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## A Diamond among 1080p DLP HDTVs

### A review of Mitsubishi's WD-57831 1080p DLP HDTV

By Dennis P. Barker

Recently, there has been a lot of "buzz" about Plasma and other next-generation flat-panel High Definition televisions. Some models have been given fairly high marks by several reviewers. Many of these sets have been excellent in displaying [HDTV](#) images in different ways. And, for the most part, many are relatively affordable. Some models today have used have employed non-CRT MicroDisplay technologies like [DLP](#), 3LCD, HD-ILA, SXRD or LCoS to [display](#) stunning high-definition visual images. Personally, I have always been a fan of MicroDisplays. And within the various MicroDisplay technologies, DLP, which stands for Digital Light [Processing](#) with chips by Texas Instruments (T.I.), is a leading innovator today.

[Mitsubishi](#), who has always been a strong supporter of DLP technology since its inception, now offers a complete line of MicroDisplay rear projection HDTVs with 1080p screen resolutions. Well, the company has produced the best example I've seen of a MicroDisplay DLP HDTV with their stunning WD-57831. This model is part of their 831 Diamond Series of rear projection DLP HDTVs that include a 57-inch, 65-inch, and 73-inch models. This reviewer, who has always been a fan of Mitsubishi TVs, has found that this company has consistently produced all types of quality televisions over the years. Mitsubishi was the inventor of the large-screen TV category years ago.



#### Introduction

Rear projection consumer DLP presently uses a single-chip design, which means no convergence problems (like old-fashioned [CRT](#) Televisions) or phosphor burn in problems (like plasma displays), or motion-lag problems (like LCDs). DLP front and rear projectors have the capability of displaying images up to true HD quality of 1,920 x 1080 pixels for true 1080p (p = progressive) native HD resolution. All of Mitsubishi's new 2007 line of DLP sets uses T.I.'s latest HD5 [chipset](#) featuring BrilliantColor that greatly improves brightness and contrast (over previous versions) to produce over 2.0 million pixels. T.I.'s HD5 optical semiconductor 16:9 chips use thousands digital microscopic mirrors (DMDs) that build a digital image by switching on/off thousands of times a second via a digitally controlled light beam source.

But Mitsubishi does not rely on the [TI](#) HD5 chipset alone to produce exceptional images; it has also added its own 6-primary color light engine system and 180-watt lamp that further enhances TI's new BrilliantColor system. BrilliantColor uses innovations in image processing to improve the optical efficiency of DLP projection systems while expanding the capability of current [RGB](#) color wheels. BrilliantColor technology can also be combined with new color wheel designs that can expand beyond traditional 3-color systems, enabling the utilization of wide color gamut on DLP display systems, which is what Mitsubishi is doing here. Mitsubishi's proprietary light engine and higher power lamp provides exceptional detail and truly brighter, more vibrant, and wider range of colors.

Mitsubishi's 1080p DLP 6-Color Light Engine generates yellow, cyan and magenta directly, rather than by mixing combinations of red, green and blue to create them. This more efficient process adds a wider range of colors, brighter

individual colors and purer whiter whites. The resulting picture quality brings more realism to yellow sunlight, blue skies and crimson sunsets. The Mitsubishi light engine also features Mitsubishi's PerfectColor and PerfectTint features to adjust the intensity of the tint of each color independently and separately for each input. Deep blacks and rich dark scene detail are provided by a high-contrast screen and Dark Detailer dynamic contrast system.

### Features

Mitsubishi's WD-57831 is a 57W widescreen 16:9 HDTV, designed to produce exceptional images from all " both standard and high definition -- video sources. The WD-57831 is certainly a crowd pleaser! If ever a TV was designed for watching High Definition programming (standard definition images aren't too shabby either), enjoying Home Theater, viewing movies, or watching stills from your Digital Camera, and this is the one! Happily, it's not just the size of the screen that impresses, but clearly the images displayed on it. The set includes dual antenna RF inputs, 2 rear A/V /S-Video inputs, 3 HD-level component video inputs, 2 [HDMI](#) w/HDCP [input](#) , 2 [IEEE 1394](#), and 1 A/V/S-Video, 1 component video, and [RF](#) outputs.. Convenience features include twin-tuner PIP (picture-in-picture), and TV Guide On Screen (that worked flawlessly with my local [cable](#) system -- Cablevision).

Mitsubishi's WD-57831 is a striking example of a fully integrated HDTV with an ATSC (over-the-air) HD tuner, Cable HD [QAM](#) tuner, and a standard definition NTSC tuner. This model is also Digital Cable Ready featuring a CableCARD slot. What this means is that if your cable company offers CableCARDs is that it will allow you to receive all programming provided by the cable company (including HD) without a cable box. What you can't do with CableCARD is buy programming or movies via your remote. If you utilize your cable company's video-on-demand (VOD) or pay-per-view (PPV) services, you might be better off using a cable HD set-top box that would also include an integrated [DVR](#) (Digital Video Recorder). Either way, this Mitsubishi set offers either possibility.

Mitsubishi has added several color enhancement features with the 831 series including Tru1080p processing and 4D Video Noise Reduction. All Mitsubishi 1080p DLP HDTVs process 1920 x 1080p DLP inputs without any down conversion. What this does is that it delivers the full [bandwidth](#) of the incoming signal directly to the screen for a true 2 million [pixel](#) image. Mitsubishi's 4D Video Noise Reduction further adds an extra dimension to picture performance by using advanced algorithms to filter video noise more efficiently yielding clean, crisp images. It upgrades and converts all incoming signals to 1080i (including non-HD signals of 480i or 480p) to achieve optimum picture quality from both [analog](#) and HD sources. Since high definition video is shot in 1080p, the WD-57831 presents those images as they were intended to be seen giving those images the true look and feel of 35mm and 70mm film.

Audio power is rated 10-watts per channel from twin bottom-mounted speakers without any further audio enhancements. The set does, however, include simulated stereo and artificial surround sound settings. However, to receive the complete surround sound effect, it is highly suggested to include a separate AV Receiver with high-quality speakers. For this evaluation, I used a [PioneerElite](#) VSX-84TXSi AV Receiver with six 700 Series B&W loudspeakers. Video sources included the [Oppo Digital](#) DV-981HD Universal DVD player, [Toshiba](#) HD-XA1 HD DVD player, and the Sony [PlayStation3](#) that features an integrated Blu-ray Disc player. All HDMI switching was accomplished via the Pioneer Elite receiver, and utilized one HDMI input on back of the Mitsubishi TV, which allowed for the full enjoyment of HD DVD, Blu-ray, and PS3 HD games

Mitsubishi has also included an average 45-button illuminated universal remote that will control the TV, a VCR, Cable/SAT box, DVD player, and Audio Component via a top-mounted slider. The remote is dark gray. As you press any key, it illuminates, which is a smart idea for easy recognition in a darkened room. Cool! To access video inputs, simply press the INPUT button for the appropriate video source. Although, I left the video input on HDMI 1 for ease of use.

Front A/V/S-Video jacks and one IEEE 1394 input with DV Decoder are located under a hidden flap in the center of the set. These inputs are included for the easy attachment of a camcorder, or external video source. The set also includes a Memory Card Reader that accepts several types of cards including SmartMedia, CompactFlash, MicroDrive, MultiMediaCard (MMC), SD, MemoryStick and MemoryStick PRO. The WD-57831 is housed a beautiful piano black cabinet. An optional matching (and quite attractive I might add) base is available that features bottom storage on two shelves for all of your gear. What was surprising about the base is that it comes fully assembled, which is a god-send, and perfectly complements the WD-57831.

### Evaluation

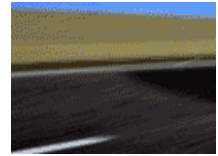
Connection was easy and straight-forward. Since I currently have several [video](#) sources, all were attached via HDMI to Pioneer Elite receiver, and then [output](#) via HDMI into the TV. The main HD source component was EchoStar's ViP 622 HD DVR, which is DISH Network's second-generation high-definition satellite box that includes a built-in DVR. The HDMI connection was employed. As previously noted, an upconverting DVD player along with Toshiba's HD [DVD](#) player and Sony's PS3 were also employed for exemplary standard definition and high-definition images. All worked flawlessly passing 480p, 720p, 1080i, and 1080p HD signals. As signals are fed into the WD-57831, it briefly displays the incoming screen [resolution](#) in the top left-hand corner of the screen.

To calibrate this DLP set for optimal picture playback, I used a special DVD entitled *Digital Video Essentials* by Joe Kane Productions. This special disc allows you to correctly set contrast, brightness, black levels, color, sharpness, and gray scale among other video settings. It also educates about different signals received, and helps set-up your audio system also (if need be). Set-up was relatively easy, but you have to remember that aspect ratio, and image quality for this [DTV](#) is controlled by the source. The on-screen menus are clear and concise.

Using the [Dish Network](#) ViP622 as my HD Satellite Receiver in-place, the displayed images on the WD-57831 produced realistic color with unprecedented picture detail and resolution free from any perceived artifacts. In the end, it all comes down to images and pictures. Either way picture quality is nothing short of spectacular for this exceptional Mitsubishi set! I had thought that I had seen excellent HD images in the past from several DLP sets from other manufacturers. Well, I was wrong. Both broadcast and satellite HDTV images were simply stunning! They were among the best that this reviewer has seen to date. I am at a loss to find negative things to say about picture quality. In prolonged viewings of numerous Prime Time TV shows such as LOST (the best looking HD show on television) and C.S.I. - Miami, the HD images that were received (via rooftop antenna and satellite dish) came in perfectly clear and crisp without any signal degradation or loss of detail in both 720p (ABC-HD and FOX-HD) and 1080i (CBS-HD and Dish Network HD [with now

over 30 HD channels!]).

The colors displayed on the WD-57831 were truly vibrant and very life-like giving you the feeling that "you are there." It cannot be understated! It's almost like watching the world through a clear pane of glass. I want to point out that HD-Net and DiscoveryHD in particular produced some of the most compelling HD images that can be viewed. Test grids from Digital Video Essentials and Silicon Optix's HQV Benchmark DVD Ver.1.4 certainly confirmed what my eyes were telling me that image clarity was right on the mark. Color bars, for example, were in perfect alignment with no coloring bleeding between colors. As well, the lines between colors were straight and true with no jagged edges either. [Grayscale](#) transformed itself from light to dark seamlessly. Test patterns clearly re-affirmed image clarity with image resolution! Also, using THX's video optimizer as well, you could certainly delineate white balance from the eight different squares.



High Definition images seem to produce a truly "life-like" 3-dimensional effect on the viewer as HD adds a considerable amount of depth "not to mention realism -- to any image. The images "pop" right off the screen. This is especially true for DiscoveryHD Theater, which a friend of mine has dubbed "the [bug](#) channel." Insects, and all of nature, never looked so realistic. Of course, sporting events in HD are the "crme de la crme" of HD images, as they need to be seen to be fully appreciated. For example, you can easily count the blades of grass or Astro Turf from several late season football games (I can't believe that the NY Jets and NY Giants have made the playoffs!) or discern the rubble on asphalt on NBC-HD's NASCAR racing. Unbelievable! Watching a football game made me feel that I was sitting right on the fifty yard line. Standard definition NTSC signals looked at good as they could get at 480p from EchoStar esp. the SciFi Channel's Battlestar Gallactica. Of course, re-runs of this show in HD on Universal's HD channel look nothing short of spectacular!

Using this set as a video [monitor](#) for a DVD player (with the Oppo Digital DV-981HD as a reference progressive scan universal DVD player featuring HDMI upconversion capability), the projected images were just as compelling as if you were watching the movies at your local cinema "only better! Here, you're watching movies as they are meant to be seen " in widescreen and digital video via HDMI! Watching films like *40th Anniversary The Sound of Music*, *Spiderman 2*, *The Star War Trilogy*, *Beauty and the Beast-Special Edition*, *Superman Returns*, or even *Mannheim Steamroller*, for example, portrayed a display device that could easily distinguish subtle color shading and hue reproducing colors as accurately and realistically as possible. Black levels, which are the Achilles' heel of all MicroDisplay sets, was better than other HD sets previously viewed. While DVDs never looked better, it's really the HD images displayed from EchoStar satellite, the over-the-air antenna, HD DVD and Blu-ray Disc that produced the most stunning, startling, and most compelling images ever seen by this reviewer in a production sample display device.

Of course, watching and listening to movies in standard definition is OK, but to get the real benefits of an HD set you have to watch content in high def. Initially, I used the Toshiba HD-XA1, which was their first step-up HD DVD player with a screen resolution of 1080i and previously reviewed by this author. Clearly, there are certain movies that were meant to be seen and heard in HD DVD. Current offerings include: *King Kong*, *Mission Impossible III*, *Miami Vice-Unrated Director's Edition*, and *The Polar Express* among other HD DVD titles viewed. One title in particular shows off any high definition format, and that film is John Ford's *The Searchers* (also available on Blu-ray) makes you believe that you can reach out and touch Monument Valley. Simply unbelievable, and it's a sight not to be missed. *Miami Vice*, which was shot in HD by Michael Mann, looked especially gritty and realistic also.

While I had initially viewed Samsung's first BD offering late last Summer (2006), which I found unacceptable, I turned to Sony's recently released PlayStation3 as a terrific source for both next-generation video games in high-definition and Blu-ray movies in screen resolutions up to 1080p. Video games have never looked so compelling esp. *RESISTANCE - FALL OF MAN* in 720p, and *HD Gran Turismo* in 1080p. The graphics have never looked so realistic or spectacular. In *HD Gran Turismo*, for example, I thought that I was back in the Alps near the Eiger Mountain in this racing game. I also believe that this is the first video game in 1080p. Numerous Blu-ray movies have been watched including *The League of Extraordinary Gentlemen*, *X-The Last Stand*, *Annapolis*, and *UNDERWORLD Evolution* to name a few titles. This last title mentioned, however, was chosen because it is especially taxing on a DLP set because there are so many dark scenes throughout the entire movie. Needless to say, the gradations of gray-to-black made the texture of the film appear very crisp and precise, and different shades of black were easily discernable. Of course, standard definition DVDs also looked exceptional when playback on the PS3 as well.

### Conclusions

In conclusion, Mitsubishi's WD-57831 combined with several high-definition sources produced and reproduced the some of the best images from regular over-the-air HD, Satellite, Satellite HD, and high-definition optical disc signals possible! This is a set that has to be seen in all its glory to be fully appreciated! In many ways, it's superior to its competitors in both design and function. Clearly, extended viewings are recommended! Here is a television with the capability of showing each type of signal in the best possible way. While it's somewhat pricey, it produces some of the best images on the planet! And, as the old saying goes, "you get what you pay for."

Since the WD-57831 is a HDTV with all of the right connectors (including HDMI), you're set for many years to come of extended viewings. So, get comfortable. You'll be receiving and watching the most pristine and compelling HDTV signals on this or any other planet! Clearly, it's your new window onto the world, and just the ticket for watching your favorite TV shows in HD and viewing your growing DVD collection. Pass me the popcorn!



**RATING: 9.9**

**Mitsubishi WD-57831 57-in. widescreen DLP HDTV**

- 1080p DLP High-Output Light Engine with BrilliantColor
- TurboLight 180 lamp
- 6-Primary Color System
- Dark Detailer
- Plush 1080p
- Tru1080p Processing
- 4D-Video Noise Reduction
- 12-Bit System w/Enhanced Algorithms for Video Noise Elimination
- 20-watt audio featuring simulated surround with 2 full-range speakers
- TV Guide On Screen
- Fully illuminated remote
- 2nd Simple Remote
- Multi-Format [Memory](#) Card Reader
- 2 RF inputs
- 2 HDMI w/ HDCP input
- 1 PC DVI-Input
- 3 Component HD inputs
- 2 A/V/S-Video rear inputs
- 1 A/V/S-Video front panel inputs
- Rear [IEEE 1394](#) input
- Front IEEE 1394 input with DV Decoder
- 36-3/16" high x 51-1/2" wide x 17-15/16" deep
- 85.8 lbs.

**MSRP: \$3,799**

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