

in

COLLABORATORS

	<i>TITLE :</i> in		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		February 12, 2023	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	in	1
1.1	ModuleInformation	1

Chapter 1

in

1.1 ModuleInformation

```
ShowModule v1.10 (c) 1992 $#%!
now showing: "hardware/custom.m"
NOTE: don't use this output in your code, use the module instead.
```

```
(----) OBJECT custom
(  0)  bltdat:INT
(  2)  dmaconr:INT
(  4)  vposr:INT
(  6)  vhposr:INT
(  8)  dskdatr:INT
( 10)  joy0dat:INT
( 12)  joy1dat:INT
( 14)  clxdat:INT
( 16)  adkconr:INT
( 18)  pot0dat:INT
( 20)  pot1dat:INT
( 22)  potinp:INT
( 24)  serdatr:INT
( 26)  dskbytr:INT
( 28)  intenar:INT
( 30)  intreqr:INT
( 32)  dskpt:LONG
( 36)  dsklen:INT
( 38)  dskdat:INT
( 40)  refptr:INT
( 42)  vposw:INT
( 44)  vhposw:INT
( 46)  copcon:INT
( 48)  serdat:INT
( 50)  serper:INT
( 52)  potgo:INT
( 54)  joytest:INT
( 56)  strequ:INT
( 58)  strvbl:INT
( 60)  strhor:INT
( 62)  strlong:INT
( 64)  bltcon0:INT
( 66)  bltcon1:INT
```

```
( 68)  bltafwm:INT
( 70)  bltalwm:INT
( 72)  bltcpt:LONG
( 76)  bltbpt:LONG
( 80)  bltapt:LONG
( 84)  bltdpt:LONG
( 88)  bltsize:INT
( 90)  pad2d:CHAR
( 91)  bltcon01:CHAR
( 92)  bltsizv:INT
( 94)  bltsizh:INT
( 96)  bltcmmod:INT
( 98)  bltbmod:INT
(100)  bltamod:INT
(102)  bltdmod:INT
(104)  pad34[4]:ARRAY OF INT
(112)  bltcdat:INT
(114)  bltbdat:INT
(116)  bltadat:INT
(118)  pad3b[3]:ARRAY OF INT
(124)  deniseid:INT
(126)  dsksync:INT
(128)  cop1lc:LONG
(132)  cop2lc:LONG
(136)  copjmpl:INT
(138)  copjmp2:INT
(140)  copins:INT
(142)  diwstrt:INT
(144)  diwstop:INT
(146)  ddfstrt:INT
(148)  ddfstop:INT
(150)  dmacon:INT
(152)  clxcon:INT
(154)  intena:INT
(156)  intreq:INT
(158)  adkcon:INT
(160)  aud:audchannel (or ARRAY OF audchannel)
(224)  bplpt[8]:ARRAY OF LONG
(256)  bplcon0:INT
(258)  bplcon1:INT
(260)  bplcon2:INT
(262)  bplcon3:INT
(264)  bpl1mod:INT
(266)  bpl2mod:INT
(268)  bplcon4:INT
(270)  clxcon2:INT
(272)  bpldat[8]:ARRAY OF INT
(288)  sprpt[8]:ARRAY OF LONG
(320)  spr:spritedef (or ARRAY OF spritedef)
(384)  color[32]:ARRAY OF INT
(448)  htotal:INT
(450)  hsstop:INT
(452)  hbstrt:INT
(454)  hbstop:INT
(456)  vtotal:INT
(458)  vsstop:INT
(460)  vbstrt:INT
```

```
( 462)  vbstop:INT
( 464)  sprhstrt:INT
( 466)  sprhstop:INT
( 468)  bplhstrt:INT
( 470)  bplhstop:INT
( 472)  hhposw:INT
( 474)  hhposr:INT
( 476)  beamcon0:INT
( 478)  hsstrt:INT
( 480)  vsstrt:INT
( 482)  hcenter:INT
( 484)  diwhigh:INT
( 486)  padf3[11]:ARRAY OF INT
( 508)  fmode:INT
(----) ENDOBJECT      /* SIZEOF=510 */

(----) OBJECT spritedef
(  0)  pos:INT
(  2)  ctl:INT
(  4)  dataa:INT
(  6)  datab:INT
(----) ENDOBJECT      /* SIZEOF=8 */

(----) OBJECT audchannel
(  0)  ptr:PTR TO INT
(  4)  len:INT
(  6)  per:INT
(  8)  vol:INT
( 10)  dat:INT
( 12)  pad[2]:ARRAY OF INT
(----) ENDOBJECT      /* SIZEOF=16 */

CONST BLTSIZV=$5C,
      JOYTEST=$36,
      DISPLAYPAL=$20,
      AC_VOL=8,
      BLTCDAT=$70,
      DISPLAYDUAL=$40,
      INTREQR=30,
      BPLCON3_EXTBLKZD=2,
      STREQU=$38,
      HHPOSR=$1DA,
      VHPOSR=6,
      VPOSR=4,
      CLXDAT=14,
      HHPOSW=$1D8,
      VHPOSW=$2C,
      VPOSW=$2A,
      SPR=$140,
      BLTALWM=$46,
      BPLDAT=$110,
      BLTBPT=$4C,
      DSKSYNC=$7E,
      VARCSYNC=16,
      VARHSYNC=$100,
      VARVSYNC=$200,
      BLTADAT=$74,
```

POT1DAT=20,
JOY1DAT=12,
BPLPT=\$E0,
POTGO=\$34,
AC_PER=6,
SERDATR=24,
DSKDATR=8,
CSBLANK=8,
VARVBLANK=\$1000,
DSKPT=\$20,
REFPTR=\$28,
POTINP=22,
BLTAFWM=\$44,
BPLHSTOP=\$1D6,
SPRHSTOP=\$1D2,
VBSTOP=\$1CE,
VSSTOP=\$1CA,
HBSTOP=\$1C6,
HSSTOP=\$1C2,
DDFSTOP=\$94,
DIWSTOP=\$90,
COP1LC=\$80,
BLTCMOD=\$60,
STRHOR=\$3C,
DSKDAT=\$26,
INTENA=\$9A,
BLTCPT=\$48,
AC_PTR=0,
AC_DAT=10,
COPJMP1=\$88,
COPJMP2=\$8A,
COPCON=\$2E,
BPLCON3_BRDNTRAN=16,
CUSTOMADDR=\$DFF000,
BLTDDAT=0,
BPLCON2_ZDBPEN=\$800,
SERPER=\$32,
BPL1MOD=\$108,
BLTAMOD=\$64,
COP2LC=\$84,
STRVBL=\$3A,
COLOR=\$180,
SD_DATAA=4,
DSKBYTR=26,
SD_DATAB=6,
DIWHIGH=\$1E4,
BEAMCON0=\$1DC,
BPLCON0=\$100,
BLTCON0=\$40,
INTENAR=28,
SD_CTL=2,
BPLCON1=\$102,
BLTCON1=\$42,
CLXCON2=\$10E,
BPLCON2=\$104,
BPLCON3=\$106,
BLTDPT=\$54,

USE_BPLCON3=1,
BPLCON4=\$10C,
AUD=\$A0,
BLTBDAT=\$72,
SERDAT=\$30,
COPINS=\$8C,
BPLCON3_BRDNBLNK=\$20,
FMODE=\$1FC,
HCENTER=\$1E2,
CLXCON=\$98,
INTREQ=\$9C,
BPLCON2_ZDCTEN=\$400,
BLTDMOD=\$66,
ADKCONR=16,
DMACONR=2,
VSSTRT=\$1E0,
HSSTRT=\$1DE,
BPLHSTRT=\$1D4,
SPRHSTRT=\$1D0,
VBSTRT=\$1CC,
HBSTRT=\$1C4,
DDFSTRT=\$92,
DIWSTRT=\$8E,
BPLCON3_EXTBLNKEN=1,
CSCBLANKEN=\$400,
LOLDIS=\$800,
VTOTAL=\$1C8,
HTOTAL=\$1C0,
DENISEID=\$7C,
BLTCON0L=\$5B,
SD_POS=0,
STRLONG=\$3E,
POTODAT=18,
JOYODAT=10,
VARBEAM=\$80,
DMACON=\$96,
HSYNCTRUE=1,
VSYNCTRUE=2,
CSYNCTRUE=4,
AUD0=\$A0,
AUD1=\$B0,
BPL2MOD=\$10A,
AUD2=\$C0,
BLTBMOD=\$62,
DSKLEN=\$24,
AUD3=\$D0,
BPLCON2_ZDBPSEL0=\$1000,
SD_SIZEOF=8,
AC_SIZEOF=16,
BPLCON3_ZDCLKEN=4,
BPLCON2_ZDBPSEL1=\$2000,
SPRPT=\$120,
BPLCON2_ZDBPSEL2=\$4000,
BLTSIZE=\$58,
ADKCON=\$9E,
BLTSIZH=\$5E,
BLTAPT=\$50,

AC_LEN=4
