



Product Description

The simulated MPCD (CRT) is a high-performance 5-inch x 5-inch color, raster-scanned Multi-Purpose Color Display for avionics simulation applications. RS170-type video interface can be sync-on-green or separate/composite video sync. This display features:

- § Complete remote adjustment, calibration and diagnostics using a standard PC.
- § High-brightness, fine dot pitch color CRT. Available with NVIS compatibility.
- § Precision scan electronics and wide bandwidth video.
- § Same functional controls and form-factor as the flight display, plus contrast enhancement filter for improved readability.
- § Built for durability and low life-span cost in simulator applications only, including full motion platforms. Cannot be used in aircraft.

Simulated F/A-18C/D MPCD (CRT) Multi-Purpose Color Display



FA-18 C/D
Cockpit



MPCD Rear View

Simulated F/A-18C/D MPCD (CRT) Multi-Purpose Color Display

Performance Specifications

Resolution: 640 x 480 to 1280 x 1024 multi-sync
Vertical Frequency: 30-80Hz
Horizontal Frequency: 30-76kHz
Video Bandwidth: 100MHz, -3db
Input Impedance: 75 Ohms
Connectors: BNC type (Video & Sync); 9-pin DB-9 (Monitor Control I/O); 37-pin DB-37 bezel control I/O; 3-prong IEC Power Cord
Synchronization: Composite Video (R, G, B) with sync on G or separate composite sync (Optional Horizontal/Vertical sync)
Frequency Detect: Automatic upon change of Video input
Brightness: 150ft-L screen center, without filter
Video Signal Sensitivity: 0.7 volts peak-peak (1.0 volts peak-peak including composite sync). Input circuits are designed to withstand up to 5 volts peak-peak without damage
Horizontal Linearity: 2% of picture width, (Ball chart method)
Vertical Linearity: 2% of picture height, (Ball chart method)
Geometric Distortion: 2% vertical, 3% horizontal.
Size Changes: 2% maximum
Position Changes: 2% maximum
Display Jitter: 0.005 inch peak-peak
Phosphor Protect: Automatically blanks screen if missing sweep
Overscan: Horizontal overscan is standard allowing 1:1 display of 4:3 video.
Degaussing: Automatic upon power-up

Operating Specifications

Power Requirement: 110/220 V AC, 47-400 Hz;
110 watts maximum consumption, 70 watts nominal
Temperature: 0 to 40 C operating, -20 to 70 C non-operating
Altitude: 0 to 10,000 ft operating, 0 to 40,000 ft non-operating
Relative Humidity: Up to 90% (non-condensing) operating, up to 95% (non-condensing) non-operating

Mechanical Specifications

Enclosure Height: 7.20" exclusive of mounting foot
Enclosure Width: 6.75"
Enclosure Depth: 16" (from front flat surface of bezel)
Enclosure Material: Aluminum
Cooling: Forced air, rear intake fan
I/O: Video - R, G, B (75 Ohm BNC)
Horizontal/Vertical Sync - (75 Ohm BNC), 110/220 V AC power - 3-prong IEC power cord
Monitor Control I/O: 9-pin Male DB9
Bezel Control I/O: 37-pin Male DB37

CRT Specifications

CRT Type: Precision in-line gun astigmatronics type
Screen Type: High contrast, black matrix
Deflection Method: Magnetic
Convergence Method: Magnetic: mechanical, static, or dynamic
Focusing Method: Electrostatic
Phosphor Dot Pitch: 0.31 mm
Useable Display Area: 4.93" x 4.97"
Spot Size: 0.020" maximum @ 50 ft-L
Phosphor Type: P22 (medium short persistence)
Light Transmittance: 30% (filter)
Linearity: +/- 2% of picture height over full screen
Line Width: @150 microAmp, 0.020" center, 0.024" corner
Luminance: @150 microAmp, White 150 ft-L
Convergence: Within 0.2 mm center, 0.3 mm corner

Remote Adjustments

- RGB gain and cutoff - Contrast
- Brightness - Horizontal size and center
- Vertical size and center - Horizontal linearity
- E-W pincushion - Horizontal trapezoidal
- Horizontal parallelogram - Horizontal bow
- Horizontal s-correction - Focus
- Dynamic convergence

Warranty

These units are offered with the standard Precision Display Technologies (PDT) warranty of one (1) year on parts and labor for design and/or manufacturing defects in PDT supplied components only (original manufacturers' warranties apply to all CRTs, HUD optics, AMLCDs and bezels). Warranty specifically does not include customer-induced failures or damage caused by shippers.