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ROBERT ERSKINE & HUMPHREY WALWYN
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**SIXTY
PROGRAMS**
for the

DRAGON 32



Pan/Personal Computer News
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Sixty Programs for the
Dragon 32

Robert Erskine, Humphrey Walwyn
with **Paul Stanley, Michael Bews**

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Introduction

This book was born of the conviction that it was high time a listings collection offered real value for money. You have in your hands as complete a software library as can be crammed into close on three hundred pages. We have pulled out all the stops to offer you as varied, innovative and exciting selection of programs as possible. There are arcade action games for those of you whose fingers naturally twitch around the cursor control keys, tactical games for the more cerebrally inclined, genuinely novel games as well as classics of the genre, quizzes, tests of your mental agility, party games and a leavening of utility and educational programs. In short, for the price of a single cassette we've put together a collection of sixty fully-developed programs which have been exhaustively tested before being dumped straight to the printer. This ensures the accuracy of the listings, so all you have to do is to get your eager fingers flashing across the keyboard and faithfully reproduce the programs on your screen.

A few words about the listings themselves. The inverse video characters of the Dragon display print as lower case characters, as usual. We should point out that in order to get as many programs as possible into the book we have extended the line length of the listings to forty-five characters, as opposed to the thirty-two characters of the Dragon screen. This simply means that you should take extra care over the spaces to ensure that you get the displays right.

Finally, we would like to extend our thanks to the team of converters and checkers without whom this project would not have been possible. Their selfless devotion to accuracy inspired us to slave over hot keyboards into the midnight hour.

So now it's up to you. A quick glance through the contents pages reveals that the Earth is being threatened by anything from an alien invasion fleet to a vampire cat! As usual, you are our only hope, so get to the keyboard and go get 'em!

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Sheepdog Trials

There's no getting away from it, sheep are dumb. The pen in the middle of the screen is large enough for them all to be housed in comfort, but the wretched creatures are demonstrating an unpalatable degree of reticence. Your trusty collie, Craigsmuir, is doing the best he can, but he requires a firm handling from you and your arrow keys. As in life, time is running out, and this unusually difficult game will defeat you unless you manage to get all the sheep into the pen before the last second ticks away. If your best efforts are to no avail never fear . . . there's always the slaughter house!

```

1 REM BY ROBERT ERSKINE FROM AN ORIGINAL IDEA
  BY TOM HAYWARD
2 REM *** DRAGON VERSION ***
3 REM *** sheepdog trials ***
10 PCLEAR 8:GOSUB 9000
15 GOSUB9110
20 GOSUB 5000
30 INPUT"HOW MANY PLAYERS";A
40 DIMP(A):DIMS(4,2):DX=120:DY=120
45 DD=1:RR=1:DIMR(2):R(1)=-8:R(2)=8
65 FORT=1 TO A
80 PMODE3,1:PCLS:SCREEN1,0:COLOR2,1:LINE(0,7)
  -(255,167),PSET,B
81 LINE(80,48)-(167,95),PSET,B
82 COLOR1,1:LINE(120,95)-(135,95),PSET
85 SC=0:S(1,1)=24:S(1,2)=120:S(2,1)=24:S(2,2)
  =128:S(3,1)=32:S(3,2)=120:S(4,1)=32:S(4,2)=12
  0
90 PMODE3,5:GET(120,0)-(167,7),L,G
92 PMODE3,1:PUT(0,0)-(47,7),L,PSET
93 NO=T:XS=50:GOSUB9900
94 FOR Z=1 TO 4:REM sheeploop
95 SX=S(Z,1):SY=S(Z,2):REMsheepmove
100 REM dogmove
105 A$=INKEY$:IF A$="0" THEN GOSUB 3000:GOTO
  370
110 COLOR1,1:LINE(DY,DX)-(DY+7,DX+7),PSET,BF
115 TX=DX:TY=DY:OK=1:IF A$="" THEN A$=B$
120 IF ASC(A$)=8 THEN IF DY>15 THEN GOSUB 600

```


8 Sheepdog Trials

```
: IF OK=1 THEN DY=DY-8:DD=2
130 IF ASC(A#)=10 THEN IF DX<168 THEN GOSUB 6
50: IF OK=1 THEN DX=DX+8
140 IF ASC(A#)=94 THEN IF DX>15 THEN GOSUB 65
0: IF OK=1 THEN DX=DX-8
150 IF ASC(A#)=9 THEN IF DY<240 THEN GOSUB 60
0: IF OK=1 THEN DY=DY+8:DD=1
160 B#=A#:ON DD GOSUB 400,450
200 IF RND(0)>.75 THEN 230
210 IF RND(0)>.5 THEN SX=S(Z,1)+R(2):GOTO 220
215 SX=S(Z,1)+R(1)
220 IF RND(0)>.5 THEN SY=S(Z,2)+R(2):GOTO 230
225 SY=S(Z,2)+R(1)
230 E=(ABS(DX)-S(Z,1))/80:F=(ABS(DY)-S(Z,2))/
80:G=S(Z,1)-DX:H=S(Z,2)-DY
235 O=0:Q=RND(0):IF Q>E AND Q>F THEN O=1
240 IF G>0 AND O=1 THEN SX=S(Z,1)+8
250 IF H>0 AND O=1 THEN SY=S(Z,2)+8:RR=1
260 IF G<0 AND O=1 THEN SX=S(Z,1)-8
270 IF H<0 AND O=1 THEN SY=S(Z,2)-8:RR=2
280 COLOR1,1:LINE(S(Z,2),S(Z,1))-(S(Z,2)+7,S(
Z,1)+7),PSET,BF
290 OK=1:TX=SX:TY=SY:TT=0:GOSUB610:IF OK=0 TH
EN 310 ELSE GOSUB660:IF OK=0 THEN 310
300 S(Z,1)=SX:S(Z,2)=SY
310 ON RR GOSUB 500,550
330 RR=RND(2)
340 NEXT Z
350 SC=SC+1:PMODE3,5:GET(80,0)-(119,7),L,G:PM
ODE3,1:PUT(168,0)-(207,7),L,PSET:NO=150-SC:XS
=210:GOSUB9900:IF SC=150 THEN GOSUB 3000:GOTO
370
360 GOTO 94
370 NEXT T
380 GOTO 2000
400 PUT(DY,DX)-(DY+7,DX+7),DR,PSET:RETURN
450 PUT(DY,DX)-(DY+7,DX+7),DL,PSET:RETURN
500 PUT(S(Z,2),S(Z,1))-(S(Z,2)+7,S(Z,1)+7),SR
,PSET:RETURN
550 PUT(S(Z,2),S(Z,1))-(S(Z,2)+7,S(Z,1)+7),SL
,PSET:RETURN
600 TT=1:IF ASC(A#)=8 THEN TT=-1
610 FOR XX=TY+8*TT TO TY+8*TT+7
620 IF PPOINT(XX,TX+2)<>1 THEN OK=0
```

```

630 NEXT XX:RETURN
650 TT=1:IF ASC(A$)=94 THEN TT=-1
660 FOR YY=TX+8*TT TO TX+8*TT+7
670 IF PPOINT(TY,YY)<>1 THEN OK=0
680 NEXT YY:RETURN
700 FOR XX=SX TO SX+7
710 FOR YY=SY TO SY+7
720 IF PPOINT(YY,XX)<>1 THEN OK=0
730 NEXTYY,XX:RETURN
2000 CLS
2005 PRINT@12,"RESULTS":PRINT
2010 FOR X=1 TO A
2020 PRINT"          PLAYER";X;"          ";P(X)
2030 NEXT X
2040 PRINT:PRINT"          PRESS ANY KEY TO RESTART"
2045 A$=INKEY$
2050 A$=INKEY$:IF A$="" THEN 2050
2060 RUN 15
3000 COLOR2,1:LINE(120,95)-(135,95),PSET
3002 P(T)=150-SC
3005 CH=0
3010 FOR X=1 TO 4
3020 IF S(X,1)>48 AND S(X,1)<95 AND S(X,2)>80
AND S(X,2)<167 THEN CH=CH+1
3030 NEXT X
3035 FOR X=1 TO 500:NEXT X
3040 IF CH<4 THEN CLS:PRINT@226,"YOU FAILED T
O PEN THE SHEEP":PRINT@262,"YOUR SCORE IS ZER
O":P(T)=0:CH=0:GOSUB 4000
3050 IF CH=4 THEN CLS:PRINT@226,"YOUR SCORE W
AS";P(T):CH=0:GOSUB 4000
3060 RETURN
4000 FOR @=1 TO 2000:NEXT @:RETURN
5000 CLS
5010 PRINT@40,"SHEEPDOG TRIALS"
5020 PRINT"THE OBJECT OF THE GAME IS TO   HE
RD ALL FOUR SHEEP INTO THE PENWITHIN A FIXED
TIME LIMIT BY   MOVING THE DOG USING THE ARR
OW KEYS. WHEN THE SHEEP HAVE BEEN PENNED, C
LOSE THE GATE WITH THE 0 KEY AND YOUR SCORE W
ILL BE   DISPLAYED.";
5030 PRINT" LESS THAN FOUR","SHEEP IN THE PE
N, OR RUNNING   OVER TIME, RESULTS IN A ZERO
SCORE"

```

10 Sheepdog Trials

```
5040 PRINT"ANY NUMBER OF PLAYERS CAN PLAY IN  
TURN"  
5070 PRINT"PRESS ANY KEY TO START":A$=INKEY$  
5075 A$=INKEY$:IF A$="" THEN 5075  
5080 RETURN  
9000 PMODE3,5:PCLS3:SCREEN1,0  
9010 XC=0:YC=0:C=2:B=3  
9020 FOR CH=1 TO 25:IF CH>21 THEN READ C,B  
9030 FOR Y=YC TO YC+7  
9040 READ CD:D=8  
9050 FOR X=XC TO XC+7 STEP 2  
9060 P=INT(CD/D)  
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)  
:CD=CD-D  
9080 D=D/2:NEXT X,Y  
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8  
9100 NEXT CH  
9105 RETURN  
9110 PMODE3,5:DIMN(1):DIML(11):DIMDL(1):DIMDR  
(1):DIMSL(1):DIMSR(1)  
9120 GET(168,0)-(175,7),DR,G  
9130 GET(176,0)-(183,7),DL,G  
9140 GET(184,0)-(191,7),SR,G  
9150 GET(192,0)-(199,7),SL,G  
9160 B$=" "  
9340 RETURN  
9400 DATA6,9,11,11,13,13,9,6  
9410 DATA2,6,2,2,2,2,2,7  
9420 DATA2,5,1,1,6,4,4,7  
9430 DATA7,7,1,3,3,1,7,7  
9440 DATA2,4,4,10,10,15,2,2  
9450 DATA7,4,4,7,1,5,5,7  
9460 DATA7,4,4,6,5,5,5,7  
9470 DATA7,1,1,2,2,4,4,4  
9480 DATA7,5,5,7,7,5,5,7  
9490 DATA7,5,5,7,1,1,1,7  
9505 DATA2,5,4,7,1,1,5,2  
9506 DATA2,5,5,4,4,5,5,2  
9507 DATA2,5,5,5,5,5,5,2  
9508 DATA4,6,5,4,4,4,4,4  
9509 DATA2,5,5,6,4,5,5,2  
9510 DATA4,7,5,5,6,4,4,4  
9512 DATA4,4,4,4,4,4,4,3  
9514 DATA0,1,3,5,5,5,3,1
```

```

9516 DATA0,5,5,5,3,1,1,6
9518 DATA2,5,5,6,4,5,5,2
9520 DATA4,6,5,4,4,4,4,4
9522 DATA2,1,0,0,1,1,14,6,9,0
9524 DATA2,1,0,0,8,8,7,6,9,0
9526 DATA2,1,0,2,15,15,14,14,10,5
9528 DATA2,1,0,4,15,15,7,7,5,10
9700 PMODE3,5:GET(152,0)-(199,7),L,G
9710 PMODE3,1:PUT(40,168)-(87,175),L,PSET
9720 NO=HS:XS=88:GOSUB9900
9730 PMODE3,5:GET(128,0)-(151,7),L,G
9740 PMODE3,1:PUT(128,168)-(151,175),L,PSET
9750 NO=LI:XS=152:GOSUB9900
9760 PMODE3,5:GET(80,0)-(127,7),L,G
9770 PMODE3,1:PUT(184,168)-(231,175),L,PSET
9780 NO=0:XS=232:GOSUB9900
9790 RETURN
9900 COLOR3,1:LINE(XS,0)-(XS+28,7),PSET,BF:N$
=STR$(NO):FOR NM=2 TO LEN(N$)
9910 NO=VAL(MID$(N$,NM,1)):GOSUB9950
9920 XS=XS+10:NEXT:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETURN

```

Xmas Eve

Xmas Eve is a race against time for Santa, who must rush to deliver presents before the inhabitants of the houses awake.

By manoeuvring Santa's sleigh left and right you can catch the presents as they are thrown down from above by the elves. Presents can then be dropped down the chimneys by pressing the M key. Each time a present is successfully delivered, the inhabitants of the house awake and switch on the lights, which causes the snow on the roof to melt at a rate proportional to the activity in the house. The more work Santa does the more he has to hurry, in order to complete his work without being seen.

```

1 REM****DRAGON VERSION****
2 REM *** XMAS EVE ***
3 REM** @ PAUL STANLEY **
4 REM*****
5 PCLEAR8:GOSUB9000:GOSUB8000
7 HS=0:DIMD$(28):DEFFNH(T)=8*(INT(RND(0)*28)+
2)
10 GOSUB9700:Y=80
15 SK=,98:S=0
20 X=216:B$=" "
22 FOR G=0 TO 28:D$(G)=" ":NEXT
25 G=16:H=FNH(T)
30 XS=73:NO=S:GOSUB9900
40 P=0
50 XS=231:NO=HS:GOSUB9900
60 A$=INKEY$:IFA$="" THENA$=B$
70 IFA$="X" THENGOSUB6000ELSE IFA$="Z" THENGOSUB7
000ELSE IFA$=" " THENGOSUB8000
80 B$=A$:IF P<>1 THEN G=G+8:GOSUB9000:IF G=80
THEN IF H>X AND H<X+23 THEN P=1
90 IF G=96 THEN IF PPOINT(H,104)=1 THEN GOTO
1000
100 IF G=96 THEN LINE(H,96)-(H+7,103),PSET,BF
:G=16:H=FNH(X)
110 IFP=1THENIFA$="M" THEN D=1:G=80: H=X+16*DR
:P=0:REMDR=DIRECTION
120 IFRND(0)>SK THEN Q=INT(RND(0)*7)+1:E=INT(
RND(0)*4):COLOR1,2:LINE(8*(Q*4-E+1),128)-(8*(

```

```

Q*4-E+1)+7,130),PSET,BF:D*(Q*4-E)="P":IF D*(Q
*4-3)+D*(Q*4-2)+D*(Q*4-1)+D*(Q*4)="PPPP" THEN
GOTO 2000
130 GOTO 60
600 REMsanta right
610 PUT(X,Y)-(X+31,Y+7),SR,PSET
620 DR=1:X=X+(16 AND X<216):RETURN
700 REMsanta left
710 PUT(X,Y)-(X+31,Y+7),SL,PSET
720 DR=0:X=X-(16 AND X>15):RETURN
800 IF DR=1 THEN PUT(X,80)-(X+31,87),SR,PSET:
RETURN
810 PUT(X,80)-(X+31,87),SL,PSET:RETURN
900 COLOR3,1:IF D=0 THEN LINE(H,G-8)-(H+7,G-1
),PSET,BF
910 PUT(H,G)-(H+7,G+7),PR,PSET:D=0:RETURN
1000 COLOR3,2:LINE(H,96)-(H+8,104),PSET,BF:CO
LOR3,2
1010 IF PPOINT(H,138)=2 THEN GOTO25
1015 S=S+1:PUT(H,136)-(H+15,151),L,NOT:PLAY"T
15001L8CDE"
1020 FOR F=32 TO 224 STEP32:IF PPOINT(F,140)=
2 THEN NEXT F:SK=SK-.02:PCLS3:GOSUB 9700:GOTO
20
1030 GOTO 25
2000 IF PPOINT(Q*32,140)<>2 THEN GOTO 6000
2010 GOTO 60
6000 PLAY"T12004L4":FOR F=80 TO 8 STEP-4:Y=F:
ON DR+1 GOSUB 700,600:X=X+16-32*DR:COLOR3,2:L
INE(X,F)-(X+31,Y+7),PSET,BF:PLAY STR$(12-INT(
F/8)):NEXT
6005 IF S>HS THEN HS=S
6007 LINE(X,8)-(X+31,15),PSET,BF:LINE(H,G)-(H
+7,G+7),PSET,BF
6010 PUT(8*(Q*4-1),144)-(8*(Q*4-1)+7,151),M,P
SET
6020 PLAY"T204L8EEL<E":GOSUB6080:PLAY"L>EEL<E
":GOSUB6080:PLAY"L>EGCDL2E":GOSUB6080:PLAY"L8
FFF":GOSUB6080:PLAY"FFEE":GOSUB6080:PLAY"EGGF
DL4.C":GOSUB6080
6050 PRINT@323,"press";S*;"any";S*;"key"+S*;"
to"+S*;"play"+S*;"again";
6052 PRINT@167,S*;"g";S*;"a";S*;"m";S*;"e";S*
;S*;"o";S*;"v";S*;"e";S*;"r";S*

```

```

6055 A$=INKEY$:FOR N=1 TO 100
6060 A$=INKEY$:IF A$="" THEN NEXT:PRINT@166,"
":FOR N=1 TO 100:A$=INKEY$:IFA$="" THEN NEXT
:GOTO 6052
6070 CLS:SCREEN1,0:GOTO10
6080 PUT(8*(Q*4-1),136)-(8*(Q*4-1)+16,151),L,
NOT:RETURN
8000 D$=STRING$(26,"-"):A$=STRING$(32,CHR$(12
8)):S$=CHR$(128):CLS0:PRINT@128," C H R I S
T M A S E V E":PRINT@200,CHR$(96);S$+S$+S$;
"paul";S$;"stanley";FORN=1TO5000:NEXT:CLS
8010 PRINT@64," IT IS APPROACHING MIDNIGHT O
N CHRISTMAS EVE AND SANTA IS LATE.YOU MUST PL
AY THE PART OF SANTA AND YOU MUST DELIVER PRE
SENTS WHICH ARE THROWN DOWN TO YOU BY YOUR
ELVES. HAVING CAUGHT A PRESENT (BY FLYING
DIRECTLY"
8020 PRINT"BELOW IT) YOU MUST MOVE OVER A CH
IMNEY AND DROP A PRESENT DOWN IT.":GOSUB8200:
PRINT@64," WHEN A PRESENT HAS BEEN DRO
PPED DOWN A CHIMNEY THE FAMILY IN THAT H
OUSE IMMEDIATELYSTART WORK ON OPENING UP THE
PRESENT AND THEY WILL";
8030 PRINT" TURN THE LIGHT ON. DROPPING AND
THER PRESENT DOWN A CHIMNEY OF A LIT HOUS
E WILL NOT COUNT."
8040 GOSUB8200:PRINT@64," BENEATH EACH ROOF Y
OU WILL SEE A PATCH OF SNOW WHICH MELTS AS T
IME ELAPSES. THIS MELTS AT A RATE WHICH IS
PROPORTIONAL TO THE ACTIVITY IN THE HOUSE."
:GOSUB8200
8050 PRINT@0," AS THE PRESENTS MUST BE PLACE
DDOWN THE CHIMNEYS BEFORE ANYONE SEES YOU, IF
ALL THE SNOW HAS MELTED UNDER A PARTICULAR
ROOF WITHOUT A PRESENT BEING DROPPED BEFORE
THIS OCCURS IT WILL INDICATE THAT THE I
NHABITANTS ARE AWAKE AND";
8060 PRINT" YOU WILL HAVE TO RETURN IMMEDIAT
ELY."
8070 PRINT@320,"Z";D$;"-LEFT";"X";D$;"RIGHT";
"SPACE BAR";LEFT$(D$,19);"STOP";"M";LEFT$(D$,
19);"DROP PRESENT";
8080 GOSUB8200:RETURN
8200 PRINT@448,A$;:PRINT@450,"press";S$;"any"

```

```

;S$;"key";S$;"to";S$;"to";S$;"continue";
8210 I$=INKEY$:IFI$=""THEN8210
8220 CLS:RETURN
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 38:IFCH>28THENREADC,B
9025 IFC=0THEN9090
9030 FORY=YC TO YC+7
9040 READ CD:D=8
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMSR(6):DIMSL(6):DIMPR(3):DIMM(1):DIML(
3,3):DIMN(1)
9120 GET(224,0)-(255,7),SL,G
9130 GET(0,8)-(7,15),M,G
9140 GET(8,8)-(39,15),SR,G
9150 GET(40,8)-(47,15),PR,G
9160 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA4,4,4,6,5,5,5,5
9501 DATA2,0,2,2,2,2,2,1
9502 DATA3,5,5,7,1,1,5,2
9503 DATA4,4,4,6,5,5,5,5
9504 DATA0,0,0,0,0,0,0,0
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA4,7,5,5,6,4,4,4

```



```

9511 DATA4,6,5,4,4,4,4,4
9512 DATA2,5,5,6,4,5,5,2
9513 DATA2,5,4,7,1,1,5,2
9514 DATA2,5,5,6,4,5,5,2
9515 DATA0,4,7,5,5,5,5,5
9516 DATA4,6,4,4,4,4,5,2
9517 DATA2,5,4,7,1,1,5,2
9518 DATA1,3,8,4,10,4,7,7,5,5
9519 DATA2,3,2,2,7,11,7,10,2,7,0,0,0,0
9520 DATA2,3,4,14,10,14,4,14,14,14
9530 DATA0,0,0,0,2,3,4,4,14,13,14,5,4,14
9540 DATA1,3,1,2,5,2,14,14,10,10
9550 DATA2,3,0,0,5,5,2,2,5,5
9560 LLIST9500-9550
9700 PMODE3,1:PCLS3:SCREEN1,0
9710 FOR X=16 TO 208 STEP32:COLOR1,2
9720 LINE(X+8,104)-(X+15,119),PSET,BF
9730 LINE(X,128)-(X+31,167),PSET,BF
9735 IF X>16 THEN COLOR3,2:LINE(X,129)-(X,167
),PSET
9740 COLOR2,2:LINE(X,127)-(X+16,112),PSET
9750 LINE-(X+32,127),PSET:LINE-(X,127),PSET:P
AINT(X+16,120),2
9760 FOR N=X TO X+31 STEP4
9770 PSET(N,128,2):PSET(N,129,2):NEXT N
9780 COLOR3,2:LINE(X+8,136)-(X+23,151),PSET,BF
9790 COLOR2,2:LINE(X+8,144)-(X+23,144),PSET
9795 NEXT
9800 PMODE3,5:GET(160,0)-(223,7),L,G
9810 PMODE3,1:PUT(2,2)-(65,9),L,PSET
9820 PMODE3,5:GET(80,0)-(159,7),L,G
9830 PMODE3,1:PUT(144,2)-(223,9),L,PSET
9840 RETURN
9900 IFNO<10 THEN 9950 ELSE N$=STR$(NO):N$=RI
GHT$(N$,2)
9910 NO=VAL(LEFT$(N$,1)):GOSUB9950
9920 XS=XS+10:NO=VAL(RIGHT$(N$,1)):GOSUB 9950
:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,2)-(XS+7,9),N,PSET:RETURN

```

Bricklayer

You are in control of a small aircraft which flies across the top of the screen. From the bottom of the screen, a large wall is being built up which will eventually fill the whole of the playing area. The object of the game is to drop men out of the aircraft, aiming to plummet them through gaps in the wall to the bottom of the screen. If a man should hit any part of the wall then a life will be lost. In order to create gaps for the men to drop through and to prevent the wall advancing too far up the screen, you also have the option of dropping bombs which blow sections of the wall away.

```

1 REM *** DRAGON VERSION ***
2 REM *** BRICKLAYER ***
5 PCLEAR8:GOSUB9000:GOSUB8000
7 HS=0:A$=INKEY$
10 GOSUB9700:PLAY"T5003L8"
15 NO=HS:XS=128:GOSUB9900
20 X=X+F
30 IF X=0 OR X=232 THEN SOUND200,1:F=-F
35 NO=S:XS=48:GOSUB9900:NO=LI:XS=238:GOSUB9900
40 PUT(X,8)-(X+23,15),S,PSET
52 A$=INKEY$:IF A$="Z" THEN IF T<>1 THEN T=1:
K=X+8:L=16
55 IF A$="M" AND X>24 AND X<216 THEN IF Z<>1
THENZ=1:Q=X+8:I=16
60 IF T=1 THEN COLOR1,1:LINE(K,L)-(K+7,L+7),P
SET,BF:L=L+8:PUT(K,L)-(K+7,L+7),B,PSET:PLAY"F
":IF PPOINT(K,L+8)<>5 THEN GOSUB140
65 IF Z=1 THEN COLOR1,1:LINE(Q,I)-(Q+7,I+7),P
SET,BF:I=I+8:PUT(Q,I)-(Q+7,I+7),M,PSET:PLAY"C
":IF PPOINT(Q,I+8)<>5 THEN GOSUB160
70 IFL=168 THEN COLOR1,1:LINE(K,L)-(K+7,L+7),
PSET,BF:T=0
75 IF I=168 THEN S=S+B*2/8:SOUND150,1:COLOR1,
1:LINE(Q,I)-(Q+7,I+7),PSET,BF:I=0:Z=0
110 A1=A1+C:A=8*(INT(A1/6))
115 COLOR(RND(3)+1),1:LINE(A,B)-(A+7,B+7),PSE
T,BF
120 IF A<24 OR A>216 THEN C=-C:B=B-8

```

18 Bricklayer

```

125 IF B=24 THEN GOTO 1000
130 GOTO 20
140 COLOR 1,1:LINE(K,L)-(K+7,L+7),PSET,BF
145 LINE(K-16,L+8)-(K+23,L+15),PSET,BF:T=0:IF
  L<160 THEN LINE(K-8,L+16)-(K+15,L+23).PSET,BF
150 RETURN
160 COLOR 1,1:PUT(Q,I)-(Q+7,I+7),M,PRESET:LI=L
  I-1:SOUND80,2:Z=0:LINE(Q,I)-(Q+7,I+7),PSET,BF
  :LINE(Q-8,I+8)-(Q+15,I+15),PSET,BF:IF LI=0 TH
  EN GOTO 1000
165 RETURN
1000 IF LI=0 THEN NO=0:XS=240:GOSUB9900
1010 FOR Z=20 TO 80 STEP 2
1020 SOUNDZ,1
1025 NEXT:A$=INKEY$
1030 PRINT@233,"ANOTHER GAME?"
1035 IF S>HS THEN HS=S
1040 A$=INKEY$:FOR Z=1 TO 350
1045 IF A$="" THEN NEXT:SCREEN1,1:FOR Z=1 TO
  300:A$=INKEY$:IF A$="" THEN NEXT:GOTO1030 ELS
  E IF A$="Y" THEN GOSUB 9700:CLS:FOR N=1 TO 12
  00:NEXT N:GOTO15
1060 STOP
8000 D$=STRING$(26,"-"):A$=STRING$(32,CHR$(12
  8)):S$=CHR$(128):CLS0:PRINT@128,"      B R I C
  K L A Y E R":FORN=1TO4200:NEXT:CLS
8010 PRINT"      THE OBJECT IS TO DROP      HU
  MANOIDS FROM THE SPACECRAFT ATTHE TOP OF THE
  SCREEN."
8020 PRINT"      AS THE GAME PROGRESSES A WALLWI
  LL BE BUILT UP, STARTING FROM THE BOTTOM. HO
  LES CAN BE MADE IN THIS BY RELEASING A BOMB."
8030 PRINT"      YOU HAVE 10 LIVES AND EACH TI
  ME A HUMANOID HITS THE WALL A LIFE WILL BE LO
  ST."
8040 PRINT:PRINT"Z";LEFT$(D$,20);"DROPS BOMBS"
8050 PRINT"M";LEFT$(D$,13);"RELEASES HUMANOID
  S";
8200 PRINT@448,A$;PRINT@450,"press";S$;"any"
  ;S$;"key";S$;"to";S$;"to";S$;"continue";
8210 I$=INKEY$:IFI$="" THEN8210

```

```

8220 CLS:RETURN
9000 PMODE3,5:PCLS:SCREEN1,1
9010 XC=0:YC=0:C=4:B=1
9020 FOR CH=1 TO 30:IFCH>25THENREADC,B
9025 IFC=0THEN9090
9030 FORY=YC TO YC+7
9040 READ CD:D=8
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMS(4):DIMB(1):DIMM(1):DIML(1,4):DIMN(1)
9120 GET(200,0)-(223,7),S,G
9130 GET(232,0)-(239,7),M,G
9140 GET(224,0)-(231,7),B,G
9160 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA4,4,4,6,5,5,5,5
9501 DATA2,0,2,2,2,2,2,1
9502 DATA0,2,2,0,0,2,2,0
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9511 DATA4,4,4,4,4,4,4,3
9512 DATA2,0,2,2,2,2,2,1
9513 DATA0,5,5,5,5,5,5,2
9514 DATA2,5,5,6,4,5,5,2
9515 DATA2,5,4,7,1,1,5,2

```

```
9516 DATA0,2,2,0,0,2,2,0
9517 DATA0,0,2,1,6,9,15,9,6,0,0,0,0,0
9518 DATA2,1,9,9,6,6,6,6,6,6
9519 DATA2,1,2,2,7,2,2,5,5,5
9700 PMODE3,1:PCLS:SCREEN1,1
9710 A=216:A1=216:B=160
9720 C=-4.8:T=0:L=8:Z=0:I=8
9730 X=0:F=8
9740 S=0:LI=10
9800 PMODE3,5:GET(104,0)-(151,7),L,G
9810 PMODE3,1:PUT(0,0)-(47,7),L,PSET
9820 PMODE3,5:GET(80,0)-(103,7),L,G
9830 PMODE3,1:PUT(104,0)-(127,7),L,PSET
9840 PMODE3,5:GET(152,0)-(199,7),L,G
9850 PMODE3,1:PUT(190,0)-(237,7),L,PSET
9860 RETURN
9900 IFNO<10 THEN COLOR1,1:LINE(XS,0)-(XS+17,
7),PSET,BF:GOTO9950 ELSE N#=STR$(NO):FOR NM=2
TO LEN(N#)
9910 NO=VAL(MID$(N#,NM,1)):GOSUB9950
9920 XS=XS+10:NEXT:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETURN
```

Postman

In Postman you have a limited time in which to collect a letter from a post box and deliver it to the house without being caught by the dog. The number of post boxes can be varied for each game and letters must be collected from the one which is currently flashing.

```

1 REM *** DRAGON VERSION ***
2 REM @ Postman-Paul Stanley
5 PCLEAR8:GOSUB9000:GOSUB8000:HS=0:DIMX(36):D
IMY(36)
10 GOSUB8500
20 GOSUB 7000
60 GOSUB 5000
70 SOUND100,1
80 FOR I=0 TO 1
85 IF LT<>1 THEN PUT(X(FL),Y(FL))-(X(FL)+7,Y(
FL)+15),PB,NOT
90 A$=INKEY$:IF A$="" THEN A$=B$
100 IF A$=CHR$(8) THEN IF X>8 AND PPOINT(X-8,
Y)<>4 AND PPOINT(X-8,Y+9)<>4 THEN X=X-8:DR=1
110 IF A$=CHR$(9) THEN IF X<232 AND PPOINT(X+
16,Y+1)<>4 AND PPOINT(X+16,Y+9)<>4 THEN X=X+8
:DR=2
120 IF A$=CHR$(94) THEN IF Y>8 AND PPOINT(X,Y
-8)<>4 AND PPOINT(X+8,Y-8)<>4 THEN Y=Y-8:DR=3
130 IF A$=CHR$(10) THEN IF Y<136 AND PPOINT(X
,Y+17)<>4 AND PPOINT(X+8,Y+17)<>4 THEN Y=Y+8:
DR=4
140 B$=A$:COLOR2,2:LINE(X1,Y1)-(X1+15,Y1+15),
PSET,BF:ON DR+4*I GOSUB 1000,1100,1200,1300,1
600,1700,1800,1300:X1=X:Y1=Y
200 IF LT=1 THEN IF X=HX OR X=HX-8 THEN IF Y=
HY THEN FOR F=1 TO10:SOUND100+F,1:NEXT F:SC=S
C+0:NO=SC:XS=60:GOSUB9900:O=FNO(X):GOSUB5000
250 IF LT<>1 THEN PUT(PX,PY)-(PX+7,PY+15),PB,
PSET:IF X=PX OR X+8=PX THEN IF Y=PY THEN LT=1
:SOUND200,1:SC=SC+10:NO=SC:XS=60:GOSUB9900:O=
FNO(X)
300 NEXT I
500 DY=DY+8*((1-(DY<Y))-(1-(DY>Y)))

```

```

510 IF DX<X THEN DX=DX+8:DG=1
530 IF DX>X THEN DX=DX-8:DG=2
580 IF PPOINT(DX,DY+3)=4 OR PPOINT(DX,DY+3)=1
   OR PPOINT(DX,DY+3)=3 THEN U=DX:DX=DX-8*((DX<
X)-(DX>X)):IF DX=U THEN DX=DX+8
800 PUT (HX, HY) - (HX+7, HY+7), H, PSET: COLOR2, 2: LI
NE(XD, YD) - (XD+7, YD+7), PSET, BF: ON DG GOSUB 140
0, 1500
810 YD=DY:XD=DX:T=T-1:NO=T:XS=216:GOSUB99000:I
F T=0 THEN GOTO 4000
850 IF DX=X OR DX=X+8 THEN IF DY=Y OR DY=Y+8
THEN GOSUB 6000
999 GOTO 80
1000 PUT (X, Y) - (X+15, Y+15), M1, PSET: RETURN
1100 PUT (X, Y) - (X+15, Y+15), M2, PSET: RETURN
1200 PUT (X, Y) - (X+7, Y+15), M3, PSET: RETURN
1300 PUT (X, Y) - (X+7, Y+15), M4, PSET: RETURN
1400 PUT (DX, DY) - (DX+7, DY+7), D1, PSET: RETURN
1500 PUT (DX, DY) - (DX+7, DY+7), D2, PSET: RETURN
1600 PUT (X, Y) - (X+15, Y+15), M5, PSET: RETURN
1700 PUT (X, Y) - (X+15, Y+15), M6, PSET: RETURN
1800 PUT (X, Y) - (X+7, Y+15), M7, PSET: RETURN
4000 FOR F=1 TO 40: SOUND100+F, 1: NEXT F
4010 PRINT: PRINT "YOU HAVE RUN OUT OF TIME."
4015 PRINT, , "YOU SCORED "; SC; " POINTS."
4020 IF SC>HS THEN HS=SC: PRINT, , "WELL DONE, T
HAT'S A NEW HIGH SCORE!! PLEASE ENTER YOU
R NAME.": INPUTM$: GOTO 4035
4030 PRINT, , "THE HIGH SCORE IS "; HS; " POINTS"
, " BY POSTMAN "; M$
4035 FOR F=1 TO 150: NEXT F
4040 PRINT, , "PRESS ANY KEY TO PLAY AGAIN...."
:A$=INKEY$
4050 A$=INKEY$: IF A$="" THEN 4050
4060 CLS: GOTO 10
5000 PUT (PX, PY) - (PX+7, PY+15), PB, PSET
5003 FL=RND(LB)
5005 LT=0
5010 PUT (X(FL), Y(FL)) - (X(FL)+7, Y(FL)+15), PB, P
SET
5020 PY=Y(FL): PX=X(FL)
5030 HX=8*(INT(RND(0)*14)*2+1): HY=8*(INT(RND(
0)*9)*2+1)
5040 IF PPOINT(HX, HY+3)=4 THEN GOTO 5030

```

```

5050 PUT (HX, HY) - (HX+7, HY+7), H, PSET
5100 RETURN
6000 FOR F=1 TO 120 STEP 10: SOUND100+F, 1: GOSU
B1000
6010 SOUND100+F, 1: GOSUB1100
6020 SOUND100+F, 1: GOSUB1200
6030 SOUND100+F, 1: GOSUB1300
6040 NEXT F
6050 COLOR2, 2: LINE (X, Y) - (X+15, Y+15), PSET, BF: L
INE (HX, HY) - (HX+7, HY+7), PSET, BF
6060 T=T-50: IF T<=0 THEN GOTO 4000
6070 LINE (216, 168) - (243, 175), PSET, BF
6080 Y=136: X=224: Y1=Y: X1=X
6090 DY=8: DX=8: YD=DY: XD=DX
6100 GOTO 60
7000 PMODE3, 1: PCLS2: SCREEN1, 0: FOR F=0 TO 152
STEP8: PUT (0, F) - (7, F+7), R, PSET: PUT (248, F) - (255
, F+7), R, PSET: NEXT F
7010 FOR F=8 TO 240 STEP 8
7020 PUT (F, 0) - (F+7, 7), R, PSET
7030 PUT (F, 152) - (F+7, 159), R, PSET
7040 NEXT F
7100 FOR F=1 TO LB
7110 Y=8*(INT(RND(0))*4)+3: X=8*(INT(RND(0))*
9)+3+3)
7120 IF PPOINT(X, Y+1)=4 OR PPOINT(X, Y+9)=4 TH
EN GOTO 7110
7125 Y(F)=Y: X(F)=X
7130 PUT (X, Y) - (X+7, Y+15), PB, PSET
7140 NEXT F
7800 Y=136: X=224: Y1=Y: X1=X
7840 SC=0: T=300
7850 PMODE3, 5: GET (80, 0) - (127, 7), L, G
7860 PMODE3, 1: PUT (8, 168) - (55, 175), L, PSET
7870 PMODE3, 5: GET (128, 0) - (167, 7), L, G
7880 PMODE3, 1: PUT (176, 168) - (215, 175), L, PSET
7885 NO=SC: XS=60: GOSUB9900: NO=T: XS=216: GOSUB9
900
7890 LT=0: PY=Y(LB): PX=X(LB)
7900 DY=8: DX=8: DG=1
7910 XD=X: YD=Y
7950 DEFFNO(X)=INT((SQR(ABS(HY-PY)^2+ABS(HX-P
X)^2))/64)
7999 RETURN

```



```

8000 S$=CHR$(128):PRINT"          p";S$;"o";S$
;"s";S$;"t";S$;"m";S$;"a";S$;"n"
8010 PRINT:PRINT"          @ PAUL STANLEY"
8020 PRINT:PRINT"FIRST COLLECT A LETTER FROM
THE FLASHING POST-BOX. THEN DELIVERIT TO THE
LITTLE BLUE HOUSE."
8030 PRINT:PRINT"YOU HAVE LIMITED TIME, AND I
F YOU ARE ATTACKED BY THE DOG, YOUWILL LOSE
TIME."
8040 PRINT:PRINT"MOVE WITH THE ARROW KEYS.":P
RINT:PRINT"PRESS ANY KEY TO START.....":A$=IN
KEY$
8050 A$=INKEY$:IF A$="" THEN 8050
8060 CLS:RETURN
8500 PRINT@416,"HOW MANY POST BOXES WOULD YOU
LIKE THERE TO BE? (ANY NUMBER BETWEEN 1
AND 36)"
8510 INPUT LB
8520 IF LB<1 OR LB>36 THEN PRINT"STOP MESSING
ABOUT!":GOTO8500
8530 CLS:RETURN
9000 PMODE3,5:PCLS2:SCREEN1,0
9010 XC=0:YC=0:C=4:B=2
9020 FOR CH=1 TO 44:IFCH>21THENREADC,B
9025 IFC=0THEN9090
9030 FORY=YC TO YC+7
9040 READ CD:D=8
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMH(1):DIMPB(3):DIMM1(7):DIML(1,4):DIMN
(1):DIMM2(7):DIMM3(3):DIMM4(3):DIMD1(1):DIMD2
(1):DIMM5(7):DIMM6(7):DIMM7(3):DIMR(3)
9120 GET(168,0)-(175,7),M1,G
9125 PUT(0,20)-(7,27),M1,PSET
9130 GET(176,0)-(183,7),M1,G
9135 PUT(8,20)-(15,27),M1,PSET
9140 GET(208,0)-(215,7),M1,G
9145 PUT(0,28)-(7,35),M1,PSET
9150 GET(216,0)-(223,7),M1,G

```

9155 PUT (8,28) - (15,35), M1, PSET
9157 GET (0,20) - (15,35), M2, G
9160 GET (164,0) - (191,7), M1, G
9165 PUT (16,20) - (23,27), M1, PSET
9170 GET (192,0) - (199,7), M1, G
9175 PUT (24,20) - (31,27), M1, PSET
9180 GET (224,0) - (231,7), M1, G
9190 PUT (16,28) - (23,35), M1, PSET
9195 GET (232,0) - (239,7), M1, G
9200 PUT (24,28) - (31,35), M1, PSET
9205 GET (16,20) - (31,35), M1, G
9210 GET (200,0) - (207,7), M3, G
9215 PUT (32,20) - (39,27), M3, PSET
9220 GET (240,0) - (247,7), M3, G
9225 PUT (32,28) - (39,35), M3, PSET
9227 GET (32,20) - (39,35), M3, G
9230 GET (32,8) - (39,15), M4, G
9235 PUT (40,20) - (47,27), M4, PSET
9240 GET (40,8) - (47,15), M4, G
9245 PUT (40,28) - (47,35), M4, PSET
9247 GET (40,20) - (47,35), M4, G
9250 GET (248,0) - (255,7), M5, G
9255 PUT (0,28) - (7,35), M5, PSET
9260 GET (0,8) - (7,15), M5, G
9265 PUT (8,28) - (15,35), M5, PSET
9267 GET (0,20) - (15,35), M6, G
9270 GET (8,8) - (15,15), M5, G
9275 PUT (16,28) - (23,35), M5, PSET
9280 GET (16,8) - (23,15), M5, G
9285 PUT (24,28) - (31,35), M5, PSET
9287 GET (16,20) - (31,35), M5, G
9290 GET (24,8) - (31,15), M7, G
9295 PUT (32,28) - (39,35), M7, PSET
9297 GET (32,20) - (39,35), M7, G
9300 GET (48,8) - (55,15), D1, G
9305 GET (56,8) - (63,15), D2, G
9310 GET (88,8) - (95,15), PB, G
9315 PUT (80,16) - (87,23), PB, PSET
9320 GET (80,8) - (87,23), PB, G
9325 GET (64,8) - (71,15), H, G
9330 GET (72,6) - (79,15), R, G
9340 RETURN
9400 DATA 6, 9, 11, 11, 13, 13, 9, 6
9410 DATA 2, 6, 2, 2, 2, 2, 2, 7

9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9520 DATA4,6,4,4,4,4,5,2
9521 DATA2,0,2,2,2,2,2,1
9522 DATA9,15,15,9,9,9,9,9
9523 DATA2,5,5,6,4,5,5,2
9524 DATA0,2,2,0,0,2,2,0
9530 DATA3,2,6,7,12,13,15,14,6,15
9531 DATA3,2,0,0,0,14,14,0,0,8
9532 DATA3,2,0,0,0,7,7,0,0,1
9533 DATA3,2,6,14,3,11,15,7,6,15
9534 DATA3,2,6,6,6,6,6,6,15,15
9535 DATA3,2,6,6,6,9,9,9,9,5
9536 DATA3,2,4,0,0,0,0,0,0,8
9537 DATA3,2,2,0,0,0,0,0,0,1
9538 DATA3,2,6,6,6,9,9,9,9,10
9539 DATA3,2,15,15,6,15,9,9,8,8
9540 DATA3,2,6,6,6,5,4,4,4,6
9541 DATA3,2,0,0,0,0,8,8,12,0
9542 DATA3,2,0,0,0,0,1,1,3,0
9543 DATA3,2,6,6,6,10,2,2,2,6
9544 DATA3,2,15,15,6,15,9,9,1,1
9545 DATA3,2,6,13,11,15,6,15,6,6
9546 DATA3,2,6,6,6,0,0,0,0,0
9547 DATA3,2,2,3,10,15,14,5,5,9
9548 DATA3,2,4,12,5,15,7,10,10,9
9549 DATA3,2,6,6,15,15,9,9,15,15
9550 DATA1,2,6,9,6,9,9,6,9,6
9551 DATA4,2,6,15,9,15,15,15,15,15
9552 DATA4,2,9,9,9,9,15,15,15,15
9700 PMODE3,1:PCLS:SCREEN1,1
9710 A=216:A1=216:B=160

```
9720 C=-4.8:T=0:L=8:Z=0:I=0
9730 X=0:F=8
9740 S=0:LI=10
9800 PMODE3,5:GET(104,0)-(151,7),L,G
9810 PMODE3,1:PUT(0,0)-(47,7),L,PSET
9820 PMODE3,5:GET(80,0)-(103,7),L,G
9830 PMODE3,1:PUT(104,0)-(127,7),L,PSET
9840 PMODE3,5:GET(152,0)-(199,7),L,G
9850 PMODE3,1:PUT(190,0)-(237,7),L,PSET
9860 RETURN
9900 COLOR2,1:LINE(XS,168)-(XS+28,175),PSET,B
F:N$=STR$(NO):FOR NM=2 TO LEN(N$)
9910 NO=VAL(MID$(N$,NM,1)):GOSUB9950
9920 XS=XS+10:NEXT:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,168)-(XS+7,175),N,PSET:R
ETURN
```

Hangman

In this rather sophisticated game of Hangman the computer invites you to guess words from a range of topics, including animals, countries of the world, composers and artists, chemical elements, christian names and general verbs.

The strings from which the words are chosen by the computer are stored in A\$ and you may wish to modify the program to include your own words and topics or to combine all the existing topics so that the selected word can be taken randomly from any one of them. Note that some of the topics are divided up into two distinct groups of words of different lengths and random number routines are used in the program to determine which group the word is to be chosen from.

```

1 REM *** DRAGON VERSION ***
2 REM @ Paul Stanley
3 REM *** HANGMAN ***
5 FCLEARB:GOSUB9000
7 GOSUB 7000
10 GOTO 1000
100 IF RND(0)>.5 THEN GOTO 125
110 A$="PIGEON DONKEY BUDGIE MAGGOT JAGUAR SPIDER
EETLE WEEVIL EARWIG SHRIMP SALMON PLAICE MINNOW BADG
ER CATTLE KITTEN LOCUST MAGPIE RABBIT TURKEY TURTLE
CANARY GERBIL MONKEY CURLEW"
120 I=RND(25)*6-5:B#=MID$(A$,I,6):RETURN
125 A$="SNAIL ROACH HIPPO LAMACHIMP CAMEL HORSE
TIGER HOUND SNAKE ROBIN HERON RAVEN STORK TROUT WHALE
HYEN A PANDA SKUNK TAPIR ZEBR A MOUSE SHREW EAGLE SWIFT
PEACOCK PRAWN OTTER GOOSE KOALA SHEEP"
130 I=RND(31)*5-4:B#=MID$(A$,I,5):RETURN
150 IF RND(0)>.5 THEN GOTO 175
160 A$="ALBANIA AUSTRIA BELGIUM DENMARK FINLAND
GERMANY HUNGARY ICELAND IRELAND ROMANIA BRAHRAIN
LEBANON ALGERIA LIBERIA NIGERIA SENEGAL TUNISIA
BERMUDA JAMAICA BOLIVIA URUGUAY"
170 I=RND(21)*7-6:B#=MID$(A$,I,7):RETURN
175 A$="TURKEY UGANDA SWEDEN POLAND NORWAY MEXICO
KUWAIT ISRAEL GREECE ZAMBIA FRANCE CYPRUS CANADA
BRAZIL TAIWAN PANAMA MALAWI JORDAN AZORES ANGOLA"

```

```

185 I=RND(20)*6-5:B#=MID$(A$,I,6):RETURN
200 A$="PURCELLROSSINIBELLINIBERLIOZBORODINPU
CCINIDEBUSYSTRAUSSBRITTENHQLBEINMILLAISDAUMI
ERCEZANNEGAUGUINMATISSEPICASSO"
210 I=RND(16)*7-6:B#=MID$(A$,I,7):RETURN
250 IF RND(0)>.5 THEN 275
260 A$="BARIUMCARBONCERIUMCOBALTCOPPERCURIUME
REIUMHELIUMINDIUMIODINENICKELOSMIUMQXYGENRADI
UMSILVERSDIUM"
265 I=RND(16)*6-5:B#=MID$(A$,I,6):RETURN
275 A$="ARSENICBISMUTHBROMINECADMIUMCAESIUMCA
LCIUMFERMIUMGALLIUMHAFNIUMHOLMIUMIRIDIUMKRYPT
ONLITHIUMMERCURYRHENIUMRHODIUMSILICONULPHERT
ERBIUMTHORIUMTHULIUMYTTRIUM"
280 I=RND(22)*7-6:B#=MID$(A$,I,7):RETURN
300 A$="JAMESDAVIDEDGARHENRYCAROLHELENBRIANSA
LLYSARAHSUSANPETERSIMONMANDYKEVINSCOTTNIGELMI
LESROEINVENUSROMECECILDYLANPERCYLEIGHHEMILYPA
BLOFRANKCLIVEDIANANICKYTRACYBARRYGEOFFTERRY"
320 I=RND(34)*5-4:B#=MID$(A$,I,5):RETURN
350 IF RND(0)>.5 THEN 375
360 A$="CARRYCATCHMARRYLAUGHTWISTBRINGFETCHWR
ITECLIMBWORRYGLIDEAWASHSHOOTDODGEFUNCHSMACKSC
ALETHROWLOATHDRIVEPRESSTASTESPEAKHURRYSORETR
AILFORCEPROVETRACEPAINT"
370 I=RND(30)*5-4:B#=MID$(A$,I,5):RETURN
375 A$="COLOURTHRILLUNLOCKAFFECTABDUCTFOLLOWA
TTACKDEFENDDIFFERSELECTOUTPUTDEFINCHANGEMODI
FYREMAINACCEPTSPRINGASSUREVANISHFINISHTRAVEL"
390 I=RND(21)*6-5:B#=MID$(A$,I,6):RETURN
1000 PRINT@9,"H A N G M A N"
1005 PRINT,"WHICH SUBJECT DO YOU WANT?"
1010 PRINT,,,"1.....ANIMALS",,"2.....COUNTRI
ES OF THE WORLD",,"3.....COMPOSERS AND ARTISTS"
1020 PRINT"4.....CHEMICAL ELEMENTS",,"5.....CH
RISTIAN NAMES",,"6.....GENERAL VERBS"
1050 PRINT,"PRESS THE APPROPRIATE KEY."
1060 I$=INKEY$:IF I$="" THEN1060 ELSE IF ASC(I
$)<49 OR ASC(I$)>54 THEN 1060
1070 ON VAL(I$) GOSUB 100,150,200,250,300,350
1080 CLS
1090 PRINT@15,"H A N G M A N"
1100 S=0:C=0:L=LEN(B#):Y=13:X=15

```

30 Hangman

```

1105 PRINT@367,"YOUR GUESSES:"
1110 FOR F=1 TO L:PRINT@109+F*2,"-":NEXT F
1120 PRINT@239,"GUESS A LETTER"
1130 I$=INKEY$:IF I$="" THEN 1130
1140 IF ASC(I$)<65 OR ASC(I$)>90 THEN 1130
2000 S1=S:FOR F=1 TO L
2010 IF I$=MID$(B$,F,1) THEN 2100
2020 NEXT F:IF S=S1 THEN SCREEN1,0:SOUND50,1:
ON C+1 GOSUB 5000,5010,5020,5030,5040,5050,50
60,5070,5080,5090,5100:C=C+1
2030 IF S=S1 THEN FOR Z=1 TO 1000:NEXT Z:PRINT
@Y*32+X,I$;X=X+2:IF X=33 THEN X=15:Y=Y+2
2040 GOTO1120
2100 PRINT@109+F*2,I$;
2110 SOUND200,1:S=S+1:IF S=L THEN 3000
2115 NEXT F
2120 GOTO 1120
3000 PRINT@448,"WELL DONE! YOU CORRECTLY GOT
";B$;" IN ";C+S;" GUESSES"
3010 FOR F=1 TO 4000:NEXT F:CLS:PCLS2:GOTO1000
5000 LINE(8,120)-(119,127),PSET,BF:RETURN
5010 LINE(16,24)-(23,119),PSET,BF:RETURN
5020 LINE(16,20)-(79,23),PSET,BF:RETURN
5030 LINE(24,40)-(40,24),PSET
5033 LINE(24,47)-(47,24),PSET
5035 PAINT(26,41),4,4:RETURN
5040 LINE(72,24)-(75,35),PSET,BF:RETURN
5050 CIRCLE(74,43),8:CIRCLE(74,43),6,4,1,.07,
.43
5052 PSET(72,40,4):PSET(76,40,4):PSET(74,43,4
):PSET(74,44,4):PSET(74,45,4):RETURN
5060 LINE(72,50)-(75,55),PSET,BF
5062 LINE(62,56)-(85,79),PSET,BF
5065 COLOR1,1:LINE(58,64)-(89,71),PSET,BF
5067 LINE(66,80)-(81,83),PSET,BF:COLOR4,1:RET
URN
5070 LINE(62,55)-(46,40),PSET
5072 CIRCLE(46,40),4:PAINT(46,41),4,4
5075 RETURN
5080 LINE(86,55)-(101,40),PSET
5085 CIRCLE(101,40),4:PAINT(101,41),4,4
5087 RETURN
5090 COLOR1,1:LINE(66,81)-(42,113),PSET

```

```

5092 LINE(64,81)-(40,113),PSET:COLOR4,1
5095 LINE(34,111)-(48,113),PSET,BF:RETURN
5100 GOSUB6000
5105 FORZ=1TO2000:NEXTZ
5110 PRINT@448,"BAD LUCK! YOU'VE BEEN HANGED.
THE ANSWER WAS ";B$
5120 GOTO3010
6000 COLOR1,1:LINE(84,81)-(107,113),PSET
6005 LINE(82,81)-(105,113),PSET
6010 COLOR4,1:LINE(97,111)-(111,113),PSET,BF:
RETURN
7000 PMODE3,1:PCLS2:SCREEN1,0:FOR L=1 TO 11
7010 ON L GOSUB 5000,5010,5020,5030,5040,5050
,5060,5070,5080,5090,6000
7020 NEXT L
7030 PUT(4,136)-(251,175),T,PSET:SOUND90,1
7040 FORF=100 TO 210 STEP 10
7050 PUT(4,136)-(251,175),T,NOT
7055 SOUND,F,1
7060 NEXT F
7070 FOR F=1 TO 1000:NEXT F:CLS:PCLS2:RETURN
9000 PMODE3,5:PCLS2:SCREEN1,0
9010 XC=0:YC=0:C=4:B=2
9020 FOR CH=1 TO 31
9030 FORY=YC TO YC+39
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+40
9100 NEXT CH
9110 DIMT(16,16)
9120 GET(0,0)-(247,39),T,G
9130 RETURN
9500 DATA15,15,15,15,15,15,15,15,15,15,15,15,
15,15,15,15,15,15,15,15,15,15,15,15,15,15,
15,15,15,15,15,15,15,15,15,15,15,15,15,15
9505 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,15,1
5,15,15,15,15,15,15,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0
9510 DATA15,15,15,15,15,15,15,15,15,15,15,15,
15,15,15,15,15,15,15,15,15,15,15,15,15,15,

```


15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
 9515 DATA99,0,0,0,0,3,3,3,3,15,15,15,15,15,15,
 ,15,15,15,15,15,15,15,15,15,15,15,15,15,15,
 ,15,15,15,15,15,15,15,15,15,15,15,15,15,15
 9517 DATA15,15,15,15,15,15,15,15,0,0,0,0,0,0,
 0,0,15,15,15,15,15,15,15,15,0,0,0,0,0,0,0,0,
 ,0,0,0,0,0,0,0
 9520 DATA0,0,0,0,12,12,12,12,15,15,15,15,15,1,
 5,15,15,15,15,15,15,15,15,15,15,15,15,15,1,
 5,15,15,15,15,15,15,15,15,15,15,15,15,15
 9525 DATA99,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15
 9530 DATA0,0,0,0,12,12,12,12,12,12,12,12,3,3,
 3,3,3,3,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
 ,0,0,0
 9535 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
 0,0,12,12,12,12,12,12,12,12,12,3,3,3,3,3,3,3,
 ,0,0,0
 9540 DATA15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15
 9545 DATA99,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15
 9550 DATA15,15,15,15,15,15,15,15,0,0,0,0,0,0,
 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,15,15,15,
 15,15,15,15,15
 9555 DATA15,15,15,15,15,15,15,15,0,0,0,0,0,0,
 0,0,0,0,0,0,0,0,0,0,15,15,15,15,15,15,15,1,
 5,15,15,15,15,15,15,15
 9560 DATA99,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15
 9565 DATA12,12,12,12,15,15,15,15,3,3,3,3,3,3,
 3,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
 ,0,0,0
 9570 DATA0,0,0,0,0,0,0,0,0,0,0,0,15,15,15,15,
 15,15,15,15,15,15,15,15,0,0,0,0,0,0,0,0,0,0,
 ,0,0,0,0,0
 9575 DATA3,3,3,3,15,15,15,15,12,12,12,12,12,1,
 2,12,12,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
 ,0,0,0,0,0
 9580 DATA15,15,15,15,15,15,15,15,15,15,15,15,
 15,15,15,15,15,15,15,15,15,15,15,15,15,15,

15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
 9585 DATA99, 0, 0, 0, 0, 3, 3, 3, 3, 15, 15, 15, 15, 15, 15,
 , 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 , 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
 9590 DATA15, 15, 15, 15, 15, 15, 15, 15, 15, 0, 0, 0, 0, 0, 0,
 0, 0, 15, 15, 15, 15, 15, 15, 15, 15, 15, 0, 0, 0, 0, 0, 0, 0, 0,
 , 0, 0, 0, 0, 0, 0, 0
 9595 DATA0, 0, 0, 0, 12, 12, 12, 12, 15, 15, 15, 15, 15, 15,
 5, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 5, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
 9600 DATA99, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
 9605 DATA0, 0, 0, 0, 12, 12, 12, 12, 12, 12, 12, 12, 3, 3,
 3, 3, 3, 3, 3, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
 , 0, 0, 0
 9610 DATA0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
 0, 0, 12, 12, 12, 12, 12, 12, 12, 12, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,
 , 0, 0, 0
 9615 DATA15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15

Dam Eaters

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 *** DRAGON VERSION ***
2 REM *** DAMEATERS ***
5 PCLEAR8:HS=0:CLS:PCLS
10 GOSUB9000
15 GOSUB 7000
17 FL=1:GOSUB 9800
20 GOSUB 8000
30 FOR I=1 TO N
40 X(I)=X(I)-8:IF RND(0)>.8 THEN GOSUB1000
50 PUT(X(I),Y(I))-(X(I)+23,Y(I)+7),DE,PSET
60 IF PPOINT(X(I)-8,Y(I))=2 OR PPOINT(X(I)-8,
Y(I))=4 THEN GOSUB 2000
80 NEXT I
81 * REM *
90 Q$=INKEY$
100 IF B=0 THEN IF Q$(">") THEN IFASC(Q$)>48 AND
ASC(Q$)<52 THEN G=(VAL(Q$)*6+2)*8:S1=VAL(Q
$):F=0:B=1:SOUND200,1
110 IF B=0 THEN GOTO 30
115 FOR I=1 TO 2
140 COLOR1,1:LINE(G,F)-(G+7,F+7),PSET,BF
150 F=F+8:IF F=168 THEN GOTO 5000
160 IF PPOINT(G+3,F)=4 OR PPOINT(G+3,F+2)=4 T
HEN GOTO 3000
170 COLOR4,1:LINE(G+3,F)-(G+3,F+7),PSET
190 NEXT I
200 IF N<3 THEN C=C+1:IF C=130 THEN N=N+1:C=0
:PRINT@230,"ENEMY REINFORCEMENT":FOR I=100 TO
130:SOUNDI,1:NEXT I:SCREEN1,0:CLS
999 GOTO 30
1000 COLOR1,1:LINE(X(I),Y(I))-(X(I)+23,Y(I)+7

```

```

),PSET,BF
1005 Y(I)=Y(I)+8-(16 AND RND(0)>.5)
1010 IF Y(I)=0 THEN Y(I)=160
1020 IF Y(I)>160 THEN Y(I)=8
1030 RETURN
2000 PUT(X(I)-8,Y(I))-(X(I)+7,Y(I)+7),DD,PSET
:SOUND100,1:SOUND150,1
2010 COLOR1,1:LINE(X(I)-8,Y(I))-(X(I)+15,Y(I)
+7),PSET,BF
2020 IF PPOINT(X(I)-16,Y(I))=3 THEN GOTO 4000
2030 Y(I)=RND(20)*8:X(I)=232
2040 RETURN
3000 PUT(G-8,F)-(G+15,F+7),EE,PSET:SOUND130,1
:SOUND140,1:SOUND150,1:COLOR1,1:LINE(G-8,F)-(
G+15,F+7),PSET,BF
3005 SC=INT(SC+S1*2+F/24):NO=SC:XS=228:GOSUB9
900
3010 B=0
3015 FOR I=1 TO N
3020 IF F=Y(I) THEN IF G=X(I) OR G=X(I)+8 THEN
GOTO 3500
3030 NEXT I
3500 Y(I)=8*(RND(21)):X(I)=232
3510 GOTO 30
4000 COLOR3,1:FOR O=16 TO 40 STEP 8:LINE(O,Y(
I))-(O+7,Y(I)+7),PSET,BF:SOUND50,1:NEXT O
4010 FOR O=Y(I) TO 160 STEP 8:LINE(40,O)-(47,
O+7),PSET,BF:SOUND50,1:NEXT O
4020 LINE(0,8)-(255,8),PSET
4030 PAINT(60,167),3,3
4040 FOR O=1 TO 1000:NEXT O
4050 PRINT@102,"YOU SCORED ";SC;"POINTS."
4060 IF SC>HS THEN HS=SC:PRINT@166,"WELL DONE
! THAT'S A NEW":PRINT@198,"HIGH SCORE!!"
4070 PRINT@262,"THE HIGH SCORE IS";HS
4080 PRINT@326,"PRESS A KEY TO PLAY AGAIN":A$
=INKEY$
4090 A$=INKEY$:IF A$="" THEN 4090
4100 CLS:GOTO17
5000 PUT(G,160)-(G+7,167),EX,PSET
5010 SOUND100,1:B=0
5020 COLOR1,1:LINE(G,160)-(G+7,167),PSET,BF:G
OTO 30
7000 PMODE3,5:GET(80,0)-(223,7),L,G

```

36 *Dam Eaters*

```

7010 PMODE3,1:PUT(48,0)-(191,7),L,PSET
7020 FOR F=232 TO 32 STEP-8
7025 PUT(F,16)-(F+23,23),DE,PSET
7027 SOUND250,1:NEXT F
7030 PUT(24,16)-(31,23),DD,PSET:SOUND200,1
7040 CLS:PRINT@6,"D A M E A T E R S"
7045 PRINT@64,"CAN YOU PREVENT THE DAM FROM
      BEING BROKEN BY THE DAM EATERS?"
7050 PRINT,,"RELEASE BOMBS FROM ANY OF THE
      3 CANNONS ABOVE THE DAM WITH THEKEYS 1-3."
7060 PRINT,,"THERE ARE SEVERAL MORE FEATURES
      WHICH YOU WILL HAVE TO WAIT TO FIND OUT!"
7070 PRINT,,"PRESS ANY KEY TO START":A$=INKEY$
7080 A$=INKEY$:IF A$="" THEN 7080
7090 CLS:RETURN
8000 SC=0:F=0:N=1:C=0
8010 FOR I=1 TO 3
8020 Y(I)=8*(RND(20)):X(I)=232
8030 NEXT I:RETURN
9000 PMODE3,5:PCLS:SCREEN1,0
9010 XC=0:YC=0:C=2:B=1
9020 FOR CH=1 TO 43:IF CH>28 THEN READ C,B
9025 IFC=0THEN9090
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
      :CD=CD-D
9080 D=D/2:NEXT X,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMDE(4):DIMDD(3):DIMEE(4):DIMC(1):DIML(
      5,6):DIMN(1):DIMD(1):DIMEX(1)
9120 GET(224,0)-(247,7),DE,G
9130 GET(248,0)-(255,7),C,G
9140 GET(48,8)-(55,15),D,G
9150 GET(56,8)-(79,15),EE,G
9160 GET(64,8)-(79,15),DD,G
9170 GET(80,8)-(87,15),EX,G
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7

```

```

9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9491 DATA1,1,1,3,5,5,5,3
9492 DATA99,0,1,3,5,5,5,3,1
9493 DATA99,0,5,7,5,5,5,5,5
9494 DATA99,99,2,5,5,6,4,5,5,2
9495 DATA99,0,1,3,5,5,5,3,1
9496 DATA99,4,6,4,4,4,4,5,2
9497 DATA99,2,5,5,6,4,5,5,2
9498 DATA99,4,6,5,4,4,4,4,4
9499 DATA99,2,5,4,7,1,1,5,2
9500 DATA4,1,0,15,15,10,5,15,15,0
9501 DATA4,1,7,13,15,15,7,15,15,0
9502 DATA4,1,99,4,1,15,15,7,7,3,3,1,1
9505 DATA2,1,2,5,4,7,1,1,5,2
9506 DATA2,1,2,5,5,4,4,5,5,2
9507 DATA2,1,2,5,5,5,5,5,5,2
9508 DATA2,1,4,6,5,4,4,4,4,4
9509 DATA2,1,2,5,5,6,4,5,5,2
9510 DATA2,1,0,2,2,0,0,2,2,0
9515 DATA4,2,10,10,5,5,10,10,5,5
9520 DATA4,2,5,10,5,10,5,10,5,10
9525 DATA4,2,5,10,5,10,5,10,5,10
9530 DATA4,2,10,5,6,13,5,10,4,11
9535 DATA2,1,9,9,6,9,6,9,9,6
9580 PMODE3,1:PCLS:SCREEN1,0:FOR F=0 TO 160 S
TEP 8:FOR Z=16 TO 32 STEP 8
9610 PUT(Z,F)-(Z+7,F+7),D,PSET:NEXT Z,F
9620 COLOR3,1:LINE(0,0)-(15,167),PSET,BF
9630 LINE(0,168)-(255,175),PSET,BF
9640 FOR F=56 TO 152 STEP 48
9650 PUT(F,0)-(F+7,7),C,PSET:NEXT F
9655 IF FL=0 THEN 9890
9660 PMODE3,5:GET(0,8)-(47,15),L,G
9670 PMODE3,1:PUT(179,0)-(226,7),L,PSET
9680 NO=0:XS=228:GOSUB9900
9690 RETURN
9700 COLOR1,1:LINE(228,0)-(255,7),PSET,BF:N#=
STR$(NO):FOR Z=2 TO LEN(N#)

```

38 *Dam Eaters*

```
9910 NO=VAL(MID$(N$,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETURN
```

Tug-of-War

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 ***DRAGON VERSION ***
100 ' TUG OF WAR
105 ' BY PAUL STANLEY
110 ' REWRITTEN FOR THE DRAGON 32
115 ' BY E.A.JACKSON
120 DIM C(62),L(16),P(16),Q(16),R(16),S(10),T
(10),U(24),V(24),W(16),X(100),Y(200)
125 RESTORE:CLS:PMODE3,1:PCLS
130 PRINT@10," TUG OF WAR ";
135 GOSUB 495:GOSUB 385
140 PRINT @484," PRESS SPACE BAR TO PLAY";
145 A$=INKEY$:IF A$(>CHR$(32))THEN 145
150 GOSUB 525
155 SCREEN 1,0
160 I=56:J=8:X$=""
165 N=1:B$=INKEY$
170 GOSUB 375
175 N=N+J:IFN>200 OR N<1 THEN GOSUB 375:GOTO
175
180 PUT(N,0)-(N+50,18),U,PSET
185 A$=INKEY$:IF A$=""THEN175
190 Z=16*(A$="A")-16*(A$="L")
195 IF Z=16 THEN 215
200 IF Z=-16 THEN 255
205 GOTO 175
210 'RIGHT PARACHUTE
215 PUT(N,0)-(N+50,18),V,PSET
220 FOR K=4TO92 STEP3:PUT(N,K)-(N+16,K+37),L,
PSET:NEXT

```


40 Tug-of-War

```

225 PUT(N,K)-(N+16,K+37),P,PSET
230 IF ABS(F-N)>8 THEN 165
235 GOSUB 295:GOSUB 345
240 IF Q<8 OR Q>104 THEN 305
245 GOTO 165
250 'LEFT PARACHUTE
255 PUT(N,0)-(N+50,18),V,PSET
260 FOR K=4T092 STEP3:PUT(N,K)-(N+16,K+37),R,
PSET:NEXT K
265 PUT(N,K)-(N+16,K+37),P,PSET
270 IF ABS(F-N)>8 THEN 165
275 GOSUB 295:GOSUB 355
280 IF Q<8 OR Q>104 THEN 305
285 GOTO 165
290 'BLANK TARGET
295 DRAW "C1;BM"+X*+",128;R8;D1;L8;D1;R8":RET
URN
300 'VICTORY JUMP
305 PUT(7,127)-(246,157),Y,PSET
310 HN=102:IF Q<10 THEN HX=27 ELSE HX=166
315 FOR JUMP=1T03
320 FOR N=128 TO HN STEP-4:PUT(HX,N)-(HX+16,N
+27),Q,PSET:PUT(HX+30,N-10)-(HX+46,N+17),Q,PS
ET:PUT(HX+60,N)-(HX+76,N+27),Q,PSET:NEXT N
325 FOR N=HN TO 128 STEP4:PUT(HX,N)-(HX+16,N+27)
,Q,PSET:PUT(HX+30,N-10)-(HX+46,N+17),Q,PSET:P
UT(HX+60,N)-(HX+76,N+27),Q,PSET:NEXT N
330 NEXT JUMP
335 GOTO 150
340 'PULL RIGHT
345 FOR Q=I TO I+Z:PUT(Q,137)-(Q+148,157),X,P
SET:NEXT Q:GOSUB 365:RETURN
350 'PULL LEFT
355 FOR Q=I TO I+Z STEP-1:PUT(Q,137)-(Q+148,1
57),X,PSET:NEXT Q:GOSUB 365:RETURN
360 'UPDATE ROPE POSITION
365 I=I+Z:PUT(120,137)-(136,157),W,PSET:GET(I
,137)-(I+148,157),X,G:RETURN
370 'DRAW NEW TARGET
375 J=J*-1:DRAW"C1;BM"+X*+",128;R8;D1;L8;D1;R
8":F=RND(50)*4:X*=STR*(F):DRAW"C2;BM"+X*+",12
8;R8;D1;C3;L8;D1;C2;R8":RETURN
380 'SET USER DEDFINED GRAPHICS
385 FOR B=0T061:READ C(B):NEXT B

```

```

390 FORB=0TO30:D=1632+(B*32):POKE D,C(B):POKE
D+1,C(B+31):NEXTB
395 GET(0,0)-(16,37),R,G
400 POKE 2016,69:POKE 2048,69:POKE 2080,69:PO
KE 2017,132:POKE 2049,132
405 GET(0,0)-(16,37),L,G:PCLS
410 GET(0,0)-(16,37),P,G:PCLS
415 FOR B=0TO39:READC(B):NEXTB
420 FOR B=0TO19:D=1664+(B*32):POKE D,C(B):POK
E D+1,C(B+20):NEXTB
425 GET(0,0)-(16,27),Q,G
430 FOR B=0TO41:READC(B):NEXT B
435 FOR B=0TO20:D=1536+(B*32):POKE D,C(B):POK
E D+1,C(B+21):NEXTB
440 GET(0,0)-(15,20),S,G:PCLS
445 FOR B=0TO41:READ C(B):NEXT B
450 FOR B=0TO20:D=1536+(B*32):POKE D,C(B):POK
E D+1,C(B+21):NEXT B
455 GET(0,0)-(15,20),T,G:PCLS
460 FOR B=0TO29:READ C(B):NEXT B
465 FOR B=0TO9:D=1569+(B*32):POKE D,C(B):POKE
D+1,C(B+10):POKE D+2,C(B+20):NEXT B
470 GET(0,0)-(50,18),U,G:PCLS
475 GET(7,137)-(248,157),Y,G
480 GET(0,0)-(50,18),V,G
485 RETURN
490 'INSTRUCTION SCREEN
495 PRINT@32,CHR$(159);"A SIMPLE GAME FOR 2 P
LAYERS WHO HAVE TO WIN A TUG OF WAR, NOT BY
STRENGTH, BUT BY REACTIONS."
500 PRINT@128,CHR$(159);"A UFO WILL FLY ACROS
S THE TOP OF THE SCREEN AND A TARGET WILL A
PPEAR AT THE BOTTOM."
505 PRINT@224,CHR$(159);"PLAYER 1 CAN PARACHU
TE ON TO THE TARGET BY PRESSING ";CHR$(97)
;" AND PLAYER 2 BY PRESSING ";CHR$(108)";".
";
510 PRINT@320,CHR$(159);"IF YOU LAND ON THE T
ARGET YOU WILL PULL THE OTHER TEAM.IF ANY M
EN FALL INTO THE CHASM, THAT TEAM WILL FIND
IT HARDER TO WIN."
515 RETURN
520 'SET SCREEN DISPLAY
525 PCLS: DRAW "C4;BM0,158;R116;D4;L6;D2;R4;D4

```

42 Tug-of-War

```

;L2;D4;L8;D8;L4;D6;R6;D2;L106;U30"
530 DRAW "C4;BM140,158;R116;D30;L104;U4;R6;U6
;L6;U8;L6;U4;L2;U2;L2;U4;L2;U2"
535 PAINT(2,162),4,4:PAINT(148,160),4,4
540 DRAW"C2;BM72,145;R114"
545 FOR N=72TO116 STEP16:PUT(N,137)-(N+15,157
),S,PSET:NEXT N
550 FOR N=140TO174 STEP16:PUT(N,137)-(N+15,157
),T,PSET:NEXT N
555 GET(120,137)-(136,157),W,G
560 GET(56,137)-(204,157),X,G
565 RETURN
570 'USER DEFINED GRAPHIC DATA
575 DATA 1,1,5,5,21,21,85,85,128,128,130,138,
10,73,201,197,241
580 DATA 255,15,15,15,5,10,10,10,8,8,8,8,40,4
0,64,64,80,80,84
585 DATA 84,85,85,8,8,8,136,68,68,76,76,60,25
2,192,192,192,64
590 DATA 128,128,128,128,128,128,128,160,160,
2,74,69,133,133,161
595 DATA 255,15,15,15,5,10,10,8,8,8,8,8,40,40
,0,132,68,76,60,252
600 DATA 252,192,192,192,64,128,128,128,128,1
28,128,128,160,160
605 DATA 2,10,9,9,5,5,15,5
610 DATA 95,15,15,0,10,10,10,10,10,0,0,0,0,0,
128,64,64,64,61
615 DATA 253,245,244,244,0,128,128,128,160,16
0,160,160,160,168
620 DATA 168,0,2,1,1,1,1,124,124,87,31,31,0,2
,2,2,10,10,10,10
625 DATA 42,42,128,160,96,96,80,80,64,240,245
,240,240,0,160
630 DATA 160,160,160,160,0,0,0,0
635 DATA 0,0,5,21,95,95,21,5,63,63,20,85,125,
125,85,85,125,125
640 DATA 85,20,0,0,80,84,245,245,84,80,252,252

```

Horse Race

Horse Race is a racing and betting game for any number of players in which six horses race across the screen. At the beginning of the game you can choose how many races there will be at the meeting.

Before the start of each race the betting form is displayed, complete with the tipsters odds on each runner. The odds are a fairly accurate reflection of each horse's potential.

Starting with £200, each player may bet on one horse in each race and the winner is the player who ends up with the largest amount of money at the end of the meeting. If you want the rules to allow cheating then players who lose all their money may have the option of accepting the offer of an additional £50, otherwise they are out of the game.

```

1 REM *** DRAGON VERSION ***
100 'HORSE RACE BY PAUL STANLEY          REWRITE
N FOR THE DRAGON 32          BY E.A.JACKSON
105 DIM A(88),T(76),J(40),K(40),L(40),M(40)
110 RESTORE:GOSUB280:GOSUB590:GOSUB290:GOSUB2
40
115 FOR R1=1 TO RACES
120 GOTO 305:'BETTING SEQUENCE
125 PRINT@480,"READY FOR THE START.....";
130 GOSUB555:'SCREEN DISPLAY
135 GOSUB165:'RACE SEQUENCE
140 DRAW "C2;BM6,188;U170"
145 FOR T=1 TO 5000:NEXT T
150 GOSUB395:'RESULT SEQUENCE
155 NEXT R1
160 GOTO 480:'SUMMARY
165 'RACE SEQUENCE
170 SCREEN 1,0:F1=0
175 FOR G=1 TO 5:Y(G)=0:NEXT G
180 N=190:F1=F1+1
185 FOR G=1 TO 5:X(G)=RND(4)+2:NEXT G
190 FOR G=1 TO 5:Z=16+(G*25):Y(G)=Y(G)+X(G):P
UT(N-Y(G),Z)-((N-Y(G))+47,Z+23),J,PSET:NEXT G
195 G=0
200 G=G+1:IFN-Y(G)<6 THEN 210

```

```

205 IF G<5 THEN 200 ELSE GOTO 185
210 IF F1=FURL THEN RETURN
215 FOR G=1TO5:Z=16+(G*25):PUT(N-Y(G),Z)-((N-Y(G))+47,Z+23),K,PSET:NEXT G
220 FOR G=1TO5:Y(G)=N-Y(G):IF Y(G)>40 THEN Y(G)=40
225 Y(G)=40-Y(G):NEXT G
230 IF F1<>FURL-1 THEN 180
235 DRAW "C2;BM6,19;U10;C0;L4;U8;R8;D8;L4":PAINT(8,7),0,0:GOTO 180
240 'SET UP RACE CARD
245 PRINT@96,CHR$(159);" HOW MANY RACES WOULD YOU LIKE AT THIS MEETING?";:GOSUB 265:RACES=Q:PRINT@161,RACES;"RACE(S)";
250 PRINT@256,CHR$(159);" HOW MANY PUNTERS ARE THERE?":GOSUB 265:P1=Q:PRINT@289,P1;"PUNTER(S)";
255 FOR T=1TO500:NEXT T
260 FOR C=1 TO P1:LET P(C)=200:NEXT C:RETURN
265 A$=INKEY$:IF A$="" THEN 265
270 Q=ASC(A$):IF Q<49 OR Q>57 THEN 265
275 LET Q=Q-48:RETURN
280 CLS:PRINT@8,"HORSE RACE";
285 PRINT@96,CHR$(159);" A GAMBLING GAME FOR THE WHOLE FAMILY":RETURN
290 PRINT@488,"PRESS SPACE BAR ";
295 A$=INKEY$:IF A$<>CHR$(32) THEN 295
300 PRINT@485,STRING$(23,32);:RETURN
305 'BETTING SEQUENCE
310 FOR G=1 TO P1:W(G)=0:H(G)=0:B(G)=0:NEXT G
315 G=0
320 G=G+1:IF G>P1 THEN 480
325 IF P(G)<1 THEN 320
330 G=0:FOR C=1TO5:LET F(C)=RND(5):NEXT C:FURL=RND(3)+1
335 LET G=G+1:IF G>P1 THEN 125
340 IF P(G)=0 THEN 335
345 CLS:PRINT@0,"RACE NUMBER";R1;:PRINT@20,FURL;"FURLONGS"
350 PRINT@70,"LATEST BETTING";
355 FOR C=1TO5:PRINT@70+(C*32),"HORSE NO."I C;F(C);"/1";:IF F(C)=1 THEN PRINT@70+(C*32)+12,"EVENS";
360 NEXT C

```

```

365 FOR T=320TO418 STEP 32:PRINT@T,STRING$(31
,32):NEXT T
370 PRINT@320, "PUNTER NO. ";G; "YOU HAVE";P(G);
"POUNDS";:PRINT@352, "HOW MUCH WOULD YOU LIKE
TO BET";
375 INPUT Q$:B(G)=VAL(Q$):IF B(G)=0 OR B(G)>P
(G) THEN 365
380 FOR T=320 TO 418 STEP 32:PRINT@T,STRING$(
31,32):NEXT T
385 PRINT@320, "ON WHICH HORSE IS THIS TO BE
PLACED";:INPUT Q$:E(G)=VAL(Q$):IF E(G)=0 OR
E(G)>5 THEN 380
390 GOTO 335
395 'RESULT SEQUENCE
400 FOR G=1TO5:IF N-Y(G)<7 THEN H(G)=1 ELSE H
(G)=0:NEXT G
405 CLS:PRINT@0, "RACE NUMBER";R1;:PRINT@20, "R
ESULTS";
410 PRINT@64, "PUNTER HORSE STAKE RETURN CASH"
:PRINT
415 FOR G=1 TO P1
420 IF P(G)=0 THEN 450
425 PRINT G;TAB(7) E(G);TAB(12) B(G);
430 W(G)=B(G)*F(E(G))
435 W(G)=W(G)*H(E(G)):IF W(G)=0 THEN W(G)=B(G
)*-1
440 P(G)=P(G)+W(G)
445 PRINT TAB(19) W(G);TAB(24) P(G)
450 NEXT G
455 G=0
460 G=G+1:IF G>P1 THEN 470
465 IF P(G)<1 THEN GOSUB515 ELSE GOTO 460
470 GOSUB 290
475 RETURN
480 'END SUMMARY
485 CLS:PRINT@0, "MEETING OVER";TAB(20) "SUMMA
RY":PRINT
490 FOR G=1 TO P1:PRINT "PUNTER NO. ";G; " HAS"
;
495 IF P(G)<1 THEN P$(G)=" NOTHING" ELSE P$(G
)=STR$(P(G))+ " POUNDS"
500 PRINT P$(G):NEXT G
505 GOSUB 290
510 GOTO 110

```

```

515 'CHEAT SEQUENCE
520 IF R1=RACES THEN RETURN
525 PRINT@384,"IF YOUR RULES ALLOW CHEATING
    PRESS ";CHR$(99) ";" AND EVERY PUNTER WILL
    RECEIVE AN EXTRA 50 POUNDS      -ELSE PRESS
    ";CHR$(120);
530 A$=INKEY$:IF A$=CHR$(32) THEN 530
535 IF A$="X" THEN CLS:RETURN
540 IF A$(">")"C" THEN 530
545 FOR G=1 TO P1:P(G)=P(G)+50:NEXT G
550 CLS:RETURN
555 'SCREEN DISPLAY
560 PCLS1:FOR N=14 TO 230 STEP 6:PUT(N,10)-(N
+9,29),M,PSET:NEXT N
565 FOR N=8 TO 230 STEP 6:PUT(N,180)-(N+9,189
),M,PSET:NEXT N
570 DRAW "C2;BM242,50;R2;D8;NL2;R2":DRAW"C2;B
M242,75;R6;D4;L6;D4;R6":DRAW "C2;BM242,100;R6
;D3;NL4;D4;L6"
575 DRAW "C2;BM240,125;BR2;D6;R4;NR2;NU4;D4":
DRAW "C2;BM242,150;NR6;D4;R6;D4;L6"
580 DRAW "C2;BM236,10;R18;D178;L18;U178":PAIN
T(238,22),3,2
585 RETURN
590 'USER DEFINED GRAPHICS
595 PMODE 3,1:PCLS1
600 FOR N=0 TO 87:READ A(N):NEXTN
605 FOR N=0 TO 21:C=1537+(N*32)
610 POKE C,A(N):POKE C+1,A(N+22):POKE C+2,A(N
+44):POKE C+3,A(N+66)
615 NEXT N
620 GET(0,0)-(47,23),J,G:PCLS
625 GET(0,0)-(47,23),K,G
630 DRAW "C2;BM0,20;NR4;D4;NR4;D4;R4"
635 GET(0,20)-(9,29),M,G:PCLS
640 RETURN
645 DATA 0,0,0,0,0,3,15,63,255,255,255,195,3,
15,15,15,15,12,12,3,0,0
650 DATA 16,48,48,10,10,42,42,197,196,247,247
,255,255,255,255,248,195,195,243,31,204,204
655 DATA 0,0,0,0,0,0,0,0,240,252,255,255,255,
255,252,255,204,60,48,240,192,240
660 DATA 0,0,0,0,0,0,0,0,0,0,0,0,192,48,48,48
,0,0,0,0,0,0

```

Stunt-Cycle

In this game, Stunt-Cycle, the motorcycle leaps over a line of buses and must be landed on the other side without loss of control. After each successful leap the number of buses is increased. Can you beat the record?

```

1 REM *** DRAGON VERSION ***
100 'STUNT CYCLE BY PAUL STANLEY      REWRITE
N FOR THE DRAGON 32      BY E.A.JACKSON
105 DIM C(42),R(16),S(16),T(16),U(16),Z(10)
110 GOSUB 395:GOSUB415:GOSUB135
115 PRINT@486,"PRESS spacebar TO PLAY";
120 A$=INKEY$:IF A$(<)CHR$(32) THEN 120
125 GOTO 200
130 'SCREEN DISPLAY
135 PCLS:DRAW"C2;BM0,25;R250;D4;L250;U4":PAINT
T(2,27),2,2
140 DRAW"C2;BM0,100;R250;D4;L250;U4":PAINT(2,
102),2,2
145 DRAW"C2;BM0,177;R250;D4;L250;U4":PAINT(2,
179),2,2
150 DRAW "C2;BM64,82;D15;L15;E15":PAINT(62,95
),2,2
155 N1=70:N2=(BUS*20)+70:NX=N2:IF BUS>=8 THEN
N2=210
160 FOR N=N1 TO N2 STEP 20:PUT(N,79)-(N+15,10
0),Z,PSET:NEXT N
165 IF BUS=<8 THEN N2=N2+22:N$=STR$(N2):GOTO
190
170 PUT(230,79)-(245,100),Z,PSET
175 N2=((BUS-9)*20)+22:N$=STR$(N2)
180 FOR N=0TO N2-22 STEP 20:PUT(N,155)-(N+15,
175),Z,PSET:NEXT N
185 DRAW "C2;BM"+N$+",157;D15;R15;H15":PAINT(
N2+2,165),2,2:RETURN
190 DRAW "C2;BM"+N$+",82;D15;R15;H15":PAINT(N
2+2,95),2,2
195 RETURN
200 'STUNTS
205 SCREEN 1,0

```


48 Stunt Cycle

```

210 WL=0:N=0:V=RND(3)+2:L=6:BUS=BUS+1:IF BUS>
15 THEN BUS=15
215 IF INKEY#=CHR$(65) THEN V=V+1:IF V>8 THEN
GOTO 245
220 IF INKEY#=CHR$(68) THEN V=V-2:IF V<2 THEN
V=2
225 N=N+V:PUT(N,L)-(N+23,L+17),R,PSET
230 IF N>18 AND L>50 THEN GOTO 295
235 IF N<210 THEN 215 ELSE PUT(N,L)-(N+23,L+17
),U,PSET:L=L+75:N=0
240 IF L<210 THEN 215 ELSE BUS=0:GOTO 355
245 'WHEELIES
250 V=8
255 WL=WL+1:N=N+V:PUT(N,L)-(N+23,L+17),S,PSET
:IF WL>16 THEN 285
260 IF INKEY#=CHR$(65) THEN 275
265 IF N<230 THEN 245 ELSE PUT(N,L)-(N+23,L+1
7),U,PSET:L=L+75:N=0
270 IF L<210 THEN 245 ELSE BUS=0:GOTO 355
275 'JUMP SEQUENCE
280 N=N+V:PUT(N,L-2)-(N+23,L+15),T,PSET
285 IF N<230 THEN 275 ELSE PUT(N,L-2)-(N+23,L
+15),U,PSET:L=L+75:N=0
290 IF L<160 THEN 275 ELSE BUS=0:GOTO 355
295 LN=INT((20*BUS)*(V/8))+90:LX=LN
300 XN=20:IF LN>220 THEN L2=220 ELSE L2=LN
305 PUT(N,L)-(N+23,L+17),U,PSET
310 FOR N=XN TO L2 STEP V:PUT(N,L-22)-(N+23,L
-5),S,PSET:NEXT N:IF LX<210 THEN PUT(N,L-22)-
(N+23,L-5),U,PSET
315 IF L2=LN OR LN<210 THEN 325
320 PUT(N,L-22)-(N+23,L-5),U,PSET:XN=0:L2=LN-
210:LN=L2:L=159:GOTO 310
325 PUT(N,L-22)-(N+23,L-5),U,PSET
330 FOR P=N+4 TO 200 STEP V:PUT(P,L)-(P+23,L+
17),S,PSET:NEXT P
335 FOR PQ=P TO 230 STEP V:PUT(PQ,L)-(PQ+23,L
+17),R,PSET:NEXT PQ
340 PUT(PQ,L)-(PQ+23,L+17),U,PSET
345 IF BUS>9 THEN NX=NX-20
350 IF LX<NX+32 THEN BUS=0
355 IF BUS=0 THEN PUT(230,L)-(253,L+17),T,PSE
T:FOR PS=1 TO 500:NEXT PS
360 GOSUB 135

```

```

365 GOTO 200
370 PUT (N,L-8)-(N+23,L+9),S,PSET:PUT(N,L-8)-
(N+23,L+9),U,PSET
375 FOR P=N+4 TO 232 STEP V:PUT(P,L)-(P+23,L+
17),T,PSET:NEXT P
380 BUS=0:GOSUB 135
385 GOTO 200
390 PUT(232,L)-(255,L+15),T,PSET:BUS=0:PUT(23
2,L)-(255,L+15),U,PSET:GOTO 200
395 CLS:PRINT@12,"STUNT CYCLE"
400 PRINT@64,CHR$(159);"THE WORLD RECORD FOR
JUMPING OVER BUSES WHILE RIDING A MOTOR -C
YCLE STANDS AT 16 BUSES.":PRINT:PRINT CHR$(1
59);"YOU ARE NOW ABOUT TO ATTEMPT TO EQUAL TH
IS RECORD.":PRINT:PRINT CHR$(159);"USE ";CHR$(
97);" TO ACCELERATE."
405 PRINT:PRINT CHR$(159);"LAND SAFELY AND DO
N'T RIDE TOO FAST.":
410 RETURN
415 'USER DEFINED GRAPHICS
420 PMODE 3,1:PCLS
425 FOR B=0TO31:READC(B):NEXT
430 FOR B=0TO15:D=1601+(B*32):POKE D,C(B):POK
E D+1,C(B+16):NEXT
435 GET(0,0)-(23,17),R,G:PCLS
440 FOR B=0TO31:READC(B):NEXT
445 FOR B=0TO15:D=1601+(B*32):POKE D,C(B):POK
E D+1,C(B+16):NEXT
450 GET(0,0)-(23,17),S,G:PCLS
455 FOR B=0TO31:READC(B):NEXT
460 FOR B=0TO15:D=1601+(B*32):POKE D,C(B):POK
E D+1,C(B+16):NEXT
465 GET(0,0)-(23,17),T,G:PCLS
470 GET(0,0)-(23,17),U,G
475 FOR B=0TO39:READC(B):NEXTB
480 FOR B=0TO19:D=1536+(B*32):POKE D,C(B):POK
E D+1,C(B+20):NEXTB
485 GET(0,0)-(15,20),Z,G
490 RETURN
495 DATA 3,3,3,1,10,10,10,10,63,191,171,35,15
5,152,168,168,192,64,64,64,0,128,160,40,8,170
,42,160,230,166,42,42
500 DATA 60,52,52,20,60,63,63,63,63,191,171,1
71,152,152,168,168,0,0,0,160,160,170,170,38,3

```

50 Stunt Cycle

8, 42, 42, 0, 0, 0, 0, 0

505 DATA 168, 168, 152, 152, 171, 171, 191, 63, 63, 63,
63, 60, 20, 52, 52, 60, 0, 0, 0, 0, 0, 42, 42, 38, 38, 170,
170, 160, 160, 0, 0, 0

510 DATA 255, 255, 255, 213, 213, 213, 213, 255, 255,
255, 213, 213, 215, 215, 255, 255, 255, 191, 160, 160, 2
55, 255, 255, 87, 87, 87, 87, 255, 255, 255, 87, 87, 215,
215, 255, 255, 255, 254, 10, 10

Minelay

Minelay is a maze game in which your hero runs about collecting golden 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.

```

1 CLS
5 REM ***DRAGON VERSION ***
10 REM ***MINELAY ***
15 LET HS=0
20 GOTO 6035
50 SOUND 16*.1,10
55 LET LI=3
60 PRINT"                MM    HI-Score ";HS
100 POKE 32*Y1+X1+1024,32:POKE 32*Y+X+1024,ASC(A$)-64:Y1=Y:X1=X
110 LET X=X+(PEEK(&H153) AND 32)/32-(PEEK(&H153) AND 8)/8:Y=Y+(PEEK(&H153) AND 16)/16-(PEEK(&H153) AND 4)/4
120 LET A=PEEK(Y*32+X+1024):IF A=32 THEN 690
122 IF A=ASC("*") AND A$="A" THEN 5000
125 IF A=ASC("*") THEN Y=Y1:X=X1
130 IF A=ASC("#") THEN SC=SC+10:PRINT@0,SC;:IF SC/500=INT(SC/500) THEN LI=LI+1:PRINT@11+LI,"M";
140 IF A=0 OR A=ASC("^")-64 THEN 6000
150 IF A=ASC("/") THEN A$="A"
690 IF SK=35 AND RND(100)>20 THEN GOTO 690
700 POKE 32*INT(MY)+INT(MX)+1024,32:IF RND(100)>SK THEN POKE 32*INT(Y2)+INT(X2)+1024,0
702 IF X1=MX AND Y1=MY THEN 6000
705 Y2=MY:X2=MX
710 MY=MY+(-(MY<Y)+(MY>Y))/2:MX=MX+(-(MX<X)+(MX>X))/2
720 POKE 32*INT(MY)+INT(MX)+1024,ASC("^")-64
940 IF RND(100)<20 THEN          POKE((RND(12

```

```

)+1)*32+RND(28)+1)+1024),ASC("#"):IF RND(100)
>90 THEN POKE(((RND(12)+1)*32+RND(28)+1)+1024
),ASC("/"))
999 GOTO 100
1850 SC=0:PRINT@0,"SCORE 0"
5000 IF Y=1 OR Y>14 OR X=0 OR X=30 THEN 125
5010 A$="M":GOTO 130
5500 POKE 1036+LI,96:POKE 32*Y+X+1024,32:Y=2:
X=1:Y1=Y:X1=X:GOTO100
6000 POKE 32*INT(MY)+INT(MX)+1024,32:MY=RND(5
)+9:Y2=MY:X2=MX:IF A$="A" THEN A$="M":GOTO 700
6005 POKE 32*Y1+X1+1024,32:SOUND 10,10
6007 LI=LI-1:IF LI>0 THEN 5500
6010 FOR G=1 TO 60:NEXT G
6020 CLS:PRINT@133,"G A M E   O V E R"
6030 PRINT:PRINTTAB(5);"YOU SCORED ";SC
6031 IF SC>HI THEN HI=SC:SC=0:PRINT:PRINT" W
ELL DONE A NEW HI-SCORE":GOTO 6035
6032 PRINT:PRINT" HI-SCORE=";HI
6035 PRINT:PRINT" PRESS 2 FOR EASY GAME OR
PRESS 1 FOR HARD GAME"
6036 IN$=INKEY$:IF IN$<>"1" AND IN$<>"2" THEN
6036
6040 SK=(70 AND IN$="1")+(85 AND IN$="2")
6050 CLS 0:COLOR 1,0
7000 FORI=1024 TO 1535:POKE I,32:NEXT I:FOR I
=1056 TO 1087:POKE I,ASC("*"):POKE I+448,ASC(
"*"):NEXT I
7010 FOR I=1056 TO 1504 STEP 32:POKE I,ASC("*
"):POKE I+31,ASC("*"):NEXT I
7020 FOR G=1 TO (7 AND SK=85)+(14 AND SK=70):
S=RND(28)-1:F=S+RND(10)-1:X=(RND(5)-1)*2+1:IF
F>29 THEN F=29
7030 FOR Y=S TO F:POKEX*32+Y+1024,ASC("*"):NE
XT Y
7050 S=RND(17)+1:F=S+RND(10)-1:X=(RND(6)-1)*2
+2:IF F>20 THEN F=20
7060 FOR Y=S TO F:POKEX*32+Y+1024,ASC("*"):NE
XT Y:NEXT G
7380 FOR F=1 TO 20
7390 X=RND(12)+2:Y=RND(25):IF PEEK(X*32+Y+102
4)<>32 THEN7390
7400 POKE (X*32+Y+1024),ASC("#"):NEXT F

```

```

7500 FOR F=1 TO 10
7510 Y=RND(19)+1:X=RND(28):IF PEEK(X*32+Y+102
4)<>32 THEN 7510
7530 POKE (X*32+Y+1024),0:NEXT F
7600 FOR F=1 TO 5:POKE ((RND(13)+1)*32+RND(28
)+1024),ASC("/"):NEXT F
7800 Y=2:X=1:Y1=Y:X1=X:A$="M"
7840 MY=RND(4)+9:MX=RND(18)+12:Y2=MY:X2=MX
7999 GOTO 50
9000 CLS:PRINT"          m i n e l a y"
9010 PRINT"MOVE ABOUT THE MAZE PICKING UP TH
E EGGS '#', AVOIDING THE MINES'@' & ALSO THE
MINE-LAYER '^'"
9020 PRINT"IF YOU PICK UP AN AXE '/' YOU CA
N DESTROY THE MAZE WALLS '*', MINES, AND THE
MINE-LAYER."
9030 PRINT"YOU BEGIN WITH 3 LIVES, BUT AN EX
TRA LIFE IS GIVEN EVERY 500 POINTS."
9040 PRINT"'M'=YOU WITHOUT AXE           'A
'=YOU WITH AXE"
9050 PRINT:PRINT"PRESS ANY KEY TO START"
9060 IF INKEY$="" THEN 9060 ELSE CLS:PRINT"MO
VE WITH 'Q'-UP      'Y'-LEFT           'A'-D
OWN  'I'-RIGHT":RETURN

```

Heli-Bomber

After all this intergalactic warfare, you'll find it refreshing to return to Earth and struggle to cope with a fleet of helicopters whose pilots are committed to wiping out your fair city. Thankfully you're in control of the metropolitan laser tower, and it's up to you to shoot down the bombs before they hit the city. You'll get points for every bomb you hit, and whilst you can wipe out a chopper if you feel so inclined, you will not add to your tally by so doing. You move your laser sight with the arrow keys, and the game is over once one of the bombs finds a clear path to the ground or the laser tower itself is destroyed.

```

1 REM *** DRAGON VERSION ***
10 REM HELIBOMBER - SPECTRUM R ERSKINE 1983 -
  DRAGON 32 RICHARD HALE
20 PCLEAR8: DIMBA(9,7): DIMDA(15,7): DIMHA(15,7)
: DIMTA(7,7): DIMLT(7,7): DIMSA(7,7): DIMKA(7,7):
DIMEA(7,7): DIMGA(7,7): DIMNB(7,7): DIMNH(15,7):
SCREEN1,0:CLS8:
30 SC=0: HS=0
40 PRINT@202, "HELI-BOMBERS";
50 PRINT@448, "      PRESS ANY KEY TO START"
60 IF INKEY$="" THEN 60
70 CLS3: PRINT@0, "YOUR CITY IS UNDER ATTACK B
Y HELICOPTER BOMBERS. WHEN A BOMB HAS A CLEAR
  PATH TO THE GROUND OR YOUR LASER TOWER IS DE
STROYED THE GAME ENDS."
80 PRINT "MOVE YOUR LASER SIGHT USING THE ARR
OW KEYS AND TRY TO SHOOT DOWN THE BOMBS OR TH
E HELICOPTER USING THE SPACE BAR"
90 PRINT@448, " THE GRAPHICS ARE BEING SET UP"
: GOSUB 9000: CLS2: PRINT@448, "      PRESS ANY
  KEY TO START"
100 IF INKEY$="" THEN 100
105 PMODE,1:PCLS:SCREEN1,0
110 GOSUB 8000
120 IF PPOINT(124,135)=2 THEN 4000
125 X$=INKEY$: IF X$="" THEN XV=0: ELSE XV=ASC
(X$)
130 LI=LI+(16 AND XV=10 AND LI<112)

```

```

140 CO = CO-(16 AND XV=8): IF CO<0 THEN CO=240
150 LI=LI-(16 AND XV=94 AND LI>0)
160 CO=CO+(16 AND XV=9): IF CO>240 THEN CO=0
170 IF CL<>CO OR LN<>LI THEN PUT(CL, LN)-(CL+7
, LN+7), BA, PSET: PUT(CO, LI)-(CO+7, LI+7), SA, PSE
T: LN=LI: CL=CO
180 IF C1=240 THEN C1=0: L1=(RND(11)-1)*8
190 L1=L1+(8 AND RND(10) > 7 AND L1<104)
200 L1=L1+(8 AND RND(10) > 7 AND L1<104)
210 L1=L1-(8 AND RND(10) > 7 AND L1>0)
220 C1=C1 + (8 AND C1<240)
230 IF LA<>L1 OR CA<>C1 THEN PUT(CA, LA)-(CA+1
5, LA+7), DA, PSET: PUT(C1, L1)-(C1+15, L1+7), HA, P
SET: CA=C1: LA= L1
240 IF G=1 AND C1<>240 AND RND(5)>4 THEN L2=L1
+8: C2=C1+8: LB=L2: CB=C2: G= -G
250 IF G=1 THEN 290
260 L2=L2+8
270 PUT(CB, LB)-(CB+7, LB+7), BA, PSET: PUT(C2, L2
)-(C2+7, L2+7), GA, PSET: LB=L2: CB=C2: SOUND150
, 2: IF L2>168 THEN 4000
280 IF PPOINT(C2+4, L2+15)=3 THEN PUT(C2, L2)-(
C2+7, L2+7), BA, PSET: PUT(C2, L2+8)-(C2+7, L2+15)
, EA, PSET: FOR DY=1 TO 10: NEXT DY: PUT(C2, L2+
8)-(C2+7, L2+15), BA, PSET: G=-G
290 IF XV<>32 THEN 120
291 LINE(124, 127)-(CO+3, LI+3), PSET
300 IF G=-1 THEN GET(C2, L2)-(C2+7, L2+7), NB: F
OR XT=0T07: FOR YT=0T07: IF GA(XT, YT) <> NB(X
T, YT) THEN B=-B: GOTO 310: ELSE NEXT YT: NEXT
XT
310 GET(C1, L1)-(C1+15, L1+7), NH: FOR XT=0T015
: FOR YT=0T07: IF NH(XT, YT)<> HA(XT, YT) THEN
H=-H: GOTO 320: ELSE NEXT YT: NEXT XT
320 LINE(124, 127)-(CO+3, LI+3), PRESET: PUT(CO,
LI)-(CO+7, LI+7), SA, PSET
330 IF B=-1 THEN GOSUB 400
340 IF H=-1 THEN GOSUB 500
350 GOTO 120
400 PUT(C2, L2)-(C2+7, L2+7), BA, PSET: B=-B: G=-
G: SC=SC+10: RETURN
500 FOR XX=L1+8 TO 168 STEP 8: PUT(CA, LA)-(CA
+15, LA+7), DA, PSET: IF XX<168 THEN PUT(C1, XX)-

```



```

(C1+15,XX+7),HA,PSET: LA=XX:NEXT XX:
510 H=-H: L1=0: C1=(RND(31)-1)*8: LA=L1: CA=C
1: RETURN
4000 CLS4: PRINT@0, "                END OF GAME": P
RINT@200,"YOUR SCORE";: PRINT USING"#####";SC
;: IF SC>HS THEN HS=SC
4010 PRINT@232,"HIGH SCORE";:PRINT USING"####
#" ;HS;
4020 PRINT@448,"    PRESS ANY KEY TO RESTART"
4030 IF INKEY$="" THEN 4030
4040 SC=0
4050 GOSUB 8000
4060 GOTO 120
8000 PMODE3,1:COLOR4,2:PCLS:SCREEN1,0
8010 FOR X=8 TO 240 STEP 8
8020 R=(RND(5) +16) *8
8030 FOR Y=R TO 168 STEP 8
8040 PUT(X,Y)-(X+7,Y+7),KA,PSET
8050 NEXT Y
8060 NEXT X
8070 PUT(120,128)-(127,135),LT,PSET
8080 FOR Y=136 TO 168 STEP 8
8090 PUT(120,Y)-(127,Y+7),TA,PSET
8100 NEXT Y
8110 LI=80: CO=120: PUT(CO,LI)-(CO+7,LI+7),SA
,PSET: CL=CO: LN=LI
8120 L1=0: C1=(RND(31)-1)*8
8130 PUT(C1,L1)-(C1+15,L1+7),HA,PSET
8140 LA=L1: CA=C1: G=1: H=1: B=1
8150 LINE(0,176)-(255,191),PSET,BF
8300 RETURN
9000 PMODE3,5:PCLS2:COLOR3,2
9010 GET(0,0)-(7,7),BA,G
9020 GET(0,0)-(15,7),DA,G
9030 XC=0
9040 FOR CH=1 TO 10
9050 FOR YC=0 TO 7
9060 DV=64: READ ZZ
9070 FOR XX=XC TO XC+7 STEP 2
9080 P=FIX(ZZ/DV) + 1
9090 PSET(XX,YC,P): ZZ=ZZ - (P-1)*DV: DV=DV/4
9100 NEXT XX
9110 NEXT YC
9120 IF CH=2 THEN GET(0,0)-(15,7),HA

```

```
9130 IF CH=3 THEN GET(16,0)-(23,7),TA,G
9140 IF CH=4 THEN GET(24,0)-(31,7),LT,G
9150 IF CH=5 THEN GET(32,0)-(39,7),SA,G
9160 IF CH=6 THEN GET(40,0)-(47,7),KA,G
9170 IF CH=7 THEN GET(48,0)-(55,7),EA,G
9180 IF CH=8 THEN GET(56,0)-(63,7),GA: RETURN
9190 XC=XC+8:NEXT CH: STOP
9500 DATA 85,90,85,21,0,20,85,85,85,170,85,5,
17,160,1,117
9530 DATA 170,154,166,154,166,154,166,170
9540 DATA 86,89,60,125,60,125,170,170
9550 DATA 85,125,215,215,215,215,125,85
9560 DATA 170,150,170,150,170,190,190,170
9570 DATA 85,93,117,87,213,125,223,255
9580 DATA 85,125,255,85,65,65,65,85
9900 PMODE3,1: SCREEN1,0: GOTO9900
```

Drag Racer

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 *** DRAGON ***
2 PCLEAR8: DIMDA(9,7): DIMG(4): DIMBA(9,7): DIMMA
(29,7): DIMRA(29,7)
5 GOSUB 4000
10 GOSUB 9150
12 PRINT@448, "PRESS ANY KEY TO CONTINUE"
13 IF INKEY$="" THEN 13
14 PRINT@448, "      STARTING"
15 GOSUB 9000
20 GX=1
30 CLS4: FOR DY=1 TO 300: NEXT DY
40 CLS2: FOR DY=1 TO 300: NEXT DY
50 CLS1: FOR DY=1 TO 300: NEXT DY
60 SCREEN1,0
100 I$=INKEY$
110 IF I$="M" THEN A=A+1
120 IF I$>"0" AND I$<"5" THEN GX=VAL(I$)
130 IF T<3 THEN RPM=FNA(X): ELSE RPM=FNB(X)
140 IF RND(1000) > (RPM-6000) THEN OS=NS: ELSE
GOTO 3000
170 OP=NP
180 TQ=FNC(X)
190 TG=17
200 NS=FND(X)
210 NP=FNE(X)
220 T=T+1
230 A=FNF(X)
270 X=45*SIN(A)
280 Y=45*COS(A)

```

```

285 IF T>1 THEN LINE(188,130)-(188+XX,130-YY)
,PRESET
290 LINE(188,130)-(188+X,130-Y),PSET
300 XX=X:YY=Y
310 A=FNG(X)
320 N=46*SIN(A)
330 O=46*COS(A)
340 IF T>1 THEN LINE(85,130)-(85+NN,130-OO),P
RESET
350 LINE(85,130)-(85+N,130-O),PSET
360 NN=N:OO=O
365 PUT(CO,L1)-(CO+9,L1+7),BA,PSET
400 CO=CO+INT((NP-OP)/CL)*10
410 IF CO>245 AND L1<72 THEN CO=CO-245: L1=L1
+8
460 IF L1<80 THEN PUT(CO,L1)-(CO+9,L1+7),DA,P
SET
500 IF NP<1320 THEN 100
2000 T=FNH(X)
2005 IF BT=0 OR T<BT THEN BT=T
2030 CLS3: PRINT@0,"TIME";T;"SECONDS"
2040 PRINT"BEST TIME";BT;" SECONDS"
2050 PRINT"MAXIMUM SPEED: ";NS;" MPH"
2055 FOR X=1 TO 1000:NEXT X
2060 PRINT@448," PRESS ANY KEY TO RESTART"
2070 IF INKEY$="" THEN GOTO 2070
2080 PRINT@448," RESTARTING "
2090 GR=GR+.1: IF GR>4.1 THEN GR= 4.11
2100 GOTO 15
3000 FOR RR=1 TO 15 STEP 3: CIRCLE(CO+4,L1+3),
RR,4: NEXT RR
3010 FOR X=1 TO 1000:NEXT X
3020 CLS0: PRINT@202," ENGINE BLOWN UP";: GOT
O 2055
4000 CLS4: PRINT@202,"DRAG RACER";
4010 PRINT@451,"PRESS ANY KEY TO CONTINUE";
4015 IF INKEY$="" THEN 4015
4020 CLS8: PRINT@0,"THE OBJECT IS TO ACHEIVE
THE FASTEST RUN OVER THE QUARTER MILE. THE ON
LY CONTROL YOU HAVE IS THE GEAR SHIFT FOR GEA
RS 1 TO 4. OVER 6000 RPM THE ENGINE MAY BLOW
UP. GOOD LUCK"
4030 PRINT @448,"THE GRAPHICS ARE BEING SET U
P"

```

60 Drag Racer

```

4090 RETURN
8000 COLOR1,2:LINE(0,0)-(255,80),PSET,BF:COL
OR4,2
8010 FOR Y=7 TO 79 STEP 8
8020 LINE(0,Y)-(255,Y),PSET
8030 NEXT Y
8040 RETURN
9000 PMODE3,1:COLOR4,2:PCLS
9010 G(1)=4:G(2)=2.5:G(3)=1.5:G(4)=1
9020 T=0:NP=0:NS=NP:MPH=0:RPM=0
9030 L1=0:CO=0
9090 CIRCLE(85,130),48,4:CIRCLE(188,130),48,4
9095 PAINT(100,190),3,4
9100 PUT(70,184)-(99,191),RA,PSET
9110 PUT(173,184)-(202,191),MA,PSET
9140 GOSUB 8000
9145 RETURN
9150 DEF FNA(X)=4200*(G(GX)/G(1))
9160 DEF FNB(X)=NS*GR*G(GX)*CX/CIRC
9170 DEF FNC(X)=(C1*RPM^3)+(C2*RPM^2)+(C3*RPM)
9180 DEF FND(X)=OS+(TG/TG)
9190 DEF FNE(X)=OP+NS*(5280/60^2)
9200 DEF FNF(X)=(NS*2)/180*PI
9210 DEF FNG(X)=(RPM/19.5)/180*PI
9220 DEF FNH(X)=T+(1320-OP)/(NP-OP)-1
9250 CX=63360
9260 CIRC=4523.893421
9265 PI=3.1415926
9270 C1=-1.8953E-9
9280 C2=1.02157E-5
9290 C3=.015752
9300 BT=0:GR=3:CL=5.176
9400 PMODE3,5:PCLS:COLOR4,1
9430 LINE(0,15)-(255,15),PSET
9440 GET(0,8)-(9,15),BA,G
9450 XC=0:YC=0
9460 FOR CH=1TO12
9470 FOR CY=0TO7
9480 READ C
9490 DV=256:FOR XX=XC TO XC+9 STEP 2
9500 PX=FIX(C/DV)+1
9510 PSET(XX,CY,PX):C=C-((PX-1)*DV):DV=DV/4

```

```

9520 NEXT XX
9530 NEXT CY
9540 IF CH=3 THEN GET(0,0)-(29,7) MA,G
9550 IF CH=6 THEN GET(30,0)-(59,7) RA,G
9560 IF CH=7 THEN GET(60,0)-(69,7) DA,G: RETU
RN
9570 XC=XC+10: NEXT CH
9600 DATA 682,682,425,357,409,425,425,682,682
,682,598,614,598,618,618,682,682,682,410,410,
346,410,410,682
9610 DATA 682,682,345,409,345,361,409,682,682
,682,358,613,358,678,678,682,682,682,666,602,
410,666,666,682
9620 DATA 0,0,0,0,404,662,640,1023
9990 PMODE3,5: SCREEN1,0:GOTO 9990

```

Defend

Yet again the Earth is under attack from the Alien hordes, and as always the fate of humanity is in your hands. This time the aggressors are out to capture humanoids for their debauched cloning experiments, and the ever cooperative humans have gathered on the (randomly generated) hillsides to watch the action. So it's all down to you. You must shoot down the Alien craft with your powerful laser before it can lay its hands on the populace. Failing that, you have a chance of shooting it down once it has the human in tow, but be warned: if the Alien craft is too high, the humanoid loses its life and you lose points. And never forget— Aliens invariably bite back!

```

100 'DEFEND BY PAUL STANLEY           REWRITE
N FOR THE DRAGON 32      BY E.A.JACKSON
105 CLEAR 500: DIM B(39),R(32),S(32),T(24),U(2
4),V(24),W(48),X(48),H1(255),V1(255)
110 GOSUB 395
115 H1=0:GOSUB 645:GOSUB425:GOSUB 410
120 SCORE=0:J1=0:J2=0:GOSUB575
125 D1=100:D2=46:SCREEN 1,0
130 TIMER=1000:CAP=0:GOSUB 510:GOSUB 485:GOSU
B535:GOSUB555
135 MARK=0
140 A1=220:A2=28
145 GOTO 280
150 IF MARK=99 THEN 355
155 IF CAP=3 OR FUEL =0 THEN 440
160 IF MARK=99 THEN 135
165 GOTO 145
170 'MOVE DEFENDER 1
175 IF D$=CHR$(8) THEN 225
180 COLOR 2,3:A$=INKEY$
185 IF A$=CHR$(32) THEN 210
190 IF A$=CHR$(10) OR A$=CHR$(94) THEN B$=A$
195 IF A$=CHR$(8) THEN D$=A$:GOTO 170
200 D2=D2+8*(B$=CHR$(94) AND D2>26)-8*(B$=CHR
$(10) AND D2<60)
205 PUT(D1,D2)-(D1+39,D2+32),R,PSET:RETURN
210 LINE(D1+39,D2+16)-(220,D2+46),PSET:LINE(D

```

```

1+39,D2+16)-(220,D2+30),PSET:LINE(D1+39,D2+16
)-(220,D2+46),PRESET:LINE(D1+39,D2+16)-(220,D
2+30),PRESET:SOUND 125,1:TIMER=TIMER+100
215 IF A1+16>D1+39 AND A1<200 AND A2+15>D2 AN
D A2+15<D2+30 THEN SCORE =SCORE+25:TIMER=TIME
R-500:GOSUB535
220 GOSUB485:RETURN
225 'DEFENDER 2
230 IF B$=CHR$(9) THEN 170
235 COLOR 2,3:A$=INKEY$
240 IF A$=CHR$(32) THEN 265
245 IF A$=CHR$(9) THEN D$=A$:GOTO 170
250 IF A$=CHR$(10) OR A$=CHR$(94) THEN B$=A$
255 D2=D2+8*(B$=CHR$(94) AND D2>26)-8*(B$=CHR
$(10) AND D2<60)
260 PUT(D1,D2)-(D1+39,D2+32),S,PSET:RETURN
265 LINE(D1,D2+16)-(35,D2+46),PSET:LINE(D1,D2
+16)-(35,D2+30),PSET:LINE(D1,D2+16)-(35,D2+46
),PRESET:LINE(D1,D2+16)-(35,D2+30),PRESET:SOU
ND 125,1:TIMER=TIMER+100
270 IF A1+30<D1 AND A2>D2+20 AND A2+15<D2+46
THEN SCORE=SCORE+25:HIT=1:TIMER=TIMER-500:GOS
UB535:GOTO 360
275 GOSUB485:RETURN
280 'ANDROID 1
285 COLOR 1,3
290 IF A1<1 THEN RETURN
295 A1=A1-10:A2=A2+8:IF A2>90 THEN A2=90
300 PUT(A1,A2)-(A1+27,A2+23),T,PSET
305 GOSUB 170
310 IF A2>50 AND A2<70 THEN 320
315 IF H1(A1)=1 THEN 335ELSE 325
320 LINE(A1,A2+8)-(A1-70,A2+8),PSET:LINE(A1,
A2+8)-(A1-70,A2+8),PRESET:SOUND 120,1:IF ABS(
D2-(A2-8))<4 THEN TIMER=TIMER+750:GOSUB485
325 IF A2=90 THEN LINE(A1+8,A2)-(A1+8,A2-30),PSE
T:LINE(A1+8,A2)-(A1+8,A2-30),PRESET:SOUND 170
,1:IF PPOINT(A1+8,A2-34)<>3 THEN TIMER=TIMER+
200:GOSUB485
330 GOTO 150
335 IF A2>V1(A1)-45 THEN 345
340 A2=A2+4:IF A2<V1(A1) THEN PUT(A1,A2)-(A1+
27,A2+23),T,PSET:GOTO 335
345 H2=A1:H3=V1(A1)-19:PUT(A1,A2-4)-(A1+31,A

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2+44),W,PSET:MARK=99:H1(A1)=0:GOTO 150
350 GOTO 340
355 'ANDROID2
360 IF HIT=1 THEN PUT(A1,A2)-(A1+31,A2+48),X,
PSET:PUT(H2,H3)-(H2+19,H3+19),V,PSET:HIT=0:H1
(H2)=1:CAP=CAP-1:MARK=99:GOSUB485:GOSUB510:GO
TO160
365 A1=A1-10:IF A1<1 THEN A1=1:GOTO 390
370 LINE(A1+26,A2+4)-(A1+56,A2-38),PSET:LINE(
A1+26,A2+4)-(A1+56,A2-38),PRESET:SOUND 170,1:
IF D2>26 AND A1>50 AND A1<80 THEN TIMER=TIMER+
200:GOSUB485
375 GOSUB 170
380 A2=A2-8:IF A2<90 THEN A2=90
385 PUT(A1,A2)-(A1+31,A2+48),W,PSET:GOTO365
390 PUT(A1,A2)-(A1+31,A2+48),X,PSET:CAP=CAP+1
:GOSUB 510:GOSUB485:GOTO135
395 'INSTRUCTIONS
400 CLS:PRINT@12,"DEFEND":PRINT "A FLEET OF A
LIENS HAVE BROKEN THROUGH EARTH'S OUTER DEF
ENCES. ONE BY ONE THEY FLY IN WITH THE SOLE I
NTENT OF PICKING UP HUMANOIDS WHO WHO H
AVE CLIMBED TO THE HILL TOPS TO SEE WHAT IS
HAPPENING.":PRINT:
405 PRINT"YOUR JOB IS TO PREVENT THE FLEETFRO
M CAPTURING THE HUMANOIDS.":PRINT "YOUR ONLY
WEAPON IS A LASER SHIPWITH ONLY A SHORT RANGE
AND LIMITED MANOUVRABILITY":RETURN
410 CLS:PRINT"USE THE ARROW KEYS FOR DIRECTIO
NAND THE SPACEBAR TO FIRE.":PRINT "THE GAME W
ILL END IF THREE HUMANOIDS ARE CAPTURED
OR IF YOURUN OUT OF FUEL."
415 GOSUB 425:RETURN
420 GOTO 420
425 PRINT@484,"PRESS SPACEBAR";
430 A$=INKEY$:IF A$(<)CHR$(32) THEN 430
435 RETURN
440 'END PLAY
445 DRAW "C2;BM86,100"+ST$(5):FOR T=1TO1000:N
EXT T
450 B$=INKEY$
455 DRAW "C2;BM60,120"+ST$(6)
460 DRAW "C2;BM116,120"+ST$(7)
465 GOSUB485:GOSUB510:GOSUB535:GOSUB555

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```

470 A$=INKEY$:IF A$<>CHR$(32) THEN 470
475 IF SCORE>HI THEN HI=SCORE
480 GOTO 120
485 'RECORD FUEL
T A:GET(4,0)-(27,35),U,G:PCLS3
675 FOR A=0T031:READ B(A):NEXTA:FOR A=0T015:C
=1601+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEX
T A:GET(4,0)-(23,19),V,G:PCLS3
680 PUT(4,0)-(31,23),T,PSET:FOR A=0T015:C=233
7+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEXT A:
GET(0,0)-(31,48),W,G:PCLS3
685 GET(0,0)-(31,48),X,G:RETURN
695 'TEXT GRAPHICS
700 DATA"BR2;NU1;R6;U4;L6;U4;R6;ND1;BD8;BR10;
NU1;L6;U6;R6;ND1;BD6;BR4;U6;R6;D6;NL6;BR4;U6;
R4;ND1;BD6;BR4;BR6;NU1;L6;U3;NR6;U3;R6;D3;BD3
;BR4","U4;NU4;R6;NU4;D4;BR4;U4;BU2;U1;BD7;BR8
"
705 DATA"BR4;NU1;L6;U6;R6;ND1;BD6;BR4;NU3;R6;
U3;NL6;U3;L6;ND1;BD6;BR10;ND4;U6;R6;D6;NL6;BR
4;BR4;NU1;L4;U6;NR2;NU4;BR4;BD6;BR4;NU6;R6;NU
6;BR4;U6;R4;ND1;BD6;BR4;BU3;R6;U3;L6;D6;R6;NU
1;BR4;NU6;R6;U6;NL6;U4;BD10;BR4"
710 DATA "BR4;U6;NR4;U4;R6;ND1;BD10;BR2;NU6;R
6;NU6;BR4;BU3;R6;U3;L6;D6;R6;NU1;BR4;NU10;R2"
715 DATA"NR4;U6;R6;D6;NL6;D3;L6;NU1;BR6;BU3;B
R4;NR4;NU3;R6;U3;NL6;U3;L6;D1;BD5;BR10;U6;R4;
ND6;R4;D6;BR4;U6;R6;D3;L6;D3;R6;NU1;BR10;NR6;
U6;R6;D6;BR6;NU2;R2;U2;L4;U4;BR6;D4;BD2;BR10;
NU1;L6;U6;R6;D3;NL6;BD3;BR4;U6;R4;D1;BD5;BR4"
720 DATA "ND4;U6;R6;D6;L6;BR10;U6;R4;ND1;BD6;
BR4;BU3;R6;U3;L6;D6;R6;NU1;BR4;NU1;R6;U3;L6;U
3;R6;ND1;BD6;BR4;NU1;R6;U3;L6;U3;R6;ND1;BD5;B
R4"
725 DATA "NU1;R6;U3;L6;U3;R6;D1;BD5;BR4;ND4;U
6;R6;D6;L6;BR10;NU3;R6;U3;NL6;U3;L6;D1;BD5;BR
10;R6;U1;BU4;U1;L6;D6;BR10;U6;R6;D3;L6;D3;R6;
NU1;BR4;U6;NU4;R6;D6;L6;BR10;NU3;R6;U3;NL6;U3
;L6;D1;BD5;BR10;U6;R4;ND1;BD6;BR4"
730 DATA "U6;R6;D6;NL6;BR4","R2;NR2;U6;NL2;BD
6;BR6","BU5;U1;R6;D3;L6;D3;R6;NU1;BR4","NU1;R
6;U3;NL3;U3;L6;ND1;BR10;BD6","BR4;U2;NR2;NU2;
L4;U4;BR6;BD6;BR4","NU1;R6;U3;L6;U3;R6;BD6;BR

```

4", "EUS;R6;D3;L6;U6;R6;ND1;BD6;BR4"
735 DATA "EU5;U1;R6;D6;BR4", "R6;U3;NL6;U3;L6;
D6;BR10", "R6;U6;L6;D3;R6;BD3;BR4"
740 DATA 170,170,90,86,149,165,165,165,149,86
,90,170,170,170,170,149,127,95,87,85,85,85,85
,149,170,170,170,170,170,106,90,214,85,86,90,
106,170,170,170
745 DATA 170,170,170,169,165,151,85,149,165,1
69,170,170,170,170,170,86,252,245,213,85,85,8
5,85,86,170,170,170,170,165,149,90,106,106,10
6,90,149,165,170,170
750 DATA 165,149,157,157,165,165,85,101,101,1
01,101,154,154,154,154,151,106,90,218,218,106
,106,86,102,102,102,102,154,154,154,154,90
755 DATA 175,109,101,37,41,0,128,160,160,165,160
,160,162,162,162,150,234,230,102,98,162,2,10,
42,42,106,42,42,42,42,90
760 DATA 175,109,101,229,233,255,191,175,175,
160,165,165,166,166,166,150,234,230,102,110,1
74,254,250,234,234,42,106,106,106,106,106,90

Buzzy Bee

In Buzzy Bee you control a small bird which pecks away at the stems of a row of plants which are gradually growing towards the top of the screen. If any of the plants should reach the top a bee will drop down and take the nectar and you have lost the game.

The bird can be moved from left to right by using the arrow keys and the 'M' key will cause it to peck, although none of the stems can be pecked twice in succession.

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1 REM *BUZZY BEE, PAUL STANLEY
10 CLS:PCLEAR8:GOSUB 9000
15 GOSUB 9110
20 GOSUB 7000
30 HS=0
40 GOSUB 8000
50 TIMER=0
100 COLOR2,2:LINE(X1,Y1)-(X1+23,Y1+15),PSET,B
F
110 ON BD GOSUB 800,820:Y1=Y:X1=X
120 IF Y(T)=32 THEN GOSUB 1000
130 I$=INKEY$
140 IF I$=CHR$(9) THEN IF G<248 THEN G=G+16
150 IF I$=CHR$(8) THEN IF G>0 THEN G=G-16
160 COLOR3,1:MP=1:IF (G1-24)/48=INT((G1-24)/4
8) THEN COLOR1,3
165 IF(G-24)/48=INT((G-24)/48) THEN MP=2
170 LINE(G1,F1)-(G1+7,F1+7),PSET,BF
180 F1=F:G1=G:IF MP=1 THEN PUT(G,F)-(G+7,F+7)
,M1,PSET ELSE PUT(G,F)-(G+7,F+7),M,PSET
190 IF I$="M" THEN GOSUB 2000
200 T=RND(5):Y(T)=Y(T)-8:IF Y(T)<H2 AND Y(T)>
H1 THEN H2=Y(T):F4=T*8
210 IF Y(T)<H1 THEN H1=Y(T):F3=T*8
220 IF T/2=INT(T/2) THEN COLOR3,3:LINE(T*48-4
0,Y(T))-(T*48-1,Y(T)+31),PSET,BF:PUT(T*48-40,
Y(T))-(T*48-1,Y(T)+31),FL,AND ELSE PUT(T*48-4
0,Y(T))-(T*48-1,Y(T)+31),FL,PSET
230 IF X<F3*6-32 THEN BD=2:X=X+8:IF X>232 THE
N X=232

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240 IF X>F3*6-32 THEN BD=1:X=X-8:IF X<0 THEN
X=0
250 GOTO 100
800 PUT(X,Y)-(X+23,Y+15),BL,PSET
810 RETURN
820 PUT(X,Y)-(X+23,Y+15),BR,PSET
830 RETURN
840 PUT(D,I)-(D+15,I+7),WL,PSET
850 RETURN
860 PUT(D,I)-(D+15,I+7),WR,PSET
870 RETURN
1000 IF X=T*48-32 THEN 1500
1010 IF G=T*48-24 THEN COLOR1,3:LINE(G,F)-(G+
7,F+7),PSET,BF
1015 COLOR3,3
1020 FOR F=32 TO 136 STEP 8
1030 LINE(T*48-40,F)-(T*48-1,F+7),PSET,BF
1040 IF T/2=INT(T/2) THEN LINE(T*48-40,F+8)-(
T*48-1,F+39),PSET,BF:PUT(T*48-40,F+8)-(T*48-1
,F+39),FL,AND ELSE PUT(T*48-40,F+8)-(T*48-1,F
+39),FL,PSET
1050 SOUND F,1
1060 NEXT F
1070 F=168:Y(T)=144
1080 IF T*8=F3 THEN F3=F4:H1=H2
1100 IF G=T*48-24 THEN PUT(G,F)-(G+7,F+7),M,P
SET
1110 RETURN
1500 IF BD=1 THEN D=X+8 ELSE D=X
1510 TM=INT(TIMER/50)
1520 FOR I=0 TO 24 STEP 8:FOR G=1 TO 10
1530 PLAY A#:IF D=X THEN GOSUB 860:GOSUB 840
ELSE GOSUB 840:GOSUB 860
1540 NEXT G
1550 COLOR2,2:LINE(X,I)-(X+23,I+7),PSET,BF
1560 Y=I+8:ON BD GOSUB 800,820
1570 NEXT I
1580 FOR F=1 TO 1000:NEXT F
1590 CLS:PRINT@128,"YOU SURVIVED FOR";TM;" SE
CONDS."
1600 IF TM>HS THEN HS=TM:PRINT"WELL DONE THAT
'S THE LONGEST RECORDED TIME!":GOTO 1650
1610 PRINT,,"THE LONGEST RECORDED TIME STANDS
AT";HS;" SECONDS."

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1650 PRINT, "PRESS ANY KEY TO PLAY AGAIN.":I$
=INKEY$
1660 I$=INKEY$:IF I$="" THEN 1660
1670 CLS:GOTO 40
2000 SOUND100,1:IF (G-24)/48<>INT((G-24)/48)
THEN RETURN
2010 IF G=U*48-24 OR Y((G+24)/48)>120 THEN RE
TURN
2020 U=(G+24)/48:Y(U)=Y(U)+16
2030 COLOR3,2:LINE(U*48-40,Y(U)-16)-(U*48-1,Y
(U)-1):PSET,BF
2040 IF U/2=INT(U/2) THEN LINE(U*48-40,Y(U))-
(U*48-1,Y(U)+31),PSET,BF:PUT(U*48-40,Y(U))-(U
*48-1,Y(U)+31),FL,AND ELSE PUT(U*48-40,Y(U))-
(U*48-1,Y(U)+31),FL,PSET
2050 IF U*8=F3 THEN IF Y(U)>H2 THEN H1=H2:F3=
F4:F4=U:H2=Y(U)
2060 RETURN
7000 PMODE3,1:PCLS2:SCREEN1,0
7010 PCOPY 6 TO 1
7020 Y=64:Y1=64
7025 COLOR2,2
7030 FOR F=0 TO 232 STEP 8
7040 PLAY A$
7050 LINE(F-8,Y1)-(F+15,Y1+15),PSET,BF
7060 PUT(F,Y)-(F+23,Y+15),BR,PSET
7070 Y1=Y:PLAY A$
7080 IF RND(0)>.5 THEN Y=Y+8-(16 AND RND(0)>.
5)
7090 NEXT
7100 CLS:PRINT@8,"B U Z Z Y B E E"
7110 PRINT@30," @ PAUL STANLEY"
7120 PRINT:PRINT"A GIANT BEE LIKES NECTAR FRO
M GIANT FLOWERS, BUT YOU HAVE TO STOP IT B
ECAUSE YOU EAT NECTAR AS WELL!!"
7130 PRINT"CHOP CHUNKS OUT OF THE STALKS WI
TH M (BUT NOTE THAT ONCE A PIECE HAS BEEN
CUT OUT OF ONE STALK YOU MUST CUT THE NEXT
PIECE OUT OF A DIFFERENT STALK).";
7140 PRINT"MOVE WITH THE ARROW KEYS.":PRINT
7150 PRINT"PRESS ANY KEY TO START.":I$=INKEY$
7160 I$=INKEY$:IF I$="" THEN 7160
7170 CLS:RETURN
8000 S=1:COLOR1,3:PCLS3:SCREEN1,0:FOR X=0 TO

```

200 STEP 48

8005 Y(S)=144:S=S+1

8010 IF X=8 OR X=104 OR X=200 THEN PUT(X,144)
-(X+39,167),FL,PSET ELSE PUT(X,144)-(X+39,167)
,FL,AND

8020 LINE(X+16,168)-(X+23,175),PSET,BF

8030 NEXT:GET(8,144)-(47,175),FL,G

8040 COLOR2,3:LINE(0,0)-(255,31),PSET,BF

8500 Y=0:X=120:BD=1

8510 F=168:G=120

8520 Y1=Y:X1=X:F1=F:G1=G

8530 PUT(G,F)-(G+7,F+7),M,PSET

8540 H1=160:H2=160:F3=16:F4=32

8550 T=1:U=10:SOUND200,1:RETURN

9000 PMODE3,5:PCLS3:SCREEN1,0

9010 XC=0:YC=0:C=2:B=3

9020 FOR CH=1 TO 69

9030 FOR Y=YC TO YC+7

9040 READ CD:D=8:IF CD=99 THEN 9090 ELSE IF C
D=999 THEN READC,B:GOTO 9040

9050 FOR X=XC TO XC+7 STEP 2

9060 P=INT(CD/D)

9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D

9080 D=D/2:NEXT X,Y

9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8

9100 NEXT CH

9105 RETURN

9110 PMODE3,5:DIMFL(31):DIMM(1):DIMBL(9):DIMB
R(9):DIMY(5):DIMWL(3):DIMWR(3):DIMM1(1)

9115 A\$="T10001L8CC#DD#DC#C"

9120 GET(0,0)-(39,23),FL,G

9130 GET(40,0)-(63,15),BL,G

9140 GET(72,0)-(95,15),BR,G

9150 GET(64,0)-(71,7),M,G

9160 GET(48,0)-(63,7),WL,G

9170 GET(72,0)-(87,7),WR,G

9180 GET(64,8)-(71,15),M1,G

9200 COLOR2,3:FOR XC=0 TO 248 STEP 8

9210 FOR YC=48 TO 80 STEP 8

9220 READ CD:IF CD=1 THEN LINE(XC,YC)-(XC+7,Y
C+7),PSET,BF

9230 IF CD=99 THEN 9250

9240 NEXT YC

9250 NEXT XC
 9260 RETURN
 9300 DATA8,8,8,4,4,4,6,3
 9302 DATA99,99,99
 9308 DATA1,1,1,2,2,2,6,12
 9309 DATA999,3,2
 9310 DATA2,2,9,5,5,5,5,5
 9312 DATA1,2,4,5,5,5,6,7
 9314 DATA8,4,14,5,5,5,9,2
 9315 DATA999,2,1
 9316 DATA10,10,15,2,2,5,5,5
 9317 DATA999,3,2
 9318 DATA1,2,7,10,10,10,9,4
 9320 DATA8,4,2,10,10,10,6,14
 9322 DATA4,4,9,10,10,10,10,10
 9324 DATA99,99,99,99,99,99,99,99,99,99,
 99,99,99,99,99,99,99
 9325 DATA999,2,3
 9330 DATA3,3,3,3,3,3,3,3
 9332 DATA99,999,2,4
 9334 DATA11,10,10,2,5,5,10,5
 9336 DATA99,999,2,3
 9338 DATA12,12,12,12,12,12,12,12
 9339 DATA999,3,2
 9340 DATA7,13,9,15,15,7,3,1
 9342 DATA15,5,5,5,5,5,5,15
 9344 DATA8,4,6,7,7,6,4,8,999,2,3
 9345 DATA10,10,15,2,2,5,5,5,999,3,2
 9346 DATA1,2,6,14,14,6,2,1
 9348 DATA15,10,10,10,10,10,10,15
 9350 DATA14,11,9,15,15,14,12,8
 9352 DATA99,99,99,99,99,99,99,99,99,99,
 99,99,99,99,99,99,99
 9360 DATA999,2,3
 9362 DATA3,3,1,0,0,0,0,0
 9364 DATA15,15,15,15,0,0,0,0
 9366 DATA15,15,15,15,15,15,15,15
 9368 DATA15,15,15,15,0,0,0,0
 9370 DATA12,12,8,0,0,0,0,0
 9500 DATA1,1,1,1,1,1,0,1,0,1,1,1,1,1,1
 9510 DATA99,1,1,1,1,1,0,0,0,0,1,1,1,1,1,1
 9520 DATA99,1,0,0,1,1,1,0,1,0,1,1,1,0,0,1
 9530 DATA99,1,0,0,1,1,1,0,1,0,1,1,1,0,0,1
 9540 DATA99,1,1,1,0,0,0,0,1,1,1,1,1,1,0,0

9550 DATA99,99,1,1,1,1,1,1,0,1,0,1,1,1,1,1,1

9560 DATA99,1,1,1,1,1,1,0,1,0,1,1,0,1,0,1

9570 DATA99,1,1,1,1,1,1,0,1,0,1,1,0,1,0,1

Duel

The classic European confrontation, in a high resolution graphics forest! It's just you and your challenger—and all just because you didn't return his joysticks! At least you can shoot first . . . and third . . . if there is a 'third'!

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10 REM**D U E L**                                @1983
MICHAEL BEWS
15 DIM R(35,55)
20 SH=0:W=0:DS=0:OS=0:MY=20
25 GOTO600
30 PMODE3: SCREEN1,0:PCLS2: COLOR 1,2
40 CIRCLE(18,18),18,1,.85
45 PAINT(18,18)
50 COLOR4,2
55 LINE(14,32)-(22,55),PSET,BF
60 GET(0,0)-(35,55),R,G
100 FORT=1TO6:READX,Y
110 PUT(X,Y)-(X+35,Y+55),R,PSET
120 NEXTT
125 COLOR3,2
130 LINE(45,88)-(50,88),PSET
135 LINE(46,89)-(48,91),PSET,BF
140 PSET(47,92,3)
145 LINE(45,93)-(50,94),PSET,BF
148 LINE(46,94)-(48,97),PSET,BF
150 LINE(46,98)-(46,102),PSET:LINE(48,98)-(48,102),PSET
155 LINE(51,91)-(54,91),PSET
160 PSET(51,92,3):LINE(52,92)-(52,94),PSET
165 LINE(46,103)-(50,103),PSET
170 LINE(186,88)-(181,88),PSET
175 LINE(185,89)-(183,91),PSET,BF
180 PSET(184,92,3):LINE(186,93)-(180,94),PSET,BF
185 LINE(179,92)-(179,94),PSET:LINE(180,91)-(176,91),PSET:PSET(180,92,3)
190 PSET(179,94,3):PSET(180,94,3)
195 LINE(182,95)-(184,98),PSET,BF:LINE(184,99)-(184,103),PSET,BF:LINE(182,95)-(182,103),PS

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ET:PSET(180,103,3)
199 REM***MAIN ROUTINE
200 X$=INKEY$: IFX$="" THEN GOTO 200
210 IFX$("<"A" AND X$("<"Z" AND X$("<"N" THEN GO
TO 200
220 IF X$="A" THEN MY=MY-3: GOTO 300
230 IF X$="Z" THEN MY=MY+1: GOTO 300
240 IF X$("<"N" THENGOTO 200
245 SH=SH+1:PSET(96+2*SH,184,4)
250 LINE(55,91)-(175,91+MY),PSET
260 LINE(55,91)-(175,91+MY),PRESET
262 PLAYPR$
265 IFMY<1 AND MY>-1 THEN W=1:GOTO500
270 GOTO400
300 IFMY<-20 THEN MY=-20
310 IFMY>20 THEN MY=20
330 GOTO200
399 REM**OPONENT FIRE RTN
400 FORX=1TO500:NEXTX
405 Y=RND(50)-25
407 SH=SH+1
410 LINE(175,91)-(55,91+Y),PSET
420 PLAYPR$
425 LINE(175,91)-(55,91+Y),PRESET
430 IFY<3 AND Y>-3 THEN GOTO500
440 GOTO 200
499 REM**END OF GAME RTN
500 IF W=1 THEN DS=DS+1
510 IFW=0 THEN OS=OS+1
515 YA=178-(126*W):DRAW"BM"+STR$(YA)+"",112D8F
1R2E1NU4F1R3U9"
520 PLAYPW$
530 FORX=1TO1500:NEXTX
540 PMODE0:CLS4:PRINT"D U E L @1983 MICHAEL
BEWS ";
550 PRINT@96,"ROUNDS FIRED THIS GAME =" ;SH;
555 X$="YOUR OPPONENT FIRED THE WINNING SHO
T":IFW=1 THEN X$="CONGRATULATIONS! YOU FIRED
THE WINNING SHOT"
560 PRINT@160,X$;
570 PRINT@256,"TOTAL DUELS THIS SESSION =" ;DS
+OS
575 PRINT"OF WHICH YOU HAVE WON" ;DS; "AND
YOUR OPPONENT HAS WON" ;OS

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```
580 SH=0:W=0:MY=20
585 PRINT@488,"PRESS ANY KEY";
586 IF INKEY$<>" " THEN GOTO586
587 X$=INKEY$:IFX$="" THEN GOTO587
590 RESTORE:GOTO30
599 REM**INITIALISATION
600 CLS4:PRINT"D U E L @1983 MICHAEL BEWS";
610 PRINT@64,"YOU ARE THE DUELLIST ON THE LEF
T";
620 PRINT@128,"TAKE ALTERNATE SHOTS WITH YOUR
OPONENT UNTIL ONE SCORES A HIT ";
630 PRINT@224,"THE NUMBER OF ROUNDS FIRED IS
SHOWN BY THE INDICATOR AT THE BOTTO
M OF THE SCREEN ";
635 PRINT@352,"USE 'A' AND 'Z' KEYS TO AIM AN
D USE 'N' KEY TO FIRE - GOOD LUCK!";
640 PR$="V31T255L504BA#AG#"
645 PW$="V31L5T504A#03A#02A#01A#V1504A#03A#0
2A#01A#V804A#03A#02A#01A#V304A#03A#02A#01A#"
685 PRINT@488,"PRESS ANY KEY";
690 X$=INKEY$:IFX$="" THEN GOTO690
700 GOTO30
900 GOTO900
1000 DATA37,14,96,4,136,10,175,25,210,45,192,
100
```

Critical Path Analysis

Even if critical path analysis does not exactly excite you, this program can be used to find the longest or shortest route through a large maze. As dimensioned, it will handle a network of up to 50 nodes or junctions, each of which may have up to 5 outlets. The joining links can represent distance or time and the program will list all possible paths, or the longest path, or the one with most nodes. Loop back conditions are automatically rejected by the program. Draw your own network on paper and enter the separate link details in the DATA LINES 1000 onwards. Then press the keysit back and watch the computer display the path analysis.

```

10 REM**CRITICAL PATH ANALYSIS           @1983 M
MICHAEL BEWS           DRAGON TRANSLATION IAN HUGHES
15 CLEAR1000
20 DIMA$(50),B$(50),P$(30),P(30),T(30)
22 K=0:G$=STRING$(30,32):N$=G$
25 GOTO500
29 REM**READ NETWORK DATA
30 READE
40 FORX=1TOE
50 READA,B,C
70 B$(A)=B$(A)+CHR$(33+B):N$=LEFT$(N$,A-1)+CHR$(ASC(MID$(N$,A,1))+1)+MID$(N$,A+1):GOTO100
100 A$(A)=A$(A)+CHR$(33+C):GOTO120
120 NEXTX
122 PLAYPK$
125 READ A:IFA(>-1) THEN PRINT"CHECK SUM ERROR":STOP ELSE PRINT"DATA CHECK OK"
130 INPUT"ENTER START NODE":S=N=S:IF S<1 THEN GOTO130
140 INPUT"FINISH NODE (ENTER -1 TO SEE ALL POSSIBLE PATHS)":F:IF F>0 THEN N$=LEFT$(N$,F-1)+" "+MID$(N$,F+1)
142 IFF>E OR F=0 OR F=S OR F<-1 THEN GOTO140
143 PRINT@320,"":PRINT"":PRINT"":PRINT"":PRINT"":PRINT@320,"PLEASE WAIT FOR A FEW SECONDS"
145 P=1:H$=N$

```

```

150 P$(P)=CHR$(33+N)
160 IFMID$(N$,N,1)=" " THEN GOTO300
165 G$=LEFT$(G$,N-1)+"1"+MID$(G$,N+1)
170 H=ASC(MID$(H$,N,1))-32
175 IF MID$(G$,ASC(MID$(B$(N),H,1))-33,1)<>"
" THEN GOTO430
180 F$(P)=P$(P)+MID$(B$(N),H,1)
185 T(N)=P(P):P(P)=P(P)+ASC(MID$(A$(N),H,1))-
33
190 N=ASC(MID$(B$(N),H,1))-33
200 GOTO160
300 V=1:G=0
301 FORX=LEN(P$(P))TO1STEP-1
305 Y=ASC(MID$(P$(P),X,1))-33:G$=LEFT$(G$,Y-1)
)+" "+MID$(G$,Y+1)
307 IFG=0 AND MID$(P$(P),X,1)<>CHR$(F+33) AN
D F>0 THEN V=0
310 G=1: IFMID$(H$,Y,1)>"!" THEN GOTO400
320 NEXTX
325 IF V=0 THEN P$(P)="":P=P-1
327 PLAYPK$
330 J=0:U=0:R=0:TP=0:FOR X=1 TO P:IFX=15 THEN
PLAYPK$:INPUT"PRESS <ENTER> TO CONTINUE LIST
";X$
332 PRINTMID$(STR$(X),2);">";
335 FORY=1 TO LEN(P$(X))
340 PRINTMID$(STR$(ASC(MID$(P$(X),Y,1))-33),
2);", ";:NEXTY
350 PRINT" * ";MID$(STR$(P(X)),2): IF P(X)>J
THEN J=P(X):K=X
355 TP=TP+1:IFY-1>R THEN R=Y-1:U=X
360 NEXTX
362 F$=STR$(F):IFF<0 THEN F$="END"
365 PRINT$STRING$(32,163);:PRINT"NO.OF PATHS";
S;" TO ";F$;" =";TP
366 PRINT"PATH NO. ";MID$(STR$(U),2);" HAS MOS
T NODES (";MID$(STR$(R),2);")"
368 PRINT"PATH NO. ";MID$(STR$(K),2);" IS LONG
EST (";MID$(STR$(J),2);")"
370 GOTO370
400 N=ASC(MID$(P$(P),X,1))-33:H$=LEFT$(H$,N-1)
)+CHR$(ASC(MID$(H$,N,1))-1)+MID$(H$,N+1):Q$=P
$(P):P=P+V:P$(P)=LEFT$(P$(P-V),X):P(P)=T(N)
405 FORY=X+1 TOLEN(Q$):Z=ASC(MID$(Q$,Y,1))-33:

```

78 Critical Path Analysis

```

IF Z<1 THEN GOTO160
410 H$=LEFT$(H$,Z-1)+MID$(N$,Z,1)+MID$(H$,Z+1
)
415 NEXTY
420 GOTO160
430 PRINT"LOOP-BACK ERROR.":FORL=1TOLEN(P$(P)
)-1:IF ASC(MID$(P$(P),L,1))<34 THEN GOTO450
440 PRINTASC(MID$(P$(P),L,1))-33;"-";:NEXTL
450 PRINTASC(MID$(B$(N),H,1))-33:PRINT"PLEASE
CORRECT DATA ERROR.":GOTO330
499 STOP
500 REM**CPA EXPLANATION
505 PK$="T255V3105C04C03C02C01CV2505C04C03C02
C01CV2005C04C03C02C01CV1505C04C03C02C01CV1005
C04C03C02C01CV505C04C03C02C01CV105C04C03C02C0
1CCCC"
510 CLS:PRINT"CRITICAL PATH NETWORKS CAN BE
APPLIED WHEREVER SEVERAL INTER-DEPENDENT AC
TIVITIES NEED TO BE CARRIED OUT IN A SPECI
FIED SEQUENCE TO ACHIEVE AN OBJECTIVE WHICH
MIGHT BE THE COMPLETION OF A LARGE PROJECT
OR, SIMPLY, ";
520 PRINT"ARRIVAL AT A DISTANT METRO STA
TION BY THE SHORTEST POSSIBLE ROUTE. THIS PROG
RAM IS SUITABLE FOR EITHER CASE. A DEMONSTRAT
ION NETWORK IS SHOWN AND THE PROGRAM WILL TRACE
OUT ALL POSSIBLE PATHS, INDICATING LONGE
ST AND SHORTEST ROUTES."
530 PRINT" PRESS <ENTER>";:INPU
TX$
540 PLAYPK$
610 CLS
620 Z$=CHR$(140)+CHR$(140):ZZ$=Z$+Z$
650 PRINT@1,"(4)";Z$;"(5)";CHR$(140);Z$;"(6)
";Z$;"(11)";ZZ$;
660 PRINT@100,"(2)";CHR$(141);:PRINT@115,ZZ$;
ZZ$;CHR$(140);"(12)";:PRINT@143,"(7)";CHR$(13
7);:PRINT@160,"(1)";CHR$(140);ZZ$;"(3)";ZZ$;C
HR$(137);CHR$(139);CHR$(141);:PRINT@228,CHR$(
140);ZZ$;ZZ$;ZZ$;"(8)";Z$;ZZ$;"(10)";
665 PRINT@307,"3";CHR$(134);CHR$(140);"(9)";C
HR$(135);"2";:PRINT@209,CHR$(139);CHR$(141);
670 PRINT@33,CHR$(142);CHR$(135);:PRINT@65,CH
R$(133);:PRINT@97,CHR$(133);:PRINT@129,CHR$(1

```

```

33); " "; CHR$(137); " "; CHR$(139); CHR$(141); :
PRINT@111, CHR$(139); CHR$(141);
680 PRINT@38, CHR$(142); CHR$(135); : PRINT@69, CH
R$(142); CHR$(135); : PRINT@194, CHR$(134); : PRINT
@227, CHR$(134);
685 PRINT@45, CHR$(139); CHR$(141); : PRINT@59, CH
R$(134); : PRINT@78, CHR$(139); CHR$(141); : PRINT@
92, CHR$(134);
690 PRINT@158, CHR$(137); : PRINT@189, CHR$(137);
: PRINT@220, CHR$(137); : PRINT@281, CHR$(142); CHR
$(135); : PRINT@275, CHR$(134);
700 PRINT@36, "1"; : PRINT@42, "1"; : PRINT@49, "7";
: PRINT@57, "3"; : PRINT@64, "4"; : PRINT@71, "3"; : PR
INT@77, "2"; : PRINT@98, "2"; : PRINT@104, "1";
710 PRINT@151, "11"; : PRINT@197, "4"; : PRINT@205,
"5"; : PRINT@208, "0"; : PRINT@265, "11"; : PRINT@215
, "3"; : PRINT@190, "9";
720 PRINT@288, "NODES (EG. (1) ),"; : PRINT@320,
"REPRESENT THE COMMENCEMENT OF ACTIVITIES (
REPRESENTED BY THE JOINING LINES). LINE LENG
THS MIGHT REPRESENT DISTANCE OR TIME REQUIR
ED TO COMPLETE AN ACTIVITY";
724 PLAYPK$
725 PRINT@480, " PRESS <ENTER>"; :
X$=INKEY$: IFX$="" THEN GOTO725
730 PRINT@288, " "; : PRINT@320
, "": PRINT"": PRINT"": PRINT"": PRINT"": PRINT@320, ;
735 PRINT"ACTIVITIES PROGRESS IN THE DIR
ECTION ENTERED IN THE DATA STATEMENTS AND T
HE PROGRAM WILL REJECT A LOOP-BACK CONDITION.";
737 PLAYPK$
740 X$=INKEY$: IFX$="" THEN GOTO740
745 PRINT@320, "": PRINT"": PRINT"": PRINT"": PRIN
T"": PRINT@320, ;
750 PRINT"THE ZERO (0) LENGTH BETWEEN NOD
ES (7) AND (8) INDICATES A CONSTRAINT WHICH
PREVENTS ACTIVITIES AT (8) FROM COMMENCING
UNTIL (3)-(7) AND (6)-(7) ARE COMPLETE.";
760 X$=INKEY$: IFX$="" THEN GOTO760
770 PRINT@320, "": PRINT"": PRINT"": PRINT"": PRIN
T"": PRINTSTRING$(29, 32); : PRINT@320, ; : GOTO30

```


80 Critical Path Analysis

```
1000 REM**FLOW CHART DATA
1005 REM*NUMBER OF CONNECTING          LI
NES
1010 DATA 18
1015 REM** START NODE, FINISH NODE, LINE LENG
TH
1050 DATA 1,4,4
1060 DATA1,2,2
1070 DATA1,3,4
1080 DATA1,8,11
1090 DATA2,3,1
1100 DATA2,5,3
1110 DATA3,7,5
1120 DATA4,5,1
1130 DATA5,6,1
1140 DATA6,7,2
1150 DATA6,11,7
1160 DATA7,8,0
1170 DATA7,12,11
1180 DATA8,9,3
1190 DATA8,10,3
1200 DATA9,10,2
1210 DATA10,12,9
1220 DATA11,12,3
1230 DATA-1
```

Newmarket

This is another game with an equestrian flavour, except this time around you'll require the skills of a budding Lester Piggot. There are eight horses in the race, and two things will happen once you have decided which one you want to ride. Firstly, all the other horses will gallop off at the start, leaving you floundering at half speed. You soon discover that your mount is one of those creatures that only pulls its weight when the finishing line is in sight and then it will go twice as fast as anything else on four legs.

The second problem is that the other horses have a (cleverly computed) desire to crowd you out of the action. They will tend to close up in front of you and even steer straight at you from the side! There's no steward to protect you in this race, so aim for a gap in the field and hope you will be fast enough to avoid trouble. Any horses colliding with each other are flung randomly sideways and backwards, thus losing valuable speed. OK, you're under starter's orders . . .

```

1 REM NEWMARKET . . . . . WALWYN
2 REM HORSERACE GAME
8 PCLEAR8
10 GOSUB 9000
15 GOSUB 9110:C=0
20 SL=3
30 GOSUB 1000:CLS:GOSUB 4000
40 PMODE3,1:PCLS:SCREEN1,1
50 HP=2:FOR H=1 TO 7
60 P$=RIGHT$(STR$(H),1):XS=0:YS=16+24*(H-1):G
OSUB 9900
70 HX=16:HY=4S:ON H GOSUB 2000,2100,2200,2000
,2100,2200,2000
80 NEXT
85 COLOR4,1:FOR Y=0 TO 168 STEP 8:LINE(240,Y+
4)-(247,Y+7),PSET,BF:NEXT
90 P$="CONTROLS 7:UP 6:DOWN":XS=16:YS=0:GOS
UB 9900:P$="SELECT YOUR HORSE 1 TO 7":XS=0:YS
=176:GOSUB 9900
95 A$=INKEY$:IF A$="" THEN 95
97 IF A$<"1" OR A$>"7" THEN 95
98 N=VAL(A$):AC=(20-ABS(4-N))/34:

```

```

99 Y=16+24*(N-1):FOR Q=1 TO 8:PUT(16,Y)-(31,Y
+7),C1,NOT:SOUND100+2*Q,1:NEXT
100 K$=INKEY$:M=RND(7):IF M=N THEN 100
105 IF K$="6" OR K$="7" THEN M=N:GOTO 150
110 K$="7":IF RND(0)>.5 THEN K$="6"
120 IF X(M)>X(N)-16 THEN K$="7":IF Y(N)>Y(M)
THEN K$="6"
150 IF K$="7" THEN Y(M)=Y(M)-8:IF Y(M)<8 THEN
Y(M)=8
160 IF K$="6" THEN Y(M)=Y(M)+8:IF Y(M)>160 TH
EN Y(M)=160
165 X(M)=X(M)-8/SL
170 FOR I=1 TO 7
175 J=RND(4)
180 IF I<>N THEN 220
190 IF C=0 THEN J=J*AC:IF X(N)>72 THEN C=1
200 IF C=1 THEN COLOR3,1:FOR Y=0 TO 168 STEP
8:LINE(240,Y+4)-(243,Y+7),PSET,BF:NEXT Y:C=2
210 IF C=2 THEN J=J*2
220 X1(I)=X1(I)+8*J/SL:X(I)=8*INT(X1(I)/8):IF
X(I)>224 THEN X(I)=224
230 NEXT I
400 CR=0
410 FOR I=1 TO 7
420 FOR J=1 TO 7
430 IF I=J THEN 550
440 IF Y(I)<>Y(J) THEN 550
450 IF ABS(X(I)-X(J))>24 THEN 550
460 D=8:IF B(I)>B(J) THEN D=-8
470 Y(I)=Y(I)-D:Y(J)=Y(J)+D
480 IF Y(I)<8 THEN Y(I)=8
490 IF Y(I)>160 THEN Y(I)=160
500 IF Y(J)<8 THEN Y(J)=8
510 IF Y(J)>160 THEN Y(J)=160
520 X(J)=X(J)-8*(RND(5)/SL)
530 IF X(J)<16 THEN X(J)=16
540 CR=1
550 NEXT J,I
570 IF CR=1 THEN 400
600 COLOR1,1:FOR I=1 TO 7
610 LINE(A(I),B(I))-(A(I)+23,B(I)+7),PSET,BF
620 H=I:HP=2:IF X1(I)-INT(X1(I))>.5 THEN HP=1
630 HX=X(I):HY=Y(I):ON H GOSUB 2000,2100,2200
,2000,2100,2200,2000

```

```

640 IF X(I)=224 THEN 5000
650 A(I)=X(I):B(I)=Y(I)
660 NEXT I
670 GOTO 100
999 REM **** INSTRUCTIONS ****
1000 CLS
1010 PRINT@74,"newmarket":PRINT
1020 PRINT"IN THIS HORSE-RACE GAME, YOU"
1030 PRINT"RIDE ANY HORSE FROM 1 TO 7."
1040 PRINT"YOU MUST STEER A PATH AVOIDING"
1050 PRINT"THE OTHER HORSES SINCE ANY HORSE";
1060 PRINT"IN A COLLISION WITH ANOTHER WILL";
1070 PRINT"BE BLOCKED AND FORCED SIDWAYS"
1080 PRINT"AND BACKWARDS."
1085 PRINT:PRINT"PRESS ANY KEY TO SEE MORE..."
":A$=INKEY$
1087 A$=INKEY$:IF A$="" THEN 1087
1090 CLS:PRINT"'EASY', YOU MIGHT SAY..."
1100 PRINT"BUT YOUR HORSE IS A VERY S-L-O-W";
1110 PRINT"STARTER AND WILL ONLY RUN AT"
1120 PRINT"SPEED WHEN HE SEES THE FINISHING";
1130 PRINT"LINE TURN FROM ORANGE TO PURPLE.";
1140 PRINT"THIS OCCURS WHEN YOU HAVE RIDDEN";
1150 PRINT"A THIRD OF THE WAY DOWN THE"
1160 PRINT"TRACK, SO YOU WILL ALWAYS HAVE"
1170 PRINT"OTHER HORSES IN FRONT OF YOU."
1180 PRINT:PRINT"PRESS ANY KEY TO SEE MORE..."
":A$=INKEY$
1190 A$=INKEY$:IF A$="" THEN 1190
1200 CLS:PRINT"TO MAKE IT HARDER STILL, ALL"
1210 PRINT"HORSES WITHIN 20 FEET OF YOU"
1220 PRINT"WILL ATTEMPT TO BLOCK YOUR PATH"
1230 PRINT"OR CRASH INTO YOU!":PRINT
1240 PRINT"PUSH NUMBER 6 TO MOVE DOWN THE"
1250 PRINT"SCREEN AND NUMBER 7 TO MOVE UP"
1260 PRINT"THE SCREEN. beware: ANY COURSE"
1270 PRINT"ALTERATION WILL ALSO REDUCE YOUR";
1275 PRINT"SPEED!"
1280 PRINT:PRINTTAB(11);"GOOD LUCK!":PRINT:PR
INT"      PRESS ANY KEY TO START":A$=INKEY$
1290 A$=INKEY$:IF A$="" THEN 1290
1295 RETURN
2000 ON HP GOTO 2010,2020
2005 STOP

```

```

2010 PUT (HX, HY) - (HX+23, HY+7), C1, PSET: RETURN
2020 PUT (HX, HY) - (HX+15, HY+7), C2, PSET: RETURN
2100 ON HP GOTO 2110, 2120
2105 STOP
2110 PUT (HX, HY) - (HX+23, HY+7), M1, PSET: RETURN
2120 PUT (HX, HY) - (HX+15, HY+7), M2, PSET: RETURN
2200 ON HP GOTO 2210, 2220
2205 STOP
2210 PUT (HX, HY) - (HX+23, HY+7), O1, PSET: RETURN
2220 PUT (HX, HY) - (HX+15, HY+7), O2, PSET: RETURN
3999 REM ** SET UP SCREEN POSITIONS **
4000 FOR Q=1 TO 7
4010 A(Q)=16:X(Q)=16:X1(Q)=16
4020 B(Q)=Q*24-8:Y(Q)=B(Q)
4030 NEXT
4040 RETURN
4999 REM *** WINNER ***
5000 FOR Q=150 TO 200: SOUNDQ, 1: NEXT: IF I=N TH
EN 5030
5010 P$=" THE WINNER    HORSE NUMBER"+STR$(I)
+"    ":XS=0:YS=0:GOSUB 9900
5020 GOTO 5040
5030 P$="    YOU WON!  WELL DONE":YS=0:XS=16:
GOSUB 9900
5040 A$="    PRESS ANY KEY TO PLAY AGAIN":XS=0
:YS=176
5050 FOR Q=1 TO 30:P$=MID$(A$, Q, 1)
5060 PUT (X(I), Y(I)) - (X(I)+23, Y(I)+7), C1, NOT: S
OUND100+Q, 1
5070 GOSUB 9900
5080 NEXT Q:A$=INKEY$
5090 A$=INKEY$:IF A$="" THEN 5090
5095 RUN 15
9000 PMODE3, 5 : SCREEN1, 1:PCLS
9010 XC=0:YC=0:C=2:B=1
9020 FOR CH=1 TO 59
9030 FOR Y=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090 ELSE IF C
D=999 THEN READC,B:GOTO 9040
9050 FOR X=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y

```

```

9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH:RETURN
9110 PMODE3,5:DIMC1(4):DIMC2(3):DIMM1(4):DIMM
2(3):DIMO1(4):DIMO2(3):DIMN(1):DIMA(7):DIMB(7
):DIMX(7):DIMY(7):DIMX1(7)
9120 GET(96,8)-(119,15),C1,G
9130 GET(120,8)-(135,15),C2,G
9140 GET(136,8)-(159,15),M1,G
9150 GET(160,8)-(175,15),M2,G
9160 GET(176,8)-(199,15),O1,G
9170 GET(200,8)-(215,15),O2,G
9200 RETURN
9350 DATA0,1,3,5,5,5,3,1
9351 DATA4,4,4,6,5,5,5,6
9352 DATA2,5,5,4,4,5,5,2
9353 DATA1,1,1,3,5,5,5,3
9354 DATA2,5,5,6,4,5,5,2
9355 DATA2,5,4,4,6,4,4,4
9356 DATA3,5,5,7,1,1,5,2
9357 DATA4,4,4,6,5,5,5,5
9358 DATA2,0,2,2,2,2,2,1
9359 DATA1,1,1,1,1,1,5,2
9360 DATA4,4,5,6,6,5,5,5
9361 DATA4,4,4,4,4,4,4,3
9362 DATA5,5,7,5,5,5,5,5
9363 DATA4,7,5,5,5,5,5,5
9364 DATA2,5,5,5,5,5,5,2
9365 DATA4,7,5,5,6,4,4,4
9366 DATA6,10,10,6,2,2,3,2
9367 DATA4,6,5,4,4,4,4,4
9368 DATA2,5,4,7,1,1,5,2
9369 DATA4,6,4,4,4,4,5,2
9370 DATA5,5,5,5,5,5,5,2
9371 DATA5,5,5,5,5,5,5,2
9372 DATA5,5,5,5,5,7,5,5
9373 DATA5,5,5,2,2,5,5,5
9374 DATA5,5,5,5,3,1,1,6
9375 DATA7,1,1,2,2,4,4,7
9376 DATA99,99,99,99,99,99
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2

```

```

9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9491 DATA0,2,2,0,0,2,2,0
9492 DATA2,2,2,2,2,2,0,2
9500 DATA0,12,3,3,3,3,5,10
9502 DATA6,13,15,15,14,14,1,1
9504 DATA0,12,14,9,12,8,4,2
9506 DATA0,0,9,7,7,9,9,9
9508 DATA8,14,11,14,12,6,10,9
9510 DATA999,3,1
9512 DATA0,12,3,3,3,3,5,10
9514 DATA6,13,15,15,14,14,1,1
9516 DATA0,12,14,9,12,8,4,2
9518 DATA0,0,9,7,7,9,9,9
9520 DATA8,14,11,14,12,6,10,9
9522 DATA999,4,1
9524 DATA0,12,3,3,3,3,5,10
9526 DATA6,13,15,15,14,14,1,1
9528 DATA0,12,14,9,12,8,4,2
9530 DATA0,0,9,7,7,9,9,9
9532 DATA8,14,11,14,12,6,10,9
9900 IF P$="" THEN RETURN
9910 C$=LEFT$(P$,1):P$=RIGHT$(P$,LEN(P$)-1)
9915 IF C$="!" THEN C$="";
9920 IF ASC(C$)<60 AND ASC(C$)>47 THEN YG=8:X
G=8*(ASC(C$)-48) ELSE YG=0:XG=8*(ASC(C$)-65)
9930 IF C$=" " THEN COLOR1,1:LINE(XS,YS)-(XS+
7,YS+7),PSET,BF ELSE GOSUB 9950
9940 XS=XS+8:IF XS>248 THEN XS=0:YS=YS+12
9945 GOTO9900
9950 PMODE3,5:GET(XG,YG)-(XG+7,YG+7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN

```

Energy Field

You are at the edge of Time, closely pursued by a fleet of alien craft who are out to steal your ship's power. However you have a trick or two up your sleeve. You have the capacity to guard the ends of the time tunnel by setting up energy fields at each of the four open ends of the system. If you attempt to set up a force field anywhere other than at the ends of the time tunnel, the force will feedback and destroy you. Likewise, if you set up a field at the end of an unoccupied tunnel you are finished. Passive cruiser commanders who allow too many aliens through will find their power drained and the game over.

```

1 REM *** DRAGON VERSION ***
2 CLS: CLEAR500
3 D=0: X=0: Y=0: F7=0: F8=187: F9=239: FA=8: F6=0: F2
=0: F3=0: F4=0: F1=0: F2=0: F=0
4 REM *** ENERGY FIELDS ***
5 GOSUB9800
7 GOSUB9840
8 H=0
10 GOSUB8000
20 GOSUB9000
35 COLOR2,0: GET(X,Y)-(X+16,Y+8),R1,G: PUT(X,Y)
-(X+16,Y+8),R,AND
39 GOSUB9000: GOSUB9550: IFLI<=1 THEN GOTO 7000
40 P=P-0.1: G=1: ON RND(4) GOTO 100,200,300,40
0
60 F5=8: F6=16: K1=253: F3=X+F6: F4=Y+F5: K0=254: F
ORD=1TOP: COLOR2,0: PUT(X,Y)-(F3,F4),R1,PSET
65 IF PEEK(339)=K0 THEN X=X+FA: Y=Y+FA
70 IF PEEK(339)=K1 THEN X=X+FA: Y=Y-FA
75 IF Y<F7 THEN Y=F8
80 IF Y>F8 THEN Y=F7
87 IF X>F9 THEN X=FA
90 F3=X+F6: F4=Y+F5: GET(X,Y)-(F3,F4),R1,G: COLO
R 4,0: PUT(X,Y)-(F3,F4),R,AND
92 IF PEEK(338)=K0 AND G<>0 THEN GOSUB1000
93 NEXT D
95 RETURN
100 F2=49: A=1: F1=112: O=S: FOR F=1TO7STEP2
110 E$="BM128,"+STR$(F1)+";S"+CHR$(F2)+";" +A$

```



```

(1):DRAW"C1;" +E$
115 IF G<>0 THEN GOSUB60
120 PLAY"05;L150;" +CHR$(48+F)
130 DRAW"C0;" +E$:F1=F1+8:E$="BM128," +STR$(F1)
+";S"+CHR$(F2)+";"+A$(1):DRAW"C1;" +E$:F2=F2+1
135 IF G<>0 THENGOSUB60
140 PLAY"05;L150;" +CHR$(49+F)
150 DRAW"C0;" +E$
160 F1=F1+8:NEXT F
165 IFS<>0 THEN :DRAW"BM128,180;C2":GOSUB9700
:GOSUB9500:DRAW"BM128,180;C0":GOSUB9700
167 IF S=0 THEN LI=LI-0.2:
170 GOTO 39
200 A=2:F2=49:F1=96:O=S:FOR F=1 TO7STEP2
210 C$="BM128," +STR$(F1)+";S"+CHR$(F2)+";"+A$
(1):DRAW"C1;" +C$
215 IF G<>0 THEN GOSUB60
220 PLAY"05;L150;" +CHR$(48+F)
230 DRAW"C0;" +C$:F1=F1-8:C$="BM128," +STR$(F1)
+";S"+CHR$(F2)+";"+A$(1):DRAW"C1;" +C$:F2=F2+1
235 IF G<>0 THEN GOSUB60
240 PLAY"05;L150;" +CHR$(49+F)
250 DRAW"C0;" +C$
260 F1=F1-8:NEXT F
265 IF S<>0 THEN DRAW"BM128,29;C2":GOSUB9700:
GOSUB9500:DRAW"BM128,29;C0":GOSUB9700
267 IF S=0 THEN LI=LI-0.2
270 GOTO 39
300 A=3:F2=49:F1=120:O=S:FOR F=1TO9STEP2
310 C$="BM"+STR$(F1)+",104;S"+CHR$(F2)+";"+A$
(2):DRAW"C1;" +C$
315 IF G<>0 THEN GOSUB60
320 PLAY"04;L150;" +CHR$(48+F)
330 DRAW"C0;" +C$:F1=F1-8:C$="BM"+STR$(F1)+",1
04;S"+CHR$(F2)+";"+A$(2):DRAW"C1;" +C$:F2=F2+1
335 IF G<>0 THEN GOSUB60
340 PLAY"04;L150;" +CHR$(48+F)
350 DRAW"C0;" +C$
360 F1=F1-8:NEXT F
365 IF S<>0 THEN DRAW"BM23,104;C2":GOSUB9700:
GOSUB9500:DRAW"BM23,104;C0":GOSUB9700
367 IF S=0 THEN LI=LI-0.2
370 GOTO 39
400 A=4:F2=49:F1=136:O=S:FOR F=1 TO 9STEP2

```

```

410 C$="BM"+STR$(F1)+"",104;S"+CHR$(F2)+"";"+A$(
(2):DRAW"C1;"+C$
415 IF G<>0 THEN GOSUB60
420 PLAY"O4;L150;"+CHR$(48+F)
430 DRAW"C0;"+C$:F1=F1+8:C$="BM"+STR$(F1)+"",1
04;S"+CHR$(F2)+"";"+A$(2):DRAW"C1;"+C$:F2=F2+1
435 IF G<>0 THEN GOSUB60
440 PLAY"O4;L150;"+CHR$(48+F)
450 DRAW"C0;"+C$
460 F1=F1+8:NEXT F
465 IF S<>0 THEN DRAW"BM233,104;C2":GOSUB9700
:GOSUB9500:DRAW"BM233,104;C0":GOSUB9700
467 IF S=0 THEN LI=LI-0.2
470 GOTO 39

1000 IF X<45 THEN GOTO 1100
1010 IF X>86 AND X<170 THEN GOTO 1200
1020 IF X<=211 THEN GOTO 2000
1030 IF X>241 OR Y<31 OR Y>177 THEN GOTO 2000
1040 COLOR 1,0:LINE(212,32)-(239,176),PSET,BF
1050 GOSUB 9600
1060 COLOR 0,0:LINE(212,32)-(239,176),PSET,BF
1065 IF A<>4 THEN GOTO 2000
1070 S=S+20
1080 G=0
1090 GOSUB9000:RETURN
1100 IF X<15 OR Y<31 OR Y>177 THEN GOTO 2000
1110 COLOR 1,0:LINE(16,32)-(43,176),PSET,BF
1120 GOSUB9600
1130 COLOR 0,0:LINE(16,32)-(43,176),PSET,BF
1135 IF A<>3 THEN GOTO2000
1140 S=S+20
1150 G=0
1160 GOSUB9000:RETURN
1200 IF Y<80 THEN GOTO 1300
1210 IF Y<162 OR Y>187 THEN GOTO2000
1220 COLOR 1,0:LINE(88,163)-(169,186),PSET,BF
1230 GOSUB9600
1240 COLOR 0,0:LINE(88,163)-(169,186),PSET,BF
1245 IF A<>1 THEN GOTO 2000
1250 S=S+20
1260 G=0
1270 GOSUB9000:RETURN
1300 IF Y>46 OR Y<21 THEN GOTO 2000
1310 COLOR 1,0:LINE(88,22)-(169,45),PSET,BF

```

```

1320 GOSUB9600
1330 COLOR 0,0:LINE(88,22)-(169,45),PSET,BF
1335 IF A<>2 THEN GOTO 2000
1340 S=S+20
1350 G=0
1360 GOSUB9000:RETURN
2000 REM
2010 J=140:FOR R=Y+8 TO 191 STEP 8
2020 PUT(X,R-8)-(X+16,R),R1,PSET:GET(X,R)-(X+
16,R+8),R1,G:PUT(X,R)-(X+16,R+8),R,PRESET
2030 SOUND J,1:J=J+5
2050 NEXT R
2055 PUT(X,R-8)-(X+16,R),R1,PSET:GET(X,Y)-(X+
16,Y+8),R1,G:PUT(X,Y)-(X+16,Y+8),R,AND
2060 LI=LI-1:IF LI<=1 THEN GOTO 7000
2070 GOSUB9000:RETURN
7000 CLS 4:PRINT@7*32+11,"GAME OVER";:PRINT@9
*32+8,"YOU SCORED: ";S;:FOR I=1 TO 60:SOUND 6
0+I,1:NEXT I
7005 IF S>H THEN H=S
7100 PRINT@10*32+5,"HIGHEST SCORE: ";H;:PRINT
@15*32,"PRESS A KEY TO PLAY AGAIN";
7105 D$=INKEY$
7200 D$=INKEY$:IFD$="" THEN GOTO 7200
7300 SCREEN 1,0:PCLS0:X=8:Y=8:S=0:LI=8:P=5:RE
STORE:GOTO20
8000 DIMA$(4):RESTORE:FORF=1TO3:READ A$(F):NE
XTF
8005 PMODE3:PCLS0:SCREEN1,0:COLOR2,0
8010 DIM R(16,8):LINE(0,0)-(16,8),PSET:LINE(1
6,0)-(0,8),PSET:LINE(0,0)-(0,8),PSET:LINE(16,
0)-(16,8),PSET
8020 LINE(7,2)-(9,6),PSET,BF:GET(0,0)-(16,8),
R,G:PCLS0
8030 DIM R1(16,8),R2(12,12)
8040 X=8:Y=8
8050 DATA "U2;D4;U2;L2;R4;BR1;U1;H4;L3;G4;D3;
F4;R3;E4;U1"
8060 DATA"BR2;U3;L4;D4;R4;U1;BR2;U6;L8;D8;R8;
U2;"
8070 DATA"BD4;U8;BR4;BD4;L8;BU4;F8;BL8;E8"
8100 S=0:LI=8:P=5:RETURN
9000 COLOR 2,0:DRAW "S4;BM126,98;R4;D4;R4;D4;
L4;D4;L4;U4;L4;U4;R4;U4"

```

```

9010 DRAW"M-40,-77;R84;D25;L84;U25;BM86,46;M+
40,+52;R4"
9020 DRAW"M+40,-52;U25;M-40,+77"
9030 DRAW"BM126,110;M-40,+77;R84;U25;L84;D25;
U25;M+40,-52;R4;M+40,+52;D25;M-40,-77"
9040 DRAW"BM122,102;M-107,-71;R30;D146;L30;U1
46;R30;M+77,+71;D4;M-107,+71;R30;M+77,-71"
9050 DRAW"BM134,102;M+107,-71;L30;D146;R30;U1
46;L30;M-77,+71;D4;M+107,+71;L30;M-77,-71"
9060 RETURN
9500 PLAY"O1;L20;CEGEC":RETURN
9550 COLOR0,0:LINE(0,0)-(255,8),PSET,BF:J=0:F
OR I=1TO8
9560 IF I<=LI THEN COLOR 1,0:PUT(J,0)-(J+16,8
),R,PSET
9570 J=J+24:NEXT I: RETURN
9600 PLAY"O5;L100;CEDFEG":RETURN
9700 DRAW"S4;" +A*(3):RETURN
9800 CLS2:FOR F=0TO5:FOR G=0TOF:PRINT@F*32+2*
F,"ENERGY FIELDS";:PLAY"O3L30T2V31;" +CHR*(49+
G):NEXTG:NEXT F
9835 PRINT@7*32,"";:RETURN
9840 PRINT"GUARD THE TUBE WITH YOUR CRAFT":PR
INT"BY SETTING UP ENERGY SHIELDS AT THE 4 OPE
N ENDS OF THE SYSTEM."
9841 PRINT"ATTEMPTING TO PLACE A FIELD AT AN
Y PLACE OTHER THAN THE END WILL RESULT IN
YOUR DESTRUCTION"
9850 PRINT"SETTING ONE UP AT A TUBE NOT CO
NTAINING AN ENEMY WILL RESULT IN DESTRUCTION
ALSO."
9855 C*=INKEY$:IFC*=""THEN GOTO 9855
9856 CLS:GOSUB9800
9860 PRINT"MOVE WITH 1(UP) & 9(DOWN) BUT RE
MEMBER THAT YOU MOVE RIGHT AT THE SAME TIME A
ND GOING OFF THE SCREEN WILL PLACE YOU ON THE
OPPOSITE SIDE."
9870 PRINT"PLACE AN ENERGY FIELD AT A TUBE MO
UTH WITH 0. LETTING AN ENEMY PAST OR SELF-DE
STRUCTION RESULTSIN A POWER LOSS AND IF THIS
IS TOO GREAT THE GAME IS OVER.":INPUT"PRESS
ENTER TO START";C*:CLS
9880 RETURN

```

Bulls and Cows

Choosing a four digit number, the computer will respond to your guesses (or deductions, we hope) by displaying a bull when you get a correct digit in the the right place, and a cow when a number you input also occurs in the computers' number, but not in the same place. You should note that the computers number can have the same digit repeated.

You can choose the number of guesses you're allowed, making it more difficult for yourself as you get more practiced.

```

1 REM BULLS AND COWS @ ROBERT ERSKINE 1983
2 REM ***DRAGON VERSION***
10 PCLEAR8:GOSUB 9000
20 GOSUB 5000
30 DIMA(4):DIMH(4):DIMO(4)
100 YS=6:INPUT"HOW MANY GUESSES DO YOU WANT";
T
110 GOSUB 1000
120 CLS:PRINT"I HAVE CHOSEN MY 4 DIGIT NUMBER
.":FOR N=1 TO 1600:NEXT N
125 GOSUB 2000
130 FOR Q=1 TO T
135 PRINT@416," "
140 INPUT"YOU MAY ENTER A GUESS NOW      (4
DIGITS)";G#
145 IF LEN(G#)<>4 THEN PRINT@416,"REINPUT COR
RECTLY PLEASE.":FOR N=1 TO 1000:NEXT N:GOTO1
35
147 FOR F=1 TO 4:IF ASC(MID$(G#,F,1))<48 OR A
SC(MID$(G#,F,1))>57 THEN PRINT@416,"NUMBERS O
NLY PLEASE!":FOR N=1 TO 1000:NEXT N:GOTO135
148 NEXT F
150 SCREEN1,0:GOSUB 200
160 GOSUB 3000
170 A#=INKEY$:IF BL=4 THEN 180
175 IF Q=T THEN NEXT Q ELSE A#=INKEY$:IF A#<>
CHR$(13)THEN 175 ELSE NEXT Q
180 FOR N=1 TO 1800:NEXT N:GOSUB4000
190 PRINT@452,"PRESS ANY KEY TO RESTART":A#=I
NKEY$

```

```

195 A$=INKEY$:IF A$=""THEN 195 ELSE 100
200 BL=0:WH=0:FOR N=1 TO 4:A(N)=0:H(N)=0:NEXT
  N
210 FOR X=1 TO 4
215 A(X)=VAL(MID$(G$,X,1)):NEXT X
220 FOR X=1 TO 4
230 IF A(X)=O(X) THEN BL=BL+1:H(X)=1
240 NEXT X
250 FOR X=1 TO 4
260 FOR Y=1 TO 4
270 IF A(X)=O(Y) AND H(Y)=0 THEN WH=WH+1:H(Y)
  =1:GOTO 290
280 NEXT Y
290 NEXT X
300 NO=VAL(G$):XS=0:YS=YS+10:GOSUB 9900
310 RETURN
1000 REM choose
1010 FOR X=1 TO 4
1020 O(X)=RND(9)
1030 NEXT X
1040 RETURN
2000 PMODE3,1:PCLS3
2010 PMODE3,5:GET(80,0)-(135,7),L,G
2020 PMODE3,1:PUT(0,0)-(55,7),L,PSET
2030 PMODE3,5:GET(136,0)-(175,7),L,G
2040 PMODE3,1:PUT(104,0)-(143,7),L,PSET
2050 PMODE3,5:GET(176,0)-(207,7),L,G
2060 PMODE3,1:PUT(208,0)-(239,7),L,PSET
2070 RETURN
3000 IF BL=0 THEN 3070
3010 F=104:G=YS
3020 FOR X=1 TO BL
3030 PUT(F,G)-(F+7,G+7),B,PSET
3040 SOUND150,1
3050 F=F+8
3060 NEXT X
3070 IF WH=0 THEN 3130
3080 F=208:G=YS
3090 FOR X=1 TO WH
3100 PUT(F,G)-(F+7,G+7),C,PSET
3110 SOUND150,1:F=F+8
3120 NEXT X
3130 RETURN
4000 IF BL<4 THEN 4030

```

```

4010 CLS:PRINT@128,"YOU ARE CORRECT",,"THE NU
MBER I CHOSE WAS ";
4020 GOTO 4040
4030 CLS:PRINT"THAT WAS NOT VERY GOOD. ,"THE
NUMBER I CHOSE WAS ";
4040 FOR X=1 TO 4
4050 PRINT RIGHT$(STR$(O(X)),1);
4060 NEXT X
4070 PRINT,"AND YOU GUESSED      ";
4080 FOR X=1 TO 4
4090 PRINT RIGHT$(STR$(A(X)),1);
4100 NEXT X
4110 PRINT
4120 RETURN
5000 CLS:PRINT@40,"BULLS AND COWS":PRINT
5010 PRINT"THE OBJECT OF BULLS AND COWS IS TO
GUESS A FOUR DIGIT NUMBER CHOSEN BY THE C
OMPUTER. AFTER EACH GUESS THE COMPUTER WILL
GIVE YOU CLUES; EACH BULL      INDICATES
A CORRECT DIGIT IN THECORRECT POSITION AND E
ACH COW"
5020 PRINT"INDICATES A CORRECT DIGIT IN THEWR
ONG POSITION.",,"WHEN YOU ARE READY FOR YOUR
NEXTGUESS, HIT 'ENTER'"
5030 PRINT@484,"PRESS ANY KEY TO START":A$=IN
KEY$
5040 A$=INKEY$:IF A$="" THEN 5040
5050 RETURN
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 28:IF CH=28 THEN READ C,B
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(11):DIMB(1):DIMC(1)
9120 GET(208,0)-(215,7),B,G
9130 GET(216,0)-(223,7),C,G
9160 RETURN

```

```

9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA3,5,5,7,1,1,5,2
9502 DATA0,5,5,5,5,5,5,2
9504 DATA2,5,5,6,4,5,5,2
9506 DATA2,5,4,7,1,1,5,2
9508 DATA2,5,4,7,1,1,5,2
9510 DATA2,5,5,6,4,5,5,2
9512 DATA2,5,4,7,1,1,5,2
9514 DATA4,4,4,6,5,5,5,6
9516 DATA0,5,5,5,5,5,5,2
9518 DATA4,4,4,4,4,4,4,3
9520 DATA4,4,4,4,4,4,4,3
9522 DATA2,5,4,7,1,1,5,2
9524 DATA2,5,5,4,4,5,5,2
9526 DATA2,5,5,5,5,5,5,2
9528 DATA5,5,5,5,5,5,7,5
9530 DATA2,5,4,7,1,1,5,2
9532 DATA0,0,2,1,14,6,5,5
9534 DATA1,3,0,0,0,1,14,6,5,5
9900 COLOR3,3:LINE(XS,YS)-(XS+27,YS+7),PSET,B
F:N$=STR$(NO):FOR Z=2 TO LEN(N$)
9910 NO=VAL(MID$(N$,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN

```


Flying Geese

It's time to don your tweeds, grease up your shotgun and head for the marshes. The geese are back from the north and the freezer is empty. Don't worry about the corpses - your faithful hound will deal with those after the game is over. Just blast away with your shooter and notch up a handsome tally.

```

1 REM *** DRAGON VERSION ***
10 REM ** FLYING GEESE @ MICHAEL BEWS 1983
15 YS=0:DIMG(4):DIMD(4):DIMH(4)
20 PCLEAR8:GOSUB 5800:GOTO 1000
25 REM **FLYING/SHOOT ROUTINE
30 FOR X=1 TO 4
40 D(X)=EI-8*X+8*(SGN(8-TW*INT(RND(0))*(TW/8)))
50 COLOR3,3:LINE(G(X)-8,H(X))-(G(X)+7,H(X)+7)
,PSET,BF
60 FOR Z=1 TO 4
70 F=-F:GS=GS+F:ON GS GOSUB 500,550
80 NEXT Z
100 A$=INKEY$:IF A$<>"A" THEN 300
110 FOR Y=1 TO 2
120 COLORY+1,3
130 LINE(18,141)-(22,138),PSET
140 DRAW"UBF8L8":PAINT(24,134),Y+1,Y+1
150 NEXT Y
160 SH=SH+1:NO=SH:XS=48:GOSUB9900
170 IF G(X)<>88 AND G(X)<>96 THEN 300
180 COLOR3,3:B=B+1:LINE(G(X),D(X))-(G(X)+23,D
(X)+7),PSET,BF
190 NO=B:XS=238:GOSUB 9900
200 G(X)=-8:H(X)=8:COLOR3,3
210 FOR Y=D(X) TO 144 STEP 16
220 LINE(112,Y-16)-(119,Y+7),PSET,BF
230 PUT(112,Y)-(119,Y+23),DG,PSET
240 NEXT Y
250 LINE(112,144)-(119,167),PSET,BF
300 COLOR3,3:H(X)=D(X):G(X)=G(X)+TW:IF G(X)>T
N THEN LINE(G(X)-8,H(X))-(G(X)+7,H(X)+7),PSET
,BF:G(X)=8

```

```

310 NEXT X:IF SH>99 THEN 3000
320 GOTO 30
500 PUT(G(X),D(X))-(G(X)+23,D(X)+7),GU,PSET:R
ETURN
550 PUT(G(X),D(X))-(G(X)+23,D(X)+7),GD,PSET:R
ETURN
1000 FOR X=1 TO 4:H(X)=8:G(X)=8*(X*5-4):NEXT
1010 PMODE3,1:PCLS3:SCREEN1,0
1020 FOR X=0 TO 160 STEP 160
1030 LINE(X,160)-(X+95,175),PSET,BF
1040 NEXT:COLOR3,3
1050 FOR X=96 TO 152 STEP 8
1060 PUT(X,168)-(X+7,175),P,PSET:NEXT
1065 XS=168:XF=184
1070 FOR Y=104 TO 136 STEP 8
1080 FOR X=XS TO XF STEP 8
1090 PUT(X,Y)-(X+7,Y+7),T,PSET
1100 NEXT X:IF Y<120 THEN XS=XS-8:XF=XF+8
1110 NEXT Y
1120 LINE(168,136)-(191,143),PSET,BF
1130 COLOR1,3:
1140 LINE(176,136)-(183,159),PSET,BF:COLOR3,3
1150 PUT(8,144)-(15,159),M,PSET
1160 PMODE3,5:GET(80,0)-(127,7),L,G
1170 PMODE3,1:PUT(0,0)-(47,7),L,PSET
1180 PMODE3,5:GET(128,0)-(215,7),L,G
1190 PMODE3,1:PUT(80,0)-(167,7),L,PSET
1200 PMODE3,5:GET(216,0)-(255,7),L,G
1210 PMODE3,1:PUT(190,0)-(229,7),L,PSET
1220 PMODE3,5:GET(0,8)-(7,15),L,G
1230 PMODE3,1:PUT(230,0)-(237,7),L,PSET
1300 GOTO30
2999 REM END OF GAME
3000 CLS:IF B>TT THEN TT=B
3010 PRINT@298,"GAME OVER":PRINT@356,"SCORE";
B;" IN 100 SHOTS"
3020 PRINT@424,"HIGHEST SCORE";TT
3025 PRINT:PRINT " ";
3030 INPUT"PRESS ENTER FOR NEXT GAME";X$:SH=0
:B=0:GOTO 1000
5799 REM **INITIALISATION***
5800 CLS
5810 FOR X=1 TO 4:D(X)=0:G(X)=0:H(X)=0:NEXT
5820 SX=48:HY=240:TT=0:SH=0:NI=152:EN=144:TF=

```

```

141:SI=128:FO=112:EI=64:F=-1:TW=16:TH=172:FR=
4:TN=232:GS=1
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 45:IF CH>43 THEN READ C,B
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(17):DIMM(3):DIMG(1):DIMP(1)
:DIMGU(4):DIMGD(4):DIMDG(4)
9120 GET(8,8)-(31,15),GU,G
9130 GET(32,8)-(55,15),GD,G
9140 GET(88,8)-(95,15),T,G
9150 GET(96,8)-(103,15),P,G
9160 GET(56,8)-(63,15),DG,G
9165 PUT(0,40)-(7,47),DG,PSET
9170 GET(64,8)-(71,15),DG,G
9175 PUT(0,48)-(7,55),DG,PSET
9180 GET(0,32)-(7,55),DG,G
9190 GET(72,8)-(79,15),M,G
9195 PUT(0,40)-(7,47),M,PSET
9200 GET(80,8)-(87,15),M,G
9205 PUT(0,48)-(7,55),M,PSET
9210 GET(0,40)-(7,55),M,G
9220 B=0
9300 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA2,5,4,7,1,1,5,2
9502 DATA4,4,4,6,5,5,5,5

```

```

9504 DATA2,5,5,5,5,5,5,2
9506 DATA4,6,4,4,4,4,4,5,2
9508 DATA2,5,4,7,1,1,5,2
9510 DATA0,2,2,0,0,2,2,0
9512 DATA2,4,4,4,4,4,4,2
9514 DATA6,9,9,15,9,9,9,9
9516 DATA4,2,2,2,2,2,2,4
9518 DATA99,4,6,4,4,4,4,5,2
9520 DATA2,5,5,5,5,5,5,2
9522 DATA99,2,5,4,4,6,4,4,4
9524 DATA2,0,2,2,2,2,2,1
9526 DATA4,6,5,4,4,4,4,4
9528 DATA2,5,5,6,4,5,5,2
9530 DATA2,5,4,7,1,1,5,2
9532 DATA2,5,5,4,4,5,5,2
9534 DATA2,5,5,5,5,5,5,2
9536 DATA4,6,5,4,4,4,4,4
9538 DATA2,5,5,6,4,5,5,2
9540 DATA0,2,2,0,0,2,2,0
9542 DATA99,0,2,2,3,15,4,0,0
9544 DATA0,0,14,10,15,8,0,0
9546 DATA99,0,0,0,0,15,7,3,1
9548 DATA0,0,14,10,15,8,0,0
9550 DATA10,10,4,5,5,7,6,6
9552 DATA6,6,6,7,5,6,4,
9554 DATA13,13,14,10,13,15,12,12
9556 DATA12,10,10,10,10,10,10,10
9560 DATA2,1,5,10,5,10,5,10,5,10
9562 DATA3,1,5,10,5,10,5,10,5,10
9900 COLOR3,3:LINE(XS,YS)-(XS+17,YS+7),PSET,B
F:N$=STR$(NO):FOR Z=2 TO LEN(N$)
9910 NO=VAL(MID$(N$,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN

```

Battleships

This is the traditional game of Battleships to be played against the computer. For anyone who hasn't come across the game before (does such a creature exist?), there are full instructions included in the listing. The winner is the first to destroy all six enemy ships, and there are levels of difficulty (1 or 2) which must be entered before battle can commence.

```

1 REM *** DRAGON VERSION ***
2 REM @ PAUL STANLEY
3 REM *** BATTLESHIPS ***
10 PCLEAR8:GOSUB 9000
12 GOSUB9110
15 GOSUB 7000
20 GOSUB 8000
50 Q=128:P=144
90 GET (P,Q)-(P+7,Q+7),N,G
100 PUT (P,Q)-(P+7,Q+7),CR,PSET
110 GOSUB 1500
130 PUT (P,Q)-(P+7,Q+7),N,PSET:A*=INKEY*
140 IF A*=CHR*(10) THEN Q=Q+8:IF Q=136 THEN Q
=40
150 IF A*=CHR*(94) THEN Q=Q-8:IF Q=32 THEN Q=
128
160 IF A*=CHR*(9) THEN P=P+8:IF P=240 THEN P=
144
170 IF A*=CHR*(8) THEN P=P-8:IF P=136 THEN P=2
32
180 IF A*=CHR*(13) THEN 200
185 GET (P,Q)-(P+7,Q+7),N,G
190 PUT (P,Q)-(P+7,Q+7),CR,PSET
195 SOUND50,1:GOTO 130
200 SOUND200,1:PUT (P,Q)-(P+7,Q+7),CR,PSET
210 FOR F=1 TO 6
220 IF H(F)=0 AND Q/8=F(F) THEN IF P/8=G(F) O
R P/8=G(F)+1 THEN 250
230 NEXT F
240 GOTO 300
250 H(F)=1:PX=8*G(F):PY=8*F(F):PUT (PX,PY)-(PX
+15,PY+7),S2,PSET:FOR G=1 TO 8:PUT (PX,PY)-(PX
+15,PY+7),S2,NOT:SOUND25,1:NEXT G

```

```

270 S1=S1+1:IF S1=6 THEN 2000
300 GOSUB1600
305 G=(INT(RND(0)*12/SK))*SK+1:F=RND(12)
320 IF MID$(C$(F),G,1)="X" THEN 305
330 C$(F)=LEFT$(C$(F),G-1)+"X"+RIGHT$(C$(F),LEN(C$(F))-G)
350 Y=8*(F+4):X=8*(G+3)
360 GOSUB 1000:Y=Y/8:X=X/8
370 FOR I=1 TO 6
380 IF Y=Y(I) THEN IF X=X(I) OR X=X(I)+1 THEN
400
385 NEXT I
390 GOTO 90
400 SOUND50,1:PX=8*X(I):PY=8*Y(I):PUT(PX,PY)-(PX+15,PY+7),S2,PSET:FOR N=1 TO 8:PUT(PX,PY)-(PX+15,PY+7),S2,NOT:SOUND25,1:NEXT N
410 C$(Y(I)-4)=LEFT$(C$(Y(I)-4),X(I)-4)+"XX"+RIGHT$(C$(Y(I)-4),LEN(C$(Y(I)-4))-X(I)+2)
420 S2=S2+1:IF S2=6 THEN 2100
450 GOTO 90
1000 GET(X-32,Y-8)-(X+39,Y+15),B,G
1010 PUT(X-32,Y-8)-(X+39,Y+15),B1,PSET
1020 SOUND200,1:PUT(X-32,Y-8)-(X+39,Y+15),B,PSET
1030 GET(X-24,Y-8)-(X+39,Y+15),B,G
1040 PUT(X-24,Y-8)-(X+39,Y+15),B2,PSET
1050 SOUND180,1:PUT(X-24,Y-8)-(X+39,Y+15),B,PSET
1060 GET(X-24,Y-8)-(X+23,Y+7),B,G
1070 PUT(X-24,Y-8)-(X+23,Y+7),B3,PSET
1080 SOUND160,1:PUT(X-24,Y-8)-(X+23,Y+7),B,PS
ET
1090 GET(X-16,Y)-(X+15,Y+7),B,G
1100 PUT(X-16,Y)-(X+15,Y+7),B4,PSET
1110 SOUND140,1:PUT(X-16,Y)-(X+15,Y+7),B,PSET
1120 GET(X-8,Y)-(X+15,Y+7),B,G
1130 PUT(X-8,Y)-(X+15,Y+7),B5,PSET
1140 SOUND120,1:PUT(X-8,Y)-(X+15,Y+7),B,PSET
1150 GET(X-8,Y)-(X+7,Y+7),B,G
1160 PUT(X-8,Y)-(X+7,Y+7),B6,PSET
1170 SOUND100,1:PUT(X-8,Y)-(X+7,Y+7),B,PSET
1180 GET(X,Y)-(X+7,Y+7),B,G
1190 PUT(X,Y)-(X+7,Y+7),B7,PSET
1200 SOUND80,1:PUT(X,Y)-(X+7,Y+7),B,PSET

```

```

1210 RETURN
1500 COLOR1,1:LINE(0,144)-(55,151),PSET,BF:PM
ODE4,5:GET(16,8)-(47,15),L,G
1510 PMODE4,1:PUT(0,144)-(31,151),L,PSET
1520 PMODE4,5:GET(120,8)-(151,15),L,G
1530 PMODE4,1:PUT(40,144)-(71,151),L,PSET
1540 RETURN
1600 COLOR1,1:LINE(0,144)-(71,151),PSET,BF
1610 PMODE4,5:GET(96,8)-(111,15),L,G
1620 PMODE4,1:PUT(0,144)-(15,151),L,PSET
1630 PMODE4,5:GET(120,8)-(151,15),L,G
1640 PMODE4,1:PUT(24,144)-(55,151),L,PSET
1650 RETURN
2000 FOR N=1 TO 1000:NEXT:CLS:PRINT@128,"WELL
  DONE! YOU DESTROYED ALL THECOMPUTER'S FLEET
  !!"
2050 GOTO 2200
2100 FOR N=1 TO 1000:NEXT:CLS:PRINT@128,"BAD
  LUCK! THE COMPUTER SUNK ALL YOUR SHIPS!!"
2200 PRINT@256,"PRESS ANY KEY TO PLAY AGAIN..
  .":A$=INKEY$
2210 A$=INKEY$:IF A$="" THEN 2210
2400 CLS:GOTO 20
7000 PMODE4,1:PCLS1:SCREEN1,1:FOR Y=160 TO 32
  STEP -32:X=216-Y:GOSUB 1000:NEXT
7005 A$="BATTLESHIPS  "
7010 CLS:PRINT@32,"*";FOR F=1 TO 5:FOR G=1 TO
  13:PRINTMID$(A$,G,1):SOUND100+G+F*3,1:NEXTG
,F
7020 PRINT@131,"@ P A U L S T A N L E Y"
7100 PRINT,,"PLAY THE COMPUTER AT BATTLESHIPS
  "
7110 PRINT,,"THE WINNER IS THE FIRST TO
  DESTROY ALL SIX ENEMY SHIPS."
7120 FOR N=1 TO 2500:NEXT N
7130 CLS:PRINT,,"WHEN THE NAUTICAL GRID APPEA
  RS, YOU CAN PLACE SIX BATTLESHIPS BYENTERING
  THEIR GRID REFERENCES (A LETTER FOLLOWED BY
  A NUMBER).THEN BATTLE COMMENCES!","MOVE YOUR
  SIGHTS WITH THE ARROW KEYS, AND FIRE WITH 'EN
  TER'"
7135 PRINT,,"PRESS ANY KEY TO START":A$=INKEY
  $
7140 A$=INKEY$:IF A$="" THEN 7140

```

```

7150 CLS:RETURN
8000 INPUT"ENTER SKILL LEVEL (1-EASY OR 2-
HARD) ";SK
8005 IF SK<>2 AND SK<>1 THEN 8000
8010 SCREEN1,1:PCLS1:COLOR0,1:FOR F=32 TO 144
STEP 112:FORX=F TO F+88 STEP 8:FOR Y=40 TO 1
28 STEP 8
8020 LINE(X,Y)-(X+8,Y+8),PSET,B
8030 NEXTY,X,F
8040 XG=112:YG=0:XP=16:YP=40
8050 FOR F=1 TO 12
8060 PMODE4,5:GET(XG,YG)-(XG+7,YG+7),N,G
8070 PMODE4,1:PUT(XP,YP)-(XP+7,YP+7),N,PSET
8080 XG=XG+8:YP=YP+8:NEXT
8090 PMODE4,5:GET(8,0)-(103,7),L,G:PMODE4,1:P
UT(32,24)-(127,31),L,PSET
8100 PMODE4,5:GET(16,8)-(95,15),L,G
8110 PMODE4,1:PUT(32,8)-(111,15),L,PSET
8120 PMODE4,5:GET(56,8)-(95,15),L,G
8130 PMODE4,1:PUT(184,8)-(223,15),L,PSET
8140 PMODE4,5:GET(96,8)-(111,15),L,G
8150 PMODE4,1:PUT(160,8)-(175,15),L,PSET
8160 FOR N=1 TO 2000:NEXT N
8170 A$="":FOR N=1 TO 6:Y(N)=0:X(N)=0:H(N)=0:
NEXT N
8180 FOR F=1 TO 6
8190 PRINT"PLACE BATTLESHIP NUMBER";F;
8200 INPUT A$
8210 IF LEFT$(A$,1)<"A" OR LEFT$(A$,1)>"L" TH
EN 8200
8220 Y=ASC(LEFT$(A$,1))-60:X=VAL(RIGHT$(A$,LE
N(A$)-1))+3
8230 IF X<4 OR X>14 THEN 8200
8240 FOR I=1 TO 6:IF Y=Y(I) THEN IF X=X(I)-1
OR X=X(I) OR X=X(I)+1 THEN 8200
8250 NEXT I
8260 SCREEN1,1:PUT(8*X,8*Y)-(8*X+15,8*Y+7),S1
,PSET
8270 Y(F)=Y:X(F)=X:SOUND150,1
8280 FOR N=1 TO 1000:NEXT N
8290 NEXT F
8500 FOR N=1 TO 6:F(N)=0:G(N)=0:C$(N)=STRING$
(12," "):C$(N+6)=C$(N):NEXT
8510 FOR F=1 TO 6

```



```

8520 Y=INT(RND(0)*12)+5:X=INT(RND(0)*11)+18
8530 FOR G=1 TO 6
8540 IF Y=F(G) THEN IF X=G(G) OR X=G(G)+1 OR
X=G(G)-1 THEN 8520
8550 NEXT G
8560 F(F)=Y:G(F)=X
8570 NEXT F
8580 S1=0:S2=0
8590 RETURN
9000 PMODE4,5:PCLS1:SCREEN1,1
9010 XC=0:YC=0
9020 FOR CH=1 TO 68
9030 FORY=YC TO YC+7
9040 READ CD:D=128:IF CD=999 THEN 9090
9050 FORX=XC TO XC+7
9060 P=INT(CD/D)
9070 IF P=1 THEN PSET(X,Y,0):CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9105 RETURN
9110 PMODE4,5:DIMN(1):DIML(19):DIMS1(3):DIMS2
(3):DIMB7(1):DIMB6(3):DIMB5(4):DIMB3(19):DIMC
R(1):DIMB1(43):DIMB2(38):DIMB4(6):DIMB(43):DI
MX(6):DIMY(6):DIMH(6):DIMF(6):DIMG(6):DIMC*(1
2)
9120 GET(168,8)-(199,15),B4,G
9130 GET(200,8)-(223,15),B5,G
9135 GET(104,0)-(111,7),CR,G
9140 GET(0,16)-(15,23),S1,G
9145 GET(16,16)-(31,23),S2,G
9150 GET(224,8)-(239,15),B6,G
9160 GET(240,8)-(247,15),B7,G
9165 COLOR0,1
9170 LINE(0,32)-(23,55),PSET,BF
9180 LINE(32,32)-(67,55),PSET,BF
9190 LINE(0,40)-(71,47),PSET,BF
9200 LINE(68,36)-(71,51),PSET,BF
9210 GET(0,32)-(71,55),B1,G
9220 LINE(80,32)-(95,51),PSET,BF
9230 LINE(104,32)-(131,51),PSET,BF
9240 LINE(96,40)-(139,43),PSET,BF
9250 LINE(132,36)-(135,47),PSET,BF
9255 GET(80,32)-(143,55),B2,G

```

9260 LINE(148,36)-(159,47),PSET,BF
 9270 LINE(168,36)-(183,47),PSET,BF
 9280 LINE(160,40)-(167,43),PSET,BF
 9290 GET(152,8)-(159,15),N,G
 9300 PUT(184,32)-(191,39),N,PSET
 9310 GET(160,8)-(167,15),N,G
 9320 PUT(184,40)-(191,47),N,PSET
 9330 GET(144,32)-(191,47),B3,G
 9340 RETURN
 9400 DATA0,24,36,44,52,36,24,0
 9410 DATA0,8,24,8,8,8,28,0
 9420 DATA0,24,36,8,16,32,60,0
 9430 DATA0,24,36,24,4,36,24,0
 9440 DATA0,8,24,40,72,124,8,0
 9450 DATA0,60,32,56,4,36,24,0
 9460 DATA0,28,32,56,36,36,24,0
 9470 DATA0,60,4,8,16,32,32,0
 9480 DATA0,24,36,24,36,36,24,0
 9490 DATA0,24,36,36,28,4,56,0
 9500 DATA0,38,41,41,41,41,38,0
 9502 DATA0,20,20,20,20,20,20,0
 9504 DATA0,76,82,68,72,80,94,0
 9506 DATA255,128,144,144,252,144,144,128
 9508 DATA0,60,66,66,126,66,66,0
 9510 DATA0,124,66,124,66,66,124,0
 9512 DATA0,60,66,64,64,66,60,0
 9514 DATA0,120,68,66,66,68,120,0
 9516 DATA0,126,64,124,64,64,126,0
 9518 DATA0,126,64,124,64,64,64,0
 9520 DATA0,60,66,64,78,66,60,0
 9522 DATA0,66,66,126,66,66,66,0
 9524 DATA0,62,8,8,8,8,62,0
 9526 DATA0,2,2,2,66,66,60,0
 9528 DATA0,68,72,112,72,68,66,0
 9530 DATA0,64,64,64,64,64,126,0
 9532 DATA0,66,102,90,66,66,66,0
 9534 DATA0,60,66,66,66,66,60,0
 9536 DATA0,124,66,66,124,64,64,0
 9538 DATA0,124,66,66,124,68,66,0
 9540 DATA0,60,64,60,2,66,60,0
 9542 DATA0,254,16,16,16,16,16,0
 9544 DATA0,66,66,66,66,66,60,0
 9546 DATA0,66,66,66,66,36,24,0
 9548 DATA0,130,68,40,16,16,16,0

```

9550 DATA0,60,66,66,66,66,60,0
9552 DATA0,66,66,66,66,66,66,60,0
9554 DATA0,124,66,66,66,124,68,66,0
9556 DATA999,0,60,64,60,2,66,60,0
9558 DATA0,66,66,126,66,66,66,0
9560 DATA0,62,8,8,8,8,62,0
9562 DATA0,124,66,66,124,64,64,0
9564 DATA0,60,64,60,2,66,60,0
9566 DATA0,66,102,90,66,66,66,0
9568 DATA0,130,68,40,16,16,16,0
9570 DATA999,0,66,102,90,66,66,66,0
9572 DATA0,60,66,66,66,66,60,0
9574 DATA0,66,66,66,66,36,24,0
9576 DATA0,126,64,124,64,64,126,0
9578 DATA0,0,0,0,224,248,252,254
9580 DATA255,255,255,255,254,252,248,224
9582 DATA255,255,255,255,255,255,255,255
9584 DATA31,31,31,255,255,31,31,31
9586 DATA255,255,255,255,255,255,255,255
9588 DATA224,240,248,248,248,248,248,224
9590 DATA0,63,63,63,63,63,63,0
9592 DATA0,63,63,255,255,63,63,0
9594 DATA0,224,240,248,248,240,224,0
9596 DATA0,0,60,63,63,60,0,0
9598 DATA0,0,252,254,254,252,0,0
9600 DATA0,0,0,222,255,222,0,0
9602 DATA999,255,130,162,187,191,255,255,128,
255,0,32,48,248,254,252,0
9604 DATA255,128,208,164,254,231,255,255,255,
128,136,151,200,174,252,255
9900 COLOR1,1:LINE(XS,0)-(XS+17,7),PSET,BF:N#
=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:FUT(XS,0)-(XS+7,7),N,PSET:RETURN
10000 PRINTF,G,Y,X
10010 FORN=1TO1000:NEXT
10020 SCREEN1,1
10030 RETURN

```

Fives

A deceptively easy game. Try to find the computer's five digit numbers by asking just four simple arithmetic questions. Be warned, it is very addictive!

```

1 REM *** DRAGON VERSION ***
10 REM*FIVES* (C)1983 MI
CHAE L BEWS DRAGON TRANSLATION BY
IAN HUGHES
20 DIM A(83):DIM B$(4):DIM F$(5):DIM S$(5):K$
="04T25L5C#CG#GD#DA#A"
40 GOTO600
50 'MAIN ROUTINE
60 CLS
70 FOR X=1 TO 5
80 A(X)=RND(9)
90 IF X=1 THEN GOTO120
100 FOR Y=1 TO X-1: IF A(X)=A(Y) THEN GOTO80
110 NEXT Y
120 NEXT X
130 PRINT@43,"F I V E S"
135 PRINT@96,STRING$(32,163);:PRINT@256,STRIN
G$(32,172);
140 PRINT@384,"NOW ENTER YOUR QUESTIONS ONE
AT A TIME"
145 FOR W=1 TO 4
150 PRINT@W*32+96,W;"> ";
155 GOSUB 490
157 PLAYK$
160 F$(W)=STR$(A(P))
165 PRINTX$;
170 GOSUB 530
177 PLAYK$
180 PRINT@W*32+96+7,B$(W);
190 GOSUB490
192 IF STR$(A(P))=F$(W) THEN PRINT@W*32+96+16
,"DIFFERENT LETTER";:PLAY"01L4T4C":GOTO190
194 PLAYK$
195 S$(W)=STR$(A(P))
200 PRINT@W*32+96+9,X$;

```

```

201 IF B$(W)="*" THEN Q=VAL(F$(W))*VAL(S$(W))
202 IF B$(W)="+" THEN Q=VAL(F$(W))+VAL(S$(W))
)
203 IF B$(W)="-" THEN Q=VAL(F$(W))-VAL(S$(W))
)
204 IF B$(W)="/" THEN Q=VAL(F$(W))/VAL(S$(W))
210 PRINT@W*32+107,"=";Q
215 PLAY"05T255V20CEGC#FG#DF#AD#GA#EG#B"
220 NEXTW
250 'ENDING ROUTINE
255 PRINT@288,;:FORX=1TO6:PRINTSTRING$(32,32)
;:NEXT
260 PRINT@288,"NOW ENTER YOUR GUESS AS
  COMPLETE FIVE FIGURE NUMBER -   FOR EXAMPLE
: 12345(ENTER)"
265 PRINT@448,"      ENTER '?' IF YOU RESIGN"
:PRINT@384,;
270 INPUT X$
272 PLAY"01L4T4C"
275 IF X$="?" THEN GOTO 305
280 IF LEN(X$)<>5 THEN PRINT@416,"      A
GAIN! - FIVE FIGURES";:GOTO260
290 FOR X=1 TO 5: IFVAL(MID$(X$,X,1))<>A(X) T
HEN PRINT @ 416,"      NO! TRY AGAIN
";:GOTO 260
295 NEXTX
300 PRINT@55,"CORRECT";:SC=SC+1
305 PRINT@96,;:PRINT:PRINT:PRINT:PRINT:PRINT:
PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:TT=
TT+1
310 FOR W=1 TO 5:PRINT@W*2+72,A(W);:FOR Z=W*5
+100 TO W*5+200 STEP 9:SOUNDZ,1:NEXTZ:NEXTW
320 PRINT@128,STRING$(32,163);:PRINT@192,STRIN
G$(32,172);
330 PRINT@160,"SCORE:";SC;"CORRECT OUT OF";TT
340 PRINT@352,"PRESS <ENTER> FOR NEXT GAME
";:INPUTX$
350 GOTO60
480 REM** LETTER INPUT ROUTINE
490 X$=INKEY$:IF X$="" THEN 490 ELSE X=ASC(X$)
)
501 IF X<>69 AND X<>70 AND X<>73 AND X<>83 AN
D X<>86 THEN 490
505 IF X=70 THEN P=1

```

```

510 IF X=73 THEN P=2
515 IF X=86 THEN P=3
520 IF X=69 THEN P=4
525 IF X=83 THEN P=5
527 RETURN
529 REM** SIGN INPUT ROUTINE
530 X$=INKEY$: IF X$="" THEN 530 ELSE X=ASC(X$
)
541 IF X<>43 AND X<>42 AND X<>45 AND X<>47 AN
DX<>58 AND X<>59 THEN 530
550 IFX$=":" THEN X$="*"
560 IFX$=";" THEN X$="+"
565 B$(W)=X$
570 IF W=1 THEN RETURN
580 FOR Z=1 TO W-1:IF B$(W)=B$(Z) THEN PRINT@
W*32+96+15," " ;B$(W);" ' ALREADY USED!":PLAY"0
1L4T4C":GOTO530
582 NEXTZ
590 RETURN
600 'INSTRUCTIONS
610 CLS:PRINT"THE OBJECT OF F I V E S IS TO
CALCULATE THE FIVE DIGIT NUMBER WHICH IS REP
RESENTED BY 'FIVES' ON THE SCREEN."
620 PRINT:PRINT"YOU MAY DO THIS BY ASKING THE
COMPUTER TO GIVE YOU ANSWERS TO FOUR SIMPL
E SUMS"
630 PRINT:PRINT"THESE SUMS MUST BE ONE EACH O
F THE FOUR MATHEMATICAL FUNCTIONS:ADDITION,
SUBTRACTION, MULTIPLICATION AND DIVI
SION (+ - * /)"
632 PLAYK$
635 PRINT@456,"PRESS ANY KEY
636 IF INKEY$="" THEN636
637 CLS
640 PRINT:PRINT"FOR EXAMPLE:";
650 PRINT"PRESS I+V(ENTER)":PRINT" AND THE
COMPUTER WILL GIVE YOU AN ANSWER"
660 PRINT:PRINT"YOU MAY ASK THE QUESTIONS IN
ANY ORDER YOU WISH."
665 PLAYK$
670 PRINT@416," "; "PRESS ANY KEY TO START
"
680 IF INKEY$="" THEN GOTO680
685 PLAYK$
690 GOTO60

```

Dambusters

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 the bouncing bombs themselves by moving your sight up, down, right or left and then use the zero key 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 *** DRAGON ***
10 'DAMBUSTER BY PAUL STANLEY          REWITTEN
FOR THE DRAGON 32          BY E.A. JACKSON
15 CLEAR 300
20 DIM P(6), R(24), T(2), U(8), V(8), X(2), Y(2), Z
(4), S*(10), Y2(11), Z2(11)
30 LOSS=0:H=128:V=120:BC=1:SCORE=0:HI=0
40 GOSUB920:GOSUB780:GOSUB650
50 GOSUB530:GOSUB460:GOSUB500
60 BC=1:GOSUB110
70 ON BC GOSUB140,160,190,220,260
80 IF LOSS>60 THEN 410
90 GOSUB280:IF BC<6 THEN 70
100 GOTO 60
110 'BOMBER
120 X=RND(85)+85:FOR N=70 TO 20 STEP-2:PUT(X,
N)-(X+23,N+4),U,PSET:PUT(X,N)-(X+23,N+4),V,PS
ET:NEXT N:SHOTS=0:RETURN
130 'FIRST BOUNCE
140 PSET(X+12,N,3):N=N+4:IFN>140 THEN BC=2:RE
TURN
150 PSET(X+12,N,2):RETURN
160 PSET(X+12,N,3):N=N-4:IF N<40 THEN BC=3:RE
TURN
170 PSET(X+12,N,2):RETURN

```

```

180 'SECOND BOUNCE
190 PUT(X+6,N)-(X+13,N+7),T,PSET:N=N+8:IFN>14
4 THEN BC=4:N=N+1:IF N>152 THEN BC=4:RETURN
200 PUT(X+6,N)-(X+13,N+7),Z,PSET
210 LINE(7,161)-(127,140),PSET:LINE(127,140)-
(248,161),PSET:RETURN
220 PUT(X+6,N)-(X+13,N+7),T,PSET:N=N-8:IF N<6
0 THEN BC=5:RETURN
230 PUT(X+6,N)-(X+13,N+7),Z,PSET
240 LINE(7,161)-(127,140),PSET:LINE(127,140)-
(248,161),PSET:RETURN
250 'THIRD BOUNCE
260 PUT(X+6,N)-(X+13,N+7),T,PSET:N=N+8:IF N>1
68 THEN BC=99:PUT(X+6,164)-(X+21,175),P,PSET:
LOSS=LOSS+10:RETURN
270 PUT(X+6,N)-(X+13,N+7),R,PSET:LINE(7,161)-
(127,140),PSET:LINE(127,140)-(248,161),PSET:R
ETURN
280 'MOVE WEAPON SIGHT
290 COLOR 2,3
300 LINE(H,V)-(H+8,V),PRESET:LINE(H,V-8)-(H+8
,V-8),PRESET
310 H=H+1:IF H>220 THEN H=H-2
320 A$=INKEY$:IF A$=""THEN 350
330 B$=A$:IF B$=CHR$(32) AND SHOTS<3 THEN 380
340 IF A$<>CHR$(8) OR A$<>CHR$(9) OR A$<>CHR$(
10) OR A$<>CHR$(10) THEN RETURN
350 H=H+4*(B$=CHR$(8) AND H>8)-2*(B$=CHR$(9)
AND H<240)
360 V=V-(B$=CHR$(10) AND V<148)+(B$=CHR$(94)
AND V>90)
370 LINE(H,V)-(H+8,V),PSET:LINE(H,V-8)-(H+8,V
-8),PSET:RETURN
380 SHOTS=SHOTS+1:LINE(7,161)-(H+4,V-4),PSET:
LINE(7,161)-(H+4,V-4),PRESET:LINE(H+4,V-4)-(2
48,161),PSET:LINE(H+4,V-4)-(248,161),PRESET:
390 IF ABS((H+4)-(X+9))<4 AND ABS((N+3)-(V-4)
)<4 THEN 400 ELSE RETURN
400 COLOR 0,3:FOR B1=V-12 TO V+12:LINE(H-12,B
1)-(H+12,B1),PSET:NEXT B1:FOR B1=V+12 TO V-12
STEP-1:LINE(H-12,B1)-(H+12,B1),PRESET:NEXT B
1:SCORE=SCORE+25:BC=99:COLOR 2,3:GOSUB460:RET
URN
410 'GAME OVER

```



```

415 LOSS=0:IF SCORE>HI THEN HI=SCORE
420 CLS:PRINT@12,"DAMBUSTERS"
430 PRINT@96,"GAME OVER - THE DAM HAS SHED TO
OMUCH WATER.":PRINT@192,"SCORE          ";SCORE
E:PRINT@256,"HIGHEST SCORE ";HI:GOSUB530
440 SCORE=0:PRINT@484,"PRESS SPACEBAR TO PLAY
";
450 A$=INKEY$:IF A$(<)CHR$(32)THEN450 ELSE 50
460 'CHANGE SCORE
470 DRAW"C3;BM62,12"+SS$
480 SS$="":SC$=STR$(SCORE)
490 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SS$=SS$+S$(Y2(Z2)):NEXT Z2:DRAW "C2;BM62
,12"+SS$:RETURN
500 'CHANGE HI SCORE
510 DRAW"C3;BM188,12"+SH$:SH$="":SC$=STR$(HI)
520 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SH$=SH$+S$(Y2(Z2)):NEXT Z2:DRAW "C2;BM18
8,12"+SH$:RETURN
530 'SCREEN DISPLAY
540 PCLS3:DRAW "C2;BM0,176;R255;D20;L255;U20"
:PAINT(2,178),4,2
550 DRAW"C2;BM0,164;R255;D12;L255;U12":PAINT(
2,166),2,2
560 LINE(7,161)-(127,140),PSET:LINE(127,140)-
(248,161),PSET
570 PUT(0,154)-(7,160),X,PSET:PUT(248,154)-(2
55,160),Y,PSET
580 FOR T=1TO30:J=RND(255):K=RND(60)+20:PSET(
J,K,2):NEXT T
600 DRAW"C2;BM8,12"+SX$
610 DRAW"C2;BM120,12;U8;BR6;D4;NL6;D4;BR4;U5;
BU2;U1;BD8;BR6"+SX$
620 DRAW "C2;BM80,188;U10;NL2;R6;D10;NL8;BR4;
NR6;U3;R6;ND3;U3;L6;BD6;BR10;U6;R4;ND6;R4;D6;
BR4;NU10;R6;U6;NL6;BD6;BR4;NU6;R6;NU6;BR4;NU1
;R6;U3;L6;U3;R6;BD6;BR4;R4;NU1;BL4;U6;NR4;U4;
BD10;BR8;NR6;U3;NR6;U3;R6;D3;BD3;BR4;U6;R4;D1
;BD5;BR4;NU1;R6;U3;L6;U3;R6"
630 SCREEN 1,0
640 RETURN
650 'INTRODUCTION
660 CLS:PRINT@10,"DAMBUSTERS":PRINT "THE YEAR
IS 1943, YOU ARE IN      CHARGE OF A POWERFUL

```

BEAM WEAPON WITH WHICH YOU HAVE TO PROTECT A DAM FROM THE BOUNCING BOMBS OF THE BRITISH ATTACKERS."

670 PRINT "THEY HAVE SEVERAL LANCASTER BOMBERS WHICH FLY TOWARDS YOU AND RELEASE THE DANGEROUS BOMBS.";

680 PRINT "HOWEVER, YOUR TASK IS NOT ALL THAT SIMPLE FOR YOUR WEAPON IS UNABLE TO REACH THE LANCASTERS SO YOU MUST SHOOT DOWN THE BOMBERS INSTEAD."

690 PRINT @488, "PRESS SPACEBAR";

700 A\$=INKEY\$: IF A\$ <> CHR\$(32) THEN 700

710 CLS: PRINT "YOU CAN MOVE YOUR SIGHTS WITH THE CURSOR KEYS, BUT HOLDING THE SIGHT STEADY IS DIFFICULT DUE TO CROSS WINDS."

720 PRINT "FIRE YOUR BEAM BY PRESSING THE SPACEBAR.": PRINT

730 PRINT "BECAUSE OF THE POWER OF YOUR WEAPON, AFTER 3 SHOTS IT IS DRAINED OF POWER AND WILL ONLY BE READY BY THE TIME THE NEXT AEROPLANE ATTACKS."

740 PRINT "THE GAME ENDS WHEN TOO MUCH WATER POURS THROUGH THE DAM."

750 PRINT @488, "PRESS SPACEBAR";

760 A\$=INKEY\$: IF A\$ <> CHR\$(32) THEN 760

770 CLS: RETURN

780 'USER DEFINED GRAPHICS

790 PMODE 3, 1: PCLS3

800 FOR A=0 TO 6: READ B: POKE 1536+(A*32), B: NEXT A: GET(0,0)-(7,6), X, G: PCLS3

810 FOR A=0 TO 6: READ B: POKE 1536+(A*32), B: NEXT A: GET(0,0)-(7,6), Y, G: PCLS3

820 FOR A=1 TO 6: READ B(A): NEXT A

830 FOR A=1 TO 3: POKE 1537+(A*32), B(A): POKE 1538+(A*32), B(A+3): NEXT A

840 GET(0,0)-(23,4), U, G: PCLS3: GET(0,0)-(23,4), V, G: PCLS3

850 FOR A=0 TO 5: READ B: POKE 1601+(A*32), B: NEXT A: GET(0,0)-(12,12), Z, G: PCLS3

860 FOR A=1 TO 7: READ B: POKE 1568+(A*32), B: NEXT A

870 GET(0,0)-(7,7), Z, G: PCLS3: GET(0,0)-(7,7), T, G

880 FOR A=2 TO 5: POKE 1632+(A*32), 85: NEXT A

```
890 GET(0,0)-(7,7),R,G:PCLS1
900 GET(0,0)-(15,10),P,G:PCLS3:RETURN
910 DATA 85,85,85,90,90,90,90,85,85,85,165,16
5,165,165,169,85,153,106,85,104,154,154,85,85
,154,154,170,170,165,165,165,165,170,170
920 S*(0)="BR4;U6;R6;D6;NL6;BR2":S*(1)="BR4;U
6;BD6;BR2":S*(2)="BR2;NR6;U3;R6;U3;L6;BD6;BR
":S*(3)="BR2;R6;U3;NL4;U3;L6;BD6;BR8":S*(4)="
BR6;U2;NR2;NU2;L4;U4;BR6;BD6;BR2"
930 S*(5)="BR2;R6;U3;L6;U3;R6;BD6;BR2":S*(6)=
"BR2;R6;U3;L6;ND3;U3;R6;BD6;BR2":S*(7)="BR2;B
U6;R6;D6;BR2":S*(8)="BR2;R6;U3;NL6;U3;L6;D6;B
R8":S*(9)="BR2;R6;U6;L6;D3;R6;BD3;BR2"
940 SX*="BR2;NU1;R6;U4;L6;U4;R6;ND1;BD8;BR10;
NU1;L6;U5;R6;ND1;BD5;BR4;U5;R6;D5;NL6;BR4;U5;
R4;ND1;BD5;BR4;NR6;U5;R6;D2;L6":RETURN
```

Moonlander

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 of 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 goners. 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.

```

1 REM *** DRAGON VERSION ***
2 REM *** MOONLANDER ***
10 PCLEAR8: DIMBA(9,21): DIMPA(9,7): DIMSA(9,15)
: DIMVA(59,7): DIMHA(49,7): DIM GA(5,7): DIM CA(9
,7): DIMEA(4,7): DIMFA(29,7)
20 CLS8: PRINT@202, "MOON LANDING";
50 PRINT@454, "ANY KEY TO CONTINUE";
60 IF INKEY$="" THEN GOTO 60
70 CLS8: PRINT@0, "LAND YOUR MODULE ON THE SMAL
L PAD. YOU MUST NOT LAND WITH A VELOCITY OF F
ASTER THAN -5. USE THE UP KEY FOR MOTORS ON,
THE DOWN KEY FOR MOTORS OFF. THE LEFT AND RIG
HT KEYS MOVE THE MODULE LEFT AND RIGHT"
75 PRINT@224, "THERE WILL BE A DELAY WHILE THE
GRAPHICS ARE SET UP";
100 GOSUB 6000
150 PRINT@454, "ANY KEY TO CONTINUE";
160 IF INKEY$="" THEN GOTO 160
220 GOSUB 5000
1000 H1=H:H=(H+V)-.81: IF E=0 THEN GOTO 1050
1005 M=M1: M1=M-F1
1020 V=V+((T/F1)*(LOG(M/M1)))-1.62
1030 F=F-F1
1040 GOTO 1075
1050 M1=M
1070 V=V-1.62
1075 C1=CO
1076 IF HK<250 THEN 1095

```

```

1080 IF CO>7 AND RND(2) = 1 THEN CO=CO-8
1090 IF CO<238 AND RND(2) =1 THEN CO=CO+8
1095 H=INT(H): NO=H: YC=0: XC=192: GOSUB 7000
1100 V=INT(V): NO=V: XC=69: GOSUB 7000
1110 NO=F: XC=69: YC=9: GOSUB 7000
1120 X$=INKEY$: IF X$="" THEN GOTO 1140: ELSE
XV=ASC(X$)
1130 IF XV = 10 THEN E=0
1135 IF XV = 94 THEN E=1
1136 IF XV = 9 AND CO < 244 THEN CO=CO+8
1137 IF XV = 8 AND CO > 8 THEN CO=CO - 8
1140 IF H1<= 2000 THEN HY=162-INT(H1/SF): PUT
(C1,HY)-(C1+9,HY+21),BA,PSET
1150 IF H<=2000 THEN HY=162-INT(H/SF): PUT(CO
,HY)-(CO+9,HY+15),SA,PSET: IF E=1 THEN CIRCLE
(CO+4,HY+16),5,8,1,0,.5
1160 IF F=0 OR H<=10 THEN 2000
1170 GOTO 1000
2000 IF H<=20 AND V>-SK AND (INT(CO/4)=31) TH
EN 2500
2005 IF H>2000 THEN HY=96
2010 FOR RR = 2 TO 72 STEP 4
2020 CIRCLE(CO+4,HY+8),RR,8
2030 NEXT RR
2040 CLS0:PRINT@202,"YOU CRASHED";
2050 GOTO 150
2500 CLS2:PRINT@202," WELL DONE";
2990 GOTO 150
5000 PMODE3,1:COLOR3,1:SCREEN1,1:PCLS
5005 LINE(0,17)-(255,17),PSET
5010 PUT(0,0)-(59,7),VA,PSET
5015 PUT(60,0)-(63,7),EA,PSET
5020 PUT(138,0)-(187,7),HA,PSET
5030 PUT(30,8)-(59,15),FA,PSET
5040 PUT(60,8)-(63,15),EA,PSET
5060 M=1378: M1=M: T=4800:F1=2: F=378: E=1 :
CO=124: Y=8: SK=9
5070 V=-20:NO=V: YC=0: XC=69: GOSUB7000
5080 H=2000:NO=H: YC=0: XC=192:GOSUB7000
5085 SF=H/144
5090 NO=F: XC=69: YC=9: GOSUB7000
5100 COLOR3,1
5110 PUT(124,173)-(133,180),PA,PSET
5120 DRAW"BM0,180;C2;E8;F6E10F13E18F12E24F30R

```

```

15E20F15E3F6E4F8E15R2E12F30M255,180"
5130 PAINT(128,191),2,2
5180 RETURN
6000 PMODE3,5:PCLS:COLOR3,1
6010 XC=0:YC=0
6020 GET(0,0)-(9,21),BA,G
6070 FOR CH=1 TO 56
6080 FOR Y=YC TOYC+7
6090 READ CD: D=256: IF CD=8888 THEN 6225
6100 IF CD=9999 THEN STOP
6110 FOR X=XC TO XC+9 STEP 2
6120 P=INT(CD/D) +1
6130 PSET(X,Y,P): CD=CD-(D*(P-1))
6140 D=D/4
6150 NEXT X,Y
6160 IF CH<11 THEN GOTO 6220
6170 IF CH=11 THEN GET(100,0)-(109,7),PA,G
6180 IF CH=12 THEN GET(112,0)-(117,7),GA,G
6190 IF CH=18 THEN GET(120,0)-(179,7),VA,G
6200 IF CH=23 THEN GET(180,0)-(229,7),HA,G:GET
(224,0)-(227,7),EA,G
6210 IF CH=27 THEN GET(230,0)-(239,15),SA,G:
YC=YC+8: XC=-10
6215 IF CH=29 THEN GET(0,16)-(29,23),FA,G:RET
URN
6220 XC=XC+10:NEXT CH
6225 YC=YC+8:XC=XC-10
6230 NEXT CH:RETURN
6240 DATA 0,32,136,136,136,136,32,0
6250 DATA 0,32,160,32,32,32,168,0,0,32,136,8,
32,128,168,0,0,168,8,32,8,136,32,0,0,8,40,136
,170,8,8,0
6260 DATA 0,168,128,160,8,136,32,0,0,32,128,1
60,136,136,32,0,0,168,8,170,32,32,32,0,0,168,
136,32,136,136,168,0,0,32,136,136,40,8,160,0
6270 DATA 0,0,0,0,0,1023,204,1023
6275 DATA 0,0,0,0,168,0,0,0
6280 DATA 0,0,819,819,819,819,195,0,0,0,972,1
2,780,12,975,0,0,0,63,51,51,51,831,0,0,0,252,
192,192,192,252,0,0,0,831,780,780,780,780,0,0
,0,204,204,48,48,48,0
6290 DATA 0,0,819,819,1011,819,819,0,0,0,972,
12,780,12,972,0,0,0,1011,771,771,819,1011,0,0
,0,207,195,963,195,195,0,0,0,768,0,60,0,60,0

```

```

6300 DATA 32,32,168,136,136,682,546,168,8888,
546,546,546,546,682,546,546,546,0
6310 DATA 0,0,674,514,642,514,514,0,0,0,138,1
36,138,136,650,0,0,0,544,32,544,32,554,0
7000 COLOR4,2:N#=STR$(NO):
7005 IF NO<0 THEN PUT(XC,YC)-(XC+5,YC+7),GA,P
SET: XC=XC+5
7010 FOR ZZ = 1 TO LEN(N#): NO=VAL(MID$(N#,ZZ
,1)): GOSUB 7040
7020 XC=XC+10: NEXT ZZ:
7030 PUT(XC,YC)-(XC+9,YC+7),BA,PSET:RETURN
7040 PMODE3,5: GET(10*NO,0)-(10*NO+9,7),CA,G
7050 PMODE3,1: PUT(XC,YC)-(XC+9,YC+7),CA,PSET
:RETURN
9990 PMODE3,5:SCREEN1,1
9991 GOTO 9991
62500 ,32,160,32,32,32,168,0,0,32,136,8,32,12
8,168,0,0,168,8,32,8,136,32,0,0,8,40,136,170,
8,8,0
62700 ,0,0,0,1023,204,1023

```

Russian Roulette

The six-shooter points straight at you. There is only one bullet somewhere in the cylinder. Spin the cylinder as much as you wish and then press the trigger—if you dare!

```

10 REM**RUSSIAN ROULETTE                                @1983 MICH
AEL BEWS
30 F=1:SC=0:HS=0
40 PCLEARB
100 PMODE4:SCREEN1,1:PCLS0
110 CIRCLE(126,72),32
120 CIRCLE(146,60),6
130 CIRCLE(146,84),6
140 CIRCLE(126,96),6
150 CIRCLE(106,84),6
160 CIRCLE(106,60),6
170 CIRCLE(126,48),6
180 CIRCLE(126,72),14
185 CIRCLE(126,72),13
187 CIRCLE(126,72),12
188 LINE(121,104)-(131,130),PSET,BF
189 LINE(124,35)-(128,40),PSET,BF
190 FORX=1TO500:NEXT
200 PMODE0:CLS4:PRINT"RUSSIAN ROULETTE @1983
M.BEWS ";
220 PRINT@64,"THIS IS A REVOLVER, POINTING AT
YOU. IT HAS ONE BULLET. PRESS '^';CHR$(127)
;' TO SPIN THE CYLINDER FOR AS LONG AS YOU W
ISH AND FIRE WITH '^'. SCORE 100 EACH TIME T
HE GUNFAILS TO KILL YOU,THEN TRY AGAIN";
230 PRINT@488,"PRESS ANY KEY";
235 X$=INKEY$:IFX$="" THEN GOTO235
240 PMODE4,1:SCREEN1,1
245 IFINKEY$(">") THEN GOTO245
250 A=PEEK(343):B=PEEK(341):IFA<>223 AND B<>2
23 THEN GOTO250
252 PLAY"05V31L5T255C"
260 IF A<>223 THEN GOTO400
300 PSET(146,60,5):FORY=1TO50:NEXTY:F=1:PRESE
T(146,60)

```



```

305 A=PEEK(343):IFA<>223 THEN GOTO250
310 PSET(146,84,5):FORY=1TO50:NEXTY:F=2:PRESE
T(146,84)
315 A=PEEK(343):IFA<>223 THEN GOTO250
320 PSET(126,96,5):FORY=1TO50:NEXTY:F=3:PRESE
T(126,96)
325 A=PEEK(343):IFA<>223 THEN GOTO250
330 PSET(106,84,5):FORY=1TO50:NEXT:F=4:PRESET
(106,84)
335 A=PEEK(343):IFA<>223 THEN GOTO250
340 PSET(106,60,5):FORY=1TO50:NEXT:F=5:PRESET
(106,60)
345 A=PEEK(343):IFA<>223 THEN GOTO250
350 PSET(126,48,5):FORY=1TO50:NEXT:F=6:PRESET
(126,48)
360 GOTO250
400 IFB<>223 THEN GOTO 250
410 IFF=1 THENPMODE4,5:PCLS5:FORX=1TO10:PMODE
4,5:SCREEN1,1:PCLS5:FORY=1TO20:NEXTY:PMODE4,1
:SCREEN1,1:NEXTX:GOTO700
420 PLAY"L5T100V3104CEGCEGCEGCEGCEGCEGCEGC
EGCEGCEGC"
425 PMODE0:CLS4:PRINT"RUSSIAN ROULETTE @1983
M.BEWS ";PRINT@73,"YOU SURVIVED!";PRINT@2
61,"THE BULLET WAS IN"IF1
430 SC=SC+100:PRINT@362,"SCORE";SC;
440 PRINT@488,"PRESS ANY KEY";
445 IFINKEY$<>" THEN GOTO445
450 X$=INKEY$:IFX$="" THEN GOTO450
460 GOTO240
500 IFHS<SC THEN HS=SC
505 PRINT@362,"SCORE";SC;
510 PRINT@419,"HIGHEST SCORE SO FAR";HS;
520 PRINT@488,"PRESS ANY KEY";
525 IFINKEY$<>" THEN GOTO525
530 X$=INKEY$:IFX$="" THEN GOTO530
540 F=1:GOTO240
700 PLAY"V31T255L503A02G#03G#02A03G#02G03G02G
#"
710 PMODE0:CLS4:PRINT"RUSSIAN ROULETTE @1983
M.BEWS ";
720 PRINT@74,"YOU'RE DEAD!";PRINT@261,"THE B
ULLET WAS IN";F;;GOTO500

```

Numbers

If you're a Roman who doesn't understand numbers to base 3, then this is the program for you. Convert between binary, hexadecimal, decimal and Roman numerals, plus any other number systems (to different bases) you care to invent. 7 fingered aliens catered for!

```

10 REM**ROMAN NUMBERS @1983 MICHAEL BEWS DRAGON TRANSLATION IAN HUGHES
15 LETST$=STRING$(32,32)
20 PK$="V31T25505C04C03C02C01C05C04C03C02C01C"
22 PL$="05L255CC#CD#CECF#CGCG#ACA#CB"
25 DIMK(7),A$(8),C(25)
30 GOTO550
39 REM**ROMAN NUMBERS
40 L=160:CLS4
50 PRINT"ROMAN NUMBERS @1983 MICHAEL BEWS";
60 PRINT@64,"ENTER A COMPLETE ROMAN NUMBER
EXAMPLE: MCMLXXXIV ";
65 PRINT@481,"PRESS<ENTER>TO RETURN TO MENU "
;
70 PRINT@416,"ROMAN NUMBER";:INPUTT$
75 PRINT@416,ST$;ST$;
80 IFT$="" THEN GOTO600
90 PRINT@L,ST$;:PRINT@L,"ROMAN NUMBER ";T$;
95 PLAYPK$
100 FORX=1TOLEN(T$)
110 Y$=MID$(T$,X,1):IF Y$="M" THENC(X)=1000
112 IF Y$="D" THEN C(X)=500
114 IF Y$="C" THEN C(X)=100
116 IF Y$="L" THEN C(X)=50
118 IF Y$="X" THEN C(X)=10
120 IF Y$="V" THEN C(X)=5
122 IF Y$="I" OR Y$="1" THEN C(X)=1
125 IFC(X)<1 THEN PRINT@448,ST$;:PRINT@448,Y$
;" IS NOT A ROMAN NUMBER !!";:GOTO65
130 NEXTX
180 T=0
190 FORX=1TO LEN(T$)

```

```

200 IF C(X+1) > C(X) THEN C(X)=-C(X)
210 T=T+C(X)
220 C(X)=0
230 NEXTX
240 X=24:IF LEN(T$)>9 THEN X=50
250 PRINT@L+X,"=";T;
255 PLAYPK$
260 L=L+64:IFL>448 THEN PRINT@448,"RETURN TO
MENU";:INPUTX$:GOTO600
270 GOTO70
299 REM*VARIABLE BASE CALCULATOR
310 CLS3:PRINT"VARIBASE CALCULATOR @1983 M.BE
WS";
320 PRINT@96,"CHOOSE ANY BASE BETWEEN 2 AND 2
4(DECIMAL EQUIVALENT). WE SHALL USE LETTERS
'A TO N' FOR SYMBOLSREQUIRED AFTER 9 UP TO ON
E LESS THAN THE CHOSEN BASE VALUE ";
325 PLAYPL$
330 PRINT@416,"ENTER CHOSEN BASE(2 TO 24)";:I
NPUTX$
340 IFX$="" OR LEN(X$)>2 THEN GOTO330
370 B=VAL(X$):IF B <2 OR B>24 THEN GOTO330
380 CLS:PRINT"VARIBASE CALCULATOR @1983 M.BEW
S";
390 PRINT"BASE:";B;
395 X$=" ":IFB<10 THEN X$=" "
397 B$=MID$(STR$(B),2)
400 PRINT@64," 7 6 5 4 3 2 1 0 <POWER
";B$;X$;B$;X$;B$;X$;B$;X$;B$;X$;B$;X$;B$;X$;B$;X$
;B$;": (DEC)";
410 K0=99999:IFB=3 THEN K0=6560
415 IFB=2 THEN K0=255
420 FORX=1 TO 7:N=K(X):N$=MID$(STR$(K(X)),2):
PRINT@121+X*32,"=";N$;:PRINT@96+32*X,;:GOSUB4
45
425 FORY=8 TO 1 STEP -1:PRINTTAB(25-Y*3);A$(Y
);:NEXTY
430 NEXTX
435 PLAYPL$:GOTO480
440 REM*MULTIBASE CALC SUBROUTINE
445 FORZ=1TO8: A$(Z)="":NEXTZ
450 NA=N:FORZ=1 TO 8
455 I=INT(NA/B):A$(Z)=CHR$(48+(NA-B*I)+(7 AND
(NA-B*I)>9))

```

```

460 IF I >=B THEN NA=I: NEXTZ
465 A$(Z+1)=CHR$(48+I+(7 AND I>9))
470 RETURN
479 REM*DECIMAL INPUT FOR CONVERSION
480 PRINT@384,"ENTER DECIMAL NO. BELOW";KO:PR
INT"FOR CONVERSION TO BASE";B;"OR":PRINT"PRES
S <ENTER> FOR MENU";:INPUTX$
485 PLAYPK$
490 IFX$="" THEN GOTO 600
500 FOR X=1 TO LEN(X$): IF MID$(X$,X,1)<"0" OR
MID$(X$,X,1)>"9" THEN PRINT@472," ";:
GOTO480
505 NEXTX:N=INT(VAL(X$)):IFN<1 OR N> KO THEN
PRINT@472," ";:GOTO480
510 GOSUB 440
520 PRINT@352,ST$;:PRINT@352,;
530 FORY=8TO1 STEP-1:PRINTTAB(25-Y*3);A$(Y);:
NEXTY
540 PRINT" =";MID$(STR$(N),2)
542 PRINT@472," ";
545 GOTO480
549 GOTO549
550 REM*INITIALISATION
570 FORX=1TO7:READ K(X):NEXTX
600 CLS0:PRINT"NUMBER SYSTEMS@1983 MICHAEL BE
WS";
610 PRINT@64," THIS PROGRAM EXAMINES A FEW
OF THE MANY COUNTING SYSTEMS AND ENABLES
YOU TO INVENT SOME OF YOUR OWN! "
620 PRINT@224," M E N U ":PRINT@2
88,"1 ROMAN NUMBERS ":PRINT"2 DECIMA
L SYSTEM":PRINT"3 BINARY SYSTEM":PRINT"4
HEXADECIMAL":PRINT"5 INVENT YOUR OWN!"
630 PRINT@488,"SELECT KEY NUMBER";
635 PLAYPL$
640 X$=INKEY$:IFX$="" THEN GOTO640
650 IFX$<"1" OR X$>"5" THEN GOTO640
660 IFX$="1" THEN GOTO800
670 IFX$="2" THEN GOTO900
680 IFX$="3" THEN GOTO1100
690 IFX$="4" THEN GOTO1200
700 IFX$="5" THEN GOTO 310
799 REM*ROMAN EXPLANATION
800 CLS8:PRINT"ROMAN NUMBERS @1983 MICHAEL BE
WS";

```

```

810 PRINT@64,"          IN THE ROMAN SYSTEM
M=1000 D=500 C=100 L=50 X=10      V=5
AND I=1          ";
840 PRINT"A LOWER VALUE LETTER COMING IMM
EDIATELY IN FRONT OF A HIGHVALUE LETTER IS
SUBTRACTED FROM THE TOTAL INSTEAD OF BEING AD
DED      SO THAT LX=60 AND XL=40      ";
850 PRINT@488,"PRESS <ENTER>";
855 PLAYPL$
860 INPUTX$
870 GOTO40
899 REM*DECIMAL EXPLANATION
900 CLS5:PRINT"DECIMAL SYSTEM      (BASE 1
0)";
920 PRINT@64,"          ALL COUNTING SYSTEMS
NEED ENOUGH SYMBOLS TO REPRESENTTHE COUNT FR
OM ZERO UP TO ONE LESS THAN THE BASE NUMBER
. THIS MEANS THAT SYMBOLS 0 1 2 3 4 5 6 7 8 9
ARE NEEDED FOR DECIMAL. THERE IS NO SEPARAT
E SYMBOL FORTHE BASE";
930 PRINT" (TEN IN THE CASE OF      DECIMAL),
THE BASE BEING REPRE-SENTED BY 1 0 TO INDIC
ATE 1 COMPLETE GROUP OF TEN ITEMS,
PLUS 0 REMAINDER.      ";
940 PRINT@488,"PRESS <ENTER>";
942 PLAYPL$
945 X$=INKEY$:IFX$="" THEN GOTO945
950 CLS5:PRINT"DECIMAL SYSTEM      (BASE 1
0)";
960 PRINT@64," '1 0 0' THEREFORE MEANS TEN
GROUPS OF TEN AND '1 0 0 0' IS TEN TIMES TE
N GROUPS OF TEN OR 10 X 10 X 10 WHICH IS TH
E SAME AS 10 TO THE POWER OF 3.      ";
970 PRINT@256," 7 6 5 4 3 2 1 0
10 10 10 10 10 10 10";
980 PRINT"          1 0 0 0";
990 PRINT" ANY NUMBER RAISED TO THE POWER 0
F 1 IS ITSELF AND ANY NUMBER RAISED TO POW
ER 0 IS ALWAYS 1."
1010 PLAYPK$
1020 PRINT@488,"PRESS <ENTER>";
1025 X$=INKEY$:IFX$="" THEN GOTO1025
1030 B=10:GOTO380
1099 REM*BINARY EXPLANATION

```

```

1100 CLS7:PRINT" BINARY SYSTEM (BASE
2)";
1110 PRINT"MECHANICAL AND ELECTRICAL SW
ITCHES ARE SIMPLEST AND MOST RELIABLE WHEN T
HEY HAVE ONLY TWOPOSSIBLE STATES, 'ON' AND 'O
FF'.";
1120 PRINT" FROM OUR NOTES ON THE DECIMAL S
YSTEM WE CAN SEE THAT BINARY NEEDS ONLY TWO
SYMBOLS '0' AND '1'TO COUNT UP TO ANY EQUIVA
LENT";
1130 PRINT"DECIMAL VALUE. USING THE 'OFF' ST
ATE OF A SWITCH OR CIRCUIT TO REPRESENT '0' A
ND THE 'ON' STATETO REPRESENT '1', IT IS POSS
IBLETO REPRESENT ANY DECIMAL NUMBER ";
1140 PRINT" USING VERY SIMPLE DEVICES. ";
1145 PRINT@490,"PRESS <ENTER>";
1147 PLAYPK$
1148 X$=INKEY$:IFX$="" THEN GOTO1148
1150 B=2:GOTO380
1199 REM#HEXADECIMAL EXPLANATION
1200 CLS6:PRINT"HEXADECIMAL (BASE
16)";
1210 PRINT@64," COMPUTERS WORK BEST IN BINARY
.";
1220 PRINT"UNFORTUNATELY HUMANS DO NOT! 187DE
CIMAL IS 10111010 IN BINARY! ";
1230 PRINT"THIS COMPUTER USES 8 BIT BYTES. EA
CH BYTE CAN HOLD NUMBERS FROM 0 TO 255 (IE 1
1111111 BINARY). 16(DECIMAL) IS 2^4
";
1240 PRINT"SO HEXADECIMAL IS A GOOD COMPRO-MI
SE BETWEEN COMPUTER AND HUMAN.AND NUMBERS FRO
M 0 TO 255 (DEC) ARE ALL JUST TWO HEX DIGIT
S. ";
1250 PRINT@490,"PRESS <ENTER>";
1255 PLAYPL$
1260 X$=INKEY$:IFX$="" THEN GOTO1260
1270 B=16:GOTO380
2000 DATA5,8,10,16,20,32,255

```

Soccer Supremo

You've been headhunted, and accepted the position of manager of a first division club. It's down to you to ensure that the team is run like the business football is these days. Whether or not you manage to survive to start the following season is determined by the way in which you handle the team's finances, who you buy and sell, and, of course, the position your team holds at the end of the season coupled with the kind of gate-average you have managed to achieve throughout the year. This is not a game for the softhearted. If your stars are not paying their way, it's up to you to make the tough decision to swop them up on the open market. Whether or not you've made the correct decision is reflected in the results of the individual games which are simulated throughout the season. The points system, as listed, awards 3 points for a win. If you wish to change this to 2 points for a win you should change the final "+3" to "+2" in LINE6143 and again in LINE6170

```

5 REM *** DRAGON VERSION ***
10 REM ***SOCCER SUPREMO                COPYRIGHT
1983 JOHN AND MICHAEL BEWS
15 CLEAR1000
20 DIMB$(7), M$(8)
30 G=0: I=0: L=0: O=0: P=0: W=0
80 E$=STRING$(32, 131)
90 S$=STRING$(32, 32)
120 K=1000000
160 GOTO4010
200 REM**GAME COMMENTARY
220 CLS:PRINT@32, E$; :FORX=32TO288STEP32:PRINT
@X+15, CHR$(128); :NEXT:PRINT@320, E$;
230 PRINT"PLEASE SELECT PLAYING FORMAT    1)4
-3-3 (FLXBLE) 2)4-2-4 (ATTACK) 3)4-4-2 (DEFNSV)
4)2-3-5 (CLASSCL) ";
240 FORX=1TO4:PLAY"V"+STR$(39-X*8)+"03L120CEG
A04C":NEXT
270 X$=INKEY$: IFX$="" THENGOTO270
272 IFX$<"1"ORX$>"4" THENGOTO270
275 D=ASC(X$)-49
290 PLAYPL$

```

```

295 PRINT@352,S*;S*;S*;
300 PRINT@352,"SELECT 1)LEFT WING 2)RIGHT WI
NG OR 3)CENTRE FIELD ATTACK"
305 IFINKEY*<>" "THENGOTO305
307 Y*=INKEY*
310 IFY*=" "ORY*<"1"ORY*>"3"THENGOTO307
312 PLAYPL*
315 E=2*VAL(Y*)-2
320 PRINT@352,S*;S*;
330 PRINT@352," CALL H(HEADS) OR T(TAILS) "
335 X*=INKEY*;IFX*=" "OR(X*<"H"ANDX*<"T") TH
ENGOTO335
350 PLAYPL*
395 A=J
400 IFRND(10)<6 THENA=Q
410 F=8-16*SGN(ABS(A-R))
420 D=D*2
430 IFD<>2THEND=4
450 PRINTMID*(M*(A),9);" TO KICK OFF"
470 Y*="01"+CHR$(47+RND(2))+ "000"+CHR$(48+A)+
CHR$(48+E)
471 IFG<>W THENY*="00"+MID*(Y*,3)
476 GOTO840
480 E=9
500 PRINTTAB(8+F);"KICK OFF!"
505 PLAYPW*
510 B=Q+J-A
520 X=5*(ASC(MID*(V*(A-1)*12+E,1))-64)
540 Y*=CHR$(ASC(Y*+1)+MID*(Y*,2,4)+CHR$(ASC(
MID*(Y*,6,1))+1)+MID*(Y*,7)
542 IFINKEY*<>" " THEN GOTO5400
543 IFASC(MID*(Y*,6,1))=78 OR ASC(MID*(Y*,6,1
))>107 THEN GOTO 920
545 N=RND(8)
547 FORC=1TO1000:NEXT
550 C=N+E-D
560 IFE=1 OR ASC(Y*)<50 THEN GOTO 570
565 IF C=E OR (C<1 AND ASC(MID*(Y*,3,1))=49)
THEN GOTO652
570 IFC<1 THENC=1
575 IFE>3 AND ASC(Y*)>51 AND RND(0)>.55 THEN
GOTO 735
580 IFN>6 THEN C=N+ASC(MID*(Y*,8,1))-49
581 IF C>11 THEN C=12-RND(4)

```



```

582 IF C=E AND ASC(Y$)<50 THEN GOTO545
583 IF C=E THENGOTO680
585 PRINTTAB(8+F);E;"PASSES TO";C
590 IFASC(Y$)<50 OR ((X>50 OR RND(0)<.7)AND R
ND(0)<.9) THEN GOTO 610
592 FORXX=1TO600:NEXT
595 E = 12 -INT((C+E)/2)
596 IF E<5 THEN E=E+RND(2)
600 PRINTTAB(8-F);"INTERCEPTED BY";E
603 Y$="1"+MID$(Y$,2)
605 GOTO710
610 E=C
620 GOTO520
652 IFE=1 THEN GOTO680
655 PRINTTAB(8+F);E;"TACKLED BY";13-E
657 FORY=1TO500:NEXT
660 Y=5*(ASC(MID$(V$, (B-1)*12+(12-E),1))-64)
670 IFY>(2.5+(ASC(MID$(Y$,2,1))-49)*SGN(F))*X
OR RND(0)>.65 THEN GOTO700
680 PRINTTAB(8+F);E;"RETAINS BALL"
690 GOTO540
700 E=13-E
705 PRINTTAB(8-F);E;"GAINS BALL"
710 F=-F
712 FORY=1TO400:NEXT
715 A=B
720 GOTO510
735 PRINTTAB(8+F);E;"**SHOOTS**"
740 FORY=1TO1500:NEXT
745 IFRND(0)>.95 OR RND(4)+SGN(F)*(ASC(MID$(Y
$,2,1))-49)>3.5 THEN GOTO800
750 Y=5*(ASC(MID$(V$, (B-1)*12+1,1))-64)
760 IFY*RND(0)<8 THEN GOTO800
765 IFRND(0)>.6 THEN GOTO780
770 PRINTTAB(8-F);"**SAVED**"
772 PLAYPW$
773 Y$="0"+MID$(Y$,2)
775 E=1
777 GOTO710
780 PRINTTAB(8+F);" ** CORNER **"
782 PLAYPW$
785 FORE=1TO1500:NEXT
790 E=5+RND(6)
795 PRINTTAB(8+F);"TAKEN BY";E

```

```

797 Y$="0"+MID$(Y$,2)
798 GOTO540
800 PRINTTAB(8+F);E;"SCORES GOAL"
810 PRINTE$:PLAYPW$
820 E=4+SGN(ABS(A-H))
830 Y$=LEFT$(Y$,E-1)+CHR$(ASC(MID$(Y$,E,1))+1)
    +MID$(Y$,E+1)
835 F=-F
836 A=B
837 Y$="0"+MID$(Y$,2)
840 PRINT"SCORE:"
860 PRINTMID$(M$(H),9);ASC(MID$(Y$,4,1))-48;T
AB(15);MID$(M$(R),9);ASC(MID$(Y$,5,1))-48
880 PRINTE$
910 GOTO480
920 X$="HALFTIME"
925 IF ASC(MID$(Y$,6,1))>107 THEN X$="FULL
    TIME":FC=1
930 PRINTTAB(6);X$
935 PLAYPW$:IFFC=1 THEN FC=0:PLAYPJ$
940 PRINTE$
955 Y$="0"+MID$(Y$,2)
960 IFASC(MID$(Y$,6,1))>107 THEN GOTO970
966 Y=J+Q+48-ASC(MID$(Y$,7,1))
967 IFA<>Y THEN F=-F
968 A=Y
969 GOTO840
970 PRINT"FINAL SCORE:"
972 PRINTMID$(M$(H),9);ASC(MID$(Y$,4,1))-48;M
ID$(M$(R),9);ASC(MID$(Y$,5,1))-48
975 FORX=1TO2500:NEXT
980 GOTO5535
999 REM **MAIN MENU (DIARY)
1000 CLS
1002 PLAYPL$
1005 FORX=1TO4
1007 H=VAL(MID$(F$,((W-1)*8+2*X-1),1))
1010 R=VAL(MID$(F$,((W-1)*8+2*X),1))
1012 IFH=Q OR R=Q THENGOTO1016
1014 NEXTX
1016 J=H
1018 IFH=Q THEN LET J=R
1020 T=0
1022 U=0

```

```

1024 FORX=1TO12
1026 T=T+50000*(ASC(MID$(V$,((Q-1)*12+X),1))-64)
1028 U=U+50000*(ASC(MID$(V$,((Q-1)*12+X),1))-64)
1030 NEXTX
1032 IFS>6 THEN LET S=6
1035 IFO=0 OR P>.9 THEN GOTO 1050
1040 PRINT@224,"OVERDRAFT CALLED IN BY BANK"
1043 LETK=K-(INT(O*.06))
1046 LETO=0
1047 CLS
1050 IF(K<O*-1 OR LEFT$(M$(Q),1)=CHR$(8) AND W>4) AND L<>W THEN GOTO 6500
1082 X$="AWAY"
1085 IFH=Q THEN X$="HOME"
1090 PRINTTAB(9);"CLUB*";MID$(M$(Q),9):PRINTTAB(6);"SUPREMOS DESK DIARY",E$;"DAY";S;TAB(23);"WEEK";W:PRINT"1 CLUB ACCOUNTS":PRINT"2 LEAGUE TABLE":PRINT"3 WEEKLY LEAGUE FIXTURES":PRINT"4 WEEK";W;"BUSINESS MATTERS"
1092 PRINT"5 ANALYSE WEEK";W;"OPONENTS":PRINTTAB(4);MID$(M$(J),9);" (";X$;) GAME":PRINTTAB(14);"+":PRINTTAB(4);"PLAYER TRANSFER MARKET":PRINT:PRINT"***** PRESS CHOSEN KEYCODE *****"
1095 IFS>=6 THEN PRINT@389,"*** M A T C H D A Y ***":PRINTTAB(10);"PRESS ANY KEY"
1100 X$=INKEY$:IFX$="" THEN GOTO1100
1110 IF S>=6 THENCLS:GOTO200
1115 IFX$<"1"ORX$>"5" THEN GOTO1100
1117 PLAYPL$:CLS
1118 X=VAL(X$)
1120 ON X GOTO 1200,1400,1600,1800,2000
1200 REM** CLUB ACCOUNTS
1215 CLS
1270 PRINTTAB(4);"CLUB ACCOUNTS: WEEK";W:PRINT E$;S;"BANK BALANCE:";TAB(20);"L";K:PRINT"PERMITTED OVERDRAFT:L";O:PRINTS$;E$;S$;" TEAM VALUE: L";T
1275 PRINT@320,"PRESS 0 TO DISCUSS OVERDRAFT OR ENTER TO RETURN TO DIARY"
1290 X$=INKEY$:IFX$="" THEN GOTO 1290
1300 IF X$<"0" AND X$>"0" THEN GOTO 1000

```

```

1320 PRINT@320,S$;"ENTER 1 TO 4 (LHUNDRED-THOU
SAND) "
1325 PLAYPL$
1330 INPUTX$
1345 IF X$<"1" OR X$ > "4" OR LEN(X$)>1 THEN
GOTO1000
1347 X=100000*VAL(X$)
1350 IF RND(7)<4 OR X+0>400000 THEN GOTO1380
1355 O=O+X
1357 P=RND(3)+1
1360 PRINT@352,"L";X;"EXTENDED FOR";P;"WEEKS"
1370 GOTO1385
1380 PRINT@454,"****REFUSED****"
1385 S=S+1
1387 PLAYPL$
1390 FORX=1TO800:NEXTX
1395 GOTO1000
1400 REM** LEAGUE TABLE
1420 PRINTTAB(5);"SUPER LEAGUE - WEEK";W-1;PR
INTE$;
1460 PRINTTAB(23);"GOALS":PRINTTAB(14);"W D
L FR AG PT"
1470 FORX=1TO8
1490 FORY=1TO8
1500 IFLEFT$(M$(Y),1)<>CHR$(X) THEN NEXTY
1510 AQ$=MID$(STR$(ASC(MID$(M$(Y),3,1))-65),2
)
1512 BQ$=MID$(STR$(ASC(MID$(M$(Y),4,1))-65),2
)
1514 CQ$=MID$(STR$(ASC(MID$(M$(Y),5,1))-65),2
)
1516 DQ$=MID$(STR$(ASC(MID$(M$(Y),6,1))-65),2
)
1518 EQ$=MID$(STR$(ASC(MID$(M$(Y),7,1))-65),2
)
1520 FQ$=MID$(STR$(ASC(MID$(M$(Y),8,1))-65),2
)
1525 FX$="%                % % % % % % % %"
1530 PRINT USING FX$;MID$(M$(Y),9),AQ$,BQ$,CQ
$,DQ$,EQ$,FQ$
1560 NEXTX
1580 PRINT@416,"PRESS <ENTER> TO RETURN TO DI
ARY"
1585 INPUTX$

```

```

1593 IFW=15 THEN GOTO6500
1595 GOTO1000
1600 REM** LEAGUE FIXTURES
1610 Y=W
1630 CLS
1640 PRINT" LEAGUE FIXTURES FOR WEEK";Y;PRIN
TE$;S$;S$
1650 FORX=1TO4
1655 H=VAL(MID$(F$,8*(Y-1)+(X*2)-1,1))
1656 R=VAL(MID$(F$,8*(Y-1)+(X*2),1))
1659 PRINTMID$(M$(H),9);TAB(16);"V";TAB(18);M
ID$(M$(R),9)
1678 NEXTX
1680 PRINT@352,"ENTER ANOTHER WEEK NUMBER OR
PRESS <ENTER> TO RETURN TO DIARY"
1682 PLAYPL$
1683 INPUTX$
1685 IFX$="" THEN GOTO1000
1690 Y=INT(VAL(X$))
1692 IFY<1 OR Y>14 THEN PRINT@448,"
";GOTO 1680
1695 GOTO1630
1800 CLS4:PRINT"ACTION FILE - WEEK";W:PRINT@6
4,"1 SPONSOR/ADVERTISER":PRINT"2 TRAVEL/TCKT
SALES/SUPPORTERS":PRINT"3 TRAINING/PRESS RELA
TIONS":PRINT"4 GROUND IMPROVEMENT":PRINT"5 ES
CAPE FOR GOLF AND LEAVE IT ALL TO BEN AN
D JO, YOUR ";
1802 PRINT"ASSISTANT AND SECRETARY"
1805 PRINT@357,"*** SELECT ACTIVITY ***";:PRI
NT@352,;
1810 X$=INKEY$:IFX$=""THEN GOTO1810
1815 IFX$<"1" OR X$>"5" THEN GOTO1810
1820 X=VAL(X$)
1830 ON X GOTO 1840,1845,1880,1890,1900
1840 X$="OFLAYOU MADE IT. 1 YEAR SPONSORSHIPS
INGLE GAME SPONSORSHIP DEAL PITCH ADVERTISE
MENT RENTED FOR ADVERTISER CANCELLED CONTRACT
-":GOTO1850
1845 X$="MM@@TRAVEL AGENT GIVES YOU REBATE S
UPPORTERS CLUB GIVES DONATION JO(SEC) LOST 40
0 SEASON TICKETS BEN(ASST) FXD BAD FGN TOUR DE
AL"
1850 N=RND(4)

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```

1851 IFN(>)1 OR X(>)1 THEN GOTO1855
1852 IF RIGHT$(F$,1)="!" THEN GOTO1850
1853 F$=LEFT$(F$,112)+"!"
1855 X=5000*(ASC(MID$(X$,N,1))-68)
1856 IFX>50000 THEN X=1000000
1857 PRINTMID$(X$,5+(N-1)*31,31),"L";X
1860 K=K+X
1870 GOTO1900
1880 G=W
1882 PRINT"TEAM MORALE HIGH(GOOD PRESS COV)"
1885 GOTO1900
1890 I=I+1
1891 K=K-100000
1892 PRINT"STAND ACCOM UP BY 10K(COST 100K)"
1900 FORX=1 TO 2500:NEXT
1905 S=S+2
1910 GOTO1000
2000 REM** TEAM DETAILS NEXT GAME
2010 CLS8
2070 X=19*SGN(ABS(H-0))
2080 PRINTMID$(M$(H),9);"(H)";TAB(17);MID$(M$(R),9)+"(A)":PRINTTAB(X);"MGR:SUPREMO";:PRINT
@44,"(L000)";
2096 F=0
2097 C=0
2100 FORX=1TO11
2110 Y=50*(ASC(MID$(V$(H-1)*12+X,1))-64)
2115 D=50*(ASC(MID$(V$(R-1)*12+X,1))-64)
2117 F=F+Y/1000
2118 C=C+D/1000
2120 PRINT@32+X*32,MID$(STR$(X),2);";";LEFT$(S$,6-LEN(STR$(Y)));MID$(STR$(Y),2);TAB(16);LE
FT$(S$,6-LEN(STR$(D)));MID$(STR$(D),2);
2125 FORY=1TO7
2126 E=ASC(MID$(B$(Y),2,1))-64
2127 IF E<>X THEN GOTO2150
2130 D=ASC(MID$(B$(Y),1,1))-64
2135 IFD<>H AND D<>R THEN GOTO 2150
2140 PRINT@32*(E+1)+7+15*SGN(ABS(H-D)),MID$(B$(Y),3);
2150 NEXTY
2200 NEXTX
2300 PRINT@416,"TOTAL";F;"M.";TAB(18);"TOTAL"
;C;"M.":PRINT"ENTER NO.OF PLAYER TO SWAP

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```

OR <ENTER> TO RETURN TO DIARY";:PRINT@474,;
2340 INPUTX$
2345 IFX$="" THEN GOTO1000
2350 IF S>6 OR VAL(X$)<1 OR VAL(X$)>11 THEN G
OTO1000
2357 X=VAL(X$)
2360 N=RND(8)
2370 IFN=Q THEN GOTO 2360
2372 A=(N-1)*12+X
2374 B=(Q-1)*12+X
2375 D=75*(ASC(MID$(V$,A,1))-64)
2377 E=D-(D/15)*(RND(5)-1)
2378 S=S+1
2380 PRINT@448,S$;LEFT$(S$,31);:PRINT@448,"A
NO. ";MID$(STR$(X),2);" OFFERED AT L ";MID$(STR
$(D),2):PRINT"ENTER AN OFFER OR PRESS <ENTER>
";:PRINT@471,;
2390 INPUTY$
2395 IFY$="" THEN GOTO2300
2400 IF VAL(Y$)>=E THENGOTO2420
2405 PRINT@480,STRING$(31,32);:PRINT@480,"SOR
RY - OFFER TOO LOW";
2410 FORYY=1TO1500:NEXT
2415 GOTO2380
2420 PRINT@480,STRING$(31,32);:PRINT@480,"ACC
EPTED - THANK YOU";
2425 C=1000*(50*(ASC(MID$(V$,B,1))-64)-VAL(Y$
))
2430 K=K+C
2460 X$=MID$(V$,A,1)
2470 V$=LEFT$(V$,A-1)+MID$(V$,B,1)+MID$(V$,A+
1)
2475 V$=LEFT$(V$,B-1)+X$+MID$(V$,B+1)
2480 FORY=1TO7
2485 IF(ASC(B$(Y))=Q+64 OR ASC(B$(Y))=N+64) A
ND ASC(MID$(B$(Y),2,1))=X+64 THEN B$(Y)=CHR$(
Q+N+128-ASC(B$(Y)))+MID$(B$(Y),2)
2490 NEXTY
2495 S=S+2
2500 GOTO2000
4000 REM**INITIALISATION
4010 PJ$="03V25T7L1A04DP503BP5GP5EP5G"
4020 PW$="L100T255V3105GAG#GAG#GAG#GAG#A#AG#A
#AG#A#AG#AA#BABA#ABA#ABA#ABA#ABA#ABA#ABA#ABA#

```

```

ABA#ABA#ABA#ABA#
4030 PC$="L10T20V3101GD#CGD#CGD#CGD#CGD#CGD#C
"
4040 PL$="V15L10004EP80G#P80B"
4210 DATA"BASHILTON", "AFWHELAN", "DGKEEGAN", "G
EFRANCIS", "CJREGIS", "EGWILKINS", "HHHODDLE"
4220 FORX=1TO7:READB$(X):NEXT
4255 V$="DADADTBDCABATBDDCBABACDABCBBADCACTBA
DABACBTADDBADDACBDTCBCBADAABBCBBDABADBAATABCA
CDABABCAABTBCBA"
4300 F$="123456783142758614235867516273841625
384753647182182736452143658713245768324176851
5263748526174831728354654637281"
4435 DATA"LIVERPOOL", "NOTTINGHAM", "WEST BROMW
ICH", "SOUTHAMPTON", "MANCHESTER U.", "LEEDS", "M
ANCHESTER C.", "TOTTENHAM"
4438 FORX=1TO8:READM$(X):NEXT
4440 FORX=1TO8
4442 IFW<2 THENM$(X)=CHR$(X)+"AAAAAAA"+M$(X)E
LSE M$(X)=LEFT$(M$(X),1)+"AAAAAAA"+MID$(M$(X)
,9)
4450 NEXTX
4680 CLS
4700 PRINT"SOCCER SUPREMO - BEWS BROTHERS":P
RINT"STAR PLAYERS      SUPER LEAGUE"
4740 A=0
4750 FORX=1TO7
4760 PRINTCHR$(X+64);" ";MID$(B$(X),3);TAB(1
4);CHR$(X+A+79);" ";MID$(M$(X+A),9)
4770 IFX=1 THENPRINTTAB(3);"GOALKEEPER Q" ";M
ID$(M$(2),9)
4780 IFX=1 THEN A=1
4790 NEXTX
4800 PRINT@320,"IF YOU WISH TO CHANGE A STAR
      PLAYER OR TEAM PRESS APPROPRIATE LETTER AN
D ENTER THE NEW NAME, OR PRESS <ENTER> IF LIS
T IS OK"
4810 PLAYPL$
4820 X$=INKEY$:IFX$=""OR(X$<"A"ANDX$<>CHR$(13
))ORX$>"W" OR(X$<"P"ANDX$>"G") THENGOTO4820
4840 IFX$=CHR$(13) THEN GOTO 4900
4850 PLAYPL$
4852 A=0
4855 IFX$>"G" THEN LETA=1

```



```

5600 FORX=1T04
5610 H=VAL(MID$(F$,8*(W-1)+(X*2)-1,1))
5620 R=VAL(MID$(F$,8*(W-1)+X*2,1))
5640 IFH<>Q AND R<>Q THEN GOTO 5720
5680 A=ASC(MID$(Y$,4,1))-48
5690 B=ASC(MID$(Y$,5,1))-48
5700 GOTO5750
5720 REM***SCORES
5730 A=ASC(MID$(X$, (ASC(M$(H))-1)*6+RND(6),1)
)-48
5740 B=ASC(MID$(X$, (ASC(M$(R))-1+SGN(8-ASC(M$(
R))))*6+RND(6),1))-48
5750 M$(H)=LEFT$(M$(H),5)+CHR$(ASC(MID$(M$(H)
,6,1))+A)+CHR$(ASC(MID$(M$(H),7,1))+B)+MID$(M
$(H),8)
5770 M$(R)=LEFT$(M$(R),5)+CHR$(ASC(MID$(M$(R)
,6,1))+B)+CHR$(ASC(MID$(M$(R),7,1))+A)+MID$(M
$(R),8)
6120 IFA<>B THEN GOTO6140
6125 M$(H)=LEFT$(M$(H),3)+CHR$(ASC(MID$(M$(H)
,4,1))+1)+MID$(M$(H),5,3)+CHR$(ASC(MID$(M$(H)
,8,1))+1)+MID$(M$(H),9)
6130 M$(R)=LEFT$(M$(R),3)+CHR$(ASC(MID$(M$(R)
,4,1))+1)+MID$(M$(R),5,3)+CHR$(ASC(MID$(M$(R)
,8,1))+1)+MID$(M$(R),9)
6135 GOTO6200
6140 IFA<B THEN GOTO6170
6143 M$(H)=MID$(M$(H),1,2)+CHR$(ASC(MID$(M$(H)
),3,1))+1)+MID$(M$(H),4,4)+CHR$(ASC(MID$(M$(H)
),8,1))+3)+MID$(M$(H),9)
6160 M$(R)=LEFT$(M$(R),4)+CHR$(ASC(MID$(M$(R)
),5,1))+1)+MID$(M$(R),6)
6165 GOTO6200
6170 M$(R)=LEFT$(M$(R),2)+CHR$(ASC(MID$(M$(R)
),3,1))+1)+MID$(M$(R),4,4)+CHR$(ASC(MID$(M$(R)
),8,1))+3)+MID$(M$(R),9)
6180 M$(H)=LEFT$(M$(H),4)+CHR$(ASC(MID$(M$(H)
),5,1))+1)+MID$(M$(H),6)
6200 FX$=" %### % %###"
6210 PRINT USING FX$;MID$(M$(H),9),A,MID$(M$(
R),9),B
6220 NEXTX
6320 C=200
6325 X$="

```

```

6330 FORX=1TO8
6340 A=-100
6350 FORY=1TO8
6360 D=ASC(MID$(M$(Y),8,1))+ASC(MID$(M$(Y),6
,1))-ASC(MID$(M$(Y),7,1))/20
6370 IF D>C OR MID$(X$,Y,1) <> " " OR D<=A TH
EN GOTO 6400
6380 B=Y
6390 A=D
6400 NEXTY
6410 M$(B)=CHR$(X)+MID$(M$(B),2)
6420 X$=LEFT$(X$,B-1)+"1"+MID$(X$,B+1)
6430 C=A
6440 NEXTX
6445 S=1:W=W+1:P=P-1
6450 PRINT@488,"PRESS ANY KEY";
6460 X$=INKEY$:IFX$="" THEN GOTO 6460
6470 CLS:GOTO1400
6499 REM**CHAIRMAN'S OFFICE
6500 CLS4
6502 IF W=15 THEN GOTO 6510
6503 PLAYPC$
6505 IF L<>W THEN M=M+1
6510 PRINT$;E$;:PRINT@103,"CHAIRMAN'S OFFICE
";:PRINT@160,E$;E$
6520 PRINT"PERMITTED OVERDRAFT L";MID$(STR$(O
),2):PRINT"BANK BALANCE L";K:PRINT:PRINT"LEAG
UE POSITION";ASC(M$(Q));"OUT OF 8":PRINT"MISD
EMEANOR WARNING NUMBER";M
6540 IFM>4 THEN PRINT@452,"SUPREMO - YOU ARE
SACKED!":STOP
6560 IFW>14 THEN GOTO6570
6565 L=W
6566 PRINT@456,;:INPUT"PRESS <ENTER>";X$
6568 GOTO1000
6570 PRINT@416," CONGRATULATIONS - YOU WIN":
PLAYPJ$
6575 PRINT"PRESS <ENTER> FOR NEXT SEASON";
6580 X$=INKEY$:IFX$="" THEN GOTO 6580
6590 GOTO4440

```

Roots

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

In the section of the program where you are asked to enter numbers yourself, we have actually included an ABS function in LINE 670 to help your computer out of its predicament! 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**R O O T S                                COPYRIGHT
1983 MICHAEL BEWS                                DRAGON TRANSLATION IAN
HUGHES
20 PK$="04T255V31BA#V24BA#V18BA#V14BA#V9BA#V6
BA#V4BA#V3BA#V2BA#V1BA#BA#BA#BA#BA#"
100 CLS2
110 PRINT"THIS PROGRAM CALCULATES ROOTS      U
SING BOTH THE INTERNAL ' ^ ' FUNCTION IN THE
COMPUTER ROM ANDNEWTON RAPHSON REITERATIVE
      APPROXIMATION.      "
115 PRINT@192,"WHEN IS A '5' NOT A '5' ??"
120 PRINT@256,"      THE PROGRAM WILL DEMONSTRA
TEONE OF THE PROBLEMS FACED BY      YOUR COMPUT
ER WHEN IT TRIES TO      ";
130 PRINT"CONVERT THE RESULT OF ITS BINARYSYS
TEM CALCULATIONS INTO DECIMAL      FOR DISPLAY O
N THE SCREEN"
132 PLAYPK$
135 PRINT@488,"PRESS <ENTER>";:INPUTX$
140 CLS3:PRINT@128,"ALTHOUGH WE WOULD NEED TO
EMPLOYMACHINE CODE METHODS TO ACTUALLYSEE TH
E 'BIT' DIFFERENCE BETWEEN TWO SEEMINGLY IDENT
ICAL NUMBERS, WE CAN";
150 PRINT" SHOW YOU THE 'IMPOSSIBLE' AS YOUR
COMPUTER 'FAILS' TO      RECOGNISE THE NUMBER F
OR WHICH      IT IS SEARCHING!      "
155 PLAYPK$
160 PRINT@488,"PRESS <ENTER>";:INPUTX$

```

```

170 CLS0:PRINT"R O O T S    @1983 MICHAEL BEW
S ";
175 PRINT064,"ANY ROOT MAY BE CALCULATED BY
REITERATIVE APPROXIMATION USING:";
180 PRINT0160, "A = ((N/G^(R-1))+G*(R-1))/2
";
185 PRINT0192,"WHERE N=ORIGINAL NUMBER
      R=ROOT NUMBER REQUIRED          G=ANY
NUMBER                                A=APPROXIMATION TO
ROOT N                                PRODUCED BY THE FORMULA."
186 PRINT" IFA<>G THEN WE LET G=A AND    APP
LY THE FORMULA REPEATEDLY,    MAKING G EQUAL T
O THE PRECEDING VALUE OF 'A' UNTIL A=G(=ROOT
N).";
187 PLAYPK$
188 PRINT0488,"PRESS <ENTER>";:INPUTX$
190 CLS8:PRINT"R O O T S    @1983 MICHAEL BEWS
";STRING$(32,163);
192 PRINT064,"A = ((N/G^(R-1))+G*(R-1))/2
";
200 PRINT096,STRING$(32,172);
205 PRINT"EXAMPLE TO FIND SQ.ROOT OF 16  ";
210 PRINT"LET G=3 (A REASONABLE GUESS AS
SQ.ROOT 16=4 AS YOU KNOW!)"
215 G=3:N=16
220 GOSUB230:GOTO235
230 A=(N/G+G)/2:RETURN
232 PRINT0224,;
235 PRINT"G=";G;"GIVES A=";A
240 PRINT"      WE NOW LET G=";A
245 G=A:GOSUB230
250 PRINT"G=";G;"A=";A
260 IFA=G THEN GOTO 280
270 GOTO245
280 PRINT"THEREFORE SQ.ROOT 16=";A
285 PRINT"YOUR COMPUTER SAYS ROOT 16=";A
290 PLAYPK$
300 PRINT0488,"PRESS <ENTER>";:INPUTX$
310 CLS4
320 PRINT"EXAMPLE TO FIND SQ.ROOT OF 25  ";
330 PRINT041,"LET G=3 AGAIN";
340 G=3:N=25:GOSUB230
350 PRINT064,"G=";G;"GIVES A=";A
360 PRINT"      WE NOW LET G=";A

```

```

370 G=A:GOSUB230
380 PRINT"G=";G;"": A=";A
390 IFA=G THEN GOTO400
395 GOTO370
400 PRINT"THEREFORE SQ.ROOT OF 25 =" ;A
410 PRINT"BUT YOUR COMPUTER FAILED TO STOP TH
E FIRST TIME THAT G & A BOTH          EQUALL
ED 5 !!"
420 PRINT"(BECAUSE G IS NOT PRECISELY 5 !)" ;
422 PLAY"05T255V31C04C03C02C01C05F04F03F02F01
F05E04E03E02E01E05D04D03D02D01D05C04C03C02C01
C"
425 PRINT"PRESS 'R' TO REPEAT THE EXAMPLES O
R <ENTER> TO TRY YOUR OWN  ";
430 X$=INKEY$:IFX$="" THEN GOTO430
435 IF X$="R" THEN GOTO190
440 CLS4:PRINT"R O O T S      @1983 MICHAEL BEW
S ";
490 PLAYPK$
500 PRINT@64,"ENTER NUMBER (N)";:PRINT@448,;:
INPUT"(>) AND <1000000)";;N$
510 IFN$="" THEN GOTO500
515 IF VAL(N$)<.0001 OR VAL(N$)>1000000 THEN
GOTO 500
530 N=INT(VAL(N$)):PRINT@80,;N
540 PLAYPK$
550 PRINT@96,"ENTER ROOT NUMBER ";:PRINT@448,
STRING$(32,32);:PRINT@448,;:INPUT"(>1 AND < 1
00)";;R$
570 IFR$="" THEN GOTO550
580 IF VAL(R$)>100 OR VAL(R$)<2 THENGOTO550
600 R=INT(VAL(R$)):PRINT@114,R
605 PRINT@448,STRING$(32,32);
610 LETG=2*(N^(1/R)):X=1
650 A=(N/G^(R-1)+G*(R-1))/R
660 PRINT@160,X;"> A=";A
670 IF ABS(A-G)<.000001 THEN GOTO 700
680 X=X+1:G=A:GOTO650
700 PRINT@224,"THE";R;"ROOT OF";N;"="  "
705 PRINTTAB(18);A
707 PLAYPK$
710 PRINT"CHECK USING COMPUTER '^'FUNCTION";
720 PRINT" ";A;"^";R;"=";A^R
730 PRINT@416,"PRESS 'Q' TO QUIT OR ANY OTHER
KEY TO REPEAT"

```

740 X\$=INKEY\$: IF X\$="" THEN GOTO740

750 IFX\$="Q" THEN STOP

760 GOTO440

OXO

The classic game, played against the computer. But in our version the computer can be beaten!

```

1 REM ***DRAGON VERSION ***
10 REM NOUGHTS & CROSSES. (C) 1982 BY MICHAEL
  BEWS. (REVISED FOR THE DRAGON 32 BY PETE LUC
  AS)
20 DIM A$(9), B$(9), D=0:H=0:M=0
30 S$="CDEFGAB"
40 Y$=CHR$(201)+CHR$(128)+CHR$(198):Y1$=CHR$(
  128)+CHR$(207)+CHR$(128):Y2$=CHR$(198)+CHR$(1
  28)+CHR$(201)
50 Z$=CHR$(193)+CHR$(195)+CHR$(194):Z1$=CHR$(
  197)+CHR$(128)+CHR$(202):Z2$=CHR$(196)+CHR$(2
  04)+CHR$(200)
60 FOR X=1 TO 9:READ B(X):NEXT X
70 GOTO 470
80 REM***MAIN ROUTINE***
90 SOUND 200,2:T=T+1:IF A<0 THEN GOSUB 670 ELS
  E GOSUB 680
100 A(N)=A:A=-A:IF A<0 THEN PRINT @ 317," "
110 REM***CHECK FOR WIN***
120 FOR X=0 TO 2:IF ABS(A(3*X+1)+A(3*X+2)+A(3*X+3
  ))=3 OR ABS(A(X+1)+A(X+4)+A(X+7))=3 THEN 600
130 IF X>1 THEN 150
140 IF ABS(A(5)+A(5+2*(X+1))+A(5-2*(X+1)))=3
  THEN 600
150 NEXT X:IF T=9 THEN GOTO 320:REM***CHECK F
  OR A DRAW***
160 IF A<0 THEN GOTO 420:REM***PLAYER'S TURN
  ***
170 IF T>0 THEN 210
180 N=1+2*RND(5)-2:IF N=5 THEN 180:REM***CH
  OOSE A CORNER SQUARE ON FIRST MOVE***
190 GOTO 90
200 REM***CHECK FOR POSSIBLE WIN(K=2), THEN
  CHECK FOR POSSIBLE OPPONENTS WIN(K=-2)***
210 K=2:N=0
220 FOR X=0 TO 2:IF A(3*X+1)+A(3*X+2)+A(3*X+3)=K
  THEN 340

```



```

230 IF A(X+1)+A(X+4)+A(X+7)=K THEN GOTO 360
240 IF X=2 THEN GOTO 260
250 IF A(5)+A(5+2*(X+1))+A(5-2*(X+1))=K THEN
GOTO 380
260 NEXT X:K=-K:IFK<0 THEN GOTO 220
270 REM****CHOOSE A CORNER SQUARE IF POSSIBLE
(40 ATTEMPTS)****
280 FORX=1TO40:N=1+2*RND(5)-2:IFN<>5 AND A(N)
=0 THEN 90
290 NEXT X
300 FORX=1TO9:IF A(X)=0 THEN N=X: GOTO 90:REM
****CHOOSE ANY VACANT SQUARE****
310 NEXT X
320 PRINT @ 408," DRAW ";D=D+1:PLAY "T15"+S
$+S$+S$: GOTO 630
330 REM****SELECT THE VACANT SQUARE IN POTENT
IAL WIN ROW****
340 FORY=3 TO 1 STEP -1:IF A(3*X+Y)=0 THEN N=
3*X+Y:GOTO90
350 NEXT Y
360 FORY=3 TO 1 STEP -1:IF A(X+Y*3-2)=0 THEN
N=X+3*Y-2:GOTO 90
370 NEXT Y
380 IF A(5)=0 THEN N=5:GOTO 90
390 IF A(5+2*(X+1))=0 THEN N=5+2*(X+1):GOTO 90
400 IF A(5-2*(X+1))=0 THEN N=5-2*(X+1):GOTO 90
410 REM****PLAYER'S TURN****
420 X$=INKEY$:IF X$="" OR X$<"1" OR X$>"9" TH
EN 420
430 N=VAL(X$)
440 PRINT @ 345," ";:PRINT @ 312,"YOU ";N
;:IF A(N)<>0 THEN PRINT @ 345,"AGAIN";:SOUND
150,10: GOTO 420
450 GOTO 90
460 REM****INITIALISATION****
470 FOR X=1 TO 9:A$(X)=STR$(X):NEXT X
480 FOR X=1 TO 9:A(X)=0:NEXT X
490 G=17:F=3:N=0:T=0:CLS3
500 PRINT @ 7,"NOUGHTS & CROSSES";
510 FOR P=1 TO 3:FOR X=1 TO 25:SET(G+X,F,7):N
EXT X
520 FOR X=1 TO 27 STEP 8:FOR Y=0TO 7:SET(G+X,

```

```

F+Y,7):NEXT Y,X:F=F+8:NEXT P
530 FOR X=1 TO 25:SET(G+X,F,7):NEXT X
540 PRINT @ 97,"I AM ";;PRINT @ 120,"YOU ARE"
;;PRINT @ 129," O   ";;PRINT @ 152," X   ";
550 FORX=1 TO 9:PRINT @ B(X)+32,A*(X);" ";;NE
XT X
560 A=(2*(1+RND(2))-5)
570 P$="ME ":IF A<0 THEN P$="YOU"
580 PRINT @ 456,P$;" TO GO FIRST";:GOTO 110
590 REM***END OF GAME ROUTINE***
600 P$="YOU WIN":IF A<0 THEN P$=" I WIN ":M=M
+1:GOTO 620
610 H=H+1
620 PRINT @ 408,P$;:PLAY "T15"+S$+S$+S$
630 PRINT @ 448,"SCORE: YOU ";;H;" ME ";;M;"DRA
W";:D:PRINT @ 483,"PRESS ANY KEY FOR NEW GAME";
640 X$=INKEY$:IF X$="" THEN GOTO 640
650 GOTO 480
660 DATA 74,78,82,202,206,210,330,334,338
670 PRINT @ B(N),Y$;:PRINT @ B(N)+32,Y1$;:PRI
NT @ B(N)+64,Y2$;:RETURN
680 PRINT @ B(N),Z$;:PRINT @ B(N)+32,Z1$;:PRI
NT @ B(N)+64,Z2$;:RETURN

```

Galaxians

You are the commander of the sole surviving laser base on Earth. The fleets of Alien spacecraft are moving in for the final onslaught. Some swoop down, lasers blasting; others sit at the top of the screen launching unstoppable bombs which must be dodged. If you wipe out one fleet, another will appear in its place. In short, you haven't a chance. But make sure you take as many of the nasties with you as you can before you go.

```

100 'GALAXIANS BY PAUL STANLEY      REWRITTE
N FOR THE DRAGON32      BY E.A.JACKSON
105 CLEAR 500: DIM X(12), W(16), Z(16), GV(9)
110 GOSUB465: GOSUB520
115 GOSUB375: GOSUB400
120 GN=8: H=108: HV=8: P1=0: D1=0: SCORE=0
125 FORN=1 TO8: G1(N)=2: G2(N)=(24*N)-14: NEXT N
130 GOSUB425
135 GOSUB 375: GOSUB 400
140 DRAW"C2;BM40,40"+G$(1)
145 GOTO160
150 GOTO210
155 GOTO315
160 'MOVE BASE
165 A$=INKEY$: IF A$="" THEN 180
170 IF A$=CHR$(32) THEN 190
175 IF A$=CHR$(8) OR A$=CHR$(9) THEN B$=A$
180 H=H+8*(B$=CHR$(8) AND H>12)-8*(B$=CHR$(9)
AND H<200)
185 PUT (H, 156)-(H+32, 168), W, PSET: GOTO 155
190 COLOR 4, 3: LINE (H+14, 156)-(H+14, 40), PSET: S
OUND 200, 1
195 LINE (H+14, 156)-(H+14, 40), PRESET: SOUND 200, 1
200 IF ABS((H+14)-(D1+6))<16 THEN D$=STR$(D1)
+ ", "+STR$(D2): SCORE=SCORE+750: SOUND 170, 1: SOU
ND150, 1: DRAW"C3BM"+D$+SG$(1): SOUND170, 1: SOUND
150, 1: G1=0: D1=0: GOSUB375
205 IF PPOINT(H+14, 34)<>3 THEN SCORE=SCORE+25
: GOTO245
210 'MOVE GALAXIANS 1
215 V=V+1: IFV>8 THEN V=1

```

```

220 IF G1(V)<2 THEN 145
225 P1$="BM"+STR$(G2(V))+",40":C1$="C"+STR$(G1(V))
230 DRAW C1$+P1$+SG$(1):IF G1(V)=3 THEN G1(V)=2 ELSE G1(V)=3
235 IF G1(V)=3 THEN COLOR 2,3:LINE(G2(V)+6,48)-(G2(V)+6,170),PSET:LINE(G2(V)+6,48)-(G2(V)+6,170),PRESET:SOUND 120,1:IF ABS((H+12)-(G2(V)+6))<8 THEN 295
240 GOTO145
245 'HIT ROUTINE
250 QV=INT((H+12)/24):G1(QV)=-1:P1$="BM"+STR$(G2(QV))+",40":DRAW"C3"+P1$+SG$(1):GN=GN-1:IF GN=0 THEN GN=8:FORN=1TO8:G1(N)=3:NEXT N:D1=H:D2=60:GOTO155
255 GOSUB375:GOTO150
260 'ENDPLAY
265 DRAW"C2;BM76,88"+ST$(3):FOR T=1TO1000:NEXT T
270 B$=INKEY$
275 DRAW "C2;BM56,108"+ST$(4):DRAW "C2;BM114,108"+ST$(5)
280 A$=INKEY$:IF A$<>CHR$(32) THEN 280
285 IF SCORE>HI THEN HI=SCORE
290 PUT(H,156)-(H+32,168),Z,PSET:GOTO 120
295 'WIPE OUT
300 COLOR 2,3:FOR N=G2(V) TO G2(V)+24STEP4:LINE(N,160)-(N,180),PSET:NEXT N:FOR N=G2(V)TOG2(V)+24:LINE(N,150)-(N,180),PRESET:SOUND120,1:NEXT N:GOTO260
305 'WIPE OUT2
310 COLOR 1,3:FOR N=D1 TO D1+24 STEP4:LINE(N,150)-(N,180),PSET:SOUND 100,1:NEXT N:FOR N=D1 TO D1+24:LINE(N,150)-(N,180),PRESET:SOUND 150,1:NEXT N:GOTO260
315 'MOVE GALAXIANS2
320 IF D1=0 THEN 210 ELSE D$=STR$(D1)+", "+STR$(D2)
325 DRAW "C3BM"+D$+SG$(1)
330 D2=D2+12:IFD2>160 THEN 345
335 D$=STR$(D1)+", "+STR$(D2)
340 DRAW"C1BM"+D$+SG$(1):GOTO 145
345 IF ABS((H+14)-(D1+6))<16 THEN 305 ELSE DRAW"C3BM"+D$+SG$(1):D1=0:GOTO155

```

```

350 'ENDPLAY
355 DRAW"C2;BM88,185"+ST$(3):FOR T=1TO1000:NE
XT T:DRAW "C3;BM88,185"+ST$(3)
360 DRAW"C2;BM60,185"+ST$(4)
365 DRAW"C2;BM120,185"+ST$(5)
370 A$=INKEY$:IF A$<>CHR$(32)THEN370 ELSE RET
URN
375 'RECORD NEW SCORE
380 IF SCORE<0 THEN SCORE=0
385 DRAW"C3;BM60,14"+SS$:SS$="":SC$=STR$(SCOR
E)
390 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SS$=SS$+SN$(Y2(Z2)):NEXT Z2
395 DRAW"C2;BM60,14"+SS$:RETURN
400 'RECORD HIGH SCORE
405 IF HI<0 THEN HI=0
410 DRAW"C3;BM196,14"+SH$:SH$="":SC$=STR$(HI)
415 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SH$=SH$+SN$(Y2(Z2)):NEXT Z2
420 DRAW"C2;BM196,14"+SH$:RETURN
425 'SCREEN DISPLAY
430 PMODE 3,1:PCLS3
435 DRAW "C2;BM128,168"+SG$(2):GET(120,156)-(
152,168),W,G:PCLS3:GET(120,156)-(152,168),Z,G
440 DRAW "C2;BM2,14"+ST$(1)
445 DRAW "C2;BM122,14"+ST$(2)+ST$(1)
450 FORN=1TO8:P1$=STR$(G2(N)):DRAW"C2;BM"+P1$
+",40"+SG$(1):NEXT N
455 SCREEN 1,0
460 RETURN
465 FOR N=1TO5:READ ST$(N):NEXT N:FOR N=0TO9:
READ SN$(N):NEXT N:FORN=1TO3:READ SG$(N):NEXT
N:RETURN
470 'TEXT GRAPHICS
475 DATA"BR2;NU1;R6;U4;L6;U4;R6;ND1;BD8;BR10;
NU1;L6;U6;R6;ND1;BD6;BR4;U6;R6;D6;NL6;BR4;U6;
R4;ND1;BD6;BR4;BR6;NU1;L6;U3;NR6;U3;R6;D3;BD3
;BR4","U4;NU4;R6;NU4;D4;BR4;U4;BU2;U1;BD7;BR8
"
480 DATA"NR4;U6;R6;D6;NL6;D3;L6;NU1;BR6;BU3;B
R4;NR4;NU3;R6;U3;NL6;U3;L6;D1;BD5;BR10;U6;R4;
ND6;R4;D6;BR4;U6;R6;D3;L6;D3;R6;NU1;BR10;NR6;
L6;R6;D6;BR6;NU2;R2;U2;L4;U4;BR6;D4;BD2;BR10;
NU1;L6;U6;R6;D3;NL6;BD3;BR4;U6;R4;D1;BD5;BR4"

```

```

485 DATA "ND4;U6;R6;D6;L6;BR10;U6;R4;ND1;BD6;
BR4;BU3;R6;U3;L6;D6;R6;NU1;BR4;NU1;R6;U3;L6;U
3;R6;ND1;BD6;BR4;NU1;R6;U3;L6;U3;R6;ND1;BD5;B
R4"
490 DATA "NU1;R6;U3;L6;U3;R6;D1;BD5;BR4;ND4;U
6;R6;D6;L6;BR10;NU3;R6;U3;NL6;U3;L6;D1;BD5;BR
10;R6;U1;BU4;U1;L6;D6;BR10;U6;R6;D3;L6;D3;R6;
NU1;BR4;U6;NU4;R6;D6;L6;BR10;NU3;R6;U3;NL6;U3
;L6;D1;BD5;BR10;U6;R4;ND1;BD6;BR4"
495 DATA "U6;R6;D6;NL6;BR4","R2;NR2;U6;NL2;BD
6;BR6","BU5;U1;R6;D3;L6;D3;R6;NU1;BR4","NU1;R
6;U3;NL3;U3;L6;ND1;BR10;BD6","BR4;U2;NR2;NU2;
L4;U4;BR6;BD6;BR4","NU1;R6;U3;L6;U3;R6;BD6;BR
4","BU3;R6;D3;L6;U6;R6;ND1;BD6;BR4"
500 DATA "BU5;U1;R6;D6;BR4","R6;U3;NL6;U3;L6;
D6;BR10","R6;U6;L6;D3;R6;BD3;BR4"
505 DATA "BR8;NU1;L2;U3;NR12;U3;R2;U2;NL2;BD2
;R4;ND4;R4;U2;NR2;BD2;R2;D6;L2;NU1;BR2"
510 DATA "BR6;NU10;R6;U6;L12;D6;R6"
515 DATA "BR2;ND1;R4;U6;R4;D4;NL2;NR2;BU4;R4;
D6;R4;D2;L16;BR6;BU10;U2;L2;BR6;NR2;D2"
520 'INSTRUCTIONS
525 CLS:PRINT@6,"GALAXIANS"
530 PRINT:PRINT"FLEET AFTER FLEET,THE INVADER
S FORM TO ATTACK -FIRING LASERS TODESTROY YO
UR BASE"
535 PRINT:PRINT"USE THE ARROW KEYS TO MOVE YO
UR BASE, AND THE SPACEBAR TO FIRE":PRINT:PRIN
T"WATCH OUT FOR THE GREENIES!:"
540 PRINT@404,"PRESS SPACEBAR";
545 A$=INKEY$:IF A$(<)CHR$(32) THEN 545
550 RETURN

```

Wordgram

Two versions of a very popular wordgame. Watch the letters move about the screen as you try to solve the JUMBLED game. The program allows you to select 'word endings'—a technique used frequently by crossword experts. You may also enter your own words for solution by someone else.

```

100 'WORDGRAM BY MICHAEL BEWS          CONVERTE
D FOR THE DRAGON 32      BY E.A.JACKSON
105 DIM A$(7),L(16),P(16)
110 GOTO 680
115 P(X)=LW+X-GL
120 'NORMAL GAME
125 CLS:PRINT@12,"WORDGRAM
130 FOR X=1TOLW:L(X)=0:MID$(L$,X,1)=MID$(W$,X
,1):NEXT X
135 FOR X=1TOLW:IF L(X)=1 THEN PRINT@256+(2*X
)+2,MID$(L$,X,1);
140 NEXT X
145 FOR X=1TOLW:PRINT@288+(2*X)+2,"-":NEXT X
150 FOR X=1TOLW:IF L(X)=0 THEN165
155 NEXT X
160 GOTO635:'GAME COMPLETE ALL LETTERS GUESSED
165 PRINT@356,"WRONG GUESSES"
170 PRINT@388,I$
175 PRINT@32,"PRESS LEFT ARROW TO GUESS WORD
OR SPACEBAR TO RESIGN"!
180 PRINT@416,"?"
185 Q$=INKEY$:IF Q$=""THEN185
190 IF Q$(<)CHR$(8)THEN215
195 PRINT@416,STRING$(63,32);:PRINT@416,"ENTE
R YOUR GUESSWORD NOW":LINE INPUT G$
200 IF G$=W$THEN FOR X=1TOLW:L(X)=1:NEXT X:GO
TO135
205 FOR X=1TOLEN(G$):IF MID$(G$,X,1)<"A" OR M
ID$(G$,X,1)>"Z" THEN PRINT@448,"ENTER AGAIN-D
O NOT USE INVERSE ";:GOTO 200
210 NEXT X:PRINT@448,"WRONG WORD-KEEP TRYING
";:GOTO175

```

```

215 IF Q$=CHR$(32) THEN FOR X=1TOLW:PRINT@256
+(2*X)+2,MID$(L$,X,1);:NEXT X:GU=1:GOTO635
220 PRINT Q$
225 PRINT@448,STRING$(31,32);
230 IF ASC(Q$)<65 OR ASC(Q$)>90 THEN PRINT@44
8,"LETTERS ONLY PLEASE      ";:GOTO180
235 FOR X=1TOLW:IF Q$<>MID$(L$,X,1)THEN250
240 IF L(X)=1 THEN SOUND 200,1:PRINT@448,"ALR
EADY GUESSED CORRECTLY      ";:GOTO180
245 L(X)=1:R=1
250 NEXT X
255 IF R=1 THEN SOUND 200,1:PRINT@420,"*** YE
S ***";:R=0:GS=GS+1:GOTO135
260 FOR X=1 TO LEN(I$):B$=MID$(I$,X,1):IF B$=
Q$ THEN SOUND 150,1:PRINT@448,"ALREADY GUESSE
D WRONGLY";:GOTO180
265 NEXT X
270 GS=GS+1:SOUND 125,1:PRINT@420," * NO *
";:LET I$=Q$+I$:PRINT@388,I$;:GOTO180
275 ' JUMBLED GAME
280 CLS:FOR X=1TOLW:L(X)=0:NEXT X:LET G$=""
285 FOR X=1TOLW
290 Q=INT(RND(LW)+0.995):IF L(Q)=1 THEN 290
295 L(Q)=1:MID$(L$,X,1)=MID$(W$,Q,1)
300 PRINT@320+(X*2),MID$(L$,X,1);
305 SOUND 150,1
310 NEXT X
315 FOR X=1TOLW:L(X)=0:MID$(U$,X,1)="-":P(X)=
0:NEXT X
320 FY=0
325 PRINT@32,CHR$(159);"RE-ARRANGE LETTERS NO
W":PRINT:PRINT CHR$(159);"LEFT ARROW TO RETUR
N LETTER      ";:RIGHT ARROW FOR WORD ENDING
SPACEBAR TO RESIGN";
330 PRINT@160,STRING$(31,32)
335 G$="":GL=0:FZ=0
340 Q$=INKEY$:IF Q$=""THEN 340
345 SOUND 150,1
350 PRINT@320,STRING$(31,32)
355 PRINT@288,STRING$(63,32)
360 IF GL=0 THEN FY=0
365 IF Q$=CHR$(8) AND GL<1THEN 340
370 IF Q$=CHR$(8)THEN 405
375 IF Q$=CHR$(9) AND FY=0 THEN585

```



```

380 IF Q#=CHR*(9) THEN340
385 IF Q#=CHR*(32) THEN PRINT@320,"WORD WAS "
;W#:GU=1:GOTO635
390 PRINT@320,"( "; Q# ;" )      ";
395 PRINT@320,"          "
400 GOTO 430
405 FOR X=1TOLW:IF MID*(L*,X,1)<>MID*(U*,GL,1)
) OR L(X)<>1 THEN NEXT X
410 L(X)=0:MID*(U*,GL,1)="-":PRINT@160+(14+P(
GL))," ";P(GL)=0:GL=GL-1
415 FOR Y=1TOLW:IF L(Y)=0 THEN PRINT@320+(2*Y
),MID*(L*,Y,1)
420 NEXT Y
425 GOTO 340
430 IF ASC(Q#)<65 OR ASC(Q#)>90 THEN PRINT@29
3,"AGAIN!! ";:GOTO340
435 FOR X=1TOLW
440 IF MID*(L*,X,1)=Q# AND L(X)=0 THEN465
445 NEXT X
450 PRINT@320,"NO ";Q#;" AMONG THE REMAINING
LETTERS"
455 GOTO 340
460 'MOVE LETTER ROUTINE
465 L(X)=1:GL=GL+1:MID*(U*,GL,1)=Q#:P(GL)=GL-
FZ
470 FOR X=1TOLW:IF L(X)=1 THEN PRINT@320+(2*X
)," ";
475 NEXT X
480 PRINT@160+(14+P(GL)),MID*(U*,GL,1)
485 IF GL<>LW THEN340
490 'NEXT GUESS (JUMBLED)
495 PRINT@320,"      WAIT":GS=GS+1
500 GG=50
505 FOR X=1TOLW:IF P(X)<=GG THEN GG=P(X)-1
510 NEXT X
515 FOR X=1TOLW
520 FOR Y=1TOLW
525 IF P(Y)=X+GG THEN G#=G#+MID*(U*,Y,1)
530 NEXT Y
535 NEXT X
540 PRINT@448,"          "
545 IF G#=W# THEN 635
550 FOR X=1TOLW
555 B#=MID*(G*,X,1)

```

```

560 MID$(L$, X, 1) = B$
565 PRINT@320 + (2 * X), MID$(L$, X, 1)
570 NEXT X
575 GOTO 315
580 ' WORD ENDING ROUTING
585 FZ = GL
590 FORX = 1 TO GL
595 P(X) = LW + X - GL
600 NEXT X
605 PRINT@160, STRING$(31, 32)
610 FORX = 1 TO GL: PRINT@160 + (14 + P(X)), MID$(U$, X,
1)
615 NEXT X
620 FY = 1
625 GOTO 340
630 ' END GAME ROUTINE
635 IF GU = 1 THEN 650
640 RG = RG + 1
645 PRINT@320, " CORRECT"
650 PRINT@448, STRING$(31, 32)
655 PRINT@448, GS; " GUESSES."; RG; " WORDS RIGHT
";: PRINT@484, "PRESS SPACEBAR";
660 Q$ = INKEY$: IF Q$ < > CHR$(32) THEN 660
665 SOUND 200, 1
670 I$ = " ": GU = 0: GS = 0: GOTO 725
675 ' INITIALISATION
680 GS = 0: GU = 0: R = 0: RG = 0: S = 0: I$ = " "
685 A$(1) = "GATELINKBUSHEDGEPLANAUNTPINELEAFWI
THMILESTEPPESTPINTPUSHHUNT"
690 A$(2) = "CHAIRNIECEGRASSPIANOCELLORADIONYLO
NMANORBRICKAPPLERIVERSPICEGLASSMOUSEPYLON"
695 A$(3) = "FAMILYPALACEPLAQUECINEMAWINDOWFLOW
ERFATHERSISTERFRIENDPEANUTMINUTEMIDDLEPUDDLEP
ANTHER"
700 A$(4) = "PENDANTOMNIBUSCARAVANFEATHERDIAMON
DMASONRYCHIMNEYPACKAGEMUSTARDSWALLOWBICYCLEBI
SCUITPUDDLESPUDDINGWEATHER"
705 A$(5) = "CHILDRENNECKLACEPQSTCARDPANARAMAMA
TERIALFARMYARDBLUEBELLTHOUSANDPROSPECTELECTIO
NMULTYPLYDIVIDENDDIVIDERSCASSETTE"
710 A$(6) = "WATERFALLFURNITUREBOOKSHELFAEROPLA
NEPINEAPPLENEWSPAPERGRAPEVINEDESTITUTEFANTAST
ICPHOTOCOPYDORMITORYTELEPHONEINSTITUTEINSPECT
OR"

```

715 A\$(7)="BENEFACTORHEREDITARYPARLIAMEN
 ENTARYGREENHOUSESTRAWBERRYSOMERSAULTS
 SUPPLEMEN
 THENCEFORTHHELECTRICALCOMPENSATEGRADUATIONGLAS
 SHOUSEHEADPHONESNATIONWIDE"

720 '

725 CLS:PRINT@12,"WORDGRAM":PRINT@64,"PRESS A
 NY NUMBER UP TO 9 FOR THEMIMUM NUMBER OF LE
 TTERS WHICH YOU WANT IN THE WORD":

730 PRINT:PRINT"-OR S FOR SIX OR LESS LETTERS
 ":PRINT:PRINT::PRINT"-OR P TO ENTER YOUR OWN
 WORD"

735 Q\$=INKEY\$:IF Q\$="" THEN 735

740 SOUND 200,1

745 IF Q\$(<>CHR\$(80)) THEN 765

750 PRINT@416,"ENTER YOUR WORD NOW(NOT INVERS
 E)";:LINE INPUT W\$

755 FOR X=1 TO LEN(W\$):IF MID\$(W\$,X,1)<"A" OR M
 ID\$(W\$,X,1)>"Z" THEN PRINT@416,"ENTER WORD AG
 AIN(NOT INVERSE)":GOTO750

760 NEXT X:LW=LEN(W\$):L\$=STRING\$(LW,45):U\$=ST
 RING\$(LW,45):GOTO810

765 IF ASC(Q\$)=83 THEN S=INT(RND(3)+.995):GOT
 0790

770 IF ASC(Q\$)<49 OR ASC(Q\$)>57 THEN GOTO 735

775 S=ASC(Q\$)-51

780 IF S<1 THEN S=1

785 IF S=6 THEN S=S+INT(RND(1)+.5)

790 L\$=STRING\$(S+3,45):U\$=STRING\$(S+3,45)

795 N1=INT(RND(12)+1):IF N1>12 THEN N1=12

800 NQ=N1*(S+3)

805 W\$=MID\$(A\$(S),NQ+1,S+3)

810 CLS:PRINT@448,"PRESS J(JUMBLED) OR N(NORM
 AL)":LW=LEN(W\$)

815 Q\$=INKEY\$:IF Q\$="" THEN 815

820 SOUND 200,1

825 IF Q\$=CHR\$(74) THEN 275

830 IF Q\$(<>CHR\$(78)) THEN 815

835 GOTO120

Morse Tutor

This has to be the definitive Morse code tutor. It's got everything you could possibly require to painlessly acquaint yourself with the code, and then to go on and practice until you reach professional speeds. The program offers you a comprehensive menu with a full listing of letters and numbers (in both text and Morse), a facility to convert your own messages into the code and a challenging tester section. You also have the opportunity to adjust the speed of the code to suit your own abilities. What more could you ask for?

```

1 REM *** DRAGON VERSION ***
2 REM *** MORSE TUTOR ***
10 CLEAR1000
20 REM MORSE TUTOR @ROBERT ERSKINE 1983
40 GOSUB 8500
100 CLS
110 PRINT@43,"OPTIONS"
120 PRINT
140 PRINT"1 PRINT A MESSAGE":PRINT
150 PRINT"2 MESSAGE WITH SOUND ONLY":PRINT
160 PRINT"3 CREATE YOUR OWN MESSAGE":PRINT
170 PRINT"4 TEST SECTION":PRINT
180 PRINT"5 CHANGE SPEED":PRINT
190 PRINT"6 THE MORSE CODE":PRINT
200 A$=INKEY$:IF A$="" THEN 200
210 IF A$="1" THEN 2005
220 IF A$="2" THEN 2000
230 IF A$="3" THEN 2030
240 IF A$="4" THEN 5000
250 IF A$="5" THEN 6000
260 IF A$="6" THEN 7000
290 GOTO 200
1000 X$=V$:V$=Q$+V$+H$
1010 FOR X=1 TO LEN(V$)-32
1020 IF Q=0 THEN PRINT@448,MID$(V$,X,32);
1025 T=ASC(MID$(V$,X+31,1))
1030 FOR Y=1 TO 5
1035 IF T=32 THEN 1045
1040 IF T>64 THEN CD=T-64
1041 IFT<58 AND T>47 THEN CD=T-21

```

```

1042 L=C(CD,Y):IF L>0 THEN PLAY"T"+T$+"O4L"+S
TR$(L)+"C#"
1045 NEXT Y
1046 FOR N=1 TO 60:NEXT N
1050 NEXT X
1999 GOTO 2110
2000 O=1
2005 V$=F$
2010 GOSUB 1000
2020 GOTO 100
2030 CLS:PRINT@39,"CREATE A MESSAGE"
2040 PRINT"ENTER YOUR OWN MESSAGE AT THE BO
TTOM OF THE SCREEN AND THEN PRESS THE 'ENTE
R' KEY."
2050 INPUT V$
2060 CLS:PRINT"DO YOU WANT THE MESSAGE
DISPLAYED IN BOTH SOUND AND VISION? (Y
OR N)"
2065 FOR N=1 TO 2000:NEXT N
2070 A$=INKEY$:IF A$="" THEN 2070
2080 IF A$="Y" THEN 2100
2090 O=1
2100 GOTO 1000
2110 O=0
2140 F$=X$
2150 GOTO 100
5000 CLS:PRINT@42,"TEST SECTION"
5010 PRINT
5020 INPUT"DO YOU WANT TO BE TESTED ON CH
ARACTERS (1) CODE (2) OR SOUND(3)?"A$
5025 IF A$="" THEN 5000
5030 IF ASC(A$)<49 OR ASC(A$)>51 THEN 5000
5035 W=VAL(LEFT$(A$,1))
5060 INPUT"DO YOU WANT TESTING ON LETTERS (1
) OR NUMBERS (2)?"A$
5070 IF ASC(A$)<49 OR ASC(A$)>50 THEN 5060
5080 B=VAL(LEFT$(A$,1))
5110 IF W>1 THEN 5250
5115 FOR N=1 TO 1000:NEXT N
5120 PRINT"THE CHARACTER WILL APPEAR FIRST,FO
LLOWED SHORTLY BY THE CODE AND SOUND":FOR N=1
TO 2000:NEXT N
5130 FOR X=1 TO 15
5140 IF B=1 THEN V=RND(26)

```

```

5150 IF B=2 THEN V=RND(10)+26
5160 IF B=1 THEN PRINTCHR$(V+64);
5170 IF B=2 THEN PRINT CHR$(V+21);
5180 FOR N=1 TO 1000:NEXT N
5190 FOR Y=1 TO 5
5200 IF C(V,Y)>0 THEN PLAY"T"+T$+"O4L"+STR$(C
(V,Y))+ "C#"
5210 NEXT Y
5220 PRINT" = ";C$(V)
5230 NEXT X
5240 FOR N=1 TO 1000:NEXT N:GOTO100
5250 IF W>2 THEN 5390
5260 PRINT"THE CODE WILL APPEAR FIRST,      FO
LLOWED SHORTLY BY THE      CHARACTER AND S
OUND":FOR N=1 TO 1000:NEXT N
5270 FOR X=1 TO 15
5280 IF B=1 THEN V=RND(26)
5290 IF B=2 THEN V=RND(10)+26
5300 PRINTC$(V);:FOR N=1 TO 1000:NEXT N
5310 FOR Y=1 TO 5
5320 IF C(V,Y)>0 THEN PLAY"T"+T$+"O4L"+STR$(C
(V,Y))+ "C#"
5330 NEXT Y
5340 PRINT" = ";
5350 IF B=1 THEN PRINT CHR$(V+64)
5360 IF B=2 THEN PRINT CHR$(V+21)
5370 NEXT X
5380 FOR N=1 TO 1000:NEXT N:GOTO 100
5390 PRINT"THE SOUND WILL BE HEARD FIRST,  F
LLOWED SHORTLY BY THE      CHARACTER AND
CODE":FOR N=1 TO 2000:NEXT N
5400 FOR X=1 TO 15
5410 IF B=1 THEN V=RND(26)
5420 IF B=2 THEN V=RND(10)+26
5430 FOR Y=1 TO 5
5440 IF C(V,Y)>0 THEN PLAY"T"+T$+"O4L"+STR$(C
(V,Y))+ "C#"
5450 NEXT Y
5460 FOR N=1 TO 1000:NEXT N
5470 PRINT"THAT WAS ";
5480 IF B=1 THEN PRINT CHR$(V+64);" = ";C$(V)
;" ";
5490 IF B=2 THEN PRINT CHR$(V+21);" = ";C$(V),

```

```

5500 FOR N=1 TO 1000:NEXT N
5510 NEXT X
5520 FOR N=1 TO 1000:NEXT N:GOTO 100
6000 CLS:PRINT@38,"ALTER SPEED OF CODE":PRINT
6010 PRINT"ENTER A MULTIPLICATION FACTOR TOAL
TER THE SPEED OF THE MORSE.  VALUES LESS THA
N 1 WILL INCREASETHE SPEED"
6020 INPUT A
6030 IF A>9 OR A<=0 THEN 6020
6040 T#=STR$(INT(VAL(T#)/A)):IF VAL(T#)>155 T
HEN T#=STR$(155) ELSE IF VAL(T#)<1 THEN T#=ST
R$(1)
6050 GOTO 100
7000 CLS:PRINT@7,"THE MORSE CODE":PRINT
7010 FOR X=1 TO 26
7020 PRINT CHR$(X+64);" = ";C$(X),
7025 NEXT X
7027 PRINT@480,"PRESS ANY KEY TO SEE THE NUMB
ERS";A$=INKEY$
7028 A$=INKEY$:IF A$="" THEN 7028
7029 FOR X=27 TO 36
7030 IF X>26 THEN PRINT CHR$(X+21);" = ";C$(X
),
7040 NEXT X
7050 PRINT:PRINT@480,"PRESS ANY KEY TO RETURN
";A$=INKEY$
7060 A$=INKEY$:IF A$="" THEN 7060
7070 GOTO 100
8500 O=0:X$="":T$="10"
8510 F$="THIS IS A MESSAGE TO DEMONSTRATE THE
MORSE CODE TUTOR THE COMPLETE ALPHABET IS
AS FOLLOWS ABCDEFGHIJKLMNOPQRSTUVWXYZ
AND THE NUMBERS ARE 1234567890"
8520 Q$=STRING$(31," ")
8530 H$=" "
9000 DIMC(36,5):DIMC$(36)
9010 FOR X=1 TO 36
9020 FOR Y=1 TO 5
9030 READ C(X,Y)
9040 NEXT Y,X
9060 DATA 6,2,0,0,0,2,6,6,6,0,2,6,2,6,0,2,6,6
,0,0,6,0,0,0,0,6,6,2,6,0,2,2,6,0,0,6,6,6,6,0,
6,6,0,0,0,6,2,2,2,0,2,6,2,0,0,6,2,6,6,0,2,2,0
,0,0,2,6,0,0,0,2,2,2,0,0,6,2,2,6,0,2,2,6,2,0,

```

```

6,2,6,0,0,6,6,6,0,0,2,0,0,0,0,6,6,2,0,0,6,6,6
,2,0,6,2,2,0,0,2,6,6
9061 DATA 2,0,2,6,2,2,0,2,2,6,6,0
9070 DATA 2,2,2,2,2,6,2,2,2,2,6,6,2,2,2,6,6,6
,2,2,6,6,6,6,2,6,6,6,6,6,2,6,6,6,6,2,2,6,6,6,
2,2,2,6,6,2,2,2,2,6
9090 FOR X=1 TO 36
9100 READ C$(X)
9110 DATA .-,-.-.,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,
.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,
.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-,-.-.-
9115 DATA ---.,---.,---.,---.,---.,---.,---.,---.,
---.,---.,---.,---.,---.,---.,---.,---.,*
9120 NEXT X
9130 RETURN
10000 GOSUB9000:FORX=1TO36:PRINTC$(X)
10010 A$=INKEY$:IFA$=""THEN10010
10020 NEXT

```


Show Sign

This forces your computer to work for a living. When you don't want it to grapple with your tax problems, beat you at chess or zap your lunar bases, then with the aid of this program you can make it display a message in large characters to alert passers-by (useful if shop window displays play a role in your life), or entertain party guests with ribald comments. You choose the message which can be up to fifty lines in length. You also have the facility to change the colour of letters and screen background colours.

```

100 'SHOWSIGN BY H. WALWYN                REWITTE
N FOR THAE DRAGON 32      BY E.A.JACKSON
105 CLS: CLEAR 5000: DIM P*(32), L(59,5), N*(51),
W*(5,5)
110 DEF FN X(Z)=Z-INT(Z/2)*2
115 DEF FN Y(Z)=INT(Z/2)
120 RESTORE: FOR N1=1 TO 59: FOR N2=1 TO 5: READ L(N1
,N2): NEXT N2, N1
125 CLS: PRINT@10, "SHOW SIGN"
130 PRINT: PRINT "THIS IS A MOVING SIGN DISPLAY
    FOR YOUR SHOP, HOME, OFFICE OR    PARTY ETC.
"
135 PRINT: PRINT "FIRST,  SET THE COLOURS OF TH
E  BACKGROUND AND THE LETTERS, THEN ENTER THE
MESSAGE WHICH CANNOT  EXCEED FIFTY LINES EACH
OF FIVE CHARACTERS."
140 PRINT@488, "PRESS SPACEBAR"; A#=INKEY#: IF
A#(<)CHR$(32) THEN 140
145 CLS: PRINT@10, "SHOW SIGN"
150 PRINT: PRINT "YOU MAY ENTER ANY CHARACTER
    FROM: ASC(32).....SPACE        TO:  ASC(
90).....Z": PRINT: PRINT "USE LEFT ARROW TO COR
RECT ERRORS IN A LINE": PRINT: PRINT "AND RIGHT
ARROW WHEN YOU HAVE  FINISHED YOUR MESSAGE"
155 PRINT@488, "PRESS SPACEBAR"; A#=INKEY#: IF
A#(<)CHR$(32) THEN 155
160 CLS: PRINT@10, "SHOW SIGN"
165 PRINT"    1.....GREEN
    2.....YELLOW        3.....
.....BLUE            4.....RED"

```

```

170 PRINT "      5.....BUFF
      6.....CYAN          7.....
.....MAGENTA          8.....ORANGE"
175 PRINT@352,"FIRST SELECT THE COLOUR FOR TH
E BACKGROUND(1 TO 8)"
180 E$=INKEY$:IF E$=""THEN180
185 IF VAL(E$)<1 OR VAL(E$)>8 THEN 175
190 EX=127+(16*VAL(E$))
195 PRINT@352,"NOW SELECT THE COLOR FOR THE
      LETTERS(1 TO 8)
200 C$=INKEY$:IF C$=""THEN200
205 IF VAL(C$)<1 OR VAL(C$)>8 THEN 195
210 CX=127+(16*VAL(C$))
215 CLS:GOSUB 705
220 CLS:PRINT@10,"SHOWSIGN"
225 PRINT:PRINT"NOW LET'S HAVE YOUR MESSAGE.."
230 PRINT "REMEMBER:      YOU WILL NOT BE      AL
LOWED TO ENTER MORE THAN FIFTYLINES OR MORE T
HAN FIVE LETTERS PER LINE"
235 PRINT:PRINT"ALWAYS INSERT SPACES TO COMPL
ETE EACH LINE"
240 PRINT:PRINT"LEFT ARROW....TO CORRECT LINE
      RIGHT ARROW...WHEN FINISHED"
245 PRINT@488,"PRESS SPACEBAR";
250 A$=INKEY$:IF A$(<)CHR$(32)THEN250
255 CLS:W=0:Z=0:F$="-----"
260 B$="":PRINT@416,STRING$(32,143);
265 W=W+1
270 PRINT@416,"LINE NO. ";W;
275 A$=INKEY$:IF A$=""THEN 275
280 Y=ASC(A$)
285 IF Y=8 THEN W=W-1:GOTO 260
290 IF Y=9 THEN BX$=B$+F$:B$=MID$(BX$,1,5):GO
TO 330
295 IF Y<32 THEN 275
300 IF Y>97 THEN Y=Y-32
305 B$=B$+CHR$(Y):PRINT@416,"LINE NO: ";W|B$
310 IF LEN(B$)=5 THEN PRINT:PRINT:GOTO 320
315 GOTO 270
320 N$(W)=B$:IF W=51 THEN GOTO 330
325 GOTO 260
330 CLS:PRINT "YOUR MESSAGE WILL NOW SCROLL
      CONTINUALLY UNTIL YOU PRESS      SPACEBAR"

```

```

335 E=VAL(E*):CLS E
340 PRINT@480,STRING$(32,EX);:N1=N1+1:IF N1>W
-1 THEN N1=1
345 FORN2=1TO5
350 R(N2)=ASC(MID$(N$(N1),N2,1))-31
355 FOR N3=1TO5:W$(N2,N3)=P$(L(R(N2),N3)):NEX
T N3,N2
360 FOR N3=1TO5:FOR N2=1TO5:PRINT CHR$(EX)+W$
(N2,N3);:NEXT N2:PRINT STRING$(2,EX);:NEXT N3
365 PRINT STRING$(32,EX);
370 FOR N=1503TO1535:POKE N,EX:NEXT N
375 A$=INKEY$:IF A$<>CHR$(32) THEN 340
380 CLS:PRINT@10,"SHOWSIGN"
385 PRINT:PRINT"PRESS ";CHR$(115);" FOR SAME
MESSAGE":PRINT:PRINT "OR ";CHR$(110);" TO ENT
ER NEW MESSAGE."
390 A$=INKEY$:IF A$=" "THEN390
395 IF A$="S" THEN 340
400 IF A$="N" THEN125
405 GOTO 390
410 DATA 0,0,0,0,0
415 DATA 4,4,4,0,4
420 DATA 10,10,0,0,0
425 DATA 10,31,10,31,10
430 DATA 31,20,31,5,31
435 DATA 16,0,31,0,1
440 DATA 28,20,31,21,31
445 DATA 12,4,0,0,0
450 DATA 24,16,16,16,24
455 DATA 3,1,1,1,3
460 DATA 21,10,31,10,21
465 DATA 4,4,31,4,4
470 DATA 0,0,0,12,4
475 DATA 0,0,31,0,0
480 DATA 0,0,0,0,4
485 DATA 1,2,4,8,16
490 DATA 31,17,17,17,31
495 DATA 4,4,4,4,4
500 DATA 31,1,31,16,31
505 DATA 31,1,31,1,31
510 DATA 16,16,18,31,2
515 DATA 31,16,31,1,31
520 DATA 31,16,31,17,31
525 DATA 31,1,1,1,1

```

```
530 DATA 31,17,31,17,31
535 DATA 31,17,31,1,1
540 DATA 0,4,0,4,0
545 DATA 0,4,0,4,12
550 DATA 0,15,16,15,0
555 DATA 0,31,0,31,0
560 DATA 0,30,1,30,0
565 DATA 31,17,7,4,4
570 DATA 0,0,0,0,0
575 DATA 31,17,31,17,17
580 DATA 31,9,15,9,31
585 DATA 31,16,16,16,31
590 DATA 31,9,9,9,31
595 DATA 31,16,31,16,31
600 DATA 31,16,31,16,16
605 DATA 30,16,23,18,30
610 DATA 17,17,31,17,17
615 DATA 14,4,4,4,14
620 DATA 14,4,4,20,20
625 DATA 17,18,28,18,17
630 DATA 16,16,16,16,31
635 DATA 31,21,21,21,21
640 DATA 31,17,17,17,17
645 DATA 31,17,17,17,31
650 DATA 31,17,31,16,16
655 DATA 30,18,22,19,30
660 DATA 31,17,30,17,17
665 DATA 31,16,31,1,31
670 DATA 31,4,4,4,4
675 DATA 17,17,17,17,31
680 DATA 17,17,10,10,4
685 DATA 21,21,21,21,31
690 DATA 17,10,4,10,17
695 DATA 17,17,31,4,4
700 DATA 31,1,31,16,31
705 FORN1=0TO31:P*(N1)=STRING*(5,EX):Z=N1:FOR
N2=5TO1 STEP-1:IF FN X(Z)=1 THEN MID*(P*(N1)
,N2,1)=CHR*(CX)
710 Z= FN Y(Z):NEXT N2,N1:RETURN
```

Wordsum

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.

```

1 REM *** DRAGON ***
10 '*** WORDSUM ***                                (C)1983 BY
    MICHAEL BEWS      CONVERSION BY J.BREFFNI.
20 CLS:GOSUB 910' INITIALISE
30 'START
40 T=0
50 NN=RND(N)
60 IF MID$(W$(NN),6,1)=" " THEN X=5 ELSE X=6
70 P$=MID$(W$(NN),1,X)
80 SOUND 89,1
90 CLS 2
100 PRINT@0,"WORDSUM (C) BY MICHAEL BEWS."
110 FOR I=1 TO 6
120 PRINT@32*I+140,B$;
130 NEXT
140 'GET RANDOM LETTER
150 FOR X=1 TO LEN(P$)
160 A$(X)=MID$(P$,X,1)
170 IF X=1 THEN 210
180 FOR Z=1 TO X-1
190 IF A$(X)=A$(Z) THEN A(X)=A(Z):GOTO 270
200 NEXT Z
210 A(X)=RND(9)
220 IF A(1)=0 THEN 210
230 IF X=1 THEN 270
240 FOR Y=1 TO X-1
250 IF A(X)=A(Y) THEN 210
260 NEXT Y
270 NEXT X
280 P=0
290 FOR X=LEN(P$) TO 1 STEP-1
300 T=INT(T+(A(X)*10^P))

```

```

310 P=P+1
320 NEXT X
330 S=9*(1000+RND(9000))
340 I=T-S
350 S$=STR$(S):T$=STR$(T):I$=STR$(I)
360 S$=MID$(S$,2):T$=MID$(T$,2):I$=MID$(I$,2)
370 FOR X=1 TO LEN(T$)
380 FOR Y=1 TO LEN(I$)
390 IF MID$(I$,Y,1)=MID$(T$,X,1) THEN C(X)=1:
MID$(I$,Y,1)=A$(X)
400 NEXT Y
410 NEXT X
420 FOR X=1 TO LEN(T$)
430 FOR Y=1 TO LEN(S$)
440 IF MID$(S$,Y,1)=MID$(T$,X,1) THEN C(X)=1:
MID$(S$,Y,1)=A$(X)
450 NEXT Y
460 NEXT X
470 FOR X=1 TO LEN(T$)
480 IF C(X)=0 THEN MID$(T$,X,1)=A$(X)
490 NEXT X
500 'PRINT SUM ON SCREEN
510 PRINT@211-LEN(I$),;
520 FOR X=1 TO LEN(I$)
530 SOUND X,1
540 PRINT MID$(I$,X,1);
550 NEXT
560 PRINT@(211+32)-LEN(S$),;
570 FOR X=1 TO LEN(S$)
580 SOUND X+6,1
590 PRINT MID$(S$,X,1);
600 NEXT
610 PRINT@205+64,"-----";
620 PRINT @(211+96)-LEN(T$),;
630 FOR X=1 TO LEN(T$)
640 SOUND X+11,1
650 PRINT MID$(T$,X,1);
660 NEXT
670 PRINT@416,"press (space) to reveal the wo
rd";
680 K$=INKEY$
690 IF INKEY$("<>") " THEN 690
700 SOUND 89,1
710 PRINT@222-LEN(I$),STR$(I);" ";

```

```

720 PRINT@253-LEN(S*), " ";STR*(S); " ";
730 PRINT@280, " ----- ";
740 PRINT@318-LEN(T*), STR*(T); " ";
750 PRINT@307-LEN(T*), ;
760 FOR X=1 TO LEN(T*)
770 SOUND 30*X,1
780 PRINT A*(X);
790 NEXT
800 K*=INKEY*
810 TIMER=0
820 IF TIMER/50<.5 THEN 820
830 PRINT@416, STRING*(32, " ");
840 TIMER=0
850 IF TIMER/50<.5 THEN 850
860 PRINT@416, "PRESS (1) FOR ANOTHER WORDSUM.";
870 IF INKEY*(>"1" THEN 810
880 SOUND 89,1
890 FOR I=1 TO 6:C(I)=0:NEXT
900 GOTO 30
910 'INITIALISE SECTION
920 DIM A(10),C(10),A*(10),W*(60)
930 B*=" "
940 PRINT@0, "ONE MOMENT PLEASE..."
950 FOR I=1 TO 60
960 W*(I)=" "
970 NEXT
980 N=1
990 READ W*(N):IF W*(N)="!" THEN N=N-1:RETURN
1000 N=N+1:GOTO 990
1010 DATA HEARTH, YELLOW, ENGINE, RABBIT, CARPET,
CLEVER, FEASTS, SHADES, POTATO, RADIOS, THAMES, CAR
ROT, TOMATO, CHEESE, BUTTER, RUDDER, HEATER, PLINTH
, FARMER, TROPHY
1020 DATA CHERRY, HAPPEN, COFFEE, TEAPOT, MOTHER,
SISTER, HOUSES, CABINS, ISLAND, PIRATE, SILVER, JEW
ELS, BOUNTY, TOWELS, PLANES, PLANTS, HOCKEY, TENNIS
1030 DATA COSTLY, LEMONS, APPLES, ORANGE, VIOLET,
ROBBER, RATHER, POINTS, PAINTS, TANDEM, LETTER, LIT
TER, LATTER, FASTER, MASTER, MISTER
1040 DATA !

```

Tanx

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 ----- T A N X -----
2 REM --- @ PAUL STANLEY ---
3 REM ***DRAGON VERSION***
10 CLS
12 PCLEAR8:GOSUB 9000:GOSUB 7000
15 S1=0:S2=0
30 C=0:GOSUB 8000
35 IF RND(0)>.5 THEN C=C+1:GOSUB 700
40 GOSUB 100
44 C=C+1
45 IF C=8 THEN PCLS3:GOTO 30
46 GOSUB 700
47 C=C+1
48 IF C=8 THEN PCLS3:GOTO 30
50 GOTO 40
100 PUT(96,168)-(143,175),P,PSET:NO=1:XS=152:
YS=168:GOSUB9900
105 GOSUB400
110 A=VAL(R#):IF A>90 OR A<0 THENGOTO 105
115 GOSUB 450
120 V=VAL(R#):IF V<2 OR V>10 THEN GOTO 115
124 SC=F1:O1=F1
130 MX=100+5*V
140 E=A/10
160 FOR G=8 TO 255 STEP V
170 IF SC>0 THEN IF SC<175 THEN IF G>10 THEN
IF PPOINT(G,SC)=4 THEN K=G:SOUND100,1:GOTO 20
0
172 IFSC>0 THEN IF SC<175 THEN FOR F=0 TO 7:I
F PPOINT(G,SC+F)=2 THEN GOTO 1000 ELSE NEXT F
175 IF SC>0 THEN IF SC<175 THEN PSET(G,SC,2)

```



```

180 SC=SC-(E AND G<MX)+(E AND G>=MX)
185 IF G<MX THEN E=E-E/8 ELSE E=E+E/4
191 NEXT G
195 K=255
200 IF SC>Q2-1 AND SC<Q2+8 AND K>247 THEN GOT
O 1000
205 E=A/10:FOR G=8 TO 255 STEP V
210 IF G=K THEN RETURN
220 IF O1>0 THEN IF O1<175 THEN PSET(G,01,3)
230 O1=O1-(E AND G<MX)+(E AND G>=MX)
240 IF G<MX THEN E=E-E/8 ELSE E=E+E/4
250 NEXT G
260 RETURN
300 PUT(0,184)-(39,191),L1,PSET
310 PUT(136,184)-(207,191),L2,PSET
320 RETURN
400 COLOR3,3:LINE(224,184)-(241,191),PSET,BF:
GOSUB 300:PUT(48,184)-(119,191),EL,PSET:NO=0:
XS=146:YS=184:GOSUB9900:NO=90:XS=180:GOSUB990
0:GOSUB500:RETURN
450 COLOR3,3:LINE(48,184)-(119,191),PSET,BF:G
OSUB 300:PUT(48,184)-(111,191),V,PSET:NO=2:XS
=146:GOSUB9900:NO=10:XS=180:YS=184:GOSUB9900:
LINE(224,184)-(241,191),PSET,BF:GOSUB500:RETU
RN
488 IF C=9 THEN PCLS3:GOTO 30
500 R$="":A$=INKEY$:IF A$="" THEN 500
510 IF ASC(A$)<48 OR ASC(A$)>57 THEN 500
520 NO=VAL(A$):XS=224:GOSUB9900:R$=A$
530 A$=INKEY$:IF A$="" THEN 530
540 I=ASC(A$):IF I=13 THEN RETURN ELSE IF I=8
THEN COLOR3,3:LINE(224,184)-(231,191),PSET,B
F:GOTO 500
550 IF I<48 OR I>57 THEN 530
560 NO=VAL(A$):XS=234:GOSUB9900:R$=R$+A$
570 A$=INKEY$:IF A$="" THEN 570
580 I=ASC(A$):IF I=13 THEN RETURN ELSE IF I=8
THEN COLOR3,3:LINE(234,184)-(241,191),PSET,B
F:R$=LEFT$(R$,1):GOTO 530
590 GOTO 570
700 PUT(96,168)-(143,175),P,PSET:NO=2:XS=152:
YS=168:GOSUB9900
705 GOSUB400
710 A=VAL(R$):IFA>90 OR A<0 THEN GOTO 705

```

```

715 GOSUB450
720 V=VAL(R#):IF V<2 OR V>10 THEN GOTO 715
725 SC=F2:O1=F2
730 MX=155-5*V
740 E=A/10
750 FOR G=247 TO 0 STEP -V
760 IF SC>0 THEN IF SC<175 THEN IF G<239 THEN
  IF PPOINT(G,SC)=4 THEN K=G:SOUND100,1:GOTO 8
  00
765 IF SC>0 THEN IF SC<175 THEN FOR F=0 TO 7:
  IFPPOINT(G,SC+F)=2 THEN GOTO 2000 ELSE NEXT F
770 IF SC>0 THEN IF SC<175 THEN PSET(G,SC,2)
780 SC=SC-(E AND G>MX)+(E AND G<=MX)
790 IF G>MX THEN E=E-E/8 ELSE E=E+E/4
792 NEXT G
795 K=0
800 IF SC>Q1-1 AND SC<Q2+8 AND K<8 THEN GOTO
  2000
805 E=A/10:FOR G=247 TO 0 STEP -V
810 IF G=K THEN RETURN
820 IF O1>0 THEN IF O1<175 THEN PSET(G,O1,3)
830 O1=O1-(E AND G>MX)+(E AND G<=MX)
840 IF G>MX THEN E=E-E/8 ELSE E=E+E/4
850 NEXT G
860 RETURN
1000 COLOR3,3:LINE(248,Q2)-(255,Q2+7),PSET,BF
1010 PLAY"T5004L8":FOR F=1 TO 50:PLAY STR$(RND(12)):PSET(255-RND(0)*20,Q2+RND(0)*15,2):NEXT F
1030 S1=S1+1
1040 GOTO 2500
2000 COLOR3,3:LINE(0,Q1)-(7,Q1+7),PSET,BF
2010 PLAY"T5004L8":FOR F=1 TO 100:PLAYSTR$(RND(12)):PSET(F+RND(0)*20,Q1+RND(0)*15,2):NEXT F
2030 S2=S2+1
2500 P$="POINT":IF S1<>1 THEN P$=P$+"S"
2505 CLS:PRINT@197,"PLAYER 1 HAS ";S1;" ";P$:
IF S2=1 THEN P$="POINT" ELSE P$="POINTS"
2507 PRINT@293,"PLAYER 2 HAS "S2;" ";P$
2510 IF S1+S2=7 THEN PRINT@418,"PRESS ANY KEY
  TO PLAY AGAIN":GOSUB 3000:CLS:S1=0:S2=0:GOTO
  30
2520 FOR F=1 TO 1000:NEXT F:GOTO 30

```

```

3000 PRINT@360,"G A M E O V E R";
3010 FORF=1 TO 100:A$=INKEY$:IF A$="" THEN NE
XT F ELSE RETURN
3020 PRINT@360," "
3030 FOR F=1 TO 100:A$=INKEY$:IF A$="" THEN N
EXT F ELSE RETURN
3040 GOTO 3000
7000 Q1=3.6:Q2=11.2:E=19.5:V=27.1:FOR F=15 TO
  1 STEP -1
7010 PRINT@F*32+Q1,"T";PRINT@F*32+Q2,"A";PR
INT@F*32+E,"N";PRINT@F*32+V,"X";
7020 SOUND200,1
7025 IF F>1 THEN PRINT@F*32," "
7030 Q1=Q1+.6:Q2=Q2+.2:E=E-.25:V=V-.65
7040 NEXT F
7050 PRINT@13,"TANX":PRINT@32,"THE 2 PLAYERS
TAKE IT IN TURN TOENTER THE ANGLE AND VELOCIT
Y AT WHICH THEY WANT TO FIRE TO TRY AND HIT
THEIR OPPONENT."
7060 PRINT"THE SHELLS MUST BE FIRED OVER TH
E HILLS BUT IF YOU ARE LUCKY YOUR SHELL MAY
BE ABLE TO GO THROUGH A HILL (PARTICULARLY
AT THE HIGHER SPEEDS.)"
7065 GOSUB7100
7070 PRINT@13,"TANX":PRINT"THE WINNER IS THE
PLAYER WHO HASHIT HIS OPPONENT THE MOST AFTER
A TOTAL OF 7 HITS HAVE BEEN MADE"
7075 PRINT"TO STAND THE BEST CHANCE OF HI
TTING YOUR OPPONENT TRY TO USETHE SMALLEST PO
SSIBLE ANGLE OF ELEVATION."
7077 PRINT"THE CAPTION AT THE BOTTOM OF THESE
REEN INDICATES WHOSE GO IT IS."
7080 PRINT"PRESS ANY KEY TO START.":A$=INKEY$
7090 A$=INKEY$:IF A$="" THEN 7090
7095 CLS:RETURN
7100 PRINT"PRESS SPACE BAR TO SEE MORE...."
7110 A$=INKEY$:IF A$<>" " THEN 7110
7120 CLS:RETURN
8000 PMODE3,1:PCLS3:SCREEN1,0
8005 Q=8*(18-RND(0)*13):COLOR4,3
8010 FOR F=16 TO 232 STEP 8
8020 FOR G=168 TO Q STEP-8
8030 LINE(F,G)-(F+7+(16 AND F=232),G+7),PSET,
BF

```

```

8035 IF F=16 THEN LINE(F-16,G)-(F-1,G+7),PSET
,BF
8040 NEXT G
8050 Q=Q+RND(0)*32-RND(0)*32
8060 IF Q<24 THEN Q=32+RND(0)*16
8065 IF Q>160 THEN Q=160
8070 NEXT F
8100 FOR F=8 TO 168 STEP 8
8110 IF PPOINT(0,F)<>3 THEN PUT(0,F-8)-(7,F-1
),T1,PSET
8113 IF PPOINT(0,F)<>3 THEN F1=F-9:Q1=F-8:GOT
O 8116
8115 NEXT F
8116 FOR F=8 TO 168 STEP 8:IF PPOINT(248,F)<>
3 THEN PUT(248,F-8)-(255,F-1),T2,PSET
8117 IF PPOINT(248.F)<>3 THEN F2=F-9:Q2=F-8:RE
TURN
8120 NEXT F
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 57
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML1(1,3):DIML2(2,4):DIMIT1(1):D
IMT2(1):DIMP(1,6):DIMV(1,6):DIMEL(2,4)
9120 GET(80,0)-(119,7),L1,G
9130 GET(184,0)-(255,7),L2,G
9140 GET(0,8)-(71,15),EL,G
9150 GET(72,8)-(135,15),V,G
9160 GET(136,8)-(183,15),P,G
9170 GET(184,8)-(191,15),T1,G
9180 GET(192,8)-(199,15),T2,G
9190 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7

```

```

9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA2,5,5,6,4,5,5,2
9512 DATA0,4,7,5,5,5,5,5
9514 DATA4,6,4,4,4,4,5,2
9516 DATA2,5,5,6,4,5,5,2
9518 DATA4,6,5,4,4,4,4,4
9520 DATA99,99,99,99,99,99,99,99
9522 DATA2,4,4,4,4,4,4,2
9524 DATA99,99,4,6,4,4,4,4,5,2
9526 DATA2,5,5,5,5,5,5,2
9528 DATA99,99,99,4,2,2,2,2,2,4
9530 DATA2,5,5,6,4,5,5,2
9532 DATA4,4,4,4,4,4,4,3
9534 DATA2,5,5,6,4,5,5,2
9536 DATA0,5,5,5,5,5,5,2
9538 DATA0,1,3,5,5,5,3,1
9540 DATA4,6,4,4,4,4,5,2
9542 DATA2,0,2,2,2,2,2,1
9544 DATA2,5,5,5,5,5,5,2
9546 DATA0,4,7,5,5,5,5,5
9548 DATA0,5,5,5,5,5,5,2
9550 DATA2,5,5,6,4,5,5,2
9552 DATA4,4,4,4,4,4,4,3
9554 DATA2,5,5,5,5,5,5,2
9556 DATA2,5,5,4,4,5,5,2
9558 DATA2,0,2,2,2,2,2,1
9560 DATA4,6,4,4,4,4,5,2
9562 DATA0,5,5,5,3,1,1,6
9564 DATA4,7,5,5,6,4,4,4
9566 DATA4,4,4,4,4,4,4,3
9568 DATA0,1,3,5,5,5,3,1
9570 DATA0,5,5,5,3,1,1,6
9572 DATA2,5,5,6,4,5,5,2
9574 DATA4,6,5,4,4,4,4,4
9576 DATA0,0,0,1,6,6,15,15
9578 DATA0,0,0,8,6,6,15,15
9900 COLOR3,3:LINE(XS,184)-(XS+7,191),PSET,BF
:N#=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950

```

```
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:C
OLOR3,3:RETURN
```

Giant Rats

The object of Giant Rats is to direct a man through a maze to reach the girl, whilst being pursued by a killer rat. You have a displayed time limit in which to move before the girl mutates - and if you are unlucky she will unpredictably change places with the rat! If the rat should reach the girl first, she will disappear altogether. At the beginning of the game you are shown the positions of up to four randomly placed mines which you must try to memorise since they will remain invisible for the remainder of the game.

```

1 REM *****giant rats*****
2 REM *** DRAGON VERSION ***
5 CLS:HS=0
10 PCLEAR8:GOSUB 9000
50 GOSUB 5000
70 SC=0
80 LI=5
90 PMODE3,1:PCLS3:SCREEN1,0
100 FOR F=0 TO 248 STEP 8:PUT(F,0)-(F+7,7),BD,PSET:PUT(F,160)-(F+7,167),BD,PSET:NEXT F:FOR
F=8 TO 152 STEP 8:PUT(0,F)-(7,F+7),BD,PSET:PUT(248,F)-(255,F+7),BD,PSET:NEXT F
103 GOSUB 2000
107 FOR I=1 TO 30:M=8*(INT(RND(0)*15)*2):N=8*(INT(RND(0)*10)*2):PUT(M,N)-(M+7,N+7),BD,PSET:NEXT I
110 SC=SC-1:Y=8:X=8:F=152:G=232:R=1:F2=152:G2=232
115 GOSUB9700
120 C=1
130 GOSUB 1500
200 FOR I=1 TO 2
201 C=C-1:NO=C:XS=0:GOSUB 9900:IF C=0 THEN 3500
205 IF RND(0)>.97 THEN GOSUB 1600
210 COLOR3,3:LINE(X,Y)-(X+7,Y+7),PSET,BF
220 A$=INKEY$:IF A$<>" " THEN KB=ASC(A$)
225 IF KB=9 THEN IF PPOINT(X+8,Y)<>2 THENX=X+8
230 IF KB=8 THEN IF PPOINT(X-8,Y)<>2 THEN X=X-8

```

```

240 IF KB=94 THEN IF PPOINT(X,Y-8)<>2 THEN Y=
Y-8
250 IF KB=10 THEN IF PPOINT(X,Y+8)<>2 THEN Y=
Y+8
255 IF W=X AND Q=Y AND PPOINT(W+3,Q+3)<>1 THE
N GOSUB 1500
257 FOR N=1 TO 4:IF X=B(N) AND Y=A(N) THEN 30
00 ELSE NEXT N
260 ON I GOSUB 300,350:GOSUB 1000
270 NEXT I
280 GOTO 200
300 PUT(X,Y)-(X+7,Y+7),M1,PSET:RETURN
350 PUT(X,Y)-(X+7,Y+7),M2,PSET:RETURN
400 PUT(G,F)-(G+7,F+7),R1,PSET:RETURN
450 PUT(G,F)-(G+7,F+7),R2,PSET:RETURN
500 PUT(G,F)-(G+7,F+7),R3,PSET:RETURN
550 PUT(G,F)-(G+7,F+7),R4,PSET:RETURN
1000 F1=F:G1=G
1010 IF F<Y THEN R=4:F2=F2+4:F=INT(F2/8)*8
1020 IF F>Y THEN R=3:F2=F2-4:F=INT(F2/8)*8
1030 IF G<X THEN R=2:G2=G2+4:G=INT(G2/8)*8
1040 IF G>X THEN R=1:G2=G2-4:G=INT(G2/8)*8
1050 COLOR3,3:LINE(G1,F1)-(G1+7,F1+7),PSET,BF
:ON R GOSUB 400,450,500,550
1060 IF PPOINT(X+3,Y+3)=1 THEN 3100
1070 M=8*(INT(RND(0)*15)*2):N=8*(INT(RND(0)*1
0)*2):PUT(M,N)-(M+7,N+7),BD,PSET
1100 RETURN
1500 SC=SC+1:NO=SC:XS=232:GOSUB9900
1501 SOUND100,1
1502 C=50
1505 Q=8*(INT(RND(0)*10))*2+8:W=8*(INT(RND(0)
*15))*2+8:PUT(W,Q)-(W+7,Q+7),G,PSET
1510 RETURN
1600 COLOR3,3:LINE(W,Q)-(W+7,Q+7),PSET,BF:L=Q
:M=W:L1=F:M1=G:F=L:G=M:Q=L1:W=M1
1605 PUT(W,Q)-(W+7,Q+7),G,PSET
1606 T=1
1610 RETURN
2000 FOR I=1 TO 4
2010 A(I)=8*(INT(RND(0)*10))*2+8:B(I)=8*(INT(
RND(0)*15))*2+8:NEXT I
2020 FOR I=8 TO 3 STEP -1:FOR L=1 TO 4:COLORI
,3:LINE(B(L),A(L))-(B(L)+7,A(L)+7),PSET,BF:SO

```



```

UND150+L*I,1: SOUND150-L*I,1:NEXTL,I
2030 RETURN
3000 REM mines
3002 FOR I=1 TO 7:PUT(X,Y)-(X+7,Y+7),M1,NOT:S
OUND250-I*2,1
3005 NEXT I
3010 GOTO 3600
3100 FOR I=1 TO 7:PUT(X,Y)-(X+7,Y+7),R4,NOT:S
OUND250-I*4,1:NEXT I
3120 GOTO3600
3500 REM out of time
3505 FOR I=1 TO 3:SOUND100+I,1:PUT(W,Q)-(W+7,
Q+7),G,NOT
3510 NEXTI
3600 COLOR3,3:LINE(X,Y)-(X+7,Y+7),PSET,BF:LIN
E(G,F)-(G+7,F+7),PSET,BF:LINE(W,Q)-(W+7,Q+7),
PSET,BF
4000 LI=LI-1:IF LI>0 THEN SOUND100,1:GOTO110
4002 CLS:FOR F=100 TO 120:SOUNDF,1:NEXT F:PRI
NT,,"YOU SCORED";SC;" POINT";:IF SC<>1 THEN P
RINT"S";
4003 PRINT". "
4010 IF SC>HS THEN HS=SC:PRINT,,"WELL DONE!
A NEW HIGH-SCORE!":PLAYT$
4015 PRINT,,"THE HIGH-SCORE IS";HS
4018 PRINT,,"PRESS ANY KEY TO PLAY AGAIN...":
A$=INKEY$
4019 A$=INKEY$:IFA$ =" " THEN 4019
4020 CLS:GOTO 70
5000 PRINT"           M U T A N T"
5010 PRINT"           R A T S"
5015 FOR N=1 TO 500:NEXT N
5020 IF FL<5 THEN FL=FL+1:CLS:PLAY M$:GOTO 50
00
5050 PRINT,," @ P A U L S T A N L E Y"
5060 PRINT,,"THE GIANT RAT IS OUT TO GET YOU!
YOU MUST TRY TO REACH THE GIRL BEFORE SHE MU
TATES (A TIMER AT THE BOTTOM OF THE SCREEN C
OUNTS THIS DOWN). "
5065 GOSUB5100
5070 PRINT,,"HOWEVER, SHE MIGHT BE A MUTANT
HERSELF AND CHANGE PLACES WITH THE RAT UNPRE
DICTABLY. ALSO, SHE MIGHT DISAPPEAR TOTALL
Y (IF SHE MEETS THE RAT, SHE WILL). "

```

```

5075 GOSUB 5100
5080 PRINT,,"AND THAT'S NOT ALL! WHEN YOU
START, UP TO 4 MINES WILL BE SHOWN IN RAND
OM POSITIONS. THESE POSITIONS MUST BE NOTED, F
OR IF YOU LAND ON ONE, YOU WILL BE DESTROY
ED!"
5090 PRINT,,"MOVE WITH THE ARROW KEYS."
5095 PRINT,,"PRESS ANY KEY TO START....":A$=I
NKEY$
5097 A$=INKEY$:IF A$="" THEN 5097 ELSE CLS:RE
TURN
5100 PRINT,,"PRESS ANY KEY TO SEE MORE...":A$
=INKEY$
5110 A$=INKEY$:IF A$="" THEN 5110 ELSE CLS:RE
TURN
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 33:IF CH>29 THEN READ C,B
9030 FORY=YC TO YC+7
9040 READ CD:D=8
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(9):DIMM1(1):DIMM2(1):DIMR1(
1):DIMR2(1):DIMR3(1):DIMR4(1):DIMG(1):DIMBD(1
):DIMA(4):DIMB(4)
9120 GET(200,0)-(207,7),M1,G
9130 GET(208,0)-(215,7),M2,G
9140 GET(216,0)-(223,7),G,G
9150 GET(224,0)-(231,7),BD,G
9160 GET(232,0)-(239,7),R1,G
9170 GET(240,0)-(247,7),R2,G
9180 GET(248,0)-(255,7),R3,G
9190 GET(0,8)-(7,15),R4,G
9200 M$="T15505L16CGDAEFDCEAGDCFAEDCGFADEGDEF
ACDGEBABDGCBELEGDACEADACBGE"
9210 T$="T204L8CDL4CL8CDL4CL8FEDCL2DL8EDCO3B-
AB-L404CL803GB-AGL3F"
9340 RETURN
9400 DATA6,9,11,11,13,13,9,6

```

```

9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9512 DATA4,4,4,4,4,4,4,3
9514 DATA2,0,2,2,2,2,2,1
9516 DATA0,2,2,0,0,2,2,0
9518 DATA4,4,4,6,5,5,5,5
9520 DATA2,0,2,2,2,2,2,1
9522 DATA0,0,0,6,6,0,0,0
9524 DATA2,5,4,7,1,1,5,2
9526 DATA2,5,5,4,4,5,5,2
9528 DATA0,2,2,0,0,2,2,0
9530 DATA6,6,15,6,6,9,9,9
9532 DATA6,6,15,6,6,6,6,6
9534 DATA6,6,15,6,15,15,9,9
9535 DATA15,9,6,9,9,6,9,15
9536 DATA1,3,0,0,4,6,14,15,6,9
9538 DATA1,3,0,0,2,6,7,15,6,9
9540 DATA1,3,4,4,14,14,14,14,4,7
9542 DATA1,3,14,2,7,7,7,7,2,2
9700 PMODE3,5:GET(152,0)-(199,7),L,G
9710 PMODE3,1:PUT(40,168)-(87,175),L,PSET
9720 NO=HS:XS=88:GOSUB9900
9730 PMODE3,5:GET(128,0)-(151,7),L,G
9740 PMODE3,1:PUT(128,168)-(151,175),L,PSET
9750 NO=LI:XS=152:GOSUB9900
9760 PMODE3,5:GET(80,0)-(127,7),L,G
9770 PMODE3,1:PUT(184,168)-(231,175),L,PSET
9780 NO=0:XS=232:GOSUB9900
9790 RETURN
9900 COLOR3,3:LINE(XS,168)-(XS+28,175),PSET,B
F:N*=STR*(NO):FOR NM=2 TO LEN(N*)

```

```
9910 NO=VAL(MID$(N$,NM,1)):GOSUB9950
9920 XS=XS+10:NEXT:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,168)-(XS+7,175),N,PSET:R
ETURN
10000 DIMM1(1):FOR X=1 TO 10
10010 FOR Y=1 TO 10
11020 PRINTX,Y:SOUND100+X,1:PUT(X,Y)-(X+7,Y+7
),M1,NOT
11030 NEXTY,X
```

Division One

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 *** dragon ***
5 REM DIVISION ONE.....WALWYN/FRASER
8 GOSUB63900
9 UM=US:G=US:P5=0
10 REM GOSUB 10000:PLAYER CHECK,BLANK,ADD,MOV
E.
12 REM GOSUB 12000:BALL CHECK,BLANK,ADD,MOVE
13 GOSUB20000
15 J=0
20 REM 8000:PRINT PLAYING FIELD
30 DIM TZ(15,15),T*(15),TA(15),TM(15),TD(15),
TT(15),TP(15),TF(15)
31 REM IF TZ(15,15)=1 THEN THE FIXTURE HAS AL
READY BEEN PLAYED.
32 REM TA(15),TM(15) AND TD(15) ARE THE DIFFE
RENT STRENGTHS.
33 REM IN ATTACK,MIDFIELD PLAY AND DEFENCE FO
R EACH TEAM.
34 REM TT(15) IS THE POINTS TOTAL.
35 FOR I=1TO15:READ T*(I),TA(I),TM(I),TD(I):N
EXTI
36 DATA"LIVERPOOL",9,6,6,"MAN UTD  ",8,5,6,"I
PSWICH  ",6,7,6,"ARSENAL  ",7,6,6
37 DATA"STHAMPTON",8,5,4,"A VILLA  ",6,6,5,"N
OTTM F  ",9,5,5,"SWANSEA  ",5,6,5
38 DATA"WOLVES  ",5,5,5,"CRYSTAL P",5,6,5,"T.

```

```

OTTENHAM",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:FOR Y=0TO9:D(X,Y)=Y+64-X*64:NEXT
Y,X
70 FOR J=1TO6:READ XS(0,J),YS(0,J):NEXT
72 FOR J=1TO6:READ XS(1,J),YS(1,J):NEXT
75 DATA2,7,7,4,7,11,12,2,12,8,12,13
76 DATA 29,7,23,4,23,11,18,2,18,8,18,13
80 GOSUB5000
85 GOSUB6000
100 GOSUB8000
105 R=0:Q=0:TIMER=0
110 FOR I=0TO1:FORJ=1TO6:X(I,J)=XS(I,J):Y(I,J)
)=YS(I,J):NEXTJ,I
120 FOR I=0TO1:FOR J=1TO6:POKE G+X(I,J)+Y(I,J)
)*32,D(I,J)
125 NEXT J,I
150 X2=0:Y2=0
152 X=0:Y=0:X1=15:Y1=8
155 I=0:J=0
160 ZZ$="A"
300 Z$=INKEY$:K3=PEEK(340):K=PEEK(338):K1=PEE
K(339):IF Z$=" "ANDK<>253 ANDK1<>254 AND K1<>25
3 AND K3<>340 THEN X=0:Y=0:MP=0:GOTO340
301 IF Z$<>" "AND VAL(Z$)<=0 THEN ZZ$=Z$:GOTO3
40
303 W=1:I=0:PQ=ASC(ZZ$)-64:IF K=MP THEN W=INT
(RND(0)*S(I,PQ))
304 J=PQ:MP=K:IF J<0 OR J>6 THEN ZZ$="A":J=1
305 IF K3=340 THEN Y=0:X=1:GOTO330
310 IF K=253 THEN Y=+1:X=0:GOTO330
315 IF K1= 254 THEN X=-1:Y=0:GOTO330
320 IF K1=253 THENX=0:Y=-1:GOTO330
330 I=0
340 FOR L=1TOW:GOSUB10000
342 IF MM THEN MM=0:X2=INT(RND(0)*2):Y2=INT(
RND(0)*3-1):GOTO620
344 NEXT L
350 IF TIMER>4500 THEN CLS2:PRINT@235,"TIMES
UP";:GOTO6700
360 U8=ASC(ZZ$):POKE 1024,U8
400 REM OPPONENT MOVE
410 W=1:I=1:V=INT(RND(0)*6+1):IF V=MV THEN W=

```

```

INT(RND(0)*S(I,MV))
420 I=1:J=V:MV=J:Y=SGN(Y1-Y(I,J))
422 IF V=1 AND RND(0)>0.5 THEN Y=SGN(14-Y(I,J))
X=1:W=1:GOTO430
424 X=SGN(X1-X(I,J))
430 FOR L=1TO W:GOSUB10000
440 IF MM THEN MM=0:X2=-INT(RND(0)*2):Y2=INT(RND(0)*3-1):GOTO620
445 NEXTL
600 U=INT(RND(0)*TA(N)+VJ+1)
620 FORL=1 TO U
650 GOSUB 12000
660 IF ZZ THEN ZZ=0:FOR I=1TO2000:NEXT I:GOSUB8000:GOTO110
690 NEXT L
900 GOTO300
999 END
5000 REM START PROCEDURE AND TEAM SET UP
5005 CLS:PRINT:PRINT
5010 FOR I=1 TO15
5020 PRINT I;" ";T$(I);" ",
5030 NEXTI
5040 PRINT:PRINT:INPUT"      your choice of tea
m";M
5042 IFM<=0ORM>15THEN5040
5050 CLS
5090 RETURN
6000 REM MATCH DECISION
6005 GOSUB 7000
6006 CLS:P=0:PRINT@229,"how many auto results
":PRINT@298,"(0-MANUAL)";:INPUTP1:IF PL=0 THE
N 6008
6007 FOR P=1 TO P1
6008 IF PL=210 THEN GOSUB 7000:CLS:PRINT"THAT
'S THE END OF THE SEASON":END
6010 Q9=INT(RND(0)*15+1):R9=INT(RND(0)*15+1)
6020 IF Q9=R9 OR TZ(Q9,R9)=1 THEN 6010
6025 TZ(Q9,R9)=1:PL=PL+1
6028 PRINT"-----";
6030 PRINT"MATCH #";PL
6040 PRINT" ";T$(Q9);" HOME TO ";T$(R9)
6042 IF Q9=M OR R9=M THEN 6050
6045 IF P>0 THEN 6500
6047 PRINT"      press any key"

```

```

6048 A$=INKEY$: IF A$="" THEN 6048
6049 GOTO6500
6050 PRINT" DO YOU WISH TO PLAY (Y/N) "
6060 A$=INKEY$: IF A$="" THEN6060
6070 IF A$="Y" THEN 6100
6080 GOTO6500
6100 REM SET ME TO PLAY
6105 J=Q9:VJ=2:VM=1: IF Q9=M THEN J=R9:VM=2:VJ
=1
6106 N=J
6110 S(1,1)=TD(J)*VJ:S(1,2)=TM(J)*VJ:S(1,3)=T
M(J)*VJ
6115 S(1,6)=TA(J)*VJ:S(1,5)=TA(J)*VJ:S(1,4)=T
A(J)*VJ
6120 S(0,1)=TD(M)*VM:S(0,2)=TM(M)*VM:S(0,3)=T
M(M)*VM
6125 S(0,6)=TA(M)*VM:S(0,5)=TA(M)*VM:S(0,4)=T
A(M)*VM
6180 GOTO1000
6500 REM MATCH DECIDE
6510 S9=INT(RND(0)*20+1):T9=INT(RND(0)*20+1):
U9=INT(RND(0)*20+1)
6520 S=0:T=0:U=0
6530 Q=TA(Q9)-TM(R9)+S9-TD(R9)+U9/2.5
6540 R=TA(R9)-TM(Q9)+T9-TD(Q9)
6550 Q=INT(Q/5):R=INT(R/5)
6555 IF Q<1 THEN Q=0
6556 IF R<1 THEN R=0
6570 PRINTT$(Q9)"..."Q,T$(R9)"..."R
6578 TP(Q9)=TP(Q9)+1:TP(R9)=TP(R9)+1:TF(Q9)=T
F(Q9)+Q:TF(R9)=TF(R9)+R
6580 IF Q>R THEN TT(Q9)=TT(Q9)+3
6584 IF R>Q THEN TT(R9)=TT(R9)+3
6586 IF R=Q THEN TT(Q9)=TT(Q9)+1:TT(R9)=TT(R9
)+1
6588 IF TT(Q9)>P5 THEN P5=TT(Q9)
6589 IF TT(R9)>P5 THEN P5=TT(R9)
6590 IF P THEN 6598
6595 PRINT" press any key when ready"
6596 A$=INKEY$: IFA$="" THEN6596
6597 GOTO6600
6598 NEXT P:PRINT"PRESS ANY KEY WHEN READY"
6599 A$=INKEY$: IF A$="" THEN6599
6600 GOTO6000

```



```

6700 FORI=1TO3000:NEXTI:CLS2
6705 REM***DELETE***
6715 PRINT"THE SCORE WOULD HAVE BEEN....."
6720 QQ=TA(Q9)-TM(R9)+S9-TD(R9)+U9/2.5
6730 RR=TA(R9)-TM(Q9)+T9-TD(Q9)
6740 QQ=INT(QQ/5):RR=INT(RR/5)
6750 IF QQ<1 THEN QQ=0
6760 IF RR<1 THEN RR=0
6770 PRINTT$(Q9)"..."QQ,T$(R9)"..."RR
6775 IF Q=QQ AND R=RR THEN PRINT"WHICH IS EXA
CTLY RIGHT!":GOTO6578
6776 PRINT"PRESS ANY KEY TO CONTINUE"
6777 A$=INKEY$:IF A$<>" "THEN6777
6778 A$=INKEY$:IF A$=" "THEN6778
6780 PRINT"...BUT AS IT IS,THE SCORE IS..."
6790 GOTO6570
7000 REM TABLE DISPLAY
7001 Y7=0
7003 CLS
7005 PRINT "team          p          g          pts"
7008 REM***DELETE***
7010 FOR J=(P5+1)TO0STEP-1
7020 FORI=1TO15
7030 IF TT(I)=J THEN 7100
7040 NEXT I
7050 NEXT J
7060 SCREEN0,1:FORI=1TO12000:NEXTI:CLS5:PRINT
0227,"matches left to play";210-PL;:FORI=1TO3
000:NEXTI:RETURN
7100 Y7=Y7+1:PRINT@Y7*32,T$(I);:PRINT TAB(12)
TP(I);:PRINTTAB(18)TF(I);:PRINT TAB(25)TT(I);
7150 GOTO 7040
8000 CLS5
8010 FORI=0TO31:POKEUM+I,243:POKEUM+I+480,252
:NEXT
8020 FORI=1TO14:POKEUM+I*32,245:POKEUM+31+32*
I,250:NEXT
8030 FORI=6TO9:POKEUM+I*32+1,58:POKEUM+30+32*
I,58:NEXT:RETURN
10000 A=X(I,J)+Y(I,J)*32
10001 IF PEEK(US+A+X+Y*32)=42 THEN 16000
10002 IF PEEK(US+A+X+Y*32)<>207THEN RETURN
10005 IF A=0 THEN A=20000
10010 AA=207

```

```

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)*32
10045 IF A=0 THEN A=20000
10050 POKE US+A,AA
10100 RETURN
12000 K=PEEK(G+X1+X2+(Y1+Y2)*32)
12002 IF K=207 THEN 12020
12004 IF K=58 THEN 12200
12006 IF K=245 OR K=250 THEN X2=-X2:GOTO12000
12008 IF K=102 THEN Y2=-Y2:GOTO12000
12011 S9=INT(RND(0)*3-1)
12012 T9=INT(RND(0)*2):IF T9=0 THEN X2=-X2:Y2
=S9:GOTO12000
12014 Y2=-Y2:X2=S9:GOTO12000
12020 POKE G+X1+Y1*32,207
12025 X1=X1+X2:Y1=Y1+Y2
12050 POKEG+X1+Y1*32,106
12100 RETURN
12200 REM GOAL
12230 POKE US+X1+Y1*32,207
12240 X1=X1+X2:Y1=Y1+Y2
12250 POKE US+X1+Y1*32,106
12251 REM***DELETE***
12252 CLS:PRINT@237,"goal";
12254 REM***DELETE
12260 IF X1<3 AND M=Q9 THEN R=R+1
12265 IF X1>28 AND M=Q9 THEN Q=Q+1
12270 IF X1<3 AND M=R9 THEN Q=Q+1
12275 IF X1>28 AND M=R9 THEN R=R+1
12280 ZZ=1
12299 RETURN
16000 U=INT(RND(0)*S(I,J)*2+1)
16005 MM=1
16010 RETURN
20000 CLS:PRINT"                division one"
20010 PRINT"YOU WILL BE ASKED TO CHOOSE A T
EAM TO";
20020 PRINT" LEAD THROUGHOUT ONE SEASON,"
;
20030 PRINT" THERE ARE 210 MATCHES IN ALL";
20040 PRINT" EVERYONE PLAYS EVERYONE TWIC
E HOME & ";

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```

20050 PRINT"AWAY.YOU CAN EITHERPLAY A MATCH O
R";
20060 PRINT" LET THE MACHINE CALCULATE THE RE
SULT. ";
20070 PRINT"WHEN THE    NUMBER OF AUTOMATIC RE
SULTS";
20080 PRINT" IS ENDED,A LEAGUE TABLE IS DRAW
N. "
20081 PRINT@380,"press any key to continue";:
A$=INKEY$:IF A$=""THEN20081 ELSE CLS
20082 PRINT:PRINT"AS THE FIXTURES PROGRESS,YO
U    WILL SEE";
20084 PRINT" HOW MANY GAMES EACH    TEAM HAS
PLAYED,";
20086 PRINT"HOW MANY GOALS    EACH TEAM HAS SCO
RED";
20087 PRINT" AND HOW    MANY POINTS FOR EACH
TEAM"
20088 PRINT"(3 FOR A WIN,1 FOR A DRAW) "
20091 PRINT:PRINT"n.b. WHEN YOU GET NEAR THE
END OF THE";
20092 PRINT" SEASON, THERE MAY BE A    SLIGHT
PAUSE ";
20093 PRINT"BETWEEN MATCHES AS THE COMPUTER H
UNTS ";
20094 PRINT"FOR THE NEXT FIXTURE."
20096 PRINT:PRINT"    press any key to continu
e"
20097 A$=INKEY$:IF A$=""THEN 20097 ELSE CLS
20100 PRINT:PRINT:PRINT"IF YOU DECIDE TO PLAY
A MATCH"
20110 PRINT"THEN YOU MAY RE-POSITION YOUR    T
EAM AS";
20120 PRINT" THEY PLAY.ONLY SIX    FOOTBALL
ERS ARE ";
20130 PRINT"SHOWN IN EACH    TEAM (LETTERS A-F
). ";
20132 PRINT"YOUR TEAM    ALWAYS PLAYS FROM LE
FT TO ";
20134 PRINT"RIGHT IN THE 'light strip'"
20135 PRINT@420,"press any to continue":A$=IN
KEY$:IfA$=""THEN20135 ELSE CLS
20136 PRINT:PRINT"YOU MAY RE-POSITION PLAYERS
ANY TIME IN ";

```

```

20140 PRINT"THE GAME BUT YOU HAVE NOCONTROL O
VER ";
20150 PRINT"WHERE THEY KICK THEBALL! THIS DEP
ENDS ";
20160 PRINT"UPON THE          VARIOUS STRENGTHS OF
ATTACK ";
20170 PRINT"AND DEFENCE.IT IS QUITE USUAL FOR
";
20172 PRINT"A TEAM TO SCORE AN 'OWN GOAL'....
#
20177 PRINT:PRINT"          THE BALL MOVES FURTHE
R ANDFASTER WHEN ";
20179 PRINT"THE MATCH IS 'AWAY' FROM HOME.";
20182 PRINT"THE DURATION OF EACH MATCH IS 3
MINS."
20183 PRINT@451,"press any key to continue":A
$=INKEY$:IFA$=""THEN20183 ELSE CLS
20184 PRINT@5,"re-position procedure":PRINT:P
RINT"HOLD DOWN THE LETTER OF YOUR PLAYER "
;
20185 PRINT"AND WAIT FOR THE LETTER TO BE DI
SPLAYED ";
20186 PRINT"IN THE TOP LEFT HAND CORNER.":PRI
NT
20187 PRINT"          THEN PRESS '1' AND '2' FOR L
EFT & RIGHT ";
20188 PRINT"AND KEYS '8' AND '9' FOR DOWN A
ND UP."
20189 PRINT"HOLD THE KEY DOWN FOR RANDOM M
ULTI-MOVE."
20194 PRINT@452,"press any key to start"
20195 A$=INKEY$:IF A$=""THEN 20195
20197 RETURN
63900 REM CLR/SOUND CODES
63902 US=1024
63915 RETURN

```

Alien

The alien ship passes overhead, razing the ground below with its power beam, and dropping swarms of deadly Veepods. Moving swiftly across your territory you fire your missiles as long as the power holds out. When a recharge is necessary, your base changes shape, and you must ride out the dangers undefended. As an added difficulty, you can choose to have an invisible alien, only identifiable when it fires, and providing minimal guidance for your missile positioning.

```

1 REM *** DRAGON VERSION ***
100 'ALIEN BY PAUL STANLEY REWRITTE
N FOR THE DRAGON 32 BY E.A. JACKSON
105 CLEAR 500:PCLEAR8: DIM B(24),R(10),S(30),T
(20),U(20),V(30),W(20),Y(36),Z2(11),S$(10),Y2
(11)
110 GOSUB460:GOSUB535:GOSUB375:GOSUB480:GOSUB
340: IF AL=99 THEN GET(100,100)-(139,107),R,G
115 IF SCORE>HI THEN HI=SCORE
120 BD=0:CD=0:H=127:J=16:K=0:H2=40:L=RND(28)*
8:SCORE=0:C$=INKEY$
125 GOSUB300:GOSUB325
130 SCREEN 1,0:COLOR 1,2
135 IF BR<25 THEN 175 ELSE 225:'MOVE BASE
140 IFK>200 THEN PUT(K,H2)-(K+39,H2+7),V,PSET
:K=0:H2=H2+4:L=RND(30)*8: IF H2>100 THEN H2=40
145 BC=BC+1:IF BC>25 THEN GOSUB 295
150 K=K+J:PUT (K,H2)-(K+39,H2+7),R,PSET
155 RA=RND(50): IF RA>48 THEN RA=0:GOTO 250
160 IF ABS(L-K)<28 THEN COLOR 3,2:LINE (K+16,
H2+6)-(K+16,160),PSET:SOUND 175,1:LINE(K+16,1
60)-(K+16,H2+6),PRESET:SOUND 190,1:IF ABS(K-H
)<8 THEN PUT(H,156)-(H+28,168),U,PSET:CD=99
165 IF CD=99 THEN CD=0:COLOR 0,2:FOR B1=H TO
H+28 STEP 4:Z1=Z1+4:LINE (B1,156-Z1)-(H+14,16
8),PSET:NEXT B1:Z1=0:FOR B1=H TO H+28 STEP 4:
Z1=Z1+4:LINE (B1,156-Z1)-(H+14,168),PRESET:NE
XT B1:FOR T=1TO1000:NEXT T:Z1=0:PUT(K,H2)-(K+
39,H2+7),V,PSET:GOTO115
170 GOTO 135
175 'MOVE BASE

```

```

180 A$=INKEY$:IF A$="" THEN 195
185 IF A$=CHR$(32) THEN 205
190 IF A$="P" OR A$="Q" THEN B$=A$
195 H=H+8*(B$="Q" AND H>8)-8*(B$="P" AND H<21
0)
200 PUT(H,156)-(H+28,168),T,PSET:GOTO 140
205 COLOR 1,2:LINE (H+14,156)-(H+14,H2),PSET:
SOUND 200,1
210 LINE(H+14,H2)-(H+14,156),PRESET:SOUND 200
,1
215 IF ABS((K+20)-(H+7))>8 THEN 140
220 COLOR 3,2:FOR B1=K TO K+50 STEP 4:LINE (B
1,H2-8)-(H+14,H2+16),PSET:NEXT B1:FOR B1=K TO
K+50:LINE (B1,H2-8)-(H+14,H2+16),PRESET:NEXT
B1:PUT(K,H2)-(K+39,H2+7),V,PSET:SCORE=SCORE+
25:GOSUB 300:K=0:GOTO 195
225 'MOVE NON-FIRING BASE
230 A$=INKEY$:IF A$="" THEN 240
235 IF A$="P" OR A$="Q" THEN B$=A$
240 H=H+8*(B$="Q" AND H>8)-8*(B$="P" AND H<21
0)
245 PUT(H,156)-(H+28,168),W,PSET:GOTO 140
250 'ALIENS
255 PUT(K,H2)-(K+39,H2+7),V,PSET
260 FOR N1=H2 TO 146 STEP 8:PUT(K,N1)-(K+32,N1
+15),Y,PSET
265 B$=INKEY$
270 H=H+6*(B$="Q" AND H>8)-6*(B$="P" AND H<21
0):PUT(H,156)-(H+28,168),W,PSET:NEXT N1:PUT(H
,156)-(H+28,168),T,PSET
275 PUT(K,N1)-(K+32,N1+15),S,PSET:PUT(K,H2)-(
K+39,H2+7),V,PSET
280 IF ABS(K-H)>20 THEN 175
285 BC=0:BR=0:COLOR 0,2:FOR B1=H TO H+36 STEP
4:Z1=Z1+4:LINE (B1,156-Z1)-(H+14,168),PSET:NE
XT B1:Z1=0:FOR B1=H TO H+36 STEP 4:Z1=Z1+4:LIN
E(B1,156-Z1)-(H+14,168),PRESET:NEXT B1:PUT(H,
156)-(H+28,168),U,PSET:Z1=0:FOR T=1 TO 1000:NEX
T T:GOTO 115
290 'RANDOM BASE
295 BR=RND(40):BC=0:IF BR<25 THEN PUT(H,156)-
(H+28,168),T,PSET ELSE PUT(H,156)-(H+28,168),
W,PSET:RETURN
300 'CHANGE SCORE

```

```

305 DRAW"C3;BM62,12"+SS$
310 SS$=" ":SC$=STR$(SCORE)
315 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2,1)):SS$=SS$+S$(Y2(Z2)):NEXT Z2
320 DRAW "C2;BM62,12"+SS$:RETURN
325 DRAW"C3;BM194,12"+SH$:SH$=" ":SC$=STR$(HI)
330 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2,1)):SH$=SH$+S$(Y2(Z2)):NEXT Z2
335 DRAW "C2;BM194,12"+SH$:RETURN
340 'SET UP DISPLAY SCREEN
345 PCLS2: DRAW "C3;BM0,0;R255;D18;L255;U18":PAINT(2,2),3,3
350 SX$="BR2;NU1;R6;U4;L6;U4;R6;ND1;BD8;BR10;NU1;L6;U5;R6;ND1;BD5;BR4;U5;R6;D5;NL6;BR4;U5;R4;ND1;BD5;BR4;NR6;U5;R6;D2;L6"
355 DRAW"C2;BM8,12"+SX$
360 DRAW "C2;BM126,12;U8;BR6;D4;NL6;D4;BR4;U5;BU2;U1;BD8;BR6;"+SX$
365 DRAW "C3;BM0,171;R255;D20;L255;U2":PAINT(2,173),3,3: DRAW "C2;BM105,184;U8;R6;D3;NL6;D5;BR4;NU8;R2;BR4;U5;BU2;U1;BD8;BR4;NR6;U3;NR6;U3;R6;D3;BD3;BR4;U6;R6;D6"
370 RETURN
375 'USER DEFINED GRAPHICS
380 PMODE 3,1:PCLS2
385 FOR A=0TO23:READ B(A):NEXT A
390 FOR A=0TO7:C=1538+(A*32):POKE C,B(A):POKE C+1,B(A+8):POKE C+2,B(A+16):NEXT A
395 GET(0,0)-(39,7),R,G:PCLS2
400 GET(0,0)-(39,7),V,G:PCLS2
405 FOR A=0TO21:READ B(A):NEXT A
410 FOR A=0TO10:D=1537+(A*32):POKE D,B(A):POKE D+1,B(A+11):NEXT A
415 GET(0,0)-(28,12),T,G:PCLS2
420 GET(0,0)-(28,12),U,G
425 FOR A=0 TO 21:READ B(A):NEXT A
430 FOR A=0TO10:D=1537+(A*32):POKE D,B(A):POKE D+1,B(A+11):NEXT A
435 GET(0,0)-(28,12),W,G:PCLS2
440 FOR A=0TO7:READ B(A):D=1792+(A*32):POKE D,B(A):POKE D+1,B(A):POKE D+2,B(A):POKE D+3,B(A):NEXT
445 GET(0,0)-(32,15),Y,G:PCLS2
450 GET(0,0)-(32,15),S,G

```

```

455 RETURN
460 ' INSTRUCTIONS
465 CLS:PRINT@12,"ALIENS";
470 PRINT@96,"CONTROLS:":PRINT@106,"LEFT.....
.....Q":PRINT@138,"RIGHT.....P":PRINT@202
,"FIRE.....SPACEBAR"
475 PRINT@256,"REMEMBER YOU CANNOT FIRE WHILE
THE BASE IS BEING RECHARGED.":RETURN
480 PRINT@352,"PRESS ";CHR$(105);" FOR AN INV
ISIBLE ALIEN":PRINT:PRINT" OR ";CHR$(118);"
FOR A VISIBLE ONE.";
485 A$=INKEY$:IF A$=""THEN 485
490 IF A$=CHR$(73) THEN AL=99:GOTO 500
495 IF A$=CHR$(86) THEN AL=0 ELSE 485
500 PRINT@488,"PRESS SPACEBAR";
505 A$=INKEY$:IF A$<>CHR$(32) THEN 505
510 RETURN
515 DATA 85,86,90,101,101,90,86,85,85,170,170
,130,130,170,170,85,85,149,165,89,89,165,149,
85
520 DATA 87,87,87,87,95,93,93,125,119,119,247
,85,85,85,85,213,213,213,245,117,117,125
525 DATA 127,119,93,93,93,117,125,126,119,119
,247,245,117,213,213,213,117,245,245,117,117,
125
530 DATA 68,66,68,68,81,81,81,81
535 S$(0)="BR4;U6;R6;D6;NL6;BR2":S$(1)="BR4;U
6;BD6;BR2":S$(2)="BR2;NR6;U3;R6;U3;L6;BD6;BR8
":S$(3)="BR2;R6;U3;NL4;U3;L6;BD6;BR8":S$(4)="
BR4;BR2;U2;NR2;NU2;L4;U4;BR6;BD6;BR2"
540 S$(5)="BR2;R6;U3;L6;U3;R6;BD6;BR2":S$(6)=
"BR2;R6;U3;L6;ND3;U3;R6;BD6;BR2":S$(7)="BR2;B
U6;R6;D6;BR2":S$(8)="BR2;R6;U6;L6;D3;R6;BD3;B
R2":S$(9)="BR2;R6;U6;L6;D3;R6;BD3;BR2":RETURN

```


Fall Guy

This is a game for two, in which each player directs a small figure down a vertical maze so that it can drop through a hole in the moving floor at the bottom. The figure is manoeuvred through the maze by directing markers up and down the outer walls and shifting horizontal sections of the maze to the left or right, allowing the figures to drop through to lower levels. The trick is to alter the internal pattern of the maze in order to move your own figure without at the same time opening up advantages for the opposition.

```

1 REM ***DRAGON VERSION***
100 'FALL GUY BY PAUL STANLEY           REWRITTE
N FOR THE DRAGON 32           BY E.A. JACKSON
105 CLEAR 5000: DIM A$(13)
110 L=1:R=1:LP=1027:RP=1052:Z=0
115 GOSUB350:GOSUB280
120 PRINT@(L*32),CHR$(62);:PRINT@(R*32)+31,CH
R$(60);
125 E$=MID$(C$,2,29)+MID$(C$,1,1):C$=E$:PRINT
@449,C$;
130 GOSUB 240
135 IF Z=99 THEN 320
140 A$=INKEY$: IF A$="" THEN 125
145 L=L-(A$="A" AND L<13)+(A$="2" AND L>1)
150 R=R-(A$="L" AND R<13)+(A$="0" AND R>1)
155 IF A$="Q" THEN N=L:GOSUB 200
160 IF A$="P" THEN N=R:GOSUB 220
165 IF A$="O" THEN N=R:GOSUB 200
170 IF A$="W" THEN N=L:GOSUB 220
175 PRINT@(L*32)-32,CHR$(143);:PRINT@(L*32),C
HR$(62);:PRINT@(L*32)+32,CHR$(143);
180 PRINT@(R*32)-1,CHR$(143);:PRINT@(R*32)+31
,CHR$(60);:PRINT@(R*32)+63,CHR$(143);
185 GOSUB 240
190 IF Z=99 THEN 320
195 GOTO 125
200 'MOVE LEFT
205 IF BL=N OR BR=N THEN RETURN
210 M$=MID$(A$(N),2,28)+MID$(A$(N),1,1):A$(N)
=M$

```

```

215 PRINT@(N*32)+2,A$(N);:RETURN
220 'MOVE RIGHT
225 IF BL=N OR BR=N THEN RETURN
230 M$=MID$(A$(N),28,1)+MID$(A$(N),1,27):A$(N)
    )=M$
235 PRINT@(N*32)+2,A$(N);:RETURN
240 'FALL SEQUENCE
245 LQ=LP+32:RQ=RP+32
250 IF PEEK(LQ)=128 THEN POKE LQ,159:POKE LQ-
    32,128:LP=LQ:BL=INT(LQ-1027)/32:SOUND 125,1
255 IF PEEK(LQ)=207 THEN POKE LP,128:LP=1027
    :POKE LP,159:BL=0
260 IF PEEK(RQ)=128 THEN POKE RQ,159:POKE RQ-
    32,128:RP=RQ:BR=INT(RQ-1052)/32:SOUND175,1
265 IF PEEK(RQ)=207 THEN POKE RP,128:RP=1052:
    POKE RP,159:BR=0
270 IF LP>1470 OR RP>1475 THEN Z=99
275 RETURN
280 'DISPLAY SCREEN
285 FOR N=1TO13:A$(N)=STRING$(28,143):K=RND(2
    8):MID$(A$(N),K,1)=CHR$(207):FOR J=1TO8:K=RND
    (28):MID$(A$(N),K,1)=CHR$(128):NEXT J:NEXT N
290 B$=STRING$(2,143)+CHR$(159)+STRING$(24,14
    3)+CHR$(159)+STRING$(2,143)
295 C$=STRING$(15,143)+CHR$(128)+STRING$(14,1
    43)
300 CLS:
305 PRINT@1,B$;:PRINT@449,C$;
310 FOR N=1TO13:PRINT@(32*N),CHR$(143);CHR$(1
    59);A$(N);CHR$(159);CHR$(143);:NEXT N
315 RETURN
320 'ENDPLAY
325 FOR T=1TO3:PLAY "T12V3104DDFO3CCFGCO4CECC
    DDFCCCFDECC":NEXT T
330 FOR T=1TO1000:NEXTT
335 PRINT@482,"PRESS SPACE BAR TO PLAY AGAIN"
    ]
340 Q$=INKEY$:IFQ$(<)CHR$(32) THEN 340
345 GOTO 110
350 'INSTRUCTIONS
355 CLS:PRINT@12,"FALL GUY"
360 PRINT@64,CHR$(159);"A GAME FOR 2 PLAYERS.
    ":PRINT:PRINT CHR$(159);"FALL TO THE BOTTOM O
    F THE GRID BEFORE YOUR OPPONENT,";

```

```
365 PRINT " BY MOVING THE GRID.":PRINT@202,CHR$(128):PRINT@204,CHR$(128);:PRINT@206,"UNDER YOUR PLAYER.";
370 PRINT:PRINT CHR$(159);"AVOID FALLING ON THE MINES.";CHR$(207):PRINT" OR YOU WILL RETURN TO THE TOP OF THE GRID.":PRINT:PRINT CHR$(159);"CONTROLS:  UP  DOWN  LEFT RIGHT PLAYER 1:  2   A     Q     W  PLAYER 2:  0   L     O     P";
375 PRINT@486,"PRESS SPACEBAR";
380 Q$=INKEY$:IF Q$<>CHR$(32) THEN 380
385 PRINT@484,STRING$(26,32);
390 RETURN
```

Invaders

How could we write a Bumper Book of programs without including the classic Invaders games? Well, here it is complete with shields and Mothership and a screen full of the dreaded Aliens. Move with the < and > keys (plus shift for faster movement), and ↑ to fire.

```

1 REM *** INVADERS ***
2 REM *** DRAGON VERSION ***
10 PCLEAR8:DIMBA(9,7):DIMCA(9,7):DIMIA(9,7):D
IMGA(9,7):DIMMA(29,7):DIMSA(39,7):DIMRA(59,7)
:DIMEA(17,7):DIMIV(9,7)
20 CLS8:PRINT@202,"THE INVADERS";
30 REM DRAGON INVADERS BY RICHARD HALE AFTER
M BEWES JULY83
40 REM MAIN LOOP -1000
50 REM INVADER SHUFFLE-2000
60 REM KEYS -3000
70 REM FIRING-4000
75 REM WIN OR LOSE -5000
80 REM NEW GAME -6000
90 REM FIRST TIME ONLY -7000
95 REM HIRES NUMBER ROUTINE
100 REM YI=DEPTH OF SHUFFLE,ZY=OFFSET FOM 0 0
N X AXIS,PY IS THE LAST LINE START POSITION 0
N THE Y AXIS
110 REM ZV IS THE PREVIOUS ZY, NY IS THE NEXT
Y LINE TO SHUFFLE, OY IS THE PREVIOUS NY
120 REM IA IS THE START LINE THIS VARIED FOR
EXPERT GAMES
130 REM IL IS THE CURRENT Y LINE BEING SHUFFL
ED, IY IS THE Y INDEX ON IV THE INVADER ARRAY
,IX THE X FOR SAME, RY CONTROLS THE ROCKET FI
RE
140 REM DW IS THE INCREMENT FOR THIS SHUFFLE,
VARING THIS AS IA INCREASES IS POSSIBLE
150 PRINT@454,"ANY KEY TO CONTINUE";
160 IF INKEY$="" THEN GOTO 160
170 CLS8:PRINT@0," WHAT LEVEL WOULD YOU LIK
E?":PRINT@32," PRESS A KEY BETWEEN 0 AND 5"
180 X$=INKEY$:IF X$ <"0" OR X$>"5" THEN GOTO
180

```

```

190 SA=VAL(X*)
200 GOSUB 6000
210 PMODE3,1:COLOR4,2:SCREEN1,0:PCLS2
220 GOSUB 5000
230 REM INVADER GETS THREE TO YOUR ONE
240 GOSUB1000:GOSUB1000:GOSUB 2000:GOSUB1000:
GOTO 240
1000 FOR IX =0 TO 6: IF IV(IX,IL)=1 THEN NEXT
  IX: FX=1: FOR IX = 0 TO 6: FOR IY = 0 TO 6:
IF IV(IX,IY) = 0 THEN GOTO 1010: ELSE NEXT IY
,IX : GOTO 4000
1010 IF FX=1 THEN FX=0: GOTO 1070
1020 IF IL+IA > FY GOTO 4100
1030 OY=NY-DW
1040 FOR IX=0TO6: IF IV(IX,IL) = 1 THEN NEXT
IX:GOTO 1070
1050 PUT(IX*32+ZV,OY)-(IX*32+ZV+9,OY+7),BA,PS
ET:PUT(IX*32+ZY,NY)-(IX*32+ZY+9,NY+7),IA,PSET
1060 NEXT IX
1070 NY=(IL+IA-1)*YI
1080 IL=IL-1: IF IL< 0 THEN IL=6:DW=0:NY=(IA+
IL)*YI:ELSE RETURN
1090 IF FR=0 THEN FR=1:ZY=24:RETURN
1100 IF ZY=8 OR ZY=40 THEN DY=-DY:IC=IC+1: IF
  IC=3 THEN IC=1: IA= IA + 1:DW=YI: NY=(IA+IL)
*YI:PY=NY
1110 ZV=ZY:ZY=ZY+16*DY
1120 IF IA>1 THEN LINE(0,0)-(255,7),PRESET,BF
: MX=RND(190): PUT(MX,0)-(MX+29,7),MA,PSET
1130 RETURN
2000 X*=INKEY*:IF X*="" THEN RETURN
2010 KX=ASC(X*):IF KX = 94 OR KX = 95 THEN GO
SUB 3000:RETURN
2020 IF KX <> 8 AND KX <> 9 AND KX <> 21 AND
KX <> 93 THEN RETURN
2030 LINE(0,173)-(255,180),PRESET,BF
2040 IF KX=8 THEN GP=GP-32:GOTO 2080
2050 IF KX=9 THEN GP=GP+32: GOTO 2090
2060 IF KX=93 THEN GP=GP+64: GOTO2090
2070 GP=GP-64
2080 IF GP<0 THEN GP=12:GOTO 2100
2090 IF GP>245 THEN GP=232
2100 PUT(GP,173)-(GP+9,180),GA,PSET
2110 RETURN

```

```

3000 IF PPOINT(GP+4,170) = 4 THEN SOUND 20,2:
  RETURN
3010 IF RK= 0 THEN PLAY"O2L2BBB":RETURN
3020 RK=RK-1: XC=192:YC=184:NO=RK:GOSUB 7000:
SOUND255,2
3030 COLOR4,2
3040 FOR RY=160 TO 4 STEP -12
3050 LINE(GP+4,168)-(GP+4,RY+2),PSET
3060 IF PPOINT(GP+4,RY) = 2 THEN NEXT RY: RY=
4: SOUND10,2:SC=SC-10: GOTO3110
3070 SOUND155,1:PUT(GP-4,RY-4)-(GP+13,RY+3),E
A,PSET:IF RY=4 AND IA>1 THEN SC=SC+200: ELSE
SC=SC+20
3080 PUT(GP,RY-4)-(GP+9,RY+3),BA,PSET:IF RY=4
AND MX<>0 THEN GOTO 3110
3090 IF RY-4 > NY THEN HX=FIX((GP+4-ZY)/32):
HY= FIX((RY+YI*6-4-PY)/YI): ELSE HX=FIX((GP+4
-ZV)/32): HY=FIX((RY+YI*6-4-PY+DW)/YI)
3100 IV(HX,HY)=1
3110 LINE(GP+4,168)-(GP+4,RY+2),PRESET:COLOR4
,2:NO=SC:YC=184:XC=45:GOSUB 7000:COLOR4,2:RET
URN
4000 MU$="O3T12L2.C#L4F#L2.AL4F#L2.E#L8F#G#L1
F#"
4010 PLAY MU$+MU$
4020 CLS3:PRINT@200,"CONGRATULATIONS";
4030 PRINT@257,"YOU HAVE ELIMINATED THE ALIEN
S";
4040 PRINT@329,"SCORING";SC;
4050 PRINT@391,"USING";60-RK;"ROCKETS";
4060 X$=INKEY$
4070 PRINT@450,"PRESS ANY BUTTON TO CONTINUE"
;
4080 IF INKEY$ =" " THEN GOTO 4080
4090 GOTO 4200
4100 FOR RR=2 TO 128 STEP 8
4110 CIRCLE(128,168),RR,4,0.656,0.5,1
4120 NEXT RR
4130 PAINT(128,2),1,4
4140 MU$="O2T2L2B-L4.B-L8B-L2B-L4.O3D-L8CL4.C
L8O2B-L4.B-L8B-L1B-"
4150 PLAY MU$+MU$
4160 CLS0:PRINT@192,"YOU ARE NOW PART OF THE
EMPIRE";

```

```

4170 FOR KO = 1 TO 900: NEXT KO
4180 PRINT@265, "A DEAD PART";
4190 GOTO 4040
4200 CLS4:PRINT@201, "HIGH SCORE";:PRINT USING
"####";HS;:PRINT@233, "YOUR SCORE";:PRINT USIN
G"####";SC;
4210 IF SC > HS THEN HS=SC
4220 PRINT@452, "PRESS Y FOR ANOTHER GAME";
4230 X#=INKEY#: IF X#="" THEN GOTO 4230
4240 IF X#("<")"Y" THEN END
4250 GOTO 210
5000 PUT(0,184)-(39,191),SA,PSET
5010 FOR IX=0 TO 6
5020 FOR IY=0 TO 6
5030 IV(IX,IY) = 0
5040 NEXT IY
5050 NEXT IX
5060 IA=SA:YI=12:IL=6:IC=1:DY=1:ZY=8:FR=0:ZV=
8:DW=0:NY=YI*(6+IA):PY=NY:FY=INT((168-4)/YI)
5070 GP=12:SC=0:RK=60:YC=184:NO=SC:XC=45:GOSU
B7000
5080 NO=RK:XC=192:GOSUB7000
5090 PUT(128,184)-(187,191),RA,PSET
5100 COLOR4,2
5110 PUT(GP,173)-(GP+9,180),GA,PSET
5120 FOR LP=0 TO 4 STEP 2
5130 LINE(0,168+LP)-(255,168+LP),PSET
5140 NEXT LP
5150 FOR LP=8 TO 255 STEP 32
5160 LINE(LP,168)-(LP+8,172),PRESET,BF
5170 NEXT LP
5180 RETURN
6000 PMODE3,5:PCLS2:SCREEN1,0:COLOR4,2
6010 XC=0:YC=0
6020 GET(0,0)-(9,7),BA,G
6030 FOR RR=1 TO 5 STEP 4
6040 CIRCLE(104,103),RR,4
6050 NEXT RR
6060 GET(96,100)-(113,107),EA,G
6070 FOR CH=1 TO 43
6080 FOR Y=YC TOYC+7
6090 READ CD: D=256: IF CD=8888 THEN 6220
6100 IF CD=9999 THEN RETURN
6110 FOR X=XC TO XC+9 STEP 2

```

```

6120 P=INT(CD/D) +1
6130 PSET(X,Y,P): CD=CD-(D*(P-1))
6140 D=D/4
6150 NEXT X,Y
6160 IF CH<11 THEN GOTO 6220
6170 IF CH=11 THEN GET(100,0)-(109,7),IA,G
6180 IF CH=12 THEN GET(110,0)-(119,7),GA,G
6190 IF CH=15 THEN GET(120,0)-(149,7),MA,G
6200 IF CH=19 THEN GET(150,0)-(189,7),SA,G
6210 IF CH=25 THEN GET(190,0)-(249,7),RA,G
6220 XC=XC+10: IF XC>255 THEN XC=0: YC=YC+8
6230 NEXT CH:RETURN
6240 DATA 341,373,477,477,477,477,373,341
6250 DATA 341,373,501,373,373,373,509,341,341,
,373,477,349,373,469,509,341,341,509,349,373,
349,349,501,341,341,349,381,477,511,349,349,3
41
6260 DATA 341,509,469,501,349,349,501,341,341
,373,469,501,477,477,373,341,341,509,349,511,
373,469,469,341,341,509,477,373,477,477,373,3
41,341,373,477,477,381,349,501,341
6270 DATA 273,0,204,204,0,68,273,84
6280 DATA 357,357,357,425,357,425,425,682
6290 DATA 341,320,258,32,32,257,325,257,341,0
,136,32,32,257,325,257,341,5,129,32,32,257,32
5,257
6300 DATA 341,341,678,598,678,358,678,341,341
,341,666,345,345,345,666,341,341,341,618,614,
618,617,614,341,341,341,425,405,421,405,425,3
41
6310 DATA 341,341,678,614,678,662,614,341,341
,341,666,409,409,409,666,341,341,341,614,361,
357,361,614,341,341,341,425,405,421,405,425,3
41,341,341,678,406,406,405,406,341,341,341,66
1,341,665,405,665,341,9999
7000 COLOR4,2:N*=STR$(NO):
7010 FOR ZZ = 1 TO LEN(N*): NO=VAL(MID$(N*,ZZ
,1)): GOSUB 7040
7020 XC=XC+10: NEXT ZZ:
7030 PUT(XC,YC)-(XC+9,YC+7),BA,PSET:RETURN
7040 PMODE3,5: GET(10*NO,0)-(10*NO+9,7),CA,G
7050 PMODE3,1: PUT(XC,YC)-(XC+9,YC+7),CA,PSET
:RETURN

```


Championship Boxing

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 PCLEAR8
2 REM @ P. STANLEY
5 S1=0:S2=0
8 GOSUB 9000
10 GOSUB9110:GOSUB 7000
15 RD=1:Pmode3,1:PCLS:SCREEN1,1
20 GOSUB 5000
30 GOSUB 5500
40 P*=RIGHT*(STR*(RD),1):XS=16:YS=136:GOSUB 9
  900
50 SOUND200,1:SOUND200,1
60 Y=16:X=56:Y1=Y:X1=X
70 G=184:F=136:F1=F:G1=G
80 TM=3:TS=2
90 E=0
100 COLOR1,1:LINE (X1,Y1)-(X1+15,Y1+23),PSET,B
  F:PUT (X,Y)-(X+15,Y+23),B1,PSET:Y1=Y:X1=X
105 LINE (G1,F1)-(G1+15,F1+23),PSET,BF:PUT (G,F)
  -(G+15,F+23),B2,PSET:PUT (X,Y)-(X+15,Y+23),B1
  ,PSET:F1=F:G1=G
110 TS=TS-2:IF TS=0 THEN TM=TM-1:TS=60:IF TM=
  -1 THEN 8500
120 P1*=STR*(TM):P2*=STR*(TS):IF TS<10 THEN P
  2*="0"+RIGHT*(P2*,1) ELSE P2*=RIGHT*(P2*,2)
130 P*=P1*+" "+P2*:XS=216:YS=136:GOSUB9900
400 PK=PEEK(&HFF00)
410 IF (PK AND 16)=0 THEN GOSUB 1000
420 IF (PK AND 1)=0 THEN GOSUB 1100

```

```

430 IF G=X+8 THEN IF RND(0)>SK THEN GOSUB 200
0
435 PK=PEEK(&HFF00)
440 IF (PK AND 32)=0 THEN IF Y<136 THEN Y=Y+8
450 IF (PK AND 4)=0 THEN IF Y>16 THEN Y=Y-8
460 IF (PK AND 8)=0 THEN IF X<176 THEN X=X+8
470 IF (PK AND 2)=0 THEN IF X>56 THEN X=X-8
550 F=F+8*(INT(RND(0)*2.5)-INT(RND(0)*2.5)-(F
<Y)+(F>Y))
560 IF F<16 THEN F=16
570 IF F>136 THEN F=136
580 X2=X+16:G=G+8*(INT(RND(0)*2.5)-INT(RND(0)
*2.5)-(G<X2)+(G>X2))
590 IF G<X+8 THEN G=X+8
600 IF G>184 THEN G=184
610 IF E=0 THEN IF X>160 THEN E=1
620 IF E<>0 THEN E=E+1:IF X<160 THEN E=2
630 IF E=10 THEN GOSUB 3000
640 SOUND50,1
650 GOTO 100
1000 PUT(X+8,Y)-(X+23,Y+7),P3,PSET:SOUND200,1
1010 PUT(X+8,Y)-(X+23,Y+7),P4,PSET
1020 IF Y=F+8 AND X=G-8 THEN S1=S1+1:SOUND220
,1:P1*=STR*(S1):P*=RIGHT*(P1*,LEN(P1*)-1):XS=
16:YS=64:GOSUB9900
1030 IF S1=K2 THEN 6000
1040 RETURN
1100 PUT(X+8,Y+16)-(X+23,Y+23),P1,PSET:SOUND2
00,1
1110 PUT(X+8,Y+16)-(X+23,Y+23),P2,PSET
1120 IF Y=F-8 AND X=G-8 THEN S1=S1+1:SOUND220
,1:P1*=STR*(S1):P*=RIGHT*(P1*,LEN(P1*)-1):XS=
16:YS=64:GOSUB9900
1130 IF S1=K2 THEN 6000
1140 RETURN
2000 IF F<Y THEN 2100
2010 PUT(G-8,F)-(G+7,F+7),P5,PSET:SOUND210,1
2020 PUT(G-8,F)-(G+7,F+7),P6,PSET
2030 IF F=Y+8 THEN S2=S2+1:SOUND220,1:P1*=STR
*(S2):P*=RIGHT*(P1*,LEN(P1*)-1):XS=224:YS=64:
GOSUB9900
2040 IF S2=K1 THEN 6500
2050 RETURN
2100 PUT(G-8,F+16)-(G+7,F+23),P7,PSET:SOUND21
0,1

```

```

2110 PUT (G-8, F+16) - (G+7, F+23), P8, PSET
2120 IF F=Y-8 THEN S2=S2+1: SOUND220, 1: P1*=STR
*(S2): P*=RIGHT*(P1*, LEN(P1*)-1): X6=224: YS=64:
GOSUB9900
2130 IF S2=K1 THEN 6500
2140 RETURN
3000 COLOR1, 1: LINE (X1, Y1) - (X1+15, Y1+23), PSET,
BF
3010 FOR X=152 TO 96 STEP -8: X1=X
3020 LINE (X1+24, Y1) - (X1+31, Y1+23), PSET, BF: PUT
(X1, Y1) - (X1+15, Y1+23), B1, PSET: PUT (X1+16, Y1) - (
X1+23, Y1+23), RF, PSET
3030 SOUND100, 1: NEXT X
3040 LINE (X1+16, Y1) - (X1+23, Y1+23), PSET, BF
3050 E=0: RETURN
5000 XA=55: XB=200: YA=15: YB=160: COLOR4, 1: FOR F
=1 TO 4
5010 LINE (XA, YA) - (XB, YB), PSET, B
5020 YA=YA-2: YB=YB+2
5025 IF F<3 THEN XA=XA-3: XB=XB+3
5030 NEXT F
5040 LINE (48, 8) - (55, 15), PSET, BF
5050 LINE (200, 8) - (207, 15), PSET, BF
5060 LINE (48, 160) - (55, 167), PSET, BF
5070 LINE (200, 160) - (207, 167), PSET, BF
5080 P*=N*: XS=0: YS=32: GOSUB 9900
5090 P*=B*: XS=208: GOSUB 9900
5100 P*="POINTS": XS=0: YS=48: GOSUB 9900
5110 P*="POINTS": XS=208: GOSUB 9900
5120 P*="ROUND": XS=0: YS=120: GOSUB 9900
5130 P*="TIME": XS=216: YS=120: GOSUB 9900
5140 P*="0": XS=16: YS=64: GOSUB 9900
5150 P*="0": XS=224: YS=64: GOSUB 9900
5160 RETURN
5500 COLOR1, 1: Y1=128: X1=72: FOR F=1 TO 4
5510 FOR E=1 TO 12: PUT (X1, Y1) - (X1+7, Y1+23), 0L
, PSET: P*=RIGHT*(STR*(RD), 1): XS=X1: YS=Y1-8: GOS
UB 9900: COLOR1, 1
5520 SOUND20, 1
5530 IF E=12 THEN FOR O=175 TO 200 STEP 4: SOU
NDO, 1: NEXT O: FOR O=1 TO 60: NEXT O: FOR O=200 T
O 175 STEP -4: SOUND0, 1: NEXT O
5540 LINE (X1, Y1-8) - (X1+7, Y1+23), PSET, BF
5550 Y1=Y1-8*(F=4)+8*(F=2): X1=X1-8*(F=1)+8*(F
=3)

```

```

5540 NEXT E,F:RETURN
6000 PUT(G,F)-(G+31,F+23),OK,PSET
6010 P$="WELL BOXED A K O ":XS=56:YS=8:GOSUB
9900:SOUND50,6
6020 GOTO 6600
6500 PUT(X-16,Y)-(X+15,Y+23),KO,PSET
6510 P$="BAD LUCK A K O ":XS=56:YS=8:GOSUB
9900
6600 FOR F=1 TO 1000:NEXT F
6610 CLS:IF K1=S2 OR S2>S1 THEN 6700
6620 PRINT"WELL DONE ! YOU BEAT ";B$;" IN";RD
;" ROUNDS."
6640 PRINT"THE RESULT IN POINTS WAS";S1;" FOR
YOU, AND";S2;" FOR ";B$
6650 PRINT"I SUGGEST YOU TRY A TOUGHER OP
PONENT."
6660 GOTO 6780
6700 PRINT"BAD LUCK ! YOU WERE BEATEN IN";RD;
" ROUNDS."
6710 PRINT"THE RESULT IN POINTS WAS";S1;"FOR
YOU, AND";S2;" FOR ";B$
6720 PRINT"I SUGGEST YOU TRY A WEAKER OP
PONENT."
6780 FOR F=1 TO 2500:NEXT F:PRINT"HERE'S YOUR
CHOICE:":FOR F=1 TO 10:PRINTF;"...";IF F<10
THEN PRINT".";
6790 PRINTA$(F):NEXT F
6800 INPUT"ENTER YOUR OPPONENT'S NUMBER OR 0
IF YOU'VE HAD ENOUGH. ";X
6810 IF X=0 THEN STOP
6820 CLS:B$=LEFT$(A$(X),6):PRINT"OK - YOU SHA
LL FIGHT ";B$:PRINT,,"PRESS ANY KEY TO START
THE BOUT.":I$=INKEY$
6830 I$=INKEY$:IF I$="" THEN 6830
6840 CLS:S1=0:S2=0:SK=(11-X)/12:K2=10+X+INT(R
ND(0)*6):K1=16-X+INT(RND(0)*10):GOTO 15
7000 CLS:PRINT@224,"ENTER YOUR NAME(UP TO 6 L
ETTERS)"
7010 INPUT N$:IF LEN(N$)>6 THEN 7000
7020 CLS
7030 A$(1)="HENRY HOPELESS":A$(2)="ARNOLD AWF
UL":A$(3)="NIGEL NO-GOOD":A$(4)="PHILIP FAIR"
:A$(5)="ANDREW AVERAGE":A$(6)="ROGER RIGHT-HO
OK":A$(7)="BRIAN BRICK-WALL":A$(8)="SIMON SUP

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```

ER":A$(9)="EDWARD EXCELLENT":A$(10)="FLYNN FA
NTASTIC"
7040 PRINT"      C H A M P I O N S H I P
      B O X I N G                      @ PAUL
      STANLEY"
7050 PRINT,,"SO YOU WANT TO BE A CHAMPION DO
YOU? IF SO THIS IS THE GAME FORYOU."
7060 FOR F=1 TO 3000:NEXT
7070 CLS:PRINT"WHICH OPPONENT DO YOU WISH TO
      FIGHT FIRST?"
7080 PRINT:FOR F=1 TO 10:PRINTF;"...";
7090 IF F<10 THEN PRINT". ";
7100 PRINTA$(F):NEXT F
7110 INPUT X:IF X<1 OR X>10 THEN 7110
7120 SK=(11-X)/12
7130 K2=10+X+INT(RND(0)*6):K1=16-X+INT(RND(0)
*10)
7140 B$=LEFT$(A$(X),6)
7150 CLS:PRINT"VERY WELL, YOUR OPPONENT WILL
BE";A$(X);". "
7160 PRINT,,"EACH BOUT YOU FIGHT IS ONLY 3
ROUNDS. MOVE UP WITH 'A', DOWN WITH 'Z', LEF
T WITH ',' AND      RIGHT WITH 'L'. PUNCH WITH
'Q' (LEFT HAND) AND '0'-ZERO-(RIGHT HAND).
NOTE THAT YOU CAN MOVE      AND PUNCH AT THE SAM
E TIME."
7170 PRINT,,"ONLY PUNCHES TO THE HEAD SCORE
AND K.O.S ARE POSSIBLE."
7180 PRINT,,"PRESS ANY KEY TO START THE BOUT.
";I$=INKEY$
7190 I$=INKEY$:IF I$="" THEN 7190
7200 CLS:RETURN
8500 P$="0:00":XS=224:YS=136:GOSUB 9900:SOUND
100,1:SOUND100,1
8510 RD=RD+1:IF RD=4 THENRD=3:GOTO 6620
8520 P$="PREPARE TO FIGHT THE NEXT ROUND":XS=
0:YS=168:GOSUB 9900
8530 PUT(56,16)-(63,23),S,PSET:PUT(192,152)-(
199,159),S,PSET
8540 COLOR1,1:FOR I=1 TO 20
8550 Y=Y-(8 AND Y>16):X=X-(8 AND X>56)
8560 LINE(X1,Y1)-(X1+15,Y1+23),PSET,BF:PUT(X,
Y)-(X+15,Y+23),B1,PSET:X1=X:Y1=Y:SOUND25,1

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8565 F=F+(8 AND F<136):G=G+(8 AND G<184)
8570 LINE(G1,F1)-(G1+15,F1+23),PSET,BF:PUT(G,
F)-(G+15,F+23),B2,PSET:F1=F:G1=G:SOUND25,1
8580 NEXT I:GOSUB 5500:LINE(0,168)-(255,175),
PSET,BF:GOTO 40
9000 PMODE3,5:PCLS:SCREEN1,1
9010 XC=0:YC=0:C=2:B=1
9020 FOR CH=1 TO 127:IF CH=56 OR CH=76 OR CH=
79 OR CH=88 OR CH=120 THEN READ C,B ELSE C=2:
B=1
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9105 RETURN
9110 PMODE3,5:DIMS(1):DIMN(1):DIMB1(9):DIMB2(
9):DIMP1(3):DIMP2(3):DIMP3(3):DIMP4(3):DIMP5(
3):DIMP6(3):DIMP7(3):DIMP8(3):DIMKO(19):DIMOK
(19):DIMRF(4):DIMGL(4)
9120 GET(88,8)-(103,31),B1,G
9130 GET(104,8)-(119,31),B2,G
9140 GET(120,8)-(151,31),OK,G
9150 GET(152,8)-(183,31),KO,G
9160 GET(184,8)-(191,31),RF,G
9170 GET(192,8)-(199,31),GL,G
9180 GET(208,0)-(223,7),P1,G
9190 GET(216,0)-(231,7),P2,G
9200 GET(232,0)-(247,7),P3,G
9210 GET(240,0)-(255,7),P4,G
9220 GET(232,24)-(247,31),P5,G
9230 GET(224,24)-(239,31),P6,G
9240 GET(208,24)-(223,31),P7,G
9250 GET(200,24)-(215,31),P8,G
9260 GET(144,16)-(151,23),S,G
9270 RETURN
9350 DATA0,1,3,5,5,5,3,1
9351 DATA4,4,4,6,5,5,5,6
9352 DATA2,5,5,4,4,5,5,2
9353 DATA1,1,1,3,5,5,5,3

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9354 DATA2,5,5,6,4,5,5,2
9355 DATA2,5,4,4,6,4,4,4
9356 DATA3,5,5,7,1,1,5,2
9357 DATA4,4,4,6,5,5,5,5
9358 DATA2,0,2,2,2,2,2,1
9359 DATA1,1,1,1,1,1,5,2
9360 DATA4,4,5,6,6,5,5,5
9361 DATA4,4,4,4,4,4,4,3
9362 DATA5,5,7,5,5,5,5,5
9363 DATA4,7,5,5,5,5,5,5
9364 DATA2,5,5,5,5,5,5,2
9365 DATA4,7,5,5,6,4,4,4
9366 DATA6,10,10,6,2,2,3,2
9367 DATA4,6,5,4,4,4,4,4
9368 DATA2,5,4,7,1,1,5,2
9369 DATA4,6,4,4,4,4,5,2
9370 DATA5,5,5,5,5,5,5,2
9371 DATA5,5,5,5,5,5,5,2
9372 DATA5,5,5,5,5,7,5,5
9373 DATA5,5,5,2,2,5,5,5
9374 DATA5,5,5,5,3,1,1,6
9375 DATA7,1,1,2,2,4,4,7
9376 DATA0,0,0,15,15,15,15,0
9377 DATA0,0,3,15,15,15,15,3
9378 DATA99,0,15,15,15,15,0,0,0
9379 DATA3,15,15,15,15,3,0,0,99
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9491 DATA0,2,2,0,0,2,2,0
9500 DATA0,7,7,15,15,12,12,14
9502 DATA3,15,15,15,15,3,0,0
9504 DATA12,15,15,15,15,12,0,0
9506 DATA0,14,14,15,15,3,3,7
9508 DATA2,6,14,14,6,7,3,3
9510 DATA12,15,15,15,15,12,0,0
9512 DATA0,14,14,15,15,3,3,7

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9514 DATA99,99,0,7,7,15,15,12,12,14
9516 DATA3,15,15,15,15,3,0,0
9518 DATA4,6,7,7,6,14,12,12
9519 DATA4,1,0,14,14,15,15,3,3,7,9,9,9,15,9,9
,9,15
9520 DATA99,99,99,99,99,99,99,99,99,99,99,99,
99,99,99,99,99,99
9522 DATA2,4,15,9,9,0,0,9,9,15
9524 DATA99,99
9526 DATA2,3,15,9,9,0,0,9,9,15
9528 DATA3,3,3,1,1,3,3,3
9530 DATA15,15,15,15,15,15,15,15
9532 DATA15,15,15,15,15,15,15,15
9534 DATA6,15,15,15,15,15,15,6
9536 DATA6,15,15,15,15,15,15,6
9538 DATA15,15,15,15,15,15,15,15
9540 DATA15,15,15,15,15,15,15,15
9542 DATA12,12,12,8,8,12,12,12
9544 DATA4,3,15,9,9,0,0,9,9,15
9545 DATA6,6,6,6,15,15,15,15
9546 DATA99,99,99,99,99,99,99,99,99,99,99,99,
99,99,99,99,99,99
9548 DATA14,12,12,15,15,7,7,0
9550 DATA0,0,3,15,15,15,15,3
9552 DATA0,0,12,15,15,15,15,12
9554 DATA7,3,3,15,15,14,14,0
9556 DATA3,3,7,6,14,14,6,2
9558 DATA0,0,12,15,15,15,15,12
9560 DATA7,3,3,15,15,14,14,0
9562 DATA99,99,14,12,12,15,15,7,7,0
9564 DATA0,0,3,15,15,15,15,3
9566 DATA12,12,14,6,7,7,6,4
9568 DATA4,1,7,3,3,15,15,15,15,0
9570 DATA15;6,6,6,6,6,6,15
9572 DATA99,0,0,12,15,15,15,15,12
9574 DATA0,0,0,15,15,15,15,0
9576 DATA99,12,15,15,15,15,12,0,0
9578 DATA0,15,15,15,15,0,0,0
9900 IF P$="" THEN RETURN
9910 C$=LEFT$(P$,1):P$=RIGHT$(P$,LEN(P$)-1)
9920 IF ASC(C$)<59 AND ASC(C$)>47 THEN YG=8:X
G=8*(ASC(C$)-48) ELSE YG=0:XG=8*(ASC(C$)-65)
9930 IF C$=" " THEN COLOR1,1:LINE(XS,YS)-(XS+
7,YS+7),PSET,BF ELSE GOSUB 9950

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208 *Championship Boxing*

```
9940 XS=XS+8:IF XS>248 THEN XS=0:YS=YS+12
9945 GOTO9900
9950 PMODE3,5:GET(XG,YG)-(XG+7,YG+7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN
```

Grand Prix

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. Unlike the computer, you have a choice of gears (first or second), and its up to you to select the type of course you want to compete on. If you crash you not only lose points, but you are replaced on the track in a random position, so you'll have to sort yourself out pretty snappily if you want to get back into the running.

```

1 REM *** DRAGON VERSION ***
2 REM *** GRAND PRIX ***
3 DIM X(26),Y(26)
4 PCLEARB
5 FOR N=1 TO 928:READ A:NEXT:GOSUB90000:GOSUB8
000
6 CLS
8 INPUT"ENTER SKILL (1-GOOD TO 4-BAD)";SK:IF
SK<1 OR SK>4 THEN 8
9 INPUT"HOW MANY LAPS";LP:IF LP<1 THEN 9
10 INPUT"1-HARD OR 2-EASY CIRCUIT";CI:IF CI<>
1 AND CI<>2 THEN 10
15 GOSUB 8500
20 PMODE3,5:GET(0,8)-(39,15),L,G
30 PMODE3,1:PUT(136,16)-(175,23),L,PSET:SOUND
100,4
40 PMODE3,5:GET(40,8)-(55,15),L,G
50 PMODE3,1:PUT(128,16)-(143,23),L,PSET:SOUND
150,4
60 COLOR2,2:LINE(128,16)-(175,23),PSET,BF
65 PMODE3,5:GET(56,8)-(71,15),L,G
67 PMODE3,1:PUT(136,16)-(151,23),L,PSET:SOUND
200,1
68 COLOR2,2:LINE(136,16)-(151,23),PSET,BF
70 A$=INKEY$:IF A$="1" THEN G=1:SOUND150,1
80 IF A$="2" THEN G=2:SOUND150,1
90 IF A$=CHR$(9) THEN PO=PO+1-(8 AND PO=8)
100 IF A$=CHR$(8) THEN PO=PO-1+(8 AND PO=1)
102 IF X<40 THEN C=1
105 FOR F=1 TO G
110 IF PO>1 AND PO<5 THEN Y=Y-8 ELSE IF PO>5
THEN Y=Y+8

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```

112 IF PO=8 OR PO<3 THEN X=X-8 ELSE IF PO>3 A
ND PO<7 THEN X=X+8
115 IF PPOINT(X,Y+3)<>2 OR PPOINT(X,Y+4)<>2 T
HEN Y=Y1:X=X1:SOUND50,1:PO=RND(8)
120 COLOR2,2:LINE(X1,Y1)-(X1+7,Y1+7),PSET,BF:
ON PO GOSUB 500,520,540,560,580,600,620,640
125 Y1=Y:X1=X:P1=PO
130 IF Y=88 THEN IF X>216 THEN IF C=1 THEN SO
UND200,1:L1=L1+1:NO=L1:XS=80:GOSUB9900:C=0:IF
L1=LP+1 THEN 5000
140 NEXT F
150 IF CP>1 AND CP<5 THEN CY=CY-8 ELSE IF CP>
5 THEN CY=CY+8
152 IF CP=8 OR CP<3 THEN CX=CX-8 ELSE IF CP>3
AND CP<7 THEN CX=CX+8
155 IF PPOINT(CX,CY+3)<>2 OR PPOINT(CX,CY+4)<
>2 THEN SOUND70,1:CY=YC:CX=XC:CP=PC
160 IF CX=X(DP) THEN IF CY=Y(DP) THEN READ Q:
CP=CP+Q:DP=DP+1:IF DP=27 THEN RESTORE:DP=1
170 COLOR2,2:LINE(XC,YC)-(XC+7,YC+7),PSET,BF:
ON CP GOSUB 510,530,550,570,590,610,630,650
175 YC=CY:XC=CX:PC=CP
180 IF CY=88 THEN IF CX=240 THEN L2=L2+1:SOUN
D150,1:NO=L2:XS=240:GOSUB9900:IF L2=LP+1 THEN
5000
190 GOTO 70
500 PUT(X,Y)-(X+7,Y+7),CW,PSET:RETURN
510 PUT(CX,CY)-(CX+7,CY+7),CW,AND:RETURN
520 PUT(X,Y)-(X+7,Y+7),C1,PSET:RETURN
530 PUT(CX,CY)-(CX+7,CY+7),C1,AND:RETURN
540 PUT(X,Y)-(X+7,Y+7),CN,PSET:RETURN
550 PUT(CX,CY)-(CX+7,CY+7),CN,AND:RETURN
560 PUT(X,Y)-(X+7,Y+7),C2,PSET:RETURN
570 PUT(CX,CY)-(CX+7,CY+7),C2,AND:RETURN
580 PUT(X,Y)-(X+7,Y+7),CE,PSET:RETURN
590 PUT(CX,CY)-(CX+7,CY+7),CE,AND:RETURN
600 PUT(X,Y)-(X+7,Y+7),C3,PSET:RETURN
610 PUT(CX,CY)-(CX+7,CY+7),C3,AND:RETURN
620 PUT(X,Y)-(X+7,Y+7),CS,PSET:RETURN
630 PUT(CX,CY)-(CX+7,CY+7),CS,AND:RETURN
640 PUT(X,Y)-(X+7,Y+7),C4,PSET:RETURN
650 PUT(CX,CY)-(CX+7,CY+7),C4,AND:RETURN
5000 FOR F=1 TO 40:SOUND100+F,1:NEXT
5010 CLS:SC=40/CI+60/SK:IF L2>L1 THEN SC=-SC

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5020 SC=SC+(L1-L2)*2:IF SC<0 THEN PRINT@64,"B
AD LUCK! YOU WERE BEATEN."
5030 IF SC>0 THEN PRINT@64,"WELL DONE! YOU WE
RE THE WINNER."
5040 PRINT"YOUR SCORE IS";SC:IF SC<I(3) THEN
5090
5050 PRINT@192,"YOUR SCORE IS GOOD ENOUGH TO
BE INCLUDED IN THE TOP SCORES. PLEASE ENT
ER YOUR NAME.":INPUT N$:IF LEN(N$)>15 THEN 50
50
5060 IF SC>I(1) THEN I(3)=I(2):I(2)=I(1):I(1)
=SC:B$(3)=B$(2):B$(2)=B$(1):B$(1)=N$:GOTO 509
0
5070 IF SC>I(2) THEN I(3)=I(2):I(2)=SC:B$(3)=
B$(2):B$(2)=N$:GOTO 5090
5080 I(3)=SC:B$(3)=N$
5090 PRINT,,"THESE ARE THE BEST SCORES:":FOR
F=1 TO 3:PRINT,F;"...";B$(F);TAB(23);I(F):NEX
T F
5100 PRINT"PRESS ANY KEY TO PLAY AGAIN.":A$=I
NKEY$
5110 A$=INKEY$:IF A$="" THEN 5110
5120 GOTO 6
8000 A$="GRAND PRIX - BY PAUL STANLEY - "
8010 PRINT@64,"STEER YOUR CAR AROUND THE RACE
- TRACK AND TRY TO BEAT A CAR DRIVEN BY T
HE COMPUTER."
8020 PRINT"TURN LEFT AND RIGHT WITH THE AR
ROW KEYS. YOU CAN SELECT GEARS WITH 1(SLOW) AN
D 2(FAST). THE COMPUTER WILL STAY IN FIRST
AT ALL TIMES."
8030 PRINT"IF YOU CRASH YOU WILL RESTART INA
RANDOM DIRECTION, SO YOU MUST SORT YOURSELF O
UT AS FAST AS POSSIBLE."
8035 PRINT"YOUR CAR IS THE BLUE ONE":I$=INKEY
$
8040 PRINT"PRESS ANY KEY TO CONTINUE."
8050 PRINT@0,A$;:PRINT@480,A$;:A$=RIGHT$(A$,3
0)+LEFT$(A$,1):FOR N=1 TO 70:NEXT:I$=INKEY$:I
F I$="" THEN 8050
8060 RETURN
8100 COLOR4,2:LINE(220,88)-(223,95),PSET,BF:L
INE(248,88)-(251,95),PSET,BF
8110 GOSUB 540:GOSUB 550

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```

8120 PMODE3,5:GET(80,0)-(111,7),L,G
8130 PMODE3,1:PUT(0,0)-(31,7),L,PSET
8140 PMODE3,5:GET(152,0)-(231,7),L,G
8150 PMODE3,1:PUT(112,0)-(191,7),L,PSET
8160 PMODE3,5:GET(112,0)-(151,7),L,G
8170 PMODE3,1:PUT(40,0)-(79,7),L,PSET:PUT(200
,0)-(239,7),L,PSET
8180 NO=1:XS=80:GOSUB9900:XS=240:GOSUB9900
8190 RETURN
8200 DATA-1,-1,7,-7,7,-1,-1,-1,1,1,1,-7,7,-1,
-1,-1,-1,-1,1,1,1,1,-1,-1,-1,-1
8300 DATA0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,
1,1,1,1,1,1,1,1,1,1,0,0,0,1,1,0,0,0,0,0,0,
0,0,0
8310 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,
1,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0
8320 DATA0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1
8330 DATA1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,1,1,0,0,0,
0,0,0,0,0,0,0,0,0,1,1,0,0,0,0
8340 DATA1,0,0,1,1,0,0,0,0,0,1,1,0,0,0,0,0,0,
0,0,0,0,0,0,0,1,1,0,0,0,0,1,0,0
8350 DATA0,1,1,0,0,0,0,1,1,0,0,0,0,1,1,1,1,1,1,
1,1,1,1,1,0,0,0,0,0,0,1,0,0,0,0,1
8360 DATA1,0,0,0,1
8370 DATA1,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,0,0,0,
0,0,0,1,0,0,0,0,0,1,0,0,0,1,1,0,0,0,0,0,0,0,
0,0,1,0,0,0,0,0
8380 DATA0,0,1,0,0,0,0,0,1,0,0,0,1,1,0,0,0,0,
0,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1
8390 DATA0,0,0,0,0,1,0,0,0,1,1,1,0,0,0,0,0,0,0,
0,0,0,1,0,0,0,1,1,1,0,0,0,1,0,0,0
8400 DATA0,0,1,0,0,0,1,0,1,1,1,1,1,1,0,0,0,0,0,
1,0,0,0,1,0,1,0,0,0,1,0,0,0,0,0,1
8410 DATA0,0,0,1,0,0,0,0,0,0,1,1,0,0,0,1,0,0,0,
0,1,0,1,0,0,0,1,0,0,0,0,0,1,0,0,0
8420 DATA1,0,1,1,1,1,1,1,0,0,0,0,1,0,0,0,1,0,
1,0,0,0,1,0,0,0,0,1,0,0,0,1
8430 DATA1,1,0,0,0,0,0,0,0,0,0,1,0,0,0,1,0,1,
0,0,0,1,1,0,0,0,1,1,0,0,0,1,1,0,0,0,0,0,0,0,
0,0,1,0,0,0,1,0,1,0
8440 DATA0,0,0,1,1,1,1,1,0,0,0,0,1,1,0,0,0,0,
0,1,1,1,1,1,1,0,0,0,1,0,1,0,0,0,0
8450 DATA0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,

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0,0,0,0,0,0,0,1,0,1,0,0,0,0,0,0,0,0
8460 DATA0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,1,0,1,0,0,0,0,0,0,0,0,0,0,0
8470 DATA0,0,0,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,
1,1,0,1,1,0,0,0,0,0,0,0,0,0,0,0,1
8480 DATA1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,
0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,
8490 DATA24,48,24,56,32,40,32,48,64,16,72,16,
72,24,136,24,144,24,64,144,104,224
8500 RESTORE:FOR N=1 TO 26:READ A:NEXT:X=0:Y=
8
8505 PMODE3,5:GET(72,8)-(79,15),N,G
8510 PMODE3,1:PCLS2:SCREEN1,0
8520 FOR N=1 TO 672:READ A
8530 IF A=1 THEN PUT(X,Y)-(X+7,Y+7),N,PSET
8540 X=X+8:IF X=256 THEN X=0:Y=Y+8
8550 NEXT:FOR N=1 TO 11:READ Y,X
8560 IF CI=1 THEN PUT(X,Y)-(X+7,Y+7),N,PSET
8570 NEXT:FOR N=1 TO SK:FOR M=1 TO 26:READ Y(
M),X(M):Y(M)=Y(M)*8:X(M)=X(M)*8:NEXTM,N:RESTO
RE
8580 PO=3:CP=3:Y=80:X=224:CY=80:CX=240:Y1=Y:X
1=X:P1=PO:YC=CY:XC=CX:PC=CP:L1=1:L2=1:G=1:C=0
:DP=1
8590 GOSUB 8100:RETURN
8600 DATA9,30,3,24,3,9,6,6,6,5,7,4,8,4,9,5,9,
6,11,8,13,8,15,6,15,5,16,4,17,4,18,5,18,11,17
,12,12,12,9,15,9,16,11,18,15,18,17,20,17,27,1
4,30
8610 DATA8,30,3,25,3,8,6,5,6,4,7,3,8,3,9,4,9,
5,12,8,13,8,15,6,15,5,16,4,17,4,18,5,18,11,16
,13,12,13,9,16,9,17,10,18,13,18,17,22,17,26,1
3,30
8620 DATA6,30,2,26,2,12,5,9,5,3,7,1,9,1,10,2,
10,7,12,9,15,9,16,8,16,3,17,2,18,2,19,3,19,11
,16,14,10,14,7,17,7,18,8,19,16,19,20,23,20,25
,15,30
8630 DATA5,30,2,27,2,6,4,4,4,2,5,1,9,1,10,2,1
0,7,13,10,14,10,16,8,16,3,18,1,19,1,20,2,20,1
1,17,14,9,14,7,16,7,18,9,20,17,20,19,22,19,27
,16,30
9000 PMODE3,5:PCLS2:SCREEN1,0
9010 XC=0:YC=0:C=4:B=2
9020 FOR CH=1 TO 50:IF CH=43 THEN C=3

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9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(15):DIMCW(1):DIMCN(1):DIMCE
(1):DIMCS(1):DIMC1(1):DIMC2(1):DIMC3(1):DIMC4
(1)
9120 GET(80,8)-(87,15),CN,G
9130 GET(88,8)-(95,15),CW,G
9140 GET(96,8)-(103,15),CS,G
9150 GET(104,8)-(111,15),CE,G
9160 GET(112,8)-(119,15),C1,G
9170 GET(120,8)-(127,15),C4,G
9180 GET(128,8)-(135,15),C2,G
9190 GET(136,8)-(143,15),C3,G
9200 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9500 DATA0,5,5,5,3,1,1,6
9502 DATA2,5,5,5,5,5,5,2
9504 DATA0,5,5,5,5,5,5,2
9506 DATA4,6,5,4,4,4,4,4
9508 DATA4,4,4,4,4,4,4,3
9510 DATA0,1,3,5,5,5,3,1
9512 DATA4,7,5,5,6,4,4,4
9514 DATA2,5,4,7,1,1,5,2
9516 DATA0,2,2,0,0,2,2,0
9518 DATA2,5,5,4,4,5,5,2
9520 DATA2,5,5,5,5,5,5,2
9522 DATA0,5,7,5,5,5,5,5
9524 DATA4,7,5,5,6,4,4,4
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9526 DATA0,5,5,5,5,5,5,2
9528 DATA4,6,4,4,4,4,5,2
9530 DATA2,5,5,6,4,5,5,2
9532 DATA4,6,5,4,4,4,4,4
9534 DATA4,4,4,0,0,0,0,0
9536 DATA2,5,4,7,1,1,5,2,99,99,99
9538 DATA4,6,5,4,4,4,4,4
9540 DATA2,5,5,6,4,5,5,2
9542 DATA0,1,3,5,5,5,3,1
9544 DATA1,1,1,3,5,5,5,3
9546 DATA0,5,5,5,3,1,1,6
9548 DATA2,5,4,7,1,1,5,2
9550 DATA4,6,4,4,4,4,5,2
9552 DATA3,5,5,7,1,1,5,2
9554 DATA2,5,5,5,5,5,5,2
9556 DATA6,9,15,9,9,15,9,6
9558 DATA6,15,15,6,6,15,15,15
9560 DATA5,5,15,15,15,15,5,5
9562 DATA15,15,15,6,6,15,15,6
9564 DATA10,10,15,15,15,15,10,10
9566 DATA0,4,5,15,15,11,2,0
9568 DATA0,2,11,15,15,5,4,0
9570 DATA0,2,10,15,15,13,4,0
9572 DATA0,4,13,15,15,10,2,0
9900 COLOR2,1:LINE(XS,0)-(XS+17,7),PSET,BF:N#
=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950
9920 XS=XS+8:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETURN

```


Flying Bomb

The year is 1943. You are a wartime test-pilot under orders to conduct a series of tests on a powerful new flying bomb which, if it proves its mettle, could bring D-Day that much closer. Your instructions are to try out the new wonder weapon on a Nazi bunker (situated at the bottom right of your TV screen). You can only drop one bomb per run, and because you've never grappled with these devices before, it's going to take you a while to get the hang of the controls. But do your best. Your country is depending on you!

```

1 REM *** DRAGON VERSION ***
2 REM *** FLYING BOMB ***
10 PCLEAR8:GOSUB 9000
15 GOSUB 4000:SC=0
20 PR=-1:DIST=270000:DC=DIST:TH=1000:D=0:H=4:
DK=D*8:HK=H*8:S=150
100 PMODE3,1:PCLS:SCREEN1,1
110 PMODE3,5:GET(96,0)-(143,7),L,G
120 PMODE3,1:PUT(0,0)-(47,7),L,PSET
130 PMODE3,5:GET(0,8)-(31,15),L,G
140 PMODE3,1:PUT(80,0)-(111,7),L,PSET
150 PMODE3,5:GET(200,0)-(247,7),L,G
160 PMODE3,1:PUT(160,0)-(207,7),L,PSET
170 PMODE3,5:GET(144,0)-(199,7),L,G
180 PMODE3,1:PUT(152,10)-(207,17),L,PSET
190 NO=SC:XS=50:YS=0:GOSUB9900
195 GOSUB 1000
199 REM main routine
200 PR=PR+1:IF PR/6=INT(PR/6) THEN NO=INT((17-
H)*100-20):XS=208:YS=10:GOSUB 9900 ELSE 250
210 NO=(27-D)/5:XS=114:YS=0:GOSUB 9900
220 NO=S*2:XS=208:YS=0:GOSUB 9900
230 COLOR1,1:LINE(DK,HK)-(DK+15,HK+7),PSET,BF
240 HK=H*8:DK=D*8:PUT(DK,HK)-(DK+15,HK+7),C1,
PSET
250 A$=INKEY$:IF A$="" THEN A$=B$
260 IF A$="" THEN 360
270 IF A$="M" THEN S=S+5:IF S>195 THEN S=195
280 IF A$="N" THEN S=S-5:IF S<45 THEN 845
290 IF A$="A" THEN H=H-.1:IF H<2.2 THEN H=2.2

```

```

300 IF A$="Z" THEN H=H+.1:IF H>16.8 THEN 750
310 IF A$="K" THEN PUT(DK,HK)-(DK+15,HK+7),C2
,PSET:GOTO 500
320 B$=A$
360 IF H>13 AND D>27 THEN 780
399 REM move closer
400 DC=DC-S:D=INT((DIST-DC)/TH)
410 IF D>30 THEN 810
420 GOTO 200
499 REM bomb dropped
500 Y=1:V=H+1:F=D+1:HK=V*8:DK=F*8
510 X=Y*Y*(1-S/200)
520 SOUND150,1
530 V=V+X/40:F=F+Y/8
540 IF V>15 AND F>28 THEN 710
550 IF V>18.5 OR F>31 THEN 810
560 COLOR1,1:LINE(DK,HK)-(DK+7,HK+7),PSET,BF
570 PUT(F*8,V*8)-(F*8+7,V*8+7),B,PSET
580 HK=V*8:DK=F*8
590 Y=Y+1:GOTO 510
700 REM won game
710 COLOR1,1:LINE(DK,HK)-(DK+7,HK+7),PSET,BF
720 SC=SC+1:NO=SC:XS=50:YS=0:GOSUB 9900
725 PMODE3,5:GET(72,8)-(199,15),L,G:PMODE3,1:
PUT(88,128)-(215,135),L,PSET
730 FOR N=3 TO 6:GOSUB 1010:SOUNDRND(100)+50,
1:NEXT N
740 FOR N=1 TO 800:NEXT N:GOTO 20
749 REM ditched
750 PMODE3,5:GET(64,16)-(127,23),L,G
760 PMODE3,1:PUT(88,128)-(151,135),L,PSET
770 FOR N=1 TO 4:PUT(88,128)-(143,135),L,NOT:
SOUND150,1:NEXT N:GOTO 910
779 REM crash on target
780 PMODE3,5:GET(128,16)-(239,23),L,G
790 PMODE3,1:PUT(88,128)-(199,135),L,PSET
795 GOTO 730
800 REM lost game
810 COLOR1,1:LINE(DK,HK)-(DK+15,HK+7),PSET,BF
820 PMODE3,5:GET(200,8)-(239,15),L,G:PMODE3,1
:PUT(88,128)-(127,135),L,PSET
825 FOR N=1 TO 4:PUT(88,128)-(127,135),L,NOT:
SOUND100,1:NEXT N:GOTO 910
840 REM stalled

```

```

845 PMODE3,5:GET(0,16)-(63,23),L,G:PMODE3,1:P
UT(0,128)-(63,135),L,PSET
850 COLOR1,1:FOR X=H*8 TO 136 STEP 8
860 LINE(D*8,X)-(D*8+15,X+7),PSET,BF
870 PUT(D*8,X+8)-(D*8+15,X+15),C1,PSET
880 NEXT X
900 PLAY"T100L8":FOR X=1 TO 10:PLAY"04C05C04F
#":NEXT X
910 FOR X=1 TO 800:NEXT
920 GOTO 20
999 REMsea&dam
1000 N=2:COLOR3,1:LINE(0,144)-(255,191),PSET,
BF
1010 COLORN,1:LINE(224,143)-(247,119),PSET
1020 LINE(248,119)-(255,119),PSET
1030 LINE(250,118)-(250,112),PSET
1040 LINE(224,143)-(255,143),PSET
1050 PAINT(240,142),2,2:RETURN
3999 REM intro
4000 CLS:PRINT,,"      F L Y I N G   B O M B"
4010 PRINT,," SEE IF YOU CAN BREAK THE DAM!"
4015 FOR N=1 TO 2000:NEXT N
4020 PRINT,," AT THE TOP OF THE SCREEN YOU
WILL SEE DISPLAYED:"
4030 PRINT"      YOUR SPEED (IN NOTS)",,"      Y
OUR HEIGHT (IN FEET)",,"      YOUR SCORE",,,"
MILES TO TARGET (MTT)"
4040 PRINT,,"KEYS A AND Z CONTROL HEIGHT",,"KE
Y N REDUCES YOUR SPEED",,"KEY M INCREASES YOUR
SPEED",,"KEY K RELEASES THE FLYING BOMB",,"SPA
CE BAR = NO CHANGE",,"      GOOD LUCK!"
4050 PRINT"      PRESS ANY KEY TO START":A$=IN
KEY$
4060 A$=INKEY$:IF A$="" THEN 4060
4070 RETURN
9000 PMODE3,5:PCLS:SCREEN1,1
9010 XC=0:YC=0:C=4:B=1
9020 FOR CH=1 TO 94:IF CH=37 THEN C=2
9025 IF CH=42 THEN C=4
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D

```

```
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(25):DIMC1(3):DIMC2(3):DIMB(
1)
9120 GET(32,8)-(47,15),C1,G
9130 GET(48,8)-(63,15),C2,G
9140 GET(64,8)-(71,15),B,G
9160 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9492 DATA0,0,0,0,0,0,4,4
9494 DATA0,0,0,6,6,0,0,0
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9522 DATA4,4,4,6,5,5,5,5
9523 DATA2,5,5,6,4,5,5,2
9524 DATA2,0,2,2,2,2,2,1
9526 DATA3,5,5,7,1,1,5,2
9528 DATA4,4,4,6,5,5,5,5
9530 DATA4,6,4,4,4,4,5,2
9532 DATA0,2,2,0,0,2,2,0
9534 DATA2,5,4,7,1,1,5,2
9536 DATA4,7,5,5,6,4,4,4
9538 DATA2,5,5,6,4,5,5,2
9540 DATA2,5,5,6,4,5,5,2
9542 DATA1,1,1,3,5,5,5,3
9544 DATA0,2,2,0,0,2,2,0
9546 DATA99,5,7,7,5,5,5,5
9548 DATA4,6,4,4,4,4,5,2
9550 DATA4,6,4,4,4,4,5,2
9552 DATA0,2,2,0,0,2,2,0
```

9554 DATA12,4,7,5,3,0,0,0
9556 DATA0,0,14,5,14,11,7,11
9558 DATA12,4,7,5,3,0,0,0
9560 DATA0,0,14,5,14,0,0,0
9562 DATA0,0,0,0,0,11,7,11
9564 DATA2,5,5,4,4,5,5,2
9566 DATA2,5,5,5,5,5,5,2
9568 DATA0,4,7,5,5,5,5,5
9570 DATA3,5,5,7,1,1,5,2
9572 DATA4,6,5,4,4,4,4,4
9574 DATA0,1,3,5,5,5,3,1
9576 DATA4,6,4,4,4,4,5,2
9578 DATA0,5,5,5,5,5,5,2
9580 DATA4,4,4,4,4,4,4,3
9582 DATA0,1,3,5,5,5,3,1
9584 DATA4,6,4,4,4,4,5,2
9586 DATA2,0,2,2,2,2,2,1
9588 DATA2,5,5,5,5,5,5,2
9590 DATA0,4,7,5,5,5,5,5
9592 DATA2,5,4,7,1,1,5,2
9594 DATA4,4,4,4,4,4,0,4
9596 DATA4,4,4,4,4,4,4,3
9598 DATA2,5,5,5,5,5,5,2
9600 DATA2,5,4,7,1,1,5,2
9602 DATA4,6,4,4,4,4,5,2
9604 DATA4,4,4,4,4,4,0,4,99,99
9606 DATA2,5,4,7,1,1,5,2
9608 DATA4,6,4,4,4,4,5,2
9610 DATA0,1,3,5,5,5,3,1
9612 DATA4,4,4,4,4,4,4,3
9614 DATA4,4,4,4,4,4,4,3
9616 DATA2,5,5,6,4,5,5,2
9618 DATA1,1,1,3,5,5,5,3
9620 DATA4,4,4,4,4,4,0,4
9622 DATA1,1,1,3,5,5,5,3
9624 DATA2,0,2,2,2,2,2,1
9626 DATA4,6,4,4,4,4,5,2
9628 DATA2,5,5,4,4,5,5,2
9630 DATA4,4,4,6,5,5,5,5
9632 DATA2,5,5,6,4,5,5,2
9634 DATA1,1,1,3,5,5,5,3
9636 DATA4,4,4,4,4,4,0,4
9638 DATA4,6,4,4,4,4,5,2
9640 DATA4,4,4,6,5,5,5,5

```

9642 DATA0,1,3,5,5,5,3,1
9644 DATA4,6,4,4,4,4,5,2
9646 DATA4,4,4,0,0,0,0,0
9648 DATA2,5,4,7,1,1,5,2,99
9650 DATA2,5,5,4,4,5,5,2
9652 DATA4,4,4,4,4,4,4,3
9654 DATA2,5,5,6,4,5,5,2
9656 DATA0,5,5,5,5,5,5,2
9660 DATA2,5,5,6,4,5,5,2
9662 DATA4,6,5,4,4,4,4,4
9664 DATA4,4,4,4,4,4,0,4
9900 N%=STR$(NO):FOR Z=1 TO LEN(N%)
9902 IF MID$(N%,Z,1)=" " THEN NEXT Z
9905 IF MID$(N%,Z,1)="." OR MID$(N%,Z,1)="-"
THEN GOSUB9970:NEXT Z
9910 NO=VAL(MID$(N%,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:IF XS<248 THEN COLOR1,1:
LINE(XS,YS)-(XS+7,YS+7),PSET,BF
9930 RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN
9970 NO=10:IF MID$(N%,Z,1)="-" THEN NO=11
9980 GOSUB 9950:XS=XS+8:RETURN

```

ABM Command

You are in command of the anti-missile base of the city of your choice. Choose the level of attack you think you can sustain, and watch for the missiles descending, leaving their vapour trails behind them. Your mobile base can manoeuvre under the missiles to send your ABMs along the lightpath to explode them harmlessly in free space. You have to hit the missile's current position, not the trail it leaves behind, and the numbers keep building, coming from all angles. Hold out as long as you can!

```

1 REM *** DRAGON VERSION ***
2 REM *** ABM COMMAND ***
10 DIMSH$(2)
20 SH$(1)=CHR$(128)+CHR$(128)+CHR$(143)+CHR$(
128):SH$(2)=CHR$(128)+CHR$(141+96)+CHR$(140+9
6)+CHR$(142+96)+CHR$(128)
30 EX=0:SC=0:A2=0:SH=352:HS=SH:LV=3:E=1:F=5:S
=-1:SK=2:IFCL$(>)" THEN60
40 CL$(1)=CHR$(128)+CHR$(128)+CHR$(128)+CHR$(128
)+CHR$(128):DIMEX(2)
50 EX$(1)=CHR$(136+16)+CHR$(141+112):EX$(2)=C
HR$(132+32)+CHR$(137+96)+CHR$(140+64)
60 A=RND(3):PO=RND(11)+10:OP=PO:IF PO=BP THEN
60
70 IF A=1 THEN AN=31:AN$(1)=CHR$(134+64)
80 IF A=2 THEN AN=32:AN$(1)=CHR$(138+64)
90 IF A=3 THEN AN=33:AN$(1)=CHR$(137+64)
100 IF A2>0 THEN 190
110 A=RND(3):PB=RND(11)+10:BP=PB:IF PB=OP THE
N 110
120 IF A=1 THEN AB=31:AB$(1)=CHR$(134+16)
130 IF A=2 THEN AB=32:AB$(1)=CHR$(138+16)
140 IF A=3 THEN AB=33:AB$(1)=CHR$(137+16)
150 A2=2
160 IF H=3 THEN 190
170 IFY=0 THEN Y=3:GOSUB810
180 GOSUB470
190 A$(1)=INKEY$:IFA$(1)="L" THENQ=E ELSE IF A$(1)="K"
THEN Q=S
200 IFA$(1)="W" THEN GOT0850
210 SH=SH+Q:PLAY"O3T255V8CG#"

```

```

220 IFSH<3520RSH>380THENSH=HS
230 PRINT@SH,SH$(1)::PRINT@SH+32,SH$(2)::IFA$
="^"THEN280
240 R=R+E:IF R<F THEN HS=SH:GOTO190
250 R=R:PO=PO+AN:PB=PB+AB:IFPB>3520RPO>352THE
N540
260 PRINT@PO,AN$:PRINT@PB,AB$:
270 HS=SH:GOTO190
280 PLAY"V1":FOR A=SH+2-32 TO SH+2-320 STEP -
32
290 IFA=PO OR A=PB THEN320 ELSE PRINT@A,CHR$(
131+80)::IFA<SH+2-32THENPRINT@A+32,CHR$(128);
300 PLAY"05L255V+V+V+C":NEXTA
310 PRINT@SH+2-320,CHR$(128)::SOUND200,2:GOTO
250
320 IF A=PB AND A<>PO THEN 410
330 PRINT@PO-1,EX$(2)::PRINT@PO+32,EX$(1)::PR
INT@PO+65,CHR$(134+112);
340 EX=EX+10:SC=SC+10:IFEX>2000 THEN EX=0:HT=
4:LV=LV+1:GOSUB790
350 PRINT@1," SCORE :";SC;
360 PLAY"04V31T255CFCFCFCACACADGDGDGDBDBDB"
370 PRINT@PO-1,CL$:PRINT@PO+32,CL$:PRINT@PO
+64,CL$;
380 FOR A=PO TO 32 STEP -AN
390 PRINT@A,CHR$(128)::NEXT A
400 GOTO60
410 PRINT@PB-1,EX$(1)::PRINT@PB+32,EX$(2)::PR
INT@PB+65,CHR$(134+112);
420 EX=EX+25:SC=SC+25:IF EX>1000 THEN EX=0:LV
=LV+1:HT=4:GOSUB790
430 PRINT@1," SCORE :";SC:PLAY"02T255VJ1C03C
04C05C02E03E04E05E02G03G04G05G01C02C03C04C01C
02C03C04C"
440 PRINT@PB-1,CL$:PRINT@PB+32,CL$:PRINT@PB
+65,CL$;
450 FOR A=PB TO 32 STEP -AB:PRINT@A,CHR$(128)
::NEXT A
460 GOTO110
470 H=3:CLS0:PRINT@0,STRING$(32,252);
480 PRINT@1," SCORE :";SC;
490 PRINT@20," LIVES ";LV:IF HT=4 THEN HT=0:
RETURN
500 FOR A=1440 TO 1535

```



```

510 READB:POKEA,B:NEXT A
520 PRINT@SH,SH*(1);:PRINT@SH+32,SH*(2);
530 PRINT@238,"READY";:PLAY"03T4L5V30CT8CT6C0
3T4GT8GT6GT4ET8ET6ET3GT255DFGDFGDFGDFGDFGDFG"
:PRINT@238,CL*;:RETURN
540 LV=LV-1
550 PRINT@20," LIVES :";LV;
560 PRINT@SH+2,CHR*(135);:PLAY"02L2T5V20C":PR
INT@SH+2,CHR*(131);:PLAY"C":PRINT@SH+2,CHR*(1
29);:PLAY"T10C":PRINT@SH+2,CHR*(128);:PLAY"TS
C"
570 PRINT@SH+33,CHR*(133+96);:PLAY"D#":PRINT@
SH+33,CHR*(129+96);:PLAY"T10D":PRINT@SH+33,CH
R*(128);:PLAY"TSD"
580 PRINT@SH+34,CHR*(132+96);:PLAY"T10C":PRIN
T@SH+34,CHR*(128);:PLAY"TS":PRINT@SH+35,CHR*
(134+96);:PLAY"01T10B":PRINT@SH+35,CHR*(132+9
6);:PLAY"02T3C":PRINT@SH+35,CHR*(128);:PLAY"0
1C"
590 CLS5:PRINTSTRING*(32,252);:PRINT@8," TORP
EDO ATTACK ";
600 IFLV<1 THEN PRINT@132," YOUR GAME IS OVER
";:PRINT@292," YOUR SCORE WAS:";SC1:GOTO730
610 PRINT@65," LIVES LEFT:";LV;:PRINT@129," S
CORE:";SC;:PRINT@201,"news";:PRINT@206,"headl
ines";
620 POKE1224,32:POKE1229,32:POKE1239,32
630 PRINT@256," ";PL*; " WIPED OUT IN":PRINT"
DEVASTATING TORPEDO RAID"
640 PRINT@224,STRING*(32,"#");:PRINT@320,STRI
NG*(32,"#");
650 PRINT@384," PLEASE TYPE IN THE NAME OF TH
E PLACE YOU WISH TO DEFEND ";:LINE INPUTPL*
660 PRINT@486," ^HIT A KEY TO START ";
670 A*=INKEY*:IFA*="" THEN 670
680 A2=0:H=0:SH=352:RESTORE:GOTO600
690 DATA128,128,223,128,223,128,128,128,211,2
23,128,128,128,128,128,223,223,211,223,128,12
8,128,128,128,128,128,223,218,128,128,128,223
700 DATA223,211,223,128,223,223,128,213,223,2
23,223,128,128,211,128,223,223,223,223,211,21
1,211,223,211,211,211,223,218,128,128,223,223
710 DATA223,223,223,223,223,223,220,221,223,2
23,223,211,211,223,223,223,223,223,223,163,16

```

```

3,163,163,163,163,163,223,219,211,211,223,223
720 GOTO 720
730 PRINT@487," PRESS THE 'G' KEY ";:SOUND90,
1:A$=INKEY$:IFA$<)"G"THEN PRINT@487," press t
he 'g' key ";:SOUND130,1:GOTO730
740 Y=0:IFSC<HI+1THEN H=0:RESTORE:GOTO30
750 CLS3:PRINTSTRING$(96,"#");:PRINT@32,"#wel
l#done###highest#score#today#";:PRINT@416,STRI
NG$(64,"#");
760 PRINT@128,"PREVIOUS HIGH SCORE :";HI;:PRI
NT@192," YOUR SCORE :";SC;:HI=SC:PRINT@352,
" WHAT'S YOUR NAME CHAMP";
770 PLAY"04L10T20C01C04C01C04D01D04D01D04E01E
04E01E04F01F04F01F04G01G04G01G04E01E04E01E04C
01C04C01C04C01C":INPUTMN$
780 PLAY"01L5T20V20CCC02C01BAGFEDCEGO2CEGCEGO
3CEGCEGO4CEGCEGCEGCEGO5L1C":H=0:GOTO30
790 PRINT@20,"extra life";:PLAY"05T255CDCFCAC
DCFCACDCFCFA03T5L20BAGFEFGFEDCO2BAGFGAGFEDC"
800 PRINT@20," LIVES :";LV;:RETURN
810 CLS0:PRINT"-----TORPEDO----ATTACK-----
--";:PRINT@96," HIGHEST SCORE TODAY :";HI;:PR
INT@128," BY : ";MN$;" ";:PRINT@224,"PRESS AN
Y KEY";
820 PRINT@430,SH$(1);:PRINT@462,SH$(2);:FORA=
95 TO 352 STEP 31:PRINT@A,CHR$(198);:NEXTA:PR
INT@336,CHR$(211);:A$=INKEY$:IFA$=""THEN820
830 CLS2:PRINT@8," TORPEDO ATTACK ";:PRINT@17
0," levels ";:PRINT@226," 1. THATS BAD MAN
! ";:PRINT@258," 2. GULP ! ";:PRINT@290," 3.
KAMIKAZE ";
840 PRINT@390," WHAT LEVEL (1-3) ";:INPUTA:F=
11-(A*3):SOUND58,1:SOUND187,1:CLS3:PRINT@128,
" PLEASE TYPE IN THE PLACE YOU WISH TO DEF
END ";:LINEINPUTPL$:SOUND240,1:SOUND1,2:RESTO
RE:RETURN
850 A$=INKEY$:IFA$="" THEN 850 ELSE GOTO210

```

Swordsman

Choose your moment, then swiftly thrust your sturdy blade into the gaping jaws of some hideous monster. Beastmaster you'll never be, these nasties are definitively untameable, but swordsman you might just about manage. It's all quite simple. You just have to survive and get as many points as possible before some hideous creature does for you. Maybe the Vampire Cat will get to chew on your jugular. Who can tell? Quick. Lunge and thrust, missed . . . back to the left quickly . . . missed again . . . Aaargh . . . !

```

1 GOSUB5000
10 REM SWORDSMAN BY H. WALWYN          FOR CBM64.
   CONVERTED FOR          DRAGON BY J.R. KENEALLY
*
25 MZ=0
30 DIM E$(4):E$(1)="YOU ARE UNHARMED AND RARI
   NG TO GO"
31 E$(2)="YOU ARE SLIGHTLY WOUNDED NOW"
32 E$(3)="YOU HAVE RECEIVED MULTIPLE      LAC
   ERATIONS"
33 E$(4)="IT'S YOUR LAST CHANCE NOW. GOOD LUC
   K....."
100 DIM V(9)
110 FOR J=1TO9: READ V(J):NEXT J
120 DATA 3,4,3,4,3,5,2,2,4
150 REM VK= NUMBER OF DEAD MONSTERS
160 REM WK=WOUNDED LEVEL
170 REM PK=POINTS SCORED
180 VK=0: PK=1: WK=1
200 DIM V$(9)
210 FOR K=1TO9:READ V$(K):NEXT K
220 DATA "GANGRENE GOAT","NORTH-SEA BOIL","VA
   MPIRE CAT"
230 DATA "POLITICAL WORM","MAD METER MAID","S
   CHOOOL SPINACH"
240 DATA "DANDRUFFED BEAR","RAMPANT BANKER",P
   ICKLED ALBATROSS"
500 DIM D$(4,3),M$(9,4,3)
510 FOR I=1TO4: FOR J=1TO3:READ D$(I,J)

```

```

530 NEXT J:NEXT I
550 REM DATA LINES 600-620 HOLD THE VARIOUS STANCES OF THE SWORDSMAN
600 DATA " O!", " O ", " } )"
602 DATA " O!", " O ", " ( ("
604 DATA " O /", " O-", " X"
606 DATA " O", " O--", " / )"
650 FOR K=1TO9: FOR J=1TO4: FOR I=1TO3
660 READ M$(K,J,I)
680 NEXT I:NEXT J:NEXT K
699 REM LINES 700-876 CONTAIN STANCES OF THE MONSTERS WHO OPPOSE THE SWORDSMAN
700 DATA " O ", "##-", " ( ("
702 DATA " O ", "## -", " I I' "
704 DATA " O ", "##-", " I <' "
706 DATA " O /", " ##", " // "
720 DATA "***", "*O:O*", "* # *"
722 DATA "***", "*O:O*", "* # *"
723 DATA "***", "*O:O*", " "
724 DATA "***", "*O:O*", "* # *"
740 DATA " ", "O- ", " X"
742 DATA " ", "O- ", " I"
744 DATA " ", "O--", " << "
746 DATA " ", "O- ", " // "
760 DATA " ", "## O", " OO O"
762 DATA " ", "## OO", " OO O"
764 DATA " ", " O O", "## O "
766 DATA " ", " OO", "##O OO"
780 DATA "$$$$$", "$O.O$", "<< >>"
782 DATA "$$$$$", "$O.O$", " X X"
784 DATA "$$$$$", "$O.O$", "<< >>"
786 DATA "$$$$$", "$O.O$", " X X"
800 DATA "### #", "#O##", " ##"
802 DATA "####", "####", "O##"
804 DATA " ##", "####", "##"
806 DATA "## #", "### #", "#O#"
820 DATA "*OO*", " ", " B "
822 DATA "*OO*", " ", " E "
824 DATA "*OO*", " ", " A "
825 DATA "*OO*", " ", " R "
840 DATA " O", "'-:-", " X"
842 DATA " O", " : ", " ( )"
844 DATA " O", " I:I", " < >"

```

```

846 DATA " O", "###", "/ I"
860 DATA " # ", "O -<", "''"
862 DATA "O--<", "''", ""
864 DATA "O! (<", " # ", ""
866 DATA " ", "O--<", "''"
999 REM START OF GAME PROPER
1000 CLS1
1100 GOSUB4000
1900 GOTO1000
2750 FOR L=1TO1000: NEXT L:RETURN
2760 PRINT@320,"THE ";V$(MZ);" CUT YOU UP"
2765 FOR I=1TO500:NEXT I:RETURN
2799 REM CLEAR TOP OF SCREEN"
2800 FOR X=0 TO 320 STEP 32:PRINT@X,STRING$(3
2,143);
2815 NEXT X
2817 PRINT@0,"";
2820 RETURN
2950 MR=MZ
2960 MZ=RND(9):IF MZ=MR THEN GOTO2960
2970 RETURN
4000 GOSUB2950:REM MONSTER BATLE
4002 PRINT@288,STRING$(96,32)
4005 PRINT" IT'S THE ";V$(MZ);" ! "
4006 PRINT" (DEGREE OF DIFFICULTY TO KILL":P
RINT"= ";V(MZ);")"
4007 PRINT E$(WK)
4010 M7=4: D7=2: M8=20+RND(5)
4011 D8=15: M6=4: D6=2: M9=M8: D9=D8
4015 PRINT@0,"TOTAL POINTS ";PK
4020 K1=PEEK(339):K2=PEEK(342)
4025 IF K1=254 THEN D8=D8-1: D7=1: IF D8<4 TH
EN D8=4
4030 IF K1=253 THEN D8=D8+1: D7=2: IF D8>27 T
HEN D8=27
4035 IF K2=223 THEN D7=D7+1:IF D7>3 THEN D7=4
:DS=D8+1:IF D8>27 THEN D8=27
4036 IF K2=223 AND D7=2 THEN D7=3
4037 PRINT@191+D9," ";:PRINT@223+D9,"
";:PRINT@255+D9," ";
4038 K3=192+D9:FOR X=1TO3:PRINT@K3,D$(D7,X)::
K3=K3+32:NEXT X
4039 D9=D8: D6=D7
4040 IF D7=4 THEN GOTO 4060

```

```

4050 GOTO4085
4060 K3=192+M9:FOR X=1TO3:PRINT@K3,M$(MZ,M6,X
):K3=K3+32:NEXT X
4065 K3=225+1024+D8:FOR Z=1 TO 2
4068 Z1=PEEK(K3):IF Z1<>96 AND Z1<>107 AND Z1
<>109 THEN GOTO4090
4070 PRINT@226+D8,"+";
4072 NEXT Z
4082 D7=2
4085 M7=M7+1:IF M7=5 THEN M7=1
4086 IF RND(0)>0.35 THEN M8=M8-1
4087 PRINT@191+M9,"      ";PRINT@223+M9,"
";PRINT@255+M9,"      ";
4088 K3=192+M8:FOR X=1TO3:PRINT@K3,M$(MZ,M6,X
):K3=K3+32:NEXT X:IF M8<D8+2 THEN GOTO4100
4089 M9=M8:M6=M7:GOTO4020
4090 PRINT@320,"WELL DONE! YOU GOT THE
";V$(MZ);STRING$(32-LEN(V$(MZ)),32);
4091 P5=INT(V(MZ)*D8):VK=VK+1:WK=WK-1:IF WK<1
THEN WK=1
4092 PRINT@0,"POINTS FOR KILL = ";P5;:PK=PK+P
5:GOSUB2750
4093 GOSUB2800
4095 RETURN
4100 WK=WK+1
4102 IF WK<5 THEN PRINT@0,"TRY AGAIN.....":G
OSUB2760:GOSUB2800:GOTO4002
4103 CLS1
4105 PRINT:PRINT:FOR I=1TO3: PRINT"OH DEAR...
";
4107 FOR J=1TO50: NEXT J:NEXT I
4110 PRINT:PRINT"AAAAAAAARGH!!!"
4120 PRINT:PRINT"ANOTHER HERO BITES THE DUST."
4125 PRINT:PRINT"YOU KILLED ";VK;" MONSTERS":
PRINT"SCORING ";PK;" POINTS."
4130 INPUT"WANT TO PLAY AGAIN (Y/N) ";Z$
4135 IF Z$<>"Y"ANDZ$<>"N"THEN GOTO4130
4140 IF Z$="Y"THEN RUN
4145 STOP
5000 FMODE0:SCREEN 1,0:PCLS
5010 DRAW"C1;BM60,16;L16;D8;R16;D8;L16;BM+20,
-16"
5020 DRAW"M+4,+16;M+4,-6;M+4,+6;M+4,-16"

```

```
5030 DRAW"BM+4,+0;R16;D16;L16;U16":DRAW"BM+20
,+16;U16;R16;D8;L16;M+16,+8"
5040 DRAW"BM+4,+0;U16;R8;M+8,+4;D8;M-8,+4;L8;
BM+20,+0"
5050 DRAW"R16;U8;L16;U8;R16;BM+4,+16;U16;M+8,
+8;M+8,-8;D16;BM+4,+0"
5060 DRAW"M+8,-16;M+8,+16;BM-4,-8;L8;BM+16,+8
"
5070 DRAW"M+0,-16;M+16,+16;U16"
5080 DRAW"BM123,76;R2;U12;R6;D12;R2;M-5,+80;B
M-5,-80;M+5,+80"
5090 DRAW"BM-5,-80;M-16,+3;M+16,+3;BM+10,+0;M
+16,-3;M-16,-3"
5100 DRAW"BM144,63;M+16,-16;BM144,95;M+16,+16
;BM112,63;M-16,-16;BM112,95;M-16,+16"
5110 PLAY"O3T4L8GP8GP8L4.GP8"
5111 PLAY"L8GP8GP8L4.GP8"
5112 PLAY"L8GP8GP804L2CDE"
5120 CLS:PRINT"KILL THE MONSTERS USING KEY 1
TOMOVE LEFT, 9 TO MOVE RIGHT, AND DOWN-ARROW
TO STRIKE. PRESS      ENTER TO BEGIN"
5130 PLAY"O3L8GP8GP8L4.GP8GP8L4.O4CP8L8EP8EP8
L2D03BG"
5140 INPUT Z$:RETURN
```

Asset Stripper

This is an investment simulation in which you compete with the computer's company, Spectral Investments, to acquire £1 million. Starting with £100,000 you must study market intelligence reports and buy and sell shares on the stock market. If you find a company which is rich in capital assets but running at a loss, you can make a bid for the company with a mind to distributing its assets amongst the shareholders. To make a takeover bid you must attempt to buy 51 per cent of the shares, at which point the opposition will start bidding against you. Occasionally, Spectral will initiate its own takeover bids. The longer the bidding continues, the greater the possibility that a 'third party' will intervene.

Ordinary shares may be bought and sold in any quantity and a regular review of share prices is given, together with a market 'wire service'. If you want to look more closely at the performance of a particular company, you have the option of calling up a copy of its annual report which will give you information on assets, share prices, profits and other useful data. During each round, all the companies manufacture and trade their produce, and it is this activity which determines profitability. Frequently a company will invest in new capital equipment and this expenditure will cause a small drop in the share price. Don't be too hasty to sell your shares when a rise in productivity might just be around the corner.

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5 'ASSET STRIPPER BY R.ERSKINE          CONVERTED
FOR THE DRAGON 32          BY E.A.JACKSON
10 CLEAR 2000:CLS:PRINT@9,"ASSET STRIPPER":PR
INT@128,"WHAT IS YOUR SURNAME":INPUT N$
15 PRINT@224,"ENTER DIFFICULTY (1-3)":INPUT L
EV
20 IF LEV<1 OR LEV>3 THEN PRINT@256,"":GOTO15
25 PRINT@320,"PLEASE WAIT"
30 GOTO 1335
35 CLS:PRINT TAB(11);"ACCOUNTS":PRINT
40 '
45 PRINT N$;E$:PRINT
50 PRINT "LIQUID ASSETS ";TAB(20)INT((CH+.005
)*100)/100:PRINT

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```

55 Q=0:Q1=0
60 FOR X=1TO10
65 Q=Q+E(X)
70 IF F$(X)="C" THEN 80
75 Q1=Q1+(E(X)*D(X))
80 NEXT X
85 PRINT "SHARES HELD ";TAB(20)INT(Q):PRINT
90 PRINT"TOTAL SHARE VALUE ";TAB(20)INT((Q1+.005)*100)/100:PRINT
95 PRINT "TOTAL ASSETS ";TAB(20)INT((Q1+CH+.005)*100)/100:PRINT
100 FOR T=1TO4000:NEXT T
105 IF Q1+CH>S THEN 1110
110 IF Q1+CH<0 THEN 1120
115 Q3=0
120 FOR X=1TO10
125 IF F$(X)="C" THEN 135
130 Q3=Q3+(F(X)*D(X))
135 NEXT X
140 IF Q3+ZXCH>S THEN 1120
145 IF Q3+ZXCH<0 THEN 1110
150 IF T$="X" AND CH+Q1>ZXCH+Q3 THEN 1110
155 IF T$="X" AND CH+Q1<ZXCH+Q3 THEN 1120
160 PRINT M$;"CLAIMS ASSETS OF ";Q3+ZXCH:PRINT
165 RETURN
170 'WIRE SERVICE
175 CLS:CLS0:PRINT@10,"WIRE SERVICE";
180 Q=0:Q1=0
185 M(1)=ASA
190 FOR X=1TO10
195 IF F$(X)="C" THEN TW$=" CEASED TRADING":GOSUB1440
200 IF F$(X)="C" THEN 240
205 Q=Q+1
210 IF B(X)>A(X) AND E(X)<510000 AND F(X)<510000 THEN TW$="MAY BE RIPE FOR TAKEOVER":GOSUB1440
215 IF G(X)<1 AND W(X)>59 THEN TW$="PROFITS LOW":GOSUB1440
220 IF W(X)<60 THEN TW$="HEADS FOR TROUBLE":GOSUB1440
225 IF G(X)>5 THEN TW$="SET FOR GOOD PROFITS":GOSUB1440

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230 IF V(X)>0 AND V(X)>=1 THEN TW$="ANNOUNCES
    "+STR$(INT(V(X)))+ " REDUNDANCIES":GOSUB1440
235 Q1=Q1+D(X)
240 NEXT X
245 IF Q=0 THEN T$="X":GOTO45
250 ASA=Q1/Q
255 TW$="ALL SHARE AVERAGE "+STR$(INT(((ASA+.0
05)*100)/100)):GOSUB1450
260 IF ASA>M(1) THEN TW$="UP "+STR$(INT(((ASA
-M(1))+.005)*100)/100)):GOSUB1450
265 IF ASA<M(1) THEN TW$="DOWN "+STR$(INT(((M
(1)-ASA)+.005)*100)/100)):GOSUB1450
270 IF ASA>I(2) THEN TW$="ALL TIME HIGH":GOS
UB1450
275 IF ASA>I(2) THEN I(2)=ASA
280 IF ASA<I(3) THEN TW$="ALL TIME LOW":GOSUB
1450
285 IF ASA<I(3) THEN I(3)=ASA
290 RETURN
295 '
300 FOR X=1TO10
305 IF F$(X)="C" THEN 390
310 IF LEV=1 OR LEV=2 THEN 320
315 IF F$(X)="X" AND F(X)=0 AND F(X)<510000 T
HEN GOSUB435
320 IF W(X)<61 AND F(X)<510000 THEN GOSUB435
325 IF F$(X)="C" THEN 390
330 IF ZXCH<100 THEN 390
335 IF LEV=1 AND RND(100)>50 THEN 355
340 LETF=(((S/100)*51)-F(X))*D(X)
345 IF(B(X)/100)*51>F AND F<ZXCH AND F(X)<510
000 AND E(X)<510000 AND G(X)<1 THEN 1080
350 IF F$(X)="C" THEN 390
355 IF ZXCH<100 THEN 390
360 TENTH=ZXCH/10
365 IF W(X)>60 AND G(X)>0 THEN GOSUB400
370 IF LEV=1 THEN 390
375 IF W(X)>60 AND G(X)>1 THEN GOSUB400
380 IF W(X)>60 AND G(X)>5 THEN GOSUB400
385 IF W(X)>60AND G(X)>10 THEN GOSUB400
390 NEXT X
395 RETURN
400 IF(TENTH/D(X))+E(X)+F(X)>L(X) THEN RETURN
405 IF F(X)<510000 AND(F(X)+(TENTH/D(X)))>S T
HEN RETURN

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410 A(X)=A(X)+TENTH*1.05
415 ZXCH=ZXCH-TENTH
420 F(X)=F(X)+INT(TENTH/D(X))
425 L(X)=L(X)-INT(TENTH/D(X))
430 RETURN
435 A(X)=A(X)-((F(X)*D(X))*1.05)
440 ZXCH=ZXCH+F(X)*D(X)
445 L(X)=L(X)+F(X)
450 F(X)=0
455 RETURN
460 PRINT
465 CLS:PRINT TAB(9);"SHARE PRICES"
470 PRINT"COMPANY";TAB(11);"SHARE PRICE";TAB(
24);"UP/DOWN"
475 FOR X=1TO10
480 IF F*(X)="C" THEN PRINT C*(X);:PRINT TAB(
17) "CLOSED DOWN"
485 IF F*(X)="C" THEN 495
490 PRINT USING"%          %###.##      ##.#
#-";C*(X);D(X);N(X)
495 NEXT X
500 PRINT "ALL SHARE AVERAGE ";INT((ASA+.005)
*100)/100
505 PRINT"YOU HAVE ";INT((CH+.005)*100)/100
510 RETURN
515 INPUT"BUY HOW MANY ";Y
520 IF Y*D(X)>CH THEN PRINT"YOU HAVE INSUFFIC
IENT CASH":GOTO 515
525 IF Y>L(X) THEN PRINT"NOT ENOUGH SHARES AV
AILABLE":GOTO 515
530 IF Y+E(X)>500000 AND E(X)<510000 THEN 610
535 CH=CH-(Y*D(X))
540 L(X)=L(X)-Y
545 A(X)=(A(X)+(Y*D(X)))*1.05
550 E(X)=E(X)+Y
555 X*="P"
560 RETURN
565 PRINT "HOW MANY DO YOU WISH TO SELL"
570 INPUT Y
575 IF Y>E(X) THEN PRINT "YOU DO NOT HAVE THA
T MANY":GOTO 565
580 CH=CH+(Y*D(X))
585 L(X)=L(X)+Y
590 A(X)=A(X)-((Y*D(X))*1.05)

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```

595 E(X)=E(X)-Y
600 X$="P"
605 RETURN
610 T$="PHASEH"
615 Z1=.01
620 CLS:PRINT TAB(7);"TAKEOVER BID":PRINT
625 PRINT"YOUR SHAREHOLDING IS ";INT(E(X)*100
)/S;" PERCENT"
630 PRINT"CURRENT SHARE PRICE IS ";INT((D(X)
+.005)*100)/100
635 PRINT "THERE ARE ";INT(L(X));" AVAILABLE"
640 PRINT "YOU NEED ";INT(510000-E(X));" FOR
MAJORITY"
645 PRINT"THESE COST ";INT(((510000-E(X))*D(
X)+.005)*100)/100;" AT MARKET PRICE"
650 PRINT "YOU HAVE ";INT((CH+.005)*100)/100
655 EG=0
660 FOR V=1TO10
665 IF F$(V)<>"C" THEN EG=EG+(F(V)*D(V))
670 NEXT V
675 IF RND(10)>1 THEN 690
680 PRINT"THIRD PARTY WINS BID":FOR T=1TO 200
0:NEXTT
685 GOTO 820
690 PRINT"HOW MUCH DO YOU BID PER SHARE"
695 INPUT Z
700 IF Z1>Z THEN 735
705 K1=A(X)+(510000*(Z+.01))
710 K2=(510000-F(X))*(Z+.01)
715 IF K1>K2 AND (ZXCH+EG)>K2 THEN Z1=Z+.01
720 IF Z1>Z THEN PRINT M$;" BIDS ":PRINT INT(
(Z1+.005)*100)/100
725 IF Z1>Z THEN 675
730 IF Z1<Z THEN GOSUB760
735 IF Z1>Z THEN GOSUB1100
740 Z1=0
745 Z=0
750 IF T$="PHASEH" THEN 555
755 IF T$="PHASEM" THEN 390
760 'DISPOSAL
765 PRINT
770 Z1=0
775 F=0
780 PRINT"YOU WON THE BID"

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```

785 CH=CH-(Z*(510000-E(X)))
790 A(X)=A(X)+Z*(510000-E(X))
795 E(X)=E(X)+(510000-E(X))
800 L(X)=S-(E(X)+F(X))
805 PRINT"DO YOU WANT TO STRIP THE ASSETS OF
THIS COMPANY (Y/N)"
810 INPUT Y$
815 IF MID$(Y$,1,1)="N" THEN RETURN
820 PRINT"ASSETS ARE BEING DISTRIBUTED      AMO
NGST SHAREHOLDERS"
825 PSH=(E(X)*100)/S
830 ZXPSH=(F(X)*100)/S
835 OO=B(X)/100
840 CH=CH+(PSH*OO)
845 ZXCH=ZXCH+(ZXPSH*OO)
850 IF A(X)<=0 THEN 870
855 D(X)=A(X)/S
860 CH=CH+(E(X)*D(X))
865 ZXCH=ZXCH+(F(X)*D(X))
870 F$(X)="C"
875 L(X)=0
880 RETURN
885 PRINT M$;" HAS WON BID"
890 LET ZXCH=ZXCH-((510000-F(X))*Z1)
895 A(X)=A(X)+((510000-F(X))*Z1)
900 F(X)=F(X)+(510000-F(X))
905 Z1=0
910 IF G(X)<1 THEN GOSUB 820
915 RETURN
920 FOR X=1TO10
925 IF F$(X)="C" THEN 1070
930 V(X)=0
935 C(X)=0
940 IF A(X)<10000 THEN A(X)=10000
945 J(X)=A(X)/10
950 C(X)=C(X)+J(X)
955 IF H(X)<J(X)/1000 THEN H(X)=J(X)/1000
960 IF B(X)>A(X)/20 THEN 975
965 C(X)=C(X)+((A(X)/10)-B(X))
970 B(X)=INT(A(X)/10)
975 PROD=J(X)/10
980 RD=RND(3)+1
985 IF RD=1 THEN W(X)=W(X)-1

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```

990 IF RD=3 THEN W(X)=W(X)+1
995 T(X)=PROD*W(X)
1000 C(X)=C(X)+(H(X)*5000)
1005 PROF=T(X)-C(X)
1010 A(X)=A(X)+T(X)
1015 A(X)=A(X)-C(X)
1020 IF A(X)<=10000 THEN V(X)=H(X):H(X)=J(X)/
1000
1025 V(X)=V(X)-H(X)
1030 G(X)=(PROF*100)/T(X)
1035 SP1=D(X)
1040 IF A(X)<10000 THEN A(X)=10000
1045 D(X)=A(X)/S
1050 N(X)=D(X)-SP1
1055 IF A(X)<10000 THEN A(X)=10000
1060 IF RND(100)<70 THEN W(X)=W(X)+10
1065 IF RND(100)>70 THEN W(X)=W(X)-10
1070 NEXT X
1075 RETURN
1080 T$="PHASEM"
1085 PRINT M$;" BID FOR"
1090 PRINT C$(X);" TAKEOVER"
1095 Z1=D(X)
1100 PRINT "AT ";(INT(D(X)+.005)*100)/100;" P
ER SHARE"
1105 GOTO625
1110 PRINT "YOU HAVE WON"
1115 GOTO 1125
1120 PRINT M$;" HAS WON", "WITH ";ZXCH+Q3
1125 PRINT"DO YOU WANT ANOTHER GAME (Y/N)"
1130 INPUT V$
1135 IF MID$(V$,1,1)="Y" THEN 10
1140 STOP
1145 'LOOP
1150 GOSUB920
1155 GOSUB920
1160 GOSUB35
1165 GOSUB170
1170 GOSUB460
1175 PRINT"ENTER INITIAL OF CHOSEN COMPANY"
1180 PRINT"OR P(PASS)";W$;
1185 INPUT X$
1190 IF MID$(X$,1,1)="P" THEN 1325
1195 FOR X=1TO10

```

```

1200 IF ASC(MID$(C$(X),1,1))=ASC(X$) THEN 1215
1205 NEXT X
1210 GOTO 1175
1215 IF F$(X)="C" THEN 1175
1220 PRINT
1225 CLS:PRINT C$(X)
1230 PRINT "LIQUID CAPITAL ";INT((A(X)+.005)
*100)/100
1235 PRINT "EMPLOYEES ";INT (H(X))
1240 PRINT"OVERHEADS ";INT((C(X)+.005)*100)/
100
1245 PRINT"PROFIT PERCENT OF TURNOVER";INT (
G(X))
1250 PRINT "SHARE PRICE ";INT((D(X)+.005)*10
0)/100
1255 PRINT"SHARES AVAILABLE ";INT(L(X))
1260 PRINT"SHARES HELD BY YOU ";INT(E(X))
1265 PRINT"PERCENTAGE SHARES HELD BY YOU ";IN
T((E(X)*100)/S)
1270 PRINT "YOU HAVE ";INT((CH+.005)*100)/100
1275 PRINT STRING$(31,45)
1280 IF E(X)>=510000 THEN PRINT "DISPOSE OF A
SSETS ":INPUT A$
1285 IF E(X)<510000 THEN A$="N"
1290 IF E(X)>=510000 AND MID$(A$,1,1)="Y" THE
N GOSUB820
1295 IF F$(X)="C" THEN X$="P":GOTO 1305
1300 IF F$(X)="X" THEN PRINT "BUY(B),SELL(S),
OR PASS(P)":INPUT X$:X$=MID$(X$,1,1)
1305 IF X$<>"P" AND X$<>"S" AND X$<>"B" THEN
1175
1310 IF X$="B" THEN GOSUB 515
1315 IF X$="S" THEN GOSUB 565
1320 IF X$="P" THEN PRINT "LOOK AT ANOTHER CO
MPANY (Y/N)":INPUT A$:IF MID$(A$,1,1)="Y" THE
N GOSUB 1170
1325 GOSUB300
1330 GOTO1155
1335 'INITIALISATION
1340 RESTORE:FOR X=1TO10:READ C$(X):NEXT X
1345 DATA "ACME CORP.," "BRN IND.," "CAPRA STEE

```

```

L", "DELTA GROUP", "ELLIOT CORP.", "FORAX CHEMIC
ALS", "GNS INT.", "HOPE HOLDINGS", "INCE & CO.",
"JONES & PEEKE"
1350 M$="SPECTRAL INVESTMENTS LTD"
1355 E$=" INVESTMENTS LTD"
1360 S=10000000
1365 CH=1000000
1370 ZXCH=CH
1375 AW=0
1380 T$="0"
1385 PT=0
1390 FOR X=1TO10
1395 A(X)=INT(RND(S)/2)+1
1400 D(X)=S/A(X)
1405 B(X)=INT(RND(S)/10)+1
1410 H(X)=B(X)/100/1000
1415 W(X)=60
1420 F$(X)="X"
1425 L(X)=S
1430 NEXT X
1435 GOTO 1145
1440 WIRE$=STRING$(31,46)+C$(X)+"      "+TW$+ST
RING$(34,46)
1445 FOR WT=1TO LEN(WIRE$)-32:PRINT@320,MID$(
WIRE$,WT,32);:SOUND 200,1:NEXT WT :RETURN
1450 WIRE$=STRING$(32,46)+TW$+STRING$(32,46):
FOR WT=1 TO LEN(WIRE$)-32:PRINT@320,MID$(WIRE
$,WT,32);:SOUND 200,1:NEXT WT:RETURN

```


Chomper

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. Enjoy!

```

1 REM CHOMPER : DRAGON VERSION BY P.SIVITER
2 PCLEAR8:CLS
10 FOR N=1 TO 4:GOSUB 9990:NEXT
20 GOSUB 9000
25 GOSUB 9110
30 HS=0:G$="T10004L8G"
40 RESTORE:FM=0:SC=0:LI=3:GOSUB 8000
50 PMODE4,1:PCLS:SCREEN1,1:GOSUB 8500
60 GOSUB 8800
100 MV=0:COLOR0,1:A$=INKEY$:IF A$="" THEN A$=
B$
110 IF A$=CHR$(9) THEN IF (PPOINT(X+9,Y+3)=0
AND PPOINT(X+9,Y+2)=0 AND PPOINT(X+9,Y+5)=0)
OR (X+8=G AND Y=F) THEN X=X+8:P=1:MV=1
120 IF A$=CHR$(8) THEN IF (PPOINT(X-7,Y+3)=0
AND PPOINT(X-8,Y+1)=0) OR (X-8=G AND Y=F) THE
N X=X-8:P=2:MV=1
130 IF A$=CHR$(10) THEN IF (PPOINT(X,Y+9)=0 A
ND PPOINT(X+3,Y+9)=0) OR (X=G AND Y+8=F) THEN
Y=Y+8:P=3:MV=1
140 IF A$=CHR$(94) THEN IF (PPOINT(X,Y-7)=0 A
ND PPOINT(X+1,Y-7)=0 AND PPOINT(X+6,Y-7)=0) O
R (X=G AND Y-8=F) THEN Y=Y-8:P=4:MV=1
145 B$=A$
150 PP=0:FOR N=0 TO 3:IF X=PP(N,0) AND Y=PP(N
,1) THEN PP=1:PP(N,0)=0:PP(N,1)=0:N=3
155 NEXT:IF PP THEN SOUND200,1:R=1:SCREEN1,0:
DF=-DF:DG=-DG
160 IF MV THEN IF PPOINT(X+4,Y+5)<>0 THEN PUT
(X1,Y1)-(X1+7,Y1+7),P0,PSET:SC=SC+1:C1=C1+1:P
$=STR$(SC):P$=RIGHT$(P$,LEN(P$)-1):XS=48:YS=0
:GOSUB9900:COLOR0,1:PLAY G$:IF C1=C THEN 7000
170 IF Y=88 THEN X=X+(240 AND X=8)-(240 AND X
=248)
180 PX=X:QY=Y:IF R THEN PX=248-X:QY=168-Y:R=R

```

```

+1: IF R=50 THEN SOUND50,1:SCREEN1,1:R=0
190 LINE(X,Y)-(X+7,Y+7),PSET,BF:ON P GOSU
B 2000,2010,2020,2030
200 Y1=Y:X1=X
210 IF Y=F AND X=G THEN 6000
220 F1=F:G1=G:G=G+DG:F=F+DF:IF F=Y AND G=X TH
EN 280
230 GOSUB 1300:IF OK=0 THEN 1000
240 I=F1+(8 AND F1<=QY)-(8 AND F>QY):J=G1+(8
AND G1<=PX)-(8 AND G1>PX)
245 F2=F:F=F-I:G2=G:G=G1:GOSUB 1300:F=F2:G=G2
250 IF F1<>QY AND DF=0 THEN IF OK THEN 1010
255 F2=F:F=F1:G2=G:G=G1:GOSUB 1300:F=F2:G=G2
260 IF G1<>PX AND DG=0 THEN IF OK THEN 1200
270 IF F=88 THEN G=G+(240 AND G=8)-(240 AND G
=248)
280 PUT(G1,F1)-(G1+7,F1+7),GG,PSET:GET(G,F)-(
G+7,F+7),GG,G:PUT(G,F)-(G+7,F+7),G,PSET
290 IF Y=F AND X=G THEN 6000
295 GOTO 100
1000 IF DG=0 THEN 1200
1010 IF DF=0 THEN DF=8*((F1>QY)-(F1<=Y)):DG=0
:G=G1:F=F1+DF
1020 GOSUB 1300:IF OK=0 THEN DF=-DF:F=F1+DF
1030 GOTO 270
1200 DG=8*((G1>PX)-(G1<=PX)):DF=0:F=F1:G=G1+DG
1210 GOSUB 1300:IF OK=0 THEN DG=-DG:G=G1+DG
1220 GOTO 270
1300 OK=1:FOR N=0 TO 7:IF PPOINT(G,F+N)<>0 OR
PPOINT(G+N,F+1)<>0 THEN OK=0:N=7
1310 NEXT:RETURN
2000 PUT(X,Y)-(X+7,Y+7),P1,PSET:RETURN
2010 PUT(X,Y)-(X+7,Y+7),P2,PSET:RETURN
2020 PUT(X,Y)-(X+7,Y+7),P3,PSET:RETURN
2030 PUT(X,Y)-(X+7,Y+7),P4,PSET:RETURN
6000 IF R THEN 6500
6010 FOR F=1 TO 15:FOR G=1 TO 4
6020 ON G GOSUB 2000,2010,2020,2030
6030 SOUND150+F*G,1
6040 NEXTG,F
6050 FOR F=1 TO 250:NEXT
6060 LINE(X,Y)-(X+7,Y+7),PSET,BF:LI=LI-1:IF L
I>0 THEN GOSUB 8800:GOTO 100

```

```

6070 CLS:PRINT@96,"YOU SCORED";SC;"POINTS."
6080 IF SC>HS THEN HS=SC:PRINT@192,"WELL DONE
  THAT'S THE NEW BEST   SCORE!!!":GOTO 6100
6090 PRINT@192,"THE HIGH SCORE IS";HS;". "
6100 PRINT@256,"PRESS ANY KEY TO PLAY AGAIN."
:A$=INKEY$
6110 A$=INKEY$:IF A$="" THEN 6110
6120 CLS:GOTO 40
6500 PMODE4,5:GET(88,8)-(95,15),N,G:PMODE4,1:
COLOR1,1:FOR F=1 TO 5:FOR G=1 TO 6
6510 PUT(X,Y)-(X+7,Y+7),N,PSET
6520 FOR M=1 TO 100:NEXT:PLAY G$
6530 LINE(X,Y)-(X+7,Y+7),PSET,BF
6540 FOR M=1 TO 20:NEXT
6550 NEXTG,F
6560 SCREEN1,1:R=0:SC=SC+50
6570 P$=STR$(SC):P$=RIGHT$(P$,LEN(P$)-1):XS=4
8:YS=0:GOSUB 9900
6580 F=128:G=128:G1=G:F1=F
6590 DG=-8:DF=0:GET(G,F)-(G+7,F+7),GG,G
6600 PUT(G,F)-(G+7,F+7),G,PSET
6610 GOTO 100
7000 CLS:PRINT@102,"W E L L   D O N E ! ! "
7010 FOR F=50 TO 200:SOUNDF,1:NEXT
7020 FOR F=1 TO 500:NEXT
7030 CLS:FM=FM+1:IF FM=4 THEN FM=0:RESTORE
7040 GOTO 50
8000 PRINT@42,"C H O M P E R":PRINT@73,"@ PAU
L STANLEY"
8010 PRINT:PRINT:PRINT"A STANDARD PACMAN-TYPE
GAME,   COMPLETE WITH POWER-PILLS, WHICHWHE
N EATEN GIVE YOU THE CHANCE TO EAT THE GHOST
."
8020 PRINT:PRINT"MOVE WITH THE ARROW KEYS."
8030 PRINT:PRINT"PRESS ANY KEY TO PLAY...":A$
=INKEY$
8040 A$=INKEY$:IF A$="" THEN 8040
8050 CLS:RETURN
8500 X=32:Y=8:C1=0:C=3
8510 READ A$:IF A$="FIN" THEN RETURN
8515 IF A$="S" THEN 8550
8520 A=ASC(A$)-65:X1=96+8*A
8525 IF A$="M" THEN C=C+1

```

```

8530 PMODE4,5:GET(X1,8)-(X1+7,15),N,G
8540 PMODE4,1:PUT(X,Y)-(X+7,Y+7),N,PSET
8550 X=X+8:IF X=256 THEN X=0:Y=Y+8
8560 GOTO 8510
8600 DATAH,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,
A,A,A,A,A,A,J,S,S,S,S,S,S,S
8602 DATAB,N,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
M,M,M,M,M,N,B,S,S,S,S,S,S,S
8604 DATAB,M,F,A,L,A,E,M,C,M,F,A,L,A,E,M,C,M,
F,A,L,A,E,M,B,S,S,S,S,S,S,S
8606 DATAB,M,M,M,B,M,M,M,B,M,M,M,D,M,M,M,B,M,
M,M,B,M,M,M,B,S,S,S,S,S,S,S
8608 DATAB,M,C,M,B,M,C,M,B,M,C,M,M,M,C,M,B,M,
C,M,B,M,C,M,B,S,S,S,S,S,S,S
8610 DATAB,M,B,M,B,M,B,M,B,M,B,M,C,M,B,M,B,M,
B,M,B,M,B,M,B,S,S,S,S,S,S,S
8612 DATAB,M,B,M,D,M,D,M,B,M,D,M,B,M,D,M,B,M,
D,M,D,M,B,M,B,S,S,S,S,S,S,S
8614 DATAB,M,B,M,M,M,M,M,B,M,M,M,B,M,M,M,B,M,
M,M,M,M,B,M,B,S,S,S,S,S,S,S
8616 DATAB,M,G,A,A,A,A,A,I,M,F,A,K,A,E,M,G,A,
A,A,A,A,I,M,B,S,S,S,S,F,A,A
8618 DATAI,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
M,M,M,M,M,M,G,A,A,E,S,S,M,M
8620 DATAM,M,F,A,A,A,A,A,A,A,A,A,A,A,A,A,A,
A,A,A,A,E,M,M,M,M,S,S,F,A,A
8622 DATAJ,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
M,M,M,M,M,H,A,A,E,S,S,S,S
8624 DATAB,M,F,A,A,A,L,A,A,A,E,M,C,M,F,A,A,A,
L,A,A,A,E,M,B,S,S,S,S,S,S,S
8625 DATAB,M,M,M,M,M,B,M,M,M,M,M,B,M,M,M,M,
B,M,M,M,M,M,B,S,S,S,S,S,S,S
8628 DATAB,M,F,A,E,M,B,M,C,M,C,M,D,M,C,M,C,M,
B,M,F,A,E,M,B,S,S,S,S,S,S,S
8630 DATAB,M,M,M,M,M,B,M,B,M,B,M,M,M,B,M,B,M,
B,M,M,M,M,M,B,S,S,S,S,S,S,S
8632 DATAB,M,C,M,F,A,I,M,D,M,G,A,A,A,I,M,D,M,
G,A,E,M,C,M,B,S,S,S,S,S,S,S
8634 DATAB,M,B,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
M,M,M,M,B,M,B,S,S,S,S,S,S,S
8636 DATAB,M,G,A,A,A,A,A,A,A,A,A,A,A,A,A,A,
A,A,A,A,I,M,B,S,S,S,S,S,S,S
8638 DATAE,N,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,

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A,A,A,A,A,A,I,FIN
 8700 DATAH,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,
 A,A,A,A,A,A,J,S,S,S,S,S,S,S
 8702 DATAB,N,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,M,N,B,S,S,S,S,S,S,S,S
 8704 DATAB,M,H,A,A,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,A,A,J,M,B,S,S,S,S,S,S,S,S
 8706 DATAB,M,B,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,B,M,B,S,S,S,S,S,S,S,S
 8708 DATAB,M,B,M,H,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,J,M,B,M,B,S,S,S,S,S,S,S,S
 8710 DATAB,M,D,M,B,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,B,M,D,M,B,S,S,S,S,S,S,S,S
 8712 DATAB,M,M,M,D,M,M,F,E,M,F,E,M,F,E,M,F,E,
 M,M,D,M,M,M,B,S,S,S,S,S,S,S,S
 8714 DATAB,M,C,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,C,M,B,S,S,S,S,S,S,S,S
 8716 DATAB,M,G,A,A,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,A,A,I,M,B,S,S,S,S,F,A,A
 8718 DATAI,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,M,M,G,A,A,E,S,S,M,M
 8720 DATAM,M,F,A,A,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,A,A,E,M,M,M,M,S,S,F,A,A
 8722 DATAJ,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,M,M,H,A,A,E,S,S,S,S
 8724 DATAB,M,H,A,A,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,A,A,J,M,B,S,S,S,S,S,S,S,S
 8726 DATAB,M,D,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,D,M,B,S,S,S,S,S,S,S,S
 8728 DATAB,M,M,M,C,M,M,F,E,M,F,E,M,F,E,M,F,E,
 M,M,C,M,M,M,B,S,S,S,S,S,S,S,S
 8730 DATAB,M,C,M,B,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,B,M,C,M,B,S,S,S,S,S,S,S,S
 8732 DATAB,M;B,M,G,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,I,M,B,M,B,S,S,S,S,S,S,S,S
 8734 DATAB,M,B,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,B,M,B,S,S,S,S,S,S,S,S
 8736 DATAB,M,G,A,A,E,M,F,A,A,A,E,M,F,A,A,A,E,
 M,F,A,A,I,M,B,S,S,S,S,S,S,S,S
 8738 DATAB,N,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,
 M,M,M,M,M,N,B,S,S,S,S,S,S,S,S
 8740 DATAG,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,
 A,A,A,A,A,A,I,FIN
 8750 DATAH,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,A,

A, A, A, A, A, A, J, S, S, S, S, S, S, S, S
 8752 DATAB, N, M, N, B, S, S, S, S, S, S, S, S, S
 8754 DATAB, M, C, M, F, J, M, M, M, M, H, A, A, A, J, M, M, M, M, H, A, A, E, M, B, S, S, S, S, S, S, S, S, S, S
 8756 DATAB, M, B, M, M, B, M, M, M, M, B, M, M, M, B, M, M, M, M, B, M, M, M, M, B, S, S, S, S, S, S, S, S, S, S
 8758 DATAB, M, B, M, M, B, M, M, M, M, D, M, M, M, D, M, M, M, M, B, M, M, M, M, B, S, S, S, S, S, S, S, S, S, S
 8760 DATAB, M, B, M, F, I, M, M, M, M, M, M, M, M, M, M, M, M, M, M, M, M, M, M, B, M, M, M, M, B, S, S, S, S, S, S, S, S, S, S
 8762 DATAB, M, B, M, M, M, M, M, M, M, H, A, A, A, J, M, M, M, M, B, M, M, M, M, B, S, S, S, S, S, S, S, S, S, S, S
 8764 DATAB, M, B, M, M, M, M, M, M, M, B, M, M, M, B, M, M, M, M, B, M, M, M, M, B, S, S, S, S, S, S, S, S, S, S, S
 8766 DATAB, M, D, M, M, M, M, M, M, M, D, M, M, M, D, M, M, M, M, G, A, A, E, M, B, S, S, S, S, F, A, A
 8768 DATAI, M, G, A, A, E, S, S, M, M, M
 8770 DATAM, M, F, A, A, E, M, F, E, M, F, A, A, A, E, M, F, E, M, F, A, A, E, M, M, M, S, S, F, A, A
 8772 DATAJ, M, H, A, A, E, S, S, S, S, S
 8774 DATAB, M, C, M, C, M, C, M, C, M, H, A, A, A, J, M, H, E, M, M, M, M, C, M, B, S, S, S, S, S, S, S, S, S, S, S
 8776 DATAB, M, B, M, B, M, B, M, B, M, B, M, M, M, B, M, B, M, M, M, M, B, M, B, S, S, S, S, S, S, S, S, S, S, S
 8778 DATAB, M, B, M, D, M, D, M, B, M, D, M, M, M, D, M, B, M, C, M, M, M, B, M, B, S, S, S, S, S, S, S, S, S, S, S
 8780 DATAB, M, B, M, M, M, M, M, B, M, M, M, M, M, M, M, M, M, B, M, D, M, C, M, B, M, B, S, S, S, S, S, S, S, S, S, S, S
 8782 DATAB, M, B, M, M, M, M, M, B, M, H, A, A, A, J, M, B, M, M, M, D, M, B, M, B, S, S, S, S, S, S, S, S, S, S, S, S
 8783 DATAB, M, B, M, M, M, M, M, B, M, B, M, M, M, B, M, B, M, M, M, M, M, B, M, B, S, S, S, S, S, S, S, S, S, S, S
 8784 DATAB, M, D, M, M, M, M, M, D, M, D, M, M, M, D, M, D, M, M, M, M, F, I, M, B, S, S, S, S, S, S, S, S, S, S, S
 8786 DATAB, N, M, N, B, S, S, S, S, S, S, S, S, S, S
 8788 DATAG, A, I, FIN
 8800 X=128:Y=40:Y1=Y:X1=X:R=0:P=3:F=128:G=X:G1=G:F1=F:DG=-8:DF=0:PP(0,0)=40:PP(0,1)=16:PP(

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1,0)=216:PP(1,1)=16:PP(2,0)=40:PP(2,1)=160:PP
(3,0)=216:PP(3,1)=160
8810 GET(G,F)-(G+7,F+7),GG,G:PUT(G,F)-(G+7,F+
7),G,PSET
8820 P$="SCORE":XS=0:YS=0:GOSUB9900:P$="HIGH
SCORE:"+RIGHT$(STR$(HS),LEN(STR$(HS))-1):XS=
136:YS=0:GOSUB9900
8825 COLOR0,1:LINE(16,24)-(23,55),PSET,BF
8830 IF LI<2 THEN 8850 ELSE LY=24:FOR N=1 TO
LI-1
8840 PUT(16,LY)-(23,LY+7),P1,PSET:LY=LY+12:NE
XT
8850 RETURN
9000 PMODE4,5:PCLS:SCREEN1,1
9010 XC=0:YC=0
9020 FOR CH=1 TO 50
9030 FOR Y=YC TO YC+7
9040 READ CD:D=128:IF CD=999 THEN 9090
9050 FOR X=XC TO XC+7
9060 P=INT(CD/D)
9070 IF P=1 THEN PSET(X,Y,5):CD=CD-D
9080 D=D/2:NEXT X,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9105 RETURN
9110 PMODE4,5:DIMN(1):DIMG(1):DIMGG(1):DIMP0(
1):DIMP1(1):DIMP2(1):DIMP3(1):DIMP4(1):DIMPP(
3,1)
9120 GET(208,0)-(215,7),P0,G
9130 GET(216,0)-(223,7),P1,G
9140 GET(224,0)-(231,7),P2,G
9150 GET(232,0)-(239,7),P3,G
9160 GET(240,0)-(247,7),P4,G
9170 GET(248,0)-(255,7),G,G
9200 RETURN
9500 DATA0,60,66,66,126,66,66,0
9510 DATA0,124,66,124,66,66,124,0
9512 DATA0,60,66,64,64,66,60,0
9514 DATA0,120,68,66,66,68,120,0
9516 DATA0,126,64,124,64,64,126,0
9518 DATA0,126,64,124,64,64,64,0
9520 DATA0,60,66,64,78,66,60,0
9522 DATA0,66,66,126,66,66,66,0

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9524 DATA0,62,8,8,8,8,62,0
 9526 DATA0,2,2,2,66,66,60,0
 9528 DATA0,68,72,112,72,68,66,0
 9530 DATA0,64,64,64,64,64,126,0
 9532 DATA0,66,102,90,66,66,66,0
 9533 DATA0,66,98,82,74,70,66,0
 9534 DATA0,60,66,66,66,66,60,0
 9536 DATA0,124,66,66,124,64,64,0
 9537 DATA0,60,66,66,114,74,60,0
 9538 DATA0,124,66,66,124,68,66,0
 9540 DATA0,60,64,60,2,66,60,0
 9542 DATA0,254,16,16,16,16,16,0
 9544 DATA0,66,66,66,66,66,60,0
 9546 DATA0,66,66,66,66,36,24,0
 9547 DATA0,66,66,66,90,102,66,0
 9548 DATA0,66,36,24,24,36,66,0
 9549 DATA0,130,68,40,16,16,16,0
 9550 DATA0,126,4,8,16,32,126,0
 9551 DATA60,126,255,255,255,255,126,60
 9552 DATA60,126,240,224,224,240,126,60
 9554 DATA60,126,15,7,7,15,126,60
 9555 DATA60,126,255,231,195,195,66,0
 9556 DATA0,66,195,195,231,255,126,60
 9558 DATA60,126,219,201,255,231,231,170
 9560 DATA0,24,36,44,52,36,24,0
 9562 DATA0,8,24,8,8,8,28,0
 9564 DATA0,24,36,8,16,32,60,0
 9566 DATA0,24,36,24,4,36,24,0
 9568 DATA0,8,24,40,72,124,8,0
 9570 DATA0,60,32,56,4,36,24,0
 9572 DATA0,28,32,56,36,36,24,0
 9574 DATA0,60,4,8,16,32,32,0
 9576 DATA0,24,36,24,36,36,24,0
 9578 DATA0,24,36,36,28,4,56,0
 9580 DATA0,0,8,0,0,0,8,0
 9582 DATA0,242,133,229,21,149,98,0
 9584 DATA0,255,0,0,0,0,255,0
 9586 DATA66,66,66,66,66,66,66,66
 9588 DATA0,24,36,66,66,66,66,66
 9590 DATA66,66,66,66,66,36,24,0
 9592 DATA0,248,4,2,2,4,248,0
 9594 DATA0,31,32,64,64,32,31,0
 9596 DATA66,65,64,32,32,24,7,0

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9598 DATA0,7,24,32,32,64,65,66
9600 DATA66,130,2,4,4,24,224,0
9602 DATA0,224,24,4,4,2,130,66
9604 DATA66,129,0,0,0,0,255,0
9606 DATA0,255,0,0,0,0,129,66
9608 DATA0,0,0,0,0,24,24,0
9610 DATA0,0,36,24,126,24,36,0
9900 IF P$="" THEN RETURN
9910 A$=LEFT$(P$,1):P$=RIGHT$(P$,LEN(P$)-1)
9920 YG=0:A=ASC(A$)-65:IF A$<"A" THEN YG=8:A=
ASC(A$)-48
9930 IF A$=" " THEN COLOR0,1:LINE(XS,YS)-(XS+
7,YS+7),PSET,BF:GOTO9945
9940 XG=8*A:GOSUB9950
9945 XS=XS+8:GOTO 9900
9950 PMODE4,5:GET(XG,YG)-(XG+7,YG+7),N,G
9960 PMODE4,1:PUT(XS,YS)-(XS+7,YS+7),N,PSET:R
ETURN
9990 FOR M=1 TO 666:READ A$:NEXT:RETURN
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Cheshire Cat

Cast adrift in space without fuel you have only a beam weapon to defend yourself against the hostile nasties which attack you from all sides.

Your craft can be spun round to the left or right with the A and S keys. Your beam is fired with the SPACE bar, and if you're really desperate, you can always do your disappearing act by pressing your 0 key and visiting the void for a while.

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1 REM CHESHIRE CAT*DRAGON VERSION
10 PCLEAR8:HS=0:GOSUB 9000
15 GOSUB 8500
20 GOSUB 8000
50 IF (PEEK(&HFF00) AND 16)=0 THEN P=P+1:IF P
>8 THEN P=1
60 IF (PEEK(&HFF00) AND 4)=0 THEN P=P-1:IF P=
0 THEN P=8
70 ON P GOSUB 1500,1510,1520,1530,1540,1550,1
560,1570
80 IF (PEEK(&HFF00) AND 1)=0 THEN GOSUB 4000
85 IF B THEN IF(PEEK(&HFF00) AND 32)=0 THEN G
OSUB 1000
90 ON T-1 GOSUB 200,300,400,500,600,700,800,9
00
100 IF (X=120 OR X=112) AND (Y=88 OR Y=80) TH
EN GOSUB 7000
110 TI=TI-1:NO=TI:XS=224:GOSUB9900:IF TI=0 TH
EN FOR N=1 TO 8:PUT(200,0)-(231,7),L,NOT:SOUN
D50,1:NEXT:GOTO 6000
120 IF T1-TI>NS THEN GOSUB 3000
130 GOTO 50
200 Y=Y+16:X=X+16:IF Y>=168 THEN Y=8
210 IF X>=248 THEN X=0
220 GOSUB 1600:GOSUB 1700:GOSUB 1710
230 Y1=Y:X1=X:RETURN
300 Y=8*INT((Y+RND(0)*12-RND(0)*12)/8):IF Y>=
168 THEN Y=8
310 X=X+16:IF X>=248 THEN X=0
320 IF Y<=0 THEN Y=160
330 GOSUB 1600:GOSUB 1700:GOSUB1710

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340 Y1=Y:X1=X:RETURN
400 Y=8*INT(Y/8+RND(0)*3-RND(0)*3):X=8*INT(X/
8+RND(0)*3-RND(0)*3)
410 IF X<0 THEN X=240
420 IF X>240 THEN X=0
430 IF Y>160 THEN Y=8
440 IF Y<8 THEN Y=160
450 GOSUB1600:GOSUB 1720:GOSUB1730
460 Y1=Y:X1=X:RETURN
500 Y=Y-24:IF Y<8 THEN Y=160:X=X+24+8*(INT(RN
D(0)*7/8)):IF X>240 THEN X=INT(RND(0)*40)
510 GOSUB 1600:GOSUB 1720:GOSUB 1730
520 Y1=Y:X1=X:RETURN
600 DE=DE+1
610 IF DE=5 THEN DE=0:Y=8*RND(20):X=8*RND(30)
620 Y=Y+8*INT(RND(0)*2-RND(0)*2):X=X+8*INT(RN
D(0)*2-RND(0)*2):IF Y<8 OR Y>160 OR X<0 OR X>
240 THEN DE=5:GOTO 610
630 GOSUB 1600:GOSUB 1740:GOSUB 1750
640 Y1=Y:X1=X:RETURN
700 Y=Y+8*INT(RND(0)*2-RND(0)*2-(Y<88)+(Y>88)
):X=X+16
710 IF X>240 THEN X=0
720 IF Y>160 OR Y<8 THEN Y=88
730 GOSUB 1600:GOSUB 1740:Y=Y+8:GOSUB 1720:Y=
Y-8
740 Y1=Y:X1=X:RETURN
800 Y=Y+DI:X=X+16:DE=DE+1:IF DE=5 THEN DE=0:D
I=-DI
810 IF Y<8 THEN Y=160
820 IF Y>160 THEN Y=8
830 IF X>240 THEN X=0
840 GOSUB 1600:GOSUB 1740:Y=Y+8:GOSUB 1720:Y=
Y-8
850 Y1=Y:X1=X:RETURN
900 Y=Y+DI:X=X+DE*8
910 IF X>240 THEN X=0
920 IF Y<8 THEN Y=160
930 IF Y>160 THEN Y=8
940 IF RND(0)>.8 THEN DE=2AND DE=0:DI=8*(2AND
DI=0):IF RND(0)>.5 THEN DI=-DI
950 GOSUB 1600:GOSUB 1760
960 Y1=Y:X1=X:RETURN
1000 B=B-1:NO=B:XS=152:GOSUB9900

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1010 IF P=1 THEN G1=124:F1=88:F=F1-78:G=G1:GO
TO1100
1020 IF P=2 THEN G1=128:F1=88:F=F1-78:G=G1+78
:GOTO1100
1030 IF P=3 THEN G1=128:F1=92:F=F1:G=G1+126:G
OTO1100
1040 IF P=4 THEN G1=128:F1=95:F=F1+78:G=G1+78
:GOTO1100
1050 IF P=5 THEN G1=124:F1=95:F=F1+78:G=G1:GO
TO1100
1060 IF P=6 THEN G1=118:F1=95:F=F1+78:G=G1-78
:GOTO1100
1070 IF P=7 THEN G1=118:F1=92:F=F1:G=G1-118:G
OTO1100
1080 IF P=8 THEN G1=118:F1=88:F=F1-78:G=G1-78
1100 FOR N=1 TO 8:COLOR2,3:LINE(G1,F1)-(G,F),
PSET
1110 COLOR1,3:LINE(G1,F1)-(G,F),PSET:NEXT
1120 COLOR3,3:LINE(G1,F1)-(G,F),PSET
1130 IF P/2=INT(P/2) THEN GOSUB 1200:GOTO 115
5
1140 IF P=1 OR P=5 THEN IF X=112 OR X=120 THE
N IF (P=1 AND Y<88) OR (P=5 AND Y>95) THEN HI
T=1
1150 IF P=3 OR P=7 THEN IF Y=80 OR Y=88 THEN
IF (P=3 AND X>127) OR (P=7 AND X<120) THEN HI
T=1
1155 IF HIT THEN 2000
1160 IF B=0 THEN FOR N=1 TO 8:PUT(128,0)-(159
,7),L,NOT:SOUND50,1:NEXT:GOTO 6000
1170 RETURN
1200 X2=X-G1-(Y-F1)*(G-G1)/(F-F1):Y2=Y-F1-(X-
G1)*(F-F1)/(G-G1)
1205 IF (P>5 AND X>128) OR (P<5 AND X<120) TH
EN 1230
1210 IF Y2>=-21 AND Y2<=0 THEN HIT =1
1220 IF X2>=-21 AND X2<=0 THEN HIT =1
1230 RETURN
1500 PUT(120,88)-(127,95),S1,PSET:RETURN
1510 PUT(120,88)-(127,95),S2,PSET:RETURN
1520 PUT(120,88)-(127,95),S3,PSET:RETURN
1530 PUT(120,88)-(127,95),S4,PSET:RETURN
1540 PUT(120,88)-(127,95),S5,PSET:RETURN

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1550 PUT(120,88)-(127,95),S6,PSET:RETURN
1560 PUT(120,88)-(127,95),S7,PSET:RETURN
1570 PUT(120,88)-(127,95),S8,PSET:RETURN
1600 COLOR3,3:LINE(X1,Y1)-(X1+15,Y1+15),PSET,
BF
1610 IF RND(10)>7 THEN PSET(X1+RND(7),Y1+RND(
7),2)
1620 RETURN
1700 PUT(X,Y)-(X+15,Y+7),X4,PSET:RETURN
1710 PUT(X,Y+8)-(X+15,Y+15),X5,PSET:RETURN
1720 PUT(X,Y)-(X+15,Y+7),X6,PSET:RETURN
1730 PUT(X,Y+8)-(X+15,Y+15),X7,PSET:RETURN
1740 PUT(X,Y)-(X+15,Y+7),X2,PSET:RETURN
1750 PUT(X,Y+8)-(X+15,Y+15),X3,PSET:RETURN
1760 PUT(X,Y)-(X+15,Y+7),X1,PSET
1770 PUT(X,Y+8)-(X+15,Y+15),X1,PSET:RETURN
2000 NS=NS-1:HIT=0:SC=SC+0:NO=SC:XS=24:GOSUB9
900:PLAY"T15004L8"
2010 FOR N=1 TO 156:PSET(X-1+RND(16),Y-1+RND(
16),3):PLAY STR$(RND(12)):NEXT:GOSUB 1600
2020 ON P GOSUB 1500,1510,1520,1530,1540,1550
,1560,1570
2030 IF B=0 THEN FOR N=1 TO 8:PUT(128,0)-(159
,7),L,NOT:SOUND50,1:NEXT:GOTO 6000
2500 T=RND(8)+1:Y=8*RND(20):X=0
2510 Y1=Y:X1=X:T1=TI
2520 IF T=2 OR T=3 THEN O=20-(10 AND T=3)
2530 IF T=4 OR T=5 THEN O=25-(15 AND T=5)
2540 IF T=6 THEN O=30
2550 IF T=7 OR T=8 THEN O=25-(5 AND T=7):DE=0
:DI=-16
2560 IF T=9 THEN DI=0:DE=2:O=20
2570 RETURN
3000 D=X+(16 AND X<=120)+(X>120)
3010 FOR N=1 TO 8:COLOR2,3:LINE(D,Y)-(122,91)
,PSET
3020 COLOR1,3:LINE(D,Y)-(122,91),PSET:NEXT
3030 COLOR3,3:LINE(D,Y)-(122,91),PSET
3040 GOTO 7000
4000 TI=TI-30:T1=T1-30:NO=TI:XS=224:GOSUB 990
0:IF TI<=0 THEN FOR N=1 TO 8:PUT(200,0)-(231,
7),L,NOT:SOUND50,1:NEXT:GOTO 6000
4010 COLOR3,3:FOR N=1 TO 8

```

```

4020 LINE(120,88)-(127,95),PSET,BF:SOUND100,1
4030 ON P GOSUB 1500,1510,1520,1530,1540,1550
,1560,1570
4040 SOUND150+N*2,1:NEXT
4050 LINE(120,88)-(127,95),PSET,BF
4060 FOR N=1 TO 8:FOR M=1 TO 50:NEXT M:ON T-1
GOSUB 200,300,400,500,600,700,800,900:NEXT N
4070 FOR N=1 TO 8
4080 LINE(120,88)-(127,95),PSET,BF:SOUND100,1
4090 ON P GOSUB 1500,1510,1520,1530,1540,1550
,1560,1570:SOUND150+N*2,1
4100 NEXT:RETURN
6000 FOR N=200 TO 250 STEP 2
6010 SCREEN1,1:SOUNDN,1
6020 SCREEN1,0:SOUNDN+1,1
6030 NEXT
6040 CLS:PRINT@43,"GAME OVER"
6050 PRINT,," YOU SCORED";SC;"POINT";:IF
SC<>1 THEN PRINT"S"
6060 IF SC<=HS THEN 6067
6065 HS=SC:PRINT"WELL DONE - A NEW HIGH SCORE
!! PLEASE ENTER YOUR NAME.":INPUT H$:GOT
O 6070
6067 PRINT@387,"THE HIGH SCORE IS";HS;"POINTS
.":PRINT@419,"BY ";H$
6070 PRINT@450,"PRESS ANY KEY TO PLAY AGAIN."
:A$=INKEY$
6080 A$=INKEY$:IF A$="" THEN 6080
6090 SOUND200,1:CLS:GOTO 20
7000 LI=LI-1:NO=LI:XS=96:GOSUB 9900
7010 FOR N=1 TO 5:FOR M=1 TO 8
7020 ON M GOSUB 1500,1510,1520,1530,1540,1550
,1560,1570:SOUND150+N*P,1
7030 NEXT M,N
7040 IF LI=0 THEN FOR N=1 TO 8:PUT(72,0)-(103
,7),L,NOT:SOUND50,1:NEXT:GOTO 6000
7050 GOSUB 1600:COLOR3,3:LINE(120,88)-(127,95
),PSET,BF
7060 GOTO 2500
8000 PMODE3,1:PCLS3:SCREEN1,0
8010 FOR N=1 TO 60:PSET(RND(255),RND(167),2):
NEXT
8015 COLOR1,3:LINE(0,0)-(255,7),PSET,BF

```

```

8020 P=1:TI=500:B=100:SC=0:LI=5:HIT=0:NS=29
8030 PMODE3,5:GET(80,0)-(103,7),L,G
8040 PMODE3,1:PUT(0,0)-(23,7),L,PSET
8050 PMODE3,5:GET(104,0)-(127,7),L,G
8060 PMODE3,1:PUT(72,0)-(95,7),L,PSET
8070 PMODE3,5:GET(128,0)-(151,7),L,G
8080 PMODE3,1:PUT(128,0)-(151,7),L,PSET
8090 PMODE3,5:GET(152,0)-(175,7),L,G
8100 PMODE3,1:PUT(200,0)-(223,7),L,PSET
8110 NO=SC:XS=24:GOSUB 9900:NO=LI:XS=96:GOSUB
9900:NO=B:XS=152:GOSUB 9900:NO=TI:XS=224:GOS
UB 9900
8120 SOUND100,1:GOTO 2500
8500 CLS:PRINT@96,"CHESHIRE CATS AND OTHER NA
STIES!"
8510 PRINT" PROGRAM DESIGN & SOFTWARE"
8520 PRINT" BY PAUL STANLEY."
8530 FOR N=1 TO 2500:NEXT:CLS
8540 PRINT,,"THEY PLACED ME IN SPACE.", "WITHO
UT ENGINES, JUST A LASER.", "'SHOOT THE NASTIE
S' THEY SAID.
8550 PRINT"I'D LIKE TO SEE THEM DO IT."
8560 PRINT,,"TWIST LEFT WITH 'A', RIGHT WITH
'S' WERE MY INSTRUCTIONS."
8570 PRINT"THEY TOLD ME TO BLAST 'EM WITH 'S
FACE' AND THAT IF I GOT INTO TROUBLE I COULD
PRESS '0'."
8580 PRINT"GOD ONLY KNOWS WHAT IT DOES."
8590 PRINT,,"PLEASE HELP ME!",,,,"IF YOU'RE P
REPARED TO, PRESS ANYKEY...";A$=INKEY$
8600 A$=INKEY$:IF A$="" THEN 8600
8610 SOUND100,1:CLS:RETURN
9000 PMODE3,5:PCLS:SCREEN1,0
9010 XC=0:YC=0:C=4:B=1
9020 FOR CH=1 TO 44:IF CH=23 THEN READ C,B
9030 FOR Y=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FOR X=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH

```



```

9110 DIMN(1):DIML(6):DIMX1(3):DIMX2(3):DIMX3(
3):DIMX4(3):DIMX5(3):DIMX6(3):DIMX7(3):DIMS1(
1):DIMS2(1):DIMS3(1):DIMS4(1):DIMS5(1):DIMS6(
1):DIMS7(1):DIMS8(1)
9120 GET(176,0)-(183,7),S1,G
9130 GET(208,0)-(215,7),S2,G
9140 GET(184,0)-(191,7),S3,G
9150 GET(232,0)-(239,7),S4,G
9160 GET(192,0)-(199,7),S5,G
9170 GET(216,0)-(223,7),S6,G
9180 GET(200,0)-(207,7),S7,G
9190 GET(224,0)-(231,7),S8,G
9200 GET(240,0)-(255,7),X1,G
9210 GET(0,8)-(15,15),X2,G
9220 GET(16,8)-(31,15),X3,G
9230 GET(32,8)-(47,15),X4,G
9240 GET(48,8)-(63,15),X5,G
9250 GET(64,8)-(79,15),X6,G
9260 GET(80,8)-(95,15),X7,G
9300 RETURN
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9512 DATA4,4,4,4,4,4,4,3
9514 DATA2,0,2,2,2,2,2,1
9515 DATA0,2,2,0,0,2,2,0
9516 DATA2,5,4,7,1,1,5,2
9518 DATA4,4,4,6,5,5,5,5
9520 DATA0,2,2,0,0,2,2,0
9522 DATA4,6,4,4,4,4,5,2
9524 DATA2,0,2,2,2,2,2,1
9526 DATA0,2,2,0,0,2,2,0
9550 DATA2,3,0,2,2,7,7,7,7,7

```

```

9552 DATA0,0,14,14,15,14,14,0
9554 DATA0,7,7,7,7,7,2,2
9556 DATA0,0,7,7,15,7,7,0
9558 DATA0,5,14,15,6,2,0,0
9560 DATA0,0,4,6,15,7,10,0
9562 DATA0,10,7,15,6,4,0,0
9564 DATA0,0,2,6,15,14,5,0
9566 DATA15,9,9,6,6,9,9,15
9568 DATA15,9,9,6,6,9,9,15
9570 DATA8,8,12,12,15,13,13,15
9572 DATA1,1,3,3,15,11,11,15
9574 DATA15,8,8,8,4,4,2,1
9576 DATA15,1,1,1,2,2,4,8
9578 DATA0,1,1,3,3,11,15,5
9580 DATA0,8,8,12,12,13,15,10
9582 DATA7,7,10,13,15,10,2,0
9584 DATA14,14,5,11,15,5,4,0
9586 DATA4,10,9,5,1,2,1,1
9588 DATA2,5,9,10,6,4,8,8
9590 DATA3,5,9,10,8,8,8,8
9592 DATA12,10,9,5,1,1,1,1
9900 COLOR1,1:LINE(XS,0)-(XS+27,7),PSET,BF:N#
=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETURN

```

Exocet

A group of enemy ships randomly make their way across the horizon, and it's up to you to sink as many of them as possible by firing missiles using the space bar. A mobile sight is printed slightly below the line of the horizon. There are three sizes of enemy ships, and the smaller the target the more points you score for a hit. Occasionally the enemy's electronic defence system will succeed in confusing your missile and deflecting it from its course.

```

1 REM EXOCET @ ROBERT ERSKINE 1983
2 REM *** DRAGON VERSION ***
5 PCLEAR8:GOSUB 9000
10 GOSUB 4000
15 GOSUB 1000
20 DIMX(6):DIMT(6)
30 FOR M=1 TO 6:X(M)=256:NEXT M
100 IF C=0 THEN IF RND(10)>8 THEN T(NX)=RND(3)
):X(NX)=256-8*(4-T(NX)):X=X(NX):ON T(NX) GOSU
B 340,320,300:NX=NX+(1 AND NX<6):C=6:GOTO 170
110 COLOR1,1:FOR M=1 TO NX-1
120 X(M)=X(M)-8:LINE(X(M)+8,80)-(X(M)+31,87),
PSET,BF
130 IF X(M)>=0 THEN X=X(M):ON T(M) GOSUB 340,
320,300
140 IF X(M)<0 THEN SH=1
150 NEXT M:IF C>0 THEN C=C-1
160 IF SH=1 THEN N=1:GOSUB 500
170 COLOR3,3:LINE(SX,88)-(SX+7,95),PSET,BF
180 A$=INKEY$:IF A$="Z" AND FL=0 AND SX>0 THE
N SX=SX-8:T=T-8
190 IF A$="X" AND FL=0 AND SX<208 THEN SX=SX+
8:T=T+8
200 PUT(SX,88)-(SX+7,95),S,PSET
210 IF FL=1 THEN 235
220 IF A$<>"0" THEN 275
225 L=175:D=1:FL=1:Y=127
230 EX=EX-1
235 PSET(Y,L,FG)
240 LL=L:YY=Y:SOUND100,1
245 IF L<=63 THEN D=0

```

```

250 IF RND(0)>.8 THEN 265
255 IF D=1 THEN L=L-8 ELSE L=L+8
260 IF T>Y THEN Y=Y+(ABS(Y-T)/2) ELSE IF T<Y
THEN Y=Y-(ABS(Y-T)/2)
265 PSET(Y,Y,LL,BG):IF L>=80 AND D=0 THEN GOSU
B 6000
267 IF L<88 THEN FG=3:BG=1 ELSE FG=1:BG=3
270 IF FL=0 THEN FOR N=1 TO 100:NEXT N
275 IF EX<0 THEN 3000
280 GOTO 100
300 PUT(X,80)-(X+7,87),B1,PSET:RETURN
320 PUT(X,80)-(X+15,87),B2,PSET:RETURN
340 PUT(X,80)-(X+23,87),B3,PSET:RETURN
500 FOR M=N TO 5
510 X(M)=X(M+1):T(M)=T(M+1)
520 NEXT M:NX=NX-1:BN=BN+1:SH=0:RETURN
1000 PMODE3,1:PCLS3:SCREEN1,1
1010 PCOPY 6 TO 1:PCOPY 6 TO 2
1020 SX=120:T=123:FL=0:EX=10:NX=1
1025 COLOR3,1:LINE(0,88)-(255,95),PSET,BF
1030 PMODE3,5:GET(128,0)-(167,7),L,G
1040 PMODE3,1:PUT(74,0)-(113,7),L,PSET
1050 PMODE3,5:GET(168,0)-(199,7),L,G
1060 PMODE3,1:PUT(140,0)-(171,7),L,PSET
1070 PMODE3,5:GET(80,0)-(127,7),L,G
1080 PMODE3,1:PUT(180,0)-(227,7),L,PSET
1090 PUT(0,0)-(47,7),L,PSET
1100 NO=SC:XS=48:GOSUB9900
1110 NO=EX:XS=114:GOSUB9900
1120 NO=HS:XS=228:GOSUB9900
1130 RETURN
3000 CLS:PRINT@166,"YOUR SCORE WAS";SC
3005 IF SC>HS THEN HS=SC
3010 SC=0
3020 PRINT@355,"PRESS ANY KEY TO RESTART"
3025 A$=INKEY$
3030 A$=INKEY$:IF A$="" THEN 3030
3040 GOSUB 1000
3050 GOTO 100
4000 CLS:PRINT@44,"EXOCET":PRINT
4020 PRINT"THE OBJECT OF THIS GAME IS TO SI
NK THE ENEMY SHIPS WITH EXOCETMISSILES AS THE
Y CROSS THE HORIZON":PRINT
4040 PRINT" Z = MOVE SIGHT LEFT"

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```

4050 PRINT"      X = MOVE SIGHT RIGHT"
4060 PRINT"      0 = FIRE MISSILE"
4070 PRINT"      BIG SHIPS SCORE 10"
4080 PRINT"      MEDIUM SIZE SHIPS SCORE 20"
4085 PRINT"      SMALL SHIPS SCORE 30"
4090 PRINT@484,"PRESS ANY KEY TO START":A$=IN
KEY$
4200 A$=INKEY$:IF A$="" THEN 4200
4210 RETURN
6000 FOR M=80 TO 87
6010 IF PPOINT(Y,M)=6 THEN HT=1
6020 NEXT M
6030 IF HT=0 THEN 6120
6040 TX=INT(Y/8)*8:FOR M=1 TO 5
6050 IF X(M)=TX OR X(M)=TX-8 OR X(M)=TX-16 TH
EN N=M:S=10*T(M):M=5
6060 NEXT M
6070 COLOR4,1:DRAW"BM"+STR$(INT(Y))+",87E4F4G
4H4"
6080 PAINT(INT(Y+5),85),4,4
6090 COLOR1,1:LINE(Y-23,80)-(Y+23,87),PSET,BF
6100 PLAY"T15501CF#CF#CF#CF#CF#CF#CF#CF#"
6110 SC=SC+S:GOSUB 500
6120 HT=0:FL=0:GOSUB 1100:RETURN
9000 PMODE3,5:PCLS:SCREEN1,1
9010 XC=0:YC=0:C=2:B=1
9020 FOR CH=1 TO 33:IF CH=33 THEN READ C,B
9030 FOR Y=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9050 FOR X=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
:CD=CD-D
9080 D=D/2:NEXT X,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMN(1):DIML(9):DIMS(3):DIMB1(1):DIMB2(3
):DIMB3(4)
9120 GET(200,0)-(207,7),B1,G
9130 GET(208,0)-(223,7),B2,G
9140 GET(224,0)-(247,7),B3,G
9150 GET(0,8)-(7,15),S,G
9160 RETURN
9400 DATA6,9,11,11,13,13,9,6

```

```

9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9505 DATA2,5,4,7,1,1,5,2
9506 DATA2,5,5,4,4,5,5,2
9507 DATA2,5,5,5,5,5,5,2
9508 DATA4,6,5,4,4,4,4,4
9509 DATA2,5,5,6,4,5,5,2
9510 DATA0,2,2,0,0,2,2,0
9512 DATA2,5,5,6,4,5,5,2
9514 DATA5,5,5,2,2,5,5,5
9516 DATA2,5,5,5,5,5,5,2
9518 DATA2,5,4,7,1,1,5,2
9520 DATA0,2,2,0,0,2,2,0
9522 DATA4,4,4,6,5,5,5,5
9524 DATA2,0,2,2,2,2,2,1
9526 DATA3,5,5,7,1,1,5,2
9528 DATA4,4,4,6,5,5,5,5
9530 DATA0,0,0,0,0,0,4,15
9532 DATA0,0,1,1,5,15,15,7
9534 DATA0,0,0,0,10,15,15,14
9536 DATA0,0,0,0,1,15,7,3
9538 DATA0,0,2,7,15,15,15,15
9540 DATA0,0,0,0,8,15,14,12
9542 DATA99,1,3,0,2,2,2,7,2,2,2
9900 COLOR1,1:LINE(XS,0)-(XS+17,7),PSET,BF:N#
=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,0)-(XS+7,7),N,PSET:RETUR
N

```



```

160 REM ** MUSHROOMS ADVANCE **
170 PLAY"O4T255V20CBE":JK=0:PRINT@480,NL$:;FOR
R A=1 TO NU:PRINT@2*NRND(13)+449,MU$;:NEXTA
175 HJ=HJ+1:IF HJ=10 THEN Y=Y-1:IF Y<10 THEN
Y=10
180 PRINT@0,NL$;:PRINT@10,"SCORE :";SC;:PRINT
@X,X$;:FOR A=1 TO 63 STEP 2:IF POINT(A,3)=8 T
HEN 240 ELSE NEXTA
190 GOTO100
200 REM ** SMART BOMB **
210 IF SM=0 THEN GOTO90 ELSE FOR A=64 TO 224
STEP 32:PRINT@A,SM$;:PLAY"O4L255T255V31CDE05V
10BAF":NEXTA
220 SC=SC+RND(5)*25+RND(5)*5+RND(5)*5:PRINT@1
00,"SCORE :";SC;:PLAY"O4T255V20BA#AG#GF#FED#DC
#C":FOR A=32 TO 224 STEP 32
230 PRINT@A,NL$;:NEXTA:SM=SM-1:GOTO90
240 REM** LANDED **
250 CLS0:PRINT@412,CHR$(143)+CHR$(143)+CHR$(1
43)+CHR$(143);:PRINT@444,CHR$(143)+CHR$(143)+
CHR$(143)+CHR$(143);:FOR A=61 TO 381 STEP 32:
PRINT@A-32,CHR$(128);CHR$(128);:PRINT@A,MU$;:
PLAY"O4T255V10BAFDC":NEXTA
260 PRINT@7,"MUSHROOM TAKEOVER";:PLAY"O1T5L20
C#CF#FD#G#GCDEFGGEECCCCC"
270 PRINT@100," YOUR SCORE :";SC;:PRINT@454,"
PRESS THE 'K' KEY";
280 Y$=INKEY$:IF Y$<>"K" THEN 280 ELSE RUN
290 REM ** GOT ONE **
300 O=A-32:FOR A=X+34 TO 0 STEP 32:PRINT@A,CH
R$(128);:NEXTA
310 IF PEEK(1056+O)=253 THEN PO=0 ELSE PO=-1
320 PRINT@A+PO,CHR$(248)+CHR$(244);:PLAY"O5T2
55V20FV17FV14FV11FV20BV8FV17BV6FV14BV4FV11BV2
FV8BV1FV6BV1FF"
330 PRINT@A+PO,CHR$(128)+CHR$(128);
340 FOR A=1 TO 10:SC=SC+1:PRINT@10,"SCORE :";
SC;:SOUND (SC+20)/10,1:NEXTA:GOTO80
350 GOTO 350
360 REM ** INITIALISATION **
370 SM=5:X=32:Y=30:B$=CHR$(230)+CHR$(226):FOR
A=1 TO 16:SM$=SM$+B$:NEXTA:PLAY"O3"
380 CLS3:PRINT@33,0$;:PRINT@257,0$;:PRINT@449
,0$;:PRINT@167," MUSHROOM INVASION ";:PRINT@3

```



```
58," (C) 1983 I.HUGHES ";
390 PLAY"04L5T15EFT10BP5T-G":FOR A=1 TO 3:PLA
Y"01T255C04C02C05C03C01D04D02D05D03D01B04B02B
05B03B":NEXT A
400 CLS0:PRINT@X+32,X*:PRINT@480,NL*:PRINT@
10,"SCORE :";SC:RETURN
```

Lunar Base Delta

Heading across the craggy surface of the unexplored moon of a strange sun, you have to locate and land on the only bit of the landscape that's flat enough for a landing. Despite your initial velocity and the effect of misfiring lateral thrusters, you have to bring your craft down as gently as possible whilst using as little of your fuel as possible, since you'll need it for future landings, if you don't misjudge the gravitational force!

```

1 REM *** DRAGON ***
10 REM** LUNAR BASE DELTA **                (C) 198
3 BY IAN HUGHES
20 GOSUB600
30 CLS:PRINT@99," ";:INPUT"GRAVITATIONAL PULL
(1-30)";SP:IFSP>35 OR SP<1 THEN 30
40 R=0:FL=750
50 PMODE3:SCREEN1,0:PCLS3:COLOR2
60 X=0:Y=140:PSET(X,Y,2):L=RND(200)+10:O=8:LL
=L:OO=0:PL=0:K=0:P=2:I=4:R=8
70 LINE(X,Y)-(X,Y),PSET
80 FORA=1TO23:B=RND(20)-13
90 Y=Y+B:X=X+11:IFY>255 OR X<100 AND Y<100 OR
X>100 AND Y<50 THEN Y=Y-B:H=3
100 LINE-(X,Y),PSET
110 PLAY"O4L5T20V10C":IFB=0 THEN H=3
120 NEXTA
130 IF H<>3 THEN 50
140 LINE-(X+5,Y),PSET:PAINT(1,150),1,2
150 L=9:O=10
160 REM** GAME CORE **
170 A$=INKEY$:IFA$="1" THEN P=1:GOSUB310
180 IF A$="2" THEN P=2:GOSUB340
190 IF P=1 THEN GOSUB310
200 IF P=2 THEN GOSUB340
210 IF A$="@" THEN P=3:GOSUB500
220 IF P=3 THEN GOSUB500 ELSE K=K-.05:FORA=1TO
10:NEXTA:IFK<-5 THEN K=-5
230 O=O-K
240 COLOR3:LINE(LL,OO)-(LL+8,OO),PSET:LINE-(L
L+4,OO-4),PSET:LINE-(LL,OO),PSET
250 L=R/5+L:IFL<10 OR L>238 THENL=LL

```

```

260 O=SP/10+0:IF0<5 OR O>184 THEN O=00
270 COLOR2:LINE(L,0)-(L+8,0),PSET:LINE-(L+4,0
-4),PSET:LINE-(L,0),PSET
280 IF PPOINT(L,0+1)<>3 OR PPOINT(L+8,0+1)<>3
THEN 370
290 LL=L:OO=0:GOTO160
300 GOTO 300
310 U=U+1:IFU<5 THEN RETURN
320 U=0:R=R-2:IFR=-8THEN R=-6
330 RETURN
340 I=I+1:IFI<5 THEN RETURN
350 I=0:R=R+2:IFR=8THEN R=6
360 RETURN
370 REM ** BLOWN UP OR HIT LANDSCAPE**
380 GOSUB650
390 IF K>2THEN Q=1:GOTO420
400 PLAY"04L5T10EECCCEEDDDFFGGDDDDGGEEDDFFCCCC
"
410 GOTO 540
420 COLOR3:LINE(L,0)-(L+8,0),PSET:LINE-(L+4,0
-4),PSET:LINE-(L,0),PSET
430 PLAY"03T255V31CAGFB":COLOR2:LINE(L,0)-(L+
7,0-1),PSET:LINE(L+7,0-3)-(L+5,0-5),PSET:LINE
(L,0-2)-(L+2,0-4),PSET:PLAY"V25BAFDG#"
440 COLOR3:LINE(L+7,0)-(L-3,0-8),PSET,BF
450 COLOR2:LINE(L,0)-(L+6,0-2),PSET:LINE(L+8,
0-4)-(L+6,0-6),PSET:LINE(L-1,0-2)-(L+1,0-5),P
SET:PLAY"V21CAGFB"
460 COLOR3:LINE(L+7,0)-(L-3,0-8),PSET,BF
470 COLOR2:LINE(L+1,0)-(L+5,0-3),PSET:LINE(L+
7,0-5)-(L+6,0-8),PSET:LINE(L-1,0-3)-(L,0-7),P
SET:PLAY"BFVGDG#"
480 COLOR3:LINE(L+7,0)-(L-3,0-8),PSET,BF
490 COLOR2:LINE(L+1,0)-(L+4,0-3),PSET:LINE(L+
8,0-7)-(L+8,0-8),PSET:LINE(L,0-3)-(L-1,0-5),P
SET:PLAY"CGFEA#"
500 COLOR3:LINE(L-1,0-8)-(L+8,0),PSET,BF
510 COLOR2:LINE(L+1,0)-(L+3,0-3),PSET:LINE(L+
8,0-8)-(L+9,0-9),PSET:LINE(L-1,0-5)-(L-2,0-5)
,PSET:PLAY"CGDBF#"
520 COLOR3:LINE(L-2,0-9)-(L+9,0),PSET,BF
530 PLAY"V31":FORA=1TO30:PLAY"V-01CF":NEXTA:C
R=CR+1
540 CLS3:PRINT@230," FUEL LEFT :";FL;:PRINT@1

```

```

05," CRASHES :";CR);PRINT@486," PRESS ANY KEY
";
550 A$=INKEY$:IFA$="" THEN550
560 IF CR=3 THEN PLAY"05T25L10V20FEDCFEDCFEDC
FEDCFEDCFEDCO1CDEFGDEFGAIEFGABFGABO2CCCC":GOT
0640
570 PLAY"04L5T5V20FT15CFT5GT15CGT3A":GOTO50
580 K=K+.1:PLAY"01T85V20CG":FL=FL-2:IF FL<30
THEN SOUND1,1:IFFL=0 THEN 630
590 RETURN
600 CLS1:PRINT@70,"LUNAR BASE DELTA";PRINT@2
64,"BY IAN HUGHES";PLAY"03T25L25CL1GL25CL1
EL25O2BL103FL102L25B03L1D"
610 PLAY"02L25G03L1T15E02L25G03L1C04T25L25CGV
25GV10CV21GV5CV17GV13CV14GV1CV9GV7GV6GV4GV3GG
V2GGGV1GGGGT15L15V2002CG03CG04CG05C02CEG03CEG
04CEG05CEG05C04E05C04E05C04E05C04E"
615 PRINT:PRINT:PRINT"USE KEY <1> FOR LEFT AN
D KEY <2>FOR RIGHT. USE <@> TO FIRE YOURRETR
O ROCKETS":FOR Y=1 TO 2500:NEXT Y
620 RETURN
630 ' FUEL=0 OR CRASHES=3
640 CLS3:PLAY"01L2T2CP100C":PRINT@100," YOU C
RASHED";CR;"TIMES ";:PRINT@230," FUEL LEFT : "
;FL;:PRINT@490," PRESS 'ENTER' ";:LINEINPUTA$
:RUN
650 IF PPOINT(L,0+1)=2 AND PPOINT(L+5,0+1)=2
OR PPOINT(L+8,0+1)=2 AND PPOINT(L+3,0+1)=2 TH
EN RETURN ELSE GOTO420

```

Evolution

This is series of six programs which have been divided into three self contained groups. It represents the evolution of life from the single celled amoeba to modern man, linked by a single theme—survival!

Evolution 1 (2)

Evolution 1 begins with the amoeba stage, in which the player controls the movement of a tiny amoeba which must wander round the screen eating spores whilst avoiding attack from other single celled creatures.

In the second program in this suite the player is transformed into a frog which has to dodge from side to side avoiding capture by birds whilst zapping the required number of airborne flies with its tongue. There is no fairy princess as a reward for this one but instant promotion into the form of a beaver in the third program, in which you must swim around and capture ten fish whilst avoiding contact with a vicious crab.

```

5 'EVOLUTION 1                                DRAGON VER
SION BY E.A.JACKSON
10 CLEAR500:DIM X1(10),Y1(10),B(32),R(2),S(2)
,T(2),U(2),V(2),W(2)
15 GOSUB600:GOSUB695:GOSUB540
20 SCORE=0:LIVES=1:TIMER=0:PCLS1:FOR N=1TO9:X
1(N)=(RND(16)*8)+64:Y1(N)=(RND(16)*8)+32:NEXT
N
25 A$=INKEY$:IF A$=""THEN 35
30 B$=A$
35 X1(1)=X1(1)+8*(B$=CHR$(8) AND X1(1)>64)-8*
(B$=CHR$(9) AND X1(1)<192)
40 Y1(1)=Y1(1)+8*(B$=CHR$(94) AND Y1(1)>32)-8
*(B$=CHR$(10) AND Y1(1)<128)
45 PUT(X1(10),Y1(10))-(X1(10)+7,Y1(10)+7),V,P
SET:PUT(X1(1),Y1(1))-(X1(1)+7,Y1(1)+7),R,PSET
:X1(10)=X1(1):Y1(10)=Y1(1)

```

```

50 GOSUB510:IF SCORE>4THEN145
55 IF LIVES=0 THEN 140
60 IF HI=0THEN140
65 FOR N=2TO3:PUT(X1(N),Y1(N))-(X1(N)+7,Y1(N)
+7),V,PSET:X1(N)=X1(N)+8:IF X1(N)>192 THEN X1
(N)=64
70 Y1(N)=Y1(N)-8:IF Y1(N)<32 THEN Y1(N)=128
75 PUT(X1(N),Y1(N))-(X1(N)+7,Y1(N)+7),U,PSET:
NEXT N
80 FOR N=4 TO 5:PUT(X1(N),Y1(N))-(X1(N)+7,Y1(
N)+7),V,PSET
85 X1(N)=X1(N)-8:IF X1(N)<64 THEN X1(N)=192
90 Y1(N)=Y1(N)+8:IF Y1(N)>128 THEN Y1(N)=32
95 PUT(X1(N),Y1(N))-(X1(N)+7,Y1(N)+7),S,PSET:
NEXT N
100 FOR N=6 TO 7:PUT(X1(N),Y1(N))-(X1(N)+7,Y1
(N)+7),V,PSET
105 X1(N)=X1(N)-8:IF X1(N)<64 THEN X1(N)=192
110 Y1(N)=Y1(N)+8:IF Y1(N)>128 THEN Y1(N)=32
115 PUT(X1(N),Y1(N))-(X1(N)+7,Y1(N)+7),T,PSET
:NEXT N
120 FOR N=2TO3:IF ABS(X1(N)-X1(1))<8 AND ABS(
Y1(N)-Y1(1))<8 THEN SCORE =SCORE+1:FOR N2=230
TO 245:SOUND N2,1:NEXT N2:X1(N)=64:Y1(N)=32
125 NEXT N
130 FOR N=4TO7:IF ABS(X1(N)-X1(1))<8 AND ABS(
Y1(N)-Y1(1))<8 THEN LIVES=LIVES-1:FOR N2=150
TO 135 STEP-1:SOUND N2,1:NEXT N2:X1(N)=64:Y1(
N)=32
135 NEXT N:GOTO25
140 CLS:PRINT:PRINT"BAD LUCK! YOU FAILED IN
THE 1STSTAGE OF EVOLUTION":GOTO150
145 CLS:PRINT:PRINT"WELL DONE YOU SURVIVED TH
E 1ST STAGE OF EVOLUTION AS AN AMOEBA."
150 PRINT:PRINT"SELECT THE STAGE YOU WISH TO
TRYNEXT."
155 PRINT:PRINT"1....AMOEBA STAGE.":PRINT"2..
..FROG STAGE.":PRINT"3....BEAVER STAGE.":PRIN
T"4....LOAD STAGES 4 & 5.":PRINT"5....EXIT FR
OM PROGRAM."
160 A$=INKEY$:IF A$=""THEN 160
165 IF A$="1" THEN 10
170 IF A$="2"THEN 195

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```

175 IF A$="3" THEN 320
180 IF A$="4" THEN 785
185 IF A$="5" THEN 790
190 GOTO 160
195 'FROG STAGE
200 CLEAR 500: DIM B(55), R(12), S(6), T(2), U(6)
205 RESTORE: FOR A=0 TO 31: READ B(A): NEXT A
210 FOR N=0 TO 9: READ SN$(N): NEXT N
215 GOSUB 625: GOSUB 730: GOSUB 575
220 LIVES=1: SCORE=0: X=127: Y=172: X1=RND(32)+200: COLOR0, 1
225 GOSUB 275
230 IF LIVES=0 THEN 310
235 IF SCORE>9 THEN 315
240 A$=INKEY$: IF A$=CHR$(32) THEN 260
245 IF A$="" THEN 250 ELSE B$=A$
250 X=X+8*(B$=CHR$(8) AND X>8)-8*(B$=CHR$(9) AND X<220)
255 PUT(X, Y)-(X+31, Y+15), R, PSET: GOTO 225
260 LINE(X+15, Y)-(X+15, Y-40), PSET: LINE(X+15, Y)-(X+15, Y-40), PRESET: FOR N=128 TO 130 STEP 2: SOUNDN, 1: NEXT N
265 IF ABS((X+15)-(X1+4))<8 THEN SCORE=SCORE+1: GOSUB 480
270 GOTO 225
275 PUT(X1, 136)-(X1+15, 143), U, PSET: X1=X1-(RND(8)+8): IF X1<1 THEN X1=RND(60)+170
280 PUT(X1, 136)-(X1+7, 143), T, PSET
285 PUT(X4, Y4)-(X4+15, Y4+7), U, PSET: X4=X4-8: IF X4<(X+8) THEN X4=X+8
290 IF X4=X+8 AND Y4>156 THEN PUT(X4, 163)-(X4+15, 170), S, PSET: FOR N=220 TO 230: SOUND N, 1: NEXT N: LIVES=0
295 Y4=Y4+RND(16): IF Y4>164 THEN Y4=RND(64)+32: X4=X4-230-RND(120): GOTO 285
300 PUT(X4, Y4)-(X4+15, Y4+7), S, PSET
305 RETURN
310 CLS: PRINT: PRINT "YOU HAVE BEEN CONSUMED AND CAN EVOLVE NO FURTHER.": GOTO 150
315 CLS: PRINT: PRINT "WELL DONE! - YOU CONSUMED 10 FLIES AND CAN THEREFORE EVOLVE TO THE NEXT STAGE.": GOTO 150
320 'BEAVER STAGE

```

```

325 CLEAR500: DIMB(55), R(12), S(12), T(12), U(12)
, V(12), W(12)
330 RESTORE: FORA=0 TO 31: READ B(A): NEXT A: FOR N
=0 TO 9: READ SN$(N): NEXT N: FORA=0 TO 55: READ B(A)
: NEXT A
335 GOSUB650: GOSUB745: GOSUB585
340 X=120: Y=160: X1=RND(24)*8: Y1=(RND(12)*8)+1
6: LIVES=1: SCORE=0
345 IF SCORE>9 THEN 470
350 IF LIVES=0 THEN 475
355 GOSUB360: GOSUB405: GOTO345
360 FC=FC+1: IF FC>25 THEN GOSUB440
365 A$=INKEY$: IF A$="" THEN 375
370 B$=A$: IF A$=CHR$(8) OR A$=CHR$(9) THEN C$
=A$
375 PUT(X, Y)-(X+15, Y+7), W, PSET: Y=Y+8*(B$=CHR$(
94) AND Y>16)-8*(B$=CHR$(10) AND Y<160)
380 IF C$=CHR$(8) THEN 395
385 X=X+8: IF X>232 THEN X=232
390 GOSUB450: PUT(X, Y)-(X+15, Y+7), R, PSET: RETUR
N
395 X=X-8: IF X<8 THEN X=8
400 GOSUB450: PUT(X, Y)-(X+15, Y+7), S, PSET: RETUR
N
405 PUT(X1, Y1)-(X1+15, Y1+7), W, PSET
410 X1=X1+8: IF X1>232 THEN X1=8
415 Y1=Y1+8*(Y1>Y AND Y1>32)-8*(Y1<Y AND Y1<1
44)
420 PUT(X1, Y1)-(X1+7, Y1+7), U, PSET
425 IF X1=X AND Y1=Y THEN GOSUB435
430 RETURN
435 FOR N=180 TO 100 STEP-10: SOUND N, 1: NEXT N:
LIVES=0: RETURN
440 X5=RND(24)*8: Y5=(RND(12)*8)+16: PUT(X5, Y5)
-(X5+7, Y5+7), U, PSET: FC=0: RETURN
445 FOR N=200 TO 250 STEP 10: SOUND N, 1: NEXT N:
SCORE=SCORE+1: GOSUB480: RETURN
450 IF X=X1 AND Y=Y1 THEN 435
455 PF=(1536+(FIX(X/8)))+(Y+4)*32)
460 IF PEEK(PF)<>255 OR PEEK(PF+1)<>255 THEN
GOSUB445
465 RETURN

```



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470 CLS:PRINT:PRINT"WELL DONE! - YOU HAVE SUR
VIVED AS A BEAVER AND CAN EVOLVE TO NEXT S
TAGE IF YOU WISH.":GOTO150
475 CLS:PRINT:PRINT"BAD LUCK! - YOU HAVE BEEN
DEstroyED BY A CRAB AND CAN EVOLVE
NO FURTHER.":GOTO150
480 'RECORD SCORE
485 S#=STR$(SCORE)
490 DRAW "C1;BM126,10"+S#
495 SC#="" :FOR Z2=2TOLN(S#):Y2(Z2)=VAL(MID$(
S#,Z2,1)):SC#=SC#+SN$(Y2(Z2)):NEXT Z2
500 DRAW"C0;BM126,10"+S#
505 RETURN
510 'RECORD TIMER
515 HI=100-INT(TIMER/35)
520 IF HI<0 THEN HI=0
525 DRAW"C3;BM126,14"+SH$:SH#="" :SC#=STR$(HI)
530 FOR Z2=2TOLN(SC#):Y2(Z2)=VAL(MID$(SC#,Z2
,1)):SH#=SH#+SN$(Y2(Z2)):NEXT Z2
535 DRAW"C2;BM126,14"+SH$:RETURN
540 'SCREEN DISPLAY1
545 PCLS1:SCREEN 1,0
550 DRAW"C0;BM40,50;BU5U1R6D3L6D3R6NU3BR4U6R3
ND6R3D6BR4NR6U6R6D6BR4BU3R6U3L6D6R6NU1BR4NR6U
6NU4R6D6BR4BU5U1R6D3L6D3R6NU3"
555 PUT(110,43)-(117,50),R,PSET
560 DRAW"C0;BM40,70;BU3R6U3L6D6R6NU1BR4BU5U1R
6D3L6D3R6NU3BR4U6NR2U2BD8R4NU1":PUT(110,63)-(
117,70),U,PSET
565 DRAW"C0;BM40,90;BU5U1R6D3L6D3R6NU3BR4BU6D
4R2D2R2U2R2U4BD6BR4NR6U6R6D6BR4U5BU2U1BD8BR4N
R6U6R6NU4D6BR4":PUT(110,83)-(117,90),T,PSET:
PUT(130,83)-(137,90),S,PSET
570 GOSUB765:RETURN
575 PCLS1:SCREEN1,0
580 DRAW"C0;BM0,188;R255":RETURN
585 PCLS1
590 FOR N=0TO247 STEP 8:PUT(N,170)-(N+7,177),
T,PSET:NEXT N
595 SCREEN 1,0:RETURN
600 PMODE 4,1:PCLS1
605 RESTORE:FOR A=0 TO31:READ B(A):NEXT A
610 FOR N=0TO9:READ SN$(N):NEXT N

```

```

615 FOR A=0T07:C=1536+(A*32):POKE C,B(A):POKE
  C+2,B(A+8):POKE C+4,B(A+16):POKE C+6,B(A+24)
:NEXT A
620 GET(0,0)-(7,7),R,G:GET(16,0)-(23,7),S,G:G
ET(32,0)-(39,7),T,G:GET(48,0)-(55,7),U,G:PCLS
1:GET(0,0)-(7,7),V,G:RETURN
625 PMODE 4,1:PCLS1
630 FOR A=0T055:READ B(A):NEXT A
635 FOR A=0T07:C=1537+(A*32):POKE C,B(A):POKE
  C+1,B(A+8):POKE C+256,B(A+16):POKE C+257,B(A+
  24):POKE C+4,B(A+40):POKE C+5,B(A+48):POKE C+
  7,B(A+32):NEXT A
640 GET(0,0)-(31,15),R,G:GET(40,0)-(55,7),S,G
:GET(63,0)-(70,7),T,G:PCLS1:GET(0,0)-(15,7),U
,G:RETURN
645 GOTO 645
650 FOR A=0T055:READ B(A):NEXT A
655 PMODE 4,1:PCLS1
660 FOR A=0T07:C=1536+(A*32):POKE C,B(A):POKE
  C+1,B(A+8):POKE C+3,B(A+16):POKE C+4,B(A+24)
:POKE C+6,B(A+32):POKE C+8,B(A+40):POKE C+10,
B(A+48):NEXT A
665 GET(0,0)-(15,7),R,G:GET(24,0)-(39,7),S,G:
GET(48,0)-(55,7),T,G:GET(64,0)-(71,7),U,G:GET
(80,0)-(87,7),V,G:PCLS1:GET(0,0)-(15,7),W,G:R
ETURN
670 'GRAPHIC DATA
675 DATA 135,123,75,77,126,102,170,204,255,23
1,219,165,165,219,231,255,255,182,213,227,128
,227,213,182,255,195,189,110,122,110,189,195
680 DATA "NR6U6R6D6BR4","R2U5NL1U1BD6R2BR4",
"BU6R6D3L6D3R6NU1BR4","NU1R6U3NL4U3L6D1BD5BR10
","BU1NU5R4NU2NR2D1BR6","NU1R6U3L6U3R6BD6BR4"
,"BU3R6D3L6U6R6D1BD5BR4","BU5U1R6D6BR4","NR6U
3NR6U3R6D6BR4","NU1R6U3L6U3R6D6BR4"
685 DATA 227,221,177,176,179,223,191,207,199,
187,141,13,227,251,253,243,240,207,191,163,16
7,171,173,6,15,243,253,197,229,213,181,96,255
,255,255,221,170,192,231,255,255,255,255,192,
128,112,254,240,240,224,131,15,63,31,0,255
690 DATA 255,255,240,239,31,96,247,243,255,22
3,35,245,254,1,239,231,255,251,196,175,127,12
8,247,231,255,255,15,247,248,6,239,207,255,25

```

5,247,194,64,0,0,0,243,225,72,0,0,65,225,243,
60,195,0,129,20,189,90,91

695 CLS:PRINT@11,"EVOLUTION":PRINT"THIS SEMI-
SCIENTIFIC SERIES OF ROUTINES GIVES YOU THE
CHANCE TOEVOLVE FROM AN AMOEBA TO A HUMA
N."

700 PRINT:PRINT"THIS SECTION TAKES YOU FROM A
N AMOEBA TO A BEAVER.":PRINT:PRINT"THE NEXT
FROM A GORILLA TO A CAVEMAN.":PRINT:PRINT"
THE FINAL SECTION INVOLVES THE PRESENT STAGE
OF EVOLUTION - MAN AND HIS TECHNOLOGY.":G
OSUB755

705 CLS:PRINT"THE INTENTION IS THAT YOU SHOUL
DTRY THE STAGES IN THE CORRECT ORDER,BUT AF
TER EACH STAGE YOU ARE GIVEN A MENU OF OPTIO
NS.":GOSUB755

710 CLS:PRINT@8,"EVOLUTION -STAGE 1":PRINT:PR
INT"THE FIRST STAGE IS AS AN AMOEBA.YOU HAVE
TO EAT FIVE SPORES WHILE AVOIDING OTHER O
RGANISMS."

715 PRINT:PRINT"THIS IS ALSO A RACE AGAINST T
IMEAND WHEN THE CLOCK AT THE TOP OFTHE SCREEN
REACHES ZERO,IT MEANSTHAT YOU HAVE STARVED B
ECAUSE YOU DID NOT EAT THE SPORES IN TIME
."

720 PRINT"USE THE ARROW KEYS TO MOVE IN THE
WATER.":GOSUB755

725 RETURN

730 CLS:PRINT@6,"EVOLUTION STAGE 2":PRINT:PRI
NT"IN THIS STAGE YOU HAVE TO CATCH FLIES ON Y
OUR TONGUE WHILE AVOIDING THE BIRDS WHIC
H SWOOP DOWN AND TRY TO CAPTURE THEIR PREY
- YOU!"

735 PRINT:PRINT"USE LEFT AND RIGHT ARROW KEYS
TOMOVE AND SPACEBAR TO STICK YOUR TONGUE OUT
.":PRINT:PRINT"TO SURVIVE THIS STAGE YOU NEED
TO CONSUME 10 FLIES WITHOUT FALLING PRE
Y TO THE BIRDS."

740 GOSUB755:RETURN

745 CLS:PRINT@6,"EVOLTION STAGE 3":PRINT:PRIN
T"YOU HAVE NOW EVOLVED TO A BEAVER":PRINT:PRI
NT"IN THIS STAGE YOU HAVE TO EAT 10FISH AND A
VOID BEING EATEN BY THE PATROLLING CRAB."

```

750 PRINT:PRINT"USE THE 4 ARROWS KEYS TO MOVE
  INTHE WATER AND EAT THE FISH      BEFORE THE
  CRAB DOES.":PRINT:PRINT"AVOID THE CRAB AT AL
L COSTS.":GOSUB755:RETURN
755 PRINT@488,"PRESS SPACEBAR";
760 A$=INKEY$: IF A$<>CHR$(32) THEN 760 ELSE R
ETURN
765 DRAW"C0;BM40,170ND4U6R6D6NL6BR4U6R4D1BD5B
R4BU3R6U3L6D6R6NU1BR4NU1R6U3L6U3R6D1BD5BR4NU1
R6U3L6U3R6D1BD5BR10"
770 DRAW"NU1R6U3L6U3R6D1BD5;BR4ND4U6R6D6NL6;B
R4BU5U1R6D3L6D3R6NU3;BR10NU1L6U6R6D1BD5;BR4BU
3R6U3L6D6R6NU1;BR4NR6U6NU4R6D6;BR4BU5U1R6D3L6
D3R6NU3;BR4U6R4D1"
775 A$=INKEY$: IF A$<>CHR$(32) THEN775
780 RETURN
785 CLOAD""
790 END

```

Evolution 2 (2)

Evolution 2 contains two programs. In the first, the player controls a large gorilla which lumbers round a forest collecting bananas which drop randomly to the ground. The computer controls a small and extremely agile monkey which makes for very tough competition.

The second program in this section puts you in control of a caveman who tries to kill raiders attacking his territory from surrounding caves by firing arrows.

```

5 'EVOLUTION 2                                REWRITTEN
FOR THE DRAGON 32      BY E.A. JACKSON
10 CLEAR: DIM B(64), P(16), R(16), S(8), T(8), U(8)
, V(16), W(8), Z(16)
15 GOSUB885: GOSUB610: GOSUB770: GOSUB715: GOSUB8
20: GOSUB845
20 X=24: H=24: V=48: H1=24: V1=48: J=207: K=160: J1=
207: K1=160
25 PUT (J, K) - (J+15, K+15), R, PSET
30 GOSUB60
35 IF RQ=10 THEN 950
40 IF LIVES>40 THEN 945
45 GOSUB 95
50 GOSUB145
55 GOTO35
60 'PLACE BANANA
65 LIVES=LIVES+1: GOSUB845
70 PUT (X, Y) - (X+7, Y+7), W, PSET
75 PUT (J1, K1) - (J1+15, K1+15), V, PSET: J=207: K=16
0
80 X=(RND(26)+2)*8: Y=(RND(6)+6)*8
85 IF FNQ(X)<>255 THEN 80
90 PUT (X, Y) - (X+7, Y+7), S, PSET: RETURN
95 'MOVE MONKEY
100 H=H+8*(H>X AND H<232)-8*(H<X AND H>24)
105 V=V+(8*(V>Y AND V<168))-(8*(V<Y AND V>16)
)
110 IF FNS(X)=255 THEN 125
115 IF H=X AND V=Y THEN FOR N=80 TO 060 STEP -4:

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```

SOUND N,1:NEXT N:PUT(X,Y)-(X+7,Y+7),W,PSET:GO
SUB60
120 V=24+(RND(2)*8):H=(RND(26)+2)*8
125 PUT(H1,V1)-(H1+7,V1+7),W,PSET
130 PUT(H,V)-(H+7,V+7),T,PSET
135 H1=H:V1=V
140 RETURN
145 'MOVE GORILLA
150 A$=INKEY$:IF A$="" THEN 160
155 B$=A$
160 J=J+16*(B$=CHR$(8) AND FNO(X)=255)-16*(B$
=CHR$(9) AND FNM(X)=255)
165 K=K+16*(B$=CHR$(94) AND FNK(X)=1)-16*(B$=
CHR$(10) AND FNI(X)=1)
170 PUT(J1,K1)-(J1+15,K1+15),V,PSET
175 PUT(J,K)-(J+15,K+15),R,PSET
180 PUT(X,Y)-(X+7,Y+7),S,PSET
185 J1=J:K1=K:IF ABS(Y-K)>8 THEN RETURN
190 IF ABS(X-J)>8 THEN RETURN
195 RQ=RQ+1:FORN=230TO240:SOUNDN,1:NEXTN:GOSU
B820
200 PUT(X,Y)-(X+7,Y+7),W,PSET:IF RQ=10 THEN R
ETURN
205 GOSUB60
210 J=J1:K=K1:RETURN
215 'CAVEMAN SEQUENCE
220 CLEAR:DIM B(72),O(2),P(2),Q(2),R(8),S(2),
T(2),U(2),V(2),W(2),X(2),Y(2),Z(2)
225 LIVES=3:RQ=0:AX=124:AY=92:B$=CHR$(8)
230 GOSUB800:GOSUB635:GOSUB750:GOSUB820:GOSUB
845
235 FOR N=96 TO 152 STEP 8:PUT(N,92)-(N+7,99)
,R,PSET:NEXT N
240 FOR N=64 TO 120 STEP 8:PUT(124,N)-(131,N+
7),R,PSET:NEXT N
245 Y=56:FOR N=92 TO 152 STEP 1:Y=Y+1:PUT(N,Y)
-(N+7,Y+7),R,PSET:NEXT N
250 Y=56:FOR N=156 TO 92 STEP -1:Y=Y+1:PUT(N,Y)
-(N+7,Y+7),R,PSET:NEXT N
255 FOR N=1TO8:READ RH(N),RV(N):NEXT N
260 GOSUB470
265 IF LIVES<1 THEN 935
270 IF RQ>30 THEN 940

```

```

275 ON RA GOSUB485,495,505,510,515,520,525,53
0
280 IF FQ=0 THEN310
285 IF FA<>RA THEN 295
290 IF ABS(FX-RX)<8 AND ABS(FY-RY)<8 THEN 550
295 ON FA GOSUB385,395,405,415,425,435,445,45
5
300 IF FA<>RA THEN 265
305 IF ABS(AX-RX)<16 AND ABS(AY-RY)<16 THEN 5
50 ELSE 265
310 A$=INKEY$:IF A$=""THEN320
315 B$=A$:IF B$=CHR$(32) THEN FQ=99:GOTO295
320 FA=FA+(B$=CHR$(8))-(B$=CHR$(9))
325 IF FA<1 THEN FA=8
330 IF FA>8 THEN FA=1
335 ON FA GOSUB 345,350,355,360,365,370,375,3
80
340 GOTO265
345 PUT(AX,AY)-(AX+7,AY+7),Z,PSET:RETURN
350 PUT(AX,AY)-(AX+7,AY+7),Y,PSET:RETURN
355 PUT(AX,AY)-(AX+7,AY+7),X,PSET:RETURN
360 PUT(AX,AY)-(AX+7,AY+7),W,PSET:RETURN
365 PUT(AX,AY)-(AX+7,AY+7),V,PSET:RETURN
370 PUT(AX,AY)-(AX+7,AY+7),U,PSET:RETURN
375 PUT(AX,AY)-(AX+7,AY+7),T,PSET:RETURN
380 PUT(AX,AY)-(AX+7,AY+7),S,PSET:RETURN
385 IF AY<40 THEN465 ELSE AY=AY-8
390 PUT(AX,AY+8)-(AX+7,AY+15),O,PSET:SOUND AY
,1:PUT(AX,AY)-(AX+7,AY+7),Z,PSET:RETURN
395 IF AY<56 THEN465 ELSE AX=AX+8:AY=AY-8
400 PUT(AX-8,AY+8)-(AX-1,AY+15),O,PSET:SOUND
AX,1:PUT(AX,AY)-(AX+7,AY+7),Y,PSET:RETURN
405 IF AX>184 THEN465 ELSE AX=AX+8
410 PUT(AX-8,AY)-(AX-1,AY+7),O,PSET:SOUND AX,
1:PUT(AX,AY)-(AX+7,AY+7),X,PSET:RETURN
415 IF AY>124 THEN465 ELSE AX=AX+8:AY=AY+8
420 PUT(AX-8,AY-8)-(AX-1,AY-1),O,PSET:SOUND A
X,1:PUT(AX,AY)-(AX+7,AY+7),W,PSET:RETURN
425 IF AY>144 THEN465 ELSE AY=AY+8
430 PUT(AX,AY-8)-(AX+7,AY-1),O,PSET:SOUND AY,
1:PUT(AX,AY)-(AX+7,AY+7),V,PSET:RETURN
435 IF AY>124 THEN465 ELSE AX=AX-8:AY=AY+8
440 PUT(AX+8,AY-8)-(AX+15,AY-1),O,PSET:SOUND

```

```

AX,1:PUT(AX,AY)-(AX+7,AY+7),U,PSET:RETURN
445 IF AX<72 THEN465 ELSE AX=AX-8
450 PUT(AX+8,AY)-(AX+15,AY+7),0,PSET:SOUND AX
,1:PUT(AX,AY)-(AX+7,AY+7),T,PSET:RETURN
455 IF AX<88 THEN465 ELSE AX=AX-8:AY=AY-8
460 PUT(AX+8,AY+8)-(AX+15,AY+15),0,PSET:SOUND
AX,1:PUT(AX,AY)-(AX+7,AY+7),S,PSET:RETURN
465 PUT(AX,AY)-(AX+7,AY+7),0,PSET:AX=124:AY=9
2:FQ=0:GOTO280
470 'SELECT RAIDER
475 RQ=RQ+1:IF RQ>30 THEN RETURN
480 RA=RND(8):RX=RH(RA):RY=RV(RA):RETURN
485 IF RY>84 THEN535 ELSE RY=RY+4:PUT(RX,RY-4
)-(RX+7,RY+3),R,PSET:SOUND RY,1:GOSUB545:RETU
RN
490 PUT(RX,RY-8)-(RX+7,RY-1),R,PSET:SOUND RY,
1:PUT(RX,RY)-(RX+7,RY+7),P,PSET:RETURN
495 IF RY>84 THEN535 ELSE RX=RX-4:RY=RY+4:PUT
(RX+4,RY-4)-(RX+11,RY+3),R,OR:SOUND RY,1:GOSU
B545:RETURN
500 PUT(RX+8,RY-8)-(RX+15,RY-1),R,PSET:
505 IF RX<132 THEN535 ELSE RX=RX-4:PUT(RX+4,R
Y)-(RX+11,RY+7),R,PSET:SOUND RX,1:GOSUB545:RE
TURN
510 IF RY<100 THEN535 ELSE RX=RX-4:RY=RY-4:PU
T(RX+4,RY+4)-(RX+11,RY+11),R,PSET:SOUND RX,1:
GOSUB545:RETURN
515 IF RY<100 THEN535 ELSE RY=RY-4:PUT(RX,RY+
4)-(RX+7,RY+11),R,PSET:SOUND RY,1:GOSUB545:RE
TURN
520 IF RY<100 THEN535 ELSE RX=RX+4:RY=RY-4:PU
T(RX-4,RY+4)-(RX+3,RY+11),R,PSET:SOUND RY,1:G
OSUB545:RETURN
525 IF RX>116 THEN535 ELSE RX=RX+4:PUT(RX-4,R
Y)-(RX+3,RY+7),R,PSET:SOUND RX,1:GOSUB545:RET
URN
530 IF RX>116 THEN535 ELSE RX=RX+4:RY=RY+4:PU
T(RX-4,RY-4)-(RX+3,RY+3),R,PSET:SOUND RX,1:GO
SUB545:RETURN
535 PUT(RX,RY)-(RX+7,RY+7),0,PSET:GET(RX,RY)-
(RX+7,RY+7),R,G:FOR N=1TO20:PUT(124,92)-(131,
99),P,PRESET:PUT(124,92)-(131,99),P,PSET:SOUN
D 240,1:NEXT N:PUT(RX,RY)-(RX+7,RY+7),0,PSET:

```



```

GOSUB470:LIVES=LIVES-1:GOSUB845
540 PUT (AX,AY)-(AX+7,AY+7),O,PSET:FQ=0:AX=124
:AY=92:RETURN
545 GET (RX,RY)-(RX+7,RY+7),R,G:PUT (RX,RY)-(RX
+7,RY+7),P,AND:RETURN
550 PUT (AX,AY)-(AX+7,AY+7),O,PSET:PUT (RX,RY)-
(RX+7,RY+7),O,PSET:SCORE=SCORE+1:AX=124:AY=92
:FQ=0:GOSUB820:GOTO260
555 'RECORD SCORE
560 S$=STR$(SCORE)
565 DRAW "C1;BM126,10"+S$
570 SC$="":FOR Z2=2TOLEN(S$):Y2(Z2)=VAL(MID$(
S$,Z2,1)):SC$=SC$+SN$(Y2(Z2)):NEXT Z2
575 DRAW"C0;BM126,10"+S$:RETURN
580 'RECORD TIMER
585 HI=100-INT(TIMER/35)
590 IF HI<0 THEN HI=0
595 DRAW"C3;BM126,14"+SH$:SH$="":SC$=STR$(HI)
600 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SH$=SH$+SN$(Y2(Z2)):NEXT Z2
605 DRAW"C0;BM126,14"+SH$:RETURN
610 RESTORE:FOR A=0TO63:READ B(A):NEXT A
615 FOR N=0TO9:READ SN$(N):NEXT N
620 PMODE4,1:PCLS1
625 FOR A=0TO7:C=1536+(A*32):POKE C,B(A):POKE
C+1,B(A+8):POKE C+256,B(A+16):POKE C+257,B(A
+24):POKE C+3,B(A+32):POKE C+5,B(A+40):POKE C
+7,B(A+48):POKE C+263,B(A+56):NEXT A
630 GET (0,0)-(15,15),R,G:GET (24,0)-(31,7),S,G
:GET (40,0)-(47,7),T,G:GET (56,0)-(63,15),U,G:P
CLS1:GET (0,0)-(15,15),V,G:GET (0,0)-(7,7),W,G:
GET (0,0)-(23,10),P,G:RETURN
635 PMODE 4,1:PCLS1
640 FOR A=0 TO 63:READ B(A):NEXT A:FOR N=0TO9
:READ SN$(N):NEXT N
645 FOR A=0TO63:READ B(A):C=1536+(A*32):POKE
C,B(A):NEXT A
650 GET (0,0)-(7,7),Z,G:GET (0,8)-(7,15),Y,G:GE
T (0,16)-(7,23),X,G:GET (0,24)-(7,31),W,G:GET (0
,32)-(7,39),V,G
655 GET (0,40)-(7,47),U,G:GET (0,48)-(7,55),T,G
:GET (0,56)-(7,63),S,G
660 PCLS1:GET (0,0)-(7,7),O,G:GET (0,0)-(7,7),R
,G

```

```

665 FOR A=0T07:READ B(A):C=1536+(A*32):POKE C
,B(A):NEXT A:GET(0,0)-(7,7),P,G:PCLS1
670 GOSUB870:SCREEN1,0:RETURN
675 DATA 191,156,154,204,192,224,242,248,255,
63,95,63,7,3,65,24,248,248,248,241,243,243,22
7,228,30,31,143,207,207,207,199,225
680 DATA 253,249,241,227,199,15,255,255,230,2
30,0,67,103,195,219,153,247,195,129,1,0,128,1
29,195,231,231,231,231,231,231,231,231
685 DATA"NR6U6R6D6BR4","R2U5NL1U1BD6R2BR4","B
U6R6D3L6D3R6NU1BR4","NU1R6U3NL4U3L6D1BD5BR10"
,"BU1NU5R4NU2NR2D1BR6","NU1R6U3L6U3R6BD6BR4",
,"BU3R6D3L6U6R6D1BD5BR4","BU5U1R6D6BR4","NR6U3
NR6U3R6D6BR4","NU1R6U3L6U3R6D6BR4"
690 DATA 247,227,247,247,247,247,247,247,255,
249,249,247,239,223,191,255,255,255,253,0,253
,255,255,255,255,191,223,239,247,249,249,255
695 DATA 247,247,247,247,247,247,227,247,255,
253,251,247,239,159,159,255,255,255,191,0,191
,255,255,255,159,159,239,247,251,253,255,255
700 DATA 99,107,0,0,65,73,73,73
705 DATA 68,40,128,16,188,40,46,96,212,96,68,
156,128,176,185,156
710 DATA 124,32,164,48,188,92,168,132,124,152
,80,132,64,92,84,48
715 'SCREEN DISPLAY1
720 PMODE 4,1:PCLS1
725 FOR N=0T0246 STEP8:PUT(N,0)-(N+7,15),U,PS
ET:PUT(N,176)-(N+7,191),U,PSET:NEXT N
730 FOR N=0 TO 191 STEP16:PUT(0,N)-(7,N+15),U
,PSET:PUT(8,N)-(15,N+15),U,PSET:PUT(240,N)-(2
47,N+15),U,PSET:PUT(248,N)-(255,N+15),U,PSET:
NEXT N
735 FOR N=1T015:X=(RND(8)+4)*16:Y=(RND(4)+4)*
16:PUT(X,Y)-(X+7,Y+15),U,PSET:NEXT N
740 PUT(36,2)-(59,12),P,PSET:PUT(156,2)-(179,
12),P,PSET
745 SCREEN 1,0:RETURN
750 PMODE 4,1:PCLS1
755 FOR N=1T08:READ J(N),K(N):CIRCLE(J(N),K(N
)),12,0:NEXT N
760 CIRCLE(128,94),30,0
765 SCREEN1,0:RETURN

```

```

770 CLS:PRINT:PRINT"IF YOU TRIED THE PREVIOUS
      PROGRAM THIS WILL BE THE 4TH STAGE
      IN THE EVOLUTION SEQUENCE.":PRINT:PRINT"IN TH
      IS STAGE YOU PLAY THE PART OF A GORILLA WHO H
      AS TO COMPETE AGAINST A MONKEY WHO IS SMALLER
      AND FASTER."
775 PRINT:PRINT"YOUR TASK IS TO EAT 10 OUT 40
      BANANAS,PLACED IN RANDOM POSITIONS
      IN THE FOREST,BUT THE MONKEY LIKES BANANAS AS
      WELL."
780 GOSUB870
785 CLS:PRINT:PRINT"USE THE 4 ARROW KEYS TO M
      OVE, BUT NOTE THAT YOU CANNOT MOVE THROUG
      H THE TREES."
790 PRINT:PRINT"PICK UP BANANAS BY ALIGNING T
      HE TOP HALF OF YOUR BODY WITH THE BANANA."
795 GOSUB870:RETURN
800 CLS:PRINT@6,"EVOLUTION STAGE 5":PRINT"THE
      OBJECT IS TO STOP OTHER CAVEMAN FROM ATT
      ACKING YOUR CAVEAND STEALING YOUR PROVISIONS.
      "
805 PRINT"YOUR CAVE IS IN THE MIDDLE OF 8 OTH
      ERS.":PRINT"YOU CAN SPIN ROUND BY USING L
      EFT AND RIGHT ARROW KEYS AND THROW A SPEAR
      BY PRESSING SPACE BAR."
810 PRINT"YOU HAVE THREE LIVES AND ARE SUC
      CESSFUL IF STILL ALIVE AFTER 30 ATTACKS."
815 RETURN
820 DRAW"C1BM40,10"+SC$
825 SC$="":IF RQ<1 THEN RQ=0
830 S$=STR$(RQ):FOR Y2=2 TO LEN(S$):Z2=VAL(MI
      D$(S$,Y2,1)):SC$=SC$+SN$(Z2):NEXT Y2
835 DRAW"C0BM40,10"+SC$
840 RETURN
845 DRAW"C1BM160,10"+SH$
850 SH$="":IF LIVES<1 THEN LIVES=0
855 S$=STR$(LIVES):FOR Y2=2 TO LEN(S$):Z2=VAL
      (MID$(S$,Y2,1)):SH$=SH$+SN$(Z2):NEXT Y2
860 DRAW"C0BM160,10"+SH$
865 RETURN
870 PRINT@488,"PRESS SPACEBAR";
875 A$=INKEY$:IF A$="" THEN875
880 CLS:RETURN

```

```

885 DEF FNP(X)=(1536+(FIX(X/8)))+(Y+4)*32)
890 DEF FNQ(X)=PEEK(FNP(X))
895 DEF FNR(X)=(1536+(FIX(H/8)))+(V+4)*32)
900 DEF FNS(X)=PEEK(FNR(X))
905 DEF FNN(X)=(1535+(FIX(J/8)))+(K*32)
910 DEF FNO(X)=PEEK(FNN(X))
915 DEF FNL(X)=(1539+(FIX(J/8)))+(K*32)
920 DEF FNM(X)=PEEK(FNL(X))
925 DEF FNK(X)=PPOINT(J+4,K-4)
930 DEF FNI(X)=PPOINT(J+4,K+20):RETURN
935 CLS:PRINT:PRINT"BAD LUCK! - YOU FAILED IN
  YOUR ATTEMPT TO DEFEND YOUR CAVE.":GOTO955
940 CLS:PRINT:PRINT"WELL DONE! - DEFENDING YO
UR CAVE WAS NOT EASY BUT YOU DID VERY WELL A
ND CAN EVOLVE FURTHER IF YOU WISH.":GOTO955
945 CLS:PRINT:PRINT"BAD LUCK! - YOU ARE TOO S
LOW TO EVOLVE ANY FURTHER.":GOTO955
950 CLS:PRINT:PRINT"WELL DONE! - YOU MANAGED T
O EAT THE BANANAS AND CAN THEREFORE PROCEE
D TO THE NEXT STAGE."
955 PRINT:PRINT"SELECT THE STAGE YOU WISH TO
  ATTEMPT NEXT.":PRINT:PRINT"1....GORILLA ST
AGE.":PRINT"2....CAVEMAN STAGE.":PRINT"3....L
OAD 5TH STAGE.":PRINT"4....EXIT FROM PROGRAM.
"
960 A$=INKEY$:IF A$=""THEN960
965 IF A$="1" THEN 10
970 IF A$="2" THEN 215
975 IF A$="3" THEN 990
980 IF A$="4" THEN 995
985 GOTO 960
990 CLOAD""
995 END

```

Evolution 3 (2)

Evolution 3 is the logical culmination of survival conditioning. As the leader of the superpower of your choice you must destroy your enemy's capitals with cruise missiles before you are destroyed by one of their ICBM's. To do this you have a very short time to pre-program the flight of your missile with a series of direction codes as the enemy's missile moves towards your capital. The screen features a map of the world on which the missile courses are plotted.

```

1 REM **DRAGON VERSION**
2 REM**EVOLUTION 3**
5 PCLEAR8
10 FOR N=1 TO 10:READ A$,A,B:NEXT:FOR N=1 TO
672:READ D:NEXT
20 GOSUB 9000
30 GOSUB 9110
40 M$="T100L1601CC#DD#EFF#GCC#DD#EFF#G":W$="T
100L803CC#DD#EFF#GGF#FED#DC#C"
50 CLS:PRINT"THIS IS THE THIRD AND FINAL
SECTION IN THE SERIES OF          EVOLUTION PRO
GRAMS.":PRINT
60 PRINT"THIS ONE INVOLVES A NUCLEAR WAR,WHER
E YOU PLAY THE PART OF P.M. OF ANY OF 10 SUPE
RPOWERS WHICH MAY EXIST IN 2002 (THE YEAR IN
WHICH THIS WAR TAKES PLACE). "
70 PRINT:PRINT"THE OBJECT IS TO PROGRAM CRUIS
E MISSILES TO HOME IN ON THE          ENEMIES CAP
ITALS.":PRINT:PRINT"PRESS ANY KEY TO READ MOR
E. "
80 IF PEEK(&HFF00)=255 THEN 80
90 CLS:PRINT"IN 2002 THE WORLD IS NOT VERY
DIFFERENT FROM THE PREVIOUS 20 YEARS, APART
FROM NEW SUPERPOWERFORCES EXISTING. SOUTH AME
RICA HAS BEEN OVER-RUN BY BRAZIL AND ITS CAP
ITAL IS BRASILIA."
100 PRINT:PRINT"JAPAN HAS BECOME A POWERFUL
NATION, AND THE ARABS HAVE A          FIGHTING N
ATION BASED AROUND          RIYADH. ALSO AUSTRALIA
& SOUTH AFRICA ARE SUPERPOWERS.":PRINT

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```

110 INPUT"ENTER A SKILL LEVEL (30-100).30 IS
THE HARDEST";SK
120 IF SK<30 OR SK>100 THEN 110
130 CLS:PRINT"IN WHICH CAPITAL DO YOU WANT TO
BE P.M.? (YOU ONLY NEED TO TYPE THE FIRST 2
CHARACTERS).":PRINT
140 RESTORE:FOR N=1 TO 10:READ A$,Y,X:PRINTA$
,;NEXT
150 PRINT:INPUT A$:IF LEN(A$)<2 THEN 150
160 RESTORE:OK=0:FOR N=1 TO 10:READ B$,Y,X:IF
LEFT$(B$,2)=LEFT$(A$,2) THEN F=N:N=10:OK=1
170 NEXT:IF OK=0 THEN 150
180 Y=Y*8:X=X*8:V=Y:U=X:E=1:F$(F)="X"
190 RESTORE:I=RND(10):IF F$(I)="X" THEN 190 E
LSE FOR N=1 TO I:READ B$,Y2,X2:NEXT:Y2=Y2*8:X
2=X2*8
200 CLS:PRINT"THE WAY YOU PROGRAM YOUR MISSIL
EIS BY COMPASS DIRECTIONS (IE. N,S, W AND E).
THE WORLD MAP IS DIVIDED INTO SQUARES, AND
EACH STEP OF THE PROGRAM MOVES THE MISSIL
E 1 SQUARE."
210 PRINT:PRINT"FOR EXAMPLE, 'NNEES' MOVES TH
E MISSILE 2 SQUARES UP, 2 RIGHT AND 1 DOWN
.":PRINT:PRINT"PRESS ANY KEY TO READ MORE."
220 IF PEEK(&HFF00)=255 THEN 220
230 CLS:PRINT"IF THE MISSILE GOES OFF THE
SCREEN AT ANY SIDE IT WILL APPEAR ON TH
E OPPOSITE SIDE.":PRINT
240 PRINT"THE RED SQUARE IS YOUR TARGET.":PRI
NT:PRINT"YOU MUST ENTER YOUR PROGRAM AS QUIC
KLY AS POSSIBLE. WHEN IT ISREADY, PRESS 'F'
TO LAUNCH A NUKE.":PRINT:PRINT"PRESS ANY K
EY TO BEGIN THE APOCALYPSE."
250 IF PEEK(&HFF00)=255 THEN 250
260 SC=1:GOSUB 3000
270 COLOR4,3:LINE(X2,Y2)-(X2+7,Y2+7),PSET,BF:
PUT(X,Y)-(X+7,Y+7),C,PRESET:Y1=Y2:X1=X2:D=1:C
=1
280 FOR N=1 TO 50:C$(N)="":NEXT
285 GET(X1,Y1)-(X1+7,Y1+7),S,G
290 P$="ENTER PROGRAM AFTER THE TONE":XS=0:YS
=168:GOSUB 9900
295 GET(U,V)-(U+7,V+7),S1,G

```

```

300 FOR N=1 TO 750:NEXT:COLOR3,3:LINE(0,168)-(
(255,191),PSET,BF:SOUND75,7
310 C1=C:FOR N=1 TO SK:I$=INKEY$:IF I$<>" " TH
EN N=SK
320 NEXT:IF I$="N" OR I$="S" OR I$="W" OR I$=
"E" THEN C$(C)=I$:C=C+1
330 IF I$="F" OR C=51 THEN COLOR3,3:LINE(0,16
8)-(255,191),PSET,BF:SOUND90,1:GOTO 600
340 IF C1=C THEN GOSUB 500:IF DS=1 THEN 900 E
LSE GOTO 310
350 P$=I$:XS=8*((C-1) AND C<33)+((C-33) AND
C)>=33):YS=168:GOSUB 9900
360 IF C=32 THEN COLOR3,3:LINE(0,168)-(255,19
1),PSET,BF
370 SOUND50,1:GOTO 310
500 DS=0:PUT(X1,Y1)-(X1+7,Y1+7),S,PSET:XM=X1:
YM=Y1:COLOR4,1:LINE(X2,Y2)-(X2+7,Y2+7),PSET,B
F
510 IF Y1<Y THEN Y1=Y1+8:D=3
520 IF Y1>Y THEN Y1=Y1-8:D=1
530 IF X1<X THEN X1=X1+8:D=2
540 IF X1>X THEN X1=X1-8:D=4
550 GET(X1,Y1)-(X1+7,Y1+7),S,G:XM=X1:YM=Y1:ON
D GOSUB 1500,1510,1520,1530
560 IF X1=X THEN IF Y1=Y THEN DS=1
570 SOUND100,1:SOUND175,1:RETURN
600 EX=0:C=1:XM=U:YM=V:ON E GOSUB 1500,1510,1
520,1530
610 FOR N=1 TO 3:PUT(X,Y)-(X+7,Y+7),C,PRESET:
PUT(U,V)-(U+7,V+7),S1,PSET
620 V=V+(8 AND C$(C)="S")-(8 AND C$(C)="N"):U
=U+(8 AND C$(C)="E")-(8 AND C$(C)="W")
630 E=(1 AND C$(C)="N")+(2 AND C$(C)="E")+(3
AND C$(C)="S")+(4 AND C$(C)="W")
640 IF V=-8 THEN V=160
650 IF V=168 THEN V=0
660 IF U=256 THEN U=0
670 IF U=-8 THEN U=248
680 IF V=Y2 THEN IF U=X2 THEN EX=2:N=3:GOTO 7
30
690 GET(U,V)-(U+7,V+7),S1,G:XM=U:YM=V:ON E GO
SUB 1500,1510,1520,1530
700 C=C+1:IF C<51 THEN IF C$(C)<>"N" AND C$(C
)<>"W" AND C$(C)<>"S" AND C$(C)<>"E" THEN C=1

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```

:EX=8:N=3:GOTO 730
710 IF C=51 THEN N=3:EX=8:GOTO 730
720 PLAY M$
730 NEXTN:IF EX=2 THEN 2000 ELSE IF EX=8 THEN
  800
740 GOSUB 500:IF DS=1 THEN 900
750 GOTO 610
800 PUT(U,V)-(U+7,V+7),S1,PSET
810 C=1:V=Y:U=X:GOTO 290
900 FOR N=1 TO 25:SCREEN1,1:SOUND50+N*2,1:SCR
EEN1,0:NEXT
910 CLS:PRINT@384,"YOU HAVE BEEN NUKED!":INPU
T"WANT ANOTHER GO";F$
920 IF LEFT$(F$,1)="N" THEN STOP
930 SC=1:PRINT@384," ":INPUT"ENTER A SKILL LE
VEL (30-100). 30 IS THE HARDEST";SK
940 IF SK<30 OR SK>100 THEN 930
950 CLS:PRINT@384," ":INPUT"WANT TO SEE THE N
AMES";F$
960 IF LEFT$(F$,1)="N" THEN 980
970 RESTORE:CLS:FOR N=1 TO 10:READ F$,Y,X:PRI
NTF$, :NEXT
980 FOR N=1 TO 10:F$(N)="":NEXT
990 PRINT@416," ":PRINT@384," ":INPUT"WHICH C
APITAL";A$:IF LEN(A$)<2 THEN 990
1000 RESTORE:OK=0:FOR N=1 TO 10:READ B$,Y,X:I
F LEFT$(B$,2)=LEFT$(A$,2) THEN F=N:N=10:OK=1
1010 NEXT:IF OK=0 THEN 990
1020 Y=8*Y:X=8*X:F$(F)="X":C=1:V=Y:U=X:FOR N=
1 TO 50:C$(N)="":NEXT
1030 RESTORE:I=RND(10):IF F$(I)="X" THEN 1030
ELSE FOR N=1 TO I:READ B$,Y2,X2:NEXT:F$(I)="
X":Y2=Y2*8:X2=X2*8:GOTO 260
1500 PUT(XM,YM)-(XM+7,YM+7),M1,AND:RETURN
1510 PUT(XM,YM)-(XM+7,YM+7),M2,AND:RETURN
1520 PUT(XM,YM)-(XM+7,YM+7),M3,AND:RETURN
1530 PUT(XM,YM)-(XM+7,YM+7),M4,AND:RETURN
2000 IF SC=9 THEN I=5:GOTO 2020
2010 I=RND(10):IF F$(I)="X" THEN 2010
2020 SC=SC+1:F$(I)="X":FOR N=1 TO 8:PUT(X2,Y2
)-(X2+7,Y2+7),Z,NOT:SOUND100,3:SOUND50,1:NEXT
:PUT(X2,Y2)-(X2+7,Y2+7),Z,PSET
2030 F$=B$+" HAS BEEN DESTROYED":XS=0:YS=168:
GOSUB 9900

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2035 IF SC=10 THEN 4000
2040 PUT (X1,Y1)-(X1+7,Y1+7),S,PSET
2050 C=1:FOR N=1 TO 50:C$(N)="":NEXT:V=Y:U=X:
RESTORE:FOR N=1 TO I:READ B$,Y2,X2:NEXT:X2=8*
X2:Y2=8*Y2:COLOR4,1:LINE(X2,Y2)-(X2+7,Y2+7),P
SET,BF:Y1=Y2:X1=X2
2060 COLOR3,3:LINE(0,168)-(255,191),PSET,BF
2070 GOTO 290
3000 PMODE3,1:PCLS3:SCREEN1,0:COLOR2,3
3010 FOR M=0 TO 248 STEP 8
3020 LINE(M,0)-(M,167),PSET:NEXT
3030 FOR N=7 TO 167 STEP 8
3040 LINE(0,N)-(255,N),PSET:NEXT
3050 LINE(0,0)-(255,167),PSET,B
3060 COLOR3,3
3070 RESTORE:FOR N=1 TO 10:READ A$,A,B:NEXT
3100 FOR N=0 TO 160 STEP 8:FOR M=0 TO 248 STE
P 8
3110 READ D:IF D=0 THEN 3150
3120 PUT(M,N)-(M+7,N+7),Z,PSET
3150 NEXTM,N
3160 RESTORE:FOR P=1 TO 10:READ A$,A,B
3170 M=B*8:N=A*8:PUT(M,N)-(M+7,N+7),C,PSET:NE
XT
3180 RETURN
4000 FOR N=1 TO 20:SCREEN1,1:PLAY W$:SCREEN1,
0:PLAY W$:NEXT
4010 CLS:PRINT"CONGRATULATIONS - YOU NOW RULE
THE WHOLE WORLD AND ALL ITS LIFEFORMS.":PRI
NT
4020 PRINT"POST-SCRIPT: ALIEN LIFE SCANS RE
VEAL THAT THE ONLY REMAINING LIFE-FORM IS TH
E AMOEBA!!!":PRINT
4030 INPUT"WANT TO TRY AGAIN";I$
4040 IF LEFT$(I$,1)="N" THEN STOP
4050 CLS:GOTO 930
4900 DATALONDON,8,13,MOSCOW,5,24,BONN,7,17,WA
SHINGTON,8,3,BRASILIA,17,4,TOKYO,9,28,RIYADH,
12,17,CANBERRA,18,29,PEKING,9,25,PRETORIA,17,
14
5000 DATA0,0,0,0,0,0,1,1,1,1,1,0,0,0,0,0,0,0,
0,0,1,1,1,0,1,0,0,0,0,0,0,0,0,0,0,0,1,1,1
,1,1,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,0,0,0,
0

```

```

5002 DATA0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,1,1,1,
1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,1,1,0,0,0,0,1
,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,
1
5004 DATA1,0,1,1,0,0,0,0,0,0,0,0,1,0,0,0,0,1,1,
1,1,1,1,1,1,1,1,1,1,1,0,0,0,1,1,1,1,1,0,0,0,0
,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,
0
5006 DATA1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,1,1,1,
1,1,1,1,1,1,1,1,1,1,1,0,0,0,1,1,1,1,1,1,0,0,0
,0,0,0,1,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,
0
5008 DATA1,1,1,1,0,0,0,0,0,0,0,0,0,0,1,0,1,1,1,
1,1,1,1,1,1,1,1,1,0,0,0,0,0,1,1,1,0,0,0,0,0,0
,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,0,1,0,0,
0
5010 DATA1,1,1,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,1,1,
1,1,1,1,1,1,1,1,1,0,1,0,0,0,1,0,1,0,0,0,0,0,0
,0,0,0,1,1,0,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,
0
5012 DATA1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,
0,0,1,1,0,0,1,0,0,0,1,0,0,0,1,1,0,0,0,0,0,0,0
,0,0,1,1,1,1,1,0,1,0,0,0,1,0,0,0,0,1,0,0,1,0,
0
5014 DATA0,1,1,1,1,0,0,0,0,0,0,1,1,1,1,1,1,1,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,1,1,1,0,0,0
,0,0,1,1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,1,0,1,0,0,
0
5016 DATA0,1,1,1,1,1,0,0,0,0,0,0,0,0,1,1,1,1,0,
0,0,0,0,0,1,1,1,1,1,1,0,0,0,0,1,1,1,1,0,0,0
,0,0,0,0,1,1,1,0,1,0,0,0,0,0,1,1,1,1,1,1,1,1,
0
5018 DATA0,0,0,1,1,0,0,0,0,0,0,0,0,0,1,1,1,0,0,
0,0,0,0,0,0,1,1,1,1,1,1,0,0,0,0,0,1,1,0,0,0,0
,0,0,0,0,1,0,0,0,0,0,0,0,0,0,1,0,0,0,1,1,0,
0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0
9000 PMODE3,5:PCLS3:SCREEN1,0
9010 XC=0:YC=0:C=2:B=3
9020 FOR CH=1 TO 44
9030 FORY=YC TO YC+7
9040 READ CD:D=8:IF CD=99 THEN 9090
9045 IF CH=29 THEN C=1:B=4

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9046 IF CH=33 THEN C=2:B=3
9050 FORX=XC TO XC+7 STEP 2
9060 P=INT(CD/D)
9070 IF P=0 THEN PSET(X,Y,B) ELSE PSET(X,Y,C)
: CD=CD-D
9080 D=D/2:NEXTX,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9105 RETURN
9110 PMODE3,5:DIMN(1):DIMM1(1):DIMM2(1):DIMM3
(1):DIMM4(1):DIMZ(1):DIMC(1):DIMF$(10):DIMC$(
50):DIMS(1):DIMS1(1)
9120 GET(208,0)-(215,7),Z,G
9130 GET(216,0)-(223,7),C,G
9140 GET(224,0)-(231,7),M1,G
9150 GET(232,0)-(239,7),M2,G
9160 GET(240,0)-(247,7),M3,G
9170 GET(248,0)-(255,7),M4,G
9200 RETURN
9350 DATA0,1,3,5,5,5,3,1
9351 DATA4,4,4,6,5,5,5,6
9352 DATA2,5,5,4,4,5,5,2
9353 DATA1,1,1,3,5,5,5,3
9354 DATA2,5,5,6,4,5,5,2
9355 DATA2,5,4,4,6,4,4,4
9356 DATA3,5,5,7,1,1,5,2
9357 DATA4,4,4,6,5,5,5,5
9358 DATA2,0,2,2,2,2,2,1
9359 DATA1,1,1,1,1,1,5,2
9360 DATA4,4,5,6,6,5,5,5
9361 DATA4,4,4,4,4,4,4,3
9362 DATA5,5,7,5,5,5,5,5
9363 DATA4,7,5,5,5,5,5,5
9364 DATA2,5,5,5,5,5,5,2
9365 DATA4,7,5,5,6,4,4,4
9366 DATA6,10,10,6,2,2,3,2
9367 DATA4,6,5,4,4,4,4,4
9368 DATA2,5,4,7,1,1,5,2
9369 DATA4,6,4,4,4,4,5,2
9370 DATA5,5,5,5,5,5,5,2
9371 DATA5,5,5,5,5,5,5,2
9372 DATA5,5,5,5,5,7,5,5
9373 DATA5,5,5,2,2,5,5,5
9374 DATA5,5,5,5,3,1,1,6

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9375 DATA7,1,1,2,2,4,4,7
9376 DATA7,7,7,7,7,7,7,7,0
9378 DATA0,0,0,6,6,0,0,0
9380 DATA2,2,7,7,2,2,7,7
9382 DATA0,0,10,10,15,15,10,10
9384 DATA7,7,2,2,7,7,2,2
9386 DATA5,5,15,15,5,5,0,0
9400 DATA6,9,11,11,13,13,9,6
9410 DATA2,6,2,2,2,2,2,7
9420 DATA2,5,1,1,6,4,4,7
9430 DATA7,7,1,3,3,1,7,7
9440 DATA2,4,4,10,10,15,2,2
9450 DATA7,4,4,7,1,5,5,7
9460 DATA7,4,4,6,5,5,5,7
9470 DATA7,1,1,2,2,4,4,4
9480 DATA7,5,5,7,7,5,5,7
9490 DATA7,5,5,7,1,1,1,7
9491 DATA0,2,2,0,0,2,2,0
9492 DATA2,2,2,2,2,2,0,2
9900 IF P$="" THEN RETURN
9910 C$=LEFT$(P$,1):P$=RIGHT$(P$,LEN(P$)-1)
9915 IF C$="!" THEN C$=";"
9920 IF ASC(C$)<60 AND ASC(C$)>47 THEN YG=8:
G=8*(ASC(C$)-48) ELSE YG=0:
XG=8*(ASC(C$)-65)
9930 IF C$=" " THEN COLOR3,1:
LINE(XS,YS)-(XS+7,YS+7),PSET,BF
ELSE GOSUB 9950
9940 XS=XS+8:IF XS>248 THEN XS=0:
YS=YS+12
9945 GOTO9900
9950 PMODE3,5:GET(XG,YG)-(XG+7,
YG+7),N,G
9960 PMODE3,1:PUT(XS,YS)-(XS+7,
YS+7),N,PSET:R
ETURN
10000 SCREEN1,0
10005 PUT(0,0)-(7,7),S,PSET
10007 PUT(0,8)-(7,15),S1,PSET
10010 GOTO10010

```

Dogfight

Up in the wild blue yonder, you and the enemy ace are duelling above the trenches. Swoop down on the foe, hang on his tail, catch him unawares from below, with your trusty Brownings spitting leaden death. All good clean fun, but watch for the wraparound!

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1 REM **DRAGON VERSION**
2 REM**SOLO DOGFIGHT**
3 REM *© ERSKINE 1983*
10 PCLEAR8
15 FOR N=1 TO 64:READ X:NEXT:GOSUB 9000
20 GOSUB 8000
30 L1=3:L2=3:GOSUB 7000
40 G=1:P(1)=160:P(2)=0:P(3)=P(1):P(4)=P(2):Q(
1)=160:Q(2)=248:Q(3)=Q(1):Q(4)=Q(2):A=1:AA=1
50 RESTORE:FOR N=1 TO 16
60 READ D(N),E(N):NEXT
70 F=0
80 FOR N=1 TO 16:READ F(N):NEXT
90 FOR N=1 TO 16:READ G(N):NEXT
100 DATA0,0,-8,-8,-8,-8,-8,-8,0,0,8,8,8,8,8,8
,8,-8,8,-8,0,0,-8,8,-8,8,-8,8,0,0,8,-8
110 DATA8,8,0,-8,-8,-8,0,8,0,-8,-8,-8,0,8,8,8
120 DATA-8,-8,0,8,8,8,0,-8,0,-8,-8,-8,0,8,8,8
1000 REM MAIN LOOP
1010 IF P(3)=Q(3) AND P(4)=Q(4) THEN 4000
1020 COLOR0,1:LINE(P(4),P(3))-(P(4)+7,P(3)+7)
,PSET,BF
1030 IF P(1)<168 THEN ON A GOSUB 3000,3010,30
20,3030,3040,3050,3060,3070:P(3)=P(1):P(4)=P(
2)
1040 IF P(1)=Q(3) AND P(2)=Q(4) THEN 4000
1050 COLOR0,1:LINE(Q(4),Q(3))-(Q(4)+7,Q(3)+7)
,PSET,BF
1060 IF Q(1)<168 THEN ON AA GOSUB 3100,3110,3
120,3130,3140,3150,3160,3170:Q(3)=Q(1):Q(4)=Q
(2)
1065 IF F>0 THEN GOSUB 2000
1070 IF (PEEK(&HFF00) AND 8)=0 AND G=1 THEN F
=1

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1080 IF RND(0)>.5 AND G=-1 AND ABS(P(1)-Q(1))
<56 AND ABS(P(2)-Q(2))<56 THEN F=2
1090 IF (PEEK(&HFF00) AND 4)=0 AND G=1 THEN A
=A+1:IF A=9 THEN A=1
1100 IF RND(0)>.9 THEN AA=AA+1:IF AA=9 THEN A
A=1
1110 IF (PEEK(&HFF00) AND 32)=0 AND G=1 THEN
A=A-1:IF A=0 THEN A=8
1120 IF RND(0)>.9 THEN AA=AA-1:IF AA=0 THEN A
A=8
1135 P(1)=P(1)+D(A):P(2)=P(2)+D(A+8):Q(1)=Q(1
)+E(AA):Q(2)=Q(2)+E(AA+8)
1140 IF P(1)>160 THEN P(1)=0
1150 IF Q(1)>160 THEN Q(1)=0
1160 IF P(1)<0 THEN P(1)=160
1170 IF Q(1)<0 THEN Q(1)=160
1190 IF P(2)>248 THEN P(2)=0
1200 IF P(2)<0 THEN P(2)=248
1220 IF Q(2)>248 THEN Q(2)=0
1230 IF Q(2)<0 THEN Q(2)=248
1240 G=-G
1250 GOTO 1000
2000 REM FIRE
2010 IF F=1 THEN X=P(2)+4:Y=P(1)+4
2020 IF F=2 THEN X=Q(2)+4:Y=Q(1)+4
2030 IF F=1 THEN XX=F(A):YY=F(A+6)
2040 IF F=2 THEN XX=G(AA):YY=G(AA+8)
2050 CT=0
2060 IF X>247 OR X<8 OR Y<8 OR Y>175 THEN 220
0
2070 IF CT>0 THEN PSET(X,Y,1)
2080 IF (F=1 AND X-Q(2)<8 AND X-Q(2)>=0 AND Y
-Q(1)<8 AND Y-Q(1)>=0) OR (F=2 AND X-P(2)<8 A
ND X-P(2)>=0 AND Y-P(1)<8 AND Y-P(1)>=0) THEN
5000
2090 CT=CT+1
2100 PSET(X,Y,0):X=X+XX:Y=Y+YY
2110 IF CT<6 THEN 2060
2200 F=0:RETURN
3000 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P1,PSET:R
ETURN
3010 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P2,PSET:R
ETURN

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3020 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P3,PSET:R
ETURN
3030 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P4,PSET:R
ETURN
3040 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P5,PSET:R
ETURN
3050 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P6,PSET:R
ETURN
3060 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P7,PSET:R
ETURN
3070 PUT(P(2),P(1))-(P(2)+7,P(1)+7),P8,PSET:R
ETURN
3100 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C1,PSET:R
ETURN
3110 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C2,PSET:R
ETURN
3120 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C3,PSET:R
ETURN
3130 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C4,PSET:R
ETURN
3140 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C5,PSET:R
ETURN
3150 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C6,PSET:R
ETURN
3160 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C7,PSET:R
ETURN
3170 PUT(Q(2),Q(1))-(Q(2)+7,Q(1)+7),C8,PSET:R
ETURN
4000 REM COLLISION
4010 FOR N=1 TO 16:PUT(P(4),P(3))-(P(4)+7,P(3)
)+7),N,NOT:SOUND50+N*3,1:NEXT
4020 L1=L1-1:L2=L2-1
4030 IF L1=0 OR L2=0 THEN 6000
4040 COLOR0,1:LINE(P(4),P(3))-(P(4)+7,P(3)+7)
,PSET,BF
4050 A=1:AA=1:P(1)=160:P(2)=0:P(3)=P(1):P(4)=
P(2):Q(1)=160:Q(2)=248:Q(3)=Q(1):Q(4)=Q(2)
4060 GOSUB 7100
4070 GOTO 1000
5000 IF F=1 THEN HX=Q(2):HY=Q(1):L2=L2-1
5010 IF F=2 THEN HX=P(2):HY=P(1):L1=L1-1
5020 FOR N=1 TO 16:PUT(HX,HY)-(HX+7,HY+7),N,N
OT:SOUND50+N*3,1:NEXT
5030 IF L1=0 OR L2=0 THEN 6000

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5040 IF F=1 THEN Q(1)=160:Q(2)=248:AA=1
5050 IF F=2 THEN P(1)=160:P(2)=248:A=1
5060 GOSUB 7100
5070 GOTO 2200
6000 REM END
6005 CLS
6010 IF L1=0 AND L2=0 THEN PRINT@356,"THE RES
ULT IS A DRAW"
6020 IF L1=0 AND L2>0 THEN PRINT@355,"THE COM
PUTER IS THE WINNER"
6030 IF L1>0 AND L2=0 THEN PRINT@356,"YOU ARE
THE WINNER"
6040 PRINT@452,"PRESS ANY KEY TO RESTART":A$=
INKEY$
6050 A$=INKEY$:IF A$="" THEN 6050
6060 GOTO 30
7000 PMODE4,1:PCLS1:SCREEN1,1:PMODE4,5:GET(80
,0)-(111,7),L,G
7010 PMODE4,1:PUT(0,168)-(31,175),L,PSET
7020 PMODE4,5:GET(112,0)-(151,7),L,G
7030 PMODE4,1:PUT(144,168)-(183,175),L,PSET
7040 PMODE4,5:GET(32,0)-(79,7),L,G
7050 PMODE4,1:PUT(40,168)-(87,175),L,PSET
7060 PUT(192,168)-(239,175),L,PSET
7100 NO=L1:XS=96:GOSUB 9900
7110 NO=L2:XS=248:GOSUB 9900
7120 RETURN
8000 CLS
8010 PRINT@9,"SOLO-DOGFIGHT":PRINT:PRINT
8020 PRINT"          PLAYER CONTROLS:":PRINT
8030 PRINT" A = UP  Z = DOWN  M = FIRE":PRINT
:PRINT"YOUR PLANE STARTS ON THE LEFT."
8040 PRINT@452,"PRESS ANY KEY TO START":A$=IN
KEY$
8050 A$=INKEY$:IF A$="" THEN 8050
8060 RETURN
9000 PMODE4,5:PCLS1:SCREEN1,1
9010 XC=0:YC=0
9020 FOR CH=1 TO 35
9030 FOR Y=YC TO YC+7
9040 READ CD:D=128:IF CD=999 THEN 9090
9050 FOR X=XC TO XC+7
9060 P=INT(CD/D)
9070 IF P=1 THEN PSET(X,Y,0):CD=CD-D

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9080 D=D/2:NEXT X,Y
9090 XC=XC+8:IF XC>255 THEN XC=0:YC=YC+8
9100 NEXT CH
9110 DIMP1(1):DIMP2(1):DIMP3(1):DIMP4(1):DIMP
5(1):DIMP6(1):DIMP7(1):DIMP8(1):DIMC1(1):DIMC
2(1):DIMC3(1):DIMC4(1):DIMC5(1):DIMC6(1):DIMC
7(1):DIMC8(1):DIMN(1):DIML(9):DIMP(4):DIMQ(4)
:DIMD(16):DIME(16):DIMF(16):DIMG(16)
9120 GET(152,0)-(159,7),P1,G
9130 GET(160,0)-(167,7),P2,G
9140 GET(168,0)-(175,7),P3,G
9150 GET(176,0)-(183,7),P4,G
9160 GET(184,0)-(191,7),P5,G
9170 GET(192,0)-(199,7),P6,G
9180 GET(200,0)-(207,7),P7,G
9190 GET(208,0)-(215,7),P8,G
9200 GET(216,0)-(223,7),C1,G
9210 GET(224,0)-(231,7),C2,G
9220 GET(232,0)-(239,7),C3,G
9230 GET(240,0)-(247,7),C4,G
9240 GET(248,0)-(255,7),C5,G
9250 GET(0,8)-(7,15),C6,G
9260 GET(8,8)-(15,15),C7,G
9270 GET(16,8)-(23,15),C8,G
9280 RETURN
9400 DATA0,24,36,44,52,36,24,0
9410 DATA0,8,24,8,8,8,28,0
9420 DATA0,24,36,8,16,32,60,0
9430 DATA0,24,36,24,4,36,24,0
9450 DATA0,64,64,64,64,64,126,0
9452 DATA0,62,8,8,8,8,62,0
9454 DATA0,66,66,66,66,36,24,0
9456 DATA0,126,64,124,64,64,126,0
9458 DATA0,60,64,60,2,66,60,0
9460 DATA0,0,8,0,0,0,8,0
9462 DATA0,124,66,66,124,64,64,0
9464 DATA0,64,64,64,64,64,126,0
9466 DATA0,66,66,36,24,24,24,0
9468 DATA0,124,66,66,124,68,66,0
9470 DATA0,60,66,64,64,66,60,0
9472 DATA0,60,66,66,66,66,60,0
9474 DATA0,66,102,90,66,66,66,0
9476 DATA0,124,66,66,124,64,64,0
9478 DATA0,0,0,0,0,48,48,0

```

```

9480 DATA0,15,132,255,0,15,0,0
9482 DATA8,26,52,9,18,164,64,0
9484 DATA84,84,116,84,16,16,16,48
9486 DATA16,72,36,208,72,36,2,4
9488 DATA0,240,0,255,33,240,0,0
9490 DATA0,2,37,72,144,36,88,16
9492 DATA12,8,8,8,42,46,42,42
9494 DATA32,64,36,18,11,36,18,8
9496 DATA0,240,33,255,0,240,0,0
9498 DATA16,88,164,144,72,37,2,0
9500 DATA42,42,46,42,8,8,8,8
9502 DATA8,18,36,11,18,36,64,32
9504 DATA0,0,15,0,255,132,15,0
9506 DATA0,64,164,18,5,36,26,4
9508 DATA48,16,16,16,84,116,84,84
9510 DATA4,2,36,72,208,36,72,16
9900 COLOR1,1:LINE(XS,168)-(XS+7,175),PSET,BF
:N#=STR$(NO):FOR Z=2 TO LEN(N#)
9910 NO=VAL(MID$(N#,Z,1)):GOSUB9950
9920 XS=XS+10:NEXT Z:RETURN
9950 PMODE3,5:GET(8*NO,0)-(8*NO+7,7),N,G
9960 PMODE3,1:PUT(XS,168)-(XS+7,175),N,PSET:R
ETURN

```

Space Traffic

As you travel about in the midst of an asteroid belt recovering lost satellites (well, someone has to do it), you are assailed by missiles and enemy spacecraft which you can either dodge or attack. Movement is either to left or right using the Z and X keys and your cannon can be fired with the M key, although this will lose you points.

The satellites are collected by manoeuvring your spaceship into them and points are gained for each one which you manage to recover. Collision with other objects results in destruction, although you are allotted five lives at the start of each game.

```

1 REM**SPACE TRAFFIC**
2 REM**DRAGON VERSION**
10 CLS:GOSUB90000
20 GOSUB80000
50 HS=0
70 FOR F=1 TO 4:PRINT@0,"----- ASTEROIDS DET
ECTED ----- ";:PLAY AL$:PRINT@0,BL$;:PLAY AL$
:NEXT F
90 X1=X:Y1=Y
100 I$=INKEY$:IF I$="X" AND X<26 THEN X=X+2 E
LSE IF I$="Z" AND X>5 THEN X=X-2
105 PK=1184+X:IF PEEK(PK)>208 ORPEEK(PK+1)>20
8 THEN HT=1
107 IF HT=0 THEN IF (PEEK(PK-96)>192 AND PEEK
(PK-96)<208) OR (PEEK(PK-95)>192 AND PEEK(PK-
95)<208) THEN SOUND200,1:SC=SC+1:X1=X-1:Y1=2:
GOSUB20000:X1=X+1:GOSUB20000
110 GOSUB20000:PRINT@511,BL$+BL$;:POKE1535,128
:GOSUB10000
112 IF Q=6 THEN IF W=X THEN SOUND50,1:GOSUB40
20
115 IF HT=1 THEN HT=0:SOUND50,1:GOSUB4020
117 IF I$="M" THEN GOSUB50000
118 IF C<200 THEN IF C/2=INT(C/2) THEN 140
120 AX=INT(RND(56)/2):AY=14:GOSUB14000
140 IFRND(0)>.6 THEN SX=INT(RND(56)/2):SY=14:
GOSUB11000

```

```

150 IF RND(0)<.4 THEN EY=14:EX=INT(RND(56)/2)
:GOSUB1300
160 FOR F=0 TO 96 STEP 32
165 IF PEEK(PK+F+64)=220 AND PEEK(PK+F+65)=22
0 THEN GOSUB 4000:F=96
170 NEXT F
185 C=C+1
187 IF C>400 THEN 90
190 Q=Q-2:GOSUB1200:X1=W:Y1=Q+2:GOSUB2000:IF
Q=0 THEN Q=14:W=X
200 GOTO 90
1000 PRINT@Y*32+X,A#;
1010 PRINT@(Y+1)*32+X,B#;
1020 RETURN
1100 PRINT@SY*32+SX,C#;
1110 PRINT@(SY+1)*32+SX,D#;
1120 RETURN
1200 PRINT@Q*32+W,E#;
1210 PRINT@(Q+1)*32+W,F#;
1220 RETURN
1300 PRINT@EY*32+EX,H#;
1310 PRINT@(EY+1)*32+EX,G#;
1320 RETURN
1400 PRINT@AY*32+AX,J#;
1410 PRINT@(AY+1)*32+AX,K#;
1420 RETURN
2000 PRINT@Y1*32+X1,S#;
2010 PRINT@(Y1+1)*32+X1,S#;
2020 RETURN
4000 FOR G=5+F/32 TO 2 STEP-1
4005 PRINT@G*32+X,CHR$(245);:PRINT@G*32+X,CHR
$(128);:NEXT G
4010 PLAY"T5001LBCF#CF#CF#CF#"
4020 FOR F=79 TO 0 STEP -79
4030 PRINT@Y*32+X,CHR$(128+F)+CHR$(128+F);:PR
INT@(Y+1)*32+X,CHR$(128+F)+CHR$(128+F);:PRINT
@(Y+2)*32+X-1,CHR$(128+F)+CHR$(128+F)+CHR$(12
8+F);
4035 PRINT@(Y+3)*32+X,CHR$(128+F)+CHR$(128+F)
+CHR$(128+F);
4040 NEXT F
4130 LI=LI-1:FOR F=1 TO 8:PRINT@0,"LIVES LEFT
:";LI;:PRINT@22,"SCORE:";SC;:PLAY LEFT$(AL$,1
3):PRINT@0,BL$;:NEXT F

```

```

4135 IF LI<>0 THEN RETURN
4137 FOR F=1 TO 4:SOUND50,2:SOUND100,2:FOR G=
1 TO 50:NEXT G,F
4140 CLS:PRINT@160,"YOU SCORED";SC;" POINTS."
4145 PRINT,,"THE HIGH SCORE IS";HS;". "
4150 IF SC>HS THEN HS=SC:PRINT"CONGRATULATION
S!","THAT IS A NEW HIGH SCORE."
4160 PRINT,,"PRESS ANY KEY TO PLAY AGAIN.":I$
=INKEY$
4170 I$=INKEY$:IF I$="" THEN 4170
4180 CLS0:GOSUB 9500:GOTO 70
5000 SC=SC-1:FOR F=4 TO 12:PRINT@F*32+X,CHR$(
147);
5020 PRINT@F*32+X,CHR$(128);:IFPEEK(32*(F+1)+
X+1024)<>128 THEN 5030
5025 NEXT F
5030 X2=X1:Y2=Y1:X1=X:Y1=F+1:GOSUB2000:X1=X2:
Y1=Y2
5040 PLAY"T50L801CF#CF#CF#CF#CF#CF#"
5050 RETURN
8000 PRINT"      S P A C E T R A F F I C      ",
,"      BY PAUL STANLEY      "
8010 PRINT"YOU ARE FLYING THROUGH OUTER      SP
ACE WHEN SUDDENLY YOU      ENCOUNTER AN AS
TEROID BELT."
8020 PRINT"TO SCORE YOU HAVE TO RECOVER      LO
ST SATELLITES (WHITE) IN YOUR CRAFT."
8025 GOSUB 8095
8030 PRINT"ENEMY CRAFT WILL FIRE AT YOU,      GI
VEN THE CHANCE, AND OTHER      MISSILES ARE AI
MED RIGHT AT YOU."
8040 PRINT,,"IF YOU ARE DESPERATE, YOU CAN
FIRE BACK, BUT YOU LOSE A      SATELLITE IN
THE PROCESS."
8050 PRINT,,"MOVE LEFT WITH Z, RIGHT WITH X,
AND FIRE WITH M."
8060 PRINT,,"PRESS ENTER TO START.":I$=INKEY$
8070 I$=INKEY$:IFI$=""THEN8070
8080 IF ASC(I$)<>13 THEN 8070
8090 CLS0:RETURN
8095 PRINT"PRESS SPACE BAR TO SEE MORE...":I$
=INKEY$
8097 I$=INKEY$:IF I$=""THEN8097
8098 IF I$=" " THEN CLS:RETURN ELSE8097

```

```
9000 A$=CHR$(147)+CHR$(147)
9010 B$=CHR$(157)+CHR$(158)
9020 S$=CHR$(128)+CHR$(128)
9030 C$=CHR$(201)+CHR$(198):D$=CHR$(198)+CHR$(201)
9040 E$=CHR$(213):F$=CHR$(216)+CHR$(216)
9050 G$=CHR$(220)+CHR$(220):H$=CHR$(215)+CHR$(219)
9060 J$=CHR$(214)+CHR$(217):K$=CHR$(217)+CHR$(214)
9170 BL$=STRING$(32,CHR$(128))
9180 SS$="CC#DD#EFF#GG#AA#B":AL$="T155L801XSS$;02XSS$;03XSS$;04XSS$;05XSS$;"
9500 X=16:C=0:HT=0:SC=0:Q=14:W=X:LI=5:RETURN
```

Paypackets

Anyone who runs a shop or small business will find this program something close to invaluable. It's Friday, you've worked out how much everyone is getting paid and the time has come to make up the wage packets. How many, of what note and what change are you going to need? Well, key this in and all your problems are solved. The program is relatively short, completely reliable and of course you don't have to own a business to use it. It will work with any sum — from thousands of pounds right down to the expenses for the local church fete, or individual small prizes for the children's party.

```

1 REM***PAYPACKETS***
5 CLEAR:CLS
20 FORJ=1 TO 10:READC$(J),CV(J):NEXT J
25 DATA ONE PENCE,0.01,TWO PENCE,0.02
30 DATA FIVE PENCE,0.05,TEN PENCE,0.1,TWENTY
   PENCE,0.2
40 DATA FIFTY PENCE,0.5,ONE POUND,1,FIVE POU
   ND,5
50 DATA TEN POUND,10,TWENTY POUND,20
60 SR=0
150 GOSUB500
155 PRINTTAB(5)"PRESS ANY KEY FOR MENU"
156 IFINKEY$=""THEN156
157 CLS:FORS=0TO5:PRINT:NEXT
160 PRINT"PRESS 'N' TO INPUT NEW PAYMENT ";
165 PRINT"PRESS 'C' TO CANCEL ALL DATA"
170 PRINT"PRESS 'P' TO GIVE THE TOTAL
   AMOUNT"
205 XX=0:SR=1
210 A$=INKEY$:IF A$=""THEN210
220 IFA$="N"THEN300
230 IFA$="P"THEN400
235 IFA$="C"THEN5
250 GOTO210
300 CLS
310 INPUT"CASH AMOUNT IN PACKET";A$
320 A=VAL(A$):A1=A
330 INPUT"NUMBER OF PACKETS";B$
335 CLS

```

```

340 B=VAL (B$) : B1=B
350 GOSUB800
360 GOTO150
400 CLS
410 XX=1
420 GOTO150
500 REMTABLE
505 AT=0
525 PRINT"currency";TAB(12);"no.of units";TAB
(26);"amount";
535 FORJ=1TO11
536 IFJ<>11THEN540
537 PRINTTAB(27)"----"
538 PRINTTAB(13)"total:";
539 A$=STR$(AT):GOTO580
540 A$=C$(J)
545 PRINTA$;
550 C=LEN(STR$(INT(CA(J))))
551 IFXX=1THENC=LEN(STR$(INT(CB(J))))
559 IFXX=1THENPRINT;TAB(18-C)CB(J);:GOTO571
560 PRINTTAB(18-C)CA(J);
570 A$=STR$(CA(J)*CV(J))
571 IFXX=1THENA$=STR$(CB(J)*CV(J))
574 IFXX=1THEN AT=AT+CB(J)*CV(J):GOTO580
575 AT=AT+CA(J)*CV(J)
580 AA$="":N=0:FOR K=1 TO LEN(A$)
590 B$=MID$(A$,K,1)
600 IF B$=" " THEN 650
610 AA$=AA$+B$
615 IF B$="."AND VAL(AA$)<1 THEN AA$="0"+AA$
620 IFB$="." THEN NN=1
650 NEXTK
660 IFN=0 THEN AA$=AA$+".00":GOTO700
670 A=LEN(AA$):IF MID$(AA$,A-1,1)="." THEN AA$
=AA$+"0"
680 END
690 REM COMPLETE
700 REM
710 A=LEN(AA$)
720 PRINTUSING"#####.##";VAL(AA$)
730 NEXTJ
740 IFSR=0THEN750
741 IFXX=1THENPRINTTAB(6)"THIS IS A RUNNING T
OTAL":GOTO750

```


304 *PayPackets*

```
743 PRINT;TAB(8);"THIS IS A SUBTOTAL"  
750 RETURN  
800 REM CALCULATE  
810 X=0:A=A*100:FOR J=10TO1STEP-1  
820 CA(J)=0:IFX=1THEN850  
830 IF(A-CV(J)*100)<0THEN850  
835 A=INT(A-INT(CV(J)*100.0000001)):IF A=0THE  
NX=1  
836 REM OVERFLOW CHECK  
840 CA(J)=CA(J)+1:IF X=0THEN830  
850 NEXTJ  
860 FORJ=1TO10:CA(J)=CA(J)*B:NEXT  
870 FORJ=1TO10:CB(J)=CB(J)+CA(J):NEXTJ  
880 RETURN
```



PERSONAL COMPUTER

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60 PROGRAMS FOR THE DRAGON 32, Errata

Unfortunately, even the best computing books and magazines can suffer from gremlins creeping into the listings, and sadly the 60 PROGRAMS FOR THE DRAGON 32 is no exception. Here are some corrections. If you should still have any problems, we suggest that you thoroughly check your keying-in and refer to the enclosed hints sheet.

DAM EATERS. Page 34 -

Line 81 should read:

81 REM

TUG OF WAR. Page 39 -

Lines 320 and 325 have become merged together and should be separated immediately after the NEXT N, by pressing ENTER.

DEFEND. Page 62 -

In lines 490-670, you will find that the zeros are not slashed. You should be especially careful when entering these lines to distinguish between the zeros and the 0's.

Lines 320 and 325 run together and should be separated after GOSUB485 by pressing ENTER.

Line 690 is superfluous and can be deleted.

Lines 750 and 755 run together and should be separated (by pressing ENTER) immediately after the 90.

SOCCER SUPREMO. Page 126 -

Line 1 should be deleted.

GRAND PRIX. Page 209 -

Add this line to the program:

3 DIMX(26),Y(26)

also, on line 8480, the last comma of the line should be removed.

64 Defend

```

360 AZ=AZ-8:IF A2<90 THEN A2=90
365 PUT (A1,A2)-(A1+31,A2+48),W,PSET:GOTO365
390 PUT (A1,A2)-(A1-31,A2+48),X,PSET:CAP=CAP+1
:GOSUB 510:GOSUB485:GOTO135
295 'INSTRUCTIONS
400 CLS:PRINT@12,"DEFEND":PRINT "A FLEET OF A
LIENS HAVE BROKEN THROUGH EARTH'S OUTER DEF
ENCES. ONE BY ONE THEY FLY IN WITH THE SOLE I
NTENT OF PICKING UP HUMANOIDS WHO WHO H
AVE CLIMBED TO THE HILL TOPS TO SEE WHAT IS
HAPPENING.":PRINT:
405 PRINT"YOUR JOB IS TO PREVENT THE FLEETFRO
M CAPTURING THE HUMANOIDS.":PRINT "YOUR ONLY
WEAPON IS A LASER SHIFWITH ONLY A SHORT RANGE
AND LIMITED MANOUVRABILITY":RETURN
410 CLS:PRINT"USE THE ARROW KEYS FOR DIRECTIO
NAND THE SPACEBAR TO FIRE.":PRINT "THE GAME W
ILL END IF THREE HUMANOIDS ARE CAPTURED
OR IF YOURUN OUT OF FUEL."
415 GOSUB 425:RETURN
420 GOTO 420
425 PRINT@484,"PRESS SPACEBAR";
430 A$=INKEY$:IF A$<>CHR$(32) THEN 430
435 RETURN
440 'END PLAY
445 DRAW "C2;BM86,100"+ST$(5):FOR T=1TO1000:N
EXT T
450 B$=INKEY$
455 DRAW "C2;BM60,120"+ST$(6)
460 DRAW "C2;BM116,120"+ST$(7)
465 GOSUB405:GOSUB510:GOSUB535:GOSUB555
470 A$=INKEY$:IF A$<>CHR$(32) THEN 470
475 IF SCORE>HI THEN HI=SCORE
480 GOTO 120
485 'RECORD FUEL
490 FUEL=1000-INT(TIMER/10):IF FUEL<1 THEN FU
EL=0
495 DRAW "C4;BM 52,184"+SF$:SF$="":SC$=STR$(F
UEL)
500 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z
2,1)):SF$=SF$+SN$(Y2(Z2)):NEXT Z2
505 DRAW "C2;BM52,184"+SF$:RETURN
510 'RECORD CAPTIVES
515 IF CAP<1 THEN CAP=0
520 DRAW"C4;BM206,184"+SP$:SP$="": SC$=STR$(C
AP)
525 FOR Z2=2TO LEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z
2,1)):SP$=SP$+SN$(Y2(Z2)):NEXT Z2
530 DRAW "C2;BM206,184"+SP$:RETURN
535 'RECORD NEW SCORE
540 DRAW"C3;BM60,14"+SS$:SS$="": SC$=STR$(SCOR
E)

```

```

545 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SS$=SS$+SN$(Y2(Z2)):NEXT Z2
550 DRAW"C2;BM60,14"+SS$:RETURN
555 'RECORD HIGH SCORE
560 DRAW"C3;BM196,14"+SH$:SH$="":SC$=STR$(HI)
565 FOR Z2=2TOLEN(SC$):Y2(Z2)=VAL(MID$(SC$,Z2
,1)):SH$=SH$+SN$(Y2(Z2)):NEXT Z2
570 DRAW"C2;BM196,14"+SH$:RETURN
575 'SCREEN DISPLAY
580 PMODE 3,1:PCLS3
585 DRAW "C3;BMO,0;R255;D20;L255;U20":PAINT(2
,2),3,3
590 DRAW "C2;BM2,14"+ST$(1)
595 DRAW "C2;BM122,14"+ST$(2)+ST$(1)
600 COLOR 0,3:FOR N=0TO255 STEP 30:V1(N)=170-
RND(15):NEXT N
605 IF J1>=255 THEN 620
610 J2=J1+30:IF J2>255 THEN J2=255:V1(255)=150
615 LINE(J1,V1(J1))-(J2,V1(J2)),PSET:J1=J2:GO
TO 605
620 PAINT(0,191),4,4
625 FOR N=0TO230 STEP60:H1(N)=1:PUT(N,(V1(N)-
191)-(N+19,V1(N)),V,PSET:NEXT N
630 DRAW "C2;BM4,184"+ST$(4):DRAW"C2;BM124,18
4"+ST$(3)
635 RETURN
640 RETURN
645 FOR N=1TO7:READ ST$(N):NEXT N:FOR N=0TO9:
READ SN$(N):NEXT N
650 PMODE 3,1:PCLS3
655 FOR A=0TO38:READB(A):NEXT A:FOR A=0TO12:C
=1793+(A*32):POKE C,B(A):POKE C+1,B(A+13):POK
E C+2,B(A+26):NEXT A:GET(0,0)-(39,32),R,G
660 FOR A=0TO38:READ B(A):NEXTA:FOR A=0TO12:C
=1793+(A*32):POKE C,B(A):POKE C+1,B(A+13):POK
E C+2,B(A+26):NEXT A:GET(0,0)-(39,32),S,G:PCL
S3
665 FOR A=0TO31:READ B(A):NEXTA:FOR A=0TO15:C
=1793+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEX
T A:GET(4,0)-(31,23),T,G
670 FORA=0TO31:READ B(A):NEXT A:FOR A=0TO15:C
=2113+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEX
T A:GET(4,0)-(27,35),U,G:PCLS3
675 FOR A=0TO31:READ B(A):NEXTA:FOR A=0TO15:C
=1601+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEX
T A:GET(4,0)-(23,19),V,G:PCLS3
680 PUT(4,0)-(31,23),T,PSET:FOR A=0TO15:C=233
7+(A*32):POKE C,B(A):POKE C+1,B(A+16):NEXT A:
GET(0,0)-(31,48),W,G:PCLS3
685 GET(0,0)-(31,48),X,G:RETURN

```

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