

Minelay

+3K

Minelay is a maze game in which your hero runs about collecting eggs and avoiding the deadly mines which are scattered randomly about the maze. A fiendish little 'minelayer' scuttles around the screen in hot pursuit. Contact with this persistent creature results in instant death. Here is the good news. A number of axes are dotted around the playing area which the player can pick up and carry around. Each axe can be used both to break through maze walls and also to fend off direct attacks by the minelayer.

```

5 REM @ P. STANLEY
10 GOT09000
15 HS=0
20 GOT06030
50 POKEY,6:POKEHI,141
51 FORI=1TO100:NEXT:POKEY,0:POKEHI,0
55 LI=3
60 PRINT"§";TAB(9);"HI SCORE";HS
70 POKESN+22,37:POKESN+23,37:POKECL+2
2,6:POKECL+23,6
100 N=1+N
101 POKESN+X1+Y1*22,32:POKESN+X+Y*22,A
S:POKECL+X+Y*22,7:Y1=Y:X1=X
110 GETA$
111 IFA$="Q"ANDY>3THENY=Y-1
112 IFA$="Z"ANDY<19THENY=Y+1
113 IFA$="P"ANDX<20THENX=X+1
114 IFA$="I"ANDX>1THENX=X-1
120 A=PEEK(SN+X+Y*22):IFA=32THEN700
122 IFA=36ANDAS=38THEN5000
125 IFA=36THENY=Y1:X=X1:GOTO5000
130 IFA<>60THEN140
131 POKEY,6:POKEHI,235
132 FORI=1TO10:NEXT:POKEHI,0:POKEY,0:S
C=SC+10:PRINT"§";TAB(5);SC
133 IFSC/500<>INT(SC/500)THEN140
134 POKESN+21+LI,37:POKECL+22+LI,6
135 FORI=1TO5:POKEHI,128:POKEY,6
136 FORJ=1TO200:NEXT:POKEY,0:POKEHI,0:
NEXTI

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8030 PRINT"WITHOUT A PRESENT      BEING
DROPPED BEFORE  THIS OCCURS,IT WILL...";
8031 PRINT"PRESS A KEY.":POKE198,0:
WAIT198,1:PRINT
8032 PRINT"...INDICATE THAT THE  IN
HABITANTS ARE AWAKE AND YOU WILL HAVE TO
8034 PRINT"RETURN IMMEDIATELY."
8040 PRINT"LEFT", "LEFT"
8041 PRINT"LIGHT", "LIGHT"
8042 PRINT"DROP PRESENT", "DROP PRESENT"
8046 PRINT"PRESS A KEY TO START."
:POKE198,0:WAIT198,1:RETURN
9000 PRINT"CHR$(142):POKE783,PEEK(783
)AND254:FORX=2TO18STEP4:POKE781,13:POKE78
2,X:SYS65520
9010 PRINT"
"
9020 NEXT:RETURN
10000 :PRINT"MOVE RIGHT WITH 'Z'"
10010 PRINT"MOVE  LEFT WITH 'X'"
10020 PRINT"DROP PRESENTS WITH 'SHIFT'"
10030 IF INKEY$=""THEN 10030
10040 RETURN

```



```

50 IFP=0 THEN G=G+1:POKEFNP(G-1),32:POKE
EFNP(G)+CO,6:POKEFNP(G),219:IFG=10 THEN K0=
1
51 IFK0=1 THEN K0=0:IFH=X+1 OR H=X+2 OR H=X
+3 OR H=X+4 THEN NP=1
60 IFG=12 THEN IF PEEK(HM+(G+1)*22+H)=93
THEN 1000
65 IFG=12 THEN POKEFNP(12),32:G=1:H=INT
(RND(8)*18)+2
70 IFP=1 THEN IF (PEEK(653) AND 1)=1 THEN G=
10:H=X+4+(S=S2)*3:P=0
80 IFRND(8)>SK THEN Q=INT(RND(8)*5)+1:E
=INT(RND(8)*4):POKEHM+16*22+Q*4-E,32:K0=1

81 IFK0=1 THEN D$=LEFT$(D$,Q*4-E-1)+"P"
+MID$(D$,Q*4-E+1,255)
82 IFK0=1 THEN K0=0:IFMID$(D$,Q*4-3,4)=
"PPPP" THEN 2000
90 GOTO 30
1000 POKEFNP(12),32
1010 IF(PEEK(HM+CO+22*18+H) AND 7)=7 THEN 2
5
1015 S=S+1:PRINT"🎁 PRESENTS" S
1020 FORI=0 TO 1:FORJ=0 TO 1:POKEHM+CO+(18+
I)*22+H+J,7:NEXTJ,I
1022 FORF=1 TO 10:POKE36876,227+F:POKE368
76,195+F:NEXT:POKE36876,0
1025 FORF=3 TO 19 STEP 4
1027 IF(PEEK(HM+CO+18*22+F) AND 7)=7 THEN N
EXTF:SK=SK-.02:PRINT"🎁":GOSUB9000:GOTO20
1030 F=30:NEXTF:GOTO25

2000 IF(PEEK(CO+HM+18*22+Q*4-1) AND 7)<>7
THEN 6000
2010 GOTO 30
5000 RESTORE:FORF=1 TO 26:READB,A:POKE368
76,B
5002 FORI=15 TO 0 STEP -2/A:POKE36878,I:NEX
T I
5010 NEXTF:POKE36876,0
5020 RETURN
5100 DATA 195,2,195,2,195,4,195,2,195,2,
195,4,195,2,203,2,179,2,187,2,195,6,0,1,1
99
5110 DATA 2,199,2,199,2,199,2,199,2,195,

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```

5020 POKE X1+4361,X%(X2):RETURN
5030 X=SGN(X):Y2=Y2+X:IFY1*8+Y2<0ORY1*8
+Y2>159 THEN Y2=Y2-X:RETURN
5040 IF Y2<0(Y2AND7) THEN POKEY1+4449,96+SGN(Y2)*64:Y1=Y1+SGN(Y2):Y2=Y2AND7
5050 POKEY1+4449,X%(Y2):RETURN
8000 FOR I=4096 TO 4096+22*11-1:POKE I,228:POKE I+33792,5:NEXT:RETURN
9000 G(1)=4:G(2)=2.5:G(3)=1.5:G(4)=1:PRINT"
9010 PRINT"
|-----|
|-----|2000
|-----|
"
9020 PRINT"
|-----|
|-----|60000
|-----|
"
9140 GOSUB 8000:RETURN
9150 DEFFNA(X)=50*(G(G)/GR)
9160 DEFFNB(X)=NS*GR*G(G)*CN/CI
9170 DEFFNC(X)=(C1*RPM^3)+(C2*RPM^2)+(C3*RPM)
9180 DEFFND(X)=DS+T0/T1
9190 DEFFNE(X)=OP+NS*(5280/60^2)
9220 DEFFNH(X)=T+(1320-OP)/(NF-OP)-1
9250 CN=63360:CI=4523.893421:C1=-1.8953E-9:C2=1.02157E-5:C3=.015752:CL=5.455
9310 CO=0:FOR I=0 TO 7:READ X%(I):NEXT:RETURN
9320 DATA 32,101,116,117,97,246,234,231

```


Drag Racer

+8K

This is a simulation of a drag race. The object of the game is to complete the quarter mile course in the shortest possible time. You have four gears and must determine the optimum moment for changing up. If you change too early, your revs will fall too low and you will lose valuable time; if you spend too much time in high revs you'll probably blow your engine. The rear end ratio of the car is progressively increased with each succeeding game, and the right moment to change gear becomes increasingly hard to judge.

```

1 REM DRAG RACER
2 REMR.ERSKINE 1983
3 REM CONVERTED FOR
4 REMVIC20 G.G.MICHAEL
5 POKE828,0:POKE829,0
6 BT=PEEK(829):GR=PEEK(828)/1E2+3:GO
SUB4000:GOSUB9000:GOSUB9150
20 G=1
100 GETI$:I=ASC(I$+" ")
120 IFI>48ANDI<53THEN G=I-48
125 IFT<3THENRPM=FNA(X):GOTO140
130 RP=FNB(X)
140 IFRND(8)<<(RP-6E3)/1E3THEN3000
160 OS=NS:OP=NP:TQ=FNC(X):T1=17:NS=FND
(X):NP=FNE(X):T=T+1
260 FORI=OSTONNSSTEP2:GOSUB5000:NEXT
310 X=SGN(RP-RM):FORI=RMTORPSTEP37*X:G
OSUB5030:NEXT:RM=RP
365 POKE4096+CO,228
400 CO=CO+INT((NP-OP)/CL)
460 IFCO<242THENPOKE4096+CO,190
500 IFNP<1320THEN100
2000 T=FNH(X):IFBT=0THENBT=T
2010 IFT<BTTHENBT=T
2020 FORI=1TO1E3:NEXT:PRINT"TIME",SPC
(2)INT(T)"SECS
2030 PRINT"BEST TIME "INT(BT)"SE
CS","Maximum speed"int(ns)"mph
2060 PRINT"PRESS ANY KEY TO START":POK
E198,0:WAIT198,1

```


176 Tug-of-War

```

2020 SYSP:PRINT"▣ " :IFF<>TTHENPOKE1,13:
POKE2,T:SYSP:PRINT" " :GOTO2260
2100 GOSUB40:X=X+(K=1)+ABS(K=2)
2110 IFX<0THENX=0:C#=RIGHT$(C$,LEN(C$)-
1)
2120 GOSUB30:FORD=1TO15:POKER,130+D*6:N
EXT:POKER,0:GOSUB20
2130 U=0:IFPEEK(7997)<>52THENU=8:T(1)=T
(1)-10
2140 IFPEEK(8000)<>52THENU=12:T(2)=T(2)
-10
2150 IFU=0THEN2260
2200 POKE1,14:POKE2,U:SYSP:PRINT"  ▣▣▣▣
" :C#=C#+ "44" :A=-A:GOSUB50:A=-A
2210 POKE2,10:FORG=14TO19:POKE1,G:SYSP:
PRINT"^(▣▣▣▣)*" :D=12-Y:N=190-G*3:GOSUB60
2220 SYSP:PRINT"  ▣▣▣▣ " :NEXT
2230 B=ABS(U<9)+2*ABS(U>8):U=T(B)/5:IFU
=0THENC#="" " :E=ABS(B=2)+2*ABS(B=1)
2240 IFB=1THENA#=LEFT$(A$,U)+"▣"+LEFT$(
D$,U)+RIGHT$(A$,U)
2250 IFB=2THENB#=LEFT$(B$,U)+"▣"+LEFT$(
D$,U)+RIGHT$(B$,U)
2255 GOSUB30:GOSUB40:GOSUB20
2260 POKE1,0:POKE2,F:PRINT"▣":RETURN
6500 POKE1,2:POKE2,0:FORF=1TO7:POKE646,
F:SYSP:PRINT" WELL DONE PLAYER " :CHR$(64
+E)
6510 PRINT"▣▣▣▣▣▣▣▣YOU WON":FORG=1TO8:D=
10:N=130+(F*2)*G:GOSUB60:NEXTG,F:POKER,0:
POKE1,5
6520 SYSP:PRINT"▣ PRESS SPACE TO PLAY
AGAIN" :WAIT197,32:PRINT"" :POKE36
869,240
6530 POKE36879,238:FORA=0TO9:GETA$:NEXT
:GOSUB9040:GOSUB7000:E=0:GOTO1000
7000 PRINT"▣ STARTING":FORD=0TO499:NEXT
:C#="3333333333":POKE36869,255:POKE36879,8

7010 PRINT"▣▣":POKE1,16:POKE2,0:SYSP:FO
RF=1TO4:PRINTC$:CHR$(42+F):NEXT:POKE2,12
7020 FORF=1TO4:POKE1,15+F:SYSP:PRINTCHR
$(46+F):C$:NEXT:PRINT"▣ LEVEL ▣":CHR$(64
+Y)

```

Tug-of-War

+3K

Tug-of-War is a two player game consisting of a canyon with a rope stretched across the top, held by a team of three figures on either side. A small UFO flies overhead and each player takes turns in dropping a parachute from it, attempting to land on a target which appears lower down the screen in a random position. Every time a parachutist hits the target, the opposing team is pulled further towards the edge of the canyon and if a man topples over the precipice, the team is weakened. The winner is the player who succeeds in pulling all the opposing team over the edge of the canyon.

```

1 REM***VIC 20 +3K***
2 REM***TUG OF WAR***
10 PRINT"  " :GOSUB9000 :GOSUB8000 :GOSUB
7000 :R=36875 :POKER+3,15 :GOTO1000
20 POKE1,14 :POKE2,X :SYSP :PRINT"  " ;A$ ;
"  " ;C$ ;"  " ;B$ :RETURN
30 IFX+T(1)/5+T(2)/5+LEN(C$)>22THENC$
=RIGHT$(C$,LEN(C$)-1)
35 RETURN
40 POKE1,14 :POKE2,0 :SYSP :FORD=0TO43 :P
RINT"  " ; :NEXT :RETURN
50 POKE646,2+4*ABS(A<0) :RETURN
60 FORB=1TO0 :POKER,N :NEXT :RETURN
100 REM 2210 6510
1000 POKE1,13 :POKE2,T :SYSP :PRINT"  " :T=I
NT(RND(T)*18)+3 :POKE2,T :SYSP :GOSUB50 :PRIN
T"5"
1010 POKE1,0 :FORF=HTOISTEPA :SYSP :PRINT"
" :POKE2,F :SYSP :PRINT"%" :B=PEEK(197)
1020 IFPEEK(7966+T)=53THENK=ABS((B=17)*
(A>0))+2*ABS((B=21)*(A<0)) :IFKTHENGOSUB20
00
1030 D=T(S)/Y :N=130 :GOSUB60 :POKER,0 :NEX
T :IFETHEN6500
1040 B=H :H=I :I=B :A=-A :S=2*ABS(S=1)+ABS(
S=2) :GOTO1000
2000 GOSUB50 :FORG=1TO12 :POKE1,G :SYSP :PR
INT"  " :D=7-Y :N=255-G*Y :GOSUB60 :NEXT :PO
KER,0

```

174 Show Sign

005

8007 FORX=1T08:READA:IFA>255THENRETURN

8008 POKEX+XX+7551,A:NEXT:XX=XX+8:GOTO8

007

8010 DATA 124,254,198,198,254,254,198,198,252,254,198,254,254,198,254,252

8011 DATA254,254,192,192,192,224,254,254,252,254,198,198,198,230,254,252

8012 DATA254,254,192,252,252,192,254,254,254,192,252,252,192,192,192

8015 DATA254,254,192,222,222,198,254,254,198,198,198,254,254,198,198,198

8017 DATA60,60,24,24,24,24,60,60,124,124,24,24,24,24,120,120

8020 DATA196,204,216,240,240,216,204,196,192,192,192,192,192,192,254,254

8022 DATA254,254,214,214,214,214,198,198,254,254,198,198,198,198,198,198

8023 DATA254,254,198,198,198,230,254,254,254,198,254,254,192,192,192

8025 DATA254,254,198,198,206,206,255,255,62,126,224,192,192,192,192,192

8026 DATA254,254,224,254,254,14,254,254,126,126,24,24,24,24,24,24

8030 DATA198,198,198,198,198,198,254,254,198,198,198,198,198,238,124,56

8036 DATA198,198,214,214,214,214,254,254,198,198,108,56,56,108,198,198

8039 DATA198,198,230,254,126,14,14,14,254,254,6,12,24,48,126,254

8040 DATA255,255,255,255,255,255,255,255

8100 DATA300

8103 DATA124,254,198,198,198,198,254,124,56,56,24,24,24,24,60,60

8105 DATA254,254,198,14,28,120,254,254,254,254,6,62,62,6,254,254

8107 DATA192,192,192,216,254,254,24,24,254,254,192,254,254,6,254,254

8108 DATA254,254,192,254,254,230,254,254,254,198,6,6,6,6,6

8109 DATA254,254,198,254,254,198,254,254,254,254,198,254,254,6,254,254

8200 DATA300

172 Show Sign

```

120 PRINT"THIS IS A MOVING SIGN"
121 PRINT"DISPLAY FOR YOUR HOME"
122 PRINT"OFFICE OR SHOP ETC.":PRINT
130 PRINT"FIRST SET THE SCREEN":
131 PRINT"BORDER AND CHARACTER":PRINT
"COLOURS.THEN ENTER "
133 PRINT"YOUR MESSAGE WHICH CAN"
134 PRINT"NOT EXCEED FIFTY LINES"
135 PRINT"OF TWENTY CHARACTERS.":PRIN
T"      HIT A KEY"
138 GETA$:IFA$=""THEN138
140 PRINT"NOW ENTER YOUR SCREEN+"
141 PRINT"BORDER COLOUR 8-255"
142 INPUTC$:C1=VAL(C$)
143 IFC1>255ORC1<8THEN140
145 PRINT"NOW ENTER THE TEXT ":PRINT"
colour you are going"
146 PRINT"YOU ARE GOING TO USE.":PRIN
T"1-8."
147 INPUTC$:C2=VAL(C$):IFC2<1ORC2>8THE
N145
160 PRINT"REMEMBER YOUR MESSAGE"
161 PRINT"SHOULD BE NO LONGER "
163 PRINT"THAN FIFTY LINES OF "
164 PRINT"TWENTY CHARACTERS."
165 PRINT"TO RUN THE MESSAGE,AT"
166 PRINT"THE START OF A LINE "
167 PRINT"TYPE (*RUN*)."
168 PRINT"      HIT A KEY"
169 GETA$:IFA$=""THEN169
170 PRINT"THE SPEED OF THE TEXT":PRI
NT"CAN BE CONTROLLED BY"
172 PRINT"PRESSING F1 TO SLOW":PRINT"
down and"
173 PRINT"OF7 TO SPEED UP.":PRINT"
HIT ANY KEY"
175 GETA$:IFA$=""THEN175
199 PRINT":FORLN=1TO50
200 PRINT"      "
INT"ENTER LINE"LN
201 INPUTL$(LN)
205 IFL$(LN)="*RUN*"ORL$(LN)="(*RUN*)"
THENLS=LN:GOTO300
206 IFLLEN(L$(LN))>20THENPRINT"LINE TO
O LONG":goto201

```


170 Roots

```
:PRINT "OR ENTER TO CARRY ON"  
 740 GET A$:IF A$="Q" THEN STOP  
 745 IF A$="" THEN 740  
 750 GOTO 440  
1000 STOP  
2000 PRINT"PRESS ANY KEY TO CONT"  
2010 GET A$:IF A$="" THEN2010  
2020 RETURN  
2350 PRINT"G=";G:PRINT"GIVES A=";A  
2360 RETURN
```

```

403 PRINT"DID N'T STOP ON 5=5 ON THE F
IRST GO!"
404 GOSUB 2000
405 PRINT"THIS IS BECAUSE OF ";PRINT"R
OUNDING ERRORS IN"
406 PRINT"COMPUTED";"CALCULATIONS!"

410 PRINT"ENTER R TO REPEAT";PRINT "TH
E EXAMPLES"
415 PRINT"OR RETURN TO TRY";PRINT" Y
OUR OWN."
430 GET A$;IF A$="R" THEN GOTO 195
435 IF A$="" THEN 430
440 PRINT"          ROOTS"
500 PRINT"ENTER NUMBER (N)"
505 PRINT ">0 AND <1000000";:INPUT N
$
510 IF N$="" THEN 440
515 FOR X=1 TO LEN(N$):IF MID$(N$,X,1)
<"0" OR MID$(N$,X,1)>"9" THEN 440
520 NEXT
530 N=VAL(N$):IF N<.01 OR N>1000000 TH
EN 440
550 PRINT"ENTER DESIRED ROOT";PRINT"F
OR THE ROOT OF ";N
560 PRINT"ROOT (>1 AND < 100)";:INPU
T R$
570 IF R$="" THEN 550
580 FOR X=1 TO LEN(R$):IF MID$(N$,X,1)
<"0" OR MID$(N$,X,1)>"9" THEN 550
590 NEXT
600 R=VAL(R$):IF R<2 OR R>99 THEN 550
610 G=2*(N^(1/R)):X=1
650 A=(N/G^(R-1)+G*(R-1))/R
660 PRINT";X;"> A=";A
670 IF ABS(A-G)<.0001 THEN 700
680 X=X+1:G=A:GOTO 650
700 PRINT:PRINT"THE ";R;"TH ROOT OF ";
N
702 PRINT:PRINT"  IS ";A
705 PRINT:PRINT:PRINT"WITH ROM FUNCTIO
N:"
706 PRINT:PRINT:PRINT A;"^";R;"=";A^R
730 PRINT:PRINT:PRINT"TYPE Q TO QUIT "

```

168 Roots

```
180 GOSUB 2000
182 PRINT"  ROOTS"
183 PRINT "ANY ROOT CAN BE CALCUL"
184 PRINT"-ATED BY USING NEWTONS"
185 PRINT"APPROXIMATION USING"
186 PRINT :PRINT"A=(N/G+(R-1)+G*(R-1))
/R"
187 PRINT:PRINT"WHERE:";PRINT" R=ROOT
REQUIRED";PRINT" N=ORIGINAL NUMBER"
188 PRINT" G=ANY NUMBER"
189 PRINT" A=APPROXIMATION"
190 PRINT "IF A<>G THEN WE LET";PRINT"
G=A REPEATEDLY APPLY "
191 PRINT "THE FORMULA MAKING G"
192 PRINT"EQUAL TO PRECEEDING"
193 PRINT"VALUES OF A UNTIL A=G"
194 GOSUB 2000
195 PRINT"  ROOTS"
196 PRINT:PRINT:PRINT"EXAMPLE TO FIND
SQUARE ROOT OF 16"
197 PRINT"LET G=3 (A REASONABLE";PRINT
"GUESS AS SQUARE";PRINT "ROOT OF 16=4"
200 N=16;G=2
225 GOSUB 230
227 GOTO 235
230 A=(N/G+G)/2;RETURN
235 GOSUB 2350;GOSUB 2000
245 G=A;GOSUB 230
250 GOSUB 2350;GOSUB 2000
260 IF A=G THEN 280
270 GOTO 245
280 PRINT"WHICH IS OUR ANSWER!"
285 GOSUB 2000
310 PRINT"  SRQ 25"
340 G=3;N=25;GOSUB 230
350 GOSUB 2350
360 PRINT "LET G=";A
370 G=A;GOSUB 230
380 GOSUB 2350;GOSUB 2000
390 IF A=G THEN 400
395 GOTO 370
400 PRINT"WHICH IS OUR ANSWER!"
402 PRINT:PRINT "NOTE THE FACT THAT I
T "
```

Roots

+3K

You are about to see your infallible micro make an unbelievably simple mistake — that even a four year old child would spot!

Computers are happiest in Binary arithmetic but would probably settle for Hexadecimal as a compromise — but if we humans insist that micros communicate with us in the Decimal system then we have only ourselves to blame if the computer seems to get it wrong occasionally.

```

10 REM ** ROOTS
20 PRINT "      ROOTS."
100 PRINT:PRINT:PRINT:PRINT
110 PRINT "THIS PROGRAM CALC-"
120 PRINT"ULATES ROOTS USING"
125 PRINT "BOTH THE INTERNAL FUN-"
130 PRINT "CTION IN THE ROM AND"
135 PRINT "NEWTON RAPHSON METHOD."
140 PRINT:PRINT:GOSUB 2000
150 PRINT "THIS PROGRAM WILL DEM-";
155 PRINT"ONSTRATE THE";
160 PRINT"PROBLEMS  FACED BY YOUR";
162 PRINT"COMPUTER  WHEN IT TRIES";
163 PRINT " TO CON-  VERT THE RESULT";

164 PRINT " OF ITS  BINARY SYSTEM";
165 PRINT " CALCUL-  ATIONS INTO DEC";

166 PRINT "IMAL  FOR DISPLAY ONTO";
167 PRINT " YOUR  SCREEN."
168 PRINT:PRINT:PRINT:GOSUB2000
170 PRINT"ALTHOUGH WE WOULD NEED"
171 PRINT"MACHINE CODE METHODS"
172 PRINT"TO ACTUALLY SEE THE"
173 PRINT "DIFFERENCE BETWEEN TWO"
174 PRINT"SEEMINGLY IDENTICAL"
175 PRINT"NUMBERS. WE CAN SHOW"
176 PRINT"THE IMPOSSIBLE AS YOUR"
177 PRINT"COMPUTER FAILS TO REC-"
178 PRINT"GNISE THE NUMBER "
179 PRINT"WHICH IT IS SEARCHING  FOR!
!!"

```

166 Division One

```
20155 PRINT"■E.G. IT'S QUITE USUAL FOR
A TEAM TO SCORE AN OWN GOAL"
20160 PRINT"■ THE BALL TRAVELS FURT
HER AND FASTER WHEN THE MATCH IS AWAY"

20165 PRINT"■FROM HOME"
20170 PRINT:PRINT"■THE DURATION OF EACHM
ATCH IS IS 3 MINS."
20175 PRINT"■ HIT ANY KEY "
20180 GETA$:IFA$=""THEN20180
20185 PRINT"■*****DIVISION 1*****"
20190 PRINT"■ TO MOVE A MAN..... HOLD
DOWN THE LETTER OF THE PLAYER TO BE"
20195 PRINT"MOVED AND WAIT FOR IT TO BE
DISPLAYEDNEXT TO 'MAN TO RE-POSITION='

20200 PRINT"■THEN PRESS '1' AND '3' TO MO
VE HIM LEFT AND"
20210 PRINT"RIGHT AND '7' AND '9' TO
MOVE HIM DOWN AND UP"
20215 PRINT"■DIVISION 1 BY H.WALWYN"
20220 PRINT"■CONVERTED TO VIC 20 BY
I.MCLAUGHLIN
20225 PRINT"■ HIT ANY KEY TO ■
■
20230 GETA$:IFA$=""THEN20230
20235 RETURN
63900 REM
63910 UC=37888:US=4096
63920 RETURN
```

```

20015 PRINT"■ THERE ARE 210 GAMES PLAYE
D IN ALL AND EACHTEAM PLAYS 28 GAMES"
20020 PRINT" SINCE EVERYONE PLAYS EVERY
ONE TWICE (HOME AND AWAY)"
20021 PRINT"■ YOU CAN EITHER PLAY"
20025 PRINT" A MATCH OR LET THE MACHIN
E CALCULATE THE"
20030 PRINT" RESULT. WHEN THE GAME "
20032 PRINT" IS OVER A LEAGUE TABLE IS DR
AWN"
20035 PRINT"■ HIT ANY KEY "
20040 GETA$:IFA$=""THEN20040
20045 PRINT"■*****DIVISION 1*****"
20050 PRINT"■ AS THE FIXTURES PROG- RESS,
YOU WILL SEE HOWMANY GAMES EACH ";
20055 PRINT" TEAM HAS PLAYED, HOW MANY
GOALS EACH TEAM HAS SCORED AND HOW";
20060 PRINT" MANY POINTS FOR EACH TEA
M (3 FOR A WIN AND 1 FORA DRAW)"
20065 PRINT"■ N.B. WHEN YOU GET NEAR
THE END OF A SEASON, THERE MAY BE"
20070 PRINT" A SLIGHT PAUSE AS THE COMPUT
ER HUNTS FOR THE NEXT FIXTURE"
20075 PRINT"■ HIT ANY KEY "

20080 GETA$:IFA$=""THEN20080
20085 PRINT"■*****DIVISION 1*****"
20090 PRINT"■ IF YOU DECIDE TO PLAY
A MATCH THEN YOU MAY RE-POSITION YOUR "
20095 PRINT" TEAM AS THEY PLAY. ONLY S
IX FOOTBALLERS ARE SHOWN IN EACH TEAM"
20100 PRINT" (LETTERS A-F). YOUR TEAM A
LWAYS FROM LEFT"
20110 PRINT" TO RIGHT IN THE 'DARK STRIP'
."
20120 PRINT"■ YOU MAY RE-POSITION PLAYE
RS AT ANYTIME IN THE GAME BUT YOU HAVE"
20125 PRINT" NO CONTROL OVER WHERE THEY K
ICK THE BALL! THIS DEPENDS UPON THE"
20130 PRINT" VARIOUS STRENGTHS OF ATTACK
AND DEFENCE. "
20140 PRINT"■ P.T.O. BY ANY KEY"
20145 GETA$:IFA$=""THEN20145
20150 PRINT"■*****DIVISION 1*****"

```



```

7005 PRINT"JTEAM"TAB(10)"P"TAB(13)"F"TA
B(16)"PTS  MATCHES LEFT"
7006 PRINT"  _____  |  TO
PLAY "210-PL:PRINT"
7010 FORJ=(P5+1)TO0STEP-1
7020 FORI=1TO15
7030 IFTT(I)=JTHEN7100
7040 NEXTI
7050 NEXTJ
7060 IFPL=210THEN10080
7065 RETURN
7100 PRINTT$(I):PRINT"J";TAB(9)TP(I):PR
INT"J";TAB(12)TF(I):PRINT"J";TAB(15)TT(I)

7150 GOTO7040
8000 POKE36879,93:PRINT"J(0)(0)(0)(0)"
8010 FORI=0TO21:POKEUC+132+I,0:POKEUC+1
32+352+I,0:NEXT
8015 FORI=0TO21:POKEUM+I,102:POKEUM+I+3
52,102:NEXT
8020 FORI=0TO15:POKEUC+132+I*22,0:POKEU
C+21+132+I*22,0:NEXT
8025 FORI=0TO15:POKEUM+I*22,230:POKEUM+
21+22*I,230:NEXT
8030 FORI=7TO10:POKEUC+132+I*22,1:POKEU
C+132+21+I*22,1:NEXT
8035 FORI=7TO10:POKEUM+I*22,58:POKEUM+2
1+I*22,58:NEXT:RETURN
10000 A=X(I,J)+Y(I,J)*22
10001 IFPEEK(US+A+X+Y*22)=42THEN16000
10002 IFPEEK(US+A+X+Y*22)<>32THENRETURN
10010 AA=32
10020 POKEUS+A,AA
10025 X(I,J)=X(I,J)+X:Y(I,J)=Y(I,J)+Y
10030 AA=D(I,J)
10040 A=X(I,J)+Y(I,J)*22
10050 POKEUS+A,AA:RETURN
10060 FORT=1TO5000:NEXTT:POKE36879,25:PR
INT"J":RESTORE:POKE198,0
10061 READD0$:IFD0$<>"@"THEN10061
10063 :FORT=1TO13:READD0$:PRINTD0$:FORT
T=1TO30:NEXTTT
10064 POKE36877,250:FORTT=1TO3:NEXTTT:PO
KE36877,0:NEXTT

```



```

6588 IFTT(Q%)>P5THENP5=TT(Q%)
6589 IFTT(R%)>P5THENP5=TT(R%)
6591 IFPTHEN6598
6595 PRINT"PRESS ANY KEY WHEN
      "
6596 GETA$:IFA$=""THEN6596
6597 GOTO6600
6598 NEXTP:PRINT"PRESS ANY KEY WHE
N
      "
6599 GETA$:IFA$=""THEN6599
6600 GOTO6000
6700 FORT=1TO2000:NEXTT:POKE36879,25:PR
INT" "
6706 DATA*, " ", I, F, Y, O, U, H, A, D, L, E,
T, M, E, D, E, C, I, D, E, "
6712 DATA, " ", T, H, E, S, C, O, R, E, " ",
W, O, U, L, D, H, A, V, E, B, E, E, N, . . . . .
6714 READCC$:IFCC$<>"*"THEN6714
6715 FORI=1TO49:READBB$:PRINTBB$,:POKE3
6877,254:FORT=1TO2:NEXTT:POKE36877,0
6717 FORT=1TO20:NEXTT:NEXTI:PRINT:RESTO
RE
6718 FORI=0TO2:POKE36874,250:FORT=1TO20
:NEXTT:POKE36874,0:FORT=1TO20:NEXTT:NEXTI

6720 QQ=TA(Q%)-TM(R%)+S%-TD(R%)+UX/2.5
6730 RR=TA(R%)-TM(Q%)+T%-TD(Q%)
6740 QQ=INT(QQ/5):RR=INT(RR/5)
6750 IFQQ<1THENQQ=0
6760 IFRR<1THENRR=0
6765 PRINT" "
6770 PRINTT$(Q%):PRINTTAB(16)" ";QQ
6771 PRINTT$(R%):PRINTTAB(16)" ";RR
6775 IFQ=QQANDR=RRTHENPRINT" THE SAME!
":FORT=1TO2000:NEXTT:GOTO6790
6776 PRINT"PRESS ANY KEY TO
      "
6777 GETA$:IFA$<>""THEN6777
6778 GETA$:IFA$=""THEN6778
6780 PRINT" BUT AS IT IS , THE SCORE
IS. . ."
6790 POKE36879,8:PRINT" ":GOTO6578
7000 REM
7003 PRINT" ":POKE36879,8

```

```

6030 PRINT"MATCH # "PL" " ;
6040 PRINT" "T$(Q%)
6041 PRINT"HOME TO "T$(R%)
6042 IFQ%=MORR%=MTHEN6050
6045 IFP>0THEN6500
6047 PRINT"PRESS ANY KEY WHEN
        6048 GETA$:IFR$=""THEN6048
6049 GOTO6500
6050 PRINT"DO YOU WISH TO PLAY AGAIN
(Y/N)"
6060 GETA$:IFR$=""THEN6060
6070 IFR$="Y"THEN6100
6080 GOTO6500
6100 REM
6105 J=Q%:VJ=2:VM=1:IFQ%=MTHENJ=R%:VM=2
:VJ=1
6106 N=J
6110 S(1,1)=TD(J)*VJ:S(1,2)=TM(J)*VJ:S(
1,3)=TM(J)*VJ
6115 S(1,6)=TA(J)*VJ:S(1,5)=TA(J)*VJ:S(
1,4)=TA(J)*VJ
6120 S(0,1)=TD(M)*VM:S(0,2)=TM(M)*VM:S(
0,3)=TM(M)*VM
6125 S(0,6)=TA(M)*VM:S(0,5)=TA(M)*VM:S(
0,4)=TA(M)*VM
6180 GOTO100
6500 REM
6510 S%=RND(1)*20+1:T%=RND(1)*20+1:U%=R
ND(1)*20+1
6520 S=0:T=0:U=0
6530 Q=TA(Q%)-TM(R%)+S%-TD(R%)+U%/2.5
6540 R=TA(R%)-TM(Q%)+T%-TD(Q%)
6550 Q=INT(Q/5):R=INT(R/5)
6555 IFQ<1THENQ=0
6556 IFR<1THENR=0
6570 PRINT"T$(Q%) "... "Q,T$(R%) "... "R:
IFGG=1THENFORT=1TO2000:NEXTT:GG=0
6578 TP(Q%)=TP(Q%)+1:TP(R%)=TP(R%)+1:TF
(Q%)=TF(Q%)+Q:TF(R%)=TF(R%)+R
6580 IFQ>RTHENTT(Q%)=TT(Q%)+3
6584 IFR>QTHENTT(R%)=TT(R%)+3
6586 IFR=QTHENTT(Q%)=TT(Q%)+1:TT(R%)=TT
(R%)+1

```

```

353 GOTO6700
360 PRINT"SUBROUTINE MAN TO RE-POSITION=ZZ$
"ZZ$
400 REM
410 W=1:I=1:V=INT(RND(1)*6+1):IFV=MVTH
ENW=INT(RND(1)*S(I,MV))
420 I=1:J=V:MV=J:Y=SGN(Y1-Y(I,J))
422 IFV=1ANDRND(1)>.5THENY=SGN(14-Y(I,
J)):X=1:W=1:GOTO430
424 X=SGN(X1-X(I,J))
430 FORL=1TOW:GOSUB10000
440 IFMMTHENMM=0:X2=-INT(RND(1)*2):Y2=
INT(RND(1)*3-1):GOTO620
445 NEXTL
500 U=INT(RND(1)*TA(N)*VJ+1)
620 FORL=1TOU
650 GOSUB12000
660 IFZZTHENZZ=0:FORI=1TO2000:NEXTI:GO
SUB8000:GOTO110
690 NEXTL
900 GOTO300
999 END
5000 REM
5002 PRINT"*****DIVISION ONE*****"
5010 FORI=1TO15
5020 PRINTI,T$(I)
5030 NEXTI
5040 INPUT"ENTER YOUR TEAM":M
5042 IFM<0ORM>15THEN5040
5045 T$(M)="$"+T$(M)+"$"
5050 PRINT"$"
5090 RETURN
6000 REM
6001 GOSUB7000
6003 F=0:PRINT"$ AUTO RESULTS "$"
6004 PRINT"$ ($=MANUAL)"
6005 INPUTP1:IFP1>210-PLTHEN6004
6006 PRINT"$":IFP1=0THENGOTO10080
6007 FORP=1TOP1
6010 Q%=RND(1)*15+1:R%=RND(1)*15+1
6020 IFQ%=R%ORTZ(Q%,R%)=1THEN6010
6025 TZ(Q%,R%)=1:PL=PL+1
6028 PRINT"_____"
```

```

75 DATA1,14,3,9,3,19,8,12,8,16,10,14
76 DATA20,14,18,9,18,19,13,16,13,12,1
1,14
80 GOSUB5000
85 GOSUB6000
100 GOSUB8000
105 R=0:Q=0:TI$="000000"
110 FORI=0TO1:FORJ=1TO6:X(I,J)=XS(I,J)
:Y(I,J)=YS(I,J):NEXTJ,I
120 FORI=0TO1:FORJ=1TO6:POKEG+X(I,J)+Y
(I,J)*22,D(I,J)
125 NEXTJ,I
150 X2=0:Y2=0
152 X=0:Y=0:X1=10:Y1=12
155 I=0:J=0
160 ZZ$="A"
300 K=PEEK(197):GETZ$:IFK=64THENX=0:Y=
0:MP=0:GOTO340
301 IFZ$<>" "ANDVAL(Z$)<=0THENZZ$=Z$:GO
TO340
303 W=1:I=0:PQ=ASC(ZZ$)-64:IFK=MPTHENW
=INT(RND(1)*S(I,PQ))
304 J=PQ:MP=K:IFJ<0ORJ>6THENZZ$="A":J=
1
305 IFK=3THENY=1:X=0:GOTO330
310 IFK=4THENY=-1:X=0:GOTO330
315 IFK=0THENX=-1:Y=0:GOTO330
320 IFK=1THENX=1:Y=0:GOTO330
330 I=0
340 FORL=1TOW:GOSUB10000
342 IFMMTHENMM=0:X2=INT(RND(1)*2):Y2=I
NT(RND(1)*3-1):GOTO620
344 NEXTL
345 PRINT"███      "T$(Q%);:PRINT"█";:P
RINTTAB(19)Q;
346 PRINT"      █-V-█"
347 PRINT"█      ";T$(R%);:PRINT"█";:P
RINTTAB(19)R
349 PRINT"███"TAB(8)MID$(TI$,4,1):"MID
$(TI$,5,2)
350 IFMID$(TI$,3,2)<>"03"THEN360
351 PRINT"██████      █TIME'S UP!!"
352 FORI=0TO2:POKE36874,250:FORT=1TO20
:NEXTT:POKE36874,0:FORT=1TO60:NEXTT:NEXTI

```

Division One

+16K

This time around you're a soccer manager whose overall proficiency will be judged at the end of a season. There are details of matches played and goals scored, points awarded, games remaining and a constantly changing league table. The computer will calculate the results according to the relative strengths of the teams, whether the game was played at home or away, and so on.

If things are going badly it could be that you'll have to intervene at the touchline, changing players' positions and generally backseat booting. Is it going to be championship or relegation? It's up to you and the lads. And the DATA statements which can be messed around with if you feel that we've been biased one way or another.

```

1 REM DIVISION ONE.....H.WALWYN
2 REM CONVERTED FOR VIC 20 BY I.MCLA
UGHLIN
6 POKE36878,13
7 GOSUB20000
8 GOSUB63900
14 POKE36879,105:PRINT"
PLEASE WAIT..."
15 J=0
30 DIMTZ(15,15),T$(15),TA(15),TM(15),
TD(15),TT(15),TP(15),TF(15)
35 FORI=1TO15:READT$(I),TA(I),TM(I),T
D(I):NEXTI
36 DATA"LIVERPOOL",9,6,6,"MAN UTD",8,
5,6,"IPSWICH",6,7,6,"ARSENAL",7,6,6
37 DATA"STAMPTON",8,5,5,"A VILLA",6,6
,5,"NOTTM F",9,5,5,"SWANSEA",5,6,5
38 DATA"WOLVES",5,5,5,"CRSTAL P",5,6,
5,"TOTTENHAM",8,4,6,"NORWICH",4,5,4
39 DATA"COVENTRY",4,4,4,"LEEDS",4,3,4
,"W BROM",8,3,4
50 FORX=0TO1:FORY=0TO9:D(X,Y)=Y+128-X
*128:NEXTY,X
70 FORJ=1TO6:READXS(0,J),YS(0,J):NEXT
72 FORJ=1TO6:READXS(1,J),YS(1,J):NEXT

```

```

7022 NEXTG,F
7023 POKE36874,0:POKE36875,0:POKE36876,
0:POKE36878,15
7030 PRINT"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
7050 PRINT"XXXXXXXXXX THE TWO PLAYERS TAKE
IT IN TURNS TO ENTER the angle and velo
CITY
7055 PRINT"AT WHICH THEY FIRE XXXX TO TR
Y TO HIT THEIR opponent."
7060 PRINT"XXXXXX HE SHELLS MUST BE XXXX FIRE
D OVER THE HILLS.
7080 PRINT"XXXX PRESS A KEY TO START.":POK
E198,0:WAIT198,1:POKE198,0:PRINT"XX":RETUR
N
8000 Q=4+RND(8)*10:Q=14
8010 FORF=2TO19
8020 FORG=22TOQSTEP-1
8030 POKEFNC(0),5:POKEFNP(0),102
8031 IFF=19THENPOKEFNC(1),5:POKEFNP(1),
102:POKEFNC(2),5:POKEFNP(2),102
8032 IFF=2THENPOKEFNC(-2),5:POKEFNP(-2)
,102:POKEFNC(-1),5:POKEFNP(-1),102
8040 NEXTG
8050 Q=Q+RND(8)*4-RND(8)*4
8060 IFQ<5THENQ=6+RND(8)*2
8065 IFQ>20THENQ=20
8070 NEXTF
8100 FORF=1TO21
8110 IFPEEK(HM+F*22)<>32THENPOKEHM+(F-1
)*22,62
8114 IFPEEK(HM+F*22)<>32THENQ1=F-1:F=22

8115 NEXTF
8116 FORF=1TO21:IFPEEK(HM+F*22+21)<>32T
HENPOKEHM+21+(F-1)*22,60
8117 IFPEEK(HM+F*22+21)<>32THENQ2=F-1:R
ETURN
8120 NEXTF
9000 RETURN

```

```

140 TH=A*/180:T=0:V=V*3:D=HM:PS=0
150 Y=S1-V*SIN(TH)*T+5*T^2
160 X=V*COS(TH)*T
165 POKED,32:POKEHM+S1*22-(PN=-1)*21,6
1+PN
170 D=HM-(PN=-1)*21+INT(Y)*22+X*PN:DD=
PEEK(D)
171 IFD<HMTHEN190
172 IFDD=102ORX>21THENRETURN
175 IF(DD=60ORDD=62)ANDT>0THENPS=1:RET
URN
180 POKED+CO,3:POKED,46
190 T=T+.1
200 GOTO150
700 PRINT"#####LAYER 2":INPUT"LEVATION
(0-90)":A
701 IFA<0ORA>90THEN700
715 GOSUB3000:INPUT"#####VELOCITY (2-10)"
:V:GOSUB3000
720 IFV<2ORV>10THEN715
721 GOSUB3000
730 S1=Q2:PN=-1:GOSUB140:RETURN
1000 D=HM+INT(Q1)*22:IFDD=60THEND=HM+21
+INT(Q2)*22
1005 POKED,42
1010 POKE36877,220:FORI=15TO0STEP-.1:PO
KECO+D,(I*10AND1)*5+2:POKE36878,I:NEXT
1020 IFDD=62THENU2=U2+1:GOTO2500
1030 U1=U1+1
2500 PRINT"#####LAYER 1 :▲"U1
:PRINT"#####LAYER 2 :▲"U2
2505 PRINT"#####AME NO. :▲"U1+U2
2510 IFU1+U2=7THENPRINT"##### * \ -
Γ x - _":PRINT"Press a key t
O REPLAY.":U1=9
2511 IFU1=9THENPOKE198,0:WAIT198,1:PRIN
T"□":RUN30
2520 FORI=1TO1E3:NEXT:PRINT"□":GOTO30
3000 FORI=0TO2:POKE782,21:POKE781,I:SYS
60047:NEXT:RETURN
7000 FORF=0TO19:POKE646,(FAND3)+2:PRINT
"##### * / #
7020 FORG=F*2TO9+F*2:POKE36876,G+128:PO
KE36874,253-G:POKE36875,SIN(G/5)*30+220
7021 IFPEEK(198)>0THENF=20

```

Tanx

+3K

Tanx is a two player game in which two guns are placed on either side of a range of randomly generated hills. Each player takes turns in attempting to hit the gun on the other side by entering the angle and velocity of fire. The winner is the player with the highest score after a total of seven hits have been made. Your best chance of success is to use the smallest possible angle of elevation for a given velocity and, at higher speeds, it may be possible to fire through one of the hills.

```

1 REM      TANX
2 REM  PAUL STANLEY
3 REM  CONVERTED TO
4 REM      VIC20 BY
5 REM  GREGORY MICHAEL
6 REM
7 HM=7680:CO=30720:PRINT"  ":IFPEEK(4
096)=32THENHM=4096:CO=33792
8 DEFFNP(X)=HM+G*22+F+X:DEFFNC(X)=FN
P(X)+CO
9 A=RND(-TI):POKE36879,8:PRINT"  "CHR
(14)CHR(8):POKE36878,15
10 GOSUB7000
11 C=0:GOSUB8000
12 IFRND(8)>.5THENC=C+1:GOSUB7000
13 GOSUB1000
14 ONPSGOTO1000
15 C=C+1
16 IFC=8THENPRINT"  ":GOTO30
17 GOSUB7000
18 ONPSGOTO1000
19 IFC=8THENPRINT"  ":GOTO30
20 GOTO40
21 PRINT"  "LAYER 1":INPUT"  LEVATION
(0-90)":A
22 IFA<00RA>90THEN100
23 GOSUB3000:INPUT"  VELOCITY (2-10)"
:V
24 IFV<20RV>10THEN115
25 GOSUB3000
26 S1=Q1:PN=1:GOSUB140:RETURN

```


154 *Moonlander*

```
8080 PRINT"X = MOVE RIGHT"
8090 PRINT"I = MOTOR ON"
8100 PRINT"O = MOTOR OFF"
8110 PRINT"PRESS ANY KEY TO START"
8120 GETA$:IFA#=""THEN8120
8500 POKE51,255:POKE52,25
8510 POKE55,255:POKE56,25
8520 PRINT"□":CLR
8530 FORI=7168TO7632:POKEI,PEEK(I+25600
):NEXT
8550 FORI=7168+36*8TO7168+38*8+7:READA:
POKEI,A:NEXT
8560 POKE648,26:POKE36869,239:POKE36866
,PEEK(36866)OR128
8564 VO=36878:HI=36876
8565 SN=4*(PEEK(36866)AND128)+64*(PEEK(
36869)AND112)
8566 CL=37888+SGN(PEEK(36866)AND128)*51
2
9000 H=1800:V=-20:M=1378:M1=M:T=4800:F1
=2:F=378:E=1:X=15:Y=8
9330 PRINT"□"
9340 GOTO90
10000 DATA60,126,219,255,255,126,189,129

10010 DATA24,60,60,60,24,24,0,0
10020 DATA0,0,0,0,24,60,126,255
```

```

260 IFE=0THEN270
261 POKESN+X+Y*22+22,37:POKECL+X+Y*22+
22,2
270 FORI=1TO22:POKESN+484+I,69:POKECL+
484+I,1:NEXT:POKECL+499,4
300 IFF=0ORHC=0THEN2000
310 GOTO90
2000 IFF=0THENPRINT"                  OUT OF FUEL
"
2010 IFHC=0ANDV<-5THENPRINT"                  YO
U HAVE CRASHED":GOTO3000
2020 IFH>0ORV<-6THEN2024
2021 PRINT"                  YOU HAVE LANDED"
2024 IFHC=0ANDV>-6ANDX=15THENPRINT"  AT
THE CORRECT PLACE"
2026 IFHC=0ANDV>-6ANDX<>15THENPRINT"
AT THE WRONG PLACE"
2030 PRINT"                  PRESS ANY KEY TO START"
2035 FORI=1TO10:GETA$:NEXT:REM CLEAR KE
Y BUFFER
2040 GETA$:IFA$=""THEN2040
2050 GOTO9000
3000 POKESN+X1+(22-(H1/100)*22),32:POKE
SN+X1+440,38:POKECL+X1+440,3
3010 FORJ=130TO160STEP6:POKEVO,6:POKEHI
,J
3020 FORI=1TO30:NEXT:POKEVO,0:POKEHI,0:
NEXTJ
3040 GOTO2030
8000 POKE36879,8:PRINT"                  MOON LAND
ER":PRINT
8005 PRINT
8010 PRINT" THIS IS A REAL-TIME  GAME I
N WHICH YOU MUSTLAND THE LUNAR MODULE ON
THE SMALL";
8020 PRINT" FLASHING PURPLE LANDING PAD
.  YOU MUST LAND IN THE CORRECT PLACE
AT A"
8030 PRINT"RATE OF DESCENT NOT  FASTER
THAN -5. "
8040 PRINT
8050 PRINT"THE CONTROLS ARE:-"
8060 PRINT
8070 PRINT"Z = MOVE LEFT"

```

Moonlander

+3K

This is an up-market real-time lander program which gives you an opportunity to grapple with the problems which face a space-lagged cruiser commander returning home after a long haul. The object to the exercise is to land your craft on the chillingly small landing-pad at the bottom of the screen. Precision is the name of the game, because if your rate of descent is greater than -5 you and your crew are gonners. A word of warning: if you over-fire your rockets you'll disappear into hyperspace until returning back on screen, plummeting to your doom unless you've been doing some nifty blind flying to slow your descent.

```

10 REM MOON LANDER @ ROBERT ERSKINE 1
983
20 GOTO8000
30 GOTO9000
90 H1=H:H=H+V-.81
95 IFE=0THEN150
100 M=M1:M1=M-F1
120 V=V+2400*LOG(M/M1)-1.62
130 F=F-F1:X1=X:GOTO180
150 M1=M:V=V-1.62:X1=X
180 IFX>0ANDRND(0)>.5THENX=X-1
185 IFX<21ANDRND(0)>.5THENX=X+1
190 PRINT"☾";TAB(4);"HEIGHT ";INT(H);"
"
195 PRINTTAB(4);"VELOCITY ";INT(V);"|||
"
200 PRINTTAB(4);"FUEL ";F;"|||  "
210 AS=PEEK(197)
220 IFAS=52THENE=0
230 IFAS=12THENE=1
232 IFAS=33ANDX>0THENX=X-1
234 IFAS=26ANDX<21THENX=X+1
240 IFH>2000ORH<1THEN270
245 Y1=INT(21-(H1/100)):Y=INT(21-(H/10
0))
249 POKESN+X1+Y1*22+22,32:POKESN+X1+Y1
*22+22,32
250 POKESN+X1+Y1*22,32:POKESN+X+Y*22,3
6:POKECL+X+Y*22,3

```

```

540 XX=18:YY=0:GOSUB700:PRINT" HIT ANY
KEY TO REVEAL          the word"
550 GETX$:IFX$=""THEN550
565 BP=240:GOSUB800:XX=7:YY=6-LEN(I$):
GOSUB700:PRINTRIGHT$(STR$(I),6);
566 XX=9:YY=6-LEN(S$):GOSUB700:PRINTRI
GHT$(STR$(S),5);
567 XX=10:YY=0:GOSUB700:PRINT"—————"
568 XX=12:YY=6-LEN(T$):GOSUB700:PRINTR
IGHT$(STR$(T),6);
570 XX=12:YY=22-2*LEN(T$):GOSUB700:PRI
NT"▣";:FORX=1TOLEN(T$):BP=X*X+212:GOSUB80
0
571 PRINTMID$(A$,X,1);" ";:NEXT
580 XX=18:YY=0:GOSUB700:PRINT"      PRES
S F1  FOR
";
581 PRINT"ANOTHER WORDSUM"
585 GETB$:IFB$=""THEN585
586 B=ASC(B$):IFB<>133THEN585
587 GOTO80
590 DATAHEARTH,YELLOW,ENGINE,RABBIT,CA
RPET,"CLEVER,FEASTS,SHADES,POTATO,RADIOS,
THAMES
592 DATACARROT,TOMATO,CHEESE,BUTTER,RU
DDER,HEATER,PLINTH,FARMER,TROPHY,CHERRY,H
APPEN
594 DATACOFFEE,TEAPOT,MOTHER,SISTER,HO
USES,CABINS,ISLAND,PIRATE,SILVER,JEWELS,B
OUNTY
602 DATATOWELS,PLANES,PLANTS,HOCKEY,TE
NNIS,COSTLY,LEMONS,APPLES,ORANGE,VIOLET,R
OBBER
604 DATARATHER,POINTS,PAINTS,TANDEM,LE
TTER,LITTER,LATTER,FASTER,MASTER,MISTER
620 DATA"! "
700 IFXX=0THENPRINT"▣";:GOTO720
710 POKE214,XX-1:PRINT
720 POKE211,YY:RETURN
800 POKE36876,BP:POKE36878,5 :FORJ=1TO
50:NEXTJ:POKE36876,0:POKE36878,0:RETURN

```

```

170 FOR Y=1 TO X-1:IF A(X)=A(Y) THEN 140
180 NEXT Y
190 NEXT X
200 P=0
207 POKE 36879,110
210 FOR X=LEN(P$) TO 1 STEP -1
220 T=INT(T+A(X)*10↑P)
230 P=P+1
240 NEXT X
250 S=9*INT(RND(1)*9000+1000)
260 I=T-S
270 S$=RIGHT$(STR$(S),5):T$=RIGHT$(STR
$(T),6):I$=RIGHT$(STR$(I),6)
280 FOR X=1 TO LEN(T$)
300 FOR Y=1 TO LEN(I$)
320 IF MID$(I$,Y,1)=MID$(T$,X,1) THEN C(X
)=1:I$=LEFT$(I$,Y-1)+MID$(A$,X,1)+MID$(I$
,Y+1)
340 NEXT Y
350 NEXT X
360 FOR X=1 TO LEN(T$)
380 FOR Y=1 TO LEN(S$)
400 IF MID$(S$,Y,1)=MID$(T$,X,1) THEN C(X
)=1:S$=LEFT$(S$,Y-1)+MID$(A$,X,1)+MID$(S$
,Y+1)
420 NEXT Y
430 NEXT X
440 FOR X=1 TO LEN(T$)
450 IF C(X)=0 THEN T$=LEFT$(T$,X-1)+MID$(
A$,X,1)+MID$(T$,X+1)
460 NEXT X
490 REM
495 PRINT "  "
500 XX=7:YY=22-(2*LEN(I$)):GOSUB 700:FO
RX=1 TO LEN(I$):BP=X*X+147:GOSUB 800
501 PRINT MID$(I$,X,1); " " :NEXT X
510 XX=9:YY=22-2*LEN(S$):GOSUB 700:FOR X
=1 TO LEN(S$):BP=X*X+191:GOSUB 800
511 PRINT MID$(S$,X,1); " " :NEXT X
520 XX=10:YY=10:GOSUB 700:PRINT "-----
-----"
530 XX=12:YY=22-2*LEN(T$):GOSUB 700:FOR
X=1 TO LEN(T$):BP=X*X+212:GOSUB 800
531 PRINT MID$(T$,X,1); " " :NEXT X

```

Wordsum

+3K

A test of your logical thought processes, this program presents you with a sum to solve. Not so difficult you might think, but in this case some of the numbers have been replaced by letters, and the answer you want is not a number, but the word that the numbers spell! The program gives you a different set of number/letter substitutions for each problem, and the answer is always to be found if you follow the arithmetic through.

```

10 REM **WORDSUM**          (C)1983 MICHAEL
L BEWS
15 REM **CONVERTED FORVIC20 BY RON NI
CKSON**
20 POKE36879,110:PRINT"📄 W O R D S U
M (C)1983      michael bews"
21 XX=11:YY=8:GOSUB700:PRINT"STANDBY"
:FORJ=1TO500:NEXTJ
40 DIMA(10),C(10),A$(10),W$(60)
50 N=1
60 READW$(N):IFW$(N)="!"THENN=N-1:GOT
080
70 N=N+1:GOTO60
80 POKE36879,59:T=0:NN=1+INT(RND(1)*(
(N-1)+1)):X=6
82 P$=LEFT$(W$(NN),X)
83 BP=195:GOSUB800
85 REM
86 POKE36879,110:PRINT"📄 W O R D S U
M (C)1983      michael bews"
90 FORX=1TOLEN(P$)
95 C(X)=0
100 A$=LEFT$(A$,X-1)+MID$(P$,X,1)+MID$
(A$,X+1)
110 IFX=1THEN140
120 FORZ=1TOX-1:IFA$=LEFT$(A$,X-1)+MID
$(A$,Z,1)+MID$(A$,X+1)THENA(X)=A(Z):GOTO1
90
130 NEXTZ
140 A(X)=INT(RND(1)*(9+1))
150 IFA(1)=0THEN140
160 IFX=1THEN190

```

148 *Dambusters*

```
8095 PRINT"␣    PRESS ANY KEY TO      C
ONTINUE";
8100 GET CO$:IF CO$="" THEN GOTO8100
8110 PRINT"␣    \OVE THE CROSS HAIRSIGHT
S AS FOLLOWS:-"
8120 PRINT"␣-LEFT      ␣-RIGHT":PRINT"␣
-UP      ␣-DOWN"
8125 PRINT"PRESS<_␣ /_␣ TO FIRE."
8140 PRINT"␣UE TO THE POWER OF  THE W
EAPON IT NEEDS TOBE REARMED AFTER 3  SH
OTS";
8150 PRINT" AND WILL NOT BE READY UNTIL
THE NEXT AEROPLANE ATTACKS."
8160 PRINT"␣    OUR BATTLE IS OVER WHEN
TOO MUCH WATER"
8170 PRINT"HAS POURED THROUGH THEBROKEN
DAM."
8180 PRINT"␣PRESS ANY KEY TO START"
8190 GET CO$:IF CO$="" THEN 8190
8200 PRINT"␣"
8210 POKE36869,240
9000 RETURN
```

```

240 POKESI,32
290 RETURN
300 REM **BREACH DAM
310 FOR N=0TO4:POKE(AP+22*N),32:NEXT
320 POKE36877,220:FORL=15TO0 STEP-1:PO
KE36878,L:FORM=1TO20:NEXT:NEXT
325 POKE36877,0:POKE36878,0
326 B=1
330 LOSS=LOSS+10
390 RETURN
400 PRINT"STARTINGGAME OVER":PRINT"PRES
S ANY KEY TO PLAY AGAIN"
410 POKE36878,15:FOR N=1TO 5:FORM=180T
0235STEP2:POKE36876,M:NEXT:POKE36876,0:NE
XT
420 POKE36878,0
425 FORN=1TO10:GETT$:NEXT
430 IFSC>HS THEN HS=SC
440 GET C0$:IF C0$="" THEN GOTO440
450 PRINT"□":GOTO10
997 GET JB$:IF JB$=""THEN997
998 POKE36879,25
999 END
1000 REM
1010 SI=8064
1020 SC=0:SH=0
1030 G=81:LOSS=0
1040 C=30720
1100 RETURN
8000 REM TITLES & INTRO
8005 POKE36869,242
8010 PRINT"□  ←*\\|*|←_•"
8020 PRINT"□THE YEAR IS 1943. OUR TASK
IS TO PROTECT A DAM FROM THE";
8030 PRINT"BOUNCING BOMBS OF THE BRITI
SH."
8040 PRINT"  THEY HAVE SEVERAL BOMBER
S WHICH WILL FLYTOWARDS YOU AND DROP"
8050 PRINT"THEIR BOMBS.":PRINT"  HOWE
VER YOUR TASK IS NOT ALL THAT EASY"
8060 PRINT"AS YOUR WEAPON CANNOT REACH
THE BOMBERS SO YOU";
8070 PRINT" MUST SHOOT AT THEBOMBS IN
STEAD."

```



```

33 IF SC>HS THEN HS=SC
34 PRINT "SCORE";SCORE;"HS";HS
35 FORN=7746TO AP:POKEN,65:POKEN+3072
0,7:FORM=1 TO200:NEXT:POKEN,32:NEXT
40 POKEAP,32:POKEAP,G :POKEAP+C,0:POK
ESI,43:POKE SI+C,0
42 FORN=1TO 5 :NEXT
50 POKEAP,32:AP=AP+INC:IF AP>8076ORAP
<W+7745 THENINC=-INC:B=B+1:IF B<3 THEN G=
81
52 IF B>6 AND AP>8055 THEN GOSUB300:G
OTO30
53 POKEAP,G:POKE AP+C,0:FOR N=1 TO10:
NEXT
54 IF B=3 OR B=4 THENG=87
55 IF B=5 OR B=6 THEN G=90
57 GET IN$:IF IN$="" THENGOTO 50
58 IM=ASC(IN$)
60 POKESI,32
62 SI=SI-2+INT(RND(1)* 2+1)
65 IF IM =90 THEN SI=SI-1
70 IF IM =88 THEN SI=SI+1
80 IF IM =79 THEN SI=SI+22
90 IF IM =80 THEN SI=SI-22
95 IF IM =13 THEN GOSUB200 :ON H GOTO
40,30
100 POKESI,43:POKESI+C,1:GOTO40
120 GOTO40
170 POKEAP,B:POKEAP+C,2
180 FORN=1TO100:NEXT
190 GOTO50
200 REM ** FIRE CANON
202 POKE36878,15:POKE36876,220:FOR N=1
TO10:NEXT:POKE36876,0:POKE36878,0
203 SH=SH+1:IF SH>3 THEN RETURN
204 IFSI=AP THEN GOTO207
206 POKE SI,32:SI=SI-5+INT(RND(1)*10+1
):POKESI,43:POKESI+C,1:RETURN
207 POKESI,32:POKESI,42:M=7
208 SC=SC+10*(7-B):H=2
210 POKE36878,15:FORL=1TO15:FORN=200TO
220+L*2
220 POKE36876,N:NEXT:NEXT
230 POKE36878,0:POKE36876,0

```

Dambusters

Standard

Dambusters is a game in which you have to defend a dam which is under attack from enemy aircraft, armed with bouncing bombs. Each bomb which succeeds in hitting the dam will blow a section of it away until eventually the water pours through and the game is over.

Your defence consists of two beam guns which are mounted at each side of the dam and which fire converging ray beams at a target sight controlled by the player. Since the aircraft are out of range, you must aim at the bouncing bombs themselves by moving your sight up, down, right or left and then use the Return to fire. Unfortunately your beam weapons need to be recharged after every three firings and therefore accuracy is vital, especially as there is a strong wind which has a tendency to blow your sights off course!

```

1 REM*VIC 20 STANDARD**
2 REM*DAMBUSTERS*
3 REM*C.PAUL STANLEY*
4 HS=0
5 REM POKE36879,110:PRINT"□"
6 PRINT"□"
8 GOSUB8000
10 GOSUB1000
15 POKE7680,19:POKE7681,3:POKE7682,15
:POKE7683,18:POKE7684,5:
16 FORN=0TO4:POKE38400+N,0:NEXT
17 N=7690:POKEN,8:POKEN+C,0:POKEN+1,9
:POKEN+1+C,0
20 FORN=8120TO8141
22 POKEN,102:POKEN+30720,7:POKEN+22,4
5:POKEN-22,45:POKEN+30742,7:POKEN+30698,7
:NEXT
24 FORN=8142TO8098STEP-22:POKEN,118:POKE(N+21),117:POKE(N+30720),7:POKE(N+30741),7:NEXT
30 POKESI,32:V=INT(RND(1)*2+1):W=INT(RND(1)*19+1):AP=W+7746:C=30720:B=1:SH=0
31 IF LOSS>100 THEN GOTO400
32 INC=22:SI=8064:H=1

```

```
9130 PRINT"FIGURE CODE NUMBER.  SEE 'R  
EM' STATEMENTS  IN THE LISTING FOR"  
9140 PRINT"FURTHER DETAILS."  
9150 PRINT"915PRESS A KEY TO GO ON"  
9160 GET A$:IF A$<>"" THEN 9160  
9170 GET A$:IF A$="" THEN 9170  
9180 RETURN
```

```

2050 DATA 809,12WAGRAM*THE FRENCH*THE A
USSTRIANS
2060 DATA 812,BORODINO*THE FRENCH*THE R
USSIANS
2070 DATA 813,LEIPZIG*THE ALLIES*THE FR
ENCH
2080 DATA 815,WATERLOO*THE ALLIES*THE F
RENCH
2999 DATA END,*
7000 REM*****
7002 REM COLOUR CODES FOR THE VIC 20
7010 U0$="█":REM BLACK
7020 U1$="▒":REM WHITE
7030 U2$="▓":REM RED
7040 U3$="▒":REM GREEN
7050 U4$="█":REM BLUE
7060 UU$="▒":REM PURPLE
7070 UE$="▒":REM YELLOW
7080 REM SCREEN POKE CODE FOR THE VIC 2
0
7090 UG=36879:UF=27
7100 RETURN
9000 PRINTUU$;"▒" HISTORYCROSS"
9010 PRINT"▒" THIS IS A 'CROSS- NUMBE
R' PUZZLE,MADE UPOF DATES FROM BRITISH ";
9020 PRINT"HISTORY.FIRSTLY I WILL SIFT T
HROUGH THE DATA-BANK AND CROSS-MATCH"
9030 PRINT"RESPECTIVE DATES. SOMETI
MES,I WILL NOT BE ABLE TO FIND AN"
9040 PRINT"EXACT MATCH AND WILL THEN L
OOK FOR ANNIVER-SARIES AND NEAR MISSES";
9050 PRINT"AT THE LAST RESORT I SHALL
GIVE YOU A MATHEMATICAL CLUE."
9060 PRINT"▒"PRESS A KEY TO GO ON"
9070 GET A$:IF A$<>" THEN 9070
9080 GET A$:IF A$="" THEN 9080
9090 PRINTU9$;"▒"PROGRAMMERS NOTE:"
9100 PRINT"AT PRESENT,I HAVE INCLUD
ED LOTS OF DATESFROM CANUTE TO"
9110 PRINT"WATERLOO,BUT YOU MAY CHANGE
OR ALTER THE DATES DATA FOR LINES"
9120 PRINT"1000-6999 IF YOU WISH.▒THE C
LUE DATA IS ALWAYS PRECEDED BY A 2";

```

1750 DATA 660,15CHARLES THE SECOND
 1760 DATA 665,10GREAT FIRE OF LONDON
 1770 DATA 685,17CHARLES THE SECOND
 1780 DATA 685,15JAMES THE SECOND
 1790 DATA 688,10'GLORIOUS REVOLUTION'
 1800 DATA 694,10BANK OF ENGLAND ESTABLISHED
 1810 DATA 702,16ANNE
 1820 DATA 704,12BLENHEIM*THE DUKE OF MALBOROUGH*THE FRENCH
 1830 DATA 713,10PEACE OF UTRECHT
 1840 DATA 714,15GEORGE THE FIRST
 1850 DATA 727,17GEORGE THE FIRST
 1860 DATA 727,15GEORGE THE SECOND
 1870 DATA 745,12CULLODEN*THE ENGLISH*THE SCOTS
 1880 DATA 757,12PLASSEY*CLIVE OF INDIA*THE FRENCH
 1890 DATA 759,12QUEBEC*THE BRITISH*THE FRENCH*GEN. WOLFE
 1900 DATA 760,17GEORGE THE SECOND
 1910 DATA 760,15GEORGE THE THIRD
 1920 DATA 765,10STAMP ACT
 1930 DATA 773,10BOSTON TEA PARTY
 1940 DATA 776,10AMERICAN DECLARATION OF INDEPENDENCE
 1950 DATA 777,12SARATOGA*THE AMERICANS*THE BRITISH
 1960 DATA 781,11ST. VINCENT*THE BRITISH*THE FRENCH
 1970 DATA 781,10END OF THE SIEGE OF YORKTOWN
 1980 DATA 783,10END OF THE WAR OF U.S. INDEPENDENCE
 1990 DATA 789,10STORMING OF THE BASTILLE
 2000 DATA 793,17LOUIS THE SIXTEENTH*GUILOTINED
 2010 DATA 798,11THE NILE*ADMIRAL NELSON*THE FRENCH
 2020 DATA 802,10PEACE OF AMIENS
 2030 DATA 805,11TRAFALGAR*ADMIRAL NELSON*THE FRENCH*NELSON
 2040 DATA 806,12JENA*THE FRENCH*THE PRUSSIANS

1390 DATA 349,10BLACK DEATH
 1400 DATA 377,17EDWARD THE THIRD
 1410 DATA 377,15RICHARD THE SECOND
 1420 DATA 381,10PEASANTS REVOLT
 1430 DATA 399,17RICHARD THE SECOND*DEPOSED
 1440 DATA 399,15HENRY THE FOURTH
 1450 DATA 413,17HENRY THE FOURTH
 1460 DATA 413,15HENRY THE FIFTH
 1470 DATA 415,12AGINCOURT*THE ENGLISH*THE FRENCH
 1480 DATA 422,17HENRY THE FIFTH
 1490 DATA 422,15HENRY THE SIXTH
 1500 DATA 461,17HENRY THE SIXTH*DEPOSED
 1510 DATA 461,15EDWARD THE FOURTH
 1520 DATA 471,12BARNET*YORK*LANCASTER*WARWICK
 1530 DATA 483,17EDWARD THE FOURTH
 1540 DATA 483,15RICHARD THE THIRD
 1550 DATA 485,12BOSWORTH*HENRY*RICHARD
 1560 DATA 485,17RICHARD THE THIRD
 1570 DATA 485,15HENRY THE SEVENTH
 1580 DATA 509,17HENRY THE SEVENTH
 1590 DATA 509,15HENRY THE EIGHTH
 1600 DATA 513,12FLODDEN FIELD*THE ENGLISH*THE SCOTS
 1610 DATA 547,17HENRY THE EIGHTH
 1620 DATA 553,16MARY
 1630 DATA 558,18MARY
 1640 DATA 558,16ELIZABETH THE FIRST
 1650 DATA 588,10DEFEAT OF THE SPANISH ARMADA
 1660 DATA 603,18ELIZABETH THE FIRST
 1670 DATA 603,15JAMES THE FIRST
 1680 DATA 605,10GUNPOWDER PLOT
 1690 DATA 625,17JAMES THE FIRST
 1700 DATA 625,15CHARLES THE FIRST
 1710 DATA 642,10START OF THE ENGLISH CIVIL WAR
 1720 DATA 648,12PRESTON*CROMWELL*THE SCOTS
 1730 DATA 649,17CHARLES THE FIRST*EXECUTED
 1740 DATA 658,10DEATH OF OLIVER CROMWELL

```

1048 REM FOR DETAILS OF HOW THE MONARCH
LEFT THE THRONE
1050 REM 18=END OF REIGN (QUEEN)
1060 REM ALWAYS PUT THE CLUE AFTER A 2
FIGURE NUMBER
1065 REM DATA LINES CONTAIN THE YEAR (M
INUS THE LEADING 1)
1070 REM AND THEN HAVE THE CLUE DATA ON
THE SAME LINE.
1100 REM DATA STARTS HERE
1110 DATA 016,15CANUTE
1120 DATA 035,17CANUTE
1130 DATA 066,12HASTINGS*THE NORMANS*TH
E ENGLISH*KING HAROLD
1140 DATA 086,10RELEASE OF THE DOMESDAY
BOOK
1150 DATA 087,17WILLIAM THE FIRST
1160 DATA 087,15WILLIAM THE SECOND
1170 DATA 100,17WILLIAM THE SECOND
1180 DATA 100,15HENRY THE FIRST
1190 DATA 135,17HENRY THE FIRST
1200 DATA 135,15STEPHEN
1210 DATA 154,17STEPHEN
1220 DATA 154,15HENRY THE SECOND
1230 DATA 164,10CONSTITUTIONS OF CLAREN
DON
1240 DATA 189,15RICHARD THE FIRST
1250 DATA 199,17RICHARD THE FIRST
1260 DATA 199,15JOHN
1270 DATA 215,10MAGNA CARTA
1280 DATA 216,17JOHN
1290 DATA 216,15HENRY THE THIRD
1300 DATA 265,12EYESHAM*EDWARD*SIMON DE
MONTFORT
1310 DATA 272,17HENRY THE THIRD
1320 DATA 272,15EDWARD THE FIRST
1330 DATA 307,17EDWARD THE FIRST
1340 DATA 307,15EDWARD THE SECOND
1350 DATA 314,12BANNOCKBURN*THE SCOTS*TH
E ENGLISH
1360 DATA 327,17EDWARD THE SECOND
1370 DATA 327,15EDWARD THE THIRD
1380 DATA 346,12CRECY*THE ENGLISH*THE F
RENCH

```

```

945 GOTO 960
950 IF R$((K-1)+(J-4)*4)<>MID$(N$(J),K
,1) THEN 980
960 NEXT K
965 NEXT J
970 PRINTUU$;"WELL DONE..... Y
OU FINISHED IT"
974 PRINT"ANOTHER GO? (Y/N)"
975 GET A$:IF A$<>" " THEN 975
976 GET A$:IF A$="" THEN 976
977 IF A$="Y" THEN 100
978 PRINTUE$"THANKYOU FOR PLAYING..GOO
DBYE";END
979 REM INCORRECT ANSWER
980 PRINTUE$"NO! YOU GOT IT WRONG."
981 PRINTUE$"DO YOU NEED HELP?(Y/N)"
982 GET A$:IF A$<>" " THEN 982
983 GET A$:IF A$="" THEN 983
989 IF A$="Y" THEN 991
990 GOTO 400
991 Z=0:PRINTUU$;"HERE'S THE CORRECT
ANSWER...."
992 PRINTLEFT$(G$,21)
993 FOR J=4 TO 7:PRINTTAB(17)" ";N$(J)
994 NEXT J
995 GOTO 974
999 END
1000 REM HISTORY DATES DATA
1010 REM PREFIX NUMBERS....
1012 REM 10=MISCEL.
1013 REM THIS SHOULD NOT HAVE A 'THE' I
N FRONT
1015 REM 11=NAVAL BATTLE
1016 REM 11 AND 12 MAY CONTAIN 3 ASTERI
SKS
1017 REM THE FIRST MARKS THE VICTOR
1018 REM THE SECOND MARKS THE LOSER
1019 REM THE THIRD IS FOR A FIGURE WHO
WAS KILLED
1020 REM 12=LAND BATTLE
1035 REM 15=START OF REIGN (KING)
1040 REM 16=START OF REIGN (QUEEN)
1045 REM 17=END OF REIGN (KING)
1047 REM 17 AND 18 MAY CONTAIN ONE ASTE
RISK

```



```

768 IF X=3 THEN PRINT " BEAT ";X=X+1:G
OTO 780
769 IF X=5 THEN PRINT:PRINT"AND ";X=X
+1:GOTO 780
770 IF X=10 AND B=7 THEN PRINT:PRINT"(
HE WAS ";X=X+1:GOTO 780
771 IF X=10 AND B=8 THEN PRINT:PRINT"(
SHE WAS ";X=X+1:GOTO 780
775 PRINTB$;
780 NEXT K
782 IF X=6 THEN PRINT" WAS KILLED.":GO
TO 788
784 IF X=11 THEN PRINT").":GOTO 788
786 PRINT". "
788 GOTO 800
790 IF B$="+" THEN PRINT" YEARS AFTER"
:Z=0:GOTO 797
792 IF B$="-" THEN PRINT" YEARS BEFORE
":Z=0:GOTO 797
794 PRINTB$;
796 GOTO 780
797 Q$=RIGHT$(Q$(J),LEN(Q$)-K):GOTO 72
0
800 PRINTU2$;"WYEAR? (IF YOU DON'T K
NOW THEN ****)"
810 INPUT A$
820 IF A$="" OR LEN(A$)<>4 THEN PRINT"
":GOTO 810
830 IF J>3 THEN 850
835 FOR K=1 TO 4
840 R$(J+(K-1)*4)=MID$(A$,K,1)
845 NEXT K:GOTO 880
850 FOR K=1 TO 4
855 R$((K-1)+(J-4)*4)=MID$(A$,K,1)
860 NEXT K
880 GOTO 400
900 PRINT U2$;"WSO YOU THINK YOU'VE
GOT IT RIGHT?"
910 PRINT"LET ME CHECK..."
920 FOR J=0 TO 7
930 FOR K=1 TO 4
935 IF J>3 THEN 950
940 IF R$(J+(K-1)*4)<>MID$(N$(J),K,1)
THEN 980

```

```

651 PRINT"LINE LETTER (A-F)"
652 PRINT"(IF YOU'VE FINISHED"
653 PRINT"PRESS RETURN)"
660 GET A$:IF A$<>" " THEN 660
670 GET A$:IF A$="" THEN 670
680 IF(ASC(A$)<71 AND ASC(A$)>64) THEN
700
685 IF ASC(A$)=13 THEN 900
690 GOTO 660
700 PRINT"XXXXXXXXXXXXXXXX"
705 PRINTU4$;"CLUE TO LINE ";A$;"...X
"
706 PRINT"
"
707 PRINT"
"
708 PRINT"
"
710 X=0:B=0:Z=0:J=ASC(A$)-64:IF J>3 TH
EN J=J+1
715 Q#=Q$(J)
720 FOR K=1 TO LEN(Q#)
730 B#=MID$(Q#,K,1)
735 IF Z=1 THEN 790
740 IF K=2 AND B#=">" THEN Z=1:GOTO 78
0
750 IF K=1 THEN 780
755 IF K<>2 THEN 765
757 B=VAL(B#):IF B=0 THEN PRINT"THE ";
:GOTO 780
758 IF B=1 THEN PRINT"THE NAVAL BATTLE
OF ";:GOTO 780
759 IF B=2 THEN PRINT"THE BATTLE OF ";
:GOTO 780
760 IF B=5 THEN PRINT"THE ACCESSION TO
THE THRONE OF KING":GOTO 780
761 IF B=6 THEN PRINT"THE ACCESSION TO
THE THRONE OF QUEEN":GOTO 780
762 IF B=7 THEN PRINT"THE END OF THE R
EIGN OF KING":GOTO 780
763 IF B=8 THEN PRINT"THE END OF THE R
EIGN OF QUEEN":GOTO 780
764 GOTO 780
765 IF B#="*" AND B>6 THEN X=10
766 IF B#="*" AND B>0 AND B<3 THEN X=X
+1
767 IF X=1 THEN PRINT:PRINT"WHEN ";:X=
X+1:GOTO 780

```

```

317 IF D(L)=0 THEN 325
320 IF MID$(N$,K,1) <> MID$(N$(L),PP,1)
THEN 330
325 NEXT K:GOTO 340
330 REM TRY AGAIN
332 Z=Z+1:IF Z<>25 THEN 225
333 Z$="":FOR K=1 TO 4
334 IF P<4 THEN L=K+3
335 IF P>3 THEN L=K-1
336 IF D(L)=0 THEN Z$=Z$+RIGHT$(STR$(I
NT(RND(1)*10)),1):GOTO 338
337 Z$=Z$+MID$(N$(L),PP,1)
338 NEXT K
339 X=VAL(Z$):GOTO 225
340 D(P)=1:D=D+1:N$(P)=N$:Q$(P)=Q$
350 A(P)=VAL(NN$)
360 IF D<8 THEN 220
380 FOR J=0 TO 15:R$(J)="":NEXT J:H=H+
1
400 REM FINISHED,NOW FOR THE PUZZLE:
405 PRINTUU$;" HISTORYCROSS #";H
415 FOR J=0 TO 3:R$(J)="1":NEXT J
420 FOR J=4 TO 12 STEP 4:R$(J)="1":NEX
T J
450 PRINT UE$;"50"
460 PRINTTAB(9)"   A B C   "
465 PRINT
470 PRINTTAB(9)"   █   "
475 PRINTTAB(9)"   █ █ █ █ "
480 PRINTTAB(9)"D █   "
485 PRINTTAB(9)"   █ █ █ █ "
490 PRINTTAB(9)"E █   "
495 PRINTTAB(9)"   █ █ █ █ "
500 PRINTTAB(9)"F █   "
505 FOR K=1 TO 50:NEXT K
510 FOR L=1 TO 50:NEXT L
515 FOR L=0 TO 3
520 FOR K=0 TO 3
525 IF R$(L*4+K)=" " THEN 540
530 PRINTLEFT$(G$,L*2+5);TAB(K*2+10)"█
";R$(L*4+K)
540 NEXT K
550 NEXT L
600 PRINT"*****"
650 PRINTU3$;"TO GET A CLUE,PRESS"

```

```

212 FOR N=0 TO 7:D(N)=0:A(N)=0:N$(N)="
":Q$(N)="" :NEXT N
214 D(0)=1:D(4)=1:N$(0)="1111":N$(4)="
1111"
215 D=2
220 P=INT(RND(1)*8):IF D(P)=1 THEN 220

221 PRINT"*****(I'M NOW WORKI
NG ON "
222 PRINT"DATE NUMBER: ";D-1;" "
223 X=0:Z$="":Z=0:R=INT(RND(1)*200+1):
GOTO 230
225 R=INT(RND(1)*5+2)
230 FOR J=1 TO R:READ N$,Q$:IF N$="END
" THEN RESTORE:READ N$,Q$
235 NEXT J
240 N$="1"+N$:N=VAL(N$):NN$=N$
260 REM CHECK THIS HAS NOT APPEARED EL
SEWHERE
264 FOR J=0 TO 7:IF A(J)=N THEN 330
268 NEXT J
270 IF Z<25 THEN 300
271 REM TOO MANY TRIES...TIME FOR A NE
W APPROACH !
272 N$=Z$:IF Z<50 THEN 275
273 IF N>X THEN C=N-X:GOTO 290
274 IF X>N THEN C=X-N:GOTO 280
275 FOR E=0 TO 2
276 FOR K=1 TO 10:C=K*C(E)
277 IF N-C=X THEN 290
278 IF N+C=X THEN 280
279 NEXT K,E:GOTO 330
280 Q$="<" +RIGHT$(STR$(C),LEN(STR$(C)
)-1)+" "+Q$
285 GOTO 340
290 Q$="<" +RIGHT$(STR$(C),LEN(STR$(C)
)-1)+" -"+Q$
295 GOTO 340
300 REM CHECK IF IT FITS IN THE CROSSN
UMBER GRID
305 PP=P+1:IF PP>4 THEN PP=PP-4
310 FOR K=1 TO 4
313 IF P<4 THEN L=K+3
315 IF P>3 THEN L=K-1

```



```

160 IFPEEK(HM+F*22+G-1)<>32THEN3000
170 POKEC0+HM+F*22+G-1,1:POKEHM+F*22+G
-1,93
190 NEXTI
200 IFN<3THENC=C+1:IFC=130THENN=N+1:C=
0:POKE781,8:POKE782,12:SYSPA:PRINT"ENEMY"
,,:K0=1
201 IFK0=1THENPRINT"■■■■REINFORCEMENT":
FORI=180TO213:FORJ=-5TO5:POKEV+2,I+J:NEXT
J,I
202 IFK0=1THENK0=0:POKEV+2,0:POKE781,8
:POKE782,12:SYSPA:PRINT"      ","■■■■"
"
999 GOTO30
1000 POKE781,Y(I):POKE782,X(I):SYSPA:PR
INT"      "
1005 Y(I)=Y(I)+1+(RND(8)>.5)*2
1010 IFY(I)=0THENY(I)=20
1020 IFY(I)=21THENY(I)=1
1030 RETURN
2000 POKEV,130:POKE781,Y(I):POKE782,X(I
)-1:SYSPA:PRINT"▣>xxx":;POKEV,240
2001 PRINT"■■■■▣***":;POKEV,0
2010 PRINT"■■■■▣      ":;
2020 IFPEEK(HM+Y(I)*22+X(I)-1)=96THEN40
00
2030 Y(I)=INT(RND(8)*20+1):X(I)=19
2040 RETURN
3000 POKE781,F:POKE782,G-3:SYSPA:PRINT"
xxxxx":;FORO=150TO210STEP20:POKEV,0:O=O+
0*SIN(O)
3001 POKEV,0:NEXTO:POKEV+2,240:PRINT"■■■
***":;POKEV+2,0:PRINT"      "
3005 SC=INT(SC+S1*2+F/3):PRINT"▣"TAB(1
6)SC
3010 B=0
3015 FORI=1TON
3020 IFF=Y(I)THENIFABS(X(I)-G)<4THENY(I
)=INT(RND(8)*20+1):X(I)=19:I=N+1
3030 NEXTI
3500 GOTO30
4000 FORO=2TO5:POKEV+1,2E2:POKEHM+Y(I)*
22+O,96:POKEV+1,0:NEXT
4010 FORO=Y(I)TO20:POKEV+1,2E2:POKEHM+O
*22+5,96:POKEV+1,0:NEXT

```

Dam Eaters

+3K

The object of this game is to prevent the dam-eating creatures from eating away the dam which is built up on the left-hand side of the screen by dropping shells on them from any of the three cannon at the top. The dam eaters enter randomly from the right of the screen and gradually chew away the bricks of the dam until finally they break through and you have lost the game. The game contains a number of other features which you will have to discover by experience.

```

1 REM   DAM EATER
2 REM   CONVERTED FOR
3 REM   ANY VIC-20 BY
4 REM   GREGORY MICHAEL
5 PRINT"☐"CHR$(8)CHR$(14):POKE36879,
8
6 POKE783,PEEK(783)AND254:PA=65520:V
=36874:POKEY+4,15
7 HM=7680:CO=30720:IFPEEK(4096)=32TH
ENHM=4096:CO=33792
10 DIMX(3),Y(3)
15 GOSUB7000
17 GOSUB9800
20 GOSUB8000
30 FORI=1TON
40 X(I)=X(I)-1:IFRND(8)>.8THENGOSUB10
00
45 IFX(I)<1THEN4000
50 POKE781,Y(I):POKE782,X(I):SYSPA:PO
KE646,((I+1)AND3)+2:PRINT"<=[ "
60 IF(PEEK(HM+CO+Y(I)*22+X(I)-1)AND7)
=7THENGOSUB2000
80 NEXTI
90 GETQ$:IFB=1ORQ$<"1"ORQ$>"3"THEN110

100 POKEY+2,2E2:G=VAL(Q$)*4+3:S1=VAL(Q
$):F=0:B=1:POKEY+2,0
110 IFB=0THEN30
115 FORI=1TO3
140 IFF>0THENPOKEHM+F*22+G-1,32
150 F=F+1:IFF=21THEN5000

```


130 Championship Boxing

```

1200 POKE36879,8:PRINT"THE EASY WE
IGH T";:PRINT"    boxing"
1210 PRINT"DO YOU WANT TO BE A CHAMPION?":PR
INT"IF SO, THEN CHOOSE YOUR OPPONENT:-"
1220 RESTORE:FOR T=1 TO 10:READ W$(T):PRINT
T"11.",:IFT<10 THEN PRINT". ";
1230 PRINT W$(T):NEXT
1240 PRINT"DO YOU CHOOSE A NUMBER(1-10)":INP
UTC:IF C<0 OR C>10 THEN 1240
1245 W$=LEFT$(W$(C),6):FOR T=1 TO 10:W$(T)
="":NEXT
1250 SK=(11-C)/12:K2=10+C+INT(RND(1)*6)
:K1=16-C+INT(RND(1)*10)
1300 PRINT"DO YOU MOVE USING <=LEFT":PRINT TAB
(11)">=RIGHT":PRINT TAB(11)"Z=UP"
1302 PRINT TAB(11)"X=DOWN":PRINT"DO YOU PUN
CH- CBM=LEFT":PRINT TAB(9)"SHIFT=RIGHT"
1305 PRINT"DO YOU CAN MOVE & PUNCH A
T THE SAME TIME"
1380 PRINT"DO YOU PRESS ANY KEY TO START";
1390 GET QQ$:ON-(QQ$="")GOTO 1390:RETURN
2000 DATA "HENRY HOPELESS", "ARNOLD AWFUL
", "NIGEL NO-GOOD", "PHILIP FAIR", "ANDREW A
VERAGE"
2010 DATA "ROGER RIGHT-HOOK", "BRIAN BRIC
KWALL", "SIMON SUPER", "EDWARD EXCELLENT"
2020 DATA "FLYNN FANTASTIC"
6500 IF P1=K2 THEN PRINT"SUCCESS!! WELL BOX
ED A K.O!":FOR T=1 TO 1000:NEXT
6520 PRINT"DO YOU WELL DONE!!":PRINT"    YOU
BEAT "W$" IN "R" ROUNDS":GOTO 6700
6600 IF P2=K1 THEN PRINT"SUCCESS!! BAD LUCK
! A K.O!":FOR T=1 TO 1000:NEXT
6620 PRINT"DO YOU HARD LUCK!!":PRINT W$" BEAT
YOU IN "R" ROUNDS":FOR T=1 TO 1000:NEXT
6700 PRINT"DO YOU THE RESULT IN POINTS WAS
"P1" FOR YOU AND    "P2" FOR "W$:POKE 198,
0
6710 PRINT"    I SUGGEST YOU TRY A "E$(-(
P1<P2))" OPPONENT"
6720 PRINT"DO YOU HERE'S YOUR CHOICE:-":CLR:G
OSUB 1220:R=1:GOTO 2

```

```

153 IFP1=K2THENGOTO6500
155 F=F+(((F>X+2)-(F<X+2))*INT(RND(1)*
2))
156 G=G+(((G>Y-1)-(G<Y+1))*INT(RND(1)*
2)+(G=Y)*(INT(RND(1)*3)-1)
157 B=0:IFG<YTHENIFRND(1)>SKANDG>Y-2TH
ENB=2
158 IFG>YTHENIFRND(1)>SKANDG<Y+2THENB=
1
159 IFX=F-2THENIF((Y+1=G)AND(B=1))OR((
Y-1=G)AND(B=2))THENP2=P2+1:S=150:GOSUB200
160 IFP2=K1THENGOTO6500
165 IFG<3THENG=3
168 IFF<X+1THENF=X+1:B=0
169 IFG>Y+3ORG<Y-3THENB=0
170 PRINT"  "LEFT$(D$,G)SPC(F)B$(B);
180 GOSUB450:TS=TS-1:IFTS=-1THENTM=TM-
1:TS=59:IFTM=-1 THENGOTO500
190 GOTO100
200 POKESO,S:FORT=1TO100:NEXTT:POKESO,
0:RETURN
400 S$="  ":Q$=S$:FORT=1TO20:S$=S$+"  ":
Q$=Q$+"  ":NEXTT:Q$=Q$+"  "
410 PRINT"  "S$"  ";:FORT=1TO19:PRINT
Q$;:NEXTT:PRINTS$"  ";:S$="":Q$="":Z=F
RE(0)
420 PRINT"  ROUND  TIME  PTS  PTS  ";:
RETURN
450 PRINT"  "R"  "TM"  "TS"  ":PRINTT
AB(13)"  "P1"  "P2"  ":RETURN
500 R=R+1:IFR=4THENR=3:GOTO6515
505 X=X+(X>1):Y=Y+(Y>3):F=F-(F<17):G=G
-(G<16)
506 PRINT"  "LEFT$(D$,Y)SPC(X)B$(0);
507 PRINT"  "LEFT$(D$,G)SPC(F)A$(0);
508 IF(X<=1)AND(Y<=3)AND(F=17)AND(G=
16)THEN510
509 GOTO505
510 FORT=1TO10:POKESO,220:PRINT"  "SPC(
200)"PREPARE FOR THE":PRINT"  "NEXT ROUN
D"
515 FORL=1TO100:NEXTL:POKESO,0
520 PRINT"  "SPC(200)"  "
PRINT"  "  ":FORL=1TO50:NEXTL,T:
GOTO50

```

Championship Boxing

Standard

Although we say it ourselves, this program is very close to being a masterpiece. Let's face it, you're never going to make it into the ring, but the hours you spend keying-in programs amount to a great deal of repressed aggression. So here's your chance to take on the boxing champions of the world without stirring from your armchair. The program offers you a bird's eye view of a boxing ring and the opportunity to go three rounds with an opponent of your choice. You only score points if you manage to connect with the head, and a KO is possible if your strategy's slick enough.

```

1 GOSUB1200
2 E$(0)="TOUGHER":E$(1)="WEAKER":R=1
5 D$="XXXXXXXXXXXXXXXXXXXXXXXXXXXX":PRINTCHR
$(8):POKE36878,15:S0=36876
20 A$(0)="      [||||] [||||] [||||] [||||]
   "
25 A$(1)="      [|||||] [|||||] [|||||] [|||||]
JQ  "
27 A$(2)="      [||||] [||||] [||||] [||||]
   "
30 B$(0)="      [|||||] [|||||] [|||||] [|||||]
   "
31 B$(1)="      [|||||] [|||||] [|||||] [|||||]
   "
32 B$(2)="      [|||||] [|||||] [|||||] [|||||]
   ":gosub400
50 X=1:Y=3:F=17:G=16:TM=3:GOSUB450
100 P=PEEK(653):K=PEEK(197):X=X+(((K=2
9)AND(X>1))-((K=37)AND(X<14)))
130 Y=Y+((K=33)AND(Y>3))-((K=26)AND(Y<
16))
140 IFK=29ANDX<F-3THENP=0
150 PRINT" [|||||] "LEFT$(D$,Y)SPC(X)A$(P);
152 IFX=F-2THENIF((Y-1=G)AND(P=1))OR((
Y+1=G)AND(P=2))THENP1=P1+1:S=200:GOSUB200

```



```
1514 PRINT "#####"
1516 PRINT "######"
1518 PRINT "######"
1520 PRINT "######"
1522 PRINT "######"
1524 PRINT "######"
1526 PRINT "######"
1528 PRINT "######"
1530 PRINT "#####"
1532 PRINT "#####"
1534 PRINT "#####"
1536 PRINT "#####"
1538 PRINT "#####"
1540 PRINT "#####":RETURN
1599 REM *** DIFFICULT MAZE ***
1600 PRINT "#####"
1602 PRINT "#####"
1604 PRINT "#####"
1606 PRINT "#####"
1608 PRINT "#####"
1610 PRINT "#####"
1612 PRINT "#####"
1614 PRINT "#####"
1616 PRINT "#####"
1618 PRINT "#####"
1620 PRINT "#####"
1622 PRINT "#####"
1624 PRINT "#####"
1626 PRINT "#####"
1628 PRINT "#####"
1630 PRINT "#####"
1632 PRINT "#####"
1634 PRINT "#####"
1636 PRINT "#####"
1638 PRINT "#####":RETURN
1700 C=61:POKEZ,15:POKEX,255
1710 FORL=15TO0STEP-.5
1720 POKEZ,L:FORK=1TO50:NEXTL:POKEZ,0:F
OKEX,0
1750 A=A+DD:GOTO170
1999 REM *** END OF GAME ROUTINE ***
2000 PRINT "YOU HAVE WON!":A$=" "
2010 INPUT "ANOTHER GAME":A$
2020 IFA$="Y"ORA$="YES"THEN10
```

```

1020 POKEM,N:POKEM+0,0
1030 GE=0:RETURN
1100 DATA8088,61,8087,61,8086,61,8085,6
1,8084,61,8083,61,8082,61,8081,61,8059,59
,8037,59
1110 DATA8015,59,7993,59,7992,61,7991,6
1,7990,61,7968,59,7946,59
1115 DATA7924,59,7902,59,7903,62,7881,5
9
1120 DATA7860,59,7861,62,7839,59,7817,5
9,7816,61,7815,61,7814,61,7792,59
1125 DATA7770,59,7748,59,7749,62
1130 DATA7727,59,7728,62,7729,62,7730,6
2,7731,62,7732,62,7733,62
1135 DATA7734,62,7735,62,7736,62
1140 DATA7758,60,7759,62,7781,60,7780,6
1,7779,61,7778,61,7777,61
1145 DATA7776,61,7775,61,7798,60,7820,6
0
1150 DATA7842,60,7864,60,7865,62,7887,6
0,7909,60,7931,60,7953,60
1155 DATA7975,62,7976,62,7977,62,7978,6
2
1160 DATA7979,62,7980,62,7981,62,7982,6
2,7983,62,7961,59,7939,59
1165 DATA7917,59,7895,59,7873,59,7851,5
9
1170 DATA7850,61,7828,59,7806,59,7784,5
9,7762,59,7740,59,7741,62,7742,62,7743,62
1175 DATA7744,62,7766,60
1180 DATA7788,60,7810,60,7832,60,7854,6
0,7876,60,7898,60,7920,60,7942,60,7964,60
1185 DATA7986,60,8008,60
1190 DATA8030,60,8052,60,8074,60,8073,6
1,8072,61,8071,61,8093,60
1200 DATA999,0
1499 REM **** EASY MAZE ****
1500 PRINT"#####";
1502 PRINT" # # #";
1504 PRINT" # ##### ## #";
1506 PRINT" # #### # # #";
1508 PRINT"## ### # # #";
1510 PRINT"# ## ##### ## #";
1512 PRINT"## # # # # #";

```

```

72 X=36877
74 RESTORE
80 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXX3"
82 FORJ=1TO600:NEXT
84 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXX2"
86 FORJ=1TO600:NEXT
88 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXX1"
90 FORJ=1TO600:NEXT
96 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXXGO!"
"
97 FORJ=1TO600:NEXT
98 PRINT "XXXXXXXXXXXXXXXXXXXXXXXXX"
":G=1
99 PRINT "XXXXXXXXGEAR 1"
100 POKER,32
110 IFPEEK(197)=39THENA=A-22:C=59:DD=+
22
120 IFPEEK(197)=47THENA=A+22:C=60:DD=-
22
130 IFPEEK(197)=17THENA=A-1:C=61:DD=+1
140 IFPEEK(197)=18THENA=A+1:C=62:DD=-1
142 IFPEEK(197)=55THENG=1:PRINT"XXXXXXXX
GEAR 1"
144 IFPEEK(197)=63THENG=2:PRINT"XXXXXXXX
GEAR 2"
146 GE=GE+1
148 IFGE>2THENG=0
149 IFG>2THENG=0
150 IFPEEK(A)=35THEN1700
155 IFPEEK(A)=255THEN2000
156 POKE198,0
160 POKER,C
165 POKER+Q,5
170 IFG=1ANDGE=1THENGOSUB1000
172 IFG=2ANDGE=2THENGOSUB1000
200 FORB=1TO100:NEXT:GOTO100
999 REM *** DATA FOR OPPONENTS CAR *
***
1000 POKEM,32
1002 READM
1004 READN
1010 IFM=999THEN3000

```

Grand Prix

+3K

Grand Prix offers you a race-track, a worthy opponent (in the shape of your micro's car), and as much speed as you can handle. It is up to you to select the type of course you want to compete on, easy or hard. If you crash you are replaced at the start of the track again, so you'll have to sort yourself out pretty snappily if you want to get back into the running.

The program is made up of 2 listings. The first part must be run before loading or keying in the second part, as it's defining the character set.

Part One

```

10 FOR I=7176 TO 7679:POKE I,PEEK(25600+I)
):NEXT
20 FOR X=7176+(8*58) TO 7183+(61*8):READ
C:POKE X,C:NEXT
30 DATA 8,93,127,93,20,85,127,65,65,12
7,85,20,93,127,93,8
40 DATA 119,34,126,242,126,34,119,0,23
8,68,126,79,126,68,238,0

```

Part Two

```

2 INPUT "*****INSTRUCTIONS (Y/N)";I
N$
3 IF IN$="N" THEN 10
4 IF IN$="Y" THEN 4000
10 Q=30720
13 POKE 52,29:POKE 56,29:POKE 36869,255
14 REM **** MAZE SELECTION ****
15 PRINT "*****EASY (1) HARD (2). "
16 INPUT "*****DIFFICULTY";R
17 IFR=1 THEN GOSUB 1500
18 IFR=2 THEN GOSUB 1600
19 IFR<1 OR R>2 THEN 15
30 A=8066
40 C=61
70 Z=36878

```


122 *Duel*

```
535 GOTO525
540 GOTO100
999 REM **TREE
1000 DATA3,15,0,127,255,255,0,60,8,3,25
5,192,63,255,188,0,60,0,15,255,240,55,247
,248,0
1001 DATA60,138,15,255,248,31,63,248,0,
60,40,126,255,126,31,60,240,0,60,138,127,
255,254
1002 DATA24,60,48,0,60,162,255,255,252,
0,60,0,0,60,160,127,223,252,0,60,0,0,60,3
2
1009 REM * DUELLIST
1010 DATA248,112,112,112,112,112,119,80
,38,80,250,80,254,80,112,120
1019 REM *OPPONENT
1020 DATA31,14,14,14,14,14,238,10,100,1
0,95,10,127,10,14,30
```



```

5 IFPEEK(642)>16ANDPEEK(642)<>32THEN
PRINT"PLEASE RE-LOAD":FORT=0TO5000:NEXT:
POKE642,32:SYS64824
10 REM ***** D U E L ***** C1983 MIC
HAEL BEWS
15 SN=256*PEEK(648):CO=(37888+4*(PEEK
(36866)AND128))-SN:POKE36879,92:PRINT" ";

20 PRINT"*****";:FO
RI=1TO21:PRINT"*DUELDUELDUELDUELDUEL*":N
EXT
25 PRINT"*****";:POKE
SN+CO+505,5:POKESN+505,42:CH=5120
30 IFPEEK(642)<18THENPOKE56,20:POKE52
,20:POKE55,0:POKE51,0:POKE643,0:POKE644,2
0
35 SH=0:W=0:DS=0:OS=0:MY=INT(RND(1)*4
0)-20
40 FORI=0TO2047:POKECH+I,PEEK(32768+I
):IFI/8=INT(I/8)THENPOKE36879,I/8
45 NEXT:POKE36879,220:POKE36869,PEEK(
36869)OR13
50 FORX=0TO7:FORY=1TO9:READA:POKECH+7
0*8+Y*8+X,A:NEXTY,X
60 FORX=0TO7:FORY=1TO2:READA:POKECH+6
4*8+Y*8+X,A:NEXTY,X
65 FORX=0TO7:FORY=1TO2:READA:POKECH+7
9*8+Y*8+X,A:NEXTY,X
80 M$="||||":N$="| | | |":T$="| | | |
| | | |":sn=256*peek(648)
90 S0$="-----":S1$="-----
-----":S2$="-----
"

99 REM ** PRINT SCENE
100 POKE36879,220:POKE36878,80:PRINT"
DUEL C'83 MICHAEL BEWS";
120 POKE646,13:PRINT" "T$ "T$ "T$ "T$
T$ "T$";
130 PRINT" "T$ "T$ "T$ "T$ "T$ "T$ "T$
"T$";
135 PRINT" "T$ "T$ "T$ "T$ "T$ "T$
T$ "T$ "T$ "T$ "
T$
140 PRINT" "M$ "N$";

```



```

180 PRINT"#####"TAB(35)"#SHOTS:  ###"RIG
HT$(STR$(SH),LEN(STR$(SH))-1)"#"
199 REM **MAIN GAME ROUTINE
200 A=PEEK(197):IFA=64THEN200
210 IFA<>17ANDAC<>33ANDAC<>63THEN200
220 IFA=17THENMY=MY+1:GOTO300
230 IFA=33THENMY=MY-1:GOTO300
240 IFA<>63THEN200
245 SH=SH+1:PRINT"#####"TAB(41)RIGHT$(S
TR$(SH),LEN(STR$(SH))-1):SH$=S1$:IFMY>=2T
HENSH$=S0$
250 PRINT"#####" ; :IFMY<=-2TH
ENSH$=S2$
253 FORI=1TOLEN(SH$):PRINTMID$(SH$,I,1
);:IF(I=4OR I=12)ANDSH$=S0$THENPRINT"□";
254 IF(I=5OR I=13)ANDSH$=S2$THENPRINT"■
";
260 NEXT:PRINT"#####";
261 FORI=1TOLEN(SH$):PRINT" ";:IF(I=4O
RI=12)ANDSH$=S0$THENPRINT"□";
262 IF(I=5OR I=13)ANDSH$=S2$THENPRINT"■
";
263 NEXT:SH$="":POKE36878,95:FORX=250T
O245STEP-1:POKE36874,X:FORT=0TO2:NEXT
264 POKE36874,0:NEXT:POKE36878,80
265 IFMY<2ANDMY>-2THENW=1:GOTO500
270 GOTO400
300 IFMY<-20THENMY=-20
310 IFMY>20THENMY=20
330 GOTO200
399 REM **OPPONENT FIRE RTN
400 FORT=0TO100:NEXT:Y=INT(RND(1)*50)-
25
405 SH=SH+1:PRINT"#####"TAB(41)RIGHT$(S
TR$(SH),LEN(STR$(SH))-1):SH$=S1$:IFY>=3TH
ENSH$=S2$
410 PRINT"#####
";:IFY<=-3THENSH$=LEFT$(S0$,LEN(S0
$)-1)
412 FORI=LEN(SH$)TO1STEP-1
413 PRINT"###"MID$(SH$,I,1)"###";:IF(I=5OR
I=13)ANDSH$=LEFT$(S0$,LEN(S0$)-1)THENPRIN
T"■";
414 IF(I=6OR I=14)ANDSH$=S2$THENPRINT"□
";

```



```

:POKEZ-X,Q:POKE36879,Q:NEXTQ:POKEZ-X,0:NE
XTX
 1532 POKE36879,8:PRINT"XXXXXXXXXXXXXXXXXXXX
      NI          ":POKES,22:POKES+C,7
 1534 FORX=254TO128STEP-1:POKEY-2,X:POKE
V-3,X:NEXT:POKEY-3,0:POKEY-2,0:RETURN
 4000 IFOK=1THENLV=LV-1:FORX=250TO128STE
P-2:POKEMA+C,X/20:POKEY-2,X:NEXT:POKEY-2,
0:GOTO4020
 4005 IFOK=0THENSC=SC+100:FORX=254TO128S
TEP-2:POKEY-2,X:POKEY-3,X:NEXT:POKEY-2,0:
KO=KO+1
 4006 POKEY-3,0
 4007 PRINT"XXXXXXXXXXXXXXXXXXXXGHIJK"SC
 4020 POKEMA,32:POKE7825,LV+48:IFLV=0THE
N4100
 4021 B=0:A=0:POKES,22:POKES+C,7:GOTO100

 4050 RETURN
 4100 PRINT"XXXXXXXXXXXXXXXXXXXX      NI+K I%K
J ":FORX=1TO2000:NEXT:POKE198,0
 4102 PRINT"XXXXXXXXXXXXXXXXXXXX      LM& !>$ #%&
&I>"
 4103 GETA$:IFA$=""THEN4103
 4104 RUN
 4200 IFKO>3THENRETURN
 4201 GOTO4100
 6000 POKE36879,248:OK=0:TM=50-(WV*10):F
ORX=250TO128STEP-2:POKEY-2,X:POKEY-3,X:NE
XTX
 6001 POKEY-2,0:POKEY-3,0:CL=2:RETURN

```



```

=7816:I=15:G=PS:TM=1:S=7976:L=0:A=0:BB=0
1501 WV=1:PRINT"JFJ00000000000000000000
JF":POKE36879,8:POKE36869,255
1502 PRINT"JF0000\BC00\BC00\BC00\BC00
000F"
1503 PRINT"JF0000\DE00\DE00\DE00\DE00
000F"
1504 PRINT"JF0\BC0000000000000000\BC0\
F"
1505 PRINT"JF0\DE0\BTTTTTTTTTTTC0\DE0
0F"
1507 PRINT"JF0000\F0 'M%KG00:003\ F0
0000F"
1508 PRINT"JF0\BC0\DTTTTTTTTTTTE0\BC0
0F"
1509 PRINT"JF0\DE0000000000000000\DE0\
F"
1510 PRINT"JF00000000000000000000\F"
1511 PRINT"JF0\BTTTTTTTTTTTTTTTTTTC0\F"

1512 PRINT"JF0\F0 JK!I$0!0 F0
0F"
1513 PRINT"JF0\DTTTTTTTTTTTTTTTTTTTE0\F"

1514 PRINT"JF00000000000000000000\F"
1515 PRINT"JF0\BC0\BC0\BTC0\BC0\BC
0BC0F"
1516 PRINT"JF0\DE0\DE0\DE0\DE0\DE0\DE
0DE0F"
1517 PRINT"JF00000000000000000000\F"
1518 PRINT"JF0\BC0\BC0\BC0\BTC0\BC
0BC0F"
1519 PRINT"JF0\F0\DE0\DE0\DE0\DE0\DE
0FF0F"
1520 PRINT"JF0\DE0000000000000000\DE0\
F"
1521 PRINT"JFJ000\BTTTTTTTTTTTC000J\
F"
1522 PRINT"JDTTTT\TTTTTTTTTTT\TTTTTE0000"
:LL=2060:POKE7825,LV+48
1523 FORX=255TO38STEP-1:POKE36881,X:NEX
T
1525 Z=36876
1530 FORX=2TO0STEP-1:FORQ=128TO250STEP3

```

```

1304 PRINT"JF00\FF00000000000000\FF00\
F"
1305 PRINT"JF00\DE00\BTTTTTTTTTTC00\DE0
OF"
1307 PRINT"JF00000\F0 'M%KG:03\ F00
00F"
1308 PRINT"JF00\BC00\DTTTTTTTTTTTE00\BC0
OF"
1309 PRINT"JF00\DE0000000000000000\DE00\
F"
1310 PRINT"JF000000000000000000000000\F"
1311 PRINT"JF00\BTTTTTTTTTTTTTTTTTTC00\F"

1312 PRINT"JF00\F0 JK!I$! \F0
OF"
1313 PRINT"JF00\DTTTTTTTTTTTTTTTTTTTE00\F"

1314 PRINT"JF000000000000000000000000\F"
1315 PRINT"JF00\BTTTC00\BTTTC00\BTTTC0
OF"
1316 PRINT"JF00\DTTTE00\DTTTE00\DTTTE0
OF"
1317 PRINT"JF000000000000000000000000\F"
1318 PRINT"JF00\BC00\BTTTC00\BTTTC00\B
COF"
1319 PRINT"JF00\FF00\DTTTE00\DTTTE00\F
FOF"
1320 PRINT"JF00\DE0000000000000000\DE00\
F"
1321 PRINT"J015000\BTTTTTTTTTTTTC0000\J\
F"
1322 PRINT"JDTT\TTTTTTTT\TTTTTE0000"
:LL=1810:POKE7825,LV+48
1323 FORX=255TO38STEP-1:POKE36881,X:NEX
T
1325 Z=36876
1330 FORX=2TO0STEP-1:FORQ=128TO250STEP3
:POKEZ-X,Q:POKE36879,Q:NEXTQ:POKEZ-X,0:NE
XTX
1332 POKE36879,8:PRINT"
NI " :POKES,22:POKES+C,7
1334 FORX=254TO128STEP-1:POKEY-2,X:POKE
V-3,X:NEXT:POKEY-3,0:POKEY-2,0:RETURN
1500 PRINT" \BTTTTTTTTTTTTTTTTTTC":PS

```



```

117 B=INT(RND(1)*4)+1
118 IFB=2THENB=22
119 IFB=3THENB=-22
120 IFB=4THENB=-1
121 U=PEEK(PS+BB+B):IFU=32ORU=15ORU=29
THEN123
122 GOTO124
123 POKEPS+BB,I:POKEPS+BB+C,6:BB=BB+B:
G=PS+BB:I=PEEK(G):POKEG,OK:B=0:POKEG+C,CL

124 MA=S+A:IFPEEK(MA+1)<20RPEEK(MA-1)=
<20RPEEK(MA-22)<20RPEEK(MA+22)<2THENGOTO4
000
130 O=PEEK(S+M+A):IFO=15ORO=32ORO=29TH
EN250
150 GOTO100
200 A=A+M:IFM=0THEN100
210 POKES+A,PM:POKES+A-M,32:M=0:POKES+
A+C,7:GOTO100
250 IFHG=1THENHG=0:GOTO200
251 IFPM=22THENPM=16
252 IFPM=21THENPM=17
254 IFPM=23THENPM=18
255 IFPM=24THENPM=19
260 HG=1
270 GOTO200
1000 PRINT"BTTC":PS
=7859:I=15:G=PS:TM=1:POKE36881,255:S=7998
:WV=2
1001 A=0:L=0:PRINT"0000000000000000
0001F":BB=0
1002 PRINT"BTTCBTTCBTTC
OF"
1003 PRINT"FBTTEDTTTEDTTCF
OF"
1004 PRINT"FF0000000000000000FF
F"
1005 PRINT"DEBTTCDE
OF"
1007 PRINT"0000F M%KG:3 F
000F"
1008 PRINT"0000DTTTE0000F"
1009 PRINT"00000000000000000000F"

```

```

86 WAIT" "
87 WAIT" "
88 WAIT" "
90 WAIT" " LM& !>$ #%&&I>"
95 CONTRA$:INPUT#A$-" "CLOSE95
99 82256
100 WAIT" "
101 WAIT" "HLI←↑KJ 00000J000000000000
0"
102 WAIT" "N!←K MIK! ↑. G&!>'K$"
103 WAIT" "↑JINJ!← $$ I!%K NM#GI)"
104 WAIT" "( ↑H) 1983"
106 WAIT" "LM& !>$ #%&&I>"
110 CONTRA$:INPUT#A$-" "CLOSE110
112 WAIT" "&I 'I! I LM& GLM.& !>I"
113 WAIT" " G&I↑ #%&&I) &I 'I! I"
114 INPUT#RND(197)-64CLOSE114
115 INPUT#RND(197)*+24 CLOSE 114
116 END A$:INPUT# A$*+"***" CLOSE 116
117 207I-1CMD6:END A:STOP630TAB(I,A:13
118 STOP 198,6:LIST
119 82 ***,76,207,13,82,213,13

```

Part Two

```

10 POKE36879,8:POKE36869,255:PM=22:C=
30720:V=36878:POKEY,15:LV=3:WV=3
20 FORX=38TO255:POKE36881,X:NEXT:IFWV
=1THENGOSUB1000:GOTO100
22 IFWV=2THENGOSUB1300:GOTO100
23 IFWV=3THENGOSUB1500:GOTO100
100 P=PEEK(197):IFP=21THENM=-1:PM=22
101 IFP=45THENM=1:PM=21
102 IFP=13THENM=-22:PM=24
103 IFP=37THENM=22:PM=23
105 IFPEEK(S+M+A)=29THENGOSUB6000
106 IFTM>1THENTM=TM-1
109 IFTM<2THENPOKE36879,8:OK=1:CL=1
110 IFPEEK(S+A+M)=15THENPOKEY-1,128:PO
KEY-1,0:SC=SC+10:PRINT "GHIJK"SC:L=L+1
111 IFL*10>LL-11THENFORX=1TO150:POKEY+
1,8:POKEY+1,25:NEXT:POKEY+1,8:GOSUB4200:G
OTO20

```

46 820,0,255,0,0,255,0,0
 47 8263,126,240,192,192,240,126,63
 48 82254,126,15,3,3,15,126,254
 49 8260,126,231,231,195,195,195,129
 50 82129,195,195,195,231,231,126,60
 51 8236,36,39,32,32,39,36,36
 52 820,0,255,0,0,231,36,36
 54 8236,36,228,4,4,228,36,36
 55 8236,36,231,0,0,255,0,0
 56 820,16,56,124,56,16,0,0
 57 82254,254,198,254,254,192,192,192
 58 82 254,254,214,214,214,214,198,198
 59 820,0,0,0,0,0,0,0
 60 82124,254,198,198,254,254,198,198,
 0,0,0,0,0,0,0
 61 82252,254,198,254,254,198,254,252
 62 82195,195,231,255,126,24,24,24
 63 82198,198,198,198,198,238,254,124
 64 82126,126,24,24,24,24,24,24
 65 82192,192,192,192,192,192,254,254
 66 82126,129,189,161,161,189,129,126
 67 82254,254,198,198,198,198,198,198
 68 820,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
 69 82254,254,192,252,252,192,192,192,
 0,0,0,0,0,0,0
 70 82124,254,206,214,230,198,254,124
 71 8256,56,24,24,24,24,60,60
 72 82254,254,198,14,28,120,254,254
 73 82254,254,6,62,62,6,254,254,192,19
 2,192,216,254,254,24,24
 74 82254,254,192,254,254,6,254,254
 75 82254,254,192,254,254,230,254,254
 76 82254,254,198,6,6,6,6,6,254,254,19
 8,254,254,198,254,254
 78 82254,254,198,254,254,6,254,254
 79 82256
 80 STOP36869,255:STOP36879,8:WAIT"⌘↑
 '!\$ &LMG N!←K &LK":WAIT"q!Nk !q &!hN!>■
 "
 81 WAIT"#%& \$I% ■+%G& ⌘K!& 4":WAIT"⌘N
 LIG&G ↑KJ GLKK& K'GK"
 82 WAIT"⌘\$I%' 'IGK &LK N!←K⌘."
 85 WAIT"⌘⌘&I ←I%K %GK⌘:■"

Chomper

+3K

This is an interesting variation of a game we caught sight of in an arcade a while back. It's got a maze, power pills, a ghost and things that go chomp in the night. The first program defines the graphics, and then LOADS the main program, which must of course be the next program on the tape.

Part One

```

1 LET***VIC 20 +3K***
2 LET***CHOMPER***
5 STOP52,28:STOP56,28
10 207X-7175CMD7679:STOPX,RND<25600TAB
B(X):13
11 207X-0CMD7:ENDA:INPUT#A+255CLOSE15

12 STOPXTAB<XXTAB<7168,A:13:XX-XXTAB<
8:NEXT11
15 STOP36869,255
20 8260,126,219,255,213,171,255,85
21 8260,126,237,201,255,255,255,85
22 820,0,15,24,48,39,36,36
23 820,0,240,24,12,228,36,36
24 8236,36,39,48,24,15,0,0
25 8236,36,228,12,24,240,0,0
28 8236,36,36,36,36,36,36,36
29 82254,254,224,254,254,14,254,254
30 82254,254,192,192,192,224,254,254
31 82254,254,198,198,198,230,254,254
33 8262,126,224,192,192,192,192,192
34 82254,254,192,252,252,192,254,254
35 82198,198,198,254,254,198,198,198
36 8260,60,24,24,24,24,60,60
37 82254,254,192,222,222,198,254,254
40 820,0,0,24,24,0,0,0
42 8260,126,255,7,7,255,126,60
43 8260,126,255,224,224,255,126,60
44 8260,126,255,231,231,231,102,36
45 8236,102,231,231,231,255,126,60

```

```

6170 GETA$:IFA$=""THEN6170
6180 GOTO2
7000 END
9000 POKE36879,8:POKE36869,205
9001 FORI=5120+64*8TO5119+105*8
9010 READA:POKEI,A:NEXT
9013 FORI=0TO7:READR0%(I):NEXT:RETURN
9020 DATA0,0,0,0,0,2,2,10,11,47,47,18
8,170,255,255
9030 DATA160,248,248,248,44,188,188,224
,32,32,32,32,32,176,176,176
9040 DATA34,35,35,35,32,32,32,32,170,23
9,239,239,32,32,56,56
9050 DATA42,63,63,63,0,0,0,0,160,224,22
4,224,176,176,176,176
9060 DATA11,11,47,47,188,170,255,255,25
5,0,0,0,0,170,255,255
9070 DATA224,224,34,34,178,242,243,195,
128,128,192,192,192,170,255,255
9080 DATA32,32,32,32,32,32,48,48,56,8,8
,8,8,8,12,12
9090 DATA2,2,2,11,11,10,15,15,192,192,1
92,0,0,170,255,255
9100 DATA0,0,0,0,0,170,255,255,255,0,0,
0,0,0,0,0,255,0,0,0,0,0,0
9110 DATA3,0,0,0,0,0,0,0,255,0,0,0,0,0,
0,0,48,0,0,0,0,0,0
9120 DATA12,0,0,0,0,0,0,0,15,0,0,0,0,0,
0,0,255,0,0,0,0,0,0,255,0,0,0,0,0,0
9130 DATA255,255,255,255,255,255,255,25
5
9140 DATA0,0,27,54,252,48,24,12
9150 DATA0,0,24,24,24,24,0,0,0,0,12,28,
56,48,0,0,0,0,60,60,0,0,0,0,0,48,56,28,
12,0,0
9160 DATA16,16,40,56,56,124,198,130
9170 DATA0,0,2,2,8,32,32,131,0,160,10,0
,0,60,195,0,0,0,0,160,32,8,8,194
9180 DATA140,140,35,131,140,140,140,131
,50,50,194,200,194,50,50,50
9190 DATA35,35,32,8,8,2,2,0,0,3,204,48,
0,2,4,160,194,200,8,8,32,128,0,0
9500 DATA92,93,94,95,92,93,94,95

```



```

4020 FORT=1TO2000:NEXT:X=21:Y=1:BF=0:PO
KES+BY*22+BX,32:GOTO200
5000 POKES+GY*22+GX,32:POKES+BY*22+BX,3
2:POKES+Y*22+X,32:RETURN
6000 GOSUB5000
6010 FORI=1TO5:POKEP1,10:POKEP2,6:SYSAT
:PRINT"GAME OVER":FORT=1TO400:NEXT
6020 POKEP1,10:POKEP2,6:SYSAT:PRINT"
":FORT=1TO400:NEXTT,I
6030 POKE646,13:PRINT"TAB(7)BL$
6040 PRINT" SCORE BOARD"
6050 PRINT"TIME"TAB(15)IT$
6055 PRINT"BOMBERS"TAB(14)PL
6060 SC=INT((VAL(IT$)*100)*PL):PRINT"SC
ORE"TAB(14)SC
6062 IFSC<CHIZ(4)THENGOTO6070
6063 FORI=1TO100:POKE646,INT(RND(1)*6)+
1:POKEP1,15:POKEP2,8:SYSAT:PRINT"HISCORE"
:NEXT
6065 PRINT"ENTER NAME"
6066 POKE198,0:INPUTA$:IFLEN(A$)>10THEN
PRINT":GOTO6066
6068 HN$(5)=A$:HI$(5)=SC:GOTO6100
6070 PRINT"HIT ANY KEY":POKE198
,0
6080 GETA$:IFA$=""THEN6080
6090 GOTO2
6100 POKE646,13:PRINT"TAB(7)BL$
6110 PRINT"HALL OF FAME"
6120 FL=0:FORI=0TO4:A1=HI$(I):A2=HI$(I+
1)
6130 IFA1<A2THENHI$(I)=A2:HI$(I+1)=A1:A
$=HN$(I):HN$(I)=HN$(I+1):HN$(I+1)=A$:FL=1
6140 NEXT
6145 IFFL=1THEN6120
6150 PRINT"
"
6160 FORI=0TO4
6161 A$=STR$(HI$(I)):A1=LEN(A$):A$=RIGH
T$(A$,A1-1):A1=A1-1:B$=LEFT$("000000",6-A
1)
6162 C$=B$+A$
6163 PRINT"C$TAB(8)"HN$(I)
6165 PRINT:NEXT:POKE198,0
6167 PRINT"HIT ANY KEY"

```

```

270 IFGB=0THENGOSUB3000
280 IFGB=1THENGOSUB3020:GOSUB3050
310 IFHT=6THEN6000
500 GOTO200
2000 POKES+BY*22+BX,32
2010 BY=BY+1:P=S+BY*22+BX
2015 POKEP,RO%(RO):RO=RO+1:IFRO=8THENRO
=0
2020 IFBY<20THENRETURN
2030 Q=PEEK(P+22):IFQ<49ANDQ>54THEN2050
2040 IFPEEK(P+22)<>90THENHT=HT+1
2045 POKEP+22,90
2050 BF=0:POKEP,32
2060 RETURN
3000 GETA$:A=VAL(A%):IFA<10RA>6THENRETU
RN
3010 GB=1:GY=20:GX=3*A
3015 IFPEEK(4558+GX)=90THENGGB=0:RETURN
3017 FORI=1TO10:POKESO,128:POKESO,0:NEX
T
3020 POKES+GY*22+GX,32
3030 GY=GY-1:P=S+GY*22+GX
3040 POKEP,96:IFGY<4THENGGB=0:POKEP,32
3045 RETURN
3050 GETA$:IFA%<>"0"THENRETURN
3053 GB=0:FORI=15TO0STEP-3:POKEP1,GY-1:
POKEP2,GX-1:GOSUB3080
3055 SYSAT:POKE646,INT(RND(1)*7)+1:PRIN
TEX$:POKEP1,GY-1
3056 POKEP2,GX-1:GOSUB3080:SYSAT:PRINTE
C$:NEXT:POKE36877,0:POKE36878,32+15
3060 IFGY=YANDGX=XTHENPL=PL+1:FF=1:GOTO
4000
3065 IFGY=BYANDGX=BXTHENBF=0:FF=0:GOTO4
000
3067 GOSUB5000
3070 RETURN
3080 POKESO+2,128+INT(RND(1)*30):POKESO
+3,I
3085 POKE36865,PEEK(36865)+INT(RND(1)*3
)-1:POKE36864,PEEK(36864)+INT(RND(1)*3)-1
3090 POKE36865,38:POKE36864,12:RETURN
4000 GOSUB5000
4010 IFFF=0THENRETURN

```


102 Alien

```
2060 GETA$
2062 IFA$="I"THEN G$=" " :GOTO2070
2064 IFA$="Y"THEN G$="繼!"+CHR$(34) :GOTO2
070
2066 GOTO2060
2070 RETURN
```

```

303 POKECH+30720,INT(RND(1)*7)+1:NEXT:
POKES1,0:POKECH,32:GOTO310
305 FORI=15TO0STEP-1:POKES1+2,I
306 FORL=150TO130STEP-1:POKES1,L:NEXTL
,I:POKES1,0
310 FORI=1TO5:POKEP1,10:POKEP2,6:SYSAT
:PRINT"GAME OVER":FORT=1TO500:NEXT
315 POKEP1,10:POKEP2,6:SYSAT:PRINT"
":FORT=1TO500:NEXTT,I
320 IFS>HSTHENHS=S
330 GOTO5
500 GETA$
501 Z=Z+(A$="Z")-(A$="X")
502 IFZ<1THENZ=1
503 IFZ>18THENZ=18
504 POKEP1,20:POKEP2,Z:SYSAT:PRINT"DR"
R$:DR$="# #"
505 RETURN
600 POKES1,0
605 FORI=1TO10:POKE646,INT(RND(1)*15)+
1:POKEP1,Y:POKEP2,X:SYSAT:PRINT" $$"
610 POKES1+1,170+INT(RND(1)*10):NEXT:P
OKES1+1,0:POKES1,0
620 RETURN
999 STOP
1000 FORI=7432TO7432+8*8-1:READA:POKEI,
A:NEXT:RETURN
1010 DATA0,0,60,255,234,63,15,3,0,0,60,
255,87,252,240,192,8,8,8,93,119,99,93,0
1020 DATA1,68,136,16,160,0,4,84
1025 DATA129,255,165,36,60,60,126,255
1030 DATA0,130,198,108,124,56,16,16
1035 DATA8,8,8,8,8,28,0,0
1040 DATA1,1,1,1,1,1,1,1
2000 PRINT"TAB(8)"ALIEN"
2030 PRINT"LEFT.....ZRI
GHT.....Xfire.....
.M"
2040 PRINT" YOU CAN ONLY FIRE IF
YOUR BASE IS # and not %"
2050 PRINT"PRESS:"
2055 PRINT"FOR INVISIBLE ALIEN. FOR
VISIBLE ALIEN."

```

```

22 D2$="  "
"
25 PRINT"§"TAB(12)"HI";HS
30 GOSUB71:IFRND(1)>.97ANDX>4ANDX<18T
HENGOSUB200
40 IFRND(1)<.08THENGOSUB78
63 GOSUB500:IFA$="M"THENGOSUB100
69 PRINT"§SCORE";S:GOTO30
71 X=X+1:POKEP1,Y:POKEP2,X:SYSAT:PRIN
T" ";G$
72 IFX=20THENPOKEP1,Y:POKEP2,X:SYSAT:
PRINT" ";X=0:Y=Y+1
73 IFY=20THENY=1:C=C+1
74 IFC=3THEN305
75 RETURN
78 POKES1,250:DO=57-(3*(Y-1)):POKEP1,
Y+1:POKEP2,X+1
79 SYSAT:PRINT"§"LEFT$(D1$,DO):FORT=1
TO100:NEXT
80 POKEP1,Y+1:POKEP2,X+1:SYSAT:PRINTL
EFT$(D2$,DO):"§":POKES1,0
81 IFZ=XTHENGOTO305
84 RETURN
100 FORA=20TO1STEP-1
110 POKEP1,A:POKEP2,Z+1:SYSAT:PRINT"§"
"
150 GOSUB500:GOSUB71:POKE36876,200+A
160 IFA=YTHENIFX=ZORX+1=ZTHENS=S+INT(1
00/Y)+10:GOSUB600:RETURN
168 POKEP1,A:POKEP2,Z:SYSAT:PRINT" "
"
170 NEXT:POKE36876,0:RETURN
200 F=X:FORA=YTO21
210 POKEP1,A:POKEP2,F:SYSAT:PRINTAL$
220 DR$=" % ":GOSUB500
230 IFA=19THENIFPEEK(7680+19*22+Z+1)=3
8THEN300
242 GOSUB71:POKEP1,A:POKEP2,F:SYSAT:PR
INT" ";NEXT:RETURN
300 POKEP1,A:POKEP2,F:SYSAT:PRINT"
"
302 CH=7681+20*22+Z:POKECH,36:FORI=15T
O0STEP-1:POKES1+2,I:FORL=200TO230:POKES1,
L:NEXTL

```