INTERNATIONAL TI-LINES

MERRY CHRISTMAS

Formerly OXON TI USERS

A PUBLICATION OF THE INTERNATIONAL TI USER GROUP

PETER G. Q. BROOKS
96 BANBURY ROAD
OXFORD OX2 6JT

OXFORD 510822

Index to articles   Page

```
--------------------------------------------------------------------
```

This issue is shorter than usual due to production difficulties, and the
January issue will be at least a fortnight late because of the holiday. '

Incidental artwork is a mixture of RLE-based material, and original work
from you-know-who.

MERRY CHRISTMAS AND A HAPPY NEW YEAR!!!

```
------------------------------------------------------------------------

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

------------------------------------------------------------------------
```

Last month's IT came out late due to illness and other factors; I hope
that this December issue makes it out a little closer to its intended
publication date!

One of the things which didn't make it into the Burble last time was
the news that JIM PETERSON of TIGERCUB SOFTWARE in the States has
published his last TIPS FROM THE TIGERCUB. As Jim specifically writes
his Tips for non-profit clubs if they wish to publish, I have not
published anything in IT, but I remember having seen at least one of the
TIPS in TI-EXCHANGE's TI*MES in the past.

If you have never heard of Jim or seen any of his work, well, you missed
quite a lot. Jim also produces NUTS & BOLTS disks of numerous programs
and utility routines, but I gather from his later TIPS that so much
piracy went on that he was forced to give up, which is a shame.

He hasn't dropped from sight altogether, and I have invited him to drop
a line or two from the States for publication in IT if he can find the
time. (A similar request has been made by at least one overseas group -
for a UK writer to tell them what goes on over here - but I'm so tied up
I rarely get chance to sit down and write to my own relatives!).

If some kind person will work out how to provide an image-grabber based
on the dreaded charge-coupled device, I will beat a path to their door -
and then start adding to the growing library of images in the Public
Domain.

We could have Ol' Baldie At The Watering Hole, Ol' Baldie The Thinker,
Ol' Baldie The Moaning Leaser - the mind boggles...

If you have V3.3 DM1000, did you know that there now is a V3.5 knocking
around...?

One of these days I will get around to reading the FUNLWRITER manuals. I
found by accident that FCTN 7 will activate the cataloguer (which you
get when at certain points in the hierarchy of menus) even when you are
>>MORE>

                                                              3

in the FORMATTER, ahem...while it is operating. Should you so desire,
you can hold FCTN 7 down for a couple of tics and lo, the Formatter
stops, runs the cataloguer, and lets you catalogue any disk (or RAMDISK)
and then, when you have filled your heart's desire with faffing about
looking at directories, will allow you back into the Formatter which
calmly carries on from wherever it left off.

Now, what practical use can I find for it ...?

Talking of Formatters, I discovered that you can do something clever
when formatting a file to disk (rather than RS232 or PIO). I'm always
mucking about with software (Chief Faffer), and I hate sending formatted
output straight to the printer when I'm not entirely sure that the
blasted Formatter will do as it has been told (it's all down to mental
models, chaps), so I tend to format out to disk (on rare occasions!).

Recently, I added the "switches" which apply to the printer - i.e.,
.CR or .LF, and found that I could name a file DSK2.ITUGA.CR.

Now, as all good 4DOS devotees will know, you cannot use the full stop
(period, or what you will - sorry, Shakespeare) more than once if you
specify a disk NUMBER. DSK.FRED.ITUGA is OK, because the first period
separates the file (DSK) from the disk name (FRED) and the second
separates the file name (ITUGA); but... DSK2.ITUGA.CR ought to cause
hiccups (only it doesn't).

Senior manual readers will now rush to the phone/4A and let me know that
this is all well documented in the manual, why don't I bother to read
it, etc., etc. I told you - I'm Chief Faffer, and that exempts me from
normal behaviour.

I reckon that clever Strine software writers have somehow modified the
parser for the output file input line (got that ?) so that you can tack
on .CR or .LF and switch one or the other ON. I might be persuaded to
experiment further and see what happens.

Not-many-people-know-dis-Fact Number 2: the disk directory for such a
file shows it to be something similar to ITUGA-CR (not .CR you notice),
indicating that the period is not all it seems in the Formatter, and no,
it isn't a hyphen, it's a redefined character providing a sort of
underlining facility for the displays.

Further adding to the confusion is the fact that if you go back into the
Editor, you can ask for the file using the second period - although the
directory shows "-", you can use ".".

Curiouser and curiouser, with apologies to Alice.

But if you enter DM1000 and try to Review the DV/80 file saved in this
manner, hey presto, the period is now a period again, and DM1000 won't
let you look at the file. Hee, hee, hee...

What's more, you can Review a file with a "blank" name, and go hopping
through myriad versions of the directory sectors presented as a DV/80
file - should you want to, that is.

Interesting, innit ?

What do you mean, no ?
>>>MORE>

4

Now pay attention at the back. GORDON PITT of Bloxwich Workshop fame,
is planning another Workshop with a special one-day Seminar for TIWriter
cum Funlwriter and MultiPlan. The preliminary idea is that a group of
earnest individuals would be able to listen to (and presumably try out)
the instructions given by an experienced veteran on the particular
subject. If a picture paints a thousand words, then a Seminar is worth
several books... There may even be a demo of Geneve!

The problem is that Gordon needs to know exactly what sort of level of
interest there is in such an idea. If you are very keen to attend the
Seminar then please do get in touch with Gordon and let him know. He
will obviously need a minimum number of attendees in order to keep the
cost down, so in a sense "the more, the merrier".

Contact Gordon on 0922 476373, or write to him at 259 Sneyd Lane,
Bloxwich, WALSALL, W. Midlands, WS3 2LS. Remember that he needs you
to commit yourself to coming - if you didn't turn up, that could be his
loss as well as yours (he has to pay for the hire of the facilities
whether you make it or not).

The intended venue is the same as for the Workshop - the Sneyd Community
School.

I will be off-line for about three weeks from December 10th., so if you
need to contact me, I'm afraid that things will have to wait until I
come back. I need a rest...

For that reason, the January issue of IT will most probably be late,
unless I manage a small miracle!

JAMES STRINGFELLOW, who you may remember as the author of a set of small
machine-code-in-BASIC routines and of the accessing-dot-graphics-from-
the-TI-Writer-Editor article (most impressive), has trumped his previous
efforts with some windowing routines. At the time of writing I'm not
sure if he has sent them for my edification or for publication; either
way they provide a facility for up to ten user-defined windows on screen
each of which can be individually addressed and manipulated. Again, he
has provided two versions of the routines: one with a CALL LOAD to bring
on board some machine code from a disk-based object file (the source
code is also provided) so that your own programs can then use LINKs, and
the other is a poke-it-in-byte-by-byte program which has the same
effect. I shall endeavour to establish what I am allowed to do with
them prior to publication, so check the index to see what there is!

With the cost increase this year of both photocopying (up 33%) and post
(up ~10%), the 1987 subscription may have to rise to £11. I warn you
now so that you can prepare the piggy bank by saving an extra 20p a
month to cope with it!!

I'm looking for feedback from readers so that I can tailor articles

>>MORE)

5

in IT to try and fit the readers' needs; last issue was described by a few as "too technical", although there were no hardware articles. I am often told what readers DON'T want to see — perhaps one or ten of you might let me know what you WOULD like to read.

The suggestions need to be a bit specific — "more on programming" is too vague — and I will either try and work something into the odd issue, or if I can't do it, I will ask around to see if there is someone who can.

If I dared to raise the subscription to £15.00 a year, I could possibly increase the number of pages to a regular 40 instead of 32, but I know already that a 50% price rise would be self-defeating, so that is out of the question. I do try to get the balance right, but it becomes more difficult as ITUG grows — there are more people to please all of the time!

With regard to the item earlier about the Bloxwich venue, it is worth pointing out that if you live within the region regarded as the West Midlands, there is apparently a special transport ticket which you can obtain which enables you to trundle about anywhere within that region for the princely sum of £1.50 (I am told). Take it up with either GORDON PITT or WMPTE — the West Midlands Passenger Transport Executive!

JIM PETERSON (see earlier) popped a little puzzle into his last TIPS, which I quite liked so I'm passing it on to you, dear reader. It is a small, one-line program:

    100 DISPLAY AT(1,1):0

When you RUN it, the output on screen is this:

    0
    0

Why ?

You may remember the much-vaunted ITUG BBS which was due to start trials as soon as I could get the software ? Well, I'm STILL waiting for the third disk to be returned by RALPH FOWLER, (after having sent a total of $15 so far to cover postage, and still being required to register my (incomplete) copy of his software for $30-odd), so through the helpful services of JOHN RICE and GORDON PITT I am placing a request for the "Techie" Bulletin Board system, about which I have seen excellent reports. Let's hope we get a swifter response should any problems arise this time!

Finally, TI have sent through some "diagnostic software" to registered User groups, and having examined some of it, well, all I can say is that they really can't think that much of us after all...

>>END

6

```
100 REM   TSC GA0066 - GAME I
NVENTED BY R.C.RICHARDSON,4
HUNTERS LANE, ITHACA, NY 14850
110 @A=0
120 @B=0
130 CALL CLEAR
140 PRINT "      ENGLISH TEN
NIS":::
150 PRINT "POINTS ARE SCORED
 WHEN THE  BALL HITS THE NET
 ON A PLAY-ERS OWN SIDE
OF THE COURT."
160 PRINT "THE JOYSTICK IS U
SED TO MOVETHE HOLE IN THE N
ET TO THE   POINT OF IMPACT S
O THAT THE"
170 PRINT "BALL PASSES THROU
GH THE NET.":::
180 FOR DELAY=1 TO 400
190 NEXT DELAY
200 INPUT "WHO IS SCORING IN
 THE BOTTOM?":A$
210 PRINT "":::"OK ,";A$;" S
QUEEZE YOUR TRIGGER."::
220 CALL KEY(1,K,S)
230 IF K=18 THEN 240 ELSE 22
0
240 CALL SOUND(-200,440,2)
250 INPUT "WHO IS SCORING IN
 THE TOP?":B$
260 PRINT "":::"OK ,";B$;" SQ
UEEZE YOUR TRIGGER."::
270 CALL KEY(2,K,S)
280 IF K=18 THEN 290 ELSE 27
0
290 CALL SOUND(-200,880,2)
300 CALL CLEAR
310 E=15
320 CALL CLEAR
330 CALL SCREEN(12)
340 CALL COLOR(1,2,2)
350 FOR I=3 TO 8
360 CALL COLOR(I,16,2)
370 NEXT I
380 CALL COLOR(9,13,2)
390 CALL CHAR(96,"3C42818181
81423C")
400 CALL CHAR(97,"000000FE7F
")
410 CALL CHAR(98,"0000818181
81")
420 RANDOMIZE
430 CALL HCHAR(12,1,97,32)
440 CALL CHAR(152,"")
450 CALL COLOR(16,12,12)
460 CALL HCHAR(24,1,152,32)
470 CALL HCHAR(12,E,98)
480 REM **      INITIAL BALL
                    POSITION
490 I=INT(21*RND+2)
500 IF (I)=11)+(I(=13)=-2 TH
EN 490
510 J=INT(30*RND+2)
520 CALL HCHAR(I,J,96)
530 A=-1
540 B=-1
550 Z=0
560 V=0
570 CALL HCHAR(I,J,32)
580 IF I(12 THEN 620
590 GOTO 1040
600 CALL SOUND(-10,1320,4)
610 CALL HCHAR(I,J,32)
620 I=I+A
630 J=J+B
640 GOSUB 1440
650 CALL HCHAR(I,J,96)
660 IF (J=1)+(J=32)=0 THEN 7
90
670 IF V()0 THEN 760
680 IF Z()0 THEN 750
690 _=100*RND
700 IF _)20 THEN 740
710 Z=A
720 A=0
730 GOTO 770
740 IF Z=0 THEN 770
750 A=Z
760 Z=0
770 B=-B
780 CALL SOUND(-50,440,2)
790 IF (I=1)+(I=12)=0 THEN 6
10
800 A=-A
810 IF Z()0 THEN 890
820 _=100*RND
830 IF _)20 THEN 870
840 V=B
850 B=0
860 GOTO 900
870 IF V=0 THEN 900
880 B=V
890 V=0
900 IF I=1 THEN 600
910 IF (J=E)+(I=12)=-2 THEN
980
920 @B=@B+1
930 IF (@B/10-INT(@B/10))=0
THEN 1640
940 CALL SOUND(-50,330,2,220
,2)
950 GOSUB 1810
960 CALL HCHAR(12,J,97)
970 GOTO 620
980 A=-A
990 CALL HCHAR(12,J,98)
```

>>MORE>

2023 note: Reminder:
Underline and @ are valid variable names!

7

```
1000 B=INT(3*RND+1)-2               1500 IF DE=0 THEN 1520
1010 GOTO 1040                      1510 CALL HCHAR(12,E-DE/4,97
1020 CALL SOUND(-10,1320,4)         )
1030 CALL HCHAR(I,J,32)             1520 CALL HCHAR(12,E,98)
1040 I=I+A                          1530 RETURN
1050 J=J+B                          1540 REM   JOYST 2
1060 GOSUB 1540                     1550 CALL JOYST(2,DE,X)
1070 CALL HCHAR(I,J,96)             1560 E=E+DE/4
1080 IF (J=1)+(J=32)=0 THEN         1570 IF (E(1)+(E)32)(=-1 THE
1210                                N 1580 ELSE 1600
1090 _=100*RND                      1580 E=E-DE/4
1100 IF V()0 THEN 1180              1590 GOTO 1550
1110 IF Z()0 THEN 1170              1600 IF DE=0 THEN 1530
1120 IF _)20 THEN 1160              1610 CALL HCHAR(12,E-DE/4,97
1130 Z=A                            )
1140 A=0                            1620 CALL HCHAR(12,E,98)
1150 GOTO 1190                      1630 RETURN
1160 IF Z=0 THEN 1190               1640 REM    SCORE
1170 A=Z                            1650 CALL SOUND(-50,330,2,22
1180 Z=0                            0,2)
1190 B=-B                           1660 PRINT A$&" HAS ";@A;" A
1200 CALL SOUND(-50,440,2)          ND "&B$&" HAS ";@B
1210 IF (I=12)+(I=23)=0 THEN        1670 INPUT "WANT TO CONTINUE
 1030                               ?":ANS$
1220 A=-A                           1680 IF SEG$(ANS$,1,1)="Y" T
1230 IF Z()0 THEN 1310              HEN 1700
1240 _=100*RND                      1690 END
1250 IF _)20 THEN 1290              1700 IF @A=50 THEN 1730
1260 V=B                            1710 IF @B=50 THEN 1750
1270 B=0                            1720 GOTO 310
1280 GOTO 1320                      1730 PRINT "THE WINNER IS ";
1290 IF V=0 THEN 1320               A$
1300 B=V                            1740 GOTO 1770
1310 V=0                            1750 PRINT " THE WINNER IS "
1320 IF I=23 THEN 1020              ;B$
1330 IF (J=E)+(I=12)=-2 THEN        1760 GOTO 1770
 1400                               1770 @A=0
1340 @A=@A+1                        1780 @B=0
1350 IF (@A/10-INT(@A/10))=0        1790 GOTO 1640
 THEN 1640                          1800 @A=23
1360 CALL SOUND(-50,330,2,22        1810 QA$=STR$(INT(@A/10))
0,2)                                1820 PA$=STR$(@A-10*INT(@A/1
1370 GOSUB 1810                     0))
1380 CALL HCHAR(I,J,97)             1830 QB$=STR$(INT(@B/10))
1390 GOTO 1040                      1840 PB$=STR$(@B-10*INT(@B/1
1400 A=-A                           0))
1410 CALL HCHAR(12,J,98)            1850 CALL HCHAR(22,3,ASC(QA$
1420 B=INT(3*RND+1)-2               ))
1430 GOTO 620                       1860 CALL HCHAR(22,4,ASC(PA$
1440 REM *** CALL JOYST             ))
1450 CALL JOYST(1,DE,X)             1870 CALL HCHAR(2,3,ASC(QB$)
1460 E=E+DE/4                       )
1470 IF (E(1)+(E)32)(=-1 THE        1880 CALL HCHAR(2,4,ASC(PB$)
N 1480 ELSE 1500                    )
1480 E=E-DE/4                       1890 RETURN
1490 GOTO 1450
```

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

>>END

8

```
    ---------------------------------
    B E G I N N I N G   B A S I C
    ---------------------------------
```

By PETER BROOKS

LESSON 2

Don't forget, computers are pretty stupid. This little-known fact means
that you, tne owner/programmer, will have to be just that little bit
smarter in order to tell the machine what it has to do, and probably
even smarter still to work out why the damned thing ignores you...

Let's begin by learning a few more fairly simple, but quite important,
facts.

The first, and most important, is that there is a program already
built into the computer, and it begins running as soon as you switch on
the machine. This program does all sorts of clever things, some of
which you may eventually come to appreciate. It prepares the title
screen and sends it to the television, it checks to see what peripherals
you might have attached to the main console, and it also scans the
keyboard whenever necessary, to see if you are pressing any keys.

What most of us think of as "programs" - in BASIC, at any rate, - are
actually instructions to the computer about which parts of its built-in
program are to be used. Our BASIC programs are never REALLY run,
despite the fact that in BASIC we type RUN to get a program going.

The second fact, and probably just as important, is that on some
occasions the computer will respond or react the instant that you touch
a key, while at other times you can type away line after line (up to a
point) and then sit back and watch absolutely nothing happening.

Under those circumstances, the computer is waiting. You may know that
you have typed all you wanted to, it's now up to the computer, but the
machine, bless its little silicon heart, only realises that you've had
your say when certain keys are pressed. Of these, the most frequently
used is one labelled ENTER. It is called other things on other
machines - NEWLINE, CARRIAGE RETURN, or just RETURN, and so on - but on
the 99/4A the ENTER key is the one which galvanises the computer into
action.

Well, sometimes, anyway.

Under normal circumstances, you can tell whether a tap on the ENTER key
is required because an object appears on screen and blinks on and off.

This object is called a CURSOR, and is usually a solid black rectangle,
although you may come across pieces of software which change its shape.

There are very few hard and fast rules as far as screen displays go, and
although, to give TI their due, most of their software follows a pretty
standard format, there are times when even experienced keyboard-bashers
can be left in the dark.

If in doubt, press ENTER, and don't blame me...
)))MORE)
```

*9*

One thing which 4A owners experience quite often is the "crash".  There
are other terms — glitch, hang-up, freeze, etc., — but basically they
all mean that the computer has gone on holiday and doesn't fancy coming
back.

Sometimes you can get by with pressing and holding down the key marked
"FCTN" and pressing "=" — the so-called QUIT sequence — but more often
than not you'll have to switch off the console, count to five, and then
switch back on.  Alternatively, inserting (or re-inserting) a module can
have a similar effect (it isn't EXACTLY the same, but we'll talk about
that side of things when you're older...).  There are other techniques,
but they usually involve additional hardware (the LOAD INTERRUPT switch,
about which more later — or read an early issue of TI-LINES!!).

Either way, you'll lose anything you were working on, which will bring
us to another "rule" a little later in the series.


BRIEF SUMMARY
-------------

    1.  Computers are still pretty thick — they haven't improved since the
        last article.

    2.  Our computer — along with just about all others — has a built-in
        program which starts running as soon as you switch on.  It isn't
        written in BASIC, so don't look for a listing!

    3.  If all else fails, press the ENTER key and see what happens.  If
        even that fails, switch off the console, wait a few seconds, and
        then switch back on — or insert/re-insert a module.


ONWARD
------

What The Computer Can And Can't Do
----------------------------------

Switch on your computer, make sure that you can see the title screen on
your TV.  Press a key (note that some keys have no effect), and you will
see what's known as a MENU.  No food, but a request to press the "1" key
for TI BASIC, and if you have any module plugged in as well, there will
be other entries.

Press the "1" key for TI BASIC, and the screen will clear, to be
followed by the words TI BASIC READY at the bottom of the screen.

The cursor will be there, blinking away — so whatever you type will need
to be followed by a press on the ENTER key, don't forget — and there
will also be another shape on the screen.

To the left of the cursor will be a ")" symbol, known as GREATER THAN.
It's actually a mathematical symbol, but the manufacturers have chosen
to use it as a "prompt".  It appears every time the computer gives you a
fresh line to enter instructions — which does not mean EVERY line on the
screen.  Its purpose is somewhat obscure, but it generally marks the
beginning of each PROGRAM line that you type — a program line can be up
to FOUR screen lines, and sometimes more.  You will be pleased to learn
)))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))MORE)

10

that you can conveniently forget all about it.  I'm sorry I mentioned it...

Next thing is to check a key at the bottom left of the keyboard called the ALPHALOCK key, and labelled so.  It is a "latched" key, in that if you press it once it will be latched into one position, and if you press it again it will be unlatched.  For our purposes we want the key to be in the DOWN position, so that only large upper case (capital) letters will appear on screen.

Type these two words:

    HELLO COMPUTER   (ENTER)

Remember what you were told about not typing "(" "ENTER" ")" ...

If your 4A responds with "HELLO TI OWNER" see a psychiatrist.  What you should have seen is the reply *INCORRECT STATEMENT, where the squashed spider at the front of the phrase is what passes for an asterisk (note the "k").

We humans have a tendency to describe the responses of non-humans in human terms (called ANTHROPOMORPHISM) and this is also true when we deal with computers (and cars, and houses, and washing machines...).

In this case, we might say that the computer has not "understood" what the instruction was.  The response here is known as an ERROR MESSAGE, and it means that the computer could find no instruction in its internal "dictionary" or "library" regarding the phrase "HELLO COMPUTER".

If instead you typed:

    GO TO LONDON   (ENTER)

the computer would respond with *CAN'T DO THAT.  The reason for this response is fairly complex, but basically the computer "recognised" part of the sentence as an acceptable instruction (GO TO) but "realised" that the circumstances didn't allow it to carry out the command (and not just because there weren't any buses running at the time!).

In fact, the computer got no further than GO TO, which it found in its internal dictionary, because it also found a restriction which said that it could only respond properly to the instruction GO TO if it was part of a BASIC program.  The computer never got any further in its analysis of the sentence (experienced buffs may wonder how I know) - typing GO TO HELL produces the same response.

Typing the word NEW and pressing ENTER produces a more positive response.  The screen clears, and the phrase TI BASIC READY appears, just as it did when you first selected TI BASIC.

The word NEW is an instruction to the computer to clear the screen, and to "forget" any BASIC program which you might have been clever enough to type in.  It's a "clear the decks and stand by for action" type of command, and as such is not one to use hastily when typing in a program!

There are quite a few of these "understandable" instructions, but not

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>MORE)

11

so many that you can't eventually learn them all (although you may never get round to using some of them!). They are all listed in the User's Reference Guide — that's the manual that you should have received with the computer.

These instructions are known by several names: COMMANDS, FUNCTIONS, RESERVED WORDS, and so on, and under certain circumstances they may wear more than one hat at a time in that a command may also be a function...

Finally, we'll begin looking at the words which form part of the instruction set for the language BASIC. The word BASIC is an acronym — that is, a word in which the individual letters actually stand for other words. In the case of BASIC, it is an acronym for Beginners All-purpose Symbolic Instruction Code, and much later you might begin to understand why it is called Symbolic Instruction Code.

It was devised by two academics in about 1957 in the States at a college in Dartmouth, so the original version of the BASIC is often known as Dartmouth BASIC.

Since then a lot of water has flowed under the bridge, and there are now more versions of BASIC than there are machines (there are several for our machine!), so don't be surprised if, when you look at a set of program instructions for another computer, they don't seem to match up to anything you've seen for the 4A. There is BASIC, and there is BASIC, as they say.

BASIC is based loosely on another computer language called ForTran, which is another acronym: Formula Translator (or sometimes Translation). This makes BASIC a language which is intended more for number-crunching (calculating) than for anything else, which in turn makes it a little difficult to put over to a first-timer.

But we'll try.

Switch on your machine and select TI BASIC.

Type:

PRINT "HELLO,MOTHER"   <ENTER>

The computer should respond by scrolling up whatever is already on the screen, printing the phrase "HELLO,MOTHER" at the bottom, and then scrolling up another line to leave the cursor (with its ")" prompt) blinking away at the bottom line.

Now do almost the same thing again, only this time don't include the quotation marks:

PRINT HELLO,MOTHER

What happens, and why, will be the subject of the next article.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>END

# ADVENTURE HELP

By JO ANN COPELAND

ADVENTURE No. 12     GOLDEN VOYAGE     Difficulty Level:  Advanced
-----------------------------------------------------------------

In this Adventure the King advises he has three days to live.  So, you
are given three days to find a way to give him a zap of vitality -
could it be the Fountain of Youth?  Beware of problems, though:  One
great big EYE has a focus in my direction! / The Merchant slits my
throat! / The Cyclops eats me alive! / I'm struck down by a thunder-
bolt! / The Guards have me beheaded! / I'm in great PAIN! / I've been
cut in two! / I'm lynched by angry mourners. Their King is dead - and
so am I!! / PLOOSH! / YUCK!

Great Adventure so far, don't you think?  Give it a try and have some
fun!  The least you can do is get stepped on by a Cyclops!


Number of Messages   : 82
Number of Objects    : 79
Number of Verbs      : 74
Number of Nouns      : 74
Number of Locations  : 37
You can carry 7 Objects
Length of Nouns/Verbs:  4


VERB LISTING
------------

| | | | | |
|---|---|---|---|---|
| AT | EXIT | LIGHt | READ | STEP |
| ATTAck | FILL | LOOK | REMOve | STUDy |
| AUTO | GET | LOWEr | RIDE | TAKE |
| BREAk | GIVE | MOVE | RUN | THROw |
| BURN | GO | NAVIgate | SAIL | TIE |
| BUY | GRAB | ON | SAVE | TO |
| CARRy | HELP | OPEN | SAY | UNLIght |
| CLIMb | HOLD | POUR | SCREam | UNLOck |
| DESTroy | HOLLer | PRAY | SEE | UNTIe |
| DIG | IGNIte | PROCeed | SHAKe | WAIT |
| DRINk | IN | PURChase | SHOVe | WALK |
| DROP | INVEntory | PUSH | SLEEp | WATCh· |
| EMPTy | JUMP | PUT | SMASh | WEAR |
| ENTEr | KILL | QUIT | SPILl | WEIGh |
| EXAMine | LIFT | RAISe | STEAl | YELL· |

*13*

## NOUN LISTING
----------------

| | | | | |
|---|---|---|---|---|
| ABOArd | CHESt | GUARd | MOUNtain | SOUTh |
| ALTAr | CITY | HALL | NORTh | STAIrs |
| ANCHor | COMPass | HUT | NOTE | STALagmite |
| ANY | COT | INVEntory | OCEAn | STATue |
| AROUnd | CREVice | ISLAnd | PALAce | STEE1 |
| ASHOre | CYCLops | JUNGle | PASSage | STONe |
| BAG | DOWN | KEY | PIT | STRAnd |
| BEACh | EAST | KING | ROPE | SUN |
| BLOCk | FLINt | LIQUid | RUBBle | SWORd |
| BOAT | FLOOr | MAN | SAIL | TABLet |
| BONE | FOUNtain | MARKings | SAND | TELEscope |
| BOX | GAME | MASK | SCORe | TORCh |
| CABIn | GLOBe | MAST | SHIP | UP |
| CAVE | GOLD | MEDIcine | SHOVel | WATEr |
| CHALice | GROUnd | MERChant | SKELeton | WEST |


## CLUES for GOLDEN VOYAGE
-------------------------


Story of your life — Going nowhere fast?
        Have you checked out equipment, or even the mast?
Two items needed here to see you on your way,
        And if you're caught for stealing, why not pay?

When going down a country lane, miles and miles on a street
        You find yourself saying "Oh My Feet!".
A little protection or covering could surely save the day
        Plus the fact you might just make it on your way!
If not, some medicine is provided — does it do you any good?
        Ask the Dead Man on the beach...

Well you finally made your boat go — but it's a one-way trip.
This is really too obvious — something I should almost skip!
        To keep a ship in place, or sail it on it's way —
Drop or raise an item —  it's provided for you on board!

I'm on the stairs — with no 'up' or 'down' —
        seems this lift is stuck — all I can do is frown!
The verb/noun list is helpful in this case,
        This will help you get to home base!
While you're there, remember Humpty Dumpty — who had a great fall.
        Push something down the stairs — an item that's quite tall!

Well, I make it up the steps — with nowhere else to go.
        Bloodshot eyes and a headache are all I have to show.
Maybe I should go to church, relieve my aches and pains.....
        And while I'm there I'll try a little prayer!

I hear there's four items to find.
        I'd tell you where they were — if I were kind.
Since I'm not, and most will agree
        Dig, and dig again, and see what you can see.

)))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))MORE)

14

Three bloody stones - what can I do with them?
      Remember what you've always heard...
      Birds of a feather, flock together...?

Examine your tablet, try to get it clean.
      Putting it in the fountain wouldn't be too mean.
But then again, which one? you say...
      Examine them both...they'll show you the way.

A mountain goat climbs mountains almost every day.
      For some of us this idea doesn't seem to pay.
At the foot - not the peak is a clue that comes to mind.
      You never know what you might find!

One PLOOSH, two PLOOSH, three PLOOSH, four...
      OOPS - should have stopped at two and not any more
The answer is there for you - if you're keeping score
      The first tablet makes PLOOSH one
The second scores TWO - and no more.
      Adventuring tactics required, once again indeed
You never know what you'll uncover when you are in need.

In search of the dreaded Cyclops - I search with Globe in hand.
      When I find him I will surely make a stand!
The answer lies behind the altar, your tactics you'll need again.
      The verb/noun list has saved many a woman and man!

Aha - I see you hiding there!  You think you'll get past me?
      A purely random event - we'll see what we can see!
Got you once, and got you twice - care to try again?
      Work with the globe and mask - try, try again!

Oh why did I drink that liquid?  I'm in nappies all over again?
      Maybe I shouldn't have tried the liquid - and saved it for the
      King?

                    ----------


THE HITCH-HIKER's TRILOGY ----- CONTINUED ----- (yuk!)
--------------------------


My Joo Janta 200 Super-Chromatic Peril-Sensitive Sunglasses cracked -
along with my brain (at least, what there was that could be considered
a brain!) - but I trudge on!  I dial 1-5-555-55-55555-555-5555 for help
and am advised to order a hint book!  Funny ha-ha... They didn't
realize I called collect.....

So I'm on board the Heart of Gold and I've collected four fluffs.  Cute
little things, but not worth much in their present condition.  Wonder
what I could do with them?  (Besides the obvious?)

In the meantime..... I have to find a sperm whale which means I have to
help Eddie (the shipboard computer) go wacko.  Not too hard, since I'm
already there!  Let's see...

)))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))MORE)

15

I remember picking up a computer interface (or something like that).
One would think I should do something with that.  Why not interface it?
Go to the galley - remove board and replace interface with new
interface.  Huh?  Touch pad...Oh No!  What is Eddie shouting about now?
Seems I've really done it this time!  What's that about:

```
*********************************
*****NUMBER BEING CRUNCHED!*****
*********************************
```

Oops, what do I do now? Better run up to the bridge and see what's
going on - oops - almost run into Ford and the gang. They sure are
running about madly! Guess I better play with some switches or the
console here! Why are they all slapping me on the back saying "Good
job!" Enough of this, back to the galley. Well, well, well - REAL TEA!
Hmmm, wonder if I should replace this with the tea substitute. With
all else that's gone on it couldn't do any worse, or could it?

Replace and ready to go. Flip swith. OH NO NOT AGAIN! Yes, until I
find the dreaded ol' sperm whale. Yes - sperm whale! Flip switch,
flip switch, flip switch, HEY I'M HERE! Now what do I do? Look around,
examine, feel, search - what's this? A plant potter? Or is it a potted
plant? Or is it just dirt in a planter? Who cares, let's take it and
see what happens. Hmmm, my thing is also here - better put this
planter in the thing that my aunt gave me that I don't know what it is.

Uh-oh - I feel that feeling again - where am I now? 5 senses. Back on
the Heart of Gold. Where is my thing? Better have a look around...

Well, it seems I made it back and so did my thing. Let's look inside.
Yup, the planter is here as well. Wonder if I should do something
completely off the wall and plant the fluffs? As crazy as this
Adventure has been so far - nothing resembling normality has worked so
far, so let's do it! Hmmm, now what? Go for broke... I have a potted
plant with fluffs in it. Can't water it. But moisture might help.
Wonder where I can get that? Hey, the bridge -

Well, look there! A fruit! Wonder if I should do something with it?
Maybe I better take my real tea with me also. And my thing. Where is
Marvin anyway? I think I'll track him down, maybe he's in his room.
Knock knock. No one answers. Hey, here comes Marvin now heading
towards his room. Gee, that screen door opened and he went right
through. Wonder if I can do the same? West. I go through the door
and DIE! A wave of depression hits me solid! Restore... Knock again.
Something says "To enter you must show intelligence". Well, that
certainly lets me out! I'll show this door everything I am carrying.
Real tea, thing, towel, potted plant with fruit in it. I GOT IT! No
one in their right mind (that's me) can show Real Tea and No Tea at the
same time! Now, where did I leave my 'no tea'? Got to find it or
else...

Found it. Pick up no tea. I drop real tea. Pick up both (at the same
time?) Go to Marvin's door. Show no tea and real tea. "Wow, that's
real intelligent - no tea and tea at the same time". The door opens.
I enter. I DIE! A wave of depression hits me solid! Restore... Try it
again. Wish I had a bottle of whiskey with me. Maybe a cup of tea
would do nicely instead?

>>MORE)

16

I get through and there's Marvin! What's that behind him? Better take
that too. Had to take everything all through this game anyhow! I
wonder if I can talk to Marvin? "Marvin, we have to get on the planet
surface. Can you open the hatch?" "Complain, complain, complain —
that's all you humans do — Marvin this, Marvin that — Meet me in the
hatchway in 11 minutes — AND BRING THE RIGHT TOOL!" Huh? With all
that I've collected how can I know which is the right tool!!??! I guess
I'll give him one at a time.

In the hatchway — OH NO! I can only fit through with one tool! Now
which one is it! Try it one at a time and keep restoring — Marvin
keeps changing it every time! Darn random sequencing! Okay, which
other way can I go... What am I carrying? Hmmm, haven't used this
plant for anything. I think I'll get rid of it and eat the fruit.

Hey, what a dream I just had! Restore, start over the right way. Go
hatchway and Give Marvin the right tool! The hatch opens — should I go
out or stay here? Well, the game hasn't ended yet so maybe I should go
outside. Hey, here's the gang — why don't they go outside — why are
they telling me to? I go out the hatch — I freeze to death! What, this
Adventure is over and I got 400 out of 400 points? What is it saying
about looking for the following sequel Adventure to The Hitchhiker's
Guide to the Galaxy? ----- ARE THEY KIDDING?? THIS ADVENTURE WAS
ENOUGH FOR A LIFETIME!!!!!

Okay guys and gals — you completed this one if you could follow all the
nonsense! Wasn't that fun?!?!?!

For any other nonsense and ridiculous clues — write in to the Adventure
Help Column ... Care of: SCOTT or JO ANN COPELAND, PCS Box 5927,
RAFL, Brandon, Suffolk IP27 9PN.

That's all folks!

>>>END

Magazine scanned 2023 by Stephen Shaw

17

```
          ------------------------------------------------
          S O F T W A R E / F I R M W A R E   L I S T
          ------------------------------------------------


----------------------------------+-----+-----+----------------------------------
TITLE OF ITEM                     |FORM |PRICE|STOCK LEFT, AND COMMENTS
----------------------------------+-----+-----+----------------------------------
ABM CONTROL/FROGLET               |CASS | 2.00| 2
ADDITION & SUBTRACTION 1          |CART | 5.50| 3
ADDITION & SUBTRACTION 2          |CART | 5.50| 1
ADVENTURE (PIRATE)                |CART |12.50| 1
ALIEN ADDITION                    |CART | 6.50| 8
ALLIGATOR MIX                     |CART | 6.50| 6
ALPINER                           |CART |10.50| 1
ASCOT STAKES/TORPEDO ALLEY        |CASS | 2.00| 5
BATTLESTAR ATTACK                 |CASS | 2.00| 1
BEGINNING GRAMMAR                 |CART | 5.50| 2
BLACKJACK & POKER                 |CART | 6.50| 3
BLASTEROIDS                       |CASS | 2.00| 4
BOMBS AWAY                        |CASS | 2.00| 8
BOUNCER                           |CASS | 2.50| 3
BURGERTIME                        |CART |12.50| 2
CHARACTER GENERATOR               |CASS | 2.50| 7
CONNECT FOUR                      |CART | 8.50| 1
DADDIE'S HOT ROD                  |CASS | 2.00| 1
DEFENDER                          |CART |12.50| 1
DEMOLITION DIVISION               |CART | 6.50| 6
DIYAD                             |CASS | 2.00| 4
EARLY LEARNING FUN                |CART | 5.50| 3
EARLY READING                     |CART | 5.50| 4
ESPIAL                            |CART |10.50| 7
FACEMAKER                         |CART |12.50| 2
FROGLET/BATTLESHIPS               |CASS | 2.00| 2
FUN-PAC                           |CASS | 2.00| 1
GRAPHICS CREATOR                  |CASS | 2.00| 1
HOP-IT                            |CASS | 2.00| 4
HOPPER                            |CART |10.50| 1
HOUSEHOLD BUDGET MANAGEMENT       |CART | 6.50| 2
HUNCHBACK HAVOC                   |CASS | 2.00| 1
HUNT THE WUMPUS                   |CART | 5.50| 4
INDOOR SOCCER                     |CART | 8.50| 3
INVADERS                          |CART | 5.50| 2
INVENTORY MANAGEMENT              |DISK |12.50| 1
INVOICE MANAGEMENT                |DISK |12.50| 1
JAWBREAKER II                     |CART | 8.50| SOLD OUT
M.A.S.H.                          |CART |12.50| 1
MAILING LIST                      |DISK |12.50| 1
METEOR MULTIPLICATION             |CART | 6.50| 8
MIND CHALLENGERS                  |CART | 6.50| 1
MINUS MISSION                     |CART | 6.50| 6
MISSILE ALERT                     |CASS | 2.00| 1
MULTIPLICATION 1                  |CART | 5.50| 1
MUNCHMAN                          |CART | 5.50| 5
MUNCHMOBILE                       |CART | 8.50| 1
NUMBER MAGIC                      |CART | 5.50| 4
OPERATION MOON                    |CASS | 2.00| 5
OTHELLO                           |CASS | 2.00| 8

(continued)..............................................................
```

18

TITLE OF ITEM	FORM	PRICE	STOCK LEFT, AND COMMENTS
PARSEC	CART	6.50	1
PEARL DIVER	CASS	2.00	10
PERSONAL FINANCIAL AIDS	CASS	4.50	1
PERSONAL REPORT GENERATOR	CART	6.50	2
PILOT	CASS	2.00	1
PROGRAMMING AIDS 1	CASS	6.50	2
PROGRAMMING AIDS 2	DISK	10.50	1
PROGRAMMING AIDS 3	DISK	10.50	1
QUASIMODO HELP	CASS	5.50	1
RETURN TO PIRATE ISLE	CART	12.50	1
ROBOPODS	CASS	2.00	4
RUNNER ON TREITON	CASS	2.00	1
SAMURAI	CASS*	4.50	2 INCLUDES CONSOLE DUST COVER
SLYMOIDS	CART	12.50	2
SNEGGIT	CART	8.50	SOLD OUT
SPEECH EDITOR	CART	12.50	1
SPELL WRITER	DISK	12.50	1
STAR STRIKE/HOUSE OF HORRORS	CASS	2.00	1
STATISTICS	CART	12.50	1
SUPERFLY	CART	12.50	1
TEACH YOURSELF BASIC	CASS	2.50	1
TEACH YOURSELF EXTENDED BASIC	CASS	2.50	1
TOAD GRAPHICS	CASS	2.50	3
TOMBSTONE CITY	CART	5.50	2
TROLL KING	CASS	2.00	1
YAHTZEE	CART	6.50	2
ZERO ZAP	CART	6.50	4
TI SOUND & GRAPHICS	BOOK	10.50	3
33 PROGRAMS FOR THE TI	BOOK	8.50	2
CREATING ARCADE GAMES	BOOK	8.50	2
SPECIAL OFFERS:			
STARTER PACK 1	BK/CS	3.00	9 }
STARTER PACK 2	BK/CS	3.00	3 } ALL LABELLED BK/CS ARE
GAMES WRITER PACK 1	BK/CS	3.00	4 } BOOK AND CASSETTE PACKS
GAMES WRITER PACK 2	BK/CS	3.00	3 }

WORD PROCESSING

By JO ANN COPELAND   (the Grey-haired Ghost)

----- TI-WRITER/FUNLWRITER ----- OVERVIEW ----- PART VI

Well, we finished co-ordinating approximately four months of work on a
carnival for our Elementary School - a pat on the back serves its
purpose for Scott and I helping the school bring in over $6,520 for the
kids! Now, it's back to basics and computering - and our review on the
TI-Writer and/or Funlwriter!

Purge and Recover Edit, Editing Operations not already covered, and a
short dealing with Transliteration will be discussed in this column.
Maybe... Let's start with Purge and Recover Edit...

In a previous article we discussed Purge. When you were in the Text
Editor you found you could enter Command Mode and either Quit, Save,
Exit or Purge. We found out Purge wiped out everything you had on
screen, never to be seen or heard from again. I guess quite a lot of
people would like to do that to me! Well, Recover Edit helps in case
you made that drastic mistake when you really didn't want to. If you
enter Command Mode and type RE (Recover Edit) (Enter) - you will see a
prompt something like this: Recover Edit (Yes or No)? - Well, we
wouldn't be here if we didn't want to, so we press Y to execute the
command. Typing N escapes and you return to Edit Mode. If you typed
in Y and pressed Enter you should have recovered all BUT the first line
of the file originally purged from the buffer. Save this recovered
file to a temporary file THEN load the temporary file into the buffer
before working further on it. Just something to keep you going happily!

Now, this should have worked, but there are some conditions to be aware
of. You might NOT be able to recover a file if:

    (1) you typed any text or loaded a file in the Text Editor

    (2) you ran a utility program

    (3) you turned off the memory expansion unit or your console

    (4) you used the Text Formatter option.

Generally, the computer can't recover text if you did anything in
between purging and recovering. But this is helpful if you
inadvertently hit the wrong key and then wanted the file back.

>>>MORE>

As far as Editing Operations go - we went through quite a bit of them
and hopefully we have all practised them until we never want to see them
again! However, there are a few to be covered that are used in the odd
place now and then.

Back Tab: CTRL T   This moves your cursor one tab setting to the LEFT.
If you are in text and want to wrap around to see what you just typed,
hold the CTRL and T keys and the screen will back up for you placing the
cursor at your tab settings.

If you are in text, and wish to go back to the left margin (beginning
of line) just hold down the CTRL and V keys: Beginning of Line.   The
cursor moves to the beginning of the line on which you are typing.

CTRL K: Delete End of Line   These keys cause everything to the right
of the cursor to be deleted, all the way to the end of the line
(including the character hiding under your cursor).   If you are at the
beginning of a line and press CTRL K everything on your line will be
deleted but you will still have a line.   If you press this accidentally
you can use CTRL 1 (OOPS) to recover that line, if you haven't pressed
anything else in the meantime.

FCTN 3:   Delete Line   Pressing FCTN 3 causes the entire line to be
deleted, but you have no blank line left.   CTRL 1 works here again, if
necessary.   Remaining lines are renumbered to show you took one out.

To control a display of line numbers - alternating between removing
line numbers and displaying them, press FCTN O: Display Line Numbers.
This helps if you just want text on screen - and if you want to see the
line numbers press FCTN O (zero) again.   Try it!

CTRL 5:   Duplicate Line   The line where your cursor is standing will
be replaced with a duplicate of the line above it.   So if you have one
line typed and go to the next line you can press CTRL 5 and see it
duplicate itself!

CTRL L: Home Cursor   Pressing CTRL L causes the cursor to appear in
the upper left hand corner of the screen.   This is "home".   Nothing in
your text or on your screen is affected.   This can be handy if you want
to zip your way up the text for perhaps a typing change or to see what
you recently typed.

FCTN 8:   Insert Line   This command will insert a blank line above the
line on which your cursor is sitting.   Again, line numbers are
resequenced to show a new line has been added.

CTRL 6:   Last Paragraph   This command places your cursor on the
previous paragraph.   This works best in Word Wrap mode as the cursor
locates a carriage return symbol to signify a paragraph.   So, pressing
CTRL 6 (or CTRL H) will bring your cursor to the first character of the
previous paragraph.   However, if you have carriage return symbols in
your text, it will work outside Word Wrap mode as well.

CTRL Y: Left Margin Release   Here we come back to a 'normal'
typewriter where you can bypass your margins.   With this command, you
can move the cursor to the left of the left margin to put in text.   You
have to have the cursor positioned right at the left margin before you
press CTRL Y.   This command must be used each time you want the cursor

>>>>>>>>>>>::>>>MORE>

21

to go past the left margin setting. So, go to the beginning of your
line, press CTRL Y, and use your arrow key to go left of the margin
setting. (Or use CTRL V).

CTRL 4: Next Paragraph We already found out how to find a paragraph
above us - this command helps us find the next one in text. It will
place the cursor on the first character of the following paragraph
where you are in text. Again, this does work in Fixed Mode, but will
work best in Word Wrap Mode.

FCTN 4: Roll Down, and FCTN 6: Roll Up They help you 'scroll' your
text. These commands will display 24 lines for you. Roll Down goes
down 24 lines following the last line on the screen, and Roll Up goes
24 lines upwards preceding the top line on your screen. In both of
these commands, your cursor does not change its position.

CTRL 3: Screen Colour Hate the colour of your screen when you are
typing? Why not change it by pressing CTRL 3? You will see quite a few
colour choices to work with. Choose what's best for you.

FCTN 7: Tab We already saw how to go backwards on tabs, now we can
go forwards by pressing FCTN 7. This places the cursor at the next tab
to the right of where your cursor is sitting.

        To ·find the first letter of the next word on the line you are
working with, try CTRL 7: Word Tab. If you are at the beginning of a
typed line, pressing CTRL 7 puts the cursor at the beginning of every
word in that line until you stop pressing CTRL 7 (or until you reach the
end of the line!).

Well, that should keep us all quite busy, and it should also cover all
of the 'odd' commands I left out. They can be used quite often
depending on your needs, or they may never be used - however, they are
there for convenience for anyone who remembers what the commands are! I
very often don't! And what's new about that?

TRANSLITERATION

A $500 word that looks a lot meaner than it really is! We're going to
discuss this now as our next issue includes Special Character Mode
(CTRL U) and transliteration can go hand in hand with that. So, let's
find out what this word is all about...

Transliteration, in English, means you type in one character on screen,
however when printed it comes out as something else. Technically put,
the transliteration command assigns one or more ASCII character values
to another ASCII character value. I like English a lot better! To do
this, we use the command - .TL - at the BEGINNING of a fresh line.
You may realise that this comes under the heading of a Dot Command -
hence the dot in front of it!

.TL 123:195

>>>MORE>

22

I use this command often as my printer and console have the dollar sign
($). When I order items through the mail, or send cash involving
things on the British side, I need the pound sign (£). So when I am in
text, instead of a £ I use a character I won't otherwise use and when
the text gets printed out the result shows the pound sign (£).

All I do is go to a new line (before text involving the £), and
transliterate by typing in the following command:

.TL 123:195

What I have done here is this - wherever I want the pound sign (£) to
print out I actually type in a left brace (FCTN F) - { - which is
character code number 123. The pound sign is character number 195. So
wherever the left brace is (123) it gets changed to the pound sign
(195) thus the transliteration of .TL 123:195. The first number
is the ASCII code of the character you HAVE used, and the second number
is the ASCII code of the character you WANT to use.

I also need to print out the cent sign a lot and my console does not
have it. I use the left brace again and transliterate it to become the
Cent sign (character code 212). I go to a new line, type in .TL 123:212
and then in the text I will use the left brace wherever I really want
the cent sign.

{NB The .TL command is only active when the Formatter is used, not with
PF in the Editor. PB}

Listed below is a table containing the common character codes (excluding
almost all of the CONTROL characters) - any others should be found in
your own printer manual:

===== ASCII CHARACTER CODES ==

32	(space)	55	7
33	! (exclamation point)	56	8
34	" (quote)	57	9
35	£ (number/pound sign)	58	: (colon)
36	$ (dollar sign)	59	; (semicolon)
37	% (percent)	60	< (less than)
38	& (ampersand)	61	= (equals)
39	' (apostrophe)	62	> (greater than)
40	((open parenthesis)	63	? (question mark)
41	) (close parenthesis)	64	@ (at symbol)
42	* (asterisk)	65	A
43	+ (plus sign)	66	B
44	, (comma)	67	C
45	- (minus sign)	68	D
46	. (period)	69	E
47	/ (slant, slash)	70	F
48	0 (zero)	71	G
49	1	72	H
50	2	73	I
51	3	74	J
52	4	75	K
53	5	76	L
54	6	77	M

>>>MORE>

78	N		105	i	
79	O		106	j	
80	P		107	k	
81	Q		108	l	
82	R		109	m	
83	S		110	n	
84	T		111	o	
85	U		112	p	
86	V		113	q	
87	W		114	r	
88	X		115	s	
89	Y		116	t	
90	Z		117	u	
91	[	(left bracket)	118	v	
92	\	(reverse slant)	119	w	
93	]	(right bracket)	120	x	
94	^	(caret)	121	y	
95	_	(underline)	122	z	
96	`	(accent grave)	123	{	(left brace)
97	a		124			(vertical bar)
98	b		125	}	(right brace)
99	c		126	~	(tilde)
100	d		127	DEL	(on screen is a blank)
101	e				
102	f				
103	g		195	£	(pound on my printer)
104	h		212	¢	(cent on my printer)

==

Needless to say, there are quite a few more - and depending on your
printer and what international character code set it can work with, you
can use your imagination to work out all sorts of things!

{Unfortunately, Jo used some of the graphics characters available on her
printer, but unavailable on mine, so I have been unable to reproduce
them here.   PB}

So, why not play with this command for a while, and help yourself get
set for the next article - Special Character Mode (CTRL U).   If you'd
like to get ahead of me, there was an article in the March issue by
JAMES STRINGFELLOW covering the CTRL U command.   Why not check it out?

Until then, we have covered quite a bit to work on and practice.   So
good luck, and Happy Funlwriting! (Happy funlwriting?) Whatever!

'Bye for now.....

                                                                    •

DISK PERIPHERAL D.S.R. SUBPROGRAMS

By COLIN HINSON

Continuing from last issue:

DIRECT FILE ACCESS ROUTINES

The direct file access routines can be used for accessing disk files without paying attention to the type of disk file (PROGRAM or DATA). The level of access is equivalent to the Level 2 disk software, which means that access is performed on the basis of straight AUs. However, Level 3 information can be passed at file open time.

Since the input and output direct access subprograms can be used together to copy files, the usedr has to be very careful with the information returned by the input file subprogram, since some of this information may be used by the output file subprogram.

Direct File Input - Subprogram >14

The transfer block for the subprogram is:

```
              +-------------------------------+
>834C         |  Unit #      | Access code    |
              +-------------------------------+
>834E         |   Pointer to file name        |
              +-------------------------------+
>8350 (X)     | Addt'l info |
              +-------------+
```

The meaning of each entry is:

Unit # - Indicates the disk drive on which the operation is to be performed. This entry has to be either 1, 2, or 3.

Access code - An access code is used to indicate which function is to be performed, since this subprogram combines multiple functions. The following codes are used:

    O   Transfer file parameters. This will transfer Level 2 parameters to the additional information area (six bytes). It also passes the number of AUs allocated for the file.

    N   When N is not equal to zero, this indicates the number of AUs to be read from the given file, starting at the AU indicated in the additional information block.

>>MORE>

25

After the READ is complete, this entry contains the
actual number of AUs read. If all AUs have been read
the entry will be zero.

Pointer to file name. - Contains a pointer to the first character
of a 10 character filename, possibly padded to the right
with spaces. The filename is NOT checked by the disk
software.

Additional information - Points to a 10 bytes location in CPU ram
containing additional information for direct disk access:

```
        +------------------------------+
  X     | VDP Buffer Start Address     |
        +------------------------------+
  X+2   |        # of first AU         |
        +------------------------------+
  X+4   | Status flags | # records/AU  |
        +------------------------------+
  X+6   | EOF offset   | log. rec Size |
        +------------------------------+
  X+8   | # of Level 3 rec's allocated |
        +------------------------------+
```

The VDP Buffer start address indicates where the information read
from the disk can be stored. The buffer has to be able to
store at least N * 256 bytes, in which N is the access code.

The # of first AU entry indicates the AU number at which the read
should begin. If the access code = 0 (parameter passing),
the total number of AUs allocated for the file will be
returned.

The remaining six bytes are explained in a previous article giving
information about the the File Descriptor records (Sector 1
on the disk).

The user must be very careful when changing these bytes,
since they directly affect Level 3 operation. If the
information in these 6 bytes is not modified consistently
then unpredictable results may (WILL if you don't want them
to!) occur.

Error codes are returned at location)8350 in CPU RAM

Direct File Output - Subprogram)15

The transfer block for the subprogram is:

```
          +------------------------------+
  )834C   |   Unit #      | Access code  |
          +------------------------------+
  )834E   |   Pointer to file name       |
          +------------------------------+
  )8350 (X) | Addt'l info |
          +--------------+
```

) MORE)

26

The meaning of each entry is:

Unit # - Indicates the disk drive on which the operation is to be
         performed. This entry has to be either 1, 2, or 3.

Access code - An access code is used to indicate which function is
         to be performed, since this subprogram combines multiple
         functions. The following codes are used:

         O   Create file and copy Level 3 parameters from the
              additional information area.

         N   When N is not equal to zero, this indicates the number
              of AUs to be written to the given file, starting at
              the AU indicated in the additional information block.

Pointer to file name. - Contains a pointer to the first character
         of a 10 character filename, possibly padded to the right
         with spaces. The filename is NOT checked by the disk
         software.

Additional information - Points to a 10 bytes location in CPU ram
         containing additional information for direct disk access:

```
        +---------------------------------+
  X     I VDP Buffer Start Address        I
        +---------------------------------+
  X+2   I          # of first AU          I
        +---------------------------------+
  X+4   I Status flags I # records/AU I
        +---------------------------------+
  X+6   I EOF offset    I log. rec Size I
        +---------------------------------+
  X+8   I # of Level 3 rec's allocated I
        +---------------------------------+
```

The VDP Buffer start address indicates where the information to be
    written to the disk is stored. The buffer must of course
    contain at least N * 256 bytes, in which N is the access code.

The # of first AU entry indicates the AU number at which the write
    should begin. If the access code = O (parameter passing),
    the total number of AUs allocated for the file has to be
    indicated. (automatically passed if a read has been done
    first).

The remaining six bytes are explained in a previous article giving
    information about the the File Descriptor records (Sector 1
    on the disk).

    The user must be very careful when changing these bytes,
    since they directly affect Level 3 operation. If the
    information in these 6 bytes is not modified consistently
    then unpredictable results may (WILL if you don't want them
    to!) occur.

    Error codes are returned at location >8350 in CPU RAM

>>MORE>

27

This is the end of this series of articles which I hope have been
of use to someone out there. As I have had no feedback of any kind I
assume they have been acceptable. I have tried to cover things
concerning the disk system which do not appear in the Editor/Assembler
manual, so if you are starting from scratch, read that first — it covers
PABs etc., fully. Colin Hinson

>>>END

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 /

JIM BALLINGER is looking for an expansion system (PEB, 32K, Controller
and Drive). If you have such a setup which you are considering selling,
please contact him at any time on DERBY 772612.

oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

If anyone is interested in serious business software for the 4A (with a
view to establishing what interest there is), contact MUKUND RAJPARA on
021 449 6182.

oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo

JONATHAN TYLER still has his ALPHACOM 42 printer for sale, complete with
a minimum of 5 rolls of paper. It is perhaps worth mentioning that this
is one of those printers which have a TI interface built-in, so you do
not need an RS232/PIO unit in order to operate it. The printer is about
a year old, and cost £152. Jonathan is asking £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.

>>>END