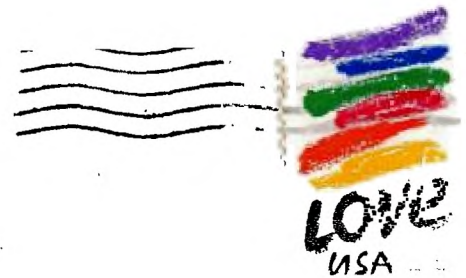


K3 TI USERS GROUP
PO BOX 1941
KANKAKEE, ILL 60901



NEXT MEETING

MAY 18, 1985

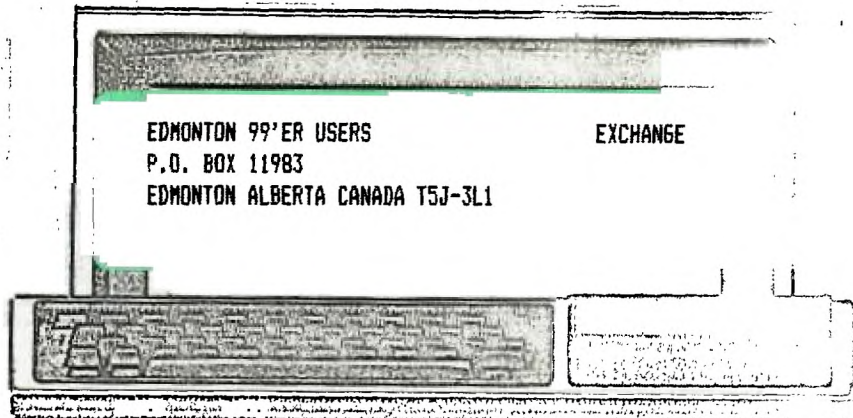
BOURBONNAIS

MUNICIPAL

CENTER

1pm 'til 4pm

K3 TI USERS GROUP NEWSLETTER



HOPE TO SEE YOU THERE!



R+3 Users Group Newsletter



MAY 1985
Editor Mark Haras

It seems the interest in Forth is building and I have found a little tib-bit that will help the 2 sided drive people. It was released in the CorComp Cursor last August.

1 Initialize a disk using Disk Manager.

2 Back up Forth onto this disk do not use Disk Manager. If you have to use DM then copy the files, but then boot your original disk and copy screens 1-9 DM puts them in the wrong place.

To do this type in:

n BLOCK UPDATE (where n is the screen to move from the original disk)

FLUSH (after inserting the copy disk)

Do this till all 9 are copied.

3 EDIT 3 (edit screen 3)

120 DISK_SIZE ! (it did say 90)

180 DISK_HI ! (2 drives 2x this number or 3x for 3)

4 EDIT 39 Look for the word DTEST change the value to 180 from 90.

5 EDIT 40 Line 3 change 168 to 200.

Line 5 replace entire line with DUP 10 + 2028 SWAP ! DUP 12 + 0201 SWAP ! DUP 14 + 240 FILL.

Line 10 change 145 to 200.

6 EDIT 33 modify the FORMAT-DISK word to:

: FORMAT-DISK 1 + 258 33616 ! 18 SYSTEM ;

7 TYPE IN AND EXECUTE THIS WORD.

HEX 0 DISK_LD !

: DSFORTH 0 BLOCK UPDATE DUP A + 200 SWAP ! DUP C + 944

SWAP ! DUP 10 + 2028 SWAP ! DUP 12 + 201 SWAP ! 38 + C8 FF

FILL 1 BLOCK UPDATE DUP E + 2A0 SWAP ! DUP 1C + 4020 SWAP !

DUP 1E + 2805 SWAP ! 20 + F029 SWAP ! FLUSH ;

DECIMAL DSFORTH

You now have Double-Sided Single-density Forth with 180

MUSICAL MOMENTS

```
10 CALL CLEAR
20 CALL COLOR(5,16,2)
30 CALL COLOR(6,16,2)
40 CALL COLOR(7,16,2)
50 CALL COLOR(8,16,2)
60 CALL SCREEN(2)
70 PRINT TAB(9);"MY BONNIE": : : : : :TAB(10);"BY": :TAB(10);"REBEL": :TAB(10)
;"SOFTWARE": : : : :
80 FOR R=1 TO 2
90 FOR N=1 TO 64
100 READ A,B,C,D
110 CALL SOUND(A,B,0,C,5,D,5)
120 NEXT N
130 DATA 350,293,240,195,525,493,146,195,350,440,146,240,350,391,146,240,350,440
,164,131,350,391,164,131
140 DATA 350,329,131,195,350,293,240,195,700,240,146,195,700,240,146,195,350,293
,240,195,525,493,146,195
150 DATA 350,440,146,240,350,391,146,240,350,391,164,138,350,369,164,138,350,391
,164,138,875,440,146,184
160 DATA 700,440,146,184,350,293,220,184,525,493,146,240,350,440,146,240,350,391
,146,240,350,440,164,131
170 DATA 350,391,164,131,350,329,131,195,350,293,240,195,700,240,146,195,700,240
,146,195,350,293,240,195
180 DATA 350,329,131,195,350,440,164,131,350,391,164,131,350,369,146,220,350,369
,146,220,350,369,146,220
190 DATA 875,391,146,240,700,391,146,240,875,293,240,195,875,391,146,240,875,329
,131,195,700,440,164,138
200 DATA 350,391,164,138,350,369,146,220,350,369,146,220,350,369,146,220,350,369
,146,220,350,329,146,220
210 DATA 350,369,146,220,700,391,146,240,350,440,146,240,875,493,146,195,875,293
,240,195,875,391,146,240
220 DATA 875,329,131,195,700,440,164,138,350,391,164,138,350,369,146,220,350,369
,146,220,350,369,146,220
230 DATA 350,369,146,220,350,329,146,220,350,369,146,220,875,391,146,240,350,391
,146,240
240 RESTORE
250 NEXT R
260 CALL CLEAR
```

Library News
By Bev Cook

Our new public domain disks should be arriving soon. We hope to have them available for copying at the May meeting. Check with the library for availability. Rentals have been poor lately with the nice weather's arrival. Hope you can spare some time to attend our May meeting.

The following people have late rentals. Late charges will be applied.

Brian Mackie - Burgertime

Ken Kubacki - Pole Position

K3 II USERS GROUP
BOARD MEETING
APRIL 29, 1985

by George Lespeotis / Secretary

There where six board members in attendance at the April board meeting.

In order to offset slow library sales for the last few months, the board members decided to try four fund raising ideas in May. The first will be the sale of a disk loaded with programs from our library for a fantastic price for \$5.00 each. The second idea will be the sale of slow renting modules, books, and magazines from our library at the May general meeting. The thrid fund raiser will be the formulation of a favorite recipe disk. We need some help from our II-Widows and other great chefs. Please submit receipts to Bev Cook or Joy Flowers, for subaission into a recipe disk that will be sold by our library for a reasonable price. The last idea was to have a club sponsored garage sale, scheduled for the weekend of May, 31 thru June 2, 1985 at the Flowers resident in Kankakee. Everybody is asked to donate items for the garage sale, higher priced items will be sold at a 10% commission for our club. Bring items, arrange deliveries, and get more information at the May general meeting.

The May general meeting will feature demos of two basic compiling prograss. One demo will be of the SST compiling program by Al Johnson and the second demo will be of the Advance Software Basic Compiler by George Lespeotis.

That is all that that was covered at the April board meeting, hope to see you at the May meeting.

TI FORTH PART 2

Now that you have had some time to play with the system and maybe become comfortable with FORTH, It's time to take the options you like to use and turn them into a fast loading BSAVE program. We will add a couple of words that I use all the time, PAGE and FREE. PAGE is nice to clear the screen and sets the curser at upper left. FREE is a good one, it will tell you how much memory you have free. Maybe by now you have defined some of your own words.

Lets define the word PAGE:

```
: PAGE 0 0 GOTDXY CLS ;
```

Just as you see it on the above line. Thats all there is to it. You have a new word.

Lets define the word FREE:

```
: FREE SP@ HERE - . ;
```

Now you can see the amount of free momory anytime.

Now we have to find a place on a scr for these new words. You can pick a empty scr or add them to scr#3 latter, because we have to update scr#3 any way. The only option you need to put these words in the vocabulary is -SYNONYMS. So load -SYNONYMS and define these words and see how they work.

Lets do the job now. BSAVE. The

first thing is to put the backup disk in drive 1. Better yet make another copy of the backup disk, because we are going to write on this disk and on some of the scrs that you may want to look at in the future. Now we have a 3rd copy. The first is the original with the write protection tab on it. The second is the backup that has scr72 corrected "the bug removed and set for PIO". Now lets work on the third.

Put it in drive 1 and load FORTH. If you are already in FORTH, go to command mode and type:

```
TEXT COLD
```

```
press enter
```

This will reboot the FORTH system to make sure we start from scratch.

Now we have the flashing cursor under the word TI FORTH.

Lets load our options. The ones you like to use or these, type:

```
-GRAPH -DUMP -VDFMODES -COPY -PRINT  
-BSAVE -64SUPPORT
```

```
press enter
```

The -64SUPPORT maybe -EDITOR which one you like better. REMEMBER you can not use both.

In my system I have loaded everything but -EDITOR -TRACE -ASSEMBLER -CRU -FLOAT, to save memory. They can be loaded after the BSAVE is in memory.

After the ok is displayed and the cursor is flashing again we are ready to do our BSAVE type:

```
' TASK 51 BSAVE
```

```
press enter
```

(NOTE the first character in the line is the apostrophe)

Now we have our fast loading program on disk. We just have to tell FORTH where it is at. type:

```
EMPTY-BUFFERS 3 EDIT
```

```
press enter
```

Now we have to change scr#3 to tell FORTH where the BSAVE is at and also put in a little more information.

SCREEN#3 is the welcome scr. If you are using the 40 column editor you have line numbers, if -64SUPPORT you have no line numbers and have to count then for yourself. This is what scr#3 should look like after all changes.

```

0( WELCOME SCREEN) BASE->R HEX 10 SYSTEM
  ( Clears Screen)
10 0 GOTOXY ." TI FORTH BOOTING" CR 10
  83C2 C! ( QUIT off)
2DECIMAL 51 BLOAD 1& SYSTEM MENU
31 VDFPDE ! ( Tells FORTH you'r in TEXT
  mode)
40 DISK_LO ! ( Allows EDIT/COPY on all
  SCREENS)
589 DISK_HI ! ( Sets highest scr number)
689 DISK_SIZE ! ( Set single sided disk)
7: FREE SP@ HERE - . ; ( Free memory)
8: PAGE 0 0 GOTOXY CLS ; ( Clear screen)
9 FREE
10
11
12
13
14
15R->BASE

```

Now don't get the line numbers mixed up with the text, and don't type in the line numbers. The line numbers on in column 1, they are just there for reference.

Now hold down the function key and press 9. Back to the command mode. type:
 FLUSH
 press enter

Our new scr is written and we can try it out. type:
 TEXT COLD
 press enter

That was quick, we have just loaded everything you saved with BSAVE.

Try it again, this time turn the computer off and start from the master screen. FAST ha?

Now all you need is the program "CLONE" and you can copy ANYTHING in TI language. You can do it also with the FORTH command "FORTH-COPY".

That was quick, we have just loaded everything you saved with BSAVE.

Try it again, this time turn the computer off and start from the master screen. FAST ha?

Now all you need is the program "CLONE" and you can copy ANYTHING in TI language. You can do it also with the FORTH command "FORTH-COPY".

• Most of this information I read from MILLERS GRAPHICS, "The smart programmer", 1475 W. Cypress ave. San Dimas, Ca 91773. \$12.50 a year, It is a monthly publication, maybe.

Lets see some of you programs now!

HANK

MEMBERSHIP NOTES

By Bev Cook

Membership renewals have been doing quite well. We have picked up a few new members recently, also. Do you know anyone with a 99/4A that doesn't know about us? Invite them to a meeting. We can all benefit from the increased interest.

The following people are due for renewal. If you renew by mail, please make your check payable to the K3 USERS GROUP and send it to us. Thanks.

JOHN KUJAWA 3-85
BRENT TERRELL 3-85
DOUG LIEB 4-85
PHILIP AND JUDITH WESTIN 5-85
KEN KUBACKI 5-85

JANUARY 1985
RYTE DATA
BOX 210
KILBURN DRIVE
KILBURN, ONTARIO, NEW 150
CANADA
1(705)457-2774

Welcome to the RYTE DATA SERVICES information newsletter on the new computer system we mentioned on every TI BBS we could find in North America! This bulletin is designed for all present TI owners AND future 9900 family computer owners. We will be reporting directly back to the developers of this marvelous machine. The public response to their work will determine the final production runs set up. Your input is CRITICAL! Write us with YOUR response letters ideas comments and/or programs (assembly language is preferred) and PLEASE pass the data along to friends associates TI owners and anyone else who might be interested retailers programmers users groups etc.

Beta testing is slated to begin next month - as soon as the printed circuit boards roll off the line. As this happens we will be reporting on features changes and more final details on the operation of this truly superb machine. This new computer incorporates the 9995 chip from Texas Instruments - fully compatible with the 9900 family of micro processors used in the 99/4A. Based on the unreleased 99/8 - intended to be the successor to the 99/4A (before the disastrous 'computer wars' of '83) - this computer is everything the 4A and the 99/9 should have been...AND MORE! None of the current limitations of the TI 99/4A have been designed into the new machine. Several very exciting features are included or designed as options. Perhaps most important is compatibility with 99/4A hardware and software. You will be able to use your Peripheral Expansion Box disk drives modems printers monitor and the software that runs on your system right now with few if any modifications. Interface connectors will work PLUS rather than the huge flat cable hanging off the side of the 4A the new console connector cable will be smaller and round. The unfortunate news is that there are some compatibility problems with non-TI equipment. Further testing will show exactly which hardware will not work with the new computer system. If you are considering upgrading your 99/4A console now we would suggest that you stick with the original TI expansion unit. More on all this in a moment.

Prototype design work is completed. THIS IS NOT A PROPOSED SYSTEM OR ANY SORT OF CLONE. Rather than announcing a future computer to be developed later this computer has actually been produced before confirming the fact. The motherboards are up and running. The printed circuit boards are going into production phase - but no commitment has yet been made for FINAL full-scale asked to NOT reveal full

information at this point. With these stakes at risk the parent company (a very well known TI support manufacturer) is setting up a new company to handle the production distribution and marketing. We are assisting in an informal manner. In other words we are doing everything we can to provide market research and assist them in committing to resurrecting the TI world for everyone's benefit.

FORMAL release data has been set for the June Consumer Electronics Show. We will keep all interested parties informed through our information newsletter subscription. Upon authorization to release FULL data WE WILL NOTIFY ALL SUBSCRIBERS. There are several new and vital developments are planned.

Now back to features Standard memory configuration is 128k - expandable internally to 512k with options to address up to one megabyte of memory directly. This is what the 99/4A 'could' have been capable of with some slightly different addressing schemes. The ROM size has not been fully specified at this writing. In addition to the 128 - 512k RAM another 16k VDP RAM is included - similar to the 16k memory of the 4A contained in the Video Display Ram. This is also expandable to 64k with a new VDP chip from TI. Plans are for this to accommodate teletext (if all goes as presently planned).

A full size keyboard - Selectric type - with function keys has been designed into a console design which is larger than the 4A similar to the Apple II but sleeker and lower in profile. The reason for this approach is that the original TI expansion box will be used as the card cage - rather than forcing users to purchase another piece of hardware or completely re-designing new cards for additional functions. For example an internal modem card is under development for the PEB as are RAM disk cards Analog/Digital cards and real time clock cards. The Pascal subsystem is another case in point along with the standard RS-232 cards. Having retained hardware compatibility it only makes sense to allow users to upgrade without sacrificing their total investment in hardware (and software).

The video display mentioned varies in several other ways as well. Resolution is twice that of the 99/4A in both directions. A full 80 columns is displayed for full scale word processing and even better graphics. As we all know even IBM uses TI's 9918A chip in the PCjr. Now with a much faster machine and greater VDP RAM we will see some truly amazing graphics capabilities! Being separate from the CPU addressing this VDP RAM will not slow the machine down the same way it does in the 4/A. Rather than the CPU being owned overated by the Graphics Read Only Memory possibilities such as page switching banks of graphics screens and multi-layered sprites are on the horizon. In addition the video output will support both composite (the 99/4A output) and RGB (red-green-blue) monitors. This will let owners use their existing monitors or switch to the higher resolution RGB

units advances in equipment.

The disk operating system is substantially different. The interface will allow your choice of 5 1/4 floppy disks or a hard disk to be added without adding a hard disk controller. Double-sided double-density disks can be added to the system in any combination of SS/SD SS/DD or all the way up to the new quad-density, 800K floppies now available. The DOS has been rewritten to be more powerful and easier to utilize. Rather than switching back forth to see your file directory or do other housekeeping duties the system will allow such functions to be accessed readily.

It looks as if the sound/music capabilities will be upgraded as well. We're not sure about this feature at this point. It could remain very similar or it could easily be a more powerful approach. The TI could easily use more flexible sound shaping envelope attack delay Comcents?

Another question for the developers is that of speech. This is rather complex to develop fully. Some doubt has arisen about the desire owners have to keep (or be able to obtain) speech with this new computer. TI still has the leading edge in the speech technology area. Few people realize that the PCjr's speech unit costs more than TI's EVER did. This is another area we require your input on. It will be possible to add a card to the expansion unit later - but if it's a high priority item for many users....

Now here's the real clincher SPEEDK. Running at a full 10 megahertz clock (remember the 99/4A runs at 3.3mhz the IBM PC at 4.6mhz) this monster will outperform anything in it's class!!! With all the other features this new computer will give everyone a run for their money. Even the 32 bit machines being sold will have a hard time keeping up with a full-blown 16 bit system. A large software base all ready to go will also make the machine VERY attractive to old and new users. The system designers have multiplexed the address lines so that large banks of memory can be used. This allows the more powerful - and memory intensive business software to be used/developed. One of the unheralded technical advances TI used in their 9900 family was the memory to memory architecture. This means that the computers workspaces are all external to the CPU's internal registers. Programmers are able to take better advantage of the speed potential without lines of code to push pop the stack. We can expect some very powerful software to follow this machine.

People who have upgraded their consoles recently have discovered what so many 99'ers already know - to get the same capabilities out of any other machine you have to spend a lot more money. Still it comes down to marketing. Today I take great pleasure in showing some of the technical experts what the 9900 chip is capable of. He who laughs last! We have lived to see the 99/4A live on. Osborne proved there was life after death in this industry.

With the many companies still supporting the 99, you can upgrade your console knowing that the equipment you purchase

will be usefull later. Should you upgrade to this new computer the hardware will move along with your new hot system. More powerful software will be introduced - more support will appear and truly innovative products will be developed. We have seen a gradual fading away of some TI support companies. Other companies have moved to produce clones but have never made it past the drawing board. One persistent rumour was that TI would re-enter the market. Their legal people (as of mid-January) say they most definitely will not. Another announced computer has been placed on the back burner. Some people even wanted to buy the rights to the 99/4A - but who wants to risk 40 million in venture capital in the hopes of doing a better marketing job? Well we know who! It is very real - and your response will determine the full committment to production.

A comment about this last point we have been asked about this hesitancy in final production committment. It boils down to the risks involved. Effective marketing is the FINAL KEY. Obviously no one can afford to go into full-scale production without knowing that money can be made. On the other hand it isn't really fair to raise false hopes. A balance is being struck. Our efforts are dedicated to helping TI users (as we are also long term die hard enthusiasts) and the developers.

As contract committments to volume purchasing of chips must be made - and full committment from TI in producing these new VDP chips - such features may change slightly by the June release date. As noted we will keep our subscribers informed during the next few months. We are developing the first users support services newsletter / magazine software development / marketing and Canadian distribution for this new computer (and the 99/4A!). From now until the formal release in June we will be offering an introductory price for a monthly publication. Judging from the response to date we are planning a full-scale publication to cover this new computer starting in July 1985. At that point we will include advertising reviews technical information and programs for both computers. At this time we are actively soliciting assembly code programs to fill the market demand. With a standard 128k to work with vastly superior software is the next wave for the TI world. The next issue will be sent out to you automatically. If you decide to not follow these developments simply write cancel across the invoice and return both the next issue and the invoice to us. As a special introductory offer the price is \$5.00 for the total of 7 issues. Our next issue will include core system details new products programming and reader feedback. Reports on beta testing and developments will continue along with additional tech features how-to-articles and on-going product reviews for hardware software and products for both machines.

LIBRARY CLEARANCE SALE

The following items are for sale from the group library. We hope to get some newer modules and books with what is sold. All items will be sold on a first come first served basis. If you are interested in any item and cannot attend our meeting, contact Bev Cook at 939-0275 days. Items not paid for by the meeting date will be sold at the meeting unless other arrangements are made.

MODULES

ALPINE	3.50
ADVENTURE MODULE w/PIRATE	10.00
BLASTO	3.50
CAR WARS	3.50
CHISOLM TRAIL	3.50
DEMOLITION DIVISION	3.50
DISK FIXER MODULE	20.00
HUNT THE WUMBUS	3.50
JAWBREAKERII	3.50
MOON MINE	3.50
MUNCH MAN	3.50
NUMBER MAGIC	3.50
PARSEC	3.50
RABBIT TRAIL	6.00
RETURN TO PIRATE ISLE	8.00
TI INVADERS	3.50
TOMBSTONE CITY MODULE	3.50

CASSETTE TAPES

ADVENTURE CASSETTES	
MISSION IMPOSSIBLE	4.00
PIRATE ADVENTURE	3.00
PYRAMID OF DOOM	4.00
THE COUNT	4.00

GAMES

CHICKEN	2.00
FUNPAX 1	2.00
FUNPAX 2	2.00
KHE SAHM	2.00
LONDON BLITZ	1.00
SLINKY	2.00
SNOW TREK	2.00
THE CHASE	2.00
THIEF	2.00
ZERO ZONE	2.00

DISKETTES

ASTROMANIA	3.00
DEATH DRONES	3.00
MOONEEAM EXPRESS	3.00
STRIKE FORCE 99	3.00

BOOKS

36 PROGRAMS FOR TI	3.00
101 PROGRAMS FOR TI	3.00
BASIC GAMES NOTEBOOK	2.00
BEGINNERS BASIC	1.50
BEGINNING BEGINNER	2.50
COMPUTER TECH HANDBOOK	.50
COMPUTES GUIDE	7.00
INTRO TO TI BASIC	5.00
KIDS AND THE 4/A	8.00
PROGRAMMING BASIC	7.00
PROGRAMS FOR THE TI	5.00
SAMS 24 BASIC PROGRAMS	3.50
SAMS 51 PROGRAMS	5.00
TI BASIC	3.00
TI 99/4A BASIC GUIDE	3.00
TI 99/4A GAME PROGRAMS	7.00
USERS GUIDE	1.00
USING AND PROGRAMMING THE TI	2.00

HARDWARE

TI MODEM	50.00
SPEECH SYNTHESIZER	20.00



THE K3 TI USER'S GROUP WILL HOLD A GARAGE SALE ON
MAY 31-JUNE 1 AND JUNE 2. WE ARE LOOKING FOR DONATIONS
OF GOOD USED ITEMS TO BENEFIT THE GROUP. ALSO WE ARE
TAKING ITEMS FOR SALE ON CONSIGNMENT. ANYONE WISHING TO
EITHER DONATE ITEMS OR PUT ITEMS ON CONSIGNMENT PLEASE
BRING THEM TO OUR MAY MEETINGS AT THE MUNICIPAL CENTER
OR CONTACT JOY FLOWERS AT 937-5009 EVENINGS. THANKS.

CLASSIFIEDS

WANTED FOR THE USER'S GROUP LIBRARY: TI PILOT DISKETTE Any
person having these please contact us C/O group at our P.O.
box or see Mark Haras or Bev Cook at a meeting.

FOR SALE: Burgertime module. Contact Rich De Roos or
Librarian at a meeting.

FOR SALE: TI SS/SD disk drive for PE box. \$75.00 or best
offer. Call George Lespeotis. 312-258-6126 or see him at a
meeting.

GOOD STUFF FOR THE TI
By Mark Haras

How does a Multi-Color Pen Plotter sound for under
\$120.00?

Yep that's right the Radio Shack Pen Plotter will adapt
to the TI for use with the RS232 card and it really looks
neat.

The original price for the unit was around \$250.00 and
their closing them out at \$119.99 while the supply lasts.

It will make pie charts and bar graphs and even draw
pictures with the right software, wich I understand is easy
to write or find. if I find out more about this I'll relay
it at the next meeting so see you there and keep watching for
GOOD STUFF FOR THE TI !!

```

110 GEM
120 CALL CLEAR
130 PRINT "R:"; "I":TAB(5);"V":TAB(7);"E"
140 PRINT TAB(9);"R"
150 PRINT TAB(14);"T R I P"
160 PRINT "TRY TO STAY ON THE PATH BY"
170 PRINT : "PRESSING THE LEFT AND"
180 PRINT : "RIGHT ARROW KEYS."
190 CALL CHAR(96,"3C7ED8FFDBE77E3C")
200 CALL CHAR(97,"E7E738381C1CE7E7")
210 CALL COLOR(9,12,16)
220 CALL COLOR(10,16,14)
230 CALL CHAR(104,"FFFFFFFFFFFFFF")
240 CALL CHAR(105,"0")
250 A$="iihhhhhhii"
260 PRINT "PRESS ANY KEY TO START.";
270 CALL KEY(0,K,S)
280 IF S<1 THEN 270
290 CALL CLEAR
300 RANDOMIZE
310 X=19
320 G=104
330 FOR J=10 TO 15
340 PRINT TAB(J);A$
350 NEXT J
360 CALL HCHAR(22,X,96)
370 FOR I=1 TO 50
380 J1=(-1) (INT(4RND)) (INT(4RND))
390 IF (J+J1=J2)+((J+J1)>=20) THEN 380
400 J=J+J1
410 J2=J
420 IF J<18 THEN 440
430 J=18
440 IF J>5 THEN 460
450 J=5 460 PRINT I;TAB(J);A$
470 CALL SOUND(-100,440,4)
480 CALL HCHAR(21,X,6)
490 CALL KEY(0,K,S)
500 IF (K<>83)+(K<>68)=-2 THEN 590
510 IF K=83 THEN 560
520 X=X+2
530 IF X<31 THEN 590
540 X=31
550 GOTO 590
560 X=X-2
570 IF X>2 THEN 590

```

```

580 X=2
590 CALL GCHAR(22,X,6)
600 IF G=104 THEN 640
610 CALL SOUND(-50,-5,0)
620 CALL HCHAR(22,X,97)
630 GOTO 690
640 CALL HCHAR(22,X,96)
650 NEXT I
660 FOR I=1 TO 20
670 CALL SOUND(100,INT(RND0)+500,2)
680 NEXT I
690 PRINT : "TRY AGAIN? (Y/N)"
700 CALL KEY(0,K,S)
710 IF K=89 THEN 290
720 IF K<>78 THEN 700
730 CALL CLEAR
740 END

```