



Panasonic DP-UB9000

4K UHD Blu-ray Disc Player

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In an era where some manufacturers are axing optical disc players from their product line-ups due to slowing disc sales, Panasonic and a select few other manufacturers are releasing updated disc players anyway. On top of that, Panasonic has chosen unique-so-far-as-I-know sales/distribution of the flagship DP-UB9000. Value Electronics, a New York dealer/distributor, was, initially, the sole distributor and seller of the DP-UB9000 in the United States. From January 2019 to August 2019, they also supplied technical and customer service support during that launch. In September 2019, Panasonic added Magnolia and a few other brick and mortar retailers. The US Panasonic Web site doesn't even include information about the DP-UB9000 (as of late November 2019). Subject to change, the current price of the DP-UB9000 through Value Electronics is \$998 through the end of December 2019. Check the Web site to see if the retail offer has changed. Value Electronics' Web site supports purchase of the DP-UB9000. The URL appears at the end of the review.

Being the flagship Panasonic disc player brings features and component upgrades that push the retail price well beyond prices of less-well-equipped disc players. Like other high-end disc players, a lot of the extra cost of these machines comes from features not present in less-expensive disc players, upgrades of electronic components, and mechanical design improvements. The DP-UB9000 is smooth as silk and is much quieter in operation than low-cost disc players. Opening the disc drawer creates no plastic rattling or whirring noises. The quiet comes from the heavier double-wall chassis, a heavy mount plate for the center-mounted disc transport, a silent cooling fan, and a transport with better-fitting and sturdier mechanical components than low-cost transports.

On-board, digital-to-analog conversion is done by 32-bit 784,000 Hz sample rate DACs for all channels. The analog audio connections are: 7.1 outputs via RCA jacks; stereo analog via RCA

jacks; and stereo analog via XLR jacks. Supporting this high-end analog audio output capability is a dedicated analog audio power supply. Some owners might choose an HDMI cable for movies and the stereo XLRs for high-quality analog stereo. Don't forget that using analog outputs for 7.1 sound into a processor will result in the processor digitizing the incoming audio again unless you are using the AVR/processor's bypass mode called Pure or Direct or Pure Direct, or something similar. The analog audio from the disc player will be encoded back to digital in the AVR/processor, processed, then converted back to analog again... a conversion step that should always be avoided for best sound quality. For those who need it, the quality of the analog output stage is excellent.

The DP-UB9000 doesn't play SA-CD or DVD-Audio discs but does play just about everything else. It is considerably heavier than lower-cost Panasonic disc players. Most of the weight gain comes from double-wall metal in the chassis that stiffens and quiets the DP-UB9000. The front panel is 7-mm aluminum and side panels are 3-mm aluminum. Panasonic uses its new Gen 2 HCX (Hollywood Cinema Experience) video processor. A feature called HDR Optimizer allows you to adjust HDR luminance. This feature can help you improve video displays with HDR limitations or "fix" discs that were mastered too dark or too bright. The value of this feature cannot be overstated if you have a video display (TV or projector) that does not offer similar control over the appearance of HDR. To my eye, this control appears to move the 50 percent luminance level up or down (towards 100 percent or 0 percent luminance) while peak white and black remain peak white and black. Some newer projectors and TVs I've seen do a flavor of this in 2019 with their Contrast control. But Panasonic's dual optimizer controls give even more control over HDR appearance. The DP-UB9000 will even display metadata for the disc so you can see if the disc has an error in the metadata. One recently released 4K

Ultra HD title has the peak luminance meta data value set to a little over 9,000 nits, which is an error since there aren't mastering video displays that get that bright yet. This means this disc won't look right on any display that can't compensate for the error in the meta data. The DP-UB9000 can reduce or remove that error. Other HDR content can look too bright or too dim for a variety of reasons, but the HDR Optimizer can be adjusted to compensate. This can make a too-dark 4K Ultra HD disc like *The Last Witch Hunter* look far better than it does if this type of adjustment is not available. The HDR Optimizer only works when the HDR source has static metadata. HDR10+ and Dolby Vision have dynamic metadata so the HDR Optimizer will be disabled for those formats. HDR10 has static metadata and HLG has no metadata at all, so HDR Optimizer will work with both of those formats.

There is also a means of producing simulated HDR on SDR video displays from SDR sources. This doesn't turn SDR content into HDR content, but it does add some of the "snap" in HDR images to SDR displays showing SDR content. UHD/HDR video brought a new concept with it called "tone mapping." This is the process of distributing the full luminance range of the source over the full luminance capability of the video display. If the mastering monitor had 100 percent white at 1,200 nits and your home video display can produce 900 nits, all video from 0 percent to 50 percent on the disc will be reproduced as encoded on the disc. The luminance values from 50+ percent to 100 percent white are "compressed" to fit the remainder of the video display's luminance range. In this example, 0 percent to 50 percent luminance on the disc would display as 0 to 600 lumens on the video display. On playback, 0 percent to 50 percent luminance on the disc still uses the 0- to 600-nit luminance on the video display. But luminance levels from just over 50 percent to 100 percent on the disc are spread over another 600 nits on the disc. But the video display in this example maxes out at 900 nits, so you only have 601 to 900 nits on the display to show you the information contained between 601 and 1,200 nits on the disc. Tone mapping is applied to the top 600 nits of luminance from the disc so you see all (or as much as possible) of that information in the 300 nits the video display has left. To accomplish the adjustments, Panasonic is essentially manipulating tone mapping to compensate for displays that don't have flexible tone mapping like this disc player. The HDR settings can be addressed directly via an HDR button on the remote.

Panasonic includes gigabit Ethernet and front and rear USB ports. The rear USB port supports USB 3.0, while the front USB port supports USB 2.0. A hard, immovable Wi-Fi antenna sticks out an inch or a bit more from the back of the DP-UB9000. I didn't use Wi-Fi during the review, but if this antenna works as well as the more typical (and vulnerable to damage) stick antennas that rotate and tilt, it will be welcome relief from those flimsy stick plastic antennas. There are single coax and optical digital outputs. The usual dual HDMI outputs allow connections to an audio processor and video display should that be needed in your system. There is a cooling fan, but I never heard it in operation, it is extremely quiet. There is an IEC socket for the power cord. Appearance-wise, the DP-UB9000 looks purposeful and serious. PAL video is not supported in the version of the DP-UB9000 sold here. It will play region-free discs (all 4K UHD discs are region-free), region A HD Blu-ray and region 1 DVD-Video. There were two firmware updates during the review period, though, I did not find any new features added, nor did I notice any bugs that needed to be fixed. But both updates installed without problems and the process wasn't annoyingly lengthy.

The remote, if not identical to the last 4K Ultra HD Panasonic disc player I reviewed, is very similar. It works well and has plenty of buttons to access common settings without having to navigate menus. The labels on the keys are as big as they can be made, something other manufacturers mess up with some regularity by

Features

Plays music and movie discs, except SA-CD, HD DVD, and DVD-Audio
Chassis designed for stiffness, low center of gravity, and reduction of vibrations
Supports all Immersive Sound formats
HDMI: 0 inputs; 1 output for UHD video and audio; 1 output for audio only or audio + HD video
Analog: 0 inputs; 3 outputs— stereo RCAs, stereo XLRs, 7.1 RCA jacks
Digital Inputs: 2 USB; 1 Ethernet
Digital Outputs: 1 coax; 1 optical; 2 HDMI
IEC power cord socket
Supports: HDR10/HDR10+; HLG; Dolby Vision; 1080p 3D; Ethernet; Wi-Fi 5 (AC)
HDR Optimizer
Ultra HD Premium certified
Aluminum front and side plates
Dual wall chassis construction
Dedicated analog audio power supply
Separate analog audio circuit board with fully balanced outputs connected to stereo XLR outputs (and RCA jacks)
Extensive adjustments for video and audio
Ultra quiet operation

Specifications

Dimensions: 17 W x 3.25 H x 12 13/16 D (inches)
Weight: 17.2 (pounds)
Power requirement: 120 VAC; 60 Hz
Power consumption: 39 operating; 11 Quick Start standby; 0.3 standby w/o Quick Start (watts)
Frequency response: NA
Max. THD: NA
Signal to Noise: NA
Designed In: Japan
Warranty: 1 year parts; 90 days labor; 90 days on accessories
MSRP: \$999.99 (USD)

Manufactured In China For:

Panasonic North America
2 Panasonic Way
Secaucus, New Jersey 07094
Phone: 201 348 7000
Web site: panasonic.com

Value Electronics
35 Popham Road
Scarsdale, New York
Phone: 914 723 3344
Web page:
https://www.valueelectronics.com/Panasonic_DMP-UB900.php
Email: rzohn@valueelectronics.com

making everything too tiny to read. All the buttons except red/green/blue/yellow are backlit. The backlighting has to be turned on with the Light button. The Basic Owner's Manual only has three pages of product information, and the on-screen menus don't often have descriptions of their functions to help you not need a manual so much. The full owner's manual that I had to find on the Panasonic.com Web site has around 35 pages of information and another 12 pages of licenses, safety warnings, tables, and lists.

To prevent adding judder to movies, Panasonic offers a 24p Output setting that outputs 24p when the source is 24p. If you

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enable both 4K/60 and 4K/24, you will get 24p movies in 24p and video (usually 30p or 60i) as 60p. There are settings that disable Dolby Vision and HDR10+, which seems odd until you remember that dynamic metadata has to override any picture settings you make in the disc player. To help you not make bad choices for combinations of settings, Panasonic guides you to pick these options based on the capabilities of your system. But they can't anticipate every possible bad combination of settings. It really helps if you understand the settings or have a dealer-integrator-installer who understands all the settings. You have more control over the appearance of HDR images than I have seen in any other disc player. But that also provides the opportunity to misuse these controls egregiously. If an owner gets into trouble with settings, there are several opportunities to reset groups of settings back to defaults. As you familiarize yourself with the setting options, you'll notice there are a lot of settings that allow you to force the disc player to do something specific. For many, this will be overkill and the default Auto setting will be fine. But if you have components in your system that don't pass HDMI handshake information reliably, you can force the DP-UB9000 into any mode you might need it to be in for the content you want to view, even if the disc player won't go into that mode based on handshake information alone. On more than one occasion I've had an Ultra HD video display in the system, but the system would not send UHD resolution if the disc player did not have a forced UHD mode. So, all the On/Off options for so many settings may seem like overkill, but for a system that needs to use one or more of them, they are vital.

The DP-UB9000 has a lot of image processing capabilities because of the Gen 2 HCX video processor's capabilities. The adjustments go beyond what is present in most disc players. Possibly the biggest head-scratcher about the DP-UB9000 is the fact that it won't play SA-CDs, but it will decode DSD, the digital format encoded on SA-CDs. If you rip your SA-CDs to DSD files stored on a network hard disk, the DP-UB9000 will play the music, but if you put the disc in the transport... nada!

The DP-UB9000 is one of those disc players caught in the middle of a gray area. The DP-UB9000 plays ripped CD music and DSD-encoded music. Hi-res formats, standard res formats, low-res formats, they all work. You can confidently put your entire music-disc collection on network hard disks and the Panasonic will play it all. Try that with movies and you are met with the frustration of video without audio. Panasonic uses a cryptic message that says something like, "The sound format is not compatible" superimposed on the video. The message doesn't tell you that the machine won't play copies of discs. Instead, it tells you the soundtrack isn't compatible. The movie industry doesn't want disc player manufacturers to allow copies of movies to be played, which is easy enough for a disc player to figure out. <Oh, this is legitimate video and audio but it is coming in on the Ethernet port and there is no disc in the transport, so... give them the misleading error

message.> Anybody who wants to download pirated copies of movies online certainly doesn't need a disc player to play back those illicit movies, so disabling that capability on a legitimate disc player seems like a punishment for honest home theatre enthusiasts. There is a "fair use" policy on CDs... it is okay to copy the contents to other devices for personal use. That would appear to apply to movies on discs, but the studios apply "copy protection" to discs that is 100 percent inconsequential to anyone who wants to pirate discs for profit. There are some interpretations of "fair use" that indicate if the digital media is copy-protected, removing the copy protection is the gray area, not so much copying the movie. In any case, I can't find any indication that even one person in the U.S. has gotten in trouble for copying discs to a network hard disk for their own use as long as they own the physical movie disc.

External memory devices are supported via the two USB ports (v2.0 on the front, v3.0 on the back) that do not have power for recharging devices or for operating USB hard discs. These memory devices have the same restrictions on movies copied from discs that you get trying to bring those same movies into the player via Ethernet. USB 2.0 is borderline fast enough to support real-world UHD/HDR content from USB devices. You can actually run out of bandwidth during periods of high data rates (complex audio and video at the same time).

The purist in me says, "The disc player should do nothing but deliver the contents of the disc to the AVR/processor." This keeps going through my head because you typically don't want more than one component in the signal path processing anything, especially video. Disc players should deliver data without changing it. AVRs/processors should do what we need them to do with audio, and video displays should do everything we need them to do. But UHD/HDR is still so new, there still isn't a standard for making HDR look good on projectors. And some early UHD/HDR TVs made bad choices about how UHD/HDR picture controls should work and what controls should be available. Many of those early products can be "saved" by all the adjustments in the DP-UB9000. If your TV is bothersome on some UHD/HDR titles but looks fine on others, the DP-UB9000 has controls to let you fix that too... though, you may have to make manual changes for those "off" discs, at least you can make them look good (or better) than the originals. At some point UHD/HDR will get "all figured out," but until then, having a disc player with this many adjustments for various settings and all the adjustment capabilities it has can improve less-than-stellar UHD/HDR images. That will get you through the awkward adolescent years of the developing UHD/HDR era.

If you turn all the processing options off or to "neutral" settings where they aren't doing anything, when you compare the Panasonic machine to other high-end machines from OPPO and Pioneer, you'll get sound and images that may not all be 100 percent identical in every way, but they will be very close to each other. There is no outright winner since each machine has its strengths and weaknesses. The OPPO machine has the least impact here because OPPO is one of those companies who have decided to not make disc players any longer. But their final two players (circa \$550 and \$1,300) were excellent machines. It is nice to see other high-end disc players filling this void. Once you start using adjustments in the players, OPPO has the fewest image processing options, Pioneer adds some useful image control options, and Panasonic has included the most adjustability for images and audio.

“Music Remains The Ultimate Test Of A Disc Player, And Here The Panasonic Does Not Disappoint.”

Music remains the ultimate test of a disc player, and here the Panasonic does not disappoint. You get the same great musical sound from Ethernet, USB, or HDMI. Using Marantz' current AV-8805 processor (\$4,499 MSRP), there was no sonic advantage to using a disc, the network server, or a USB memory stick as the music source. All were equally good sounding. And there was no sonic advantage to decoding to analog in the DP-UB9000 versus sending digital audio from the DP-UB9000 to the processor. As with video, there are a number of audio processing options available if you are using the analog outputs. These include six settings claimed to imbue the sound of the DP-UB9000 with varying degrees of the type of sound you get from amplifiers using vacuum tubes rather than solid-state output devices. Much of the warmth and “glow” associated with the sound of classic tube amplifiers comes from the higher levels of even-order harmonics that tend to come with classic tube amplifier designs. But tube amplifiers don't all have the warm glow of added second harmonics. There are a lot of modern tube amplifiers that avoid the classic tube sound in favor of more modern, less “colored” sound that some feel makes music perhaps a little more heavenly sounding than real life. I found this feature did audibly change the sound and provided an afternoon's worth of playing around with it and other settings. I can't say I'd use it all the time, but it's kind of interesting to hear how you can manipulate sound in subtle ways. There are also a number of options for changing the analog audio output filter used when converting digital audio to analog. There are varying filter techniques that affect how the cut-off filter affects sound within the human-audible frequency range. If you can hear these differences, they will come from the unavoidable analog filter artifacts' different effects on phase at higher frequencies. Those high-ish frequency phase issues “beat” with lower harmonics so much that you can detect effects of the analog cutoff filter options down into the upper midrange octave. The differences heard with the different analog output filters are very small indeed. I suspect many will assume there is no difference at all. The three Remaster options allow more personal tailoring of the sound should you wish to experiment. A Night Surround option allows the player to reduce bass while keeping everything audible during late night listening, when you wish to not disturb others. This is in addition to

the Dolby dynamic range control for Dolby formats only.

For integration into a custom home theatre system with an integrated control system, the DP-UB9000 lacks additional interfaces. There is no RS-232 port and no wired IR connection for automation/control systems. But there is IP control for Control4, and other control systems may be supported in the future.

Conclusion

Hour after hour of movies and music during the review caused me to appreciate the DP-UB9000 disc player for all the adjustments and settings that can be used to get the most out of your UHD/HDR system. When I didn't want or need any “help” from the DP-UB9000, it was easy enough to disable everything and just enjoy the silent operation, quick response to controls, detailed and colorful images, and enough audio options to optimize sound quality in any system. Highly recommended. **WSR**

Value Electronics

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DP-UB9000 Promotion

Free Spears & Munsil 10bit test disc w/UB9000 purchase
We double box every UB9000 & include Spears & Munsil's 10bit disc

Our customers enjoy the best support to get your
UB9000 properly configured with you a/v system

On sale now \$998.00 Delivered Nationwide

Call us 914-723-3344 or email:
rzohn@valueelectronics.com

Or visit our website:
www.ValueElectronics.com

Our beautiful a/v showroom is located at:
35 Popham Road, Scardale, NY 10583