PRECISION DISPLAY TECHNOLOGIES

High Performance
High Fidelity
High Reliability

The Display Engineers

Simulated B-2 MDU Multi-Purpose Display Unit (ARINC-D)

MDU Rear View

Product Description

The simulated MDU is a high-performance 6.4-inch x 6.4-inch color, raster Multi-Purpose Display Unit 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.

Additional Front View

Precision Display Technologies § 4635 Longley Lane, Building 109, Reno, NV 89502
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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
Synchronization:	Composite Video (R, G, B) with sync on G or separ ate composite sync (Optional Horiz ontal/Vertical sync)
Frequency Detect:	A utomatic 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 v olts 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% v ertical, 3% horizontal.
Size Changes:	2% maximum
Position Changes:	2% maximum
Display Jitter:	0.005 inch peak -peak
Phosphor Protect:	A utomatically blanks screen if missing sweep
Overscan:	Horiz ontal overscan is standard allowing 1:1 displa y of 4:3 video.
Degaussing:	A utomatic upon power-up

Operating Specifications

Power Requirement:	90/264 V AC, 47-400 Hz; 110 watts maximum consumption, 70 w atts nominal
Temperature:	0 to 40 C oper ating, -20 to 70 C non-oper ating
Altitude:	0 to 10,000 ft oper ating, 0 to 40,000 ft non-oper ating
Relative humidity:	Up to 90% (non-condensing) oper ating, up to 95% (non-condensing) non-oper ating

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.

Mechanical Specifications

Enclosure Height:	7.75"
Enclosure Width:	7.75"
Enclosure Depth:	18" (from front flat surface of bez el)
Enclosure Material:	Aluminum
Cooling:	F orced air, rear intake fan
I/O:	Video - R, G, B (75 Ohm BNC) Horiz ontal/Vertical Sync - (1.5k Ohm BNC). 110/220 V AC power - 3-prong IEC power cord
Monitor Control I/O:	DB9 Male
Bezel Control I/O:	19-Pin Ba yonet

CRT Specifications

CRT Type:	Precision in-line gun a vionics type
Screen Type:	High contr ast, black matrix
Deflection Method:	Magnetic
Convergence Method:	Magnetic: mechanical, static, or dynamic
Focusing Method:	Electrostatic
Phosphor Dot Pitch:	0.31 mm
Useable Display Area:	6.4" x 6.4"
Phosphor Type:	P22 (medium short persistence)
Light Transmittance:	30% (filter)
Linearity:	+/- 2% of picture height o ver full screen
Line Width:	@150 microAmp . 0.020" center, 0.024" corner
Luminance:	@150 microAmp . White 150 ft-L without filter
Convergence:	Within 0.2 mm center , 0.3 mm corner

Remote Adjustments

- RGB gain and cutoff - Contr ast
- Brightness - Horiz ontal size and center
- Vertical size and center - Horizontal linearity
- E-W pincushion - Horiz ontal bow
- Horizontal trapezoidal - Horiz ontal parallelogram
- Horizontal s-correction - HVPS
- Focus - Con vergence
- User brightness-contrast High/Low limits both day and night mode

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