

# MPRD-138 / MPRD-138 HB technical specifications

## ELECTRO OPTICAL

Panel type: Active Matrix LCD (AM-LCD) - 8 bit/color  
 Panel size: 15.0" (381 mm)  
 Panel resolution: XGA - 1024 x 768 pixels  
 Pixel dimensions: 0.297 mm (H) x 0.297 mm (V)  
 Image dimensions: 304.1 mm x 228.1 mm  
 (11.97" x 8.98")  
 Panel specifications: 16M colors  
 256 grayscales  
 Brightness:  
 MPRD 138: Day mode: Min. 250 cd/m<sup>2</sup>, (70 fL)  
 MPRD 138 HB: Day mode: Max. 686 cd/m<sup>2</sup>, (200 fL) typical  
 Min. 6 cd/m<sup>2</sup>, (1.75 fL) typical  
 Night mode\*: Max. 6 cd/m<sup>2</sup>, (1.75 fL) typical  
 Min. 0.05 cd/m<sup>2</sup>, (0.05 fL) typical  
 \* = different values in combination with the NVIS A/B option  
 Contrast ratio: 300:1 @ dark environment  
 Dimming ratio: Min. 3000:1  
 Color temperature: > 5000 °K over the viewing cone  
 White uniformity: <= 30% non-uniformity  
 Viewing angle: Horizontal @ CR=5 ± 70°  
 Vertical @ CR=5 +55°/- 60°

## CONTROLS & INDICATORS

On Screen Display: OSD  
 Bezel controls: Day/Night, Inp1, Inp2, Sel, Up, Down, Stand-by  
 Bezel indicators: Power: Green indicator  
 General Overtemp: Red Indicator\*  
 Fault: Orange Indicator\*  
 \* = different front indicators will be used in combination with NVIS A/B Option

## INPUTS

With (VPB): 2 RGB non-differential inputs according to RS-412A signal standard  
 Supported resolutions: VGA up to XGA  
 Connectors: 2 x D38999/20FD05PN with RGB coax inputs

## GENERAL DATA

Mounting: 4 captive bolts of M4 x 15  
 Weight: 7 to 9 kg (15 to 19 lbs) depending on configuration  
 Cooling: Integrated internal fans  
 Dimensions: (WxH) 387 mm (15.24") x 308 mm (12.13")  
 Depth (total): MPRD 138: 112 mm (5.12")  
 MPRD 138 HB: 136 mm (5.97")  
 Depth (behind bezel): MPRD 138: 88 mm (4.33")  
 MPRD 138 HB: 112 mm (5.00")  
 Console aperture: (WxH) 359 mm (14.14") x 277 mm (10.91")

## ENVIRONMENTAL

Low operating temp: - 25°C / - 13°F  
 High operating temp: +55°C / + 131 °F  
 +71 °C / + 160 °F for 30 minutes  
 Low storage temp: -40°C / -40°F  
 High storage temp: +70°C / +158°F  
 Humidity: 95% @ +40°C / +104°F  
 non-condensing  
 Vibration: Sine Vibration  
 Ships MIL-STD-167 T1  
 Airborne (5g) MIL-E-5400T  
 Random Vibration (all terrain vehicles) GAM EG 13  
 50 g - 12.5 ms half sine  
 (3 per axis) MIL-STD-810  
 EMI/EMC: Aircraft - Navy - Ground Army MIL-STD-461  
 Drip proof: drip-proof in all directions MIL-STD-810  
 115-220 V mounted in console, only on front bezel  
 Altitude (operating): Up to 40,000 ft  
 (187 mbar / 2.72 psi) MIL-STD-810  
 Altitude (storage): Up to 40,000 ft  
 (187 mbar / 2.72 psi) MIL-STD-811  
 Rapid decompression: 8,000 ft (792 mbar / 10.91 psi)  
 to 40,000 ft (187 mbar / 2.72 psi)  
 Operating MIL-STD-810  
 Sand & dust, salt fog: comply at unit level MIL-STD-810  
 115-220 V mounted in console, only on front bezel  
 MTBF: 13989 hours GF@ 25°C MIL-HDBK-217F

## POWER

Power supply: 28 VDC / 115-220 VAC MIL-STD-704  
 Power consumption:  
 MPRD 138  
 Heater off: < 50 W  
 < 65 W for 115-220 VAC  
 Heater on: 130 W  
 180 W for 115-220 VAC  
 MPRD 138 HB  
 Heater off: < 70 W  
 < 85 W for 115-220 VAC  
 Heater on: 180 W  
 200 W for 115-220 VAC

## OPTIONS

Image Processing Board: 3 additional BNC/TNC inputs are provided  
 Multi Standard Decoder (MSD) EIA RS 170 (A)  
 CCIR 472-3  
 STANAG A, B, C  
 Smart Motion De-Interlacing (SMDI)  
 Triple Frame Store Buffer (3FSB)  
 Up and Down scaling  
 Mixing of two inputs signals  
 Transparency mode  
 Color keying  
 Digital Video: On request  
 12 Multi Function Buttons: F1 - F6 at left side  
 F7 - F12 at right side  
 NVIS A or B compatible backlight with status indicator  
 Output: RS-422 or RS-232 ASCII string  
 A or B Option MIL-STD-3009  
 NVIS:  
 Top Handle:  
 Touch screen: IR type

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 Technical specifications are subject to change without prior notice



# MPRD-138 / MPRD-138 High Bright



## Main features

- Excellent performance in whatever viewing conditions
- High-Bright version with sunlight readable LCD
- Unique front bonding technology keeps the display condensation-free and provides optimum optical performance at all times
- Outstanding backlight performance and dimming range
- Text overlay capability
- Multiple analog or digital input signals
- Optional Image Processing Board for scaling, mixing and Picture-In-Picture functionality
- Optional night vision goggle compatibility
- Optional IR touch screen

## 15" Multi-Purpose Rugged Display

The MPRD-138 (Multi-Purpose Rugged Display) is Barco's 15.0" MIL-tailored flat panel display for use in tactical and surveillance missions. The MPRD-138 features a 1024 x 768 XGA LCD and is available in a standard brightness and a high-bright version. Be it on airborne or land-based platforms, the MPRD-138 guarantees superior image quality in whatever viewing conditions. For high ambient light conditions, the MPRD-138 HB (High-Bright) version features a sunlight-readable LCD. In addition, with the optional NVIS functionality, Barco's MPRD-138 HB also becomes a reliable display solution during night missions.

The MPRD's Video Processing Board (VPB) is able to process RGB signals with a resolution between VGA and XGA. Furthermore, the display is equipped with On-Screen Display, which generates text overlay with user-definable characters. The optional Image Processing Board (IPB) includes additional capabilities, such as thermal imaging, Picture-In-Picture and camera viewing. With the IPB, any RGB or video source can be mixed or scaled to the appropriate LCD format.

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