

# NATGUG NEWS

Volume 5 Issue 12

June 1984 ✓

OFFICIAL JOURNAL OF THE  
National TBS-80  
& Genie Users  
Group.

INFORMATION ON THE GROUP  
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Membership of the Group is by subscription to the Newsletter, which is published monthly. Membership details are obtainable from the Group Secretary. Membership of the Group is open to anyone with an interest in the TRS-80 range of microcomputers, and compatible systems such as the Video Genie.

Details of the Group accounts and the constitution of the Group are obtainable from the Secretary.

Members requiring assistance with problems related to the TRS-80/Video Genie may call the Secretary. An attempt will be made to put them in touch with a member who can help with the problem.

Workshops are arranged from time to time in various parts of the country.

Sub-groups exist in many areas. A list is provided at the back of the Newsletter from time to time.

The Group maintains two software libraries (Models I and II) which are free to members. Library lists are obtainable from the Secretary.

A membership list is obtainable on disk from the Secretary.

Back numbers of the Newsletter are available.

Please send all contributions for the Newsletter to the Editor.

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CONTENTS

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1. Information on the Group
3. Editorial
3. Guidelines for contributors
3. Library information
4. Members' letters
4. Problem section
5. Pacing with RSET
7. Superscript problems
8. Close encounters of a stellar kind
10. Why the newsletter is late, a relativistic hypothesis
11. More on CP/M Plus for Model 4
12. Unprotecting Scripsit (and other odds and ends)
13. Help - TRSDOS 1.3, Snapware and a strange bug
14. Model I high resolution graphics
16. C compiler
17. ????????
19. For sale and wanted
22. Visicalc data transfer
22. LeScript
23. Multiplan
24. Gloucester Workshop and Sternberg at Luton

EDITORIAL  
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Sorry about the delay again, but I have to wait until I get sufficient material before putting the newsletter together. In fact, contributions seem to be drying up, probably as a result of the drop in membership and lack of interest in the TRS-80 range generally. Brian tells me that membership is currently around 475.

As mentioned in the last issue, we had a Joint NATGUG and IQLUG stand at the London Computer Fair at Earls Court. There was, as I expected, far more interest in IQLUG than NATGUG.

The Milton Keynes workshop takes place at the end of the month. The Sunday will be shared with IQLUG, and the way things are going there might be more IQLUG than NATGUG members, especially since we are having one of the QL's designers along to talk about the machine, and we will be holding the inaugural General Meeting. I will be demonstrating the use of my Model II as a development system for the QL, a task for which the Model 4 is ideal, as it now runs CP/M, and could utilise the same MC68000/8 cross-assembler that I use. The QL can also use many of the Tandy printers, and the connection of the low-cost colour plotter or the colour ink-jet printer to the QL would be a very interesting exercise. I am sorry to sound a bit defeatist about the prospects of NATGUG, but we just have to face the facts.

Leon Heller

GUIDELINES FOR CONTRIBUTORS  
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1. If possible, send material in printed form.
2. Scripsit or Pencil disks/cassettes are acceptable.
3. Ensure your ribbon is in reasonable condition.
4. Printer output should be on A4 paper if possible.
5. If you send in hand-written material, write legibly.
6. Do not fold the sheets when posting them. Use a large envelope and keep them flat.

Leon Heller

LIBRARY INFORMATION  
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Model I: Leighton Davies, 105 Caerau Road, Caerau, Glamorgan. Tel: (0656) 738337

Model II: Jim Hutton, 25 High Street, Stroud, Glos. Tel: (045 36) 4423

MEMBERS LETTERS  
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I have recently fitted a 48K internal RAM expansion supplied by GNMIC which caused some difficulties as I have a Hitachi built TRS-80 and the internals are very different, and am looking now for one or two disk drives (and DOS) which I intend to interface via the GNMIC DP1000 interface. Should you know of any second-hand drives which are available, I would be pleased if you could let me know of them.

I hope my knowledge will grow sufficiently so that I can understand more of the magazine - just now a lot of it is really too advanced for me, but I read that this is everyone's experience and so I don't feel too bad about it.

J.C. King,  
5 Market Street,  
Hebden Bridge,  
W. Yorks. HX7 6EU.

(x Blandford Computers often have second-hand disk drives in stock. Give Os House a ring on (0258) 53737. LFH x)

PROBLEM SECTION

When Noel (my wife) rang you re May issue I did tell her to ask you whether the Journal has died from natural causes or has it been murdered? Only I gather she never managed to get to the end of my message as you had rather a bad day. Well, we all have them. My mini was on the blink since Thursday last week and DIR/BAD was giving me a varied number of bad blocks on the System Master - up to 99 on one occasion. On the advice of our OEM I re-initialized the System Master using one of my copies. I have three of those - apart from the official copy. The trouble was that I have made some program alterations to the subscriptions' programs (I have 22 of those) on the System Master and not all of them have been copied onto my copies. On top of that the accounts update program is still suffering from hiccups in spite of three cracks at it by OEM. (For obvious reasons I would not touch the sources of the accounts' programs). The latest hiccup was that on the update of a group of nominals the nominals, which should not have been updated, not only lost first links with the transaction file but also doubled their Current Period Total. Being an accountant and using a computer is bad enough but this combined with being DP manager (kind of - as the only mug in the establishment who ever saw computer) can be sheer hell. Incidentally the bad blocks were the result of dirty heads - now cleaned by DEC maintenance chappie.

Being a devil for punishment I am looking for a decent accounting program for my Model 4. Do you know of any? I would like to be able to print or display accounts with transactions and balances at any time, be able to contra the original entries to more than one nominal, accommodate about six bank/cash accounts, about 200 nominals and about 500 transactions between updates (monthly). I would like to be able to print day's transactions and not the transaction file from the beginning each time I require a print. Also I would like the update to run without accounts' print.

I wrote to about ten places, got very few replies and those which I got were not suitable. The price I would expect to pay is about £300 - 400. You know how I value your knowledge - any advice would be appreciated.

Amcn.

(\* Any suggestions to Brian, please. LFH \*)

I am writing to you as NATGUG newsletter editor and a TRS-80 expert hoping that you might be able to help a fellow member of the group ?

I am I am afraid not very technically minded and am somewhat confused about using Electric Pencil with my Video Genie. My set up is VG EG3003 with EG3014 48k expansion and twin disks (Micropolis).

At the moment I run Electric Pencil in upper case and all is well. But as my printer can print lower case it would be nice to implement lower case in the computer as well. Having contacted Lowe's they advise that they can fit lower case for me for approx £44 plus carriage; (Phew!!). But they are not sure if it will operate O.K. with Pencil and there was a letter in the March newsletter from a Mr Williams who seems to have a similar problem.

Now this is where my confusion starts. My Pencil manual tells me that to have lower case fitted I need two extra switches (a) a control key and (b) a single pole double throw switch to switch the extra bit of screen memory in and out. At the moment my Pencil is set up by the vendor to use the 'Clear' key as the Control key, and this is quite satisfactory in upper case usage. But do I really need the other switch ? Lowe's seem unsure, they say that lower case is implemented by a software driver they supply on tape with the modification.

Help please ! I am totally confused. My version of Pencil is titled on the disk as 'Pencil/LC' which sort of suggests that lower case is around somewhere, but on powering up I do not get a question asking if lower case is fitted or not (as Mr Williams mentions he does in his letter, and as also is mentioned in the Pencil manual).

Could you kindly throw some light on the lower case modification and the usage of Pencil in lower case please; is the Lowe's one the best one to have or are there others available which might be better. Any words of wisdom would be greatly appreciated I assure you.

Peter Roberts

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(\* Eric Hartley on (0200) 22980 can help with the L.C. mod. Can anyone help with the other problems? LFH \*)

I have been using SCRIPSIT patched to run with enhanceNETS on LDOS. The patches were published in the LDOS quarterly way back in OCT 82 and I can get most of them to work but not P,F print to file or P,D print to display has anybody succeeded?

For those that have not tried LSCRIPT it is a very big improvement on standard SCRIPSIT for the model I. The ability to speed the cursor up and to use a spooler is a great asset. As the control keys are moved to the top row I use a printed overlay which puts the functions along side the key. This makes it much easier to use for somebody that is not familiar with the idea that V = page and S = insert.

The strange thing about Scripsit is that it gains usefulness with experience. I used to regret that there was no multiple print facility until it was explained that the repeat key allows up to 255 copies and even more recently I found that \_\_\_\_\_ can be printed with YQM together (as in Name: \_\_\_\_\_). This has two advantages. It provides a space on manual forms and SORTS high. In a list of figures or letter grades there is a tendency for the records with nothing in them to SORT to the top. Although the character is really an underline character it cannot be used for this purpose but it is visually better than ..... or \_\_\_\_\_.

In case anyone wonders what sorting has got to do with SCRIPSIT I should add that if I have simple data to work with I find it easier to set up a file in Scripsit or Visical and use CMD "0" to sort it before returning. This way you get the all the input and printout routines written for you.

I have also seen mention of a hardware buffer PCB. Where can I get one?

Derek Trayler  
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 Hornchurch,  
 Essex RM11 1PW.

(\* Print buffer PCBs are available from Roger Hamlett on 01-508 0062. LPH \*)

PADDING WITH RSET

The CMD"0" SORT that is available under most DOS's is very fast but will only work for strings. If STR\$ is used to convert the number into a string, it can be sorted by CMD"0" but the result can be strange. I found 5 sorted greater the 1500 but less than 60 and this turned out to be because it was sorting on the first character. I tried to use 0005 but the leading zeros were suppressed.

Reading through an old newsletter gave me the tip to use RSET as this pads the string to get an accurate sort. A demo program shows the effect and it can be PRINTed or LPRINTed as required. It is interesting to see the effect of the CHR\$(95) in line 100. If this is changed to CHR\$(32), a different order is obtained.

```

10 CLEAR1000:P$="   ###  %   %"
100 DIMN$(100):FORN=1TO20:N$(N)=STRING$(6,95):NEXT
200 FORNN=1TO14
300 READD:RSETN$(NN)=STR$(D)
400 NEXT
500 DATA1,34,99,24,129,2990,199,2,187,3,123,4,128,6
600 FORN=1TO20:LPRINTUSINGP$;N;N$(N):NEXT
700 CMD"0",20,N$(1)
800 FORN=1TO20:LPRINTUSINGP$;N;N$(N):NEXT

```

Derek Trayler

### SUPERSCRIPSIT PROBLEMS

I continue to have trouble with Tandy's latest version of Superscript (1.02). It is much improved on the initial disaster issue, but still a little too prone to occasional catastrophe. The first time this version was used, it behaved alright for about an hour and a half, with frequent @w's to save the text. At the end of this time it produced "DATA RECORD NOT FOUND" or some such message. It transpired that the system had written some of the text on the directory track and thoroughly lost its place as a result. Reconstitution of the text was possible with Leo's help at Swindon, using Superzap. The text was found on the corrupted disk by searching sector-by-sector, then copied by sectors to a previously prepared empty Scripsit file on another disk. Although this took longer than retyping the text would have done, it was reassuring to prove the method. As far as Tandy Customer Services were concerned, no advice was available to recover "lost" text like this.

Another recent fault was that a Superscript file which had apparently saved alright would not load when next needed. The system froze when it attempted to open the document. The first sector of the file had been corrupted and could not be read by Scripsit or by Superzap. In this case, recovery was achieved by copying the first sector of another Scripsit document into the faulty sector. It was then straightforward to the formerly corrupted file under its old name (since the directory was not altered by the sector copy and 'knew' the correct address from when the document was previously saved). Scripsit automatically copied the correct document name back into the 'Open Document' details but tab layout needed readjustment, once back in the document itself.

Both of these faults happened while using Superscript under TRSDOS 2.3, on two different Model 1 systems. On a third Model 1, Scripsit kept returning to the main menu each time an attempt was made to open a new document. I was using TRSDOS because my school has not yet taken my advice to buy a decent DOS. With my own NEWDOS 80.2, Superscript has worked very well in the few weeks since I received from Apparatus the zap list for this latest version.

Tandy Customer Services tell me that many people are using Model 1 and Superscript without troubles like these. I wonder how many more still have difficulties like mine but have learned to live with them, found solutions or simply given up. It was only after a particularly bad session with an earlier version of Superscript that I was annoyed enough to go back to Tandy for the third or fourth time, to discover that they had produced another improvement. It is a sorry reflection on their after-sales service that they hadn't even bothered to tell registered owners that the new version was available to remedy unsatisfactory performance of the earlier one.

I hope this will be a help to some other members, but I would still be glad to know, has anyone a solution or even an explanation for these problems?

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CLOSE ENCOUNTERS OF A STELLAR KIND

Whilst casting around for simple routines to dress up as BASIC programs for those of my pupils who are prepared to use their Spectrums, VIC 20s and so on as other than games machines I came across a novel use of astrophysics - the prediction of stellar close encounters. Thus for general amusement I present some calculations which allow prediction of time and distance of closest approach for those slightly rogue stars that do not follow the plane of the Galaxy and which have a resultant velocity in our general direction. Not being an astrophysicist I have limited this program to handle stars with a negative radial velocity - that is they are headed in our direction! Certain information will need to be found from star catalogues but I include a list of some of the nearest stars and their relevant properties to start you off.

As it stands the program will give answers accurate to around 0.2%. Better results would come with more significant figures in the constants plus account taken of factors such as precession but one can be too picky! Should you build a garden fish pool with exacting specifications of around 10 places of decimals for  $\pi$  you'll have cause to tear your hair out when any insect drops in as it will distort space curvature enough to ruin your meticulous figures.

For those of us who do not aspire to Mensa status help with derivation of the formulae, constants and units can be found in a 'simple' text, the volume set by A.E. Roy & D. Clarke entitled Astronomy and published by J.W. Arrowsmith, Bristol. An article on the subject may be found in the U.S. magazine 'Astronomy', April 1979.

The works of the program lie in lines 380 to 430 the rest of the program is self explanatory flannel meant to make it user friendly. In line 480 the straight left hand bracket indicates that 2.512 is being raised to the power of (AM - NM).

STAR	R.A. (h,m)	DEC (°)	PARALLAX	P.M.	R.V.	MAG	S.T.
$\alpha$ Cen C	14 28	-62 36	0.764	3.841	-15.7	11.05	M5
$\alpha$ Cen AB	14 38	-60 46	0.743	3.673	-27.0	-0.29	G2,K0
Barnard's	17 56	+04 36	0.553	10.278	-110.0	9.54	M5
W 359	10 56	+07 10	0.428	4.691	-12.0	13.53	M8
Sirius AB	6 44	-16 42	0.374	1.323	-7.6	-1.46	A1,wdA
Ross 248	23 40	+44 04	0.314	1.584	-81.0	12.29	M6
L 78 <sup>o</sup> -6	22 38	-15 28	0.298	3.270	-60.0	12.18	M6
Ross 128	11 47	+00 58	0.300	1.369	-13.0	11.10	M5
$\delta$ 1 Cyg AB	21 06	+38 38	0.292	5.204	-64.0	4.80	K5,K7
$\epsilon$ Ind	22 30	-56 52	0.285	4.694	-39.0	4.68	K8

These figures are for the epoch 1980. Take the reciprocal of the parallax to obtain parsecs. Proper motion is in seconds of arc per year, radial velocity is in Km per second and MAG is the star's apparent visual magnitude - the smaller the number the brighter the star. The last column shows spectral type.

```
10 CLS:FOR S = 1 TO 5
20 PRINT @ 467,STRING$(26,"*")
30 PRINT @ 531,STRING$(3,"*")  STELLAR KAMIKAZE  "STRING$(3,"*")
40 PRINT @ 595,STRING$(26,"*")
50 FOR W=1 TO 500:NEXT W:CLS:FOR W = 1 TO 100:NEXT W:NEXT S
60 PRINT @ 192,"This program will calculate both"
70 PRINT"the closest approach of a Star"
80 PRINT"to our Solar System and the Time"
90 PRINT"it will take to do so"
100 FOR W = 1 TO 2000:NEXT W:CLS
110 CLS:PRINT @ 192,"You will need to enter:":PRINT
120 PRINT"1. Name of Star":PRINT"2. Its Proper Motion"
130 PRINT"3. Its Present Distance":PRINT"4. Its Radial Velocity"
140 PRINT"5. Its Apparent Magnitude":FOR W = 1 TO 2000:NEXT W
150 CLS:PRINT @ 456,"For a short explanation of units used"
160 PRINT @ 520,"PRESS <ENTER>"
170 PRINT @ 648,"To continue press <SPACE BAR>"
180 A$ = INKEY$:IF A$ = "" THEN 180
190 IF A$ = CHR$(13) THEN 520:IF A$ (<) CHR$(13) THEN 200
200 CLS:PRINT @ 64,"Note that approaching stars have negative radial velocities"
210 PRINT:INPUT"Name of Star";S$
220 INPUT"Proper Motion - in seconds of arc per year";PM
230 PRINT"If "S$" distance is in parsecs then type P"
240 PRINT"If "S$" distance is in light years then type L"
250 B$ = INKEY$:IF B$ = "" THEN 250
260 IF B$ = "P" THEN 300:IF B$ = "p" THEN 300
270 IF B$ = "L" THEN 280:IF B$ = "l" THEN 280:GOTO 250
280 INPUT "Distance - in light years";L
290 D = L/3.2615:GOTO 310
300 INPUT"Distance - in parsecs";D
310 INPUT"Radial Velocity - in kilometres per second";RV
320 INPUT"Apparent magnitude";AM
330 PRINT:PRINT"### If you have correctly entered information press <ENTER> ###"
340 PRINT"### If you have made a mistake press <SPACE BAR> ###"
350 E$ = INKEY$:IF E$ = "" THEN 350
360 IF E$ = CHR$(13) THEN 380:IF E$ = CHR$(32) THEN 370:GOTO 350
370 CLS:GOTO 110
380 TV = 4.74 * PM * D:REM ** Tangential or Transverse Velocity (Km/S) **
390 SV = SQR(TV * TV + RV * RV):REM ** Space Velocity (Km/s) **
400 MD = 4.74 * D * D * PM/SV:REM ** Minimum Distance (pc) **
410 NPM = 0.0444 * SV * SV/(D * D * PM):REM ** Proper Motion at MD
      (s of arc/year) **
420 NM = AM + 5 *(LOG(MD/D)/LOG(10)):REM ** New Apparent Magnitude at MD **
430 T = 977 800 * D * RV/(SV * SV):REM ** Time taken to MD (years) **
440 CLS:PRINT @ 320,"In "T * -1" years "S$" will be at"
450 PRINT"its nearest, "MD" parsecs, and will"
460 PRINT"appear to have a magnitude of "NM
470 PRINT"an increase of "(AM - NM)" magnitudes"
480 PRINT"which is "2.512*(AM - NM)" times as bright"
490 PRINT:PRINT:PRINT"### for another calculation press <?> ###"
      ### Press any other key to finish  ###
500 D$ = INKEY$:IF D$ = "" THEN 500
510 IF D$ = CHR$(63) THEN 110 ELSE STOP
520 PRINT @ 192,"Measurements of Distance:":PRINT
530 PRINT"1 parsec (1pc) = 3.261 5 light years"
540 PRINT"= 1/p where P = parallax in seconds of arc"
550 PRINT:PRINT"Measurements of Angle:":PRINT
560 PRINT"1 radian = 180 * 60 * 60/PI seconds of arc"
570 PRINT"There are 60 minutes in 1 degree and 60 seconds in 1 minute"
580 PRINT"Thus 1 degree = 60' = 3 600''
590 PRINT"1 degree = PI/180 radians"
600 PRINT:PRINT:PRINT"## To return to main program press any key ##"
610 C$ = INKEY$:IF C$ = "" THEN 610 ELSE 200
```

WHY THE NEWSLETTER IS LATE, A RELATIVISTIC HYPOTHESIS.

In a rare brainwave (well something rippled) the explanation came to me as to why it seems that NATGUG News comes out late no matter how hard our editor works. It is all down to relativity. The faster Leon compiles the magazine the slower his watch appears to run. Thus when he looks up and sees he is ahead he takes a well earned break only to find out when it comes to distribution time that his creation has missed the last post.

For example, even if Leon works at the speed of his slowest Model 1, after a full working day his watch would be over 2 hours slow compared to everyone else's. The faster he works the later the magazine!

Proof lies in the program below. Incidentally, can anyone tell me why spurious values (in this case  $> 1$  for ST) arise in line 60 with velocities of around  $100\ 000\text{ms}^{-1}$ . I had to put an elastoplast conditional statement in line 70 to trap them. Around  $U = 100\ 000$  seems to be the point where the SQR function is going to produce a non unit answer. While I am asking would a Model 1 user please explain why in the INKEY\$ routine, lines 140 to 160, I can not merge the test statements into one line.

Chris Oldman  
38 Clifton Gardens  
London W9

```
5 REM 100% RELATIVISTIC TIME CONTRACTION 100%
10 DEFDBL A-Z
20 CLS:INPUT"The work rate in metres /s";U
30 IF U > 299792459 THEN 180
40 PRINT:PRINT"Enter working time in hours, minutes"
50 INPUT"How long is the work session";H,M
60 OS = H * 3 600 + M * 60:C = 299792459: REM $$ Time in secs-Light speed $$
70 RV = (U*U)/(C*C):ET = 1 - RV:ST = SQR(ET): REM $$ Time contraction factor $$
80 AT = OS * ST:IF AT => OS THEN 120: REM $$ Test SQR(ET) < 1 $$
90 A = (OS - AT)/60:MIN = INT(A):S = OS - AT - MIN * 60: REM $$ Time in mins,secs $$
100 CLS:PRINT @ 192,"Your watch reads "MIN" minutes and "S" seconds"
110 PRINT"slower than anyone else's.":GOTO 130
120 CLS:PRINT @ 454,"Apologies, time difference too small to register."
130 PRINT:PRINT" $$$ Press (F) to finish otherwise press (SPACE BAR) $$$"
140 A$ = INKEY$:IF A$ = "" THEN 140
150 IF A$ = "F" THEN 200
160 IF A$ = "f" THEN 200
170 GOTO 20
180 PRINT"Faster than light travel not allowed here"
190 FOR W = 1 TO 1000:NEXT:GOTO 20
200 CLS:PRINT @ 535,"NO TIME TO LOSE":PRINT:PRINT
```

More on CP/M Plus for Model 4 from Roy Barber.

There appear to be two of us following a parallel theme on the Model 4 CP/M. Anon and I overlapped a little in the last issue. Perhaps we should compare notes !. Anyway, my regards to that gentleman.

I am continuing to relate my experiences on the subject of this CP/M as I think it is of some importance to the prospective purchaser.

My comments in the last issue about the drive stepping rate being inactive were not strictly correct. Although the prompt says 'inactive' it does work and the prompt changes to 'active' only while the stepping rate is actually being changed.

For those who have not yet experienced any of the problems of this version of CP/M I should point out that an even more serious bug has come to light associated with the stepping rate change feature than it just not working. This has been brought to my notice by another member who has purchased CP/M Plus. This bug manifests itself as follows:

If a new stepping rate is selected and an attempt is then made to install this as a permanent change as the SETUP utility allows, after the new stepping rate is written to disk the disk will no longer boot !. This is obviously a major fault and if a newcomer to disks is unfortunate enough to try it on the master disk he will be in a very unfortunate situation.

On the subject of documentation, which Anon commended, I agree it is ample and most of the users requirements are well covered but when it comes to the installation of CP/M Digital Research has maintained its tradition of incomprehensibility. Most Model 4 users will not be too concerned with this aspect as the CP/M comes configured for them but if the user needs to alter the configuration, as I do for double sided drives he will have little chance using the DRI documentation. A source list of the actual BIOS implementation for Model 4 would have helped but DRI provides only a sample BIOS for 8 inch 50 SS drives. The only help provided is a source list of the model 4 ports and addresses. (Incidentally, DRI's comments like 'This does not work' have been left intact here.)

The GENCPM utility which is used when a new BIOS is incorporated also does not function as indicated in the manual. I have been unable to get it to run to the first prompt shown in the examples. I may have missed some subtle point somewhere in the instructions but as I am unable to get the results indicated by DRI I do not feel like working on modifying the BIOS only to find the bugs in the installation program prevent it from being installed.

All in all, unlike Anon, I find this CP/M a great disappointment and I only hope other purchasers can get more value for their money from it than I consider I have so far. Of course, in time this may all be put right and maybe someone will figure out or explain how to modify the BIOS for drives other than Tandy standards but in its present form.....

Roy Barber. (01 304 3856 for your comments.)

Unprotecting SCRIPSIT (and other odds and ends).

As this is my first contribution to the newsletter perhaps an introduction is in order. My name is Roy Sainsbury and I live at Park Farm Nurseries, Landford, Salisbury ((0794) 390319 after 6). I have had a Model-I for about 3 years but in February I changed to a Model-III. At the moment I am beginning to wonder if this was a good idea: I had no disk I/O errors to speak of on my model-I, but the new machine's drive 1 seems to have the gremlins and is currently back at Tandy's in Southampton to have it checked (again). However, on to the interesting bits...

As I already had Model-III SCRIPSIT (which came with the model-I package), I decided to put this to use and was horrified to find that not only had one of the demo files been replaced by a lot of rubbish files but also that I could only get one backup out of it. After that, neither my master or the backup would do another backup without reporting that I had exceeded the limit and had copied everything except SCRIPSIT. Like most people I have a dislike of this kind of thing so I wrote to Tandy about it and in the meantime used SuperUtility to copy the master. Tandy were very good about it and in fact sent me a replacement master disk, so now, armed with two masters, one used and one unused, I could investigate how the limited backup protection (which allows only 2 copies) is done. This I did, and came up with the following 'un-protect' procedure. For this you'll need a zap program (I used SU+):-

1. Go to the directory (track 17) and search for the filename of the protected program (Tandy tells me that at the moment only SCRIPSIT and VISICALC are limited). The first byte of the line containing the filename will contain 7EH. Change this to 5EH, which 'unflags' the file as being protected.
2. Go to the BCOT sector (track 0 sector 1). Byte 22H is the backups counter. On normal disks this will be FFH, but on limited copy disks it will be the number of copies allowed. Change this from whatever is there to FFH to clear the counter. (Note: if you use SU+, it's repair-BCOT also sets this to FFH).
3. You may now backup the previously protected program using TRSDOS as usual.

Incidentally, trying to backup a protected disk that is write-protected results in backup aborting because it can't change the counter on the source disk. Once the counter reaches zero (or the disk is not protected), you can keep the write-protect tab on.

Regarding protection, It appears that Tandy, in an attempt to let Model-III BASIC programmers protect their programs by giving them "EXEC" only access (if the program is stopped it is erased), they have left a loophole by which it ought to be possible to copy ANY program, without knowing passwords and without using a zap program to get rid of them. I haven't actually tried it yet but I do know that you can read an "Exec" only program from BASIC.

I found this out quite by accident (I wonder how often we do that?) using the "Load Module Locator" program from Machine-language Disk I/O & mysteries on SCRIPSIT, totally forgetting that on the Model-III it is password protected with Execute-only access and therefore should have had access denied, but it wasn't! When I hit BREAK to stop using the program, the "Protection has CLEARED Memory" message came up. When I realised that BASIC was letting Execute-only access through as if it were a program!

From this, it seems that a simple program could copy any such program. Just open two random files, one to read the file, and another to re-write it to a new file, then read records one-by-one from the 'protected' file and write them out to the new one! Of course, if any errors occur you'll lose the program, and I don't know if it closes files correctly under those circumstances, but if you are really stuck for getting into a protected program, it might work!

If any of you have tried using the Misosys Disassembler (disk version) on Tandy's Series-I Editor/Assembler, you'll know that it won't work. I found this out on the Model-I, and at first thought it was incompatibility with TRSDOS 2.3B, which seems to differ from 2.3. In fact it is not, but an incompatibility with the Assembler as it doesn't work on the Model-III either. Or at least, I should say that it didn't, because I have found a fix for it, along with fixes for a few other bugs in it. I would have listed them here but as the computer isn't around I can't print out the relevant information (I gave my previous list to the chap who bought my Model-I!). However, when it gets back I'll run it off and send it in. By the way, I suggest that if you're using TRSDOS 2.3B on Model-I, consider the PATCH command as a 'program destroyer', because my experience with it is that files which were loadable before produced LOAD MODULE ERRORS after a patch was attempted. Safer to LOAD the program, patch it with DEBUG and then DUMP it again.

One contributor in an earlier newsletter commented that when he ran his Model-4 in Model-III mode but switched the speed to model-4 speed, he got errors on disk I/O. Although I haven't got a model-4 I thought about this a bit and it seems to be to be reasonable that it should happen that way. If you have a model-III DOS running on the machine it will think it is running a model-III at the speed that machine runs at, so software time loops to allow for disk startup time and initial read/write delays and so on will have been programmed accordingly. Speed up the clock and all those loops run faster and thus terminate early, so the disk could be written to before it's fully up to speed. Interestingly, the manual for Howe's System Diagnostics (version 3.0) says that even in Model-III mode that program will show the drive speed as being 7% higher than it should be, which I suppose means that in Model-III mode the 4 is actually slower than the actual model-III.

HELP - TRSDOS 1.3, SNAPEWare & a strange bug

Perhaps some members will be able to help me with the following:-  
 a) When using SuperUtility 3.2 on my Model-III with TRSDOS 1.3, I note that all system disks have a bad GAT. Experimenting with two identical backups indicates that after you do a "repair-GAT" two granules are released for use (track 2, sectors 7 to 12 inc.). It appears that these granules don't belong to any of the DOS files but for some reason Tandy allocates them. Sector 7 contains what looks like a "load module" which does make machine-code sense (but I don't know what it actually does), and sector 10 is full of zeros except the first byte. Now, the point is that SU+ also repairs the GAT whenever you kill, recover, copy or build a file, and the danger here is that those sectors might get clobbered by a new file if it's short enough to fit. Can anyone tell me if these sectors actually do anything or are they just remnants from a previous version of TRSDOS (not of 1.1 because my 1.1 has an active program (CONVERT, I think) occupying that area). I can reinstate those granules by zapping byte 02 of the GAT from 3FH back to 3FH, but this presupposes they don't get clobbered first!

b) I recently bought SNAPP VI (garbage collector), but I am worried about using it after reading that it requires the production of a 42 track disk. Trouble is, the drives are only supposed to be 40 track and I don't want to wreck them using this program. Unfortunately, Molimerx won't support SNAPPWare and I think SNAPP is out of business anyway, so there's no help there! I would rather throw the disk away than cause a disaster, so if anyone knows if 42 tracks is safe or not, please let me know.

c) I have a strange bug. A machine-language subroutine used with a BASIC program worked OK on Model-I, and also on a model-4 but on model-III? It just crashes everything. The program manipulates the screen while it's in 32-chr. Mode, and I have since discovered that it works on Model-III if left in normal mode (switching over after it has been done). I tried this out on a model-III that was in Tandy's for repair the other day, and the same thing happens. Is this a design fault or is there something I should be doing in 32-chr. mode to stop that happening? If anyone with a model-III wants to try it I can send them a copy (probably on tape but it needs disk BASIC).

Finally, I would like to order some programs from the States, and having never done this sort of thing before, don't know the procedure: do they accept Access IX as Mastercard; What happens about Customs/VAT and all that stuff? I know lots of people even buy hardware abroad, so if someone out there knows the works, it would be a great help (I shall probably get Trashman and junk SNAPP VI if it's unsafe).

Roy Sainsbury, Park Farm Nurseries, Landford, Salisbury.  
Phone Romsey (0794) 390319 after 6pm.

(\* Buying items (hardware or software) from the States does not present any problems. Just quote your Mastercharge or Visa number (they don't know about Access or Barclaycard over there), and ask for the goods to be sent airmail. The postman will ask for the duty and VAT when he delivers the goods to you. I have used this technique lots of times without any problems. LFH \*)

## MODEL 1 High Resolution Graphics.

---

### Main Character Generator.

---

Each HI-RES graphics Character is made up of a matrix 6 pixels across & 12 lines down. This character is the same 'size' as the original TANDY character No 191 but instead of being sub-divided into 2x3 it is now 6x12!

Each of the 72 dots of a character has 1 bit of Ram allocated to it. To achieve this each line of 6 dots is allocated 1 byte of ram with 2 bits not used.

Bit 0 is the rightmost dot & bit 6 the leftmost, with bits 7 & 8 not used. As the line count for each character is 0-11, lines 12 to 15 are never accessed, gating of the address lines could have been employed here to use the minimum amount of ram, but as yet manufacturers of 1536x8 (128x12) rams are hard to find, so 2048x8 (128x16) have been used & 4 bytes wasted on each character.

The character generator section is made up 4Kx4 low power rams (2114s), I/Cs 7 to 10, I/C11 Gate & Hex Tristate gate I/C6.

The rams are configured into 2 1Kx8 blocks, with NA 10 & NA 10 (via I/C 11 inverter) acting as the block selector. I/C6 acts as a buffer between the CPU Data bus & the character generator output.

In operation there are simply two modes, first, READ, when the character generator is supplying video character line information to the video shift register, & second, WRITE, whereby the character generator is being written to by the CPU. (similar to the writing of information to the 1K of video ram).

In the READ mode the control line to the address multiplexers (I/C 3, 4 & 5) is LOW, this means that the ram R/W is high, setting the rams to the READ mode & I/C6 buffer outputs to the tristate mode, it also means that the character generator is getting it's address inputs from the video timing circuits of the keyboard (L0, LB1 etc). Thus the ram outputs are providing signals for the HI RES video shift register (I/C12).

In the WRITE mode the control line to the address multiplexer is HIGH. The ram R/W line is now a function of the 0 to 2K decoding & the CPU WR line. To actually write a byte to the generator the CPU must do a write operation to any location between 0 & 2047 with the address multiplexer control line in this high state. Address 0 - 11 correspond to lines 1 - 12 of character 128, 16 - 27 to character 129, 32 - 43 to character 130 etc, the line dot pattern as described earlier, but to indicate it, 0 will give a blank line, 63 a complete line, 1 a rightmost dot & 32 a leftmost one.

Remember though, as your characters are now ram based, on power-up they will be filled with 'junk'. To clear all the characters run the following program:-

```
10 OUT 140,1:FOR X=1TO2047:POKE X,0:NEXT:OUT 130,1
```

Or in Assembler for speed:-

```
LD HL,0
LD (HL),0
PUSH HL
POP DE
INC HL
LD BC,2047
OUT (140),A
LDIR
OUT (130),A
```

#### Address Decoding.

CPU address lines A3 - A7 inclusive are used with the OUT signal to decode the following I/P ports 130, 140, 150 & 155 via I/C 1, these signals are used to toggle two 'D' type flipflops (I/C2), (both these flipflops are reset on power-up & on operation of the reset button). When an I/O operation is performed to port 130 this produces a -VE going pulse which is applied to the CLK of I/C2A flipflop, this latches the low held on the 'D' input onto the 'Q' output. This output is used to control the ram character generator address multiplexers (I/C3, 4 & 5). When it is low the generator receives it's addresses from the video divider chain L1, L2, LA, L(, LBO etc.

When an I/O operation is performed to port 140 a -VE going pulse is applied to the SET of I/C2A, this latches a HIGH on the 'Q' output & thus the address multiplexer control line. With the line in this state the ram character generator receives it's addresses from the CPU address bus.

When an I/O operation is performed to port 150 a -VE going pulse is applied to the CLK of flipflop I/C2B, this latches the LOW held on the 'D' input onto the 'Q' output & the Q output is set to a HIGH. The LOW on the Q output is fed to the CLEAR input of the HI-RES video shift register I/C12, this forces the shift register to continually shift out a 'LOW' signal, this is inverted by I/C11 & sent to the keyboard via pin 9 on th 20 way ribbon cable & the I/F PCB to the video driver I/C 741 pin 7, thus the HI-RES graphics are inhibited.

Memory Mapped Address Decoding.

CPU address lines A11 - A15 inclusive are decoded by I/C14 to produce a LOW signal called ROM A whenever the CPU address bus is within the 0 - 2K range. This signal is then gated (I/C11) with the CPU WR signal to provide the R/WR required by the ram character generator whilst it is being programmed.

HI-RES Video Shift Register.

The HI-RES video shift register supplies, when enabled, via inverter I/C11 serial graphic video data to be mixed with ASCII data at Z41 in the keyboard. The timing signals SHIFT & GRAPHIC SHIFT/LOAD are brought in from the keyboard via the 20 way ribbon connector. The shift register is enabled & disenabled by having it's CLEAR line taken low to disenable it, this is selected by doing an I/O operation to port 150, for more information see address decoding I/O section.

New ASCII Character Generator.

The new ASCII character generator is in the form of a pre programmed 2Kx8 Eprom. It provides true descending tails by instead of blanking the inter-character lines (L8 - L11) at Z26-12, the signal is removed & the generator is programmed to give 4 blank lines to characters without tails.

(See track cut in Fig 2 of fitting instructions).

The generator also provides 5 special characters 123 - 127 to enable a grid to be drawn for the character set-up program supplied with the modification.

These new characters need to be the full six dots wide, hence the pink wire to the isolated leg Z10-14.

Power Supplies.

The Unit uses the +5v of the Keyboard assembly for it's power.

General.

All references to PL1 refer to the 40 way bus extension connector. It must be noted that the numbering at present uses the convention of the Manufacturers, which is DIFFERENT to the TANDY numbering.

John Kilpatrick

C COMPILER

I have now acquired a working version of the C compiler that I mentioned some time ago. At least, it compiles itself, and the resultant program works perfectly under CP/M. I could get it working on the Model I but I think that I would be better off modifying it to produce MC68000 code and turn it into a cross-compiler or even a resident compiler for the QL, since the financial rewards would be much greater. On the other hand, if 100 members said they were interested and would buy it for say, £40 (don't send any money, my name is not Sinclair!) I might be persuaded otherwise.

Leon Meller

So the debate has started - or has it ? I refer to NATGUG and IQLUG of course. Should we or should we not - that is the question ! Whether 'tis nobler in the mind to suffer the outdated models, IBM compatibles etc or not to take arms against a sea of Sinclairs and by ignoring - oppose them. No doubt, WS (not the WordStar one) could have put it much better. Or, alternatively, if you cannot beat them .....

Until recently I used to buy monthly 80Micro, Byte, Personal Computer World and Practical Computing - probably more money than sense. For quite a while now I had a feeling that I was wasting my money and cluttering unnecessarily the house by the two latter publications. From month to month I was hoping to find at least one or two bits of interest or some value but all I could find were pages of Sinclair, Oric and Commodore 64. And to think that one of these publications is considered (by its' editors) a small business system paper. Well - no more ! Byte and 80Micro will have to do in the future unless there should appear an English computer paper devoted to a micro and not a micro-toy.

No doubt the IQLUG will be big as there are plenty of those, who will buy it for Xmas or on the spur of a the moment and won't know what to do with it. They will be buying all sorts of magazines devoted to this new wonder, will be joining groups, buying lots of programmes (mainly rubbish), won't learn anything, and finally will consign their IQL to the bottom of the cupboard - the IQ not being up to it. There also will be some (a minority) who will learn to write simple programs and, as any proud creator, will seek their publication.

Judging by the latest issue the NATGUG (magazine) has been put on a strict diet and I wish that I could shed pounds as NATGUG has shed pages. Still I would hate it to grow on material of the type found in the magazines devoted to Sinclair products. I hope that I do not give an impression of being anti-Sinclair. Nothing of the sort and my interest in microcomputing has started with the acquisition of, believe it or not, ZX80. What I am trying to convey however is that cheap products do not address a serious audience and this, I am greatly afraid, is going to be the case with the majority of IQL users. Let's keep the Group as it is. Let our motto be:

Never mind the width - feel the quality.

We may be a dying species but we will take our time about it yet. We may even take a turn for the better. After all Tandy is selling a lot of machines and some are bound to be sold in this country. In fact I hear that the business in Model 4 is very good, and now that the CP/M is with us it may even become better. I do not wish to get involved in the Model 2000 controversy - but I wish that I had held off changing my Model 1. Nothing adverse as far as Model 4 is concerned only it would be madness to take a loss on selling it now to get Model 2000.

I am one of the guilty ones, who attended MK workshop but failed to stay for the AGM. Well, at the best of times AGMs are a bore - great bore to be honest, whether they are AGMs of the society, group or company. They are a necessary evil and there is no getting away from it. I would however like to know how many pins has the chip referred to by David W in his article. If it was a forty odd pin chip then maybe I can offer some words of consolation. In the hope of picking brains I attended the CP/MUG AGM. Not that I was there long. There were NO SMOKING notices all over the place and those, who know me, also know that the pipe never, but never, leaves my mouth. This however has nothing to do

with the subject and is just a recollection of rather an unpleasant experience. The point is that the AGM in question was attended, I estimate, by some 40 - 60 members. Considering that the Group has over 1000 members and is still growing and that AGM was held in London (next to the tube) I think that, by comparison, our group has not done so badly (at all, at all).

Still on the subject of these gatherings. During my long army service I had to attend Mess meetings. These you could call a type of monthly AGM with a small difference that you do not do the talking - you just listen and vote as the Chair wishes. It was not so bad whilst I was just a listener but when, in the Buggin's turn, I had to take the chair for quite a number of years the burden was becoming unbearable. It is so difficult to tell others what to do when one is fighting the sleeping sickness. Of course from time to time some intrepid, misguided soul made a proposal. This always did liven up the proceedings as everybody watched for the reaction from the chair - silly chaps. The chair reaction was, as everything in the army, well thought out in advance and went just as drill by numbers:

1. Thank you - sit down.
2. This is what I think we shall do .....
3. Basilisk eye on the mess members fix !!!
4. Anyone against ?
5. Passed unanimously.

However - now that we are all civilians and the COs do not drop in at the AGMs to refresh themselves from the water carafes filled with gin, why don't we have postal AGMs ? Call for proposals in the NATGUG and circulate the agenda with the proposals and any other necessary junk (like accounts) to the members who indicate their wish to participate in the debate. Let the members send the written comments on the proposals etc to the Committee who can do the sorting and finally publish the minutes in the NATGUG. Well, the postal votes for committees exist in many organisations and throwing the AGM open to a much wider audience could bring new ideas etc. After all, I am sure that it is not the lack of interest which causes poor attendance but lack of time and, in some cases, lack of money. The additional benefits of such an AGM would be that no one - but no one - would have to sit through three member discussion on the merits of the library (or was demerits ? I cannot remember) and the Committee in their wisdom could decide what has been passed unanimously etc.

I have received my Pro Pascal and very impressive it is. It must be impressive and clever as I got eleven compilation errors in six lines program ! It took me about two evenings before I managed to send couple of characters to the printer. So there is learning to be done and there is so little time for it. There are only a few hours in the evening after coming home from the "big smoke", one has to eat, have a bath and enter the accounts. At the weekend there are all the jobs not done during the week and even Nature has refused to water my garden for the last five weeks. Apart from the Pascal there also are all these CP/M+ manuals - 7 lbs of them according to my wife's bathroom scales. Slowly I will get there. Pro Pascal is very powerful judging by the manual and, when I get into it a bit more, I shall say more about it. The No 1 issue of CP/MUGUK newsletter lists in the library Vol 18 containing ProPascal and CBO programs. The only trouble is that they do not say whether the programs are written for CP/M or CP/M-86. I would ring to find out if I did not know that the answering machine will say "Send two Pounds and disk". I am delighted to have discovered that CP/M+ does read the IBM CP/M-86 format without any trouble. This means that I can buy any machine independent program meant to run either on 8080 or Z80 on that format disk.

Writing Pascal programs I require square brackets and curly brackets. The square brackets are no problem as CTRL ( / CTRL) provide them. But the curly brackets are not available in spite of their inclusion in Appendix B to TRS-80 Model 4 Reference Manual (CP/M+). Nor does the keyboard provide ESC. All is not lost however as the SETUP utility permits defining the F keys. The pointer sign ^ is obtained by CTRL/Up arrow. Underline can be obtained by CTRL - .

I had a slight problem customising the WordStar to CP/M+. CP/M+ emulates VT52 which is not one of the terminals listed in three pages of choices in the INSTALL program. So I had to go for the option "None of those" and do the patching. There is really not much to it. Label CLEAD1:+2 (absolute address 024C) needs changing 59H. Both LINDOFF: (025E) and COLOFF: (025F) need to be 20H. I have also patched the optional ERAEOL: 2H, ERAEOL:+1 1B, ERAEOL:+2 4B. If you want highlighting which WordStar uses on menus and blocks you need to patch IVON: 2H, IVON:+1 1BH, IVON:+2 40H, IVOFF: 2H, IVOFF:+1 1BH, IVOFF:+2 41H and HIBIV: 01H. That has done the trick. Oh yes - and CRBLIV: FF to have the flashing cursor in blocks.

As I have already said the keyboard does not provide ESC so useful to avoid the stupid questions in printing. SETUP does take care of that. There is also no DEL key but CTRL/5 does rub the character before the cursor. I find that the cursor does flash a bit too fast and CAPS key works on a hit & miss basis. Several tries are sometimes required before the change of case occurs - something to do with the speed of Model 4 and keyboard scanning. No missed characters in typing though.

Anon.

FOR SALE AND WANTED

GNOMIC SALE  
-----

GNOMIC have a few of their expansion units (disk interface and memory) for sale at £25 each. They are uncased and without power supplies, but look like a good buy if you don't mind a bit of work. Contact Ken Grey for further details on:-

(0783) 860314 (work)

(0632) 561761 (home)

Tandy DWP-410 Daisy Wheel Printer, Tractor Feed,	
3 Print Wheels, 7 Spare Ribbons.	£500
Dosplus 3.4 Operating System for Model 1	£ 50
Basic Compiler	£ 35
Microfiles Filing Program	£ 20
MODEM80 Communication Program	£ 15
Newscript 7.0 + Labels	£ 50
Microproof Dictionary Program	£ 10
Zork Game Program for Model 1	£ 10

Graham A Welsh  
2 Grange Crescent  
Edinburgh  
EH9 2EH

- FOR SALE:- \* 12" HIGH RES, GREEN MONITOR - £50  
\* VIG HIGH RES UNIT - £50  
\* TRS80/S100 'ELECTRIC MOUTH' c/w  
274 WORD DICTIONARY - £60  
\* PERCOM DATA SEPARATOR - £7  
\* LARGE RANGE OF ORIGINAL VIG-TRS80  
SOFTWARE (DISK & TAPE) - MOSTLY SERIOUS  
+ SELECTION OF BOOKS - 40% OF COST.  
SSAE for LIST.

AL NEILSON (051-220 5470)  
78, ACKERS HALL AVE,  
LIVERPOOL.  
L14 2EA

FOR SALE

OMICROM MAPPER 1 complete with:-  
CP/M 2.2 CP/M Accessory Disk M Basic C Basic Wordstar &  
Micro-Pro spelling checker. £175.00

E.C.Kilpatrick,  
3a Gainsborough St,  
Sudbury.  
SUFFOLK. CO10 6ET.  
27/06/84.  
Phone 0787 79504.

FOR SALE

FOR SALE

MICROLINE 83 15" carriage

Tandy graphics

Great business machine (cost £700)

Charles Davies 01-393 9255

64K Print Buffer Board

or made up.

Pete Drew a group member  
can help out with the  
construction of the above  
Ring him on 0582-840680

## FOUR TRS-80

### Software Library List

Model 4 owners who wish to keep abreast of developments can obtain an up-to-date list of all commercially-available software for the Model 4 by sending a large, stamped and addressed envelope to ->

Ken Arntsen  
3 Home Pastures  
Hatfield Heath  
Bishops Stortford  
Herts CM22 7ES

The information is regularly culled from "80 MICRO" AND "BASIC COMPUTING" as well as various catalogues and includes references to published reviews of the software where this information is available.

#### +CODA+ V 4.1

V 4.1 is a substantially revised version of the +CODA+ data security program originally introduced in 1981. The main features of the earlier releases are retained eg. the 48 character teletype compatible character set, facilities for input from keyboard, disc or tape and output to screen, disc, tape or printer. The key library has been expanded to provide 10,000 keys - accessible by library/page number and the encryption routine has been revised to implement recent developments in cryptography.

+CODA+ uses a stream cipher to encrypt data, a form of encryption in which the clear text input is combined with a stream of pseudo-random characters. This stream is generated by the interaction of an internal key (specific to the individual +CODA+ program used) and an external key selected by the user. The external key consists of an 11 character keyword and a 2 digit page number. Since the +CODA+ character set has 48 characters, the number of external keys available to each user is  $48^{11} \times 10^2$  or just over  $3 \times 10^{13}$ .

In a stream cipher the corruption of a single character in a piece of encrypted text results only in the corruption of the equivalent character in the decrypted text and not in the corruption of a block of text, as occurs in many high security ciphers. Because of this +CODA+ can be used with any type of data storage or transmitter system without the need for any special error checking precautions.

+CODA+ consists of a machine code program which provides high speed and security for the encryption and decryption processes and a BASIC program which handles the input and output functions. The machine code section provides routines for encryption and decryption, for subdivision of encrypted data into 5 character blocks, for removal of spaces between blocks or words, for text, keyword and page number entry and for the encryption or decryption of data with automatic incrementing of the page number after each 1 kbyte section of text has been processed. An exit routine which wipes out both program and text buffer is included. The input/output section is written in BASIC in order to permit easy modification by users to meet their individual needs.

+CODA+ provides a preamble with each piece of text which can be used to give information about the key needed for decryption. V 4.1 provides guidance on key management and includes a short key translation program for transforming keys into a form suitable for use in the preamble.

+CODA+ is available for TRS 80 Model I/III (2 $\frac{1}{2}$ " disk) and is normally supplied on a TRSDOS data disc. Price \$100.00

An MSDOS version is scheduled for release in December 84.

For details contact

D. S. Brown.  
+CODA+ Data Security,  
17, Douglas Avenue,  
Newcastle upon Tyne,  
NE3 4XD, ENGLAND.  
Telephone 091 285 8667

#### VISICALC DATA TRANSFER

Re reading the FEB newsletter I noticed a comment on the need to re-input data from one Visical file to another, to continue working large sheets. Surely the best way is to save the Totals cols as a DIF file and to load it into the Tot carried forward col of the new file. I have a file which totals the monthly figures and comes up with a monthly total. The sum of the monthly totals gives me a yearly figure. To extend this to the next year, I use a blank sheet with the monthly and weekly labels in place. By saving the last col Mon/Tot as a DIF file I can carry it forward to the new sheet where it is inserted under Bal c/fwd.

The enhanced Visical is available for the model III but not the model I. This is a pity because the Edit function is very useful if you make a small error in a formula. There are two ways round the problem. Either use program published in Micro 80 which I have not tried but understand is very good or LDOS users can patch Mod III Visical ver 160-Y0-T83 to be used on a Mod I

The enhanced version is better than the previous but whether it is worth upgrading is a difficult decision in view of the cost. Also the extra code takes up more room which leaves less for work space.

Derek Brayler

## LeScript - Comments from a Potential User - Part 1.

Zorloff has been advertised quite widely but has never made an appearance at a workshop, until Edinburgh. Peter Frederick of Wordsworth commented that LeScript (formerly Zorloff) and the Model 4 made a first class word-processing package. In the late afternoon Ian Wright demonstrated the program and Laurie Shields, on the way home, commented that it looked good.

The disk and manual arrived just before the Gloucester meeting and on arrival Dave Holman was invited to look it over. A little later he agreed to run through its main features after lunch which went quite smoothly! As with all our lectures the subject can appear quite attractive and more useful or better than the current program in use - in my case SCRIPSIT. As always the bottom line is - do I buy it? Here the answer was Yes and the users will be fellow lecturers at college preparing text for themselves, for students, exam papers and sundry correspondence.

The following comments will perhaps explain why

1. Supports 80 x 24 display on the Model 4 and the extra 64k of extra memory.
2. Works on M1, M3, M4 I use all three.
3. On screen representation of underline, bold, superscript, subscript, italics and expanded characters. Once these features are all in use the screen is all singing and all dancing and can be turned on/off.
4. Horizontal scrolling like Scripsit 0 - 252 - which the new TANDY/TOSHIBA can handle.
5. Commonly used Phrases can be inserted with one key strokes - lawyers Companies Act 1981, Accountants Association of Certified Accountants.
6. Built in support for 150 Printers - we use 4 TANDY Printers.
7. Headers & Footers can consist of multiple lines and use the character enhancements.
8. Delete - a word, a line, to the left & right of the cursor.
9. Search & replace automatically.
10. Search & delete --do--
11. Memory, Word and Line count.
12. Convert U/C to L/C and vice versa.
13. Display/Print directory and by extension plus kill files.
14. TAB - vital to lecturers in numerate subjects.
15. Write blocks to disk.
16. Clear and exit to DOS require two keystrokes.
17. A form of hyphenation is supported.

more next month

Brian Pain

## MULTIPLAN

This will be a three part series on the above as some members may be seeing a spreadsheet for the first time. Multiplan has already had enough rave reviews to warrant material in our own mag.

At college we have VISICALC for the Model 3, and MULTIPLAN was bought for our Model 4's. The main features to be explored are the jargon free commands and the SORT. Micro 80 is most complimentary and awards the following ratings:-

EASY TO USE 5 stars.  
GOOD Documentation 4 Stars.  
Bug Free 5 stars.  
Does the job 5 stars.

Over this short series the following will be attempted by me or any member who would like to contribute.

- 1) Execute files only where the user cannot adjust the formulae, but just input the amounts.
- 2) Consolidation of departmental/subsidiary files carrying forward totals only.
- 3) Transferring MULTIPLAN files to our own IBM PCs and manipulating with LOTUS 1-2-3.
- 4) Transferring data from Model 100 to Model 4 and incorporating that data into M4 Multiplan model/sheets - Preferably exec. only.
- 5) Doing some over the phone transfers between home and college perhaps with other members joining in. Here they would be supplied with the files, transmit them and then see the result of their files on the overall result. Remember you can use my account at college - Phone 0582-411842, Account no. 12.110, Password 566660 - 110 baud.
- 6) Standard exam questions on the topics - management/financial accounting, taxation, perhaps statistics.

We have bought the Tandy MULTIPLAN book, I have the SIRIUS MULTIPLAN manual, and of course we have the 421 Page manual that comes with the disk.

Please note that SORT is not in the SIRIUS manual - I bought first, looked second!

Brian Pain

GLOUCESTER WORKSHOP 17th June 1984

The location was the very convenient Crest Hotel just outside Gloucester, and the theme of the day was WORDPROCESSING.

The main features of the day were:-

1) Model 2000 making its debut, hooked to a inkjet Printer and showing off its colour and excellent resolution. Members looked on with just a shade of envy. Bradley House and a succession of members enjoyed playing with it during the day.

2) Os also brought along an EPSON lookalike, made in Germany, and proved its compatibility by working with DOTWRITER, producing exactly the same output as the EPSON - price around 250 Pounds.

3) Amongst Os's goodies was the TANDY/TOSHIBA 24 head/wire Printer that featured in the afternoon as a lecture topic. Dave Holman had finished the LeScript session and proceeded to play with this Printer. Members agreed that TANDY were not marketing this product properly, it is quite superb.

4. Disks were on offer at around 13.00 Pounds from Os and this needs a mention because many members forget that they can order their disks through the Post from Blandford.

5. Jim Roden brought along his new modem and seemed rooted to his keyboard going through this product - see the specification at the end of the mag.

6. John Carne's 40/80 switchable twin disk drives attached to his Model 3 were on show for the last time this year as John is off to BOTSWANA - it could happen to nicer bloke!

7. Dave Washford's considerable library of fonts for DOTWRITER were on show, which seem to be a regular conversation stopper.

8. LeScript was sent along by Peter Frederick of Wordsworth, and Dave Holman very kindly did an hour on its main features in the afternoon.

9. Os House had two second-hand hard drives on offer - once we read about them - here were two s/h, lady owners, never raced or rallied, good all round condition - or have I got the wrong product ?

10. Dave Holman had some own designed fonts for his regimental mag, including a map of the UK.

11. Tony Evetts did a really smooth dem of DOTWRITER and was promptly signed up for MILTON KEYNES Sunday morning.

12. Ken Arnsten had an extensive list of Model 4 software and has agreed to make this available to members.

13. Colin Ashford did a first class overview of WORDSTAR, with helpful tips of actually using it on quite an extensive report.

14. John Christie very kindly went through the patches that are supplied in the LDOS newsletter for SCRIPT.

Brian Pain

## STERNBERG BUSINESS PROGRAMS

At last the short course that had been promised to my Luton accountancy students in the dark months of January & February took place in June (22/23)

The idea was quite simple (mine always start out quite simple) take accountancy students through some BASIC which relates to their work, and then try out the above book's early chapters - initialisation of the general ledger, posting the entries and concluding with the trial balance.

The students had been sent their homework, three chapters plus the instructions to GOTO the library and take out a beginners book. Did they? Did they heck! We all met on the Friday and started promptly at 6.00, finishing at 9.00 with just a 5 minute break. The session consisted of the students following the blackboard and seeing the results on their own micros (Model 3/4).

We started in earnest on the Saturday morning - 9.00am - and slowly went through the program which initialises, setting up the parameters required by the program. As a teacher on the course the importance of clear documentation became quite obvious, with the students demanding rem statements nearly every line.

During the Friday and Saturday sessions the IBM BASIC manual was referred to and compatibility was confirmed where it became a point of interest. I am pleased that my out of date micro's BASIC is compatible with the no. 1 business micro's BASIC.

Brian Pain

# CP/M USERS GROUP (UK)

72 MILL ROAD, HAWLEY, DARTFORD, KENT DA2 7RZ

Telephone (0322) 22669

## THE SOFTWARE LIBRARY

The CP/M Users Group (UK) maintains a Library of public domain software. Most of the material available at the present time originates in the USA but a growing number of disks are becoming available from the UK Group and from other groups around the world. The two US groups are:

- 1) The CP/M Users Group. This was the first group to be set up in the US. This group has currently produced 90 volumes of software.
- 2) The SIG/M Group. This is a specialist group within the New York Amateur Computer Club. They have so far issued 162 volumes of software. (As of March 1984).

Other groups have been formed in Australia and Holland.

The UK Library was set up in 1981 and has so far issued 18 volumes of software. UK Volume 0 contains up-to-date catalogue information on volumes held in the Library. (Currently counts as 2 volumes).

All libraries rely on contributions from their members. Contributions to the UK library are always welcome. Please send as much documentation with your software as possible. All contributions must be original or in the public domain. If your contribution was originally published as a magazine listing, please obtain permission from the Editor before submitting it to the library. Please note any software or hardware dependencies either at the beginning of the source file or in a separate .DOC file.

The only standard format for floppy diskettes is 8" SS SD. This is the only 8" format supplied.

5.25" diskettes involve the Group in additional expense and time for copying. Please order 5.25" disks only if absolutely essential. The methods used for copying 5.25" disks cannot cope with large amounts of copying, so this service has to be restricted to small orders only. Please note that up to 4 disks per volume will be required for single density 5.25" formats.

Note that some formats rely on the assistance of other members. Allow up to 4 weeks for delivery.

### Current charges:

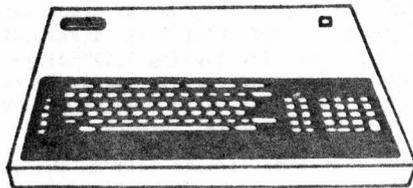
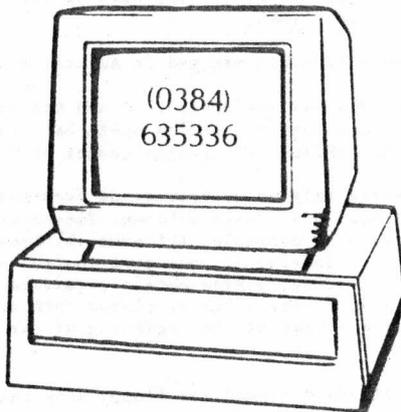
Copying charge . . . . .	#1.50 per volume.
Post/packing . . . . .	#0.50 per volume.
Media charge (8" only) .	#2.50 per volume.

We cannot supply media for 5.25" orders at present owing to the difficulty of stocking several different types of disk.

D.P. Fordred  
Librarian

Software Librarian: DEREK FORDRED

# INTRODUCING THE *Digicommm Panther*



## THE DIGICOMM 'PANTHER' MODEM.

This is one of the first of a new breed of international modem that runs on both North American and European phone systems so can be used almost anywhere in the world. It supports the following features:-

1. An industry standard 25 way 'D' socket to connect to the micro computer.
2. 300/300 baud full duplex CCITT standard (this is used by all MAILBOX systems).
3. 1200/1200 half duplex for fast transfer of data.
4. 1200/75 baud for

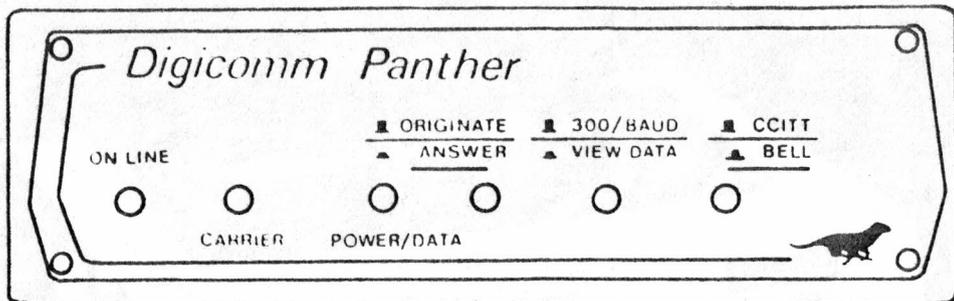
PRESTEL/MICRONET etc.

5. Full Answer/Originate on all of the above.
6. Carrier Detect LED (to show if computer is logged on at other end of phone link).
7. Data Tri state LED (to show that data is being transmitted between both computers).
8. Online switch to connect call (when computer logs off at

other end this will automatically disconnect the phone line).

9. Optional Auto/Answer board (this allows your computer to answer the phone without intervention from you).
10. Comes complete with a 600 series modular jack plug to connect your phone line (the phone plugs into the PANTHER).
11. Full instructions for use.

# FRONT PANEL



DIGICOMM Systems  
(0384) 635336

One of the great (and not as yet fully realised) advantages of using a microcomputer is the ability to communicate with other computers via a modem and a telephone system. This advantage can be realised today with a state of art modem by DIGICOMM called the 'PANTHER'. This modem uses the very latest LSI technology to bring you a world standard modem of unheard of power just a few years ago.

### WHAT IS A MODEM ?

A modem is a device that interfaces between the micro computer and the telephone line allowing communication to be established between two computers. These

computers can be alike or not as the case may be.

You could use this link for :-

contacting friends for the exchange of computer software, transferring personal mail, banking or even shopping.

In the US where the use of modems for communications are now firmly established there are around 2000 privately run MAIL BOX systems, these allow you or I to dial them up and browse around a whole new world of free information, free software, messages and any other thing you can think of. In this country there are around thirty privately run MAIL BOX systems but these are increasing almost daily as more people find out about the fascinating world of communications. On the commercial side of this

there is of course PRESTEL/VIEWDATA, MICRONET, TELECOM GOLD, COMET, REWTEL, DIALOG INFORMATION SERVICES etc etc.

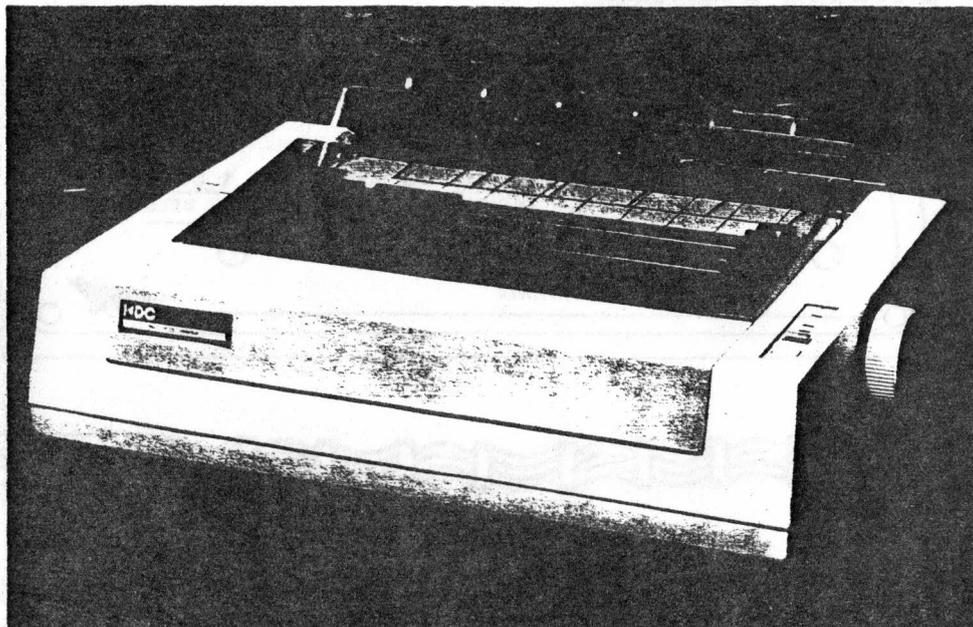
### WHAT ELSE IS REQUIRED ?

All that is required other from a modem, computer and a phone, is software to handle the exchange of information between the computers. We have some free software for several popular computers including CP/M machines, BBC, TANDY, ELECTRON, SPECTRUM etc.

We can also supply software for a number of computers just ask for prices and availability, MAIL BOX software can be purchased i.e. T88S, FORUMBO, MAIL BOX, C88S etc. (Includes CP/M machines) this software can be used with a number of well known computers.

## Tel: Cradley Heath 635336

164 HALESOWEN ROAD, CRADLEY HEATH, WARLEY, WEST MIDLANDS.



### FT 5001 DOT MATRIX PRINTER

#### FEATURES

- Friction and adjustable sprocket feeding
- Variety of printing modes with PICA and ELITE pitch
- 100 cps bi-directional printing
- 96 ASCII with descender, 8 international character sets and 49 semi graphics
- Automatic paper insertion
- Low cost, high reliability

#### SPECIFICATIONS

- Print Rate ..... 100 CPS
- Print Direction ..... Bi-directional with logic seeking
- Line Spacing ..... DIP switch selectable; 1/6", 1/8" Programmable; 1/6", 1/8", 7/72", n/72", n/144"
- Character Set ..... 96 ASCII characters with descender  
8 international character sets  
49 semi graphics
- Font Registration ..... Up to 62 fonts
- Character Size ..... 2.46 (H) x 1.67 (W) mm
- Character Structure ..... Text mode; 9 x 9 Bit image, 480 x 8, 576 x 8, 960 x 8, 1152 x 8 dots/line
- Print Size (character/line) ..... Ordinary (PICA)/ELITE; 80/96  
Elongated (PICA)/ELITE; 40/48  
Compressed (PICA)/ELITE; 113/136  
Compressed elongated (PICA)/ELITE; 57/68
- Forms Handling ..... Form feed; Programmable length to 255 lines  
Horizontal tab; 12 positions  
Vertical tab; 12 positions
- Paper Feed ..... Friction feed, Sprocket feed
- Paper Width ..... Fanfold; 4 - 10 inches  
Cut sheet; 4-9 inches
- Copies ..... 3 max.
- Interface ..... Standard; Centronics-style 8 bit parallel  
Option; RS232C with 2k buffer
- Ink Ribbon ..... Cassette (service life; 3 mil. characters)
- Power Requirements ..... AC120 or 220 V 50/60 Hz
- Power Consumption ..... 20 W (standby); 50 W typ. (operation)
- Dimensions ..... 115 (H) x 399 (W) x 286 (D) mm
- Weight ..... 6.8 Kg

#### CONTROL CODES

Code	Function
CR	Printing command
LF	Printing and new line command
VT	Line feed up to designated line
FF	Printing and paper feed up to top of next position
HT	Movement of printing point up to designated character column position
SO	Double width elongated printing
SI	Printing of characters compressed to half in horizontal direction
DC4	Double width elongated printing release
DC2	Compressed character printing release
DC1	On-line mode establishment (select)
DC3	Off-line mode establishment (de-select)
CAN	Print buffer data cleared
ESC	Code for expansion control command
BS	1 character immediately before in print buffer cleared
BEL	Buzzer sounds for approx. 0.5 sec.
NULL	Tab setting completion code

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