

CANON REALIS WUX450ST PROJECTOR ROAD TEST

M. DAVID STONE, AUGUST 16, 2016



The Canon WUX450ST offers ample brightness with excellent color quality for screen sizes up to 180" diagonal in moderate ambient light. The size drops only a little - to 170" -with the Video Optimized setting. Even in Power Saving mode with the Video Optimized setting, its 2700 lumens can light up screens up to 155.

For conference rooms and classrooms, the vertical and horizontal lens shift adds flexibility for setup, while the short throw makes it easy to get a large image with the projector mounted

close to the screen. The ability to control and send data to the projector over a variety of networking options can also be helpful.

For one-projector displays and signs, the short throw and lens shift can be even more useful; the ability to mount the WUX450ST facing straight up or down lets you create displays on ceilings and floors; and the HDBaseT connector lets you use a single Ethernet cable both for data and control over a network.

More ambitious projects, like large museum displays or simulations, will benefit from the

built-in edge blending, which adds the ability to create large, seamless images with multiple projectors and high resolution, at 1920x1200 per projector. Most impressively, the WUX450ST's suitability for all of these applications rests firmly on a foundation of top-tier image quality, including excellent color quality even at the projector's top brightness.

If you want DICOM Simulation, the WUX450ST comes in a "D" version which is about \$500 more.

> What the CANON REALiS WUX450ST is Designed For:

It is ideal for:

• **Business and Higher Education Presentations**
High brightness, a short throw, and top-tier image quality make the WUX450ST an excellent choice for permanent installation in a conference room or classroom with a large screen or high level of ambient light. Its high-quality video makes it a particularly good choice for presentations that include video clips.

• **Displays and Signage**

Can both control the projector and send data to it over a network. Can read files directly from a

USB memory key with or without using the automatic slide show feature. Built-in Edge Blending allows projection of a single, large image from multiple projectors. Can mount to project straight up or down as well as straight ahead.

It is also suitable for:

• **Video/Movies**

Although designed primarily as a data projector, the WUX450ST's impressive video delivers engaging full length movies at 1080p.



> What the CANON REALiS WUX450ST Gives You:

- ✓ Excellent image quality for both data and video
- ✓ Short throw -- a 150" picture from just 6 feet
- ✓ Easy set up with horizontal and vertical lens shift
- ✓ Built in edge blending
- ✓ 4-point geometric keystone correction
- ✓ HDBaseT
- ✓ 360 Degree vertical installation
- ✓ DICOM Simulation included with "D" version
- ✓ Admin software for broadcasting to multiple projectors and controlling input from up to 10 PCs to switch from one to another.
- ✓ Networking via PjLink, CRESTRON RoomView, AMX Device Discovery

Connection Panel Inputs:

- (1) 3.5mm stereo audio out
- (1) 3.5mm wired remote control
- (2) 3.5mm stereo audio in
- (1) USB A (reads files from USB memory keys)
- (1) DVI-I
- (1) VGA/Component video
- (1) HDMI
- (1) RJ-45 LAN (for control and data)
- (1) HDBaseT
- (1) DB-9 RS-232 (for control)
- (1) Built-in Wi-Fi



Physical Attributes:

All the ports are on the right side panel as viewed from behind, on the bottom third of the panel. The power connector is near the rear of the right side, and the controls are near the front. The exhaust vents cover most of the rear panel, with a small intake vent on the left side of the rear. The main intake vents are on the front. Lens shift controls are on the left side, near the front. The Kensington lock slot and security bar are on the left side of the rear.

> OUR LAB TESTS: What the Meters Say:

Brightness:

ANSI lumen measurements on the WUX450ST were as follows:

MODE	FULL	POWER SAVER
Presentation	3842	2881
Standard	3263	2447
Photo/sRGB	2846	2125
Dynamic	4033	3011
Video	2396	1789

The last two modes don't show as choices unless you change a menu setting from the factory default, and neither is available at all when using the LAN, USB ports, or a PC connected by VGA. When they are available, they replace the first two, so the menu choices at any point are Photo/sRGB either with Presentation and Standard or with Dynamic and Video.

Low Lamp Mode:

Power Saver mode drops brightness to about 75% of Full Power, which is still easily bright enough for many classrooms and conference rooms. It also increases lamp life from 3000 hours to 5000, making it well worth using.

Presentation Optimized Lumens:

All five predefined modes deliver excellent color quality, so you can pick the one that offers the most appropriate brightness for the image size and light level.

Video Optimized Lumens:

Here again, all five modes deliver solid video, but the best choice for most video is Presentation mode with a slight tweaking of the color temperature, which gives better color balance, and brought the brightness down just a hair, to 3638 lumens.

Zoom Lens Effect:

The short throw lens doesn't offer zoom, so there's no zoom lens effect to curtail light.

Brightness Uniformity:

The measured 71% uniformity is less than most projectors deliver, but not unusual for a short-throw lens. More important, the dimmest and brightest areas are far enough apart that the difference is barely noticeable with a solid white image even if you look for it. It's impossible to see with any image that breaks up the field of view.

Input Lag:

The lag meter measures the input lag at 19 to 23 ms depending on the preset mode.



> What it Sounds Like

On-board Audio:

The audio system's 5-watt mono speaker delivers enough volume for a mid-size room and good enough sound quality for narration or movie dialogue.

Fan Noise:

With Full Power, the WUX450ST is rated at 37 dB, and is loud enough to be intrusive even from 15 feet away. In Power Saver mode, rated at 30 dB, it's still audible from 15 feet in a quiet room, but

is a constant whooshing white noise that I didn't find bothersome sitting just five feet away.

The vertical mode settings for facing the projector up and down both raise the noise level. However this shouldn't be an issue, since you're most likely to use vertical mounting for displays or signage.

Canon recommends using High Altitude mode starting at 7545 feet--50% higher than

for most projectors and higher than the maximum elevation in all but 13 states in the continental US. That makes it unlikely you'll ever need it. If you have to use it, however, it's easy to hear in full power mode from 40 feet away. You'll probably want to stay with Power Saver mode instead, or consider putting the projector behind a false wall to help deaden the sound.

> Setting it Up

Throw Distance:

With no zoom, the WUX450ST is limited to a fixed distance for any given size image. For the native 16:10 aspect ratio, it can throw a 120" diagonal image from roughly 4.75 feet, and a 150" image from six feet. To find the right range for the image size you want, see the [Projection Calculator](#) loaded with WUX450ST data.

Lens Shift:

With the projector on a table in front of the screen, and at the bottom extreme of the vertical shift range, 50% of the 16:10 image is above the centerline of the lens, and 50% is below. At the top of the range, the bottom edge of the image is 30% of the image height above the centerline of the lens. Depending on the vertical shift setting, the horizontal shift varies

from 10% to 15% of the image width left or right of middle position.

If you have to tilt or swivel the projector even after taking advantage of the lens shift, you can manually adjust for up to plus or minus 12 degrees for both vertical and horizontal keystone distortion. Alternatively, you can individually adjust each corner.