# Tech Info Library

## Macintosh Display Card 8/24GC and Raster Ops Monitors

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TOPIC -------------------------------------------------------------

I have a RasterOps Colorboard 108 plus video card and a RasterOps 19-inch
Trinitron monitor.  I also have two questions:

1) Does the Macintosh Display Card 8/24GC support the RasterOps 19-inch
   Trinitron monitor?

2) If I install the Macintosh Display Card 8/24GC but don't connect a
   monitor to it, will it accelerate the display on the RasterOps monitor?

DISCUSSION --------------------------------------------------------

1) The Macintosh Display Card 8/24GC supports any display that meets one of the
   following specifications:

   | Sense pins | | | | Hor x Vert | Dot | Vert | Horiz |
   |-----|---|---|------------------------|------------|-------|--------|--------|
   | 10 | 7 | 4 | Display | Pixels | Clock | Refrsh | Refrsh |
   | 0 | 0 | 1 | Apple Portrait Display | 640 x 870 | 57.2832 | 75 | 68.9 |
   | 0 | 1 | 1 | Apple Two-Page Monochrome Monitor | 1152 x 870 | 100 | 75 | 68.7 |
   | 1 | 1 | 0 | 12-Inch Apple Monochrome Monitor | 640 x 480 | 30.24 | 66.7 | 35.0 |
   | 1 | 1 | 0 | 13-Inch AppleColor RGB Monitor | 640 x 480 | 30.24 | 66.7 | 35.0 |

   0 - Grounded   1 - Not Connected

   Note that sense pins 4, 7, and 10 are referred to as SENSE0, SENSE1, and
   SENSE2 in pinout tables for the video connectors.

   None of the RasterOps 19-inch Trinitron displays meets the above
   specifications.  One of their 19-inch Trinitron displays has a vertical
   refresh of 75Hz and a horizontal refresh of 60.241KHz.  We do not think that
   this will work properly, but you can try it in the "Apple Two-Page
   Monochrome Monitor" mode.

   Here are the pinouts for the Macintosh Display Card 8/24GC:

```
  Pin          Description
  ---          -----------
   1           Red Video Ground
   2           Red Video
   3           Composite Sync
   4           SENSE0
   5           Green Video
   6           Green Video Ground
   7           SENSE1
   8           Not Connected
   9           Blue Video
  10           SENSE2
  11           Composite Sync and Vertical Sync Ground
  12           Vertical Sync
  13           Blue Video Ground
  14           Horizontal Sync Ground
  15           Horizontal Sync
  Shell        Chassis Ground
```

2) If no monitor is connected to the Macintosh Display Card 8/24GC, the card
   will, in effect, turn itself off and not accelerate the RasterOps display
   system.  You can trick the card into thinking that a monitor is attached by
   grounding pin 4.  This will cause the card to accelerate other displays in
   the system.

Keywords:  <None>


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