

Mitsubishi HC900 DLP Projector

Not quite HD, but it throws up a great picture.



BY EDWARD MEREDITH



A The HC900's remote is backlit and has inputs and discrete codes for power on/off.

While plasma and LCD flat-panel TVs get all of the media attention these days as “must-have” products, they’re still rather high on the dollars-per-square-foot scale. Mitsubishi’s HC900 blows the glass guys out of the water in terms of visual area capability per dollar spent and shows that the transition from the boardroom-presentation-projector market to the home theater venue can have significant benefits for the savvy home-cinema shopper.

The HC900 features Texas Instruments’ Matterhorn DMD (digital micromirror device) chip, a

16:9 affair that, while not quite up to the level of true high definition, is close enough that the visual result is fairly close to HD, picture-wise. Clocking in at 1,024 by 576 pixels, the Matterhorn chip falls short of TI’s true HD DLP chip offerings, but projectors so-equipped can retail for thousands less than their higher-end, single-chip HD DLP brethren. So, what we have here is a near-beer, not-quite-HD DLP, but one that seems just as tasty as the HD real deal.

Mitsubishi tries to give it to you both ways, promising lots of light and high contrast. Sorry, but you can’t have it all. If you want your lumens and your contrast, you have to pick one or the other. They cheerfully acknowledge that the projector puts out a way-bright picture at the standard out-of-the-box settings; but, at the same time, they also point out that the HC900 is equipped with a number of light-reduction features that can provide the deep blacks that HT-lovers crave. As with many other light-bulb projectors, the HC900 has a lower lamp mode, which drops the light output

down by about 20 percent. This cuts the fan noise substantially and provides a surprising doubling of the lamp life, up from 2,000 hours in standard mode to 4,000 hours in the lower lamp mode. With most other bulb-based projectors that feature a low lamp mode, the lamp life typically remains the same as it is with the higher setting.

The HC900 also lets you dial down the light output even more via their CineFocus adjustable-iris feature. CineFocus further constricts the light output to the point where you can achieve a sufficiently bright picture, as well as experience finely detailed blacks, with about a 35 percent reduction in light output when the iris is fully stopped down.

There is more home theater goodness here, with the HC900’s substantial optical offset. That is the amount of optical shift from the screen centerline that allows you to position the projector either well below the screen’s bottom edge (for tabletop installation) or raised well above the screen’s top edge when ceiling-mounted, which is the most likely installation scenario for most

MITSUBISHI HC900 DLP PROJECTOR

OVERALL RATING

Build Quality	Value	Features	Performance	Ergonomics
<ul style="list-style-type: none"> → Spiffy case design, soft, brushed, metallic-like finish → Some light spill from the ventilation grilles, moderate fan noise 	<ul style="list-style-type: none"> → Near-HD quality at thousands less than HD-DLP; bright, too (or not) → Optics a cut above the class, including substantial offset for low tabletop or high ceiling placement 	<ul style="list-style-type: none"> → Great light-control features, such as an adjustable iris and long-life low lamp mode → All it’s missing is the more-installation-friendly HDMI digital input 	<ul style="list-style-type: none"> → Looked great with DVD; surprisingly good with HD material → Dial down the light output and you still have a high-contrast picture with great blacks 	<ul style="list-style-type: none"> → Multiple user memories for daytime- and evening-preferred viewing settings, sports and game-box modes → Backlit remote has discrete codes for power on/off, inputs
87	89	87	88	89

88

This little DLP powerhouse has a lot going for it, once you spend a few minutes during setup to tame the flamethrower-bright light output. More than a few times, I had to remind myself that this wasn’t a full-on HD DLP projector.

General information

HC900 DLP Projector, \$2,995 → Mitsubishi Digital Electronics, (888) 307-0349, www.mitsubishi-hometheater.com
Dealer Locator Code MSU

users. With my midsized, 78-inch-diagonal, 16:9 screen, the HC900 provides about a foot of offset, which means that, when ceiling-mounted, the projector is well above the screen's top edge.

To prevent flare, the lens features an eyelid that eliminates light overspray. This kills stray reflectance

that would otherwise illuminate above the top of the screen and ceiling or bounce off the coffee table, should you forgo a ceiling-mount installation.

The HC900 also features a white-peaking control, called CineRichColor, which pushes up bright white scenes, providing some

HIGHLIGHTS

- Near-HD DLP resolution at a cost of thousands less
- Smart light-control options, adjustable iris
- Super-long lamp life in the lower bulb setting

AT A GLANCE MITSUBISHI HC900 DLP PROJECTOR



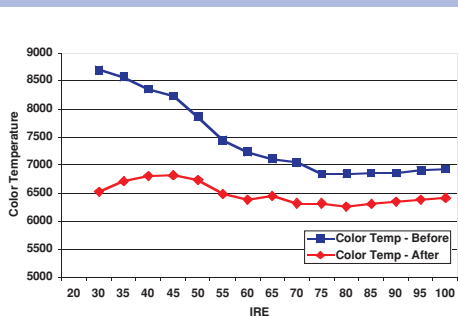
FEATURES

Type:	DLP
Native resolution/aspect ratio:	1,024 by 576 / 16:9
Lamp Life:	2,000 hours (standard), 4,000 hours (low mode)
Different Lenses Available?:	No
Dimensions (H x W x D, inches):	4 x 12.25 x 10
Price:	\$2,995

CONNECTIONS

Inputs:	
Video:	DVI-D with HDCP (1), component video (1), SVGA (1), S-video (1), composite video (1)
Audio:	L/R analog (2 pairs), 3.5 mini stereo (1)
Outputs:	
Video:	None
Audio:	None
Additional:	RS-232 (1)

HT Labs Measures: Mitsubishi HC900 DLP Projector



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❖ Full-On/Full-Off Contrast Ratio—1680:1; ANSI Contrast Ratio—417:1

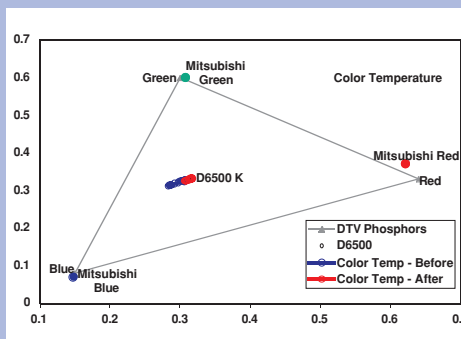
❖ Measured Resolution with the Leader LT-446:
480: 470 (per picture height)
720p: Out to the limits of the 1024-by-576 panel
1080i: Out to the limits of the 1024-by-576 panel

❖ DC Restoration (poor, average, good, excellent):
Excellent

❖ Color Decoder (poor, average, good, excellent):
Good

❖ Measured Color Points:
Red Color Point: $x=0.621, y=0.371$
Green Color Point: $x=0.308, y=0.601$
Blue Color Point: $x=0.148, y=0.071$

The left chart shows the HC900's gray scale relative to its color temperature at various levels of intensity, or brightness (20 IRE is dark gray; 100 IRE is bright



white). The gray scale as set by the factory, in the 6500 color-temperature mode, measures quite cool with dark images but fairly close to D6500, the accurate color temperature, with warmer images. After making adjustments using the Photo Research PR-650, the gray scale measures better, within 320 kelvin of D6500, across the entire range.

The right chart shows the gray scale (or color temperature) relative to the color points of the display's red, green, and blue color-filter-wheel segments. Compared to those specified by SMPTE; blue is correct, green is ever so slightly yellow, and red is fairly orange.

Using a full-field 100-IRE white (8.401 foot-lamberts) and a full-field 0-IRE black (0.005 ft-L), the contrast ratio was 1680:1. Using a 16-box checkerboard pattern (ANSI contrast), the contrast ratio was 417:1. The best contrast ratio was achieved with the standard bulb setting and the iris fully closed. The brightest image, which was achieved in the standard bulb setting with the iris fully open, produced 19 ft-L on an 87-inch-wide, 1.0-gain Da-Lite Da-Mat screen.—GM

extra vividness and vitality. Think of it as a reverse white-crush control that extends the visual dynamic range. You can also turn it down to prevent white shimmering in bright, high-contrast scenes.

Compared with its HD siblings, the lower-resolution Matterhorn chip's downside is its larger individual pixel size and poorer fill factor, the dark spacing around each pixel. Sit too close to a too-large screen, and the dreaded screen-door effect rears its head. With my moderately sized screen and at a proper seating distance, I was never bothered by that impairment.

Happy I was too with the HC900's picture quality. On the test bench, it performed well.

With HD material, I occasionally forgot that the projector isn't quite up to the true HD level. DVDs also

looked fine. The set's internal deinterlacer did a great job, as did the scaler, putting up a picture that had good, deep blacks, clear and detailed bright whites, and accurate flesh tones with no upconversion artifacts.

At a quite reasonable \$2,995, the HC900 butts heads with true HD-spec LCD projectors in the same price range, but DLP seems to have that little extra visual punch and snap that viewers love. With the HC900, I think I've found a new favorite budget projector to recommend to my always-inquiring friends. 📺