



# SoftSide Selections



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## MINIGOLF

# Mini Golf



by Mitch Voth

**Minigolf is a graphic simulation of miniature golf for a TRS-80® Model I or III with at least 16K RAM.**

Remember the golden days of youthful summers, when you and the gang would go out to the miniature golf course? Does it seem too long ago? Now you can relive those halcyon times, right on your computer. You can invite the old gang over, too, because up to ten people can play.

## Instructions

The first thing you do is tell the computer how many people will be playing. The computer then asks you for their names. After that, just play nine holes of relaxing *Minigolf*.

The left- and right-arrow keys position your "putter." When you think you have the angle right, press one of the number keys from 1 to 9. Use 9 to deliver a powerful swipe at the ball, and send it bounding about the course. The force of your swing declines gradually down to 1, which represents a light tap.

Players putt each hole in its entirety before the next one tees off. After each hole, the scorecard appears.

See you at the course!



```

SS SS
SS
SS TRS-80 MOD I/III BASIC SS
SS "MINIGOLF" SS
SS Program by: Mitch Voth SS
SS
SS Copyright (c) 1983 SS
SS SoftSide Publications, Inc SS
SS SS
SS SS SS SS SS SS SS SS SS SS SS

```



**If you don't wish to type this program, it is available on Issue #40 SoftSide DV and CV.**

Initialize variables, and input number of players and their names.

```

10 CLS: CLEAR200: DEFINT A-H: DEFSTR Z: PRINTCHR$(23): PRINT@18, "TRS-80
  9 HOLE":; PRINT@82, "MINIATURE GOLF"
30 PRINT@400, "NUMBER OF PLAYERS": INPUTNP: IFNP>10, 10 ELSE PRINT@40
0, CHR$(30); FORA=1TONP: PRINT@400, "PLAYER #": A; INPUTZ(A): PRINT@4
00, CHR$(30); NEXT: CLS: GOTO300

```

Scoring subroutine.

```

40 CLS: PRINTCHR$(23): PRINT@12, "SCORE": FORA=1TONP: PRINTZ(A), S(A)
: NEXT: FORA=1TO4000: NEXT: CLS: RETURN

```

Routine to get putter movement and force of hit.

```

50 Z=INKEY$: IFZ<>"", IFASC(Z)<58 AND ASC(Z)>48, HH=VAL(Z)*10: POKHP,
46: HM=0: VM=0: IFA=1, RESET(C1, C2): RESET(C1+1, C2): GOTO200 ELSE SET(C1
, C2): SET(C1+1, C2): GOTO200
60 T=0: IFZ<>"", IFASC(Z)=8, CP=CP+1: IFCP=17, CP=1: IFA=1, RESET(C1, C2
): RESET(C1+1, C2): GOTO100 ELSE SET(C1, C2): SET(C1+1, C2): GOTO100 ELSE I
FA=1, RESET(C1, C2): RESET(C1+1, C2): GOTO100 ELSE SET(C1, C2): SET(C1+1,
C2): GOTO100
70 IFZ<>"", IFASC(Z)=9, CP=CP-1: IFCP=0, CP=16: IFA=1, RESET(C1, C2): RE
SET(C1+1, C2): GOTO100 ELSE SET(C1, C2): SET(C1+1, C2): GOTO100 ELSE IFA=1
, RESET(C1, C2): RESET(C1+1, C2): GOTO100 ELSE SET(C1, C2): SET(C1+1, C2):
GOTO100
80 GOTO50
90 POKHP, 46: SET(B1, B2): SET(B1+1, B2): IFPOINT(C1, C2)=-1, A=0: RESET
(C1, C2): RESET(C1+1, C2): GOTO50 ELSE SET(C1, C2): SET(C1+1, C2): A=1: GOTO
50

```

Routine to alter ball or putter position.

```

100 ONCPGOTO101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113,
114, 115, 116
101 C1=B1: C2=B2+2: M1=0: M2=-1: GOTO90
102 C1=B1+2: M1=-1: GOTO90

```

**MINIGOLF**

## MINIGOLF

```

103 C1=B1+4:C2=B2+2:M1=-2:M2=-1:GOTO90
104 C2=B2+1:M2=-.5:GOTO90
105 C2=B2:M2=0:GOTO90
106 C2=B2-1:M2=.5:GOTO90
107 C1=B1+4:C2=B2-2:M1=-2:M2=1:GOTO90
108 C1=B1+2:M1=-1:GOTO90
109 C1=B1:M1=0:GOTO90
110 C1=B1-2:M1=1:GOTO90
111 C1=B1-4:C2=B2-2:M1=2:M2=1:GOTO90
112 C2=B2-1:M2=.5:GOTO90
113 C2=B2:M2=0:GOTO90
114 C2=B2+1:M2=-.5:GOTO90
115 C1=B1-4:C2=B2+2:M1=2:M2=-1:GOTO90
116 C1=B1-2:M1=1:GOTO90

```

## Hole in one routine.

```

150 IFS=1,PRINT@153,"A HOLE IN ONE!!";FORA=1TO2000:NEXT:PRINT@1
53,CHR$(30);:RETURNElsePRINT@149,"THAT TOOK YOU";S;"STROKES";:FO
RA=1TO2000:NEXT:PRINT@149,CHR$(30);:RETURN

```

## Calculate reflection angles.

```

200 D1=B1:D2=B2:RESEt(B1,B2):RESEt(B1+1,B2):IF(ABS(M1)=1ANDHM=1)
DRABS(M1)=2,D1=B1+2*SGN(M1):HM=0ELSEHM=1
205 I=I+1:IF I>4,RC=2:RETURN

```

## Check for hole.

```

210 IFPOINT(D1,B2)=-1,RC=0:RETURNElseSET(D1,B2):SET(D1+1,B2):B1=
D1:IFPEEK(HP)>46,IFPEEK(HP)=140,S(PT)=S(PT)+S-P:RC=1:GOSUB150:R
ETURNElsePOKEHP,46
220 RESEt(B1,B2):RESEt(B1+1,B2):IF(ABS(M2)=.5ANDVM=1)DRABS(M2)=1
,D2=B2+SGN(M2):VM=0ELSEVM=1
230 IFPOINT(B1,D2)=-1,RC=0:RETURNElseSET(B1,D2):SET(B1+1,D2):B2=
D2:IFPEEK(HP)>46,IFPEEK(HP)=140,S(PT)=S(PT)+S-P:RC=1:GOSUB150:R
ETURNElsePOKEHP,46
240 T=0:HH=HH-1:IFHH<0,RC=2:RETURNElse200

```

## Display score.

```

300 FORA=50TO79:SET(A,44):SET(A,9):NEXT:FORA=9TO44:SET(50,A):SET
(51,A):SET(78,A):SET(79,A):NEXT:HP=15648:PRINT@25,"HOLE # 1 PA
R 2";P=2:FORPT=1TONP:S=1:PRINT@91,CHR$(30);:PRINT@91,Z(PT);"'S
TURN";:B1=RND(11)*2+52:B2=41:SET(B1,B2):SET(B1+1,B2):POKEHP,46:
CP=1
305 GOSUB100
310 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO310
320 IFRC=1,NEXTPT:GOTO400
325 HH=HH-10:IFHH<2,HH=2
330 IFD1=50ORD1=78,M1=-M1:GOSUB200:GOTO310ELSEM2=-M2:GOSUB200:GO
TO310

```



## Routines for displaying the individual holes.

```

400 GOSUB40:FORA=50T079:SET(A,44):SET(A+22,9):NEXT:FDRA=20T043:SE
ET(50,A):SET(51,A):SET(78,A):SET(79,A):NEXT:SET(78,19):SET(79,19
):FORA=78T0101:SET(A,18):NEXT:FORA=10T017:SET(100,A):SET(101,A):
NEXT:FDRA=52T071:SET(A,45.5-A/2):NEXT:HP=15663
405 PRINT@25,"HOLE # 2 PAR 2*";P=2:FORPT=1TONP:S=1:PRINT@91,CHR
R$(30);:PRINT@91,Z(PT);""S TURN";:B1=RND(11)*2+52:B2=41:POKEHP,4
6:CP=1:SET(B1,B2):SET(B1+1,B2):GOSUB100
420 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO420
430 IFRC=1,NEXTPT:GOTO500
435 HH=HH-10:IFHH<2ANDHH>-6,HH=2
440 IFD2=90RD2=440R(D2=18ANDD1>79),M2=-M2:GOSUB200:GOTO420ELSEIF
D1=500RD1=780RD1=100,M1=-M1:GOSUB200:GOTO420ELSEA=M1:M1=-M2*2:M2
=-A/2:GOSUB200:GOTO420
500 GOSUB40:FORA=20T043:SET(22,A):SET(23,A):SET(50,A):SET(51,A):
SET(78,A):SET(79,A):NEXT:FDRA=22T079:SET(A,44):NEXT:FORA=44T057:
SET(A,9):NEXT:PRINT@409,CHR$(191);:FORA=10T019:SET(63-A*2,A):SET
(62-A*2,A):SET(38+A*2,A):SET(39+A*2,A):NEXT:HP=16210
510 PRINT@25,"HOLE # 3 PAR 2*";P=2:FORPT=1TONP:S=1:PRINT@91,CHR
R$(30);:PRINT@91,Z(PT);""S TURN";:B1=RND(11)*2+52:B2=41:SET(B1,B
2):SET(B1+1,B2):POKEHP,46:CP=1:GOSUB100
520 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO520
530 IFRC=1,NEXTPT:GOTO600
540 HH=HH-10:IFHH<2ANDHH>-6,HH=2
550 IFD2=90RD2=44,M2=-M2:GOSUB200:GOTO520ELSEIFD1=220RD1=500RD1=
78,M1=-M1:GOSUB200:GOTO520ELSEIFD1<50,A=M1:M1=-M2*2:M2=-A/2:GOSU
B200:GOTO520ELSEA=M1:M1=M2*2:M2=A/2:GOSUB200:GOTO520
600 GOSUB40:FORA=17T044:SET(50,A):SET(51,A):SET(78,A):SET(79,A):
NEXT:FORA=17T029:SET(98,A):SET(99,A):SET(116,A):SET(117,A):NEXT:
FORA=66T0101:SET(A,9):NEXT:FORA=52T077:SET(A,44):NEXT:FORA=94T01
01:SET(A,37):NEXT:FORA=80T097:SET(A,17):NEXT
610 FORA=10T016:SET(85-2*A,A):SET(84-2*A,A):SET(83+A*2,A):SET(82
+A*2,A):SET(60+A*2,A+20):SET(61+A*2,A+20):SET(134-A*2,A+20):SET(
135-2*A,A+20):NEXT:HP=15852:PRINT@25,"HOLE # 4 PAR 3*";P=3:FOR
PT=1TONP:S=1:PRINT@91,CHR$(30);:PRINT@91,Z(PT);""S TURN";
615 CP=1:B1=RND(11)*2+52:B2=41:SET(B1,B2):SET(B1+1,B2):GOSUB100
620 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO620

```

## MINIGOLF

630 IFRC=1,NEXTPT:GOTO700  
 640 HH=HH-10:IFHH<2ANDHH>-6,HH=2  
 650 IFD2=9ORD2=44OR(D2=37ANDD1>90)OR(D2=17ANDD1>70ANDD1<100),M2=-M2:GOSUB200:GOTO620ELSEIFD1=50ORD1=78ORD1=98ORD1=116,M1=-M1:GOSUB200:GOTO620ELSEIF(D1>80ANDD2<20)OR(D2>25ANDD1<96),A=M1:M1=M2\*2:M2=A/2:GOSUB200:GOTO620ELSEA=M1:M1=-M2\*2:M2=-A/2  
 660 GOSUB200:GOTO620  
 700 GOSUB40:FORA=19T044:SET(78,A):SET(79,A):NEXT:FORA=50T077:SET(A,44):NEXT:FORA=32T043:SET(50,A):SET(51,A):NEXT:FORA=42T049:SET(A,32):NEXT:FORA=19T022:SET(22,A):SET(23,A):NEXT:FORA=42T059:SET(A,9):NEXT:FORA=9T018:SET(42+A\*2,A):SET(43+A\*2,A)  
 710 SET(59-A\*2,A):SET(58-A\*2,A):SET(A\*2+4,A+14):SET(A\*2+5,A+14):SET(40+A\*2,A+14):SET(41+A\*2,A+14):NEXT:HP=15827:PRINT@25,"HOLE # 5 PAR 2":P=2:FORPT=1TONP:S=1:PRINT@91,CHR\$(30):PRINT@91,Z(PT):"S TURN":B1=RND(11)\*2+52:B2=41:SET(B1,B2):SET(B1+1,B2)  
 715 CP=1:GOSUB100  
 720 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO720  
 730 IFRC=1,NEXTPT:GOTO800  
 740 HH=HH-10:IFHH<2ANDHH>-6,HH=2  
 750 IFD2=9ORD2=44OR(D2=34ANDD1<50),M2=-M2:GOSUB200:GOTO720ELSEIFD1=22ORD1=50ORD1=78,M1=-M1:GOSUB200:GOTO720ELSEIFD1<50ANDD2<20,A=M1:M1=-M2\*2:M2=-A/2:GOSUB200:GOTO720ELSEA=M1:M1=M2\*2:M2=A/2:GOSUB200:GOTO720  
 800 GOSUB40:FORA=9T044:SET(50,A):SET(51,A):NEXT:FORA=32T044:SET(78,A):SET(79,A):NEXT:FORA=52T077:SET(A,44):NEXT:FORA=52T0111:SET(A,9):NEXT:FORA=9T023:SET(112,A):SET(113,A):NEXT:FORA=80T095:SET(A,32):NEXT:FORA=18T023:SET(70,A):SET(71,A):SET(90,A-6)  
 810 SET(91,A-6):NEXT:FORA=24T032:SET(116-A\*2,A):SET(117-A\*2,A):SET(158-A\*2,A):SET(159-A\*2,A):NEXT:HP=15838:PRINT@25,"HOLE # 6 PAR 3":P=3:FORPT=1TONP:S=1:PRINT@91,CHR\$(30):PRINT@91,Z(PT):"S TURN":CP=1:B1=RND(11)\*2+52:B2=41:SET(B1,B2):SET(B1+1,B2)  
 815 GOSUB100  
 820 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO820  
 830 IFRC=1,NEXTPT:GOTO900  
 840 HH=HH-10:IFHH<2ANDHH>-6,HH=2  
 850 IFD2=9ORD2=44OR(D2=32ANDD1>79),M2=-M2:GOSUB200:GOTO820ELSEIFD1=50ORD1=78ORD1=112ORD1=90OR(D1=70ANDD2<23),M1=-M1:GOSUB200:GOTO820ELSEA=M1:M1=-M2\*2:M2=-A/2:GOSUB200:GOTO820  
 900 GOSUB40:FORA=30T079:SET(A,44):NEXT:FORA=23T043:SET(78,A):SET(79,A):NEXT:FORA=30T051:SET(A,30):SET(A,9):NEXT:FORA=20T033:SET(8,A):SET(9,A):SET(50,A+11):SET(51,A+11):NEXT:FORA=10T029:SET(A,29+A/2):SET(A,24,5-A/2):NEXT:FORA=50T079  
 910 SET(A,A/2-16):NEXT:FORA=50T067:SET(A,A/2-9):NEXT:FORA=50T059:SET(A,A/2-1):NEXT:HP=16150:PRINT@25,"HOLE # 7 PAR 3":P=3:FORPT=1TONP:S=1:PRINT@91,CHR\$(30):PRINT@91,Z(PT):"S TURN":B1=RND(11)\*2+52:B2=41:SET(B1,B2):SET(B1+1,B2):CP=1:GOSUB100  
 920 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO920  
 930 IFRC=1,NEXTPT:GOTO1000  
 940 HH=HH-10:IFHH<2ANDHH>-6,HH=2



```

950 IFD1=78ORD1=8OR(D1=50ANDD2>30),M1=-M1:GOSUB200:GOTO920ELSEIF
D2=30ORD2=9ORD2=44,M2=-M2:GOSUB200:GOTO920ELSEIFD1<40ANDD2<24,A=
M1:M1=-M2#2:M2=-A/2:GOSUB200:GOTO920ELSEA=M1:M1=M2#2:M2=A/2:GOSU
B200:GOTO920
1000 GOSUB40:FORA=50TO79:SET(A,44):SET(A,9):NEXT:FORA=33TO43:SET
(50,A):SET(51,A):SET(78,A):SET(79,A):NEXT:FORA=18TO24:SET(32,A):
SET(33,A):SET(96,A):SET(97,A):SET(56,A+1):SET(57,A+1):SET(72,A+1
):SET(73,A+1):NEXT:FORA=34TO49:SET(A,A/2+8)
1010 SET(A,34.5-A/2):SET(A+46,49.5-A/2):SET(A+46,A/2-7):NEXT:FOR
A=56TO64:SET(A,A/2-2):SET(A+9,58-A/2):NEXT:FORA=52TO57:SET(A,A/2
-10):SET(A+20,44.5-A/2):NEXT:HP=15904:PRINT@25,"HOLE # 8 PAR 3"
;:P=3:FORPT=1TONP:S=1:PRINT@91,CHR$(30);:B1=RND(11)#2+52

```

### MINIGOLF

## MINIGOLF

```

1015 PRINT@91,Z(PT);"S TURN";B2=41:SET(B1,B2):SET(B1+1,B2):CP=
1:GOSUB100
1020 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO1020
1030 IFRC=1,NEXTPT:GOTO1100
1040 HH=HH-10:IFHH<2ANDHH>-6,HH=2
1050 IFD2=44ORD2=9,M2=-M2:GOSUB200:GOTO1020ELSEIFD1=32ORD1=96ORD
1=72ORD1=56ORD1=50ORD1=78,M1=-M1:GOSUB200:GOTO1020ELSEIF(D1<78AN
DD1>63)OR(D1>70ANDD2>20)OR(D1<60ANDD2<20),A=M1:M1=-M2*2:M2=-A/2:
GOSUB200:GOTO1020ELSEA=M1:M1=M2*2:M2=A/2:GOSUB200
1060 GOTO1020
1100 GOSUB40:FORA=34TO95:SET(A,9):NEXT:FORA=50TO79:SET(A,44):NEX
T:FORA=33TO43:SET(50,A):SET(51,A):SET(78,A):SET(79,A):NEXT:FORA=
10TO33:SET(34,A):SET(35,A):SET(94,A):SET(95,A):NEXT:FORA=36TO49:
SET(A,33):SET(A+44,33):NEXT:FORA=48TO63
1110 SET(A,A/2-1):SET(A+18,54.5-A/2):NEXT:FORA=56TO61:SET(A,49.5
-A/2):SET(A+12,A/2-9):NEXT:HP=15904:PRINT@25,"HOLE # 9 PAR 4";:
P=4:FORPT=1TONP:PRINT@91,CHR$(30);:PRINT@91,Z(PT);"S TURN";S=1
:B1=RND(11)*2+52:B2=41:SET(B1,B2):SET(B1+1,B2):CP=1:GOSUB100
1120 IFRC=2,S=S+1:CP=1:GOSUB100:GOTO1120
1130 IFRC=1,NEXTPT:GOTO2000
1140 HH=HH-10:IFHH<2ANDHH>-6,HH=2
1150 IFD2=90RD2=33ORD2=44,M2=-M2:GOSUB200:GOTO1120ELSEIFD1=34ORD
1=94OR(D1=78ANDD2>30)OR(D1=50ANDD2>30),M1=-M1:GOSUB200:GOTO1120E
LSEIF(D1<64ANDD2>22)OR(D1<64ANDD2<22),A=M1:M1=-M2*2:M2=-A/2:GOSU
B200:GOTO1120ELSEA=M1:M1=M2*2:M2=A/2:GOSUB200
1160 GOTO1120

```

End game routine.

```

2000 CLS:PRINTCHR$(23);:PRINT@20,"FINAL SCORE:":FORA=1TONP:PRINT
Z(A),S(A):NEXT:PRINT@900,"PLAY AGAIN (Y/N)";:INPUTZ:IFZ="Y",10

```



## SWAT TABLE

For TRS-80® MINIGOLF

LINES	SWAT CODE	LENGTH	LINES	SWAT CODE	LENGTH
10 - 60	YY	522	615 - 700	WD	520
70 - 107	VS	523	710 - 800	BW	649
108 - 205	KJ	447	810 - 900	WX	608
210 - 300	MC	533	910 - 1000	UU	617
305 - 430	WR	503	1010 - 1050	DJ	540
435 - 520	IY	502	1060 - 1150	BK	658
530 - 610	HW	573	1160 - 2000	ZL	104

# Io Miner



by Peter G. Johnson

**Io-Miner is an arcade game for a TRS-80® Model I or III with at least 48K RAM and one disk drive. Also included is a screen editor for customizing the play of Io-Miner. Both programs were compiled using the ZBASIC 2.2 compiler, copyright Simutek Computer Products Inc. and Andrew Garlepy. They are included as the bonus programs on Issue 40 TRS-80 DV. See the coupon near the back of this booklet to order your disk.**

The year is 2086, and the Terran Defense Authority has declared a state of emergency for the Sol System. The peace treaty between Terra and the Empire of Proxima Centauri has been broken, and the evil Proximans are preparing for a major attack on the Sol System. An advance party has already crossed the stellar void between the two systems, landed on Jupiter's moon Io, and captured a plutonium mine there. With the Io mine twelve re-fueling base in the hands of the Proximans, the comparatively miniscule Terran defense forces have little hope of preventing Earth and her sister planets from becoming another Proximan slave system.

However, the Proximans have temporarily evacuated the mine, leaving behind only "watchdog" robots until they return with their powerful fleet. It is your mission to guide a Mine Maintenance Robot, specially outfitted for this mission with fusion grenades, into the mine, and destroy the Proximan's communications module at the mine's lowest level.

While in Io mine twelve, be wary of the watchdog robots, whose great strength will crush your remote-controlled robot on contact. Also, beware the death-beams installed by the Proximans to deter intruders. The beams' laser blasts will vaporize your robot.

Your droids have a limited supply of energy. Launching a fusion grenade drains energy, as does maneuvering. If you fail to recharge your batteries by obtaining plutonium capsules, your robot will explode. The amount of energy in your batteries will be displayed constantly at the bottom of your video screen.

The mine shaft door control circuits have been damaged, and the doors open and close unexpectedly. They are very heavy, and will crush any object they close in

IO-MINER

DV BONUS

## IO-MINER

**DV BONUS**

on. Also found throughout the passages of the mine are matter teleporters. You may use them to travel quickly from one section of the mine to another.

You will have four miner robots with which to complete your task. Use the arrow keys to move the robots. Hitting the space bar while maneuvering will throw a grenade in the direction you are moving. Plutonium capsules ("(\$)") may be picked up by running over them with your miner robot. Running over a matter teleporter ("=:=") will transport your robot to another teleporter on the same screen line, if possible.

Each level, except the last, has at least one tunnel which extends off the bottom of the screen, and which leads to the next mine level. These are strictly one way paths — you may not return to a mine level once you leave it. On the last mine level there is no exit tunnel. Instead, move your miner robot as far down as possible to where the Proximan communication module is located, and your robot will destroy it automatically. Then you will be awarded a bonus, and will restart at the first mine level.

### The Mine-Level Editor

*Io-Miner* is supplemented by a level editor program for customizing the mine levels, thus making the game harder or easier, and allowing you to create a virtually unlimited number of different games. You will be prompted for a file specification and then be presented with a short menu. Normally, use the default, "DATA/CIM", for the filespec.

Changing the Delay Factor lets you alter the number of milliseconds between cursor cycles in the Screen Editor. The default delay factor is 50 milliseconds.

Selecting the "Modify a mine level" option will clear the screen and display the level you specified. Death-beams, doors, plutonium capsules, and teleporters are displayed as ASCII characters rather than their graphic characters. (Z, D, M, and T, respectively.)

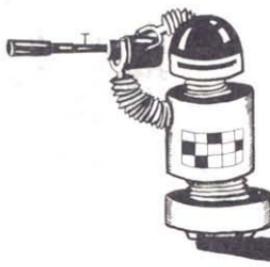
The cursor will appear as a blinking pixel in the upper left-hand corner of the screen. In the block cursor mode this cursor represents a 6x3 block of pixels. The blinking one is the upper left-hand pixel.

See the chart below for an explanation of the commands available when editing.

When editing is complete, return to the menu by hitting "Q" and type "3". The editor will return you to DOS. The editor will also display the DUMP command which you will want to type to save your modified level data. This command will include the filename specified at the beginning of the editor. To save your modified data under another name, substitute another filename for the one displayed by the editor. The rest of the command line should remain unchanged.

### *Io-Miner* Editor Commands

- Left Arrow: Moves cursor left.
- Right Arrow: Moves cursor right.
- Up Arrow: Moves cursor up.
- Down Arrow: Moves cursor down.
- "O": Set cursor mode: Pixel.
- "P": Set cursor mode: Block.
- CLEAR: Set cursor mode to Reset.
- ENTER: Set cursor mode to Set.



- “@”: Set cursor mode to Move. The cursor may now be moved without affecting the current graphics on the screen. Press “@” again to return to normal editing.
- SPACE: Enter a character onto screen. The following characters represent:
  - Z = Death-beam.
  - D = Door.
  - M = Plutonium Capsule.
  - T = Teleporter.
- “L”: Move cursor to nearest character line.
- “Q”: Exit editor — does not file current level.
- “F”: File current level in memory.
- “M”: Set alien robot.
- “C”: Clear (reset) screen.
- “R”: Ruler mode. This command displays a ruler at the top or bottom margin of the screen, useful for determining the location of passages that go off the screen.

### **Multiple Data Files**

DATA/CIM is the standard data file for *Io-Miner*. However, you can create data files with other names, as explained above. To load a data file other than DATA/CIM when running *Io-Miner*, hold down the ENTER key when invoking the program. It will ask you which file to load.

### **More Notes on the Editor**

The editor can change essentially every aspect of the data file for *Io-Miner*. Although error-trapped, it is not completely foolproof, and indiscriminate use of the editor can produce serious problems when running the game. Use the supplied data file DATA/CIM as a guideline for making modifications.

Please note the following restrictions when using the Level Data Editor:

- The following cursor modes may not be used simultaneously:

- 1) Set and Reset
- 2) Block and Move

Also note that while in Move mode, no other editing commands will function until “@” is pressed again to resume normal editing.

- Death-Beams, Doors, Teleporters and Plutonium Capsules must be placed on character lines on the screen to a maximum of 30 Death-beams or doors on any given screen at one time. There are no limitations to the number of Teleporters or Plutonium Capsules, but be aware that each teleporter must have a complementing teleporter on the same character line. Always leave two character lines below a death-beam, for the beam extends that far down. Doors require one character line above and below the door. Teleporters and plutonium capsules may only be accessed from the side, so put them only in horizontal passages.

- Up to 30 alien robots (monsters) may appear on the screen at one time.
- Every passage that extends off the bottom of the screen must accompany a passage at the same horizontal position at the top of the next screen. Passages that extend off either side (left or right) are illegal.

There must always be a space at the upper left-hand corner of the first level (Level 0) at which the player starts. The tenth level (Level 9) must allow the player to move within one pixel of the bottom of the screen for the player to be considered finished in the mine shaft.

# Defense



by Greg Schroeder  
TRS-80® version by John Landers

**Defense is an arcade-style game for the TRS-80 Model I or III with 16K RAM.**

You find yourself in alien territory, where you must kill to survive. In your travels, you encounter two types of aliens whose mission is to annihilate you. Some approach from the end of the screen opposite your ship, and move toward you either in a straight line or diagonally. Those moving diagonally bounce off the surface of the planet and the top of the screen. Blasting one of them is worth ten or twenty points. The other aliens appear at midscreen, and home in on your position. Kill them quickly — before it's too late (100 or 200 points).

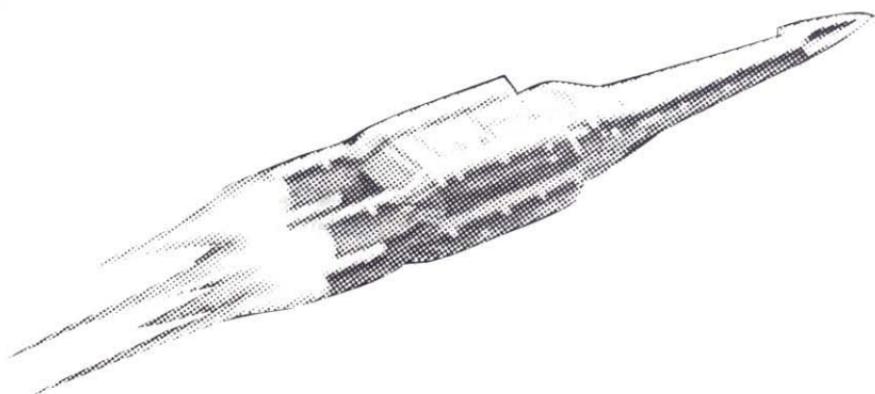
As a little added surprise, a random saucer appears sporadically and takes over the battle — the other aliens will back off and stop while the saucer approaches menacingly. If he can, he will fire when he is close enough. When the saucer is two-thirds of the way across the screen, you will hear a noise, if he is capable of firing. The saucer never misses. If you kill this pest, however, you earn 1000 points.

To play the game, use the left arrow to decrease your speed and the right arrow to accelerate. Move up and down by pressing the up and down arrows. If you fly too low, you may hit the surface of the planet, and your ship will surely explode into dust. Fire by pressing either shift key.

Once you exhaust your ships, you will go to the high score entry. Enter three initials. If you make a mistake, use the RUB word. When you are finished, select the END word to indicate you are done. You control the cursor with the arrow keys and enter a letter with the shift key.

Once you complete an attack wave, the number of aliens increases by five until you reach fifty. Often, you will see a display on the screen until you hit the ENTER key.

*Defense* has sound, so be sure to connect an amplifier to the AUX jack of your computer.



## Variables

A: Keyboard input.  
A(1-2,20-50): Alien field.  
A\$: Used for high score routine to temporarily hold initials.  
A\$(1-4): Used to make random landscape for alien planet surface.  
AL(1-2): Aliens killed in current attack wave.  
AW: Attack waves destroyed.  
B(1-3): Horizontal position of aliens.  
C(1-3): Screen position of aliens.  
D: Keyboard input for high score routine.  
D(1-3): Direction of aliens.  
DE\$: Defense in graphic letters.  
E: Flag for the saucer (if on or off).  
E(1-3): Type of alien and scoring.  
E1: Horizontal position of saucer.  
F(1-2): Total aliens in attack wave.  
GA\$: Game in big letters.  
GS: Ground speed of ship.  
H: Position of ship on planet's surface.  
H\$: Planet surface.  
HC(1-10): High score holder.  
HC\$(1-10): High score initial holder.

I: All purpose counter.  
I1,J: Counter variables.  
NM\$: Initial holder for high score.  
OV\$: "Game Over" sign in big letters.  
PL: Player presently playing.  
PO: Position of your ship.  
PP: Number of players.  
PQ: Old position of ship.  
R(1-3): Position of where alien came from in field.  
SC(1-2): Scores of players.  
SH(1-2): Ships left for each player.  
T: Counter.  
T1: Counter.  
TD: Variable used to sort high scores.  
TD\$: String used to sort high scores.  
TT: Alien number.  
V: Counter.  
X: Used to hold cursor position for high score routine.  
XC: Position in alien field.  
Z: Position of saucer.  
Z1: Direction of saucer.  
ZQ: Old position of saucer.

## DEFENSE

```

SS SS
SS
SS TRS80 BASIC SS
SS 'Defense' SS
SS Author: Greg Schroeder SS
SS Translator: John Landers SS
SS Copyright (c) 1983 SS
SS SoftSide Publications, Inc SS
SS SS
SS SS SS SS SS SS SS SS SS SS

```

**If you don't wish to type this program, it is also included on #40 SoftSide CV and DV.**

## Initialization.

```

10 CLS:BOTD60000
20 CLS:CLEAR2000:DIMA(2,50):GOSUB960
30 GOSUB1060
40 FORI=1TO2:FORJ=1TO20:A(I,J)=RND(16):NEXTJ,I
50 SH(1)=3:SH(2)=3:SC(1)=0:SC(2)=0:AL(1)=20:AL(2)=20:F(1)=20:F(2)=20:XC=0
60 FORT=1TO4:C(T)=-1:NEXTT
70 PD=576

```

## Input number of players.

```

80 CLS:PRINT@471,"HOW MANY PLAYERS?"
85 PRINT@0,;:FORT=1TO30:SOUND25,T:NEXT
90 A=PEEK(14352):IFATHENPP=A/2:PL=1ELSE90

```

## Call subroutine to set up screen.

```
100 GOSUB710
```

## Ship movement and keyboard input.

```

110 TT=TT+1:IFTT=4THENTT=1
120 IFGS>1THENH=H+GS:PRINT@896,MID$(H$,H,63);:IFH>248THENH=1
130 A=PEEK(14400):IFA=0THEN190
140 PQ=PD:IF(A=400RA=80RA=72)ANDPD>192THENPD=PD-64:GOTO160
150 IF(A=480RA=160RA=80)THENPD=PD+64
160 IFA>31ANDA<49ANDGS>0THENG=GS-0.5:GOTO180
170 IFA>63ANDGS<6.5THENG=GS+.5
175 PRINT@0,;:SOUND255-GS,5
180 PRINT@PD,"      ";:PRINT@PD,CHR$(173)CHR$(180)STRING$(2,176);:
:IFPD>895THEN430

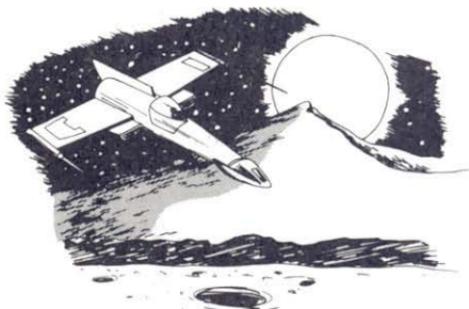
```

## Firing routine.

```

190 IFPEEK(14464)THENPRINT@PD+4,STRING$(59,160);ELSE260
195 PRINT@0,;:SOUND95,5
200 IFE=1THENIFZ-PO<58ANDZ-PO>5THEN690

```



```

210 FORI=1TO3:IFINT(PD/64)=INT(C(I)/64)THENIFE(I)<3THENPRINT@C(I)
,E(I)*10;:SC(PL)=SC(PL)+E(I)*10:GOTO230ELSEPRINT@C(I),(E(I)/2)*
100;:SC(PL)=SC(PL)+(E(I)/2)*100:GOTO230
220 NEXTI:GOTO240
230 C(I)=-1:A(PL,R(I))=-5:AL(PL)=AL(PL)-1:PRINT@10,SC(1);:PRINT@
57,SC(2);:PRINT@972,AL(1);:PRINT@1018,AL(2);:NEXT
240 PRINT@PD+4,STRING$(59,32);

```

#### Alien movement routine.

```

250 IFAL(PL)<1THEN520
260 IFE=1THEN610
270 XC=XC+1:IFXC=F(PL)+1THENXC=1
280 IFRND(100-AW)=1THENE=1:GOTO700
290 IFA(PL,XC)-5THENA(PL,XC)=A(PL,XC)-6S:IFA(PL,XC)<=0THEN390
300 IFC(TT)=-1THEN110
310 IFE(TT)>2THENIFC(TT)<POTHEND(TT)=64ELSEIFC(TT)>POTHEND(TT)=-
64ELSE(D(TT)=0
320 PRINT@C(TT)," ";:C(TT)=C(TT)-6S-1+D(TT):B(TT)=B(TT)-6S-1
330 IFB(TT)<0THENC(TT)=-1:A(PL,R(TT))=15:GOTO110
340 IFC(TT)>8310RC(TT)<255THEND(TT)=-D(TT)
350 IFABS(C(TT)-PD)<6THEN430
360 ONE(1T)GOTO370,370,380,380
370 PRINT@C(TT),CHR$(158)CHR$(179)CHR$(173);:GOTO110
380 PRINT@C(TT),CHR$(166)CHR$(191)CHR$(153);:GOTO110
390 FORI=1TO3:IFC(I)=-1THEN410
400 NEXTI:A(PL,XC)=15:GOTO300

```

#### Alien initialization routine.

```

410 C(I)=(RND(9)+3)*64+60:D(I)=64*(RND(3)-2):E(I)=RND(4):R(I)=
XC:A(PL,XC)=-10:B(I)=60:IFE(I)>2THENC(I)=C(I)-30:B(I)=30
420 GOTO300

```

#### Explode ship and prepare for next turn.

```

430 FORI=1TO20:PRINT@PO," ";:FORI1=1TO30:NEXT:PRINT@PO,CHR$(1
73)CHR$(180)STRING$(2,176);:NEXTI
435 PRINT@0,,:FORT=1TO20:SOUND255,0:SOUND1,0:SOUND1,1:SOUND255,1
:NEXT
440 FORI1=1TO5:PRINT@PO,STRING$(4,140);:FORI=1TO30:NEXT:PRINT@PO
,CHR$(140)STRING$(2,191)CHR$(140);:FORI=1TO30:NEXT:PRINT@PO,STR
ING$(4,191);:FORI=1TO30:NEXT:PRINT@PO," ";:NEXTI1

```

## DEFENSE

```

450 SH(PL)=SH(PL)-1:GS=0:PRINT@70,SH(1);:PRINT@118,SH(2);
460 IFSH(PL)=0THENGET0740
470 FORT=1T03:IFC(1)>0THENA(PL,R(1))=15:C(1)=-1
480 NEXTI
490 IFPL=2ANDSH(1)>0THENPL=1ELSEIFSH(2)>0ANDPP=2THENPL=2
500 PO=576:GOSUB580
510 GOSUB710:XC=0:GOTO110

```

End of attack wave sign. Award bonus points, and award an extra ship if it has been earned.

```

520 CLS:AW=AW+1:PRINTCHR$(23):PRINT@456,"ATTACK WAVE "AW" DESTROYED";
525 PRINT@0,;:FORT=1T030:SOUND20,T/.5:SOUND20,10/T:NEXT
530 PRINT@532,"BONUS -";SH(PL)*500:SC(PL)=SC(PL)+SH(PL)*500
540 IFAW/4=INT(AW/4)THENSH(PL)=SH(PL)+1:PRINT@598,"EXTRA SHIP";ELSE550
545 PRINT@0,;:FORT1=1T010:FORT=100T01STEP-5:SOUND1,1:NEXT:NEXT
550 AL(PL)=F(PL)+5:F(PL)=F(PL)+5:IFF(PL)>50THENF(PL)=50:AL(PL)=50
560 FORJ=1TOAL(PL):A(PL,J)=RND(16):NEXTJ
570 IFPEEK(14400)=1THENGOSUB710:GOTO110ELSE570

```

Get Ready routine.

```

580 CLS:PRINT@470,"GET READY !!"
590 PRINT@539,"PLAYER # ";PL;
595 PRINT@0,;:FORT=1T050:SOUND15,T:NEXT
600 IFPEEK(14400)=1THENRETURNELSE600

```

Alien saucer movement and intialization.

```

610 IFZ>POTHENZ1=-64:GOTO630
615 FORT=255T015STEP-15:SOUND1,1:NEXT
620 IFZ<POTHENZ1=64
630 IFZ+Z1<193THENZ1=-Z1
640 Z0=Z;Z=Z+Z1-1:GS:E1=E1-1:GS:IFE1<1THENPRINT@Z0," ";E=0:Z1=0:GOTO110
650 PRINT@Z0," ";:PRINT@Z,CHR$(184)CHR$(188)CHR$(180);
660 IFZ-PO<45ORZ-PO<10THEN110
665 PRINT@0,;:FORT=1T010:SOUND111,5:NEXT
670 IFRND(4)=2THENFORJ=Z-2TOZ-E1STEP-1:PRINT@J,CHR$(136)" ";NEXTJ:PRINT@J," ";Z=0:E=0:E1=0:Z1=0:GOTO430
680 GOTO110
690 PRINT@Z,"1000";:SC(PL)=SC(PL)+1000:PRINT@10,SC(1);:PRINT@57,SC(2);:Z=0:E=0:E1=0:GOTO240
700 E1=60:Z=((RND(9)+3)*64)+60:GOTO610

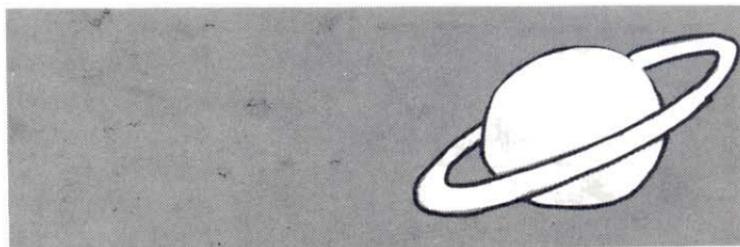
```

## Screen set up.

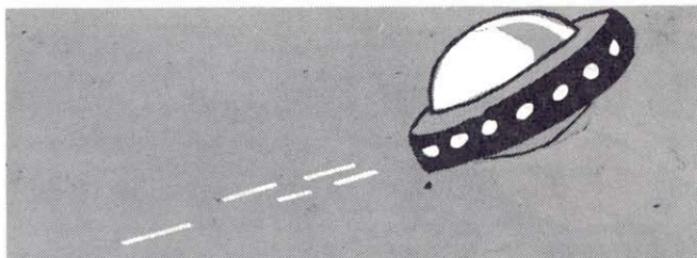
```
710 CLS:PRINT@0,"PLAYER#1: ";SC(1);:PRINT@64,"SHIPS:"SH(1);:PRINT
@47,"PLAYER#2: ";SC(2);:PRINT@111,"SHIPS:"SH(2);:PRINT@18,DE#;:PR
INT@128,STRING$(64,133);:PRINT@896,MID$(H$,1,63);:PRINT@960,"ALI
ENS LEFT: ";AL(1);:PRINT@1006,"ALIENS LEFT: ";AL(2);
720 PRINT@PQ,CHR$(173)CHR$(180)STRING$(2,176);
730 RETURN
```

## High score routine.

```
740 FORT=1T05:CLS:PRINT@270,GA#;:PRINT@462,DV#;:NEXTT
745 PRINT@0,;:FORT1=1T010:FORT=1T0255STEP15:SOUND T,1:NEXT:NEXT
750 PRINT@667,"PLAYER # ";PL;
760 IFPEEK(14400)=1THEN770ELSE760
770 CLS:NM#="":Z=0
780 X=2:PRINT@X,"RUB";:X=X+4:FORT=65T090:PRINT@X,CHR$(T);:X=X+2:
NEXTT:PRINT@X,"END";
790 X=68
800 PRINT@X," ";:D=PEEK(14400):IFD=32THENX=X-2ELSEIFD=64THENX=X+
2
810 IFX<68THENX=68ELSEIFX>122THENX=122
820 PRINT@X,CHR$(95);
830 A#="":IFPEEK(14464) THENA#=CHR$(PEEK(15360+X-64)):IFA#="B"THE
NIFPEEK(15360+X-65)=ASC("U") THENIFZ>0 THENNM#="LEFT$(NM#,Z-1):Z=Z-
1:A#=""
840 IFA#="E" THENIFPEEK(15360+X-63)=ASC("N") THENGOTO880
850 IFA#" "ANDZ<3 THENNM#=NM#+A#:Z=Z+1
860 PRINT@215,"YOUR INITIALS: ";NM#;" "
870 GOTO800
880 IFSC(PL);HC(10) THENHC(10)=SC(PL):HC$(10)=NM#:GOSUB930
890 CLS:PRINT@22,"H I G H S C O R E S":FORT=1T010:PRINTHC(T),HC$
(T):NEXTT
895 PRINT@0,;:FORT1=1T05:FORT=1T0255STEP25:SOUND T,10:NEXT:NEXT
900 IFPL=1ANDPP=2ANDSH(2)>0 THENGOTO950
910 IF(PL=2ANDSH(1)<1)OR(PL=1ANDSH(1)<1) THENPRINT@704,"ANOTHER G
AME(Y OR N)?"ELSE950
920 IFPEEK(14444)=2 THENGOTO40ELSEIFPEEK(14450)=64 THENENDELSE920
```



## DEFENSE



## Sort routine for high scores.

```

930 FORT=1T09:FORT1=T+1T010:IFHC(T)(HC(T1)THENTD=HC(T):TD=HC(T)
):HC(T)=HC(T1):HC(T)=HC(T1):HC(T1)=TD:HC(T1)=TD#
940 NEXTT1,T:RETURN
950 IFPEEK(14400)=1THENGOTO470ELSE950

```

## Graphic sign set up.

```

960 FORT=1T0158:READT1:NEXT:FORT=1T028:READA:DE#=DE#+CHR$(A):NEX
T:DE#=DE#+CHR$(26)+STRING$(28,24):FORT=1T028:READA:DE#=DE#+CHR$(
A):NEXT
970 FORT1=1T03:FORT=1T035:READA:GA#=GA#+CHR$(A):NEXT:GA#=GA#+CHR
$(26)+STRING$(35,24):NEXTT1
980 FORT1=1T03:FORT=1T035:READA:OV#=OV#+CHR$(A):NEXT:OV#=OV#+CHR
$(26)+STRING$(35,24):NEXTT1
990 H#=STRING$(10,95):A$(1)=STRING$(2,95):A$(3)=A$(1):A$(4)=A$(1
):A$(2)=CHR$(134)+CHR$(137):FORT=1T0117:H#=H#+A$(RND(4)):NEXT:H#
=H#+STRING$(10,95)
1050 RETURN

```

## Title display.

```

1060 CLS
1070 PRINT@466,DE#,:FORT=34T092:SET(T,19):SET(T,27):NEXT:FORT=20
T026:SET(34,T):SET(92,T):NEXT
1085 PRINT@0,,:FORT=1T035:SOUNDT,V:V=V+5:NEXT:FORT=35T01STEP-1:S
OUNDT,V:V=V-5:NEXT
1090 GOTO40

```

## Sound routine from 11/81 SoftSide. Line 60050 has been slightly changed.

```

60000 Z=0:FORX=1T0158:READY:Z=Z+Y:NEXT:IFZ<>15204THENCLS:PRINT"D
ATA BASE ERROR IN LINES 60060-60160, CHECK LISTING.":PRINT:LIST6
0060-60160ELSEY=86:X=255:POKE-1,0:IFPEEK(-1)<>0THENX=191:POKE-16
385,0:IFPEEK(-16385)<>0THENX=127
60010 POKE16562,X:POKE16561,Y:CLEAR50:A1=PEEK(16561)+2:A2=PEEK(1
6562):A=A1+A2*256:Z=A-1:FORX=1T0158:Z=Z+1:Z=Z+65536*(Z>32767)
60020 READY:IFY<0THENY=A1+ABS(Y):POKEZ,Y+256*(Y>255):Z=Z+1:POKEZ
,A2-(Y>255):NEXTELSEPOKEZ,Y:NEXT
60030 IFPEEK(16396)=201POKE16526,A1:POKE16527,A2ELSECMD"T":DEFUS
R=A1+(A2+256*(A2>127))*256:POKE14308,0

```

60040 IFPEEK(16807)+PEEK(16808)#256<>A+24THENA=USR(0)  
 60050 GOTO20  
 60060 DATA58,166,65,50,-164,42,167,65,34,-165,62,195,50  
 60070 DATA166,65,33,-24,34,167,65,201,245,123,254,2,40,4,254  
 60080 DATA16,32,79,229,213,42,230,64,126,183,32,4,35,35,35,35  
 60090 DATA215,6,5,17,-156,26,190,32,104,19,35,16,248,43,215  
 60100 DATA43,34,230,64,241,241,241,241,197,213,215,205,55,35  
 60110 DATA229,205,127,10,42,33,65,34,-167,225,215,43,34,230,64  
 60120 DATA35,205,55,35,43,229,205,127,10,42,33,65,58,-167,60  
 60130 DATA183,87,24,4,24,48,24,44,66,62,1,211,255,16,252,66,62  
 60140 DATA2,211,255,16,252,58,64,56,230,4,32,7,124,181,40,3,43  
 60150 DATA24,228,175,50,154,64,225,209,193,215,195,30,29,83,79  
 60160 DATA85,78,68,209,225,241

### Graphic sign data.

64000 DATA151,131,131,148,183,179,147,129,183,179,147,129,183,179,147,129,151,164,32,149,183,179,179,145,183,179,147,129,141,140,140,129,141,140,140,132,133,32,32,32,141,140,140,132,133,32,137,133,140,140,140,133,141,140,140,132  
 64010 DATA191,131,131,131,131,131,131,131,32,190,131,131,131,131,131,131,189,32,191,164,32,32,32,32,152,191,32,191,131,131,131,131,31,131,131,32,191,32,32,140,140,140,140,188,32,191,140,140,140,140,140,191,32,191,32,137,144,160,134,32,191  
 64020 DATA32,191,140,140,140,140,140,32,32,191,176,176,176,176,176,176,176,191,32,191,32,32,32,32,32,32,191,32,130,129,32,32,191,32,191,176,176,176,176,176,176,32  
 64030 DATA190,131,131,131,131,131,131,189,32,165,32,32,32,32,32,32,154,32,191,131,131,131,131,131,131,131,32,191,131,131,131,131,131,131,189,191,32,32,32,32,32,191,32,32,137,144,32,32,160,134,32,32,191,140,140,140,140,140,32  
 64040 DATA32,191,140,140,140,140,140,156,143,175,176,176,176,176,176,176,159,32,32,32,130,164,152,129,32,32,32,191,176,176,176,176,176,176,176,32,191,32,32,32,32,130,164



## SWAT TABLE

For TRS-80® DEFENSE

LINES	SWAT CODE	LENGTH	LINES	SWAT CODE	LENGTH
10 - 110	0X	322	730 - 830	RC	424
120 - 210	1R	514	840 - 930	QJ	514
220 - 330	0I	450	940 - 1085	B6	521
340 - 440	XW	572	1090 - 60060	BN	536
450 - 545	FS	457	60070 - 60150	CP	512
550 - 640	FS	392	60160 - 64020	TI	649
650 - 720	ZT	520	64030 - 64040	AG	395

### DEFENSE

# VOLCANO ISLAND



## SoftSide

### CV/DV Adventure Series

"In this adventure, I will become your eyes, ears, and hands," says your computer. You are about to enter a new fantasy world. Each issue, *SoftSide DV* presents the latest challenge to your ingenuity and perseverance. For those unfamiliar with the genre, the fantasy/adventure game places you in a puzzling situation, usually in a strange, unfamiliar world, but sometimes in a world enough like your own to lull you into a false sense of security. Your first goal is, often, simply to survive. However, success at even this basic task can be doubtful. Perplexing situations will certainly test your ingenuity and perseverance, and perhaps you will glean great treasures. But dragons and desperadoes may oppose you — you never know.

To "win" a fantasy/adventure game, you have to solve the puzzles and overcome the obstacles that confront you. Death is transitory — you can always re-run the program. Aficionados of adventures carefully map the locations in the game's world. If you have an exceptional memory, you may skip this exercise... Now, was the cave with the ruby-encrusted scepter north or east of the beach? Hmmm...

You act by giving your computer simple, one- or two-word commands, like "LOOK", or "GET RUBY".

This time, the adventure features the SAVE GAME and LOAD GAME commands. These commands respectively record and retrieve your position to or from your disk. In this way, you can solve the adventure over many playing sessions.

One issue after the appearance of an adventure, *SoftSide* will publish encrypted hints for it. The encryption will prevent you from inadvertently seeing the hints if you don't want to.

Beginning this time, the adventure contains the HINT command. This decodes the encrypted hints that we publish one issue after the appearance of an adventure. To use this command, just type, for example, "HINT DRAZIW DRAZIW". This will cause the adventure to respond "WIZARD WIZARD." This allows you to decode hints in the course of the adventure.

To begin the adventure, just RUN the program named "INTRO" on your disk, or select the adventure from the DV menu. On cassette, the adventure is the last program, and the INTRO program immediately precedes it.

**Memory requirements for all adventures — 16K tape, 32K disk.**



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## General Information

These are the standard procedures for the programs published in **SoftSide Selections**. Sometimes, a particular program does not lend itself to these procedures. Always read the specific instructions accompanying a program. They will instruct you if there are any variances from the following procedures. Also, back issues of **SoftSide Magazine** may differ in some details.

At the conclusion of each program listing in **SoftSide Selections**, we include a **SWAT (Strategic Weapon Against Typos)** Table. **SWAT** for the TRS-80 appeared in **SoftSide Issue #30**. If you missed Issue #30, we'll send you a free reprint of **SWAT**. Send a self-addressed, stamped envelope to:

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Please be sure to tell us that you have a TRS-80 computer.

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## Magnetic Media

Disks are available in Model I or Model III format. They contain the DOSPLUS operating system. A cover program runs automatically when you boot the disk. Back issues earlier than May 1981 are available only in Model I format. If you have a two-drive Model III, you can convert such disks with the CONVERT utility.

Tapes CLOAD in the normal manner on Model I's, and at low speed (500 baud) on Model III's. The first program is a cover/menu program; side two of the tape is a duplicate of side one.

**SoftSide Selections** disks and tapes are duplicated on reliable, professional equipment. Bad copies are exceedingly rare. Nevertheless, the trip through the mail occasionally results in damage to the sensitive magnetic media. If, after a reasonable number of attempts on well-adjusted, clean equipment, you are unable to load a program, return it to us along with an exact explanation of your problem. We will send you a replacement copy.

**SoftSide Selections** media are not copy protected. We urge you to make an archival backup copy of your disk or tape as soon as you receive it, as our replacement policy is valid only for 30 days. Please resist the urge to give away copies of copyrighted material.

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## Line Listings

The line listings in this booklet are in standard 64-column format, and they appear exactly as they should on your screen when you type LIST.

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## System Requirements

The necessary memory and other equipment you need to run a program are listed in the introductory paragraph of the article for each program. (Also see the **SoftSide Adventure Series** elsewhere in this booklet.)



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