



VRM17 Monitor

EK-VRM17-TC-001

This chapter describes the VRM17 monitor. It tells you about

- VRM17 monitor controls and indicators
- Graphics modules that work with the VRM17 monitor
- How to connect a VRM17 monitor to your workstation

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VRM17 Monitor Hardware

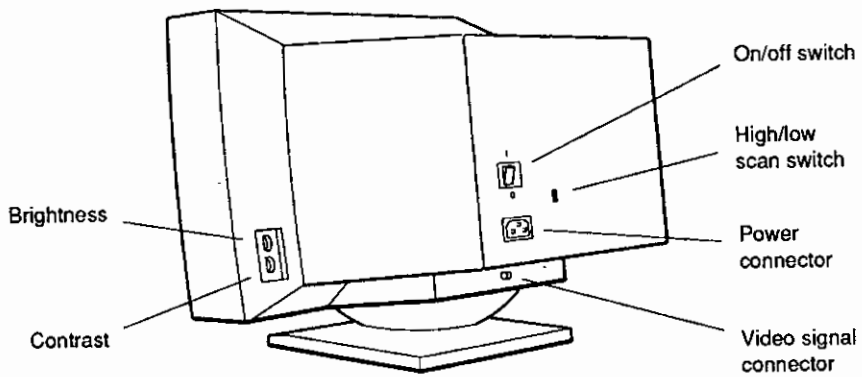
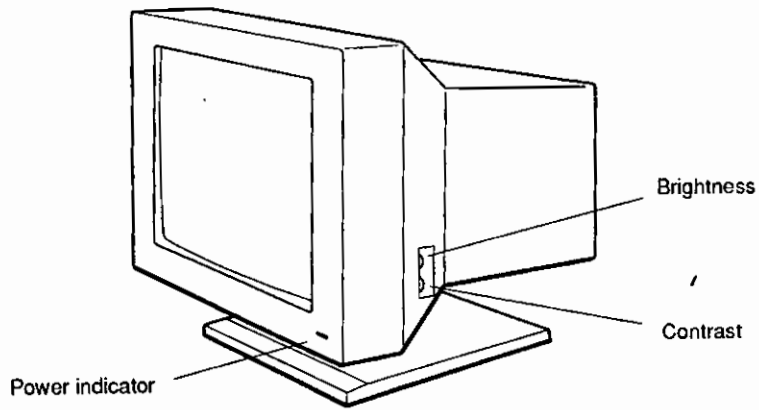
The VRM17 monitor is a 17-inch, 72-Hz monochrome monitor. The monitor display can be 1280 by 1024 pixels or 1024 by 768 pixels.

Several controls and connectors on the VRM17 monitor let you adjust the monitor and connect it to your workstation.

Table 1 lists the purpose of each control and connector.

Table 1. Controls and Connectors on the VRM17 Monitor

Item	Function
Power indicator light	Glows green when the monitor is receiving power
Contrast control	Adjusts the contrast in the monitor display
Brightness control	Adjusts the brightness of the monitor display
High scan/low scan switch	Selects high scan or low scan: <ul style="list-style-type: none">- High scan displays graphics in 1280 by 1024 pixels.- Low scan displays graphics in 1024 by 768 pixels.
Video cable connector	Connects the video cable to the monitor
Power connector	Connects the power cord to the monitor
On/off switch	Turns the monitor on and off



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Figure 1. VRM17 monitor controls and indicators

Connecting the VRM17 Monitor to a Graphics Module

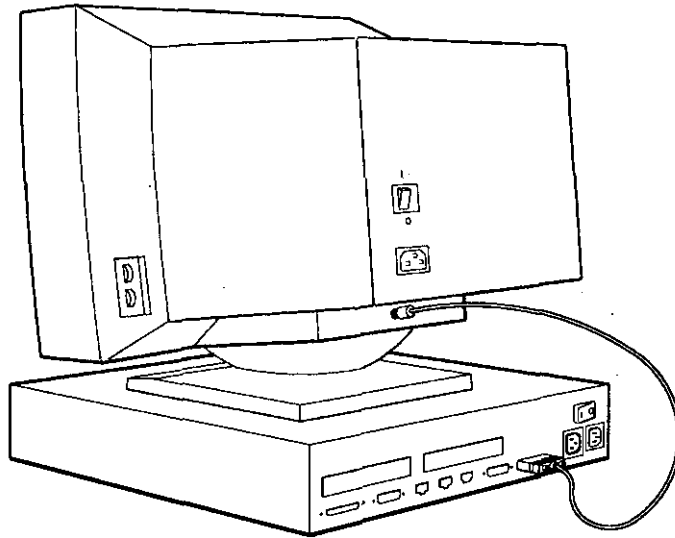
When set for high-scan, the VRM17 monitor can display graphics generated by these TURBOchannel graphics modules:

- Monochrome frame buffer graphics module
- True color frame buffer graphics module
- Smart frame buffer graphics module types PMAGB-BA, PMAGB-BC, and PMAGB-BE
- Low 3d plus graphics module type PMAGB-DA
- Mid 3D plus graphics module type PMAGB-EA
- High 3D plus graphics module type PMAGB-FA

When set for low-scan, the VRM17 monitor can display graphics generated by the smart frame buffer graphics module type PMAGB-BE and the base system graphics module of the Personal DECstation 5000.

To Connect the VRM17 Monitor to a Color Graphics Module,

1. Find the gray-scale monitor cable that came with your shipment.
2. Turn off the monitor.
3. Hold the 3-pin connector of the cable so the widest part of the connector is on top.
4. Firmly push the 3-pin connector into the graphics module connector.
5. Tighten the screws on the 3-pin connector to lock the connector in place.
6. Align the slots on the collar of the signal cable connector with the pins on the monitor connector.
7. Push the signal cable connector onto the monitor connector. Then twist the cable connector to the right to lock it.



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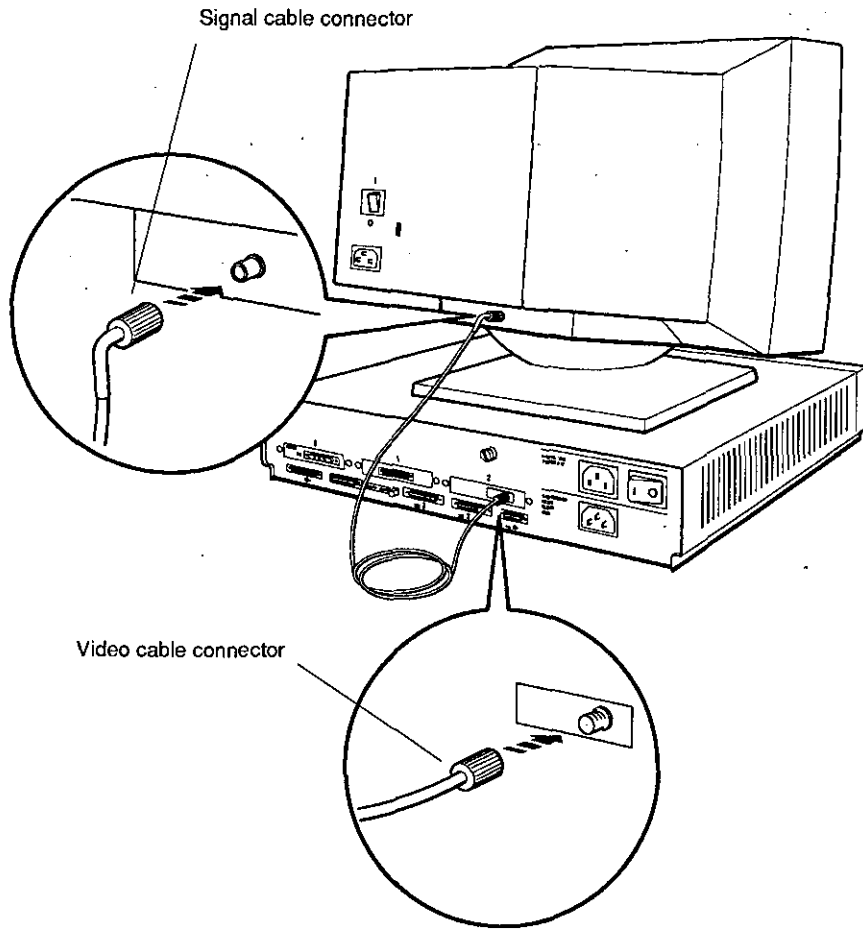
Figure 2. Connecting a VRM17 monitor to a color graphics module

To Disconnect a VRM17 Monitor from a Color Graphics Module

1. Turn off the monitor. Then turn off the system unit.
2. Twist the red signal cable connector all the way to the left. Then pull the connector away from the monitor.
3. Repeat step 2 for the green and blue signal cable connectors.
4. Loosen the two screws that hold the 3-pin connector to the graphics module.
5. Pull the 3-pin connector away from the graphics module.

To Connect a VRM17 Monitor to a Monochrome Frame Buffer Module

1. Locate the video cable that came with your shipment.
2. Turn off the monitor.
3. Press the threaded video cable connector onto the monochrome frame buffer module connector and twist it to the right to tighten it.
4. Align the slots on the collar of the slotted connector with the pins on the monitor connector.
5. Push the slotted connector onto the monitor connector. Then twist the connector to the right to lock it.



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Figure 3. Connecting a VRM17 monitor to a monochrome frame buffer module

To Disconnect a VRM17 Monitor from a Monochrome Monitor

1. Turn off the monitor. Then turn off the system unit.
2. Twist the signal cable connector all the way to the left. Then pull the connector away from the monitor.
3. Twist the video cable connector on the monitor all the way to the left. Then pull the video cable connector away from the graphics module.

For Further Information

For information about the graphics module that connects to the monitor, see the chapter in this guide that describes that module.

VRM17 Monitor Specifications

Table A-1. VRM17 Monitor Description

Weight	81.57 kg (37 lb)
Height	41.91 cm (16.50 in)
Width	40.64 cm (16.0 in)
Depth	37.47 cm (14.75 in)
External controls, switches, and indicators	Brightness Contrast Power switch Power indicator High scan/low scan switch
Cathode-ray tube (CRT)	483 mm (431.8mm (17 in)) diagonal Monochrome high efficiency type phosphor
Tilt range	24°
Swivel range	86°
Display characteristics	1280 pixels by 1024 lines (high scan) or 1024 pixels by 768 lines (low scan) Picture size 295 by 236 mm (high scan) or 300 by 225mm (low scan)
Video input - Termination	75 ohms \pm 2% BNC

(continued on next page)

Table A-1 (Cont.). VRM17 Monitor Description

- Amplitude	1.0 Vpp composite video
Refresh rate	72 Hz Factory or field service configurable
Horizontal rate timing	
- Active video time	13.2767ms (high scan) and 13.3835ms (low scan)
- Back porch	1.7124 μ s (high scan) and 13.4463 μ s (low scan)
- Blanking interval	3.1802 μ s (high scan) and 3.6574 μ s (low scan)
- Frequency	77.1273 kHz (high scan) and 57.384 kHz (low scan)
- Front porch	0.2446 ns(high scan) and 0.2151 ns (low scan)
- Horizontal period	12.9579 μ s (high scan) and 17.4265 μ s (low scan)
- Pixels displayed	
- Sync pulse	1.2232 μ s (high scan) and 1.7211 μ s (low scan)
Vertical rate timing	
- Back porch	0.427864 ms (high scan) and 0.3834 ms (low scan)
- Blanking interval	0.505658 ms (high scan) and 0.5054 ms (low scan)
- Front porch	0.038897 ms (high scan) and 0.0174 ms (low scan)
- Lines displayed	13.2767 (high scan) and 13.3835 (low scan)
- Sync pulse	0.038897 ms (high scan) and 0.1046 (low scan)
Power	
- Power supply type	
- ac input	88 to 132 V or 180 to 264 V
- Frequency	47 to 63 Hz
- Power consumption	75W
Fuse	1.4A at 120VV 1.0A at 240V

Table A-2. VRM17 Monitor Operating Conditions

Temperature range ¹	10 °C to 40°C (50°F to 104°F)
Temperature change rate	11°C (52°F) per hour maximum
Relative humidity	10% to 90% noncondensing
Maximum wet-bulb temperature	32°C (89°F)
Minimum dew-point temperature	2°C (36°F)
Altitude	2,400 m (8,000 ft) maximum

¹Reduce maximum temperature by 1.8°C for each 1,000 meter (1.0°F for each 1,000 ft) increase in altitude.

Table A-3. VRM17 Monitor Nonoperating Conditions

Temperature range	-40°C to 66°C (-40°F to 150°F)
Relative humidity	10% to 90% noncondensing
Maximum wet-bulb temperature	46°C (115°F) packaged
Altitude	4,900 m (16,000 ft) maximum
