



SHINE A LIGHT

IT'S UNDER \$4000, YET EPSON'S RANGE-TOPPING PROJECTOR OFFERS 3D, WIRELESS HDMI AND A THREE-YEAR WARRANTY. IT IS, FRANKLY, INCREDIBLE...

Many of our readers will turn to a qualified installer for advice on home cinema construction and fit-out, hoping for a result such as those shown in the CEDIA Awards pages this issue. But if you want some input into the equipment equation, here is one AV projector you shouldn't ignore.

It comes from Epson, the biggest name in the field, and it's their very top of the range. Only five years ago that would have meant a price-tag way above \$10,000. Today, you pay under \$4000 — and the projector is far more advanced. The EH-TW9000W can operate

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in 3D. It has an unusually long three-year warranty. And it is one of the first products to introduce a wireless link in place of the usual HDMI cable. We think it's incredible value.

The WirelessHD is achieved with a transmitter at one end and the receiver built in to the projector. It allows full HD — including the frame-packed 3D format — to be transmitted over distances of up to about ten metres to the projector, with no cables required (except for power, of course).

That transmitter has one HDMI input. There are also two HDMI inputs on the projector itself, along with component and composite, but not S-Video. Plus there's a D-SUB15 in case you have an ancient computer you want to use with the projector. In my review period I used both a direct HDMI connection and the WirelessHD system.

The engine of this projector is based on three LCD chips. Epson claims a brightness of up to 2400 lumens, though by default the projector operates in low output mode, and so produces less. With 3D signals it automatically kicks up the lamp's brightness (and the cooling fan speed, as well).

For, of course, this is a 3D projector. It uses infrared to sync the 3D eyewear to itself, with the IR transmitter built into the projector. The glasses — you get two sets included — weigh 56 grams according to my scales, a bit on the heavy side (the lightest active 3D glasses come in at the low 20s of grams). And they are powered by button cells, something we applaud, since it means no need to have to recharge glasses; just keep a couple of the inexpensive CR2032 cells handy and if your glasses go flat (after maybe 30 or so 3D movies), pop in new ones. That's far better than having to remember to plug them into a USB socket on a computer from time to time, or having to stop a movie to recharge.

Thanks to useful installation features — wide zoom range and lens shift — installation was nice and easy. There were no powered adjustments for any of these settings, which on balance is probably quite sensible. Ideally, such settings should only need to be made once, so powered assistance is probably overkill.

But it does have one motor: a motorised lens cap which slides open when switched on, and closed again when switched off.

The default picture settings were generally quite sensible, with one exception. SD content fed to the projector was overscanning (i.e. the picture was upsized so that all four edges fell off the sides of the display area) massively. It was set to the maximum of 8% — so much overscanning that it was pushing important picture content off the screen. Fortunately this is easily resolved — go Menu: Signal/Advanced/Overscan/Off.

The default picture setting was 'THX', with the 'ECO' lamp setting engaged and, surprisingly, with the dynamic iris set to 'OFF'. The lamp setting was to be expected, but the other

two settings are interesting. My experience with 'THX' picture settings has thus far been confined to Panasonic TVs, and their yellow/green colour caste (which proved fixable, happily) has failed to impress. But there was none of that here. The picture colour balance in THX mode seemed excellent.

Also excellent were the black levels, despite the fact that the dynamic iris wasn't employed. Epson seems to be wringing exceptionally good black levels out of its current generation of LCD panels. The blacks were smooth, and only with a full black screen did sufficient transmission of lamp light remain to remind you that this is an LCD projector. Switching on the dynamic iris largely allowed really dark scenes to go even darker, improving subjective performance noticeably. I'd recommend it especially when you're watching movies with a lot of night or dark content.

There was, however, a quiet but audible chuffing from the iris as it made frame-by-frame adjustments to optimise light output. That this could be heard was in large part testament to the quietness of the projector's cooling system in 'ECO' mode. There was just a gentle whisper of white noise. There was a marked jump up in noise when the projector kicked into the high output mode for 3D. But the results were worth it. Back to that shortly.

The projector did a good job with interlaced signals, both 576i/50 and 1080i/50. On my DVD torture test it rated just a little short of perfect, with its film mode set to 'Film/Auto'. Although this didn't force film

mode, it nearly always got it right even on hard stuff. It slipped into 'Video' mode inappropriately for only three very brief instances in the very hardest three-minute clip. As for the test scenes from the 1080i/50 'Miss Potter' Blu-ray, all were delivered perfectly.

The projector has a frame-interpolation motion smoothing system, which by default is also switched off. This was powerful, in the sense of holding its own on all the test scenes we tried, including the very detailed, very sharp Chicago flyover at 50 minutes into 'The Fugitive'. The lower level of this seemed to clarify things a little, but nowhere near as much as the 'normal' setting. However the 'Normal' setting also produced a little occasional heat-haze distortion around moving objects. On balance, I'd stick with 'Off'.

Now, as to 3D, it's worth noting the significantly improved performance here over Epson's lower wireless model, the EH-TW6000W. The cheaper projector had been no slouch overall, and while it had some noticeable crosstalk in 3D, this was at a low enough level to avoid wrecking the picture.

The TW9000W was quite different. The crosstalk was still there, but only just, and only when I paused the picture and searched for it.

Watching the new 'The Three Musketeers' on Blu-ray 3D, the 3D was magnificently deep and layered, while crosstalk did not once raise its ugly head. Pausing the Golden Gate Bridge scene on 'Monsters vs Aliens' (see our article on 3D, also in our Jan/Feb issue), I could detect extremely subtle ghosts of the coloured bridge elements against the blue sky. But again, just.

In the scale of things, crosstalk was very slightly below the performance of passive LCD and DLP, and at the very least at the top-end for LCD/LCoS projectors. It was definitely quite a bit better than the TW6000W.

The picture was impressively bright in 3D. In part this was due to the projector automatically switching to '3D Dynamic' mode with high lamp brightness, but also because of the 480Hz driver which reduces the period in which both lenses of the 3D eyewear are blanked out at the same time.

Epson has included a 2D-to-3D conversion system. This was reasonably aggressive in its



operation, producing definite layering and much of the time making a decent guess of what was in the foreground.

Of course, these things cannot be perfect. Eight minutes into the delightful recent movie 'Submarine', the psychic neighbour's van first appears. This is covered with artwork and script, which the 3D processor dutifully goes to work on, making the van seem strangely ethereal, the yellow text floating above it, the painted stars and planet surface sunk inside it. Cool, and strangely fitting with this movie, but hardly what could be considered accurate.

The 3D transmitter worked with complete reliability, bouncing from my projection screen back to the 3D eyewear even when I was up to seven metres away from the screen. Yet it somehow managed to avoid interfering too badly with other IR remotes, allowing their continued use. I had the wireless transmitter about four metres from the projector and it worked well, despite my own body frequently passing between it and the projector. If I had a choice, though, I would use the projector with a proper HDMI cable. Changes in signal standards took noticeably longer to lock in with the WirelessHD system than with a direct connection.

Still, the sheer convenience of being able to install a projector without having to worry about signal cables can make this a compelling feature in many environments.

So there you have it: the Epson EH-TW9000W is a versatile AV projector with excellent 2D performance and, perhaps surprisingly, very good 3D performance as well. All that would be well and good, especially considering the WirelessHD

capabilities, but there are two more things to add.

First, the projector's warranty period is three years, which actually includes the lamp. And, second, the projector's RRP is just under \$4000. That makes it cheaper than just about all the competition. Incredible.

Stephen Dawson ■

**Epson EH-TW9000W
AV projector \$3999
www.epson.com.au**

