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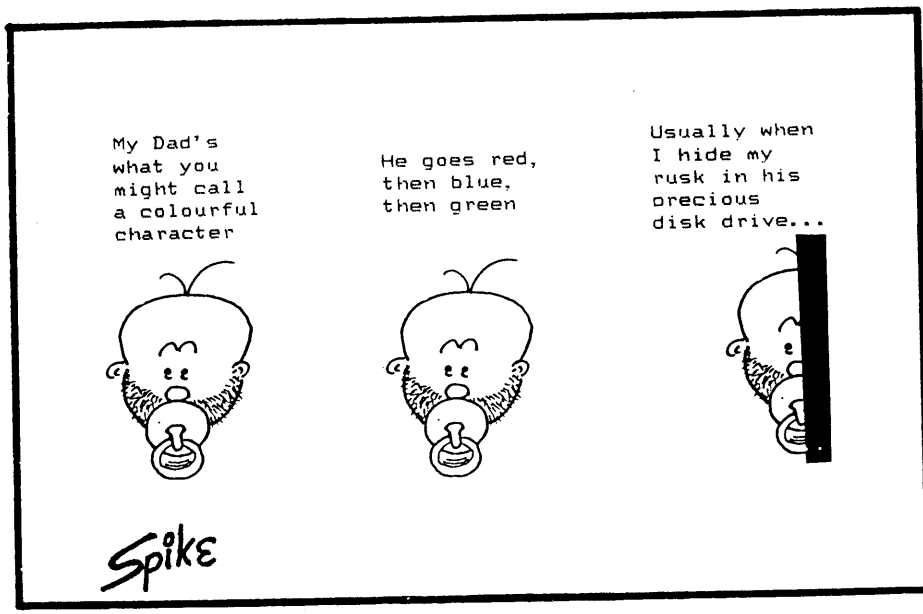

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BEGINNING BASIC is held over until next month because of lack of space

B A L D I E ' S B U R B L E

As is usual nowadays, there has been a great deal of activity on several fronts, some information about which will appear in this Burble. The major event as far as I am concerned was the successful Workshop held at Bloxwich, organised by GORDON PITT of the West Midlands TI User Group, and his able assistants. It was, I suppose, a kind of Mecca for 99/4A enthusiasts, bringing together as it did the foremost experts in both hardware and software in the UK. To pinch a quote from one of the attendees (well, all right then, it was Martin Ross), the relaxed atmosphere encouraged the free flow of information, and I know from talking to some of the participants afterwards that they were well pleased with the event, and would attend any planned for the future.

I have spoken to Gordon, who has tentatively planned further Workshops, with the strong possibility of a link with a Faire held at the same location. This would enable the day to be spent pleasurably by the whole family - those not keen to investigate the mysteries of the 4A could enjoy themselves at the Faire. As they say, watch this space...

Even though we had far fewer visitors than would normally have been the case at a TI-EXCHANGE meeting, I was still rushed off my feet for most of the day, and had to leave early because of travel arrangements (for which many thanks go to RICHARD SIERAKOWSKI). We had plenty of space in which to set up, and although I didn't count the number of systems which were actually up and running, there must have been more than half a dozen separate demonstrations of both hardware and software. I gather from Gordon that he just managed to squeeze through financially and cover his costs, although at one point it did look as though there was going to be a loss on the catering front. There were visitors from both ends of the country - JOHN BAIRD from Scotland and HARRY PRIDMORE from Devon - and we even had an overseas visitor: JAN LORIE from Holland.

Because I was so tied up (and I hope that I managed to satisfy those people who asked me for answers!) I was unable to give a full account of what went on at the Workshop, and I hope that by next issue someone will have put pen to paper to provide a more detailed account of the event.

British Telecom have not exactly endeared themselves to me recently. After an astronomically high bill (double the previous), I asked them to conduct an investigation, which they did, but concluded that I did not really know the cost of making a call! I won't bore you with the sordid details, but basically it boils down to the fact that BT will lose me as a customer as soon as Mercury get their act together. It is said that if your quarterly phone bill is around £100, you would save money by using Mercury instead; BT's insistence on charging me over £200 a quarter when there is no evidence to suggest that I use the phone that much (i.e., making calls out, not receiving them - which is what I spend most of my time doing!) has succeeded in driving me into the arms of their competitors. I expect to see many other people making the same move over the next few years - BT still behave as if their existence depends not on healthy competition but on public funding. They will soon learn differently (I hope).

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The NEW HORIZONS RAMDISKs have now been built, and I have had the chance to play around with them to see what they can do. I have been extremely impressed by their performance - I just wish I had the clinky oncers to buy one myself!

So far we have built five, ordered and received another five boards for intrepid solder jockeys to build themselves, and another two ITUGers have placed orders. I am therefore looking for another three buyers to make up the minimum order of five boards, so if you're looking to expand your system and a RAMDISK features in your plans, well, now is the time to take the plunge! The bare board now costs £50, due to the drop in the dollar/pound exchange rate, and that price includes the board, four disks containing the operating system, source code, and manual-on-disk, as well as the manual itself. The price will also cover all future updates. Contact me as soon as possible if you want to place an order.

ITUG is still growing in dribs and drabs; at present our highest subscriber number is about 175, with around twenty former subscribers yet to make up their minds to resubscribe. I recently wrote to 25 former TIHOME members, and two or three have decided to join our ranks, and to them and to the other new subscribers, welcome. I hope that the newsletter and the group's other services will keep you satisfied in the coming months, and if anyone has any criticisms or suggestions (provided they're physically possible!) please send them in so that I can try to improve on things generally as the year progresses.

I owe an apology to anyone who has been waiting for me to write back to them, or waiting for software; the chest bug with which I have been battling seems determined to scale to loftier heights, and the latest tentative diagnosis is Pfeiffer's disease, otherwise known as infectious mononucleiosis, or glandular fever to you and me. Good excuse, innit ?

As is usual, I am stuck as to what to leave out from this issue of IT, rather than what to include. There are several items which I originally planned to do as specialist Supplements, and which have been waiting in the wings for me to find the time to put them into a publishable form; as time is dragging on rather rapidly, and as one author has jibbed at the thought of being placed in a Supplement rather than in the main newsletter, I am now stuck with the proverbial quandary: I have a number of technical articles for the home constructor (two expansion systems, both now published in TI*MES by TI-EXCHANGE, and two interface articles for RS232 and PIO from the joystick port for MiniMemory owners) which need tidying up ready for presentation, but they are specialised, and I received an overpowering message through the last questionnaire to the effect that I had been putting too much emphasis on boffin-type articles in volumes 1 and 2.

Volume 3 was supposed to redress that a little by including sections for those not interested in do-it-yourself or in assembly language specials (both of which I would prefer to include in IT), and I hope that I have managed to get the balance right. That balance might be upset if I try to squeeze in more specialised items (the TI-Writer and Adventure

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series cover quite a few ITUGers, and Colin Hinson's work in outlining the details of the Disk Operating System and other mysteries is highly valuable and long-overdue for publication) but I will do my best.

Avid readers may realise that at least three series got started and then petered out, partly due to lack of space, partly to lack of time to properly prepare, and, let's face it, partly due to lack of response from the readers. I do have plans to continue some articles in the not-too-distant future, but for the moment financial constraints force me to take the present path.

The writer who jibbed at being Supplemented did say that he took a dim view of anyone profiteering out of the provision of information which should be freely available, and I would agree; however, I hope that no subscriber has the illusion that I am making vast (or any!) profits out of either IT or the Supplements. The fact that I have sunk almost £6000 of my own cash into these ventures over the last four years (plus a few more ££££ spent on total failures!) ought to dispel any anxieties. (It ought to, but does it...?)

Some new information about the "new" computer from MYARC is available, and RICHARD SIERAKOWSKI has supplied me with a sheet of bumph for publication here (only half the bumph 'cos the rest is too titchy to photocopy!). Contact Richard on 0672 54975 for technical data on GENEVE.

Some of our Merrie Thronge have been tempted to buy other micros, and I wish them luck with their new babes. If you are now into PC clones (and specifically the Amstrad PC) and also into Pascal as well, you might like to chat to PETER CALCRAFT about transferring your software from the trusty old TI to the newcomer. Contact me in the first instance (on Oxford 510822).

GORDON PITT is still looking for prospective buyers of the DATACHAT modem featured in previous issues. Apparently GEC still offer their low price for our bulk order, but are holding to their requirement for a minimum number for that order. Gordon needs only a few more buyers in order to secure a good buy for all those who put their names down, so why not give him a bell on 0922 476373 ? We have a number of extremely helpful souls in ITUG, and among them NEVILLE BOSWORTH and ALAN DAVEY will be pleased to help you in your initiation into Modem Mysteries.

Neville has provided us with another article about the subject of Comms (that's Communications to you and me) and if you send your questions to him he will have more material for further articles which you can then take great pleasure in reading. Q.E.D. (At least I think that's Q.E.D.)

I have no doubt managed to mislay most of my notes for this Burble, but time is pressing, and I have to restrict myself to three pages - far fewer than I really need this month, so if you've asked me to answer something special for you it will have to wait yet another month!!!

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GETTING STARTED WITH FAST-TERM

By NEVILLE BOSWORTH

It appears that poular as it is, the Fast-Term program confuses many people with its many varied commands and functions. ALAN DAVEY and I have received quite a number of requests for help in setting up a default file to enable 300bps Bulletin Board access. It also appears that in most cases the Default program itself will not run properly.

Thankfully mine operates perfectly every time and I have let Alan have a copy so that he can pass it on to anyone who has had difficulty with theirs. I also believe that he may be willing to set up a personalised default file for anyone who has difficulties in producing their own. If you have a working Default program and wish to access most UK 300bps Bulletin Boards or carry out ASCII file exchanges with your friends then you can enter the following suggested default settings while running the Default program in Basic:

```
 1- Parameter filename = MODEM
 2- RS232 Port = RS232/1
 3- Modem baud rate = 300
 4- Modem parity = EVEN
 5- Printer port = as for your system
 6- Default duplex = FULL
 7- Printer spooler = OFF
 8- Screen wrap = 40
 9- Number of characters to jump when windowing = 1
10- Text screen = to suit yourself
11- Send LF after CR = NO
12- Stop character = CTRL S
13- Start character = CTRL Q
14- Time till auto repeat effective = 300
15- Delay between characters on repeat = 150
16- Bell select = CHIMES
```

When Fast-Term has been loaded you can enter the filename Modem when prompted by the screen. Then after a few seconds delay you will be presented with a blank screen and a flashing cursor, at which time you can dial the Bulletin Board.

Now let us assume that you wish to communicate a large text file to a colleague. Fast-Term gives us the option of using several methods of file exchange which for this example will be as under the heading Sending and Receiving Files. This method is marginally quicker than using Xmodem protocols and more than twice as fast as using TE2 protocols, due to its lack of error checking routines. In theory this renders the method unreliable but in practice it has never caused any data to be lost or corrupted during dozens of file exchanges.

The file to be exchanged must be in either DV80 or DF80 format and the exchange must be carried out as follows:

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Both parties must have Fast-Term and Modem loaded. The one to whom the file is being sent must have his modem set up as 300bps in the Answer mode and the sender as 300bps in the Originate mode. The sender must then place the disk containing the file to be transmitted in the drive and then he should press Function(N) at which point he will enter the name of the file to be transmitted. He can then press Function(,) to prepare the file for transmission.

At this point the person on the receiving end should press Function(B) and enter the name of the file to be transmitted. He should then press Function(.) which will cause the computer to wait until the transmission begins. He should then switch his modem on-line and then the sender will follow suit.

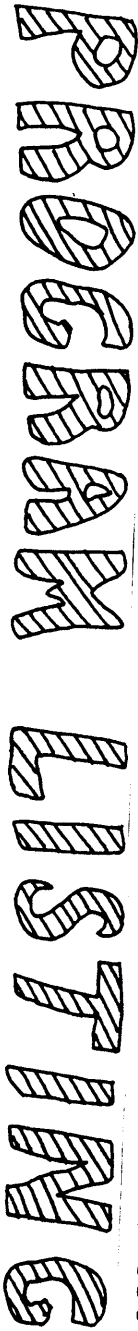
When the line is established they can both put down their phones. The sender should wait for a few seconds to allow the line to settle down and then he should start the file exchange by answering NO to the prompt asking whether to send line by line. The computer will inform you when the exchange is complete, at which point the person on the receiving end should save the file to disk by pressing Function(.) followed by Function(B).

The file can be seen at the receiving end during the transfer and it gives ample opportunity for the exchange to be aborted should anything seem to be wrong.

I hope that this will give others confidence to try their hand at file transfers as many so far seem reluctant to try. As and when I receive further enquiries regarding this utility I shall update this information.

Happy Baud Walking.

>>>



```
100 REM TEXAS INSTRUMENTS CO
NTRIBUTED SOFTWARE 1983
110 CALL CLEAR :: CALL SCREE
N(2)
120 FOR I=0 TO 8 :: CALL COL
OR(I,16,1):: NEXT I
130 CALL CHAR(33,"000000FFFF
")
140 CALL CHAR(94,"7C82BAA2BA
827C00")
150 CALL CHAR(104,"00FE041E1
E04FE00007F207878207F00"):::
CALL COLOR(10,6,1)
160 CALL INSTRUCTIONS
170 RANDOMIZE :: CALL MAGNIF
Y(2)
180 CALL CHAR(96,"00000000FF
FFFFFF183C7EFFFFFFFFFF000000
0081C3E7FF2698B55E7A5D1964")
190 CALL CHAR(100,"000008381
C10000000550000000055000000
0100000000FFFFFFFFFFFFFFFF"
)
200 CALL CHAR(112,"18997E3C3
C3C242418187EBD3C3C2424")
210 CALL CHAR(120,"FFFF00FFF
F00FFFFFFFF7EFFFF7EFFFF070F1
F3F7EFEFEFEE0F0F8FC7E7F7F7F"
)
220 CALL CHAR(124,"666666FF6
666666")
230 CALL CHAR(128,"666666FF6
6666600181808FBDF10181800181
87E7E1818008181 99FFFF998181"
)
240 CALL CHAR(132,"42425A7E7
E5A4242183C66DBDB663C18997E4
2C3C3427E9981423C3C3CBD663C"
)
250 CALL CHAR(136,"3C66BD3C3
C3C428100000018244281008142 2
418000000000000 50FFFF0A0000"
)
260 CALL CHAR(140,"00000AFFF
F5")
270 CALL COLOR(11,8,1,12,9,1
,13,4,1)
280 DIM CLR(10),P1(50),ROBOT
(6)
290 RESTORE 300 :: FOR I=1 T
O 10 :: READ CLR(I):: NEXT I
300 DATA 3,4,6,8,9,12,13,14,
15,16
310 FOR I=1 TO 6 :: READ ROB
OT(I):: NEXT I
320 DATA 129.5,131.5,133.5,1
35.5,137.5,139.5
330 FOR J=1 TO 112 :: CH=INT
(3*RND)+96
340 M$=M$&CHR$(CH):: NEXT J
350 GOSUB 1650 ! POPULATE
360 GOSUB 1360 ! SETVARS
370 IF FL=1 THEN 400 ELSE FL
=1
380 DISPLAY AT(24,1)BEEP:"PR
ESS ANY KEY TO BEGIN GAME."
390 CALL KEY(0,K,S):: IF S=0
 THEN 390
400 CALL CLEAR :: CALL COLOR
(9,12,1)
410 CALL DRAWSCREEN(M$,X,F$)
420 REM MAIN LOOP
430 CALL JOYST(1,YY,XX)
440 CALL POSITION(#1,X9,Y9):
: IF XX=0 THEN CALL MOTION(#
1,0,0):: GOTO 480
450 IF XX=4 THEN IF ABS(X9-8
)<16 THEN CALL MOTION(#1,0,0
):: GOTO 780 ELSE CALL MOTIO
N(#1,-6,0):: GOTO 480
460 IF X9<130 THEN CALL MOTI
ON(#1,6,0)ELSE CALL MOTION(#
1,0,0):: GOSUB 1490
470 GOTO 490
480 IF X9>130 THEN GOSUB 149
0 ELSE IF X9<8 THEN 780
490 IF YY=0 THEN 540
500 IF YY=4 THEN X=X+1 :: XP
=105 :: IF X=113 THEN X=1
510 IF YY=-4 THEN X=X-1 :: X
P=104 :: IF X=0 THEN X=112
520 CALL PATTERN(#1,XP)
530 DISPLAY AT(19,1)SIZE(28)
:SEG$(M$,X,113-X)&SEG$(M$,1,
X)
540 IF F=0 THEN 570
550 CALL COINC(#4,#3,21,H)::
 IF H=-1 THEN 1170
560 CALL COINC(#4,X1,C1,40,H
):: IF H=-1 THEN CALL DELSPR
ITE(#4):: F=0 ELSE 580
570 CALL KEY(1,K,S):: IF K=1
8 THEN GOSUB 1430 ! FIRE
580 IF A=1 THEN CALL COINC(#
1,#3,10,H):: IF H=-1 THEN 10
30
590 FUEL=FUEL-.05 :: IF INT(
FUEL)<>FUEL THEN 660
600 DISPLAY AT(23,5):SEG$(F$
,1,FUEL)
610 IF FUEL<>5 THEN 650
620 DISPLAY AT(10,10)SIZE(12
):"!!LOW FUEL!!"
630 CALL SOUND(500,330,1)::
CALL SOUND(1,9999,30)
640 DISPLAY AT(10,10)SIZE(12
```

>>>

```
):"" :: GOTO 660
650 IF FUEL=0 THEN 1220
660 IF A=0 AND RND).95-(TIME
*.1)THEN GOSUB 1600
670 IF A=1 THEN 680 ELSE 430
680 CALL POSITION(#1,X2,Y2):
: CALL POSITION(#3,X3,Y3)
690 IF X2(X3 THEN XV=-(6+TIM
E)ELSE XV=6+TIME
700 IF Y2(Y3 THEN YV=-(6+TIM
E)-YY ELSE YV=6+TIME-YY
710 CALL MOTION(#3,XV,YV)
720 PAT=-PAT :: CALL PATTERN
(#3,ROBOT(ZZZ)+PAT)
730 IF F=0 THEN 760
740 CALL COINC(#4,#3,21,H)::
 IF H=-1 THEN 1170
750 CALL COINC(#4,X1+2,C1,40
,H):: IF H=-1 THEN CALL DELS
PRITE(#4):: F=0
760 CALL COINC(#1,#3,12,H)::
 IF H=-1 THEN 1030
770 GOTO 430
780 IF CC=0 THEN 490 ELSE CA
LL MOTION(#4,0,0,#3,0,0)
790 CALL COLOR(#1,6):: CC=0
800 FOR I=14 TO 6+PEOPLE STE
P -1
810 CALL SOUND(-100,-3,I)::
CALL VCHAR(2,I,CR)
820 CALL VCHAR(2,I,32):: NEX
T I
830 CALL VCHAR(2,5+PEOPLE,CR
):: PEOPLE=PEOPLE+1
840 DISPLAY AT(2,1)SIZE(2):S
TR$(PEOPLE):: TOT=TOT+1
850 IF PEOPLE()AM THEN 540
860 CALL DELSPRITE(#2,#3)::
CALL LOCATE(#1,81,121)
870 DISPLAY AT(9,6):"ALL COL
ONISTS SAVED"
880 TIME=TIME+1 :: DISPLAY A
T(10,7):"ON TO PLANET #"&STR
$(TIME+1)
890 FOR I=19 TO 29-SHIPS
900 CALL SOUND(-100,-2,I)::
CALL VCHAR(2,I,105)
910 CALL VCHAR(2,I,32):: NEX
T I
920 CALL VCHAR(2,30-SHIPS,10
5):: SHIPS=SHIPS+1
930 F1=INT(FUEL)
940 FOR I=F1 TO 24
950 CALL SOUND(-200,110+2*I,
1)
960 DISPLAY AT(23,5):SEG$(F$
,1,I):: NEXT I :: FUEL=24
970 GOSUB 1640 ! POPULATE
980 GOSUB 1360 ! SETVARS
990 CALL COLOR(#1,6):: CALL
VCHAR(2,3,48):: CALL HCHAR(2
,4,32,11)
1000 DISPLAY AT(9,6):" ": :"
 "
1010 CALL COLOR(9,CLR(INT(10
*RND)+1),1)
1020 GOTO 530
1030 CALL PATTERN(#1,100,#3,
99):: CALL DELSPRITE(#4)
1040 CALL MOTION(#1,0,0):: C
ALL PATTERN(#3,100,#1,99)::
CALL DELSPRITE(#3)
1050 CALL POSITION(#1,X2,Y2)
1060 IF CC=1 THEN CR=9 ELSE
CR=6
1070 FOR I=1 TO 8 :: CALL SO
UND(-400,-7,I):: CALL PATTER
N(#1,99,#1,100)
1080 CALL SPRITE(#I+5,102,CR
,X2,Y2,5*(INT(3*RND)-1),5*(I
NT(3*RND)-1)):: NEXT I
1090 FOR I=1 TO 8 :: CALL DE
LSPRITE(#I+5):: CALL PATTERN
(#1,99,#1,100)
1100 NEXT I :: CALL COLOR(#1
,1)
1110 CALL PATTERN(#1,XP):: C
ALL LOCATE(#1,81,121)
1120 CALL VCHAR(2,31-SHIPS,3
2):: SHIPS=SHIPS-1
1130 IF SHIPS=-1 THEN 1330
1140 IF CC=1 THEN AM=AM-1 ::
 CC=0 :: IF AM=PEOPLE THEN 8
60
1150 CALL COLOR(#1,6):: F,A=
0 :: GOTO 430
1160 REM ROBOT IS HIT
1170 CALL DELSPRITE(#4):: CA
LL MOTION(#1,0,0)
1180 CALL SOUND(50,-6,1):: C
ALL PATTERN(#3,99)
1190 CALL SOUND(50,-6,10)::
CALL PATTERN(#3,100)
1200 CALL SOUND(1,9999,30)::
 F,A=0 :: CALL DELSPRITE(#3)
:: GOTO 590
1210 REM OUT OF FUEL
1220 CALL DELSPRITE(ALL)
1230 DISPLAY AT(7,8):"!!OUT
OF FUEL!!"
1240 DISPLAY AT(9,6):"YOU RE
SCUED A TOTAL"
1250 DISPLAY AT(10,7):"OF";T
OT;"COLONISTS."
1260 DISPLAY AT(12,10):"PLAY
 AGAIN?"
```

))))))

```
1270 DISPLAY AT(13,10)BEEP:"
!!Y OR N!!"
1280 CALL KEY(0,K,S):: IF S=
0 THEN 1280
1290 IF K=89 OR K=78 THEN 13
00 ELSE 1280
1300 IF K=78 THEN CALL CLEAR
 :: GOTO 2210
1310 DISPLAY AT(15,2):"WAIT
WHILE I SET THINGS UP."
1320 Z=0 :: GOTO 330
1330 DISPLAY AT(7,7):"!!NO M
ORE SHIPS!!"
1340 GOTO 1240
1350 REM SETVARS
1360 A,F,CC,PEOPLE=0
1370 X=INT(112*RND)+1
1380 IF Z=1 THEN RETURN ELSE
 Z=1
1390 F$=RPT$(CHR$(124),6)&RP
T$(CHR$(128),18)
1400 XP=105 :: FUEL=24 :: SH
IPS=3 :: PAT=.5
1410 TOT=0 :: RETURN
1420 REM FIRE
1430 CALL MOTION(#1,0,0):: C
ALL POSITION(#1,X1,Y1)
1440 IF XP=104 THEN V=-20 ::
 C1=1 ELSE V=20 :: C1=256
1450 CALL SOUND(100,1400,1,-
1,1)
1460 CALL SPRITE(#4,101,14,X
1,Y1+((XP-104.5)*10),0,V)::
F=1
1470 RETURN
1480 REM RESCUE
1490 IF CC=1 THEN RETURN
1500 CALL GCHAR(19,16,CR)::
IF CR(112 OR CR)113 THEN 153
0
1510 IF X)99 THEN M$=SEG$(M$
,1,X-100)&CHR$(INT(3*RND)+96
)&SEG$(M$,X-98,113-(X-98))::
 GOTO 1560
1520 M$=SEG$(M$,1,X+12)&CHR$
(INT(3*RND)+96)&SEG$(M$,X+14
,113-(X+14)):: GOTO 1560
1530 CALL GCHAR(19,17,CR)::
IF CR(112 OR CR)113 THEN RET
URN
1540 IF X)98 THEN M$=SEG$(M$
,1,X-99)&CHR$(INT(3*RND)+96)
&SEG$(M$,X-97,113-(X-97))::
GOTO 1560
1550 M$=SEG$(M$,1,X+13)&CHR$
(INT(3*RND)+96)&SEG$(M$,X+15
,113-(X+15))
1560 CALL SOUND(100,-3,1,220
,1):: CALL COLOR(#1,9)
1570 DISPLAY AT(19,1)SIZE(28
):SEG$(M$,X,113-X)&SEG$(M$,1
,X)
1580 CC=1 :: RETURN
1590 REM CREATE ROBOT
1600 IF RND).5 THEN COL=1 EL
SE COL=256
1610 ROW=INT(113*RND)+25 ::
ZZZ=INT(6*RND)+1
1620 CALL SOUND(-100,110,1,1
20,1)
1630 A=1 :: CALL SPRITE(#3,R
OBOT(ZZZ)-.5,CLR(INT(10*RND)
+1),ROW,COL):: RETURN
1640 REM POPULATE
1650 AM=INT((TIME+4)*RND)+TI
ME+4
1660 FOR I=1 TO AM
1670 P=INT(112*RND)+1
1680 FOR J=1 TO I :: IF P1(J
)=P THEN 1670
1690 NEXT J :: C=INT(2*RND)+
112 :: P1(I)=P
1700 IF P)99 THEN M$=SEG$(M$
,1,P-100)&CHR$(C)&SEG$(M$,P-
98,113-(P-98)):: GOTO 1720
1710 M$=SEG$(M$,1,P+12)&CHR$
(C)&SEG$(M$,P+14,113-(P+14))
1720 NEXT I
1730 RETURN
1740 SUB INSTRUCTIONS
1750 RESTORE 1800
1760 DISPLAY AT(1,7):CHR$(10
5);" ";CHR$(105);" RESCUE ";
CHR$(104);" ";CHR$(104)
1770 DISPLAY AT(2,7):"BY JIM
 ANDERSON"
1780 FOR I=4 TO 24 :: READ I
NS$
1790 DISPLAY AT(I,1)BEEP:INS
$ :: NEXT I
1800 DATA " ALIEN ROBOTOIDS
FROM AN UN-"
1810 DATA "KNOWN GALAXY ARE
ATTACKING"
1820 DATA "THE COLONIES SETT
LED BY THE"
1830 DATA "FEDERATION. THE R
OBOTOIDS"
1840 DATA "ARE PROGRAMMED TO
 KAMI-KAZI"
1850 DATA "INTO ANY FEDERATI
ON SHIP."
1860 DATA "YOUR MISSION IS T
O SAVE THE"
1870 DATA "REMAINING POPULAT
ION ON THE"
```

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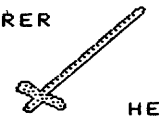
```
1880 DATA "COLONIZED PLANETS
.","  "
1890 DATA "  POSITION YOUR SH
IP ABOVE  "
1900 DATA "A COLONIST TO SAV
E HIM."
1910 DATA "YOUR SHIP WILL TU
RN RED."
1920 DATA "NEXT FLY UP TO TH
E MOTHER"
1930 DATA "SHIP ABOVE YOU. T
HE COLONIST"
1940 DATA "WILL SAFELY BOARD
 THE SHIP."
1950 DATA "USE JOYSTICK #1 T
O MANUEVER"
1960 DATA "YOUR SHIP AND THE
 FIREBUTTON"
1970 DATA "TO SHOOT THE ROBO
TOIDS.",""
1980 DATA "WAIT WHILE I SET
THINGS UP."
1990 SUBEXIT :: SUBEND
2000 SUB DRAWSCREEN(M$,X,F$)
2010 CALL HCHAR(1,1,33,32)
2020 CALL HCHAR(2,3,48)
2030 CALL HCHAR(2,15,120,4)
2040 CALL HCHAR(2,16,121,2)
2050 CALL HCHAR(2,28,105,3)
2060 CALL HCHAR(3,1,33,13)
2070 CALL HCHAR(3,15,122)
2080 CALL HCHAR(3,18,123)
2090 CALL HCHAR(3,20,33,13)
2100 FOR I=4 TO 18
2110 DISPLAY AT(I,INT(28*RND
)+1):CHR$(102)
2120 NEXT I
2130 CALL HCHAR(19,1,96,32)
2140 DISPLAY AT(19,1)SIZE(28
):SEG$(M$,X,113-X)&SEG$(M$,1
,X)
2150 CALL HCHAR(20,1,103,64)
2160 CALL HCHAR(22,1,33,32)
2170 DISPLAY AT(23,1):"FUEL"
&F$
2180 CALL HCHAR(24,1,33,32)
2190 CALL SPRITE(#1,105,6,81
,121)
2200 SUBEXIT :: SUBEND
2210 END
```

Formatted listing produced partly by a program kindly supplied by
JIM PETERSON of TIGERCUB SOFTWARE

))))))

ADVENTURE HELP

THE ADVENTURER HELP COLUMN



By JO ANN COPELAND

THE HITCHHIKER's TRILOGY) CONTINUED (OOOHHHHH NNNOOOOOOOOO!!!!!

Okay, put on your Joo Janta 200 Super-Chromatic Peril-Sensitive Sunglasses and prepare to be on your way! Don't forget your Don't Panic button! If you really need extra help just dial DA 59.99 - or call 1-555-55-5-55555-555-5555 - Operators are standing by! On Ursa Minor Beta, dial 1-5-555-55-55555-555-5555, ext. 5. On Earth dial 0638813457.

How many of us have spent hours on end lately flipping switches? Better yet, how many of us knew why? Well, to get where we don't want to go, that's why!

I've made many an unplanned, unscheduled trip in this game to get to a few interplanetary locations. I arrived often as Arthur Dent, but then I've also arrived as Tricia, Ford Prefect, and even Zaphod Beeblebrox! Well, I've heard it said two heads are better than one, and Zaphod should know better than we, 'eh? Okay, I think I'm set up and I flip my switch.....Rather better than flipping my lid 'eh? Or have I already done that? (No need to reply, thank you!)

You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, smell nothing. In fact, you don't even know who you are. What sense is missing? I type it in and see what happens!

Hmmm...I've arrived somewhere. But I don't know where that somewhere is! Oh, aboard the War Chamber, where else? (Besides a possibility of a thousand or so!) Well, there's a couple of pretty ugly creatures discussing facts important to them, but not to me. I think I'll listen in while I look around the ship. Hmmm, what's that? I don't really know, and since I don't, I think I'll take it. What's that through the view screen? A dog eating? Uh-oh, I'm somewhere else again!

)))))))

You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, feel nothing, smell nothing. In fact, you don't even know who you are. What sense is missing? I type it in and again see what happens!

Wow - back on the Heart of Gold! Let's see if I brought anything back with me - yup! Hmmm, think I'll put it in the thing that my aunt gave me that I don't know what it is. Flip switch.....

You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, see nothing, hear nothing, feel nothing, smell nothing. In fact, you don't even know who you are.)Look.
You taste nothing, feel nothing, hear nothing, smell nothing. In fact, you don't even know who you are. What sense is missing? I type it in and again see what happens!

How many times am I gonna' have to do this!!??!!? I think I'm on a speedboat. Who am I? Oh no, Zaphod Beeblebrox! Oh well, maybe with 2 heads going for me I might be able to accomplish something! Maybe? Please? I examine everything...look all around...look under, over, above, search, feel... Oops, what's this? Examine auto-pilot. I can do better than that...let's steer this thing towards the rocks and see what happens! Take what I found on board ship. Oh no, a crowd waiting, applauding my arrival? Me?? Well, I guess I'll give a speech seeing as everyone turned out to greet me. They applaud again. Well, I'll just give another speech. Boy, these people don't have much sense, do they? Who's that? Trillian! Fancy meeting you here! HI TRILLIAN! What did she say about 'sticking with the plan'? WHAT PLAN?

I guess I'll go for broke and see if I can wriggle my way out of this one! Trish, shoot the weapons! HEAD FOR THE HEART OF GOLD! Oh no, where am I now? Sheesh, go through the senses again! Back on the ship! I think I'll search around and see if I brought my stuff back with me! Okay, back to the bridge. Flip switch...AGAIN? (Yup!)

{Editor here - er, look who's this Trish chap...? PB}

Five senses again... Where am I this time and who am I? Who is this? A bugblatter beast and he's demanding to know my name? I think I'll try Arthur Dent. Yup, works. Head east. A memorial? Glad I brought my towel - maybe if I put it on my head I'll wake up and think this was all a bad dream? Not likely - but worth a shot! It worked! I think I'll look around while this creep takes a nap. Hmmm, an interface...

I'M CARRIED AWAY! 16 years later I arrive back on my ship with a... paint chipper?

))))))

Flip switch...5 senses... EARTH!!!! Home, home, dear sweet home. Who am I? Ford Prefect??!? Well, guess I'll replay this like in the beginning of the Adventure! Couldn't hurt could it? Open satchel. Give fluff to Arthur - why is he refusing my towel? Follow through with Adventure opening... Back on my ship...5 senses... how many fluffs do I have now? 3? Oh no, I have to do this again???!!! Flip switch...

5 senses...Okay, I give up. Where am I now and who am I? Well, I'm carrying a purse...so that kinda' narrows things down a bit. If I had a mirror I'd bet my life I'm Tricia. Who cares, it's not my life! Yup, that's who I am. Wow, neat party...wine in my hand and a plate of hors d'oeuvres being passed around. Who's here? Well, no Robert Redford or Charles Bronson...oh no...Arthur Dent and Zaphod Beeblebrox!

Well, let's make the most of it and examine them...Arthur sure is a boring jerk... What's he got on his jacket? Let me see what happens if I take it and put it in my purse. Now, how do I get out of here? I could spill my wine and get thrown out...What's that? Zaphod is offering me a ride in his new vehicle? What the hey... Back on my ship...5 senses...How many fluffs? 4? I needed only 4! You mean I don't have to flip any more stupid switches? Not for the time being, anyway!

Well, that's enough for now...don't think I'll recuperate from this for a long while to come!!! Next time I know to make Earth my LAST trip - I lost my satchel fluff! I'll come back to this in - maybe - 10 years from now!!!!!

))))) Confused? You'll stay that way while playing this Adventure! After these trips you still have a way to go...so don't get too sure of yourself... We'll continue at a later date... in the meantime, HAPPY FLIPPING and give a "HI" to Arthur, Tricia, Zaphod, and the bugblatter beast for me! Until then, how about a little poetry...

Oh freddled gruntbuggly, thy nacturations are to me!
As plurdled gabbleblotchits on a lurgid bee.
Groop I implore thee, my foonting turlingdromes.
And hooptiously drangle me with crinkly bindlewordles, or I will rend thee in the gobberwarts with my blurglecruncheon, see if I don't!

==========

Really, fellow Adventurers, you can write in with questions...I really don't bite...only growl... Look forward to your questions and ideas for inclusion in this column! Until later, 'Bye for now.....

Scott and Jo Ann Copeland
P. O. Box 5927 - RAF Lakenheath
Brandon, Suffolk IP27 9PN

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MULTIPLAN MANIA

By BRENDA J. NOELL

In this column I will attempt to make clear the command structure and possible uses of "TI MICROSOFT MULTIPLAN". Multiplan is an electronic worksheet. It comes with a Module, User's Guide, Reference Card, Overlay Strip and a Disk. To use Multiplan you need of course one, two or three disk drives (two is recommended), an Expansion system with a controller card and memory expansion, and a printer can be a great help. A couple of already-initialized disks for storage would also be useful.

Once everything is plugged in and turned on and you have your module inserted into your console, Multiplan can be loaded and then you are ready to begin. Keep the Multiplan disk in drive 1 at all times except when these commands are used:

Print File	Transfer Load	Transfer Save
Transfer Delete	Transfer Rename	External Copy

To change Multiplan to use drive 2, select the Transfer Options command by pressing T, then the letter O. Advance to the setup field. Press TAB (CTRL A). Designate the data file drive as DSK2. Type DSK2 (this field can be DSK1, DSK2, or DSK3). Press ENTER.

Multiplan sends the worksheet to the printer in page-size sections.

Select the Print Options command. Press P, then the letter O. Advance to the setup field. Press TAB (CTRL A). Specify the port and baud rate. E.g., type RS232.BA=1200. Parallel Port is PIO. Press ENTER.

Using the Print File command to save a worksheet produces a TI-WRITER compatible file. TI-WRITER can merge a text with a worksheet file. When printed, this merged file results in a report containing text with tabular information where you placed it. You can merge a text file and a worksheet file, creating a third file but leaving the original intact.

PART 1

CHAPTER 1: FUNDAMENTALS

When loaded and ready your Multiplan will show a screen that is 4 columns wide and 18 rows long. Press FCTN "arrow" to move the illuminated "cell pointer" around the worksheet. Below the worksheet window you will find a command line:

)))))))

```
                    COMMAND: Alpha Blank Copy Del Edit For
                     Go Help Ins Lock Move Name Opt Print
                     Quit Sort Trans Value Window Xtern

then a message line:    Select option or type command letter

then status line:       R1C1                                  100% TEMP
```

100% is the storage space remaining and TEMP is the worksheet name.

Press the space bar to move the illuminated edit cursor.

The screen actually has 63 columns and 255 rows. The active cell is illuminated by the cell pointer. The cell pointer is currently in the upper left corner of the display: in row 1, column 1 (hence R1C1). A cell is identified by its location; the row number is always given first. Cell "row 1, column 1" (R1C1) is the active cell now. Move the cell pointer by using the arrow keys. As you do so, notice the bottom line of the screen. The R and C numbers will change as you change positions on the worksheet.

The percentage at the right tells you how much working memory is left. Watch this percentage change as you enter and delete data. TEMP is the name that Multiplan gives the worksheet, until you give the sheet a name of its own.

To scroll your worksheet just move the cursor to column 4 and press the right arrow again. Notice the column is now at 5 and the first column is 2. You can do the same with rows. Press the down key until you reach 18 and press again. Rows 2 - 19 are now shown. You now are at R19C5. You can return to R1C1 by reversing this process or by pressing CTRL 1 or Home.

To get to, say, R255C63, press G or move command line to illuminate Go. This will send you to GOTO. Then press R. Press ENTER. Type in 255. Press TAB (CTRL A), which takes you to the column number and type in 63. The worksheet is now at the location of row 255 and column 63.

Multiplan now returns to the command line and is waiting for another command.

If you pressed the wrong command letter, or another key while moving the cell counter you can press the CANCEL key or CTRL C to clear the command line.

The term "menu" is used for the Command line. It is easiest to use the first letter of the command to select an option. E.g.: to select GOTO type G, for ALPHA type A, etc. BACKSPACE (FCTN 9) will erase letter by letter.

The words "row" and "column" are the names of the command "fields," which are areas you fill in to specify how you want a command carried out. Entries in these command fields are called "responses". The "proposed responses" are the responses which occupy the command fields that are proposed by Multiplan and result from various aspects of the worksheet including previous responses in command fields. The proposed responses in the command fields are based on the current position of the cell pointer.

))))))

The HELP key gives you more information. Select GOTO by using the SPACE BAR (do not press ENTER). Press HELP (FCTN ?). The worksheet will be replaced by the information to assist you in more detailed understanding of the command. Once in the Help command there are additional subcommands to view various parts of the help information.

Press C when in the Help command for COMMANDS for the COMMAND OVERVIEW, which describes how to select commands. Press N for NEXT to see the rest of the COMMAND OVERVIEW. Press R (RESUME), taking you back to the worksheet with nothing altered. Press H when in the main menu for the beginning of the Help information. Select the Help command and then press K (for KEYBOARD). The beginning of the list of keys appears. Use N to view the rest of the list, then press R to continue.

To QUIT press Q while in the main menu. The command line asks you to confirm by pressing Y for YES.

In Chapter 2 we look forward to "Building a Workshop".

››END

L E T T E R S

A word of praise from MARTIN ROSS:

Dear Peter,

I felt that I had to put pen to paper, or more accurately TIwriter to printer, to thank both yourself and Gordon Pitt for organising such an enjoyable TI workshop at Bloxwich last weekend.

It was an ideal location in that the layout of the room with the power points spread along the window side of the room made it particularly easy to view the different systems which had been set up.

It was an opportunity in my particular case to meet faces which hitherto had purely been names or voices on the telephone and the relaxed atmosphere of the location encouraged the free flow of information.

It was a long day with a two and a half hour journey at each end but it was most certainly worth the travelling.

I look forward to the next TI workshop and would certainly travel to Bloxwich again such was the suitability of the chosen location.

Thank you again for having the foresight and commitment to encourage such a workshop which proved to be so successful.

Kindest Regards,

Martin.

Martin H.R.A. Ross

WORD PROCESSING

TI-WRITER/FUNLWRITER OVERVIEW: PART V

By JO ANN COPELAND (The Grey-haired Ghost...)

It certainly was great meeting everyone at the Bloxwich Workshop! However, now that everyone really knows what a fool I am I'll never be able to live it down!!!!! I do know, though, that I wouldn't have missed it for anything! Well, almost anything.....

We're on the Text Formatter Dot commands. Hopefully we can have all these discussed in this column (if I don't get off the track too much as I've been known to do!). So let's see what we have.....

Item (1) = .PL n This command tells the printer the number of lines to put on each page. The default value is 66. If you had longer paper you could reset the page length with the command, or if you wanted, you could reduce it. One note: An 8.5 by 11 sheet cannot hold more than 66 lines per page, so don't give a command to make more than that. Of course, if you have longer sheets you can go over the 66 lines per page.

For example:

.FI;LM 10;RM 65;PL 26

This lets the printer know you want a left margin of 10, a right margin of 65, and 26 lines of text per page. Replace PL 26 with, say, PL 46 and you have 46 lines of text. There, no problem, huh?

Item (2) = .IN n This command sets the paragraph indentation point. "n" value (a numerical value) indents the first line of a paragraph to that number regardless of the left margin setting. A "+n" value gets added to the value of the left margin. If your left margin is set at 10 and you use .IN +5, your indentation point is 10+5 or 15. The value of "-n" subtracts from the value of the left margin. This is called "outdent" (or outside the left margin). If you had .LM 15 and used the command .IN -10 you would outdent the first line of the paragraph to column 5 and the rest of the lines remain at 15.

Remember, if you ever reset your left margin, reset the indentation command too. Also, if you are using the No Fill command, any indentation commands will be ignored. You need the Fill In command for these to work, eg: .FI;LM 10;RM 70

))))))

For example:

```
Line 0001  .FI;LM 10;RM 70   (ENTER)
Line 0010  .IN 3             (ENTER)
Line 0070  .IN +5            (ENTER)
Line 0090  .IN +0            (ENTER)
```

Your left margin is at 10 and right is at 70. The first indent command advises the Formatter to indent the first line of each paragraph to (3) and the next indent command advises it to add 5 to the left margin (thus 15. The last indent command advises the Formatter to cancel the indent command and text will print out with a left margin of 10 and right of 70. Paragraphs, etc., will now print out as you typed them in text. Remember, you need the Fill In command with indent commands.

Item (3) = .BP This lets the printer know that any line following this command is to be printed as the first line of text on a new page. This is interchangeable with New Page as it does the same thing. It's just a different way of doing it. Just to add confusion to an already confused person! And I know what I'm talking about...I stay thoroughly confused!

PAGE IDENTIFICATION COMMANDS

Okay, a page identification command causes the Text Formatter to print the same text, a consecutive page number, or both on either the top or bottom of each page. There are two of these commands which are discussed below:

HEADER (.HE t) What happened to "n"? Off the track again.....

A header causes text "t" to be printed at the top of each page or when using a percent symbol (%) to page consecutively. You can have both done as per example following. Lines 1, 2, 4 and 5 are blank, and the header or page number (or both) print on line 3. The first line of text is always line 6.

For example:

.HE My Practice Document Page % (press CTRL M).

This causes the words My Practice Document to be typed at the top of each page along with the page number, counting from 1, 2, 3, and so on. Smart computer 'eh?

FOOTER (.FO t) The footer command causes text "t" to be printed, where else, at the foot (bottom) of the page. Here again, the percent symbol can be used to have consecutive numbering along with the footer print.

This gets printed on the next to last line of the page and 1 line is left blank between the last line of text and the footer.

))))))

For example:

.FO My Practice Document Page % (press CTRL M).

This causes the words My Practice Document to be typed at the bottom of each page along with the page number, counting, of course, from 1 and up.

If these commands are put at the beginning of your document they affect every page of the document until printing either ceases or you have cancelled the command somewhere else in your text.

For example:

```
0005  .HE My Practice Document Page % (press CTRL M).
0070  .FO My Practice Document Page % (press CTRL M).
0075  .HE (press CTRL M).
```

The first header prints the header text starting with the first page of the document, showing My Practice Document at the top of the page with the page number. It gets cancelled later on with .HE typed alone. The first footer starts printing the footer text and continues until you might type in .FO meaning cancel the footer command previously typed.

If you wanted to just number pages you would use .FO % and press CTRL M.

If you had two document files belonging to the same subject, say such as DSK1.FILE1 and DSK1.FILE2 you could follow through paging consecutively with the following noted on each file:

DSK1.FILE1 would have the command .FO % at the beginning of text. This would number from 1 up - say to page 10. Then, on DSK1.FILE2 you could follow through with paging by using the commands: .FO % and then underneath it placing the command .PA 11. The lets the computer know that paging should start with number 11 and continue up to 12, 13, etc.

Ugh, enough of that! Let's get on to something easy, like a command for centering. Centering command is typed as: .CE n (Hey, the "n" is back!)

The centering command centers line(s) of text between the left and right margins. "n" is a numerical value and it is optional, but if it is used "n" lines will be centered. If you only wanted to center one line .CE (ENTER) and the next typed line will come out centered on your document, once printed.

Some commands are used within the Text Formatter that are not "Dot" commands, but are used continuously. OVERSTRIKING can be done with the typed (@) sign. With this, characters are printed darker as they are struck 4 times in the same place and come out noticeably. For example, if you had a line of type -

@However, we have

- the word However would be struck four times and emphasized.

)))))))

UNDERLINING can be done with the use of the (&) sign. Any characters following this command will be underlined until a blank space is encountered. If you had some lines of type -

&However, we have

- the word However will be underlined (underscored).

Overstriking and underlining will not affect commas, however, a period (full stop) will be affected unless two blank spaces preceed it.

REQUIRED SPACE helps out a lot and looks like this: ^ This helps you to command more than one word in a sentence without typing out individual commands. If you wanted a whole sentence overstruck or underlined you could type it like this:

```
     @TI @people @are @really @great @to @know!
or   &TI &people &are &really &great &to &know!
```

The first sentence tells the printer to overstrike every word and the second says underline every word. There is an easier way:

```
     @TI^people^are^really^great^to^know!        or
     &TI^people^are^really^great^to^know!
```

Notice these sentences appear shorter but will type out just like any regular document. The required space sign just says "follow on with the previous command but put a space here!" If the required space symbol is used, space(s) between words will also be underlined or overstruck. Or is it overstriked?!?

{I thought it was struck over... PB}

If you wanted to number pages, but wanted your page number to print out further in on your text, you could use the following command:

For example:

```
0001 .FO ^^^^^^^^^^^^^^^^^^^^^^^^^%
```

I'm really lost now (what's new!) but I'll continue to trudge on. There must be someone out there who knows what's going on!!! Anybody home?????

Line spacing - .LS n - "n" equals the number of times the printer is going to space down before it prints the next line of text. The default is single spacing, as most of you know (we do?) but can be changed to, say, double spacing, like so:

```
.LS 2
```

This lets the printer know you want to double space and it will do so unless you have changed the command somewhere else within the document.

Space - .SP n - This is a one-time use command and advises the printer to leave 1 or more blank lines before printing the next line of text (depending on what value you assigned to "n").

)))))))

.SP inserts one blank line while .SP 5 inserts 5 blank lines before printing the next line of text. What's this good for (besides the obvious?)? Well, it helps to save on file space, and very often I've had to use it!

Okay, to get really warped out let's use some of these commands in a practice document via the Text Editor. Yes - remember it can be done!

Just for the heck of it, though, save your practice document for fear of hitting the wrong keys! Okay, put in some commands addressed above and save it under whatever (DSK?.TEST) works well. Okay, okay, no need to yell - use what you want! Okay, saved and ready to go. Press FCTN 9 (command mode) and hit F (enter). Now, type in PF (enter). Now, type in what you need - mine being PIO for the printer device name. When your text starts printing out it will show you exactly what you typed (commands and all). You can see where you put your commands and what they look like. Now, let's compare this to the finished document! OH WOW, I CAN'T WAIT!.....

Enter Command Mode, Type Q (enter) and E (enter). Press (2) for the Text Formatter. You should see something that looks kinda' like this:

```
*TEXT FORMATTER*
ENTER INPUT FILENAME
```

{Note that, depending upon the type of TI-Writer clone you are using, you may in fact have to press several keys to get at the Formatter. PB}

If you had saved under DSK?.TEST that is what you type in. Now, press Enter. You should see the disk drives start rumbling and looking about for your file. If it doesn't find it you'll see something like CANNOT OPEN FILE. Maybe you typed the file name in incorrectly? Try again. Okay, the disk drives stop rumbling and the file was found.

You should see:

ENTER PRINT DEVICENAME. I put in PIO.LF (you put in the equivalent for your printer). Press Enter. Now you should see:

```
USE MAILING LIST? N        Press Enter.

WHAT PAGE(S)?  (ALL)       Press Enter.
A

NUMBER OF COPIES: 1        Press Enter.
1

PAUSE AT END OF PAGE? N    Press Enter.

WORKING.....
Press clear to stop        (FCTN 4 to STOP)
```

Okay, your file is printing out - however this time the commands will NOT be shown - they will be DONE and you should see a finished product. Hopefully, it is just as you wanted it.

When the prompts ask: What Pages(s) (All) you can change this to almost anything you want to. If you have 10 pages of text and only wish page 6 to print out just put a 6 where the A is placed. Page 6

))))))

will then type out. If you want more than one copy, just put a number where the 1 is located - if it is 2 you will get two copies! Also, a Y at the Pause At End of Page prompt means the Formatter will PAUSE. If you are using one sheet of paper at a time and not continuous stationery this helps out a lot. You can feed one sheet in at a time while the printer waits for you.

When you have your paper set, hit Enter and the next page prints. Then it will pause and wait for you to again set another piece of paper in.

Remember, all DOT commands start at the beginning of a line and 1 line over the text you want to command. (Or) At the beginning of your document (line 0001, etc.). If there is any (carriage return) symbol in front of these commands, the command will be ignored. Nothing gets printed beyond the carriage return symbol! Also, never put a period (.) at the beginning of a line of text - the line of text will be ignored - just as I feel I'm being by this point...!! Enough is enough!

Well, that's quite a lot to work with for the time being. Besides, my brain stopped functioning after the first page (hold your tongues out there!)

Anyway, work with these and have some fun! They all help make your typing easier and your finished document really looking nice. Next article we'll deal with: Purge and Recover Edit / Editing Operations not already dealt with / and CTRL U special character mode. Later issues will deal with Transliteration, Comments, and Include File, and possibly Mail Merge, etc., if space and time permit! There's still a lot more to go through - hopefully we all won't have gone stark raving mad by then! I know I'm half-way there at least! 'Bye for now.....

))))))

DISK PERIPHERAL D.S.R. SUBPROGRAMS

By COLIN HINSON

LEVEL 1 SUBROUTINES

The lowest routines in the disk DSR are called level 1 subroutines. These routines make the higher levels independent of the physical disk medium, e.g. changing the disk software for a double density disk would only involve changing the routines on this level provided the physical sector size remains at 256 bytes.

There are two Sub-programs available on this level:

1. Sector Read/Write
2. Format disk.

The following paragraphs contain a description of the subprograms and their call requirements. All parameters are transferred through the FAC block in CPU RAM. This block is located at a relative position of >4A (which for the 99/4A is >834A).

All the subprograms are called by a 'BLWP @DSRLNK' followed by a data statement: 'DATA >A'. (Note that the Editor Assembler manual is WRONG - it gives >10 for the data on the third line of the first paragraph on page 262). Before calling any of the subprograms, location >8356 (name length pointer) must be set up to point at the location in VRAM where the name length and the subprogram number have been written.

e.g. If subprogram >14 is called then a location in VRAM (say >1000) must contain 2 bytes, the first of which is >01 (the name length), and the second of which is the subprogram number >14. Location >8356 in CPU RAM points to the first of these bytes - i.e. contains >1000.

Error codes are returned in >8350

SECTOR READ/WRITE - SUBPROGRAM >10

The transfer block for this subprogram is:

>834A	(Sector number)
>834C	Unit # | READ/WRITE
>834E	VDP Buffer start address
>8350	Sector number

>>>

The meaning of each entry is:

Unit Number: - Indicates the disk drive on which the operation is to be performed. For a T.I. controller, this has to be either 1, 2, or 3.

READ/WRITE - Indicates the direction of data flow:
0 = WRITE
NOT 0 = READ

VDP buffer start address. - Indicates the start of VDP buffer for data transfer. The number of bytes transferred will always be 256.

Sector number - Number of the sector to be written or read. Sectors are addressed as logical sectors (0-359 for a single sided single density disk), rather than as a track and sector number, which would require a knowledge of the physical layout of the floppy disk. The sector number has to be given in CPU RAM locations >8350 and >8351, and will be returned in CPU RAM locations >834A and >834B.

DISK FORMATTING - SUBPROGRAM >11

The transfer block for this subprogram is:

>834A	(# of sectors/disk)	
>834C	DSR Ver	Unit # | # of tracks
>834E	VDP Buffer start address	
>8350	Density	# of sides

The meaning of each entry is:

# of sectors/disk - Is returned by the routine to provide compatibility between the normal controller and double density or SA200 systems.

DSR Version (This is the MS nibble)

0 indicates the format requires nothing special and can be done on any version of the DSR.
1 indicates the format requires the 2nd version of the DSR for one of two reasons. It may be because a double sided format is requested, or it may be because a # of sectors other than 35 or 40 is requested (but see below!).

>>>

Unit Number: - Indicates the disk drive on which the operation is to be performed. For a T.I. controller, this has to be either 1, 2, or 3. This is the LS nibble.

# of tracks - Indicates the number of tracks to be formatted. In the only versions released, this entry has to be either 35 or 40!!! Upon return, this entry contains the number of sectors per track.

VDP buffer start address - Indicates the start address of the VDP buffer that can be used by the disk controller to write tracks. The amount of memory used depends on the disk format. For a single density format, the buffer memory used is a nominal 3125 bytes. This can vary with disk motor speed to a maximum of 3300 bytes. To be compatible with double density versions of the controller (such as MYARC), the minimum buffer size must be 8K bytes.

Density - 0 = single

# of sides - Indicates the number of sides to format.

The above subprogram will format the entire disk on the given unit unless the disk in the unit has been hardware write protected. It can use any VDP memory starting at the location given in the transfer block.

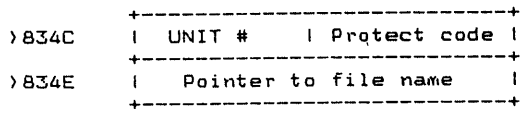
LEVEL 2 SUBROUTINES

The Level 2 subroutines use the "file" concept, rather than the "logical sector number". Note that the file concept on this level is limited to an abstract type of file which has NO properties such as "program file" or "data file". A file on this level is merely a collection of data, stored in logical blocks of 256 bytes each.

The logical blocks on this level are accessed by filename and logical block offset. This offset starts with block 0 and ends with block N-1 for a file with a length of N blocks.

MODIFY FILE PROTECTION - SUBPROGRAM >12

The transfer block for this subprogram is:



The protect bit for the indicated file will be set or reset according to the information given in CPU RAM location >4D:

>>>

0 -Reset the file protect bit. The file is no longer protected against modification or deletion.

1 -Set the file protect bit. Disallow SAVE and OPEN for OUTPUT, APPEND, or UPDATE mode.

The pointer to the file name must point to the VDP RAM location of the first character of the file name. The name must be left adjusted in a 10 character field, right filled with spaces. No checks are made to ensure the legality of the file name.

FILE RENAME ROUTINE - SUBPROGRAM >13

The transfer block for this subprogram is:

>834C	UNIT #	Unused
>834E	Pointer to new name	
>8350	Pointer to old name	

Both pointers to the file names must point to the VDP RAM location of the first character of a file name. Each name must be left adjusted in a 10 character field, right filled with spaces. No checks are made to ensure the legality of the file names.

Since the rename has to be done on the same disk, only one unit number entry is required.

Error codes are returned, as usual, at location >8350. The error codes returned are identical to the standard file management error codes, i.e. only the upper three bits of the error byte are significant.

BUFFER ALLOCATION ROUTINE - SUBPROGRAM >16

The transfer block for this subprogram is:

>834C	ZERO	
>834E	# of files	ZERO
>8350	ZERO	

The "argument" for this subprogram is the number of file buffers to be allocated. Whilst it is not actually necessary to clear >834C, & >8350, experience has shown that strange results sometimes occur if you don't.

>>>

The effect of this routine is that an attempt is made to allocate enough VDP RAM space for disk usage to facilitate the simultaneous opening of the given nuumber of files. This number has to be between 1 and 16.

The disk software automatically relocates all buffer areas that have been linked in the following manner (see also previous article on VDP RAM allocation):

Byte 1 - Validation code

Bytes 2 & 3 Top of memory before allocation of this buffer.

Byte 4 High byte of CRU address for given buffer area. For programs this byte is 0.

The linkage to the first buffer area is made through the current top of memory, given in CPU RAM location >8370.

The top of memory is also automatically updated after successful completion of this subprogram.

A check is made that the current request leaves at least >800 bytes of VDP RAM space for screen and data storage. If this is not the case, or if the total number of buffers is zero or greater than 16, the request is ignored and an error code will be indicated in CPU RAM location >8350.

Successful completion is indicated by a 0 byte in CPU RAM location >8350. A non-zero byte indicates unsuccessful completion.

Next time: Subprograms >14 and >15 - Direct file access.

>>>

DATACHAT 1223 KEEPS YOUR MICRO IN TOUCH

Get yourself and your micro into the data communications age with the new GEC Datachat 1223 modem.

Datachat gives you access to a huge amount of information held on databases such as Prestel and Micronet 800.

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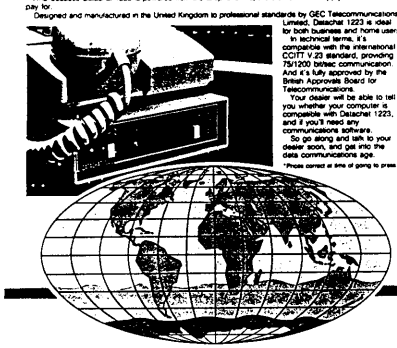
So go along and talk to your dealer soon, and get into the data communications age.

*Prices correct at time of going to press



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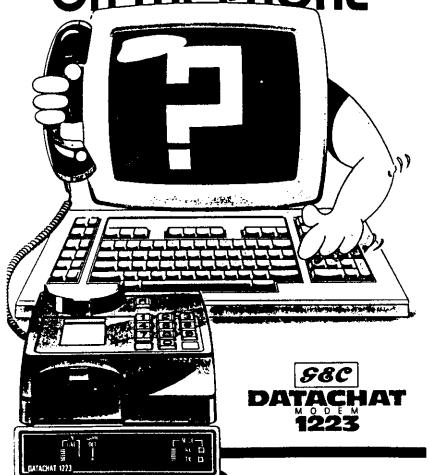
PUT YOUR MICRO ON THE PHONE



DATACHAT ® & GEC Trade Mark

SPECIFICATION

	Modem 1223		
Line Interface			
CONNECTOR — type	A standard BT '600 series' wall socket		
Power	Line powered. Line current is provided by a standard telephone line.		
Data Rates			
TRANSMIT MODE —	Transmit 1200 bit/s Receive 75 bit/s		
RECEIVE MODE —	Transmit 75 bit/s Receive 1200 bit/s		
	In accordance with CCITT recommendation V.23 1200/1200 bit/s pseudo full duplex is possible under control of the terminal software		
Data Interface	In accordance with CCITT recommendation V.24 and RS 232C		
CONNECTOR — type	5 way 240° DIN connector		
— pin connections	CCITT DESIGNATION	RS 232 DESIGNATION	PIN NUMBER
— common return (GND)	102	AB	3
— transmitted data (Tx D)	103	BA	1
— received data (Rx D)	104	BB	5
— request to send (RTS)	105	CA	2
— data channel received line signal detector (DCD)	109	CF	4
Transmitter			
FORMAT	Asynchronous frequency shift keyed modulator (FSK)		
LEVEL	– 9 dBm maximum into 600 ohms.		
Receiver			
FORMAT	Asynchronous frequency shift keyed demodulator (FSK)		
SENSITIVITY	0 to – 43 dBm in any mode.		
Frequency Allocation	Binary 0 2100 Hz Binary 1 1300 Hz	at 0 — 1200 bit/s	
	Binary 0 450 Hz Binary 1 390 Hz	at 0 — 75 bit/s	
Data Channel Received Line Signal Detector	'ON' at > – 43 dBm 'OFF' at < – 48 dBm		
Software Mode Control REQUEST TO SEND	'ON' transmit mode 'OFF' receive mode		
Dimensions	140mm wide, 210mm deep, 45mm high		
Weight	0.8 kg approximately		

UK PATENT APPLN NO 8501455

GEC
DATACHAT
MODEM
1223

Modem Division Sales,
Transmission Group, GEC Telecommunications Limited, PO Box 53, Coventry CV3 1HJ
Telephone Coventry (0203) 448331 Telex 31381 (GECTEL G) Fax (0203) 448418

B U L L E T I N B O A R D

WANTED / 4 SALE / WANTED / 4 SALE / WANTED / 4 SALE / WANTED / 4 SALE /

Christmas must be getting close - there are quite a few goodies here!

I have a BROTHER HR5 thermal printer for sale at £65. It can operate on either mains or batteries (not supplied but available at extra cost), and can use either ordinary paper (supplied with three thermal transfer ribbons) or special thermal paper. It is RS232 compatible (a lead can be supplied at extra cost).

I also have a set of new, boxed TI joysticks at £12.50 plus post and packing if you cannot collect.

Contact me on Oxford 510822.

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If you want some good quality disks at a low price, contact me at Oxford for MEMOREX SINGLE SIDED at £10.50 plus £1.50 p+p for 10 disks (includes well-constructed plastic disk box), or MEMOREX DOUBLE SIDED at £12.54 plus £1.50 p+p for 10 disks (including plastic box).

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I need three more potential buyers for the New Horizons RAMDISK board. Cost is £50 for the bare board. Contact me for further details on Oxford 510822.

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JONATHAN TYLER has an ALPHACOM 42 PRINTER for sale, complete with a minimum of 5 rolls of paper. The unit is about 9 months old, and cost £152. Jonathan is asking only £110 or nearest offer, and you can contact him on 0977 792833 between 6pm and 9pm Monday to Friday, or at any time over the weekend.

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VIC VERE has a console, Extended BASIC, cassette leads, single ATARI joystick with adaptor, numerous cassette-based utilities and games, as well as issues of User Group newsletters (TI*MES, I understand), for sale at £70 or nearest offer. Vic tells me that he has kept the console and Extended BASIC in very good condition, and you can contact him after 5 pm most evenings on 0926 39653.

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I have one of CRAIG MILLER's goodies for sale: EXPLORER, complete with manual, disk, and overlay. Selling on behalf of another ITUGer, who is asking an entirely reasonable £12 (plus the cost of postage - unless you are in a position to pick it up yourself!). Call me on Oxford 510822.

))MORE)

PASCAL buffs who have been straining at the leash waiting for a system to come up for grabs can now let themselves loose: no less than TWO are available!

One is a p code card for the PEB plus full set of disks and manuals; the asking price is £150; contact me in the first instance on Oxford 510822.

For details of the other system phone RICHARD SIERAKOWSKI on 0672 54975. Richard is also selling XIDEX DSDD 96TPI disks at £12 for ten including library case, with post and packing at £1.50. Contact him for either Pascal or disks at the number above.

oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

I have a Speech Editor module with its manual for sale on behalf of a fellow ITUGer. It is virtually unused, and the asking price is £5. Contact me on Oxford 510822.

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I have a system for disposal, either as a complete package or as its component parts:

Peripheral Expansion Box	£80
Disk Controller card	£70
32K RAM card	£60
Single-sided disk drive (no psu or case)	£45

The lot for £200. All prices are "or nearest offer" and include cost of delivery. Ring me on Oxford 510822.

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I have two single sided full height drives without psus or cases, for sale at £40 each or £75 the pair. Prices include delivery. Phone me on Oxford 510822.

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I still have most of BRIAN ABRAMS' software for sale. The list is pretty extensive, so I won't reproduce it here; instead, look at pages 30 and 31 of issue 3 of the current volume of IT, and examine the list associated with item 6! I have all of the items with me, so if you are interested then give me ring on Oxford 510822.

oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

It is worth noting that in many cases, if items have not already been sold LONG before they ever get to these pages, then there is still a slim chance that they may yet be available. It might be worth your while to either give me a ring or ring the advertiser directly if they have offered a phone number. I tend to repeat adverts only when asked specifically to do so by the advertiser - otherwise I assume that all items have been sold unless advised to the contrary.

Have a look at the Bulletin Boards in, say, the previous three issues of IT, and see if something doesn't manage to take your fancy!

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