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SoftSide™

July 1980

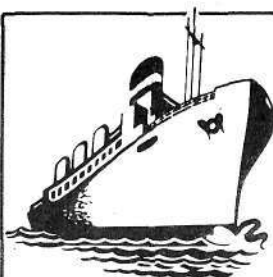
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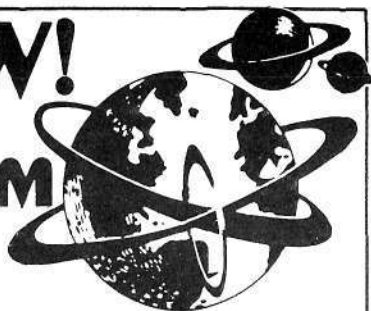
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cover illustration of
Adventureland by
Elaine Cheever



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SoftSide Magazine is continually seeking original articles and software for publication. Imagination and variety in concept and content are our primary criteria for acceptance. Payment varies with length, suitability, ease of editing and quality.

Our policies with respect to software purchase are highly individualized, and offer the programmer several options, including one-time publication rights, outright purchase, and royalties on sale of prerecorded cassettes. Program submissions should use Radio Shack Level II Basic, should run in Level II and Disk BASIC, and may not employ coding techniques that cannot be accurately presented in a line listing, such as SYSTEM modules and "super graphics" or other hybrid methods. For more information, please write: SoftSide, PO Box 68, Milford, NH 03055.

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Description of the contents of the Level II BASIC ROM by memory location, by function, and in lesson format. Includes several BASIC and Assembly Language programs in listing format to examine and use ROM routines.

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OUTGOING MAIL



THE MAKING OF AN EDITORIAL

Sitting comfortably in front of your computer, savoring with sweet anticipation the luscious programs which beckon from the following pages, you may never have wondered what transpires behind the scenes here at the luxury office suites of SoftSide in Beautiful Downtown Milford. There is a story behind the words you are reading at this moment. A story that must be told. (However, we are not implying that it must be READ—feel free to abandon me here in mid-sentence and succumb to the blandishments of this month's adventures.)

A prize-winning editorial begins with an idea; the lack of trophies on my desk attests to this fact. The idea takes on life as it is typed into

SCRIPSIT's forgiving arms. Brief moments later we see a finished document emerging from the printer.

Next step is a whisper quiet ride in our lushly carpeted elevator, down to the second floor where we pause briefly but reverently just outside the Art Room door.

This is the place where the merely mediocre is made immortal. The skill of these excitingly beautiful artisans is beyond belief. (I am not ashamed to say that I know an artisan well.)

Gail, who has come to be known as "Twinkle-fingers"—ostensibly for her amazing speed and accuracy on the typesetting machine—sets up the text in its magazine format. When she has finished her blistering display of keyboard dexterity, the machine clicks to itself for a few moments

and then disgorges a box about the size of an ostrich egg which contains a wide roll of film. When the film has been developed, accompanied by many strange gurgling sounds and mood-altering odors, it is ready to be "pasted-up".

Elaine and Donna take over now. Starting with only a few sheets of thin cardboard, faintly marked with arcane symbols (meaningful only to the true Artist) and using their Official Artist's Implements, they draw borders, insert illustrations, and even correct spelling errors discovered at the last second. This is accomplished by physically cutting out the offending letter, and delicately but firmly inserting a tiny piece of film containing the correct one. When the finished article comes back from the printers, there is no sign of the original mistake, as you can see.

The next major event in the life of our editorial is the dreaded

Deadline Day. This is the day when the sheets of cardboard containing the treasured document are slipped into an envelope along with all the other articles, programs and special features that comprise a typical SoftSide.

A trusted courier then whisks the precious envelope off to the printers. About a week later, a truckful of cartons is unloaded in the notorious Bulk Mail Room. It is here that a skilled crew of high-school students prepare thousands of SoftSides for world-wide distribution. Adults are not allowed to assist in this endeavor, since our company insurance does not cover deafness caused by radio rock music inflicted at maximum volume.

Scant days later (or weeks if you live on the west coast and don't have a first class subscription), SoftSide is in your mailbox, ready to provide you with still another month of programming ecstasy.



James



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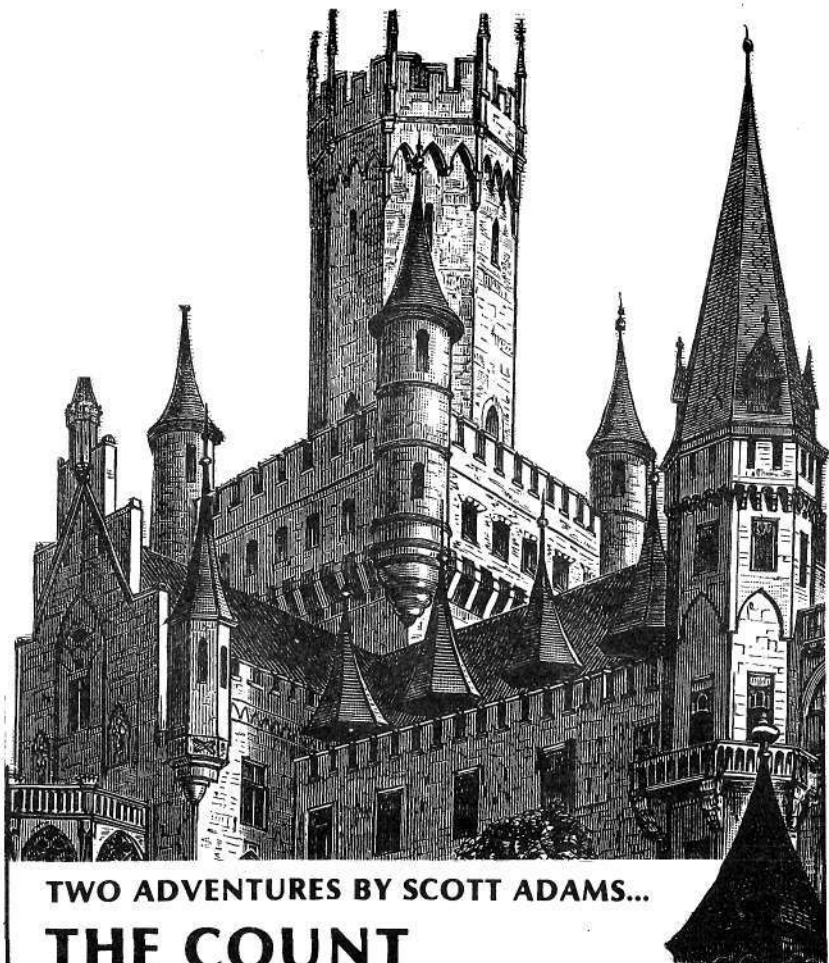
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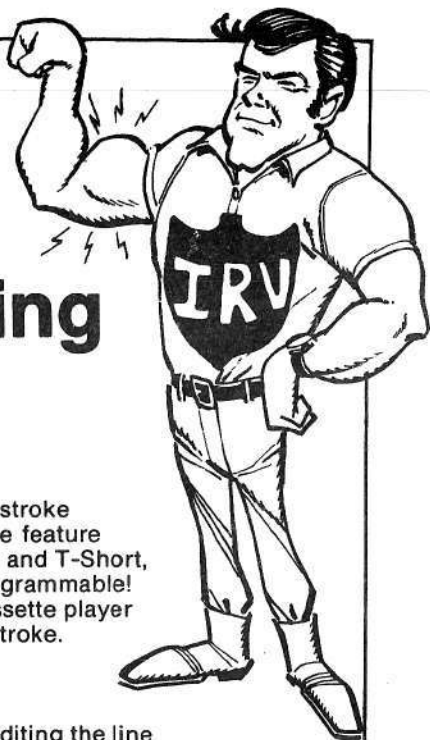
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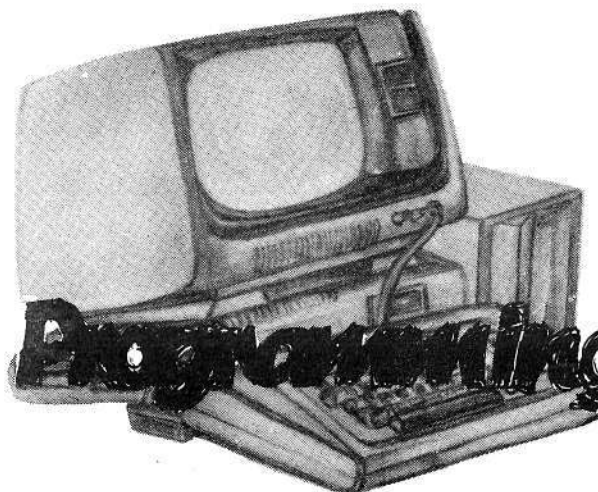
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Need to determine a PRINT @ position if only the X and Y coordinates are known? It's simple if you use this formula:

$$P = \text{INT}(Y/3) * 64 + \text{INT}(X/2)$$

where P is the PRINT @ position and X,Y are the coordinates in a graphic command such as SET(X,Y).

Shane Causer
Brunswick, Georgia

(Editor's note: It is possible to reverse the procedure. Given a PRINT @ position (P), the following lines will give you the X and Y values for SET/RESET commands:

$$Y = 3 * \text{INT}(P/64)$$

$$X = 2 * (P - 64 * Y/3)$$

Each print position contains six small graphics blocks. X and Y will be the coordinates of the upper left block in the PRINT @ position.)

If you are running some type of graphics which make use of CHR\$(24) (Cursor left) and/or CHR\$(26) (Cursor down), you can save memory space by entering these control characters directly

from the keyboard. First enter the line, but use two quotation marks ("") where the CHR\$(24) and CHR\$(26) would go. Then EDIT the line. Space over until the first quotation mark is visible. Then press I (insert) and use [SHIFT] left-arrow for each CHR\$(24) and [SHIFT] down-arrow for each CHR\$(26).

Jimmy Dossey
Ocala, Florida

(Editor's note: The "cursor-up" or CHR\$(27) may also be entered during EDITing, but you have to be sneaky; since [SHIFT] up-arrow takes you OUT of I(nsert) mode, you must use the C(hange) command instead. Leave a blank between the two quotes (" "), then C(hange) the blank to a [SHIFT] up-arrow.

You should also be aware that these memory-saving techniques should be avoided if you plan to submit your finished program to SoftSide—It's murder on the LLISTings!)

When writing text strings to tape, it is annoying that commas, semicolons and quotation marks may not be contained within the string. One way of getting around this is to examine each character in each string and translate these three (, ; ") to a value less than 32 or greater than 127 (ASCII values), and to retranslate them when they are read from tape. A much simpler method of allowing commas and semicolons in a string is to enclose the string in quotation marks before it is written. These will automatically be removed by the computer during input. One way of doing this is the following:

```
10 Q$=CHR$(34):REM CHR$(34) IS A QUESTION MARK
20 PRINT#-1,Q$+ST$+Q$
```

where ST\$ is the string to be written to tape. The trailing quote may be omitted if desired.

Since SoftSide is devoted to games and programming in

BASIC, I would like to suggest a game which may be played by all readers, at the same time giving them an opportunity to learn some of the possibilities available in Level II BASIC. It has often been said of APL-programmers that they enjoy writing "one-liners" of great obscurity and performing as much as possible with as few characters as possible. Level II BASIC actually provides the capability of writing quite impressive and complex programs in just one line. Here are the suggested game rules for BASIC "one-liners":

1. The program must be written as a single BASIC line of maximum 256 characters in expanded form (i.e. "PRINT" instead of "?")

2. The program must be self-contained, i.e., not make any assumptions about string storage available, etc.

3. The program should provide a continuously changing graphics display, as impressive as possible.

Here are a few samples to start you off:

```
1 DEFINT A-Z:CLS:FOR Y=0 TO 47 STEP RND(3):FOR X=0 TO 127 STEP RND(4):IF POI
NT(X,Y) RESET(X,Y):RESET(127-X,47-Y):NEXT:GOTO 1 ELSE SET(X,Y):
SET(127-X,47-Y):NEXT:GOTO 1
```

```
1 DEFINT X:CLS:FOR X=15360 TO 16310:POKE X,32:POKE X+1,164:POKE X+2,176
:POKE X+3,176:POKE X+4,176:POKE X+5,141:POKE X+6,140:POKE X+64,32:PO
KE X+65,138:POKE X+66,131:POKE X+67,131:POKE X+68,139:NEXT:RUN
```

```
1 CLEAR 99:DEFINT X:D$=" "+CHR$(164)+STRING$(3,176)+CHR$(141)+CHR$(
140):E$=" "+CHR$(138)+STRING$(2,131)+CHR$(139):CLS:FOR X=0 TO 950:
PRINT X,D$::PRINT X+64,E$:NEXT:RUN
```

```
1 CLS:DEFINT A-Z:X=RND(127):Y=RND(47):FOR A=0 TO 10+RND(60):I=RND(7)
-4:J=RND(5)-3:FOR B=0 TO RND(30):SET(X,Y):I=1+2*I*((I+X)/127)OR(I+X<
0):X=X+I:J=J+2*((J+Y)/47)OR(J+Y<0):Y=Y+J:NEXT:GOTO 1 ELSE FOR I=0 TO 99
9:NEXT:RUN
```

```
1 CLEAR99:J=RND(11)*64:CLS:D$=CHR$(176):PRINT@J+128,STRING$(64,D
$):C$=CHR$(187)+CHR$(183):FORI=JTOJ+58:PRINT@I,CHR$(129)CHR$(16
2)D$CHR$(145)CHR$(136)CHR$(252)CHR$(170)D$CHR$(189)CHR$(190)CHR$
(149):PRINT@I+128,D$C$CHR$(191)C$:NEXT:RUN
```

Arne Rohde
Denmark

(Editor's note: If you come up with some excellent "one-liners", send them to us at:

"One-Liners"
c/o SoftSide Magazine
P.O. Box 68
Milford, NH 03055

We'll share the best ones submitted in this column. See your name in PRINT! This is my slightly fishy contribution:

```
1 CLS:DEFSTRA:FORI=1TO25:READX:A=A+CHR$(X):NEXT:FORP=896TO948:PR
INT@P,A:PRINT@P-56,CHR$(79+47*(RND(2)=1)):FORI=1TO30:NEXT:PRIN
T@P,CHR$(31):PRINT@960:NEXT:RUN:DATA130,173,180,184,188,191,156
,180,26,8,8,8,8,8,8,8,160,158,135,139,143,191,143,135:'FISHY!!
```

A line was inadvertently omitted from Arne's programming hint in the April 1980 issue, page 70. To translate a variable D, containing a

decimal number from 0 to 15, into a hexadecimal string variable, H\$, you may use the expression:

```
H$=CHR$(48+D-7*(D>9))
```

This avoids a lot of time and code.)

The TRS-80 Users Group of Corpus Christi, TX meets the third Tuesday of every month at 8:00 at Del Mar Junior College in Room MC 109. Meetings feature an informal exchange of information and a short presentation every month on some aspect of BASIC or assembly language programming.

ADVENTURES



Expanding Universes

by James Garon

You awaken and look around at your unfamiliar surroundings. Closer examination reveals that you are in:

a bed... a rocketship... a forest... a London flat... a chapel... a desert... a ghost town...

Wherever you find yourself, one thing is certain: an exciting adventure has begun. Each adventure is different from all the rest; whether your goal is to recover treasures, rescue an explorer, or steal the secret plans from an enemy agent - you can be sure that danger, challenge and fascination lie ahead.

Adventures are often referred to as "compunovels" because of their uniquely interactive nature. Seated before your patient computer, you direct the course of the adventure by issuing one - or two-word commands such as, "GO NORTH", "GET KEYS", "HELP", "LOOK MIRROR", "GO TUNNEL", "LIGHT FUSE"...

Many times, the results are surprising; the computer's reply could range from, "I SEE NOTHING SPECIAL" thru "THERE IS A HIDDEN DOOR" to "IT BLEW UP IN MY HAND - I'M DEAD!!"

Fortunately, in these role-playing sagas, death is never permanent - at worst it means you must start over, and just possibly there is a secret word or hidden exit which will let you live again.

Even when playing the very

same adventure, no two people will have exactly the same experiences. One person will bravely break a mirror - possibly dying in the resulting rain of sharp glass splinters. Another, more timid adventurer may pass by the mirror dozens of times, seeing only his or her reflection and being told that it is "VERY PRETTY". Still a third, more experienced adventurer may discover the enchanted beekeeper's suit, put it on, break the mirror in safety, thus revealing a previously concealed passage.

Common to most well-written compunovels is the feeling of an expanding universe. Initially, you may find yourself able to explore only a few locations. The extreme case involves but a single room - with no obvious exits at all. You examine the objects around you, picking them up, setting them down and using them in any manner you can think of - the obvious ways as well as the creatively obscure. You may try to beg, burn, break or chant your way beyond your current boundaries (the last method being aided by a magic word). Eventually you will discover an escape from your restricted territory - a new room with new objects, new dangers and new opportunities.

Let us make up an example. (Discussing an actual situation from a currently popular adventure would risk spoiling the surprise for future explorers.) Perhaps you've discovered a dangerously ticking bomb. You've decided to try pouring water on it in hopes of rendering it harmless. Elsewhere you've found a stream of water. Returning excitedly to the stream, you issue the command, "GET WATER" only to be told, "I'VE NO

CONTAINER". Taking inventory of your possessions, you see that you are carrying a gun - with three remaining bullets, a book of Druid poetry and a croquet mallet. Nowhere in your travels have you seen a bucket, army boot or other suitable container for the desperately needed water. While you may have felt, by this time, that you'd been everywhere and done everything there was to be done, you now know you were wrong. Somewhere there's an entrance to a place you've never been. The entrance may be a sliding panel, a trap door or the ever popular magic word.

Whatever method eventually works, your miniature universe is about to expand. Soon you'll discover the hidden marine museum, pick up the fish bowl, discover a non-fatal method of removing its man-eating occupants, refill it at the stream and pour it on the bomb - which just might melt away - revealing in its innards the final treasure.

Once the pressure is off, and you have time to think back, you'll realize that - just as in a well-written mystery novel, where all the clues were in plain sight yet psychologically invisible - so too, the entrance to the marine museum was there all the time. Finding it was just a matter of being both persistent and creative.

As there is a wide range of talent among mystery writers, from top-notch to merely mediocre, so too with adventure creators. Only a few, such as Scott Adams, have mastered that perfect blend of frustration and progress - that knack for anticipating the movements of his explorers (us) and providing the right amount of barriers, riddles and solutions.

Some people have asked, "What do you do with an adventure once you have solved it?" Unlike a mystery story, which is unchanging from one reading to the next, adventures are worth repeating. The knowledge acquired in successfully solving an adventure can be applied to subsequent attempts. It is always possible to try for a more elegant solution, or one which requires fewer moves.

Alternatively, you can invite a friend to play, resisting the temptation to be too liberal with your hints. It is surprising how different an adventure can be when another person is in control. No two people perceive a problem in exactly the same way. Their approaches, interpretation of clues and eventual solutions may be quite different from your own.

It is most humbling to watch another player discover and use a shortcut you have missed. (One adventure contained a magic carpet which whisks its occupant safely back and forth between distant locations. Your author, having solved the adventure without ever using the silly rug, was stunned to see a fellow explorer discover the secret of the carpet and go on to relatively easy victory.)

As a tool for teaching logic and careful planning to young people (and illogical adults) the adven-

ture is without equal. A skillful adventure-writer guides the adventurer to perceive relationships between distant objects, and expand his or her awareness.

When you experience your first machine language adventure, you'll wonder how you ever put up with the slowness of BASIC. The more complete and complex an adventure is, the longer it takes BASIC to respond to your commands. Machine language eliminates the waiting and provides instant response to your commands. No sooner have you typed "GO NORTH" (or simply "N" using Scott Adam's thoughtful shorthand) than you find yourself immediately transported to a new location. No more waiting those interminable seconds while BASIC scans a vocabulary table, searching for your command.

If you've never played an adventure game in machine language, you'll certainly enjoy BASIC adventures. They are a welcome and creative change from the standard games of Space Potatoes and the like. Just a friendly warning though: machine language adventures are a quantum leap ahead of their BASIC counterparts. Once you've tried one, you'll be hooked; you may never have the patience for BASIC adventuring again.!



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Our programmer's hotline will not be in operation during July and August in order to give our staff a well deserved break.

If you need more information about one of our products, please send a self addressed stamped envelope and request the information sheet on the product in question.

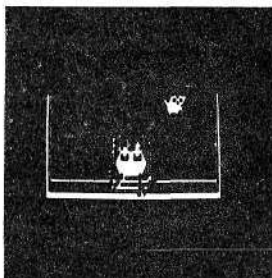
If you have a tape or disk that is defective or fails to load when received, return it for prompt replacement.

If you are having difficulty with a TSE or Ramware product, or find a bug, please describe the problem as completely as possible, indicating what you were doing when the failure occurred, the nature of the difficulty, the exact error message you received, and the line number of the problem if possible. Send it to Product Maintenance, TSE, P.O. Box 68, Milford, NH 03055.

If you find an error in the magazine, please send a note to the editor as soon as possible with full details.

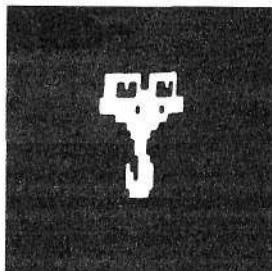
We will do our best to serve you to the limits of our abilities. Thanks to all of you for your help in these matters.

Magic from Leo Christopherson



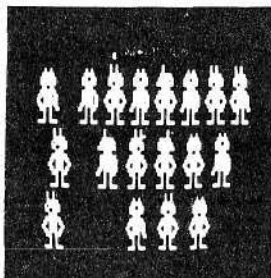
Bee Wary..

This fast-paced real time action game is a contest between a Bee operated by the player and a Spider operated by the computer. Machine language subroutines but loads as Level II for easy operation. **\$14.95**



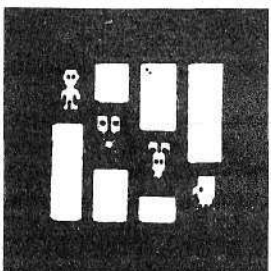
Snake Eggs..

Here is a computerized reptilian version of 21 complete with arrogant snakes and appropriate sound. Level II, 16K **\$14.95**



Android Nim..

The newest version of TRS-80's first animated graphics game—Android NIM—now with more animation and sound! Level II, 16K **\$14.95**



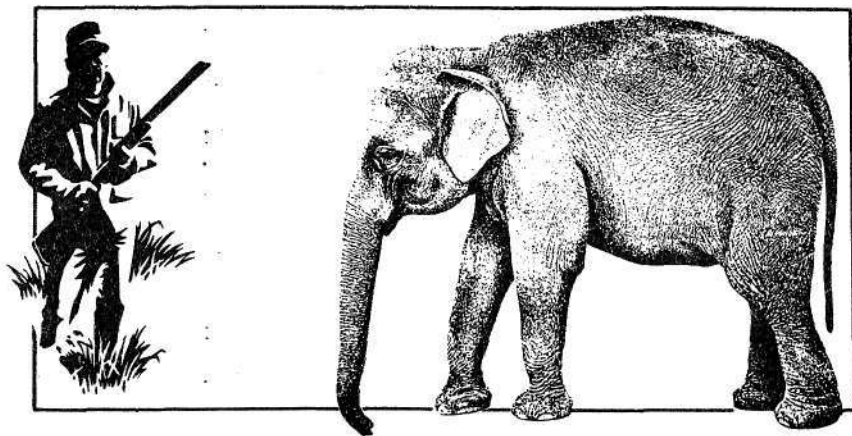
Life Two...

Two in one: Game of Life, at an astounding 100 generations a minute, plus Battle of Life with animated creatures and sound. Level II, 16K **\$14.95**

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MICRO-80 PINBALL MACHINE

Featuring...African Safari!

by Garth Jensen

SAVE YOUR QUARTERS!! Fast-paced pinball has come to the comfort of your own home on a computer that runs for hours on only pennies. Load the following program, attach an amplifier (optional), and you have an exciting game complete with realistic sight and sound effects.

The PINBALL MACHINE includes four different variations:

1. African Safari — Raise your rifle and shoot the charging elephant before you're trampled.
2. Random Targets — Keep on your toes as the rebounds in this game are unpredictable.
3. Normal Pinball — Enjoy the electronic version of the typical arcade game.
4. Wipeout — Eliminate four solid rows or targets and achieve a

perfect score. Be careful as the playing area is compressed toward the paddles.

Left and right flippers or paddles are independently operated by the "Z" and "/" keys, respectively. Scores are continuously updated and an overall rating provided at the end of each game. Two levels of difficulty are provided in each game, creating challenge for beginners and experts alike. Fire this program up and see how you rate as a pinball wizard.

Note: A machine language sound routine is poked into the string space defined at line 50. This line is altered during execution, so save the program before running.

PINBALL

```

40 CLEAR400
50 GOSUB5000
55 GOSUB9000
60 'MICRO-80 PINBALL MACHINE  COPYRIGHT 1980 BY G. R. JENSEN, A
  LL RIGHTS RESERVED
70 'PRIOR TO EXECUTION, LINE 50 LOOKS LIKE THIS: '50 GOSUB5000
  ..... " DURING EXECUTION, A COMMON MACHINE LANGU
  AGE SOUND ROUTINE IS POKED INTO GOSUB.
80 'THANKS TO SOFTSIDE MAGAZINE FOR THE IDEA OF POKING THE ROUTI
  NE INTO A RESERVED STRING SPACE.
90 'FOR SOUND (OPTIONAL), CONNECT THE AUX LEAD TO AN AMPLIFIER.
100 RANDOMIZEINSTR=Z:CLS:PRINTTAB(4);CHR$(23);"MICRO-80 PINBALL
  MACHINE":PRINT:PRINT
110 PRINT" 1 - AFRICAN SAFARI":PRINT" 2 - RANDOM TARGETS PINBA
  LL":PRINT" 3 - NORMAL PINBALL":PRINT" 4 - WIPEOUT":PRINT" 5 -
  STOP":PRINT
120 INPUT" ENTER GAME":Q:IFQ<1ORQ>5THEN120ELSEP$=""X=0:IX=0:IV
  =0:IFQ=5THENCLS:END
130 INPUT" WANT DIFFICULT VERSION? Y/N":T$:IFLEFT$(T$,1)○"Y"TH
  EN150
141 Y=0:L=0:R=0:S=0:LZ=0:RZ=0:M=0:A=0:D=0:PR=0:PL=0:M=0:E=0
150 G=0:IFLEFT$(T$,1)="Y"THENM=4:M=3:ELSEM=2:M=5
155 IFG=1THENM=2
160 P$=STRING$(14-U,61):A=15360
170 ONG GOTO5000,7000,8000,6000
180 X=59:Y=768:Z=64:IX=-RND(3):IY=-64:S=32:M=16258:PD=62:LZ=916:
  RZ=926+U
190 L=0:R=0:R$=STRING$(14-U,32):PL=-1:PR=-1:IFG=4 PD=91
195 IFG=4 R$=STRING$(22-U,5):P$=STRING$(22-U,91):LZ=906:RZ=928+U
200 T$=STRING$(4,191)+STRING$(56,32)+STRING$(4,191)
210 CLS:FORI=0TO63:POKEA+I,191:POKEA+I+896,191:NEXT
220 FORI=64TO832STEP64:PRINT@I,T$:NEXT:T$=""
230 IF G>1 THEN 245 ELSE PRINT@243,M1$:PRINT@305,M2$:PRINT@370
  ,M3$:PRINT@40,CHR$(143);
240 GOSUB5300:GOSUB5000:GOTO260
245 IFG=2GOTO7160ELSEIFG=4GOTO6140

```

```

250 FOR I=1708:ON I GOSUB 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890:NE
XT I
260 PRINT@916, STRING$(24, 5);:PRINT@968, STRING$(56, 5);:IFG>1PRINT
@968, "SCORE"; STR$(SC);
265 IFG<>4PRINT@988, "    ";:PRINT@944, "    ";
267 IFG=4 PRINT@986, STRING$(44, 5);
278 PRINT@1015, "BALL"; CT+1;:POKE@X+V, D:GOTO580
340 DATA 205, 127, 10, 14, 140, 69, 62, 1, 211, 255, 16, 254, 69, 62, 2, 211, 25
5, 16, 254, 13, 32, 239, 201
580 Q=A+X+IX+Y+IV:IFPEEK(Q)>5THEN1000
585 IFPEEK(Q)>5THEN1000
512 L=L+PL:IFL>MGOOTO700
514 R=R+PR:IFR>MGOOTO750
528 POKE@-IX-IV, S:POKE@, D:Y=Y+IV:X=X+IX:T$=INKEY$:IFT$=""THEN580
600 IFQ>5THEN580ELSEIFT$="2"PRINT@LZ, P$;:L=0:PL=1:GOTO580
610 PRINT@RZ, P$;:R=0:PR=1:GOTO580
700 L=0:PL=1:PRINT@LZ, R$;:GOTO514
750 R=0:PR=1:PRINT@RZ, R$;:GOTO528
1000 IFQ<16253ANDQ<16320THENIFPEEK(Q)=0THEN1000ELSEIFX<57ORX<6T
HEN1000ELSEITY=-IV:IX=(RND(U)+E)*SGN(IX):GOTO580
1010 IF Q<16319THENCT=CT+1:Q=USR(255):IFCT>8THEN1000ELSE2130
1020 V=PEEK(Q):IFV<57THEN1000ELSEV=V-40:SC=SC+10+V:PRINT@968, "SC
ORE"; STR$(SC);
1025 ON GOTO1060, 7300, 1030, 6200
1030 ON(V-1)GOSUB2825, 2835, 2845, 2855, 2865, 2875, 2885, 2895
1035 Q=USR(35+4+V)
1040 ON(V-1)GOSUB2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890
1060 IF PEEK(Q-IX)>5 THEN IV=-IV:C=IX:IX=(RND(U)+E)*SGN(IX):IFG
=1THEN580ELSE500
1080 IF PEEK(Q-IV)>5 THEN C=IX:IX=-IX:IFG=1THEN580ELSE500
1085 IV=-IV:C=IX:IX=-(RND(U)+E)*SGN(IX):IFG=1THEN580ELSE500
1090 IFG=1 IV=-IV:IX=RND(2)+1:GOTO580
1100 IFNT>20ORCT<30RND(0)>.15THEN1120ELSEFOR I=11701STEP-1:PRINT@
64+I, Z00(I);:NEXT I:NT=NT+1
1120 IV=-IV:IX=RND(U)*SGN(IX):GOTO580
2820 PRINT@606, "2222";:RETURN
2825 PRINT@606, STRING$(5, 191);:RETURN
2830 PRINT@622, "3333";:RETURN
2835 PRINT@622, STRING$(4, 191);:RETURN

```

```

2040 PRINT#591, "4444": RETURN
2045 PRINT#591, STRING$(4, 191): RETURN
2050 PRINT#407, "5555": RETURN
2055 PRINT#407, STRING$(4, 191): RETURN
2060 PRINT#422, "6666": RETURN
2065 PRINT#422, STRING$(4, 191): RETURN
2070 PRINT#238, "7777": RETURN
2075 PRINT#238, STRING$(4, 191): RETURN
2080 PRINT#206, "8888": RETURN
2085 PRINT#206, STRING$(4, 191): RETURN
2090 PRINT#223, "999": RETURN
2095 PRINT#223, STRING$(3, 191): RETURN
2130 IFG=2GOSUB7400
2140 X=59:Y=12*64:IX=-RND(3):IV=-64
2143 IFG=1GOSUB5300:GOSUB5000:IFW=3THENIFRND(4)>2GOSUB5300
2144 PRINT#900, "HIT SPACE BAR TO CONTINUE":
2146 T$=INKEY$:IF T$=" " THEN 2146
2150 GOTO 260
4000 IFG=1THEN5350ELSEFORI=1TO900:NEXT:CLS:PRINTCHR$(23)
4010 PRINT#82, "SCORE ":STR$(SC):
4015 E1$="RATING CHAMPIONSHIP QUALITY":E3$="RATING STRICTLY
MINOR LEAGUE":E2$="RATING COULD BE BETTER,
COULD BE WORSE!"
4020 CT=SC/CT:IFG=2ORG=3THENIFCT>300THENPRINT#192,E1$:ELSEIFCT>2
00THENPRINT#192,E2$:ELSEPRINT#194,E3$:
4030 IFG=4THENIFCT>900THENPRINT#192,E1$:ELSEIFCT>550THENPRINT#19
2,E2$:ELSEPRINT#194,E3$:
4035 GOTO4050
4050 FORI=1TO2700:NEXT:RUN100
5000 E1$=STRING$(2, 32)+CHR$(184)+STRING$(9, 191)+CHR$(187)
5010 E2$=CHR$(32)+CHR$(168)+CHR$(171)+STRING$(8, 191)+CHR$(159)+C
HR$(171)+CHR$(134)
5020 E3$=STRING$(2, 32)+CHR$(142)+CHR$(129)+CHR$(143)+STRING$(3, 3
2)+CHR$(136)+CHR$(135)+CHR$(138)+CHR$(133)+CHR$(130)
5030 M1$=CHR$(143)+CHR$(191)+CHR$(133)
5040 M2$=CHR$(141)+CHR$(140)+STRING$(3, 191)
5050 M3$=CHR$(160)+CHR$(186)+CHR$(163)+CHR$(149)
5060 DING$(13):G$(1)=CHR$(143):G$(2)=CHR$(144):G$(3)=CHR$(184)
5070 FORI=4TO9:G$(I)=CHR$(176):NEXT:G$(10)=CHR$(180)
5080 S1=532:S2=724:S1$=CHR$(172)+STRING$(5, 176)+CHR$(156)+CHR$(1

```

```

42)+STRING$(2,131)
5090 S2$=CHR$(131)+CHR$(139)+STRING$(4,140)
5100 CLS:PRINT@22,"AFRICAN SAFARI":PRINT
5105 PRINTTAB(5)"YOU ARE A HUNTER ON AN AFRICAN SAFARI, FACING A
WILD"
5110 PRINTTAB(5)"ELEPHANT THE ELEPHANT WILL CHARGE EACH TIME I
T IS"
5120 PRINTTAB(5)"HIT BY THE BALL AND WHEN THE BALL LEAVES PLAY
EACH TIME"
5130 PRINTTAB(5)"YOUR HUNTER IS HIT BY THE BALL, HE EXTENDS HIS
GUN AND"
5140 PRINTTAB(5)"WILL EVENTUALLY SHOOT THE ELEPHANT TO REWARD
YOUR SKILL."
5150 PRINTTAB(5)"THE PADDLES RETURN THE BALL IN THE HUNTER'S DIR
ECTION "
5152 PRINTTAB(5)"BEWARE OF TWO MOVING SNAKES IN THE VICINITY "
5153 PRINTTAB(5)"YOU HAVE UP TO";:IFW=3PRINT" 6 ";ELSEPRINT" 8 "

5154 PRINTTAB(5)"PLAYS TO BAG YOUR ELEPHANT ":PRINT
5155 PRINTTAB(16)"USE 'Z' FOR THE LEFT PADDLE":PRINTTAB(16)"USE
FOR THE RIGHT PADDLE":PRINT
5160 PRINTTAB(5):INPUT"HIT 'ENTER' TO CONTINUE";XE:CLS
5170 XE=20:YE=256:X2=7:GX=51:GN=0:QA=15555:QB=15737
5190 QA=5:D=42:P$=STRING$(14-U,62):E=1:IFW=5BA=7:GOTO180
5195 GOTO180
5300 IFXE>39THEN5350
5305 XE=XE+1:X2=X2+1:QA=USR(20):QB=USR(20):QC=USR(20)
5310 PRINT@YE-Z+X2,E1$;:PRINT@YE+X2,E2$;:PRINT@YE+Z+X2,E3$;:RETU
RN
5350 FORI=1TO35:GOSUB5305:IFXE>57THEN5355ELSEFORI=1TO1:NEXTI,J
5355 FORI=1TO300:NEXTI:CLS:PRINTCHR$(23):PRINT"YOU HAVE JUST BEE
N TRAMPLED BY THE ELEPHANT!!"
5360 PRINT:PRINT"BETTER LUCK ON YOUR NEXT SAFARI":GOTO4050
5500 IFQ<QAORQ>QBTHEN5500ELSEIFX+C>X2ANDX+C<=XEGOSUB5700:GOSUB530
0:GOTO500
5510 IFX+C<41ORX+C>53THEN5500ELSEGN=GN+1:IFGN>10THEN5600
5520 GOSUB5700:IFGN=1THENPRINT@306,G$(1);ELSEPRINT@244-GN,G$(GN)

5530 GOTO500
5600 QA=USR(30):QB=USR(200):FORI=233TO197STEP-1:PRINT@I-1,CHR$(1

```

```

76):PRINT@I," ":FORM=1T01:NEXTM
5610 NEXTI:PRINT@I," ":FORM=1T0400:NEXTM
5620 CLS:PRINTCHR$(23):PRINT"YOU HAVE BAGGED A NICE TROPHY!!":GO
T04050
5700 Q=A+X+IX+Y+IV:IFPEEK(Q)<>STHEN5710ELSEPOKEQ-IX-IV,S:POKEQ,D
Y=Y+IV:X=X+IX:GOSUB5800:RETURN
5710 IV=Z:IX=-RND(3):Q=A+X+IX+Y+IV:POKEQ-IX-IV,S:POKEQ,D:Y=Y+IV:
X=X+IX:GOSUB5800:RETURN
5800 IFRND(0)>.85GOTO5830
5810 PRINT@S1,STRING$(10,32):IFRND(0)>.95THEN5830ELSE$1=521+RND
(33):PRINT@S1,$1$;
5830 IFRND(0)>.85THENRETURNELSEPRINT@S2,STRING$(6,32):IFRND(0)>
.9THENRETURNELSE$2=713+RND(37):PRINT@S2,$2$:RETURN
6000 CLS:PRINTTAB(25)"WIPEOUT":PRINT
6010 PRINT"IN THE GAME OF WIPEOUT, FOUR ROWS OF NUMBERS ARE IN T
HE TOP"
6015 PRINT"OF THE PLAYING AREA. WHENEVER THE BOUNCING BALL HITS
A NUMBER,"
6020 PRINT"THE SCORE IS INCREASED BY TEN TIMES THAT NUMBER AND T
HE NUMBER"
6025 PRINT"IS REMOVED FROM THE SCREEN. WHEN ONLY FIVE NUMBERS R
EMAIN"
6030 PRINT"IN A ROW, THE NEXT HIT ON THAT ROW REMOVES THE REST O
F"
6035 PRINT"THOSE NUMBERS. PINBALL PADDLES AT THE BOTTOM OF THE
SCREEN"
6045 PRINT"HELP KEEP THE BALL IN PLAY RANDOMLY AS THE GAME PRO
GRESSES,"
6050 PRINT"THE NUMBERS SHIFT DOWN CLOSER TO THE PADDLES, THUS DE
MANDING"
6055 PRINT"GREATER SKILL FROM THE PLAYER IT IS POSSIBLE TO PLA
Y A"
6060 PRINT"PERFECT GAME AND 'WIPEOUT' ALL THE NUMBERS FROM THE S
CREEN.":PRINT
6090 DIMZ$(11):FORI=1T011:Z$(I)="":POKEVARPTR(Z$(I)),64:READ
Z:POKEVARPTR(Z$(I))+1,Z:READZ:POKEVARPTR(Z$(I))+2,Z:NEXTI
6094 DATA 0,60,64,60,128,60,192,60,0,61,64,61,128,61,192,61,0,62
,64,62,128,62
6096 NO=Y+1:NE=Y+4
6100 NT=0:DIM N(9)

```

```

6110 FOR I=2 TO 9: READ N(I): NEXT I
6120 DATA 517, 54, 389, 54, 261, 54, 133, 54
6125 PRINT "USE 'Z' FOR LEFT PADDLE, AND '/' FOR RIGHT PADDLE."
6130 INPUT "ENTER NUMBER OF BALLS (10 MAX)"; BA: IF BA < 1 OR BA > 10 THEN GOTO 130 ELSE BA = BA - 1
6135 D=140: E=0: GOTO 180
6140 FOR I=3 TO 9 STEP 2: PRINT N(I-1), STRING$(54, 48+I);: NEXT I: PRINT N(10), STRING$(64, 191);: GOTO 260
6200 POKE 0, 191: GO = USR(15+2*V): N(V) = N(V) - 1: IF N(V) < 5 THEN PRINT N(V-1) + N(T*2), STRING$(54, 5);
6220 IF N(3) + N(5) + N(7) + N(9) < 17 THEN FOR I=1 TO 500: NEXT I: GOTO 6400
6300 POKE 0, 5: GOTO 1060
6400 CLS: PRINT CHR$(23): FOR I=1 TO 30: PRINT @470, "WIPEOUT";: FOR J=2*IT TO 40: NEXT J
6410 PRINT @470, "          " FOR J=2*IT TO 40: NEXT J: NEXT I
6420 PRINT @144, "PERFECT GAME":: FOR I=1 TO 800: NEXT I: GOTO 4035
7000 CLS: PRINT TAB(20); "RANDOM TARGET PINBALL": PRINT
7010 PRINT TAB(8); "IN 'RANDOM TARGET' PINBALL, THERE ARE NINE NUMERICAL"
7020 PRINT TAB(8); "TARGETS IN THE PLAYING AREA. WHEN THE BALL HIT S"
7030 PRINT TAB(8); "ONE OF THE TARGETS, THE TOTAL SCORE IS INCREASED"
7040 PRINT TAB(8); "BY TEN TIMES THE VALUE OF THE TARGET. THEN THE"
7050 PRINT TAB(8); "TARGET ITSELF IS MOVED RANDOMLY TO ANOTHER LOCATION"
7060 PRINT TAB(8); "IN THE PLAYING AREA. WHENEVER THE BALL LEAVES PLAY,"
7070 PRINT TAB(8); "SOME OF THE THE TARGETS ARE MOVED.": PRINT
7100 DIM N(9), PS(30), NS(9): P2=30
7110 FOR I=1 TO 30: READ N(I): NEXT I: FOR I=1 TO 2: READ PS(I): NEXT I
7120 FOR I=1 TO 9: NS(I)=STRING$(5, 48+I): NEXT I
7130 DATA 202, 214, 226, 238, 328, 337, 344, 352, 359, 369, 458, 465, 472, 484, 496
7140 DATA 585, 597, 609, 621, 722, 729, 739, 196, 245, 628, 479, 750, 714, 491, 233
7150 GOTO 8850
7160 FOR I=1 TO 9

```

```

7165 J=RND(22):IFPEEK(A+PS(J))<>5THEN7165ELSEN(I)=PS(J)
7170 PRINTN(I),N$(I):NEXTI:GOTO260
7300 PRINTN(V),STRING$(5,191):GO=USR(25+2*V)
7310 J=RND(22):IFPEEK(A+PS(J))<>5THEN7310ELSEPRINTN(V),STRING$(
5,5):N(V)=PS(J):PRINTN(V),N$(V):GOTO1060
7400 ZZ=RND(9):FORI=1TOZZ:PRINTN(I),STRING$(5,5):NEXTI:FORI=1T
OZZ
7410 J=RND(P2):IFPEEK(A+PS(J))<>5THEN7410ELSEN(I)=PS(J):PRINTN(
I),N$(I):NEXTI:RETURN
8000 CLS:PRINTTAB(26);"PINBALL":PRINT
8010 PRINTTAB(8)"MICRO-80 PINBALL IS A FAST-PACED SIMULATION OF"
8020 PRINTTAB(8)"THE REAL-WORLD GAME IN WHICH A BOUNCING BALL"
8030 PRINTTAB(8)"COLLIDES WITH TARGETS IN AN ENCLOSED PLAYING"
8035 PRINTTAB(8)"AREA. THE PADDLES AT THE BOTTOM OF THE SCREEN"
8037 PRINTTAB(8)"HELP KEEP THE BALL IN PLAY. WHEN A TARGET (MAD
E"
8038 PRINTTAB(8)"UP OF NUMBERS) IS HIT, TEN TIMES THE VALUE OF"
8039 PRINTTAB(8)"THAT TARGET IS ADDED TO THE SCORE.":PRINT
8050 PRINTTAB(8)"USE 'Z' FOR LEFT PADDLE, AND '/' FOR RIGHT PAD
LE"
8060 PRINTTAB(8):INPUT"ENTER NUMBER OF BALLS (10 MAX)";BA:IFBA<1
ORBA>10THEN8060ELSEBA=BA-1
8070 D=140:E=0:GOTO100
9000 I=VARPTR(GQ$):X=PEEK(I+1)+256*PEEK(I+2)
9010 FORY=XTOX+22:READZ:POKEY,Z:NEXTY
9030 IFPEEK(16396)=281THENPOKE16526,PEEK(I+1):POKE16527,PEEK(I+2
)ELSECMD"T":DEFUSR0=X:POKE14308,0
9040 RETURN

```

Help Wanted: Columnist

The new SoftSide (coming next month!) needs a person to write a column on music and sound effects. Must have a TRS-80 and at least one of these other computers: Apple, Atari, or PET. A short monthly column would ideally discuss one sound, such as a gun shot, then provide routines to incorporate that sound in user programs on different computers. If intersted, write to George Blank, editor in chief, SoftSide.

TAKE APART: PINBALL

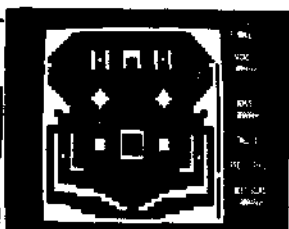
by Garth Jensen

If you need to move strings around the video screen when the content of the strings is continually changing, try this approach: Define dummy string variables, then use VARPTR and POKE to redefine the memory locations referenced by the dummy string names.

The PINBALL program elsewhere in this issue illustrates the technique. Lines 6090 and 6094 define 11 dummy strings

ZQ(I) then poke a video string length of 64 bytes into VARPTR (ZQ(I)). Next, the LSB and MSB of video line addresses are poked into VARPTR (ZQ(I))+1 and VARPTR(ZQ(I))+2, respectively. If line 1100 is executed, the string defined as the 11th video line is printed on the 12th line, the 10th line is printed on the 11th line, etc. This allows the Wipeout portion of PINBALL to lower the top 11 lines of video intact, regardless of their content.

PIN



BALL

Bust your BUMPERS!

by John Allen
from Acorn

Flashy lights, lots of sound, machine language speed combine to give the most realistic real time pinball game available for the TRS-80.

You control how fast the ball enters the playing field. You control the flippers. Try for a DOUBLE BONUS or even TRIPLE BONUS. Be alert for the sudden appearance of the "BERMUDA SQUARE". Becoming trapped inside can really help you rack up the points!

Put your quarters in the bank and play pinball at home.

16K Cassette

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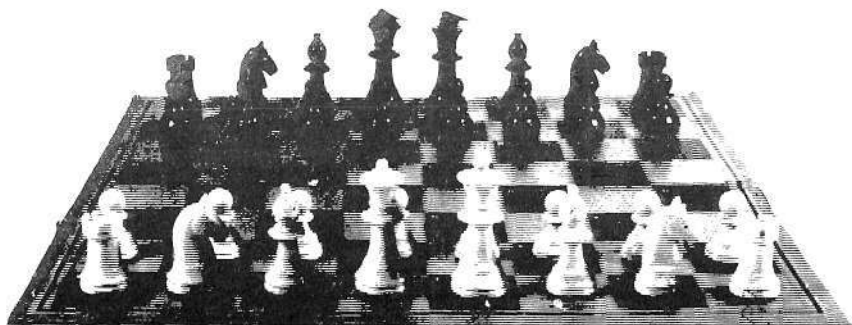
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TSE

NOTE: ST-80 is a trademark
of Lance Micklus, Inc.

by Lance Micklus

The ST-80 family of smart terminal packages

Now you can have the right terminal package for your communication needs! From ST-80 UC — the simple, pre-set, inexpensive terminal program designed for users of THE SOURCE, MICRONET, and FORUM 80 — to the power and sophistication of ST-80 III, The Software Exchange has the package for you.

All four programs include the ability to use an unmodified TRS-80 keyboard to produce RUB, ESC, and other control characters for time sharing, software control of the RS-232-C board, repeat key, bell, software support for the three most common upper/lower case hardware conversions, and line printer output.

ST-80 UC 4K Level II cassette, \$24.95

This universal communicator program is an easy-to-use timesharing program for the beginner. Special features include preset parity, word length, and baud rate (regardless of switch settings on the RS-232-C board) for THE SOURCE, MICRONET, and FORUM 80, automatic testing of the RS-232-C board, and even spooling of prepared messages on tape directly into FORUM 80 using a basic program supplied as a line listing.

ST-80 4K Level II cassette \$49.95

The original smart terminal program for the TRS-80, ST-80 lets you reprogram your RS-232-C board from the keyboard, and run at different baud rates. Does not have auto testing of RS-232-C or tape spooling.

ST-80 D 32K disk program, \$79.95

Special features include connection time clock, option of user-created translation tables for keyboard, gathering and pre-formatting data to be sent directly from disk to host computer, spooling of received files to disk or printer, editing of received files, and auto logon. If you use it with VTOS 3.1, you also get device driven I/O, job logging, and chaining.

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Short version of Adventureland, a great way to try out adventuring (but you'll get addicted!) \$5.95
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ADVENTURELAND

by Scott Adams

The following two programs, ADVENTURE BUILDER and ADVENTURE INTERPRETER, will allow you to create and play Scott Adams' ADVENTURELAND in BASIC. BUILDER creates a data tape (you'll need a C-60 cassette since the program runs for about 20 minutes) which is read by INTERPRETER.

(Editor's note: If you'd rather not wait for 20 minutes just to play the game in BASIC, you can always order the fast-loading, instant-response machine language version from TSE!)

As for the game itself, your goal is to explore the strange world in which you will find yourself, and attempt to find "TREASURES". Of course, simply finding them is not sufficient; you must also discover where they must be stored in order to earn points.

Part of the fun of all ADVENTURE games is discovering just what the computer will allow you to do. You talk to the computer by means of two-word sentences such as GO NORTH, GET AX, TAKE INVENTORY and SAVE GAME. HELP and SCORE are words that may be used by themselves. Since the computer knows over 100 words, if one word doesn't accomplish what you want, try another.

You'll be meeting some fascinating and sometimes dangerous creatures as you wander through ADVENTURELAND. Be brave and inventive! In your attempts to recover the "TREASURES", you will definitely find it helpful to draw a map.

That's all we're going to tell you! Happy Adventuring...

ADVENTURE BUILDER

10 / **** BE SURE TO USE A C-60 TAPE FOR YOUR DATA TAPE!!!!

20 / ADVENTURE DATA TAPE BUILDER. ADVENTUR/BLD

30 / VERSION 1.3 (C) SCOTT ADAMS '88.

40 / ADVENTURE INTERNATIONAL BOX 3435 LONGWOOD FL 32750

50 / PHONE (305)-862-6917

60 / BUILDS DATA TAPE FOR ORIGINAL BASIC VERSION OF ADVENTURELAN

D

70 / PLEASE NOTE ON LINES THAT SUDDENLY GO TO THE
NEXT LINE LIKE

THIS USE <DOWN ARROW> KEY WHICH IS RIGHT ABOVE
THE LEFT HAND SHIFT KEY ON YOUR TRS-80!

75 IFPEEK(16396)<201THENCMD*T"

80 DATA 60, 151, 59, 33, 5, 11, 13, 3, 125, 71, 3, 75, 161, 306, 160
200, 0, 17612, 0, 10, 401, 420, 400, 146, 0, 1852, 8850, 0, 421, 0, 0, 0, 2011
0, 0, 521, 520, 260, 0, 0, 2609, 7000, 100, 100, 760, 820, 420, 100, 8312, 1026
4, 100, 404, 0, 0, 0, 5613, 0, 5, 141, 140, 20, 246, 0

90 DATA 062, 0, 5, 406, 426, 400, 442, 146, 7045, 0, 0, 402, 152, 0, 0, 0, 2311,
0, 100, 104, 0, 0, 0, 8350, 0, 50, 161, 246, 160, 1100, 0, 7259, 7000, 100, 140
140, 940, 500, 0, 18262, 9900, 30, 041, 426, 406, 400, 0, 7045, 0, 50, 542, 141
0, 0, 0, 10504, 9150, 100, 240, 642, 720, 640, 700

100 DATA 0005, 7950, 100, 240, 542, 1040, 540, 0, 0005, 0, 100, 20, 49, 20, 40,
0, 6360, 8700, 25, 200, 260, 200, 0, 0, 7060, 9150, 100, 240, 240, 0, 0, 0, 9660,
0, 100, 269, 260, 0, 0, 0, 16350, 17357, 100, 20, 40, 20, 40, 0, 4110, 9000, 4366
22, 0, 0, 0, 0, 6900, 0, 4374, 0, 0, 0, 0, 0, 9750, 0, 4404

110 DATA 682, 0, 0, 0, 0, 6900, 0, 4407, 82, 0, 0, 0, 0, 6900, 0, 1521, 142, 421, 4
20, 140, 0, 8902, 450, 1542, 462, 141, 460, 0, 0, 7000, 0, 1521, 142, 401, 400, 1
40, 0, 8902, 450, 2742, 461, 460, 502, 700, 500, 8064, 0005, 2742, 461, 460, 0,
0, 0, 7950, 0, 1523, 402, 146, 0, 0, 0, 2311, 0, 1523, 402

120 DATA 141, 266, 0, 0, 0, 2400, 0, 1523, 402, 141, 261, 260, 520, 8902, 0, 1533,
0, 0, 0, 0, 0, 9900, 0, 4350, 0, 0, 0, 0, 0, 9600, 0, 5100, 0, 0, 0, 0, 0, 9900, 0, 345
0, 501, 344, 460, 0, 0, 8110, 8614, 2125, 623, 566, 0, 0, 0, 2050, 0, 2125, 621, 5
61, 620, 0, 0, 3021, 9209, 6794, 0, 0, 0, 0, 0, 17100, 0

130 DATA 2125, 622, 561, 620, 240, 0, 10555, 8720, 104, 404, 702, 300, 0, 0, 0, 0,
64, 0, 1525, 24, 806, 0, 0, 0, 2400, 0, 1525, 24, 001, 000, 620, 0, 8902, 0, 2725,

621, 620, 800, 0, 0, 8902, 3450, 2125, 362, 561, 0, 0, 0, 3300, 0, 6003, 0, 0, 0, 0
 , 0, 17100, 0, 185, 384, 0, 0, 0, 0, 3750, 0, 1510, 762, 760
 140 DATA305, 0, 0, 7000, 0, 2710, 761, 760, 502, 20, 0, 7906, 8700, 6343, 921,
 920, 0, 0, 0, 509, 0, 1513, 122, 261, 260, 240, 0, 8902, 0, 900, 384, 420, 726, 0,
 0, 8164, 0, 900, 424, 380, 0, 0, 0, 8164, 0, 185, 424, 502, 0, 0, 0, 3900, 0, 185, 4
 24, 505, 440, 0, 0, 8164, 0, 7015, 0, 0, 0, 0, 0, 10650, 0
 150 DATA204, 602, 0, 0, 0, 0, 7650, 0, 2723, 521, 502, 520, 400, 200, 4259, 800
 0, 1513, 122, 266, 0, 0, 0, 2400, 0, 5751, 62, 0, 0, 0, 0, 300, 0, 207, 40, 102, 0, 0
 , 0, 8164, 0, 2713, 241, 240, 260, 0, 0, 8902, 4350, 1520, 442, 440, 200, 0, 0, 83
 19, 8294, 1257, 100, 102, 292, 00, 221, 8303, 1050, 5070
 160 DATA104, 322, 206, 0, 0, 900, 0, 5570, 104, 322, 206, 0, 0, 900, 0, 3611, 22
 1, 60, 220, 0, 0, 4550, 7950, 5070, 322, 201, 320, 340, 0, 8303, 9600, 2737, 721
 , 605, 720, 0, 0, 7950, 0, 900, 384, 721, 0, 0, 0, 5011, 0, 2737, 721, 1120, 900, 6
 00, 720, 8003, 8309, 1537, 722, 720, 0, 0, 0, 4052, 0
 170 DATA300, 0, 0, 0, 0, 0, 5100, 0, 3900, 0, 0, 0, 0, 0, 9013, 0, 1510, 762, 502
 , 0, 0, 0, 3900, 0, 2710, 761, 505, 820, 760, 0, 5303, 8050, 1050, 60, 765, 60, 0,
 0, 16710, 0, 4000, 60, 60, 542, 0, 0, 5910, 0, 4950, 0, 0, 0, 0, 9750, 0, 7050, 4
 01, 0, 0, 0, 0, 16613, 15750, 7050, 421, 0, 0, 0, 0, 16613
 180 DATA15750, 104, 364, 0, 0, 0, 0, 15300, 0, 1554, 602, 0, 0, 0, 0, 7650, 0, 52
 50, 502, 060, 360, 500, 0, 6212, 8250, 2723, 521, 542, 400, 800, 540, 8003, 829
 3, 7350, 60, 60, 0, 0, 0, 9001, 16607, 5070, 342, 0, 0, 0, 0, 9600, 0, 166, 702, 30
 0, 0, 0, 0, 8164, 0, 1050, 60, 760, 100, 00, 502, 8300
 190 DATA710, 6761, 0, 0, 0, 0, 0, 16614, 0, 5400, 0, 0, 0, 0, 0, 197, 0, 207, 02,
 60, 0, 0, 0, 8164, 0, 1257, 102, 221, 100, 00, 201, 8303, 1200, 6030, 502, 0, 0, 0
 , 0, 3947, 0, 6039, 542, 0, 0, 0, 0, 5097, 0, 6313, 241, 240, 260, 0, 0, 509, 7000,
 6313, 122, 0, 0, 0, 0, 450, 0, 6342, 461, 460, 0, 0, 0, 509
 200 DATA0, 7500, 322, 60, 320, 340, 60, 8303, 010, 4050, 524, 10, 0, 0, 0, 4950
 , 0, 4050, 524, 11, 200, 0, 0, 8164, 0, 1200, 226, 0, 0, 0, 0, 5700, 0, 6600, 943, 2
 21, 220, 500, 140, 2762, 8700, 6600, 221, 527, 220, 500, 0, 2762, 9900, 4217, 1
 03, 0, 0, 0, 0, 7650, 0, 1521, 142, 140, 0, 0, 0, 7000, 0
 210 DATA4217, 203, 169, 960, 160, 0, 7403, 8700, 4217, 203, 220, 0, 0, 0, 150,
 0, 4217, 203, 200, 220, 660, 960, 7550, 8159, 4217, 203, 100, 200, 660, 900, 75
 50, 8159, 4217, 203, 160, 900, 100, 0, 7403, 8700, 7650, 401, 400, 420, 0, 0, 46
 2, 8902, 7650, 421, 0, 0, 0, 0, 463, 9150, 4050, 527, 0, 0
 220 DATA0, 0, 15300, 0, 3450, 506, 0, 0, 0, 0, 150, 0, 6600, 0, 0, 0, 0, 0, 150, 0,
 5201, 0, 0, 0, 0, 0, 16607, 5100, 6007, 0, 0, 0, 0, 0, 15450, 0, 2723, 521, 400, 52
 0, 260, 0, 8009, 7000, 6700, 0, 0, 0, 0, 0, 15450, 0, 6771, 0, 0, 0, 0, 0, 15450, 0,
 7200, 0, 0, 0, 0, 0, 15600, 0, 207, 224, 560, 0, 0, 0, 8164
 230 DATA0, 7050, 524, 0, 0, 0, 0, 16605, 16350, 7050, 224, 0, 0, 0, 0, 16605, 0,
 7050, 384, 0, 0, 0, 0, 16605, 0, 7050, 464, 0, 0, 0, 0, 16606, 0, 7050, 264, 0, 0, 0

, 0, 16609, 0, 7050, 344, 0, 0, 0, 0, 16609, 0, 7050, 304, 0, 0, 0, 0, 16609, 0, 7050
0, 424, 0, 0, 0, 0, 16605, 0, 7050, 164, 0, 0, 0, 0, 16608, 0
240 DATA5570, 281, 322, 340, 320, 0, 8005, 0, 206, 342, 120, 0, 0, 0, 8156, 960
0, 2117, 201, 200, 180, 0, 0, 8902, 1500, 2119, 181, 180, 200, 0, 0, 8902, 1350,
1551, 62, 0, 0, 0, 0, 1711, 0, 166, 1042, 400, 0, 0, 0, 8164, 0, 1549, 0, 0, 0, 0, 0,
16611, 0, 2100, 561, 365, 0, 0, 0, 3600, 0, 5250, 0, 0, 0, 0
250 DATA0, 150, 0, 3450, 581, 347, 340, 0, 0, 8118, 8464, 7050, 24, 0, 0, 0, 0, 1
6605, 0, 3611, 226, 0, 0, 0, 0, 5700, 0, 7050, 404, 0, 0, 0, 0, 16616, 15450, 6774
, 0, 0, 0, 0, 0, 9750, 0, 166, 84, 100, 0, 0, 0, 8164, 0, 1542, 462, 482, 146, 0, 0, 2
311, 0, 7050, 0, 0, 0, 0, 0, 150, 0, 1200, 0, 0, 0, 0, 0, 197
260 DATA0, 3600, 0, 0, 0, 0, 0, 16800, 0, AUT, ANY, GO, NORTH, *ENT, SOUTH, *RU
N, EAST, *WAL, WEST, *CLI, UP, JUM, DOWN, BEA, NET, CHO, FIS, *CUT, FWA, TAK, M
IR, *GET, AXE, *PIC, *AX, *CAT, WAT, LIG, BOT, *TUR, GAM, *LAM, HOL, *BUR, LAM
, DRO, *ON, *REL, OFF, *SPI, DOO, *LEA, MUD, STO, *MED
270 DATAWA, BEE, THR, SCO, TOS, GAS, GUI, FLI, SWI, EGG, RUB, OIL, LOO, *SLI
, *SHO, KEY, *SEE, HEL, DRA, BUN, SCO, INV, INV, LED, VEL, THR, WAK, CRO, UNL, B
RI, REA, BEA, OPE, DRA, ATT, RUG, *HIT, RUB, DRI, MON, *GAT, FRU, BUN, OX, FIN,
RIN, *LOC, CHI, HEL, *BIT, SAY, BRA, WIN, SIG, DOO, BLA
280 DATASCR, WEB, SAV, *WRI, , SWA, , LAV, , ARO, , HAL, , TRE, , *STU, , FIR, 0, 7
, 10, 1, 0, 24, , 23, 1, 1, 25, 0, 0, DISMAL SWAMP, 0, 0, 0, 0, 0, 1, TOP OF A TALL
CYPRESS TREE, 1, 1, 1, 1, 1, 4, LARGE HOLLOW DAMP STUMP IN THE SWAMP
, 0, 0, 0, 0, 3, 5, ROOT CHAMBER UNDER THE STUMP, 0, 0
290 DATA0, 0, 4, 0, SEMI-DARK HOLE NEXT TO ROOT CHAMBER, 0, 0, 0, 0, 5, 7,
LONG DOWN SLOPING HALL, 8, 9, 0, 27, 6, 12, LARGE CAVERN, 0, 7, 0, 0, 0, 0, LA
RGE 8 SIDED ROOM, 7, 0, 0, 0, 20, 0, ROYAL ANTEROOM, 11, 10, 26, 1, 0, 26, *I'
M ON THE SHORE OF A LAKE, 11, 11, 23, 11, 0, 0
300 DATAFOREST, 13, 15, 15, 0, 0, 13, MAZE OF PITS, 0, 0, 0, 14, 12, 0, MAZE O
F PITS, 17, 12, 13, 16, 16, 17, MAZE OF PITS, 12, 0, 13, 12, 13, 0, MAZE OF PI
TS, 0, 17, 0, 0, 14, 17, MAZE OF PITS, 17, 12, 12, 15, 14, 18, MAZE OF PITS, 0,
0, 0, 0, 17, 0
310 DATABOTTOM OF A CHASM. ABOVE ME IS
A PAIR OF LEDGES. ONE HAS A BRICKED UP WINDOW ACROSS ITS FACE
THE OTHER FACES A THRONE ROOM, , 0, 0, 0, 20, 0, 0, *I'M ON A NARROW LED
GE BY A CHASM. ACROSS THE CHASM IS
THE THRONE ROOM, 0, 0, 0, 0, 0, 9
320 DATAROYAL CHAMBER, 0, 0, 0, 0, 0, 0, NARROW LEDGE BY A THRONE ROOM.
ACROSS THE CHASM IS ANOTHER LEDGE, , 0, 0, 0, 0, 0, 21, THRONE ROOM, 10, 1
, 10, 11, 0, 0, SUNNY MEADOW, 0, 0, 0, 0, 0, 0
330 DATA*I THINK I'M IN REAL TROUBLE NOW THERE'S A FELLOW HERE
WITH

A PITCHFORK AND POINTED TAIL . OH HELL!

. 11. 0. 1. 11. 0. 0. HIDDEN GROVE. 0. 0. 0. 0. 0. 0. QUICK-SAND BOG. 0. 0. 7. 0. 0
. 0. MEMORY RAM OF A TRS-80

I TOOK A WRONG TURN! . 0. 0. 0. 0. 0. 11

340 DATATOP OF AN OAK

TO THE EAST I SEE A MEADOW BEYOND THAT A LAKE . 0. 0. 0. 0. 0. 0. 0. 0.
. 0. 0. 0. 0. . 0. 0. 0. 0. 0. 0. . 0. 0. 0. 0. 0. 0. . 0. 24. 11. 24. 28. 24. LARGE MISTY
ROOM WITH STRANGE

UNREADABLE LETTERS OVER ALL THE EXITS . . NOTHING HAPPENS

350 DATACHOP IT DOWN! . BOY THAT REALLY HIT THE SPOT! . DRAGON SMELL
S SOMETHING AWAKENS. ATTACKS ME! . LOCK SHATTERS. I CAN'T ITS LOCK
ED. TIMBER SOMETHING FELL FROM THE TREE TOP AND VANISHED! . TIMBER
! . LAMP IS OFF. FLAMELESS LAMP IS LIT

360 DATA I'M BIT BY A SPIDER. MY CHIGGER BITES ARE NOW INFECTED. MY
BITES HAVE ROTTED MY WHOLE BODY. BEAR EATS THE HONEY AND FALLS A
SLEEP. BEES STING ME. I'VE NO CONTAINER. THE BEES ALL SUFFOCATED AND
D DISAPPEARED

370 DATASOMETHING I'M HOLDING VIBRATES AND . NOTHING TO LIGHT I
T WITH. GAS BLADDER BLEW UP, IN MY HANDS! . GAS NEEDS TO BE CONTAIN
D BEFORE IT WILL BURN. GAS DISIPATES (I THINK YOU BLEW IT). THAT
WON'T IGNITE. HOW? JUMP? . BEAR WON'T LET ME

380 DATADON'T WASTE *MONEY* GET MAD INSTEAD. BEES MADEN BEAR BE
AR THEN ATTACKS ME! . IT SOAKS INTO THE GROUND. IN 1 WORD TELL ME A
T WHAT . OH NO BEAR DODGES CRASH . HEAVY! . SOMETHINGS TOO HEAVY
I FALL . TO STOP GAME SAY QUIT

390 DATAMIRROR HITS FLOOR AND SHATTERS INTO MILLION PIECES. MIRROR
R LANDS SOFTLY ON RUG LIGHTS UP AND SAYS. YOU LOST *ALL* TREASUR
ES . NOT CARRYING AXE TAKE INVENTORY! . IT DOESN'T BOTHER HIM AT A
LL. THE MUD DRIED UP AND FELL OFF

400 DATATHE BEAR IS SO STARTLED HE FALLS OFF THE LODGE . *DRAGON
STING* AND FADES I DON'T GET IT I HOPE YOU DO . THE BEES ATTACK
THE DRAGON WHICH GETS SO ANNOYED IT GETS UP

AND FLYS AWAY . MAGIC OIL ATTACKS MAGIC LAMP LAMP IS NOW FULL

410 DATAT I'M BIT BY CHIGGERS. THERE'S SOMETHING THERE ALL RIGHT! M
AYBE I SHOULD GO THERE? . MAYBE IF I THREW SOMETHING? . TOO DRY
FISH DIE . A GLOWING GENIE APPEARS DROPS SOMETHING THEN VANISH
S

420 DATAA GLOWING GENIE APPEARS SAYS -BOY YOU'RE SELFISH- TAKES
SOMETHING AND THEN MAKES -ME- VANISH! . NO ITS TOO HOT, NOT HERE
TRY THE SWAMP. USE ONE WORD

430 DATATRY--> LOOK JUMP SWIM CLIMB THROW FIND TAKE INVENTORY SCORE

DROP AND ANY OTHER VERB YOU THINK OF. SOME MAY NOT NEED A NOUN. ONLY 3 THINGS WILL MAKE THE DRAGON AND 1 ITEM IS DANGEROUS BY ITSELF!!

440 DATAIF YOU EVER WANT A HINT ON SOMETHING TRY -'HELP'. READ SIGN IN THE MEADOW!. YOU MAY NEED MAGIC WORDS HERE. A VOICE BOOOOMS OUT. PLEASE LEAVE IT ALONE. CAN ONLY THROW AX. MEDICINE IS GOOD FOR BITES. I DON'T KNOW WHERE IT IS

450 DATATO WIN GET 100 WHEN YOU SAY 'SCORE' A TREASURE IS ANYTHING WITH AN * IN THE NAME. BLOW IT UP. FISH ESCAPE BACK TO LAKE. 0. DARK HOLE. 4. *POT OF RUBIES*/RUB/. 4. SPIDER WEB WITH WRITING ON IT. 2

460 DATA-HOLLOW- STUMP AND REMAINS OF A FELLED TREE. 0. CYPRESS TREE. 1. WATER. 10. EVIL SMELLING MUD/MUD/. 1. *GOLDEN FISH*/FIS/. 10. LIT BRASS LAMP/LAM/. 0. OLD FASHIONED BRASS LAMP/LAM/. 3. RUSTY AXE (MAGIC WORD -BUNYON- ON IT)/AXE/. 10

470 DATABOTTLE WITH WATER/BOT/. 3. EMPTY BOTTLE/BOT/. 0. RING OF SKELETON KEYS/KEY/. 2. SIGN -LEAVE TREASURES HERE. SAY SCORE. -. 3. LOCKED DOOR. 5. OPEN DOOR WITH A HALLWAY BEYOND. 0. SWAMP GAS. 1. *GOLDEN NET*/NET/. 18. CHIGGER BITES. 0

480 DATAINFECTED CHIGGER BITES. 0. FLOATING PATCHES OF OILY SLIME. 1. *ROYAL HONEY*/HON/. 0. LARGE AFRICAN BEES. 0. VERY THIN BLACK BEAR. 21. BEES IN A BOTTLE/BOT/. 0. LARGE SLEEPING DRAGON. 23. FLINT & STEEL/FLI/. 13. *THICK PERSIAN RUG*/RUG/. 17

490 DATASIGN -MAGIC WORD IS AWAY. LOOK LA (REST OF SIGN IS MISSING). 18. DISTENDED GAS BLADDER/BLA/. 0. BRICKED UP WINDOW. 20. SIGN HERE SAYS -IN MANY CASES MUD IS GOOD. IN OTHERS. -. 23. STREAM OF LAVA. 18

500 DATABRICKED UP WINDOW WITH A HOLE IN IT BEYOND IS A LEDGE. 0. LOOSE FIRE BRICKS. 0. *GOLD CROWN*/CRO/. 22. *MAGIC MIRROR*. 21. SLEEPING BEAR. 0. EMPTY WINE BLADDER/BLA/. 9. BROKEN GLASS. 0. CHIGGERS/CHI/. 1. DEAD BEAR. 0

510 DATA*DRAGON EGGS* (VERY RARE)/EGG/. 0. LAVA STREAM WITH BRICK DAM. 0. *JEWELLED FRUIT*/FRI/. 25. *SMALL STATUE OF A BLUE OX*/OX/. 26. *DIAMOND RING*/RIN/. 0. *DIAMOND BRACELET*/BRAV/. 0. STRANGE SCRATCHINGS ON ROCK SAYS -ALADIN WAS HERE-. 14

520 DATASIGN SAYS -LIMBO FIND RIGHT EXIT AND LIVE AGAIN!-. 33. SMOKING HOLE PIECES OF DRAGON AND GORE. 0. SIGN SAYS -NO SWIMMING

```

ALLOWED HERE-, 10, ARROW POINTING DOWN, 17, DEAD FISH/FIS/, 0, #FIREST
ONE*(COLD NOW)/FIR/, 0, SIGN SAYS -PAUL'S PLACE-
530 DATA25, TREES, 11, , 0, , 0,
540 CLEAR800:DEFINTRA=2:POKE 16553, 255:RESTORE
550 CLS:INPUT"PREPARE DATA TAPE (HIT ENTER)":TP$
560 CLS:PRINT#4*4, "ADVENTURE DATA TAPE BUILDER - WORKING"
570 READ IL, CL, NL, RL, MX, R, TT, LN, LT, ML, TR:PRINT#-1, IL, CL, NL, RL, MX
, R, TT, LN, LT, ML, TR
580 DIMCA(1, 7), NV$(NL+10, 1), IA$(IL), IA(IL), RS$(RL), RM(RL, 5), MS$(
ML), AA(5), AS(9), A(1, 7)
590 FORZ=0TOCL STEP2:FORXX=0TO1:FORY=0TO7:READCA(XX, Y):NEXTY, XX:
X=0
600 Y=X+1:PRINT#-1, CA(X, 0), CA(X, 1), CA(X, 2), CA(X, 3), CA(X, 4), CA(X,
5), CA(X, 6), CA(X, 7), CA(Y, 0), CA(Y, 1), CA(Y, 2), CA(Y, 3), CA(Y, 4), CA(Y,
5), CA(Y, 6), CA(Y, 7):NEXTZ
610 FORX=0TONL:FORY=0TO1:READ NV$(X, Y):NEXTY, X
620 FORX=0TORL:READ RM(X, 0), RM(X, 1), RM(X, 2), RM(X, 3), RM(X, 4), RM(X
, 5), RS$(X):NEXT
630 FORX=0TONL:READ MS$(X):NEXT
640 FORX=0TOIL:READ IA$(X), IA(X):NEXT
650 FORX=0TONLSTEP10:FORY=0TO1:PRINT#-1, NV$(X, Y), NV$(X+1, Y), NV$(
X+2, Y), NV$(X+3, Y), NV$(X+4, Y), NV$(X+5, Y), NV$(X+6, Y), NV$(X+7, Y), NV
$(X+8, Y), NV$(X+9, Y):NEXTY, X
660 FORX=0TORL:PRINT#-1, RM(X, 0), RM(X, 1), RM(X, 2), RM(X, 3), RM(X, 4),
RM(X, 5), RS$(X):NEXT
670 FORX=0TONL:PRINT#-1, MS$(X):NEXT
680 FORX=0TOIL:PRINT#-1, IA$(X), IA(X):NEXT
690 INPUT"REWIND TAPE TO BE VERIFIED":TP$
700 POKE16553, 255:RESTORE:FORX=1TO11:READA0:NEXT
710 INPUT#-1, A0, A1, A2, A3, A4, A5, A6, A7, A8, A9, B0
720 IFB0<0TORA0<0ILORA1<0CLORA2<0NLORA3<0RLORA4<0MXDRA5<0ROR(A6
<0TT)ORA7<0LNOR(A8<0LT)ORA9<0MLTHEN790
730 FORX=0TOCL STEP2:INPUT#-1, A(0, 0), A(0, 1), A(0, 2), A(0, 3), A(0, 4)
, A(0, 5), A(0, 6), A(0, 7), A(1, 0), A(1, 1), A(1, 2), A(1, 3), A(1, 4), A(1, 5),
A(1, 6), A(1, 7)
740 FORY=0TO1:FORZ=0TO7:POKE16553, 255:READA8:IFA(Y, Z)<A8THEN790
ELSENEXTZ, Y, X
750 FORX=0TONLSTEP10:FORY=0TO1:INPUT#-1, AS(0), AS(1), AS(2), AS(3),
AS(4), AS(5), AS(6), AS(7), AS(8), AS(9):FORZ=0TO9:IFNV$(X+Z, Y)<AS(Z
)THEN790ELSENEXTZ, Y, X

```

```

600 FORX=ATODI: INPUT#-1, A$(1), A$(2), A$(3), A$(4), A$(5), A$(6)
610 A$(6)=ATOD5: IF A$(Y)<>ARM(X,Y)OR A$(X)<>RS$(X) THEN 790 ELSE NEXT Y
770 FORX=ATODI: INPUT#-1, A$(1), A$(2), A$(3), A$(4), A$(5), A$(6)
780 FORX=ATODI: INPUT#-1, A$(1), A$(2), A$(3), A$(4), A$(5), A$(6)
790 ELSE NEXT X
810 PRINT "DATA TAPE VERIFIED" END
790 PRINT "BAD TAPE" END

```

PENTOMINOES

by James Garon

Endless fascination for the dedicated puzzler! Each pentomino is made up of five squares, and there are twelve shapes. You can rotate them, flip them over, remove pieces at will and try them elsewhere, but to win you must fit them together to form a larger, 60-square shape. Top notch graphics and SOUND EFFECTS.

Level II, 16K

New low price! \$7.95

The Software Exchange

6 South Street
Milford, NH 03055

AMATEUR ASTRONOMY HANDBOOK

by George Hall

\$14.95

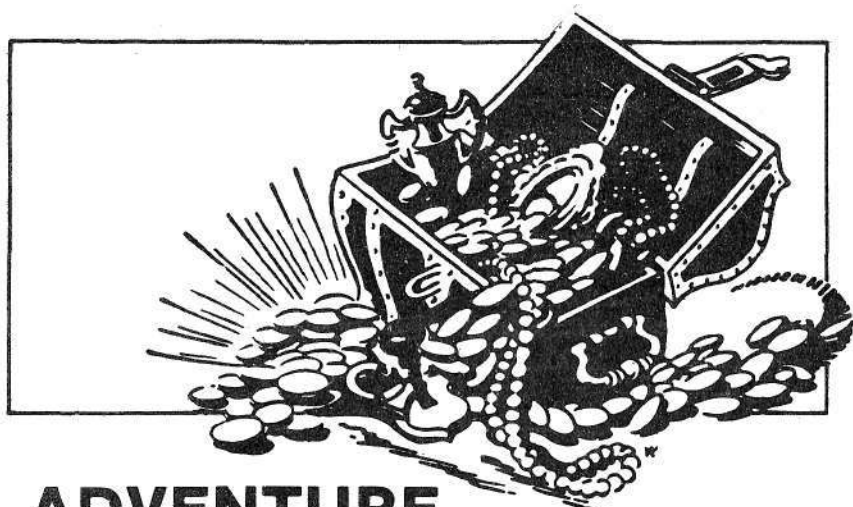


Amateur Astronomy Handbook is a Level II, 16K program designed to help anyone from the casual observer of the glorious Night Skies to the more advanced amateur who needs reasonably accurate positional information on the Sun, Moon and Planets.

Partial List of Features:

- * Convert Local to Sidereal time
- * Convert Right Ascension/Declination to Azimuth/Altitude or Heliocentric Longitude/Latitude
- * Determine Local times of Sunrise, Sunset, Moonrise, Moonset and Phases.
- * Plot position of Sun, Moon and visible planets.

The Software Exchange



ADVENTURE INTERPRETER

by Scott Adams

This program will read the cassette created by ADVENTURE BUILDER. Then it will be time to begin your adventure. Be prepared to spend many hours in your search for *TREASURES*. You'll need all your cleverness and bravery to deal with the creatures and situations which await you...

ADVENTURE INTERPRETER

1 'COPYRIGHT SCOTT ADAMS. 1978. 1-385-862-6917.

5 CLEAR\$400:DEFINT A-Z:IF PEEK(16396) > 201 THEN CMD "T"

78 X=Y=Z:K=R=Y:N=LL=F:TP\$=K\$:GOTO 190

80 CLS:PRINT" *** WELCOME TO ADVENTURE LAND. (#4, 2) ***":P

RINT:PRINT" UNLESS TOLD DIFFERENTLY YOU MUST FIND *TREASURES*
AND-RETURN-THEN-TO-THEIR-PROPER-PLACE!"

85 PRINT:PRINT" I'M YOUR PUPPET. GIVE ME ENGLISH COMMANDS THAT"

90 PRINT" CONSIST OF A NOUN AND VERB. SOME EXAMPLES. ...":PRINT:PRI

NT" TO FIND OUT WHAT YOU'RE CARRYING YOU MIGHT SAY: TAKE INVENTOR

Y

TO GO INTO A HOLE YOU MIGHT SAY: GO HOLE

TO SAVE CURRENT GAME: SAVE GAME"

100 PRINT:PRINT" YOU WILL AT TIMES NEED SPECIAL ITEMS TO DO THING
S, BUT I'M

SURE YOU'LL BE A GOOD ADVENTURER AND FIGURE THESE THINGS OUT. "

NOTE:

The "A" in line
listings should
be ↑

```

120 PRINT:INPUT"      HAPPY ADVENTURING... HIT ENTER TO START";K$
:CLS:RETURN
190 GOSUB5000
192 R=AR:LX=LT:DF=0:SF=0:INPUT"RETRIEVE OLD 'SAVED' GAME";K$:IFL
EFT$(K$,1)O"Y"THEN200
193 INPUT"READY SAVED TAPE";K$:PRINTINT(IL*5/60)+1;"MINUTES"
195 INPUT#-1,SF,LX,DF,R:FORX=0TOIL:INPUT#-1,IA(X):NEXT
200 GOSUB800:CLS:GOSUB1500:GOTO225
210 INPUT"TELL ME WHAT TO DO";TP$:PRINT:GOSUB1000:IFFPRINT"YOU U
SE WORD(S) I DON'T KNOW":GOTO210
215 IFIL>8IFIA(9)=-1THENLX=LX-1:IFLX<0THENPRINT"LIGHT HAS RUN OU
T":IA(9)=0ELSEIFLX<25PRINT"LIGHT RUNS OUT IN";LX;"TURNS:"
220 GOSUB2000
225 NV(0)=0:GOSUB2000:GOTO210
1000 K=0:NT$(0)="" :NT$(1)=""
1010 FORX=1TOLEN(TP$):K$=MID$(TP$,X,1):IFK$=" "THENK=1ELSENT$(K)
=NT$(K)+K$
1030 NEXTX:FORX=0TO1:NV(X)=0:IFNT$(X)=""THEN1070ELSENT$(X)=LEFT$
(NT$(X),LN):FORY=0TONL:K$=NV$(Y,X):IFLEFT$(K$,1)=""THENK$=MID$(
K$,2)
1035 IFX=1IFY<7THENK$=LEFT$(K$,LN)
1040 IFNT$(X)=K$THENNV(X)=YELSENEXTY:GOTO1070
1060 IFLEFT$(NV$(NV(X),X),1)=""THENNV(X)=NV(X)-1:GOTO1060
1070 NEXTX:F=NV(0)<10ORLEN(NT$(1))>0ANDNV(1)<1:RETURN
1500 IFDFIFIA(9)O-1ANDIA(9)ORPRINT"I CAN'T SEE, ITS TOO DARK."
:RETURN
1505 K=-1:IFLEFT$(RS$(R),1)=""PRINTMID$(RS$(R),2);:GOTO1520
1510 PRINT"I'M IN A ";RS$(R);
1520 FORZ=0TOIL:IFKIFIA(Z)=RPRINT" VISIBLE ITEMS HERE ARE:
":K=0
1524 GOTO1530
1525 TP$=IA$(Z):IFRIGHT$(TP$,1)="/"FORM=LEN(TP$)-1TO1STEP-1:IFM1
D$(TP$,M,1)="/"THENTP$=LEFT$(TP$,M-1)ELSENEXTM
1526 RETURN
1530 IFIA(Z)OORTHEN1540ELSEGOSUB1525:IFPOS(0)+LEN(TP$)+3>63THENP
RINT
1535 PRINTTP$;" "
1540 NEXT:PRINT
1550 K=-1:FORZ=0TO5:IFKIFRM(R,Z)OORPRINT"
OBVIOUS EXITS: ";K=0

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1560 IFRN(R,Z)O0PRINTN$(Z+1,1); " ";
1570 NEXT: IFNOTKPRINT
1580 PRINT: RETURN
2000 F2=-1: F=-1: F3=0: IFNV(0)=1ANDNV(1)<7THEN2210ELSEFORX=0TOCL: V
=CR(X,0)/150: IFNV(0)=0IFV<0THEN2930
2005 IFNV(0)>0THENNEXTX: GOT02901ELSEN=CR(X,0)-V*150
2010 IFNV(0)=0THENF=0: IFRND(100)<=NTHEN2030ELSENEXTX: GOT02901
2020 IFN<NV(1)ANDN<0THENNEXTX: GOT02901
2030 F2=-1: F=0: F3=-1: FORV=1TO5: LL=CR(X,V)/20: K=CR(X,V)-LL*20: F1=
-1: ONK+1GOTO2140, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 20
35, 2045, 2055
2035 F1=-1: FORZ=0TO1L: IFIA(Z)=-1THEN2140ELSENEXT: F1=0: GOT02140
2045 F1=0: FORZ=0TO1L: IFIA(Z)=-1THEN2140ELSENEXT: F1=-1: GOT02140
2050 F1=IA(LL)=-1: GOT02140
2055 F1=IA(LL)<0-1ANDIA(LL)>0R: GOT02140
2060 F1=IA(LL)=R: GOT02140
2070 F1=IA(LL)=RORIA(LL)=-1: GOT02140
2080 F1=R=LL: GOT02140
2090 F1=IA(LL)OR: GOT02140
2100 F1=IA(LL)<0-1: GOT02140
2110 F1=R<0L: GOT02140
2120 F1=SFANDCINT(2*LL+ 5): F1=F1<0: GOT02140
2130 F1=SFANDCINT(2*LL+ 5): F1=F1=0: GOT02140
2140 F2=F2ANDF1: IFF2THENNEXTVELSENEXTX: GOT02901
2150 IP=0: FORV=1TO4: K=(V-1)/2+6: ONVGOTO2160, 2170, 2160, 2170
2160 AC=CR(X,K)/150: GOT02200
2170 AC=CR(X,K)-CINT(CR(X,K)/150)*150
2200 IFAC>101THEN2205ELSEIFAC=0THEN2600ELSEIFAC<52THENPRINTMS$(A
C): GOT02600: ELSEONAC-51GOTO2230, 2260, 2270, 2280, 2290, 2300, 2310, 22
80, 2320, 2340, 2350, 2360, 2370, 2380, 2400, 2420, 2430, 2440, 2450, 2261
2205 IFAC<102THENPRINT"BAD ACTION"ELSEPRINTMS$(AC-50)
2207 GOT02600
2210 L=DF: IFLTHENL=DFANDIA(9)<0R ANDIA(9)>0-1: IFL PRINT"DANGEROU
S TO MOVE IN THE DARK!"
2215 IFNV(1)<1PRINT"PLEASE GIVE ME A DIRECTION ALSO ": GOT02930
2220 K=RM(R,NV(1)-1): IFK<1IFLTHENPRINT"I FELL DOWN AND BROKE MY
NECK. ": K=RL: DF=0: ELSEPRINT"I CAN'T GO IN THAT DIRECTION": GOT0293
0
2222 IFNOTLCL5
2225 R=K: GOSUB1500: GOT02930

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2230 L=0:FORZ=1TOIL:IFIA(Z)=-1LETL=L+1
2235 NEXTZ
2240 IFL=>MXPRINT"I'VE TOO MUCH TO CARRY":GOTO2600
2250 GOSUB4000:IA(P)=-1:GOTO2600
2260 GOSUB4000:IA(P)=R:GOTO2600
2261 PRINT"SAVING GAME":INPUT"READY OUTPUT TAPE";K$:PRINTINT(IL*
5/60)+1;"MINUTES"
2265 PRINT#-1,SF,LX,DF,R:FORX1=0TOIL:PRINT#-1,IA(X1):NEXTX1
2266 GOTO2600
2270 GOSUB4000:R=P:GOTO2600
2280 GOSUB4000:IA(P)=0:GOTO2600
2290 DF=-1:GOTO2600
2300 DF=0:GOTO2600
2310 GOSUB4000
2315 SF=SF ORCINT(.5+2^P):GOTO2600
2320 GOSUB4000
2325 SF=SFANDNOTCINT(.5+2^P):GOTO2600
2340 PRINT"I'M DEAD...":R=RL:DF=0:GOTO2370
2350 GOSUB4000:L=P:GOSUB4000:IA(L)=P:GOTO2600
2360 PRINT"THE GAME IS NOW OVER":INPUT"ANOTHER GAME";TP$:IFLEFT$
(TP$,1)="N"THENELSEFORX=0TOIL:IA(X)=I2(X):NEXTX:GOTO192
2370 GOSUB1500:GOTO2600
2380 L=0:FORZ=1TOIL:IFIA(Z)=TRIFLEFT$(IA$(Z),1)="*"LETL=L+1
2390 NEXTZ:PRINT"I'VE STORED";L;"TREASURES.
ON A SCALE OF 0 TO 100 THAT RATES A";CINT(L/TT*100):IFL=TTPRINT"
WELL DONE.":GOTO2360
2395 GOTO2600
2400 PRINT"I'M CARRYING THE FOLLOWING:";K=-1:FORZ=0TOIL:IFIA(Z)<
>-1THEN2410ELSEGOSUB1525:IFLEN(TP$)+POS(0)>63PRINT
2405 PRINTTP$;" ";K=0
2410 NEXTZ:IFKPRINT"NOTHING"ELSEPRINT
2415 GOTO2600
2420 P=0:GOTO2310
2430 P=0:GOTO2320
2440 LX=LT:IA(9)=-1:GOTO2600
2450 CLS:GOTO2600
2600 NEXTY
2610 IFNV(0)<>0THEN2901
2900 NEXTX
2901

```

```

2905 IFNV(0)=0THEN2930
2907 GOSUB4200
2908 IFFPRINT"I DON'T UNDERSTAND YOUR COMMAND"·GOTO2930
2910 IFNOTF2PRINT"I CAN'T DO THAT YET"·GOTO2930
2930 RETURN
4000 IP=IP+1:P=CA(X,IP)/20:M=CA(X,IP)-P*20:IFM<0THEN4000ELSERET
URN
4200 IFNV(0)◊10ANDNV(0)◊18ORF3THEN4290
4205 IFNV(1)=0PRINT"WHAT?"·GOTO4280
4206 IFNV(0)◊10THEN4210
4207 L=0:FORZ=0TOIL:IFIA(Z)=-1THENL=L+1
4208 NEXT:IFL=MXPRINT"I'VE TOO MUCH TO CARRY"·GOTO4280
4210 K=0:FORX=0TOIL:IFRIGHT$(IA$(X),1)◊"/"THEN4285ELSEL=LEN(IA
$(X))-1:TP$=MID$(IA$(X),1,LL):FORV=LLTO2STEP-1:IFMID$(TP$,V,1)◊
"/"THENNEXTV:GOTO4285
4220 TP$=LEFT$(MID$(TP$,V+1),LN)
4230 IFTP$<NV$(NV(1),1)THEN4285
4240 IFNV(0)=10THEN4270
4250 IFIA(X)◊-1THENK=1:GOTO4285ELSEIA(X)=R:K=3:GOTO4275
4270 IFIA(X)◊0THENK=2:GOTO4285ELSEIA(X)=-1:K=3
4275 PRINT"OK, ";
4280 F=0:GOTO4290
4285 NEXTX
4286 IFK=1THENPRINT"I'M NOT CARRYING IT"ELSEIFK=2PRINT"I DON'T S
EE IT HERE"
4287 IFK=0IFNOTF3PRINT"ITS BEYOND MY POWER TO DO THAT":F=0
4288 IFK◊0THENF=0
4290 RETURN
5000 INPUT"REWIND/LOAD ADVENTURE DATA TAPE. HIT ENTER";TP$
5010 INPUT#-1,IL,CL,NL,RL,MX,AR,TT,LN,LT,ML,TR
5015 A=(IL+CL/2+NL/10+RL+ML)/12:PRINT·PRINT"TAPE WILL TAKE";A+1;
"MINUTES TO LOAD. "
5020 DIMNV(1),CA(CL,7),NV$(NL,1),IA$(IL),IA(IL),RS$(RL),RM(RL,5)
,M$(ML),NT$(1),I2(IL)
5030 FORX=0TOCL STEP2:V=X+1:INPUT#-1,CA(X,0),CA(X,1),CA(X,2),CA(
X,3),CA(X,4),CA(X,5),CA(X,6),CA(X,7),CA(Y,0),CA(Y,1),CA(Y,2),CA(
Y,3),CA(Y,4),CA(Y,5),CA(Y,6),CA(Y,7):NEXT
5040 FORX=0TONL STEP10:FORV=0TO1:INPUT#-1,NV$(X,Y),NV$(X+1,Y),NV$
(X+2,Y),NV$(X+3,Y),NV$(X+4,Y),NV$(X+5,Y),NV$(X+6,Y),NV$(X+7,Y),N
V$(X+8,Y),NV$(X+9,Y):NEXTV,X

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5060 FORX=0TOR1: INPUT#-1, RN(X,0), RN(X,1), RN(X,2), RN(X,3), RN(X,4)
, RN(X,5), RS$(X): NEXT
5070 FORX=0TOM1: INPUT#-1, MS$(X): NEXT
5080 FORX=0TO11: INPUT#-1, IA$(X), IA(X): I2(X)=IA(X): NEXT: RETURN

```



APL-80 VERSION 3.0

by Phelps Gates

Now APL, the efficient computer language, is available in a self teaching version with all these features:

- Random and Sequential files ● 15 digit accuracy
- Custom module allows serial printer, lower case and reserved RAM
- Over 60 functions, 11 control characters
-)SAVE)LOAD)DOS)AUTO)EXEC)TRON)TROFF
-)PS)PD (print single or double precision))KILL)RAM
- (PEEK, POKE, and CALL)
- 5 workspace of lessons ● Clock functions

APL 80 is easy to learn, easy to use, and very powerful. Note: uses shifted alphanumeric characters instead of normal APL characters. Requires 32K, single disk TRS-80 microcomputer \$39.95.

Reduced feature 16K Level II cassette version \$14.95.

A manual is provided. However, if you wish a good tutorial on APL, the book APL: An Interactive Approach by Gilman and Rose is available separately for \$15.50 plus \$2 shipping.

Earlier disk versions may be upgraded for \$10.

The Software Exchange

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INPUT

A COLUMN OF YOUR LETTERS

The following is an unsigned letter from a software pirate:

I'm really getting a charge out of all of you jumping on the bandwagon about software pirates.

The idea that someone would give away a copy of a program! Well, I'll tell you guys something - if someone at a meeting gives me a program, I don't care if it sells for \$7.95 or \$150.00 - I'm taking it!

I'm fed up with all your magazines (or rags) printing the same stuff only a month later with a few changes. Do you think I like getting 5 different ones in the mail each month showing me 5 different ways of doing the same program?

And how about purchasing a program from Softside only to see it **free** in 3 magazines later! Well you get what you pay for. (0=0)

I'll stop taking software when:

1 copy machines are taken out of libraries;

2 you or any member of your staff gets rid of betamax for pirating movies;

3 any one of you stops tape recording music off the radio; and

4 when any member of any of your families goes to a quick copy center to get 40 copies of sheet music for "church" choir instead of purchasing 40 original copies at the music store.

Get off your soap boxes and do a magazine. I can get sermons on Sunday!

Editor's reply:

Whoever you are, you are certainly right about one thing: "You get what you pay for." Several well-known programmers have already ceased their programming efforts due to the high ratio of programs stolen to programs sold. When the software market dries up through the actions of yourself and others with the same attitude, there will be no more programs for you to pilfer. Then your \$0.00 investment will have paid off for us all.

In the June issue Edward Ting wrote an article "Super Simple Sound Interface for the TRS-80". It's nice, but there's a simpler way.

Dig in your junk box and find that little ear phone that came with your transistor radio. (You could get the one off your grandad's hearing aid, but that wouldn't be very nice.)

Put a blank tape in the recorder, put it in Record mode and plug the little ear phone into the EAR jack on the recorder. You'll get sound! If you have a little speaker in a little radio that doesn't work, you can cut the ear phone off the wire, solder the wires to the speaker terminals and plug that in. Mine sounds great!

Sherry M. Taylor
Haines City, Florida

The Lazy Man's Shortcut to Machine Language!



A **BASIC Compiler** in BASIC! Run your source program in BASIC, compile it into FAST Z-80 Code and execute the compiled version — all without reloading. 26 integer variables, GOTO, GOSUB, END, REM, RND, LET, +, *, /, IF, THEN, <, =, >, INKEY\$, CLS, PRINT@, CHR\$, PEEK, POKE. Compiled programs may be saved via TAPEDISK.

Supplied with game program, "3D TIC TAC TOE", which uses all of the TINY COMP Statement set and is ready to compile.

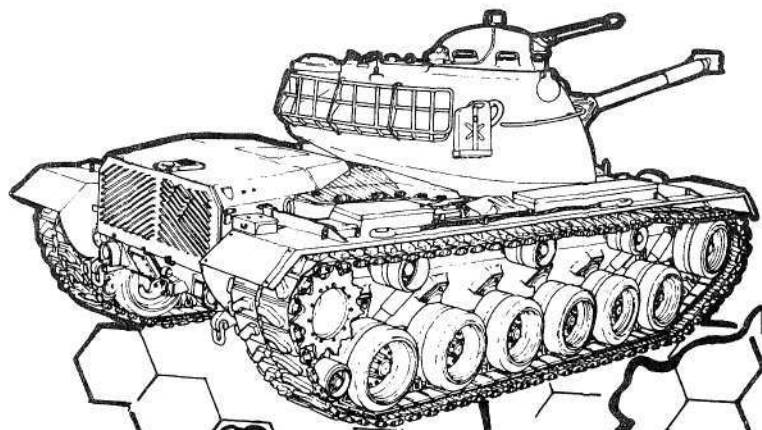
Manual includes several sample programs as well as thorough documentation of the Compiler for those who like to know "how things work" and for those who might even wish to EXPAND on TINY COMP's capabilities.

Tape version: **\$19.95**

Disk version: **\$24.95**

The Software Exchange

6 South Street, Box 68, Milford, NH 03055 603-673-5144



by
Ron Potkin

KRIEGSPIEL 2

A Wargamer's delight! Throw away your pencils, charts* and dice. Let the computer do the dirty work while you concentrate on strategy. Kriegspiel II is a much improved, two-player version of the original—with machine language routines for extra speed.

Select one of 9,999 scenarios including towns, tanks and terrain. Choose the number of mountains (up to 200), then sit back and watch as the computer generates your 31 x 32 game board, sets up the pieces, the towns, the mountains and a river.

Even the weather will become an important factor as play proceeds. To win, you must enter the Capitol City of your opponent (or reduce his fighting strength below half of your own).

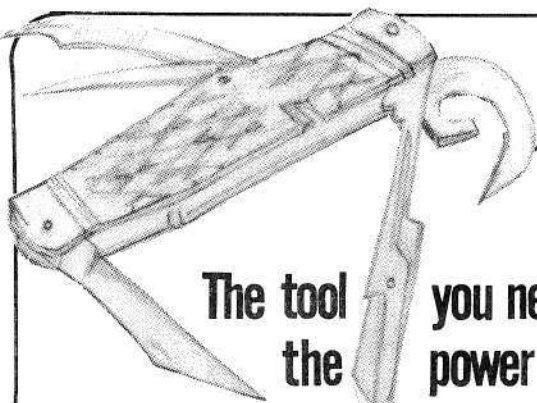
KRIEGSPIEL II — Level II 16K
(cassette version only)

\$14.95

*Combat Resolution Tables, Basic Turn Allowances, Terrain Effects Charts, etc.

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STAD

The tool you need to unlock the power of the Z-80

A powerful monitor for the TRS-80 with special ability in Tracing and Debugging. Single Step through machine language programs or set up to three breakpoints, and look at this display format!

AF	BC	DE	HL	IX	IY	AF'	BC'	DE'	HL'	SP	PC
0044	0000	C000	B77C	6433	FFFF	0102	0000	4000	3FC0	41FC	4400
4400	LD		A, 93								

★ ★ ★
All the power of
regular monitors as
well. Look at these.

A FIRST(0) LAST(FFFF)
A FIRST 0
B
B VALA
B VALA VALB(0)
C
D FIRST(0) LAST(FFFF)
E FIRST(0)
F FIRST LAST VALUE
G BRKPTS (3 max.)
H FIRST LAST VALUE
I PORT
K
L
L SECTOR MEMORY COUNT(1)
M FIRST LAST BLOCK
N
N 0
N VALUE
N FIRST 0
O PORT VALUE
P
P ENTRY
P FIRST LAST
Q FIRST LAST
R
S FIRST LAST OPTION(0)
T COUNT OPTION(6)
U FIRST COUNT OPTION(0)
V FIRST LAST BLOCK
W SECTOR MEMORY COUNT(1)
X FIRST LAST BLOCK
Z FIRST LAST VALUE(0)

ASCII dump
formatted ASCII dump
start of branch table
display in decimal
hex arithmetic
check system tape
dump hex
edit memory
find byte
set breakpoints, continue
find word
read port
keyboard echo
load system tape
load from disk
move memory
display symbol table
symbol table to tape
define value for symbol table
define start symbol table
write to port
initialize memory blocks
write memory blocks and start
define a memory block
calculate checksum
display / modify registers
disassembler
trace instructions
unformatted tape I/O
verify memory
write to disk
exchange memory
zero memory

★ ★ ★
16K, 32K, and 48K
versions on one
cassette for \$24.95
Use from tape in
Level II or as a
command file from
Disk.

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You, yes you, can help us plan future issues of SoftSide by telling us what you'd like to see. The following questionnaire is designed to help us find out who our readers really are. Please take a few minutes and let us know about you. We do listen.

THE GRAND READER SURVEY

1. Your approximate age _____
2. Do you own a TRS-80 computer? _____

(If not, explain: _____)

3. Please check the items below that will describe your computer.

HAVE	WILL PURCHASE	HAVE	WILL PURCHASE	WHAT KIND
_____	_____ Level II BASIC	_____	_____ Speech Unit	_____
_____	_____ K How much memory?	_____	_____ Home Controller	_____
		_____	_____ Floppy Disk Drive	_____
		_____	_____ Hard Disk	_____
		_____	_____ Printer	_____
		_____	_____ Modem	_____
		_____	_____ Others?	_____

4. Please give the percent of usage of your computer that goes toward:

_____ Business	_____ Learning to Program
_____ Home Applications	_____ Other Educational
_____ Word Processing	_____ Other _____
_____ Amusement	

5. Please list your five favorite programs for the TRS-80:

- (1) _____
(2) _____
(3) _____
(4) _____
(5) _____

6. Which other computer-related magazines do you read on a regular basis?

7. Please number, from 1 to 12, your order of preference for types of articles for SoftSide:

- | | |
|--|--|
| _____ Detailed game or simulation programs | _____ Programming Ideas or Hints |
| _____ Short game programs | _____ Program Reviews |
| _____ Home application/use programs | _____ Hardware Reviews |
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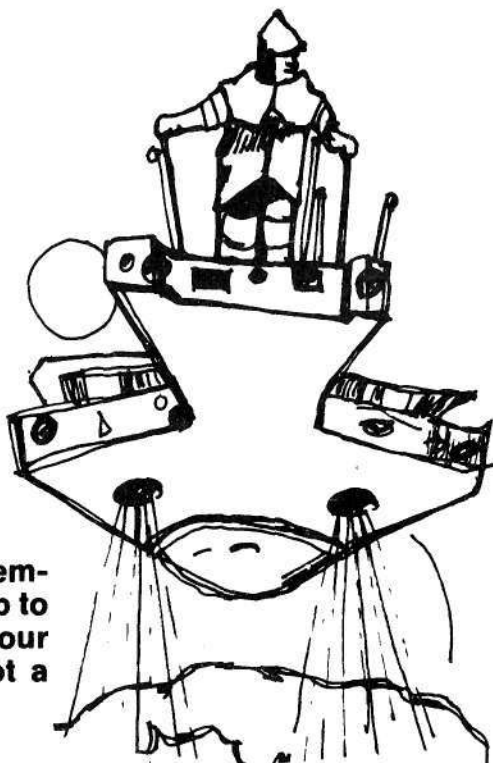
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by Douglas Carlston

Give up your shoot-em-up games and move up to grand strategy! Fight your wars as a general, not a mere pilot!



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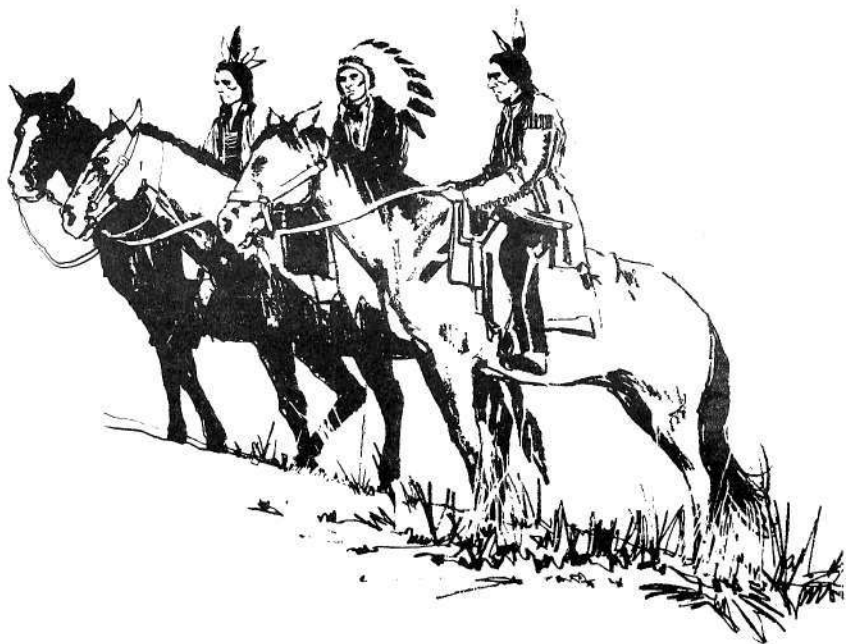
9 Games for Pre-School Children

by George Blank

Until they go to school, children think that learning is fun, not work. Is this the reason that they learn so much faster in the early years? And learning is great play. With these games children teach each other the alphabet, addition and subtraction, recognition of letters and words, even art as they play with patterns on the screen. The games are written for ages four to six. The author has a degree in education, with graduate study in child development and counseling, plus a wide variety of teaching experience in industry, the military, public and private schools, and churches. If you have children, and you also have a TRS-80, then you should have **Nine Games for Pre-School Children**. All nine games and the menu are in the computer at one time, and the children will quickly learn to select the one they want. **Level II, 16K \$9.95**

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THE SOFTWARE EXCHANGE 6 South St., Milford, NH 03055



LOST DUTCHMAN'S GOLD

by Teri Li

Deep in the Superstition Mountains of Arizona, hidden in the eerie mists of a forgotten time, the Lost Dutchman's Gold Mine awaits the fortune-seeker bold enough to challenge the fates. Protected by bands of hostile Indians, the ravines and gullies harbor silent death for the unwary adventurer.

You start in a miner's shack in the desert below the mountains with a mule, a rifle, and a few tools. There is a map hidden somewhere and this is your clue to uncountable wealth. There is a ghost town, and the desert, and, ultimately, the deadly Superstitions to explore as you search for the way to the Lost Dutchman's Mine.

```

10 CLS: CLEAR1000: DEFINT A-L, U-Z: DEFSTRN=T: DIMN(7): G(32,3): R(46): M
=STRING$(63, "="): POKE16553, 255: B=0: IN=B: LN=50: LM=LN: X1=B: X2=B: T
="": M1=T: N2=T: QM=T: U=B: U1=B: IM=2
20 GOSUB2330
30 ONERRORGOTO2320
40 FORL=BT026:FORI=BT07:READN(I):NEXTI:L
50 FORI=BT032:READO(1,0),O(1,1),O(1,2),O(1,3)="" NEXTI
60 FORI=BT046:READR(I):NEXT
70 L=1
80 PRINTCHR$(29):PRINT@448,"":GOSUB2340
100 IFL<15OR(CL)&0AND(O(12,3)~"1"OR(O(12,2)=STR$(L)))THEN150ELSEPR
INT@0,"ITS TOO DARK TO SEE !":CHR$(30):IFL=15THENIFO(6,3)<>"1"R
ND(O(4,3)<>"1"THENPRINT"YOU HEAR A STRANGE NOISE !"
110 GOTO350
120 T="OK":RETURN
140 B=1:PRINT" YOU SEE ",CHR$(30):PRINT:RETURN
150 IFL=1THENLN=LN-1:IFLN<1THENCL=0
160 RESTORE:FORL1=0TOL:FORI=0T07:READN(I):NEXTI:L1:L1=L
170 B=0:PRINT@0,CHR$(30):PRINT:PRINT:PRINT:PRINT:PRINT:PRINT@64,
"YOU ARE "N(0)".":FORJ=0T032:IFVAL(O(J,2))<LTHEN240ELSEIFB=0G0
SUB140
180 IFO(J,3)="-7"OR(O(J,3)="-2"THENPRINT"BURNT ":
190 IFJ=1THENIFVAL(O(1,2))=LTHENIFO(1,3)=""THENPRINT"UNTIED ":E
LSEIFO(1,3)="-5"THENPRINT"DEAD ":
200 IFO(J,3)="-3"THENPRINT"SMASHED ":
210 IFL=26ANDJ=32THENIFU1=0THENPRINT"LOCKED ":ELSEPRINT"UNLOCKE
D ":
220 IFL=1ANDJ=12THENPRINT"LITE ":
230 PRINTO(J,0)". ":
240 NEXTJ
250 IFU1=1ANDL=1THENPRINT"OPEN TRAP DOOR ":
260 IFN(1)=""THENPRINT:GOTO330ELSEIFB=0THENNGOSUB140
270 IFL=16THENIFU=0THENPRINT"LOCKED ":ELSEPRINT"UNLOCKED ":N(2
)="E"+RIGHT$(N(2),3)
280 IFL=17THENIFU=1THENPRINT"UNLOCKED ":ELSEPRINT"BLOCKED ":N(
2)=" "+RIGHT$(N(2),3)
285 IFU1=1ANDU=0THENPRINT"CAVED IN ":N(2)=" "+RIGHT$(N(2),3)N(
4)=""
290 PRINTN(1)". "

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330 PRINT:IFN(2)=" "THEN350ELSEPRINT"OBVIOUS EXITS ARE : ";FORI=
1TO4:P=MID$(N(2),I,1):IFP="N"THENPRINT"NORTH ";ELSEIFP="S"THENP
RINT"SOUTH ";ELSEIFP="E"THENPRINT"EAST ";ELSEIFP="W"THENPRINT"W
EST ";
340 NEXT:PRINT
350 B=0:PRINTM
360 IFL=9AND0(22,2)="11"THENPRINT@960,"THAT'S NOISE UP AHEAD - -
SOUNDS LIKE INJUNS."
370 IFL=9AND0(22,2)="11"THEN0(22,2)="11"
390 PRINT@960," WHAT DO YOU WANT TO DO NOW",:INPUTQM
410 IFLN(10)ANDCL=1THENPRINT"YOU'RE RUNNIN' LOW ON KEROSENE."
420 IFQM<"SCORE"THEN450ELSEIFL<6THENT="YOU CAN'T, YOU'RE IN TH
E WRONG LOCATION !":GOTO1900:ELSEZ=0:FORI=14TO17:IF0(I,2)=" 6"TH
ENZ=Z+1
430 NEXT
440 PRINT"YOU HAVE"Z"TREASURES, TOTALING"(Z/4)*100%":IFZ=4THENP
RINT"YOU MADE IT !!!":FORI=1TO500:NEXT:FORI=1TO100:PRINT@RD(102
3),"YOU MADE IT !!!!":NEXT:GOTO2290:ELSEZ="YOU MISSED SOME OF TH
E TREASURE.":GOTO1900
450 IFCL=0ANDL=15AND0(6,3)<"1"AND0(4,3)<"1"THENPRINT"OH NO!
YOU'VE BEEN BITTEN BY A RATTLESNAKE.
YOU'RE DEAD.":GOTO2290
460 IFL=17ANDU=1THENIFRD(9)<2THENPRINT" !!! CAVE-IN !!!
THE IRON DOOR IS BLOCKED,
YOU CAN'T GET OUT ! !":U=0
480 IFQM="HELP"THENX=VAL(N(3)):ONXGOSUB2150,2160,2170,2180,2190,
2200,2210,2220:GOTO1800
490 X1=LEN(QM):IFX1<3THENT="WHAT?":GOTO1900:ELSEFORX2=3TOX1:M1=M
ID$(QM,X2,1):IFM1<CHR$(32)THENNEXTX2:X2=X1
500 P=LEFT$(QM,3):IFX2<X1ANDX2+3>X1THEN610ELSEFORI=0TO42:IFP<OR
(1)THENNEXT:IFX1=X2THENT="WHAT?":GOTO1900:ELSEZ="SORRY, BUT YOU
CANNOT "+LEFT$(QM,X2):IFX2<X1THENT=T+RIGHT$(QM,X1-X2)+". ":GOTO19
00:ELSEZ=T+". ":GOTO1900
520 IFI<0ANDX1=X2THENONI+1GOSUB2010,2010,2010,2290,680,1010,1920
,2000:GOTO1900
540 M1=MID$(QM,X2+1,3):FORJ=0TO32:IFM1=LEFT$(0(J,0),3)THEN630ELS
ENEXTJ:IFM1="IRO"THEN580ELSEIFI=36THEN940
550 IFN(1)<" "THENZ=1:A=Z:X1=LEN(N(1)):FORX2=5TOX1:IFMID$(N(1),X
2,1)<CHR$(46)ANDX2<X1THENNEXTELSEM2=MID$(N(1),Z,3):IFM2<M1THE
M2=X2+2:A=A+1:NEXTX2:ELSEB=A:IFI=10THENPRINT"YOU SEE NOTHING SPE

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CIAL. ":GOTO160ELSE630
560 FORX=43TO46:IFM1=R(X)THEN650ELSENEXT
570 IF0(4,3)="1"OR0(6,3)="1"THENIFI=23ANDM1="SEL"THENPRINT"OK":G
OTO2296
580 IFI=32GOSUB780:GOTO1900
590 IFI=33GOSUB860:GOTO1900
600 T="I DON'T KNOW WHAT YOU WANT. ":GOTO1900
610 T="I MUST BE DUMB, I DON'T UNDERSTAND YOU. ":GOTO1900
630 IFI<9THEN650ELSEIFJ<33THENB=VAL(0(J,2)):IFB<0LANDB>0THEN1890
ELSEELSEJ=29
640 ONI-8GOSUB1250,1390,1390,1390,1250,1700,1700,1700,1700,1820,
1820,1250,700,700,1000,1000,1000,920,1150,1190,1210,730,730,700,
860,1390,900,940,1700,1690,1320,1340,1820,2300
650 IFI<9THENONI+1GOSUB970,970,970,2290,600,1010,1920,2000,1320
660 GOTO1900
680 IF0(3,3)<"1"THEN1890ELSEPRINT"OK":FORI=13TO17:IFVAL(0(I,2))
=-LTHEN T=" -- EUREKA! WE STRUCK GOLD ??? ? !":0(I,2)=STR$(L):E
LSENEXT:T="DAG NAB IT! THERE'S NOTHIN' HERE!"
690 RETURN
700 IFJ<23THEN1060ELSEIFL=14THENO(23,2)="15"ELSEIFL=15THENO(23,
2)="16"ELSEIFL=16ANDU=1THENO(23,2)="17"ELSEIFL=17THENO(23,2)="19
"ELSEIFL=19THENO(23,2)="23":0(23,3)="-3"
710 GOTO120
730 IFJ=30RJ=40RJ=60RJ=80RJ=90RJ=110RJ=120RJ=130RJ=190RJ=270RJ=2
8THENO(J,3)="-3":GOTO120:ELSE1050
770 T="IT'S ALREADY UNLOCKED. ":RETURN
780 IFL=16THENIFU=0THENIF0(10,3)="1"THENU=1:GOTO120:ELSE1890:ELS
E770
800 IFL=26THENIFU1=0THENIF0(10,3)="1"THENU1=1:RETURN:ELSE1890:EL
SE770
820 IF0(1,3)="1"THENIF0(0,3)="2"THENO(0,3)="",0(0,2)=STR$(L):GOT
O120:ELSE1050
840 IFL=1AND0(12,3)="1"THENOCL=0:GOTO120
860 IF(L=16ORL=17)ANDU=1THENU=0:GOTO120
870 IFL=26ANDU1=1THENU1=0:GOTO120
880 GOTO1050
900 T="YOU CAN HEAR NOTHING SPECIAL. ":RETURN
920 IFL<11OR0(9,3)<"1"THEN1320ELSEPRINT"THEY TOOK THE FIRE WAT
ER,
AND RAN OFF. ":IN=IN-1:0(9,2)="",0(9,3)="",0(22,2)="",RETURN

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940 IFM1="YOU'RE IN THE WRONG ADVENTURE
TURKEY!":GOTO1900
950 GOSUB120:T=T+"
+RIGHT$(QM,X1-X2)+"":GOTO1900
970 IFB<0THENL=VAL(N*(B+3)):IF0<L<3="1"AND(L=1ORL=6ORL=15)THENL
="THE MULE WON'T GO":L=L1:RETURN:ELSEIFL=17AND0=0THENL=L1:GOTO1
890:ELSEIFL1=26ANDL=1ANDU1=0THENL=L1:GOTO1890:ELSE1060
980 IFU1=1ANDL=1THENL=26:GOTO120
990 IFU1=1ANDM1="TRA"ANDL=26THENL=1:RETURN
1000 FORX1=1TO4:M2=MID$(N(2),X1,1):IFM2<LEFT$(M1,1)THENNEXTX1:EL
SE:FORM2=43TO46:IFM1<OR(X2)THENNEXTM2ELSEL=VAL(N*(X1+3)):IFL<0T
HEN1060
1010 IFL=23THENL="ITS TOO SLIPPERY ":RETURN
1020 IFL=25THENL=26:RETURN
1030 IFL=26THENL=25:RETURN
1040 IFL=19THENL=23:T="NOW, ALMOST SLIPPED AND FELL.":RETURN
1050 T="SORRY, BUT YOU CAN'T DO THAT.":RETURN
1060 B=0:GOTO120
1080 IF0<J<3<0<1"AND0<6,3)<0<1"THENL="WITH WHAT?":RETURN:ELSEIFJ
<0<1THEN1110:ELSEIF0<J,3)<0<1"THENL=99:ELSEZ=0
1090 0<J,3)<0<1"9":0<1,2)<0<1"STR$(L)
1100 IFZ=99THENIN=IN-1
1110 IFJ=22THENPRINT"YOU HIT ONE OF 'UM
BUT THE REST KILLED YOU.":GOTO2290
1120 IFJ=9THENL="YOU HIT ONE.":RETURN
1130 GOTO120
1150 IF0<13,3)<0<1"THEN1890:ELSEIFJ=40R(J)>5ANDJ<11)>OR(J)>14ANDJ<18
)>ORJ=22ORJ=25ORJ=29ORJ>30THEN1050:ELSE0<J,3)<0<1"-7":0<J,2)<0<1"STR$(L)
1160 IF0<0,3)<0<1"-7"THEN0<0,2)<0<1"STR$(L):FORJ=5TO21:IF0<J,2)<0<1"-1"THE
N0<J,3)<0<1"-7":NEXT:ELSENEXT
1170 GOTO1060
1190 IFJ<0<12THEN1150:ELSEIF0<J,3)<0<1"1"OR0<18,3)<0<1"1"THEN1150:ELSE
L=1:GOTO120
1210 IFJ=13THENPRINT"VECH !
ITS KEROSENE.
YOU JUST POISONED YOURSELF.":GOTO2290
1220 IFJ=9THENL="WHEEEEEEE !
YOU GOT PLASTERED AND LOST A DAY.":IFL=1THENL=N-LN-10:RETURN:ELS
E:RETURN

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1230 GOTO1050
1250 IFJ<33THENB=VAL(0(J,2)):IF0(J,3)<0"2"ANDBO/LANDB<0-1THENIFJ
<22THEN1890ELSESET="IT'S NOT HERE ":RETURN
1260 IFJ>210RJ=1THENT="? JUST WHO DO YOU THINK YOU ARE, PAUL BUN
YON?
YOU'RE NOT STRONG ENOUGH. ":RETURN
1270 IF0(J,2)=-7"THENT="ITS BURN'T UP AND RUINED. ":RETURN
1280 IFIND4THENT="YOU CAN'T. YOUR HANDS ARE FULL. ":RETURN:ELSEIF
0(J,3)=-1"THENPRINT"YOU ALREADY HAVE IT!":RETURN:ELSEIFVAL(0(J,1
))<00RT=16THENIN=IN+1,IF0(J,2)=-1"THENIM=IM-1,0(J,2)="",0(J,3)
="1"ELSE0(J,3)=-1"0(J,2)=""
1290 IFJ<9ANDJ<11ANDJ<2THEN120ELSEIFJ=9THENIF0(8,2)=-6"THENO
(8,2)=-6":ELSE:RETURN:ELSEIFJ=11THENIF0(12,2)=-8"THENO(12,2)=-8
"ELSE:RETURN:ELSEIFJ=2THENIF0(18,2)=-14"THENO(18,2)=-14"
1300 RETURN
1320 IF0(J,3)<0"1"THENT="YOU DON'T HAVE IT !":RETURN:ELSESET="OK":
IN=IN-1,0(J,3)="",0(J,2)=STR$(L):RETURN
1340 IF0(5,3)<0"1"THEN1890
1345 IFN(4)=-"THEN1050
1350 IFL=7THENL=8
1360 IFL=12THENL=13
1370 GOTO120
1390 GOSUB120 ONJ+1GOTO1400,1430,1440,1460,1470,1480,1490,1460,1
460,1500,1510,1520,1530,1540,1460,1460,1460,1460,1460,1560,1570,
1580,1590,1600,1610,1620,1460,1630,1460,1460,1460,1640,1460
1400 IFVAL(0(0,3))<1THENT="THEY ARE AN OLD PAIR OF LEATHER SADDL
EBAGS.
THEY APPEAR TO HAVE SOMETHING IN THEM.
MAYBE YOU SHOULD GET 'UM. ":RETURN
1410 PRINT"THEY CONTAIN ":FORI=6TO22,IF0(I,2)=-1"THENPRINT0(I,
0)" "
1420 NEXT I="":RETURN
1430 T="YOU SEE AN OLD, WEARY GREY MULE. ":RETURN
1440 T="IT'S AN OLD TORN SACK. ":IF0(18,2)=-14"THENO(18,2)=-14"
1450 RETURN
1460 T="YOU CAN SEE NOTHING SPECIAL. ":RETURN
1470 T="IT'S AN OLD WINCHESTER SINGLE-SHOT. ":RETURN
1480 T="IT APPEARS TO BE A MAP TO THE LOST DUTCHMAN KINE.
THERE'S A DRAWING OF SOME BOULDERS. ":RETURN
1490 T="NOTHING SPECIAL, JUST A LOADED SIX-SHOOTER. ":RETURN

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1500 IF0(8,2)="-6"THEN="THERE APPEARS TO BE SOMETHING BEHIND TH
E BOTTLES. ":0(8,2)="6":RETURN:ELSE1460
1510 T="THERE ARE THREE KEYS,
TIED TOGETHER WITH A LEATHER STRAP. ":RETURN
1520 IF0(12,2)="-8"THEN="IT LOOKS LIKE THERE'S GLASS UNDER 'UM.
":0(12,2)="8":RETURN:ELSE1460
1530 T="ITS AN OLD KEROSENE LANTERN. THE KEROSENE LEVEL
IS BESIDE A MARK THAT SAYS '"+STR$(LN)+"'TURNS LEFT. ":RETURN
1540 IF1=11THEN="IT SAYS 'KEROSENE'. ":RETURN
1550 T="THERE'S WRITING ON IT. ":RETURN
1560 IF0(20,2)="-17"THEN0(20,2)="17":T="ITS A MESSAGE !":RETURN:
ELSE1460
1570 IF1=11THEN="IT SAYS :
BRING TREASURES TO SALOON,
AND SAY
SCORE. ":RETURN:ELSE1550"
1580 IF1=11THEN="IT SAYS .
WATCH FOR OTHER RIDER FANTASY CREATIONS ADVENTURES!":RETURN:ELS
E1550
1590 T="THEY ARE A SAVAGE LOOKING BAND,
AND THEY'VE SEEN YOU. ":RETURN
1600 T="ITS JUST AN OLD EMPTY ORE CART. " RETURN
1610 IF0(5,2)="-25"THEN0(5,2)="1":T="THERE'S SOMETHIN' HERE !!":
RETURN:ELSE1460
1620 IF1=11THEN="IT SAYS
WELCOME TO
FRONTIERTOWN. ":RETURN:ELSE1550
1630 IF0(10,2)="-6"THEN0(10,2)="6":T="THERE'S A SET OF KEYS THER
E! ".RETURN:ELSE1460
1640 B=RND(3):ONBGO1650,1660,1670
1650 T="ITS A BARREL CACTUS. ":RETURN
1660 T="ITS A CHOLLA CACTUS. ":RETURN
1670 T="ITS A SAGUARO CACTUS. ":RETURN
1690 IFJ=4ANDI=38THEN1700
1700 IFJ<1ORVAL(0(1,3))<0T="SORRY, BUT THAT'S NOT POSSIBLE. ":RE
TURN
1710 IF1=38THENIF0(1,3)=""THEN="TENDERFOOT! YOU HAVE'TA LEAD 'I
M FIRST. " RETURN:ELSE1700
1720 IF0(1,3)="1"THEN1320ELSEIF0(7,3)="1"THENIFI<16T="TRY LEAD.
":RETURN

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1730 UNT-130T01740:1750:1760:1770
1740 T="YOU'RE TOO SLOW, HE GOT AWAY.":RETURN
1750 T="THE MULE GOT AWAY FROM YOU.":RETURN
1760 IFO(J,3)<"1"THEN T="TOUGH LUCK, YOU TRIPPED AND THE MULE RA
N OFF.":O(1,3)="":O(1,2)=STR$(L):RETURN.ELSE IFO(1,3)="":THEN GOTO1
250ELSE1320
1770 T="THE MULE BUCKED YOU OFF.":RETURN
1780 INPUT"WITH WHAT",QM:IFQ=4THEN1800ELSE IFLLEFT$(QM,3)<"SAD":T=
"IT FELL OFF.
THE MULE GOT AWAY.":O(1,3)="":IN=IN-1:RETURN
1790 IFO(0,3)="1"THEN O(0,3)="2":IN=IN-1:GOTO1060.ELSE1320
1800 IFLLEFT$(QM,3)="BUL"THEN IFO(8,3)<"1"ORO(4,3)<"1"THEN1320EL
SE1200ELSE1050
1820 IFO(J,3)<"1"THEN1320ELSE INPUT"ON OR IN WHAT? (IE. ON TABLE
)",QM:P=LEFT$(QM,2):IFP<"IN"ANDP<"ON"THEN T="HUH?":RETURN
1830 M1=MID$(QM,4,3)
1840 IFF="ON"THEN IF"MUL"=M1THEN1750.ELSE IFJ=13THEN IFLM=0 THEN T="I
TS EMPTY.":RETURN.ELSE LM=0:GOTO1320.ELSE1320
1850 IF"SAD"=M1THEN IFJ<50RJ=190RJ=22 THEN T="SORRY, IT WON'T FIT.":
RETURN.ELSE IFIM<4 THEN T="THE "+O(0,0)+" ARE FULL.":RETURN.ELSE O(
,2)="-1":O(J,3)="":IN=IN-1:IM=IM+1:T="OK":RETURN
1860 IF"MUL"=M1 THEN T="YOU GOT KICKED !":RETURN
1870 IF"LAN"=M1 THEN IFO(13,3)="1"AND O(12,3)="1"THEN IFLM=50 THEN LN=
LN+50:LM=0:GOTO120.ELSE T="ITS EMPTY!":RETURN.ELSE1320
1880 GOTO1050
1890 T="YOU CAN'T DO THAT... YET!"
1900 PRINT T:"":GOTO100
1920 PRINT"YOU HAVE WITH YOU : ",:IF IN=0 AND O(1,3)<"1" THEN T="NOT
HING.":RETURN
1930 B=VAL(O(0,3)):X1=B:IFB=1 THEN PRINT:PRINT O(0,0)", WHICH CONTR
IN.":FOR I=1 TO 22:IF O(I,2)="-1" THEN PRINT O(I,0)" ":X1=X1+2:NEXT:EL
SE NEXT:IF X1<2 THEN PRINT"NOTHING!".
1940 IFO(1,3)="1" THEN PRINT PRINT"THE "O(1,0)", WHICH YOU'RE LEAD
ING.":IFB=2 THEN PRINT"AND IS CARRYING THE SADDLEBAGS.":
1950 PRINT:X1=0:FOR I=2 TO 22:IF VAL(O(1,3))<1 THEN1970ELSE IFO(1,3)=1 AND I
=12 THEN PRINT"LITE ":
1960 PRINT O(I,0)": ":
1970 NEXT
1980 T="":RETURN
2000 IFL=19 THEN GOS:PRINT CHR$(23):"

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YOU HAVE FALLEN 100FEET.

YOU LANDED ON ROCKS.

YOU ARE DEAD.

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" :GOTO2290:ELSEIFJ=230RJ=320RM1="P"THENT="OK":RETURN:ELSE1050
2010 T="WHERE?":RETURN
2060 DATA,,,,,,IN A MINER'S SHACK,WINDOW,DOOR,,1,3,3,,,IN A D
ESERT,ROAD, MOUNTAINS, DESERT,MINES,2,4,2,2,2,ON DIRT PATH,MINER'
S SHACK, ROAD, MOUNTAINS," W ",5,1,4,2,2
2070 DATAON A DIRT ROAD,MOUNTAINS, PATH, DESERT, TOWN IN THE DIS
TANCE,NE 5,2,7,3,2,5, IN A GHOST TOWN,SALOON," N ",1,6,4,,,IN A
SALOON,,W ,1,5,,,
2080 DATAAT THE BASE OF THE SUPERSTITION MOUNTAINS,ROAD, DESERT,
S N ,4,4,2,2,2,AT THE BASE OF WEAVER'S NEEDLE,,NS ,1,9,7,,
2090 DATAIN A NARROW DEFILE,BUSHES, CAVES," NS",1,11,10,12,8, IN
A SMALL CAVE,,E ,1,9,,,BEHIND A BUSH,BUSH,W ,1,9,,,IN A B
OX CANYON,BUSHES, TREES, BOULDERS," S",4,12,12,12,9
2100 DATAIN FRONT OF A PARTIALLY HIDDEN MINE,MINE SHAFT,ESNW,8,1
4,12,12,12,IN THE ENTRANCE OF A DIMLY LITE MINE,MINE SHAFT,EW ,
1,15,13,,,IN THE MINE,DARK TUNNEL,EW ,6,16,14,,
2110 DATAAT THE END OF THE TUNNEL,IRON DOOR," W ",1,17,15,,,IN
A LARGE CHAMBER,IRON DOOR,MINES,1,16,19,18,20,IN A MAZE OF TUNNEL
S,,NSEW,6,18,18,18,18,IN FRONT OF A PIT,DARK HOLE," S ",7,23,17
,,
2120 DATAAT A TUNNEL INTERSECTION," SNW",6,,22,17,21,IN A DEAD
END TUNNEL,,E ,8,20,,,IN A BLOCKED TUNNEL,,N ,8,20,,,AT TH
E BOTTOM OF A SHAFT,WALL,S ,8,24,,,
2130 DATAIN A TUNNEL,,NS ,6,23,25,,,AT THE END OF THE TUNNEL,LA
DDER," N ",6,26,24,,,AT THE TOP OF LADDER,,,6,1,25,,
2150 PRINT"TRY EXAMING THINGS.":RETURN
2160 PRINT"ROADS USUALLY GO PLACES.":RETURN
2170 PRINT"MAYBE THE TRAIL GOES SOMEWHERE.":RETURN
2180 IFO(5,3)C>"1"THENPRINT"DO YOU HAVE THE MAP?":RETURN:ELSEPRI
NT"TRY 'FOLLOW'":RETURN
2190 IFVAL(O(1,2))=LTHENPRINT"MAYBE THE MULE IS HUNGRY.":RETURN:
ELSEGOTO2150
2200 PRINT"KEEP GOING.":RETURN
2210 PRINT"ITS SLIPPERY, BUT YOU MIGHT BE ABLE TO CLIMB DOWN.":R
ETURN
```

```

2220 PRINT"THIS IS A MINE, YOU KNOW.":RETURN
2240 DATASADDLEBAGS,2,1,MULE,,3,BURLAP SACK,4,1,SHOVEL,4,1,RIFL
E,4,1,MAP,1,-25,GUN,1,-1,CARROTS,1,-1,BOX OF RIFLE BULLETS,1,-6,
WHISKEY BOTTLES,2,6,KEYS,1,-6,PILE OF BONES (MINE),2,8
2250 DATALANTERN,2,-8,JAR OF LIQUID,1,-11,* SPANISH COINS *,1,-1
0,* TOURQUOISE *,1,-23,* SILVER *,1,-21,* GOLD *,1,-22,MATCHES,1
,-14,CRATES,3,17,NOTE,1,-17,PAPER,1,6,INDIANS,0,11
2260 DATAORE CART,,14,BED,,1,SIGN,,5,BROKEN GLASS,,6,TABLES,,6,0
HAIRS,,6,ROCKS,,10,WOODEN RAILS,,15,CACTUS,,2,TRAP DOOR,,26
2270 REA *** COMMAND TABLE ***
2290 DATAGO ,ENT,RUN,QUI,DIG,CLI,INV,JUM,DRO,GET,EXA,REA,LOO,MOV
,CAT,CHA,LEA,RID,PUT,PLA,PIC,PUS,PUL,SHO,OPE,CLO,GIV,BUR,LIG,DRI
,BRE,HIT,UNL,LCC,SER,LIS,SAY,FEE,LOA,UNT,FOL,POU,EAT,NOR,SOU,EAS
,WES
2290 PRINT@960,"DO YOU WANT TO PLAY ANOTHER GAME":INPUT@M.IFLEF
T@M,1)="Y"THENRUNELSECLS.END
2300 IFJ=7THENIF@8,3)="1"THEN="THEY TASTE PRETTY GOOD.":RETURN
2310 T="CAN'T DO THAT..."
WIERDO !":RETURN
2320 RESUME160
2330 PRINTCHR$(23)"### RIDER FANTASY CREATIONS ###":PRINTTAB(10)
"ADVENTURE # 1":PRINTTAB(4)"THE LOST DUTCHMAN'S GOLD.

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":RETURN
2340 PRINT"      WELCOME TO THE SEARCH FOR THE LOST DUTCHMAN'S G
OLD.
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YOU MAY USE TWO WORD COMMANDS TO FIND CLUES AND EXECUTE MOVEMENT
SUCH WORDS AS GET, GO, PUT, DROP, SCORE, INVENTORY ",
2350 PRINT"AND ABOUT A
HUNDRED MORE ARE AVAILABLE TO YOU.  HELP WILL GIVE YOU HINTS
WHEN YOU ARE STUCK.  GOOD LUCK  AND I HOPE YOU DON'T END UP A
GHOST LIKE ME.":INPUT"      PRESS ENTER TO CONTINUE.      READY"
,A#:CLS:RETURN

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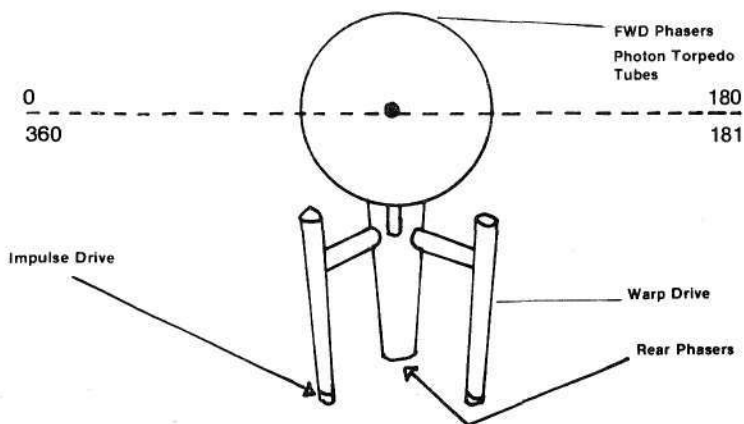
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Bug Report

Encounter in the Near Tholian Sector, May 1980

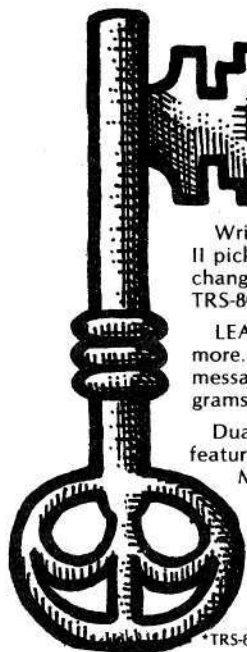
The game documentation should have indicated that the Enterprise's phasers (frwd) and

photon torpedos can only be used for targets between 0 and 180 degrees (not 90).



In Jeff Myers programming hint on Page 26 of the June 1980 SoftSide, to restore the ability to LIST a program, after it has been disabled;

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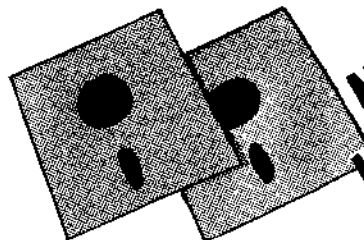
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