

CANON REALiS WUX500 REVIEW

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THE CANON REALiS WUX500 LCOS PROJECTOR IS A WUXGA [1920x1200] WITH A 5000-LUMEN RATING MADE FOR CONFERENCE ROOMS, HIGHER-ED CLASSROOMS, MUSEUMS, PHOTO CLUBS, HOUSES OF WORSHIP, AND OTHER VENUES WHERE A BRIGHT HIGH-RESOLUTION IMAGE IS REQUIRED.

It comes with some significant advantages including small size, edge blending capability, picture in picture, and the highly unusual ability to maintain almost undiminished maximum brightness throughout its full 1.8:1 zoom range. This is unique among projectors we have tested.

At 13 pounds with dimensions of 5.4" x 13.3" x 14.6", the WUX500 is smaller than earlier generation projectors in this performance class which are usually mounted high off the floor and many times on extension tubes dangling from the ceiling. If you have ever tried mounting

a projector while balancing on a ladder or scaffold, the small profile and relatively light weight of the WUX500 will be appreciated.

The WUX500's new lens design overcomes a common limitation of zoom lenses: loss of brightness while transiting from wide-angle to telephoto. It is not unusual to lose 30%-40% of a projector's rated brightness when using lenses at the long end of a 1.8x zoom, but the WUX500 maintains 95% of its brightness across its entire zoom range. That means you don't need to overspec lumens to compensate for a long throw distance.

> Viewing Experience

The WUX500 puts up a solid image with well-balanced color and even brightness uniformity across the image. Video and photo images pop with naturally saturated color and accurate color balance when in video optimized mode. Highlight and shadow details have good definition despite the WUX500's relatively low 2,000:1 contrast ratio. Flesh tones are right on the mark, and images have a luminance that combines well with presets of the Photo/sRGB mode to provide good three-dimensionality. There is no frame interpolation on the WUX500, so 24p video does exhibit some judder in slow panning scenes.

Though it may hit its stride with video projection, the WUX500 is no slouch when it comes to data projection. Even at full horizontal or vertical keystone correction, small fonts are easy to read, and the image is sharp from edge to edge with no digital artifacts.

All projectors have preset viewing modes, and most of them have a mode called Movie or Cinema that is optimized for viewing video content. The WUX500 breaks tradition and has only three preset modes: Presentation, Standard, and Photo/sRGB. Presentation mode

has the usual green bias to maximize brightness and Standard mode is designed for data projection with truer color balance than Presentation, so that leaves Photo/sRGB for video and photo projection. Fortunately, Canon has set Photo/sRGB up perfectly for video projection with accurate color temperature and a lower sharpness setting for the smooth look you might prefer when watching movies. Also, brightness in Photo/sRGB mode is only 23% lower than Presentation mode, putting out a solid 3500 lumens, so even in moderately well-lit rooms, the projected image doesn't wash out when viewing movies.

> Set Up

Setting up the WUX500 is easy since its connector panel is labeled clearly, and it offers both vertical and horizontal lens shift along with its 1.8x zoom ratio. When doing an installation, you will usually need to engage all three adjustments no matter how carefully you construct your mounting hardware. While the WUX500 provides all the usual input connections (HDMI, DVI, USB, analog and component video, and audio), it also offers HDBaseT which simplifies cabling if your system inputs are HDBaseT compatible. This can be helpful in complex installations because HDBaseT signals can be transmitted up to 325 feet from multiple sources to the projector.

The WUX500's menu is extensive but easy to navigate. Image adjustments include the usual suspects (brightness, contrast, sharpness, and gamma) and complete color control via two



submenus. Adjustments include saturation, balance, and RGB gain and offset. Along with these image control options, the WUX500 provides five custom user programmable memories in addition to the three preset modes (Standard, Presentation, and Photo/sRGB). Fortunately for those who prefer to power up and go, the video performance in the Photo/sRGB preset mode is excellent, and Presentation mode is well calibrated for PowerPoint and document presentation.

The WUX500's 5-watt speaker is not adequate for a medium-size venue, but those rooms usually rely on an external sound system. Those sensitive to the rainbow artifacts of DLP-based projectors will be happy to know that the three LCOS panels in the WUX500 eliminate that annoyance. The heat generated by the lamp requires a high fan speed and fan noise is higher than you would want in a small room, but if the WUX500 is mounted above or behind the audience, fan noise and heat exhaust are not objectionable, and are similar to competitive products in this class.

The WUX500 is versatile when it comes to networking and multiple projection sources. In addition to Crestron RoomView and PJLink compatibility, it can put up two simultaneous images side-by-side, and it can edge blend multiple computer inputs for a seamless look. It is also capable of handling multiple computer inputs via the Networked Multi-Projection (NMPJ) protocol. Also, in Wi-Fi mode, up to four computers can be wirelessly connected to the WUX500.

Key Features

Image Positioning Convenience: While most projectors in this class offer vertical lens shift, the WUX500 also provides horizontal shift as well. That along with the 1.8x zoom virtually assures that even if you make errors mounting the projector, you can position its image on the screen with ease. The lack of light loss toward the telephoto end of the zoom makes it easy to use the entire length of the zoom for maximum installation flexibility.

Corner Keystone Correction: Nearly all high-end projectors offer vertical and horizontal keystone correction, but the WUX500 complements those adjustments with corner keystone correction for projection surfaces that are not flat. Corner distortion is easily corrected with the push of one button per corner.

Edge Blending: Many smaller WUXGA products do not have this feature, and for large venue projection, this may be a key determining factor in the product selection.

Almost NO Input Lag: Though we'd be surprised if many people would be buying this projector for gaming, it has lightning fast response with an input lag of a mere 19 ms. No audio delay is required for lip sync when viewing film/video.

No Rainbow Artifacts: By virtue of its three-panel design, the WUX500 does not produce the rainbow artifacts that bother some viewers of DLP-based projector images.

Size and Weight: Most installation projectors are ceiling- or shelf-mounted above and behind the audience, and this 13 lb. unit will be easier to install than earlier generation products of substantially greater weight.

Lamp Life: 3000 hours in normal mode, and 5000 hours in eco mode.

Warranty: The WUX500 is warranted for three years, and its lamp is warranted for 120 days.

> Performance

Brightness: While the WUX500 is rated at 5,000 lumens, our test unit produced 4,560 lumens in Presentation, its brightest mode. Other preset modes produced the following: Standard - 3,975 lumens, and Photo/sRGB - 3,510 lumens.

Eco lamp mode reduced brightness in all preset modes by about 28%.

Most remarkably, the shift from the maximum wide-angle to maximum telephoto zoom position resulted in a negligible 5% drop in brightness...an astonishingly small reduction for a 1.8:1 zoom lens.

Brightness Uniformity: Uniformity was extremely good at approximately 88%. No hot spots were detectable although the left side of

the image was slightly brighter than the right side.

Image Size and Offset: With the center of its projected image on the centerline of the lens, the WUX500 is well designed for ceiling or shelf mounting. The zoom lens allows for a 200" image to be projected from as close as 19'8" or as far as 35'5" from the screen. With vertical lens shift of +60% and horizontal lens shift of $\pm 10\%$, the WUX500's image can be adjusted to fit a variety of room and screen requirements.

Fan Noise and Heat: Fan noise and exhaust heat are a bit on the high side due to the small form factor. However, if installed above and behind the audience, neither presents any serious distraction.



> Limitations

Price: The WUX500 is priced somewhat higher than competing units with the same 1920x1200 resolution, and similar lumen output and weight specs. However, it has features such as edge blending and picture in picture that the others may not have. And if you need to use the long end of the throw, you don't need to up-spec the lumens to get the same level of brightness. If these things are of value to you, then the higher price is justifiable. If not, it may not be.

24p Judder: Since there is no frame interpolation circuitry in the WUX500, some judder can be observed in certain slow-panning 24p movie scenes.

No Power Zoom/Focus: The WUX500 has manual zoom, focus, and lens shift adjustments.

Single HDMI Input: Although there is a DVI input in addition to one HDMI input, it would have been helpful to have a second HDMI input given that interface's popularity.

No 3-D: The WUX500 has no 3-D capability.

High Altitude Fan Noise: Kicking the WUX500 into its high altitude mode substantially increases fan noise, and it is not particularly quiet to begin with. The good news is that the spec calls for this mode to be activated only at altitudes above 7,500 feet.

> Conclusion

The Canon WUX500 is a solid new offering in high brightness, relatively compact WUXGA projectors. The long 1.8x zoom provides a key competitive advantage in that it does not lose up to 40% of its light at the long end. The WUX500 is priced a bit higher than some competing units but it has features the others do not have. If those features are keys to the success of your installation, the WUX500 may be the ideal solution for you.