

100 I SPRITE EDITOR VERSION H

11

120 ;32 BY 32 SPRITE EDITOR

130 WRITTEN BY S. AHMAD (c) 1985 ALL RIGHTS RESERVED WORLDWIDE

140

160 sENTRY POINT 57344

170 ORG #E000

190 LD HL?CLRFLG

200 BIT 7?(HL)

210 JR NZ,NOCLR

220 SET 7?(HL)

230 LD A,#38

240 CALL CS

250 NOeL XOR A

260 LD (BUFPTR),A

270 LD Be,#1300

280 CALL LOCATE

290 LD A? 101

300 LD HL,DFCC

310 PRTNUM PUSH AF

320 CALL PRINT!

POP

340 INC (HU)

INC (HU)

360 INC (HL)

INC A

2580 CP |a|

390 o| NZ pAT NuN

400 CALL SET |

410 LD HL? *?5A60

SET (I.o|L)

430

44!|J LD A,#47

450 LD (ATT),A

460 LD Be | 1102

|j-70 CALL LOCATE

480 LD HL

490 PRINT

?;|00

51121 JP |<EY

520

540 s GENERAL PURPOSE ROUTINES FOR 32 BY 32 SPRITE EDITING.

550 ;BY S. AHMAD (c) 1985

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?570

580

590 CURSOR COORDINATES

600 POS DEFB

610 VPDS DEFB

620 a DATA POINTER

630 D32x32 DEFW BUFFER

640 PRINT POSITION HOLDER

650 PROS DEFB

660 a SCREEN POINTER

670 S32x32 DEFW #4016

```

;INK LULUUK Up GUI! UK
690 INK DEFB #47
700 ;8 SHAPE TABLE BUFFER
710 BUFFER EQU
720 i DECLARE TEMPORARY BUFFER
730 TEMPBF EQU BUFFER-#80
740 BUFFER POINTER
750 BUFPTR DEFB 0
760 g CLEAR SCREEN FLAG
770 CLRFLG DEFB
.780 1!ESSAG DEFM "GRAPI-HCS EDIHm by S. AhmAd!
790 DEFB #D

```

```

810
820 PLOT,q
8050

```

```

LD A, (VPCIB)
8050 (-1DD) A,
t260 LD Be, Yt:,iBLE
B70 LD L, (-1)
1:380 xos A
890 LD H, (-1)
900 LD D,A
910 ADD HL, Be
LD A,
9:30 INC HL
9!HZI LD H, (HU)
9?5iZI LD L,
17'60

```

```

LD A, (XF'OS)
9f:30 BRA
990 LD E,A
1000 LD A?#F0
1010 JFK NC,NDTLO
10?20 CFL
NOT. Loo LD CA
1040 (?DD) HL,DE
10!::i0 LD B,4
1060 L.OCIPD4 LD A?C
1070 XOR (HL)
10a0 I_D (HL) ?A
INC H
1100 DJNZ LODPD1.(
1.110 RET
1120

```

```

Yt (-Y&iLE

```

```

.1 1.40 DEFW #4000,#4400,#4020,#4420
1150 DEFW #4040,#4440,#4060,#4460
1.160 DEFW #4080?.4480?#40A0?#44A0
i 170 DEFW #40C0,#44C0,#40E0,#44E0
1180
119iZJ DEFW #4800,#4C00,#4820,#4C20
1200 DEFW #4840?#4C40?#4860,#4C60
1210 DEFW #4880?#4C80?#48A0,#4CA0
DEFW #48C0,#4CC0?#48E0,#4CE0

```

```

i
1250

```

```

1270 ;ENTER WITH D32x32=ADR OF 128 BYTE DATA BLOCK

```

```

i
i :290 CALL PIXEL Ann
1 :s f2i0 xml (HU)
i 1Zi LD (HL)
1320 f,ET

```

1350 cENTER WITH D32x32 POINTING AT RELEVANT DATA BLOCK

1360 EXPOS AND POS SET AS APPROPRIATE

1370 ;EXIT WITH HL?BYTE ADDRESS, ABIT VALUE

1?:;B0
i XEL Am?

1400 LD HL EXPOS

141.0 LD A (HL)

14:20 AND #1F

LD (HU) ,A

LD B/A

INC HL

1460 LD A, O"IL_)

1470 AND (HL) ,A

1480 LD DE" (32)

1500 U) A, (HU

RL.CA

152(II RLeA

1:;;30 AND xl 11. j. 1100

1540 LD L re)

i LD H,0

i i :560 LD ABB

15EW.I RHeA

t?;90 RReA

(2)ND %0!ZHII00011

1610 OF? L

160.20 LD LEA

16:30 f-1DD HL ,DE

1640 LD A,B

1650 'Y.000001,11

1660 LD B,A

1670 INC B

1680 XOR A

1690 SCF

1700 t3H i i FTF? RRA

1710 DJ NZ SHIFTR

1720 RET

17:3:0

1740

1750 MOVle

1760 ;THIS MOVES 128 BYTES (32 X 32) FROM (D32x32) TO SCREEN

1770 ;ENTER WITH D32x32 SET TO RELEVANT ADR OF DATA TABLE

1780 ;AND WITH S32x32=POINTER TO RELEVANT SCREEN LOCATION.

17Cie LD 20.50)

1800 LD (F'RPOS) ,A

1820 Looper. LD HL

18?:'0 INC (HL)

1840 LD A, (HL)

1850 IB50 CP 16

1860 FeET z

1870.) LD HL,OFSTBL

18E?0 LD CA

1890 LD B,0

1900 f.?DD HL ! Be

1920 LD C, (HU

19:3:0 LD HL, :3?2

ADD HL,BC

i EX DE HL

i LD HL, :32

1970 HL? Be

19BIZ'I LD Be,

```

21Z10v.r
2010      LD      (HU) CA
          INC     H
          t.n    ArE
          r-mD   C
          I.D    E,A
206(l)    Jr.(   NC   N|I
2070      INC     D
          || H01  D,JNZ
          LOOF

```

```

2100
2110
2120      OFSTBL.
2130      DEFB
2140      DEFB      64,65,66,67,96,97,98,99
21050
2160
2170

```

```

2190      KEYBOARD  HANDLER  FOR  CHIMERA  GRAPHICS  EDITOR
2200

```

```

2210      ;DEFINE  VALID  KEYPRESS  TABLE, STARTING  WITH  NULL.
2220      a THE  SEARCH  IS  STARTED  FROM  THE  TOP  AND  GOES  DOWN

```

```

2240      1(8T
2250      DEFB      #FF
22.S0    DEFM      "G1WNJKGPSLIRCXDM7658FU"
2270      KEYTAB  EaU  $-1
2280      KEYLEN  EaU  KEYTAB-KSTART
2290

```

```

2300      ;THE  JUMP  TABLE  FOR  EACH  RELEVANT  KEYPRESS
2310      KEY,JMP
          DEFW  X  LEFT,  X  RIGHT  X  DOWN  X  UP
23050    DEF")  X  PLOT  X  GET  X  PUT  X  SAVE
          DEFW  X_LOAD,X_INVERT,  X_REFLECT,  X_COLOUR
235.2)  DEFv.J  X_CLEAR,X_DUMP,X_MOVE
          DEFtr) X_SUP,X_SDN,X_SLF,X_SRT
          DEF'W  X  IL  L  X
          m::FW

```

```

2400      a THE  KEY  HANDLER  CALLING  ROUTINE
2410

```

```

:~420    HANDLEF?
2430      KEY  EQU  23556

```

```

2450      LD      A,255
2460      LD      (KEY) ,A
2470      WAITK  LD      As  (KEY)
2480      LD      HL,KEYTAB
2490      LD      Be, KEYLEN
251i.10  CF'DR
2?5:t    DJ  Z  GCm<EY
          CALL  STICK
          CALL  PLOT4
          HALT
          HALT
L\560    HAL. T.
257(ij)  H(ILT
          CALL  PLOT
2590      Hf1JL.T
          Hf.LT
:~:610    LD
2620      LD      A, i*7F
26:30    IN      A

```

WHL

2670

2700 ;WE REACH HERE WITH G=KEY NUMBER
2710 HA eNTAINS THE ASCII CODE OF THE KEY PRESSED

2730

2740 (U) | X, f<EY | HANDLER
C ;BC?BC*2 (SINCE 8=0)
LD HL
2770(?) ADD HL, Be
LD A, (HI)
2790 INC HL
2800 LD H, (HL)
10 LD LH a A
2B20 JP (HU)

2850 GENERAL PURPOSE BEEP ROUTINE

2860

2B70

2B80 LD HL, B0
2890 LD <DE | :1:1:50
290(1.i) PUSH IX
29 | :1*3B5

2940

?295(J

2960 ;NOW THE COMMAND EXECUTION ROUTINES.

22970

29B0 X_t.1AVE

LD Be, 1000 ALINE 1000 IN BASIC PROG SAVES BUFFER
RET RETURN TO BASIC TO PERFORM SAVE TO MICRODRIVE

3010

?5020

:3050 LD BC,2000 ;LINE 2000 IN BASIC PROG SAVES BUFFER
3060 RET RETURN TO BASIC TO PERFORM LOAD FROM MICRODRIVE

3080

3100 X EFT

:3:1.10 LD HL, XPS
3120 LD A | (HL)
all 30 DEC A
?rH LIMIT

3150

:?:lb0

31.E30 X RIGHT

3190 LD HL,
LD A | (HL)
?::2UII INC
L |l|v| IT.

3240

?5260 X | u F,

?::T70 LD HL,YPDS
:S280 LD (Hu
DEC A
JR LIMIT

0000			
3330			
3340	X	DOWN	
3350		LD	HL tYPOS
3360		LD	As (HL)
3370		INC	A
3380			
3390			
3400			
3410	LIMIT		
3420		AND	# IF
3430		oLD	(HL) CA
3440		PUSH	IX
3450		LD	DE,90
3460		LD	HL,#200
3470		JP	#3B5
3480			
3490			
3500	STICK	IN	A, e. IF}
3510		AND	%11111
3520		RET	Z
3530		LD	IX sT I
3540		RRCA	
3550		JR	C,X_ RIGHT
3560	sT I	LD	IX,8T_ a
3570		IN	A, eIF)
3580		AND	%00010
3590		JR	NZ,X_ LEFT
3600	sT a	LD	IX,8T_3
3610		IN	As eIF)
3620		AND	%00100
3630		JR	NZ X DOWN
3640	sT 3	LD	IX,ST_ 4
3650		IN	A, eIF)
3660		AND	%01000
3670		JR	NZ,X_UP
3680	sT 4	LD	IX a sT 5
3690		III	A, eIF)
3700		AND	%10000
3710		JR	NZ X PLOT
3720	a 7700	sT a	RET
3730			
3740			
3750			
3760	X	PLOT	
3770		CALL	PLOT!
3780		CALL	PLOT4
3790		CALL	MOV128
3800		LD	HL?#100
3810		LD	DE,#60
3820		PUSH	IX
3830		JP	#385
3840			
3850			
3860			
3870	X	CLEAR	
3880		LD	HL, (D32x32)
3890		LD	Be, 127
3900		LD	DTH
3910		LD	E,L
3920		INC	DE
3930		LD	(HL) ,B
3940		LDIR	
3950		CALL	MOV128
3960		CALL	CL EDIT
3970		CALL	SET INK

(ZH2I0		
401(tj		
4020	X	COUJUR
	LD	HL, I Nt<
404(i)	LD	As (HU
40?j0	REENTC	INC A
4060	teND	%00QH7.I01 i
4.070	JR	Z
4080	OR	0(30000
4090	LD	(-HL) ,A
4:100	CaLL	SET INK
4110	JF	BEEP
4-12([1		
413(l)		
4. 40	X	NVEHT
4150	LD	HL, eX POS)
4160	PUSH	HL
4170	LD	
4180	INV 1	LD B?0
4190	INV_2	PUSH Be
4200		LD HL EXPOS
4210		LD (HL) MB
4220		INC HL
		1-0 (HU C
.t.V.240	eff L.L.	PLOT 4
Li.250	POP	Be
4260	LD	A 1*20
4270	INC	B
4287.)	CP	B
40090	STR	NZ I NV
	INC	C
	CF	C
	JR	NZ,INV,..1
	POP	HL
	LD	eXpOS) ,HL_
4.360	LD	B,#80
	LD	HL?
4380	LD	A, (HU
Li. 390	CpL	
Lj.tHZ)0	LD	(HU ,A
4410	INC	HL
4-420	DaNI	INV
	CAL L	MDV128
44.1.1-0		I X
4450		
4460		
4470		
4480	X	DUMF-
1.1. .180	LD	HL,
4500	PUS	HL
4510	LD	B?8
4?:5?20	LD	HL
4530	L.D	
ol. 540	DUMF' ol	LD A,B
425030		DEC
4.560	XOF?	%000001.11
4.570	LD	
	INC	HL
4590	INC	HL
4600	INC	HL.
(HZ)	INC	HL
4620	LD	:32) ,HL
	L.D	DE BUFFEt

4e;50	LU	H,H
4660	LD	L,0
		H
	RR	L
4680		HL, DE
4690	LD	(D32)? ,HL
4700	PUSH	Be
4710	GrILL	MOVL28
	POP	Be
4730	DJ NZ	DUI'1P I
47-40		
47?j0	LD	HL.?#4fJ:t6
4760	L_D	,)HL
4.770	PDP	HL
47f:l0	LD	(D?32H HL.
	L.D	HL. tj:5B(2HIJ+640
4B(HZI	LD	DE,
481.0	L.D	C, ?*7F
4820	LD	A, INT0
	L.D	(HL) ,A
	L.DIR	
	JP	BEEP

4.860		
4870		
4880		
	X GET	
	CALL	CALC
4910	LDIR	
.q.C120	CALL	NaVAL
	ap	X DIJ1"IF'

4940		
4950		
'F?i60		
!i970	X PUT	
4980	CALL	CALC I PTR
4	EX	DE,HL..
	LHD I	
	IIP	X DUMP

:5020		
5050	X	
25060	LD	I X, DUFF*IR
	C?LL	X
	Res	7, (HU
	INC	(I X+0)
	CALL	X
:5110	BET	7, (HU
5120	LD	I X ?<EY
51.30		BEEP

514.0		
45150	X M1	LD I X x-e:
516fJ	(.1ND	i,000I210111
	LD	I X +0) ,A
?518(ij	ADD	A,A
25190	HDD	A,A
5200	OF.:	
?*j210	LD	LEA
	LD	H a
	RET	

25240		
::*j260	X REFLECT	
	F!.mH	IX
?5290	PUSH	IY

s:5	1	2	LD	HL,TEMPBF
			LD	DE,TEMPBF+1
			L_D	Be, *1:7F
			LD	(HL)
			L.DIR	

5370			DI	
			LD	Ivy D
			LD	I X, TEI*IPBF
5:3:90			LD	C,#20
5400			LD	DE, Ij
5410	F?FL	I	LD	B, :1*20
25420	F?FL.	f	SRL	(I Y+0)
			RfD	I Y+ I
			RFD	I v-z: I

			nL.	(I
5470				(IX+2)
			RL.	I X+ I
5490				c r X-HZ)
			DJNZ	F:?FL 2
			ADD	IY, DE
255000			ADD	IX,DE
55:?(lf			DEC	e
5540			NZ	RFL I
23550			POP	IY
			EI	
5570			LD	HL TEMr;:BF?
			LD	DE,
5590			LD	Be, ?*80
!:'600			LDIR	
5610			CALL	MOV 128
			C{:?LL	
56:3:0			POP	IX
?::640			JF'	BEEP

5670	x		SUP	
5680			LD	HL,
25690			LD	D,H
25700			LD	E,L
35710			INC	HL
:::720			INC	HL
5730			INC	HL
5740			INC	HL
			LD	Be, I
?j760			L.DIR	
25770			LD	B,4
?57B0	SuP	i	DEC	HL.
57:(;0			LD	(HL) ,c
5f.300			DJNZ	SUP I
sa I 0			(AiLL	MOV12!3
5820			CALL	MOU(-iLL.
			JP	I X)

5840				
5850	x		SoN	
5860			LD	HL.
587v)			LD	DE, I
			ADD	HL_? DE
			LD	DTH
5'100			LD	as I I
10			INC	DE
592((J			INC	DEI
			I t\IC	
			INC	DE
?j9?30			LD	Be,124

59'511J'		LJDF(
5970		LD	804
5980	SDN_I	INC	HL
5990		LD	C HL) be
		DJ NZ	SDN_I
6010		CALL	MOV128
6020		CALL	MOVALL
6030		JP	(IX)
6040			
6050			
6060	_SI. F		
6070		PUSH	IX
6080		LD	I X 232)
6090		LD	DE,4
6100		LD	B,#20
6110	f:3L. I	EILA	I X
6170		HL	(IX+2)
6130		m.	(IX+1)
6:1.40		HL	(IX+0)
6150		ADD	IX?DE
6160		O_JNZ	BI, I
6170		CALL	I"IOV 128
		CALL	MOI,)(4LL.
6190		RET	
6200			
6210	X_		
6270		F'USH	I X
6230		LD	I X 3:2)
		i,o	DE,4
6250		LD	
	SF: I	SR..	(I X-HZ)
6270		RR	
6280		RR	(IX+2)
62?i'0		RR	(I
6?300		(-IDD	I X? DE
6310		DJ NZ	SR,_1
6320		CALL	MOV128
30		C(4LL	
		RET	

6370	STACK	DEFW	ill
6580			
	X	I LL.	
6400		DI	
6410		LD	(STACT-P) ,SF'
6420		LD	Bp 2
		CALL	F I LL. 1
6440		CALL	f10V128
64?ifIJ		CALL	Ilo VII L.L.
6460		L.D	SF' I (?JT
6470		EI	
64f:(2)		JP	BEEP
64.90	FILL	I	
65Qio		CALL	F I XEL food Dtp
6:::10		OR	
6520		I..D	(HU 2 A
654.0		LD	HL, (Xpm3)
6550		INe	L
6560		F I	LL,.._2
6570			
6?5EIO		LD	HL,
65(10		DEC	L
6600		DEC	L
6610		CALL	F I IJ.? 2

6630 LD HL, eXPOS)
 664(l) INC L
 6650 INC H
 6660 C(-ILL) r | n.i.
 6670
 6680 LD HL, a (XF'm3)
 6690 DEC H
 6700 DEC H
 6710 CALI FILL

67?::0 LD HL., (XF'DB)
 6740 INC H
 6750 LD XPOS) ,HL
 6760 CALL. PIXEL ADIt
 6770 RET
 6780

;Keep everything in range

F I I
 6800 LD eX POS) ,HL
 6810 CALL PIXEL_ADR
 6820 AND (HL)
 6830 F&T NZ
 6B"10 FILL 1
 68::m

6B60 X UFS'DN
 6870 LD HL,
 i1880 LD DE,
 6890 LD Be, *?80
 6900 LDIH

6910
 6920 IH
 69050 LD HL,TEM'BF
 LD IY, D
 LD DE,
 6950 ADD IV, DE
 6960

6<:n0 LD B |
 6980 LD DE,-4
 69 UI::'DN I LD A, (HU
 7000 INC HL
 7010 LD 1Y+0) ,A
 7020 LD A, (HU
 INC HL

704.0 LD ,A
 7050 LD A, (HL)
 7060 INC HL
 7070 LD (IY+2) ,A
 70{10 LD a (HU
 7090 INC HL
 7100 LD I

7110 ADD Ivy DE
 7:1.20 De! NZ UPDN I
 71:3:0 LD IV,
 7140 EI
 715el CALL. MOV12B
 71.60 CALL MOVAU
 7170 BEEp
 7180
 7190

72 lel
 7220 SOME IMPORTANT SUBROUTINES
 7230
 7240

72?)0 SET I NI<
 7260 LD I NgO
 7270 LD HL *1:580t'ZJ

```

LD IJ,L
7290 LD E,#10
LD CE
7310 LD B,E
Loo (HU ,A
7330 INC HL
DJNI
7351 ADD HL,IDE
7360 DEC C
In NZ ; L2
73cj(l) LD HL, *?58L_6
7400 LD E,#C
7410 LD C,4
7420 L4 LD B,4
LD (HL)
7440 INC HL
7 InNZ I%0
ADD HL,DE
7l+70 DEC C
7480 JR l.4
7490 RET
.7500
7?i10
7520

```

```

7530 CALC PTR
.7540 LD Be, :1:1:80
.1550 LD A? (BLJFPTF?)
7560 LD HL,
7570 LD D,
7?580 LD EyE
7590 D
7600 E
7610 EX DE,HL
7620 ADD HL,DE
7 f?ET
7640
7650
7660

```

7670 . THIS MOVES ALL OF (D32x32) TO THE EDITING AREA

```

7680 1"10VALL
7690 LD HLA ( X POS)
7700 PUSH HL
7710 CALL CL_EDIT
7720 CALL MOV128
7730 LD HL,
7?740 LD DE
7750 LD Be, #0080
7?76121 LOIn
7-770 LD DE, TEI'IPBF
T180 !"IVI LD B,
77?0 MV2 LD HL, pOS
LD (HU
7810 Ine HL,
7820 LD (HU ,C
7830 LD A ; mE
7B40 RLCA
7850 LD mE) ;
7860 ,JR NC, NOFLCIT
7B70 Be
7880 PUSH DE
7890 CALL PLOT
7900 POP DE
7910 POP Be
7920 NO PLOT INC B
7930 LD A?B

```

7950	JR	NZ	,1'W2
7960	INC	DE	
7970	BIT		
7980		Z	t1V2
7c90	J		
	BIT	5 IC	
Eml	JH	t.,	["iVi
802(.1	F.OF.	HL	
8030	t,n	(XFOB)	,HL
8040	RET		
8050			

8070			
HIZH30	CL	EDIT	
	LD	*?80	
(:3100	Loo	HL	
	LD	DE, #4001	
131 ? .20	LOoP.	eLF.	
81.30	L.D	BC,#0F	
8140	LD	IU	§ B
B:1.50	LDIF?		
B 160	LD	C,	1
B1.70	?mD	HL	.nc
81	EX	DEI	HL
B1.90	ADD	HL, Be	
8200	EX	DE,HL	
8210	DEC	A	
t122t?	JR	NZ	LOOP _CLR
023(7.)	RET		

8240			
B2?:0			
B26(d			
8270	;General	purpose	routines.
(3280			
E1290	FCC		

i e	LDC(HE		
8320	LD	A,B	
En30	AND	?*18	
	LD	H,	
B?:.50	SET		
	RRCA		
E:B7(II	RHCF-I		
	OF?	*-1:58	
84(II)L	LD	D,A	
8410	LD	A,B	
8420	AND		
£14.30	RCA		
84.40	RICA		
EIt.I:150	RCA		
811-60	ADD	A,C	
8470	LD	LN (-i	
B480	LD	E,A	
84.90	LD	A,	
8500	LD	(DFCC),HL	
8510	RET		
E)520			
85:30	DEFW		
E1540	DEFB	:1*38	
8550	t" As	DEFB	
B560			
B570	PRINT I		
85030	FUSII	HL	
H?590	LD	LEA	

	UJ	H 70.
8610	ADD	HL,HL
8620	r.:)DD	HL,HL
867:0	ADD	HL a t-IL..
	LD	DE f (BorEIE)
EI650	?mD	HL.,DE
8660	LD	DE, (DFCC)
EIb70	LD	B,8
	NIXTHOW	LD (HU
B69I?	LD	WE) a
8700	INC	HL
8710	INC	D
	DaNI	NXTRCIW
EI730	LD	A,D
8740		
B750		
8760	RRCA	
87170	DEC	A
EI781.21		
B790	OR	?f58
8 (Z10	LD	D,A
BB10	LD	HL,
8820	LD	A, wE)
8B30	X OR	L
E7840	HND	H
D850	xmI	L
B13612I	LD	WE) ,A
	LD	HL.,DFCC
8880	INC	O-IL)
m.1C)0	JR	NZ,QP1.
8900	INC	HL
	L..D	A? (HL)
8920		
8930	LD	(HL) ?;i
8940	QP:i	POP HL
B950	RET	
8960		
B970		
	PRINT	
1:19 90	LD	A, (HU
9000	INC	HL
9010	CP	
917.120	RET	Z
9030	CALL	PR INTI
9040		PI:UNT
9060		
9070		
9080		
9090	LD	HL.,
100	LD	DE, ?*4001
9110	LD	Be 18(ZH2)
9120	LD	(HU L
1	L DIH	
c.?140	LD	Be, j:??2FF
91 450	LD	o IU *A
9160	LD IF.	
9170	FeET.	
9180		
r:/190		