

## Mitsubishi HD1000U Home Theater Projector



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October 2, 2006  
[ProjectorCentral.com](http://ProjectorCentral.com)

(Editor's note: as of November 2006, Mitsubishi is no longer offering a free lamp with the purchase of the HD1000U -- but the price has now dropped to \$995. --bl)

The coming months are an exciting time for home theater enthusiasts. The latest 720p projectors are dropping to new pricing lows, making them affordable to those even on modest budgets. One of these new, low-cost 720p projectors is the [Mitsubishi HD1000U](#). This 1500 ANSI lumen DLP projector is ideal either for dark room viewing or for rooms with some ambient light or larger than average screens. It delivers stellar color performance and good contrast, even when pushing out 800 ANSI lumens in a video optimized mode. People are going to love this projector because it offers great picture quality in 720p resolution for street prices under \$1500.

### Specifications

**ANSI lumens:** 1500

**Contrast (full on/off):** 2500:1

**Light Engine:** 1280x720, native 16:9, 0.6" single-chip DLP, with a 7 segment 4x rotation speed color wheel and a 200W lamp.

**Video Compatibility:** 1080i, 720p, 576p, 576i, 480p. NTSC/PAL/SECAM.

**Data Compatibility:** Computer resolutions up to SXGA

**Connection Panel:** One HDMI port, one 15-pin VGA port, one set of YPbPr component inputs, one s-video input, one composite video input, one 12V trigger, one serial port, and one USB port.

**Lens and Throw Distance:** 1.20:1 manual zoom/focus lens. Throws a 100" diagonal 16:9 image from 11.9' to 14.5'

**Lamp Life:** 2,000 hours, 3,000 hours in eco-mode

**Warranty:** One year

### General Impressions/Feature Set

The HD1000U comes wrapped in the now-ubiquitous Mitsubishi casework, which mounts the lens dead center on the front panel with vents to either side. The manual zoom and focus rings are positioned directly over the lens, in a recessed cutout in the case. The projector is a flat gray color.

The connection panel is sufficient for home theater use, but does not have multiple digital inputs as the more expensive models tend to have. Included are one HDMI and one YPbPr component port, as well as a VGA 15-pin connection. These are the connections preferred for a high-quality 720p video

experience. There is also an S-Video input and a composite video jack for lower quality video sources.

The HD1000U has a relatively limited range 1.2x manual zoom/focus lens and no physical lens shift. That means there are some limitations on how and where you can install it to fit the screen size you desire. The throw distance range for a 100" diagonal 16:9 image is between 11.9 feet to 14.5 feet. If you wish to sit at 1.5x the screen width from the projected image, this puts the seating at 10.8 feet, which would be closer to the screen than the location of the projector. So where do you put the projector?

At first, you might think about a rear shelf behind the seats. However, the internal throw angle offset creates further limitations. The HD1000U has a fixed throw offset of roughly 35% of the picture height. This means that for a 100" diagonal 16:9 image, the bottom edge of the image will appear 17.15" above the centerline of the lens. So if the projector were above and behind the seats, the image will usually appear too high on the wall for most people's taste. In most situations rear shelf mounting will prove difficult without tilting the projector downward, which necessitates keystone correction. On the other hand, if you invert the projector and ceiling mount it, the throw angle will be ideal in many cases.

Therefore, many users are going to find themselves ceiling mounting this particular model. The downside to ceiling mounting is the added cost of the mount, the higher cost of longer run video cables, and the time, effort, and perhaps cost of doing the installation itself. The advantage to ceiling mounting is that it can provide ideal screen illumination (bouncing the light directly into the viewing area), and it gets the projector as far as possible from the viewers, thereby reducing the awareness of fan noise.

The HD1000's remote control is small and very busy. Remote buttons allow you to switch to any given source, access basic image adjustments, three AV memory slots for your settings, aspect ratio controls, and there are even separate on/off buttons. The remote is backlit, but the backlighting is rather weak which may make the buttons hard to read. However, the controls are laid out logically so there will not be much of a learning curve.

The menu system is hierarchical, with comprehensive image controls for fine-tuning your projector. Aside from the usual controls, there are gamma controls for the highs, mids, and lows as well as user-definable color temperature settings. The menu will also stay on-screen until you close it, which is useful when testing out new settings buried in the menu system.

Replacement lamps for the HD1000U are priced at \$395, which is not unusual for this class of projector. The cost of new lamps over the lifetime of the projector should be planned for, since they do burn out from time to time. However, until the end of this year, Mitsubishi is including a free replacement lamp with the purchase of an HD1000U. This will reduce the cost of ownership over the first few years of the projector's life.

The projector's fan is noticeable in high lamp mode, and less so in low lamp mode. If you plan on using a ceiling mount this is not a concern, but if you were to place the unit in close proximity to the seating area, the fan noise in high lamp mode could possibly prove distracting.

Finally, the Mitsubishi HD1000U, like all Mitsubishi projectors, has a sealed light engine. There are no air filters that need to be changed or cleaned out. As a result, the only maintenance you'll ever have to perform on this projector is to change out the lamp every 2,000 hours or so.

## Performance

The HD1000U is not just a low-cost 720p projector; it is also capable of high lumen output. When calibrated for cinema and in high lamp mode, our test unit measured 802 ANSI lumens. This can be brought higher by boosting BrilliantColor or by changing the gamma settings out of Cinema mode, but this mode presented a good compromise between bright light output and excellent color performance. Dropping the lamp into low power mode while keeping the same settings nets 620 ANSI lumens, and dropping BrilliantColor to zero in low lamp mode results in 490 ANSI lumens. So even in its least powerful mode, the HD1000U is perfect for 100" screens if not larger.

Shadow detail far exceeds what one might expect from a projector rated at 2500:1. Black level is slightly higher than we've seen recently on other high quality 720p projectors, due to the HD1000U's impressive lumen output. It never crosses the line from black into gray, though. However, this does not impact the clarity of overall contrast, which shines through on standard DVD or high definition. This only adds to the HD1000's allure as an affordable large-screen solution for home theater.

Out of the box, we fine-tuned the HD1000U's color temperature a bit using the RGB gain/offset controls. After doing so, color temperature measured rather close to the ideal 6500K, and grayscale tracking was consistent. Between 20 IRE and 90 IRE, the HD1000 measured between 6300 and 6600 at all levels, with an average of 6350. Practically speaking, the color accuracy on the HD1000 is comparable to that of much more expensive projectors. The proof is in the viewing. The color is beautifully balanced and natural, and in this regard the HD1000 is among the top performers that we've ever seen in this price range.

The precision of the deinterlacing is occasionally not as clear as on more expensive models. The HD1000 struggled with challenging scenes on DVD at 480i, with jaggies and line twitter being present. On the other hand, the use of a good progressive scan source for DVD largely eliminates this problem and helps the HD1000 deliver a cleaner, more stable picture.

When scaling DVD content to native 720p, the HD1000 did a respectable job. The image in all cases was sharp and clean, with no hint of softness. While there was some very fine detail lost in intricate scenes, it is all but unnoticeable during most use. Native 720p content suffers no loss at all, since it is not scaled.

Digital noise tends to appear in solid color fields, but it is comparable to other DLP projectors and not distracting in normal use. You may notice mosquito noise in certain scenes, especially if you are sitting too close to the screen. However, we did not consider noise to be distracting at normal viewing distances.

## Conclusion

Considering the brightness, the beautifully balanced color, and the street prices under \$1500, the Mitsubishi HD1000U is an extraordinary value. In terms of sheer price/performance, it is probably the strongest home theater offering we've seen from Mitsubishi. Its key advantages include high brightness for large screen or ambient light conditions, and terrific color balance and saturation. For those who can live with the limitations imposed by its lack of lens shift and restricted range of throw distance for a given image size, it is a formidable home theater projector. Mitsubishi's inclusion of a free replacement lamp with the initial purchase sweetens the deal even further. (Currently this offer is scheduled to expire 12/31/06). If you want to step into the experience of very large-screen home theater and you want to do it on a budget, the HD1000U is one of the strongest competitive options on the market today.