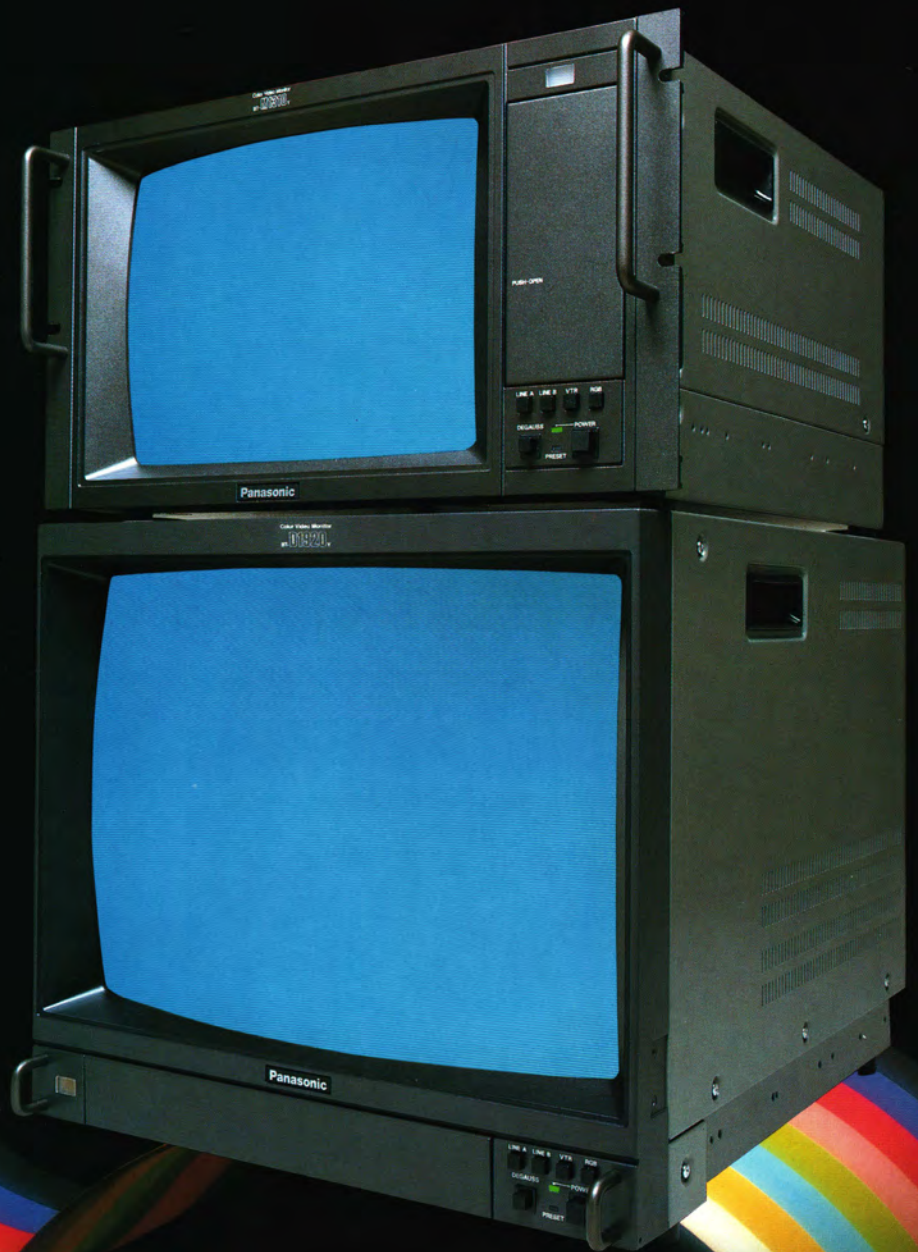


# Panasonic®

BT-D1920Y  
BT-M1310Y  
Color Video Monitors

**PRO  
SERIES**



## Specifications

### BT-D1920Y

<b>System</b>	525 lines per picture, 60 fields per second, interlaced, NTSC	<b>S-Video Input</b>	Y signal: 1 Vp-p C signal: 0.285 Vp-p 75 Ω or high impedance (manual)	<b>Picture Performance</b>	
<b>CRT</b>	Medium Resolution CRT, gray face screen, 70% transparency 0.55 mm dot pitch, 90° deflection, 29.1 mm in-line gun	<b>S-Video Output</b>	Y signal: 1 Vp-p C signal: 0.3 Vp-p 75 Ω or high impedance (manual)	<b>Overscan</b>	5 % overscan of CRT effective screen area
<b>Effective Picture Size (H x V)</b>	15 <sup>1</sup> / <sub>2</sub> " x 11 <sup>9</sup> / <sub>16</sub> " (394 x 293 mm) 19" diagonal	<b>Tally-Remote Connector</b>	Mini-DIN 4P type connector	<b>Underscan</b>	5 % underscan of CRT effective screen area
<b>Input and Output Video</b>	LINE A/B; BNC connector (x 4) 1.0 Vp-p composite video signal ± 2 dB, positive, 75 Ω, with automatic loop-through output	<b>Video Signal (Composite Signal)</b>	REMOTE: 3 terminal type (DC 24.0 ± 1.0 V input or switch) connector (x 1)	<b>Linearity</b>	Within a central area bounded by a circle whose diameter equals the picture height, within 5 % of the picture height; out of area, within 7 %
<b>Sync</b>	EXT SYNC; BNC connector (x 2) 4.0 Vp-p + 6 dB, -26 dB, negative, 75 Ω, with automatic loop-through output	<b>Differential Gain</b>	Within 5 %	<b>Color Temperature</b>	6,500°K, adjustable to other color temperatures
<b>Video Return Loss</b>	More than 40 dB (0—5 MHz with 75 Ω termination)	<b>Differential Phase</b>	Within 5°	<b>Convergence Error</b>	Central area: Less than 0.5 mm Periphery: Less than 0.7 mm
<b>Sync Return Loss</b>	More than 46 dB (0—5 MHz with 75 Ω termination)	<b>Frequency Response</b>	Luminance; 100 Hz to 8 MHz ± 3 dB	<b>Raster Size Stability</b>	Less than 4 % of picture height (at beam current of 0—500 μA)
<b>RGB</b>	R: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2) G: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2) B: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2)	<b>RGB Signal</b>		<b>Resolution</b>	More than 550 TV lines (Center, at preset luminance)
		<b>Differential Gain</b>	Within 5 %	<b>Maximum Brightness</b>	More than 90 fL
		<b>Differential Phase</b>	Within 5°	<b>Preset Contrast</b>	40 ± 5 fL
		<b>Frequency Response</b>	100 Hz to 8 MHz ± 3 dB	<b>Environment</b>	
		<b>Synchronization Performance</b>		<b>Operating Temperature</b>	32°F to 104°F (0°C to 40°C)
		<b>AFC Time Constant</b>	FAST: 0.4 msec SLOW: 1.6 msec More than ± 500 Hz	<b>Operating Humidity</b>	0 to 90 %
		<b>Line Hold Range</b>		<b>General</b>	
		<b>Retrace Time</b>		<b>Warm-up</b>	30 minutes to meet specifications
		<b>Horizontal:</b>	Within 10 μsec	<b>Anode Voltage</b>	Properly adjust HV 24.5 kV at zero beam current
		<b>Vertical:</b>	Within 1 msec	<b>Power Consumption</b>	105 W (typical)
		<b>Interlace</b>	Better than 40/60	<b>Power Requirements</b>	120 V AC ± 10 %, 60 Hz
				<b>Dimensions (W x H x D)</b>	17 <sup>5</sup> / <sub>8</sub> " x 16 <sup>5</sup> / <sub>16</sub> " x 20 <sup>1</sup> / <sub>8</sub> " (448 x 414 x 511 mm)
				<b>Weight</b>	63 <sup>7</sup> / <sub>8</sub> lbs. (29 kg)

### BT-M1310Y

<b>System</b>	525 lines per picture, 60 fields per second, interlaced, NTSC	<b>S-Video Input</b>	Y signal: 1 Vp-p C signal: 0.285 Vp-p 75 Ω or high impedance (manual)	<b>Picture Performance</b>	
<b>CRT</b>	Medium Resolution CRT, 0.39 mm dot pitch, 90° deflection, 29.1 mm in-line gun	<b>S-Video Output</b>	Y signal: 1 Vp-p C signal: 0.3 Vp-p 75 Ω or high impedance (manual)	<b>Overscan</b>	5 % overscan of CRT effective screen area
<b>Effective Picture Size (H x V)</b>	10 <sup>5</sup> / <sub>8</sub> " x 7 <sup>15</sup> / <sub>16</sub> " (267.2 x 200.3 mm) 13" diagonal	<b>Tally-Remote Connector</b>	Mini-DIN 4P type connector	<b>Underscan</b>	5 % underscan of CRT effective screen area
<b>Input and Output Video</b>	LINE A/B; BNC connector (x 4) 1.0 Vp-p composite video signal ± 2 dB, positive, 75 Ω, with automatic loop-through output	<b>Video Signal (Composite Signal)</b>	REMOTE: 3 terminal type (DC 24.0 ± 1.0 V input or switch) connector (x 1)	<b>Linearity</b>	Within a central area bounded by a circle whose diameter equals the picture height, within 5 % of the picture height; out of area, within 7 %
<b>Sync</b>	EXT SYNC; BNC connector (x 2) 4.0 Vp-p + 6 dB, -26 dB, negative, 75 Ω, with automatic loop-through output	<b>Differential Gain</b>	Within 5 %	<b>Color Temperature</b>	6500°K, adjustable to other color temperatures
<b>Video Return Loss</b>	More than 40 dB (0—5 MHz with 75 Ω termination)	<b>Differential Phase</b>	Within 5°	<b>Convergence Error</b>	Central area: Less than 0.5 mm Periphery: Less than 0.7 mm
<b>Sync Return Loss</b>	More than 46 dB (0—5 MHz with 75 Ω termination)	<b>Frequency Response</b>	Luminance; 100 Hz to 8 MHz ± 3 dB	<b>Raster Size Stability</b>	Less than 4 % of picture height (at beam current of 0—500 μA)
<b>RGB</b>	R: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2) G: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2) B: 0.7 Vp-p ± 2 dB, 75 Ω, with automatic loop-through output (BNC connector x 2)	<b>RGB Signal</b>		<b>Resolution</b>	More than 560 TV lines (Center, at preset luminance)
		<b>Differential Gain</b>	Within 5 %	<b>Maximum Brightness</b>	More than 60 fL
		<b>Differential Phase</b>	Within 5°	<b>Preset Contrast</b>	30 ± 5 fL
		<b>Frequency Response</b>	100 Hz to 8 MHz ± 3 dB	<b>Environment</b>	
		<b>Synchronization Performance</b>		<b>Operating Temperature</b>	32°F to 104°F (0°C to 40°C)
		<b>AFC Time Constant</b>	FAST: 0.4 msec SLOW: 1.6 msec More than ± 500 Hz	<b>Operating Humidity</b>	0 to 90 %
		<b>Line Hold Range</b>		<b>General</b>	
		<b>Retrace Time</b>		<b>Warm-up</b>	30 minutes to meet specifications
		<b>Horizontal:</b>	Within 10 μsec	<b>Anode Voltage</b>	Properly adjust HV 24.5 kV at zero beam current
		<b>Vertical:</b>	Within 1 msec	<b>Power Consumption</b>	105 W (typical)
		<b>Interlace</b>	Better than 40/60	<b>Power Requirements</b>	120 V AC ± 10 %, 60 Hz
				<b>Dimensions (W x H x D)</b>	16 <sup>11</sup> / <sub>16</sub> " x 10 <sup>13</sup> / <sub>16</sub> " x 18 <sup>1</sup> / <sub>4</sub> " (424 x 274 x 463 mm)
				<b>Weight</b>	40 <sup>13</sup> / <sub>16</sub> lbs. (18.5 kg)

Weight and dimensions shown are approximate.  
Specifications are subject to change without notice.

# Panasonic

Communications & Systems Company

Division of Matsushita Electric Corporation of America

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**SOUTHERN ZONE:**

Dallas Region: 4500 Arnon Carter Blvd., Ft. Worth, TX 76155 (817) 685-1117

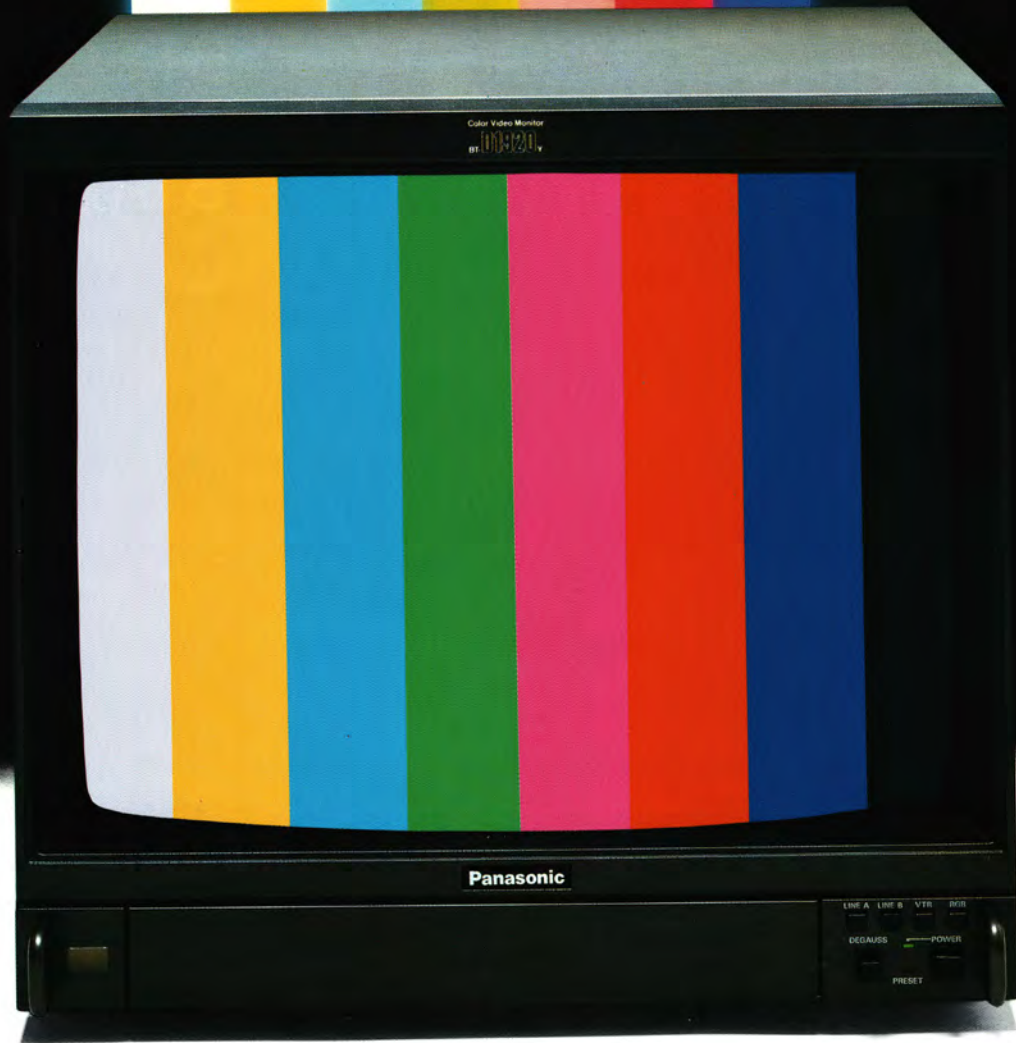
Atlanta Region: 1854 Shackelford Ct., Suite 115, Norcross, GA 30093 (404) 925-6841

**WESTERN ZONE:**

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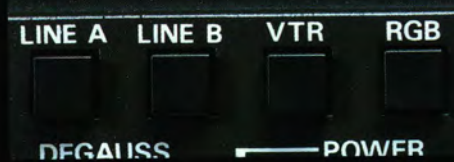


## BT-D1920Y 19" Diagonal Color Video Monitor

The Panasonic BT-D1920Y is a precisely calibrated, high-quality 19" Color Video Monitor for composite NTSC, S-Video, and RGB inputs. It lets you monitor both conventional signals and S-VHS for optimum video performance and accurate image measurement/analysis. In addition, multiple inputs and outputs permit connection of the BT-D1920Y with a broad range of equipment. With simple switch selection of the desired output conveniently available from the front panel.

### Line A/B/VCR/RGB Input Selectable

The front panel of the BT-D1920Y features a convenient array of facilities for easy selection of inputs. You can switch among Line A/B, RGB, or VCR input—which is switchable itself between S-Video and conventional video. Selection of loop-through or termination for the Line A/B and RGB signals is made automatically.



### S-VHS Compatible

For complete, full-quality compatibility with S-VHS format equipment, the BT-D1920Y has S-Video input and output connectors with bridging capability. The VCR input is switchable between

conventional 8-pin and S-Video. And because S-VHS compatibility requires greater precision in circuit tolerances (than in previous Panasonic models), the circuit performance with conventional input signals is improved.



### Complete Array of Inputs and Outputs

- S-Video (Y/C separate) input and output terminals (4-pin mini-DIN connectors) with 75 ohm/high impedance selector
- Line A input/output terminals (BNC type) with automatic termination
- Line B input/output terminals (BNC type) with automatic termination
- External Sync input/output terminals (BNC type) with automatic termination



## BT-M1310Y 13" Diagonal Color Video Monitor

The BT-M1310Y is a 13" precision calibrated Color Video Monitor for composite NTSC, S-Video, and RGB inputs. It has the same valuable features as the 19" BT-D1920Y, although its front panel controls are arranged vertically rather than horizontally. The BT-M1310Y is ideal for broadcast and non-broadcast studio applications. And for other color signal monitoring where high resolution and precise tolerances are required. It accepts S-Video inputs, and has a full array of other inputs and outputs to enable versatile interfacing.

### Versatile Front Panel Controls

A full set of front panel controls at the side of the screen includes: Preset Picture On/Off, Line A/B Split, Set-Up Switch, Cutoff Switch, Screen Controls, Time Constant Switch, Vertical and Horizontal Sync Switches, Underscan/Normal Switch, Blue-Only Switch, Color/Auto/Mono Mode Selector, Comb/Trap Filter Switch, Degauss Switch, and Picture Controls.

### Line A/B/VCR/RGB Input Selectable

Front panel selectors let you switch between

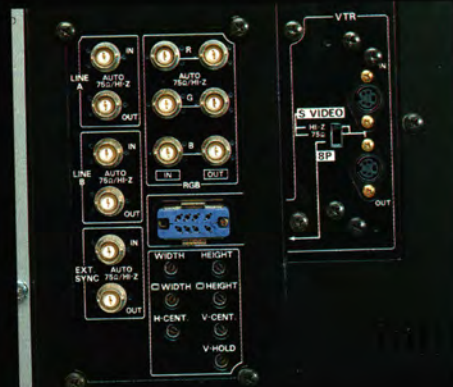
Line A and B inputs, RGB input, or VCR input—which is switchable itself between S-Video and conventional video. Selection of loop-through or termination for the Line A/B and RGB signals is made automatically.

### S-VHS Compatible

The BT-M1310Y has S-Video input and output connectors to accept S-VHS signals. A rear panel switch lets you choose between a conventional 8-pin or an S-VHS (termination or loop-through) VCR input source. And the circuit tolerances required to provide S-VHS compatibility result in superior monitoring performance with conventional signals.

### Complete Array of Inputs and Outputs

- S-Video in and out terminals with 75 ohm/high impedance selector
- Line A and B in/out terminals with automatic termination
- External Sync in/out terminals with automatic termination
- R, G, B in/out terminals with automatic termination
- 8-pin VCR terminal (input and output)



### Rack Mountable

Optional rack mount slides and brackets allow the BT-M1310Y to be mounted easily in most standard 19" racks.

### Additional Features

- Front panel tally lamp
- Rugged metal cabinet construction
- Convenient rack mounting handles
- Commercial UL listing; 3-pronged AC power cord
- Component input (R-Y, B-Y, Y) available as option



## Two High Performance Color Monitors

The BT-D1920Y and BT-M1310Y are two versatile color monitors built for high performance—with the quality and reliability you've come to expect from Panasonic. They offer you the controls and connection facilities needed for broadcast and non-broadcast studio applications. And they also serve a

wide range of industrial, educational and professional video production needs. In addition, for maximum convenience and versatility, the BT-D1920Y and BT-M1310Y Color Video Monitors offer complete, direct compatibility with the new S-VHS format—as well as with conventional signals.

# Versatile Front Panel Controls (BT-D1920Y/BT-M1310Y)

## ■ Preset Picture On/Off

The Preset Picture On/Off function lets you choose between manual picture adjustment or automatic setting. When the Preset switch is off, you can adjust contrast, brightness, chroma, phase and aperture.

## ■ Line A/B Split

Line A/B Split allows you to monitor both A and B video inputs simultaneously, to simplify phase adjustment. The line A signal appears in the upper half of the screen, and the line B signal appears in the lower half.

## ■ Set-Up Switch

Provides a set-up screen for white balance adjustment.

## ■ Simple White Balance Adjustment

The cutoff switch lets you selectively switch the red, green and blue beams on and off. Screen controls allow white balance adjustment at low brightness.

While drive controls enable white color temperature adjustment at high brightness levels.

## ■ Switchable Time Constants

Select a fast time constant to correct for jitter during tape playback. Or switch to the slow position to reveal time base instability.

## ■ Pulse-Cross Circuit

The Pulse-Cross Circuit function lets you observe vertical sync and horizontal sync separately or together.

## ■ Normal/Underscan Switch

Underscanning can disclose skewing, deflection transients and other glitches. Switching to the underscan position lets you judge picture composition and detect intruding cameras and mike booms.

## ■ Blue-Only Switch

The Blue-Only switch is convenient for

color and phase adjustment using a color bar display (SMPTE), and for detecting VCR playback noise.

## ■ Color/Auto/Mono Mode Selectable

The viewing mode is switchable between color and monochrome. Or, you can set the switch for automatic color/mono selection, based on color burst detection.

## ■ Comb/Trap Filter Selectable

Located conveniently on the front panel, the Comb/Trap Filter select switch lets you choose between a comb filter (for higher resolution) and a trap filter, depending upon which will provide a more useful reference when adjusting reception from a particular video camera or other signal source.

## ■ Degauss Switch

The Degauss switch neutralizes residual magnetization from external fields.



- R, G, B input/output terminals (BNC type) with automatic termination
- 8-pin VCR terminal (input and output)



## Rack Mountable

Optional slides and brackets are available to enable easy rack mounting of the BT-D1920Y in standard EIA 19" racks.

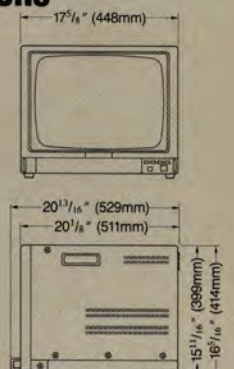


## Additional Features

- Front panel tally lamp
- Separate H/V-size controls
- H and V centering controls
- V hold control
- Rugged metal cabinet construction
- Convenient rack mounting handles
- Commercial UL listing; 3-pronged AC power cord
- Component input (R-Y, B-Y, Y) available as option

## Dimensions

BT-D1920Y



BT-M1310Y

