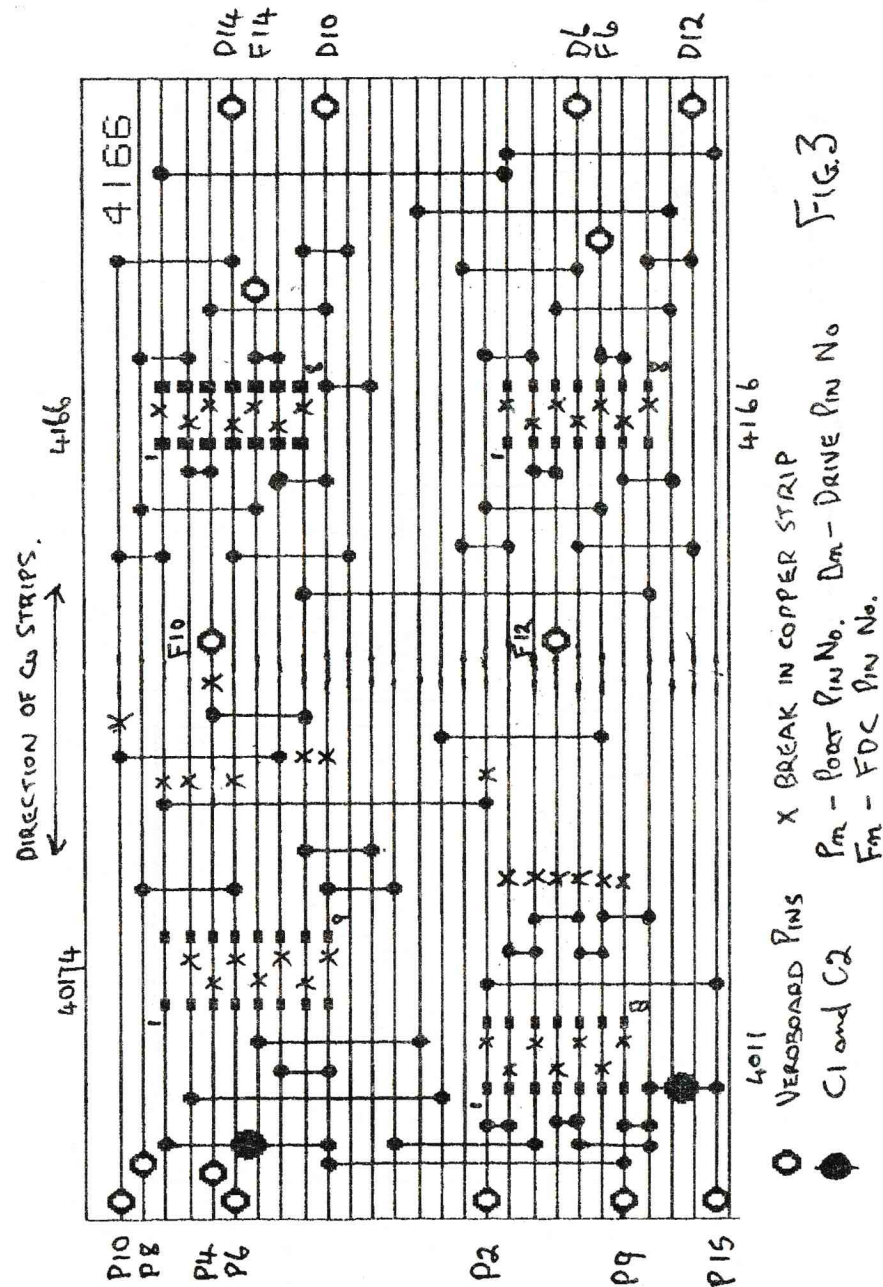
20 OUT&33,&00

30 OUT&33,&CF :REM port B

40 OUT&33,&C0 :REM control byte.

In fact, we are only going to use bits 0,1,2,3,4 and 5 as outputs and we do not need the inputs at all, but again, I have used this setup and know it works. If it ain't broke don't mend it!

We are now ready to output data to the new PCB. Our needs are simple, we need either LO voltage on all of the switch inputs, or HI voltage on all. LO is obtained by sending a 0 and HI by sending a 1 in digital terms. The circuit will initially be in a state where all the inputs are LO and this corresponds with the AABBB configuration of drives, so nothing further is required if this is what is wanted. To change to the BBAAA setup we need to send 1's to all switches, but it is not QUITE that simple (is it ever?). To get a 1 on the output of the latches requires two signals with different values of D0 so that a HI/LO signal is sent. As we need a 1 on the latches it looks like this (as D7 D6 and D5 aren't involved we ignore them):-



POSTBAG

Dear Tony

Thank you for all the magazine back numbers, it must have taken an age collating them all, this letter has been delayed by my browsings and avid reading through certain series of them. Being a newcomer to the EUG this has proved most a valuable introduction, not only in technical information but also revealing the chequered history of the group, the magazine and its contributing members. This I believe has provided me with some feel towards matters in hand, and although a novice, perhaps a possibly more objective contribution may still be permitted.

I understand a little of the problems keeping the EUG going despite the dwindling numbers but for any organization to survive change is essential and I perceive the EUG has undertaken several, a credit to its present leading voices.

One letter or article I read called for suggestions of ways forward for the EUG, these are my thoughts on that subject. The problem with any microcomputer is that it bears the seeds of its own destruction, the endless comparisons made between the latest arrivals on the market as to the best and fastest performers merely proves their imminent demise, even the top ones won't necessarily be around that long. I read several letters from those who had decided to go onto the better things of the 486, no doubt repeated by now with a pentium, that's if they want to avail themselves of multimedia.

"So what!" I say, working with Einy has far more to offer, play with the latest toys by all means, however bear in mind their obsolescence is latent but certain. I expect the present ancient micro user (users of old computers, not old users, that is!) having come this far down the computing revolution road recognizes this fact and rather than shunning actually embraces their quirky but trusty character, thereby helping preserve some affection for a bygone era, or in terms of any new users discovering the excitement and vitality of that early pioneering period when computers first became available to all.

Remember getting to grips with BASIC, trying out Forth, saving precious memory, gaining speed with machine code, typing in endless lines of code, crashes in the small hours, exchanging problems with friends to work upon, the satisfaction of a neat idea working.

I know the EUG still offers all this (and more!) as an alternative to some increasingly sterile aspects of the current computing scene.

It's probably a good thing for an organization not to take its self too seriously and that some of its more humorous and peculiar aspects should be recognized so providing some diversion and relief from the inevitable

differences arising in the views of its members.

I feel the title Steam Computer Society particularly apt in this regard, by the analogy construed from that familiar image. So here's an idea for a project - a real time clock that's actually clockwork! Contrive a pendulum clock driving shaft encoders which are read from Eineys user port to be interpreted and the time displayed with the aid of some suitable graphics, perhaps with the caption 'Millennium Proof' set above, adding more poignancy, if that's possibly, to this topical matter.

I have thoughts and details on more items to convey that must wait for now. One concerns connecting up disk drives, another keyboards, incidentally, I have had some success in getting a 3.5" disk drive working on Einey, plus my 3" and two 5.25"s, although this project is still in the boffins domain, merely because a final solution hasn't yet transpired, naturally enough!

Well I've had some fun partaking in this 'hard(ware) hack' and recommend anyone to have a go providing they have read through the half dozen or so recent magazine articles on the subject. I will conclude for now or I fear this will never reach you.

Best wishes

Bob Deeley

Thank you for those thoughts, Bob, and welcome to the Group. You are obviously a handy chap who likes to get 'stuck in' as you are getting results already. I hope you get as much enjoyment from your Einstein as I do. ED.

-@@@-

The APRIL SHOW

Steve tells me he was too busy at Stafford to make his own rounds of the other stalls, so there was obviously plenty of interest. He had requests for articles on the User Port, especially to input temperature readings and use of the mouse. I will bone up on inputs but I believe that the Joystick ports are better for this. I have an Einstein mouse but it only partly works with one mouse program (Mouse Tools) and not at all with Tubes. I will have another look at this too.

Steve also says he is cracking on with copying the Software library disks, but it is slow work. He has 400+ disks to do and can only manage about 4 or 5 a day! Hope he has time for the Show report!

What I have is:

Two twin-drive Einsteins .DEC1

Two 80 col cards & switches.

Two mono monitors (Green & Orange).

A colour printer currently in use as a TV!

one of the Alberts also has Two 3½" Drives attached (4 drives in all!) and has the DOS 80 to run them.

loads of business and other software.

If you know anyone who would like them feel free to put them in touch.

I'm not anxious to send them after the last experience (Remember?) but we

could surely arrange something.

With Best Wishes
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5th March 1999

Dear Mr Adams,

Your subscription reminder has concentrated my thoughts on my Einstein – got as a giveaway back in 1984 together with a free telephone hand set as part of a Comet promotion on the purchase of a TV set and video player/recorder. Both are still in use giving good service as is Albert who sits under my No2 TV set reproaching me for moving onto to a 386, then a 486 and now a Pentium equivalent.

The heady days of using (and I'm a user rather than a delver into innards) Albert with its then advanced Cracker spreadsheet and TurboChess were eye openers and filled me with wonder that I had reached retirement (albeit early) to experience such marvels. So much more flexible than the Vic 20 I had at the time with its 1kb of memory and good old Duck Shoot game and very basic spreadsheet.

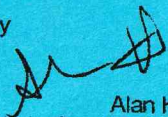
So Albert served me well as I've written before-keeping accounts for the small societies I'm still involved with and acting as my word processor ;what freedom : no longer did I have to beg my wife to see to my letters – with Albert's help I was independent!! The only drawback was that Albert regularly beat me at Chess .

After all these years it is Albert which is now redundant. The new generation is smarter, faster and easier to use. My ambitions to understand and do my own thing have evaporated .I'm now reconciled to the fact that what is under the bonnet will always be a mystery to me .

So for those members who still want to prod and bring Albert to greater things my Albert is up for grabs, with programmes ,some discs,handbooks including Dr Logo,magazines going back to Einstein User Volume 1 Number 1 November 1984.Will someone collect my Albert and give old faithful a good home?

Hopefully whoever takes Albert away will give some enthusiast a subscription to the magazine to replace mine which you have now lost

Yours sincerely



Alan Harris