



# MF10

## 1080p High Definition Projector



**The Meridian MF10 digital projector offers extraordinary black reproduction capability, with 30,000:1 native contrast ratio. It also features a brand new 0.7in full high definition device and associated optical engine utilising advanced D-ILA technology. The impressive contrast ratio is obtained via the native capabilities of the engine, without the use of a dynamic iris, thus ensuring true black reproduction without loss of brightness.**

D-ILA is a particularly advanced approach to LCOS (Liquid Crystal On Silicon) display technology which offers significant advances over other display systems.

Unlike many other systems, which use a single display element and a colour wheel, which introduces flickering and other artefacts such as colour dithering and rainbow effects, the MF10 employs three individually-tuned 1920 x 1080 pixel D-ILA devices – one each for red, green and blue.

D-ILA devices achieve a significant reduction in stray light by flattening the spaces between pixels and using new, advanced liquid crystals and orientation technologies. The optical engine also employs wire grid polarisers, which significantly reduce light scatter into the projection lens, further contributing to improved contrast.

In addition to a host of superb quality features, each Meridian MF10 projector is hand-tuned at our headquarters and manufacturing facility near Cambridge, England. Here, using specially-developed test and calibration routines, we precisely set gamma, colour temperature and other parameters, allowing the MF10 to dramatically exceed the performance of off-the-shelf projectors.

Meridian has exclusive access to the inner workings of D-ILA, and using special software developed by William Phelps, we are able to unlock the full potential of this projector – particularly the ability to calibrate the individual Red, Green and Blue colour look-up tables (LUTs) that determine exact colour levels for each pixel.

With full access to the projector's processing system, we can perform a full calibration procedure, optimising not only gamma but also colour/grey scale, ensuring more natural colour and minimum artefacts. In addition, we provide the highest degree of accuracy with all available gamma selections. No other company or process has access to these capabilities.

Superior colour rendition is made possible by an unusually broad colour space – the MF10's colour rendering system exceeds the gamut of competing systems (see over).

### Product highlights

Native 30,000:1 contrast and wire-grid polarisation deliver true blacks without an iris

Three 0.7in full-HD D-ILA chips for smooth, flicker-free, cinema-quality high-resolution images

Exclusive calibration process employs software developed for Meridian by William Phelps, dramatically improving performance

High performance 2x zoom lens

80% vertical and 34% horizontal lens shift for easier installation

True full-spec 1080p (1920 X 1080) High Definition

*Dimensioned drawing and RS232 code documents available separately.*

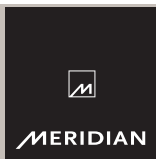
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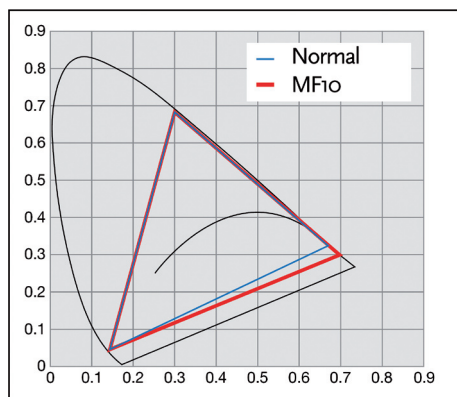
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The standard motorised projection lens is a large-diameter all-glass assembly with 16 elements in 13 groups. It is made by Fujinon Corporation, noted for their quality projection lenses. The lens minimises chromatic aberration effects and delivers maximum resolution by ensuring that individual pixels are all in focus on-screen. The 2x zoom capability permits a large, bright image even in smaller environments that do not allow for longer projector-to-screen distances.

The projector also includes a special vertical stretch facility for the display of extra-wide-screen images with the addition of a third-party lens assembly. Most projectors obtain a 2.35:1 aspect ratio simply by masking off the top and bottom of the display area with black bands (letterboxing). This inevitably reduces the image resolution, brightness and contrast, as a significant number of available

## Projection Distance Chart

Diagonal	Display size (16:9)				Projection distance			
	Width		Height		Lens = Wide		Lens = Tele	
	in.	mm	in.	mm	m	ft.	m	ft.
60	1,328	52.28	747	29.41	1.78	5.84	3.63	11.91
70	1,549	60.98	872	34.33	2.09	6.86	4.24	13.91
80	1,771	69.72	996	39.21	2.4	7.87	4.86	15.94
90	1,992	78.43	1,121	44.13	2.71	8.89	5.47	17.95
100	2,214	87.17	1,245	49.02	3.01	9.88	6.08	19.95
110	2,435	95.87	1,370	53.94	3.32	10.89	6.7	21.98
120	2,656	104.57	1,494	58.82	3.63	11.91	7.31	23.98
130	2,878	113.31	1,619	63.74	3.93	12.89	7.93	26.02
140	3,099	122.01	1,743	68.62	4.24	13.91	8.54	28.02
150	3,320	130.71	1,868	73.54	4.55	14.93	9.16	30.05
160	3,542	139.45	1,992	78.43	4.86	15.94	9.77	32.05
170	3,763	148.15	2,117	83.35	5.16	16.93	10.38	34.06
180	3,984	156.85	2,241	88.23	5.47	17.95	11	36.09
190	4,206	165.59	2,366	93.15	5.78	18.96	11.61	38.09
200	4,427	174.29	2,490	98.03	6.08	19.95	12.23	40.12

Note: all values are  $\pm 5\%$

display pixels are not being used. In the case of the MF10, the image is expanded vertically to facilitate the use of all 2,073,600 pixels in the display engine, dramatically increasing brightness and contrast.

To make positioning of the projector in an installation as easy as possible, the MF10 offers  $\pm 80\%$  vertical and  $\pm 34\%$  horizontal lens shift, and the unit may be table or ceiling mounted. Ease of installation is further enhanced by the front intake/exhaust arrangement of the low-noise fan system, which leaves only interconnects on the rear panel. In addition, the lamp is easily accessed via a side panel wherever the projector is mounted.

The projector features HDMI 1.3 inputs, allowing 225MHz bandwidth and billions of colours, enhanced resolution and higher frame rates. The connectors are widely-spaced to allow the easy connection of professional cabling. The multiple input capability of the MF10 makes it particularly easy to install in a wide variety of systems. A Meridian DVD player like those in the 800 or G Series can drive the MF10 directly via HDMI, and there are also component, S-Video and composite analogue inputs. Alternatively, a processor like the Meridian DVP1080 can be used, offering superior quality scaling, de-interlacing and up-converting of a wide selection of analogue and digital inputs. The MF10 can also be used with other processors.

## Technical specification

### Display device

- 1080p (Full HD) D-ILA device

### Panel size

- 3 x 0.7 inch (16:9 aspect ratio)

### Resolution

- 1920 x 1080 pixels

### Lens

- motorized focus/2 x zoom lens (1.4-2.8:1)

### Projection size

- 60 inches to 200 inches

### Lens shift

- $\pm 80\%$  vertical and  $\pm 34\%$  horizontal

### Contrast ratio

- Native : 30,000:1 (Device 40,000:1)

### Light source

- 200-watt ultra high pressure mercury

### Brightness

- 600 lumens

### Input terminals (back panel)

- HDMI x 2 (ver. 1.3) can also be used as PC input
- Component x 1 (3 RCA) can also be used as an RGB terminal.
- S Video terminal (mini DIN4 pin) x 1
- Composite x 1 (1 RCA terminal)
- Control terminals RS-232 (D-sub, 9-pin)

### Video input formats

- 480i/p, 576i/p, 720p 60/50, 1080i 60/50, 1080p 60/50/24,
- NTSC/NTSC4.43/PAL/PAL-M/PAL-N/SECAM

### Noise level

- 24dB (in normal mode)

### Power consumption

- 280 watts (2.7 watts in stand-by)

### Dimensions

- 455 x 172.5 x 418.5mm (17 <sup>29</sup>/<sub>32</sub> in x 6 <sup>51</sup>/<sub>64</sub> in x 16 <sup>15</sup>/<sub>32</sub> in) (W x H x D without extrusions)

### Weight

- 11.6kg (25.6 lbs.)