

**in**

**COLLABORATORS**

	<i>TITLE :</i> in		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		July 26, 2024	

**REVISION HISTORY**

NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## in

### 1.1 ModuleInformation

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

```
(----) OBJECT monitorspec
(  0)   xln:xln (or ARRAY OF xln)
( 24)   flags:INT
( 26)   ratioh:LONG
( 30)   ratiov:LONG
( 34)   total_rows:INT
( 36)   total_colorclocks:INT
( 38)   denisemaxdisplaycolumn:INT
( 40)   beamcon0:INT
( 42)   min_row:INT
( 44)   special:PTR TO specialmonitor
( 48)   opencount:INT
( 50)   transform:LONG
( 54)   translate:LONG
( 58)   scale:LONG
( 62)   xoffset:INT
( 64)   yoffset:INT
( 66)   legalview:rectangle (or ARRAY OF rectangle)
( 74)   maxoscan:LONG
( 78)   videoscan:LONG
( 82)   denisemindisplaycolumn:INT
( 84)   displaycompatible:LONG
( 88)   displayinfodatabase:lh (or ARRAY OF lh)
(102)   didbsemaphore:ss (or ARRAY OF ss)
(148)   mrgcop:LONG
(152)   loadview:LONG
(156)   killview:LONG
(----) ENDOBJECT      /* SIZEOF=160 */

(----) OBJECT specialmonitor
(  0)   xln:xln (or ARRAY OF xln)
( 24)   flags:INT
( 26)   do_monitor:LONG
( 30)   reserved1:LONG
```

```
( 34) reserved2:LONG
( 38) reserved3:LONG
( 42) hblank:analogsignalinterval (or ARRAY OF analogsignalinterval)
( 46) vblank:analogsignalinterval (or ARRAY OF analogsignalinterval)
( 50) hsync:analogsignalinterval (or ARRAY OF analogsignalinterval)
( 54) vsync:analogsignalinterval (or ARRAY OF analogsignalinterval)
(----) ENDOBJECT      /* SIZEOF=58 */

(----) OBJECT analogsignalinterval
(  0) start:INT
(  2) stop:INT
(----) ENDOBJECT      /* SIZEOF=4 */

CONST STANDARD_VIEW_X=$81,
STANDARD_VIEW_X=$81,
STANDARD_VIEW_Y=$2C,
STANDARD_VIEW_Y=$2C,
REQUEST_SPECIAL=4,
MSF_REQUEST_SPECIAL=4,
MSB_REQUEST_SPECIAL=2,
REQUEST_A2024=8,
MSF_REQUEST_A2024=8,
MSB_REQUEST_A2024=3,
BROADCAST_BEAMCON=$808,
SPECIAL_BEAMCON=$1B8A,
STANDARD_PAL_BEAMCON=$20,
STANDARD_NTSC_BEAMCON=0,
VGA_TOTAL_ROWS=$83,
STANDARD_PAL_ROWS=$138,
STANDARD_NTSC_ROWS=$106,
MSF_DOUBLE_SPRITES=16,
MSB_DOUBLE_SPRITES=4,
MIN_VGA_ROW=29,
MIN_PAL_ROW=29,
MIN_NTSC_ROW=21,
STANDARD_MONITOR_MASK=3,
BROADCAST_VBSTOP=$1C40,
BROADCAST_VSSTOP=$54C,
BROADCAST_HBSTOP=$27,
BROADCAST_HSSTOP=23,
VGA_VBSTOP=$CCD,
VGA_VSSTOP=$235,
VGA_HBSTOP=30,
VGA_HSSTOP=28,
STANDARD_VBSTOP=$1066,
STANDARD_VSSTOP=$3AA,
STANDARD_HBSTOP=$2C,
STANDARD_HSSTOP=28,
RATIO_FIXEDPART=4,
VGA_DENISE_MIN=$3B,
STANDARD_DENISE_MIN=$5D,
RATIO_UNITY=16,
REQUEST_NTSC=1,
MSF_REQUEST_NTSC=1,
MSB_REQUEST_NTSC=0,
VGA_COLORCLOCKS=$71,
STANDARD_COLORCLOCKS=$E2,
```

```
BROADCAST_VSSTRT=$2A6,  
BROADCAST_VBSTRT=0,  
BROADCAST_HSSTRT=6,  
BROADCAST_HBSTRT=1,  
VGA_VSSTRT=$153,  
VGA_VBSTRT=0,  
VGA_HSSTRT=14,  
VGA_HBSTRT=8,  
STANDARD_VSSTRT=$2A6,  
STANDARD_VBSTRT=$122,  
STANDARD_HSSTRT=11,  
STANDARD_HBSTRT=6,  
FROM_MONITOR=1,  
TO_MONITOR=0,  
STANDARD_YOFFSET=0,  
STANDARD_XOFFSET=9,  
REQUEST_PAL=2,  
MSF_REQUEST_PAL=2,  
MSB_REQUEST_PAL=1,  
STANDARD_DENISE_MAX=$1C7
```

```
#define VGA_MONITOR_NAME/0  
#define PAL_MONITOR_NAME/0  
#define NTSC_MONITOR_NAME/0  
#define DEFAULT_MONITOR_NAME/0
```