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# HOME CINEMA

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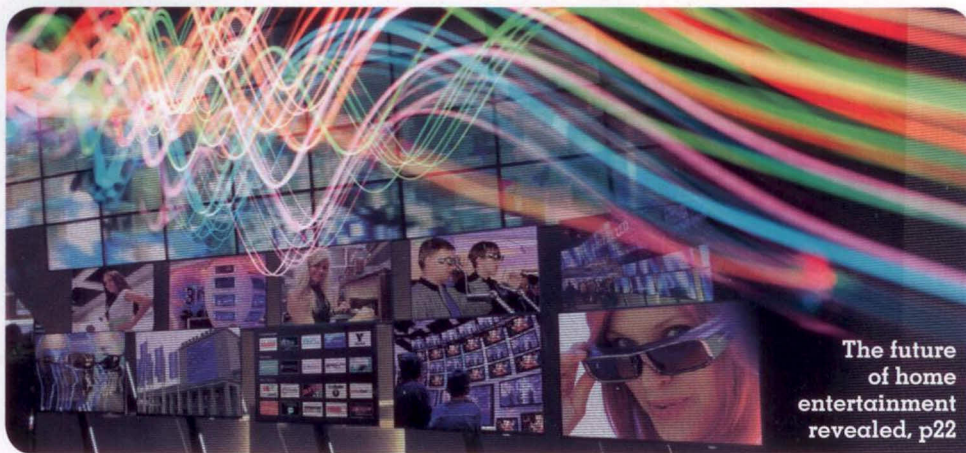
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The future  
of home  
entertainment  
revealed, p22

# WELCOME

What's the future of home entertainment? We've already seen it, so if you want the inside story on the connected technology, 3D products, amazing slim panels and groovy portable media systems we'll be enjoying next year, turn straight to page 22 for our in-depth report from the IFA 2010 Show.



This issue you can also lap up an **exclusive preview of Sony's first 3D projector**. If 3D hasn't convinced you on TV, this beamer may bring you around. Find out on page 46.

For bargain buys, you can't beat 32in TVs, but our group test sorts the cream from the dregs... check it out on page 84.

Plus, there are reviews of Samsung's entry-level AVR, some superb PSB speakers, killer subwoofers from XTZ and Paradigm, and Onkyo's super sound system to absorb, so you'll hardly have time to enter this issue's fantastic competitions. Better start reading right now!

*Chris Jenkins*

Editor

## TEAM HCC

**Chris Jenkins:**  
Our ISF-calibrated Editor  
used to run Future's  
Tech Laboratories



**Mark Craven:**  
HCC's Deputy Editor cut his  
teeth on the Sub's bench for  
five years



**Anton van Beek:**  
News Ed. Anton began his  
pro-videophile career over  
11 years ago



**Jill Lubetkin:**  
HCC's Prod Ed. is new to the  
mag, but a stalwart figure of  
the AV department



**Kevin Emden:**  
Has been invested with the  
much-coveted white coat  
of HCC's Tech Labs



**John Rook:**  
Art Editor John first worked  
on HCC back in 1999, when  
TVs were made of wood





# The elevated standard of 3D

## Team HCC

enjoyed an exclusive audition of Sony's ES-branded 3D projector – and didn't want to give it back

The past 12 months have seen one of the most aggressive format launches in the history of home entertainment. This time last year, before the CES show, Full HD 3D seemed a world away – the specifications awaiting ratification and the hardware still to be seen. Yet by the end of the Las Vegas tech fest in early January, AV fanatics had confirmation of a whole new level of home cinema coming their way, with major manufacturers launching 3D flatscreens and movie studios announcing software releases. By April, we'd reviewed the UK's first Full HD 3DTV (Samsung's UEC407000), and taken delivery of *Monsters vs Aliens* on 3D Blu-ray.

Where, though, asked a lot of home cinema enthusiasts, were the projectors? Everything was quiet on that front. People wowed by 3D in theatres, on a big screen in a dark environment, were now told the same thrills were achievable from a 40in LED TV. And, really, they aren't.

This is what makes Sony's VPL-VW90ES such an exciting product; the first consumer 3D projector, something that you can just swap into your existing cinema room for bigscreen dimensional fun, and at a reasonable price point. Although the exact tag is yet to be finalised, you can expect it to retail for around £5,500 (when we went to print, Sony was still pondering the issue). This wouldn't make it a mass



### → Specifications

**3D Ready:** YES Active Shutter with built-in IR emitter

**Full HD:** YES up to 1080p24

**Resolution:** 1,920 x 1,080

**Component video:** YES one input

**HDMI:** YES 2 x v1.4 HDMI inputs

**PC input:** YES one D-Sub

**12V trigger:** YES two

**Brightness (claimed):** N/A

**Contrast ratio (claimed):** 150,000:1

**Dimensions:** N/A

**Weight:** N/A

**Features:** SXRD 3 panel display;

2D-3D conversion; 2 x Active

Shutter 3D glasses supplied;

Cinema modes; gamma

correction; electronically

adjustable lens shift; anamorphic

zoom mode; automated

motorised lens cover; Advanced

Iris3 control; 240Hz Panel Drive;

fan noise 20dB



**AV/CV**

**Product:**  
Active Shutter  
SXRD 3D  
projector  
HD projector

**Position:**  
Sony's only  
domestic 3D  
projector

**Peers:**  
JVC DLA-X7  
(TBC)  
Mitsubishi  
Diamond 3D  
(TBC)

market proposition, of course, but considering that JVC's 2D HD950 launched for even more money, and that Samsung's 55in 9000 series 3D LED is in the same ball park, it looks like a bit of a bargain.

Sony has been kind enough to give HCC an exclusive first test of the VW90ES in a pre-production iteration, and is keen to stress that the unit we've lived with for the last few weeks isn't identical to how the VW90ES will perform when it finally hits shelves in November; the remote control isn't the finished article, the optical block will be different and the software isn't fully functional. For that reason, we didn't run it through our Tech Labs. But we did spend a lot of time playing with it...

**Let's get active!**

The first thing to note is that the VW90ES uses active shutter technology to craft a Full HD 3D image using the frame sequential mode. While Real D recently announced it will let manufacturers licence its Full HD passive polarisation wizardry for home products (which will bring the advantages of cheaper, lightweight glasses) any components of that ilk are still a way off.

**The IR emitter that syncs the glasses to the image is built into the unit,** with two

banks above and below the lens cover. The signal is then bounced off the projector screen. However, the VW90ES is supplied with an RJ adapter to connect Sony's external emitter, the TMR-BR100. This might be required if the projector is installed in a very large room, with off-centre seating. We didn't experience any problems in our test room.

The two sets of 3D spex boxed with the VW90ES are the same used for all Sony Bravia TVs, so additional pairs can be purchased simply. However, for use with the projector, Sony has added a linear polarising filter to the glasses to stop light scattered by the screen affecting your visuals. You'll be able to order these filters from Sony should you buy extra goggles.

The VW90ES is similar to Sony's impressive 2D-only VW85 (see HCC #174). A Full HD SXRD unit, styled in gloss black with an imposing centralised lens, it looks nearly identical. Cosmetic changes are limited to the lens rim, which is now black rather than silver.

Connections include two HDMI inputs plus analogue fallbacks, two >

The VW90ES uses the same 3D spex as Sony's Bravia TVs, but with an additional lens filter





**Side control:**  
All the inputs, and manual controls are housed on the side of the VW90ES

12V triggers for aiding automated systems, plus VGA PC hookup.

Sony has made some improvements over the VW85, of course, along side its 3D capability. The most significant one is a narrower element spacing on the SXRD panel, which has resulted in a contrast boost. Sony claims a dynamic ratio of 150,000:1, thanks to its Advanced Iris 3 technology.

While our backs were turned, our Tech Labs measured a real-world ratio of around 68,000:1, an excellent figure that we hope the VW90ES will continue to deliver when the finalised model goes on sale.

### 3D immersion

Anyone doubting that 3D and projection isn't a match made in heaven should get themselves a session with Sony's black beast. The inflated size of the images equates to an improved 3D experience in every way. With a flatscreen 3DTV the outcome is often that you'll find yourself straining to ignore everything around it; on a large screen (the VW90ES is capable of producing an image up to 150in), you're more inclined to sit back and let the images wash over you.

And wash over you they do. With the Sony up and running, the frenetic opening scenes of *Ice Age 3* packed real dimensional punch, both in the foreground and background; the effect was enveloping. The same was true with *Monster House*, *Cloudy With a Chance of Meatballs* and any other 3D Blu-ray we chucked at it.

This involving experience is aided by a first-rate picture performance. Even with a basic calibration (our unit wasn't completely tweakable) the VW90ES delivered a natural filmic

image, with accurate colours that never proved tiring, as well as smooth, stable motion. Colour gradations were solid, blacks impressive, but not crushed and detailing was often jaw-dropping.

The icing on the 3D cake was the absence of crosstalk (the ghosting effect fast becoming the talking point in home cinema circles), and Sony attributes this to the VW90ES' 240Hz refresh rate.

Standard 2D performance was also very good, so you shouldn't have any problems while you wait for new 3D software to arrive.

Of course, the VW90 comes with a 2D-to-3D conversion feature. Some people will view this as a gimmick, but, as Sony's technical marketing manager Eric Kingdon points out, it had to be in the PJ because it's in the brand's Bravia TVs. 'It's just obvious,' he told HCC. 'We must do it, because people are going to expect it.'

Upconverted 3D on this unit proved equally software-dependent as on flatscreen TVs. The new *Back to the Future* Blu-ray (see next issue for our review of the trilogy) didn't exactly wow with added depth, but a 2D version of *Monster House* (which was animated for 3D release) was much more impressive, presumably because Sony's software found plenty of depth cues already in the picture to work with. Neither was as excellent as the real thing, however.

### Time to pre-order

So, positioned at an appetising price point, with built-in emitter, killer styling and a 3D performance that really does the format justice, Sony's VW90ES could become a firm favourite with home cinema fans – we can't wait 'til it finally goes on sale ●



### 3D PJ battle heats up

Sony may be the first brand to give us a 3D projector to trial, but we expect more to come in the following months.

Fellow LCoS user JVC announced at the US CEDIA show three domestic 3D projector, the DLA-X9, DLA-X7, and DLA-X3, with price points of \$12,000, \$8,000 and \$4,500 respectively. These use external emitters, and only the X9 will be packaged with 3D glasses. We're still awaiting confirmation of UK release dates, if any.

Mitsubishi has also demo'd a LCoS 3D projector, named the Diamond 3D, although an exact release date and prices have yet to be announced. US brand Runco has also said it is licensing Real D's passive Full HD 3D tech for its forthcoming D-73 PJ, although its \$50,000 price tag may be too much for many home cinema enthusiasts.