# Church Production
### MAGAZINE

## CANON
# REALIS WUX400ST PRO PROJECTOR

**BRIAN NADEL**

Up close, Canon's REALiS WUX400ST can not only put up a large, bright image, but is one of the easiest projectors to hide.

> **Whether it's for a small house of worship, a temporary sanctuary, or teaching Sunday school, Canon's REALiS WUX400ST Pro AV Short Throw Compact Installation Projector has the power to illuminate and amaze at close quarters.**

By combining the performance and fidelity of a traditional projector with short-throw optics, the system has rewritten the rules for projectors.

Rather than setting the projector up far from the screen, the idea behind the WUX400ST is to put it as close to the screen as you can. It's capable of putting up an image more than eight-feet wide from approximately 4.5 feet away from the screen, and tops out at a 21-foot wide image. The projector is lightweight, weighing just 14 pounds—about half the weight of many of its competitors. This makes it easy for one person to carry and set up. There're two adjustable feet up front and four threaded attachment points underneath for ceiling mounting.

My favorite, though, is the optional Crimson AV mounting hardware that allows the projector to be hidden under a table or lectern (something Canon refers to as their "Under Table Projector Solution"). While the WUX400ST provides a lot of flexibility as to where the projector can be set up, it requires 18 inches of clearance all around or risk it overheating.

Inside the white and black case is a trio of Canon's unique 0.71-inch reflective Liquid Crystal on Silicon (LCOS) imaging chips, capable of displaying up to 1920x1200 resolution. The arrangement is perfect for showing a local video feed of the choir, but also allows the projector to do double-duty for showing HD films on movie night. If that's overkill, Canon also sells a 1400x900 resolution version that has a list price of $6,300. Rather than LEDs or a hybrid illumination engine, the WUX400ST relies on a single traditional high-pressure lamp that's rated at 260 watts. It uses Canon's fifth-generation Aspectual Illumination System (AISYS) optical engine that precisely controls the horizontal and vertical propagation of light through a series of complex lenses. It, however, lacks a zoom-lens option or any optional lenses, for that matter. The projector does have a digital zoom that does just as well.

In addition to vertical lens shift of up to 75%, the projector can shift its image side to side by 10% so you can install it in locations that are slightly off-center. Unfortunately, rather than using the remote control to shift the image, you need to turn knobs on the side of the WUX400ST to tweak the image's position. There's also a four-corner keystone correction set up procedure for making a rectangular image that takes all of two minutes to complete.



REALiS WUX400ST

## PLUG AND PROJECT

The projector's side connection panel makes it easy to set the system up. You can use HDMI, VGA, Component and DVI video inputs as well as grab images—but not video—off of a memory key or the system's wired LAN port. Unlike Casio's short-throw projectors, there's no Wi-Fi option for wireless connections.

It also has audio-in and -out connections as well as a single five-watt speaker, but the projector lacks a video-out port for connecting the WUX400ST to another projector or display. It does have an integrated edge-blending processor for using a pair of WUX400ST projectors to create a composite image. Optimizing the projector is streamlined with its two-dozen built-in test patterns. In addition to checkerboard images, there are solid fields as well as grayscale and color ramps for tweaking the image.

The projector can do a trick that many of its peers can't. You can show two inputs side-by-side in a split-screen format. It can be used for things like projecting a prayer or a hymn's lyrics on one side while showing the preacher or worship leader on the other. Unfortunately, this setup doesn't work with the contents of a memory key. Its control panel is the essence of simplicity with buttons for turning it on and off as well as changing the input, keystone correction and mating the projector with a computer. There are LED lights for warning of a fault and showing that the lamp is about to fail or is overheating.

You'll need to do most of the set up and tweaking with the projector's small remote control. It uses a pair of AAA batteries, its keys aren't backlit, and it can't be wired to the projector. The remote has all the essentials with the ability to switch the input source, adjust the volume and correct for keystone distortion. There are buttons that freeze and blank the screen, as well as keys for adjusting the projector's gamma setting and to quickly change it to power-saving Eco mode.

Its menu is well laid out and functional with easy-to-read text. There are advanced set up adjustments for things like noise reduction, fine-tuning the color gamut, and adjusting the position of the image a pixel at a time.

## REALIS WUX400ST TO THE TEST

It's a slow-starter with the WUX400ST taking 45 seconds for the projector to put an image on the screen; while you're waiting it projects a 15 second count down. It was even slower at shutting down, taking over a minute and a half. There are five pre-set modes (Standard, Presentation, Dynamic, Photo/sRGB and Video). You can also save up to five of your own presets by adjusting a variety of detailed settings.

With the WUX400ST set to Dynamic mode, it was able to put 4,150 lumens onto the screen, about 4% over its rating. While it's bright with vibrant colors, including some of the most brilliant yellows available, the projector's greens can appear weak. Using the Photo or Video settings trades some brightness for a more realistic color balance, particularly for flesh tones. In Eco mode, it put 3,720 lumens on-screen. The WUX400ST has a $70 dust filter that needs to be periodically replaced, and its $580 lamp is rated to last 3,000 hours of use. It requires a small Phillips screwdriver and takes a few minutes to swap lamps. The system consumed 352 watts at full brightness, but that drops to 276 watts in Eco mode, and when it's shut down, the projector uses less than a watt of power.

Assuming the price of electricity is the national average of 12 cents per kilowatt hour and that it's used for 15 hours a week, these operating expenses add up to reasonable annual estimate of $184.

That's much more economical than the InFocus IN5544's annual costs of $330, but more expensive to use than the Epson PowerLite 4650's $132 per year.

As bright and rich as its images are, the WUX400ST runs hot and its pair of noisy fans whirring away can be annoying. Still, the projector hit a peak of 153 degrees Fahrenheit with the projector producing 46 dBA of noise 36-inches from its back. If you use the Eco setting, that can be reduced to a less irritating 41 dBA.

With a three-year warranty, the WUX400ST lists for $6,899, but careful shoppers will find it for much less. This not only makes it attractive for smaller churches, but also can allow them to project a new image.

Brian Nadel is the former editor in chief of Mobile Computing & Communications and Portable Computing magazines. He has lived with and written about technology for 25 years.