

SECOND BOOK OF PROGRAMS

for the
DICK SMITH

WIZZARD



\$6⁹⁵

Cat. B-6197

FOREWORD

Here it is at last. Because your response to our First Book Of Wizzard Programs was so overwhelming we have produced a second book of fantastic programs to run on your Wizzard Computer.

You will find that using these programs will be an education in itself even if you are a programmer of long standing experience. They contain information and techniques which if understood are guaranteed to increase your programming skills. In this book we hope you will find the programs both entertaining and useful but more especially fun.

Of course it is up to you whether you use these programs as they stand or whether you create your own imaginative innovations. We suggest the latter rather than the former as we believe that this is the best way to grow and expand your knowledge of programming.

The Staff

Dick Smith Electronics

Second book of programs for the DICK SMITH WIZZARD

Compiled By Paul Beaver

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WIZZARD WAR

Here is a very simple but enjoyable game! It is a variation on the popular 'old' space invaders theme. However you must be accurate! The more shots that you fire the faster the invaders appear!

```
1  GOTO8000
2  REM*PLOT FACES*
3  S=S-5
4  R=0+0+0+0
5  R=RND(31)
6  IFA(R)=1THENRETURN
7  A(R)=1
8  PLOTR,9,104
9  D=D+1
10 RETURN
50  FOR B=160 TO 190
55  IFRND(10)=5THENGOSUB2
60  IFJOY(3)>0THEN300
65  POKE218,B
70  PRINT$
80  NEXTB
85  POKE218,191
90  PRINT" "
110 IF T<1THEN7040
120 T=T-1
130 COLORT+18,1,1
140 GOSUB200
150 GOTO50
200 POKE218,223
205 PRINT" SCORE";S
250 RETURN
300 C=B-159
301 POKE4098,208
302 POKE4098,0
303 POKE4098,207
310 FOR I=18 TO 9 STEP -3
320 PLOT C,I+3,32
330 PLOT C,I,96
340 POKE4098,I
360 NEXT I
380 IFA(C)=0THEN450
390 POKE4098,240
400 PLOT C,9,120
410 A(C)=0
420 S=S+250
425 PLOT C,9,121
430 D=D-1
435 PLOT C,9,122
440 IFD<1THENS=S+((T+1)**2)*40
450 PLOT C,9,32
460 SOUND1;0
```



```

470 S=S-100
480 GOSUB200
490 IFRND(6)=4THENGOSUB2
500 GOTO65
7040 IFS<=UTHEN7500
7045 CLS
7050 PRINT"          CONGRATULATIONS"
7100 SOUND26;3
7110 SOUND21;2
7120 SOUND21;1
7130 SOUND23;3
7140 SOUND21;3
7150 SOUND1;3
7160 SOUND9;3,19;3,25;3
7170 SOUND2;3,18;3,26;3
7200 CLS
7240 PRINT"PLEASE PRINT YOUR NAME"
7250 PRINT
7260 PRINT"RECORD HOLDER"
7270 PRINT
7280 INPUT NS
7310 PRINT
7320 PRINT
7330 CLS
7340 PRINT" OLD RECORD WAS ";U
7350 PRINT
7360 PRINT
7400 T=T+1
7410 U=S
7420 E=E+1
7430 F(E)=S
7480 PRINT"NEW ";
7490 GOTO7650
7500 CLS
7630 PRINT
7640 PRINT
7650 PRINT"RECORD BY "+NS+" IS"
7660 PRINT
7670 PRINT"          ";U
7680 PRINT
7690 PRINT
7700 PRINT" YOUR SCORE WAS "
7710 PRINT
7720 PRINT"          ";S
7730 PRINT
7740 PRINT
7750 PRINT"ALL RECORDS ARE:"
7760 PRINT
7770 FORI=LTOE
7780 PRINTF(I);" ";
7790 NEXTI
7800 PRINT
7805 PRINT

```

```

7810 PRINT"TO CONTINUE PRESS <!>"
7820 PRINT
7830 PRINT"TO STOP PRESS <->"
7840 GOTOJOY(4)+7840
7841 GOTO9950
7842 GOTO9000
7843 GOTO7840
8000 CLS
8010 DIM F(32)
8020 DIM A(32)
8030 CHAR96,1010101010101010
8040 CHAR104,183C7E3C42818181
8050 CHAR112,001818BDBFF99BDBD
8060 CHAR120,9110183FFD180889
8070 CHAR33,080C0EFFFF0E0C08
8080 CHAR121,814224F00F244281
8090 CHAR128,000000000000033F
8100 CHAR136,000000000017FF7F
8110 CHAR144,000000077FFFFFFF7F
8120 CHAR152,00001FFFFFFFFF7F
8130 CHAR160,077FFFFFFFFF7F
8140 CHAR168,FFFFFFFFFFFF7F
8150 CHAR122,1024814824011842
8200 COLOR13,16,1
8210 COLOR14,11,1
8220 COLOR15,7,1
8230 COLOR 7,14,1
8240 COLOR 8,14,1
8250 COLOR16,7,1
8260 COLOR6,14,1
8270 FORI=17TO22
8280 COLORI,14,1
8290 NEXTI
8300 B$="
8400 AS=" "+CHRS(112)+" "
8500 N$="FIRST GAME"
8510 GOTO8600
8520 IFJOY(4)=1THEN8570
8525 IFJOY(4)=2THEN9000
8530 GOTO8520
8570 POKE218,2
8575 FORI=1TO7
8580 PRINTB$
8585 NEXTI
8590 POKE218,2
8595 RETURN
8600 POKE4098,239
8610 SOUND1;1
8700 PRINT"
8705 PRINT"
8710 PRINT"
8715 PRINT"
8720 PRINT"
*****"
*
* WIZZARD WAR *
*
*****"

```

```

8740 PRINT
8760 PRINT
8765 PRINT
8770 PRINT" TO START GAME PRESS !"
8775 PRINT
8780 PRINT" FOR CONTINUING INSTRUCTIONS"
8785 PRINT
8790 PRINT" PRESS -"
8795 PRINT
8800 GOSUB8575
8805 PRINT"THE OBJECT IS TO SHOOT"
8810 PRINT
8815 PRINT" ALL THE ALIENS "+" :"+CHR$(104)+" "+"CHR$(104)
8820 PRINT
8825 PRINT" "+"CHR$(104)+" "+"APPEAR AT RANDOM TIMES"
8828 PRINT
8830 PRINT" BUT MORE DURING FIRING"
8840 GOSUB8520
8850 PRINT"THE DEFENDING ROCKET"
8855 PRINT
8860 PRINT" TRAVELS ACROSS THE SCREEN"
8865 PRINT
8870 PRINT" 5 TIMES. AS IDICATED BY"
8875 FORI=128TO168STEP8
8880 PLOT(I/8-12),23,I
8885 NEXTI
8890 POKE218,202
8895 PRINT".TO FIRE PRESS SHIFT"
8900 GOSUB8520
8910 PRINT"SCORING:"
8915 PRINT
8920 PRINT" A HIT = + 150"
8925 PRINT" A MISS= - 100"
8930 PRINT" A "+"CHR$(104)+" = - 5"
8940 PRINT" A SCREEN CLEAR OF"+CHR$(104)+" GIVES"
8950 PRINT" BONUS = ((FUEL)**2)*40."
8955 GOSUB8520
8960 PRINT" TO START GAME PRESS !"
8970 IFJOY(4)=2THEN9000
8990 GOTO8970
9000 CLS
9010 FORI=1TO32
9020 A(I)=0
9040 NEXT I
9050 T=5
9060 D=0
9080 C=0
9090 B=0
9100 S=2000
9200 POKE218,241
9210 PRINTNS;" ";U
9220 GOSUB200
9300 FORI=128TO168STEP8

```

```
9310 PLOT(I/8-4),24,I
9320 COLORI/8+1,14,1
9350 NEXT I
9800 GOSUB2
9810 GOSUB2
9900 GOTO50
9950 CLS
9960 REM*BY J.TUCKER*
9970 REM*GRAPHICS BY EDWIN TUCKER*
9990 END
```

BLACKJACK

Would you like to try your luck at the Wizzard casino? This program allows two players to challenge the Wizzard at once. Can you beat the computer dealer?

INSTRUCTIONS

The game commences with the statement 'Shuffling Deck!' on the screen. Each player is then asked, in turn to make their opening bid. This can be any amount from \$1 to your remaining bank.

The board will be plotted at this point showing each players starting bank and current bet. The deal will commence. Each player, in turn will be asked if they wish to Hit (buy another card) or Stand (stay with current cards).

To Hit, push SHIFT key or left fire button on left hand controller.

To Stand, push CTRL Key or right fire button on left hand controller.

If your cards are stil under 21 the dealer will keep asking you to Hit or Stand. Once both players have stood or busted (scored over 21 points) the dealer will play. The dealer will stand on anything over 17.

```
7  PRINTTAB(10);"BLACKJACK"
8  PRINTTAB(10);"#####"
9  FORY=1TO5
10 PRINT
11 NEXT
12 PRINT"WRITTEN BY J.A.STEVENS"
25 CLS
26 GOSUB9000
30 DATA80,76,46,32,72,73,84,83,84,65,78,68,32
31 DATA87,73,78,78,69,82
32 GOSUB3000
35 CLS
40 DIMS(3,2),P(3),L(6),G(6)
44 DIMQ(3,3),Z(3),D(52)
45 DIMA(3,6),B(3,3),C(3,6)
46 GOSUB9900
47 O=O+1
48 CLS
49 S=0
50 GOSUB2800
65 IFS>34THENGOSUB9950
70 FORY=1TO3
80 FORX=1TO6
90 GOSUB2900
110 NEXTX
```

```

120 NEXTY
125 GOSUB7000
130 CLS
135 F=0
136 S(1,1)=0
137 S(1,2)=0
140 FOR Y=2 TO 3
141 PRINT"HAND ";O
142 PRINT
145 B(Y,2)=0
146 S(Y,1)=0
147 S(Y,2)=0
148 Z(Y)=0
150 IF Y=2 THEN PRINT A$;
151 IF Y=3 THEN PRINT B$;
152 PRINT" WITH $";B(Y,1)
153 PRINT
154 PRINT"BID HOW MUCH PER CARD?"
155 PRINT
160 PRINT"''''> $";
165 INPUT B(Y,3)
166 IF B(Y,3) < 1 THEN 182
167 IF B(Y,3) > B(Y,1) THEN 182
170 PRINT
175 PRINT"          "
180 NEXTY
181 GOTO 190
182 PRINT
183 PRINT"MINIMUM $1, MAXIMUM $";B(Y,1)
184 GOTO 155
190 CLS
200 B(2,2)=B(2,3)
205 B(3,2)=B(3,3)
210 GOSUB 6000
215 FOR P=1 TO 3
220 FOR G=1 TO 2
230 GOSUB 8000
240 NEXT G
245 NEXT P
250 REM*CONTINUE HAND
255 FOR P=2 TO 3
260 G=2
265 G=G+1
266 IF S(P,2) > 0 THEN 420
267 IF S(P,1) = 21 THEN 420
268 IF G > 6 THEN 420
270 FOR K=3 TO 5
275 READ H
280 PLOT K, 20, H
285 NEXT K
286 PLOT 6, 20, P+47
290 FOR K=8 TO 18
295 IF K=12 THEN 310

```

```

300 READH
305 PLOTK,20,H
310 NEXTK
315 RESTORE
320 IFJOY(3)=1THEN330
325 IFJOY(3)=2THEN340
327 GOTO320
330 PLOT8,20,37
331 IFB(P,2)+B(P,3)>B(P,1)THEN3500
335 B(P,2)=B(P,2)+B(P,3)
337 GOTO360
340 PLOT18,20,37
350 GOTO420
360 G(6)=B(P,2)
365 I=5
370 IFP=2THENJ=23
375 IFP=3THENJ=24
380 GOSUB6800
385 FORX=25TO29
390 PLOTX,J,G(I)+48
392 I=I-1
395 NEXTX
400 GOSUB8000
410 GOTO265
420 NEXTP
430 FORX=1TO32
435 PLOTX,20,32
440 NEXTX
445 IFS(2,2)=2ANDS(3,2)=2THEN480
450 REM*DEALER HAND
455 P=1
456 F=1
460 G=1
465 G=G+1
466 IFG>6THEN480
470 GOSUB8000
475 IFS(P,1)<17THEN465
480 FORP=2TO3
482 IFS(P,2)=1ANDS(1,2)<>1THENB(P,1)=B(P,1)+B(P,2)
485 IFS(P,2)=1THENZ(P)=2
490 IFS(P,2)=2THENZ(P)=1
495 IFZ(P)>0THEN500
496 IFS(P,1)>S(1,1)THENZ(P)=2
497 IFS(1,1)>21THENZ(P)=2
498 IFS(P,1)>21THENZ(P)=1
500 IFZ(P)>1THENB(P,1)=B(P,1)+B(P,2)
505 IFZ(P)<2THENB(P,1)=B(P,1)-B(P,2)
510 NEXTP
515 IFZ(2)<2ANDZ(3)<2THEN600
517 IFZ(2)=2ANDZ(3)=2THEN690
520 IFZ(2)=2THEN650
525 IFZ(3)=2THEN670
600 P=1

```

```

605  A=0
610  GOTO700
650  P=2
655  A=1
660  GOTO700
670  P=3
675  A=2
680  GOTO700
690  A=3
700  P=A+1
701  IFA=3THEN800
705  GOSUB900
710  GOTO1000
800  IFS(2,1)>21ANDS(3,1)>21THEN600
805  FORP=2TO3
810  GOSUB900
820  NEXTP
830  GOTO1000
900  FORK=1TO13
905  READH
910  NEXTK
915  FORX=26TO31
920  READH
930  PLOTX,P(P)-2,H
940  NEXTX
950  RESTORE
960  RETURN
1000  IFB(2,1)=<0THEN1010
1001  IFB(3,1)=<0THEN1010
1002  GOSUB9600
1003  IFO<TTHEN47
1010  GOSUB9600
1015  CLS
1020  PRINTA$;" HAS $";B(2,1)
1030  PRINT
1040  PRINTB$;" HAS $";B(3,1)
1050  B(1,1)=(10000-B(2,1))+(10000-B(3,1))
1060  PRINT
1070  PRINT"DEALER HAS $";B(1,1)
1080  PRINT
1999  END
2800  FORY=1TO52
2810  IFD(Y)=0THENS=S+1
2820  NEXTY
2830  RETURN
2900  A=RND(52)
2910  IFD(A)=0THEN2940
2920  C(Y,X)=D(A)
2925  D(A)=0
2930  RETURN
2940  A=A+1
2945  IFA>52THENA=1
2950  GOTO2910

```

```

3000 CLS
3010 PRINTTAB(10);"BLACKJACK"
3011 PRINTTAB(10);"*****"
3012 PRINT
3013 PRINT"ENTER AMOUNT OF HANDS TO BE  "
3014 PRINT"PLAYED, OR 0 FOR A GAME OF  "
3015 PRINT"BETWEEN 1 AND 10 HANDS      "
3016 PRINT"SELECTED RANDOMLY ";
3020 INPUTT
3021 IFT=0THENT=RND(10)
3030 CLS
3040 FORY=1TO2
3045 PRINT
3050 PRINT"PLAYER ";Y;" WISH TO DISPLAY  "
3060 PRINT"YOUR NAME";
3070 INPUTZ$
3072 PRINT
3075 IFZ$="N"THEN3110
3080 PRINT"ENTER NAME";
3085 IFY=1THENINPUTA$
3090 IFY=2THENINPUTB$
3091 IFY=1THENZ$=A$
3092 IFY=2THENZ$=B$
3093 L=LEN(Z$)
3094 IFL>9THEN3130
3095 NEXTY
3100 RETURN
3110 IFY=1THENA$="PLAYER 1"
3115 IFY=2THENB$="PLAYER 2"
3120 GOTO3095
3130 PRINT
3135 PRINT"TOO LONG"
3140 PRINT
3145 GOTO3080
3500 B(P,2)=B(P,1)
3510 GOTO360
4000 PLOT26,P(P)-2,33
4001 PLOT27,P(P)-2,85
4002 PLOT28,P(P)-2,78
4003 PLOT29,P(P)-2,68
4004 PLOT30,P(P)-2,69
4005 PLOT31,P(P)-2,82
4006 GOTO8860
6000 REM*PLOT BOARD
6010 FORY=1TO3
6015 IFY=1THENZ$="DEALER"
6020 IFY=2THENZ$=A$
6021 IFY=3THENZ$=B$
6025 L=LEN(Z$)
6030 FORX=1TOL
6035 Q=ASC(MID$(Z$,X,1))
6040 PLOTX+2,P(Y)-2,Q
6045 NEXTX

```

```

6050 PLOT12,P(Y)-1,39
6055 PLOT13,P(Y)-1,39
6060 IFY<2THEN6200
6065 PLOT15,P(Y)-2,66
6070 PLOT16,P(Y)-2,65
6075 PLOT17,P(Y)-2,78
6080 PLOT18,P(Y)-2,75
6085 PLOT19,P(Y)-2,36
6090 G(6)=B(Y,1)
6100 GOSUB6800
6105 I=5
6110 FORX=20TO24
6115 PLOTX,P(Y)-2,G(I)+48
6120 I=I-1
6125 NEXTX
6130 IFY=2THENJ=23
6131 IFY=3THENJ=24
6135 G(6)=B(Y,2)
6140 GOSUB6800
6145 PLOT18,J,66
6150 PLOT19,J,69
6155 PLOT20,J,84
6160 PLOT21,J,45
6165 PLOT22,J,Y+47
6170 PLOT24,J,36
6175 I=5
6180 FORX=25TO29
6185 PLOTX,J,G(I)+48
6190 I=I-1
6195 NEXTX
6200 NEXTY
6205 FORX=1TO32
6210 PLOTX,19,39
6215 NEXTX
6220 RETURN
6800 G(5)=INT(G(6)/10000)
6805 G(6)=G(6)-(G(5)*10000)
6810 G(4)=INT(G(6)/1000)
6815 G(6)=G(6)-(G(4)*1000)
6820 G(3)=INT(G(6)/100)
6825 G(6)=G(6)-(G(3)*100)
6830 G(2)=INT(G(6)/10)
6835 G(6)=G(6)-(G(2)*10)
6840 G(1)=INT(G(6))
6845 RETURN
7000 REM* SORT CARD VALUES
7010 FORY=1TO3
7020 FORX=1TO6
7030 Z=39
7040 IFC(Y,X)<40THENZ=26
7050 IFC(Y,X)<27THENZ=13
7060 IFC(Y,X)<14THENZ=0
7100 A(Y,X)=C(Y,X)-Z

```

```

7500 NEXTX
7510 NEXTY
7520 RETURN
8000 FORX=1TO3
8001 FORY=1TO3
8002 Q(X,Y)=127
8003 IFP=1ANDG=2ANDF=0THENQ(X,Y)=1
8004 NEXTY
8005 NEXTX
8006 IFP=1ANDG=2ANDF=0THEN8550
8007 Z=113
8008 IFC(P,G)<40THENZ=112
8015 IFC(P,G)<27THENZ=105
8020 IFC(P,G)<14THENZ=104
8100 FORX=1TO3STEP2
8105 FORY=1TO3STEP2
8110 Q(X,Y)=Z
8115 NEXTY
8120 NEXTX
8500 V=A(P,G)+113
8510 Q(2,2)=V
8550 M=L(G)-1
8560 N=P(P)-1
8600 FORX=1TO3
8610 FORY=1TO3
8650 PLOTM+X,N+Y,Q(X,Y)
8660 NEXTY
8670 NEXTX
8675 IFG=2ANDP=1ANDF=0THEN8990
8680 IFA(P,G)>10THENA(P,G)=10
8685 S(P,1)=S(P,1)+A(P,G)
8690 IFG<>2THEN8700
8692 IFA(P,G)=10ANDS(P,1)=11THENS(P,1)=21
8695 IFA(P,G)=1ANDS(P,1)=11THENS(P,1)=21
8698 IFS(P,1)=21THENS(P,2)=1
8700 IFS(P,1)>21THENS(P,2)=2
8701 IFA(P,G)=1ANDS(P,1)=11THENS(P,1)=21
8710 IFS(P,2)>0THEN8800
8720 GOTO8840
8800 IFS(P,2)=2THEN8820
8805 G(2)=18
8810 G(1)=26
8815 GOTO8855
8820 G(2)=40
8830 G(1)=40
8835 GOTO8855
8840 G(6)=S(P,1)
8850 GOSUB6830
8855 I=2
8857 IFG=5ANDS(P,1)<21THENS(P,2)=1
8858 IFG=5ANDS(P,1)<21THEN4000
8860 FORX=12TO13
8865 PLOTX,P(P)-2,G(I)+48

```

```

8870 I=I-1
8875 NEXTX
8990 RETURN
9000 CHAR104,183C7EFFFF7E3C18
9010 CHAR105,66FFFFFFFF7E3C18
9020 CHAR112,183C5AFFFF5A183C
9030 CHAR113,00183C7EFFFF993C
9040 CHAR115,7EFC3037E80FFFF
9050 CHAR116,7EFC31E1EC3FF7E
9060 CHAR117,0E1E3666FFFF0606
9070 CHAR118,FFFFC0FF03C3FF7E
9080 CHAR119,7EFC0FEFFC3FF7E
9090 CHAR120,7E7E060C18303030
9100 CHAR121,7EFC37E7EC3FF7E
9110 CHAR122,7EFC3FF7F037F7E
9120 CHAR123,CEDFDBDBDBDFCE
9130 CHAR114,183C66C3C3FFC3C3
9140 CHAR124,FFFF0C0C0CCFC78
9150 CHAR125,7CFEC6C6C6FF7D
9155 CHAR39,000000FFFF
9160 CHAR126,C6CCD8F0D8CCC6C3
9165 CHAR1,AA55AA55AA55AA55
9170 CHAR33,007E607C0202623C
9175 CHAR37,3C7EFFFFFFFF7E3C
9180 COLOR0,8
9182 COLOR1,3,16
9185 COLOR5,7,1
9190 FORY=6TO12
9200 COLORY,2,1
9210 NEXT
9220 COLOR14,7,16
9230 COLOR15,2,16
9240 COLOR16,2,16
9250 RETURN
9600 FORY=1TO100
9605 NEXTY
9610 RETURN
9900 REM*POSITIONING PLOTTERS
9901 G=3
9902 FORY=1TO6
9903 L(Y)=G
9904 G=G+4
9905 NEXTY
9906 G=3
9907 FORY=1TO3
9908 P(Y)=G
9909 G=G+6
9910 NEXTY
9911 B(2,1)=10000
9912 B(3,1)=10000
9950 CLS
9951 PRINT"SHUFFLING NEW DECK"
9952 FORY=1TO52

```

```
9960 D(Y)=Y
9970 NEXT Y
9990 RETURN
```

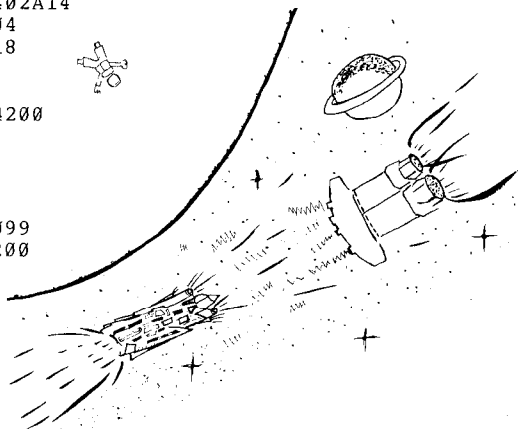
SPACE DUEL

Here is a two player game that will allow you to fight it out in the cold dark reaches of outer space. Use hyperspace to dodge your oponents shots, manoeuver your ship then fire your blaster to destroy the enemy!

```

1      C=10
2      R=12
3      I=22
4      B=1
5      J=12
6      D=15
10     CLS
20     COLOR0,2
30     FORT=1T012
40     COLORT,16,1
50     NEXT
500    CHAR1,000739C2C2390700
510    CHAR2,C0B04C4323241818
520    CHAR3,18182424242425A66
530    CHAR4,030D32C2C4341818
550    CHAR5,00E09C43439CE000
560    CHAR6,181824C4C2320D03
570    CHAR7,665A422424241818
580    CHAR8,18182423434CB0C0
600    CHAR11,00006F92926F
619    CHAR12,6090907C12130C04
620    CHAR13,1824241824243C24
630    CHAR14,0609093E48C83020
640    CHAR15,0000F64949F6
650    CHAR16,2030C8483E090906
660    CHAR17,243C242418242418
670    CHAR18,040C13127C909060
680    CHAR19,4004208280082812
692    CHAR20,00200424402A14
694    CHAR21,0002183804
700    CHAR24,0000001818
800    GOTO9000
1000   P=1
1001   IFC=IANDR=JTHEN4200
1010   A=JOY(1)
1020   IFA=3THENB=B+1
1030   IFA=7THENB=B-1
1035   IFA=5THEN1900
1040   IFJOY(3)=2THEN1099
1045   IFJOY(3)=1THEN2200
1090   IFB>8THENB=1
1091   IFB<1THENB=8
1095   PLOT C,R,B
1096   GOTO2000
1099   SOUND28;1
1100   V=C
1101   W=R

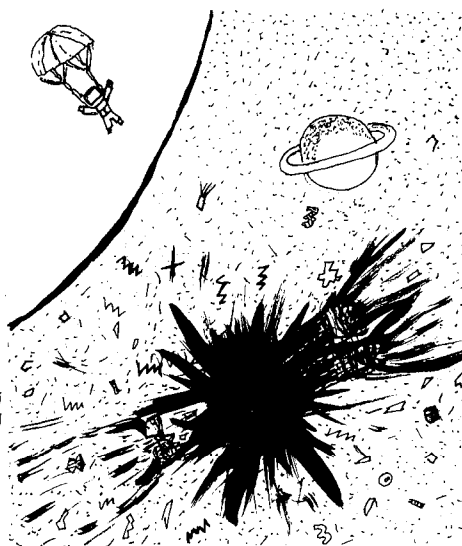
```



```

1102 K=D
1103 IFB=4THEN1400
1104 IFB=5THEN1500
1105 IFB=6THEN1600
1106 IFB=7THEN1700
1107 IFB=8THEN1800
1108 IFB=1THEN1111
1109 IFB=2THEN1200
1110 IFB=3THEN1300
1111 X=V-1
1112 Y=W
1113 IFX<1THENX=32
1120 FORZ=1TO10
1121 PLOTX,Y,32
1122 X=X-1
1124 IFX<1THENX=32
1140 PLOTX,Y,24
1180 IFX=IANDY=JTHEN4000
1181 IFX=CANDY=RTHEN4000
1185 NEXT
1186 PLOTX,Y,32
1190 GOTO2000
1200 X=V-1
1210 Y=W-1
1211 IFX<1THENX=32
1212 IFY<1THENY=24
1220 FORZ=1TO10
1221 PLOTX,Y,32
1222 X=X-1
1223 Y=Y-1
1225 IFX<1THENX=32
1226 IFY<1THENY=24
1240 PLOTX,Y,24
1280 IFX=IANDY=JTHEN4000
1281 IFX=CANDY=RTHEN4000
1285 NEXT
1287 PLOTX,Y,32
1290 GOTO2000
1300 X=V
1310 Y=W-1
1311 IFY<1THENY=24
1320 FORZ=1TO10
1321 PLOTX,Y,32
1322 Y=Y-1
1323 IFY<1THENY=24
1330 PLOTX,Y,24
1340 IFX=IANDY=JTHEN4000
1381 IFX=CANDY=RTHEN4000
1385 NEXT
1387 PLOTX,Y,32
1390 GOTO2000
1400 X=V+1
1410 Y=W-1

```



```

1411 IFX>32THENX=1
1412 IFY<1THENY=24
1420 FORZ=1TO10
1421 PLOTX,Y,32
1422 X=X+1
1423 Y=Y-1
1424 IFX>32THENX=1
1425 IFY<1THENY=24
1430 PLOTX,Y,24
1440 IFX=IANDY=JTHEN4000
1450 IFX=CANDY=RTHEN4000
1485 NEXT
1487 PLOTX,Y,32
1490 GOTO2000
1500 X=V+1
1510 Y=W
1511 IFX>32THENX=1
1520 FORZ=1TO10
1521 PLOTX,Y,32
1522 X=X+1
1524 IFX>32THENX=1
1530 PLOTX,Y,24
1540 IFX=IANDY=JTHEN4000
1550 IFX=CANDY=RTHEN4000
1585 NEXT
1587 PLOTX,Y,32
1590 GOTO2000
1600 X=V+1
1610 Y=W+1
1611 IFX>32THENX=1
1612 IFY>24THENY=1
1620 FORZ=1TO10
1621 PLOTX,Y,32
1622 X=X+1
1623 Y=Y+1
1624 IFX>32THENX=1
1625 IFY>24THENY=1
1630 PLOTX,Y,24
1640 IFX=IANDY=JTHEN4000
1650 IFX=CANDY=RTHEN4000
1685 NEXT
1687 PLOTX,Y,32
1690 GOTO2000
1700 X=V
1710 Y=W+1
1711 IFY>24THENY=1
1720 FORZ=1TO10
1721 PLOTX,Y,32
1722 Y=Y+1
1724 IFY>24THENY=1
1730 PLOTX,Y,24
1740 IFX=IANDY=JTHEN4000
1750 IFX=CANDY=RTHEN4000

```

```

1785 NEXT
1786 PLOTX,Y,32
1790 GOTO2000
1800 X=V-1
1810 Y=W+1
1811 IFX<1THENX=32
1812 IFY>24THENY=1
1820 FORZ=1TO10
1821 PLOTX,Y,32
1822 X=X-1
1823 Y=Y+1
1824 IFX<1THENX=32
1825 IFY>24THENY=1
1830 PLOTX,Y,24
1840 IFX=IANDY=JTHEN4000
1850 IFX=CANDY=RTHEN4000
1885 NEXT
1886 PLOTX,Y,32
1890 GOTO2000
1900 T=C
1901 U=R
1902 K=B
1903 IFB=4THEN1940
1904 IFB=5THEN1950
1905 IFB=6THEN1960
1906 IFB=7THEN1970
1907 IFB=8THEN1980
1908 IFB=1THEN1912
1909 IFB=2THEN1920
1910 IFB=3THEN1930
1912 PLOTX,R,32
1913 C=C-1
1914 IFC<1THENC=32
1915 PLOTX,R,B
1919 GOTO2000
1920 PLOTX,R,32
1921 C=C-1
1922 R=R-1
1923 IFR<1THENR=24
1924 IFC<1THENC=32
1925 PLOTX,R,B
1929 GOTO2000
1930 PLOTX,R,32
1931 R=R-1
1934 IFR<1THENR=24
1935 PLOTX,R,B
1939 GOTO2000
1940 PLOTX,R,32
1941 C=C+1
1942 R=R-1
1943 IFC>32THENC=1
1944 IFR<1THENR=24
1945 PLOTX,R,B

```

```

1949 GOTO2000
1950 PLOT C,R,32
1951 C=C+1
1954 IFC>32 THEN C=1
1955 PLOT C,R,B
1959 GOTO2000
1960 PLOT C,R,32
1961 C=C+1
1962 R=R+1
1963 IFC>32 THEN T=1
1964 IFR>24 THEN R=1
1965 PLOT C,R,B
1969 GOTO2000
1970 PLOT C,R,32
1971 R=R+1
1974 IFR>24 THEN R=1
1975 PLOT C,R,B
1979 GOTO2000
1980 PLOT C,R,32
1981 C=C-1
1982 R=R+1
1983 IFC<1 THEN C=32
1984 IFR>24 THEN R=1
1985 PLOT C,R,B
1989 GOTO2000
2000 P=2
2001 IFC=I AND R=J THEN 4200
2005 E=JOY(2)
2010 IFE=3 THEN D=D+1
2020 IFE=7 THEN D=D-1
2025 IFE=5 THEN 3900
2030 IFD>18 THEN D=11
2040 IFD<11 THEN D=18
2045 IFJOY(4)=2 THEN 2999
2050 IFJOY(4)=1 THEN 2300
2090 PLOT I,J,D
2099 GOTO1000
2200 PLOT C,R,19
2202 PLOT C,R,20
2203 PLOT C,R,21
2204 PLOT C,R,32
2210 C=RND(32)
2215 R=RND(24)
2216 PLOT C,R,21
2217 PLOT C,R,20
2218 PLOT C,R,19
2219 PLOT C,R,B
2220 GOTO2000
2300 PLOT I,J,19
2302 PLOT I,J,20
2303 PLOT I,J,21
2304 PLOT I,J,32
2310 I=RND(32)

```

```

2315 J=RND(24)
2316 PLOTI,J,21
2317 PLOTI,J,20
2318 PLOTI,J,19
2319 PLOTI,J,D
2320 GOTO1000
2999 SOUND27;1
3000 V=I
3001 W=J
3002 K=B
3004 IFD=11THEN1111
3010 IFD=12THEN1200
3015 IFD=13THEN1300
3020 IFD=14THEN1400
3025 IFD=15THEN1500
3030 IFD=18THEN1800
3035 IFD=17THEN1700
3040 IFD=16THEN1600
3900 T=I
3901 U=J
3902 K=D
3903 IFD=11THEN3912
3904 IFD=12THEN3920
3905 IFD=13THEN3930
3906 IFD=14THEN3940
3907 IFD=15THEN3950
3908 IFD=16THEN3960
3909 IFD=17THEN3970
3910 IFD=18THEN3980
3912 PLOTI,J,32
3913 I=I-1
3914 IFI<1THENI=32
3915 PLOTI,J,D
3919 GOTO1000
3920 PLOTI,J,32
3921 I=I-1
3922 J=J-1
3923 IFI<1THENI=32
3924 IFJ<1THENJ=24
3925 PLOTI,J,D
3929 GOTO1000
3930 PLOTI,J,32
3931 J=J-1
3934 IFJ<1THENJ=24
3935 PLOTI,J,D
3939 GOTO1000
3940 PLOTI,J,32
3941 I=I+1
3942 J=J-1
3943 IFJ<1THENJ=24
3944 IFI>32THENI=1
3945 PLOTI,J,D
3949 GOTO1000

```

```

3950 PLOTI,J,32
3951 I=I+1
3954 IFI>32THENI=1
3955 PLOTI,J,D
3959 GOTO1000
3960 PLOTI,J,32
3961 I=I+1
3962 J=J+1
3963 IFI>32THENI=1
3964 IFJ>24THENJ=1
3965 PLOTI,J,D
3969 GOTO1000
3970 PLOTI,J,32
3971 J=J+1
3974 IFJ>24THENJ=1
3975 PLOTI,J,D
3979 GOTO1000
3980 PLOTI,J,32
3981 I=I-1
3982 J=J+1
3983 IFI<1THENI=32
3984 IFJ>24THENJ=1
3985 PLOTI,J,D
3989 GOTO1000
4000 SOUND2;1
4001 PLOTX,Y,K
4010 FORI=96TO103
4011 CHARI,
4012 NEXT
4020 PLOTX,Y,K
4021 IFX-1<1THENX=32
4022 IFY+1>24THENY=1
4025 PLOTX-1,Y+1,103
4027 IFX+1>32THENX=1
4030 PLOTX+1,Y,97
4031 IFX-1<1THENX=32
4032 PLOTX-1,Y,98
4033 IFY+1>24THENY=1
4034 PLOTX,Y+1,99
4035 IFY-1<1THENY=24
4036 PLOTX,Y-1,100
4040 IFX+1>32THENX=1
4041 IFY+1>24THENY=1
4042 PLOTX+1,Y+1,101
4050 IFX-1<1THENX=32
4051 IFY-1<1THENY=24
4052 PLOTX-1,Y-1,102
4100 PLOTX,Y,96
4110 COLOR13,2,2
4112 PLOTX,Y,K
4113 CHAR96,4AAC7C1F3FD6B574
4135 CHAR100,00000000004040489

```

```

4143 CHAR102,0000100804020118
4144 CHAR103,0C010204
4145 CHAR97,000000FC00C020C0
4146 CHAR98,060100300C030003
4147 CHAR99,AA4A448484
4148 CHAR101,40605028
4149 PLOTX,Y,96
4150 COLOR13,15,1
4151 CHAR101,4060B02810
4152 COLOR13,12,1
4153 CHAR101,4060B0282010
4154 COLOR13,11,1
4155 CHAR101,4060B0201010
4156 FORL=1TO5
4157 NEXT
4173 COLOR13,10,1
4174 COLOR13,9,1
4175 COLOR13,7,1
4176 COLOR13,2,1
4190 GOTO5000
4200 CHARK,084CC6181872BA62
4201 X=C
4202 Y=J
4203 P=3
4204 GOTO4000
5000 CLS
5060 IFP=1THENPRINT"WELL DONE!! ";A$
5065 IFP=2THENPRINT"WELL DON !! ";B$
5070 PRINT
5071 PRINT"YOU WERE ABLE TO DESTROY YOUR"
5072 IFP=1THENPRINT"OPPONENT ";B$
5073 IFP=2THENPRINT"OPPONENT ";A$
5074 IFP=3THENPRINT"OPPONENT A          !"
5085 FORI=1TO5
5090 PRINT
5095 NEXT
6000 PRINT"DO YOU WANT ANOTHER GO (Y/N)"
6001 INPUTZ$
6002 IFZ$="Y"THEN1
6003 IFZ$="N"THENEND
6004 GOTO6000
9000 PRINT"          SPACE    DUEL"
      "          BY D.C.ROBERTSON"
9025 FORT=1TO50
9026 NEXT
9030 CLS
9031 PRINT"THE OBJECT IS VERY SIMPLE IT "
9032 PRINT"IS TO DESTROY YOUR OPPONENTS "
9033 PRINT"SHIP."
9035 PRINT
9036 PRINT"YOUR CONTROLS ARE-"
9037 PRINT
9038 PRINT"TO ROTATE LEFT MOVE THE      "

```

```

9039 PRINT"JOYSTICK LEFT"
9040 PRINT
9041 PRINT"TO ROTATE RIGHT MOVE THE      "
9042 PRINT"JOYSTICK RIGHT"
9043 PRINT
9045 PRINT"TO FIRE PRESS THE RIGHT FIRE "
9046 PRINT"BUTTON"
9047 PRINT
9048 PRINT"TO GO INTO HYPERSPACE PRESS  "
9049 PRINT"THE LEFT FIRE BUTTON."
9200 FORU=1TO400
9201 NEXT
9202 CLS
9300 PRINT"THE CONTROLS APPLY TO BOTH  "
9301 PRINT"JOYSTICKS."
9302 PRINT
9400 PRINT"YOU CAN NOT HIT YOUR OPPONENT"
9401 PRINT"AT POINT BLANK RANGE      "
9500 PRINT"PLEASE TYPE IN YOUR NAMES  "
9501 PRINT"PLAYER 1 ():";
9502 INPUTA$
9503 PRINT
9504 PRINT"PLAYER 2 ():";
9505 INPUTB$
9998 CLS
9999 GOTO1000

```

GOLF

Care to play a round on the Wizzard golf corse? Try to sink your putt but be careful that you don't lose your ball in the sand trap!

```

1      GOTO7000
3      REM *BRETT ELLIOTT '83*
4      GOSUB9000
10     CLS
15     DATA76,79,83,84,32
16     DATA66,65,76,76
20     PRINT"*****"
30     PRINT"* BRETT ELLIOTT'S MINI PUT *"
35     PRINT"*****"
36     PRINT
37     PRINT
38     PRINT
39     PRINT
40     PRINT
41     PRINT
42     PRINT"THE 'POWER' RATING SHOWS HOW"
43     PRINT
44     PRINT"HARD YOU WILL HIT THE BALL."
45     PRINT
46     PRINT"THE RIGHT ARROW INCREASES IT"
47     PRINT
48     PRINT"AND THE LEFT ONE DECREASES IT"
50     PRINT"PRESS 'SHIFT' TO HIT BALL ."
52     PRINT
53     PRINT"TRY NOT TO STOP IN THE SAND."
54     PRINT
55     PRINT
58     PRINT"<PRESS RETURN TO BEGIN>"
60     IFPEEK(27)=9THEN100
70     GOTO60
100    PRINT"PLAYER      HOLE      POWER  "
110    FORZ=1TO22
120    PRINT"  "
130    NEXT
131    PLOT3,2,8
132    PLOT3,3,10
133    PLOT4,2,8
134    PLOT5,2,14
135    PLOT4,3,11
136    PLOT5,3,15
138    PLOT3,4,12
140    PLOT4,4,13
146    PLOT3,20,120
147    PLOT5,20,120
148    PLOT32,20,120
150    FORZ=1TO32
160    FORX=21TO24

```



```

170 PLOTZ,X,8
180 NEXT
190 NEXT
191 B=RND(10)+5
192 H=RND(10)+17
195 PLOT10,1,P
197 PLOT18,1,N
198 PLOT27,1,S
199 PLOTH+1,21,16
200 PLOTH,21,9
202 PLOTH+3,21,16
203 PLOTH-4,21,16
210 PLOTB,20,1
220 IFB>HTHEN260
221 CHAR144,2020202020202020
222 CHAR146,2020202070F0F060
225 CHAR145,2020202020202020
230 PLOTB-1,18,144
235 PLOTB-1,19,145
240 PLOTB-1,20,146
245 V=(B-1)
250 GOTO300
260 CHAR144,0404040404040404
262 CHAR146,040404040E0F0F06
264 CHAR145,0404040404040404
265 PLOTB+1,18,144
266 PLOTB+1,19,145
270 PLOTB+1,20,146
275 V=(B+1)
300 IFPEEK(21)=68THENS=S+1
305 IFS>112THENS=104
310 IFPEEK(25)=9THENS=S-1
315 IFS<104THENS=112
318 IFPEEK(21)=34THEN340
320 PLOT27,1,S
330 GOTO300
340 REM * SHOOT SHOT *
350 IFP=49THENO=O+1
351 IFP=50THENT=T+1
352 IFB>HTHEN400
353 IFB+(S-103)>32THEN300
355 CHAR144,4040404020202020
356 CHAR145,2020202010101010
357 CHAR146,080808080E0F0F06
358 SOUND2;0
359 FORZ=BTOB+(S-103)
360 PLOTZ,20,1
370 PLOTZ,20,0
375 NEXT
378 B=(Z-1)
379 IFB=(H+1)ORB=(H+3)ORB=(H-4)THEN800
380 PLOTB,20,1
385 IFB=HTHEN500

```

```

388 FORZ=17TO20
389 PLOTV,Z,0
390 NEXT
395 GOTO210
400 IFB-(S-103)<2THEN300
401 CHAR144,0202020204040404
402 CHAR145,0404040408080808
403 CHAR146,1010101070F0F060
404 SOUND2;0
405 FORZ=BTOB-(S-103)STEP-1
410 PLOTZ,20,1
420 PLOTZ,20,0
425 NEXT
430 B=(Z+1)
435 IFB=(H+1)ORB=(H+3)ORB=(H-4)THEN800
440 PLOTB,20,1
450 IFB=HTHEN500
455 FORZ=17TO20
456 PLOTV,Z,0
457 NEXT
460 GOTO210
500 PLOTH-2,18,83
501 PLOTH-1,18,85
502 PLOTH,18,78
503 PLOTH+1,18,75
505 SOUND31;0,27;0
507 FORZ=H-3TOH+3
508 PLOTZ,18,0
510 NEXT
511 FORZ=17TO20
512 PLOTV,Z,0
515 NEXT
522 PLOTH,21,8
523 PLOTB,20,0
524 PLOTH+1,21,8
525 PLOTH+3,21,8
526 PLOTH-4,21,8
530 P=P+1
540 IFP>50THEN600
550 GOTO191
600 P=49
610 N=N+1
620 IFN>57THEN700
650 GOTO191
700 PRINT"*****"
710 PRINT
715 PRINT
720 PRINT"YOU TWO HAVE FINISHED "
730 PRINT
740 PRINT"HERE ARE THE FINAL SCORES"
750 PRINT
760 PRINT
765 PRINT

```

```

770 PRINT"PLAYER 1      ";O;
772 IFO<TTHENPRINT" THE BEST !"
773 IFT<OTHENPRINT" "
774 PRINT
775 PRINT
778 PRINT"PLAYER 2      ";T;
779 IFT<OTHENPRINT" THE CHAMP !"
780 IFO<TTHENPRINT" "
783 PRINT
784 PRINT
785 PRINT
790 PRINT
792 PRINT"<RETURN FOR ANOTHER GAME>"
793 PRINT
794 PRINT
795 PRINT
796 PRINT"*****"
798 IFPEEK(27)=9THEN3

799 GOTO798
800 REM * LOST BALL *
805 FORZ=110TO131
810 POKE4318,Z
820 NEXT
825 IFP=49THENO=O+5
826 IFP=50THENT=T+5
830 FORZ=(H-5)TOH+3
840 READD
850 PLOTZ,18,D
860 NEXT
870 RESTORE
872 FORZ=(H-5)TOH+3
873 PLOTZ,18,0
880 NEXT
882 FORZ=17TO20
883 PLOTV,Z,0
885 NEXT
890 GOTO522
7000 FORZ=110TO131
7010 POKE4318,Z
7020 NEXT
7030 FORZ=17TO29
7040 POKE4214,Z
7050 NEXT
7060 FORZ=205TO230
7070 POKE4322,Z
7080 NEXT
7100 GOTO4
9000 REM * SET COLORS CHARS *
9010 B=RND(10)+5
9015 CHAR2,B00770044F003443
9020 H=RND(10)+17
9030 P=49
9040 N=49

```

```

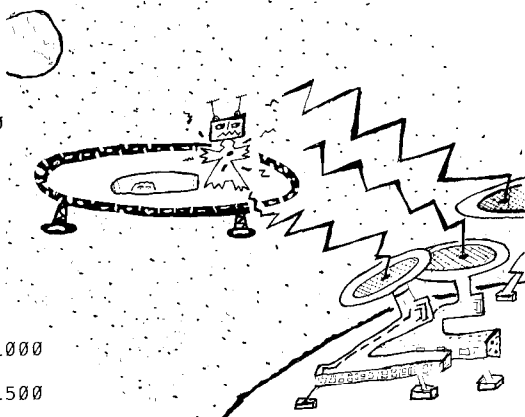
9050 S=104
9100 CHAR1,00000000183C3C18
9110 CHAR8,FFFFFFFFFFFFFFF
9120 CHAR9,000000000081C3E7
9125 CHAR10,FFFFFFFFFEFDBFF
9126 CHAR11,FFDFBF7EFEFCFCFA
9127 CHAR12,FFFFFFFFFEFCF0
9128 CHAR14,E0E0E1E6ECE0C080
9129 CHAR15,1008082824444088
9130 CHAR16,DF8E3803
9131 CHAR13,F0F474C5090A10E0
9135 CHAR104,0000000000000018
9136 CHAR105,00000000000000FF
9137 CHAR106,0000000000003CFF
9138 CHAR108,000000007EFFFFFF
9139 CHAR109,0000007EFFFFFF
9140 CHAR110,00003C7EFFFFFF
9141 CHAR111,003C7EFFFFFF
9142 CHAR112,3C7EFFFFFF
9143 CHAR107,0000000007EFFF
9144 CHAR120,060408985838183C
9145 CHAR144,2020202020202020
9146 CHAR145,2020202020202020
9147 CHAR146,2020202070F0F060
9200 COLOR2,11,6
9210 COLOR,6
9220 COLOR1,16,6
9230 FORZ=5TO12
9240 COLORZ,16,6
9250 NEXT
9260 COLOR3,2,11
9270 COLOR14,16,6
9280 COLOR15,16,6
9290 COLOR16,11,6
9295 COLOR19,2,6
9999 RETURN

```

U.F.O.

Can you help the renegade alien escape the planet? You must pilot your ship carefully to avoid both the pursuing U.F.O.s and the space mines. Keep a careful eye on your fuel level and keep watch on your passenger, he may fall out!

```
1  CLS
2  A=12
3  B=12
4  C=14
5  D=8
6  L=0
7  COLOR3,13,13
8  GOSUB9000
9  COLOR2,16,2
10 CHAR1,0040C07F0C182000
11 CHAR8,0024183C7EC37E3C
12 FORZ=3TO31
13 FORX=17TO20
16 PLOTZ,X,16
17 NEXT
18 NEXT
20 REM * BEGIN ACTION *
21 G=G+1
22 IFG>125THENGOSUB4100
23 PLOTf,1,G
24 IFRND(5)=1THENGOSUB5000
26 IFA=CANDB=DTHEN3000
27 IFF<19THENPOKE4214,245
28 IFG=120ANDF=23THENGOSUB6000
29 PLOTA,B,0
30 IFA=SANDB=16THENGOSUB6500
31 A=A+1
32 IFA>27THENA=12
33 IFPEEK(21)=17THENB=B-1
34 IFPEEK(21)=34THENR=R+1
35 IFB<3THENB=3
36 IFB>16THENB=16
37 IFA=20ANDB=3THENGOSUB4000
38 PLOTA,B,1
39 PLOTc,D,0
40 C=C+1
41 IFC>27THENC=14
42 M=RND(2)
43 IFM=1THEND=D+1
44 IFD>16THEND=16
45 IFM=2THEND=D-1
46 IFD<3THEND=3
47 IFC=(P+1)ANDJ<0THENGOSUB1000
48 IFB=HTHEN3000
49 IFC=(Q+1)ANDK<0THENGOSUB1500
50 IFB=ITHEN3000
```



```

55  PLOT C,D,8
56  J=J+1
57  IF J>10 THEN GOSUB 1030
58  K=K+1
59  IF K>10 THEN GOSUB 1530
60  IFO=0 THEN L=L+1
61  IFL>30 THEN 3000
65  GOTO 20
1000 SOUND 16;0
1001 H=D
1002 J=1
1010 PLOT P,H,9
1020 RETURN
1030 SOUND 1;0
1035 FOR Z=17 TO 29
1040 POKE 4210,Z
1050 NEXT
1055 PLOT P,H,0
1056 H=0
1060 J=-600
1070 GOSUB 9982
1080 RETURN
1500 SOUND 16;0
1501 I=D
1502 K=1
1510 PLOT Q,I,9
1520 RETURN
1530 SOUND 1;0
1535 FOR Z=17 TO 29
1540 POKE 4210,Z
1550 NEXT
1560 PLOT Q,I,0
1566 I=0
1570 K=-600
1580 GOSUB 9980
1590 RETURN
2000 REM
2001 PRINT"* BRETT ELLIOTT'S 'U F O' *"
2003 PRINT
2005 PRINT"YOU ARE FLYING A GREEN JET"
2006 PRINT
2007 PRINT"ABOVE THE PLANET VULCAN"
2008 PRINT
2009 PRINT"YOU HAVE A VULCAN PRISONER ON"
2010 PRINT"BOARD WHO IS TRYING TO GET"
2011 PRINT
2012 PRINT"AWAY FROM PRISON AND YOU ARE"
2013 PRINT
2014 PRINT"HELPING HIM ESCAPE."
2015 PRINT
2016 PRINT"THE VULCAN'S ARE AFTER HIM"
2017 PRINT
2020 PRINT"AND ARE GOING TO SHOOT YOU."

```

```

2025 PRINT
2026 PRINT"YOU'RE HIT IF YOU GET ON THE"
2027 PRINT
2028 PRINT"SAME LEVEL AS THE MINES !!"
2029 PRINT
2030 PRINT"PRESS RET'N FOR OPERATION"
2032 IFPEEK(27)=9THEN2100
2035 GOTO2032
2100 CLS
2105 PRINT"* BRETT ELLIOTT'S 'U F O' *"
2110 PRINT
2120 PRINT
2130 PRINT"THE CTRL BUTTON TAKES YOU UP"
2135 PRINT
2140 PRINT"AND SHIFT TAKES YOU DOWN."
2145 PRINT
2150 PRINT"THE PRISONER HATES SEATBELTS"
2155 PRINT
2160 PRINT"AND FALLS OUT A LOT. YOU MUST"
2175 PRINT"GET HIM BEFORE HE'S CAUGHT."
2180 PRINT
2185 PRINT"YOUR FUEL IS SHOWN UP TOP OF"
2190 PRINT
2195 PRINT"THE SCREEN. DON'T LET IT RUN"
2200 PRINT
2205 PRINT"OUT. TO FILL UP DOCK ON THE "
2215 PRINT"KEEP OFF THE LEVEL OF MINES"
2220 PRINT
2230 PRINT
2235 PRINT"<PRESS RETURN TO BEGIN>"
2240 IFPEEK(27)=9THENRETURN
2250 GOTO2240
3000 SOUND1;0
3005 FORZ=17TO29
3010 POKE4210,Z
3020 NEXT
3030 PRINT"SCORE...";Y;
3040 FORZ=1TO400
3050 NEXT
3060 RUN
4000 SOUND1;0
4005 FORZ=15TO25
4010 PLOTZ,1,120
4015 POKE4322,210
4020 NEXT
4025 SOUND1;0
4030 F=25
4035 G=120
4040 RETURN
4100 F=F-1
4110 G=120
4120 IFF<15THEN3000
4130 RETURN

```

```

5000 COLOR14,12,12
5010 COLOR14,2,2
5020 RETURN
6000 FORZ=(B+1)TO15
6010 PLOTA,Z,112
6020 PLOTA,Z,0
6025 FORV=1TO4
6026 NEXT
6030 NEXT
6032 O=0
6035 S=A
6040 PLOTA,Z,113
6050 RETURN
6500 SOUND10;0
6502 O=1
6505 L=0
6510 Y=Y+23
6511 RETURN
9000 REM * DEFINITIONS *
9001 GOSUB2000
9002 CLS
9005 CHAR9,08492A1CFC122940
9006 CHAR2,00000000FFFF8181
9007 G=120
9008 COLOR16,14,2
9010 FORZ=17TO29
9015 F=25
9020 POKE4210,Z
9030 NEXT
9040 FORZ=170TO194
9050 POKE4214,Z
9060 NEXT
9070 FORZ=205TO230
9075 POKE4322,Z
9076 J=-700
9077 K=-700
9080 NEXT
9090 M=RND(2)
9100 P=RND(10)+14
9110 PLOT20,2,2
9120 PLOT13,1,69
9130 PLOT27,1,70
9140 FORZ=15TO25
9150 PLOTZ,1,120
9160 NEXT
9200 FORZ=1TO15
9210 X=RND(2)
9220 IFX=1THENR=R+1
9230 COLOR15,16,2
9232 IFX=2THENR=R-1
9234 IFR<4THENR=4
9250 PLOTR,Z,104
9260 NEXT

```

9300 CHAR112,422418185A3C1818
9310 CHAR113,995A321818182442
9320 COLOR14,16,2
9335 CHAR120,FFFFFFFFFFFFFFFF
9336 CHAR121,FEFEFEFEFEFEFEFE
9337 CHAR122,F8F8F8F8F8F8F8F8
9338 CHAR123,F0F0F0F0F0F0F0F0
9339 CHAR124,C0C0C0C0C0C0C0C0
9340 CHAR125,0000000000000000
9970 SOUND1;0
9980 Q=RND(10)+14
9981 RETURN
9982 P=RND(10)+14
9999 RETURN

FLANKER

Here is a two player computerised version of the old favorite board game Reversi also known as Othello. Let your Wizzard move the pieces for you on the screen as you enjoy this age old game.

```
1    REM --WIZZARD FLANKER--
2    REM BY TONY FENECH
3    REM APRIL 83
10   CLS
11   PRINT"      FLANKER"
12   PRINT
13   PRINT
14   PRINT
15   PRINT"DO YOU WANT INSTRUCTIONS ?"
16   PRINT"REPLY Y OR N";
17   INPUTB$
18   IFB$="Y"THEN8000
19   IFB$<>"N"THEN16
90   CLS
91   DIME(11)
100  DIMS(8,8)
101  DATA70,76,65,78,75,69,82
102  FORB=12TO18
103  READC
104  PLOTB,4,C
105  NEXT
129  CHAR105,FEFEFEFEFEFEFE00
130  CHAR115,00003C3C3C3C0000
131  CHAR125,FEFEFEFEFEFEFE00
132  CHAR135,FEFEFEFEFEFEFE00
133  CHAR145,6060606060603E00
134  CHAR146,3E60607C60603E00
135  CHAR147,3E60607C60606000
136  CHAR148,7E18181818181800
137  CHAR155,7C62627C68646200
138  CHAR156,3C18181818183C00
139  CHAR157,3CC2C0CEC6C6FE00
140  CHAR158,6262627E62626200
141  CHAR159,7E18181818181800
142  COLOR19,7,2
143  COLOR20,16,2
148  COLOR14,11,6
149  FORW=11TO18
150  FORX=11TO18
160  PLOTX,W,105
180  NEXTX
190  NEXTW
195  W=10
200  FORX=49TO56
210  W=W+1
220  PLOTW,9,X
```

```

230  NEXT
240  W=10
250  FORX=49TO56
260  W=W+1
270  PLOT9,W,X
280  NEXT
290  COLOR17,16,2
300  PLOT14,14,135
301  SOUND31;3
310  PLOT15,15,135
311  SOUND31;3
320  COLOR16,7,2
330  PLOT15,14,125
331  SOUND31;3
340  PLOT14,15,125
341  SOUND31;3
350  S(4,5)=1
360  S(5,4)=1
370  S(4,4)=2
380  S(5,5)=2
400  X=0
401  E(1)=2
402  E(2)=2
403  E(5)=2
404  E(6)=2
410  W=0
420  P=2
421  PLOT22,9,83
422  PLOT23,9,67
423  PLOT24,9,79
424  PLOT25,9,82
425  PLOT26,9,69
426  PLOT22,11,145
427  PLOT23,11,146
428  PLOT24,11,147
429  PLOT25,11,148
430  PLOT22,13,155
431  PLOT23,13,156
432  PLOT24,13,157
433  PLOT25,13,158
434  PLOT26,13,159
435  DATA84,79,32,80,76,65,89
436  FORB=25TO31
437  READD
438  PLOTB,18,D
439  NEXT
440  GOSUB 6000
450  GOSUB 4000
460  W=0
470  L=-1
480  I=0
490  GOSUB 5000
500  L=-1

```

```

510 I=1
520 GOSUB 5000
530 L=0
540 I=1
550 GOSUB 5000
560 L=1
570 I=1
580 GOSUB 5000
590 L=1
600 I=0
610 GOSUB 5000
620 L=1
630 I=-1
640 GOSUB 5000
650 L=0
660 I=-1
670 GOSUB 5000
680 L=-1
690 I=-1
700 GOSUB 5000
705 IFW=0THENSOUND2,3
710 IFW=0 THEN 800
720 S(H,V)=P
730 PLOTV+10,H+10,Q
731 SOUND31;3
740 GOTO440
800 GOSUB 4050
801 GOTO460
810 GOTO 450
4000 V=1
4001 H=1
4010 GOTO 4100
4050 IFT=0THENT=105
4051 IFT=1THENT=125
4052 IFT=2THENT=135
4060 PLOTZ+10,Y+10,T
4100 Y=H
4110 Z=V
4120 T=S(Y,Z)
4121 IFT=0 THEN U=2
4122 IFT=1 THEN U=7
4123 IFT=2 THEN U=16
4124 COLOR15,U,2
4130 PLOTV+10,H+10,115
4200 LET J=JOY(P)
4210 IFJ=5 THEN 4300
4220 IFJ=3 THEN 4400
4230 IFJ=1 THEN 4500
4240 IFJ=7 THEN 4600
4250 IFJ=0 THEN 4700
4260 GOTO 4200
4300 IFH=1 THEN 4200
4310 H=H-1

```

```

4320 GOTO 4050
4400 IFV=8 THEN 4200
4410 V=V+1
4420 GOTO 4050
4500 IFH=8 THEN 4200
4510 H=H+1
4520 GOTO 4050
4600 IFV=1 THEN 4200
4610 V=V-1
4620 GOTO 4050
4700 LET K=JOY(P+2)
4702 IFK=0 THEN 4200
4703 IFK=1 THEN 4710
4704 IFT=0 THEN T=105
4705 IFT=1 THEN T=125
4706 IFT=2 THEN T=135
4707 PLOT Z+10, Y+10, T
4708 GOSUB 6000
4709 GOTO 4000
4710 IFS(H,V)<>0 THEN SOUND 2;3
4711 IFS(H,V)<>0 THEN 4200
4726 COLOR 15,6,2
4730 RETURN
5000 REM RECORD WINS IF ANY
5001 C=V
5002 R=H
5010 X=0
5020 C=C+L
5030 IFC>=9 OR C<=0 THEN 5300
5040 R=R+I
5050 IFR>=9 OR R<=0 THEN 5300
5060 IFS(R,C)<>0 THEN 5100
5070 X=X+1
5080 GOTO 5020
5100 IFX=0 THEN 5300
5110 IFS(R,C)<>P THEN 5300
5120 W=W+X
5130 C=C-L
5140 R=R-I
5150 IFR=H AND C=V THEN 5300
5160 S(R,C)=P
5170 PLOT C+10, R+10, Q
5171 SOUND 31;3
5180 GOTO 5130
5300 RETURN
6000 REM SET NXT PLR CNTRLS
6001 IFW=0 THEN 6030
6002 E(P)=E(P)+1+W
6003 E(O)=E(O)-W
6004 E(P+2)=0
6005 E(P+4)=E(P)
6006 IFE(P+4)<10 THEN 6010
6007 E(P+2)=E(P+2)+1

```

```

6008 E(P+4)=E(P+4)-10
6009 GOTO 6006
6010 E(O+2)=0
6011 E(O+4)=E(O)
6012 IFE(O+4)<10 THEN 6029
6013 E(O+2)=E(O+2)+1
6014 E(O+4)=E(O+4)-10
6015 GOTO 6012
6029 W=0
6030 IFP=1 THEN 6120
6035 Q=125
6040 P=1
6041 O=2
6050 GOTO6151
6120 Q=135
6130 P=2
6140 O=1
6151 E(9)=E(5)+48
6152 E(7)=E(3)+48
6153 PLOT28,11,E(7)
6154 PLOT29,11,E(9)
6156 E(10)=E(6)+48
6157 E(8)=E(4)+48
6159 PLOT28,13,E(8)
6160 PLOT29,13,E(10)
6170 E(11)=E(1)+E(2)
6171 IFE(11)<64THEN6200
6172 IFE(1)>E(2)THENQ=125
6173 IFE(1)<E(2)THENQ=135
6174 IFE(1)=E(2)THENQ=32
6200 PLOT22,17,Q
6210 PLOT23,17,Q
6220 PLOT22,18,Q
6230 PLOT23,18,Q
6235 IFE(11)>=64THEN9000
6240 RETURN
8000 REM INSTRUCTIONS
8001 CLS
8002 PRINT"          FLANKER"
8003 PRINT
8004 PRINT"THE AIM IS TO END THE GAME"
8006 PRINT"WITH MORE THAN 32 UNITS"
8008 PRINT"CAPTURED. UNITS ARE CAPTURED"
8010 PRINT"BY FLANKING ONE OR MORE OF"
8012 PRINT"YOUR OPPONENT'S UNITS ON TWO"
8014 PRINT"OPPOSING SIDES.. VERTICALLY,"
8016 PRINT"HORIZONTALLY OR DIAGONALLY."
8020 PRINT
8022 PRINT"CURSOR CAN BE MOVED BY JOY"
8024 PRINT"STICKS. WHEN CURSOR IS IN"
8026 PRINT"DESIRED SQUARE PRESS LEFT"
8028 PRINT"FIRE BUTTON TO CAPTURE YOUR"
8030 PRINT"OPPONENT'S FLANKED UNITS."

```

```

8032 PRINT"ONLY PRESS RIGHT FIRE BUTTON"
8034 PRINT"WHEN A VALID MOVE CANNOT BE"
8036 PRINT"MADE.. THIS WILL FORFIET "
8038 PRINT"YOUR TURN."
8040 PRINT
8042 PRINT"      GOOD HUNTING"
8044 PRINT
8990 PRINT"PRESS ANY KEY TO CONTINUE"
8995 INPUTB$
8999 GOTO90
9000 IFE(1)=E(2)THEN9199
9110 DATA32,32,87,32,79,32,78
9120 FORB=25TO31
9130 READD
9140 PLOTB,18,D
9150 NEXT
9160 GOTO9500
9199 REM DRAWN GAME
9200 DATA68,32,82,32,65,32,87
9210 GOTO9120
9500 PRINT"      END OF GAME"
9510 PRINT
9520 PRINT"DO YOU WANT TO PLAY AGAIN ?"
9530 PRINT"REPLY Y OR N";
9540 INPUTB$
9551 IFB$="N"THEN END
9555 IFB$="Y"THENRUN 90
9560 GOTO9530
9999 END

```

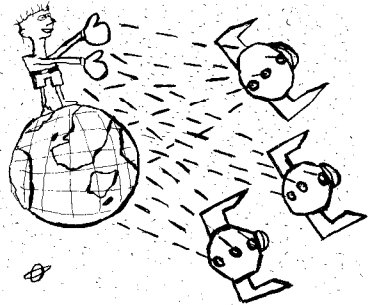
OMEGA BATTLE

Can you hold off the invading saucers? You only have 50 shots to destroy the aliens that appear at random on the screen. Be careful not to run into any that appear at ground level, the collision will destroy you!

```

1  CHAR1,18181818BDBDFF81
2  CHAR8,0000181818
3  CHAR100,0000007E
4  CHAR101,00101010101010
5  CHAR30,42BDA55A5AA5BD42
6  CHAR2,1818183C7EFF5AA5
7  CHAR3,42FFFFFFFF244281
8  CHAR4,181818187E7EDDBD
9  CHAR5,1818995A3C3C5A99
10 CHAR6,1818995A3CFF3CC3
11 CHAR104,FFFCF0E0C0C08080
12 B=23
13 GOSUB7000
14 COLOR1,6,1
15 COLOR2,16,1
16 COLOR16,10,1
17 CHAR105,FF3F0F0703030101
18 CHAR106,01010303070F3FFF
19 CHAR107,8080C0C0E0F0FCFF
20 COLOR4,7,1
25 COLOR13,12,7
26 COLOR17,14,1
27 X=4
28 Y=4
29 COLOR14,7,1
30 COLOR5,16,1
31 CHAR32,00008000000010
32 CHAR91,894A2CF81F345291
35 GOSUB6000
36 T=48
37 S=48
38 P=1
40 A=16
41 H=16
42 N=18
45 CLS
50 PLOT A,23,1
60 GOSUB4000
65 REM
70 REM > OMEGA BATTLE <
75 REM
80 REM > BY BILL BOVILL <
85 REM
99 COLOR12,8,1
100 J=JOY(1)
101 COLOR16,10,1

```



```

102  IFE>3THENGOSUB9200
103  IFRND(0)<10THENGOSUB9000
104  CHAR120,3C7EFF5A5AFF7E3C
106  IF H=A AND N=B THEN 9500
110  IFJ=7THEN1000
120  IFJ=3THEN2000
130  IFJOY(3)>0THEN3000
141  COLOR16,8,1
150  COLOR5,RND(2)+14,1
160  CHAR120,3C7EFA5A5FF7E3C
200  GOTO100
1000 A=A-1
1001 CHAR120,3C7EFA5A5FF7E3C
1005 IFA=3THENA=4
1010 PLOTA,B,1
1011 PLOTA+1,B,32
1020 GOTO100
2000 A=A+1
2001 CHAR120,3C7EFA5A5FF7E3C
2005 IFA=31THENA=30
2010 PLOTA,B,1
2011 PLOTA-1,B,32
2020 GOTO100
3000 M=M+1
3005 IFV=99THENRETURN
3006 FORF=21TO10STEP-1
3007 IFM=50THEN9500
3008 IFF=NANDA=HTHEN9900
3009 IFF=YANDA=XTHENGOSUB5600
3010 PLOTA,F,8
3011 PLOTA,F+1,32
3020 NEXT
3025 PLOTA,10,30
3026 PLOTA,10,32
3027 B=23
3028 IFI=1THENGOSUB9000
3029 I=0
3030 GOTO100
4000 FORC=2TO32
4010 PLOT3,24,100
4015 PLOT3,1,100
4020 NEXT
4021 PLOT3,23,107
4022 PLOT31,23,106
4030 FORC=24TO1STEP-1
4040 PLOT32,C,101
4045 PLOT2,C,101
4050 NEXT
4060 PLOT3,2,104
4070 PLOT31,2,105
4500 RETURN
5000 PRINT"THERE ARE THREE LEVELS OF"
5005 PRINT

```

```

5010 PRINT"DIFICULTY:-"
5015 PRINT
5016 PRINT
5020 PRINT"1 - BEGINNER."
5025 FORJ=1TO3
5030 PRINT
5035 NEXT
5040 PRINT"2 - AMATEUR."
5045 FORJ=1TO3
5050 PRINT
5055 NEXT
5060 PRINT"3 - PROFESSIONAL."
5065 FORJ=1TO3
5070 PRINT
5075 NEXT
5080 PRINT">WHICH LEVEL?";
5085 D=49
5090 PLOT16,24,D
5095 IFJOY(3)>0THEN5130
5100 IFJOY(1)>0THEN5300
5110 GOTO5095
5130 D=D+1
5135 IFD=52THEND=49
5140 PLOT16,24,D
5145 GOTO5095
5300 IFD=49THENO=100
5310 IFD=50THENO=50
5320 IFD=51THENO=20
5490 PRINT
5500 RETURN
5600 X=RND(26)+2
5605 Y=4
5610 E=-10
5615 T=T+1
5616 S=S-1
5617 GOSUB9900
5620 RETURN
6000 PRINT"1 > < ASTROSMASHER"
6010 PRINT
6020 PRINT"2 > < SPACESHOOTER"
6030 PRINT
6031 PRINT"3 > < CREEPYCRAWLER"
6032 PRINT
6033 PRINT"4 > < SPACEDOOBER"
6034 PRINT
6035 PRINT"5 > < SPACEPROBE I"
6036 PRINT
6037 PRINT"6 > < SPACEPROBE II"
6039 PRINT
6040 PRINT"WHAT IS YOUR STARSHIP CHOICE";
6041 D=49
6045 PLOT32,24,49
6046 PLOT31,24,63

```

```

6050 REM
6051 IFJOY(3)>0THEN6056
6053 COLOR5,RND(2)+14,1
6054 IFJOY(1)>0THEN6060
6055 GOTO6051
6056 D=D+1
6057 IFD=55THEN6041
6058 PLOT32,24,D
6059 GOTO6051
6060 IFD=49THENRETURN
6070 IFD=50THEN6100
6080 IFD=51THEN6200
6081 IFD=52THEN6300
6082 IFD=53THEN6400
6083 IFD=54THEN6500
6089 CLS
6090 GOTO6000
6100 CHAR1,1818183C7EFF5AA5
6105 CHAR8,000000001818
6110 RETURN
6200 CHAR1,42FFFFFFFF244281
6210 CHAR8,000000424242
6220 RETURN
6300 CHAR1,181818187E7EDBDB
6310 CHAR8,00081C1C0808081C
6320 RETURN
6400 CHAR1,1818995A3C3C5A99
6410 CHAR8,0000000000181881
6420 RETURN
6500 CHAR1,1818995A3CFF3CC3
6510 CHAR8,00000000001C081C
6520 RETURN
7000 CLS
7010 FORA=6TO16
7020 COLORA,7,1
7030 NEXT
7095 PRINT" ";
7100 PRINT" >OMEGA BATTLE<"
7110 FORA=1TO3
7120 PRINT
7130 NEXT
7131 GOSUB8100
7132 GOSUB8000
7134 CLS
7135 GOSUB5000
7136 CLS
7140 PRINT" YOU CAN CHOOSE WHICH"
7150 PRINT
7160 PRINT" SPACESHIP YOU WANT BY"
7170 PRINT
7180 PRINT" SELECTING ITS NUMBER WITH"
7190 PRINT
7200 PRINT" THE FIRE-BUTTON"

```

```

7210 PRINT
7500 RETURN
8000 REM > MUSIC <
8005 FORF=1TO3
8010 SOUND2;3,5;3,14;3
8020 NEXT
8040 SOUND2;2,4;2,13;2
8050 SOUND2;0,6;0,15;0
8060 SOUND2;3,5;3,14;3
8070 SOUND2;2,4;2,13;2
8080 SOUND2;0,6;0,15;0
8090 SOUND2;6,5;6,14;6
8091 FORN=1TO100
8092 NEXT
8095 RETURN
8100 PRINT"YOU HAVE 50 SHOTS AT THE EN-"
8105 PRINT
8110 PRINT"EMY.ON YOUR 50TH SHOT YOU "
8115 PRINT
8120 PRINT"WILL BE DESTROYED.AVOID GRO-"
8125 PRINT
8130 PRINT"UND LEVEL ALIENS,THEY WILL"
8135 PRINT
8140 PRINT"DESTROY YOU ON CONTACT."
8145 PRINT
8200 RETURN
9000 REM > ALIEN HYPERSPACE <
9005 CHAR120,003C7E7E7E7E3C
9010 CHAR120,0000183C3C18
9020 CHAR120,0000001818
9030 CHAR120,
9050 PLOTH,N,32
9060 H=RND(25)+5
9070 N=RND(15)+8
9080 IFRND(4)=3THENN=23
9090 PLOTH,N,120
9091 CHAR120,00000018
9092 CHAR120,0000183C3C18
9093 CHAR120,003C7E7E7E7E3C
9094 CHAR120,3CEFFA5A5FF7E3C
9095 I=0
9100 E=E+1
9110 IFE=20THEN9200
9120 RETURN
9200 REM> S M A R T B O M B <
9205 PLOTX,Y,91
9220 PLOTX,Y,32
9230 IFX=AANDY=BTHEN9500
9240 IFX<ATHENX=X+1
9250 IFX>ATHENX=X-1
9260 IFY<BTHENY=Y+1
9270 IFY>BTHENY=Y-1
9280 RETURN

```

```

9500 PLOTA,B,30
9501 FORQ=1TO5
9505 COLOR4,7,1
9506 COLOR4,1,1
9507 COLOR4,10,1
9508 COLOR4,1,1
9509 COLOR4,9,1
9510 COLOR4,1,1
9511 V=99
9520 NEXT
9521 FORQ=NT023
9522 PLOTH,Q,120
9523 PLOTH,Q-1,32
9524 NEXT
9530 IFT>52THEN9630
9531 FORQ=1TO10
9532 CHAR32,
9533 CHAR32,AA55AA55AA55AA55
9534 NEXT
9535 FORQ=1TO8
9536 COLORQ,1,1
9537 NEXT
9538 FORQ=12TO16
9539 COLORQ,1,1
9540 NEXT
9541 SOUND2;4,5;4,14;4
9542 SOUND2;3,5;3,14;3
9543 SOUND2;1,5;1,14;1
9544 SOUND2;4,5;4,14;4
9545 SOUND2;3,9;3,17;3
9546 SOUND2;1,7;1,16;1
9547 SOUND2;3,7;3,16;3
9548 SOUND2;1,5;1,14;1
9549 SOUND2;3,5;3,14;3
9550 DATA80,76,65,78,69,84,32,73,83,32,68,69,65,68
9551 SOUND2,1,4,1,12,1
9552 SOUND2;7,5;7,14;7
9560 FORK=10TO23
9570 READF
9580 PLOTK,14,F
9590 NEXT
9591 IFJOY(1)=0THEN9591
9595 CLS
9600 RUN
9630 DATA80,76,65,78,69,84,32,73,83,32,83,65,86,69,68
9640 FORK=9TO23
9650 READF
9660 PLOTK,14,F
9670 NEXT
9671 FORA=1TO10
9672 S=NRD(30)+1
9673 SOUNDS;0,S+1;0,S-1;0
9674 NEXT

```

```
9680 IFJOY(1)=0THEN9680
9685 CLS
9690 RUN
9900 REM
9905 S=S+1
9910 IFS=58THENT=T+1
9911 IFS=58THENS=48
9915 IFT=58THEN9550
9920 PLOT4,2,T
9930 PLOT5,2,S
9940 PLOT6,2,48
9945 IFE=-10THENRETURN
9950 I=I+1
9960 PLOTH,N+1,32
9982 PLOTH,N,30
9983 PLOTH,N,32
9988 F=10
9990 NEXTF
9998 GOSUB9000
9999 GOTO100
```

CATERPILLAR

Use the joysticks to manoever the caterpillar around your Wizzards screen. The longer the trail you leave behind, the higher the score. When you run into your trail, your game is over. How long can you make your trail before you die?

INSTRUCTIONS

The four fire buttons control the caterpillars movement.

On the Left hand controller:-

left button moves the caterpillar DOWN

Right button moves the caterpillar LEFT

On the Right hand controller:-

Left button moves the caterpillar UP

Right button moves the caterpillar RIGHT

```
10  CLS
20  REM <--CATERPILLAR-->
30  REM <--A R KILGOUR-->
40  REM
50  REM
60  REM
70  REM
80  DIML(15,15)
85  P=100
90  CHAR1,183C7EFFFF7E3C18
95  COLOR0,12
100 COLOR1,4,1
101 CHAR28,00000000000000C0C0
102 CHAR29,C0C0
103 CHAR30,0303
104 CHAR31,00000000000000303
110 CHAR8,FF818181818181FF
120 COLOR2,9,1
130 CHAR16,66141C2A3E3E1436
140 COLOR3,16,1
150 CHAR24,000000000000FFFF
160 CHAR25,C0C0C0C0C0C0C0C0
170 CHAR26,FFFF
180 CHAR27,030303030303030303
190 COLOR4,2,1
200 FORC=5TO12
201 COLORC,2,1
202 NEXT
203 R=1
208 CLS
310 PRINT"
320 FORC=1TO15
```

CATERPILLAR"



```

330 PRINT
340 NEXT
350 PRINT" 10----POINTS----200 ZAP"
360 PLOT17,22,16
370 PLOT27,22,8
380 FORC=3TO27
390 PLOT C,22,1
400 IFC=17THENGOSUB5040
410 IFC=27THENGOSUB9000
411 SOUND1;0
420 NEXT
430 CLS
440 R=0
500 PRINT" CATERPILLAR"
501 FORC=1TO22
502 PRINT
503 NEXT
509 COLOR0,12
510 FORC=8TO24
520 PLOT C,4,24
530 NEXT
540 FORC=4TO20
550 PLOT24,C,25
560 NEXT
561 PLOT24,4,28
570 FORC=24TO8STEP-1
580 PLOT C,20,26
590 NEXT
591 PLOT24,20,29
600 FORC=20TO4STEP-1
610 PLOT8,C,27
620 NEXT
621 PLOT8,20,30
622 PLOT8,4,31
630 T=0
640 G=0
650 D=10
660 X=7
670 Y=7
680 PLOTX+8,Y+4,1
690 COLOR0,12
1000 X=X+1
1001 T=T+1
1010 IFX=16THEN9000
1020 L(X,Y)=L(X,Y)+1
1030 IFL(X,Y)>1THENGOSUB5000
1031 IFG=1THEN9000
1040 PLOTX+8,Y+4,1
1041 POKE1242,196
1042 PRINT"SCORE ";T*10+S,"HI SCORE ";H
1043 IFT/D=INT(T/D)THENGOSUB6000
1044 IFT>PTHEN8000
1050 IFJOY(4)=1THEN3000

```

```

1060 IFJOY(3)=2THEN2000
1070 IFJOY(3)=1THEN4000
1080 GOTO1000
2000 X=X-1
2001 T=T+1
2010 IFX=0THEN9000
2020 L(X,Y)=L(X,Y)+1
2030 IFL(X,Y)>1THENGOSUB5000
2031 IFG=1THEN9000
2040 PLOTX+8,Y+4,1
2041 POKE1242,196
2042 PRINT"SCORE ";T*10+S,"HI SCORE ";H
2043 IFT/D=INT(T/D)THENGOSUB6000
2044 IFT>PTHEN8000
2050 IFJOY(4)=1THEN3000
2060 IFJOY(4)=2THEN1000
2070 IFJOY(3)=1THEN4000
2080 GOTO2000
3000 Y=Y-1
3001 T=T+1
3010 IFY=0THEN9000
3020 L(X,Y)=L(X,Y)+1
3030 IFL(X,Y)>1THENGOSUB5000
3031 IFG=1THEN9000
3040 PLOTX+8,Y+4,1
3041 POKE1242,196
3042 PRINT"SCORE ";T*10+S,"HI SCORE ";H
3043 IFT/D=INT(T/D)THENGOSUB6000
3044 IFT>PTHEN8000
3050 IFJOY(3)=1THEN4000
3060 IFJOY(4)=2THEN1000
3070 IFJOY(3)=2THEN2000
3080 GOTO3000
4000 Y=Y+1
4001 T=T+1
4010 IFY=16THEN9000
4020 L(X,Y)=L(X,Y)+1
4030 IFL(X,Y)>1THENGOSUB5000
4031 IFG=1THEN9000
4040 PLOTX+8,Y+4,1
4041 POKE1242,196
4042 PRINT"SCORE ";T*10+S,"HI SCORE ";H
4043 IFT/D=INT(T/D)THENGOSUB6000
4044 IFT>PTHEN8000
4050 IFJOY(4)=1THEN3000
4060 IFJOY(4)=2THEN1000
4070 IFJOY(3)=2THEN2000
4080 COTO4000
5000 IF L(X,Y) < 4 THEN G=1
5010 IF G=1 THEN RETURN
5020 L(X,Y)=1
5030 S=S+20%
5040 SOUND2;0

```

```

5050 SOUND4;0
5060 SOUND7;3,19;5,31;7
5070 RETURN
6000 A=RND(15)
6010 B=RND(15)
6030 L(A,B)=2
6040 PLOTA+8,B+4,8
6050 A=RND(15)
6060 B=RND(15)
6070 L(A,B)=3
7080 PLOTA+8,B+4,16
7090 RETURN
8000 CLS
8010 S=S+T*10
8020 COLOR0,2
8030 FORC=5TO12
8040 COLORC,9,1
8045 NEXT
8050 PRINT"          BONUS"
8060 PRINT
8070 PRINT
8080 PRINT
8090 PRINT"SCORE      ";S
8100 PRINT
8110 PRINT"          +"
8120 PRINT
8130 PRINT"BONUS      1000"
8135 P=P+20
8136 IFP>200THENP=201
8140 PRINT
8150 PRINT"SCORE      ";
8160 S=S+1000
8170 PRINTS
8180 FORA=1TO15
8190 FORB=1TO15
8200 L(A,B)=0
8210 NEXT
8220 NEXT
8230 T=0
8240 X=7
8250 Y=7
8260 CLS
8270 FORC=5TO12
8280 COLORC,2,1
8290 NEXT
8300 GOTO500
9000 COLOR0,16
9010 SOUND31;0
9020 COLOR0,12
9030 SOUND12;0
9040 COLOR0,9
9050 SOUND31;0
9060 COLOR0,2

```

```

9070 SOUND31;1,19;5,7;7
9080 COLOR0,12
9085 CLS
9090 IFR=1THENRETURN
9091 FORC=5TO12
9092 COLORC,2,1
9093 NEXT
9100 S=S+T*10
9110 IFS>HTHEN9500
9120 PRINT"      GAME OVER"
9130 PRINT"      #####"
9140 FORC=1TO5
9150 PRINT
9155 NEXT
9156 PRINT" ",Z$
9157 PRINT
9160 PRINT"SCORE ";S,"HI SCORE ";H
9170 FORC=1TO5
9180 PRINT
9190 NEXT
9195 PRINT"ANOTHER GAME";
9196 P=100
9200 INPUTI$
9210 GOTO9700
9500 PRINT"      HI SCORE"
9510 PRINT
9520 PRINT
9530 PRINT
9540 PRINT"      ";S
9550 FORC=1TO10
9560 PRINT
9570 NEXT
9580 PRINT"ENTER YOUR NAME"
9590 PRINT
9600 PRINT"FOR THE HALL OF FAME"
9610 PRINT
9620 INPUTZ$
9630 H=S
9700 S=0
9710 T=0
9715 P=100
9720 FORA=1TO15
9730 FORB=1TO15
9740 L(A,B)=0
9750 NEXT
9760 NEXT
9770 CLS
9780 GOTO500

```

You must parachute from your helicopter to the stormy sea below. If you can land on the raft all is well, but if you miss and fall into the icy water

Use the CTRL key to move to the left and the Right Arrow to move to the right. You have four chances. Good Luck!

```
2      CLS
3      GOSUB 9000
5      GOSUB 3000
20     CLS
25     GOSUB 1000
30     X=5
32     IF O<1 THEN PLOT 27,1,15
34     IF O<2 THEN PLOT 28,1,15
36     IF O<3 THEN PLOT 29,1,15
38     IF O<4 THEN PLOT 30,1,15
60     IF JOY(3)>0 THEN D=-1
70     IF JOY(4)>0 THEN D=1
71     PLOT Y,X,32
72     PLOT H,5,11
74     PLOT H,4,9
80     IF Y<2 THEN D=1
90     IF Y>31 THEN D=-1
92     Y=Y+D
94     X=X+1
95     PLOT Y,X,15
115    PLOT H,4,10
120    IF X=23 THEN 500
125    PLOT T,23,32
128    PLOT T+1,23,32
130    U=RND(2)+1
132    IF U=1 THEN T=T+1
134    IF U=2 THEN T=T-1
140    PLOT T,23,5
145    IF G=2 THEN GOTO 60
150    PLOT T+1,23,5
180    GOTO 60
384    SOUND 1;0
500    IF Y=T THEN 700
502    IF G=2 THEN GOTO 512
505    L=T+1
510    IF Y=L THEN 700
512    O=O+1
514    IF O=5 THEN GOTO 2002
515    POKE 846,32
520    PRINT"  YOU HAVE CRASHED.";
530    PLOT Y,23,14
580    FOR P=272 TO 277
583    POKE 4110,-P
584    FOR Z=1 TO 2
585    NEXT
```

```

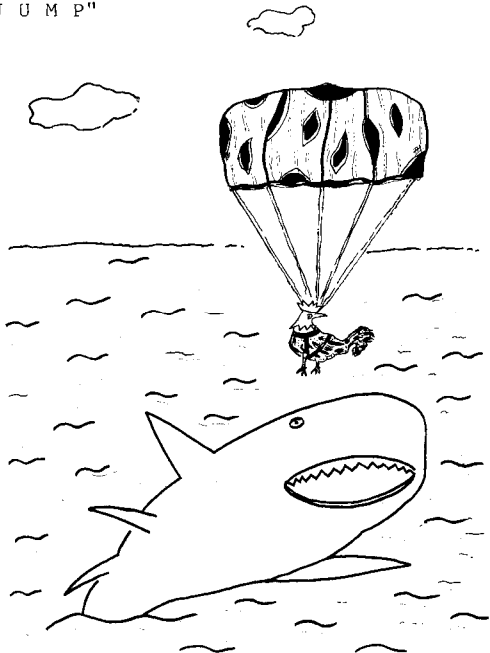
588 NEXT P
610 GOTO 20
700 POKE 846,32
705 PRINT"      YOU HAVE LANDED.";
710 R=R+1
715 FOR X=1 TO 100
718 NEXT
720 GOTO 20
1000 T=RND(14)+10
1025 CHAR 5,000000000007EFFFF
1030 Y=RND(20)+5
1035 Y=INT(Y)
1040 D=RND(1)+1
1042 IF D>1 THEN D>1
1045 H=Y
1050 CHAR 10,FF1038FE82A2827C
1055 CHAR 9,101038FE82A2827C
1056 CHAR 100,060C3C7CFCFFFFFFF
1070 CHAR 11,207F
1080 CHAR 14,000026AF7777AF26
1105 CHAR 15,3C7E7E24187E1824
1106 COLOR 0,6
1107 COLOR 13,6,11
1108 COLOR 1,9,11
1109 COLOR 2,2,11
1110 COLOR 5,11,11
1111 COLOR 6,3,11
1112 COLOR 7,3,11
1113 COLOR 8,3,11
1114 COLOR 9,3,11
1115 COLOR 10,3,11
1116 COLOR 11,3,11
1117 COLOR 12,3,11
1118 FOR Q=1 TO 32
1120 PLOT Q,24,100
1130 NEXT
1200 RETURN
2002 PRINT
2003 POKE 846,34
2004 CLS
2005 PRINT"      ";
2007 POKE 846,66
2010 PRINT"      END OF GAME";
2012 POKE 846,98
2015 PRINT"      "
2030 POKE 846,161
2040 IF R=1 THEN PRINT " YOU HAVE LANDED 1 MAN.";
2045 IF R<>1 THEN PRINT " YOU HAVE LANDED ";R;" MEN.";
2050 GOTO 3156
2980 RETURN
3000 CLS
3010 CHAR 2,80C0E0F0F8FCFEFF
3020 CHAR 3,FF7F3F1F0F070301

```

```

3030 CHAR 4,FFFEFCF8F0E0C080
3040 CHAR 6,0103070F1F3F7FFF
3071 CHAR 1,FFFFFFFFFFFFFFFF
3072 CHAR 15,FFFFFFFFFFFFFFFF
3073 COLOR 1,11,1
3074 COLOR 2,15,1
3075 CHAR 14,18181818FFFFFFFF
3110 COLOR 0,2
3115 PRINT"      "
3120 PRINT"      "
3131 PRINT"      "
3132 PRINT"      "
3133 PRINT"      "
3134 PRINT"      "
3135 PRINT"      "
3136 PRINT"      "
3137 PRINT"      "
3138 PRINT"      "
3139 PRINT"      "
3140 PRINT"      C O P T E R"
3141 PRINT"      "
3142 PRINT"      J U M P"
3143 PRINT"      "
3144 PRINT"      "
3147 PRINT"      "
3148 PRINT"      "
3149 PRINT"      "
3152 PRINT"      "
3153 PRINT"      "
3154 PRINT"      "
3155 PRINT
3156 SOUND 14;3,18;3,21;3
3157 SOUND 14;2
3158 SOUND 13;0
3159 SOUND 11;3,7;3,14;3
3160 SOUND 11;3
3162 SOUND 9;3,13;3,16;3
3164 SOUND 9;2
3166 SOUND 7;0
3168 SOUND 6;3,9;3,2;3
3170 SOUND 6;2
3172 SOUND 7;0
3174 SOUND 9;3,2;3,18;3
3176 SOUND 2;3
3178 SOUND 4;3,7;3,11;3
3180 SOUND 7;3
3182 SOUND 9;5,13;5,4;5
3184 SOUND 4;0
3186 SOUND 2;5,6;5,9;5
3188 IF O>3 THEN 9300
3189 POKE 846,225
3190 PRINT"PRESS <CTRL> FOR DIFFICULT/";
3191 POKE 846,258

```



```

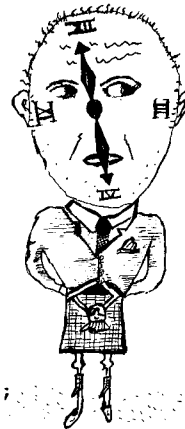
3192 PRINT"<SHIFT> FOR EASY.";
3193 G=JOY(3)
3194 IF G=0 THEN 3193
3199 FOR M=272 TO 277
3200 POKE 4110,-M
3210 NEXT
3220 CLS
3230 RETURN
9000 CHAR 65,00183C243C7E4242
9010 CHAR 66,007844427C424478
9020 CHAR 67,00183C6060603C18
9030 CHAR 68,0070784C4C4C7870
9040 CHAR 69,007E7E4070407E7E
9050 CHAR 70,007E7E4070404040
9060 CHAR 71,00387C64404E6438
9070 CHAR 72,004242427E7E4242
9080 CHAR 73,007E7E1010107E7E
9090 CHAR 74,007E7E1010107070
9100 CHAR 75,00444C5870584C44
9110 CHAR 76,0040404040407C7C
9120 CHAR 77,00C2C6EAEAD2D2C2
9130 CHAR 78,00C6C6C6E6D6CEC6
9140 CHAR 79,0038C6C6C6C6C638
9150 CHAR 80,00FECECEFECE0C0C0
9160 CHAR 81,0038C4C4C4D4CC3C
9170 CHAR 82,00FEC6C6FEF0D0CE
9180 CHAR 83,00FEFE80FE02FEFE
9190 CHAR 84,00FEFE1010101010
9200 CHAR 85,00C6C6C6C6C6C6FE
9210 CHAR 86,00C6C6C6C6C6C63C18
9220 CHAR 87,00C2C2C2C2DADA24
9230 CHAR 88,00C6C4281028C4C6
9240 CHAR 89,00C66C6C18181818
9259 CHAR 90,00FEFE020C38FEFE
9280 RETURN
9300 POKE 846,225
9305 PRINT"DO YOU WANT ANOTHER GAME?";
9310 IF PEEK(20)=81 THEN RUN
9320 IF PEEK(20)=83 THEN END
9330 GOTO9310.

```

JOCK THE CLOCK

Help teach the youngsters in your family how to tell the time! This program will introduce you to the concept of C.A.I. (computer assisted instruction). You can use your Wizzard to make learning fun!

```
10  REM*JOCK THE CLOCK BY J.M.WALLACE
20  COLOR 0,2
30  GOSUB 9000
40  GOSUB 8000
50  L$="*****"
55  PRINT
60  PRINTL$
70  PRINT"**JOCK THE TEACHING CLOCK**"
75  PRINT L$
80  PRINT
85  PRINT
90  PRINT" JOCK THE CLOCK LIKES"
95  PRINT
100 PRINT" TO BE HAPPY.HE CAN ONLY"
105 PRINT
110 PRINT"BE HAPPY IF YOU TELL HIM"
115 PRINT
120 PRINT"-----THE RIGHT TIME-----"
125 PRINT
130 PRINT"JOCK WILL SHOW YOU A TIME"
135 PRINT
140 PRINT" AND YOU MUST TYPE IN"
145 PRINT
150 PRINT"THE ANSWER & PRESS <RETURN>"
155 PRINT
160 PRINT
165 FOR N=1 TO 500
170 NEXT N
175 GOSUB 9000
350 CLS
355 GOSUB 1000
360 GOSUB 2000
400 GOSUB 4000
600 B=RND(9)
610 IF B=1 THEN GOSUB 6100
615 IF B=2 THEN GOSUB 6150
620 IF B=3 THEN GOSUB 6200
625 IF B=4 THEN GOSUB 6250
630 IF B=5 THEN GOSUB 6300
635 IF B=6 THEN GOSUB 6350
640 IF B=7 THEN GOSUB 6400
645 IF B=8 THEN GOSUB 6450
650 IF B=9 THEN GOSUB 6500
665 PRINT"WHAT'S MY TIME<? O'CLOCK>";
695 INPUT H
700 IF H=B THEN GOSUB 7000
```



```

701 IF H=B THEN GOTO350
705 PRINT" NO,PLEASE TRY AGAIN ";
735 INPUT I
740 IF I=B THEN GOSUB 7000
742 IF I=B THEN GOTO 350
743 FOR Y=22 TO 23
744 FOR X=2 TO 30
745 PLOT X,Y,32
746 NEXT X
747 NEXT Y
748 PRINT"NO,MY TIME IS ";B;" O'CLOCK"
750 FOR N=1 TO 200
755 NEXT N
770 GOTO 350
1000 REM*CLOCK ROUND SIDES*
1005 PLOT 18,6,96
1010 PLOT 19,6,97
1015 PLOT 20,7,98
1020 PLOT 21,7,99
1025 PLOT 21,8,100
1030 PLOT 22,9,101
1035 PLOT 22,10,102
1040 PLOT 22,11,103
1045 PLOT 22,12,104
1050 PLOT 22,13,105
1055 PLOT 21,14,106
1060 PLOT 21,15,107
1065 PLOT 20,15,108
1066 PLOT 20,16,1
1070 PLOT 19,16,109
1075 PLOT 18,16,110
1080 PLOT 15,16,111
1085 PLOT 14,16,112
1090 PLOT 13,16,113
1095 PLOT 13,15,114
1100 PLOT 12,15,115
1105 PLOT 12,14,116
1110 PLOT 11,13,117
1115 PLOT 11,12,118
1120 PLOT 11,11,119
1125 PLOT 11,10,120
1130 PLOT 11,9,121
1135 PLOT 12,8,122
1140 PLOT 12,7,123
1145 PLOT 13,7,124
1150 PLOT 14,6,125
1155 PLOT 15,6,126
1160 RETURN
2000 REM*CLOCK NUMBERS*
2005 PLOT 16,6,49
2010 PLOT 17,6,50
2015 PLOT 19,7,49
2020 PLOT 21,9,50

```

```

2025 PLOT 21,11,51
2030 PLOT 21,13,52
2035 PLOT 19,15,53
2040 PLOT 16,16,24
2045 PLOT 17,16,25
2050 PLOT 14,15,55
2055 PLOT 12,13,56
2060 PLOT 12,11,57
2065 PLOT 12,9,49
2070 PLOT 13,9,48
2075 PLOT 14,7,49
2080 PLOT 15,7,49
2085 RETURN
4000 REM*O'CLOCK*
4005 PLOT 16,8,128
4010 PLOT 17,8,129
4015 PLOT 16,9,130
4020 PLOT 17,9,131
4025 PLOT 16,10,130
4030 PLOT 17,10,131
4035 PLOT 16,11,134
4040 PLOT 17,11,135
4045 RETURN
6100 REM*1 O'CLOCK*
6105 PLOT 17,11,136
6110 PLOT 17,10,137
6115 PLOT 18,10,138
6120 PLOT 17,9,139
6125 PLOT 18,9,140
6130 RETURN
6150 REM*2 O'CLOCK*
6155 PLOT 17,11,141
6160 PLOT 17,10,142
6165 PLOT 18,10,143
6170 PLOT 19,10,144
6175 PLOT 18,11,145
6180 RETURN
6200 REM*3 O'CLOCK*
6205 PLOT 17,11,146
6210 PLOT 18,11,146
6215 PLOT 19,11,148
6220 RETURN
6250 REM*4 O'CLOCK*
6255 PLOT 17,11,194
6260 PLOT 18,11,149
6265 PLOT 18,12,150
6270 PLOT 17,12,151
6275 PLOT 19,12,152
6280 RETURN
6300 REM*5 O'CLOCK*
6305 PLOT 17,11,153
6310 PLOT 17,12,154
6315 PLOT 17,13,155

```

```

6320 PLOT 18,13,156
6325 PLOT 16,11,157
6330 RETURN
6350 REM*6 O'CLOCK*
6355 PLOT 16,11,130
6360 PLOT 17,11,131
6365 PLOT 16,12,130
6370 PLOT 17,12,131
6375 PLOT 16,13,163
6380 PLOT 17,13,164
6385 RETURN
6400 REM*7 O'CLOCK*
6405 PLOT 15,13,165
6410 PLOT 16,13,166
6415 PLOT 15,12,167
6420 PLOT 16,12,168
6425 PLOT 16,11,169
6430 RETURN
6450 REM*8 O'CLOCK*
6455 PLOT 14,12,170
6460 PLOT 15,12,171
6465 PLOT 15,11,172
6470 PLOT 16,12,173
6475 PLOT 16,11,174
6480 RETURN
6500 PLOT 14,11,175
6505 PLOT 15,11,146
6510 PLOT 16,11,177
6515 RETURN
7000 REM*CORRECT ANSWER*
7002 IF H=B THEN Y=7
7004 IF I=B THEN Y=6
7010 PLOT 19,Y+6,8
7015 PLOT 18,Y+6,9
7020 PLOT 18,Y+7,10
7025 PLOT 17,Y+7,11
7030 PLOT 16,Y+7,12
7035 PLOT 15,Y+7,13
7040 PLOT 15,Y+6,14
7045 PLOT 14,Y+6,15
7055 PLOT 13,Y,16
7060 PLOT 14,Y,17
7065 PLOT 19,Y,18
7070 PLOT 20,Y,19
7075 PRINT" RIGHT,YOU MAKE ME HAPPY !!"
7076 FOR N=1 TO2
7077 SOUND 20;3,11;3
7078 SOUND 16;3,8;3
7079 SOUND 18;3,9;3
7080 SOUND 11;5,4;5
7082 SOUND 16;3,8;3
7084 SOUND 18;3,9;3
7086 SOUND 20;3,11;3

```

```

7088 SOUND 16;5,8;5
7090 NEXT
7092 PRINT
7095 PRINT"NOW COUNT THE TIME WITH ME"
7096 FOR N=1 TO 100
7097 NEXT N
7100 FOR S=1 TO B
7105 SOUND 19;5,23;6,26;7
7110 NEXT S
7114 PRINT
7159 PRINT
7160 PRINT"NOW HERE'S ANOTHER FACE "
7165 FOR N=1 TO 20
7170 NEXT N
7200 RETURN
8000 REM*CHARACTERS*
8005 CHAR 1,FFFFFFFFFFFFFFFF
8010 CHAR 24,010307070C0C0603
8015 CHAR 25,E00000C0602060C0
8020 CHAR 96,00C0FCFFFFFFFF
8025 CHAR 97,00000080E0F8FEFF
8030 CHAR 98,C0E0F8F8FEFEFFFF
8035 CHAR 99,0000000000008080
8040 CHAR 100,C0E0F0F0F8FCFCFE
8045 CHAR 101,000000808080C0C0
8050 CHAR 102,C0E0E0E0E0E0F0F0
8055 CHAR 103,F0F0F0F0F0F0F0F0
8060 CHAR 104,F0F0F0E0E0E0E0C0
8065 CHAR 105,C0C0C08080800000
8070 CHAR 106,FEFEFCF8F8F0E0C0
8075 CHAR 107,C000000000000000
8080 CHAR 108,FFFFFFFFCFCF0F0C0
8085 CHAR 109,FFFEF8F080000000
8090 CHAR 110,FFFFFFFFF0CF0000
8095 CHAR 111,FFFFFFFFF7F0F00
8100 CHAR 112,FF7F3F0F03000000
8105 CHAR 113,0100000000000000
8110 CHAR 114,FFFFFFF7F3F0F0F03
8115 CHAR 115,0300000000000000
8120 CHAR 116,7F3F3F1F0F0F0F03
8125 CHAR 117,0303010101000000
8130 CHAR 118,0F0F070707070703
8135 CHAR 119,0F0F0F0F0F0F0F0F
8140 CHAR 120,0307070707070F0F
8145 CHAR 121,0000000101030303
8150 CHAR 122,03070F1F1F3F3F7F
8155 CHAR 123,0000000000000003
8160 CHAR 124,03071F1F7FFFFFFF
8165 CHAR 125,00000001071F7FFF
8170 CHAR 126,00073FFFFFFFFF
8175 CHAR 128,0103030303030303
8180 CHAR 129,80C0C0C0C0C0C0C0
8185 CHAR 130,0303030303030303

```

```

8190 CHAR 131,C0C0C0C0C0C0C0C0
8205 CHAR 134,0303030303000000
8210 CHAR 135,C0C0C0C000000000
8215 CHAR 136,F0F0E0E0C0000000
8220 CHAR 137,CFCFDFFEFEFCFCF8
8225 CHAR 138,8080000000000000
8230 CHAR 139,C0C0C0C1C1C3C3C7
8235 CHAR 140,000000C0E0E0C0C0
8240 CHAR 141,FFFFFFF8F0C00000
8245 CHAR 142,C0C0C0C0C0C1C3CF
8250 CHAR 143,00030F1F7FFFFCF0
8255 CHAR 144,0080C0C080000000
8260 CHAR 145,C080000000000000
8265 CHAR 146,0000FFFFFFF00000
8275 CHAR 148,0000E0F0F0E00000
8280 CHAR 194,C0C0C0E0F8FE7F3F
8285 CHAR 149,00000000000080C0
8290 CHAR 150,F0FCFF7F1F0F0300
8295 CHAR 151,0F03010000000000
8300 CHAR 152,00000080C0C08000
8305 CHAR 153,C0C0C0C0E0E0F0F0
8310 CHAR 154,F87C7C3E1E1F0F0F
8315 CHAR 155,0707030101000000
8320 CHAR 156,80C0E0E0E0C00000
8325 CHAR 157,0303030303010100
8330 CHAR 163,0303030303030301
8335 CHAR 164,C0C0C0C0C0C0C080
8340 CHAR 165,0103070707030000
8345 CHAR 166,E0C0C08080000000
8350 CHAR 167,0000000000000001
8355 CHAR 168,1F1E3C7C78F8F0F0
8360 CHAR 169,0303030307070F0F
8365 CHAR 170,0000000107070301
8370 CHAR 171,0F3FFFFFFF8E0C000
8375 CHAR 172,0000000000000103
8380 CHAR 173,F0C0800000000000
8385 CHAR 174,030303071F7FFFC
8390 CHAR 175,0000070F0F070000
8395 CHAR 177,0303FFFFFFF0000
8400 CHAR 8,0000E02000000000
8405 CHAR 9,000003070E0C0C18
8410 CHAR 10,103060E080000000
8415 CHAR 11,0000000007FFF000
8420 CHAR 12,00000000E0FF0F00
8425 CHAR 13,080C060701000000
8430 CHAR 14,0000C0E070303018
8435 CHAR 15,0000070400000000
8440 CHAR 16,0738618383413807
8445 CHAR 17,F008C4E2E2C20CF0
8450 CHAR 18,0F1023474743300F
8455 CHAR 19,E01C86C1C1821CE0
8460 RETURN
8465 CLS

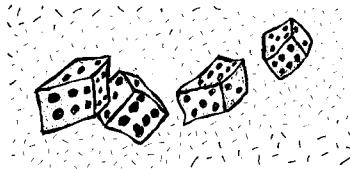
```

```
9010 COLOR 1,16,2
9015 FOR N=4 TO 8
9020 COLOR N,13,2
9025 NEXT
9030 FOR N=9 TO 12
9035 COLOR N,12,2
9040 NEXT
9045 FOR N=13 TO 16
9050 COLOR N,2,16
9055 NEXT
9060 COLOR 17,16,2
9065 FOR N=18 TO 27
9070 COLOR N,16,2
9075 NEXT
9090 COLOR 2,7,2
9095 COLOR 3,5,2
9100 RETURN
```

MATHS DICE

Here is another C.A.I. program that will help make learning fun! You have to correctly add up the numbers that appear on the dice. An excellent introduction to counting and addition.

```
1  REM*MATHS DICE*
2  REM (BY J.M.WALLACE)
3  REM
4  COLOR 0,2
5  GOSUB 9000
7  GOSUB 8000
10 PRINT TAB(6);"MATHS DICE"
11 PRINT TAB(6);"*****"
12 PRINT TAB(7);"*****"
13 PRINT
14 PRINT
30 PRINT
40 PRINT"THIS PROGRAM GIVES PICTURES"
41 PRINT
42 PRINT"OF TWO DICE. WHEN TWO DICE"
43 PRINT
50 PRINT"AND AN EQUAL SIGN FOLLOWED "
51 PRINT
52 PRINT"BY A QUESTION MARK HAVE BEEN"
53 PRINT
60 PRINT"PRINTED, TYPE YOUR ANSWER"
61 PRINT
62 PRINT"AND PRESS <<RETURN>> KEY"
63 PRINT
64 PRINT
65 PRINT
70 FOR M=1 TO 1000
71 NEXT M
75 FOR M=1 TO 100
76 NEXT M
80 CLS
110 D=RND(6)
120 IF D=1 THEN GOSUB 1100
130 IF D=2 THEN GOSUB 1200
140 IF D=3 THEN GOSUB 1300
150 IF D=4 THEN GOSUB 1400
160 IF D=5 THEN GOSUB 1500
170 IF D=6 THEN GOSUB 1600
180 PLOT 13,11,16
190 PRINT
200 E=RND(6)
210 IF E=1 THEN GOSUB 2100
220 IF E=2 THEN GOSUB 2200
230 IF E=3 THEN GOSUB 2300
240 IF E=4 THEN GOSUB 2400
250 IF E=5 THEN GOSUB 2500
```



```

260 IF E=6 THEN GOSUB 2600
500 T=D+E
510 PLOT 13,18,17
520 INPUT X
530 IF X=T THEN GOTO 590
540 PRINT" NO, COUNT AGAIN"
541 PLOT 26,23,19
542 SOUND 29;6,23;6
550 INPUT Y
560 IF Y=T THEN 590
570 PRINT"NO, THE ANSWER IS ";T
571 PLOT 26,23,19
572 SOUND 29;6,23;6
573 FOR M=1 TO 100
574 NEXT M
580 GOTO 600
590 PRINT" RIGHT !!"
591 PLOT 18,23,18
592 SOUND 23;7,26;7,31;7
593 SOUND 7;7
600 PRINT
601 PRINT"THE DICE ROLL AGAIN.."
610 GOTO 75
1100 REM*DICE ONE,ONE*
1103 GOSUB 4600
1105 GOSUB 4000
1110 GOSUB 4050
1115 GOSUB 4100
1120 GOSUB 4150
1125 RETURN
1200 REM*DICE ONE,TWO*
1203 GOSUB 4600
1205 GOSUB 4200
1210 GOSUB 4250
1215 GOSUB 4300
1220 GOSUB 4350
1225 RETURN
1300 REM*DICE ONE,THREE*
1303 GOSUB 4600
1305 GOSUB 4200
1310 GOSUB 4050
1315 GOSUB 4100
1320 GOSUB 4350
1325 RETURN
1400 REM*DICE ONE,FOUR*
1403 GOSUB 4600
1405 GOSUB 4400
1410 GOSUB 4250
1415 GOSUB 4300
1420 GOSUB 4450
1425 RETURN
1500 REM*DICE ONE,FIVE*
1503 GOSUB 4600
1505 GOSUB 4400

```

```

1510 GOSUB 4050
1515 GOSUB 4100
1520 GOSUB 4450
1525 RETURN
1600 REM*DICE ONE,SIX*
1603 GOSUB 4600
1605 GOSUB 4400
1610 GOSUB 4500
1615 GOSUB 4550
1620 GOSUB 4450
1625 RETURN
2100 REM*DICE TWO,ONE*
2103 GOSUB 5600
2105 GOSUB 5000
2110 GOSUB 5050
2115 GOSUB 5100
2120 GOSUB 5150
2125 RETURN
2200 REM*DICE TWO,TWO*
2203 GOSUB 5600
2205 GOSUB 5200
2210 GOSUB 5250
2215 GOSUB 5300
2220 GOSUB 5350
2225 RETURN
2300 REM*DICE TWO,THREE*
2303 GOSUB 5600
2305 GOSUB 5200
2310 GOSUB 5050
2315 GOSUB 5100
2320 GOSUB 5350
2325 RETURN
2400 REM*DICE TWO,FOUR*
2403 GOSUB 5600
2405 GOSUB 5400
2410 GOSUB 5250
2415 GOSUB 5300
2420 GOSUB 5450
2425 RETURN
2500 REM*DICE TWO,FIVE*
2503 GOSUB 5600
2505 GOSUB 5400
2510 GOSUB 5050
2515 GOSUB 5100
2520 GOSUB 5450
2525 RETURN
2600 REM*DICE TWO,SIX*
2603 GOSUB 5600
2605 GOSUB 5400
2610 GOSUB 5500
2615 GOSUB 5550
2620 GOSUB 5450
2625 RETURN

```

```

4000 FOR X=12 TO 15
4005 PLOT X,6,2
4010 NEXT X
4012 SOUND 14;0
4015 RETURN
4050 PLOT12,7,2
4055 PLOT13,7,5
4060 PLOT 14,7,6
4065 PLOT 15,7,2
4068 SOUND 15;0
4070 RETURN
4100 PLOT 12,8,2
4105 PLOT 13,8,9
4110 PLOT 14,8,10
4115 PLOT 15,8,2
4118 SOUND 16;0
4120 RETURN
4150 FOR X=12 TO 15
4155 PLOT X,9,2
4160 NEXT X
4162 SOUND 17;0
4165 RETURN
4200 PLOT 12,6,1
4205 PLOT 13,6,2
4210 PLOT 14,6,2
4215 PLOT 15,6,2
4218 SOUND 18;0
4220 RETURN
4250 FOR X=12 TO 15
4255 PLOT X,7,2
4260 NEXT X
4262 SOUND 19;0
4265 RETURN
4300 FOR X=12 TO 15
4305 PLOT X,8,2
4310 NEXT X
4312 SOUND 20;0
4315 RETURN
4350 PLOT 12,9,2
4355 PLOT 13,9,2
4360 PLOT 14,9,2
4365 PLOT 15,9,13
4368 SOUND 21;0
4370 RETURN
4400 PLOT 12,6,1
4405 PLOT 13,6,2
4410 PLOT 14,6,2
4415 PLOT 15,6,3
4418 SOUND 22;0
4420 RETURN
4450 PLOT 12,9,12
4455 PLOT 13,9,2
4460 PLOT 14,9,2

```

```

4465 PLOT 15,9,13
4468 SOUND 23;0
4470 RETURN
4500 PLOT 12,7,4
4505 PLOT 13,7,2
4510 PLOT 14,7,2
4515 PLOT 15,7,7
4518 SOUND 24;0
4520 RETURN
4550 PLOT 12,8,8
4555 PLOT 13,8,2
4560 PLOT 14,8,2
4565 PLOT 15,8,11
4568 SOUND 25;0
4570 RETURN
4600 REM*DICE ONE,SIDE*
4605 PLOT 11,5,96
4610 PLOT 12,5,97
4615 PLOT 13,5,98
4620 PLOT 14,5,99
4625 PLOT 15,5,104
4630 PLOT 11,6,100
4635 PLOT 11,7,101
4640 PLOT 11,8,102
4645 PLOT 11,9,112
4650 RETURN
5000 FOR X=12 TO 15
5005 PLOT X,13,2
5010 NEXT X
5012 SOUND 13;0
5015 RETURN
5050 PLOT 12,14,2
5055 PLOT 13,14,5
5060 PLOT 14,14,6
5065 PLOT 15,14,2
5068 SOUND 12;0
5070 RETURN
5100 PLOT 12,15,2
5105 PLOT 13,15,9
5110 PLOT 14,15,10
5115 PLOT 15,15,2
5118 SOUND 11;0
5120 RETURN
5150 FOR X=12 TO 15
5155 PLOT X,16,2
5160 NEXT X
5162 SOUND 10;0
5165 RETURN
5200 PLOT 12,13,1
5205 PLOT 13,13,2
5210 PLOT 14,13,2
5215 PLOT 15,13,2
5218 SOUND 9;0

```

```

5220 RETURN
5250 FOR X=12 TO 15
5255 PLOT X,14,2
5260 NEXT X
5262 SOUND 8;0
5265 RETURN
5300 FOR X=12 TO 15
5305 PLOT X,15,2
5310 NEXT X
5312 SOUND 7;0
5315 RETURN
5350 PLOT 12,16,2
5355 PLOT 13,16,2
5360 PLOT 14,16,2
5365 PLOT 15,16,13
5368 SOUND 6;0
5370 RETURN
5400 PLOT 12,13,1
5405 PLOT 13,13,2
5410 PLOT 14,13,2
5415 PLOT 15,13,3
5418 SOUND 5;0
5420 RETURN
5450 PLOT 12,16,12
5455 PLOT 13,16,2
5460 PLOT 14,16,2
5465 PLOT 15,16,13
5468 SOUND 4;0
5470 RETURN
5500 PLOT 12,14,4
5505 PLOT 13,14,2
5510 PLOT 14,14,2
5515 PLOT 15,14,7
5518 SOUND 3;0
5520 RETURN
5550 PLOT 12,15,8
5555 PLOT 13,15,2
5560 PLOT 14,15,2
5565 PLOT 15,15,11
5568 SOUND 2;0
5570 RETURN
5600 REM*DICE TWO,SIDE*
5605 PLOT 11,12,96
5610 PLOT 12,12,97
5615 PLOT 13,12,98
5620 PLOT 14,12,99
5625 PLOT 15,12,104
5630 PLOT 11,13,100
5635 PLOT 11,14,101
5640 PLOT 11,15,102
5645 PLOT 11,16,112
5650 RETURN
8000 REM*ESTABLISH CHARACTERS*

```

```

150 FOR B=1 TO 10
152 NEXT B
159 PRINT
160 PRINT "YOU FAILED-"
163 PRINT
164 PRINT
165 PRINT
166 PRINT
167 PRINT
168 GOSUB 500
170 PRINT "THE ALIENS GOT YOU"
175 PRINT
180 END
190 GOSUB 900
193 PRINT L$
195 PRINT "GOOD TAKE OFF"
197 PRINT L$
200 PRINT
202 PRINT
204 PRINT
208 PRINT L$
210 PRINT "GOOD TAKE OFF"
215 PRINT L$
217 PRINT
220 PRINT
230 PRINT
240 END
500 SOUND 2;4,5;4,14;4
510 SOUND 2;3,5;3,14;3
520 SOUND2;1,5;1,14;1
530 SOUND2;4,5;4,14;4
540 SOUND 2;3,9;3,17;3
550 SOUND2;1,7;1,16;1
560 SOUND 2;3,7;3,16;3
570 SOUND2;1,5;1,14;1
580 SOUND2;3,5;3,14;3
590 SOUND 2;1,4;1,12;1
600 SOUND 2;7,5;7,14;7
610 RETURN
900 SOUND 26;3
910 SOUND 21;2
920 SOUND 21;1
930 SOUND 23;3
940 SOUND21;3
950 SOUND1;3
960 SOUND 9;3,19;3,25;3
970 SOUND2;3,18;3,26;3
980 RETURN
1000 REM *SET COLORS*
1010 CLS
1012 FOR N=9 TO 12
1014 COLOR N,2,16
1016 NEXT

```

```

1020 COLOR 6,7,1
1030 COLOR 13,13,5
1040 COLOR 15,7,5
1050 COLOR 17,13,11
1060 COLOR 14,13,5
1070 COLOR 16,13,8
1080 RETURN
1090 CLS
1091 PLOT 24,10,100
1092 PLOT 25,10,115
1093 PLOT 26,10,101
1094 PLOT 24,11,102
1095 PLOT 25,11,129
1096 PLOT 26,11,103
1097 PLOT 24,12,104
1098 PLOT 25,12,128
1099 PLOT 26,12,105
2000 PLOT 24,13,106
2001 PLOT 25,13,121
2002 PLOT 26,13,107
2003 PLOT 24,14,108
2004 PLOT 25,14,120
2005 PLOT 26,14,109
2006 PLOT 24,15,112
2007 PLOT 25,15,114
2008 PLOT 26,15,113
2009 COLOR 5,8,14
2010 PLOT 18,3,35
2020 PLOT 32,3,35
2030 PLOT 18,22,35
2040 PLOT 32,22,35
2050 RETURN
2100 COLOR 5,7,5
2110 PLOT 19,4,35
2120 PLOT 31,4,35
2130 PLOT 19,21,35
2140 PLOT 31,21,35
2150 RETURN
2200 PLOT 20,5,35
2205 COLOR 5,11,5
2210 PLOT 30,5,35
2220 PLOT 20,20,35
2230 PLOT 30,20,35
2240 FOR J=1 TO 5
2241 SOUND 19;3,23;3
2242 NEXT J
2290 RETURN
2310 PLOT 21,6,35
2315 COLOR 5,5,11
2320 PLOT 29,6,35
2330 PLOT 21,19,35
2340 PLOT 29,19,35
2341 FOR J=1 TO 5

```

```

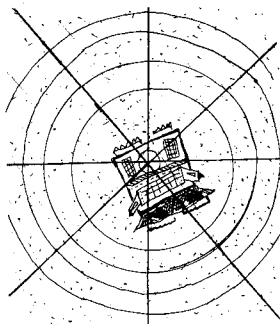
8005 CHAR 1,00001E3F3F3F3F1E
8010 CHAR 2,0000000000000000
8015 CHAR 3,000078FCFCFCFC78
8020 CHAR 4,00000000001E3F3F
8025 CHAR 5,0000000000030707
8030 CHAR 6,0000000000C0E0E0
8035 CHAR 7,000000000078FCFC
8040 CHAR 8,3F3F1E0000000000
8045 CHAR 9,0707030000000000
8050 CHAR 10,E0E0C00000000000
8055 CHAR 11,FCFC780000000000
8060 CHAR 12,1E3F3F3F3F1F0000
8065 CHAR 13,78FCFCFCFC780000
8070 CHAR 16,181818FFFF181818
8075 CHAR 17,00FFFF0000FFFF00
8080 CHAR 96,0080C0E0F0F8FCFE
8085 CHAR 97,0000000000000000
8090 CHAR 98,0000000000000000
8095 CHAR 99,0000000000000000
8100 CHAR 104,FF7F3F1F0F070301
8105 CHAR 100,FFFFFFFFFFFFFFFF
8110 CHAR 101,FFFFFFFFFFFFFFFF
8115 CHAR 102,FFFFFFFFFFFFFFFF
8120 CHAR 112,FF7F3F1F0F070301
8122 CHAR 18,6666001881C32418
8123 CHAR 19,66660000003C6681
8125 RETURN
9000 REM*COLORS*
9010 CLS
9015 COLOR 5,16,2
9020 COLOR 6,5,2
9025 COLOR 7,7,2
9026 COLOR 8,8,2
9030 COLOR 1,2,16
9035 COLOR 2,2,16
9040 COLOR 3,7,2
9045 COLOR 9,11,2
9050 COLOR 10,13,2
9055 COLOR 11,14,2
9056 COLOR 12,10,2
9060 COLOR 13,6,15
9065 COLOR 14,2,15
9070 COLOR 15,6,2
9075 RETURN

```

STARSHIP LIFTOFF

This is the last of the three C.A.I. programs. You have to calculate the force needed to lift a starship off the surface of a planet. A fun way to learn your multiplication tables!

```
4      CLS
6      REM*STARSHIP TAKE-OFF*
8      REM*BY J.M.WALLACE (1-9-83)*
12     COLOR 0,16
13     CHAR35,71E1F7BC1C3F27F3
14     GOSUB 1000
15     GOSUB 3000
16     L$="*****"
18     PRINT L$
20     PRINT "STARSHIP TAKEOFF"
22     PRINT L$
24     PRINT L$
26     PRINT
28     PRINT
29     PRINT
30     LET G=RND(13)
40     LET W=RND(40)
50     LETR=G*W
60     PRINT "GRAVITY= ";G
70     PRINT"TYPE IN TAKE"
71     PRINT"   OFF FORCE  "
72     PRINT
74     PRINT
75     PRINT L$
76     PRINT"HINT,TAKE OFF"
77     PRINT"FORCE IS A  "
78     PRINT"MULTIPLE OF "
79     PRINT"   GRAVITY  "
80     PRINT
81     PRINT"NOTE! GRAVITY"
82     PRINTL$
85     FOR C= 1 TO 8
88     INPUT F
90     IF F=R THEN GOTO 190
91     IF C=1 THEN GOSUB 1090
92     IF C>1 THEN GOSUB 1090
93     IF C>1.5 THEN GOSUB 2100
94     IF C>2 THEN GOSUB 2200
95     IF C>3 THEN GOSUB 2310
96     IF C>4 THEN GOSUB 2410
97     IF C>5 THEN GOSUB 2510
98     IF C>6 THEN GOSUB 2610
99     IF C>7 THEN GOSUB 2710
100    IF F>R THEN PRINT" LOWER";
110    IF F<R THEN PRINT"HIGHER";
130    IF C<>8 THEN PRINT" TRY AGAIN"
140    NEXT C
```



```

2342 SOUND 21;2,25;2
2343 NEXT J
2344 COLOR 19,11,2
2346 COLOR 20,11,2
2348 COLOR 21,11,2
2350 N=143
2352 FOR Y=5 TO 6
2354 FOR X=5 TO 13
2356 N=N+1
2358 PLOT X,Y,N
2360 NEXT X
2362 NEXT Y
2390 RETURN
2410 PLOT 22,7,35
2415 COLOR 5,7,11
2420 PLOT 28,7,35,
2430 PLOT 22,18,35
2440 PLOT 28,18,35
2441 FOR J=1 TO 5
2442 SOUND 23;2,26;2
2443 NEXT J
2490 RETURN
2510 PLOT 23,8,35
2515 COLOR 5,7,13
2520 PLOT 27,8,35
2530 PLOT 23,17,35
2540 PLOT 27,17,35
2550 FOR J=1 TO 10
2552 COLOR 19,1,2
2554 COLOR 20,1,2
2556 COLOR 21,1,2
2558 SOUND 25;1,28;1
2560 COLOR 19,7,2
2562 COLOR 20,7,2
2564 COLOR 21,7,2
2566 NEXT J
2590 RETURN
2610 PLOT 24,9,35
2615 COLOR 5,2,13
2620 PLOT 26,9,35
2630 PLOT 24,16,35
2640 PLOT 26,16,35
2650 FOR H=1 TO 10
2652 COLOR 19,1,2
2654 COLOR 21,1,2
2656 COLOR 20,1,2
2660 SOUND 26;1,31;1
2670 SOUND 27;1,29;1
2672 COLOR 19,7,2
2674 COLOR 21,7,2
2676 COLOR 20,7,2
2680 NEXT H
2690 RETURN

```

```

2710 PLOT 25,10,35
2715 COLOR 5,7,2
2720 PLOT 25,15,35
2730 FOR K=1 TO 5
2731 NEXT K
2732 FOR H=1 TO 5
2733 SOUND 26;0,31;0
2734 SOUND 27;0,29;0
2735 NEXT H
2740 PLOT 25,14,35
2741 PLOT 25,11,35
2750 PLOT 25,13,35
2751 PLOT 25,12,35
2760 PLOT 24,13,35
2762 PLOT 24,12,35
2764 PLOT 26,13,35
2766 PLOT 26,12,35
2769 FOR H=1 TO 5
2770 SOUND 26;0,31;0
2771 SOUND 27;0,29;0
2772 NEXT H
2773 PLOT 24,14,35
2774 PLOT 26,11,35
2775 PLOT 24,11,35
2776 PLOT 26,14,35
2790 RETURN
3000 REM*ESTABLISH CHARACTERS*
3010 CHAR 100,0000000000010103
3020 CHAR 115,3C7E7EFFFFFFFF
3030 CHAR 101,000000000008080C0
3040 CHAR 102,03070F0F1F1F3F3F
3050 CHAR 129,FFFF18181818FFFF
3060 CHAR 103,C0E0F0F0F8F8FCFC
3070 CHAR 104,6666E6FFEF8F0F0F
3080 CHAR 128,666666FFFFFFFF
3090 CHAR 105,666667FFF7F1F0F0
3100 CHAR 106,0F0F1F1F1F3F3F3F
3110 CHAR 121,FFFFFFFFFFFF0000
3120 CHAR 107,F0F0F8F8F8FCFCFC
3130 CHAR 108,7F7FFFFF7F3F1F0F
3140 CHAR 120,FFFFFFC3C3C3C3C3
3150 CHAR 109,FEFEFEFEFEFCF8F0
3160 CHAR 112,0F0F0F0F0F0F0F0F
3170 CHAR 114,FFFFFFF3C3C3C3C3C
3180 CHAR 113,F0F0F0F0F0F0F0F0
3190 CHAR 144,0000007F7F616161
3200 CHAR 145,0000008183878686
3210 CHAR 146,000000F8F8181818
3220 CHAR 147,000000617171797D
3230 CHAR 148,0000000387868686
3240 CHAR 149,000000F0F8000000
3250 CHAR 150,0000007F7F606060
3260 CHAR 151,0000008707060606

```

3270 CHAR 152,000000F0F8181818
3280 CHAR 153,616161637F7E0000
3290 CHAR 154,8787868606060000
3300 CHAR 155,F8F8181818180000
3310 CHAR 156,6D67676363610000
3320 CHAR 157,8686868687830000
3330 CHAR 158,78781818F8E00000
3340 CHAR 159,7F7F60607F7F0000
3350 CHAR 160,0707060686060000
3360 CHAR 161,F0F0181818180000
3370 RETURN

What day were you born on? This useful program can tell you what day of the week any date falls upon.

```

1  REM          WHICH DAY IS THAT ?
2  REM          BY RUSS HAYES
5  CLS
10 FORI=1TO13
20 COLORI,5,16
30 NEXT
40 COLOR0,16
45 PRINT"      THIS PROGRAM FINDS "
47 PRINT
50 PRINT"      THE DAY OF THE WEEK"
51 GOSUB1150
52 GOSUB1200
55 GOSUB1100
60 GOSUB1000
62 DATA0,0,0,0,0,0,0,0,28
63 READX,Y,Z,B,C,D,E,F,A(2)
65 PRINT"      INPUT THE NUMERICAL DATE"
67 PRINT
70 PRINT"      IN THE FORM -"
75 PRINT
80 PRINT"      DAY MONTH YEAR"
85 PRINT
90 PRINT"      E.G.    27"
93 PRINT"                      11"
95 PRINT"                      1987"
100 PRINT
105 INPUTX
110 PRINT
115 IFX>0ANDX<32ANDX=INT(X)THEN130
120 GOSUB1150
123 PRINT"      THIS DATE CAN'T HAPPEN !"
125 PRINT
127 PRINT"      TRY AGAIN !"
128 GOSUB1100
129 GOTO60
130 PRINT
135 PRINTTAB(10);
140 INPUTY
145 PRINT
150 IFY>0ANDY<13ANDY=INT(Y)THEN195
155 P INT          !"
160 PRINT
162 PRINT
165 PRINT"      MONTHS GO"
166 FORI=1TO12
167 PRINTTAB(15);I
168 NEXT

```



```

170 GOSUB1100
172 GOSUB1100
175 GOSUB1000
180 PRINT"    TRY THE MONTH AGAIN"
185 GOSUB1150
190 GOTO130
195 PRINT
200 PRINT
205 IFX<=A(Y)ORX=29THEN240
206 IFX=29THEN240
210 GOSUB1150
215 PRINT"    WHO'S A PRETTY BOY ?"
220 GOSUB1150
223 PRINT"    THIS MONTH DOESN'T HAVE"
225 PRINT
227 PRINT"    ";X;" DAYS !"
230 GOSUB1150
232 GOSUB1100
235 PRINT"    TRY AGAIN"
236 GOSUB1100
237 GOTO60
240 PRINTTAB(20);
245 INPUTZ
247 IFZ=0THEN120
248 IFZ>160700THEN60
250 IFX<>29THEN300
252 IFY<>2THEN300
255 V=Z/4
260 IFV=INT(V)THEN300
265 PRINT
270 PRINT
275 PRINT"    GUESS AGAIN !"
280 GOSUB1150
285 PRINT"    ";Z;"                                EAR"
287 GOSUB1150
295 PRINT"START AGAIN !"
297 GOSUB1150
298 GOSUB1100
299 GOTO60
300 B=INT((Z-1)/4)
305 C=365*(Z-1)+B
310 B=INT(B)
315 IFZ/4=INT(Z/4)THENA(2)=29
320 IFY=1THEN340
325 FORI=1TOY-1
330 E=E+A(I)
335 NEXT
340 C=C+E+X
345 C=C/7
350 F=INT(C)
355 D=INT((C-F)*7+0.5)
365 GOSUB1300+2*D
370 GOSUB1348+2*Y

```

```

375 GOSUB1000
380 PRINTTAB(5);B$;" ";X;" ";Z
385 GOSUB1150
390 PRINTTAB(7);"IS A"
395 GOSUB1150
400 PRINTTAB(8);A$
405 GOSUB1150
410 INPUTM$
414 POKE1195,0
416 POKE1197,0
420 GOTO60
1000 FORI=1TO23
1005 PRINT
1010 NEXT
1015 RETURN
1100 FORI=1TO125
1105 NEXT
1110 RETURN
1150 FORI=1TO5
1155 PRINT
1160 NEXT
1165 RETURN
1200 DIMA(12)
1205 DATA31,28,31,30,31,30,31,31,30,31,30,31
1210 FORI=1TO12
1215 READA(I)
1220 NEXT
1225 RETURN
1300 A$="SATURDAY"
1301 RETURN
1302 A$="SUNDAY"
1303 RETURN
1304 A$="MONDAY"
1305 RETURN
1306 A$="TUESDAY"
1307 RETURN
1308 A$="WEDNESDAY"
1309 RETURN
1310 A$="THURSDAY"
1311 RETURN
1312 A$="FRIDAY"
1313 RETURN
1350 B$="JANUARY"
1351 RETURN
1352 B$="FEBRUARY"
1353 RETURN
1354 B$="MARCH"
1355 RETURN
1356 B$="APRIL"
1357 RETURN
1358 B$="MAY"
1359 RETURN
1360 B$="JUNE"

```

1361 RETURN
1362 B\$="JULY"
1363 RETURN
1364 B\$="AUGUST"
1365 RETURN
1366 B\$="SEPTEMBER"
1367 RETURN
1368 B\$="OCTOBER"
1369 RETURN
1370 B\$="NOVEMBER"
1371 RETURN
1372 B\$="DECEMBER"
1373 RETURN

Peeks & Pokes

WIZZARD MEMORY MAP LOCATIONS.

By PEEKing and POKing around your wizzard memory locations, some interesting, amazing and very useful things can be found, here are some examples and applications:

PEEK(3) - RND GENERATOR.

Each time PEEK(3) is addressed it provides a random number from 0 to 255. Whenever RND(A) is run, PEEK(3) is automatically accessed and RND(A) calculated from the PEEK(3) value. Generally for $A(500, RND(A) = INT(A/256 * (PEEK(3) + 1))$

(PROGRAM 1)

```
5    REM PEEK(3) RND GENERATOR DEMO
10   CLS
20   X=256
30   DATA PEEK(3), RND(X)
40   READ A,B
50   C=X/256
60   D=INT(C)
65   Z=C*(A+1)
70   IF C<>D THEN Z=Z+1
75   Z=INT(Z)
80   PRINT A;TAB(10);Z;TAB(16);B
84   POKE 195,0
86   POKE 197,0
90   GOTO 20
```

PEEK(17) AND PEEK(19) - JOYSTICK POSITIONS.

The values present in PEEK(17) and PEEK(19) indicate each of the 16 left and right hand joystick positions. The zero joystick position has a value of 0, whereas positions 1 thru 16 show values 64 thru 79, when PEEKED.

The joy function will access 8 joystick positions, consequently these PEEK locations can be used to increase maneuverability in games programs. The following program shows how this can be achieved.

(PROGRAM 2)

```
0    REM PEEK(17) JOYSTICK DEMO
1    R=12
2    C=16
5    CLS
10   A=PEEK(17)-63
12   IF A=-63 THEN A=0
14   IF A>16 THEN 10
```

```

15  GOTO A*10+20
20  CLS
22  IF C<10RC>32 THEN 1
24  IF R<10RR>24 THEN 1
25  PLOT C,R,94
26  POKE 219,207
27  PRINT TAB(45);"POSITION ";A;" "
28  PRINT"PEEK(17) =";A+63
29  GOTO 10
30  R=R+1
32  GOTO 20
40  R=R+1.5
42  C=C+1
44  GOTO 20
50  R=R+1
52  C=C+1
54  GOTO 20
60  C=C+1.5
62  R=R+1
64  GOTO 20
70  C=C+1
72  GOTO 20
80  C=C+1.5
82  R=R-1
84  GOTO 20
90  C=C+1
92  R=R-1
94  GOTO 20
100 C=C+1
102 R=R-1.5
104 GOTO 20
110 R=R-1
112 GOTO 20
120 R=R-1.5
122 C=C-1
124 GOTO 20
130 C=C-1
132 R=R-1
134 GOTO 20
140 C=C-1.5
142 R=R-1
144 GOTO 20
150 C=C-1
152 GOTO 20
160 C=C-1.5
162 R=R+1
164 GOTO 20
170 C=C-1
172 R=R+1
174 GOTO 20
180 R=R+1.5
182 C=C-1
184 GOTO 20

```

```

5    REM PEEK(18)/PEEK(20) KEYBOARD DEMO
10   CLS
20   POKE219,207
30   PRINT TAB(63)
40   PRINT"L.H.S","R.H.S"
45   PRINT TAB(63)
50   PRINT"PEEK(18)","PEEK(20)"
60   PRINT TAB(63)
70   PRINT
80   PRINT TAB(63)
90   PRINT"PRESS ANY KEY"
100  POKE219,207
110  FORI=1TO10
120  PRINT
130  NEXT
140  PRINTPEEK(18),PEEK(20);"  "
145  POKE218,34
150  POKE219,209
160  GOTO 140

```

PEEK(18) AND PEEK(20) - INKEY FUNCTION.

The values present in PEEK(18) and PEEK(20) indicate the key which is being pressed on the left and right hand side of the keyboard. Programs 3 & 4 show which values are assigned to each key on either side and this can provide some very useful applications similar to an 'INKEY FUNCTION', as shown in programs 5 & 6. Either of these PEEK locations can be used to replace an 'INPUT' statement when you wish the program to halt and/or be redirected.

(PROGRAMS 3,4,5,6)

```

0    REM PEEK(18)L.H.KEYBOARD DEMO
5    CLS
8    PRINT"PRESS A LEFTHAND KEY"
10   INPUTA$
15   PRINT"PRESS SAME KEY AND --> KEY"
20   IF JOY(4)>0THEN40
30   GOTO 20
40   PRINTA$;"=";PEEK(18)
45   PRINT
50   GOTO8

```

```

5    REM PEEK(18)/PEEK(20) INKEY DEMO
10   CLS
20   POKE219,207
30   PRINT
40   PRINT"PRESS A TO STOP"
50   PRINT TAB(11);"OR"
60   PRINT"      C TO CONTINUE"
70   IFPEEK(18)=65THEN100
80   IFPEEK(18)=72THEN30
90   GOTO10

```

```

100 CLS
110 PRINT"DO YOU WISH TO START"
120 PRINT"IF SO PREES L"
130 IFPEEK(20)=70THEN10
140 GOTO130

1 REM PEEK(20) L.H.KEYBOARD DEMO
5 C=16
10 PLOT C,12,95
20 IFPEEK(20)=78THENC=C-1
30 IFPEEK(20)=70THENC=C+1
40 IFC<30RC>30THENC=16
50 CLS
55 PRINT"J TO GO RIGHT,L TO GO LEFT"
60 GOTO10

```

PEEK(21) / PEEK(22) / PEEK(23) - FIRE BUTTONS.

PEEK(22) carries values indicating which fire button is being pressed on the left hand joystick and PEEK(23) the same for the right hand joystick.

The left hand fire button gives the value 17, the right hand 34 and both pressed gives 51. PEEK(23) gives values which differentiate between the joysticks as well as each fire button.

```

L.H. Joystick - L.H. Button gives 34
                - R.H. Button gives 17
R.H. Joystick - L.H. Button gives 136
                - R.H. Button gives 68

```

Program 7 shows these values. One of the possible applications may be to signify rapid fire with both buttons down (or to handicap your mates joystick via PEEK(23)).

(PROGRAM 7)

```

1 REM PEEK(21)/PEEK(22)/PEEK(23) FIRE BUTTON DEMO
3 CLS
5 PRINT TAB(5);"PRESS ANY FIRE BUTTON"
7 POKE219,209
10 PRINTPEEK(21),PEEK(22),PEEK(23);" "
20 GOTO7

```

PEEK(25) AND PEEK(27) - INKEY FUNCTION.

Similar to PEEK(18) and PEEK(20), PEEK(25) and PEEK(27) indicate the key which is being pressed on the left and right hand side of the keyboard, but - the values are different, the shift key carries a value of 128 which when added to the normal value of a dual key gives the 2nd value, e.g. A(17) + S(33) = Sum-1(49).

These locations can provide an additional inkey function as shown in programs 9 & 10; program 8 indicates the value when one or more keys are pressed. A rather exquisite game might be made by guessing the correct combination of keys to press.

(PROGRAM 8,9,10)

```

1  REM PEEK(25) L.H.KEYBOARD DEMO
5  CLS
8  PRINT"PRESS A LEFT HAND KEY"
10 INPUT$
15 PRINT"PRESS SAME KEY AND --> KEY"
20 IFJOY(4)>0THEN35
30 GOTO20
35 PRINT
40 PRINT$;"=";PEEK(25)
45 PRINT
50 GOTO8

```

```

5  REM PEEK(25) L.H.KEYBOARD DEMO
10 CLS
12 POKE219,207
15 PRINT
20 PRINT"PRESS A TO ABORT"
30 PRINT TAB(11);"OR"
40 PRINT"          C TO CONTINUE"
50 IFPEEK(25)=17THENEND
60 IFPEEK(25)=34THEN10
70 GOTO50

```

```

0  REM PEEK(27) R.H.KEYBOARD DEMO
5  C=16
8  PRINT"J TO GO RIGHT L TO GO LEFT"
10 PLOT C,12,93
15 PLOT C-1,12,91
20 IFPEEK(27)=36THENC=C-1
30 IFPEEK(27)=12THENC=C+1
40 IFC<3ORC>30THENC=16
50 CLS
60 GOTO8

```

PEEK(28) - KEYSTROKE INDICATOR.

This location carries the value 0 when no key has been pressed, 3 when a key has been pressed and 2 when it is being pressed. The value 3 will remain unless it is poked back to 0. This can be used as a simple inkey function, however use of value 2 (while being pressed) can provide a repeat function such as continuous fire in a games program. Program 11 shows these features.

(PROGRAM 11)

```

5    REM PEEK(28) KEYSTROKE INDICATOR
10   CLS
20   POKE28,0
30   PRINT"PRESS ANY KEY TO END"
40   IFPEEK(28)=0THEN30
45   PRINT
50   PRINT"PRESS ANY KEY TO START"
55   POKE28,0
60   IFPEEK(28)=3THENRUN
65   IFPEEK(28)=2THENPRINTTAB(42);"REPEAT FUNCTION"
70   GOTO60

```

PEEK(29) - KEYBOARD.

Whenever a key is pressed, PEEK(29) registers a value of 1 - when a 2nd key is also pressed on the other side of the keyboard, the value is 2. Program 12 shows how this works.

See if you can find an interesting application.

(PROGRAM 12)

```

5    REM PEEK(29) KEYBOARD DEMO
10   CLS
15   PRINT"PRESS ONE OR MORE KEYS"
20   IFPEEK(29)=1THENPRINT"YOU PRESSED A KEY"
30   IFPEEK(29)=2THENPRINT"AND ANOTHER ON THE OTHER SIDE"
40   GOTO20

```

PEEK(30) - KEYBOARD SIDE.

PEEK(30) can differentiate between which side of the keyboard a key has been pressed. It provides a value of 1 for a left hand key, 3 for the right and 2,4, or 5 for far right hand keys as shown in program 13.

(PROGRAM 13)

```

5    REM PEEK(30) KEYBOARD DEMO
10   CLS
15   PRINT"PRESS A KEY"
20   POKE30,0
30   A=PEEK(30)
40   IFA=1THENPRINT"LEFT SIDE"
50   IFA=3THENPRINTTAB(17);"RIGHT SIDE"
55   IFA>1AND<>3THENPRINTTAB(9);"PEEK(30) =";A
60   GOTO20

```

POKE 218 AND POKE 219 - PRINT AT FUNCTION.

The wizzard screen is broken up into 3 segments each containing 256 positions. Cursor position within each segment is defined by POKE 218, X where X is the tab spacing 0 to 255, as shown below:

LINE	START	TO	END
1	0		31
2	32		63
3	64		95
4	96		127
5	128		159
6	160		191
7	192		223
8	224		255

POKE 219, 210 defines the bottom of screen segment (lines 17 to 24), POKE 219, 209 the midscreen segment (lines 9 to 16) and POKE 219, 208 the top of screen segment (lines 1 to 8). This is shown in programs 14, 15, and 16.

This has considerable advantages and applications as it confers upon the wizzard the equivalent of a 'PRINT AT' statement. By poking the cursor to the desired position with POKE 218 and POKE 219, then following it with a print statement, screen text or graphics can be directly positioned on the screen wherever you wish, without disturbing surrounding screen set up.

the normal cursor position is equivalent to POKE 218, 226 (3rd position, line 8) and POKE 219, 210 (bottom segment). CLS will bring the cursor back to normal position, however the above two poke values will also, but with the screen display intact. These features are shown in program 17.

When POKE 218 is used (with or without POKE 219), listings etc. are restricted to that 8 line segment and superimposes on previous screen display. This is shown in program 18.

Program 19 shows a simplified graphics technique coupled with POKE 218. In line 60, open quotes and while holding CTRL key down type ababab to a total of 23, then close quotes. A,B,C,D etc. In this manner directly accesses char 1,2,3,4 etc. NOTE: A,B will not be visible.

(PROGRAMS 14,15,16,17,18,19)

```

5    REM POKE218 SCREEN POSITION DEMO
10   FORI=0TO255
20   POKE218,I
30   PRINTI
40   CLS
50   NEXT

```

```

5    REM POKE218 SCREEN POSITION DEMO
10   CLS
15   POKE219,208
20   CHAR1,0000040E3F7FFFFF
40   FORI=191TO160STEP-1
50   POKE218,I
60   PRINTCHR$(1)
70   NEXT

```

```

5      CLS
10     DATA208,73,"THIS",208,210,"IS",209,172,"MIGHTY"
20     DATA 210,80,"GOOD",210,215,"STUFF."
30     FORI=1TO5
40     READA,B,L$
50     POKE219,A
60     POKE218,B
70     PRINTL$
80     NEXT
85     SOUND31;5
87     CLS
90     POKE219,208
100    POKE218,0
110    PRINTTAB(5);"SUPERCALAFRAGELISTIC"
120    POKE218,224
130    PRINTTAB(13);"EXPIALIDOTOIUS"
140    POKE219,210
150    POKE218,226
160    RESTORE
165    CLS
170    GOTO30

```

```
5 REM POKE218 SCREEN DEMO
20 POKE218,225
30 PRINT"TEXT WINDOW"
40 GOTO30
```

```

5      REM POKE 218 AND GRAPHICS DEMO
10     CHAR 1,0000040E3F7FFFFF
20     CHAR 2,00002078F8FCFFFF
30     CLS
40     FORI=227TO255
50       POKE218,I
60       PRINT"ABABABABABABABABABABA"
70       NEXT I

```

Type while Control is
Down

92

Poke 219 values 198 to 206 puts the cursor above the screen allowing invisible inputs without affecting screen set up. 211 does this also. Values of 197 and below result in some very strange displays - be prepared to lose your program; CLS and / or POKE 219, 210 may in some cases bring things back to normal.

POKE 1195 AND POKE 1197 - DATA EXPANSION.

The maximum amount of data which can be held in data lines in any one program is a total of 255 digits, commas and data lines. e.g. data 1,2,3,4,5,6,7,8,9,10 corresponds to a total of 21.

Location 1195 is the data register - whenever a program passes data lines, PEEK(1195) is increased in value as per the above scheme. If the value 255 is exceeded then error 19 occurs. location 1197 is the data pointer - Whenever data is read, PEEK(1197) is increased in value in the same manner as above.

If POKE 1195, 0 and POKE 1197, 0 are applied after the data has been used (or allocated to dim arrays), then firstly the previous data is no longer reistered (and no longer exists) and secondly the data pointer is reset to 0 for oncoming data. POKE 1197,0 is the equivalent of 'RESTORE'.

This has considerable advantages as it allows unlimited amounts of data to be utilized in any one program or continuous recycling of program portions with data. By applying a non-zero value to POKE 1197 along, the data pointer can be reset to any point within the data allowing patial retrieval of the data. If the value chosen places the pointer on a comma, then 0 will be read prior to the next element. Program 20 shows how this works.

PROGRAM 20

```

1  REM POKE1195/1197 DATA EXPANSION DEEMO
5  CLS
10 DATA 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19
15 GOSUB500
20 DATA 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35
25 GOSUB500
30 DATA 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
35 GOSUB500
40 DATA 52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67
45 GOSUB500
50 DATA68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83
55 GOSUB500
60 DATA 84,85,86,87,88
65 GOSUB500
70 PRINTTAB(33);"ALL DATA REGISTERED"
75 IFPEEK(28)>0THEN85
80 GOTO75
85 POKE28,0
90 FORI=1TO88
95 READA
100 GOSUB510

```

```

105 NEXT
110 PRINTTAB(33);"ALL DATA READ"
112 PRINT"PRESS ANY KEY"
113 IF PEEK(28)>0THEN115
114 GOTO113
115 POKE28,0
117 POKE1197,201
120 FORI=71TO83
125 READA
127 PRINTA
130 GOSUB510
135 NEXT
140 PRINTTAB(33);"PARTIAL DATA READ AGAIN"
145 PRINTTAB(33);"PRESS ANY KEY"
150 IFPEEK(28)>0THEN160
155 GOTO150
160 POKE28,0
165 POKE1195,0
170 POKE1197,0
175 DATA"THIS IS FRESH DATA ACHEIVED"
180 DATA"BY POKING 1195 AND 1197 BACK"
185 DATA"    TO ZERO"
190 DATA"PRESS ANY KEY TO CONTINUOUSLY"
195 DATA"RECYCLE THRU DATA LINES"
197 PRINT
200 FORI=1TO5
205 READ L$
210 PRINTL$
215 PRINT
220 NEXT
230 IFPEEK(28)>0THEN240
235 GOTO230
240 POKE28,0
245 POKE1195,0
250 POKE1197,0
255 PRINTTAB(33);"RECYCLE COMING UP"
260 PRINT
265 GOTO10
500 PRINT"PEEK(1195)=";PEEK(1195)
510 PRINTTAB(14);"PEEK(1197)=";PEEK(1197)
520 RETURN

```

POKE 4098 - GAME SOUNDS.

POKING 4098 to 8190 accesses the sound generator. This is how POKE 4098 works. As the value POKED into 4098 increases 1 thru 255, the volume of the sound decreases. The pitch of POKE 4098 sound is dependant on the pitch of the 'SOUND' statement last used in the program and POKE 4098 sound will be sustained until another sound statement is presented or it is cancelled by POKE 4098, 255.

With the use of for/next loops sequencing up or down, inbuild pauses and varying 'SOUND' statements, game tunes / sounds of a limitless variety can be devised. Programs 21 and 22 are examples - the mouse puzzle stamp and a bird warble.

(PROGRAM 21 & 22)

```
2  REM POKE4098 GAME SOUNDA
5  SOUND 31;0
10  FORI=235TO255
20  POKE4098,I
40  NEXT
50  GOTO 10
```

```
8  A=30
10  SOUNDA;0
20  FORI=207TO198STEP-1
30  POKE4098,I
40  POKE4098,I+10
50  POKE4098,I+20
70  NEXT
75  A=RND(31)
80  GOTO10
```



PEEK(12289).

SEE IF YOU CAN WORK THIS ONE OUT:

```
10 PRINTPEEK(12289)
20 POKE 219,193
```

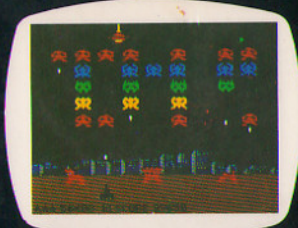
RUN, then type something (RETN), type CLS (RETN), press reset then type new (RETN), then type PRINTPEEK(12289) (RETN).

YOUR PREVIOUS TEXT IS STILL THERE!

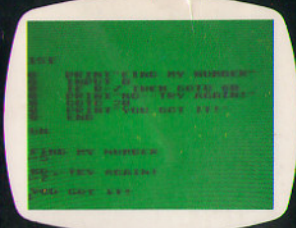


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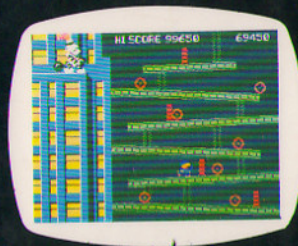
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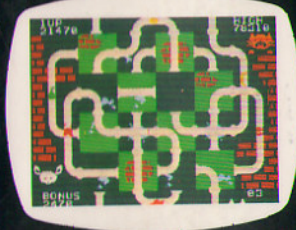
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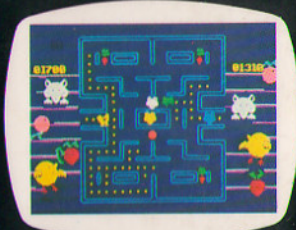
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