



BEST OF PCW

SOFTWARE FOR THE DRAGON 32



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PERSONAL
COMPUTER WORLD
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INTRODUCTION

The Information Revolution is all about getting the information you want when you want it. How many times have you wished that you had all of PCW's programs and Dragon hints in one volume?

For over five years PCW has been collecting the best in programs and programming tips for every micro. Now we've selected the finest of these and tailor made the programs to run on your Dragon computer.

Each program was redesigned by a Dragon expert to make full use of colour, sound and the other facilities of your machine. All the programs have been closely vetted by one of PCW's experienced team of referees to ensure that they are as bug free as possible.

For a pinch of spice we've added all the best readers' tips and programming hints, providing you with a unique compendium of the **Best of PCW** for your machine.

Of course one day we'll be inviting you to dial up this information but for the time being enjoy a good, old-fashioned book!

Jane Bird, editor
Personal Computer World



GENERAL DESCRIPTION

This is a normal game of patience with the added difference that you cannot cheat!

Full instructions are included in the listing of the program.

DETAILED DESCRIPTION

Lines 10-25 Credits in rem statements.

50-100 Sets up variables, strings and arrays ready to shuffle pack.

140-210 Shuffles pack.

215-280 Displays cards.

380 Waits for a key to be pressed, and loads AS with the result.

390-410 Checks to see if a deal, card from pack or the end of game is required.

420-460 Loads X with the row number and Y with the row where the selected card will go.

480 Displays at a convenient place, (@346), the row selected.

490 Waits for a key to be pressed, and loads BS with the result.

500 Checks to see if the foundation sequence is required.

510-930 Loads with the row number from which the card

is to be taken, and checks that the move is legal.
 940-1020 Isolates error, then displays the illegal move form.
 1030-1060 Sets up cursor move for positioning of card.
 1100-1250 Tells you whether you've won or lost. Stores the amount of wins in poke location (4000), and lost games in poke location (4001). Also checks to see if you want another game.
 1260-1380 Deals card from pack, and displays how many cards are left.
 1390-1700 Displays instructions.
 1710-1810 Checks for win.

```

10 REM*****STILTON PATIENCE****
**
20 REM*****BY R.W.STILL*****
25 REM (CONVERTED DMC)
40 POKE 4000,0:POKE 4001,0:GOTO
1400
50 CLS1:RESTORE:CLEAR 1000
60 PRINT "      I'M SHUFFLING THE
PACK"
70 PRINT "
"
80 DIM F$(12),P$(52),S$(4),N$(13
),A$(7,20)
90 FOR N=1 TO 7:TP(N)=N:BP(N)=N:
NEXT N:L=1:A=RND(-TIMER):P=0
100 WS=0:LS=0
140 REM*****SHUFFLE PACK*****
150 FOR I=1 TO 4:READ S$(I):NEXT
I:FOR I=1 TO 13:READ N$(I):NEXT
I
160 DATA H,^,* ,C,A,2,3,4,5,6,7,8
,9,T,J,Q,K
170 CA$="ACAH*A^2C2H2*2^3C3H3*3
^4C4H4*4^5C5H5*5^6C6H6*6^7C7H7*7
^"
180 CA$=CA$+"8C8H8*8^9C9H9*9^TCT
HT*T^JCJHJ*J^QCQHJ*Q^KCKHK*K^"
190 C=52:FOR I=1 TO 52:A=RND(C):
P$(I)=MID$(CA$,2*A-1,2)

```

```

200 L$=LEFT$(CA$, (A-1)*2):R$=RIG
HT$(CA$, (LEN(CA$)/2-A)*2):CA$=L$
+R$:C=C-1:NEXT I
210 REM*****PRESENT LAYOUT*****
215 CLS1:PRINT@0,"R1 R2 R3 R4 R
5 R6 R7";
220 FOR I=1 TO 7:FOR J=1 TO I
230 Z1=(I-1)*3+(J)*32:IF J=BP(I)
THEN PRINT@Z1,P$(L)::A$(I,J)=P$
(L):L=L+1:NEXT J:NEXT I:GOTO 250
240 PRINT@Z1,CHR$(175)+CHR$(175)
;:A$(I,J)=P$(L):L=L+1:NEXT J:NEX
T I
250 REM
280 FOR I=29 TO 52:DE$=DE$+P$(I)
:NEXT I
320 REM***MAIN LOOP - FIRST INPU
T***
330 IF D$<>" " THEN 360
340 FOR I=1 TO 7:IF BP(I)>1 THEN
I=8:NEXT:GOTO 360
350 NEXT I:GOTO 1720
360 PI=0:X=0:Y=0:T=0:TT=0:PRINT@
8*32+24,"FROM ";
380 A$=INKEY$:IF A$="" THEN 380
390 IF A$="D" THEN 1270
400 IF A$="E" THEN 1110
410 IF A$="P" THEN PI=1:GOTO 480
420 REM SET UP X AND Y
430 IF A$>"7" OR A$<"1" THEN 460
440 T=VAL(A$):X=T:Y=BP(X)
450 IF Y=0 THEN 330
460 IF T=0 THEN 380
470 REM SECOND INPUT
480 PRINT A$;:PRINT@10*32+26,"TO
";
490 B$=INKEY$:IF B$="" THEN 490
500 IF B$="F" THEN TT=8:GOTO 520
510 TT=VAL(B$)
520 IF TT=0 THEN 490
530 IF TT=T THEN 490
540 PRINT@12*32+26,B$;

```

```

550 IF TT=8 THEN Y=TP(X)
560 IF PI=1 THEN X#=H$:GOTO 580
570 X#=A$(X,Y)
580 GOSUB 970
590 IF TT=8 THEN 830
600 IF TP(TT)=0 AND NU<>13 THEN
330
610 IF TP(TT)=0 THEN BP(TT)=1:GO
TO 670
620 S1=SU:N1=NU
630 X#=A$(TT,TP(TT))
640 GOSUB 970
650 IF NU-1<N1 OR 1-SU<S1 THEN
950
660 REM *****MAIN MOVE ROUTINE**
***
670 GOSUB 1040:F=1
680 IF PI=1 THEN F=2:F$(1)=H$:GO
SUB 1380:P=P-1:GOTO 740
690 FOR I=BP(X) TO TP(X):F$(F)=A
$(X,I):A$(X,I)="":F=F+1
700 PRINT@PO," ";:PO=PO+32:NEXT
I:XX=X:YY=Y
710 BP(X)=BP(X)-1:TP(X)=BP(X)
720 IF BP(X)>0 THEN G=1
730 IF TP(TT)=0 THEN X=TT:Y=0:GO
SUB 1040:GOTO 750
740 X=TT:Y=TP(TT):GOSUB 1040
750 PO=PO+32:FOR I=1 TO F-1:PRIN
T@PO,F$(I);:PO=PO+32:A$(X,TP(X)+
1)=F$(I)
760 IF F$(I)<>" " THEN TP(X)=TP(X
)+1
770 NEXT I
780 FOR I=1 TO 12:F$(I)="":NEXT
I:F=1
790 IF G=1 THEN G=0:X=XX:Y=YY-1:
GOSUB 1040:PRINT@PO,A$(X,Y);:PO=
PO+2
800 IF PI=1 THEN 1310
810 GOTO 330
820 REM *****MOVE TO FOUNDATION***

```

```

830 IF F(S2)><NU-1 THEN 330
840 FP(S2)=FP(S2)+1:F(S2)=NU:PO=
25
850 FOR I=1 TO F(S2):PO=PO+32:NE
XT I:FOR I=1 TO S2:PO=PO+3:NEXT
I
860 IF Y=0 THEN 880
870 IF A$(X,Y-1)<>" " THEN G=1
880 PRINT@PO,X$;:PO=PO+2
890 IF PI=1 THEN GOSUB 1380:P=P-
1:GOTO 1310
900 GOSUB 1040:PRINT@PO," ";:PO
=PO+2:A$(X,Y)="":IF Y>0 THEN TP(
X)=TP(X)-1
910 IF TP(X)=BP(X)-1 THEN BP(X)=
BP(X)-1
920 IF G=1 THEN G=0:PO=PO-32-2:P
RINT@PO,A$(X,Y-1);:PO=PO+2
930 GOTO 330
940 REM*****ERROR ROUTINE*****
950 IF 1-SU <>S1 THEN PRINT@15*3
2+23,"?COLOUR?";:SOUND 200,2:FOR
I=1 TO 1000:NEXTI:PRINT@15*32+2
3," ";:GOTO 330
960 PRINT@15*32+23,"?VALUES?";:S
OUND 240,2:FOR I=1 TO 1000:NEXT
I:PRINT@15*32+23," ";:GOT
O 330
970 REM**TO RETURN VALUE AND NUM
BERS OF X**
980 RESTORE:FOR I=1 TO 4:READ W$
:IF RIGHT$(X$,1)=W$ THEN SU=I-IN
T(I/2)*2:S2=I
990 NEXT I
1000 FOR I=1 TO 13:READ W$:IF LE
FT$(X$,1)=W$ THEN NU=I:I=14
1010 NEXT
1020 RETURN
1030 REM***SET UP CURSOR MOVE***
1040 X1=X:Y1=Y:PO=0
1050 X1=X1*3-3
1060 PO=(Y1)*32+X1:RETURN

```

```

1100 REM*****END ROUTINE*****
1110 FOR I=1 TO 4:IF FP(I)<>13 T
HEN 1160
1120 NEXT I:FOR JJ=160 TO 250 ST
EP 10:SOUND JJ,1:NEXT JJ:PRINT@1
3*32+6,"CONGRATULATIONS YOU'VE W
ON!!!";
1130 FOR I=1 TO 1500:NEXT I
1140 POKE 4000,PEEK(4000)+1
1150 GOTO 1190
1160 FOR JJ=240 TO 130 STEP -10:
SOUND JJ,1:NEXT JJ:PRINT@32*13+6
,"SORRY YOU'VE LOST";
1170 FOR I=1 TO 1500:NEXT I
1180 POKE 4001,PEEK(4001)+1
1190 CLS1:PRINT"    SCORES":PRIN
T "WINS = ";PEEK(4000)
1200 PRINT:PRINT"LOSSES = ";PEE
K(4001)
1210 PRINT"PLAY AGAIN?"
1220 P$=INKEY$:IF P$="" THEN 122
0
1230 IF P$="Y" THEN 50
1240 IF P$<>"N" THEN 1220
1250 PRINT "BYE BYE ":END
1260 REM *****DEAL ROUTINE*****
1270 P=P+3
1280 IF DE$<>" " THEN 1310
1290 FOR I=1 TO 7:IF BP(I)>1 THE
N I=8:NEXT:GOTO 330
1300 NEXT I:GOTO 1720
1310 IF P=0 THEN H$=" ":GOTO 13
60
1320 IF LEN(DE$)/2=P-1 THEN P=LE
N(DE$)/2:GOTO 1350
1330 IF LEN(DE$)/2=P-2 THEN P=LE
N(DE$)/2:GOTO 1350
1340 IF P>LEN(DE$)/2 THEN P=0:GO
TO 1270
1350 H$=MID$(DE$,2*P-1,2)
1353 PRINT@23,"PACK=";LEN(DE$)/2
;

```

```

1355 PRINT@3*32+23,CHR$(191);"DE
ALT";CHR$(191);
1360 PRINT@4*32+25,H#;:GOTO 330
1370 REM *****CLOSE UP REMAINING
CARDS*****
1380 L$=LEFT$(DE$, (P-1)*2):R$=RI
GHT$(DE$, (LEN(DE$)/2-P)*2):DE$=L
$+R$:RETURN
1390 REM*****INSTRUCTIONS*****
1400 CLS1
1410 PRINT" ***STILTON***"
1420 PRINT"FROM ONE TO SEVEN CAR
DS ARE"
1430 PRINT"DEALT TO SEVEN COLUMN
S, THE "
1435 PRINT "LAST CARD ONLY OF EA
CH"
1440 PRINT"COLUMN BEING FACE UPW
ARDS. "
1450 PRINT" EXPOSED CARDS ARE
MOVED IN "
1455 PRINT"ASCENDING SUIT SEQUEN
CE"
1460 PRINT "TO ACES AS THESE APP
EAR AND"
1465 PRINT "IN DESCENDING SEQUEN
CE OF"
1470 PRINT"ALTERNATE COLOURS TO
THE "
1475 PRINT"BOTTOM CARDS OF COLUM
NS."
1480 PRINT" COMPLETE SEQUENCES O
F SEVERAL "
1485 PRINT"CARDS MAY BE MOVED BE
TWEEN "
1490 PRINT"COLUMNS.":PRINT
1500 PRINT"PRESS KEY TO CONTINUE
";
1530 A$=INKEY$:IF A$="" THEN 1530
1540 CLS1:PRINT" EMPTY COLUMNS
MAY BE FILLED"
1545 PRINT"BY KINGS OR BY SEQUEN

```

```

CES "
1550 PRINT"HEADED BY KINGS"
1555 PRINT"THE REST OF THE PACK
IS DEALT,"
1560 PRINT"THREE CARDS AT A TIME
, TO A "
1565 PRINT"WASTE PILE, THE TOP C
ARD OF"
1570 PRINT"WHICH IS ALWAYS AVAIL
ABLE"
1575 PRINT"ANY NUMBER OF RE-DEAL
S IS"
1580 PRINT"ALLOWED. CARDS ARE
MOVED"
1585 PRINT"BY SIMPLY TYPING THE
ORIGINAL"
1590 PRINT"COLUMN NUMBER, OR F F
OR WASTE"
1595 PRINT"PILE, FOLLOWED BY THE
"
1600 PRINT"DESTINATION COLUMN NU
MBER "
1605 PRINT"OR F FOR FOUNDATION S
EQUENCE."
1610 PRINT"D DEALS 3 CARDS : E E
NDS GAME"
1630 PRINT"          PRESS SPACE BAR
TO START";
1690 A$=INKEY$:IF A$=""THEN 1690
1700 GOTO 50
1710 REM **AUTOMATIC FINNISH**
1720 FOR II=1 TO 7:IF TP(II)<>0
THEN II=8:NEXT II:GOTO 1740
1730 NEXT II:GOTO 1110
1740 FOR II=1 TO 7:X=II:Y=TP(II)
:X$=A$(X,Y):GOSUB 970
1750 IF (S2)<>NU-1 THEN NEXT II:
GOTO 1720
1760 FP(S2)=FP(S2)+1:F(S2)=NU:PO
=25
1770 FOR I=1 TO F(S2):PO=PO+32:N
EXT I:FOR I=1 TO S2:PO=PO+3:NEXT I

```

```
1780 PRINT@PO,X$;:PO=PO+2
1790 GOSUB 1040:PRINT@PO," ";A$(X,Y)="":PO=PO+2:IF Y>0 THEN P(X)=TP(X)-1
1800 IF TP(X)=BP(X)-1 THEN BP(X)=BP(X)-1
1810 NEXT:GOTO 1720
```


GOLF

MARK SEXTON

Original program by Jeff Aughton

GENERAL DESCRIPTION

As the name suggests, the player has all the challenge of an eighteen hole golf course. Five strokes per hole are allowed before the computer moves you to the next hole, with a choice of thirteen clubs per shot. The game has the usual obstacles of a game of golf - bunkers, water, rough, wind and so on. Scores are displayed at the end of each hole and at the end of the course.

The game difficulty can be increased by making the dimensions of the hole smaller in line 2530, increasing the size of the water in lines 1190 and 2520 and introducing one or more random variables in any of lines 1450 - 1570 (not the rem line). See you at the clubhouse!

DETAILED DESCRIPTION

Lines 100-280 Sets up initial variables, produces sound effect and the 'Welcome' display.

290-390 Display which asks the player to input his/her handicap.

400-440 Display of 'rules'.

450-510 Display of 'clubs' and 'yardage'.

520-550 Warning display.

560-620 'Par' display. This sets out your target to beat.

630-650 Course/hole description screen display.

1000-1040 Sets up variables of hole number, scale, tee position and reads hole data.

1050-1110 Display of data on the hole to be played - length, par and so on.

1120-1290 Draws and displays each of the elements of the

hole in the order green, flag, tee, ball, water, two bunkers and rough.

1400-1630 The body of the program, which controls the play of the five strokes allowed per hole. The overall and hole strokes are incremented. The display invites the club and type of stroke to be selected; the new ball position is calculated and the ball then displayed. (As written the program leaves the old balls in position, which makes the game easier to play. Line 1595 - a rem - contains the means of removing the 'old' ball.)

1640-1660 Unfinished hole (six strokes applied) screen display.

1670-1720 Subroutine for displaying screen instructions to player.

1800-1840 Subroutine for inputting club number and type of shot.

1900-2000 Final score and invitation to play again.

2500-2540 Subroutines which check for the ball entering a bunker, the rough, the water or the hole, with appropriate messages.

2550-2580 Data for each hole - length and par.

```
100 REM*****   GOLF-4   *****
110 CLEAR2000: DIMJ(6): DIMK(6)
120 PH=0: OT=0
130 REM**GOLF**
140 CLS: PLAY" T255L1ABCDEFGHIABCDEFGHI"
150 Z$=" ": FOR B=1 TO 31: Z$=Z$+"
   ": NEXT
160 B$=" ": FOR K=1 TO 32: B$=B$+CHR
R$(175): NEXT
200 M1=0: M$="gol f": GOSUB 1670
210 PRINT"WELCOME TO THE LINKS. T
HIS IS AN"
220 PRINT"18 HOLE COURSE OF PROF
ESSIONAL"
230 PRINT"STANDARD."
240 PRINT"<<<COURSE RECORD IS 2
UNDER>>>"
250 PRINT"PLEASE REPLACE DIVOTS
```

```

AND SHOW"
260 PRINT"COURTESY TO YOUR FELLO
W GOLFERS."
270 M1=12:M$="PRESS ANY KEY":GOS
UB 1670
280 A$=INKEY$:IF A$="" THEN 280
290 PRINT
300 GOTO400
310 CLS:PRINT:PRINT:PRINT:INPUT"
WHAT IS YOUR HANDICAP";H:CLS
320 IF H>0 AND H<30 THEN 370
330 CLS:FOR I=10 TO 50 STEP10:SO
UND 1,2:NEXT
340 M1=12:M$="NUMBER BETWEEN 1 A
ND 30":GOSUB 1670
350 PRINT@96,"
"
360 GOTO 310
370 GOSUB1720:M1=12:M$="PRESS AN
Y KEY":GOSUB 1670
380 A$=INKEY$:IF A$="" THEN 380
390 GOTO560
400 CLS:M1=0:M$="rules":GOSUB 1670
410 PRINT:PRINT"YOU GET 5 SHOTS
AT EACH HOLE AND":PRINT@160,"IF
AFTER THESE YOU HAVE NOT GOT THE
BALL IN THE HOLE THEN YOU ARE
MOVED ONTO THE NEXT HOLE."
420 PRINT"THE WIND MAY CAUSE DIF
FICULTIES AND YOU MAY SOMETIMES
SLICE YOUR SHOTS."
430 M1=12:M$="PRESS ANY KEY":GOS
UB 1670
440 A$=INKEY$:IF A$="" THEN 440
450 CLS:M1=0:M$="clubs":GOSUB 16
70
460 PRINT:PRINT"yardage club
s no.
470 PRINT"200-200 1-4 WOODS
1-4"
480 PRINT"200-100 1-5 IRONS
5-9"

```

```

490 PRINT"100-0           6-9 IRONS
   10-13"
500 M1=12:M$="PRESS ANY KEY":GOS
UB 1670
510 A$=INKEY$:IF A$="" THEN 510
520 CLS:FOR I=150 TO 250 STEP10:
SOUND I,1:NEXT
530 M1=7:M$="warning":GOSUB 1670
540 PRINT"      DON'T HIT IT TOO H
ARD"
550 FOR I=1 TO 500:NEXT I:GOTO31
0
560 CLS:M1=0:M$="par":GOSUB 1670
570 PRINT"THE PAR FOR THE COURSE
   IS 69."
580 PRINT"YOUR HANDICAP IS: ";H;"
   SO YOU ":PRINT"MUST TRY AND COM
PLETE THE COURSE"
590 PRINT@192,"IN: ";69+H;" SHOTS
   ."
610 M1=12:M$="PRESS ANY KEY":GOS
UB 1670
620 A$=INKEY$:IF A$="" THEN 620
630 CLS:M1=0:M$="course":GOSUB 1
670:PRINT:PRINT"THE GREEN AND TE
E ARE YELLOW AND THE FLAG IS RED
.THE ROUGH IS      ALSO RED AND TH
ERE ARE TWO      BUNKERS WHICH AR
E YELLOW.THERE IS ALSO SOME WATE
R WHICH IS BLUE."
640 M1=12:M$="PRESS ANY KEY":GOS
UB 1670
650 A$=INKEY$:IF A$="" THEN 650
1000 HO=0:RESTORE
1010 HO=HO+1:IFHO>18THEN1900
1020 READ D,P
1030 S=220/D
1040 T=RND(120)+20
1050 CLS
1060 PRINT:PRINT:PRINT"hole: ";HO
;" distance: ";D;" par: ";P
1070 PRINT:PRINT"shots taken: "

```

```

1080 PRINT"OVERALL:";OT
1090 PRINT"AT LAST HOLE:";LH
1100 M1=12:M$="PRESS ANY KEY":GO
SUB 1670
1110 A$=INKEY$:IF A$="" THEN 111
0
1120 CLS
1130 PMODE1:SCREEN1,0:PCLS
1140 CIRCLE(220,98),20,2,.5
1150 DRAW"BM220,98C4U20;R7;G7"
1160 CIRCLE(15,T),13,2,.5
1170 PSET(15,T,3)
1180 B=RND(100)+45
1190 CIRCLE(B,70),20,3,.5
1200 PAINT(B,70),3,3
1210 L1=RND(30)+150:L2=RND(30)+1
50
1220 CIRCLE(L1,50),30,2,.3
1230 PAINT(L1,50),2,2
1240 CIRCLE(L2,90),30,2,.3
1250 PAINT(L2,90),2,2
1260 R1=RND(100)+60
1270 CIRCLE(R1,125),40,4,.3
1280 PAINT(R1,125),4,4
1290 FOR I=1 TO 2000:NEXT
1400 J(0)=0:K(0)=T:PH=0:H=0:W=0
1410 FOR H=1 TO 5:PH=H+W
1420 IF PH>5 THEN GOTO 1640
1430 GOSUB 1800
1440 OT=OT+1:F=C
1450 J(H)=J(H-1)+(D-J(H-1))/C+10
0/F:IF C=1 OR C=2 THEN C=3:GOTO
1450
1460 IF C<6 THEN J(H)=J(H)+RND(3
0)+80
1470 IF C>=6 AND C<=9 THEN J(H)=
J(H)+30
1480 IF C>9 THEN J(H)=J(H)+RND(3
0)+10
1490 K(H)=K(H-1):IF J(1)>280 THE
N J(1)=280
1500 REM L-LOFT R-RUN ON H

```

```

-HOOK S-SLICE C-CHIP BACK
D-CHIP DOWN U-CHIP UP
1510 IF V$="L" THEN J(H)=J(H)-(C
*2)
1520 IF V$="R" THEN J(H)=J(H)+10
1530 IF V$="H" THEN K(H)=K(H)-RN
D(70)
1540 IF V$="S" THEN K(H)=K(H)+RN
D(70)
1550 IF V$="C" THEN J(H)=J(H-1)-
40
1560 IF V$="D" THEN K(H)=K(H)+20
1570 IF V$="U" THEN K(H)=K(H)-20
1580 IF J(H)>D+50 OR K(H)>190 OR
K(H)<0 THEN CLS:PRINT:PRINT:PRI
NT: PRINT"OUT OF BOUNDS -
        6 STROKES FOR THE
HOLE      ":OT=OT+6-PH:LH=6:H=6:
FORZ=1 TO 1200:NEXT Z:GOTO 1010
1590 LH=PH
1595 REM *** USE PRESET(J(H
-1)*S,K(H-1)) AT THIS LINE NO.
TO REMOVE THE BALL DISPLAY BEFOR
E DISPLAYING IT'S SUBSEQUENT POS
ITION
1600 PMODE1:SCREEN1,0:PSET(J(H)*
S,K(H),3):SOUND 10,3
1610 FORI=1TO2000:NEXTI
1620 GOSUB 2500
1630 NEXTH
1640 CLS:PRINT:PRINT:PRINT:PRINT
:PRINT: PRINT"UNFINISHED HOLE -
        6 STROKE TOTAL APPLIES ":F
OR Z=1 TO 1200:NEXT Z:OT=OT+1:LH
=6
1650 GOTO 1010
1660 END
1670 M2=INT(14-LEN(M$)/2)
1680 PRINT@32*M1+M2,STRING$(LEN(
M$)+2,207)
1690 PRINT@32*(M1+1)+M2,CHR$(207
)+M$+CHR$(207)

```

```

1700 PRINT@32*(M1+2)+M2,STRING$(
LEN(M$)+2,207)
1710 RETURN
1720 FOR I=11 TO 14:PRINT@I*32,Z
$:NEXT:RETURN
1800 CLS
1810 PRINT:PRINT:PRINT: PRINT"CL
UB (1-13)":INPUT C:PRINT C:
1820 IF C<=0 OR C>13 THEN PRINT"
NUMBER BETWEEN 1 AND 13 PLEASE":
PRINT@96,"";GOTO 1810
1830 PRINT:INPUT"DIRECTION (U/D/
L/R/C/H/S)";V$:IF V$<>"U" AND V$
<>"D" AND V$<>"R" AND V$<>"L" AN
D V$<>"C" AND V$<>"H" AND V$<>"S
" THEN PRINT"U/D/L/R/C/H OR S P
LEASE":GOTO 1830
1840 RETURN
1900 CLS:M1=0:M$="score":GOSUB 1
670
1910 PRINT:PRINT"PAR=69"
1920 PRINT"HANDICAP=";H
1930 PRINT"SHOTS TAKEN=";OT
1940 PRINT"NUMBER OVER PAR=";(OT
)-69
1950 IF OT-69-H<0 THEN PRINT "AN
EXCELLENT ROUND ---
ANOTHER ? "
1960 IF OT-69-H>=0 AND OT-69-H<5
THEN PRINT" NOT A BAD ROUND
--- ANOTHER FOR
THE EXERCISE ?":PRINT:PRINT
1970 IF OT-69-H>=5 THEN PRINT "A
DISAPPOINTING ROUND --- A
NOTHER TO IMPROVE ?":PRINT:PRIN
T
1980 PRINT "IF YOU REMEMBER THE
RULES AND WANT ANOTHER ROUND
, PRESS ANY KEY TO SET YOUR HA
NDICAP AND GO TO THE FIRST TEE
"
1990 A$=INKEY$:IFA$=""THEN1990

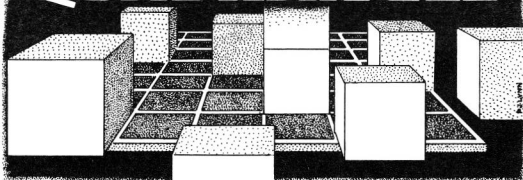
```

```

2000 GOTO310
2500 IF S*J(H)>(L1-15) AND S*J(H)
)<(L1+15) AND K(H)>40 AND K(H)<6
0 OR S*J(H)>(L2-15) AND S*J(H)<(
L2+15) AND K(H)>80 AND K(H)<100
THEN CLS:PLAY"T255;ABCDEFGGGFEDCB
A":M1=0:M$="YOU'RE IN A BUNKER":
GOSUB 1670:FORZ=1TO1000:NEXTZ:RE
TURN
2510 IF S*J(H)>(R1-45) AND S*J(H)
)<(R1+45) AND K(H)>113 AND K(H)<
140 THEN CLS:PLAY"T255AABBCCDDEE
FFGG":M1=0:M$="YOU'RE IN THE ROU
GH":GOSUB 1670:FORZ=1TO1000:NEXT
Z:RETURN
2520 IF S*J(H)>(B-35) AND S*J(H)
)<(B+35) AND K(H)>60 AND K(H)<80
THEN CLS:PLAY"T255ABCDEFGFABCDEF
GABCDEF":M1=0:M$="YOU'RE IN THE
WATER":GOSUB 1670:FOR Z=1 TO 100
0:NEXTZ:CLS:PRINT:PRINT"PENALTY
STROKE -DROPPED BALL":FORZ=1TO60
0:NEXTZ:OT=OT+1:W=W+1:RETURN
2530 IF S*J(H)>208 AND S*J(H)<23
2 AND K(H)>93 AND K(H)<112 THEN
CLS:PLAY"T255ABCABCABCABCDEFDEF
DEFDEFGGG":M=0:M$="YOU'VE HOLED
IT":GOSUB1670:FORZ=1TO1000:NEXT
Z:GOTO 1010
2540 RETURN
2550 DATA 367,4,445,4,314,4,189,
3,520,5
2560 DATA 331,4,468,4,375,4,177,
3,424,4
2570 DATA 562,5,336,4,208,3,447,
4,298,4
2580 DATA 543,5,385,4,478,4

```


QUADRANGLE



SIMON STRONG
Original program by
Eileen Baghoomians and Steven Fawthrop

GENERAL DESCRIPTION

Any game which pits your skills against the computer is always popular and Quadrangle is no exception.

You have the option of playing against a human competitor or the Dragon and, when you've made your choice, you are presented with a 7 x 6 grid. By pressing keys 1-7 you can place coloured blocks in such a way that you can build up a four-cornered figure.

Very compulsive, the program includes a scoreboard at the top of the screen and various gentle rebukes if you try to cheat. You can also call on the computer to recommend a move if you are stuck.

When playing the computer, there are three levels of difficulty to choose from.

DETAILED DESCRIPTION

Lines 100-110 Dimensions the arrays.
120 Clears screen and prints title.
140-180 Prints instructions.

190 Asks for number of players.
 200-230 Asks for player(s) names to be inputted and offers level of difficulty.
 240-250 Sets variables.
 280 Offers you the option of starting.
 310 Prints screen.
 320 Prints 'prompts' and checks if help is required.
 360 Checks that correct keys have been pressed and prints a warning if any other key than the permitted 1-7 are pressed.
 370 Checks there is sufficient room for your move.
 380 Recommended move routine.
 390 'Thinking' routine and brick placement.
 670 Checks if grid is full and declares the contest a draw.
 680 Declares the winner.
 710-730 'Flashes' the four corners of the square.
 750-770 Repeat sequence.
 780 Prints 'thinking' routine.
 1060 Draws the playing screen.
 1170 Instructions storage.
 1300 Data storage.

```

100 CLEAR 500
110 DIM A$(1),D$(1),S(1),F(70,2)
    ,G(12),M(6,6,2)
120 CLS:PRINT @235,"QUADRANGLE"
140 D$(0)=STRING$(3,175):D$(1)=S
    TRING$(3,159):C$=STRING$(3,128)
160 FOR K=1 TO 70:READ F(K,0):NE
    XT:FOR K=0 TO 12:G(K)=INT(2^K):N
    EXT
170 GOSUB 1170
180 CLS:PRINT @33,"ONE OR TWO PL
    AYERS ?"
190 B$=INKEY$:IF B$<"1" OR B$>"2
    " THEN 190 ELSE P=VAL(B$)
200 CLS:IF P=1 THEN PRINT @33,""
    ;:INPUT"YOUR NAME PLEASE ";A$(0)
    :A$(1)="COMPUTER"
210 IF P=2 THEN PRINT @33,"";:IN
  
```

```

PUT"FIRST PLAYER'S NAME ";A$(0):
PRINT @257,"";:INPUT"SECOND PLAY
ER'S NAME ";A$(1):P=0
220 IF P=1 THEN PRINT @257,"LEVE
L OF PLAY (1-3)";:E$=INKEY$ ELSE
  FOR K=1 TO 1000:NEXT:E$="0":GOT
O 240
230 E$=INKEY$:IF E$<"1" OR E$>"3
" THEN 230
240 T=VAL(E$):TS=T:S(0)=0:S(1)=0
250 RP=RND(0)*2.5+3.5:RN=RND(0)*
2.5+2.5:RM=50:ZX=0:CLS
260 IF A$(1)<>"COMPUTER" THEN 31
0
270 IF T<3 THEN P=1:GOTO 310
280 PRINT @ 33,"DO YOU WANT TO G
O FIRST?":B$=INKEY$
290 B$=INKEY$:IF B$="Y" THEN P=0
  ELSE IF B$="N" THEN P=1 ELSE 29
0
300 CLS:IF B$="Y" THEN ZX=1
310 FOR K=0 TO 6:FOR L=1 TO 6:M(
K,L,0)=-1:NEXT:M(K,0,0)=0:FOR M=
1 TO 2:FOR L=0 TO 6:M(K,L,M)=0:N
EXT:NEXT:NEXT:GOSUB 1050
320 PRINT @65,STRING$(126,32);:P
RINT @65,A$(P);"'S MOVE";:B$=INK
EY$:RM=RM+1
330 IF P=1 AND A$(P)="COMPUTER"
THEN IF ZX=1 THEN Q=P:GOTO 780 E
LSE ZX=1:G=RND(4)+2:IF G<6 THEN
350 ELSE G=4+(RND(2)+1)*SGN(RND(
0)-.5):GOTO 350
340 B$=INKEY$:IF B$="" THEN 340
  ELSE G=VAL(B$)
350 IF B$="0" THEN GOSUB 1010:GO
TO 320 ELSE IF B$="H" THEN Q=0:T
=3:GOTO 780
360 IF G<1 OR G>7 THEN PRINT @65
,"YOU HAVE MADE AN ILLEGAL MOVE"
:PRINT" PLEASE TRY AGAIN":FOR K=
1 TO 750:NEXT:GOTO 320

```

```

370 G=G-1: IF M(G,0,0)=6 THEN PRI
NT @65,"THE COLUMN CHOSEN IS OCC
UPIED, ":PRINT" PLEASE TRY AGAIN"
;:FOR K=1 TO 750:NEXT:GOTO 320
380 T=TS: IF B$="H" THEN PRINT @6
5,"I RECOMMEND";G+1;CHR$(8);".
";A$(0);"'S MOVE":;GOTO 340
390 M(G,0,0)=M(G,0,0)+1:M(G,M(G,
0,0),0)=P:GOSUB 400:GOSUB 420:IF
E$<>"Y" THEN GOSUB 520:GOTO 660
ELSE 660
400 IF P=1 AND A$(P)="COMPUTER"
THEN PP=485+3*G-32*M(G,0,0):FOR
K=1 TO 9:PRINT @ PP,D$(P);:FOR L
=0 TO 50:NEXT:PRINT @PP,C$;:FOR
L=0 TO 50:NEXT:NEXT
410 PRINT @485+3*G-32*M(G,0,0),D
$(P);:RETURN
420 Q=P:X=G:Y=M(G,0,0)
430 E$="N"
440 FOR K3=1 TO 6:IF K3=Y THEN 4
70
450 IF X+Y-K3>0 AND X+Y-K3<7 THE
N IF M(X,K3,0)=Q AND M(X+Y-K3,Y,
0)=Q AND M(X+Y-K3,K3,0)=Q THEN E
$="Y":Y8=1:GOTO 480
460 IF X-Y+K3>0 AND X-Y+K3<7 THE
N IF M(X,K3,0)=Q AND M(X-Y+K3,Y,
0)=Q AND M(X-Y+K3,K3,0)=Q THEN E
$="Y":Y8=-1:GOTO 480
470 NEXT
480 RETURN
520 VL=(2^X) OR 2^(Y+6):FOR K4=1
TO 70:VM=VL AND F(K4,0):IF VM=V
L THEN GOSUB 540
530 NEXT:RETURN
540 IF P=1 THEN 600 ELSE IF ABS(
F(K4,1))>5 THEN RETURN ELSE IF F
(K4,1)<0 THEN 620 ELSE F(K4,1)=F
(K4,1)+1:IF F(K4,1)=1 THEN F0=1
ELSE IF F(K4,1)=2 THEN F0=2 ELSE
F0=7

```

```

550 U5=1
560 FOR U=0 TO 12:VX=F(K4,0) AND
  G(U):IF VX=0 THEN 580
570 IF U<7 AND U<>X THEN U1=U EL
  SE IF U>6 AND U<>Y THEN U2=U-6
580 NEXT:M(X,U2,U5)=M(X,U2,U5)+F
  0:M(U1,Y,U5)=M(U1,Y,U5)+F0:M(U1,
  U2,U5)=M(U1,U2,U5)+F0
590 RETURN
600 IF ABS(F(K4,1))>5 THEN RETURN
  ELSE IF F(K4,1)>0 THEN 640 ELSE
  F(K4,1)=F(K4,1)-1:IF F(K4,1)=-
  1 THEN F0=1 ELSE IF F(K4,1)=-2 T
  HEN F0=2 ELSE F0=7
610 U5=2:GOTO 560
620 IF F(K4,1)=-1 THEN F0=-1 ELSE
  IF F(K4,1)=-2 THEN F0=-2 ELSE
  F0=7
630 GOSUB 610:F(K4,1)=10:RETURN
640 IF F(K4,1)=1 THEN F0=-1 ELSE
  IF F(K4,1)=2 THEN F0=-2 ELSE F0
  =-7
650 GOSUB 550:F(K4,1)=-10:RETURN
660 FOR G=0 TO 6:IF M(G,0,0)=6 T
  HEN NEXT ELSE 680
670 IF E$<>"Y" THEN PRINT @33,"T
  HE GAME IS A DRAW":GOTO 750
680 IF E$<>"Y" THEN P=(P+1) AND
  1:GOTO 320 ELSE S(P)=S(P)+1:PRIN
  T @65,STRING$(126,32):PRINT @65,
  A$(P); " WINS":PRINT @13,S(0);
690 FOR L=1 TO 9:PRINT @485+3*X-
  32*Y,C$;:PRINT @485+3*X-32*K3,C$
  ;:PRINT @485+3*(X+Y8*(Y-K3))-32*
  Y,C$;:PRINT @485+3*(X+Y8*(Y-K3))
  -32*K3,C$;
700 FOR M=1 TO 50:NEXT
710 PRINT @485+3*X-32*Y,D$(P);:P
  RINT @485+3*X-32*K3,D$(P);:PRINT
  @485+3*(X+Y8*(Y-K3))-32*Y,D$(P)
  ;:PRINT @485+3*(X+(Y-K3)*Y8)-32*
  K3,D$(P);

```

```

720 FOR M=1 TO 50:NEXT
730 NEXT
740 GOSUB 1020
750 PRINT @161,"DO YOU WISH TO P
LAY AGAIN ?":E$=INKEY$
760 E$=INKEY$:IF E$<>"Y" AND E$<
>"N" THEN 760 ELSE IF E$="N" THE
N CLS:END ELSE PRINT @161,"ARE T
HE PLAYERS THE SAME ?":E$=INKEY$
770 E$=INKEY$:IF E$<>"Y" AND E$<
>"N" THEN 770 ELSE IF E$="N" THE
N 180 ELSE 250
780 PRINT @97,"THINKING";:FOR K=
0 TO 6:PRINT". ";
790 IF M(K,0,0)=6 THEN M(K,0,1)=
-1000:GOTO 810
800 R=K:S=M(K,0,0)+1:GOSUB 1090:
M(K,0,1)=VX
810 NEXT:GOSUB 990:IF M(G,0,1)>9
98 THEN 380
820 FOR K=0 TO 6:IF M(K,0,0)<5 T
HEN Q=(P+1) AND 1:R=K:S=M(K,0,0)
+2:GOSUB 1090:IF VX=1000 THEN M(
K,0,1)=-999
830 IF M(K,0,1)>-999 THEN PRINT"
. ";:Q=P:R=K:S=M(K,0,0)+1:GOSUB 1
100:M(K,0,1)=VX
840 NEXT
850 IF T=1 THEN 960 ELSE IF T=2
THEN GOSUB 1120:GOTO 960
860 FOR K=0 TO 6:IF M(K,0,1)<-99
7 THEN 950 ELSE M(K,M(K,0,0)+1,0
)=P:M(K,0,0)=M(K,0,0)+1
870 FOR M=0 TO 6:IF M(M,0,0)=6 T
HEN M(M,0,2)=-1000:GOTO 880 ELSE
Q=(P+1) AND 1:R=M:S=M(M,0,0)+1:
GOSUB 1100:M(M,0,2)=VX
880 NEXT:PRINT". ";
890 FOR LP=1 TO 4:L=-100:FOR M=0
TO 6:IF M(M,0,2)>L THEN L=M(M,0
,2):LQ=M
900 NEXT:M(LQ,0,2)=-1000:M(K,0,1

```

```

)=M(K,Ø,1)-L*RN
91Ø NEXT
92Ø Q=P:R=K:S=M(K,Ø,Ø)+1:GOSUB 1
Ø9Ø: IF VX=1ØØØ THEN M(K,Ø,1)=M(K
,Ø,1)-RN*RM
93Ø M(K,Ø,Ø)=M(K,Ø,Ø)-1:M(K,M(K,
Ø,Ø)+1,Ø)=-1
94Ø PRINT". ";
95Ø NEXT:Q=P
96Ø PRINT @65,STRING$(126,32)
97Ø GOSUB 99Ø
98Ø GOTO 38Ø
99Ø G=-1:L=-1ØØØ:FOR K=Ø TO 6:IF
M(K,Ø,1)>L THEN L=M(K,Ø,1):G=K
ELSE IF M(K,Ø,1)=L THEN IF ABS(3
-K)<ABS(3-G) THEN L=M(K,Ø,1):G=K
1ØØØ NEXT:RETURN
1Ø1Ø CLS:GOSUB 1Ø5Ø
1Ø2Ø FOR K=Ø TO 6:FOR L=1 TO 6
1Ø3Ø IF M(K,L,Ø)<>-1 THEN PRINT
@485+3*K-32*L,D$(M(K,L,Ø));
1Ø4Ø NEXT:NEXT:RETURN
1Ø5Ø CLS
1Ø6Ø PRINT @Ø,USING" % %
## -- % % ## ";A$(Ø);S(Ø)
;A$(1);S(1);
1Ø65 FOR K=1 TO 6:PRINT @261+K*3
2,STRING$(21,128);:NEXT K
1Ø7Ø PRINT @485," 1 2 3 4 5
6 7 ";
1Ø8Ø RETURN
1Ø9Ø VX=Ø:X=R:Y=S:GOSUB 43Ø:IF E
$="Y" THEN VX=1ØØØ:RETURN ELSE Q
=(Q+1) AND 1:X=R:Y=S:GOSUB 43Ø:Q
=(Q+1) AND 1:IF E$="Y" THEN VX=9
99:RETURN ELSE RETURN
11ØØ IF P=Ø THEN VX=M(K,M(K,Ø,Ø)
+1,1) ELSE VX=M(K,M(K,Ø,Ø)+1,2)
111Ø RETURN
112Ø FOR K=Ø TO 6:IF M(K,Ø,1)<-9
97 THEN 116Ø ELSE M(K,M(K,Ø,Ø)+1
,Ø)=1:M(K,Ø,Ø)=M(K,Ø,Ø)+1

```

```

1130 IF M(K,0,0)<6 THEN Q=(P+1)
AND 1:R=K:S=M(K,0,0)+1:GOSUB 110
0:M(K,0,1)=M(K,0,1)-RP*VX
1140 M(K,0,0)=M(K,0,0)-1:M(K,M(K
,0,0)+1,0)=-1
1150 Q=(P+1)+1:R=K:S=M(K,0,0)+1:
GOSUB 1100:M(K,0,1)=M(K,0,1)+RP*
VX:M(K,0,1)=M(K,0,1)*5+RND(4)
1160 PRINT ". ";:NEXT:Q=P:RETURN
1170 CLS:PRINT @42,"INSTRUCTIONS
":PRINT @97,"AT THE BEGINNING O
F THIS GAME YOU WILL BE GIVEN
THE OPTION OF EITHER PLAYING
AGAINST THE COMPUTER OR AGAIN
ST ANOTHER PLAYER."
1171 PRINT @289,"THE OBJECT OF
THE GAME IS TO PLACE FOUR OF
YOUR PIECES AT THE CORNERS OF
A SQUARE. THE FIRST TO DO SO
IS THE WINNER."
1180 PRINT @452,"HIT ANY KEY TO
CONTINUE"
1181 IF INKEY$="" THEN 1181
1183 CLS:PRINT @33,"EACH COLUMN
IS FILLED FROM THE BOTTOM UP.
THE COLUMNS ARE INDICATED B
Y NUMBERS FROM ONE TO SEVEN.
IN ORDER TO MAKE A MOVE SIMPLY
PRESS THE NUMBER CORRESPONDIN
G TO THE COLUMN IN WHICH YOU WI
SH TO PLAY."
1190 PRINT @289,"IF YOU CHOOSE
TO PLAY AGAINST THE COMPUTER YO
U WILL BE GIVEN THE CHOICE OF
THREE LEVELS OF DIFFICULTY."
1191 PRINT @452,"PRESS ANY KEY
TO CONTINUE"
1192 IF INKEY$="" THEN 1192
1200 CLS:PRINT @33,"AT ANY POINT
YOU CAN SEEK HELP FROM THE COM
PUTER. TYPE h AND THE COMPUTE
R WILL SUGGEST A MOVE. IF YO

```


U NEED TO RE-BUILD THE BOARD (AFTER ACCIDENTALLY HITTING THE BREAK KEY) HIT THE ZERO KEY WHEN IT IS YOUR MOVE. "

1210 PRINT @452, "PRESS ANY KEY TO CONTINUE"

1220 IF INKEY\$="" THEN 1220

1230 RETURN

1370 DATA 387, 390, 396, 408, 432, 480, 771

1380 DATA 774, 780, 792, 816, 864, 1539, 1542

1390 DATA 1548, 1560, 1584, 1632, 3075, 3078, 3084

1400 DATA 3096, 3120, 3168, 6147, 6150, 6156, 6168

1410 DATA 6192, 6240, 645, 650, 660, 680, 720

1420 DATA 1285, 1290, 1300, 1320, 1360, 2565, 2570

1430 DATA 2580, 2600, 2640, 5125, 5130, 5140, 5160

1440 DATA 5200, 1161, 1170, 1188, 1224, 2313, 2322

1450 DATA 2340, 2376, 4617, 4626, 4644, 4680, 2193

1460 DATA 2210, 2244, 4369, 4386, 4420, 4257, 4290

VIRUS

GENERAL DESCRIPTION

In spite of many advances in modern medicine, there are still a number of ailments which prove difficult to cure.

With this program you play the role of doctor and are responsible for the well-being of a number of patients with different viral infections.

You are offered a range of possible treatments and must use your skill to bring the patients to a full recovery. Remember, their lives are in your hands.

DETAILED DESCRIPTION

Lines 20-70 Disable break.

140-180 Instructions.

190-440 Display patient condition.

620-670 Display treatment options.

740-790 Kill or cure.

800 Data - patient condition.

810 Data - diagnosis.

820 Data - treatment.

830-890 Random variables.

950-1090 Input screening routine.

```
10 SOUND180,1
20 POKE411,228
30 POKE412,203
40 POKE413,4
50 POKE414,237
60 POKE415,228
70 POKE410,236
80 DIMU(8),D$(8),V$(8),T$(8)
```

```

90 TX=1:GOSUB880:QX=Q:GOSUB830:G
OSUB840:GOSUB850:GOSUB860
100 FORI=1TO8:READD$(I):NEXT
110 FORI=1TO8:READV$(I):NEXT
120 FORI=1TO8:READT$(I):NEXT
130 CLS(RND(8))
140 PRINT@32,"          virus"
150 PRINT@96," YOU MUST TREAT A
PATIENT WHO"
160 PRINT@128," HAS A SERIOUS VI
RAL INFECTION."
170 PRINT@192," WHAT LEVEL OF DI
FFICULTY"
180 PRINT@224," (1 TO 5 5=EASY
)":GOSUB940
190 DX=VAL(RS$)
200 IFDX>=1ANDDX<=5THEN220
210 GOTO130
220 PX=DX/10
230 CLS(RND(8)):PRINT@0," condit
ion"
240 PRINT@32," temperature      b
lood pressure"
250 PRINT@96," respiration rate
time"
260 IFFR=0THEN400
270 GOSUB890
280 IFP>PX THEN340
290 CY=CX+1:BP=BP+2:RS=RS+1:T=T+
1
300 IFBP>150 THEN BP=150
310 IFRS>40 THEN RS=40
320 IFT>40 THEN T=40
330 GOTO380
340 CY=CX-1:BP=BP-2:RS=RS-1:T=T-
1
350 IFBP<20 THEN BP=20
360 IFRS<4 THEN RS=4
370 IFT<32 THEN T=32
380 IFCY=0 THEN 610
390 IFCY=7 THEN 740
400 FR=1:PRINT@64,T:PRINT@79," "

```

```

;BP;"/80":PRINT@128,RS:PRINT@149
,TX
410 TX=TX+1
420 PRINT@160," diagnosis
      virus type"
430 PRINT@192," ";D$(CY):PRINT@2
12,V$(QX)
440 PRINT@224," what do you reco
mmend doctor?"
450 FORI=1TO8:U(I)=0:NEXTI
460 FORI=1TO4
470 GOSUB880
480 IFU(Q)=1THEN470
490 U(Q)=1
500 NEXT
510 CT=1
520 FORI=1TO8
530 IFU(I)=1THENPRINTCT;"");T$(I
)
540 IFU(I)=1THENCT=CT+1
550 NEXT
560 GOSUB940
570 W=VAL(RS$)
580 IFW>=1ANDW<=4THEN600
590 GOTO560
600 GOTO230
610 CLS(RND(8)):PRINT@33,"patien
t about to die....."
620 GOSUB900
630 PRINT@97,"final treatment"
640 PRINT@161,"1) heart massage"
650 PRINT@193,"2) adrenalin"
660 PRINT@225,"3) shock heart"
670 PRINT@257,"4) pray"
680 GOSUB940:W=VAL(RS$)
690 IFW>=1ANDW<=4THEN710
700 GOTO610
710 GOSUB890
720 IFPX<P THEN740
730 CY=2:GOTO230
740 CLS(RND(8)):IFCY=0THENPRINT@
32," patient has died of virus"

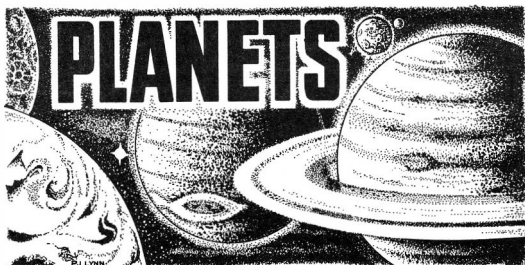
```

```

750 IFCY=0THENPRINT@96," YOU CAN
NOT SAVE THEM ALL!!"
760 IFCY=0THENSOUND10,40
770 IFCY=7THENPRINT@32," patient
has recovered"
780 IFCY=7THENGOSUB920
790 POKE416,57:END
800 DATA"CRITICAL","GRAVE","VERY
POORLY","POORLY","STABLE","ILL"
,"OUT OF DANGER","WELL"
810 DATA"SMALLPOX","YELLOW FEVER
","POLIO","INFLUENZA","RABIES","
TYPHOID","MAN MADE","UNKNOWN"
820 DATA"WAIT","VACCINATE","TRAN
SFUSION","SEDATE","VENTILATOR","
I.C.U.,""SALINE DRIP","PLASMA DR
IP"
830 T=34+RND(6):RETURN
840 BP=120+RND(30):RETURN
850 RS=4+RND(36):RETURN
860 CX=BP+RS+T
870 CY=INT((CX-158)/10)+1:RETURN
880 Q=RND(8):RETURN
890 P=RND(8):RETURN
900 SOUND1,4:FORI=1TO100:NEXTI:S
OUND1,4:FORI=1TO100:NEXTI
910 SOUND1,4:RETURN
920 FORI=1TO3:PLAY"T2L40V31GBD":
NEXTI
930 RETURN
940 RS$=""
950 H$=INKEY$:IFH$=CHR$(3)THEN950
960 IFH$=CHR$(93)THENH$=CHR$(8)
970 IFH$=CHR$(9)THENH$=CHR$(8)
980 IFH$=CHR$(21)THENH$=CHR$(8)
990 IFH$=CHR$(91)THENH$=CHR$(8)
1000 IFH$=CHR$(10)THENH$=CHR$(8)
1010 IFH$=CHR$(8)THENRS$=""
1020 IFH$=CHR$(8)THEN1100
1030 IFH$=""THEN950
1040 PRINT@448," (AT END PRE
SS enter)"

```

```
1050 IFH$=CHR$(13) THENSOUND180,1
1060 IFH$=CHR$(13) THENPRINT@416,
" "
1070 IFH$=CHR$(13) THEN RETURN
1080 RS$=RS$+H$:IFLEN(RS$)>1THEN
RS$=" "
1090 IFH$=CHR$(12) THENRS$=" "
1100 SOUND180,1:PRINT@384,"
";RS$:GOTO950
```



SIMON STRONG
Original program by C. Ward

GENERAL DESCRIPTION

This interesting routine plots the orbits of our immediate neighbours in our solar system, Mars, Venus and Mercury, as we career around the sun.

Adapted from a program written for the ZX81, the routine provides an excellent graphical representation of orbits, speed and relative positions.

DETAILED DESCRIPTION

Lines 10-41 Variables.

42 Draws screen.

45-47 'Writes' Sun and Mercury.

50 'Writes' Mars.

61 'Writes' Earth.

70 'Writes' Venus.

90-120 Increments orbit.

140 Loops back to provide movement.

```

10 A=327.95626
20 B=0
30 C=-258.47927
40 D=-135.14322
41 PI=3.14159
42 PMODE 4,1:PCLS:SCREEN 1,1
45 DRAW"BM128,96R2U3L2U3R2BF2D4R
2U4BR2ND4R2D4"
50 DRAW"BM"+STR$(INT(128+SIN(A/1
80*PI)*95))+", "+STR$(INT(96+COS(
A/180*PI)*95))+ "U6R2ND6R2D6BR2NU
2R2U2NL2U2NL2BR2ND4R2BR2NR2D2R2D
2L2" 61 DRAW"BM"+STR$(INT(128+SIN
(B/180*PI)*62.607052))+", "+STR$(
INT(96+COS(B/180*PI)*62.607052))
+"NR2U3NR2U3R2BF2R2D2L2D2R2NU2BR
2U4R2BR2NU2NR2D4R2BR2U4NU2R2D4"
70 DRAW"BM"+STR$(INT(128+SIN(C/1
80*PI)*45.281938))+", "+STR$(INT(
96+COS(C/180*PI)*45.281938))+ "BU
2NU4FNDEU2NU2BR2R2D2L2NU2D2R2BR2
U4R2ND4BR2D4R2NU4BR2R2U2L2U2R2"
80 DRAW"BM"+STR$(INT(128+SIN(D/1
80*PI)*24.231278))+", "+STR$(INT(
96+COS(D/180*PI)*24.231278))+ "U6
R2ND6R2D6BR2NR2U4R2D2NL2BR2ND2U2
R2BR2NR2D4R2BR2NU4R2NU4BR2U4R2BR
2D2R2NU2D2L2"
90 A=A-0.5240327
100 B=B-0.98561
110 C=C-1.6021291
120 D=D-4.0923507
130 FOR D=1 TO 40:NEXT D
140 PCLS:GOTO 45

```


TARGET PRACTICE

E. A. JACKSON

Original program by Gordon Mills

GENERAL DESCRIPTION

If your reactions are at a low ebb then it is time for a spot of Target Practice.

The program uses a split screen format to provide two identical target areas and two players compete to destroy as many targets as possible with just fifteen shots each.

If you find it necessary to handicap one player, then the speed of the missile launcher should be set independently for each player.

DETAILED DESCRIPTION

Lines 30 Set-up display screen.

80 If all shots fired then end.

100-130 Run missile launcher one.

135-175 Run missile launcher two.

210-215 Count shots fired.

220-240 Game over routine.

245-315 Instructions.

```
10 REM*****
15 REM TARGET PRACTICE
20 REM*****
25 CLEAR200:GOSUB245
30 CLS0
35 PRINT@448,STRING$(64,143);
40 PRINT@417,A#;:PRINT@434,B#;
45 FOR N=2TO14:M=RND(10):Z=N+M*3
2
```

```

50 PRINT@Z,CHR$(209);:PRINT@Z+16
,CHR$(146);:NEXT N
55 SH=16:ST=16
60 GOSUB210:GOSUB215
65 FOR Z=1408TO1439:POKE Z,207:P
OKE Z+96,207:NEXT Z
70 FOR Z=1039TO1519 STEP32:POKE
Z,207:NEXT Z
75 CT=CT+1:IF CT=150 THEN220
80 IF SH=0 THEN115
85 FOR X=0TO14:POKE1408+X,179
90 FOR TD=1 TO A:NEXT TD
95 POKE 1408+X,207
100 G$=INKEY$:IF G$=""THEN 110
105 IF G$="Z" THEN GOSUB155:GOTO
115
110 NEXT X
115 IF ST=0 THEN75
120 FOR X=16TO31:POKE 1408+X,179
125 FOR TD=1 TO B:NEXT TD
130 POKE 1408+X,207
135 H$=INKEY$:IF H$=""THEN 145
140 IF H$="/"THEN GOSUB 180:GOTO
75
145 NEXT X
150 GOTO75
155 GOSUB210
160 FOR Y=11TO1 STEP-1
165 Z=1024+X+(Y*32)
170 POKE Z,193:FOR W=1TO5:NEXT W
:POKE Z,128
175 NEXT Y:RETURN
180 GOSUB215
185 FOR Y=11TO1 STEP-1
190 Z=1024+X+(Y*32)
195 POKE Z,194:FORW=1TO5:NEXT W:
POKE Z,128
200 NEXT Y:RETURN
205 GOTO 75
210 SH=SH-1:PRINT@448,SH;"SHOTS
LEFT ";:RETURN
215 ST=ST-1:PRINT@465,ST;"SHOTS

```

```

LEFT ";:RETURN
220 CLS:PRINT:PRINT"DO YOU WANT
TO PLAY AGAIN (Y/N)"
225 INPUT Q$:IF LEFT$(Q$,1)="Y" T
HEN CT=0:GOSUB290:GOTO30
230 IF LEFT$(Q$,1)<>"N"THEN220
235 CLS:PRINT:PRINT"THANK YOU FO
R PLAYING"
240 GOTO320
245 CLS
250 PRINT@8,"TARGET PRACTICE"
255 PRINT:PRINT"THIS A GAME FOR
TWO PLAYERS-"
260 PRINT:PRINT"THE OBJECT IS TO
DESTROY AS MANYTARGETS AS POSSI
BLE WITH FIFTEEN SHOTS."
265 PRINT:PRINT"TO FIRE THE MISS
ILE LAUNCHER THEFIRST PLAYER USE
S THE 'Z' KEY AND THE SECOND P
LAYER USES THE '/' KEY."
270 PRINT@488,"PRESS SPACEBAR";
275 A$=INKEY$:IF A$<>CHR$(32)THE
N275
280 CLS:INPUT"ENTER THE NAME OF
THE FIRST PLAYER";A$:A$=LEFT
$(A$,12)
285 PRINT:INPUT"ENTER THE NAME O
F THE SECOND PLAYER";B$:B$=LE
FT$(B$,12)
290 CLS:PRINT:PRINT"SET THE SPEE
D OF THE MISSILE LAUNCHER (1=
FAST 10=SLOW). "
295 PRINT@128,"FOR ";A$:INPUT"(E
NTER 1-10)";A
300 IF A<1 OR A>10 THEN PRINT@16
0,STRING$(32,32):GOTO295
305 PRINT@224,"FOR ";B$:INPUT"(E
NTER 1-10)";B
310 IF B<1 OR B>10 THEN PRINT@25
6,STRING$(32,32):GOTO305
315 RETURN
320 END

```

WIRE

DAVID PONTING
Original program by Paul Makin

GENERAL DESCRIPTION

This game simulates the fairground game of moving a ring along a wire. Within a certain time limit, using the arrow keys, you have to follow a wire which appears one square ahead of you, with a ring ('O'). Failure to correctly follow creates a flashing screen and sound effects. The game ends with a % success score and comment.

DETAILED DESCRIPTION

Lines 30-60 Calls subroutine for display of game instructions.
Sets up arrays, mode, screen and initial values of variables.
High resolution graphics used.
100-190 Displays in succession in the top LHS of screen the character shapes of the line extensions and the ring, and copies them into the respective arrays. Clears screen, sets mode, screen and further values.
200-310 Controlling body of program calling subroutines, but contains a single 'successful' sound effect, calculation for coordinates of next square to be displayed, and time delay which is reduced for successively harder games.
320 Calls final score display.
330-360 Ensures wire does not go too high or too low on screen.
400-530 Determines which line extension is to be put, and sends control to appropriate subroutine.
600-660 Selects next random line extension character and checks for suitability with previous character displayed.
700-760 Puts line extension character on screen.
770 Puts line section without 'O' back into the line.

- 780 Checks for previous correct arrow indication for ring movement.
- 790 Gets a copy of character before moving the ring to the new position.
- 800 Resets values for replacement of line section without the 'O', and returns control to next Z at 310.
- 810-830 Examines arrow keys for direction of movement of the ring ('O').
- 840 Prevents sound/screen effects for first three wire extensions.
- 850-880 Produces sound/screen effects for incorrect arrow key use. Score counts the failure.
- 900-970 Character data for lines 100-160.
- 1000-1080 Displays game instructions, follows RUN and invites SPACE to be pressed.
- 1090-1230 Displays ability levels, invites player to press number key (1-10). This reduces time delay between plays (line 270).
- 1300-1410 Final score display showing % success and appropriate comment, invitation to play harder game, adjustment to time delay and resets score to zero.

```

10 REM*****   WIRE   *****
20 PRINT
30 GOTO1000
40 DIMA(8,8),B(8,8),C(8,8),D(8,8)
,E(8,8),F(8,8):DIMM(100):DIMR(8,8):DIMQ(8,8)
50 PMODE4:SCREEN1,0:PCLS
60 M=24704:Z=2:M(0)=256:X1=128:Y1=96
100 FORT=0T07:READX:POKE(1536+T*32),X:NEXT:GET(0,0)-(7,7),A
110 FORT=0T07:READX:POKE(1536+T*32),X:NEXT:GET(0,0)-(7,7),B
120 FORT=0T07:READX:POKE(1536+T*32),X:NEXT:GET(0,0)-(7,7),C
130 FORT=0T07:READX:POKE(1536+T*32),X:NEXT:GET(0,0)-(7,7),D
140 FORT=0T07:READX:POKE(1536+T*

```

```

32) ,X:NEXT:GET(0,0)-(7,7),E
150 FORT=0T07:READX:POKE(1536+T*
32) ,X:NEXT:GET(0,0)-(7,7),F
160 FORT=0T07:READX:POKE(1536+T*
32) ,X:NEXTT:GET(0,0)-(7,7),R
170 PCLS:X=128:Y=96
180 M(0)=8
190 PMODE4:SCREEN1,0:PCLS
200 FORZ:=1T099
210 IFZ<5THENM(Z)=8:GOTO230
220 GOSUB600
230 SOUND128,1
240 GOSUB330
250 Y=INT(M/256):X=M-(INT(M/256)
*256)
260 IF(Y>184)THENM=M-2048:Z=Z-1:
GOSUB600:GOTO240
270 FORT=1T0100*W:NEXTT
280 IFZ<5THENX1=XA:Y1=YA:GOTO300
290 GOSUB810
300 GOSUB770
310 NEXTZ
320 GOTO1310
330 IF(Y<24)THENM(Z)=8
340 IF(Y>164)THENM(Z)=-8
350 IF(Y<24ANDM(Z)=8ANDM(Z-1)=8)
THENM(Z)=256
360 IF(Y>164)ANDM(Z)=-8ANDM(Z-1)
=-8THENM(Z)=-256
400 IFM(Z)=M(Z-1)THEN490
410 IFM(Z-1)=8ANDM(Z)=256THENGOS
UB750:M=M+2048:GOTO530
420 IFM(Z-1)=8ANDM(Z)=-256THENGOS
SUB730:M=M-2048:GOTO530
430 IFM(Z-1)=-8ANDM(Z)=256THENGOS
SUB760:M=M+2048:GOTO530
440 IFM(Z-1)=-8ANDM(Z)=-256THENGOS
SUB740:M=M-2048:GOTO530
450 IFM(Z-1)=256ANDM(Z)=8THENGOS
UB740:M=M+8:GOTO530
460 IFM(Z-1)=256ANDM(Z)=-8THENGOS
SUB730:M=M-8:GOTO530

```

```

470 IFM(Z-1)=-256ANDM(Z)=8THENGO
SUB760:M=M+8:GOTO530
480 IFM(Z-1)=-256ANDM(Z)=-8THENGO
SUB750:M=M-8:GOTO530
490 IFM(Z)=8THENGO SUB710:M=M+8:G
OTO530
500 IFM(Z)=-8THENGO SUB710:M=M-8:
GOTO530
510 IFM(Z)=256THENGO SUB720:M=M+2
048:GOTO530
520 IFM(Z)=-256THENGO SUB720:M=M-
2048
530 RETURN
600 C=RND(4)
610 ON C GOTO 620,630,640,650
620 M(Z)=8:IFM(Z-1)=-8THEN600ELS
E660
630 M(Z)=-8:IFM(Z-1)=8THEN600ELS
E660
640 M(Z)=256:IFM(Z-1)=-256THEN60
0ELSE660
650 M(Z)=-256:IFM(Z-1)=256THEN60
0ELSE660
660 RETURN
700 REM *** PLACE THE REQUIRED
CHARACTER ***
710 PUT(X,Y)-(X+7,Y+7),A:RETURN
720 PUT(X,Y)-(X+7,Y+7),B:RETURN
730 PUT(X,Y)-(X+7,Y+7),C:RETURN
740 PUT(X,Y)-(X+7,Y+7),D:RETURN
750 PUT(X,Y)-(X+7,Y+7),E:RETURN
760 PUT(X,Y)-(X+7,Y+7),F:RETURN
770 PUT(X2,Y2)-(X2+7,Y2+7),@
780 IF(X1<>XA)OR(Y1<>YA)THENGO SU
B840:X1=XA:Y1=YA
790 GET(X1,Y1)-(X1+7,Y1+7),@:PUT
(X1,Y1)-(X1+7,Y1+7),@,OR
800 X2=X1:Y2=Y1:XA=X:YA=Y:RETURN
810 REM ** MOVE RING **
820 X1=X1+8*(PEEK(343)=223)-8*(P
EEK(344)=223):Y1=Y1+8*(PEEK(341)
=223)-8*(PEEK(342)=223)

```

```

830 RETURN
840 IF Z<3 THEN RETURN
850 FOR L=1 TO 5
860 SCREEN 1,1: SOUND 150,1: SOUND 16
0,1: FORT=1 TO 80: NEXT T: SCREEN 1,0: S
OUND 180,1: SOUND 170,1: FORT=1 TO 100
:NEXT T
870 NEXT L: SCORE=SCORE+1
880 RETURN
900 REM *** CHARACTER DATA ***
910 DATA 0,0,0,255,255,0,0,0
920 DATA 24,24,24,24,24,24,24,24
930 DATA 24,24,24,248,248,0,0,0
940 DATA 24,24,24,31,31,0,0,0
950 DATA 0,0,0,248,248,24,24,24
960 DATA 0,0,0,31,31,24,24,24
970 DATA 60,66,129,129,129,129,66
,60
1000 REM *** INSTRUCTIONS ***
1010 CLS:PRINT:PRINT"          *****
      wire *****"
1020 PRINT:PRINT"IN THIS GAME YO
U HAVE TO FOLLOW"
1030 PRINT" A WIRE WHICH WILL ON
LY APPEAR"
1040 PRINT" ONE SQUARE AHEAD OF
YOU,THE 'O'"
1050 PRINT"          *****"
1060 PRINT" USE THE ARROW KEYS
TO MOVE"
1070 PRINT" AND DON'T FORGET THA
T YOU MUST  move WITHIN THE ALL
CITED TIME"
1080 PRINT:PRINT:PRINT" PRESS sp
ace TO START THE GAME"
1090 IF INKEY#<>" " THEN 1090
1100 CLS:PRINT:PRINT"
      ABILITY LEVEL"
1110 PRINT"          _____"
1120 PRINT" 1= AMAZING"
1130 PRINT" 2= EXCELLENT"
1140 PRINT" 3= ABOVE AVERAGE"

```



```

1150 PRINT"    4= AVERAGE"
1160 PRINT"    5= BELOW AVERAGE"
1170 PRINT"    6= POOR"
1180 PRINT"   10= BEGINNER" ..
1190 PRINT:PRINT" PLEASE MAKE CH
DICE BY NUMBER"
1200 PRINT"      (THEN PRESS enter
)
1210 INPUTW:IFW<10RW>10THEN1100
1220 W=W/2
1230 GOTO40
1300 REM ** FINAL SCORE DISPLAY
**
1310 SCORE=INT(100*(95-SCORE)/95
)
1320 CLS:PRINT:PRINT:PRINT:PRINT
:PRINT"      YOUR SCORE WAS":SCO
RE:"%"
1330 PRINT:PRINT
1340 IFSCORE>40THENGOTO1360
1350 PRINT"          useless!!"
:GOTO1390
1360 IFSCORE>90THEN1380
1370 PRINT"          acceptable"
:GOTO1390
1380 PRINT"          near perfect
"
1390 PRINT:PRINT:PRINT:PRINT" P
RESS space FOR A HARDER GAME"
1400 IFINKEY#<>" "THEN1400
1410 W=W-.5:SCORE=0:GOTO190

```



DAVID PONTING
Original program by Paul Bradshaw

GENERAL DESCRIPTION

You'll hate those darn mice after you've played this very frustrating game.

Frustrating because there is a very clever random bounce incorporated in the program so that you cannot predict the exact angle of 'bounce' off the wall.

You are 'Tom' the cat, protecting a huge lump of cheese from the marauding mice who sneak out of their holes and snatch great clumps of the stuff from under your whiskers.

The mice, or mouse, as there's only one on the screen at any one time, can appear at any point on the screen. If you manage to intercept it quickly, your point tally will increase by a large amount. However, if you are led a merry dance, your score will suffer accordingly.

DETAILED DESCRIPTION

Lines 10-60 Title sequence.

120-130 Variables.

220 Cat's position.

- 300-310 Sounds the warning that another mouse is due to appear.
- 320-450 Sets up rebound and deletes 'dead' mouse.
- 460-470 Releases new mouse.
- 500-610 Selects screen display.
- 620 Prints score board.
- 640-720 Data storage.
- 750 Random mouse movement and position.

```

10 *****
20 *          CHEESE          *
30 *  ADAPTED FOR DRAGON 32 *
40 *    BY D.A.PONTING      *
50 *          12-7-83        *
60 *****
120 A=RND(0)
130 S$="000000":HS$="000000"
140 GOSUB1180:*** INSTRUCTIONS **
**
150 GOSUB640:REM** READ MOVEMENT
    DATA **
160 CLS
180 CC=18:REM ** CHEESE COUNTER
**
190 GOSUB480:REM ** INITIAL DISP
LAY **
200 REM ** INITIALIZE SOUND **
210 REM ** INITIAL CAT POSITION
**
220 C=1024+INT(RND(506)):IFPEEK(
C)<>128THEN220
230 POKEC,131
260 MC=0:SC=0
270 FORDL=1TO1000:NEXT
280 GOSUB740:MD=0:F=0:Z=M:M=M-M(
I)
290 REM ** INITIAL WARNING **
300 MC=MC+1:FORJ=1TO5:GOSUB1700:
POKEZ,128:POKEZ,46:SOUND100-J*4,
1:NEXT
310 POKEZ,128

```

```

320 REM ** MOVE MOUSE **
330 GOSUB1700:Z=M:M=M+M(D):MD=MD
+1
335 IFPEEK(M)=131THENPOKEZ,128:G
OSUB790:GOTO270
340 IFPEEK(M+1)=128ANDRND(0)>.75
THENM=M+1
350 IFPEEK(M+1)=159ANDPEEK(M)<>1
59THENM=M+1
360 IFPEEK(M-1)=159ANDPEEK(M)<>1
59THENM=M-1
370 IFPEEK(M)=128THEN440
380 IFPEEK(M)=131THENPOKEZ,128:G
OSUB790:GOTO270
390 IFPEEK(M)<>159THEN430
400 POKEZ,128:POKEM,128:CC=CC-1:
GOSUB910
410 IFCC=0THEN1030
420 GOTO270
430 IFPEEK(M)=255THENGOSUB980:M=
Z:GOTO330:REM ** REBOUND **
435 GOSUB1700
440 IFF=1THENPOKEZ,128:REM ** DE
LETE OLD MOUSE **
450 F=1
460 POKEM,46:REM ** INSERT NEW M
OUSE **
465 GOSUB1700
470 GOTO330
480 REM ** INITIAL DISPLAY **
485 CLS0:REM ** SELECT SCREEN CO
LOUR **
490 CLS0
500 FORJ=1056TO1088
510 POKEJ,255:POKEJ+448,255
520 NEXT
530 FORJ=1024TO1504STEP32
550 POKEJ,255:POKEJ+31,255
570 NEXT
580 PRINT@192," ";
590 FORJ=1227TO1291STEP32
600 FORP=0TO5:POKEJ+P,159:NEXTP

```

```

610 NEXT
620 PRINT@1,"score:00000 high:"H
S$
630 RETURN
640 REM ** READ MOVEMENT DATA **
650 FORJ=1TO4:READM(J):NEXT
660 DATA31,33,-31,-33
670 REM ** READ SOUND EFFECTS DA
TA **
680 FORJ=1TO4:READS(J):NEXT
690 DATA254,200,170,137
700 REM ** REBOUND DATA **
710 R(1)=2:R(2)=1:R(3)=4:R(4)=3
720 Q(1)=4:Q(2)=3:Q(3)=2:Q(4)=1
730 RETURN
740 REM ** RANDOM MOUSE POSITION
AND DIRECTION **
750 IFRND(0)>.5THENM=1024+RND(50
6)ELSEM=1024+2*RND(255)
755 IFPEEK(M)=131THENRETURN
760 IFPEEK(M)<>128THEN750
770 D=RND(4):IFPEEK(M+M(D))<>128
THEN750ELSEReturn
790 REM ** MOUSE EATEN **
800 FORJ=1TO4
810 SOUND20+J*20,1
820 NEXT
850 SQ=INT((SC+450-MD*4)/10)*10
860 IF(SQ>SC)THEN865ELSE870
865 SC=SQ
870 S$=MID$(STR$(SC),2)
880 L=LEN(S$):IFL<5THENS$=LEFT$(
Z$,5-L)+S$
890 PRINT@1,"score"S$"high"HS$
900 RETURN
910 REM ** CHEESE EATEN **
920 FORJ=30TO100STEP10
930 SOUNDJ,1
950 NEXT
970 RETURN
980 REM ** REBOUND **
990 REM

```

```

1000 IF (M-1056)/32=INT((M-1056)/
32)OR(M-1087)/32=INT((M-1087)/32
) THEN 1020
1010 D=Q(D):SOUND200,1:RETURN
1020 D=R(D):SOUND150,1:RETURN
1030 REM ** GAME OVER **
1060 FORDL=1TO2500:NEXT
1070 CLS:PRINT"      **** GAME O
VER ****"
1080 PRINT:PRINT:PRINT"      ALL T
HE CHEESE HAS GONE"
1090 PRINT:PRINT:PRINT"      YOU S
CORED ";S$
1100 IFS$>HS$THEN HS$=S$
1110 IFS$<HS$THENHS$=HS$
1120 PRINT:PRINT:PRINT"      hi sc
ore=";HS$
1140 PRINT:PRINT:PRINT:PRINT" P
RESS ANY KEY TO PLAY AGAIN"
1150 H$=""
1160 H$=INKEY$:IFH$=""THEN1160
1170 GOTO180
1180 REM *** INSTRUCTIONS ROUTINE
***
1190 CLS:PRINTTAB(10)"CHEESE"
1192 LI$="":FORT=1TO13:LI$=LI$+C
HR$(131):NEXTT
1195 PRINTTAB(7)LI$
1200 PRINT"THE OBJECT OF THE GAM
E IS TO"
1210 PRINT"PREVENT THE MICE ','
REACHING":PRINT"THE CHEESE"
1220 PRINT"YOU CONTROL A CAT''";:
PRINTCHR$(140);:PRINT''";:PRINT"
AND MAY MOVE IT WITH THE ARROW K
EYS AND STOP IT WITH THE space"
1230 PRINT:PRINT"TO CATCH THE MO
USE YOU MUST"
1240 PRINT"INTERCEPT IT, IN WHICH
CASES IT"
1250 PRINT"WILL RUN INTO YOUR JA
WS."

```

```

1270 PRINT:PRINT:PRINT"    PRESS
space TO CONTINUE"
1280 H$=INKEY$:IFH$<>" "THEN1280
1290 CLS:PRINT"THE GAME ENDS WHE
N ALL THE ":PRINT"CHEESE HAS BEE
N EATEN.":PRINT:PRINT:PRINT"YOU
SCORE POINTS FOR EACH MOUSE YOU
EAT.";
1310 PRINT"THE QUICKER YOU EAT A
MOUSE,THE MORE YOU SCORE FOR IT
."
1330 PRINT:PRINT:PRINT"    PRESS r
TO RE-READ THE INSTRUCTIONS OR
space TO PLAY THE GAME
1340 H$=INKEY$:IFH$=" "THENRETUR
NELSEIFH$="R"THEN1180ELSE1340
1700 REM ** MOVE CAT **
1705 ZZ=C
1710 A=ASC(INKEY$+CHR$(0)):IFA=0
THENA=RP
1720 C=C-(A=9)+(A=8)-32*(A=10)+3
2*(A=94)
1722 IFPEEK(C)<>128THENC=ZZ
1725 POKEZZ,128:POKEC,131
1730 RP=A:RETURN

```

CATCHFOUR

Original program by Brian Candy

GENERAL DESCRIPTION

You are the captain of a space freighter and you have just discovered that one of the laser guns which is part of your cargo has 'leaked' laser light into the hold. You have to enter the hold and, armed only with a reflector shield and your wits, steer the light into the magnetic force-field at the top right-hand corner of the hold. Once there you must surround the light with your shield for ten seconds before the force-field 'absorbs' the energy and everything is safe.

You control the shield by joystick or arrow keys and you can stop by pressing the space-bar. The light will always bounce off the walls and shield at 90 degree angles and it leaves a slowly decaying tail which is the only thing that can breach the shelf, other than repeated bombardments by the light. You have just five minutes to save your ship and everything and everybody in it!

DETAILED DESCRIPTION

Lines 10 Speeds up the Dragon.

20 (and inset) Allows use of arrow keys instead of joysticks.

30 Sets up the array.

40-60 Forms the 'hold'.

70-90 Sets variables and starts timer.

100-120 Checks timing and emits a 'bleep' for every minute that elapses.

170-230 Joystick control.

240-270 Checks that laser is within the boundaries of the 'hold'.

290-390 'Bounces' the laser off the walls and shield.

400-410 Ensures 'bounce' is at 90 degree angle.

420-470 Checks if laser is surrounded and changes to a

'negative' for ten seconds.

480-490 Clears screen and prints score-board.

500-520 Sets up time in minutes and seconds.

530-580 Checks time and prints suitable comments.

590-End Invites further games or stops the run.

```
20 Q$="A"
30 DIM N(500),M(500)
40 PMODE3:SCREEN1,0:PCLS
50 LINE(5,5)-(251,187),PSET,B
60 PAINT(2,2),2,4
70 X=128:Y=96:D=-1:F=1:C=250
80 Q=128:W=96
90 TIMER=0
100 PSET(X,Y)
110 PSET(X,Y,RND(2)+2)
120 N(B)=X:M(B)=Y
130 TT=TIMER
140 TT=(TT/100)*2
150 IF TT>59 THEN TIMER=0:MM=MM+
1:SOUND1,1
160 X=X+D:Y=Y+F
170 A$=INKEY$:IF A$="" THEN A$=Q$
180 V=ASC(A$)
190 IF V=9 THEN Q=Q+1
200 IF V=8 THEN Q=Q-1
210 IF V=94 THEN W=W-1
220 IF V=10 THEN W=W+1
230 Q$=A$
240 IF Q<5 THEN Q=5
250 IF Q>251 THEN Q=251
260 IF W<5 THEN W=5
270 IF W>187 THEN W=187
280 COLOR2
290 LINE(Q-1,W-1)-(Q+1,W+1),PSET
,BF
300 C=C+1:IF C=500 THEN C=1
310 B=B+1:IF B=500 THEN B=1
320 PSET(N(C),M(C),1)
330 IF PPOINT(X,Y)=2 THEN 400
340 IF X<20 AND Y<20 THEN XC=XC+
```

```

1: SOUND200,1
350 IF XC>0 AND X>20 THEN XC=0
360 IF XC>0 AND Y>20 THEN XC=0
370 IF XC=30 THEN GOTO 470
380 K=X:L=Y
390 GOTO 100
400 IF NOT K=X THEN V=D*2:D=D-V:
GOTO 430
410 IF NOT L=Y THEN V=F*2:F=F-V
420 COLOR 4
430 PSET(X,Y)
440 PLAY"T150;04;DED"
450 GOTO 160
460 GOTO 460
470 SCREEN1,1:SOUND200,100
480 CLS
490 PRINT"***SCORE BOARD***"
500 PRINT:PRINT
510 PRINT"WELL, YOU TOOK"
520 PRINTMM;" ":"TT;"TO PROVE YOU
RSELF A "
530 IF MM<1 THEN PRINT"FANTASTIC
, BRILLIANT PLAYER!!!!":GOTO590
540 IF MM<2 THEN PRINT"VERY GOOD
PLAYER!!":GOTO590
550 IF MM<3 THEN PRINT"NOT TOO B
AD PLAYER OF 'CATCH 4'":GOTO590
560 IF MM<4 THEN PRINT"PRETTY RE
ASONABLE PLAYER - BUT KEEP PRACT
ICING!!":GOTO590
570 IF MM<5 THEN PRINT"TOTAL NEW
COMER TO THIS GAME.":GOTO 590
580 IF MM>5 THEN PRINT"TRIER, IF
NOTHING ELSE!!!"
590 PRINT" RIGHT, HOW ABOUT ANOT
HER GAME?"
600 INPUT "Y/N";Y$
620 IF Y$="Y" THEN RUN
630 IF Y$="N" THEN PRINT"THANKS,
SEE YOU SOON?":STOP

```

BATTLESHIPS



ANDREW CRESSWELL
Original program by John Edyvane

GENERAL DESCRIPTION

This is a traditional game of Battleships with the player and the computer each having a 10 x 10 grid displayed. The player's grid shows his/her battleship, cruiser, two destroyers and two submarines. As play progresses, the grids display positions of hits and misses. Each fires three shells in turn with the sound of shells in flight and impacting. The game ends when one side has sunk all the ships of the other; this is displayed and accompanied by Rule Britannia or La Marseillaise, depending on which side won.

DETAILED DESCRIPTION

Lines 0-130 Sets up initial arrays, strings and variables for ship positions, ships, their size and incrementing.

140-170 Subroutine used after computer hits an opposing ship, as part of the later routine which enables it to fire at an adjacent square.

180-270 Subroutine which requests the input of the co-ordinates of a grid square, checks its validity for screen

position of player's ship when setting up and shell landing position in play and makes appropriate sound.

280-450 Subroutine, which makes random position choice for setting up its shell landing positions during play or following a hit, selects adjacent square. Checks for validity of position and ensures the position has not been used previously.

460-540 Initial screen display, describes means of inputting positions.

550-630 Main screen display which shows the two playing grids empty.

640-780 Sets up the computer's ships in position in its array, checking for validity, ensuring ship is in a straight line.

790-930 Invites the player to enter his/her ship positions on the grid and in the array. Checks for validity.

940-1300 This is the main game routine. It shows whose turn and the particular fire number, calls the subroutines for the player or computer to input the co-ordinates of the shell landing position, checks for a hit or miss and makes suitable displays, reduces ship size if hit, checks to see if any parts of ships are surviving, continues or ends the game, calling sound subroutines.

1310-1440 The sound subroutines - players shell in the air, the computers shell in the air, impact in the sea or an opposing ship and the victory tunes on winning, either Rule Britannia or La Marseillaise.

```
10 REM *** BATTLESHIPS AND CRUISERS ***
20 H=0: I=1: J=0:
30 DIMA(2,10,10):DIMN(2,6)
40 N$(1)="bATTLESHIP "
50 N$(2)="cRUISER "
60 N$(3)="dESTROYER 1"
70 N$(4)="dESTROYER 2"
80 N$(5)="sUBMARINE 1"
90 N$(6)="sUBMARINE 2"
100 FORS=1TO2
110 N(S,1)=5:N(S,2)=4:N(S,3)=3:N(S,4)=3:N(S,5)=2:N(S,6)=2
```

```

120 NEXTS
130 GOTO460
140 I=Y
150 IFK=1THENH=X
160 IFK=2THENJ=1
170 RETURN
180 SOUND20,1
190 PRINT@470,"";:INPUTA$
200 IFA$=""THEN190
210 X=ASC(A$)-64
220 IFX<10RX>10THEN180
230 A$=RIGHT$(A$,1)
240 IFASC(A$)<48ORASC(A$)>57THEN
180
250 Y=VAL(A$)+1
260 IFA(2,X,Y)<0THEN180
270 SOUND120,1:RETURN
280 IFH<>0ANDJ<>0THEN300
290 IFH<>0THENGOTO340
300 X=RND(10)
310 Y=RND(10)
320 IFA(1,X,Y)<0THENGOTO300
330 RETURN
340 P=H:Q=I
350 FORD=-1TO1
360 FORU=-1TO1
370 X=U+P
380 IFX<10RX>10THENGOTO430
390 Y=D+Q
400 IFY<0ORY>10THENGOTO440
410 IFA(1,X,Y)<0THEN430
420 RETURN
430 NEXTU
440 NEXTD
450 GOTO300
460 REM *** INITIAL SCREEN DISPL
AY ***
470 CLS
480 PRINT@96,"          battleship
s"
490 PRINT@160,"          2 GRIDS WIL
L APPEAR"

```

```

500 PRINT@256, " TO POSITION YOU
R FLEET AND"
510 PRINT@320, " FIRE AT THE ENE
MY,"
520 PRINT@384, " INPUT COLUMN LE
TTER AND "
530 PRINT@448, " ROW NUMBER TOGE
THER"
540 FOR Q=1 TO 4000:NEXT Q:CLS
550 PRINT" YOUR FLEET ENE
MY FLEET"
560 B$=" ABCDEFGHIJ ABCDE
FGHIJ"
570 PRINTB$
580 FOR S=0T09
590 PRINTS;".....";S;S;"...
.....";S;
600 NEXTS
610 PRINTB$
620 PRINT@416, "I AM POSITIONING
MY FLEET "
630 FOR Q=1 TO 2000:NEXT Q
640 FORS=1T06
650 D=RND(3)-2
660 U=RND(3)-2
670 IFABS(D)=ABS(U) THEN650
680 P=RND(10)
690 Q=RND(10)
700 FORL=0TON(1, S) - 1
710 IFP+D*L > 10ORP+D*L < 1 THEN650
720 IFQ+U*L > 10ORQ+U*L < 1 THEN650
730 IFA(2, P+D*L, Q+U*L) <> 0 THEN650
740 NEXTL
750 FORL=0TON(1, S) - 1
760 A(2, P+D*L, Q+U*L) = S
770 NEXTL
780 NEXTS
790 PRINT@416, "ENTER YOUR SHIPS
NOW ";
800 FORS=1T06
810 PRINT@450, N$(S);
820 FORL=1TON(2, S)

```

```

830 PRINT@462,"SQUARE ";L;
840 GOSUB190
850 IFA(1,X,Y)<>0THENGOSUB180:GO
T0850
860 A(1,X,Y)=3
870 PRINT@(34+X+(32*Y)),LEFT$(N$(
S),1);
880 NEXTL
890 NEXTS
900 PRINT@416,"
";
910 PRINT@450,"
";
920 PRINT@482,"
";
930 K=2
940 REM *** MAIN GAME ROUTINE **
*
950 IFK=1THENPRINT@416,"MY TURN
";
960 IFK=2THENPRINT@416,"YOUR TUR
N";
970 FORG=1T03
980 FORS=1T0300
990 NEXTS
1000 PRINT@482,"
";
1010 PRINT@460,"FIRE";G;
1020 IFK=1THENGOSUB280:GOSUB1380
1030 IFK=2THENGOSUB190:GOSUB1310
1040 Z=A(K,X,Y)
1050 A(K,X,Y)=-1
1060 IFZ=0THEN1270
1070 PRINT@(18+(K*16)+X+(32*Y)),
CHR$(240);
1080 PRINT@492,"bang ";:GO
SUB1400
1090 IFK=1THENGOSUB140
1100 N(K,Z)=N(K,Z)-1
1110 IFN(K,Z)>0THEN1210
1120 PRINT@487,N$(Z);" SUNK";
1130 IFK=1THENH=0

```

```

1140 FORS=1T0150:NEXTS
1150 FORS=1T06
1160 IFN(K,S)>0THEN1210
1170 NEXTS
1180 IFK=2THENPRINT@482,"
      YOU WIN      ";;GOSUB1420
1190 IFK=1THENPRINT@482,"
      I WIN       ";;GOSUB1430
1200 STOP
1210 NEXTG
1220 IFK=1THENGOTO1250
1230 K=1
1240 GOTO940
1250 K=2
1260 GOTO940
1270 PRINT@(18+(K*16)+X+(32*Y)),
"#";
1280 PRINT@491," SPLASH ";;GOS
UB1410
1290 IFK=1THENJ=0
1300 GOTO1210
1310 REM *** SOUND EFFECTS ***
1320 PLAY"V30L20004"
1330 FORT=1T07
1340 PLAY"L+L+T100V-V-V-V-CDEDCD
EDCDEFGFEDCD"
1350 NEXTT
1360 PLAY"V31CDEFGABCO3CDEFGABCO
4CDEFGABC"
1370 RETURN
1380 PLAY"V1"
1390 FORT=1T010:PLAY"04T100L+V+C
DEFGFGFED":NEXTT:GOTO1360
1400 PLAY"V30T15001CEDFEGFAGBA02
C01B02DCEDFEGFAGBA03C02B03DCEDFE
GFAGBA04C03B04DCEDFEGFAGBA05C":R
ETURN
1410 FORT=1T03:PLAY"10002CDCDCD
CDCDC":NEXTT:RETURN
1420 FORT=1T02:PLAY"03T6L2.EL4EF
FP8EFEDC02L1B03L2GFL8ECFDL4GFL2E
DL1C":NEXTT:RETURN

```



```
1430 FORT=1T02:PLAY"03T5L8DP100D
P100DP100L4GP100GP100AP100AP1000
4L4.DP100L803BP100GP100GP100BP10
0GP80L4EP80L4.04CP80L8C03P80AP80
F#P80L2G":NEXTT:RETURN
1440 NEXTT
```

DUCKSHOOT

SIMON STRONG

Original program by B. Philips

GENERAL DESCRIPTION

Duck Shoot uses good graphics and weird duck calls to simulate an early morning hunting session.

The ducks fly overhead at various altitudes and you, armed with a single-barrelled shotgun, move into position by using the arrow keys and fire, using the spacebar.

As each duck is hit, it is laid at your feet. If you want to, you can also fire at the sun which is drawn in various points of the sky! A hit gives more points. The ducks fly both left to right and vice versa so you have to be quick on the draw.

DETAILED DESCRIPTION

Lines 2-5 Titles and instructions.

10 Starts timer.

15 Sets screen.

30 Variables.

40 Prints 'dead ducks'.

41-43 Prints 'live ducks'.

100 Starts action.

200 Randomises the appearance of the ducks and plots them at different heights.

201 Starts the clock.

1000-1020 Firing routine.

1030 Checks keyboard for depression of space-bar.

2000-2060 'Fires' shot at target.

3000-3060 Draws 'sun' and plots it at random intervals in sky.

6000-6170 Storage of data for 'You Beast' routine.

6180-6210 End sequence and totals.

6220-6240 Scoring and repeat game sequence.
7000-7010 Lays 'dead ducks' at your feet.
8000-8170 Subroutines holding instructions.
9000-9110 Out of time routine and 'sun-up'.

```
2 CLS:PRINT @33,"DUCK SHOOT"  
3 PRINT @97,"DO YOU WANT INSTRUCTIONS ?"  
4 K#=INKEY#:IF K#<>"N" AND K#<>"Y" THEN 4  
5 IF K#="Y" THEN 8000  
10 TIMER=0  
15 PMODE 4,1:COLOR 0,1:PCLS  
30 M=16  
40 DRAW"BM3,8NR6UNLNR7UNL3NR8UR3NR5UR4U2NGRNL3UNL3HL"  
41 DIM DR(2):GET(0,0)-(11,8),DR,G:PCLS  
43 DRAW"BM2,0RDRNL3DLNL2DLNDR4GNR8DNR11FNR8FNR6"  
45 DIM DL(2):GET(0,0)-(11,8),DL,G:PCLS  
46 DRAW"BM1,13RU4R3D4RBRBU4U4HLND4LND4LND4LGD4BM+3,-6REUHLGDF"  
47 DIM M(2):GET(0,0)-(7,13),M,G:PCLS  
50 PMODE 3,1:COLOR 3:LINE(0,164)-(255,156),PSET,BF:PMODE 4,1  
60 LINE(1,165)-(255,191),PRESET,B  
100 SOUND1,3:PUT(M*8,142)-(M*8+7,155),M,PSET:SCREEN1,1  
200 DS=RND(130)  
201 IF TIMER>9000 THEN 9000  
202 IF RND(0)>.8 THEN GOSUB 3000  
205 IF RND(0)>.6 THEN 300  
220 FOR I=240 TO 0 STEP -5  
225 IF RND(0)>.6 THEN SOUND RND(20)+235,1  
230 PLAY"L255T255G":PUT(I,DS)-(I
```

```

+11,DS+8),DL,PSET:P=I
235 GOSUB 1010:SOUND 128,1:LINE(
I,DS)-(I+11,DS+8),PSET,BF
240 IF V=1 THEN V=0:HI=HI+1:GOTO
 2000
250 NEXT:D=D+1:GOTO 200
300 DS=RND(130)
305 IF RND(0)<.6 THEN 200
310 FOR I=0 TO 240 STEP 5
315 IF RND(0)<.4 THEN SOUND RND(
20)+235,1
320 PLAY"L255T255F":PUT(I,DS)-(I
+11,DS+8),DR,PSET:P=I
330 GOSUB 1010:SOUND 128,1:LINE(
I,DS)-(I+11,DS+8),PSET,BF
340 IF V=1 THEN V=0:D=D+1:HI=HI+
1:GOTO 300
350 NEXT:D=D+1:GOTO 300
1000 '** SHOOT ENABLE ROUTINE
1010 IF PEEK(343)=223 AND M>0 TH
EN LINE(M*8,142)-(M*8+7,155),PSE
T,BF:M=M-1:PUT(M*8,142)-(M*8+7,1
55),M,PSET
1020 IF PEEK(344)=223 AND M<31 T
HEN LINE(M*8,142)-(M*8+7,155),PS
ET,BF:M=M+1:PUT(M*8,142)-(M*8+7,
155),M,PSET
1030 IF INKEY$="^" THEN GOSUB 20
00
1080 RETURN
2000 '** FIRE !
2010 FOR J=137 TO 1 STEP -2
2030 SX=M*8+4:IF PPOINT(SX,J)<>0
AND PPOINT(SX+1,J)<>0 THEN PRESE
T(SX,J):PLAY"L253T254E":PSET(SX,
J):PSET(SX,J-1):NEXT J:RETURN
2040 IF XS<>0 THEN VV=1:SS=SS+1:
LINE(XS-11,YS-11)-(XS+10,YS+10),
PSET,BF:RETURN
2050 LINE(I,DS)-(I+11,DS+8),PSET
,BF:C=C+1:GOSUB 7000:SOUND C*7,4
2060 IF C<37 THEN 200 ELSE 6000

```

```

3000 '** RANDOM SUN
3010 XS=RND(230)+10:YS=RND(90)+1
0:PMODE 3,1:CIRCLE(XS,YS),10,2:P
AINT(XS,YS),2,2:PMODE 4,1
3020 FOR I=1 TO RND(200)
3030 GOSUB 1010
3040 IF VV=1 THEN VV=0:GOTO 3060
3050 NEXT I
3060 LINE(XS-11,YS-11)-(XS+11,YS
+11),PSET,BF:XS=0:RETURN
6000 CLS 0:RESTORE:FOR Y=0 TO 14
:READ A$:FOR X=1 TO LEN(A$)
6010 IF MID$(A$,X,1)="X" THEN PR
INT @X+Y*32,CHR$(127+RND(8)*16);
6020 NEXT X,Y
6030 DATA "      X  X  XXX  X
X"
6040 DATA "      X  X X  X X
X"
6050 DATA "      X  X X  X X
X"
6060 DATA "      XXX  X  X X
X"
6070 DATA "      X  X  X X
X"
6080 DATA "      X  X  X X
X"
6090 DATA "      X    XXX  XX
X"
6100 DATA " "
6110 DATA "XXXX XXXXX  X  XX
X XXXXX"
6120 DATA " X  X  X  X  X X  X
X X X X"
6130 DATA " X  X  X    X  X X
X"
6140 DATA " XXX  XX  X  X  XX
X  X"
6150 DATA " X  X  X    XXXXX
X  X"
6160 DATA " X  X  X  X X  X X
X  X"

```

```

6170 DATA "XXXX XXXXX X X XX
X XXX"
6180 FOR T=1 TO 2000:NEXT
6190 CLS:PRINT @33,"YOU HAVE SLA
UGHTERED";C;"DUCKS!"
6210 PRINT:PRINT" YOU PUT OUT TH
E SUN";SS;"TIMES."
6220 PRINT:PRINT:PRINT" YOUR SCO
RE IS";C*10+SS*25+INT(C/5)*15
6230 PRINT:PRINT" PRESS ANY KEY
FOR ANOTHER GO"
6240 IF INKEY$="" THEN 6240 ELSE
RUN
7000 IF C>18THEN D=C-18:E=1 ELSE
D=C:E=0
7010 PUT(D*13-2,168+E*12)-(D*13+
9,176+E*12),DR,PSET:RETURN
8000 CLS:PRINT @33,"* DUCK SHOOT
** INSTRUCTIONS *"
8010 PRINT @97,"THIS IS A WICKED
GAME OF SKILL AT DUCK SHOOTIN
G. YOU STOMP THROUGH THE MARS
HLAND WAITING FOR POOR UNSUSPE
CTING DUCKS TO FLY OVER. EVERY
DUCK YOU KILL IS LAYED ON THE
GROUND BENEATH YOU SO THAT YOU
MAY COUNT YOUR SPOILS."
8020 PRINT" WHEN THE SUN COMES O
UT, DUCKS DO NOT FLY. YOU MAY
THEN TAKE A POTSHOT AT THE S
UN TO GAIN EXTRA POINTS."
8030 IF INKEY$="" THEN 8030
8040 CLS:PRINT @33,"FOR EVERY 5
DUCKS YOU KILL YOU WILL GET A B
ONUS OF 15 POINTS. EVERY TIME Y
OU HIT THE SUN YOU EARN 25 POIN
TS"
8050 PRINT @193,"LEFT AND RIGHT
ARROWS MOVE YOU LEFT AND RIGHT.
UP ARROW FIRES YOUR GUN."
8060 PRINT @321,"YOUR TIME IS LI
MITED, SO SHOOT CAREFULLY."

```

```

8150 PRINT @ 449,"PRESS A KEY TO
START"
8160 K$=INKEY$: IF K$="" THEN 816
0
8170 GOTO 10
9000 CLS:PRINT @37,"ooo u u ttt
ooo fff"
9010 PRINT TAB(5);"o o u u t
o o f"
9020 PRINT TAB(5);"o o u u t
o o fff"
9030 PRINT TAB(5);"o o u u t
o o f"
9040 PRINT TAB(5);"ooo uuu t
ooo f"
9060 PRINT:PRINT TAB(8);"ttt i m
mmm eee"
9070 PRINT TAB(9);"t i m m m e"
9080 PRINT TAB(9);"t i m m m e e
e"
9090 PRINT TAB(9);"t i m m e"
9100 PRINT TAB(9);"t i m m e e
e"
9110 PRINT:PRINT" THE SUN HAS
RISEN AND THE"
9120 PRINT" DUCKS ARE AWAY ON T
HE WATER."
9130 FOR T=1 TO 1000:NEXT T:GOTO
6000

```



RODNEY JONES
Original program by Simon Williams

GENERAL DESCRIPTION

The tarot cards have always held a mysterious secret and this program helps you to unlock the hidden secrets of your future.

You have to answer three simple questions and from then on, it's up to the Dragon and your responses.

The questions: your sex, age and hair colour are all that is needed to start your computer off and then all you need to do is keep pressing any key for the randomiser at Line 381 to search through the data statements for the next prediction.

DETAILED DESCRIPTION

Lines5 Goes to title sequence.

10 Sets up arrays.

50-60 Prints first page of instructions.

69 Gosub gives continuation instructions.

70-90 Prints second page of instructions.

110-180 Asks questions as to sex, age and hair colour.

182-200 Decides your 'significator'.

210 Prints 'significator'.

220-230 Prints next set of instructions.
240 Checks keyboard for your response.
381 Random card selection.
640-1150 Data statements which hold the 'predictions'.
9000-9920 Card selection.

```
1 REM *****
2 REM TAROT
3 REM *****
5 GOSUB 530
10 DIM L(2,10):FOR N=0 TO 9:READ
  L(0,N):READ L(1,N):NEXT N
50 CLS:PRINT:PRINT" THE TAROT IS
  AN ANCIENT METHOD":PRINT" OF FO
  RTUNE TELLING WHICH MAKES":PRINT
  " USE OF A PACK OF 78 CARDS. ":P
  RINT" THESE ARE DIVIDED INTO TWO
  ":PRINT" SECTIONS, THE MAJOR AN
  D"
60 PRINT" MINOR 'ARCANAS'. THE M
  AJOR":PRINT" ARCANA IS A SET OF
  22 PICTORIAL":PRINT" CARDS DEPIC
  TING PEOPLE AND":PRINT" OBJECTS.
  THE MINOR ARCANA IS":PRINT" SIM
  ILAR TO AN ORDINARY PACK OF":PRI
  NT" PLAYING CARDS WITH AN EXTRA
  "
62 PRINT" CARD IN EACH SUIT, THE
  'PAGE'.
69 GOSUB 9900
70 PRINT" THE FOUR SUITS ARE NAM
  ED WANDS":PRINT" CUPS,SWORDS,PEN
  TACLES. ":PRINT" THE MAJOR AND M
  INOR ARCANAS ":PRINT" ARE SHUFFL
  ED TOGETHER AND DEA-":PRINT" LT
  OUT,FACE DOWN,IN ANY OF "
80 PRINT" SEVERAL ARRANGEMENTS K
  NOWN AS ":PRINT" 'LAYS'. THE CAR
  DS ARE THEN RE-":PRINT" VEALED,
  ONE AT A TIME, AND ":PRINT" READ
  ACCORDING TO THEIR INDIV-":PRIN
```

```

T" IDUAL MEANINGS AND THEIR POS-
":PRINT" ITIONS IN RELATION TO T
HE "
90 PRINT" OTHER CARDS. I SHALL R
EAD FROM":PRINT" THE TEN CARD OR
'CELTIC CROSS':PRINT" LAY."
100 GOSUB 9900
110 PRINT" BEFORE WE START,I NEE
D TO KNOW":PRINT" SOME THINGS AB
OUT YOU,IN ORDER":PRINT" TO ASSI
GN YOU ONE OF THE COURT":PRINT"
CARDS AS YOUR 'SIGNIFICATOR'."
115 PRINT:PRINT
120 INPUT"ARE YOU MALE OR FEMALE
(M/F)";S$
130 IF S$<>"M" AND S$<>"F" THEN 1
20
140 PRINT
150 INPUT"ARE YOU OVER 40 (Y/N)"
;A$
160 IF A$<>"Y"AND A$<>"N"THEN 15
0
170 PRINT:PRINT"WHAT COLOUR IS Y
OUR HAIR?":PRINT " A=VERY FAIR
B=GREY ":PRINT" C=LIGHT B
ROWN D=DARK BROWN":PRINT"
E=BLACK"
180 PRINT" ";:INPUT H$
182 IF H$<>"A" AND H$<>"B" AND H
$<>"C" AND H$<>"D" AND H$<>"E" T
HEN 180
186 A$=S$+A$:IF A$="MY" THEN A$=
"KING OF ":A=13:GOTO 192
188 IF A$="FY" THEN A$="QUEEN OF
":A=13:GOTO 192
190 IF A$="MN" THEN A$="KNIGHT O
F ":A=12 ELSE A$="PAGE OF ":A=11
192 IF H$="A" OR H$="B" THEN H$=
"WANDS":H=64:GOTO 210
194 IF H$="C" THEN H$="CUPS":H=5
0:GOTO 210
200 IF H$="D" THEN H$="SWORDS":H

```

```

=36 ELSE H$="PENTACLES":H=22
210 CD(0)=A+H:CLS:PRINT@64,"THAN
KYOU. YOUR SIGNIFICATOR IS":PRIN
T"THE ";A$+H$;". "
220 PRINT:PRINT"THIS CARD IS PLA
CED FACE UP ON":PRINT"THE TABLE
AND THE FIRST":PRINT"TWO CARDS O
F THE LAY ARE":PRINT"PLACED ON T
OP OF IT AS THEY ARE":PRINT"DEAL
T. "
230 PRINT:PRINT"PLEASE CONCENTRA
TE ON ANY MAT-":PRINT"TER OF CON
CERN BEFORE PRESSING":PRINT"THE
SPACE BAR TO BEGIN THE ":PRINT"R
EADING. "
240 IF INKEY$="" THEN R=RND(0):GO
TO 240
250 REM *****
251 REM READING
252 REM *****
260 CLS:PRINT:PRINT"THE FIRST CA
RD IS LAID ON TOP ":PRINT"OF THE
SIGNIFICATOR AND SHOWS ":PRINT"
THE GENERAL SURROUNDINGS OF ":PR
INT"YOUR ENQUIRY. THE CARD I TUR
N ":PRINT"UP IS - "
265 GOSUB 380
270 CLS:PRINT:PRINT"THE SECOND C
ARD IS PLACED ACR-":PRINT"OSS TH
E FIRST AND INDICATES ANY":PRINT
"CURRENT PROBLEMS.FAVOURABLE ":P
RINT"CARDS MEAN SMALL PROBLEMS."
:PRINT"I DRAW - "
275 GOSUB 380
280 CLS:PRINT:PRINT"THE THIRD CA
RD,WHICH INDICATES":PRINT"YOUR A
IMS AND IDEALS,IS PLACED":PRINT"
ABOVE THE SIGNIFICATOR.IN THIS":
PRINT"CASE THE CARD IS - "
285 GOSUB 380
290 CLS:PRINT:PRINT"THE FOURTH C
ARD,PLACED BELOW ":PRINT"THE SIG

```

```

SIGNIFICATOR, SHOWS THE BACKGROUND TO THE PRESENT SITUATION - WHAT LED UP TO IT.":PRINT
PRINT" I TURN UP - "
295 GOSUB 380
300 CLS:PRINT:PRINT"LEFT OF THE SIGNIFICATOR, THE FIFTH CARD SHOWS THE IMMEDIATE PAST-WHAT IS 'BEHIND' YOU. THIS CARD IS - "
305 GOSUB 380
310 CLS:PRINT:PRINT"THE SIXTH CARD, LAID TO THE RIGHT OF THE SIGNIFICATOR, SHOWS THE IMMEDIATE FUTURE-WHAT IS BEFORE YOU. THE CARD IS - "
315 GOSUB 380
320 CLS:PRINT:PRINT"THE SEVENTH CARD, PLACED TO THE RIGHT OF THE SIXTH, SHOWS YOUR ATTITUDE TO THE MATTER. IF A COURT CARD IS DRAWN, YOU ARE SHOWING SOME OF THE FEATURES OF THAT CHARACTER. I TURN UP - "
325 GOSUB 380
330 CLS:PRINT:PRINT"THE EIGHTH CARD, WHICH INDICATES THE ENVIRONMENT IN WHICH YOU ARE WORKING, IS LAID ABOVE THE SEVENTH. I DRAW - "
335 GOSUB 380
340 CLS:PRINT:PRINT"THE NINTH CARD SHOWS YOUR HOPES AND FEARS AND IS PLACED ABOVE THE EIGHTH. THIS CARD IS - "
345 GOSUB 380
350 CLS:PRINT:PRINT"THE LAST CARD, THE TENTH, INDICATES THE FINAL OUTCOME OF THE MATTER - WHAT WILL BE - AND IS LAID ABOVE THE NINTH. IT IS

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- "
355 GOSUB 380
360 CLS:PRINT:PRINT"THIS COMPLET
ES THE READING. I":PRINT"WISH YO
U GOOD FORTUNE.":FOR N=1 TO 2000
:NEXT N
370 RESTORE:GOSUB530:STOP
380 REM *****
381 REM CARD SELECTION
382 REM *****
390 R=RND(156):IF R>78 THEN N$="
    REVERSED":R1=R-78 ELSE N$=""
:R1=R
400 IF R1>54 THEN R2=R1-64:N$="
OF WANDS"+N$:GOTO 450
410 IF R1>50 THEN R2=R1-50:N$="
OF CUPS"+N$:GOTO 450
420 IF R1>36 THEN R2=R1-36:N$="
OF SWORDS"+N$:GOTO 450
430 IF R1>22 THEN R2=R1-22:N$="
OF PENTACLES"+N$:GOTO 450
440 RESTORE:FOR N=1 TO R1+194:RE
ADNM$:NEXT N:N$=NM$+N$:NM$="MAJO
R":GOTO 460
450 RESTORE:FOR N=1 TO R2+216:RE
AD NC$:NEXT N:N$="THE "+NC$+N$:N
M$="MINOR"
460 IF N1<11 THEN IF R=CD(N1) TH
EN N1=0:GOTO 380 ELSE N1=N1+1:GO
TO 460 ELSE N1=0
470 CD(CD+1)=R:RESTORE:FOR N=1 T
O R+230:READ T$:NEXT N
480 PRINT N$:PRINT"THIS CARD IS
OF THE ";NM$:PRINT"ARCANA & IMPL
IES ";T$
490 F=F+1:IF F/15=INT(F/15) THEN
GOSUB 520
495 PRINT @450,"press any key to
continue"
500 IF INKEY$="" THEN 500
510 RETURN
520 IF POINT(L(0,CN),L(1,CN))>0

```

```

THEN RESET(L(0,CN),L(1,CN)):RETURN ELSE SET(L(0,CN),L(1,CN),1):RETURN
530 REM TITLE GRAPHICS
535 PMODE 1,1:SCREEN 1,0:PCLS
540 CLS:FOR N=1 TO 10:READ C0,C1,C2,C3,C4,C5
545 GOSUB 9500
550 FOR I=C0 TO C1:PSET(I,C2,0):NEXT I:FOR I=C3 TO C4:PSET(I,C5,0):NEXT I,N
560 FOR N=1 TO 6:READ C0,C1,C2,C3:GOSUB 9500:FOR J=C0 TO C1:PSET(C2,J,0):PSET(C3,J,0):NEXT J,N
570 FOR N=1 TO 6:READ C0,C1,C2,C3,C4
575 GOSUB 9500
580 FOR J=C0 TO C1:PSET(C2,J,0):PSET(C3,J,0):PSET(C4,J,0):NEXT J,N
590 FOR N=1 TO 5:READ C0,C1,C2,C3,C4,C5,C6,C7,C8,C9,CA,CB
595 GOSUB 9500
600 PSET(C0,C1,0):PSET(C2,C3,0):PSET(C4,C5,0):PSET(C6,C7,0):PSET(C8,C9,1):PSET(CA,CB,1):NEXT N
610 FOR I=72 TO 78:PSET(I,60,0):PSET(I,70,0):NEXT I:FOR I=164 TO 178:PSET(I,50,0):PSET(I,72,0):NEXT I
620 FOR J=22 TO 26:PSET(8,J,0):PSET(10,J,0):PSET(60,J,0):PSET(62,J,0):NEXT J
630 FOR I=142 TO 150:PSET(I,50,0):NEXT I:PSET(182,32,0):FOR I=1 TO 3000:NEXT I:RETURN
640 DATA 48,59,9,6,27,10,46,49,10,32,47,11,16,17,13,6,15,14,46,52,25,44,47,26,38,53,36,56,57,36,76,79,34,92,95,34,78,81,35,90,93,35,92,99,15,98,101,16,105,111,17,105,106,35,113,117,35,103,113,

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36

650 DATA 10, 15, 28, 29, 14, 30, 26, 27, 17, 33, 24, 25, 32, 34, 22, 23, 33, 35, 20, 21, 35, 36, 18, 19

660 DATA 31, 34, 35, 36, 37, 24, 35, 53, 54, 55, 24, 36, 62, 63, 64, 29, 33, 74, 75, 76, 29, 33, 95, 96, 97, 9, 35, 102, 103, 104

670 DATA 38, 29, 39, 29, 40, 28, 41, 28, 42, 27, 43, 27, 65, 28, 66, 28, 67, 27, 68, 27, 69, 26, 70, 26, 76, 28, 77, 28, 78, 27, 79, 27, 80, 26, 81, 26, 90, 26, 91, 26, 92, 27, 93, 27, 94, 28, 95, 28, 80, 36, 81, 36, 90, 36, 91, 36, 112, 16, 113, 16

680 DATA 62, 7, 62, 7, 62, 5, 62, 9, 58, 7, 66, 7, 72, 7, 72, 5, 72, 3, 72, 1

690 DATA THE MAGICIAN, THE HIGH PRIESTESS, THE EMPRESS, THE EMPEROR, THE HIEROPHANT, THE LOVERS, THE CHARIOT, JUSTICE, THE HERMIT, THE WHEEL OF FORTUNE

700 DATA STRENGTH, THE HANGED MAN, DEATH, TEMPERANCE, THE DEVIL, THE TOWER, THE STAR, THE MOON, THE SUN, JUDGEMENT, THE WORLD, THE FOOL

710 DATA 2, 3, 4, 5, 6, 7, 8, 9, 10, PAGE, KNIGHT, QUEEN, KING

720 DATA EITHER THE NEED FOR OR THE SKILLS OF DIPLOMACY., MYSTERY & THE FUTURE OR A WOMAN WITH PSYCHIC POWERS., FRUITFULNESS IN ALL ITS ASSOCIATIONS. INITIATIVE., STABILITY IN LIFE. THE AID OF A POWERFUL PERSON.

730 DATA ASSOCIATIONS WITH OTHERS AND PARTICULARLY MARRIAGE., ALL FORMS OF LOVE AND ATTRACTION TO BEAUTIFUL THINGS, TRIUMPH ONLY THROUGH PERSEVERANCE AND DOGGEDNESS, THE JUST OUTCOME OF PROBLEMS.

740 DATA CORRUPTION, OTHERS MAY TRY TO BETRAY YOU., THE FORCES OF

LUCK AND THEREFORE SUCCESS., A TIME FOR TAKING COURAGE AND ACTING ENERGETICALLY., INTUITION - YOUR OWN OR ADVICE FROM ONE WHO HAS.
750 DATA THE END OF A CYCLE OF EVENTS.CHANGE AND RENEWAL., A NEED FOR ECONOMY & GOOD MANAGEMENT., THE EFFECT OF EXTRA EFFORT.POSSIBLY VIOLENCE., ADVERSITY & DISTRESS.MISERY CAUSED BY CONFLICT
760 DATA LOSS BY THEFT OF MATERIAL OR SPIRITUAL THINGS., A WARNING OF HIDDEN ENEMIES WHO WILL DECEIVE., MATERIAL HAPPINESS.CONTENTMENT THROUGH GOOD MARRIAGE.
770 DATA CHANGE OF POSITION.RENEWAL AND REBIRTH., ASSURED SUCCESS VIA A VOYAGE OR CHANGE OF PLACE., A TIME TO CONSIDER YOUR CARRER .CONSOLIDATION.
780 DATA PERFECT CONTENTMENT.ALSO FINANCIAL REWARD., A TIME FOR GAIETY AND RECREATION.PERHAPS GOOD NEWS., CRAFTSMANSHIP AND THE NEED TO USE PRACTICAL GIFTS., GIFT OR LEGACY.THE ACQUISITION OF NEW POSSESSIONS.
790 DATA MATERIAL DIFFICULTIES BUT LOVE IS WELL LOOKED ON., GRATIFICATION THROUGH GIFTS OR OTHER PLEASURES., INGENUITY IN BUSINESS AND MONEY MATTERS., A CREATIVE PERIOD IN CRAFT OR BUSINESS.
800 DATA PRUDENCE.SAFETY AND ACCOMPLISHMENT FROM THIS., GAIN IN MONETARY OR FAMILY MATTERS., A TIME FOR SCHOLARSHIP OR REFLECTION. LOOK TO YOUR AFFAIRS., THE EFFECT OF SOMEONE WITH YOUR AFFAIRS AT HEART.
810 DATA THE EFFECTS OF AN OPULENT THOUGH GENEROUS WOMAN.SECURIT

Y., INTELLECT AND PARTICULARLY MATHEMATICS. LOOK TO BUSINESS

820 DATA GREAT FORCE IN LOVE OR HATE. TRIUMPH THROUGH THIS., CONFIRMITY AND THE STABILITY THIS MAY BRING., A FEELING OF LOSS OF SOMEONE OR SOMETHING., THE NEED FOR SOLITUDE. A TIME FOR CONTEMPLATION

830 DATA LOSS OR DESTRUCTION OF SOMETHING CLOSE TO YOU., A JOURNEY WHICH MAY INCLUDE TRAVEL BY OR OVER WATER., ANNOYANCE AT THE FAILURE OF A PLAN THROUGH DISAGREEMENT., BAD NEWS OF AN ILLNESS OR OTHER CRISIS.

840 DATA DEEP DISAPPOINTMENT POSSIBLY THROUGH DEATH., PAIN AND SADNESS. ALL IS NOT WELL., EXAMINATION. THE ABILITY TO STUDY DETAILS NORMALLY MISSED., SKILL AND BRAVERY. THE TIME TO USE SUCH VIRTUES

850 DATA SADNESS OR EMBARRASSMENT FOR YOU (IF FEMALE) OR A WOMAN CLOSE TO YOU., THE EFFECTS OF ONE WITH AUTHORITY TO MAKE DECISIONS.

860 DATA CONTENTMENT WITH ALL RELATIONSHIPS., LOVE AND PASSION. THE INTER-RELATION OF THE SEXES., A HAPPY CONCLUSION. MERRIMENT AND FULFILLMENT., TIREDNESS AND IMAGINARY WORRIES CAUSED BY A STRICT ROUTINE.

870 DATA RECEIPT OF A GIFT. THIS RESULTS IN ANOTHER LOSS., REFLECTIONS OF THE PAST AND CHILDHOOD., DEJECTION OVER THINGS AS THEY ARE. THIS WILL PASS.

880 DATA VICTORY IN SOMETHING YOU DESIRE., CONTENTMENT WITH YOUR

PRESENT SURROUNDINGS AND THINGS AS THEY ARE., THE EFFECTS OF A FAIR AND STUDIOUS YOUNG MAN. HE MAY HELP YOU., A PROPOSITION OR INVITATION.

890 DATA THE EFFECTS OF A FAIR WOMAN. SHE IS DREAMY BUT VISIONARY., "THE EFFECTS OF A CREATIVE MAN IN BUSINESS, LAW OR THE CHURCH."

900 DATA THE BEGINNING OF NEW THINGS - CREATION. POSSIBLY A BIRTH., PHYSICAL SUFFERING OR SADNESS. DISSATISFACTION WITH POSSESSIONS., STRENGTH IN TRADE AND DEALING WITH PEOPLE., A HAPPY LIFE. PEACE AND PROSPERITY.

910 DATA IMITATION OR SHAM. A SUPERFICIAL VIEW., SUCCESS IN UNDERTAKINGS OR GREAT NEWS., A NEED TO WORK BY DISCUSSION AND NEGOTIATION. FINAL SUCCESS., HASTE TOWARDS A FAVOURABLE OUTCOME. CHANGE.

920 DATA DELAY CAUSED BY OPPOSITION TO YOUR IDEAS., FINANCIAL GAIN BUT OPPOSITION IN LAW., THE INFLUENCE OF A DARK YOUNG MAN. HE MAY BRING NEWS., DEPARTURE OR ABSENCE. A MOVE OR EMIGRATION.

930 DATA THE INFLUENCE OF A COUNTRY WOMAN WHO IS LOVING AND HONOURABLE., THE INFLUENCE OF A FRIENDLY COUNTRYMAN WHO IS HONEST AND CONSCIENTIOUS

940 DATA DISQUIET & A FEELING THAT AT ALL IS NOT RIGHT., THE PHYSICAL SIDE OF LOVE. POSSESSION. A VERY STRONG CARD., LIGHT AND TRUTH IN MATTERS. COMPLEX PROBLEMS REVEALED., BENEVOLENCE OF OTHERS TOWARDS YOU.

950 DATA AN INCREASE IN YOUR UNDERSTANDING OF SOCIETY., CERTAIN P

PROJECTS MAY BE FOOLISHLY THOUGHT
OUT., A DISPUTE. POSSIBLE LITIGATION., A TENDENCY TO BIAS. WATCH AGAINST BIGOTRY.

96Ø DATA AN OVERCAUTIOUS ATTITUDE. THINK THINGS OUT - THE ACT., ABUNDANCE OF THE GOOD THINGS IN LIFE. ENJOY THEM., AN ABUSE OF POWER THROUGH WEAKNESS., OBSTRUCTION THROUGH SELFISHNESS. TAKE HEED

97Ø DATA LETHARGY. INACTION COULD CAUSE PROBLEMS., CONNECTIONS WITH THE CHURCH OR RELIGION LOOK WELL., BLINDNESS TO WHAT IS RIGHT. PETTINESS., PROBLEMS CAUSED BY ARGUMENT OR DISAGREEMENT.

98Ø DATA TENDENCY TO ARROGANCE WHICH MAY CAUSE ALIENATION., INSTABILITY AND INCONSTANCY OF THOSE ABOUT YOU., CONTENTMENT ON MATERIAL AND SPIRITUAL PLANES.

99Ø DATA WEAKNESS THROUGH AN OVERSIMPLIFICATION OF EVENTS., INERTIA OR FIXITY MAY CAUSE STAGNATION., FOLLY THROUGH EXTRAVAGANCE OR PLEASURE-SEEKING.

100Ø DATA BAD INTELLIGENCE. THE EVIL SIDE OF WEALTH., A FACADE OF ENJOYMENT TO KEEP OTHERS HAPPY., MEDIOCRITY IN WORK. A TENDENCY TO PETTINESS., DELAY TO SOME PROJECT DUE TO OTHERS' OPPOSITION.

101Ø DATA DISORDER OR CHAOS., IT MAY SPELL RUIN FOR SOME PROJECT., ENVY AND JEALOUSY WHICH LEAD TO ILLUSORY DESIRES., QUARRELS OVER MONEY OR POSSESSIONS., A TENDENCY TO VANITY. THIS MAY STAND AGAINST AMBITION.

102Ø DATA DECEPTION. BEWARE OF OTHERS KEEPING BAD FAITH., MONETARY LOSS THROUGH GAMBLING OR ROBBERY

RY. TAKE NO CHANCES., UNFAVOURABLE NEWS CAUSING WORRY., IDLENESS AND LACK OF ENERGY. STAGNATION
1030 DATA SUSPICION AND MISTRUST MAY EFFECT YOUR REASONING., THE TEMPTATION OF VICE. WATCH FOR WEAKNESS.

1040 DATA GREAT FORCE IN LOVE OR HATE. NOT TO THE GOOD., LIES AND DISLOYALTY. BEWARE UNTRUTHS., CONFUSION AND A FEELING OF INTELLECTUAL ISOLATION., PRECAUTION. BE CAREFUL WHAT YOU DO.

1050 DATA LOSS OR DESTRUCTION OF SOMETHING CLOSE TO YOU., A PROPOSAL OF LOVE OR OTHER DECLARATION .PUBLICITY., GOOD ADVICE FROM A WISE PERSON. TAKE HEED., DIFFICULTIES AND OPPOSITION. TREACHERY.

1060 DATA SUSPICION CAST ON YOU OR A FEELING OF SHAME., TRANSITORY PROFIT OR ADVANTAGE. MAKE HAY ... , THE USE OF OBSERVATION TO BAD ENDS. SPYING., FOOLISHNESS. THE INABILITY TO THINK SOUNDLY.

1070 DATA CLOSED MIND, WATCH AGAINST BIGOTRY OR DECEIT., A TENDENCY TO CRUELTY OR PERVERSITY. WATCH THIS.

1080 DATA DISCONTENT. THE DESIRE TO PUT RIGHT YOUR PROBLEMS., LOVE AND PASSION. THE INTER-RELATION OF THE SEXES., A NEW VENTURE OR HOLIDAY. ACHIEVEMENT FROM THIS., NEW RELATIONSHIPS AND A DELIGHT IN NOVELTY.

1090 DATA THE CHANCE OF NEW ALLIANCES. BUSINESS LOOKS WELL., THE CHANCE OF FRESH EXCITEMENTS. RENEWAL., A DESIRE TO SUCCEED. YOUR FORCE OF WILL., GREAT JOY AND HAPPINESS. A CELEBRATION.

1100 DATA LOYALTY OF OTHERS TO YOU. HONESTY AND GOOD ADVICE., INDIGNATION AT AN AFFRONT IN LOVE. A VIOLENT RESPONSE., A TASTE FOR RISK COULD LEAD TO DECEPTION., A TRICK OR FRAUD. BE ON YOUR GUARD

1110 DATA THE INFLUENCE OF A DISTINGUISHED WOMAN. DON'T TRUST HER., THE EFFECT OF A ROGUE OR SCANDAL-MONGER. HE IS DISHONEST.

1120 DATA FALL IN FORTUNE. RUIN OF SOMETHING ESTABLISHED., SURPRISE AND WONDER LEADING TO DISQUIET., THE END OF TROUBLES. ADVERSITY IS OVER., PROSPERITY AND INCREASE. AN APPRECIATION OF BEAUTY.

1130 DATA CONTRADICTION AND TENDENCY OF OTHERS TO TRICK YOU., APPREHENSION AND THE FEAR OF DEFEAT., PERPLEXITY. EMBARRASSMENTS AND WORRIES., QUARRELS ARISING FROM JEALOUSY OR ENVY.

1140 DATA OBSTACLES TO YOUR IDEAS. POSSIBLE CALAMITY., DIFFICULTIES AND THE INTRIGUE OF OTHERS AGAINST YOU., BAD NEWS OR ANNOUNCEMENTS. INDECISION., DISCORD. INTERRUPTION OF THE PRESENT STATUS QUO.

1150 DATA PROBLEMS OF JEALOUSY - DECEIPT OR INFIDELITY., "THE INFLUENCE OF A GOOD BUT SEVERE MAN. HE IS AUSTERE, YET TOLERANT."

9000 IF INKEY#=" " THEN 9000

9010 CLS:RETURN

9500 C0=C0*2:C1=C1*2:C2=C2*2:C3=C3*2:C4=C4*2:C5=C5*2:C6=C6*2:C7=C7*2:C8=C8*2:C9=C9*2:CA=CA*2:CB=CB*2:RETURN

9900 PRINT @482,"press any key to continue";

```
9910 IF INKEY$="" THEN 9910  
9920 CLS:RETURN
```

DRAGONTREK

RODNEY JONES
Original author unknown

GENERAL DESCRIPTION

You are Captain Kirk, Commander of the USS Enterprise on a five-year mission to go where no man has been before.

A mysterious illness has struck down the crew and you have to steer the ship, alone except for the help given by your trusty computer, through deep space and the enemy, those evil Klingons, to Starbase Command. The crew are dying, the Klingons are getting nearer and time is running out..

DETAILED DESCRIPTION

Lines 90 Variables.

100-410 Main loop.

450-550 Instructions and responses as follows:-

W - Warp

S - Shield

P - Phaser

Z - Sensors

B - Starbase

V - Vector

T - Torpedoes

E - Energy remaining.

570 Checks if out of energy and prints comments on your performance.

670-710 Repeat sequence.

750-790 Pause routines.

830-860 Locate Starbase.

900-940 Checks if sufficient energy left to carry out damage repairs.

980 Checks if deflector shields are up or down.

1120 Photon torpedoes sequence.
 1280-1310 Pokes the graphics on the computer screen.
 1360 Scoring routine.
 1530 Prints Starbase location.
 1610 Resets variables.
 1670-1740 A further series of pokes for the phaser 'sight'.
 1950 Meteorite shower routine.
 2070-4120 Checks and updates ship's status and reports
 on various hazards and conditions.
 4210 Temporary instruction routine.
 5000 Opening instructions sequence.

```

10 REM*****
20 REM      TREK
30 REM*****
40 GOSUB4310
50 GOSUB 3790
60 GOSUB 3920
70 REM*****
80 REM MAIN LOOP
90 REM*****
100 D=D+1:EN=EN-WA*WA-SH*10-SS*5
-15*(DA>0)-5
110 IF EN<=0 THEN EN=0
120 PRINT@360,D;:PRINT@379,EN;
130 PRINT@384,"C";
140 IF EN=0 THEN GOTO 4150
150 IF WA=0 THEN GOTO 300
160 POKE S1,128:POKE S2,128
170 S1=S+RND(8)*33+RND(9)
180 IF S1/32=INT(S1/32)OR(S1-31)
/32=INT((S1-31)/32)ORS1>1311THEN
170
190 S2=S+RND(8)*33+RND(9)+18
200 IF S2/32=INT(S2/32)OR(S2-31)
/32=INT((S2-31)/32)ORS2>1311THEN
190
210 POKE S1,42:POKE S2,42
220 BD=BD+WA
230 IF BV=VE THEN BD=BD-WA*2
240 IF WA<8 OR KV<>VE THEN 300
  
```



```

250 IF DK>3 THEN 280
260 DK=2
270 GOSUB 2050
280 DK=DK+2+(WA=9)
290 IF DK>20 THEN GOSUB 4020
300 DK=DK+(DK>0)
310 IF BD>=1 THEN 340
320 IF DOCKED THEN 340
330 GOSUB 1510
340 IF SS<>0 AND DK<3 THEN GOSUB
  2990
350 IF DK=0 THEN GOSUB 3380
360 IF DA=0 THEN 400
370 IF DA THEN DA=DA-10
380 IF DA<10 THEN GOSUB 920
390 PRINT@487,Z$;:PRINT@487,DA;
400 GOSUB 430
410 IF (DA>40) AND RND(0)<(WARP*
WARP/2000+.001) THEN GOSUB 1930
420 GOTO 70
430 REM*****
440 REM CHECK KEYBOARD
450 REM*****
460 A$=INKEY$
470 IF A$="" THEN 560
480 IF A$="W" THEN GOSUB 2690
490 IF A$="S" THEN GOSUB 2870
500 IF A$="P" THEN GOSUB 2370
510 IF A$="Z" THEN GOSUB 3090
520 IF A$="B" THEN GOSUB 3230
530 IF A$="V" THEN GOSUB 3300
540 IF A$="T" THEN GOSUB 1100
550 IF A$="E" THEN GOSUB 040
560 RETURN
570 REM*****
580 REM OUT OF ENERGY
590 REM*****
600 Z7$="OUT OF ENERGY-MISSION E
NDS":GOSUB 4200
610 A$="AN ABSOLUTE DISASTER"
620 IF SCORE>5 THEN A$="TERRIBLE
"

```

```

630 IF SCORE>20 THEN A$="QUITE G
OOD"
640 IF SCORE>40 THEN A$="VERY GO
OD"
650 IF SCORE>60 THEN A$="EXCELLE
NT"
660 IF SCORE>100 THEN A$="KILLIN
GON ZAPPER SUPREME"
670 CLS5:PRINT@192,"YOUR PERFORM
ANCE IS RATED AS ";A$
680 INPUT"ANOTHER GAME Y/N?";Y$
690 IF Y$="Y" THEN RUN:IF Y$="N"
THEN PRINT "OKAY, SOME OTHER TI
ME PERHAPS"
695 IF Y$="N" THEN END
700 REM PAUSE ROUTINE
710 REM*****
720 FOR T=1 TO 500:NEXT T
730 RETURN
740 REM
750 GOSUB 690
760 RETURN
770 REM*****
780 REM LEAVE STARBASE
790 REM*****
800 DOCKED=0
810 GOSUB 4100
820 PRINT@76,U$;:PRINT@109,U$;:P
RINT@138,U$;:PRINT@171,U$;
830 RETURN
840 REM*****
850 REM EMERGENCY REPAIRS
860 REM*****
870 IF EN>DA+350 THEN 910
880 Z7$="NOT ENOUGH ENERGY FOR R
EPAIRS":GOSUB 4200
890 GOSUB 740
900 RETURN
910 EN=EN-350
920 REM*****
930 REM GENERAL REPAIRS
940 REM*****

```

```

950 IF WMAX=9 THEN 990
960 WMAX=9
970 Z7$="WARP ENGINES REPAIRED.M
AX=9":GOSUB 4200
980 GOSUB 690
990 WE=1
1000 P=1
1010 P$="READY"
1020 DA=0
1030 IF SENSOR$="OUT" THEN SENSO
R$="OFF"
1040 IF SHIELD$<>"OUT" THEN 1070
1050 SHIELD$="DOWN"
1060 SH=0
1070 PRINT@379," ";:PRINT@379
,EN;:PRINT@384,"C";:PRINT@445,R$
;:PRINT@456," ";:PRINT@456,PH
AS$;:PRINT@487,"0 ";
1080 PRINT@412,SHIELD$;
1090 RETURN
1100 REM*****
1110 REM PHOTON TORPEDOS
1120 REM*****
1130 IF NT THEN 1170
1140 Z7$=" NO TORPEDOS ":GOSUB 4
200
1150 GOSUB 740
1160 RETURN
1170 IF DK=0 THEN 1210
1180 Z7$="TARGET OUT OF RANGE":G
OSUB 4200
1190 GOSUB 740
1200 RETURN
1210 IF SHIELD$<>"UP " THEN 1250
1220 Z7$="SHIELD MUST BE DOWN TO
FIRE":GOSUB 4200
1230 GOSUB 740
1240 RETURN
1250 PRINT@112,"+";:PRINT@173,"=
";:PRINT@179,"=";:PRINT@240,"-";
1260 Z7$="TORPEDO SYSTEM ACTIVE"
:GOSUB 4200

```

```

1270 K=S+3
1280 FOR I=1 TO 5
1290 POKE K,60
1300 POKE K+1,62
1310 POKE K,128
1320 POKE K+1,128
1330 K=K+36
1340 NEXT I
1350 NT=NT-1
1360 NK=NK-1
1370 SCORE=SCORE+1
1380 PRINT@506,"  ";;PRINT@507,
SCORE;
1390 IF NT AND NK THEN 1270
1400 PRINT@112,CHR$(128);:PRINT@
173,CHR$(128);:PRINT@179,CHR$(12
8);:PRINT@240,CHR$(128);
1410 PRINT@477,"  ";;PRINT@477,N
T;
1420 IF NK THEN 1460
1430 GOSUB 4020
1440 GOSUB 740
1450 RETURN
1460 GOSUB 740
1470 Z7$="TORPEDOS OUT"+STR$(NK)
+"KLINGONS LEFT":GOSUB 4200
1480 GOSUB 740
1490 RETURN
1500 GOTO 1500
1510 REM*****
1520 REM STARBASE
1530 REM*****
1540 WA=0:PRINT@421,WA;;PRINT@76
,CHR$(134);CHR$(143);CHR$(142);C
HR$(128);CHR$(141);CHR$(143);CHR
$(137);
1550 PRINT@109,CHR$(131);CHR$(14
0);"  ";CHR$(140);CHR$(131);
1560 PRINT@138,CHR$(62);CHR$(61)
;CHR$(130);CHR$(134);CHR$(134);C
HR$(134);CHR$(134);CHR$(134);CHR
$(129);CHR$(61);CHR$(60);

```

```

1570 PRINT@171,CHR$(131);CHR$(12
9);CHR$(134);" ";CHR$(137);CHR
$(130);CHR$(131);
1580 FOR Z9=1 TO 500:NEXT Z9
1590 IF DK>2 THEN 1860
1600 Z7$=" DANGER! KLINGON ATTAC
K ":GOSUB 4190
1610 PRINT @76,U$;:PRINT@109,U$;
:PRINT@138,U$;:PRINT@171,U$;
1620 Z=S+147
1630 Z1=Z-36
1640 Z2=Z-30
1650 Z3=Z+30
1660 Z4=Z+36
1670 FOR I=1 TO 3
1680 POKE Z1,42
1690 POKE Z2,35
1700 POKE Z3,134
1710 POKE Z4,96
1720 POKE Z1,128
1730 POKE Z2,128
1740 POKE Z3,128
1750 POKE Z4,128
1760 Z1=Z1-36
1770 Z2=Z2-30
1780 Z3=Z3+30
1790 IF Z3>1311 THEN Z3=1300
1800 Z4=Z4+36
1810 IF Z4>1311 THEN Z4=1300
1820 NEXT I
1830 DOCKED=0
1840 GOSUB 4100
1850 RETURN
1860 EN=5000
1870 DOCKED=1
1880 NT=NT+2*(NT<8)+(N2=9)
1890 PRINT@477,NT;
1900 GOSUB 920
1910 BD=0
1920 RETURN
1930 REM*****
1940 REM METEORITE SHOWER

```

```

1950 REM*****
1960 TV=INT(RND(0)*(WMAX/2)+1)
1970 WMAX=WMAX-TV
1980 IF WMAX<1 THEN WMAX=1
1990 Z7$=" METEORITE SHOWER ":GO
SUB 4200
2000 GOSUB 690
2010 IF WARP<=WMAX THEN RETURN
2020 WARP=WMAX
2030 PRINT@421,WARP;
2040 RETURN
2050 REM*****
2060 REM ESCAPED KLINGONS
2070 REM*****
2080 C0$="GREEN ":PRINT @394,C0$
;
2090 IF S8 THEN Z7$=" NO KLINGON
S IN SENSOR RANGE ":GOSUB 4190
2100 RETURN
2110 REM*****
2120 REM PHASER ROUTINE
2130 REM*****
2140 FOR I=1 TO 10
2150 NEXT I
2160 K=S+23
2170 FOR I=1 TO 8
2180 POKE K,60
2190 POKE K+1,62
2200 IF PEEK(337)=255 THEN 2200
2210 POKE 337,191
2220 IF EN>50 THEN 2280
2230 POKE K,128
2240 POKE K+1,128
2250 K=K+31
2260 NEXT I
2270 RETURN
2280 EN=EN-50
2290 IF K=S+147 THEN 2310
2300 GOTO 2230
2310 POKE K,128
2320 POKE K+1,128
2330 NK=NK-1

```

```

2340 SCORE=SCORE+1
2350 PRINT@506," " ;:PRINT@507,
SCORE;
2360 RETURN
2370 REMXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2380 REM PHASERS
2390 REMXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2400 IF P THEN 2440
2410 Z7$="PHASERS ARE OUT":GOSUB
4200
2420 GOSUB 740
2430 RETURN
2440 IF DK=0 THEN 2480
2450 Z7$="TARGET OUT OF PHASER R
ANGE":GOSUB 4200
2460 GOSUB 740
2470 RETURN
2480 IF EN>50 THEN 2520
2490 Z7$="NO ENERGY FOR PHASERS"
:GOSUB 4200
2500 GOSUB 740
2510 RETURN
2520 PRINT@112,"+";:PRINT@173,"=
";:PRINT@179,"=" ;:PRINT@240,"-";
2530 PRINT@456,"ARMED";:Z7$="PHA
SERS ARMED AND READY":GOSUB 4200
2540 GOSUB 2110
2550 PRINT@379," " ;:PRINT@379
,EN;
2560 PRINT@384,"C";
2570 IF EN<50 THEN 2640
2580 IF NK=0 THEN 2600
2590 GOTO 2540
2600 GOSUB 4020
2610 PRINT@456,"READY";
2620 PRINT@112,CHR$(128);:PRINT@
173,CHR$(128);:PRINT@179,CHR$(12
8);:PRINT@240,CHR$(128);
2630 RETURN
2640 Z7$="ENERGY BANKS DRAINED":
GOSUB 4200
2650 Z7$=STR$(NK)+" KLINGONS LEF

```

```

T ":GOSUB 4200
2660 PRINT@456,"OUT ";
2670 GOSUB 740
2680 GOTO 2620
2690 REM*****
2700 REM CHANGE WARP
2710 REM*****
2720 IF WE THEN 2760
2730 Z7$="WARP DRIVE OUT OF ACTI
ON":GOSUB 4200
2740 GOSUB 740
2750 RETURN
2760 OW=WARP
2770 Z7$="NEW WARP FACTOR ?":GOS
UB 4200
2780 A$=INKEY$: IF A$="" THEN 2780
2790 WARP=VAL(A$)
2800 IF WARP>WMAX THEN 2840
2810 PRINT@421,WARP;
2820 IF OW=0 AND DOCKED THEN GOS
UB 770
2830 RETURN
2840 Z7$="THE ENGINES WONT TAKE
THAT":GOSUB 4200
2850 GOSUB 740
2860 GOTO 2770
2870 REM*****
2880 REM SHIELD
2890 REM*****
2900 IF SHIELD$="OUT " THEN 2960
2910 SH=NOT SH
2920 SHIELD$="DOWN"
2930 IF SH THEN SHIELD$="UP "
2940 PRINT@412,SHIELD$;
2950 RETURN
2960 Z7$="SHIELD IS OUT OF ACTIO
N":GOSUB 4200
2970 GOSUB 740
2980 RETURN
2990 REM*****
3000 REM SENSORS DETECT KLINGON
3010 REM*****

```



```

3020 IF DK<>2 THEN 3050
3030 CQ$="ORANGE"
3040 PRINT@394,CQ$;
3050 TV=KV+4
3060 IF TV>8 THEN TV=TV-8
3070 Z7$=STR$(NK)+"UFOS,"+STR$(DK)
+"LIGHT YEARS,VECTOR"+STR$(TV)
:GOSUB 4200
3080 RETURN
3090 REM*****
3100 REM SENSORS
3110 REM*****
3120 IF SENSOR$<>"OUT" THEN 3160
3130 Z7$="SENSORS OUT OF ACTION"
:GOSUB 4200
3140 GOSUB 740
3150 RETURN
3160 IF SS=0 THEN SS=1 ELSE SS=0
3170 SENSOR$="OFF"
3180 IF SS THEN SENSOR$="ON "
3190 PRINT@445,SENSOR$;:
3200 IF NOT SS THEN 3220
3210 Z7$="NO KLINGONS IN SENSOR
RANGE":GOSUB 4200
3220 RETURN
3230 REM*****
3240 REM NEXT STARBASE
3250 REM*****
3260 Z7$="NEAREST STARBASE"+STR$(BD)
+"LIGHT":GOSUB 4200
3270 Z7$="YEARS AT VECTOR "+STR$(BV):GOSUB 4200
3280 GOSUB 740
3290 RETURN
3300 REM*****
3310 REM CHANGE VECTOR
3320 REM*****
3330 Z7$="NEW VECTOR ?":GOSUB 4200
3340 A$=INKEY$:IF A$="" THEN 3340
3350 VECTOR=VAL(A$)
3360 PRINT@432,VECTOR;

```

```

3370 RETURN
3380 REM*****
3390 REM KLINGON ATTACK
3400 REM*****
3410 CO$="RED  "
3420 PRINT@394,CO$;
3430 IF DOCKED THEN GOSUB 1610
3440 K=S+21
3450 FOR I=1 TO 5
3460 POKE K,60
3470 POKE K+1,62
3480 GOSUB 4260
3490 POKE K,128
3500 POKE K+1,128
3510 GOSUB 4260
3520 K=K+64
3530 NEXT I
3540 GOSUB 3560
3550 RETURN
3560 REM*****
3570 REM CALCULATE DAMAGE
3580 REM*****
3590 DA=DA+NK*(20+20*(NOT SH))
3600 PRINT@487,DA;
3610 IF DA>=400 THEN 3650
3620 TV=INT(DA/100)
3630 ON TV GOTO 3740,3710,3680,3
650
3640 GOTO 3770
3650 WE=0
3660 WARP=0
3670 PRINT@421,WARP;:Z7$="WARP E
NGINES OUT":GOSUB 4200
3680 P=0
3690 P$="OUT"
3700 PRINT@456,P$;
3710 SHIELD$="OUT"
3720 SH=0
3730 PRINT@412,SHIELD$;
3740 SS=0
3750 SENSOR$="OUT"
3760 PRINT@445,SENSOR$;

```

```

3770 RETURN
3780 GOTO 3780
3790 REM*****
3800 REM DISPLAY
3810 REM*****
3820 CLS
3830 PRINT STRING$(32,137);
3840 FOR I=1 TO 9:PRINT CHR$(137
);STRING$(30,128);CHR$(137);:NEX
T I
3850 PRINT STRING$(9,137);"USS E
NTERPRISE";STRING$(9,137);
3860 PRINT"STARDATE 1000";TAB(21
);"ENERGY 5000";
3870 PRINT"CONDITION GREEN";TAB(
21);"SHIELD DOWN";
3880 PRINT"WARP 1      VECTOR 1
SENSORS OFF";
3890 PRINT"PHASERS READY";TAB(21
);"TORPEDOS 10";
3900 PRINT"DAMAGE 0";TAB(21)"SCO
RE 0";
3910 RETURN
3920 REM*****
3930 REM INITIALISE
3940 REM*****
3950 D=1000:ENERGY=5000:COND$="G
REEN":SHIELD$="DOWN":WARP=1:VECT
OR=1:SENSOR$="OFF":PHAS$="READY"
:TP=10:DAMAGE=0:SCORE=0:P$=PHAS$
3960 E$=STRING$(32,32):S=1059:S1
=S:S2=S1:SS=0
3970 GOSUB 4020
3980 SH=0:Z$=STRING$(5,32):DOCKE
D=0:WE=1:WMAX=9:NT=10:P=1
3990 GOSUB 4100
4000 U$=STRING$(11,128)
4010 RETURN
4020 REM*****
4030 REM RESET KLINGONS
4040 REM*****
4050 DK=RND(9)+10

```

```

4060 NK=RND(3):KV=RND(8):CO$="GREEN "
4070 PRINT@394,CO$;
4080 IF SS THEN Z7$=" NO KLINGONS IN SENSOR RANGE ":GOSUB 4190
4090 RETURN
4100 REM*****
4110 REM RESET STARBASE
4120 REM*****
4130 BD=RND(199)+200:BV=RND(8)
4140 RETURN
4150 REM*****
4160 REM OUT OF ENERGY
4170 IF EN>0 THEN RETURN
4180 GOTO 570
4190 REM*****
4200 REM TEMPORARY INSTRUCTIONS
4210 REM*****
4220 Z8$=STRING$(32,137):Z9$=Z8$
4230 Z0=LEN(Z7$):Z9=INT((32-Z0)/2):MID$(Z9$,Z9,Z0)=Z7$
4240 FOR I=1 TO 5:PRINT@0,Z9$;:FOR J=1 TO 125:NEXT J:PRINT@0,Z8$;:FOR J=1 TO 50:NEXT J:NEXT I
4250 RETURN
4260 FOR Z9=1 TO 50:NEXT Z9:RETURN
4270 INPUT NT
4280 NT=NT+2*(NT<8)+(NT=9)
4290 PRINT NT
4300 GOTO 4270
4310 CLS
4320 PRINT"YOU ARE CAPTAIN JAMES T KIRK, COMMANDER OF THE USS ENTERPRISE THE PRIDE OF THE FLEET."
4330 PRINT
4340 PRINT"YOU ARE ON A FIVE-YEAR MISSION TO GO WHERE NO MAN HAS BEEN BEFORE, TO SEEK OUT NEW BEINGS AND CIVILIZATIONS."
4350 PRINT

```

```

4360 FOR A=1 TO10000:NEXT A
4370 CLS
4380 CLS
4390 PRINT" DUE TO CONTAMINATION
  OF THE      MEAT SUBSTITUTE THE C
REW HAVE     ALL FALLEN ILL WITH F
OOD          POISONING.
              BEING A VEGETARIAN, Y
OU ESCAPED  THE ILLNESS LEAVING Y
OU TO GUIDE THE SHIP."
```

```

4400 PRINT"WITH THE klingons ALL
  AROUND,    YOU HAVE TO GET THE E
NTERPRISE   TO STARBASE AND SAVE
SPOCK,      M'COY, CHECKOV, UHURA
  AND THE    REST OF THE CREW.
              good luck captain!!!"
```

```

4410 FOR A=1 TO 10000:NEXT A
4420 CLS
4430 PRINT"YOU HAVE ALL THE SHIP
'S STATUS   REPORTS IN FRONT OF Y
OU ON THE   SHIP'S COMPUTER-SCREE
N."
```

```

4440 PRINT
4450 FOR A=1 TO 5000:NEXT A
4460 CLS
4470 PRINT"YOUR CONTROLS ARE AS
FOLLOWS:-"
```

```

4480 FOR A=1 TO 1000:NEXT A
4490 PRINT"          instructions
              w IS YOUR WARP SPEED
(1 TO 9)    s ACTIVATES THE DEFLE
CTOR SHIELDp ARMS THE PHASER BAN
KS          z ACTIVATES THE SENSO
RS          b GIVES LOCATION OF S
TARBASE    v ALLOWS YOU TO CHANG
E VECTORS."
```

```

4500 PRINT
4510 PRINT"FINALLY, t ARMS THE S
HIPS TEN    TORPEDOES(USE THEM SP
ARINGLY)    AND e KEEPS YOU UP-TO
-DATE- WITH THE AMOUNT OF ENERGY
LEFT."
```

```
4520 FOR A=1 TO 10000:NEXT A
4530 CLS
4540 PRINT"YOU HAVEN'T MUCH TIME
```

```
GOOD LU
```

```
OK!!"
```

```
4550 FOR A=1 TO 1000:NEXT A
4560 RETURN
```



BRIAN CANDY
Original program by E. G. Kemplen

GENERAL DESCRIPTION

You are Flying Officer Kite and you have been scrambled from your base at Biggin Hill to join the 'Few' in the battle against the Hun.

Settled into the seat of your Spitfire you see the dreaded ME 109s weaving across the sky. You latch on to one unfortunate's tail fin and follow him relentlessly until you have him in your sights. You press the button on the joystick and fire...

This very entertaining game allows you to test your skill in shooting down the enemy planes. As you go on your fuel runs low and you lose height, adding a further hazard - the ground - to your flying ability. You have three attempts before the score-board is displayed and you are offered another game. 'Okay chaps, bandits at seven o'clock, tally ho'...

DETAILED DESCRIPTION

Lines10-30 Titles.

40 Uses poke to speed up the computer. If your computer isn't able to accept this poke, delete this line before

running. Also, it's advisable not to 'Break' the routine in the middle but wait till the repeat routine appears and answer 'N' to the question, 'Another Game?'

100-260 Variables.

370 Checks for keyboard reponse and adjusts values to move planes.

1020-1030 Firing routine.

1050-1180 Plots 'shot'.

1200-1330 Checks for 'hit' and prints crashing plane.

1350-1420 First crashing routine for enemy plane.

1440-1500 Second crashing routine for your plane.

1600 Title sequence.

1610 Displays score.

1620-1650 Repeat routine.

```
10 *****
20 *FIGHTER PILOT- B.J. CANDY*
30 *****
50 PCLEAR 8
60 B$="P"
70 GOSUB 810
80 DIM CA(8,8),CB(8,8),CC(8,8),C
D(8,8),CE(8,8),CF(8,8),CG(8,8),C
H(8,8),CI(8,8)
90 PMODE 4:SCREEN1,0:PCLS
100 FOR A=1TO9
110 X=1536
120 FOR B=1TO8
130 READ P
140 POKE X,P
150 X=X+32
160 NEXT B
170 IF A=1 THEN GET(0,0)-(8,8),C
A,G
180 IF A=2 THEN GET(0,0)-(8,8),C
B,G
190 IF A=3 THEN GET(0,0)-(8,8),C
C,G
200 IF A=4 THEN GET(0,0)-(8,8),C
D,G
210 IF A=5 THEN GET(0,0)-(8,8),C
```



```

E, G
220 IF A=6 THEN GET(0,0)-(8,8),C
F, G
230 IF A=7 THEN GET(0,0)-(8,8),C
G, G
240 IF A=8 THEN GET(0,0)-(8,8),C
H, G
250 IF A=9 THEN GET(0,0)-(8,8),C
I, G
260 NEXTA
270 DATA 16,40,40,198,40,16,16,4
0
280 DATA 71,41,17,26,28,226,33,3
2
290 DATA 8,8,150,97,150,8,8,0
300 DATA 32,33,226,28,26,17,41,7
1
310 DATA 40,16,16,40,198,40,40,1
6
320 DATA 4,132,71,56,72,136,148,
226
330 DATA 16,16,105,134,105,16,16
,0
340 DATA 226,148,136,88,56,71,13
2,4
350 DATA 73,42,28,129,90,36,36,2
4
360 D=1:X=128:Y=96:F=1:O=128:P=1
50:M=20:U=0:S=0:Z=3
370 REM *** MOVE 1 ***
380 U=U+.75
390 IF Y<U THEN Y=U
400 M=M-1:IF M=0 THEN GOSUB 760
410 IF L>0 THEN GOSUB 1040
420 IF PPOINT(O,P)=1 THEN GOSUB
1230
430 IF F=9 THEN GOSUB 1270:GOTO
560
440 IF F=1 THEN PUT(O-4,P-4)-(O+
4,P+4),CA,PSET:P=P-3
450 IF F=2 THEN PUT(O-4,P-4)-(O+
4,P+4),CB,PSET:P=P-3:O=O+3

```

```

460 IF F=3 THEN PUT(0-4,P-4)-(0+
4,P+4),CC,PSET:O=O+3
470 IF F=4 THEN PUT(0-4,P-4)-(0+
4,P+4),CD,PSET:O=O+3:P=P+3
480 IF F=5 THEN PUT(0-4,P-4)-(0+
4,P+4),CE,PSET:P=P+3
490 IF F=6 THEN PUT(0-4,P-4)-(0+
4,P+4),CF,PSET:P=P+3:O=O-3
500 IF F=7 THEN PUT(0-4,P-4)-(0+
4,P+4),CG,PSET:O=O-3
510 IF F=8 THEN PUT(0-4,P-4)-(0+4
,P+4),CH,PSET:O=O-3:P=P-3
520 IF O>240 THEN F=7
530 IF O<15 THEN F=3
540 IF P>170 THEN F=1
550 IF P<15 THEN F=5
560 FOR W=5 TO 8:PCOPY W TO W-4:NE
XT W
570 IF L>0 THEN GOSUB 1040
580 IF D=9 THEN GOSUB 1430:GOTO
370
590 REM *** B.J. CANDY ***
600 A$=INKEY$:IF A$="" THEN A$=B$
610 V=ASC(A$)
620 IF V=8 THEN D=D+1:IF D=9 THE
N D=1
630 IF V=9 THEN D=D-1:IF D=0 THE
N D=8
640 IF V=32 THEN GOSUB 1010
650 IF D=9 THEN GOSUB 1430
660 IF PPOINT(X,Y)=1 THEN GOSUB
1190
670 IF D=1 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CA,OR:Y=Y-4
680 IF D=2 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CB,OR:Y=Y-4:X=X+4
690 IF D=3 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CC,OR:X=X+4
700 IF D=4 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CD,OR:X=X+4:Y=Y+4
710 IF D=5 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CE,OR:Y=Y+4

```

```

720 IF D=6 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CF,OR:Y=Y+4:X=X-4
730 IF D=7 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CG,OR:X=X-4
740 IF D=8 THEN PUT(X-4,Y-4)-(X+
4,Y+4),CH,OR:X=X-4:Y=Y-4
750 GOTO 370
760 IF F=9 THEN L=0:RETURN
770 F=F+(RND(3)-2):IF F>8 THEN F
=1
780 IF F<1 THEN F=8
790 M=RND(10):RETURN
800 GOTO 800
810 PMODE 4,5:SCREEN1,0:PCLS
820 DRAW"BM5,185"
830 FOR A=5T0250 STEP 5
840 B=RND(10)+175
850 LINE-(A,B),PSET
860 NEXT A
870 LINE(5,5)-(250,187),PSET,B
880 LINE(5,187)-(250,187),PRESET
890 PAINT(0,0),1,1
900 LINE(1,1)-(255,191),PRESET,B
910 LINE(10,190)-(40,150),PSET,B
F
920 FOR A=190T0150 STEP -4
930 FOR B=10T040 STEP 4
940 LINE(B,A)-(B+1,A+1),PRESET,B
F
950 NEXT B,A
960 LINE(10,190)-(40,150),PSET,B
970 LINE(10,150)-(25,145),PSET
980 LINE-(40,150),PSET
990 RETURN
1000 GOTO 1000
1010 REM *** FIRE ***
1020 L=40:X1=X:Y1=Y:H=D
1030 RETURN
1040 REM *** SHOT ***■
1050 IF F=9 THEN RETURN
1060 L=L-1
1070 IF L>35 THEN RETURN

```

```

1080 IF H=1 THEN Y1=Y1-5
1090 IF H=2 THEN Y1=Y1-5:X1=X1+5
1100 IF H=3 THEN X1=X1+5
1110 IF H=4 THEN X1=X1+5:Y1=Y1+5
1120 IF H=5 THEN Y1=Y1+5
1130 IF H=6 THEN Y1=Y1+5:X1=X1-5
1140 IF H=7 THEN X1=X1-5
1150 IF H=8 THEN X1=X1-5:Y1=Y1-5
1160 IF X1>245 OR X1<10 OR Y1>17
5 OR Y1<10 THEN L=0
1165 IF X1<1 THEN X1=0
1166 IF Y1<1 THEN Y1=0
1170 LINE(X1-1,Y1-1)-(X1+2,Y1+2)
,PSET,BF
1180 RETURN
1190 REM *** HIT 2 ***
1200 SOUND 1,1
1210 D=9
1220 RETURN
1230 IF F=9 THEN RETURN
1240 F=9
1250 CIRCLE(X1,Y1),10:PAINT(X1,Y
1),1,1
1260 RETURN
1270 PUT(O-4,P-4)-(O+4,P+4),CI,O
R
1280 PLAY"03;T55;GB"
1290 IF O<50 THEN O=O+2
1300 IF O>200 THEN O=O-2
1310 P=P+5
1320 IF P>180 THEN GOTO 1340
1330 RETURN
1340 REM ** CRASH **
1350 PMODE4,5
1360 PUT(O-4,P-4)-(O+4,P+4),CI,O
R
1370 PMODE4,1
1380 PLAY"05;T50;ABDABC"
1390 O=128:P=96
1400 F=RND(8)
1410 U=U-25:S=S+1
1420 GOTO 370

```

```

1430 REM ** CRASH 2 **
1440 PUT (X-4,Y-4)-(X+4,Y+4),CI,0
R
1450 Y=Y+5
1460 IF X<50 THEN X=X+1
1470 IF X>150 THEN X=X-1
1480 IF Y>180 THEN 1510
1490 PLAY"O2;T55;GB"
1500 RETURN
1510 PMODE 4,5
1520 PUT (X-4,Y-4)-(X+4,Y+4),CI,0
R
1530 PMODE 4,1
1540 D=RND(8)
1550 X=128:Y=96
1560 U=0
1570 Z=Z-1
1580 IF Z=0 THEN 1600
1590 GOTO 370
1600 CLS:PRINT"***** FIGHTER
PILOT *****"
1610 PRINT:PRINT"YOU SHOT DOWN";
S;"PLANES"
1620 PRINT:PRINT"ANOTHER GAME Y/
N"
1630 SOUND 200,100
1640 A$=INKEY$:IF A$="" THEN 164
0
1650 IF A$="N" THEN STOP
1660 RUN

```

CARD INDEX

Original program by Brian Candy

GENERAL DESCRIPTION

An ideal program for your small business, club subscriptions and so on, enabling you to select from a six-option menu and store the results on print-out or cassette tape. Also useful for storage of recorded music on tape or disc with full editing facilities available if required.

DETAILED DESCRIPTION

Lines2 Clears memory.

10-20 Prints title.

30-35 Prints the menu.

60-100 Checks keyboard for your response.

110-145 Sets file format and prints relevant comments and prompts.

150 Dimensions array.

155 Stores variables.

170 Card entry routine.

190 Sets up card loop.

210 Prints title of subroutine.

215-240 Waits for the pre-determined number of cards to be entered.

250 Dimensions array.

270 Searches for the file required.

430-435 Offers editing and return facilities.

470 Asks if you wish a printout.

485 Starts printout routine.

530-550 Prints box.

590-600 Saves box to cassette tape.

690 Warns you to prepare your data tape.

700-780 Loading routine.
1000-2040 Rejection routine.

```
2 CLEAR 15000
5 CLS
10 PRINT"=====          CARD INDE
X"
15 PRINT"= menu =          BY"
20 PRINT"=====          BRIAN CAN
DY"
25 PRINT
30 PRINT"(1) LOAD BOX FROM TAPE"
35 PRINT"(2) FORMAT BOX"
40 PRINT"(3) ENTER A CARD INTO B
OX"
45 PRINT"(4) SEARCH FOR A CARD"
50 PRINT"(5) SAVE BOX TO TAPE"
55 PRINT"(6) PRINT ALL CARDS"
60 A$=INKEY$:IF A$="" THEN 60
65 V=ASC(A$)
70 IF V>57 OR V<49 THEN GOTO 75
ELSE 95
75 PRINT@320,A$;" IS NOT AN OPTI
ON"
80 GOSUB 1000
85 PRINT@320," "
90 GOTO 60
95 V=VAL(A$)
100 ON V GOSUB 690,105,165,270,5
90,530
105 REM ** FORMAT FILE ***
110 CLS
115 IF C>0 THEN PRINT"BOX FORMAT
ED ALREADY":GOSUB 1000:GOTO 5
120 INPUT"ENTER NO. CARDS REQUIE
RD ";C
122 IF C>50 THEN PRINT"SORRY NO
MORE THAN 50 CARDS":GOTO 120
125 INPUT"ENTER NO. FIELD ON EAC
H CARD";F
130 IF F>6 THEN 135 ELSE 145
```

```

135 PRINT "SORRY NO MORE THAT 6 F
IELD'S"
140 GOTO 125
145 PRINT "THANK YOU":GOSUB 1000
150 DIM C$(C,F)
155 N=1:M=0
160 GOTO 5
165 REM *** ENTER CARD ***
170 IF C=0 THEN PRINT "CARDS NOT
FORMATED":GOSUB 1000:GOTO 5
175 IF F=0 THEN PRINT "NO FIELDS
FORMATED":GOSUB 1000:GOTO 5
180 N=1:M=1
185 REM *** CARD LOOP ***
190 IF C$(N,1)<>" " THEN N=N+1 EL
SE 205
195 IF N>C THEN PRINT "OUT OF MEM
ORY":GOSUB 1000:GOTO 5
200 PLAY "05;T50;ADAC":GOTO 190
205 CLS
210 PRINT "card*box*      CARD NO."
;N
215 PRINT "*****"
*****"
220 PRINT
225 FOR A=1 TO F
230 P=A+4:P=P*32
235 PRINT@P, "(";A;" ) ";:LINE INP
UT C$(N,A)
240 IF LEN(C$(N,A))>25 THEN PRIN
T@448,"LINE TO LONG, PLEASE RETY
PE!":GOSUB 1000:PRINT@P, " ":PRIN
T@448, " ":GOTO 235
245 NEXT A
250 PRINT:PRINT "*****"
*****"
255 PRINT "NEW CARD Y/N"
260 A$=INKEY$:IF A$="" THEN 260
265 IF A$<>"N" THEN 185 ELSE 5
270 REM *** SEARCH FOR FILE ***
275 CLS
280 INPUT "SEARCH FOR";S$

```



```

285 FOR A=1TOC-1
290 FOR B=1TOF
295 P=INSTR(1,C$(A,B),S$)
300 IF P>0 THEN GOTO 320
305 NEXT B,A
310 PRINT"NOT FOUND IN CARD BOX!
":GOSUB1000
315 GOTO 5
320 PRINT"card*box*   CARD NO.";
A
325 PRINT"*****
*****"
330 PRINT
335 FOR D=1TOF
340 PRINTC$(A,D)
345 NEXT D
350 PRINT:PRINT"*****
*****"
355 PRINT"CORRECT CARD Y/N"
360 A$=INKEY$:IF A$="" THEN 360
365 IF A$<>"N" THEN 370 ELSE 305
370 PRINT"DO YOU WISH TO EDIT Y/
N"
375 A$=INKEY$:IF A$="" THEN 375
380 IF A$<>"Y" THEN 385 ELSE 395
385 PRINT"PRESS ANY KEY TO CONTI
NUE"
390 IF INKEY$="" THEN 390 ELSE 4
70
395 REM *** EDIT FILE ***
400 CLS
405 PRINT"edit   CARD NO.";A
410 PRINT"*****
*****"
415 FOR D=1TOF
420 P=D+4:P=P*32:PRINT@P,"(";D;"
) ";C$(A,D)
425 NEXT D
430 PRINT@384,"PRESS (R) TO RETU
RN TO MENU"
435 PRINT@448,"ENTER LINE TO EDI
T";:INPUT L$

```

```

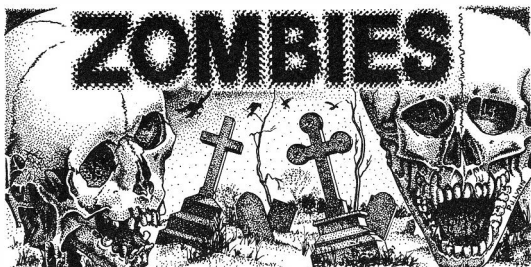
440 IF L$="R" THEN 470
445 V=ASC(L$):IF V<49 OR V>54 TH
EN 435
450 V=VAL(L$)
455 IF V>F THEN 435
460 P=V+4:P=P*32:PRINT@P+6,"";:L
INE INPUT C$(A,V)
465 GOTO 405
470 PRINT@448,"HARD COPY Y/N"
475 A$=INKEY$:IF A$="" THEN 475
480 IF A$<>"Y" THEN 5 ELSE 485
485 PRINT#-2,CHR$(14)
490 PRINT#-2,"Card Box.          CAR
D NO. ";A
495 PRINT#-2,CHR$(13)
500 FOR G=1TOF
505 PRINT#-2,C$(A,G)
510 NEXT G
515 PRINT#-2,CHR$(15)
520 GOTO 5
530 REM *** PRINT BOX ***
540 N=1
550 IF C$(N,1)="" THEN PRINT#-2,
"END OF BOX *****
*":GOTO 5
555 PRINT#-2,"CARD NO. ";N;TAB(40
);"CARD NO. ";N+1
556 PRINT#-2,CHR$(13)
560 FOR G=1TOF-1
565 PRINT#-2,C$(N,G);TAB(40);C$(
N+1,G)
570 NEXT G
575 PRINT#-2,CHR$(13);CHR$(13)
580 N=N+2:GOTO 550
590 REM *** SAVE BOX TO TAPE ***
595 CLS4
597 INPUT"ENTER BOX NAME":N$
600 OPEN "O",#-1,"BOX"
610 PRINT#-1,C,F,N$
620 PRINTN$:GOSUB 1000
630 FOR A=1TOC
640 FOR B=1TOF

```

```

650 PRINT#-1,C$(A,B)
660 NEXT B,A
665 CLOSE #-1
670 CLS
680 GOTO 10
690 CLS:PRINT"MAKE SURE THAT YOU
R DATA TAPE IS":PRINT"REWOUND BE
FORE YOU START TO LOAD"
692 CLEAR 15000
695 INPUT"BOX TO LOAD";M$
700 OPEN "I",#-1,"BOX"
710 INPUT #-1,C,F,N$
715 PRINT"FOUND ";N$;
720 IF N$<>M$ THEN GOTO 2000
722 PRINT" loading"
725 DIM C$(C,F)
730 FOR A=1TOC-1
740 FOR B=1TOF
750 INPUT#-1,C$(A,B)
760 NEXT B,A
770 CLOSE #-1
780 GOTO 5
1000 FOR E=1TO1000:NEXTE
1010 RETURN
2000 PRINT" rejected"
2002 PRINT"SEARCHING FOR ";M$
2005 FOR A=1TOC
2010 FOR B=1TOF
2020 INPUT #-1,D$
2030 NEXT B,A
2035 CLOSE #-1
2040 GOTO 700

```



DOUGLAS CLARKSON
Original program by P. Baker

GENERAL DESCRIPTION

The player must use his wits to survive in a political arena of graves and Zombies without moving into either, or being run into by Zombies and at the same time try to push those opposing Zombies into early graves.

The game opens with a yellow screen, sound effects, user instructions and with the player having to select colour and level of difficulty (choice of opposition). The play screen is then set up in appropriate colours. Movement of the player's character is with arrow keys; the graves remain in fixed positions and a Zombie moves at random following the player's move.

Sound effects register the various failures or successes, with a final display which sets out the game result and invites a further play.

DETAILED DESCRIPTION

Lines 10-67 String storage is reserved, arrays set up for grave and Zombie positions, initial strings and variables set up for screen, sound, colours of characters and playing

screen, arrow control keys, opposition players (levels of difficulty) and movement of player's character and Zombies.

67 Transfers control to subroutine 1400-1580 which produces sound effects and displays user instructions, requesting any key to be pressed.

70-110 Screen display invites colour to be selected, checks for correct options, resets order of opposition names against order of difficulty. Subroutine 1140 for inkeys is used.

130-160 Screen display invites opposition to be selected from the list. Subroutine 1140 is used and checks for correct option.

170-350 Positions the correct number of graves and Zombies in their arrays, positions player's character and ensures no duplication of any position of any character.

390-430 Controls the setting up of the play screen with all characters in position using subroutine 1200.

440-1130 Body of program which controls movement of player's character and Zombies. Checks for validity of moves, for any collisions between characters, displays messages of doom or success, with appropriate sound effects and invitation to play again.

Subroutines 1140-1400 are used.

430-670 Player's character movement, checks and displays.

660, 675-950 Zombie movement, checks and displays.

1100-1130 Player's character movement, checks and displays.

1140-1150 Subroutine for all keyboard input.

1200 Subroutine for printing game background screen and all graves, Zombies and player's character, both initially and after use of arrow keys.

1400 Subroutine for sound effects.

1500-1580 Subroutine for display of initial game instructions.

```

10 REM ZOMBIE POLITICS
15 CLEAR 2000
20 DIM PG(80),PZ(80)
30 CLS2:SU(1)=6:SU(2)=10:SU(3)=1
4:SU(4)=18:SU(5)=30
40 TX$(1)="YOUR OWN MAN":TX$(2)=
"SDP MEMBER":TX$(3)="LIBERAL MEM
BER":TX$(4)="ECOLOGY MEMBER"
50 TX$(5)="MEMBER OF CND":SL$="1
2345":RD$=CHR$(191):BL$=CHR$(175
):AC$=CHR$(239)
60 DF$="-100-10100010101010001-1
00-1-1-1":SM$="9495099310910821"
65 FOR JJ=1 TO 8:F=VAL(MID$(SM$,
(JJ-1)*2+1,2)):MC$(JJ)=CHR$(F):N
EXT JJ
67 SS=150:ES=250:SP=11:GOSUB 140
0:GOSUB 1500
70 CLS7:T$="SELECT COLOUR "+BL$+
" B OR "+RD$+" R":PRINT@32*10+2,
T$;
80 CH$=RD$:CG$=CHR$(255):CZ$=BL$
:AC$=CHR$(239)
90 GOSUB 1140:IF A$="B" THEN 13
0
100 IF A$<>"R" THEN 80
110 CZ$=RD$:CH$=BL$:T2$=TX$(2):T
3$=TX$(3):T4$=TX$(4):T5$=TX$(5):
TX$(2)=T5$:TX$(3)=T4$:TX$(4)=T3$
:TX$(5)=T2$
130 CLS2:PRINT @9,"SELECT OPPOSI
TION";
140 FOR JJ=1 TO 5:PRINT@32*(JJ+3
)+5,MID$(SL$,JJ,1);"..":TX$(JJ);
:NEXT JJ
160 GOSUB 1140:IF A$<"1" OR A$>"
5" THEN 160
170 MD=VAL(A$):NZ=SU(MD):NG=INT(
NZ*1.5):ZL=NZ
180 FOR JJ=1 TO 30:PZ(JJ)=0:PG(J
J)=0:NEXT JJ
190 CT=1:FOR JJ=1 TO NZ:

```

```

200 PZ=RND(319)
210 FOR J1=1 TO CT:IF PZ=PZ(J1)
THEN 200
220 NEXT J1:PZ(CT)=PZ:CT=CT+1:NE
XT JJ
230 REM HAVE PLACED ZOMBIES
240 CT=1:FOR JJ=1 TO NG
250 PG=RND(319)
260 FOR J1=1 TO CT:IF PG=PG(J1)
THEN 250
270 FOR J1=1 TO NZ:IF PG=PZ(J1)
THEN 250
280 NEXT J1
290 PG(CT)=PG:CT=CT+1:NEXT JJ
300 REM GRAVES READY
330 PX=RND(319)
340 FOR JJ=1 TO NG:IF PX=PZ(JJ)
OR PX=PG(JJ) THEN 330
350 NEXT JJ
390 CLS5:FOR JJ=1 TO 16:FOR J1=
1 TO 20:PRINT@(JJ-1)*32+J1-1,AC$
;:NEXT J1:NEXT JJ
400 PRINT@4*32+22,"BEWARE";:PRIN
T@6*32+22,"POLITICAL";:PRINT@32*
8+22,"ZOMBIES!";
410 FOR JJ=1 TO NZ:CP=PZ(JJ):A$=
CZ$:GOSUB 1200:SOUND 253,1:NEXT
JJ
420 FOR JJ=1 TO NG:CP=PG(JJ):A$=
CG$:GOSUB 1200:SOUND 120,1:NEXT
JJ
430 CP=PX:A$=CH$:GOSUB 1200:SOUN
D 250,4
440 REM
450 LN=INT(PX/20):CL=PX-LN*20
460 GOSUB 1140:FOR JJ=1 TO 9:IF
A$=MC$(JJ)THEN 480
470 NEXT JJ:SOUND 234,1:GOTO 460
480 B$=MID$(DF$(JJ-1)*4+1,4):IL
=VAL(LEFT$(B$,2)):IC=VAL(RIGHT$(
B$,2))
490 TL=LN+IL:TC=CL+IC:IF TC>20 0

```

```

R TC<0 THEN 460
500 IF TL>15 OR TL<0 THEN 460
504 PQ=TL*20+TC:IF PQ<0 OR PQ>32
0 THEN 460
505 PM=PX:PX=TL*20+TC
510 GOSUB 1100:ON E GOTO 650,670
,675
625 REM MOVE A ZOMBIE
640 FOR JJ=250 TO 150 STEP 15:SO
UND JJ,1:NEXT JJ:GOTO 430
650 PRINT@8,"SILLY BILLY";:PRINT
@ 32*4+2,"RAN INTO A ZOMBIE";
655 SS=250:ES=150:SP=-12:GOSUB 1
400
660 PRINT@32*8,"PRESS KEY FOR NE
W GAME";:GOSUB 1140:GOTO 30
670 PCLS2:PRINT @8,"HOW UNFORTUN
ATE!";:PRINT@4*32+4,"GRAVE ERROR
";:SS=250:ES=128:SP=-11:GOSUB 14
00:GOTO 660
675 REM MOVE A ZOMBIE
680 ZS=RND(NZ):PZ=PZ(ZS):PR=PZ:I
F PZ=-1 THEN 680
690 X=1:GOSUB 950:PR=PX:X=2:GOSU
B 950
695 IL=-SGN(LN(1)-LN(2)):IC=-SGN
(CL(1)-CL(2)):IL=IL*RND(1):IC=IL
*RND(2)
790 PT=PZ+IL*20+IC:IF PT=PX THEN
850
795 IF PT<0 OR PT>319 THEN 680
800 FOR JJ=1 TO NG:IF PT=PG(JJ)
THEN 820
810 NEXT JJ:CP=PZ:A#=AC#:GOSUB 1
200:PZ(ZS)=PT:CP=PT:A#=CZ#:GOSUB
1200
815 GOTO 450
820 PZ(ZS)=-1:A#=AC#:CP=PZ:GOSUB
1200:ZL=ZL-1
830 FOR JJ=250 TO 210 STEP 7:SOU
ND JJ,1:NEXT JJ
840 IF ZL <>0 THEN 430

```



```

345 CLS2:PRINT@6,"WELL DONE";:SS
=120:ES=250:SP=9:GOSUB 1400:GOTO
860GOTO 860
850 CLS2:PRINT@0,"GOT YOU ZAPPED
";
860 PRINT@32*5,"PRESS KEY TO TRY
AGAIN";:GOSUB 1140:GOTO 30
950 LN(X)=INT(PR/20):CL(X)=PR-LN
(X):RETURN
1100 E=0:FOR JJ=1 TO NZ:IF PZ(JJ
)=PX THEN E=1:RETURN
1110 NEXT JJ
1120 FOR JJ=1 TO NG:IF PG(JJ)=PX
THEN E=2:RETURN
1130 NEXT JJ:CP=PX:A$=CH$:GOSUB
1200:CP=PM:A$=AC$:GOSUB 1200:E=3
:RETURN
1140 A$=INKEY$:IF A$="" THEN 114
0
1150 RETURN
1200 LT=INT(CP/20):CT=CP-20*LT:P
RINT@32*LT+CT,A$::RETURN
1400 FOR J1=SS TO ES STEP SP:SOU
ND J1,1:NEXT J1:RETURN
1500 CLS5:PRINT@1,"WELCOME TO ZO
MBIE POLITICS";
1510 PRINT@32*4+1,"TRY AND ZAP T
HE OPPOSITION";
1520 PRINT@32*6+1,"PUSH THEM INT
O EARLY GRAVES";
1530 PRINT@32*8+1,"OR MAKE THEM
LIKE ZOMBIES TOO!";
1540 PRINT@32*10+1,"BEST OF LUCK
";
1550 PRINT@32*12+1,"USE ARROW KE
YS TO MOVE";
1560 PRINT@32*13+1,"(SHIFT TURNS
45 DEG. CLOCKWISE)";
1570 PRINT@32*15+9,"PRESS KEY";
1580 GOSUB 1140:RETURN

```

AIRCRAFT LANDER

Original program by P. Bailey

GENERAL DESCRIPTION

It is dark and raining, you are approaching the airport with three hundred passengers on board and your co-pilot has passed out after a bad attack of food poisoning.

Aircraft Lander is a challenging simulation of the hazards of night flying and a warning concerning the quality of in-flight catering.

It is a bit unnerving to play as the response to your controls is intentionally delayed. Small corrections or crosswinds can cause dramatic effects. The instructions contained within the program are clear and well set out, but it may be worth keeping the program listing close to hand when you play, as there is rather a lot to remember at one go.

You can control pitch and throttle and select the strength of crosswind against which you wish to fly. Once you have landed you must straighten the aircraft and apply the brakes - if you leave it too late you will find that the buildings at the end of the runway present an additional hazard in this challenging battle for survival.

DETAILED DESCRIPTION

Lines 1-3 Title and credits.

90-350 Utility routines.

400-440 Calculates velocity.

1000-1060 Approach to airfield.

1200-1290 After touchdown.

1400-1500 Fatal crash.

1600-1690 Land off runway.

1800-1820 Acknowledges good landing.

2000-2140 Updates position.

3000-3040 Checks for crash.
4000-4270 Updates display.
5000-5110 Controls in-flight.
5500-5580 Controls after landing.
6000-6090 After touchdown.
8000-8020 Initialisation.
8030-8450 Instructions.
8460-8610 Establishes variables.
8620-8635 Initial screen display.
9000-9200 Final report.

```
1  '**AIRCRAFT LANDING SIMULATOR*  
*  
2  '**BY P.D.BAILEY***  
3  '**DATE 3/7/82***  
10 GOTO8000  
90  '**UTILITY SUBROUTINES**  
100  '**SHORT DELAY***  
110 FOR J=1 TO5:NEXTJ:RETURN  
200  '**LONG DELAY***  
210 FOR J=1 TO 5000:NEXT J:RETUR  
N  
300  '**END OF PAGE***  
310 PRINT:PRINT"PRESS ENTER TO C  
ONTINUE";  
320 X$=INKEY$:IFX$=""THEN320  
330 IFASC(X$)<>13 THEN 320  
340 CLS  
350 RETURN  
400  '**CALCULATE COMPONENTS OF V  
ELOCITY***  
410 RA=AD*C1  
420 VX=AS*SIN(RA)  
430 VY=AS*COS(RA)  
440 RETURN  
1000  '**APPROACH TO AIRFIELD***  
1010 GOSUB5000  
1020 GOSUB2000  
1030 IFPZ<=0THEN1200  
1040 GOSUB4000  
1050 GOSUB5000
```

```

1060 GOTO1010
1200 '***AFTER TOUCHDOWN***
1210 GOSUB3000
1220 IFLF=1THEN1400
1230 PRINT@64,"TOUCHDOWN";
1240 GOSUB5500
1250 GOSUB6000
1260 GOSUB4000
1270 IFLF=2 THEN1600
1280 IFLF=3 THEN1800
1290 GOTO1250
1400 '***FATAL CRASH***
1410 CLS
1420 X$=INKEY$:IFX$<>" "THEN1480
1430 PRINT@224,"FATAL CRASH";
1440 GOSUB110
1450 PRINT@224,STRING$(12,32);
1460 GOTO9090
1480 CLS:PRINT"THE FLIGHT RECORD
ER HAS BEEN RECOVERED"
1490 PRINT"THE FINAL FLIGHT DETA
ILS WERE ASFOLLOWS"
1500 GOTO9000
1600 '***OFF RUNWAY AFTER GOOD L
ANDING***
1610 CLS
1620 IF PY>0THENPRINT,"YOU HAVE
GONE OFF THE END OF THE RUNWAY."
:PRINT"TRY USING YOUR BRAKES NEX
T TIME."
1630 IF ABS(PX)>WR THENPRINT"YOU
ARE OFF THE SIDE OF THE RUNWAY.
":PRINT"ISN'T IT WIDE ENOUGH FOR
YOU?"
1640 IF AS<=10 THENPRINT"LUCKILY
THERE IS ONLY MINOR DAMAGE AT T
HIS SPEED";
1650 IFAS>10 AND AS<=25 THENPRIN
T"SERIOUS DAMAGE TO YOUR AIRCRAF
T, BUT YOU SURVIVE":PRINT"TO SCA
RE YOUR PASSENGERS ANOTHER DAY";
1660 IFAS>25 THENPRINT"DISASTER

```

```

- FATAL CRASH";
1670 PRINT
1680 PRINT"DETAILS OF THE FLIGHT
  WHEN YOU LEFT THE RUNWAY:-"
1690 GOTO9000
1800 '**GOOD LANDING**'
1810 PRINT@128,"CONGRATULATIONS
CAPTAIN - A SAFE LANDING";TIMER/
50;" SECS";
1820 GOTO9090
2000 '**UPDATE POSN & SPEED IN
AIR**'
2010 PZ=PZ+GZ
2020 PY=PY+GY
2030 PX=PX+GX
2040 PT=PT+NC
2050 RL=RL+BC
2060 AS=AS+2*SGN(TS(TC)-AS)
2070 AD=AD+RL
2080 VZ=1*(TC-5)+AS*SIN(PT*C1)
2090 GOSUB400
2100 GZ=VZ
2110 GY=VY+WY
2120 GX=VX+WX
2130 GD=-ATN(VX/VY)*C2
2140 RETURN
3000 '**CHECK FOR CRASH**'
3010 IF ABS(RL)>RT OR PT>TP OR P
T<0 OR ABS(AD)>YT OR AS<45 OR AS
  >55 THEN LF=1:PRINT@64,"CRASH O
N LANDING";
3020 IF ABS(PX)>WR OR PY>0 OR PY
  <-LR THEN LF =1:PRINT@80," OFF
RUNWAY"
3030 GOSUB200
3040 RETURN
4000 '**UPDATE DISPLAY**'
4010 HT=-PZ-5:LD=-PX-WR:RD=-PX+W
R
4020 HD=HT*7:IF HD<-PY THEN HD =
-PY
4030 IF HD<3000THEN HD=3000

```

```

4040 FOR I=0 TO 4
4050 YD=-PY-I*500
4060 Q(I,1)=LD:Q(I+5,1)=RD
4070 Q(I,2)=YD:Q(I+5,2)=YD
4080 Q(I,3)=HT:Q(I+5,3)=HT
4090 NEXT I
4100 Q(10,1)=-PX:Q(10,2)=-PY:Q(1
0,3)=HT
4110 Q(11,1)=-PX:Q(11,2)=-PY-LR:
Q(11,3)=HT
4120 A1=64/WR:A2=64.5:A3=15.5:A4
=31
4130 FOR I=0 TO 11
4140 A0=(HD-Q(I,2))/HD
4150 R(I,1)=INT((Q(I,1)*A0*A1+A2
)/2.3):IF R(I,1)<1 THEN R(I,1)=1
4155 IF R(I,1)>62 THEN R(I,1)=62
4160 R(I,2)=INT((A3+A0*A4)/1.5)+
I
4165 IF R(I,2)>30 THEN R(I,2)=30
4170 NEXT I
4190 FOR I=160 TO 448 STEP 32:PRINT
@I,STRING$(32,128);:NEXT I
4200 FOR I = 0 TO 11
4210 SET(R(I,1),R(I,2),5)
4220 NEXT I
4240 GOTO 4260
4260 PRINT@32,INT(AS+C5):PRINT@3
7,INT(AD+C5):PRINT@42,INT(PT+C5)
:PRINT@46,INT(RL+C5):PRINT@49,IN
T(PZ+C5):PRINT@54,INT(ABS(PY)+C5
):PRINT@60,INT(PX+C5);
4270 RETURN
5000 ***CHECK CONTROLS***
5020 X$=INKEY$
5030 IFX$="" THEN RETURN
5040 IF ASC(X$)>47 AND ASC(X$)<5
0 THEN TC = VAL(X$):RETURN
5050 IF X$ = "F" THEN BC = -1
5060 IF X$ = "G" THEN BC = 0
5070 IF X$ = "H" THEN BC = 1
5080 IF X$ = "M" THEN NC = 1

```

```

5090 IF X$ = "K" THEN NC = 0
5100 IF X$ = "O" THEN NC = -1
5110 RETURN
5500 '***CONTROLS AFTER LANDING*
**
5520 X$=INKEY$
5530 IF X$ ="" THEN RETURN
5540 IF X$ = "R" THEN RC = 1
5550 IF X$ = "E" THEN RC = -1
5560 IF X$ = "C" THEN RC = 0
5570 IF X$ = "B" THEN FD = 2
5580 RETURN
6000 '***AFTER TOUCHDOWN***
6010 PT=0: RL=0: PZ=0
6020 GOSUB5500
6030 PX=PX+VX
6040 PY=PY+VY
6050 IFABS(PX)>WR OR PY>0 THEN L
F=2
6060 AD=AD+AD*(SGN(AD)*SGN(RC))
6070 AS=AS-FD:IF AS<=0 THEN LF=3
6080 GOSUB 400
6090 RETURN
8000 '***INITIALISATION***
8010 CLEAR100
8020 DIMQ(11,3),R(11,2)
8030 CLS:PRINT@3,"AIRCRAFT LANDI
NG SIMULATOR":PRINT
8040 INPUT"DO YOU REQUIRE INSTRU
CTIONS(Y/N)";X$
8050 PRINT
8060 IFX$="N"THEN 8290 ELSE IFX$
="Y"THEN8080
8070 INPUT"PLEASE TYPE Y OR N";X
$:GOTO 8060
8080 CLS:PRINT"IT IS DARK AND RA
INING. YOU AREAPPROACHING THE A
IRPORT WITH 300PASSENGERS ON BOA
RD AND YOUR CO-PILOT HAS JUST GO
NE UNCONSCIOUS,SO YOU MUST LAND
THE AIRCRAFT ONYOUR OWN. TO BE H
ONEST HE WASN'TDOING A GREAT JOB

```

```

BEFORE HE PASSED OUT."
8090 PRINT"YOU ARE IN LEVEL FLIGHT AT AN ALTITUDE OF 3000M BUT ONLY 20KM FROM THE FAR END OF THE RUNWAY. YOUR AIRCRAFT IS POINTING IN THE CORRECT DIRECTION BUT CROSS WIND WILL DIVERT YOU."
8100 GOSUB 310
8110 PRINT"YOU MUST LAND WITH AN AIRSPEED OF ABOUT 50 M/S. ROLL MUST BE LESS THAN 3 DEGREES AND PITCH BETWEEN 0 & 5 DEGREES. SINCE THE RUNWAY IS 2000M LONG THE DISTANCE INDICATOR MUST SHOW LESS THAN THIS ON TOUCHDOWN. THE";
8120 PRINT"RUNWAY IS 100M WIDE SO IF DEVIATION IS GREATER THAN 50M YOU'LL MISS THE RUNWAY."
8130 PRINT"AFTER TOUCHDOWN YOU MUST USE THE BRAKES AND RUDDER TO STOP BEFORE YOU REACH THE END, AS SHOWN BY A DISTANCE READING OF 0 *."
8140 GOSUB 310
8150 PRINT"YOUR INSTRUMENTS GIVE THIS INFO:"
8160 PRINT"BEARING: DIRECTION IN WHICH YOU'RE HEADING. 0 IS STRAIGHT AHEAD. PITCH: +VE WHEN NOSE IS UP. ROLL: +VE WHEN CLOCKWISE. ALT: ALTITUDE IN METRES. DISTANCE: FROM END OF RUNWAY."
8170 PRINT"DEV: FROM CENTRE OF RUNWAY."
8190 GOSUB 310
8200 PRINT"YOU HAVE THE FOLLOWING CONTROLS:"
8210 PRINT"F: ROLL TO THE LEFT
G: MAINTAIN ROLL AT T

```



```

HE LEVEL      H: ROLL RIGHT
                M: NOSE UP (INCREASE
PITCH)        K: MAINTAIN PITCH
                O: NOSE DOWN"
8220 PRINT:PRINT"0-9: THROTTLE C
ONTROL. (LANDING      IS USUALLY
ON LEVEL 2."
8230 GOSUB 310
8240 PRINT"AFTER TOUCHDOWN ONLY
THESE WORK:"
8250 PRINT:PRINT"E: RUDDER LEFT
                R: RUDDER RIGHT
                B: APPLY BRAKES
"
8260 PRINT:PRINT"GOOD LUCK!"
8270 PRINT:INPUT"DO YOU WANT TO
SEE THESE      INSTRUCTIONS AG
AIN";X$
8280 GOTO 8060
8290 PI=3.14159
8300 C1=PI/180:C2=180/PI
8310 C5=.5
8320 LF=0:'**LANDING FLAG**
8330 PZ=3000:'**ALTITUDE**
8340 PY=-2E4:'**DISTANCE TO FAR
END OF RUNWAY**
8350 PX=0:'**LATERAL DEVIATION F
ROM GLIDE PATH**
8360 RL=0:'**ROLL**
8370 PT=0:'**PITCH**
8380 AS=150:'**AIRSPEED**
8390 AD=0:'**AIR DIRECTION**
8400 GOSUB400
8410 CLS
8420 PRINT"PLEASE SELECT WIND SP
EED AND DIRECTION. A DIRECTION O
F 0 MEANS A DIRECT HEAD WIND"
8430 PRINT"THE DIRECTION SHOULD
BE BETWEEN -90(FROM THE LEFT) AN
D +90(FROM THE RIGHT). A WIND SP
EED OF 5 IS A LIGHT BREEZE. A SP
EED OF 30 IS A GALE."

```

```

8440 INPUT "WIND SPEED (M/S)";X0:
IF X0=0 THEN X0=1
8450 INPUT "WIND DIRECTION (DEG)"
;X1
8460 WY=-X0*COS(X1*C1)
8470 WX=-X0*SIN(X1*C1)
8480 GZ=VZ:GY=VY+WY:GX=VX+WX
8490 TC=5: '**THROTTLE CONTROL**
8500 BC=0: '**BANKING CONTROL**
8510 NC=0: '**NOSE UP/DOWN CONTROL**
8520 RC=0: '**RUDDER CONTROL**
8530 FOR I= 0 TO 9: READ TS(I):N
EXTI
8540 DATA0,25,50,75,100,150,200,
250,275,300
8550 YT=20: '**YAW TOLERANCE**
8560 RT=3: '**ROLL TOLERANCE**
8570 TP=5: '**PITCH TOLERANCE**
8580 LR=2000: '**RUNWAY LENGTH**
8590 WR=50: '**RUNWAY WIDTH**
8600 HD=3E4: '**DISTANCE TO HORIZ
ON**
8610 CLS0
8620 PRINT0,"A/SP HEAD PCH ROLL
ALT DIST DEV";
8630 PRINT@104,CHR$(154)+STRING$(
4,153)+CHR$(154)+CHR$(149)+STRI
NG$(4,150)+CHR$(149);
8635 TIMER=0
8640 GOTO1000
9000 '**FINAL DETAILS**
9010 PRINT
9020 PRINT"SPEED = ",AS; "M/S"
9030 PRINT"DIRECTION = ",AD; "D
EG"
9040 PRINT"RUNWAY LEFT = ",ABS(P
Y); "M"
9050 PRINT"DEVIATION = ", ABS(PX
); "M"
9060 PRINT"PITCH = ",PT; "DEG"
9070 PRINT"ROLL = ",RL; "DEG"

```

```
9080 X$=INKEY$:IF X$="" THEN 908
0
9085 Z$=INKEY$
9090 PRINT@298,"ANOTHER GAME";:I
NPUT Z$
9100 IF Z$="Y" THEN RUN
9200 IF Z$="N" THEN END
```



DAVID PONTING
Original program by Alan Green

GENERAL DESCRIPTION

You are the last line of defence as alien craft descend through the atmosphere to invade Earth. If ten craft manage to land there they will discharge sufficient troops and weapons to conquer the planet.

There are two types of craft, the slower transporters supported by the faster, more elusive fighters which, although not firing back at you, are happy to draw your fire to allow the troop carriers an easy passage.

Your 'score' is shown at the top of the screen and your overworked photon beam is replenished when your score hits 5000 points.

DETAILED DESCRIPTION

Lines 10-100 Title sequence and instructions.

110 Sets up arrays.

120-130 Selects graphics page.

150-220 Prints display.

250 Sets variables.

260-270 Draws border lines ('ground' and 'sky').
 280 Places aliens on screen.
 290-300 Randomises the starting points for aliens' appearance on screen.
 310-600 Checks keyboard for pressing of the control keys, including, at Line 520, the routine for moving your missile base. Also fires 'missile'.
 610-660 Scoring routine.
 670 Clears screen.
 680-710 Checks and prints score, adjusts Hi Score.
 720-740 Repeat routine.
 880-990 Prints instructions (including at Line 960, the flashing 'Warning' signal).

```

10 * *****
15 * * *
20 * * BLASTER *
25 * * *
30 * * FOR DRAGON 32 *
35 * * ADAPTED *
40 * * BY D.A.PONTING *
50 * * 18-7-83 *
60 * *****
100 GOTG880
110 DIMA(8,8):DIMB(12,8):DIMC(12,8):DIMZ(8,8):DIML1(8,8),L2(8,8),L3(8,8),L4(8,8),L5(8,8)
120 PMODE4
130 SCREEN1,1
140 PCLS4
150 GET(1,1)-(8,8),Z
160 GOTO760
170 POKE1536,24:POKE1536+32,24:POKE1536+64,24:POKE1536+96,153:POKE1536+128,255:POKE1536+160,153:POKE1536+192,153:POKE1536+224,153
180 GET(1,1)-(8,8),A
190 PCLS
200 POKE1536,60:POKE1536+32,126:POKE1536+64,235:POKE1536+96,126:

```

```

POKE1536+128,106:POKE1536+160,12
9:POKE1536+192,66:POKE1536+224,3
6
210 GET(0,0)-(8,8),B
220 POKE1536,60:POKE1536+32,36:P
OKE1536+64,60:POKE1536+96,126:PO
KE1536+128,255:POKE1536+160,36:P
OKE1536+192,66:POKE1536+224,66
230 GET(1,1)-(8,8),C
240 PCLS
250 D=20:A=170:M1=20:B4=100:BB=1
00
260 DRAW"BM0,20;R255"
270 DRAW"BM0,180;R255"
280 PUT(1,8)-(8,16),L1:PUT(10,8)
-(17,16),L2:PUT(19,8)-(27,16),L3
:PUT(29,8)-(36,16),L4:PUT(38,8)-
(45,16),L5
290 B1=RND(30)*8:C1=30
300 B=RND(30)*8:C=30
310 PUT(BB,CC)-(BB+7,CC+7),Z
320 PUT(B,C)-(B+8,C+8),B
330 PUT(B4,C4)-(B4+8,C4+8),Z
340 PUT(B1,C1)-(B1+8,C1+8),C
350 BB=B:CC=C:B4=B1:C4=C1
360 IF(C)=172)THENPUT(D,182)-(D+
8,190),B:PUT(B,C)-(B+8,C+8),Z:D=
D+20:GOSUB590:AL=AL+1
370 IF(C1)=172)THENPUT(D,182)-(D
+8,190),C:PUT(B1,C1)-(B1+8,C1+8)
,Z:D=D+20:GOSUB600:AL=AL+1
380 IFAL=10THENGOTO670
390 GOTO480
400 M1=M1+1:MM=M1
410 IF(A+2=B+4)AND(MM<C)THENMM=C
420 IF(A+2=B1+4)AND(MM<C1)THENMM
=C1
430 LINE(A+2,168)-(A+2,MM),PSET
440 PLAY"05T250CDEDCDEDCD
450 LINE(A+2,168)-(A+2,MM),PRESE
T
460 IF(A+2=B+4)AND(MM=C)THENPLAY

```

```

"V1503T200CDEFGCDEFGCDEFGCDEFG":
PUT (B, C) - (B+7, C+7), B, NOT: GOSUB59
0: SH=100: GOSUB610: PUT (B, C) - (B+7,
C+7), Z
470 IF (A+2=B1+4) AND (MM=C1) THEN PL
AY"04T200V15CEG05C04CEG05C04CEG0
5C04CEG05C": PUT (B1, C1) - (B1+7, C1+
7), C, NOT: GOSUB600: SH=50: GOSUB610
: PUT (B1, C1) - (B1+7, C1+7), Z
480 IF (AA<>A) THEN PUT (AA, 170) - (AA
+7, 177), Z
490 PUT (A, 170) - (A+7, 177), A
500 AA=A
510 A#=INKEY#
520 A=A+16*(A<240)*(PEEK(344)=22
3)-16*(A>16)*(PEEK(343)=223)
540 IFA#=CHR$(32) THEN 400
550 REM
560 C=C+4: B=B+8*(B>22 AND B<240)*(
RND(3)-2)-(8*(B<=22))+(8*(B)=240
))
570 C1=C1+2: B1=B1+8*(B1>22 AND B1<
240)*(RND(3)-2)-(8*(B1<=22))+(8*
(B1>=240)): GOTO310
580 B=B-8: C=C+8*(RND(3)-2): GOTO3
10
590 B=RND(31)*8: C=30: RETURN
600 B1=RND(31)*8: C1=30: RETURN
610 SCORE=SCORE+SH+MM
620 IFScore>5000 AND Q1=0 THEN M1=20
: Q1=1
630 IFScore>10000 AND Q2=0 THEN M1=2
0: Q2=1
640 IFScore>15000 AND Q3=0 THEN M1=M
1-100: Q3=1
650 PP=10*INT(SCORE/1000): IF PP>9
THEN PUT (PP+30, 8) - (PP+38, 16), B
660 RETURN
670 PMode0, 1: SCREEN0, 1: CLS
680 IF (SCORE>HI) THEN HI=SCORE
690 PRINT " ***** ALIEN BLASTER
***** "

```

```

700 PRINT:PRINT:PRINT:PRINT"   Y
OUR SCORE="SCORE
710 PRINT:PRINT"   HIGH SCORE="H
I
720 PRINT:PRINT:PRINT"   PRESS e
nter TO PLAY AGAIN"
730 FORT=1TO2000:NEXT
740 E$="":E$=INKEY$:IFE$<>CHR$(1
3)THEN740
750 SCORE=0:AL=0:GOTO120
760 POKE1536,0:POKE1536+32,126:P
OKE1536+64,66:POKE1536+96,96:POK
E1536+128,30:POKE1536+160,66:POK
E1536+192,126:POKE1536+224,0
770 GET(1,1)-(8,8),L1
780 PCLS
790 POKE1536,0:POKE1536+32,0:POK
E1536+64,126:POKE1536+96,66:POKE
1536+128,64:POKE1536+160,66:POKE
1536+192,126:POKE1536+224,0
800 GET(1,1)-(8,8),L2
810 POKE1536,0:POKE1568,0:POKE16
00,126:POKE1632,66:POKE1664,66:P
OKE1696,66:POKE1728,126:POKE1760,
0
820 GET(1,1)-(8,8),L3
830 POKE1536,0:POKE1568,0:POKE16
00,124:POKE1632,66:POKE1664,124:
POKE1696,68:POKE1728,66:POKE1760
,0
840 GET(1,1)-(8,8),L4
850 POKE1536,0:POKE1568,0:POKE16
00,126:POKE1632,64:POKE1664,120:
POKE1696,64:POKE1728,126:POKE176
0,0
860 GET(1,1)-(8,8),L5
870 GOTO170
880 REM ** INSTRUCTIONS **
890 CLS:PRINT"   *****   ALIEN B
LASTER   *****"
900 PRINT"ALIENS ARE INVADING YO
UR PLANET":PRINT:PRINT"   YOUR ON

```



```

LY HOPE IS TO BLAST      THEM BE
FORE THEY CAN LAND
910 PRINT "      AND COLONIZE EAR
TH!"
920 PRINT:PRINT"      warnin
g
930 PRINT:PRINT" ONLY TEN ALIEN
S HAVE TO LAND      TO TAKE OV
ER!!!"
940 PRINT:PRINT:PRINT" PRESS AN
Y KEY TO CONTINUE"
950 E$=INKEY$
960 PRINT@266,"WARNING":FORDL=1T
0100:NEXT:PRINT@266,"warning":FO
RDL=1T0100:NEXT
970 IFE$="" THEN950
980 SOUND120,2
990 CLS
1000 PRINT" ***** ALIEN BLASTE
R ***** "
1010 PRINT:PRINT:PRINT" USE ARRO
W KEYS TO CONTROL "
1020 PRINT" MOVEMENT AND space
TO FIRE"
1030 PRINT" THE NEUTRON-DISINTEG
RATOR GUN"
1040 PRINT:PRINT" THERE ARE TWO
TYPES OF ALIEN,"
1050 PRINT" ONE SCORES MORE THAN
THE OTHER."
1060 PRINT:PRINT" THE ALIENS ARE
WORTH MORE THE"
1070 PRINT" NEARER THEY ARE TO E
ARTH."
1080 PRINT:PRINT" PRESS space TO
CONTINUE"
1090 E$="":E$=INKEY$:IFE$="" THEN
1090
1100 CLS:PRINT" FOR EVERY 1000
POINTS SCORED"
1110 PRINT" AN ALIEN WILL SHOW
ON THE TOP LINE."

```

```
1120 PRINT:PRINT" FOR EVERY 5000
  POINTS SCORED"
1130 PRINT" FUEL RESERVES ARE RE
PLENISHED"
1140 PRINT"      AND YOUR FIRING R
ANGE IS      RESTORED TO MAXI
MUM"
1180 PRINT:PRINT:PRINT" PRESS sp
ace TO START GAME"
1190 IFINKEY$="" THEN1190
1200 GOTO110
```

STOCKMARKET

CHRIS HARRISON

Original program by Bob Chappell

GENERAL DESCRIPTION

Stockmarket gives you the chance to dabble in stocks and shares without ending up in the bankruptcy court.

This program enables you to start off with up to £100,000 and buy and sell precious metals to accumulate vast wealth or crash to Skid Row.

There are bonuses along the way which encourage you to retain your stocks, but just as you're rubbing your hands with glee, along comes a big fat demand to wipe the smile off your face.

A very enjoyable game (when you're winning) and as the caption tells us at the end of the instruction sequence, 'it's only a game!!!'

DETAILED DESCRIPTION

Lines 10 Sound routine.

50 Prints 'fraud' caption if you try to sell non-existent shares.

140 Prints heading and asks you to input your opening bank balance.

190 Selection sequence.

240 Asks you to input number of shares.

260 Asks whether buying or selling.

320-350 Checks if profit or loss made on your transactions.

420 Prints up-to-date market news.

680-750 Takeover bid routine.

790 Newsflash.

810 Bonuses, tax bonus, super tax or bonus issue routines.

970 Profit and loss account and update routine.

1150 Portfolio.

1200-1250 Checks if bank account is overdrawn.
1270 Disaster sequence.
1380 Initialise.
1530-1990 Titles and instructions.

```
5 SOUND100,1
10 REM***STOCK MARKET***
20 REM*****
30 GOTO1450
40 PRINT" fraud!!!":FORJ=1TO5:SO
UND10,5:NEXT:GOTO430
50 FORL=1TO200:NEXT:GOTO430
70 PRINTZ$
80 A$=INKEY$: IFA$="" THEN80
90 IFA$<>" " THEN80
100 SOUND150,2:RETURN
110 REM**PRINT HEADING**
120 PRINTNW$
140 RETURN
150 CLS(RND(8)):PRINT"
stock market"
160 PRINT:PRINT" HOW MUCH IN YOU
R BANK ACCOUNT?":INPUTB
170 SOUND100,1:B=INT(B):IFB<1ORB
>100000THEN150
180 XZ=1:GOTO430
190 CLS(RND(8)):PRINTH$:FORJ=1TO
6:PRINTJ;" ";M$(J):NEXT
200 INPUT" SELECTION ";C:C=INT(C
)
210 SOUND100,1:IFC<1ORC>6THEN40
220 IFC=5THEN440
230 IFC=6THENTT=1:GOTO1010
240 IFP(C)=1THENPRINTDS$:GOTO430
250 INPUT" HOW MANY SHARES ";S:S
=INT(S)
260 SOUND100,1:IFS<1THEN40
270 INPUT" BUY OR SELL (B/S) ";A
$
280 SOUND100,1:IFA$<>"B"ANDA$<>"
S" THEN40
290 R=RND(10):IFR=0THENPRINTM$:
```

```

GOTO430
300 P=V(C)*(5^(4-C)):T=S*P:IFA$="
B"THEN370
310 IFS>C(C)THEN40
320 B=B+T:C(C)=C(C)-S
330 J=S*P(C):IFJ=T THENPRINT" no
loss or profit ":GOTO360
340 IFJ-T>0 THENPRINT" a profit
of";J-T:PL(C)=PL(C)+(J-T):GOTO36
0
350 PRINT" a loss of";J-T:PL(C)=
PL(C)-(J-T)
360 GOTO390
370 IFB<T THENPRINTNF$:GOTO430
380 B=B-T:TC=P(C)*C(C):C(C)=C(C)
+S:F(C)=INT((TC+T)/C(C))
390 R=RND(10):IFR>0THEN430
400 R=RND(10):IFR<5THEN400
410 GOSUB70:GOTO810
420 REM***MARKET NEWS***
430 GOSUB70
440 L1=0:FORJ=1TO5:R=RND(10):IFR
>4THENP(J)=0
450 NEXT:CLS(RND(8)):PRINTMN$:FO
RJ=1TO4
460 PRINTJ,M$(J):IFF(J)=1THENPRI
NTSP$:GOTO560
470 R=RND(10):IFR=0THEN680
480 X=R-INT((V(J)*.4)+.9):IFX=0T
HENPRINT" held"
490 OP=V(J)*(5^(4-J)):V(J)=V(J)+
X
500 CP=V(J)*(5^(4-J)):Q=22:IFX<=
0THEN520
510 PRINT" UP ",INT(OP-OP):GOTO5
30
520 IFX<0THENPRINTCS$" DOWN ",IN
T(OP-CP)
530 Q=37:PRINT" price",INT(OP)
540 GOTO560
550 PRINT
560 NEXT:IFL1<0THENPRINT" total

```

```

loss of",ABS(L1)
570 IFL1>0THENPRINT" total profi
t of"L1
580 L1=0: IFXZ=1THENXZ=0:GOSUB70:
GOTO190
590 R=RND(10): IFR=0THENPRINT:GOS
UB120:GOTO630
600 X=INT(R-(.2*I)):I=I+X
610 IFI>20THENI=20
620 PRINT" bank rate          ";I;"%
":GOTO670
630 R=RND(10): IFR<>0THEN650
640 PRINT"BANK FAILS ":L1=L1-B:P
L(5)=PL(5)-B:B=0:GOTO660
650 PRINTSP$:P(5)=1
660 IFL1<0THENPRINT" loss of",AB
S(L1)
670 GOSUB70:GOTO800
680 GOSUB120:P(J)=1:R=RND(10): IF
R<7THEN740
690 PRINT"takeover ":GOSUB110:R=
RND(10)
700 IFR=0THENPRINTSP$:GOTO560
710 P=21*(5^(4-J)):D=(20+(R/10))
/100:PRINT" sell at",INT(P*D)
720 T=INT(P*D*C(J)):B=B+T:T1=T-C
(J)*P(J):L1=L1+T1:PL(J)=PL(J)+T1
730 C(J)=0:V(J)=1:P(J)=0:GOTO560
740 IFR>2THENPRINT;SP$:P(J)=1:GO
TO560
750 PRINT"bankrupt- forfeit shar
es" "
755 B=0:C(1)=0:C(2)=0:C(3)=0:C(4
)=0
760 L1=L1-(C(J)*P(J))
770 PL(J)=PL(J)-(C(J)*P(J))
780 C(J)=0:P(J)=0:V(J)=1:GOTO560
790 REM***NEWS FLASH***
800 L2=0:R=RND(10): IFR<5THEN1010
810 L2=0:CLS(RND(8)):GOSUB120: IF
R>7THEN890
820 R=RND(10): IFR>4ORR=0THEN870

```

```

830 J=R:PRINT " ";M$(J) " bonus " :
R=RND(10):GOSUB110
840 IFR=0THENPRINTSP$:GOTO970
850 R=10*R:PRINTR " %":CP=V(J)*(5
^(4-J)):L2=INT(CP/100*R)*C(J)
860 B=B+L2:PL(J)=PL(J)+L2:GOTO97
0
870 GOSUB110:R=RND(10):IFR<0ORB<
1THENR=0:GOTO840
880 R=10*R:PRINT " tax bonus ";R"
%":L2=INT(B/100*R):B=B+L2:PL(6)=
PL(6)+L2:GOTO970
890 R=RND(10):IFR=0THEN1360
900 IFR<51HEN940
910 GOSUB110:R=RND(10):IFR=0THEN
840
920 R=10*R:PRINT " super-tax ";R"
%":T=INT(B/100*R):PL(6)=PL(6)-AB
S(T):B=B-ABS(T)
930 L2=L2-ABS(T):GOTO970
940 PRINT " ";M$(R); " bonus issue
":T=P(R)*C(R)
950 C(R)=C(R)+(INT(C(R)/2))
960 IFC(R)<>0THENP(R)=INT(T/C(R)
)
970 IFL2<0THENPRINT " a loss of"A
BS(L2)
980 IFL2>0THENPRINT " a profit of
"L2
990 GOSUB70
1000 REM***P/L ACCOUNT***
1010 GOSUB1020:GOTO1210
1020 CLS(RND(8)):IFTT=1THENPRINT
" closing"
1030 PRINT " profit and loss acco
unt":PRINT:T=0:Q=29:FORJ=1TO4
1070 T=T+PL(J):NEXT:L2=0:IFTT=1T
HEN1090
1080 IFF(5)<>1THENL2=INT(B/100*I
):B=B+L2
1090 P(5)=0:PL(5)=PL(5)+L2
1100 IFFL(5)<0THENPRINT " interest

```

```

minus";ABS(PL(5)):GOTO1130
1110 PRINT" interest";PL(5)
1130 PRINT:IFPL(6)<0THENPRINT" t
ax minus";ABS(PL(6)):GOTO1150
1140 PRINT" tax";PL(6)
1150 T=PL(5)+PL(6)
1160 PRINT:IFT<0THENPRINT" total
minus";ABS(T):GOTO1190
1170 PRINT" total";T
1190 GOSUB70:RETURN
1200 REM***PORTFOLIO***
1210 CLS(RND(8)):IFTT=1THENPRINT
" closing portfolio":GOTO1240
1220 PRINT" portfolio "
1240 FORJ=1TO4:Q=14:PRINT" meta
";M$(J)
1250 PRINT" shares ";C(J):
IFC(J)=0THEN1270
1260 Q=25:PRINT" last price ";
INT(OP)
1270 Q=36:CP=V(J)*(5^(4-J)):PRIN
T" current price";INT(CP):NEXT
1280 PRINT" bank ";B
1290 IFB<0THENPRINT" overdrawn"
1300 IFB<-999ANDC(1)=0ANDC(2)=0A
NDC(3)=0ANDC(4)=0THEN1330
1310 GOSUB70:IFC=6THEN1430
1320 GOTO190
1330 PRINT" you are insolvent an
d your new"
1340 PRINT" address is skid row!
!":END
1350 ***REM END***
1360 CLS(RND(8)):PRINT" market c
ollapse!":GOSUB110PRINT" bankta
keover":GOSUB110
1370 Q=23:PRINT:FORJ=1TO4:PRINTJ
,M$(J)
1380 R=FNA(R):P=21*(5^(4-J)):T=(
100-(10*R))/100:R=INT(P*T):L2=C(
J)*R
1390 B=B+L2:T=C(J)*P(J)

```



```

1400 PL(J)=PL(J)+(L2-T)
1410 PRINT" sold at",R:NEXT
1420 PRINT" closing bank balance
      "B:GOSUB70:TT=1:GOSUB1020
1430 CLS(RND(8)):PRINT" end of s
peculations!":END
1440 REM***INITIALISE***
1450 DIMM$(6):H$=" buying and se
lling ":I=5:TT=0
1460 M$(1)="GOLD":M$(2)="TIN ":M
$(3)="ZINC":M$(4)="LEAD":M$(5)="
PASS"
1470 M$(6)="QUIT"
1490 FORJ=1TO4:V(J)=12:P(J)=0:NE
XT
1500 FORJ=1TO4:C(J)=0:NEXT
1520 A(1)=1500:A(2)=300:A(3)=60:
A(4)=12
1530 Z$="      press space to cont
inue"
1540 SP$=" SUSPENDED "
1570 DS$=" dealing "+SP$
1580 ST1360MS$=" market "+SP$
1590 NF$=" inadequate funds "
1600 MN$=" market news "
1610 NW$=" newsflash "
1620 CLS(RND(8)):PRINT"
stock market"
1625 PRINT@64," ***turn up the
t.v. sound***"
1630 PRINT@160,"DO YOU WANT INST
RUCTIONS (Y/N)";:INPUTA$
1640 SOUND100,1:IFLEFT$(A$,1)<>"
Y"THEN150
1650 CLS(RND(8)):PRINT"
stock market":PRINT
1660 PRINT" YOU ARE FIRST ASKED
HOW MUCH"
1670 PRINT" CAPITAL YOU REQUIRE.
"
1680 PRINT" DEALING IS IN FOUR M
ETALS:"

```

```

1685 PRINT:PRINT"    GOLD  TIN
ZINC AND LEAD"
1690 PRINT:PRINT"  VARIOUS REPORT
S WILL HELP YOU"
1700 PRINT"  CONTROL YOUR SPECULA
TIONS.":PRINT
1710 PRINT"  THE GAME ENDS WHEN Y
OU QUIT OR"
1720 PRINT"  IF YOU GET TOO DEEPL
Y IN DEBT":PRINT"  OR IF THE MARK
ET COLLAPSES."
1730 GOSUB70:CLS(RND(8)):PRINT"
    market news explanations":PRI
NT
1740 PRINT"  up          PRICE HAS
RISEN"
1750 PRINT"  down       PRICE HAS
FALLEN"
1760 PRINT"  held       PRICE UNCH
ANGED"
1770 PRINT"  suspended NO DEALING
ALLOWED"
1780 PRINT:PRINT"  takeover  SHAR
ES AUTOMATICALLY"
1785 PRINT"          SOLD AT PR
ICE SHOWN":PRINT
1790 PRINT"  takeover  NEAR SCRAP
E!"
1795 PRINT"  suspended"
1800 PRINT:PRINT"  bankrupt  SHAR
ES FORFEITED":GOSUB70
1810 CLS(RND(8)):PRINT"
    bank rules"
1820 PRINT:PRINT"  rate=X%  BANK A
CCOUNT RAISED X%"
1830 PRINT"          (IF OVERDRAW
N INTEREST"
1835 PRINT"          PAYABLE ON O
VERDRAFT)"
1840 PRINT:PRINT"  suspended NO I
NTEREST PAID"
1850 PRINT:PRINT"  fails ALL MONE

```

```

Y LOST(NEW BANK"
1855 PRINT"          ARISES NEXT TU
RN)"
1860 GOSUB70
1870 CLS(RND(8)):PRINT"  profit
and loss account":PRINT:PRINT"
SHOWS NET GAINS AND LOSSES"
1880 PRINT:PRINT"  portfolio":P
RINT:PRINT"  SHOWS SHARES HELD"
1885 PRINT"  AND BANK ACCOUNT"
1890 GOSUB70:CLS(RND(8)):PRINT"
newsflashes"
1900 PRINT:PRINT"  tax-bonus X%
BANK CREDITED"
1910 PRINT"  super-tax X%  BANK
DEBITED"
1920 PRINT"  metal-bonus X% BANK
CREDITED"
1940 PRINT"  metal-bonus-  HOLDI
NGS UP BY"
1950 PRINT"  issue          ONE S
HARE FOR":PRINT"
EVERY 2 HELD"
1960 PRINT"  ANY OF ABOVE MAY BE
SUSPENDED"
1970 PRINT "  AT THE LAST MOMENT.
*****"
1980 PRINT:PRINT"  market-fails
END OF GAME ALL"
1990 PRINT"          STOCK
SOLD AT"
1995 PRINT"          CURRE
NT PRICES"
2000 GOSUB70:CLS(RND(8)):PRINT:P
RINT"  YOU ARE ABOUT TO BECOME"
2010 PRINT:PRINT"  VERY RICH OR V
ERY POOR"
2020 PRINT:PRINT"  BUT REMEMBER I
T'S ONLY A GAME!":GOSUB70:GOTO15
0

```



GENERAL DESCRIPTION

Enter into the spirit of traditional role playing games as you lead the band of adventurers through the fantasy world of the Domain of the Djinn. You will combat with magical creatures, collect treasure and if you are lucky, live to escape and play again.

The program will react to specific letters and keywords which you will discover as the game progresses. It would spoil the fun to give too many clues, but if you are really stuck at the start of the game, try the initial letter of one of the points of the compass.

DETAILED DESCRIPTION

Lines1 Remove high resolution screens.

10-70 Main loop.

80-330 Progresses the maze.

400-430 Distributes magical powers.

440-840 Combats with the creatures of the Djinn.

900-950 Treasure and rewards.

1000-1130 Potions and cures.

1210-1290 Uses magical powers.

3000-3100 Escape and final score.

4500-4520 Inventory reports.

5000-5001 Initialisation.

5010-5070 Selects band of adventurers.
5080 The creatures of the Djinn.

```
1 PCLEAR 1:GOTO 5000
10 E$=INKEY$:RT=0:AR$="":FORU=1T
0500:NEXTU:CLS 0:FORU=0T09:FORV=
0T06:S=VAL(RIGHT$(STR$(N(L,U,V))
,2)):PRINT@65+U*3+V*64,LEFT$(A$(
S),3)::PRINT @97+U*3+V*64,RIGHT$(
A$(S),3)::NEXT V,U
25 RU=RU-1:GOSUB 200:ET$="":ET$=
INKEY$:IF ET$<>" " THEN 30 ELSE F
OR U=1 TO 30:FOR V=X1*6+2 TO X1*
6+3:SET(V,Y1*4+7,1):RESET(V,Y1*4
+7):NEXT V,U
30 PP=0:E$=INKEY$:IF E$="" AND E
T$="" THEN 30 ELSE E$=LEFT$(E$+E
T$,1):PRINT @0,STRING$(32," "):
PRINT @0,"":IF E$="N" THEN 35 E
LSE IF E$="S" THEN 40 ELSE IF E$
="E" THEN 45 ELSE IF E$="W" THEN
50 ELSE IF E$="@" THEN 1600
32 IF E$="A" THEN PP=1:GOTO 1000
ELSE IF E$="U" THEN 230 ELSE IF
E$="D" THEN 240 ELSE 30
35 IF Y1=0 OR POINT(X1*6+4,Y1*4+
4)<1 THEN 30 ELSE IF N(L,X1,Y1-1
)=0 THEN GOSUB 70:N(L,X1,Y1-1)=P
0
36 Z$=A$(VAL(RIGHT$(STR$(N(L,X1,
Y1-1)),2))):Z=65+X1*3+(Y1-1)*64:
PRINT @Z,LEFT$(Z$,3)::PRINT @Z+3
2,RIGHT$(Z$,3)::IF POINT(X1*6+4,
Y1*4+3)<1 THEN 80 ELSE X2=X1:Y2=
Y1:L2=L:Y1=Y1-1:GOTO 100
40 IF Y1=6 OR POINT(X1*6+4,Y1*4+
7)<1 THEN 30 ELSE IF N(L,X1,Y1+1
)=0 THEN GOSUB 70:N(L,X1,Y1+1)=P
0
41 Z$=A$(VAL(RIGHT$(STR$(N(L,X1,
Y1+1)),2))):Z=65+X1*3+(Y1+1)*64:
PRINT @Z,LEFT$(Z$,3)::PRINT @Z+3
```

```

2,RIGHT$(Z$,3));:IF POINT(X1*6+4,
Y1*4+8)<1 THEN 80 ELSE X2=X1:Y2=
Y1:L2=L:Y1=Y1+1:GOTO 100
45 IF X1=9 OR POINT(X1*6+7,Y1*4+
5)<1 THEN 30 ELSE IF N(L,X1+1,Y1
)=0 THEN GOSUB 70:N(L,X1+1,Y1)=P
@
46 Z#=A$(VAL(RIGHT$(STR$(N(L,X1+
1,Y1)),2))):Z=65+(X1+1)*3+Y1*64:
PRINT @Z,LEFT$(Z$,3);:PRINT @Z+3
2,RIGHT$(Z$,3));:IF POINT(X1*6+8,
Y1*4+5)<1 THEN 80 ELSE X2=X1:Y2=
Y1:L2=L:X1=X1+1:GOTO 100
50 IF X1=0 OR POINT(X1*6+2,Y1*4+
5)<1 THEN 30 ELSE IF N(L,X1-1,Y1
)=0 THEN GOSUB 70:N(L,X1-1,Y1)=P
@
51 Z#=A$(VAL(RIGHT$(STR$(N(L,X1-
1,Y1)),2))):Z=65+(X1-1)*3+Y1*64:
PRINT @Z,LEFT$(Z$,3);:PRINT @Z+3
2,RIGHT$(Z$,3));:IF POINT(X1*6+1,
Y1*4+5)<1 THEN 80 ELSE X2=X1:Y2=
Y1:L2=L:X1=X1-1:GOTO 100
70 PQ=11*(RND(2)-1):IF RND(5)=1
THEN PQ=PQ+5+RND(6) ELSE PQ=PQ+R
ND(5)
71 RETURN
80 PRINT @0,"DEAD END":FOR SS=1
TO 500:NEXT SS:GOTO 25
100 IF VAL(RIGHT$(STR$(N(L,X1,Y1
)),2))>11 THEN 300 ELSE 25
200 MM=0: SX=VAL(RIGHT$(STR$(N(L,
X1,Y1)),2)):IF SX>11 THEN RETURN
ELSE IF N(L,X1,Y1)>10 THEN MM=I
NT(N(L,X1,Y1)/100):GOTO 210 ELSE
RA=RND(8):IF RA=1 THEN MM=11 EL
SE IF RA=2 THEN MM=12 ELSE IFRA=
3 THEN MM=13 ELSE MM=10
201 N(L,X1,Y1)=N(L,X1,Y1)+MM*100
210 IF MM=10 THEN RETURN ELSE IF
MM=11 THEN E$="UP" ELSE IF MM=1
2 THEN E$="DOWN" ELSE IF MM=13 T

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HEN E$="UP AND DOWN"
220 PRINT @0,"STAIRS ";E$:RETURN
230 IF MM<>11 AND MM<>13 THEN 30
  ELSE MA=2:L2=L:X2=X1:Y2=Y1:L=L-
  1:IF L=0 THEN 3000 ELSE IF N(L,X
  1,Y1)=0 THEN GOSUB 70:N(L,X1,Y1)
  =PQ:IF PQ>11 THEN RU=1
231 GOTO 250
240 IF MM<>12 AND MM<>13 OR L=6
  THEN 30 ELSE MA=1:L2=L:X2=X1:Y2=
  Y1:L=L+1:IF N(L,X1,Y1)=0 THEN GO
  SUB 70:N(L,X1,Y1)=PQ:IF PQ>11 TH
  EN RU=1
250 NA=N(L,X1,Y1):S=VAL(RIGHT$(S
  TR$(NA),2)):IF S>11 THEN 10 ELSE
  IF NA<99 THEN N(L,X1,Y1)=NA+100
  *(10+MA):GOTO 10 ELSE IF INT(NA/
  100)=10 THEN N(L,X1,Y1)=NA+MA:GO
  TO 10 ELSE N(L,X1,Y1)=1300+S:GOT
  O 10
300 BR=0:TZ=INT(N(L,X1,Y1)/100):
  IF TZ=10 OR RND(2)=2 THEN PRINT@
  0,STRING$(32," ");:PRINT @0,"AN
  EMPTY ROOM";:N(L,X1,Y1)=N(L,X1,Y
  1)+1000*INT(1-TZ/10):GOTO 25 ELS
  E RN=RND(15+L):IF RN>=15 THEN 60
  00
305 RA=RND(10):TW=VAL(MID$(B$(TW
  ),9,1)):IF TW>L THEN 305 ELSE NM
  =(L-TW+1)*RND(3):IF NM=0 OR NM>9
  THEN 305 ELSE EZ$="":FOR U=1 TO
  8:E$=MID$(B$(RA),U,1):IF E$<>"
  " THEN EZ$=EZ$+E$:NEXT U
306 FOR U=1 TO NM:FOR V=1 TO 4:V
  L=VAL(MID$(B$(RA),9+V,1)):Z(U,V)
  =RND(2^(L-1)*VL)+2^(L-1)*(RND(9)
  -1)*VL/(VL+1):NEXT V,U:SS=0:FOR
  U=1 TO NM:SS=INT(SS+Z(U,1)):NEXT
  U
307 FOR Q=1 TO R:FOR Q1=1 TO 4:H
  (Q,Q1)=0:NEXT Q1,Q:GOSUB 8000:GO
  SUB 11000

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330 MR=0:SR=0:FOR U=1 TO NM:MR=I
NT(MR+Z(U,3)):SR=SR+Z(U,1):BR=BR
+Z(U,2):NEXT U:GOTO 400
400 CLS:PRINT @33,"MAGIC ADJUSTM
ENTS":PRINT:PRINT" YOUR PARTY LO
SES";MR;"FACTORS":MS=INT(MR/R):F
OR U=1 TO R:H(U,3)=INT(G(U,3)-MS
):NEXT U
401 FOR U=1 TO R:FOR HJ=1 TO 4:I
F HJ=3 THEN NEXT HJ ELSE H(U,HJ)
=G(U,HJ)+H(U,HJ):NEXT HJ,U:GOTO
440
405 FOR U=1 TO R:IF H(U,3)<1 THE
N 430 ELSE FOR V=1 TO R:CLS:PRIN
T @33,"SHARE MAGIC:":PRINT:PRINT
" ";C$(U);" (";H(U,3);)":PRINT
:PRINT" DO YOU WANT TO GIVE ";C$(
V):PRINT" ANY FACTORS? ":GOSUB
10000:IF E$((">".Y)" THEN 430
408 CLS:PRINT @33,C$(U);" TO ";C
$(V);" FROM";H(U,3):PRINT
410 J=0:IF H(U,3)=0 THEN 430 ELS
E INPUT" SURVIVAL POINTS";J:IF J
<0 OR J>H(U,3) THEN 410 ELSE H(V
,1)=H(V,1)+J:H(U,3)=H(U,3)-J:G(U
,3)=G(U,3)-J:G(V,1)=G(V,1)+J
412 J=0:IF H(U,3)=0 THEN 430 ELS
E INPUT" BATTLE POINTS";J:IF J<0
OR J>H(U,3) THEN 412 ELSE H(V,2
)=H(V,2)+J:H(U,3)=H(U,3)-J
414 J=0:IF H(U,3)=0 THEN 430 ELS
E INPUT" COMMUNICATION POINTS";J
:IF J<0 OR J>H(U,3) THEN 414 ELS
E H(V,4)=H(V,4)+J:H(U,3)=H(U,3)-
J
430 IF H(U,3)>0 THEN NEXT V,U EL
SE NEXT U
440 IF PP=1 THEN 10 ELSE FOR NN=
1 TO 1000:NEXT:CLS:PRINT
441 PRINT" YOUR OPTIONS:":PRINT"
";STRING$(13,"-"):PRINT
442 PRINT" 1> ATTACK"

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443 PRINT " 2> COMMUNICATE"
444 PRINT " 3> RUN"
445 PRINT " 4> USE AN ARTIFACT"
446 PRINT " 5> REVIEW TROOPS"
447 PRINT " 6> SHARE MAGIC"
448 PRINT " 7> LOOK"
449 PRINT @448, " WHICH? ";
450 UO=NM:NM=7:GOSUB 9000:J=UM:N
M=UO:IF J=7 THEN GOSUB 11000:GOT
O 440 ELSE ON J GOTO 800,600,700
,1000,7000,405
600 CLS:IF Z(1,4)=0 THEN PRINT @
228,"COMMUNICATION IMPOSSIBLE":G
OTO 440 ELSE FC=0:FOR U=1 TO R:F
C=FC+H(U,4):NEXT U:FD=0:FORU=1 T
O NM:FD=FD+Z(U,4):NEXT U:IF NM>R
O OR 2*R0-R<NM OR FD+RND(6)>FC T
HEN PRINT @234,"THEY ATTACK":FO
R SS=1 TO 1000:NEXT:GOTO 800
610 PRINT @33," THE ";EZ$:IF NM
>1 THEN PRINT#S";
620 PRINT " WILL JOIN YOU":FOR U=
1 TO NM:FOR V=1 TO 4:G(R+U,V)=Z(
U,V):NEXT V:G(R+U,0)=RA+3:C$(R+U
)=LEFT$(EZ$,4)+STR$(U):NEXT U:R=
R+M:GOTO 900
700 CLS:IF RU>=0 THEN PRINT @229
,"RETREAT IS IMPOSSIBLE":GOTO 44
0 ELSE X1=X2:Y1=Y2:L=L2:GOTO 10
800 CLS:WF=0:FOR U=1 TO R:P(U)=0
:NEXT U:IF R=1 THEN 838 ELSE PRI
NT@33,"HOW MANY WILL FIGHT? ";:U
O=NM:NM=R:GOSUB 9000:UN=UM:NM=UO
:IF UN=R THEN 838 ELSE PRINT:PRI
NT" NAMES:"
801 PRINT:FOR U=1 TO UN:PRINT U;
CHR$(2);
805 INPUT E$:FOR V=1 TO R:IF C$(
V)=E$ THEN P(V)=1:NEXT U ELSE NE
XT V:PRINT @PEEK(136)*256+PEEK(1
37)-1056," WHO";:GOTO 805
808 CLS:FOR U=1 TO NM:IF Z(U,1)<

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1 THEN NEXT U ELSE PRINT @32+U*3
,U;:NEXT U
810 FOR U=1 TO R::IF P(U)=0 THEN
NEXT U:GOTO 830 ELSE UY=0:FOR V
=1 TO 200-12*L:NEXT V:PRINT @160
,STRING$(255," ");:PRINT @161,C$(
U);" WHICH DO YOU ATTACK? ":GO
SUB 9000:HF=H(U,2)+RND(4*INT(L/2
))-3*L:IF HF<Z(UM,2) THEN PRINT"
YOU MISSED!":NEXT U:GOTO 830
811 PRINT" YOU GOT HIM!":PL=L*(H
F-Z(UM,2)):PM=2^(PL-(PL-14)*SGN(
INT(PL/14))):UY=RND(PM-(PM-32760
)*SGN(INT(PM/32760))):Z(UM,1)=Z(
UM,1)-UY:IF Z(UM,1)>0 THEN NEXT
U:GOTO 830
812 PRINT" HE DIES!":PRINT @32+U
*3," X ":IF EZ$="DJINN" THEN JD
=1 ELSE IF EZ$="GIANT" THEN FOR
WC=1 TO NM:Z(WC,3)=0:NEXT WC
819 FOR W=1 TO 500:NEXT W:FOR V=
1 TO NM
820 IF Z(V,1)>0 THEN NEXT U ELSE
NEXT V:CLS:PRINT @33,"YOU WIN":
FOR U=2 TO 4:SR=0:FOR V=1 TO NM:
SR=SR+Z(V,U):NEXT V:SR=SR/2^(L+1
)/R:FOR V=1 TO R:G(V,U)=G(V,U)+S
R+2^(L-1)*ABS(U=2 AND G(V,0)=1 A
ND U=3 AND G(V,0)=2):NEXT V,U:GO
TO 900
830 FOR U=1 TO NM
832 IF Z(U,1)<=0 THEN NEXT U:GOT
O 840 ELSE RH=RND(R):IF P(RH)=0
THEN 832 ELSE FOR O=1 TO 200-(L+
NM)*5:NEXT O:PRINT @160,STRING$(
255,32):PRINT @161,EZ$;U;"ATTACK
S ";C$(RH):HF=Z(U,2)+RND(9+4*INT
(L/2)):IF HF<H(RH,2) THEN PRINT"
HE MISSES!":NEXT U:GOTO 840
833 PRINT" HE'S HIT!":UY=2*RND(H
F-H(RF,2))
834 H(RH,1)=INT(H(RH,1)-UY):G(RH

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,1)=INT(G(RH,1)-UY):IF H(RH,1)<1
  THEN PRINT " ";C$(RH);" IS DEAD"
:GOSUB 4100 ELSE PRINT " HE HAS";
H(RH,1);"S-FACTORS LEFT"
836 IF R>0 THEN 840 ELSE FOR .SS=
  1 TO 1000:NEXT SS:CLS:PRINT @69,
  "YOUR TEAM IS ALL DEAD!":PRINT @
  132,"THE DJINN HAS BEATEN YOU":P
  RINT @420,"DO YOU WANT ANOTHER G
  O ?"
837 E$=INKEY$:IF E$="N" THEN END
  ELSE IF E$="Y" THEN RUN ELSE 83
  7
838 FOR U=1 TO R:P(U)=1:NEXT U:G
  OTO 808
840 FOR W=1 TO 500-25*L:NEXT:IF
  RU=>0 THEN 808 ELSE PRINT " DO YO
  U WANT TO RUN?";STRING$(132," ")
  ;:GOSUB 10000:IF E$="Y" THEN 700
  ELSE IF U>NM THEN 808 ELSE NEXT
  U:GOTO 808
900 SS=INT(SS/2^(L+1)/R):FOR U=1
  TO R:G(U,1)=G(U,1)+SS:NEXT U:FO
  R U=1 TO 500-20*L:NEXT U:PRINT:P
  RINT @33,"TREASURE:":PRINT:TA=RN
  D(INT(L/2)+1):TY=RND(15):IF TY<6
  THEN PRINT:PRINT " THE SACKS ARE
  EMPTY":GOTO 950
901 IF TY=6 THEN AT$="JEWELS" EL
  SE IF TY<13 THEN AT$="GOLD" ELSE
  AT$="PLATINUM"
910 PRINT " THE SACKS HOLD";TA;"U
  NIT";:IF TA>1 THEN PRINT"S";
920 PRINT:PRINT:PRINT " OF ";AT$:
  IF AR$<>" " THEN PRINT " YOU MAY A
  LSO TAKE THE ";AR$
930 PRINT:PRINT " WILL YOU TAKE A
  NYTHING? ";:GOSUB 10000:IF E$="N
  " THEN 10 ELSE GOSUB 4500:FOR U=
  1 TO R:PRINT:PRINT C$(U);" HOW M
  UCH ";AT$;"? ";
940 GOSUB 9100:IF TT=0 THEN NEXT

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U:GOTO 944 ELSE FOR V=1 TO TT:T
A=TA-1:IF TA<0 THEN 950 ELSE IF
AT$="JEWELS" THEN CA$(U)=CA$(U)+
CHR$(30):WB(U)=WB(U)+1
941 IF AT$="GOLD" THEN CA$(U)=CA
$(U)+CHR$(28):WB(U)=WB(U)+1 ELSE
IF AT$="PLATINUM" THEN CA$(U)=C
A$(U)+CHR$(29):WB(U)=WB(U)+1
942 IF TA=<0 THEN 944 ELSE NEXT
V,U
944 PRINT:FOR U=1 TO R:MS=0:MP=0
:MJ=0:IF WB(U)<1+INT(G(U,1)/3)
THEN 949 ELSE PRINT C$(U);" IS O
VERLOADED":FOR V=1 TO LEN(CA$(U)
):TH=ASC(MID$(CA$(U),V,1)):IF TH
=28 THEN MS=MS+1 ELSE IF TH=29 T
HEN MP=MP+1 ELSE IF TH=30 THEN M
J=MJ+1
945 NEXT V:PRINT MS;"GOLD ";MP;"
PLATINUM ";MJ;"JEWELS":PRINT"LOS
E WHAT? (G/P/J) ":GOSUB 9200:EL$
=EH$:E$="":FOR V=1 TO LEN(CA$(U)
):WG=ASC(MID$(CA$(U),V,1)):IF WG
=28 AND EH$="G" OR WG=29 AND EH$
="P" OR WG=30 AND EH$="J" THEN 9
47
946 NEXT V:PRINT"YOU HAVE NONE":
GOTO 944
947 FOR TS=1 TO LEN(CA$(U)):IF T
S<>V THEN E$=E$+MID$(CA$(U),TS,1
):NEXT TS:CA$(U)=E$:PRINT"DROP O
R GIVE? (D/G) ";;GOSUB 9300:IF E
$="G" THEN INPUT"TO WHOM";E$:FOR
V=1 TO R:IF C$(V)<>E$ THEN NEXT
V ELSE IF EL$="G" THEN CA$(V)=C
A$(V)+CHR$(28)
948 IF EL$="P" AND MP>0 THEN CA$
(V)=CA$(V)+CHR$(29) ELSE IF EL$=
"J" AND MJ>0 THEN CA$(V)=CA$(V)+
CHR$(30)
949 NEXT U:GOSUB 4500:FOR U=1 TO
R:IF WB(U)>1+INT(G(U,2)/3) THEN

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944 ELSE NEXT U
950 IF AR$="" THEN 10 ELSE PRINT
"WHO TAKES THE ";AR$;:INPUT E$:F
OR U=1 TO R:IF C$(U)=E$ THEN CA$
(U)=CA$(U)+CHR$(10+RT):GOTO 10 E
LSE NEXT U:GOTO 950
1000 GOSUB 4500:PRINT:INPUT" WHO
SE ARTIFACT";E$:FOR U=1 TO R:IF
C$(U)<>E$ THEN NEXT U:GOTO 1000
ELSE IF LEN(CA$(U))=0 THEN PRINT
:PRINT" HE HASN'T GOT IT":FOR U=
1 TO 800:NEXT U:GOTO 440 ELSE FO
R V=1 TO LEN(CA$(U)):PT=ASC(MID$(
CA$(U),V,1))
1001 IF PT>27 THEN NEXT V:GOTO 4
40
1005 QT=RT:RT=PT-10:AM$=AR$:GOSU
B 6010:PRINT" THE ";AR$:AR$=AM$:
RT=QT:GOSUB 10000:IF E$<>"Y" THE
N NEXT V:GOTO 440
1010 LS=LEN(CA$(U)):IF LS=1 THEN
CA$(U)="" ELSE IF V=1 THEN CA$(
U)=RIGHT$(CA$(U),LS-1) ELSE IF V
=LS THEN CA$(U)=LEFT$(CA$(U),LS-
1) ELSE AB$=LEFT$(CA$(U),V-1):AC
$(RIGHT$(CA$(U),LEN(CA$(U))-V-1)
:CA$=AB$+AC$
1015 CLS:ON PT-10 GOTO 1050,1090
,1130,1170,1210,1250,1290,1330,1
370,1410,1440,1490
1020 INPUT"WHO USES IT";EM$:FOR
U=1 TO R:IF C$(U)=EM$ THEN RETUR
N ELSE NEXT U:GOTO 1020
1050 GOSUB 1020:PRINT"WHAT A SME
LL!":G(U,4)=G(U,4)-2*(L+1):H(U,4
)=H(U,4)-2*(L+1):GOTO 440
1090 GOSUB 1020:G(U,2)=G(U,2)+3*(
L+1)/2:H(U,2)=H(U,2)+3*(L+1)/2:
PRINT"STRENGTH FLOODS INTO HIM":
GOTO 440
1130 GOSUB 1020:G(U,1)=G(U,1)+L+
1:H(U,1)=H(U,1)+L+1:PRINT"HE FEE

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LS BETTER":GOTO 440
1170 PRINT"WHERE TO MASTER ";IN
PUT"(L,S,E) ";LE,S0,EA:IF LE>6 O
R LE<1 OR S0<0 OR S0>6 OR EA<0 O
R EA>9 THEN 1170 ELSE L=LE:X1=EA
:Y1=S0:IF N(L,X1,Y1)=0 THEN GOSU
B 70:N(L,X1,Y1)=PQ
1180 GOTO 10
1210 PRINT"AWAY THEY GO!":FOR U=
1 TO R:CA$(U)="" :NEXT U:GOTO 440
1250 PRINT"PHUT":FOR U=1 TO 200:
NEXT U:N(L,X1,Y1)=12:GOTO 10
1290 IF PP=1 THEN 10 ELSE ELSE I
F EZ$="GRIFFIN" AND R+NM<=2*RO T
HEN 610 ELSE PRINT"NOTHING HAPPE
NS":GOTO 440
1330 FOR U=1 TO NM:Z(U,1)=0:NEXT
U:IF PP=1 THEN 10 ELSE IF EZ$="
DJINN" THEN JD=1 ELSE IF EZ$="GI
ANT" THEN FOR WC=1 TO NM:Z(WC,3)
=0:NEXT WC
1331 GOTO 820
1370 PRINT"OUCH!":FOR U=1 TO R:G
(U,1)=G(U,1)-2*(L+1):H(U,1)=H(U,
1)-2*(L+1):NEXT U:GOTO 440
1410 GOSUB 1020:G(U,3)=G(U,3)+2^
L:H(U,3)=H(U,3)+2^L:PRINT"PING":
GOTO 440
1490 GOSUB 1020:PRINT C$(U);" VA
NISHES":G(U,2)=2*G(U,2):H(U,2)=2
*H(U,2):G(U,1)=G(U,1)-3:H(U,1)=H
(U,1)-3:GOTO 440
1600 EN=EN+1:IF EN>3 THEN 30 ELS
E PRINT@0,"":FOR U=1 TO R:CA$(U
)="" :NEXT U:GOTO 1170
3000 CLS:PRINT @34,"YOU HAVE ESC
APED THE DUNGEON":T=0:FOR U=1 TO
R:FOR V=1 TO 4:T=T+G(U,V):NEXT
V,U:T=T+800*JD:FOR U=1 TO R:IF L
EN(CA$(U))=0 THEN NEXT U:GOTO 30
50 ELSE FOR V=1 TO LEN(CA$(U)):P
Q=ASC(MID$(CA$(U),V,1)):IF PQ<13

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THEN T=T+15
3001 IF PQ=31 THEN T=T+2 ELSE IF
PQ=28 THEN T=T+5 ELSE IF PQ=29
THEN T=T+10 ELSE IF PQ=30 THEN T
=T+25
3020 NEXT V,U
3050 PRINT @261,"TOTAL SCORE";T;
"POINTS"
3100 PRINT @457,"ANOTHER GO";:IN
PUT E$:E$=LEFT$(E$,1):IF E$="Y"
THEN RUN ELSE IF E$="N" THEN END
ELSE 3100
4000 DATA !!!!!$0$!0!$0$!!!!0$!
0!$$$!0!$0!!0!$$$!!!!0!!0!$0!!!!
!0$!!!!$0!0!$0!0!YfU+f&YfU+0&If
U+f&YcU+f&Yf5+f&YcU+0&If5+f&Yf5+
0&IfU+0&IcU+f&Yc5+f&
4100 IF RH<=R0 THEN R0=R0-1
4105 IF RH=1 THEN CA$(2)=CA$(2)+
CA$(1) ELSE CA$(RH-1)=CA$(RH-1)+
CA$(RH)
4110 CA$(RH)="":IF RH<>R THEN FO
R W=RH TO R-1:FOR XE=0 TO 4:H(W,
XE)=H(W+1,XE):G(W,XE)=G(W+1,XE):
NEXT XE:C$(W)=C$(W+1):CA$(W)=CA$
(W+1):PL(W)=PL(W+1):NEXT W:IF W<
6 THEN CA$(W+1)=" "
4115 FOR TX=1 TO R:IF P(TX)=1 AN
D H(TX,1)>0 THEN 4120 ELSE NEXT
TX:FOR TX=1 TO R:R(TX)=1:NEXT TX
4120 CA$(R)="":R=R-1:RETURN
4500 CLS:PRINT @33,"INVENTORY:":
PRINT:FOR U=1 TO R:WB(U)=0:PRINT
" ";C$(U);TAB(10);" - ";:IF LEN(
CA$(U))=0 THEN PRINT"NOTHING":NE
XT U:RETURN ELSE FOR V=1 TO LEN(
CA$(U)):E$=MID$(CA$(U),V,1):PT=A
SC(E$)-10
4505 IF PT=18 THEN PRINT"GOLD ";
ELSE IF PT=19 THEN PRINT"PLATIN
UM "; ELSE IF PT=20 THEN PRINT"J
EWELS ";

```

```

4510 IF PT>17 THEN WB(U)=WB(U)+1
:GOTO 4520 ELSE QT=RT:RT=PT:AM$=
AR$:GOSUB 6010:PRINT " ";AR$;:AR$
=AM$:RT=QT
4520 NEXT V:PRINT:NEXT U:RETURN
5000 CLS:PRINT@235,"THE DOMAIN":
PRINT TAB(10);"OF THE DJINN"
5001 CLEAR 700:DIM A$(22),D$(13)
:READ B$:FOR T=0 TO 11:A$(T)=MID
$(B$,T*6+1,6):FOR V=1 TO 6:MID$(
A$(T),V)=CHR$(95+ASC(MID$(A$(T),
V,1))):NEXT V,T:FOR V=12 TO 22:F
OR U=1 TO 6:A$(V)=A$(V)+CHR$(16+
ASC(MID$(A$(V-12),U,1))):NEXT U,
V
5010 CLS:D$(1)="FIGHTER":D$(2)="
MAGICIAN":DIM Z(9,4),N(6,9,6)
5020 NM=3:PRINT @165,"WHAT SIZE
TEAM (1-3) ? ";:GOSUB 9000:Q=2*M
M:R=INT(Q/2):RO=R:Q=Q+2*INT(4/Q)
:DIM C$(Q),P(Q),CA(Q),G(Q,4):FOR
F=1 TO R:CLS:PRINT:PRINT" MEMBE
R";F:PRINT:INPUT" NAME";C$(F)
5040 C$(F)=LEFT$(C$(F),6):PRINT:
PRINT" WHAT TYPE (1-2) ? ";:NM=2
:GOSUB 9000:M=UM:PRINT:PRINT:PRI
NT" ";D$(M);
5050 PRINT TAB(13)"SUR"TAB(18)"B
AT"TAB(23)"MAG"TAB(28)"COM":FORL
=Q-2TO0:PRINT" "Q+1-L;:G(L,1)=
RND(10):G(L,1+M)=5+RND(5):PRINTT
AB(13)G(L,1);:IFM=1THENG(L,3)=RND
(7):G(L,4)=RND(6)ELSEG(L,2)=RND
(8):G(L,4)=RND(8)
5060 PRINTTAB(18)G(L,2)TAB(23)G(
L,3)TAB(28)G(L,4):NEXTL:G(F,0)=M
5070 NM=3:PRINT:PRINT:PRINT" WHI
CH (1-3) ? ";:GOSUB 9000:FORI=1TO
4:G(F,I)=G(Q-UM+1,I):NEXT I,F
5075 FOR U=1 TO 10:READ B$(U):D$(
3+U)=LEFT$(B$(U),8):NEXT U:L=1:
X1=5:Y1=3:N(L,X1,Y1)=1101:GOTO 1

```


Ø

```
5080 DATA ZOMBIE 13500,TROLL
26648,OGRE 15637,IMP 1242
5,GOBLIN 14527,WRAITH 14550,DR
AGON 39999,CENTAUR 27769,GRIFFI
N 28787,BASILISK38858
6000 MJ=0:RT=RND(17):RZ=RT:IF RT
<>13 THEN GOSUB 6010:GOTO 6020 E
LSE CLS:PRINT"TELEPORT":FOR U=1
TO 300:NEXT U:RU=1:L=L+RND(3)-2+
INT(1/L)+INT(L/6):X1=RND(10)-1:Y
1=RND(8)-1:IF N(L,X1,Y1)=0 THEN
GOSUB 70:N(L,X1,Y1)=PQ:GOTO 10 E
LSE GOTO 10
6010 IF RT<4 THEN AR$="PHILTRE"
ELSE IF RT<7 THEN AR$="RHOMB" EL
SE IF RT<10 THEN AR$="WAND" ELSE
IF RT<13 THEN AR$="RING"
6011 RETURN
6020 MR=0:IF RT<14 THEN 305 ELSE
ON RT GOTO 6030,6040,6060,6080
6021 GOTO 309
6030 IF L<4 THEN 6000 ELSE EZ$="
BALROG":R=RO:NM=RND(L-3):FOR U=1
TO NM:Z(U,1)=RND(2^(L-1)*20):Z(
U,2)=RND(2^(L-1)*18):Z(U,3)=RND(
2^(L-1)*20):Z(U,4)=INT(2^(L-1)*2
2):NEXT U:RETURN
6040 IF L<4 OR JD=1 THEN 6000 EL
SE EZ$="DJINN":NM=1:Z(1,1)=INT(3
0*2^(L-1)):Z(1,2)=INT(30*2^(L-1)
):Z(1,3)=INT(30*2^(L-1)):Z(1,4)=
0:RETURN
6060 NM=1:EZ$="GORGON":Z(1,1)=IN
T(22*2^(L-1)):Z(1,2)=INT(19*2^(L
-1)):Z(1,3)=INT(22*2^(L-1)):Z(1,
4)=0:FOR U=1 TO R:IF RND(18)>=3+
L THEN NEXT U ELSE ST(U)=1:NEXT
U
6062 CLS:FOR U=1 TO R:IF ST(U)=0
THEN NEXT U:RETURN ELSE PRINT"T
HE FOLLOWING ARE PETRIFIED:":FOR
```

```

U=1 TO R:IF ST(U)=0 THEN NEXT U
ELSE PRINT C$(U):NEXT U
6064 FOR U=1 TO R:FOR V=1 TO LEN
(CA$(U)):IF ASC(MID$(CA$(U),V,1)
)<>13 THEN NEXT V,U:PRINT" YOU D
O NOT HAVE A CURE POTION SO TH
EY ARE DEAD":FOR US=1 TO 1900:NE
XT US:FOR RH=1 TO R:IF ST(RH)<>1
THEN NEXT RH:RETURN ELSE GOSUB
4100:NEXT RH:RETURN
6066 INPUT"WHO WILL YOU SAVE WIT
H YOUR CUREPOTION";AS$:FOR RH=1
TO R:IF ST(RH)=1 AND C$(RH)<>AS$
THEN GOSUB 4100
6068 NEXT RH:FOR U=1 TO R:ST(U)=
0:NEXT U:RETURN
6080 IF L<3 AND MJ=0 THEN 6000 E
LSE EZ$="GIANT":NM=RND((L+1)/2):
FOR U=1 TO NM:Z(U,1)=RND(2^(L-1)
*30):Z(U,2)=RND(2^(L-1)*30):Z(U,
3)=9999:Z(U,4)=0:NEXT U:RETURN
7000 CLS:PRINT"TEAM STRENGTHS:":
PRINT:PRINT"NAME SUR BAT MAG C
OM TYPE"
7001 FOR U=1 TO R:PRINT C$(U);:F
OR V=1 TO 4:PRINT TAB(3+4*V);INT
(H(U,V));:NEXT V:PRINT TAB(23);D
$(G(U,0)):NEXT U:PRINT:PRINT:PRI
NT"PRESS ANY KEY TO CONTINUE"
7010 E$=INKEY$:IF E$="" THEN 701
0 ELSE 440
8000 FOR RH=1 TO R:IF G(RH,1)<1
THEN GOSUB 4100
8100 NEXT RH:IF R>0 THEN RETURN
ELSE CLS:GOTO 836
9000 EY$=INKEY$:IFEY$=""THEN9000
ELSEIFASC(EY$)<49ORASC(EY$)>48+N
M THEN9000ELSEPRINT EY$:UM=VAL(E
Y$):RETURN
9100 EY$=INKEY$:IF EY$="" THEN 9
100 ELSE IF ASC(EY$)<48 OR ASC(E
Y$)>48+TA THEN 9100 ELSE TT=VAL(

```

```

EY$):RETURN
9200 EY$=INKEY$:IF EY$="" OR EY$
<>"G" AND EY$<>"P" AND EY$<>"J"
THEN 9200 ELSE EE$=EY$:RETURN..
9300 EY$=INKEY$:IF EY$="" OR EY$
<>"G" AND EY$<>"D" THEN 9300 ELS
E EE$=EY$:RETURN
10000 ES$=INKEY$:IF ES$="" OR ES
$<>"Y" AND ES$<>"N" THEN 10000 E
LSE E$=ES$:RETURN
11000 CLS:PRINT @33,"THE ROOM CO
NTAINS";NM;EZ$;
11010 IF NM>1 THEN PRINT"S" ELSE
PRINT
11020 IF AR$<>" " THEN PRINT" A "
;AR$;
11030 PRINT" AND SOME SACKS"
11040 FOR SS=1 TO 1000:NEXT SS:R
ETURN

```

TRUTH

SIMON STRONG

Original program by M. Costello

GENERAL DESCRIPTION

Truth is one of those man-against-machine programs in which you are invited to pit your wits and skill against the computer.

You have fifty-two cards, three skill levels and (for the weak) a chance to give in and learn the secret from the Dragon.

You have to guess a randomly selected sequence by inputting the suit ('S', 'H', 'D' or 'C') and the value (A-K) followed by a full-stop. The first two selections are always correct but from then on - you're on your own!

After each card is selected into either the 'correct' or 'mistake' bands you are told whether the discard was correct or not, the pack is amended and you pick again.

If, at any time, you want to give in, pressing 'Z' prints the secret rule in operation on that particular game. A run of eight correct selections will win you the game. Good Luck!

DETAILED DESCRIPTION

Lines 10 Sets dimensions.

30 Variables.

40 Sets up loops.

50 Prints title and invites input of skill level required.

70 Checks keyboard for response.

100-350 Subroutine for generating random selection.

400-1160 Main loop (including condition statements)

1170 Checks keyboard for repeat game/card repeat sequence response.

1390 Checks keyboard for the suit required.

1430 Prints failure caption.

1530 Prints 'cheat' caption.

- 1540-1570 Contains string variables.
- 1590 Prints success caption.
- 1610-1620 Contains the rules for sequence.
- 1640 Offers repeat game ('G') or a second look at the cards ('D').
- 1700 Scoring sequence.
- 1830 'Z' sequence for the weak?
- 1850-1880 Pause routines for varying lengths.

```

Ø REM TRUTH
1Ø CLEAR 2ØØØ: DIM P$(13,3), H(13,
3), PC$(51), PM$(51), J1(12), J2(12)
, JV(3)
2Ø GOSUB 154Ø
3Ø CT=52: FOR A=Ø TO 3: P$(1,A)="
A": P$(11,A)=" J": P$(12,A)=" Q": P
$(13,A)=" K": FOR B=2 TO 1Ø: P$(B,
A)=STR$(B): NEXT: NEXT
4Ø FOR A=Ø TO 3: FOR B=1 TO 13: H(
E,A)=B: NEXT: NEXT
5Ø CLS: PRINT @73, "T R U T H"
: PRINT @133, "(C) 1981 M.W. COSTE
LLO": GOSUB 186Ø: PRINT @225, "PLEA
SE CHOOSE YOUR": PRINT " LEVEL OF
PLAY": PRINT @324, "1. "; U1$: PRIN
T @356, "2. "; U2$: PRINT @388, "3.
"; U3$: PRINT @449, "TYPE 1, 2 OR
3"
6Ø GOSUB 117Ø
7Ø IF Z$="1" THEN US#=U1$: GOSUB
16Ø ELSE IF Z$="2" THEN US#=U2$:
GOSUB 33Ø ELSE IF Z$="3" THEN US
#=U3$: GOSUB 5ØØ ELSE 6Ø
8Ø CLS: GOSUB 118Ø: GOSUB 12ØØ: CC=
8: CM=168: C5=Ø: C6=Ø: K=Ø
9Ø ML=3: C=481: GOSUB 172Ø
1ØØ IF Z$="Z" THEN 183Ø ELSE GOS
UB 145Ø: IF CJ=1 THEN 9Ø ELSE GOS
UB 12Ø
11Ø IF CT=Ø THEN 143Ø ELSE IF K=
8 THEN 159Ø ELSE FOR A=Ø TO 2: JV

```

```

(A)=JV(A+1):NEXT:JV(3)=JT:GOTO 9
Ø
12Ø IF CT=52 THEN E=1:GOTO 14Ø
13Ø ON GC GOSUB 59Ø,61Ø,63Ø,68Ø,
7ØØ,75Ø,78Ø,81Ø,82Ø,84Ø,86Ø,91Ø,
93Ø,96Ø,99Ø,1ØØØ,1Ø2Ø,1Ø3Ø,1Ø6Ø,
111Ø,112Ø,113Ø,115Ø,116Ø
14Ø IF E=1 GOSUB 127Ø ELSE GOSUB
134Ø
15Ø CT=CT-1:IF CT=Ø THEN 143Ø EL
SE RETURN
16Ø GOSUB 58Ø
17Ø GC=RND(Ø):ON GC GOSUB 19Ø,2Ø
Ø,21Ø,28Ø,29Ø,3ØØ,31Ø,32Ø
18Ø RETURN
19Ø S1$=X3$:S2$=XA$:S3$=V5$:S4$=
V1$:RETURN
2ØØ S1$=X4$:S2$=V1$:S3$=X5$:S4$=
V7$:RETURN
21Ø L=RND(13):N$=P$(L,Ø):L1=L+6:
IF L1<14 THEN N$=P$(L1,Ø) ELSE
N$=P$(L1-13,Ø):L1=L1-13
22Ø IF L1=13 THEN Q$=P$(1,Ø) EL
E Q$=P$(L1+1,Ø)
23Ø L2=L1+6:IF L2<14 THEN Q$=P$
(L2,Ø) ELSE Q$=P$(L2-13,Ø):L2=L
2-13
24Ø S1$=N$+" TO"+N$:S2$=V1$:S3$
=Q$+" TO"+Q$:S4$=V7$
25Ø FOR A=Ø TO 12:J1(A)=Ø:J2(A)=
Ø:NEXT:FOR A=Ø TO 6:J1(A)=L:L=L+
1:IF L=14 THEN L=1
26Ø NEXT:FOR A=Ø TO 5:J2(A)=L:L=
L+1:IF L=14 THEN L=1
27Ø NEXT:RETURN
28Ø S1$=X3$:S2$=V3$:S3$=XC$+XD$:
S4$=Y7$+" "+Y5$+" "+Y4$+CHR$(13)
+" "+Y6$+" "+Y7$+" ....":RETURN
29Ø S1$=X3$:S2$=X3$:S3$=XC$:S4$=
XD$:S5$=XE$+" (FIRST 2 ALWAYS RI
GHT)":RETURN
3ØØ S1$=X3$:S2$=X6$:S3$=V8$:S4$=

```

```

X8$:S5%=V1$:RETURN
310 S1%=X3$:S2%=X6$:S3%=V8$:S4%=
X7$:S5%=V1$:RETURN
320 S1%=X2$:S2%=XF$:S3%=XG$:RETU
RN
330 GOSUB 580:GC=RND(10):ON GC G
OSUB 350,360,370,380,390,400,410
,420,480,490
340 GC=GC+8:RETURN
350 S1%=X3$:S2%=X3$:S3%=XC$:S4%=
XD$:S5%=Y5%+" "+Y7%+" "+Y4%+CHR$
(13)+" "+Y6%+" "+Y5%+" .....":R
ETURN
360 S1%=X6$:S2%=X6$:S3%=XH$:RETU
RN
370 S1%=V3$:S2%="IT":S3%=XC$:S4%
="THIS RULE:"+CHR$(13)+"DIVIDE "
+V1%+" BY 4, IF REMAINDER = 3 PL
AY "+Y7%+", IF = 2 PLAY "+Y6%+",
IF = 1 PLAY "+Y5%", ELSE PLAY
"+Y4%:RETURN
380 S1%=X2$:S2%=V1$:S3%=X4$:S4%=
" AND "+X1%" IS CORRECT IF "+V1
%+" IS "+X5%:RETURN
390 S1%=X3$:S2%=X6$:S3%="4 TO 6"
:S4%=X8$:S5%=V1$:RETURN
400 S1%=X3$:S2%=X6$:S3%="8 TO 10"
:S4%=X7$:S5%=V1$:RETURN
410 S1%=X3$:S2%=V3%+" OR "+X6%:S
3%=V4%:S4%=V1%:RETURN
420 L5=RND(4)-1:L6=L5:GOSUB 430:
L7=L5:GOSUB 430:L8=L5:GOSUB 430:
L9=L5:L5=L6:GOSUB 450:T6%=T5%:L5
=L7:GOSUB 450:T7%=T5%:L5=L8:GOSU
B 450:T8%=T5%:L5=L9:GOSUB 450:T9
%=T5%:GOTO 470
430 L5=L5+1:IF L5>3 THEN L5=0
440 RETURN
450 IF L5=0 THEN T5%=Y4% ELSE IF
L5=1 THEN T5%=Y5% ELSE IF L5=2
THEN T5%=Y6% ELSE IF L5=3 THEN T
5%=Y7% ELSE PRINT"BUG":STOP

```

```

460 RETURN
470 S1$=X4$+" "+X6$:S2$=V1$:S3$=
T6$+" OR "+T7$+" AND ":S4$=X5$+"
"+X6$+" IS CORRECT IF "+V1$+" I
S "+T8$+" OR "+T9$:RETURN
480 S1$=X1$:S2$=XF$:S3$=XG$:S4$=
" ":S6$=X2$:S7$=XF$:S8$=Y1$:RETU
RN
490 S1$=X3$:S2$=X6$:S3$="WITHIN
RANGE 2 LESS TO 2 MORE THAN "+V1
$:RETURN
500 GOSUB 580:GC=RND(6):ON GC GO
SUB 520,530,540,550,560,570,
510 GC=GC+18:RETURN
520 S1$=X4$:S2$=V1$:S3$="SAME "+
XA$+" AS":S4$=V2$+" ONE":S6$=X5$
:S7$=V1$:S8$="DIFFERENT "+XA$+"
FROM":S9$=V2$+" ONE":RETURN
530 S1$="A TO 7":S2$=V2$+" 2":S3
$=X1$:S6$="8 TO K":S7$=V2$+" 2":
S8$=X2$:RETURN
540 S1$=X4$:S2$=XF$+" BUT 3":S3$
=Y1$:S6$=X5$:S7$=S2$:S8$=XG$:RET
URN
550 S1$="EVERY THIRD CARD":S2$="
IT":S3$=XC$+XD$:S4$=Y5$+" "+Y7$+
" "+Y6$:S5$="OTHER CARDS ARE ALW
AYS CORRECT":RETURN
560 S1$="COURT "+X3$:S2$=V1$:S3$
="NOT "+S1$:S4$=V7$:RETURN
570 S1$=X2$:S2$=V6$+Y2$:S3$=X8$+
" OR EQUAL TO ":S4$=V6$+Y1$+" CA
RDS":S6$=X1$:S7$=S4$:S8$=X8$:S9$
=S2$:RETURN
580 S1$="":S2$="":S3$="":S4$="":
S5$="":S6$="":S7$="":S8$="":S9$=
":RETURN
590 IF (F=0 OR F=3) AND (HS=1 OR
HS=2) THEN E=1 ELSE IF (F=1 OR
F=2) AND (HS=0 OR HS=3) THEN E=1
ELSE E=0
600 RETURN

```



```

610 L=1:IF G=(L OR G) THEN IF HD
<>(L OR HD) THEN E=1 ELSE E=0 EL
SE IF HD=(L OR HD) THEN E=1 ELSE
E=0
620 RETURN
630 E=0:FOR A=0 TO 12:IF J1(A)=G
THEN 640 ELSE NEXT:GOTO 650
640 FOR A=0 TO 12:IF J2(A)=HD TH
EN E=1:GOTO 670 ELSE NEXT:GOTO 6
70
650 FOR A=0 TO 12:IF J2(A)=G THE
N 660 ELSE NEXT
660 FOR A=0 TO 12:IF J1(A)=HD TH
EN E=1:GOTO 670 ELSE NEXT:GOTO 6
70
670 RETURN
680 IF (F=3 AND HS=1) OR (F=1 AN
D HS=0) OR (F=2 AND HS=3) THEN E
=1 ELSE E=0
690 RETURN
700 IF CT=51 THEN E=1:RETURN ELS
E L=1:IF HD=(L OR HD) THEN LC=0
ELSE LC=1
710 IF G=(L OR G) THEN LF=0 ELSE
ELSE LF=1
720 IF G0=(G0 OR L) THEN L0=0 EL
SE L0=1
730 IF (LC=1 AND LF=0 AND L0=0)
OR (LC=1 AND LF=1 AND L0=0) OR (
LC=0 AND LF=1 AND L0=1) OR (LC=0
AND LF=0 AND L0=1) THEN E=1 ELS
E E=0
740 RETURN
750 IF G=13 THEN GT=0 ELSE GT=G
760 E=0:FOR A=0 TO 12:J1(A)=0:NE
XT:FOR A=0 TO 2:J1(A)=GT+1:GT=GT
+1:IF GT=13 THEN GT=0
770 NEXT:FOR A=0 TO 2:IF J1(A)=H
D THEN E=1:RETURN ELSE NEXT:RETU
RN
780 IF G=1 THEN GT=14 ELSE GT=G
790 E=0:FOR A=0 TO 12:J1(A)=0:NE

```

```

XT:FOR A=0 TO 2:J1(A)=GT-1:GT=GT
-1:IF GT=1 THEN GT=14
800 NEXT:FOR A=0 TO 2:IF J1(A)=H
D THEN E=1 ELSE E=1:RETURN ELSE
NEXT:RETURN
810 E=0:IF HS=0 OR HS=3 THEN E=1
:RETURN ELSE IF JV(3)=1 THEN E=1
:RETURN ELSE RETURN
820 E=0:IF (F=1 AND HS=3) THEN E
=1 ELSE IF (F=3 AND HS=0) THEN E
=1 ELSE IF (F=0 AND HS=2) THEN E
=1 ELSE IF (F=2 AND HS=1) THEN E
=1
830 RETURN
840 FOR A=0 TO 12:J1(A)=0:NEXT:F
OR A=0 TO 2:J1(A)=A+1:NEXT:J1(3)
=5:J1(4)=7:J1(5)=11:J1(6)=13
850 FOR A=0 TO 6:IF HD=J1(A) THE
N E=1:RETURN ELSE NEXT:E=0:RETUR
N
860 IF (G=6 OR G=10) AND (HS=2)
THEN E=1:RETURN
870 IF (G=5 OR G=9 OR G=13) AND
(HS=1) THEN E=1:RETURN
880 IF (G=7 OR G=11) AND (HS=3)
THEN E=1:RETURN
890 IF (G<5 OR G=8 OR G=12) AND
(HS=0) THEN E=1:RETURN
900 E=0:RETURN
910 L=1:IF G=(G OR L) THEN L5=1
ELSE L5=0
920 IF (HS=1 OR HS=2) AND (L5=0)
THEN E=1:RETURN ELSE IF (HS=0 O
R HS=3) AND (L5=1) THEN E=1:RETU
RN
930 FOR A=0 TO 12:J1(A)=0:NEXT:L
1=G+4:IF L1>13 THEN L1=L1-13
940 FOR A=0 TO 2:J1(A)=L1:L1=L1+
1:IF L1>13 THEN L1=1
950 NEXT:FOR A=0 TO 2:IF HD=J1(A
) THEN E=1:RETURN ELSE NEXT:E=0:
RETURN

```

```

960 FOR A=0 TO 12:J1(A)=0:NEXT:L
1=G-8:IF L1<1 THEN L1=L1+13
970 FOR A=0 TO 2:J1(A)=L1:L1=L1-
1:IF L1<1 THEN L1=13
980 NEXT:FOR A=0 TO 2:IF HD=J1(A
) THEN E=1:RETURN ELSE NEXT:E=0:
RETURN
990 IF (HS=F) OR (HD=G) THEN E=1
:RETURN ELSE E=0:RETURN
1000 L=1:IF HD=(L OR HD) THEN L=
0
1010 IF (L=0 AND F=L8) OR (L=0 A
ND F=L9) THEN E=1:RETURN ELSE IF
(L=1 AND F=L6) OR (L=1 AND F=L7
) THEN E=1:RETURN ELSE E=0:RETUR
N
1020 IF (HS=0 OR HS=3) AND JV(3)
=1 THEN E=1:RETURN ELSE IF (HS=1
OR HS=2) AND JV(3)=2 THEN E=1:R
ETURN ELSE E=0:RETURN
1030 FOR A=0 TO 12:J1(A)=0:NEXT:
L1=G-2:FOR A=0 TO 4:IF L1<1 THEN
L1=L1+13
1040 J1(A)=L1:L1=L1+1:IF L1>13 T
HEN L1=1
1050 NEXT:FOR A=0 TO 4:IF HD=J1(
A) THEN E=1:RETURN ELSE NEXT:E=0
:RETURN
1060 IF CT>50 THEN E=1:RETURN TH
EN L=1:IF (F=0 OF F=3) AND (F0=0
OR F0=3) THEN IF HD<>(L OR HD)
THEN E=1:RETURN
1070 IF (F=1 OR F=2) AND (F0=1 O
R F0=2) THEN IF HD<>(L OR HD) TH
EN E=1:RETURN
1080 IF (F=0 OR F=3) AND (F0=1 O
R F0=2) THEN IF HD=(L OR HD) THE
N E=1:RETURN
1090 IF (F=1 OR F=2) AND (F0=0 O
R F0=3) THEN IF HD=(L OR HD) THE
N E=1 THEN RETURN
1100 RETURN

```

```

1110 IF CT>49 THEN E=1:RETURN EL
SE IF (F1=0 OR F1=3) AND (HD<8)
THEN E=1:RETURN ELSE IF (F1=1 OR
F1=2) AND HD>7 THEN E=1:RETUN E
LSE E=0:RETURN
1120 IF CT>48 THEN E=1:RETURN EL
SE L=1:IF HD=(L OR HD) AND JV(0)
=1 THEN E=1:RETURN ELSE IF HD<>(
L OR HD) AND JV(0)=2 THEN E=1:RE
TURN ELSE E=0:RETURN
1130 E=1:IF CT>=49 THEN RETURN E
LSE DL=C5/3:IF DL<>INT(DL) THEN
RETURN
1140 IF HS=0 AND F1=1 THEN RETUR
N ELSE IF HS=3 AND F1=0 THEN RET
URN ELSE IF HS=2 AND F1=3 THEN R
ETURN ELSE IF HS=1 AND F1=2 THEN
RETURN ELSE E=0:RETURN
1150 IF HD>10 AND G<11 THEN E=1:
RETURN ELSE IF HD<11 AND G>10 TH
EN E=1:RETURN ELSE E=0:RETURN
1160 IF C6>=C5 AND (HS=1 OR HS=2
) THEN E=1:RETURN ELSE IF C6<C5
AND (HS=0 OR HS=3) THEN E=1:RETU
RN ELSE E=0:RETURN
1170 Z#=INKEY#:IF Z#="" THEN 117
0 ELSE RETURN
1180 CLS:PRINT Y1$;STRING$(153,1
75);Y2$;STRING$(153,159);
1190 PRINT @321,Y4$:PRINT @337,Y
5$:PRINT @385,Y6$:PRINT @401,Y7$
:PRINT @449,Y8$:RETURN
1200 PRINT @353,"";:FOR A=1 TO 1
3:PRINT MID$(P$(A,0),2);:NEXT A:
PRINT @369,"";:FOR A=1 TO 13:PRI
NT MID$(P$(A,1),2);:NEXT A:PRINT
@417,"";:FOR A=1 TO 13:PRINT MI
D$(P$(A,2),2);:NEXT A:PRINT @433
,"";:FOR A=1 TO 13:PRINT MID$(P$
(A,3),2);:NEXT A:RETURN
1210 PRINT @8,"";:FOR A=0 TO 51:
PRINT PC$(A);CHR$(175);:NEXT A

```

```

1220 RETURN
1230 PRINT @168,"";FOR A=0 TO 5
1:PRINT PM$(A);CHR$(159);:NEXT A
1240 RETURN
1250 GOSUB 1200
1260 RETURN
1270 IF CT<52 THEN PRINT @449,VM
$;"CORRECT **":GOSUB 1880:PRINT
@449,"":GOSUB 1880:PRINT @449,VM
$;"CORRECT **":GOSUB 1880:PRINT
@449,Y8$
1280 GOSUB 1390:PRINT @CC,@5$;:Z
T$=P$(HD,HS):PRINT MID$(ZT$,2);:
IF POS(0)>29 THEN CI=4 ELSE IF H
D=10 THEN CI=4 ELSE CI=3
1290 CC=CC+CI:GOSUB 1410:PRINT @
C,STRING$(15,32);:PRINT @C,"";:Z
Z$=P$(HD,HS):ZT$=MID$(ZZ$,2):P$(
HD,HS)="":FOR A=1 TO 13:PRINT MI
D$(P$(A,HS),2);:NEXT
1300 GOSUB 1390:PC$(C5)=@5$+ZT$:
C5=C5+1
1310 F3=F2:G3=G2:F2=F1:G2=G1:F1=
F0:G1=G0:F0=F:G0=G
1320 F=HS:G=HD
1330 JT=2:IF CT=52 THEN RETURN E
LSE K=K+1:RETURN
1340 PRINT @449,VM$;"A MISTAKE**
":GOSUB 1880:PRINT @449,"":GOSUB
1880:PRINT @449,VM$;"A MISTAKE*
*":GOSUB 1880:PRINT @449,Y8$
1350 GOSUB 1390:PRINT @CM,@5$;:Z
T$=P$(HD,HS):PRINT MID$(ZT$,2);:
IF POS(0)>29 THEN CI=4 ELSE IF H
D=10 THEN CI=4 ELSE CI=3
1360 CM=CM+CI:GOSUB 1410:PRINT @
C,STRING$(15,32);:PRINT @C,"";:Z
Z$=P$(HD,HS):ZT$=MID$(ZZ$,2):P$(
HD,HS)="":FOR A=1 TO 13:PRINT MI
D$(P$(A,HS),2);:NEXT
1370 GOSUB 1390:PM$(C6)=@5$+ZT$:
C6=C6+1

```

```

1380 K=0:JT=1:RETURN
1390 IF HS=0 THEN Q5$="S" ELSE I
F HS=1 THEN Q5$="H" ELSE IF HS=2
  THEN Q5$="D" ELSE Q5$="C"
1400 RETURN
1410 IF HS<2 THEN C=353+HS*16 EL
SE C=385+HS*16
1420 RETURN
1430 CLS:PRINT @33,"SORRY!":PRIN
T" YOU HAVE USED ALL YOUR CARD
S AND WE MUST REVEAL THE RULE:"
1440 GOSUB 1610:GOTO 1640
1450 CJ=0
1460 Z$=LEFT$(ZW$,1):IF Z$<>"S"
AND Z$<>"H" AND Z$<>"D" AND Z$<>
"C" THEN 1530
1470 IF Z$="S" THEN HS=0 ELSE IF
Z$="H" THEN HS=1 ELSE IF Z$="D"
  THEN HS=2 ELSE HS=3
1480 Z$=MID$(ZW$,2,1):IF Z$<>"1"
  THEN IF LEN(ZW$)=3 THEN 1530
1490 IF Z$="1" THEN IF LEN(ZW$)<
  >3 THEN 1530 ELSE IF RIGHT$(ZW$,
  1)<>"0" THEN 1530
1500 IF LEN(ZW$)=3 THEN HD=10 EL
SE IF Z$="A" THEN HD=1 ELSE IF Z
$="J" THEN HD=11 ELSE IF Z$="Q"
  THEN HD=12 ELSE IF Z$="K" THEN H
  D=13 ELSE HD=VAL(Z$):IF HD=0 THE
  N 1530
1510 IF H(HD,HS)=0 THEN 1820
1520 H(HD,HS)=0:RETURN
1530 PRINT @449,"NO SUCH CARD IN
  THIS PACK!":GOSUB 1850:CJ=1:PRI
  NT @449,STRING$(62,32)::PRINT @4
  49,Y6$:RETURN
1540 Y1$="CORRECT":Y2$="MISTAKE"
:Y3$="YOUR HAND":Y4$="SPADES":Y
5$="HEARTS":Y6$="DIAMONDS":Y7$="
  CLUBS":Y8$="INPUT SUIT AND VALUE
  OF CARD":Y9$="IF YOU WISH TO GI
  VE UP, TYPE Z"

```

```

1550 X1$="BLACK":X2$="RED":X3$="
CARD":X4$="EVEN":X5$="ODD":X6$="
DENOMINATION":X7$=" LESS THAN":X
8$=" GREATER THAN":V1$="LAST COR
RECT CARD":V2$=V1$+" BUT":V3$="S
UIT":V4$=" SAME AS ":V5$="DIFFER
ENT FROM":V6$="TOTAL OF ":V7$="
AND VICE VERSA"
1560 VM$="** THAT DISCARD IS ":V
8$=" 1 TO 3":U1$="BASIC":U2$="INT
ERMEDIATE":U3$="ADVANCED"
1570 XA$="COLOUR":XB$="IT FOLLO
W THE SEQUENCE":XC$="CONSISTENT
WITH":XD$=" SEQUENCE OF":XE$="2
ODD ALTERNATING WITH 2 EVEN":XF$
="PREVIOUS PLAY":XG$="MISTAKE":X
H$="PRIME NUMBER"
1580 RETURN
1590 CLS:PRINT @33,"WELL DONE!
WITH EIGHT CORRECT DISCARDS IN
A ROW, YOU HAVE WORKED OUT T
HE SECRET RULE. (UNLESS YOU'
RE JUST LUCKY)":PRINT:PRINT" THE
RULE IS:"
1600 GOSUB 1610:GOSUB 1680:GOTO
1640
1610 PRINT" ";S1$;" IS CORRECT":
PRINT" ONLY IF ";S2$:PRINT" IS "
;S3$;" ";S4$:PRINT" ";S5$
1620 IF S6$>" THEN PRINT" AND":
PRINT" ";S6$;" IS CORRECT":PRINT
" ONLY IF ";S7$:PRINT" IS ";S8$:
PRINT" ";S9$
1630 RETURN
1640 PRINT @452,"FOR ANOTHER GAM
E TYPE: G":PRINT @481,"TO SEE TH
E CARDS AGAIN TYPE: D";
1650 GOSUB 1170:IF Z$="G" THEN 3
0 ELSE IF Z$="D" THEN CLS:GOSUB
1180:PRINT @449," FOR ANOTHER
GAME TYPE: G":PRINT @484,"TO SEE
THE RULE AGAIN: R";:GOSUB 1210:

```

```

GOSUB 1230:GOSUB 1250 ELSE 1650
1660 GOSUB 1170:IF Z$="G" THEN 3
0 ELSE IF Z$<>"R" THEN 1660 ELSE
CLS:GOSUB 1610
1670 IF K<>8 THEN 1640 ELSE GOSU
B 1680:GOTO 1640
1680 L1=44-C6
1690 D1=CT/43:D2=L1/44:D3=(D1+D2
)*50
1700 PRINT @449,"PRESS ANY KEY F
OR SCORE":GOSUB 1170:CLS:PRINT @
33,"S C O R E":PRINT @97,"CARDS
IN HAND = ";CT:PRINT @161,"MISTA
KES = ";C6:PRINT USING" FINAL SCO
RE ###.##";D3;:PRINT:PRINT "(";US
$;" GAME)
1710 RETURN
1720 ZW$="":PRINT @C,STRING$(30,
32);:PRINT @C,"";
1730 Z$="":GOSUB 1170
1740 IF Z$="Z" THEN RETURN
1750 IF Z$="." THEN RETURN
1760 IF Z$=CHR$(8) THEN IF ZW$="
" THEN 1730 ELSE PRINT @C,STRING
$(30,32);:GOTO 1720
1770 IF Z$=CHR$(13) GOSUB 1810:G
OTO 1720
1780 IF Z$<" " THEN 1720 ELSE ZW
$=ZW$+Z$
1790 PRINT Z$;
1800 IF LEN(ZW$)=<ML THEN 1730 E
LSE PRINT @449,"YOU'RE TYPING TO
O MANY LETTERS":GOSUB 1850:PRINT
@449,STRING$(62,32);:PRINT @449
,Y8$:GOTO 1720
1810 PRINT @449,"USE FULL STOP,
NOT ENTER":GOSUB 1850:PRINT @449
,STRING$(62,32);:PRINT @449,Y8$:
RETURN
1820 PRINT @449,"YOU'RE NOT HOLD
ING THAT CARD":GOSUB 1850:PRINT
@449,STRING$(62,32);:PRINT @449,

```



```
Y8$:CJ=1:RETURN
1830 CLS:PRINT @193,"IF YOU ARE
    SURE YOU WANT TO GIVE UP TH
E ATTEMPT TO GUESS THE SECRET
RULE, HIT ENTER TO SEE IT. 0
THERWISE PRESS ANY OTHER KEY."
1840 GOSUB 1170:IF Z$=CHR$(13) T
HEN CLS:PRINT @33,"THE SECRET RU
LE IS:~":PRINT:GOSUB 1610:GOTO 1
640 ELSE CLS:GOSUB 1180:GOSUB 12
10:GOSUB 1230:GOSUB 1250:GOTO 90
1850 FOR A=1 TO 750:NEXT:RETURN
1860 FOR A=1 TO 1250:NEXT:RETURN
1870 FOR A=1 TO 500:NEXT:RETURN
1880 FOR A=1 TO 375:NEXT:RETURN
```



SIMON STRONG
Original program by D. Denholm

GENERAL DESCRIPTION

Race Chase is an addictive, arcade-type game which uses good colour and sound effects.

You, the asterisk, hurtle around a three-lane maze in an anti-clockwise direction while the ballistic missile, the plus sign, hurtles towards you in a clockwise direction. The maze is littered with energy capsules (dots) which you consume as you go. There are four entries/exits and you switch lanes by using the left arrow key to move to an inner lane or the right arrow key to move out a lane. The missile meanwhile switches lanes totally at random and without reason, making this game very compulsive.

DETAILED DESCRIPTION

Lines 250-430 Title sequence and instructions (including at 300 the gosub for the drawing of the maze).

450-560 Plots and moves the missile.

580-690 Plots and moves you, as well as incrementing your score and giving repeat mazes when all the energy capsules are used up.

700-800 Subroutines for checking the boundaries of the maze, changing direction and the missile's random moves.
 810 Crash sequence.
 840-880 Scoring and repeat game sequence.
 910-915 Controls the arrow keys for lane switching.
 940-999 Routine for reading data storage of the maze.
 1000-1070 Contains the data statements.

```

250 CLS 3:PRINT @32,TAB(10);"RAC
E CHASE"
260 PRINT @96," IN THIS GAME YOU
  HURTL AROUND  A TRACK TRYING T
O HIT AS MANY  TARGETS AS YOU
CAN BEFORE YOU  ARE HIT BY A BAL
LISTIC MISSILE  WHICH IS HURLIN
G IN THE OTHER  DIRECTION"
270 PRINT @320," THE LEFT AND RI
GHT ARROW KEYS MOVE YOU IN A
ND OUT ONE LANE  RESPECTIVELY."
280 PRINT @448,TAB(5);"PRESS ANY
KEY TO START"
290 IF INKEY$="" THEN 290
300 GOSUB 950
370 P1=1456:B1=1454:POKE P1,106:
POKE B1,107:P2=1:B2=-1:P3=-32:B3
=-32
380 PRINT @231," ON YOUR MARKS !
";
390 FOR X=255 TO 1 STEP -5:SOUND
X,1
400 IF X=125 THEN PRINT @231,"
  GET SET !    ";
410 NEXT X
420 PRINT @231,"          GO !
";
430 FOR X=1 TO 200:NEXT X:PRINT
@231,STRING$(17,223);
440 '
450 ' ** START LOOP
460 '
470 ' ** MOVE MISSILE

```

```

480 *
490 POKE B1,96
500 B1=B1+B2
510 IF PEEK(B1)>128 THEN 720
520 IF PEEK(B1+B3)=96 AND PEEK(B
1+B2)=96 OR PEEK(B1-B3)=96 AND P
EEK(B1+B2)=96 THEN 730
530 IF PEEK(B1)=106 THEN 810
540 IF B4<>96 THEN POKE B4,110:B
4=0
550 IF PEEK(B1)=110 THEN B4=B1
560 POKE B1,107
570 *
580 ' MOVE YOU
590 *
600 POKE P1,96
610 IF PEEK(344)=223 AND PEEK(P1
-P3)=96 OR PEEK(343)=223 AND PEE
K(P1+P3)=96 THEN 910
630 P1=P1+P2
640 IF PEEK(P1)>128 THEN 800
650 IF PEEK(P1)=110 THEN NT=NT+1
0
660 IF NT=1560 THEN GOSUB 950:TN
=TN+NT:NT=20
670 IF PEEK(P1)=107 THEN 810
680 POKE P1,106
690 GOTO 490
700 ' ** SUBROUTINES
720 B1=B1-B2:SB=B2:B2=B3:B3=-SB:
B1=B1+B2:GOTO 530
730 ON RND(5) GOTO 540,540,540,7
40,770
740 IF PEEK(B1+B3)<>96 THEN 540
750 POKE B1,96
760 B1=B1+B2+B3+B3:GOTO 540
770 IF PEEK(B1-B3)<>96 THEN 540
780 POKE B1,96
790 B1=B1+B2-B3-B3:GOTO 540
800 P1=P1-P2:SB=P2:P2=P3:P3=-SB:
GOTO 630
810 ' ** CRASH!

```

```

820 POKE B1,106:PRINT @231,"
  CRASH ! ";
830 FOR X=255 TO 1 STEP -10:SOUN
D X,1:NEXT X
840 CLS 8:PRINT @32,TAB(5);"YOU
SCORED";TN+NT;"POINTS"
850 PRINT @448,TAB(4);"DO YOU WA
NT ANOTHER GO ?"
860 A$=INKEY$:IF A$<>"Y" AND A$<
>"N" THEN 860
870 IF A$="Y" THEN RUN 280
880 CLS:END
910 IF PEEK(344)=223 THEN P1=P1-
P3-P3
915 IF PEEK(343)=223 THEN P1=P1+
P3+P3
920 GOTO 630
940 ' ** RACE TRACK
950 CLS 0:RESTORE:FOR Y=0 TO 7
970 READ A$:FOR X=0 TO 15
975 Z=(ASC(MID$(A$,X+1,1))-48)*1
6+127
976 IF Z=127 THEN Z=110
977 IF Z=271 THEN Z=96
980 POKE 1024+X+Y*32,Z
982 POKE 1054-X+Y*32,Z
983 POKE 1472+X-Y*32,Z
984 POKE 1502-X-Y*32,Z
990 NEXT X,Y
999 RETURN
1000 DATA 3333333333333333
1010 DATA 39000000000000099
1020 DATA 30444444444444449
1030 DATA 30490000000000099
1040 DATA 3040555555555559
1050 DATA 30405900000000099
1060 DATA 3040502222222222
1070 DATA 3999992666666666

```

GRAPHICS

RODNEY JONES

Original program by R. A. Develyn

GENERAL DESCRIPTION

Although the Dragon has an extensive low resolution character set, not all the characters can be obtained directly through the keyboard. Graphics is a short program which allows direct access to the full character set, including block graphics and reverse letters and numerals.

Interesting screen displays can be built up and then saved to cassette (see Hints and Tips).

The subroutine allows you to mix low-res graphics with text, obtained from the keyboard.

The sub-routine allows you to mix low-res graphics with text, including inverse, using the entire range of colours available to the Dragon. When run, the screen shows a ← which acts as a cursor and you may also use the ↑ key which allows movement up the display for erasure, and so on. When you type a character normally it will simply appear on the screen as you expect. If you press the CONTROL key first, and then type a character, you will get an unusual effect, such as a graphics character or inverse video. The unusual effects are difficult to predict - you must experiment yourself. You will soon see that the routine has great scope.

The control characters are as follows:

CHRS(64) @ at

CHRS(58) : colon

CHRS(60) < less than

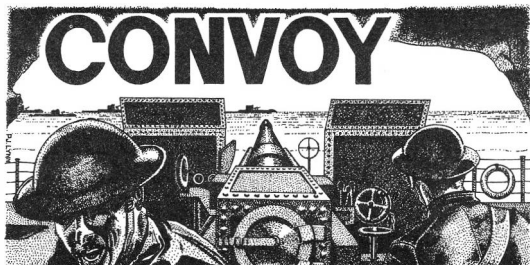
CHRS(33) ! exclamation point

In addition the up arrow can be used to change position on the screen. Try experimenting with combinations of control characters and keys on the keyboard. You will find the results worthwhile.

DETAILED DESCRIPTION

- Lines20 Set-up loop equivalent to low-res screen.
30 Wait for input.
40 Calculate ASCII code for input.
50-90 Determine whether control code.
100-180 Poke revised CHRS to low-res screen.

```
10 CLS
20 FOR I=1024 TO 1535
30 A=0:A$=" ":A$=INKEY$:IF A$=""T
HEN POKE I,95:GOTO 30
40 A=ASC(A$)
50 IF A=94 AND I>1055 THEN POKE
I,32:I=I-32:GOTO 30
60 IF A=60 AND I<>1024 THEN POKE
I,32:I=I-1:GOTO 30
70 IF A=33 AND I<1503 THEN POKE
I,32:I=I+32:GOTO 30
80 IF A=64 THEN GOSUB 130
90 IF A=58 THEN GOSUB 150
100 POKE I,A
110 NEXT I
120 GOTO 10
130 B=79
140 GOTO 160
150 B=101
160 A=0:A$=" ":A$=INKEY$:IF A$=""
THEN 160
170 A=ASC(A$):IF A>48 AND B<55 T
HEN A=A+10
180 A=A+B
190 RETURN
```



DAVID PONTING
Original program by Jeff Aughton

GENERAL DESCRIPTION

You are the commander of a large land-based gun which must be used to shell a convoy of submarines. The submarines are trying to find their way through some narrow straits and your task is to destroy them all before they escape from your range. If you successfully destroy a fleet of subs then you can go on to try your aim at larger convoys.

DETAILED DESCRIPTION

Lines 20-60 Sets up initial variables for number of ships, ship movement, pi, hits, elevation and bearing, strings for ships, blanks, displays and array sizes for ship positions.

70-215 Sets up the game screen display with the two shores, the channel in between, and the gun in position.

220-250 Pokes into screen memory the 'escape' zone at the end of the channel.

260-280 Prints position in the channel of the three ships, the line which indicates hits, elevation and bearing.

300-420 Body of program which registers change in

elevation or bearing (use of arrow keys 330, 340), firing of gun (360), sound of gun fire and calculates landing position of shell.

430-500 Moves a ship and checks for escape.

600-740 Inspects screen memory for ship at landing place of shell, prints 1, 2, 3, 4, 5 consecutively at landing spot then 'splash' or 'boom' depending upon success. Re-displays channel if miss or '+' to mark place of hit and amends as necessary the number of ships.

800-840 Successful end-of-game display, all ships sunk in time T.

850-870 Unsuccessful end display.

880-910 Invites successful player to play harder game, increasing number of ships and variables of ship movement.

```
10 REM CONVOY ADAPTED OFR DRAGON
 32 BY D.A.PONTING
15 GOSUB1000
20 N=3:U=.058:V=.04:P=22/(7*180)
25 SH$=CHR$(135)+CHR$(131):SN$=C
HR$(128)+CHR$(128):W$(1)="SPLASH
":W$(2)="BOOM! "
30 DIMM(13),S(9)
40 E=25:B=20:H=0:K=0:R=0
60 RESTORE
70 REM DRAW INITIAL SCREEN DISPL
AY
75 CLS0:A$="":TIMER=0
80 FORI=1TO32:A$=A$+CHR$(143):NE
XTI:PRINT@32,A$;
100 PRINT@114,LEFT$(A$,12);
110 PRINT@148,LEFT$(A$,10);
120 PRINT@182,LEFT$(A$,8);
130 PRINT@216,LEFT$(A$,6);
140 PRINT@250,LEFT$(A$,4);
145 PRINT@284,LEFT$(A$,2);
150 PRINT@288,LEFT$(A$,2);
160 PRINT@320,LEFT$(A$,4);
170 PRINT@352,LEFT$(A$,5);
180 PRINT@384,LEFT$(A$,7);
```

```

190 PRINT@416,LEFT$(A$,9);
200 PRINT@448,LEFT$(A$,10);
210 PRINT@480,LEFT$(A$,10);
215 PRINT@482,"+";
220 FORT=31T0511STEP32:POKE(T+10
24),32:NEXT
250 FORT=491T0511:POKE(1024+T),3
2:NEXT
260 FORI=1TON:READX:S(I)=X+1024
270 PRINT@X,SH$;:NEXTI:SB=TI
280 PRINT@0,"hits";H;" elevation
";E;" bearing";B;
300 K=K+1:IF(K>N) THENK=1
330 E=E-(E>10)*(PEEK(342)=223)+(
E<85)*(PEEK(341)=223)
340 B=B-(B>5)*(PEEK(343)=223)+(
B<90)*(PEEK(344)=223)
360 IF((INKEY$<>CHR$(32))ORR)THE
N420
365 SOUND134,2
375 TS=200*SIN(E*P)
380 T=TI
390 R=12*SIN(2*E*P)
400 X=INT(2.5*R*SIN(B*P)+.5)
410 Y=14-INT(R*COS(B*P)+.5)
420 IF(R>0) THEN600
430 D=- (RND(0)<U) -32*(RND(0)<V)
440 M=S(K)+D:IFPEEK(M+1)=32THEN9
20:REM SHIP ESCAPES
450 IFPEEK(M+1)<>128THEN280
460 PRINT@(S(K)-1024),SN$;:S(K)=
M
500 PRINT@(S(K)-1024),SH$;:GOTO2
80
600 REM SHELL LANDS
610 R=0:W=1:Q=X+Y*32
620 IFPEEK(Q+1024)=135THENW=2
630 FORI=1T05:PRINT@Q,I;:FORT=1T
020:NEXTI:PRINT@Q," ";:FORT=1T0
20:NEXTI:NEXTI
640 PRINT@Q,CHR$(128);CHR$(128);
CHR$(128);

```

```

650 FORI=-3TO3:T(I+3)=PEEK(Q+102
4+I):NEXTI
660 PRINT@(Q-2),W$(W);
670 IFW=1THEN720
690 FORI=1TON:IFS(I)<>(Q+1024)TH
ENNEXT
700 S(I)=S(N):N=N-1:H=H+1:T(3)=4
3
720 FORI=1TO500:NEXT
730 FORI=-3TO3:POKE(Q+I+1024),T(
I+3)
740 NEXT:IF(N)THEN280
800 REM *** ALL DESTROYED ***
810 T=INT(TIMER/50):CLS
815 PRINT"          *** GAME OVER
***"
820 PRINT:PRINT"      YOU DESTROYE
D";H;"SHIPS"
830 PRINT:PRINT"      YOUR TIME WA
S";T;"SECS"
840 IF(K)THEN880
850 PRINT:PRINT"      BECAUSE OF Y
OUR MISERABLE"
855 PRINT"      FAILURE YOU WILL HAV
E TO TYPE          run
860 PRINT"      IF YOU WANT TO PLA
Y AGAIN"
870 END
880 PRINT:PRINT"      PRESS space FO
R A HADER GAME"
890 IF(INKEY$(("<>"))THEN890
900 IF(H=9)THENH=8:U=U*2:V=V*2
910 N=H+1:GOTO40
920 POKES(K),128:POKES(K)+1,128
930 PRINT@35,"*** SHIP ESCAPES!!
**"
940 FORDL=1TO100:NEXTDL
945 PLAY"03;T10;L3.;E;P1;L2E;FF;
P2;EFEDC;02L1BB03L1GFL4ECFDL2GFL
1EDC
950 K=0::GOTO810
990 DATA67,104,129,170,195,73,68

```

```

,108,133
1000 REM *** INSTRUCTIONS ***
1010 CLS:PRINT@7,"*** CONVOY ***
"
1020 PRINT"  A CONVOY IS SAILING
  S-E AND"
1030 PRINT" YOU HAVE TO DESTROY
THEM ALL"
1040 PRINT"  USING THE GUN IN TH
E BOTTOM"
1050 PRINT"      CORNER OF THE SC
REEN."
1060 PRINT:PRINT"elevation IS ME
ASURED IN DEGREES";
1070 PRINT" (10-85) FROM THE HOR
IZONTAL."
1080 PRINT" PRESS UP/DOWN ARROW
KEYS TO      ALTER THE elevatio
n"
1100 PRINT"  MAX.RANGE=elevatio
n OF 45'."
1120 PRINT"bearing =-IS MEASURED
  IN DEGREES";
1130 PRINT" FROM -5 THRU 0=NORTH
  TO 90=EAST";
1140 PRINT"  PRESS L/R ARROWS T
O ALTER."
1170 PRINT"      TO fire PRESS spa
ce"
1180 PRINT"PRESS ANY KEY TO STAR
T THE GAME";
1190 A$=INKEY$:IFA$=""THEN1190
1200 RETURN

```

WORLD

M. NORRIS, .

GENERAL DESCRIPTION

The rotating globe is a familiar sight on our television screen, but now it is no longer necessary to wait for the Nine O'clock News.

This program makes full use of the Dragon's excellent screen handling facilities to produce an impressive high resolution display and creates the effect of rotation by displaying several images in rapid succession.

As the program uses the instruction POKE 65495,0 to speed up the display care should be taken when attempting to CSAVE the program. Remember that after using the BREAK key it is essential to POKE 65494,0 to return the processor to its normal operating speed.

DETAILED DESCRIPTION

Lines 10 Title and credits.

20 Select high resolution mode.

30 Initialisation.

40-240 Draw and save globe from several points of perspective.

250 Display rotating globe.

270 Colour land areas.

280-400 String detail for each continent.

410-420 Data for READ statement in line 270.

```
10  WORLD
    BY MIKE NORRIS
20  CLEAR 50:PCLEAR 4:PMODE 3:SCR
EEN 1,0:COLOR 2,3:PCLS:POKE65495
,0
```

```

30 DIM A(15,15),B(15,15),C(15,15
),D(15,15),E(15,15),F(15,15),G(1
5,15),H(15,15),I(15,15):X=100:Y=
100:R=48:R1=76:X1=52:Y1=50:X2=15
2:Y2=150:C1=1:C2=2:C3=3:C4=4
40 GOSUB 280:GOSUB 260:M$="BM54,
92":N$="BM68,96":O$="BM144,112":
P$="BM82,58"
50 Q$="XM$:XIN$:XN$:XAU$:XO$:XAM
$:XP$:XAR$":DRAW Q$:I1=5:GOSUB
270
60 GET(X1,Y1)-(X2,Y2),A,G
70 PCLS:GOSUB 260:GOSUB 320:M$="
BM73,92":N$="BM84,100":O$="BM130
,62":P$="BM94,54"
80 Q$="XM$:XIN$:XN$:XAU$:XM$:XAF
$:XO$:XAM$:XP$:XAR$":DRAW Q$:I1
=4:GOSUB 270
90 GET(X1,Y1)-(X2,Y2),B,G:PCLS:G
OSUB 260:GOSUB 330:M$="BM92,88":
N$="BM102,94"
100 Q$="XM$:XIN$:XN$:XAU$:XM$:XA
F$":DRAW Q$:I1=2:GOSUB 270:GET(
X1,Y1)-(X2,Y2),C,G
110 PCLS:GOSUB 260:GOSUB 340:M$=
"BM104,86":N$="BM122,94":Q$="BM9
0,144":P$="BM76,64"
120 Q$="XM$:XIN$:XN$:XAU$:XP$:XA
F$:XO$:XAR$":DRAW Q$:I1=3:GOSUB
270
130 GET(X1,Y1)-(X2,Y2),D,G:PCLS:
GOSUB260:GOSUB350:M$="BM90,68"
140 Q$="XM$:XAF$:XM$:XEU$":DRAW
Q$:I1=4:GOSUB270:GET(X1,Y1)-(X2
,Y2),E,G
150 PCLS:GOSUB260:GOSUB360:M$="B
M114,64":N$="BM64,94":O$="BM88,5
6"
160 Q$="XM$:XAF$:XN$:XAM$:XO$:XA
R$":DRAW Q$:I1=5:GOSUB270
170 GET(X1,Y1)-(X2,Y2),F,G:PCLS:
GOSUB 260:GOSUB380:M$="BM130,66"

```

```

:N#="BM72,96"
180 Q#="XM#;XAF#;XN#;XAM#;XM#;XE
U#;":DRAW Q#:I1=6:GOSUB270
190 GET(X1,Y1)-(X2,Y2),G,G:PCLS:
GOSUB260:GOSUB390:M#="BM96,98":N
#="BM66,128"
200 Q#="XM#;XAM#;XN#;XEU#;":DRAW
Q#:I1=4:GOSUB270:GET(X1,Y1)-(X2
,Y2),H,G
210 PCLS:GOSUB260:GOSUB400:M#="B
M122,94":N#="BM46,96":O#="BM38,8
8":P#="BM88,144"
220 Q#="XM#;XAM#;XN#;XAU#;XO#;XI
N#;XP#;XAR#;":DRAW Q#:I1=5:GOSUB
270
230 GET(X1,Y1)-(X2,Y2),I,G:COLOR
C1,C4:PCLS:X1=76:X2=176
240 X=X+26:R=70:GOSUB 260:PAINT(
X,Y),C2:PUT(X1,Y1)-(X2,Y2),I,PSE
T:POKE 65484,0
250 PUT(X1,Y1)-(X2,Y2),A,PSET:PU
T(X1,Y1)-(X2,Y2),B,PSET:PUT(X1,Y
1)-(X2,Y2),C,PSET:PUT(X1,Y1)-(X2
,Y2),D,PSET:PUT(X1,Y1)-(X2,Y2),E
,PSET:PUT(X1,Y1)-(X2,Y2),F,PSET:
PUT(X1,Y1)-(X2,Y2),G,PSET:PUT(X1
,Y1)-(X2,Y2),H,PSET:PUT(X1,Y1)-
(X2,Y2),I,PSET:GOTO 250
260 CIRCLE(X,Y),R,C2:RETURN
270 FOR I=1 TO I1:READ J,K:PAINT
(J,K),C1,C2:NEXT I:CIRCLE(X,Y),
R1,C2:PAINT(148,112),C2,C2:PAINT
(66,64),C2,C2:RETURN
280 IN#="C2R4F2R2D2U2E6F6D2U6E6R
2E6U8R2F4U2H2U4E4R6F2D2R2U6R2;BM
-20,+14;D4G4;BM-0,+6;D2;BM-20,+8
;R2"
290 AU#="F2D2R2;BM+4,+0;F2R2U2E2
L2G2;BM+8,+2;D2R8D2L2;BM-2,+6;U2
R2F6D2G4D4L2H4L8G2H2U4H2E4R6F4E2
U2;BM+0,+20;R2;BM+8,+0;R2G2L2;BM
+6,-6;R2E2L2U2"

```

300 AM\$="H2U2H4U6R2E2U2H2L2H4U8H
 4D2H2U4H6L2G4E4U4E2;BM+20,+22;L6
 D4F2R2F2;BM-28,+54;L12H2L18G2L2"
 310 AR\$="R8H2R6F2E2R6D4G2H2":RET
 URN
 320 AR\$="R4F2R8E2R2F2R2F2G2":AF\$
 ="H8L4D2F4D2G2L2H4BM-2,+6R4D2G4D
 2":AM\$="G2D4G2E2F6D2F8R2BM-30,+6
 0L14H2L10G2":RETURN
 330 AF\$="L4H2L2H2L2G2F4G2L2H4G2F
 6R2G2L2G4D2G4D12G2D4G4H8U6H2BM+0
 ,-26R8E2R4E2U6R4D2L2G2L6H2G2BM+1
 6,+40D2L2D4L2BM+8,+20E2F4BM+18,+
 2R2E2R6E2R6E2R8":RETURN
 340 AF\$="D2L4D2G2D2G2L2G2D2F2E4R
 8D2U2R2F2R4E2R2D2L2D8L2G2L2G2L4H
 2U4L8G2L2G2D2L2D2F4R4F8D6F2D6F2D
 6R6E4U14E2U2E8L2H2L2H4U2R4F4E2H2
 U2R6F2R2BM-19,+32D2L2D2L2":AR\$="G
 8D2R6":RETURN
 350 EU\$="E2R2E2R2E2U4H2G2D2U2L2U
 2E2BM-8,+6G2F2G2H2BM-30,+34R4F4R
 2D6G2D6G4BM+26,+24U2R18F2D2BM+18
 ,-54F6E2U2E4F2R2F2R4"
 360 AM\$="F2G6D6F6R2F2D12F2D2F4E2
 H2U10E4U6E2U2E2R2U4H2L2H2L2H6L6H
 6L2H2U2E2R6F2U4E2U2E8H2E2R4H4L2G
 2L6H2U2E2L4H2L6G2H2L2G2H2D2G2L2G
 2F2D2G4L4R6F2D6F2D2F2H2E2F6D2F2D
 2F2R4F4BM+6,-6"
 370 AR\$="D2F2R2E2U4BM+4,+8R2BM+4
 ,+4E2D4R2BM+2,+2R2E2R2E2U4H2G4H2
 E6BM-34,+94U2H2G8":RETURN
 380 EU\$="R2E2BM-6,+0G2U4G2BM+6,-
 4R2BM-12,-4D2G2L2U2H4BM+0,+94H4U
 4L2G6BM+44,-2E2U2E2R4":RETURN
 390 EU\$="E2BM+34,+24R2E2R4E2R2F2
 R8BM+20,-30H2U8H4U6H2L6U10E4R8BM
 -2,-4L4H2U4E4":RETURN
 400 AR\$="R4E2R2F2R6F2R2D4":RETUR
 N
 410 DATA 68,78,130,68,144,108,92


```
, 122,96,144,68,80,100,122,96,142  
, 132,70,100,70,116,114,120,70,13  
8,112,74,100,112,80,56,102,98,14  
6,92,104,136,72,64,72,64,110,90,  
56,120,100,82,112,132,108,136,72  
,82,112,82,112,82,112,94,72,100,  
102,140,96,136  
420 DATA 74,120,66,136,102,68,11  
6,66,70,94,144  
430 CHECKSUM=7568
```

HINTS AND TIPS

GETTING THE PICTURE

It is often handy to be able to save (for later recall) the screen graphics display. For example, graphs which have taken a long time to calculate can then be saved directly onto tape using CSAVEM and recalled using CLOADM and addresses gleaned from the following table of HI-RES pages:-

PAGE	HEX ADDRESS	PMODE	NO. PAGES USED
1	600-BFF	0	1
2	C00-11FF	1,2	2
3	1200-17FF	3,4	4
4	1800-1DFF		
5	1E00-23FF		
6	2400-29FF		
7	2A00-2FFF		
8	3000-35FF		

Assuming that you are starting from Page 1 then:-

For PMODE 0 use: CSAVEM "NAME", &H600, &HBBF,
&H600

For PMODE 1 + 2 use: CSAVE "NAME", &H600, &H11FF, &H600

For PMODE 3 + 4 use: CSAVE "NAME", &H600, &H1DFF,
&H600

To reload your graphics simply use:-
CLOADM "NAME"

LOCATING THE HIDDEN CHARACTERS

The Dragon's text screen is located in memory from locations 1024 (top left corner) to 1535 (bottom right corner). POKEing numbers into this area will cause the computer to PRINT characters onto the TV screen. Play around with a few numbers, or type in the following short program:-

```
10 FOR I=0 TO 255
20 PRINT@1000,I
```

```

30 POKE 1144,I
40 PRINT@162,"PRESS A KEY TO
CONTINUE"
50 IF INKEY$="" THEN 50
60 NEXT I

```

If you compare these characters with the list on Page 136 of your computer User's Manual, you will see that not only do the numbers *not* correspond with the ASCII code for the relevant character, but there are also several characters which are not listed under ASCII. For instance, POKEing to the screen is the only way to get reverse numerals (0-9).

The following sample routine will print any character that you type in its reverse form.

```

100 CLS
110 INPUT"TYPE ANY CHARACTERS";
A$
120 FOR T=1 TO LEN(A$)
130 X=ASC(MID$(A$,T,1))
140 IF X>63 AND X<96 THEN X=X-64
150 POKE (1024+100+T),X
160 NEXT T

```

BEYOND THE DRAGON'S REACH

Here is a quick way of putting a protected copyright message on to the end of your programs:-

```

TYPE 10 REM (< ENTER >)
20 REM (< ENTER >)

```

Now type EXEC (39512) and press ENTER twice. The screen will fill with garbage, but don't worry. Now list your program.

Next type: YOURMESSAGE=39512 (a maximum of 12 letters). Press ENTER, followed by:-

EXEC your message and press ENTER twice

You will now see (when you list) that your message is on line 65535. Try as you (or anybody else) might, you can't lose that line, it's there forever!

A TURBO-DRAGON?

```
POKE 65495,0.
```

The above instruction might make your programs run 30-50%

faster than usual. Because of changes in the production process, not all machines will respond to this instruction.

If your machine does speed up, then I suggest that you play with this for a while and then forget it. Using this POKE will cause you to have occasional random errors and you will have a lot of trouble with the cassette recorder operation! With careful and efficient basic programming, you can always make your program run faster and this will help you far more, in the future, than relying upon a 'BOLT-ON' turbocharger.

THE HI-RES SCROLLS

The following machine code routine will scroll the high-resolution screen up or down, left or right:-

```
10 CLEAR300,30000
20 X=30000
30 REM SCROLL DOWN
40 DATA 8E,1D,DF,EC,83,ED,88,20,
      8C,06,10,24,F6,39
50 FOR D=1 TO 14:READ A$:POKE X+
      D,VAL("&H"+A$):NEXT
60 REM SCROLL UP
70 DATA 8E,06,00,EC,88,20,ED,81,
      8C,1D,DF,2F,F6,39
80 FOR D=1TO14:READ A$:POKE X+D+
      100,VAL("&H"+A$):NEXT
```

To scroll up use: EXEC 30101

To scroll down use: EXEC 30001

To scroll left use: POKE 30008,1: EXEC 30001

To scroll right use: POKE 30106,1: EXEC 30101

Try adding these lines to the above to get a demonstration of up/down scrolling.

```
90 PMODE 4,1:SCREEN 1,0:PCLS0
100 FOR D=1 TO 100:LINE-(RND(200)
      ),RND(150)),PSET:EXEC 30001:
      NEXT:PCLS
110 FOR D=1 TO 100:LINE-(RND(200)
      ),RND(150)),PSET:EXEC 30101:
      NEXT:PCLS:GOTO100
```

HIGH SPEED KEYBOARD READ

If you find INKEY\$ too slow, you might like to read the keyboard directly. The following addresses should be PEEKed to see which of the arrow keys is pressed:-

LEFT 343

RIGHT 344

UP 341

DOWN 342

If the key is pressed, then you'll get a value of 223. Using a statement like

```
IF PEEK (341) = 223 THEN .....
```

would allow you to simulate auto-repeating keys.

Also X = PEEK (135) will return the ASCII code of any key that is being depressed.

KEYBOARD INTERRUPTS

This one is really for machine code freaks, although you can use it with care within a BASIC program.

Location 363 and 364 contain the vector for the machine's keyboard interrupt routine. By redirecting this vector, you can wedge your own code into the keyboard IRQ routine (how about auto-repeating keys or a buffered keyboard?).

These interrupts are enabled with POKE 362, 126 and disabled with POKE 362, 57. In other words, POKE 362, 57 will 'TURN OFF' the keyboard and POKE 362, 126 will 'TURN ON' the keyboard. This should only be used within a program otherwise, if you turn off the keyboard in direct mode, you will have no way of communicating with the computer to turn the keyboard back on again!

Whilst on the subject of machine code routines, USRn can be used to call M/C routines from within a BASIC program. However, because of a hardware bug only USR0 can actually be used. If you want to call more than one M/C routine, then it is better to revert to EXEC and, if necessary, POKEing your data into place before EXECing.

REVERSE SCREEN

Machine code again, but friendly this time. This little routine will, when called, reverse the colours of the HI-RES Screen:-

```
10 CLEAR 200,32699
```

```

20 DATA 142,6,0,134,255,168,132,
    167,132,48,1,140,30,0,38,243,
    126,180,140,246,57
30 FOR A=1 TO 21
40 READ B
50 POKE A+32699,B
60 NEXT A

```

EXEC 32700 will reverse the colours of the screen. By the way, this routine will work at the same time as the "SCROLLUP/DOWN/LEFT/RIGHT" routine listed elsewhere in the book

To reverse the text screen, then use (after entering and running the program above)

```

70 POKE32701,4:POKE32702,0:POKE
    32712,6:POKE32713,0:EXEC32700

```

BLACK AND WHITE?

Who always wants to watch *Dallas* or *Crossroads* right in the middle of your favourite game?

The Dragon will work perfectly happily with a black and white TV that is capable of picking up UHF transmissions. Certainly any TV less than ten years old will work with a Dragon and this is a reasonably cheap way of saving a lot of arguments (or late nights!). If you're not happy with the picture quality then, dare I say it, *Dallas* in black and white isn't too bad.

A CLEAN BREAK

It is often useful to disable the BREAK key, to prevent an impromptu end to your program. The following routine will allow this.

Enter this in direct mode:-

```

POKE 411, 228
POKE 412, 203
POKE 413, 4
POKE 414, 237
POKE 415, 228

```

Then, within a program or in direct mode use:-

```

POKE 410, 236 TO DISABLE THE BREAK KEY
POKE 410, 57 TO ENABLE THE BREAK KEY

```

USER DEFINED GRAPHICS CHARACTERS

Here's a routine that will create graphics characters from DATA. The DATA you can work out by drawing the character on a grid, and treating each row of the grid as a 'nibble' (half a byte). This is assuming you are using PMODE3; for other modes, you will need to make some modifications.

DATA codes	8	4	2	1	
6		▨	▨	▨	(racing car)
15	▨	▨	▨	▨	
6		▨	▨	▨	
6		▨	▨	▨	
6		▨	▨	▨	
6		▨	▨	▨	
15	▨	▨	▨	▨	
15	▨	▨	▨	▨	

An example character. Each box = 1 pixel in PMODE3.

The Routine:-

```
10 PMODE 3,1:PCLS:SCREEN1,0
20 XC=0:YC=0:N=1
30 FOR CH=1 TO N:REM N=NUMBER OF
  CHARACTERS
40 READ C,B:REM C=FOREGROUND
  COLOUR, B=BACKGROUND COLOUR
50 FOR Y=YC TO YC+7
60 READ CD: D=8
70 FOR X=XC TO XC+7 STEP2
80 P=INT(CD/D)
90 IF P=0 THEN PSET(X,Y,B) ELSE
  PSET(X,Y,C):CD=CD-D
100 D=D/2:NEXT X,Y
110 XC=XC+8:IF XC>255 THEN XC=0:
  YC=YC+8
120 NEXT CH
125 REM GREEN ON RED BACKGROUND
130 DATA 1,4
140 DATA 6,15,6,6,6,6,15,15
150 GOTO 150
```

SHIFT LOCK UNDER SOFTWARE CONTROL

Some programs (e.g. educational, grammar) may require that the keyboard be kept in its 'lower case mode', and you may not want to rely on the user pressing SHIFT Ø.

Well, there is a poke which will take care of this:-

POKE &H 149,Ø Puts the keyboard in lower case mode

POKE &H 149,255 Puts it back in upper case mode

The effect of SHIFT Ø remains unchanged.

TABBY DRAGON

Don't despair that you can't find the TAB function in the Dragon manual. There is one! Where N is the print position of the first character of the print string, its syntax is PRINT TAB(N); print string. (Remember that the first column on the screen is column Ø, so TAB(10); would start printing at the eleventh column.)

LESS DIM THAN YOU THOUGHT

This could save you lots of memory in your graphics programs. When you GET an area of screen into an array, you first have to DIMension the array. Dragon says that if your picture is 20 x 16 (e.g. X=20 → 39, Y=80 → 95) then you must DIMension an array of 20 x 16 (e.g. A(20,16)). This would use $21 \times 17 \times 5 = 1785$ bytes!! (Each element in an array uses five bytes.)

In fact, all you need to do is to make sure that there are enough bytes in the array to match the number of bytes used in the picture you are GETting.

In our example this would be $\frac{20 \times 16}{8} = 40$ bytes

As each element in an array uses five bytes, you will need $\frac{40}{5}$ elements, so:- DIMA(7) will be sufficient.

This means we are using forty bytes of memory instead of 1785. Quite a saving!

BURBLING DRAGON

Try this to keep the kids happy:-

```
2Ø CLS:PRINT@228,"TOUCH ME AND  
I'LL SCREAM"  
3Ø A=PEEK(&HFFØØ) AND 127:IF A=  
127 THEN 3Ø  
4Ø SOUND A+5Ø,1:GOTO 3Ø
```


Now play with the keyboard!

MERGING PROGRAMS

You can merge two or more programs together in the following way:-

- 1) Make sure one program is RENUMBERed so that all its line numbers are higher than those of the other program.
- 2) Load the program with the low line numbers.
- 3) PRINT PEEK(25); PEEK(26); PEEK(27); PEEK(28) and make a note of these values.
- 4) POKE 25 with PEEK(27), and POKE 26 with PEEK(28) - 2.
- 5) LOAD the program with the high line numbers.
- 6) POKE 25 and 26 with their original values.
- 7) LIST.

ADJUSTING YOUR PRINTER

As you know, the screen has two 'fields' for printing, and if you separate two items in a print string with a comma then the print position is moved to the next field.

This is also true when using your printer, and the 'field width' is normally 16. The difference, of course, is that with 80 characters per line instead of 32, there are 5 fields instead of just 2.

You can adjust the width of these fields by POKEing location &H99 with the field size of your choice. For example, POKE &H99,10 would result in 8 fields of 10 characters. POKE &H99,8 would result in 10 fields of 8 characters.

THREE UNMENTIONED EDIT COMMANDS

There are three editing commands which are not mentioned in the Dragon manual. They work when you are in normal editor mode (not insert mode) and they are A, E and Q. I call them Abort, Exit and Quit.

Abort is particularly useful if you've made a complete hash of your edit and wish you could start it again, because it drops you at precisely the point after which you first typed 'EDIT line no.'.

Exit is exactly like ENTER.

Quit is like Abort except that you also leave edit mode, so it drops you at precisely the point before which you typed 'EDIT line no.'. It's as though you never typed it at all.

THOSE FAST KEYBOARD READS

You may have seen that by PEEKing addresses 338 - 345 you can test for keys being pressed.

For example, if PEEK(341) = 223 THEN the UP arrow key is being pressed. This is because when the UP arrow key is being pressed, bit 5 of address 341 is reset to 0, whereas otherwise it is one.

However, the other bits in this address relate to other keys in exactly the same way, so that, for example, if key 'S' is being pressed, bit 4 will be reset to 0, so PEEK(341) will return 239.

This means that testing for the UP arrow with IF PEEK(341) = 223 will not work if 'S' is being pressed at the same time (or indeed, K,C, or 3). To make it infallible you need to test the appropriate bit, not just the whole address.

You can do this by 'masking'. The expression is:-
IF PEEK(341) AND 32 = 0 THEN the UP arrow is pressed.

If you want a fast way of checking whether any keys at all are being pressed then use:-
IF PEEK(&HFF00) = 255 THEN no-one is touching my Dragon.

PRINTING CONTROL CODES

Most computers allow the printing of control codes to some degree. The Dragon is not the most spectacular in this respect, but you can print a 'delete' character.

Therefore PRINT CHR\$(8) will delete the last character printed, or more precisely, it will delete the character immediately preceding the current print position and decrement the print position by one.

Try this:-

```
10 CLS:PRINT"0123456789";
20 A$=INKEY$:IF A$="" THEN 20
30 PRINT CHR$(8)
40 GOTO 20
```

Then try missing out the semi-colon in line 10, and hit the spacebar 23 times.

INKEY\$ LATCHING

A simple way of simulating an auto-request is to 'latch' the key pressed by storing it in a second string variable, for example B\$.

So that:-

```
100 A$ = INKEY$: IF A$ = " " THEN A$ = B$  
..... (Rest of INKEY$ related routine)
```

```
.....  
.....  
.....  
.....  
200 B$ = A$
```

When the user presses (say) '2', INKEY\$ returns '2' and assigns it to A\$ in line 100. Then in line 200, B\$ is assigned with A\$ ('2'). The next time the keyboard is checked, in line 100, if no other key has yet been pressed, INKEY\$ returns the null string and assigns it to A\$. The IF statement recognises this and assigns A\$ with its former value - B\$('2'). This creates an auto-repeat type of effect.

TEN COLOURS ON THE HI-RES SCREENS

The Dragon can send four colours to the TV in PMODE3. However, because of interference effects on the TV, you can produce another six colours! This only works properly for colour set 1, that is, PMODE3,1: SCREEN 1,1.

The relevant colours are CYAN, MAGENTA, and ORANGE. If you take any two of these colours, and draw horizontal lines, adjacent, of alternating colour, you can produce the other six colours.

Try this:-

```
100 PMODE 3,1:PCLS  
110 INPUT "1ST COLOUR";C1  
120 INPUT "2ND COLOUR";C2  
130 SCREEN 1,1  
140 FOR Y=20 TO 80 STEP 2  
150 COLOR C1,1:LINE(10,Y)-(30,Y)  
    ,PSET  
160 COLOR C2,1:LINE(10,Y+1)-(30,  
    Y+1),PSET:NEXT  
170 IF PEEK(&HFF00)=255 THEN 170  
180 GOTO 110
```

Try various combinations of colours 2,3 and 4. Notice that the same two colours produce a different colour depending on which way round you INPUT them.

A SPRITELY MACHINE

A SPRITE is a graphics character which crosses a scene without corrupting it at all.

To achieve this on the Dragon, you need to do two things.

- 1) Before you PUT your sprite onto the screen, GET the scenery into another array. Then, to erase the sprite, PUT the scenery array on screen, over the old sprite position.
- 2) To make the sprite's own background 'transparent' either
(a) colour it RED and PUT with AND instead of PSET, or
(b) colour it GREEN and PUT with OR.

If you choose (a), then colour the sprite foreground green.

If you choose (b), colour the sprite foreground red.

This applies in PMODE3, with colour set 0. For colour set 1,

RED → ORANGE



GREEN → BUFF.

RENUM HAZARD

When you RENUM, all GOTO and GOSUB line numbers are taken care of. However, if you use 'RUN line no.' in your program, you may find it crashes after a RENUM. The problem is that RENUM does not alter the RUN line number - you'll have to do that one yourself!

FOR THE RECORD..

The early Dragon manual - and at least one other well known book on the Dragon - contains a most confusing error in a table (p.93 of the Dragon manual) of PMODE numbers, GRID size, POINT(PIXEL) size. PAGES used. and colour sets available.

It shows the pixels in PMODES 2 and 3 as being of the shape  , whereas in fact they are  . Correspondingly, it lists the grid size as being 192 x 128, whereas it is, in fact, 128 x 192.

AND FINALLY

The Dragon manual tells you that the CLEAR command must be followed by a number to set aside string storage space. In fact, you can use it without any numbers - just CLEAR - and all it does is clear all the variables.

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