







#### General

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to your product. Because cures are listed on the charts in the order of most likely solution, try the first cure first. Verify whether or not the product continues to exhibit the symptom. If the symptom persists, try the next cure. (Note: If you have replaced a module, reinstall the original module before you proceed to the next cure.)

If you are not sure what the problem is, or if the Symptom Charts do not resolve the problem, refer to the Flowchart for the product family.

For additional assistance, contact Apple Technical Support.



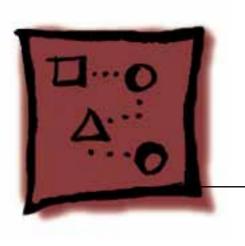
## Symptom Charts

#### Video

- Dark screen, bright
- screen without
- recognizable
- information; or other
- video problems

- 1 Reseat video card.
- 2 Reseat RAM or VRAM SIMM on video card.
- 3 Check cable connections.
- 4 Run video diagnostic tests.
- 5 Replace VRAM or DRAM (if socketed).
- 6 Replace video card.



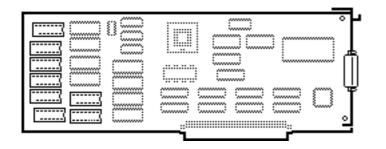


## Upgrades

### Video Cards



# 8 RAM chips Ordered separately



Upgrades

#### Video Card Upgrade

Before you begin, remove the video card.

The Macintosh II Video Card upgrade requires 8 video RAM chips.

**Note:** The required RAM chips are not available in an "upgrade kit." You must order the chips separately.

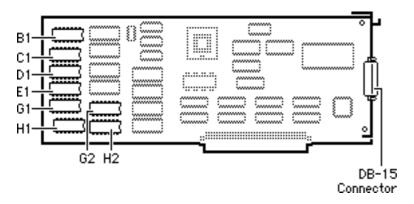
The upgrade supports 8 bits per pixel and up to 256 colors or shades of gray.





Install the eight video RAM chips in locations B1, C1, D1, E1, G1, H1, G2, and H2 on the video card.

**Note:** The notch at the end of each RAM chip should face the DB-15 connector on the rear of the card.



Upgrades



#### Two-Page Card Upgrade

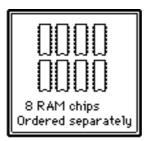
Before you begin, remove the video card.

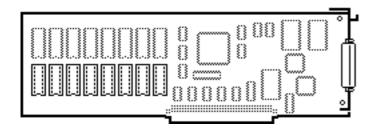
The Two-Page Monochrome Video Card upgrade requires 8 video RAM chips.

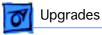
**Note:** The required RAM chips are not available in an "upgrade kit." You must order the chips separately.

The upgrade supports 4 bits per pixel and up to 16 shades of gray.





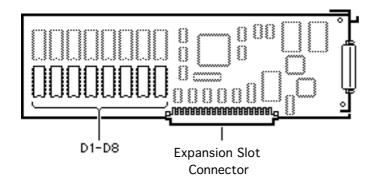






Install the eight video RAM chips in locations D1 through D8 on the video card.

**Note:** The notch at the end of each RAM chip should face the expansion slot connector on the bottom of the card.





#### Portrait Card Upgrade

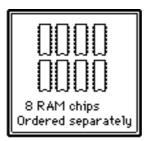
Before you begin, remove the video card.

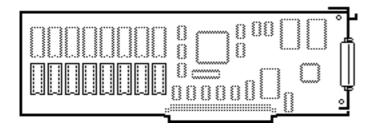
The Portrait Video Card upgrade requires 8 video RAM chips.

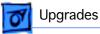
**Note:** The required RAM chips are not available in an "upgrade kit." You must order the chips separately.

The upgrade supports 4 bits per pixel and up to 16 shades of gray.





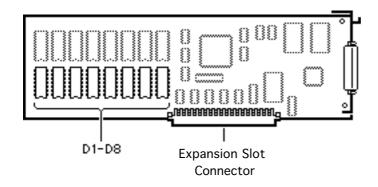






Install the eight video RAM chips in locations D1 through D8 on the video card.

**Note:** The notch at the end of each RAM chip should face the expansion slot connector on the bottom of the card.









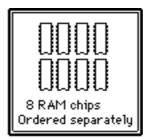
Before you begin, remove the video card.

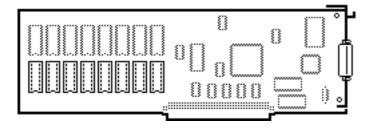
The Hi-Resolution Display Video Card upgrade requires 8 video RAM chips.

**Note:** The required RAM chips are not available in an "upgrade kit." You must order the chips separately.

The upgrade supports 8 bits per pixel and up to 256 colors or shades of gray.



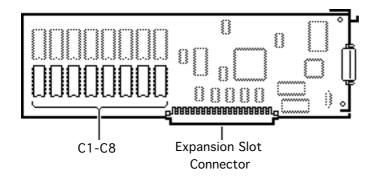






Install the eight video RAM chips in locations C1 through C8 on the video card.

**Note:** The notch at the end of each RAM chip should face the expansion slot connector on the bottom of the card.





#### 4•8 Card Upgrade

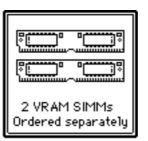
Before you begin, remove the video card.

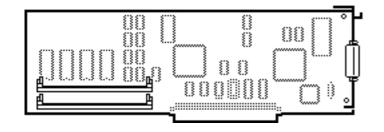
The Macintosh Display Card 4•8 upgrade requires two VRAM SIMMs.

The upgrade supports

- 24-bit performance with 1 MB of video RAM
- 16.7 million true-color scale on the AppleColor High-Resolution RGB Monitor









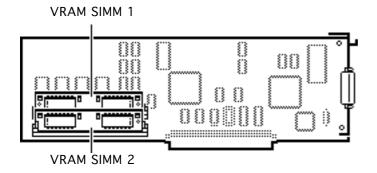


 256 gray levels on the Apple High-Resolution Monochrome Monitor, the Two-Page Monochrome Monitor, and the Macintosh Portrait Display

**Caution:** Review the ESD precautions in Bulletins/ Safety.

Install the two VRAM SIMMs in the socket locations on the video card.





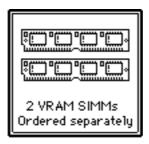
#### 8•24GC Card Upgrade

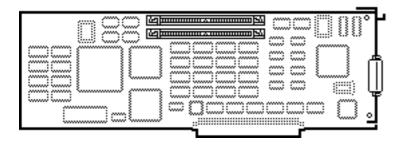
Before you begin, remove the video card.

The Macintosh Display Card 8•24GC upgrade requires two DRAM SIMMs.

The upgraded card improves the performance of applications that use larger off-screen bitmaps and other imaging techniques.











Install the two video DRAM SIMMs in the socket locations on the video card.

