

## Spectrum

```

19 REM *****
20 REM * spectrum *
21 REM *user defined char-gen*
22 REM *****
100 GO SUB 1000: REM initialise
110 FOR j=0 TO 1 STEP 0
120 GO SUB 2500: REM input
130 GO SUB 3000: REM validate
140 GO SUB pointer: REM obey
150 NEXT j
200 STOP
999 REM *****
1000 REM * initialise *
1001 REM *****
1020 DIM b(8,8): DIM c$(2,2):
    DIM d(2,7): DIM r$(8): DIM d$(
1): DIM t(8,8)
1100 LET nullkey=2000: LET movec
rar=3500: LET command=3000: LET
update=4500
1200 REM *****init screen****
1220 LET r=4: LET c=3: LET r1=
8: LET c1=8: LET of=16
1230 LET black=0: LET blue=1: LE
T cyan=5: LET white=7
1240 PAPER cyan: INK black
1250 LET z$="User-Defined Charac
ters": PRINT AT 1,41z$: PRINT AT
20,41z$
1260 LET z$=" 76543210": PRINT A
T r0,c01z$: PRINT TAB c0+of1z$
1270 PRINT AT r0+c1+1,c01z$: PR
INT TAB c0+of1z$
1280 FOR r=r0+1 TO r0+c1
1290 LET z$=STR$ (r-r0-1): LET z
$=z$+" "+z$
1300 PRINT AT r,c01z$: AT r,c0+of
1z$
1310 NEXT r
1420 REM *****cursor offset*****
1440 DATA -1,+1,0,0
1445 DATA 0,0,+1,-1
1450 DATA 0,0,+1,-1
1460 FOR k=1 TO 2: FOR l=1 TO 4
1470 READ d(k,l): NEXT l: NEXT k
1600 REM *****init text window***
1620 FOR r=1 TO r1
1640 FOR c=1 TO c1
1660 LET t(r,c)=32
1680 NEXT c: NEXT r
1800 LET rpos=1: LET cpos=1: LET
cn=144: LET e$="A"
1820 GO SUB 6000
1990 RETURN
1999 REM *****
2000 REM * invalid keypress *
2001 REM *****
2020 BEEP 2,-3: RETURN
2120 RETURN
2499 REM *****
2500 REM * crsr @ rpos, cpos *
2501 REM *****
2520 LET rp=r0+rpos: LET cp=c0+
cpo: LET c1=b(rpos, cpos): LET
d$=" "*(c1)
2540 PRINT AT rp, cp1 FLASH 1d$
2600 REM LET t$=INKEY$: IF t$<>
"" THEN GO TO 2600
2620 LET t$=INKEY$: IF t$="" THEN
N GO TO 2620
2640 PRINT AT rp, cp1 FLASH 0d$
2700 RETURN
2999 REM *****
3000 REM * validate input *
3001 REM *****
3020 IF t$="" THEN LET pointer
=nullkey: LET j=2: RETURN
3040 LET key=CODE (t$)-7: LET k=
key-45: LET pointer=nullkey
3060 IF (key)=1 AND key=(4) THEN
LET pointer=movecrsr: RETURN
3080 IF (t$)="6" AND t$="8" THEN
EN LET key=VAL (t$)-4: LET
pointer=command+key*500: RETU
R
3100 RETURN
3499 REM *****
3500 REM * move the cursor *
3501 REM *****
3520 LET ny=rpos+(2,key): LET
nx=cpo+(1,key)
3540 IF (ny<1 OR ny>r1) THEN
RETURN
3560 IF (nx<1 OR nx>r1) THEN
RETURN
3580 LET rpos=ny: LET cpos=nx
3600 RETURN
3999 REM *****
4000 REM * toggle a cell *
4001 REM *****
4020 LET tg=1-b(rpos, cpos): LET
d$=" "*(1+tg)

```

## BBC Micro

```

19 REM*****
20 REM* BBC Micro *
21 REM*****
22 REM* USER-DEF CHGEN *
50 MODE 1
60 2/3=3
70 *FX4,1
100 PROCinitialise
110 REPEAT
120 PROCget_command
130 PROCvalidate_command
140 PROCobey(COMMAND)
160 UNTIL COMMAND=QUIT
180 *FX4,0
200 END
999 REM*****
1000 DEFPROCinitialise
1001 REM*****
1040 DIM BD(8,8),C$(2,2)
1045 DIMOFST(2,7),D$(1),TX(8,8)
1060 D$(8)="":D$(1)=""
1080 CGEN=0C08-1
1100 QUIT=-1:NULLKEY=0:MVCRSR=1:
TGGL=2:DFINE=3:PLACE=4
1200 REM*****INIT SCREEN****
1220 R=4:C=3:RL=8:CL=8
1225 C9=CL+3:OF=16
1230 BLACK=8:RED=1:YELLOW=2
1235 WHITE=3:BACKGR=128
1240 COLOUR BACKGR+RED
1245 COLOUR YELLOW:CLS
1250 Z$="USER-DEFINED CHARACTERS"
1255 PRINTTAB(4,1)Z$:TAB(4,20)Z$
1260 Z$=" 76543210"
1264 PRINTTAB(C8,R8)Z$
1268 PRINTTAB(C8+OF,R8)Z$
1270 Y=R+RL+1:X=C8
1274 PRINTTAB(X,Y)Z$
1278 PRINTTAB(X+OF,Y)Z$
1280 FOR R=R0+1 TO R0+RL
1290 Z$=STR$(R-R0-1)
1295 Z$=Z$+" "+Z$
1300 PRINTTAB(C8,R)Z$
1304 PRINTTAB(C8+OF,R)Z$
1318 NEXT R
1320 COLOUR WHITE
1420 REM*****CURSOR OFFSET****
1440 DATA -1,+1,0,0
1450 DATA 0,0,+1,-1
1460 FOR k=1 TO 2:FOR l=1 TO 4
1470 READ OFST(k,l):NEXT L,k
1500 REM*****KEY SETTINGS*****
1520 *KEY1" T"
1540 *KEY2" D"
1560 *KEY3" P"
1600 REM*****INIT TEXT WINDOW**
1620 FOR R=1 TO RL
1640 FOR C=1 TO RL
1660 TX(R,C)=32
1680 NEXT C,R
1800 RPOS=1:CPOS=1:CN=224
1805 PROCdisplay_character
1990 ENDPROC
1999 REM*****
2000 DEFPROCnullkey
2001 REM*****
2020 SOUND 1,-15,48,18
2120 ENDPROC
2499 REM*****
2500 DEFPROCget_command
2501 REM*****
2520 RP=R0+RPOS:CP=C0+CPOS
2540 PRINTTAB(CP,RP):
2620 T$=GET$
2700 ENDPROC
2999 REM*****
3000 DEFPROCvalidate_command
3001 REM*****
3020 COMMAND=MVCRSR
3040 KEY=ASC(T$)-135
3060 IF KEY<1 THEN COMMAND=NULLKEY
3065 IF KEY>4 THEN COMMAND=NULLKEY
3080 IF T$="T" THEN COMMAND=TGGL
3100 IF T$="D" THEN COMMAND=DFINE
3120 IF T$="P" THEN COMMAND=PLACE
3150 IF T$=":" THEN COMMAND=QUIT
3160 ENDPROC
3299 REM*****
3300 DEFPROCobey(command)
3301 REM*****
3320 IF command=QUIT THEN
PROCnullkey
3340 IF command=MVCRSR THEN
PROCmovecursor(KEY)
3360 IF command=TGGL THEN
PROCToggle_a_cell
3380 IF command=DFINE THEN
PROCdefine_character
3400 IF command=PLACE THEN
PROCplace_character
3420 IF command=NULLKEY THEN
PROCnullkey

```