

EINSTEIN MAGAZINE No.79

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published for users of Einstein (and other) computers  
by Steam Computer Society. Chief Editor and Publisher:-  
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(opinions herein are not necessarily those of the publisher)

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EINSTEIN USER GROUP SUBSCRIPTIONS REDUCED!!!

(Yes folks, it's true -- and you read it here first)

As every member must be blind as a bat not to have realised, we do NOT run the user group on a shoe-string. We would very much like to be able to, but we just don't have the cash for such flippant and non-essential luxuries as shoe-strings!

We took over from those awfully nice people at Ipswich just as the final vestiges of Einstein support were about to be abandoned, and it was a hard struggle to get back up onto the financial knife-edge that we love so much. Now we are a long way from insolvent, & the membership would actually be going up, not down -- IF YOU WERE ALL DOING SOMETHING TO MAKE US VISIBLE TO BOOT-SALE BUYERS OF DISCARDED EINSTEINS.

Our problem nowadays is that every spare penny goes into rebuilding the user group, software library and heritage software range, and we have no cash left to spend on flippant non-essentials like postage stamps, paper, ink, staples & envelopes unless YOUR subscription renewal cheques etc. keep coming in regularly. That's why we need your subs, and why we need YOU to make us highly visible to others.

You already know that we give you a free magazine if you've helped to make it possible by sending us something to print in it, and that if you labour night and day for us as an unpaid volunteer, then we pay your subs for you in return.

For some time we've had a bonus scheme where you get a discount rate if you buy your subs in bulk, so we can get some real cash money to buy some nice NEW shoe-strings to run the group on. This works, and you appreciate it, so we're extending it -- on a trial basis for now -- as our TENTH BIRTHDAY LOYALTY BONUS to you. It's open to ALL members, whether your renewal is due yet or not.

The membership form already offers one year (i.e. 6 magazine issues) for £10, or 2 yrs at £9 per yr. IN ADDITION, YOU CAN NOW OPT FOR 3 yrs at £8 per yr, 4 yrs at £7 per yr, or 5 yrs at £6 per yr. Anyone want life membership? Make us an offer! These prices apply within the UK inland postage area. Add £2.50 per year for other addresses (UK funds only please).

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NOT ANOTHER CRISIS, SURELY !

No, not really. It's just that Andrew McRobbie has taken on too much and has had to give up being our tame Einstein Editor as there simply wasn't enough of him to go round; our Co-Editor Ted Cawkwell is about to run out of his guarantee period and may turn into a big pile of biological scrap at any moment; and I thought I was due to start a 2-year BTEC National Certificate computing day-release course soon -- but employers are now far too lean, fit and healthy to be able to pay wages to people for being at college, so the day-release course is cancelled, and I've been transferred onto the full-time National Diploma college course instead.

I'm also under great pressure to get other things done that have been taking second place to Einstein support for far too long, and within a week or two of your reading this, I shall be in the position of being able to (just about) find time & energy to print and mail the magazine out to you all, but ONLY if I receive it from the editor(s) in the form of ready-to-print hardcopy that requires NO INPUT AT ALL FROM ME before printing it, not as raw data on disk in strange sizes, shapes and formats (that still requires copy-fitting and knocking into shape before I can print it), as now.

If you want to read a magazine, someone has to edit it. If YOU don't volunteer to be Ted Cawkwell's assistant and heir apparent, NO ONE ELSE WILL EITHER, and you won't get another magazine until I finish my course in late 1998! We need one (or two) general Einstein editors, a 256 correspondent, and lots of people with other non-Einstein machines to provide input on a regular (or occasional) basis. All Micro News is now a separate companion title for all non-Einey non-Windows matters. Any volunteers to edit/contribute to this?

Frank Wadl struggles manfully on to keep us visible in Micro Mart & PC Mart, but we need a whole team of people to keep us visible in these & the other mags and wherever else "new" Einstein owners look for us, to combat "natural wastage" and keep Einstein membership high enough to be self-sustaining. Clubs that have neglected this are foundering all round us!

Clem Cole is doing a valiant job of trying to get some order into the chaos that we call a software library, but this too needs a team of members to assist him in making sense of it and bringing it out of the steam age into the space age.

No doubt the group falls down badly in a lot of other ways that are blindingly obvious to you. So do your bit & offer to help put YOUR user group back on the rails. TODAY!

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EDITORIAL (Andrew McRobbie and Ted Cawkwell)

The Einstein has had to take a back seat since I joined our local technical college (to try & gain an HNC in computing) as a two-year course with two three-hour sessions each week (plus a three-hour morning shift every third Saturday) on top of a demanding job leaves me with no spare time at all.

We are presently learning to use Pascal, as it is apparently a good procedural language for beginners. I will sum it up by saying that I am glad I have a limited amount of Xtal BASIC knowledge or I would have sunk without trace a long time ago. The old grey matter is not as quick to learn these days but my trusty Einstein has saved me yet again!

With regret I am forced retire forthwith as your Editor, as I no longer have the time (or energy) for it.  
(Andrew)

As I have intimated to Tony, I am unfortunately unable to take up the vacant position of Einstein Editor. In my case health grounds are the reason. I am able to do the job for now, but I cannot assure myself that I will be in a position to continue to do it reliably, good health being uncertain and unsure when your NHS guarantee is about to run out! My three score years and ten expire at the end of June 1996!

I undertook to do issue 79 under the old system as co-editor and I apologise for the fact that there is so much of my own stuff in it. This was due to promised articles not appearing, and others needing rewriting for various reasons.

I will, of course, continue to support the Einstein and write for EM.

(Ted)

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TALKING TO YOUR PRINTER by A Dunipace

There certainly seem to be a lot of features on the typical dot matrix printer that are seldom used. This is a great pity, as they can help you produce interesting and varied results.

You may have bought your printer second-hand without a manual, or perhaps the supplied documentation fails to provide the sort of information that you require.

I have produced a list of the commands that are present on most printers which may be of some assistance.

With each special command, you must first select the printer by using:

PRINT #1 (printer port)  
or  
PRINT #2 (serial port)

After this command, all output from a PRINT statement will be sent to the printer. To restore to normal, enter:

PRINT #0

I have given all of the commands with a brief description followed by a line of BASIC to execute the command, and where necessary the command to disable the command.

Width: it is possible to have condensed, elite, normal and double width text.

Condensed: ON PRINT CHR\$(27);CHR\$(15);  
OFF PRINT CHR\$(18);

Elite: ON PRINT CHR\$(27);"M";

Normal: ON PRINT CHR\$(27);"P";

The printer is either in Normal or Elite mode. By selecting one you de-select the other - that is why there is no OFF for those commands.

Double Width: ON PRINT CHR\$(27);"W";CHR\$(1);  
OFF PRINT CHR\$(27);"W";CHR\$(0);

Subscript and Superscript text is enabled by the following commands:

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Subscript: ON PRINT CHR\$(27);"S";CHR\$(1);  
OFF PRINT CHR\$(27);"T";

Superscript: ON PRINT CHR\$(27);"S";CHR\$(0);  
OFF PRINT CHR\$(27);"T";

If you wish to draw attention to a particular piece of text, you can do it in two ways. Underline it or have it in Bold.

Underline: ON PRINT CHR\$(27);CHR\$(45);CHR\$(1);  
OFF PRINT CHR\$(27);CHR\$(45);CHR\$(0);

Bold: ON PRINT CHR\$(27);"E";  
OFF PRINT CHR\$(27);"F";

Finally, if your ribbon is starting to fade and you are a strapped for cash, you can squeeze a bit more life out of it using double strike mode. It is darker, but not as dark as emphasised mode.

Double-strike: ON PRINT CHR\$(27);"G";  
OFF PRINT CHR\$(27);"H";

[CH.ED:- Alternatively, WD40 applied SPARINGLY to the ribbon revives it. Anyone tried ribbon re-inking machines/services?]

COMPETITION

This is a 'Find the numbers' puzzle from Ian Palfrey. They seem to be computer questions, I think Henry IV was the well-known computer buff who invented a computer language - or was that the bridge-builder chappie? This will have you all dashing for your Encyclopaedias - are they Discopaedias nowadays? All of the numbers are required for a correct answer. Entries to Tony by one month after No.79 received. The prize will be a software library disk of the winner's choice. In the event of more than one correct answer there may be a draw to select the winner -- or you may all win!

1. Blaise Pascal's adding machine invented: \_\_\_\_\_
  2. Invention of the microchip: \_\_\_\_\_
  3. Number of bytes in 1k: \_\_\_\_\_
  4. Invention of the transistor: \_\_\_\_\_
  5. Year Charles Babbage was born: \_\_\_\_\_
  6. Invention of the microprocessor: \_\_\_\_\_
  7. Assassination of Henry IV of France: \_\_\_\_\_
- Total \_\_\_\_\_
8. Divide by no. of letters in company that made the Einstein: \_\_\_\_\_  
ANSWER = Year of Babbage's 200th. birthday: \_\_\_\_\_

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## GRAPHIC DUMPS REVISITED by Ted Cawkwell

Of all the utilities used by Einstein owners the screen dump for graphics seems to be the one shrouded in the maximum mystery. Sure, there is plenty to read about them - in the Compendium for instance - but little is really explained.

What these machine code routines actually do is check the state (On or Off) of the pixels held in the Video RAM, set up the printer for bit image printing, and output the pixels to the printer in a column of 8 at a time until all the screen area has been printed. The printer is then reset to normal and control is returned to the calling program.

The first problem facing the user reading the Compendium article is that data is given for Tatung and Epson printers only. I.e. location 0124 should be 08hex for Tatung TP100 or 09hex for Epson types. What should this mysterious byte be for Star or Citizen printers? To dispel the mystery look at the following block of code for Epson printers:

```

0100   DB20E61CFE10C02A
0108   9AFBE52A9CFBE521
0110   BF00229CFB210000
0118   229AFBE5DDE1E5FD
0120   E1DDE506(09)2171A0
0128   7ECF9F2310FAFDE5
0130   0E01C5CFC7C12801
0138   37CB11FD2B30F379
0140   CF9FFDE1DD23DDE5
0148   F1B728E2DDE101F8
0150   FFFD093E0ACF9FFD
0158   E5E101BF000938C1
0160   3E1BCF9F3E40CF9F
0168   E1229CFBE1229AFB
0170   C9(0D1B41081B2A05
0178   0001)FFFFFFFFFFFF

```

The 4 digit numbers at the left are the start address of each line in memory. Look along the line 0120 and in the position 0124 09 is in brackets. (Counting from the left, the first byte of two digits is 0120 and so on.) What this byte is doing is telling the m/c that there are 9 (09hex = 9 decimal) bytes of code to be sent to the printer. These bytes are called parameters and are put at the end of the block at a known address, in this case 0171, where you will see them also bracketed. The brackets are not normally present, I have put them in just for this article.

The first byte, 0Dhex, is a carriage return which clears the printer buffer of any characters as well as going to the start of the next line. The following bytes are the hex

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values to set line spacing and invoke bit image mode at the printer. The first 3 bytes are common to many printers for which line spacing is expressed in 1/72ths. and is generally written ESC "A" n where n is the number of 72ths. of an inch, 8 in this case. The hex for ESC is 1B or 27 decimal, hex for A is 41 or 65 decimal. Your printer handbook will give you the necessary values for your printer. The printer has to be given the parameters before each and every line for bit image mode.

The 4th. byte is 1B again then 2A 05 00 01 because Epsons use a total of 5 bytes to set bit image mode. (Apparently, that is - I have never actually used one with Albert.) In any event, if you now count the bytes from and including 0D you will find 9 and then FF. FF in this context is nothing, this memory location is empty and we have reached the end of the block of code. Necessarily so, as room must be available for as many printer codes as are required.

FFhex is not always nothing! Within a block of code it could be part of an address or the number 255 decimal.

I use a Tatung TP100 and the bit image code is only 4 bytes so in my case I enter 08hex for a total of 8 bytes. I have also found that making the last byte of the eight 02 I get the output on the right half of the paper, instead of the usual left. This may not work for other printers.

So, to make the code work for your printer you have to put the correct hex numbers in locations 0172 on and the number of bytes in location 0124. In hexadecimal remember - if you put 10 in it will be looking for 16 bytes! 10 D is 0A hex.

One snag with screen dumps is aspect ratio, the screen is 3:4 so a circle on the VDU comes out like an egg standing on end! This can be almost wholly corrected by slightly overlapping the lines by using 6 instead of 8/72ths. All right, 72nds, if you insist! Try drawing a couple of circles with the ELLIPSE command, enter the lines 10-30 below and RUN, then make the next line POKE &A074,&06 and RUN again to see the difference. I can only vouch for the TP100 of course, but I believe it works with the Citizen 120D, the bytes being 0D1B41061B2A050002, 9 in all.

Two other locations are of interest as they give the routine the address of the Parameters. These are the two at the end of line 0120, in our case 71A0. Address bytes are back to front so the actual address pointed to is A071. The routine is designed to be loaded into memory at location A000 when in use and if you mentally substitute A0 for 01 in

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our listing you will see that the printer codes do indeed start at A071, the second byte of the last line but one.

If the code needs to be used from another address the two bytes have to be changed, as shown in the method for loading the dump from the DOS tracks. In this case the machine code is put into memory at E270hex and the two bytes have to be changed to E1E2 hex. Apart from this change the code can be used from any address you like, but upper memory is probably the safest place for it so as not to interfere with Basic programs. Before loading the code into memory it is necessary to use the CLEAR command to set the top of memory available to Basic. The code, previously SAVED as an .OBJ file is then LOADED and when the code is used it is CALLED from the address CLEARed to.

```
e.g 10 CLEAR &A000
    20 LOAD"GDUMP.OBJ"
    30 CALL &A000
```

The routines may be used direct from the DOS prompt 0: if the pointer to Parameter address is set to 0171hex (by changing the last byte to 01) and saving the program with a .COM extension. Make the change in MOS, then go to DOS and SAVE prog.COM. COM programs always load and run from 0100 hex in memory.

If you find all this talk about MOS and DOS difficult I suggest you refer to Andrew's 'A Beginners Guide' series which started in Issue 68. It is really quite easy!

The double size dump GDUMP2.OBJ is the same routine with extra code to print each pixel twice horizontally and repeat each line of pixels vertically. Changing the spacing doesn't work so you are stuck with large eggs for wheels!

A few days ago I would have closed this article here as being all I could usefully tell but when I recently stumbled on a way of checking if the printer is ONLINE in Basic I got a surprise.

I converted the short routine to code and arrived at the following:

```
DB20E61CFE10C0
```

When I looked afresh at the screen dump code (thinking to add this useful routine) I was amazed to see that the very first 7 bytes in the existing programs was EXACTLY the same! The dumps are designed to check the printer status, and return to the calling program if it is Off. I have been using the dumps for years and never noticed this. It does work too. If the printer is not on line, you are returned to the main program AND THERE IS NO 'CRASH'!! It is, however,

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too late to turn on the printer now unless you have arranged your BASIC prog to try again. I can only think I missed this because I have long arranged for my printer to switch on at the same time as the micro, having been bitten once too often! Even so I have occasionally been caught with the printer connected to the PC or the Psion Series 3.

As there is no warning message displayed when the print operation fails it is necessary to add some Basic to allow for failure. The most simple way would seem to be putting a line immediately after the CALL &A000 to halt the program. Y\$=INCH\$ would do as the program would wait for a keypress to proceed. You could then do IF Y\$=(SAY "Y") THEN (nextline) ELSE (back to the CALL). Hopefully having switched the printer ONLINE before pressing anything!

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#### THE NATIONAL LOTTERY

Observations on the first year's results  
Ted Cawkwell

In spite of knowing that winning is pure luck, like many others I cannot avoid the feeling that maybe the winning numbers CAN be predicted to some extent. I have therefore recorded and studied all the results to date, and from about week 10 operated a 'system' based on numbers that have been called least times and/or have not appeared for many weeks.

I have had four small wins in that time, which seems to be better than the average for two lines per week. I have therefore worked up a simple program to choose such numbers and called it, optimistically, LOTWIN! Before getting to it I propose to make a few comments about the results so far.

Looking at the chart of winning nos. I can see no obvious patterns but there are some remarkable points. No.39 has only appeared once and that a year ago! It has been one of my bankers for weeks - it must surely come up eventually. No. 13 is another long overdue number not seen for 28+ weeks and only out 4 times, once as bonus. The highest number of appearances, 14, is by no.5, twice the average which is 6.7, but 4 of the 14 were as bonus. Other high profile nos. are: 16; 10 +2bonus, 22; the same, 28; 9+3B, 30; 10+1B, 44; the same, and 48; 9+2B.

However, I think there is one thing of interest which may be useful. The number of times that the same number has been drawn the following week is an amazing 49. This includes bonus. The longest period that duplicates did not occur is 5 weeks in May/June and there have been duplicates every week

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since 9 Sept. to 9 Dec. I suppose that in theory you could run six lines, each with one of last week's nos. and be (almost!) sure of getting one right! Over the year I have found that the least called numbers only come up one at a time (though there were two one week - one of my winners) so you could include one as another 'banker'. Now you have only four more to guess!

A few numbers have been drawn 8 or more times and have not yet been drawn in successive weeks. They are:-  
15,17,21,25,30,33 and 42.

More candidates for your six lines, perhaps? There have been 10 weeks when 2 numbers have been repeats of the previous week.

LOTWIN.XBS makes a file LOTNUMS.DAT which contains 3 sets of data about each of the 49 numbers, times drawn as 1 of 6, times drawn as bonus and number of weeks since last drawn as either category. The data is always kept in the above order. A Menu allows for entering new data, selecting numbers for use in the lottery and finally, printing out the entire file. A screen dump of the last is included in this article, as it will be needed to assemble the basic file. A separate short program is provided to do this, (LOTNUMS.XBS) as the input routine in LOTWIN is not designed for large numbers of entries, and would be very slow.

```

10 CLS
20 REM*****
30 REM LOTWIN.XBS Ted Cawkwell Dec '95
40 REM Picks out least drawn and longest
50 REM since last drawn lottery numbers.
60 REM*****
70 OPEN"LOTNUMS.DAT",FD$
80 DIM N(49,3)
90 INPUT#FD$
100 INPUT DATE$
110 FOR J=1TO49
120 FOR K=1TO3
130 INPUT N(J,K)
140 NEXT K,J
150 INPUT#0
160 CLOSE
170 REM MENU
180 CLS:PRINT@10,1;"THE NATIONAL LOTTERY"
190 PRINT@12,4;"1.Add new data"
200 PRINT@12,6;"2.Find Winners"
210 PRINT@12,8;"3.Review all data"
220 PRINT@12,10;"4.Quit";@10,13;"ENTER Selected number"
230 Y$=INCH$:IF Y$<"1" OR Y$>"4" THEN 230
    
```

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```

240 IF Y$="1" THEN 300
250 IF Y$="2" THEN 610
260 IF Y$="3" THEN 760
270 CLS:PRINT@15,13;"GOOD LUCK!"
280 PRINT@0,23:END
290 REM ADD DATA
300 CLS:INPUT"DATE:-";DATE$
310 PRINT "Enter the 6 winning nos.(any order).
320 INPUT" 1:-";A(1)
330 INPUT" 2:-";A(2)
340 INPUT" 3:-";A(3)
350 INPUT" 4:-";A(4)
360 INPUT" 5:-";A(5)
370 INPUT" 6:-";A(6)
380 INPUT"BONUS:-";A(7)
390 PRINT "All Correct Y/N?":Y$=INCH$
400 IF Y$="N" OR Y$="n" THEN 300
410 FOR J=1TO6
420 N(A(J),1)=N(A(J),1)+1
430 N(A(J),3)=0
440 NEXT J
450 N(A(7),2)=N(A(7),2)+1
460 N(A(7),3)=0
470 FOR J=1TO49
480 N(J,3)=N(J,3)+1
490 NEXT
500 PRINT@14,20;"ANOTHER Y/N?"
510 Y$=INCH$
520 IF Y$="Y" OR Y$="y" THEN 300
530 REM:CREATE"LOTNUMS.DAT",FD$
540 REM:PRINT# FD$:PRINT DATE$
550 REM:FOR J=1TO49:FOR K=1TO3
560 REM:PRINT N(J,K)
570 REM:NEXT K,J
580 REM:PRINT #0:CLOSE
    
```

NOTE: I would recommend that the REM's be left in lines 530-580 of this main prog until everything else is working properly, or the file may get corrupted. The lines Create a new data file from the array data in memory.

```

590 GOTO 180
600 REM CHOOSE NUMBERS
610 CLS:INPUT"Number of times drawn:- ";X
620 INPUT"Weeks since drawn:- ";Y
630 M$=MUL$("!",40):CLS
NOTE: In line 630 the character between quotes is
Graph+Shift+1.
640 PRINT@0,2;M$;@0,7;M$
650 PRINT@0,3;"No. ";@0,4;"Times";@0,5;"Bonus";@0,6;
"Weeks"
660 K=0
    
```

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```

670 FOR J=1TO49
680 IF N(J,1)<=X AND N(J,3)>=Y THEN
PRINT@K,0;J;:K=K+3:ELSE 700
690 PRINT@3+K,3;J;@3+K,4;N(J,1);@3+K,5;N(J,2);
@3+K,6;N(J,3)
700 NEXT J
710 IF K>38 THENPRINT@4,22;"Too many numbers"
720 PRINT@4,23;"Try Again Y/N?";@24,23
730 Y$=INCH$:IF Y$="Y"ORY$="y" THEN 610
740 GOTO 180
750 REM VIEW DATA
760 CLS
770 PRINT DATE$
780 FOR J=1TO21
790 IF J<10 THEN PRINT " ";
800 PRINT J;N(J,1);N(J,2);N(J,3)
810 NEXT
820 FOR J=22TO43
830 PRINT@13,J-22;J;N(J,1);N(J,2);N(J,3)
840 NEXT
850 FOR J=44TO49
860 PRINT@27,J-44;J;N(J,1);N(J,2);N(J,3)
870 NEXT
880 PRINT@11,22;"Any Key for Menu";
890 Y$=INCH$
900 GOTO 180
910 END

```

Now the loader program LOTNUMS:-

```

50 CREATE "LOTNUMS.DAT",FD$
60 DIM N(49,3)
65 CLS
70 INPUT"DATE";DATE$
75 R=1
80 FOR J=1TO49
90 FOR K=1TO3
91 IF R=23 THEN CLS:PRINT@0,0:R=1
94 PRINT@0,R;J;@7+K*K,R;
100 INPUT"";N(J,K)
115 NEXT K
125 R=R+1
130 NEXT J
150 PRINT#FD$
180 PRINT DATE$
190 FOR J=1TO49
200 FOR K=1TO3
210 PRINT N(J,K)
220 NEXT K,J
230 PRINT #0
240 CLOSE

```

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Once you have used LOTNUMS to make the main file it should not be needed again, but if you do have to use it take care to change CREATE in line 50 to OPEN first -- or you will destroy the original file! I don't recommend using it more than once except for a fresh start. Use LOTNUMS to enter all of the data in the screen dump carefully, noting that the screen is cleared after each screenful and there is no double check routine like the one in the main program.

When using LOTWIN to select numbers(Option 2), for a start try 6 for 'no. of times' and 8 or 9 for 'no. of weeks'. The table below the numbers will give you ideas about which values to select next time.

Finally, the all important screen dump:-

08JUN96	22 13 2 5	44 14 1 9
1 8 2 10	23 9 2 8	45 10 4 2
2 11 1 13	24 7 3 2	46 10 2 1
3 6 3 21	25 12 2 1	47 9 1 6
4 12 1 4	26 13 1 3	48 14 2 5
5 14 4 12	27 7 1 11	49 10 1 6
6 10 3 6	28 14 5 8	
7 11 2 5	29 11 2 1	
8 7 1 3	30 13 2 12	
9 8 2 8	31 11 1 7	
10 7 2 5	32 11 0 1	
11 11 2 1	33 11 1 4	
12 11 1 4	34 9 1 3	
13 5 1 4	35 9 0 2	
14 12 1 10	36 6 2 2	
15 11 1 1	37 8 1 2	
16 13 3 14	38 12 1 9	
17 12 1 1	39 3 0 2	
18 10 0 7	40 11 1 4	
19 6 2 13	41 11 2 4	
20 6 4 2	42 13 0 3	
21 9 2 22	43 10 2 3	

It will be obvious that the figures for frequency of numbers and so on no longer apply, as this article is being published more than six months after it was originally written. However, the principles still apply, and the up-to-date list can be studied in the same light. The printer dump is as current as possible. If records of later winning numbers are needed you will find that they are held by ticket sellers and are supplied on request.

I would have liked to keep a list of duplicates as well, but cannot find room to print them on the screen!

You only need to know that one of last week's numbers is very likely to come up this week, really! Just make your best guess!

A list of duplicates would let you identify a number that has never yet been duplicated - yes, there are still some! As of 8/6/96 they are:-

9,11,18,19,21,35,37,39,43

Good luck!

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#### A REVIEW OF TTY.COM

Getting computers to talk to one another has always been a source of fascination to me. Apparently this is not an easy thing for them to do. Like humans communicating with someone from a foreign country, computers need certain information to enable them to understand each other.

With an Einstein however, communicating or transferring of data can be achieved through the parallel or serial ports. With a little knowledge of setting up the Baud rate and Serial link information so that each machine knows how fast the other is talking and the form it is sending the data, you can get by, using COPY.COM plus a connecting cable. Alternatively, you can use TTY.COM, a terminal emulator program by Peter Amey.

TTY.COM can only send ASCII files (American Standard Code for Information Interchange) which all half-decent word-processors can produce. While programs such as TASWORD produces odd characters to signify control and formatting, the normal letters are in ASCII form, so transfer of data does work.

If you want to transfer .COM files however, another program (like MODEM7.COM) is required.

With a suitable cable attached to the serial port, (How to make one up was covered in an EINSTEIN MAGAZINE article) from the DOS prompt, type TTY and press ENTER.

After an initial display of the program name plus author, the following menu appears.

```
LOAD TERMINAL DEFINITION FROM DISC.
SAVE TERMINAL DEFINITION TO DISC.
DEFINE TERMINAL.
USE TERMINAL (CHAT).
SEND ASCII FILE TO HOST.
RECEIVE ASCII FILE FROM HOST.
CLOSE RECEIVED FILE.
DEFINE FUNCTION KEYS.
DEFINE TRAP TABLE.
DEFINE SCREEN COLOURS.
TOGGLE 40/80 COL DISPLAY.
EXIT DOS.
HELP.
```

The strange thing about this program that selections are actioned in an 'aris for elbow' manner. The arrow keys will move a highlighted bar over the menu but to choose a subject you press the ESC key instead of the ENTER button. The SHIFT/BREAK keys will return you to the menu at any time. Once you remember this, the rest is straightforward. I have also found that for best results it is advisable to connect the cable to a computer at both ends - so I'm not infallible! A second monitor or TV (with one connected to each computer) is very useful, so that you can see what is happening with each machine.

#### Starting Out.

The first thing to do is to highlight the DEFINE TERMINAL option using the cursor keys. Press ESC and the range of settings plus the Einstein's defaults are displayed by the ">" character beside the appropriate values. A check at this stage to obtain the values used by your other computer may be advantageous, or simply take a note of the default settings listed.

```
Baud Rate - the speed of data transfer.
Tx          - Transmit.
Rx          - Receive.
Data bits  - the number of bits (Zero or One) used to make up
              each character.
Parity     ) are used as a method of checking that the
Stop bits  ) information sent is the same as that received
              ) where for example there is other noise on the
              ) line which may cause distortion.
Echo       - To see what is being sent at the sender or
              receiver end. Of more interest when things may
              not be going OK.
```

To keep things a simple as possible, I keep the remainder of the definable options set to off. Press ESC to return to the menu. The other computer should also be set so that the settings chosen for each computer are the same.

#### Terminal Mode.

Before sending any files, it is best to try sending some characters by typing them at the keyboard and checking to see if they are being received OK. To do this choose the TERMINAL CHAT option on the Einstein and terminal mode or whatever it is called on your second computer.

If you do not know what your second computers values are, all that you can do is keep changing the default values on the Einstein until something is received. With one program I kept receiving strange characters till the Baud rate was changed. Trial and error is the only solution.

EINSTEIN MAGAZINE (79/16)

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To send an ASCII file:-

It may seem obvious but to send a file, one computer has to send data while the other, receive. Select the Send option on one computer and Receive on the other.

Use the arrow keys to highlight the Send option on the Einstein and press ESC.

You are then asked for a filename to send. This can be preceded by a drive number if the file is on another disk eg. 1:NSWEEP.DOC then press Enter. If the file is not present on disk you are informed and the menu is displayed again. All going to plan, the drive should whirr and the file opened. The menu is then displayed with the highlight above the USE TERMINAL CHAT option. Simply press ESC and the file will be transferred.

Receiving an ASCII file is a similar method except that you have to select CLOSE FILE after the file has been sent.

Pitfalls.

TTY is a bit naughty in that it does not check the size of the file to be sent or room left on the disk. If you have not left enough room to save the file, TTY only tells you know once you have patiently waited all that time while file transfer takes place. The process is slow. I found this out the hard way.

Large files, (I haven't found out just what the file limit is yet) will transfer but TTY will not display over a certain size. This requires delving into MOS and modifying the file information back to 00.

The Einstein appears incapable of receiving data and scroll the screen at the same time. This results in loss of data at the beginning of a line. This data loss can be prevented by leaving the first two characters of each line blank.

Using a high Baud Rate can be used to send data but not reliably receive it. I have found that receiving not more than 1200 appears to work best.

Summary

Unlike games or other applications which can be used on the Einstein, there is not a lot to see with this program. Your files will be displayed as they are sent or received. With a terminal wrongly defined or cable wired incorrectly, no data is transferred. This can be frustrating for those new to "COMMS" as you may not know if the problem lies with the cable or either computer. A process of elimination is the best solution. This is what helps to give you a real sense of achievement when things do go OK. By transferring data however, you don't automatically lose all your valuable efforts if one computer develops one fault.

EINSTEIN MAGAZINE (79/17)

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TTY certainly tries your patience. See pitfalls above. It is however very easy to set up the Serial port requirements with this program.

-- \*\*\* --

BASIC PROGRAMS TO TYPE IN.

FUEL. by David Williams.

This is another updated version of one that was published (I believe) sometime in 1988/9. I have also contained it in MONMAT, a program in the public domain. The major change is that it now permits you to contain whatever rate of VAT is levied on your chosen energy by the fiends from Westminster.

When first using it, I suggest you refer to an earlier bill to help gain familiarity with some of the terms used.

```

10 REM*****
20 REM*   -- YOUR FUEL BILL --   *
30 REM*   Revised Feb' 1995   *
40 REM*****
50 BCOL7:TCOL1,0:CLS40:GCOL1,0
60 X$=MUL$(" ",33):GOSUB 620
70 PRINT@11,1;"YOUR FUEL BILL MENU"
80 B$(1)="BRITISH GAS CHARGES":A$(1)="Therm"
90 B$(2)="ELECTRICITY CHARGES":A$(2)="unit"
100 B$(3)="DOMESTIC OIL CHARGE":A$(3)="litre"
110 PRINT@5,6;"Which fuel:"
120 PRINT@11,9;"(1) - British gas."
130 PRINT@11,11;"(2) - Electricity."
140 PRINT@11,13;"(3) - Domestic oil."
150 PRINT@11,15;"(4) - Quit program."
160 PRINT@5,19;"Press the number key to select:";
170 Q$=INCH$:Q=VAL(Q$):IF Q=4 THEN BCOL4:RST:END
180 IF Q<1 OR Q>4 THEN 160
190 CLS:GOSUB 620:PRINT@11,1;B$(Q)
200 PRINT@12,22;"Key DEL to delete"
210 PRINT@4,5;"The V.A.T. rate.....(%) = "
220 Y=5:GOSUB 510:VT=V
230 PRINT@4,6;"The standing charge...(') = "
240 Y=6:GOSUB 510:SC=V
250 PRINT@4,7;"Previous meter reading... = "
260 Y=7:GOSUB 510:R1=V
270 PRINT@4,8;"Present meter reading.... = "
280 Y=8:GOSUB 510:R2=V:C$="":IF Q=2 THEN C$="."
290 IF R1>R2 THEN BEEP:GOSUB 640:GOTO 250
300 IF Q>1 THEN P=1:CV=1:GOTO 330
310 PRINT@4,9;"Calorific value...(B.T.U.'s) = "
```

\*\*\*\*\*

```

320 Y=9:GOSUB 510:CV=V/1000:IF V>0 AND V<2 THEN CV=V
330 PRINT@4,10-P;"Price per ";A$(Q);C$;".....(p) ="
340 Y=10-P:GOSUB 510:UC=V
350 R=CV*(R2-R1):C=UC*R/100:T=SC+C:T=T+(T*VT/100)
360 X=23:Y=88:X1=224:Y1=31:GOSUB 630
370 PRINT@2,22;X$
380 TCOL1,14:FOR A=13 TO 19
390 PRINT@4,A;X$:NEXT
400 FMT5,2:PRINT@7,14;"Standing charge   = ";SC
410 FMT0,0:R=0.1*INT(R*10)
420 PRINT@6,16;R;A$(Q)+"s used "
430 FMT5,2:PRINT@25,16;"= ";C
440 PRINT@7,18;"Total inc VAT (' ) = ";T:FMT0,0:TCOL1,0
450 X=78:Y=16:X1=168:Y1=7:GOSUB630
460 PRINT@14,22;"Again (Y/N):";
470 A=INCH AND 223
480 IF A=78 THEN BCOL4:RST:END
490 IF A=89 THEN RUN50:ELSE 460
500 PRINT@32,Y;X$
510 Z$="":M=0
520 PRINT@32,Y;Z$;
530 B$=INCH$:B=ASC(B$)
540 IF B=25 THEN 500
550 IF B=27 THEN RUN 50
560 IF B=13 THEN 600
570 IF B=46 AND M=0 THEN M=1:GOTO590
580 IF B<48 OR B>57 THEN BEEP:GOTO520
590 Z$=Z$+B$:IF LEN(Z$)=6 THEN 500:ELSE 520
600 IF Z$="" THEN 520
610 M=0:V=VAL(Z$):RETURN
620 X=63:Y=175:X1=184:Y1=184
630 DRAWX,YTOX1,YTOX1,Y1TOX,Y1TOX,Y:RETURN
640 TCOL15,8:PRINT@7,10;"CHECK METER READINGS AGAIN"
650 FOR A=1 TO 3000:NEXT:FOR A=10 TO 8 STEP-2
660 TCOL1,0:PRINT@4,A;X$:NEXT:PRINT@32,7;X$:RETURN

```

EINSTEIN USER GROUP SUBSCRIPTION RATES SPECIAL OFFER: PAGE 1

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EINSTEIN MAGAZINE BACK NUMBERS SPECIAL OFFER: PAGE 23

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ON FUNCTION KEYS AND THINGS

Ted Cawkwell

Trying to program a Function Key recently (they are the gray ones at the top of the keyboard) to RUN a BASIC program, I was reminded that it is a task more easily said than done.

Just entering KEY 7,"RUN"TRIPECR" does not RUN the file TRIPE.XBS for a number of reasons. CR is a carriage return, entered by GRAPH/ENTER.

\*\*\*\*\*

The information in quotes after the comma has to be a string as defined by Basic. "RUN" is a string, but TRIPE" is not! Alternatively, "TRIPE" is a string but "RUN is not, because the quotes define the ends of the string. You can't put a quote between a pair of quotes without seriously disturbing Albert's brain.

OK. So what is the ASCII value of a quote? CHR\$(34) you discover. Let's try "RUN";CHR\$(34);"TRIPECR" - still does not work! Likewise using the hex value &22 - NBG!

Yet I already knew that KEY 0,CHR\$(&22) does work and prints a single quote to the screen. The reason is that CHR\$( ) is considered a string in its own right, as is easily seen in the use of CHR\$ in PRINT statements.

The answer to the original problem then turns out to be adding the strings together. This is called concatenation, and is done using the + sign. So our command needs to be:  
KEY 7,"RUN"+CHR\$(&22)+"TRIPECR"

This works because the instruction is one string, composed of 23 bytes. That is everything inside the outer quotes. The CR counts as 2 bytes. This is worth bearing in mind, because the maximum bytes allowed for ALL of the F keys is 128. You could quickly run short! Of course, you are not compelled to program all the keys.

If anyone is wondering why I chose F7 there is a good reason. I find it is not one of the keys that I sometimes hit by accident, whereas F0,F1 (and the Alpha lock) are some of my bogey keys. If I was, for instance, writing a BASIC program, and had F0 programmed to RUN something, and I accidentally hit F0, then the program would LOAD over all my work, wouldn't it? Therefore I always play safe with such F keys and keep them away from my errant digits. In fact, I nearly always use F keys 8 to 15 as these need SHIFT to be pressed as well.

There was a reason for not using Shift in this particular case. I was trying to improve QR.XBS which is used to highlight and select files (#78). I had tried compressing the prog to 8 lines of Basic and using HOLD in line 9, but this did not work. HOLD is a pest to use! Then I had the bright idea of using the first line to program F7 to RUN QR (KEY7,"RUN"+CHR\$(&22)+"QR") so that when you finish with one selection a single press of the F7 key will run the prog again to choose another file. Adding new QR to files of XBAS programs works a treat! You need 2k of space on the disk.

STAFFORD SHOW -- SATURDAY 09 NOVEMBER 1996

HAVE YOU VOLUNTEERED TO HELP STEVE POTTS YET?

Now we know very well that it's entirely out of the question for you because you are over 90, with terrible arthritis, and you have a dear old granny who can't possibly be left alone for longer than twenty minutes at a time.

HOWEVER, that is an exact description of every single one of us old stagers who creak and groan & still somehow manage to keep the group running -- SO WHAT MAKES YOU ANY DIFFERENT!

If you are younger & fitter than we are, U haven't even got the beginnings of an excuse that will hold water, have you?

There are lots of other computer shows, and lots of people go to them. As Steve and Yours Truly have demonstrated, all you need is an Einstein up and running, a couple of clean sheets or table-cloths, a kettle, a pile of membership forms and the Einstein logo -- or an original Einstein box will do -- and you are in business. Showing the flag is what it is all about, and making us visible to people with an Einstein, but maybe no manuals, software or computer experience.

If YOU aren't there, and the Einstein they have bought for a fiver goes into a skip in disgust - instead of their joining the group and becoming an active and enthusiastic member - losing THEM may make all the difference between new blood ensuring that the group thrives & survives, or its folding as no longer viable, leaving YOU adrift to fend for yourself

So we DO need YOU -- to help Steve, & to build a group that enjoys meeting at shows to make us and Einy highly visible.

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## THIS ISSUE OF THE MAGAZINE

There probably won't be enough of it to go round -- so some of you may have to make do with bright new paper like the boring humdrum stuff that other groups send their members -- while others may get some very strange paper as we use up odds and ends of stock from our sister Steam Printing And Horse Tram Society, some of which will go back to the 1920s (or even earlier!) -- but most of this issue of the magazine is likely to be printed on the very last of our stock of postwar letterpress proofing paper, which was laboriously converted by hand from roll form to sheets by Yours Truly. It dates from long before we'd ever heard of metric sizes, which is why it is a bit smaller than standard A5 page size.

Once this is gone we have a varied stock of other broken reams of paper to gradually use up, but they simply don't make it like they used to. You just can't get the steam any longer, my dear, let alone the blacklead or the gas mantles -- and there's no chance at all of following the milkman's horse with a bucket and shovel for something nice to put round the geraniums! -- so sooner or later you're probably going to have to fret and grumble at being presented with a magazine printed on paper that risks your being afflicted with snow-blindness, just like everyone else is stuck with.

Meanwhile, you liked the pretty coloured cover of the disastrous 10th birthday special issue so much that we've decided to phase it back in as a permanent feature once more, with a picture of an Einstein or three on the front. However, it's the shoe-string situation once again, so we gave you the last issue with an all-black sugar-paper cover plus printed label. There was just enough left on a nine-foot wide roll we had in stock to do the whole magazine, with Yours Truly cutting it by hand into sheets. Trying to cut it square & avoid creasing it was blue murder though!

We have an immense stack of card, printed and creased to be used as boxes by a disk drive specialist. It looks nice as a cover sheet, so we'll use this, plus other redundant/surplus coloured paper or board, to phase in a conventional magazine cover over a period. The cover stock is very varied, but we'll try to ring the changes each issue on colour & design, until we are able to implement a standard "house style".

If you have any other ideas for improvement of the magazine (or any other aspect of the user group's service) please do feel free to volunteer your services (or whatever other resources it needs) to make such an improvement possible.

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## SPECIAL 76-PAGE TENTH BIRTHDAY ISSUE -- BADLY PRINTED PAGES

If you got some, and need replacements, PLEASE tell us WHICH PAGES are affected. We shall shortly be arranging to reprint them, but we shall ONLY be reprinting the exact number that are needed. If you do NOT tell us which you need, they will NOT be printed, & we will be unable to do anything for you.

Exactly the same applies if you feel unsure of your ability to unstaple the pages, insert the replacement(s) & re-insert the staples. In this case do NOT send us your copy until we ask you to, but you MUST tell us which pages you'll need, & make it clear that you will wish us to do the job for you.

EINSTEIN MAGAZINE (79/22)

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Dear Mr Adams, Apologies that I am not writing this letter on my Einstein. However I do not have any floppy disks to spare (all are original program disks).

I was presently surprised by your humorous reply, a very nice change from the short, boring letters one would usually expect to get from a business or club. I am writing this letter on my 386, which is currently unable to run Windows despite my limited PC knowledge attempts, so I have written this using the Dos editor. This means any typing errors will most likely be left as there is no spell-checker.

I am 16 years old and currently revising for my GCSEs. I am generally the exception to the rule (hence me owning an Einstein), and I am 'technically creative' (I invented that wonderful term myself), which means that I love to design electronic circuits, write computer programmes, and so on. The Einstein is very adequate for this, and I was writing my first programs at the age of 11 in Logo. I soon found the capabilities of this limited for the games that I was trying to make, and so my Dad (whose job involves computers) recommended that I start learning to program in BASIC.

I was a bit unsure about this, knowing that I would have to start from scratch and would therefore be limited to what I could do at first. My Dad told me that it would be worthwhile and I never looked back. I have never completely finished a programme (but then there has never been any need) but I have written several games and a sprite designer program with very impressive credentials. I have since made some progress in the areas of machine code and assembler (this was spurred on when I swapped a useless 286 unit that I had inherited for a Memotech MTX500 with a built-in assembler program) but BASIC is what I usually program in. I am also hoping to get the Einstein and Memotech to talk and transfer files.

When my family first got our Einstein it was a revolution. At the time a computer had always been something that 'everybody else had'. It was lent to us by a kind student and gave many hours of pleasure. Around two years later, the student was going to leave Coventry, having finished her course. We were now very attached to "our" computer and to cut a long sentence short, she decided to sell it to us for £150. I paid £75 while my three other siblings (only three of them then) shared the remainder.

More recently when my parents had decided to buy this 386 for £300 (complete rip-off but they were obsessed) my Mum decided that the Einstein should be sold before it was obsolete

EINSTEIN MAGAZINE (79/23)

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(like it was going to ever be much more so!) to replace it with a modern (groan) 386 (choke, choke, gasp "WAKE UP !").

Fortunately she advertised it for an unrealistic price, but then she decided it was to be given away. This required desperate action, and so I got my siblings together and begged them to make an obvious effort to use the Einstein. I was in luck, my mother noticed and told me to take 'Einey' up to my bedroom. I was ecstatic, and after a think decided to donate £50 towards the 386. I also wrote a nice BASIC programme which said quite simply 'Thank you' (I did this with the DRAW command) '...for keeping me.' and then, again using DRAW :Einey.

So ends the epic saga of how my Einstein made its life-saving journey to my bedroom.

Now, about me and my family: I live in a semi-detached house with a loft conversion. I have two parents and four siblings, two of each gender.

I do not know if you already "Been here, done this", but please bear with me. Just before I wrote to you, I wrote to Tatung, in the hope of obtaining extra software & hardware, and they replied, telling me about B&H computers in Southowram. I wrote to them at the same time as you, and have yet to receive a reply, but I suspect that you will be able to offer me a much better service.

(new member) Daniel Johnson, Coventry

\*\*\*\*\*

WE'VE GOT LETTERS AND ARTICLES GALORE TO PUT RIGHT HERE, but unfortunately we couldn't read the disk onto which new members John & Jenny Murray had put their letter on their 256, & our TC-01 O/A drive reacted to the replacement disk they sent by going berserk. Hopefully it's just a read head needs cleaning, not something more serious, but for now we can't read their disk -- nor can we boot up to read the disk with everything else stored on it that we wanted to put here

\*\*\*\*\*

DID YOU SEND US SOMETHING TO PRINT that hasn't appeared yet? There is confusion about what's in the pipeline, and where it's got to. Please tell us -- better still, send us a copy.

\*\*\*\*\*

WDPRO Peter Oxtan and others:- If you think that WDPRO (40 or 80) is just great, please tell us why, and how to unlock its secret mysteries. We've just received the author's permission to distribute it, and we want to do it justice.

\*\*\*\*\*

BACK NUMBERS OFFER: members only, any 2 for £1 (plus sae)

EINSTEIN MAGAZINE (79/24)

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COMING SOON IN YOUR FAVOURITE EINSTEIN MAGAZINE

Dear Tony, Sorry to hear about your earlier problems --  
photocopiers don't seem to like you very much!

Enclosed is a copy of my first article, which is about how I used a serial terminal as an 80-column output device when I couldn't get an 80-column card and a monitor at a sensible price. I am also working on my second article, which tells about the hard disks that I've installed on my Einstein.

I found a lot of very interesting stuff in the special Compendium 2 magazine issue, especially the pre-PC IBM PC that cost nearly \$20,000 for a "massive" 64K of memory. It's easy to see why that one didn't take off!

I now have a CD-ROM drive connected to one of my machines at home, & thus have access to the contents of the CP/M CD-ROM more easily. Double speed drives are very cheap now, in fact they can be had for as little as £20-30. The CD-ROM drive is actually connected to a Research Machines RML 380Z. This is an ancient Z80-based CP/M machine, which acts as a server, sending sectors from the CD down the serial line to an Amstrad PPC640 portable (with 2\*720Kb drives), which runs the Microsoft CD extensions. It's slow, but it works.

Sorry it's taken longer than expected to get the articles under way, but with two small babies and a very demanding job there isn't a lot of time left for writing it all up.

Duncan Elvin (member 1575) Norwich

\*\*\*\*\*

SORRY ABOUT THIS BLANK SPACE

Steve Potts' article on modifying disk drives by inserting a switch in the "side select" line of the data cable should have been here. This allows each side of a 3.5"/5.25" disk to be used separately as a single-sided disk under Dos 1.xx, thus avoiding the expense of upgrading the Dos to one with a totally incompatible format that is prone to cause horrific data loss/corruption. But editorial changes and resulting confusion have scuppered the best laid plans of mice & men.

BUT IT WILL BE HERE SOON!

There are two versions:- low-cost plain vanilla, or a rather more complicated/expensive option if you insist on having "proper" home-computer "fairy lights" on your disk drives.

EM/AMN/MJ/OC LATENEWS (9708/1)

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published by Steam Computer Socy. Chief Editor & Publisher:-  
A E Adams, Ivy Cottage, Church Road, New Romney, Kent. TN28 8TY

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THE STAFFORD SHOW -- 09 NOV 96 -- Steve Potts

I am planning to run our Stafford show stand on 09 NOV 96, but the amount of kit and the effort involved in setting up & taking down (as well as running the stand all day) is more than one man can stand (as Tony found out the hard way!) If you are planning to attend the show, please spare an hour or so to help out, so I can get to the loo, drink a cuppa, have a bite to eat, and have a look round the show myself. In return you get a cuppa too (I take my kettle with me!), plus a chance to rest your legs, somewhere to store your goodies, and as a helper you don't have to pay to get in! If you have kit to donate/lend/display/sell, that's welcome too. Contact me at 85 Thorold Ave, Cranwell Village, Lincs. NG34 8DS; or tel: 01400 261839 (considerately). It's cheaper at weekends! <It's very hard graft to do the Stafford show single-handed, but great fun for two or three members who take turns to man the stand during the day, helped by a working Einey or two.>

\*\*\*\*\*

1996 COMPUTER SHOWS

We know of computer shows / radio rallies on 18 Aug at Kings Lynn (01553-765614); plus Sharward (01473-741533) shows on 25 Aug at Clacton, 06 Oct at Spalding, 9 Nov 96 at Stafford.

ADVANCE NOTICE -- 1997 COMPUTER SHOWS

Sharward shows on 19 Apr 97 and 8 Nov 97 at Stafford, 16 Mar 97 and 05 Oct 97 at Spalding, 24 Aug 97 at Clacton, and (probably 17 May 97) at Ipswich. Any offers of help please?

BRITISH PRINTING SOCIETY SHOWS

"Solent Print Fair" 14 Sept 96 at Four Marks (you can travel by "Watercress Line steam train from Alton, with through tickets from Waterloo and many other BR stations). Organised for hobby and small commercial printers by local branch of BPS. Call Tony Spencer on (01252-870695) for more info.

THEY DIDN'T TELL US IN TIME SHOWS

20 July 96 at Aylesbury:- Annual ORIC meet. Amazing isn't it? Lots of clubs think they're ever so clever, saving a 19p stamp (20p now) by leaving us off their mailing list -- then get upset that we haven't advertised their events for them!

\*\*\*\*\*  
BISHOP'S CASTLE RAILWAY study day, Sat 14 Sept 96. Lecture, slides, visits, more. SAE to B. Heatley, Cantlow Hse, Vicarage La, Burton-in-Wirral, L64 5TJ for full details and booking form.

\*\*\*\*\*  
EINSTEIN MONTHLY 1/4 IS BACK IN PRINT. Same price as other back mags, & no extra to pay for a full set of back numbers. REMIND US (with 20p stamp please) IF YOU BOUGHT A FULL SET.

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(C) 1996 Steam Computer Society

ALL MICRO NEWS (— IF THERE BE ANY!) No.79

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published for users of other (and Einstein) computers  
by Steam Computer Society. Chief Editor and Publisher:-  
A E Adams, Ivy Cottage, Church Road, New Romney, Kent. TN28 8TY  
(opinions herein are not necessarily those of the publisher)  
\*\*\*\*\*

MISSING MEMBERS

The following members are still missing, and we'd like to  
know where they are so we can send their mags to them:-

Richard AXE. Was at Reading, Berks, RG3 2DG  
Wm Ironside. Was at West Stockwith, DN10 4BD

\*\*\*\*\*

STILL NEEDED

QUANTA magazine Vol.13 No3 reports (p.17) that there was an  
article on "Text Scanning With Fax And Modem" in the Oct 95  
issue of POPULAR ELECTRONICS. Can anyone lend us a copy?

\*\*\*\*\*

HELP NEEDED -- APPLY WITHIN

Duncan Elvin's twins still keep him busy, so we need someone  
(with a modem) to monitor Omega BBS (& others) for Einstein/  
AMN/MDJ/OCUG stuff, & oversee on-line discussion group. Help  
is badly needed to keep us visible in computer mags too, as  
Frank Wadl is unable to continue with this for us. PLEASE!!!

\*\*\*\*\*

A SPOONFUL OF SUGAR

"Tycoon Alan Sugar, 49, confirms that he is having talks  
with rival Psion, who have offered £230 million for his  
troubled electronics firm Amstrad, founded 28 years ago. If  
the deal goes ahead, he will concentrate on running Spurs.

"Psion was set up by Dr. David Potter (who still owns  
25% of the company) in the 1970s, is the world leader in  
hand-held computers, and wants Amstrad's recently-purchased  
Dancall business so that his next range of computers can  
also offer mobile phone facilities." THE SUN, 26 June 96

\*\*\*\*\*

OUR POLICY:- SUPPORTING USERS AND OTHER GROUPS

Our policy is to support users of orphan computers, and to  
co-operate (not compete) with other groups. We believe the  
following to be active currently. Please update us!

AMSTRAD:-

WACCI (CPC USER GROUP), 7 BRUNSWOOD GREEN, HAWARDEN. CLWYD.  
CH5 3JA (01244 534942) PAUL DWERRYHOUSE = EDITOR/SUBS  
PCW PLUS MAGAZINE SUBS/SALES, FUTURE PUBLISHING, SOMERTON,  
SOMERSET TA11 7BB (01225 822511)

ATARI:--

LACE (LONDON ATARI COMPUTER ENTHUSIASTS), 41 HENRYSON RD,  
CROFTON PARK, LONDON SE4 1HL  
PAGE 6 PUBLISHING, PO BOX 54, STAFFORD, ST16 1DR  
ICTARI (ATARI PROGRAMMERS UG), 63 WOOLSBRIDGE RD, RINGWOOD,  
HANTS, BH24 2LX  
ATARI ST & 8-BIT REPAIRS, 17 OLD POND RD, ASHFORD, KENT,  
TN23 4QX

ALL MICRO NEWS 79/2

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DRAGON:-

NATIONAL DRAGON UG, 6 NAVARINO RD, WORTHING, W SUSSEX,  
BN11 2NF

JUPITER ACE:-

JUPITER ACE FORTH USER GROUP, 17 SPRING WOOD CLOSE, DUNSTON,  
CHESTERFIELD, S41 8BS. (01246 237555) (JOHN CHARTER)  
UG DEFUNCT, BUT JOHN ACTS AS INFO LINE EVES/WKENDS,  
LIKES TO TALK & HAS ACE CONTACTS

MSX:-

MSX LINK, 74 SILVER ST, WOODSTON, PETERBORO, PE2 9BX  
(01733 319333) CONTACT: ROBIN LEE MSXrlee@dds.n1

ORIC:-

ORIC USER MONTHLY, 65 BARNARD CRES, AYLESBURY, BUCKS,  
HP21 9PW (01296 26050) CONTACT:- DAVE DICK

QUANTA:-

QUANTA, 213 MANOR RD, BENFLEET, ESSEX, SS7 4JD  
(01268 754407) (BILL NEWELL, membership secretary)

PSION:-

SERIES 3 PSION USER GROUP (01752 262627)

SHARP:-

SHARP USERS CLUB, 6 BELLE VUE, THE ESPLANADE, WEYMOUTH,  
DT4 8DR (01305 783518) CONTACT:- MAURICE HAWES

SIRIUS/VICTOR/(APRICOT?):-

SIRIUS USER GROUP, 4 CRANTOCK TERR, FORD, PLYMOUTH, S DEVON,  
PL2 3BS (01752 500901)  
BILL APPLETON (THIS ADDRESS) IS FORMING NEW USER GROUP

SPECTRUM/SAM:-

FORMAT MAGAZINE, 34 BOURTON RD, GLOUCESTER, GL4 0LE  
(01452 412572)

PD POWER/PRISM PD, M SHERWOOD, 13 RODNEY CLOSE, BILTON,  
RUGBY, CV22 7HJ

Z88:-

15 SYCAMORE GROVE, SOUTHAM, LEAMINGTON SPA, CV33 0EY.  
(Z88 HINTS/TIPS/ADVICE/+ FREE WITH SAE)

OTHER COMPUTER-RELATED:-

ALADDINK, 43 HIGH ST, EYEMOUTH, BERWICK ON TWEED, TD14 5EY  
(01890 750965) RIBBON RE-INKING & MULTISTRIKE CASSETTE  
RELOADING) PHONE FOR NON-PCW PRICES

ASSN OF C & C++ USERS, 11 FOXHILL RD, READING, RG1 5QS  
COMPUTER KNOWITCLUB, 9 WESTERN RD, BURNHAM ON CROUCH, ESSEX,  
CMO 8JE. CONTACT:- Henry PERRIN. general advice/help

DISABLED DATA LINK:- advice on hardware and software for  
disabled plus free newsletter. contact:- Stan SYKES  
(01484 681753)

8BIT MAGAZINE, 39 HIGH ST, SUTTON IN THE ISLE, ELY, CAMBS,  
CB6 2RA (01353 777006) Brian@spheroid.demon.co.uk

MICRO-MOUSE, BURITON HSE, STATION RD, NEWPORT, SAFFRON  
WALDEN, CB11 3PL (01799 41367) magazine

ROD SMITH, PDSL, WINScombe HSE, BEACON RD, CROWBOROUGH,  
E SUSSEX TN6 1UL (includes 8-bit pd software library)

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FRC ELECTRONICS LTD, 52 QUEENSWAY, CAVERSHAM PARK VILLAGE,  
READING, BERKS, RG4 6SJ (01734 479550) floppy & hard  
disk drive repairs & sales (new & 2nd-user)

ANNE ROBINSON, RIBBONS & THINGS, 8 TREEFIELDS, BUCKINGHAM,  
MK18 1BE (01280 817217) printer ribbons, etc.

RAILWAYS:-

BREDGAR & WORMSHILL RAILWAY, THE WARREN, BREDGAR, KENT,  
ME9 8AT (01622 884254)

COL STEPHENS SOCIETY, BRYN HIR, LLANIO RD, LLWYN Y GROES,  
TREGARON, SY25 6PY (the champion of light railways)

HUGH F FOSTER, FLAT WHEEL TRACTION CO, 97 TURKEY LANE,  
FURLONG, PA 18925, USA. (retired US officer, Osborne

luggage owner, researches US Army ambulance trains)

NORTH YORK MOORS RLY (MEMBERSHIP), KEDROS, FLAXTON, YO6 7PZ  
SE&CR PRES SOCY, 44 BERRYHILL, ELTHAM PARK, LONDON SE9 1QW

TRAINS MAGAZINE SUBSCRIPTIONS, PO BOX 1612, WAUKESHA, WI,  
USA 53187-1812 (monthly, current/historical news/  
articles, v.good all-round rail mag, take ACCESS/VISA)

WATER TRANSPORT, ETC:-

COUNTESS OF EVESHAM, 45 BIRMINGHAM RD, STRATFORD ON AVON,  
WARWICKS, CV37 0AA (01836 769499) RIVER AVON LUXURY  
RESTAURANT CRUISER. usually berthed at Canal Basin,  
centre of Statford by canal/river/theatre/tramway bidge,  
serves coffee/lunches/teas year-round when berthed

NATIONAL PIERS SOCY, 70 BATHGATE RD, WIMBLEDON,  
LONDON SW19 5PH. MEMBERSHIPS:-MARY MASON

PADDLE STEAMER KINGSWEAR CASTLE, HISTORIC DOCKYARD, CHATHAM,  
KENT, ME4 4TQ (01634 827648)

PADDLE STEAMER PRESERVATION SOCY, PO BOX 385, HAZLEMERE,  
HIGH WYCOMBE HP11 1AG

PADDLE STEAMER WAVERLEY, WAVERLEY TERMINAL, ANDERSTON QUAY,  
GLASGOW G3 8HA

ANIMALS:-

HORSE WATCH (01892 545696)

PEACOCK WELFARE SANCTUARY & HOSPITAL:- RUN PRIVATELY AT  
BOGNOR, SUSSEX, BY RICHARD & JILL ??????

(seen on COUNTRYFILE TV PROGRAM 10/9/95)

GENEALOGY:-

SOCIETY OF BRUSHMAKERS DESCENDANTS, 13 ASHWORTH PLACE,  
CHURCH LANGLEY ESSEX CM17 9PU

GENEALOGICAL SOCY OF TASMANIA, PO BOX 1290, LAUNCESTON 7250,  
TASMANIA, AUSTRALIA (you can pay your subs through us)

AND LAST BUT NOT LEAST:-

KENT POLICE MUSEUM, HISTORIC DOCKYARD, DOCK RD, CHATHAM,  
KENT, ME4 4TE. CURATOR: JOHN ENDICOTT

RADIO SOCIETY OF GB, LAMBDA HOUSE, CRANBORNE RD, POTTERS BAR  
EN6 3JE

FRIENDS OF SHROPSHIRE, KYNASTON HSE, WORTHEN, SALOP, SY5 9HW  
(01743 83370)

NAT ASSN UNICYCLING, 4 MOORGATE RD, LEEDS, LSx xxx

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WORDSTAR HINTS/TIPS

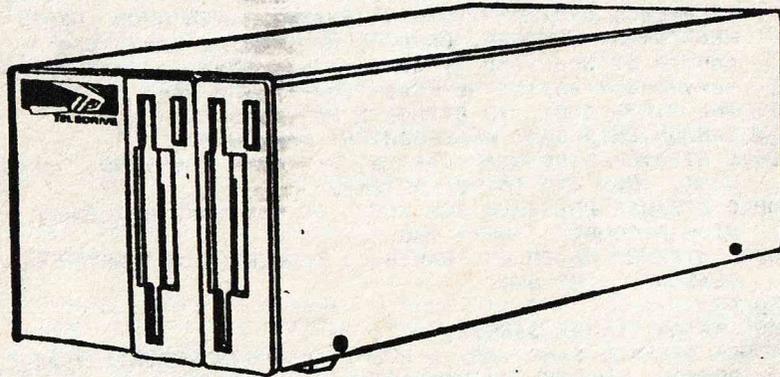
Suffering snow-blindness from WordStar due to black letters on white screen? Just load up WSCHANGE and select CONSOLE - VIDEO ATTRIBUTES. Change the colours and save the changes.

Ever keyed in a big chunk of text in the wrong case, because you've no CAPS LOCK indicator light -- or cos a glow-worm gives out a lot more light (even in the Summer mid-day sun)? Set a block with ^KB and ^KK, then use ^K' to make it lower case (ickle letters) or ^K" to make it upper (BIG LETTERS).

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TELEDRIE WANTED, DEAD OR (preferably) ALIVE

Preferably complete, working & with CP/M system/utilities disk, but will consider bits. The Teledrive was an add-on item for Tonto/OnePerDesk, but is sometimes hacked to fit QL



**TELEDRIE**

PCML LIMITED

MESSYDOS JOURNAL (No.79)

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published for users of MsDSos on PC (and other) computers  
by Steam Computer Society. Chief Editor and Publisher:-  
A E Adams, Ivy Cottage, Church Road, New Romney, Kent. TN28 8TY  
(opinions herein are not necessarily those of the publisher)  
\*\*\*\*\*

WELCOME TO THE LONG-AWAITED MESSYDOS JOURNAL

from the wonderful world of  
STEAM COMPUTER SOCY  
EINSTEIN USER GROUP  
RPM HISTORICAL SOCIETY  
OLD COPIERS USER GROUP

STEAM PRINTING AND HORSE TRAM SOCIETY

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As members of the Einstein User Group know well, the network of clubs, societies and special interest groups backing this new publication would never dream of becoming involved with anything that has any hope of being viable & self-sustaining when it can just as happily tilt at windmills & support and sustain lost causes, failed projects, and moribund magazines

We provide support for colonials trying to make contact with long-dead relatives in the UK; we own a fine collection of steam computers -- and also the type, stock & equipment of the last surviving pre-preservation-era independent steam railway printing office (which we hope will eventually form part of a working heritage centre). We have revived the moribund user group and magazine of a computer that even the manufacturer gave up on a decade ago. We support users of ancient "force the toner into the paper by brute force" photocopiers (and other reprographic equipment of similar antiquity) -- & we are based within sight and earshot of a working mainline steam railway, within walking distance of the location of the last working horse tramway on the UK mainland, and in an area which has probably the largest collection of recycled horse trams in the entire country.

It is therefore no more than an instinctive reaction on our part to regard the new wonder "instantly out-of-date on 1st January 1996" PC operating system as no more than a massive confidence trick perpetuated on a lot of gullible fools by a conspiracy of hardware manufacturers, software houses and glossy magazine publishers in order to get their sticky paws into other people's wallets by brainwashing them into junking all their existing computer kit & buying a new set.

In any event, users of MsDos are now an endangered species, a hopelessly lost cause, who fully qualify for our support!  
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## WHAT ON EARTH IS THIS ISSUE PRINTED ON?

This illustrious publication has -- until now -- been an integral part of EINSTEIN MONTHLY/ALTERNATIVE MICRO NEWS/ALL MICRO NEWS/EINSTEIN MAGAZINE & ALL MICRO NEWS (take your pick which title you use, as they're all the same thing!) However, in the past 15 issues any MsDos content has been visible mainly by its almost complete absence.

Hence it doesn't actually have any subscribers at present, and therefore it has no subscription income. Since it is now published in addition to EINSTEIN MAGAZINE -- and without depriving Einstein addicts of any of their magazine pages -- THERE IS NO MONEY AT ALL TO PAY FOR PAPER TO PRINT IT ON!

The separate ALL MICRO NEWS is in precisely the same boat.

As a result, it won't be printed on old tram tickets -- have you tried getting hold of any lately? -- but it might be most anything else, so long as it doesn't cost us anything!  
\*\*\*\*\*

## HINTS AND TIPS -- UNDOCUMENTED WORDSTAR

Do you use WordStar? Do you import ASCII files into it? If so each line will end with a hard return. This makes editing and reformatting very arduous indeed.

Quite by chance Yours Truly (<The Chief Editor>) found that ALT-A strips out the hard return and moves the cursor down a line. You can zip down a whole page doing this if you keep the key combination held down, but be careful, as it strips out the double hard return at paragraph ends too.

This certainly works on our copy of WordStar 4 (MsDos) on Amstrad PC7286 and 3386. Does it work on your WordStar too?

The other WordStar ALT key combinations don't seem to do anything very useful that can't be done in other ways -- UNLESS YOU KNOW BETTER? If you do, then tell us more!

See this issue of ALL MICRO NEWS for more tips on Wordstar.  
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## HINTS &amp; TIPS -- SURREY SOFTWARE WP-80 (MSDOS VERSION)

We thought at first that SSS WP-80 (MsDos version) couldn't handle nested sub-directories on hard disks, but we've since discovered that it can. However it does so quite differently from MsDos, and from most MsDos programs and utilities.

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Assuming that you have all your WP-80 (MsDos) program files in a sub-directory of their own, with a batch file in the default path that changes directory to, and loads WP-80, you will get a directory display that lists the files in that sub-directory, plus a highlit blank entry at the start of the listing.

If you want to load an existing file from that directory, use the arrow keys to cursor the highlit panel to the file you want to load, and press the RETURN/ENTER key. Otherwise press the RETURN/ENTER key with the blank space highlit. The existing file (or a blank page) will be displayed, and you will be in COMMAND MODE, with the directory you are in shown at the foot of the screen.

While in command mode use the back-slash (\) as a "change directory" command. The same command again will take you to the root directory, but unlike MsDos (and almost every other MsDos program) you can't route yourself through the root directory to another directory (or sub-directory) by adding its path after the root directory backslash in the same command. Instead you key in the directory path that you want to jump to WITHOUT putting the backslash at the start.

(Outside WP-80 you could only access sub-directories that branch off your default directory using this syntax.)

Once the directory path that you want is shown in the command area at the foot of the screen, you can create your document on the blank page and save it to the default directory you selected, or you can load an existing file from there by using the command Q (for "quit"), then the command R (to read another file). You then get the directory display for the directory you selected, and you can cursor to the file you want, and RETURN/ENTER to load it.

A snag we met with WP-80 is that it seems to display filenames, but not directory or sub-directory names. Also it doesn't seem to recognise . as a shorthand code for the default directory, or .. as a shorthand code for the parent directory (i.e. the level above)

-- UNLESS YOU KNOW BETTER? If you do, then tell us more!  
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If you think there's not enough stuff in MessyDos Journal that's of interest to you -- or anyone else -- just look in the mirror to see whose fault it is, and give them a good kick up the backside. The Dragon Update editor chappie is having to fill up the pages of his newsletter with lots of PC items to avoid sending it out with blank pages -- but we expect all you Dragon-user members out there to send your wonderful articles on using MsDos to us, not to them!

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## DIRECTORIES, DRIVES, PATHS AND TREES

If you've got an MsDos system, then you certainly have at least one floppy disk drive, and it will be one with at least 160Kb capacity disks and 256Kb of RAM, though you'll probably have a lot more than this. The very first disk drives on 8-bit systems had a lot less than this, but disks and drives were very expensive in the early days, so several users often shared one disk. CP/M was written so that each user could keep their own files together, separate from other users' files, in a "user area" that they alone used.

A similar concept applies under MsDos, but instead of dealing with several different users' files on the same disk, it deals with the problem that a file directory can only cope with many less entries before the file in which the entries are held is full than the disk itself can hold. This directory is just like any other file, but MsDos uses it to store information about which sectors on the disk it has put the file into, so it can find them again. The current directory has a very odd name. It is called .

How's that again? Well, you read it right. A single dot is the name that MsDos gives to it. You can check this for yourself by giving the command DIR and pressing the RETURN/ENTER KEY, and then doing the same but adding the dot as the name of the directory listing that you want to read.

It is handy to know this in programs like WordStar 4, where you can use the L command to change to another drive, or to select the next directory down the tree. But how on earth do you get back again, when the WS directory doesn't show you the level above, so you can't cursor to it and select it?

The simple answer is that you can use the back-slash (\) as the shorthand name for the root directory, but as well as the single dot being the name of whatever directory (or sub-directory) you are in, .. (two dots) is the shorthand for "the directory one level above where I am now". This is the beginnings of a useful system for navigating around, and you really only need to know two more things to get you going.

One is that you can chain your way through a string of directories by listing the path. The other is that the back-slash (\) is shorthand for the root directory if it is the first directory name in your path, but separates directories in your path when you follow them down the chain from the root. You already knew that MD U makes a directory called U wherever you are, & CD U paths you into it, didn't you?

That's it for now. More to come, but tell us YOUR queries.