

6F63

8082
A956
8000
809D
0600
0601
000F
0011

00010 *****
00020 * CSE 502 *
00030 * TRS80 PROJECT *
00040 * *
00050 * NASER ABBASI *
00060 * 3/25/87 *
00070 *****
00100 ORG \$5000
00105 TVADDR EQU \$8082
00110 SOUND EQU \$A956
00120 TUTOR EQU \$8000
00130 CLRSCN EQU \$809D
00140 DELX EQU \$0600
00150 DELY EQU \$0601
00160 ROW EQU \$0F
00170 COL EQU \$11
00180 *

00190 ***** MAIN LINE ***
00200 *

6F63

6F63 0F 10
6F65 BD 6FB0
6F68 BD 701F
6F68 BD 705C
6F6E 8E 0032
6F71 BD 708A
6F74 AD 9F A000

00210 MAIN
00211 CLR \$10
00220 JSR INIT
00230 BBB JSR MOVE
00240 CCC JSR EDGE
00250 LDX #50
00260 DDD JSR DELAY
00270 E JSR [\$A000]
00280 *

AMOUNT OF DELAY IN SECONDS

READ THE KEY BOARD

6F78 27 EE
6F7A 81 08
6F7C 26 07
6F7E C6 FF
6F80 F7 0600
6F83 20 E3
6F85 81 09
6F87 26 07
6F89 C6 01
6F8B F7 0600
6F8E 20 DB
6F90 81 5E
6F92 26 07
6F94 C6 FF
6F96 F7 0601
6F99 20 CD
6F9B 81 0A
6F9D 26 07
6F9F C6 01
6FA1 F7 0601
6FA4 20 C2
6FA6 81 51
6FA8 26 03
6FAA 7E 8000
6FAD 20 B9
6FAF 39

00290 BEQ BBB
00300 CMPA #08
00310 BNE K1
00320 LDB #FF
00330 STB DELX
00340 BRA BBB
00350 K1 CMPA #09
00360 BNE K2
00370 LDB #01
00380 STB DELX
00390 BRA BBB
00400 K2 CMPA #5E
00410 BNE K3
00420 LDB #FF
00430 STB DELY
00440 BRA BBB
00450 K3 CMPA #0A
00460 BNE K4
00470 LDB #01
00480 STB DELY
00490 BRA BBB
00500 K4 CMPA #51
00510 BNE K5
00520 JMP TUTOR
00530 K5 BRA BBB
00540 RTS
00550 *

IF NO KEY PRESSED GO TO MOVE AGAIN
IS THE KEY A LEFT ARROW ?
NO GO TO K1

YES DELX=-1
AND GO TO MOVE AGAIN
IS THE KEY A RIGHT ARROW ?
NO GO TO K2

YES MAKE DELX=1
AND GO TO MOVE ROUTINE
IS THE KEY AN UP ARROW
NO GO TO K3
YES IT IS
MAKE DELY = -1
AND GO TO MOVE ROUTINE
IS THE KEY A DOWN ARROW ?
NO G TO K4

YES MAKE DELY =1
AND GO TO MOVE ROUTINE
IS IT A Q ?
NO GO TO K5
YES IT IS GO TO TUTOR
GO TO MOVE ROUTINE

00560 ***** INIT ROUTINE *****

6FB0

6FB0 BD 809D
6FB3 86 AF
6FB5 BD 6FD0
6FB8 34 02

00580 INIT
00590 JSR CLRSCN
00600 LDA #AF
00610 JSR BORDER
00620 PSHS A

VCLEAR THE SCREEN
GET THE BLUE GRAHIC CHAR
MAKE THE BORDER LINES
SAVE THE A REG FOR A SECOND

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6FBA 86 08 00630 LDA #08
6FBC 97 0F 00640 STA RDW ROW NUMBER
6FBE 86 06 00650 LDA #06
6FC0 97 11 00660 STA COL COL NUMBER
6FC2 86 01 00670 LDA #01
6FC4 B7 0500 00680 STA DELX DELX=1
6FC7 B7 0501 00690 STA DELY DELY =1
6FCA 35 02 00700 PULS A GET BACK THE BLUE CHAR
6FCC BD 7015 00710 JSR CHROUT AND PRINT IT AT THE ABOVE POSITIO
N
6FCF 39 00720 RTS
00730 *
00740 *** BORDER ROUTINE*****
00750 *
6FD0 00760 BORDER
6FD0 C6 1F 00770 LDB #31 LAST COL POSITION
6FD2 0F 0F 00780 CLR ROW INIT THE ROW POSITION
6FD4 0F 11 00790 CLR COL INIT THE COL POSITION
6FD6 00800 LOOP1
6FD6 BD 7015 00810 JSR CHROUT PRINT THE TOP EDGE
6FD9 0C 11 00820 INC COL COL=COL+1
6FDB D1 11 00830 CMPB COL SCANNED ALL COLS ?
6FDD 2C F7 00840 BGE LOOP1 NO LOOP MORE
6FDF 34 02 00850 PSHS A SAVE THE BLUE CHAR FOR A SECOND
6FE1 86 0F 00860 LDA #15 LAST ROW POSITION
6FE3 97 0F 00870 STA ROW
6FE5 35 02 00880 PULS A GET BACK THE BLUE CHAR
6FE7 0F 11 00890 CLR COL INITILIZE TO COL ZERO
6FE9 00900 LOOP2
6FE9 BD 7015 00901 JSR CHROUT
6FEC 0C 11 00920 INC COL COL=COL+1
6FEE D1 11 00930 CMPB COL SCANNED ALL COLS ?
6FF0 2C F7 00940 BGE LOOP2 NO LOOPE MORE
6FF2 0F 11 00950 CLR COL YES INITILIZE COL POSITION
6FF4 0F 0F 00955 CLR ROW INITILIZE ROW POSITION
6FF6 C6 0F 00960 LDB #0F GET NUMBER OF ROWS TO SCAN
6FF8 00970 LOOP3
6FF8 BD 7015 00980 JSR CHROUT PRINT THE CHAR
6FF8 0C 0F 00990 INC ROW ROW=ROW+1
6FFD D1 0F 01000 CMPB ROW SCANNED ALL ROWS ?
6FFF 2C F7 01010 BGE LOOP3 NO LOOP MORE
7001 0F 0F 01020 CLR ROW YES REINITILIZE ROW POSITION
7003 34 02 01030 PSHS A SAVE THE CHAR TEMPORALY
7005 86 1F 01040 LDA #1F
7007 97 11 01050 STA COL COL IS NOW FIXED FOR COL 31
7009 35 02 01060 PULS A GET BACK THE CHAR
700B 01070 LOOP4
700B BD 7015 01080 JSR CHROUT PRINT CHAR FOR RIGHT EDGE
700E 0C 0F 01090 INC ROW ROW=ROW+1
7010 D1 0F 01100 CMPB ROW IS IT LAST ROW ?
7012 2C F7 01110 BGE LOOP4 NO LOOP MORE
7014 39 01120 RTS
01130 *
01140 *** CHROUT ROUTINE *****
01150 *
7015 01160 CHROUT
7015 34 06 01170 PSHS A,B SAVE A AND B
7017 BD 8082 01180 JSR TVADDR CALCULATE THE POSITION OF THE CH
AR
701A 35 06 01190 PULS A,B GET BACK THE REGS
701C A7 A4 01200 STA ,Y PUT THE CHAR IN SCREEN BUFFER
701E 39 01210 RTS
01220 *
01230 ***** MOVE ROUTINE *****
01240 *
701F 01250 MOVE

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01F 88 00 01250 LDA #00 TO ERASE THE RED CHAR
7021 BD 7015 01270 JSR CHROUT PRINT BLANK CHAR
7024 96 0F 01280 LDA ROW
7026 BB 0601 01290 ADDA DELY ROW=ROW+DELY
7029 97 0F 01291 STA ROW GET NEW VALUE OF ROW POSITION
702B 81 01 01300 CMPA #1 AK1 ?
702D 2C 06 01310 BGE T1 NO GO TO T1
702F C6 01 01320 LDB #1
7031 D7 0F 01330 STB ROW YES MAKE ROW=1
7033 20 0B 01340 BRA T2 AND GO TO T2
7035 81 0E 01350 T1 CMPA #14 IS ROW >14 ?
7037 2F 04 01360 BLE T2 NO GO TO T2
7039 C6 0E 01370 LDB #14
703B D7 0F 01380 STB ROW YES MAKE ROW[=14
703D 96 11 01390 T2 LDA COL
703F BB 0600 01400 ADDA DELX COL=COL+DELX
7042 97 11 01401 STA COL GET NEW VALUE OF COL POSITION
7044 81 01 01410 CMPA #1
7046 2C 06 01420 BGE T3 NO GO TO T3
7048 C6 01 01430 LDB #1
704A D7 11 01440 STB COL YES MAKE COL=1
704C 20 0B 01450 BRA T4 AND GO TO T4
704E 81 1E 01460 T3 CMPA #30
7050 2F 04 01470 BLE T4 NO GO TO T4
7052 C6 1E 01480 LDB #30
7054 D7 11 01490 STB COL YES MAKE COL =30
7056 86 BF 01500 T4 LDA #BF THE RED CHAR
7058 BD 7015 01510 JSR CHROUT
705B 39 01520 RTS

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01530 *
01540 **** EDGE ROUTINE ****
01550 *

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705C 01560 EDGE
705C 96 0F 01570 LDA ROW
705E 81 01 01580 CMPA #1 IS IT ROW 1 ?
7060 27 10 01590 BEQ G1 YES GO TO G1
7062 81 0E 01600 CMPA #14 IS ROW 14 ?
7064 27 0C 01610 BEQ G1 YES G TO G1
7066 96 11 01620 LDA COL GET THE COL POSITION
7068 81 01 01630 CMPA #1 IS IT TOP COL ?
706A 27 06 01640 BEQ G1 YES GO TO G1
706C 81 1F 01650 CMPA #31 IS IT LAST COL ?
706E 27 02 01660 BEQ G1 YES GO TO G1
7070 20 03 01670 BRA G2
7072 BD 7076 01680 G1 JSR CRASH CRASH THE PROGRAM
7075 39 01690 G2 RTS

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01700 *
01710 **** CRASH ROUTINE ****
01720 *

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7076 01730 CRASH
7076 0F E3 01740 CLR $E3
7078 0F E4 01750 CLR $E4
707A 1C EF 01760 ANDCC #EF CLEAR I
707C 86 5F 01770 LDA #$5F THE PITCH VALUE
707E 97 8C 01780 STA $8C THE PITCH VALUE
7080 8E 0005 01790 LDX #05 DELAY IN MS
7083 9F 8D 01800 STX $8D
7085 5F 01810 CLR B
7086 BD A956 01820 JSR SOUND
7089 39 01830 RTS

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01840 *
01850 **** DELAY ****
01860 *

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708A 01870 DELAY
708A 34 12 01880 PSHS A,X SAVE REGS
708C 01890 LOOPX

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708C	12		01900	NOP		
708D	12		01910	NOP		
708E	12		01920	NOP		
708F	12		01930	NOP		
7090	86	AF	01940	LDA	#\$AF	1 SEC DEAY
7092			01950	LOOPA		
7092	4A		01960	DECA		
7093	26	FD	01970	BNE	LOOPA	
7095	30	1F	01980	LEAX	-1,X	X=X-1
7097	26	F3	01990	BNE	LOOPX	
7099	35	12	02000	PULS	A,X	GET BACK THE SAVED REGS
709B	39		02010	RTS		
			02020			

MISSING END
00001 TOTAL ERRORS

BBB	6F68
BORDER	6FD0
CCC	6F6B
CHROUT	7015
CLRSCN	809D
COL	0011
CRASH	7076
DDD	6F71
DELAY	708A
DELX	0600
DELY	0601
E	6F74
EDGE	705C
G1	7072
G2	7075
INIT	6FB0
K1	6F85
K2	6F90
K3	6F9B
K4	6FA6
K5	6FAD
LOOP1	6FD6
LOOP2	6FE9
LOOP3	6FFB
LOOP4	700B
LOOPA	7092
LOOPX	70BC
MAIN	6F63
MOVE	701F
ROW	000F
SOUND	A956
T1	7035
T2	703D
T3	704E
T4	7056
TUTOR	8000
TVADDR	80B2