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SIM2 DOMINO D80E
Full HD 1080p DLP Projector



The Domino Effect

SIM2 DOMINO D80E (£4500)

Full HD performance impossible a few years ago is now within the reach of a growing band of home cinema enthusiasts. SIM2 lights the path

hi-finews
EDITOR'S
CHOICE

DOMINO
by SIM2

Tested by Paul Miller

Single-chip 1080p DLP projectors have tumbled in price over the last year or so, and not just because the likes of Marantz and SIM2 are locked into a head-to-head battle [HFN, May '08]. In practice, both these champions of TI's DLP technology are competing against a rash of 'three chip' 1080p LCD projectors at or below the £5000 price point. These projectors employ individual red, green and blue LCD panels, each offering 1920x1080 resolution, in place of the single DLP chip and rotating colour wheel at the heart of models like this Domino D80E from SIM2. Nevertheless, while the three-panel LCD projectors might seem to have the upper hand with their freedom from a colour wheel's 'rainbow flicker', for many enthusiasts they also lack the dramatic punch, the crispness and dynamic colour palette of a good single-chip DLP system. Comparable three-chip 1080p DLP projectors remain horrendously expensive of course, but we all live in hope [see News, p6].

INTO THE LIGHT

The 'E' in D80E indicates an evolution over the older model that's not even hinted at by the unassuming and highly compact 350x173x18mm (WxHxD) moulded enclosure. Numerous key technologies combine inside to squeeze the very best from TI's 0.95in DarkChip3 DLP chip, including the 'BrilliantColor' colour wheel with its primary and secondary colour segments designed to extend the colour gamut while also improving overall brightness. The folded 'Alphapath' light engine delivers the performance of a far longer assembly while the 'Unishape' lamp driver adapts the light output to image content, improving both contrast and colour resolution [see boxout, below].



THE UNISHAPE EVOLUTION

Brighter whites are normally achieved by fitting bigger lamp engines and bigger, noisier fans to deal with the excess heat. Not here. Instead, this 'Evolution' version of the D80 uses a mere 160W UHP lamp (200W is more typical) which is modulated by a Unishape pattern generator in sympathy with the image content. The adapted light waveform is precisely synchronised to both the rotation of the colour wheel (further smoothing the colour gradient) and switching of the 1920x1080 DMD chip. Lamp efficiency is increased by up to 40%, lifting the peak white output while also enhancing its greyscale resolution in dark images. Not only is there a claim of increased lamp life but contrast is improved without relying on a mechanical iris.



SIM2's own Live Colors Management software is the icing on the cake, providing exquisite control over the colour gamut, greyscale and white point of the projected image. This facet of the setup menu is just about the most comprehensive I've encountered and yet its operation is far more transparent than the high/low RGB gain adjustments favoured by competing display devices. If this is the icing then SIM2 also provides the candles in the form of motorised and remotely-controlled zoom and focus adjustment, complete with test patterns. And yes, the HDMI input is fully 1.3-compliant to service DeepColor sources if and when they arrive.

LATEX, MAKE-UP, ACTION!

Driven via HDMI by the 1080p output of my Pioneer BDP-LX70A Blu-ray player, the SIM2 D80E proved capable of delivering a truly exceptional performance,

'The 'Unishape' lamp driver adapts light output to image content, improving both contrast and colour resolution'

as *Planet of the Apes* served to demonstrate. Scenes shot in the night time ape encampment and within the bowels of the ruined Oberon spaceship are still best appreciated in a blacked-out room, if fine contrasting detail is not to be lost in the darker recesses of the image. In this respect, the D80E is really no different from the Marantz VP-15S1. It is, however, perceptibly sharper, crisper and more dynamic in tone despite offering the same native 1920x1080 pixel resolution. The glistening fleshtones, even those composed entirely of latex and make-up, portrayed a soft and realistic texture that contrasted with the glint of sunlight reflecting off the hard and edgy carapaces serving as the apes' armour.

LICENCE TO THRILL

The definition in these images was superb, a quality maintained even through quick-paced action where competing LCD projectors would tend to deliver a soft-focused image, often mistakenly described as

ABOVE: One of each video input including composite, S-video, component, PC/RGB and, most important of all, an HDMI 1.3 connection. The menu may also be navigated via a diamond array of buttons on this panel

AUDIO FILE

Full HD projector with 1x0.95in 1080p DarkChip3 DMD. Contrast rated at >4500:1

Price: £4500

Made by: SIM2 Multimedia Spa

Supplied by: SIM2 UK

Telephone: 01825 750850

Web: www.sim2.co.uk

SIM2 DOMINO D80E / £4500



ABOVE RIGHT: A mechanical $\pm 50\%$ vertical lens shift is joined by digital keystone correction offering another $\pm 18\%$. INSET: Remote offers zoom, focus and menu access

'filmic'. I was reminded of the differences, demonstrated by Dolby, between a standard flat-panel TV and one employing its adaptive backlighting technology. The same improvement to the impact of blacks and contrasting edge-detail was apparant here, but with no distracting change in the movie's colour cast. Neither does the D80E trade its dynamic and punchy sense of contrast for any obvious susceptibility to 'rainbow flicker', a phenomenon further reduced by the 'shaped' output of its proprietary light engine.

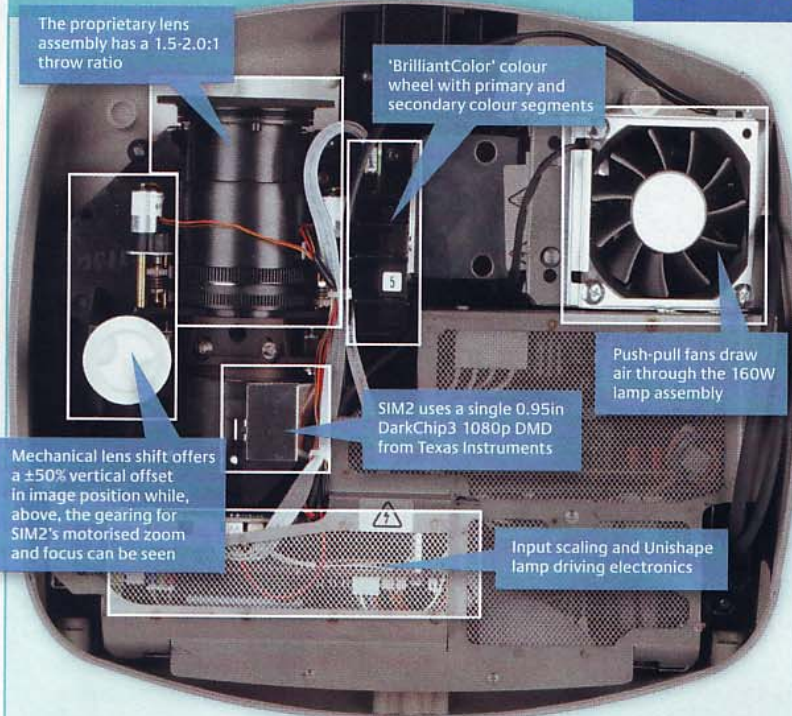
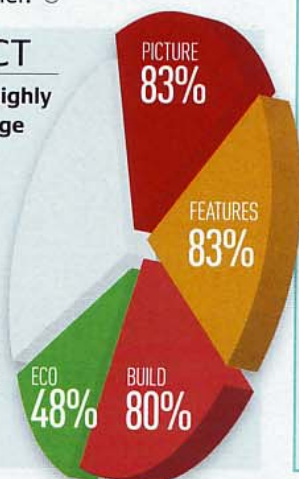
Brighter-looking films, including *Casino Royale*, look stunning through the D80E – the beach scenes from Nassau are as vivid and polished as you could wish for without exaggerating any residual film grain or skewing the slightly pinched gamma this film already possesses. In this respect, the D80E has an edge over the VP-15S1 which was not quite as convincing in its portrayal of the whitest highlights.

REMY THE RAT

Animated movies are always a good test of colour purity and saturation and Disney's *Ratatouille* (a dual-layer BD with data rates up to 48Mbps) is a textbook exponent. The soft, downy texture of the rodent hair ensures the little critters look appropriately cute while the rich livery of the restaurant is revealed in wonderful counterpoint to the rustic functionality of the kitchen. Bigger projectors like the HT5000 [HFN, Nov '07] will deliver a more dramatic, three-dimensional image than the D80E but, by never over-stretching itself, the little box reliably casts a cannily well-balanced, acutely detailed, colourful and impactful image. It's a winner. ☺

HI-FI NEWS VERDICT

This little projector blends a highly tuned and crisply defined image quality with the convenience of remotely-controlled zoom and focus. The combination of its colour management software, BrilliantColor wheel and Unishape lamp technology is clearly a boost to performance, ensuring the D80E offers more than a taste of SIM2's top-of-the-line Full HD projectors.



HI-FI NEWS RECOMMENDED SETTINGS

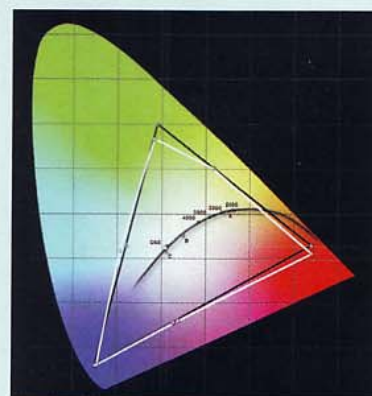
Picture Menu	Brightness	50		
	Contrast	59		
	Color	50		
	Sharpness	10		
	Noise Reduction	24		
Image Menu	Aspect	Pixel to Pixel		
	Color Management	Primaries	HDTV	
		White Point	User (6100K)	x=0.321; y=0.337
	Gamma Correction	ST1		

HI-FI NEWS LAB REPORT

Fresh out of the box, SIM2's D65 colour reference came up fractionally too blue at 7500K on my white screen but the User setting [see table, above] is not a million miles away, bringing up the red quotient while dropping the white point closer to 6800K. Tracking is within $\sim 150\text{K}$ over a full 30-100IRE dynamic (greyscale) range with these settings, realising a substantial 2.35fL increase in maximum brightness over the Marantz VP-15S1 tested last month (10.3fL versus 7.95fL). Contrast, too, is improved to 2200:1 over the reference 3m white screen and a full 3120:1 at 1m through-the-lens. This is the widest contrast measured from any projector in this class and testament to what can be achieved with a lower power 160W lamp combined with the Unishape adaptive light engine.

Despite the potential of 'BrilliantColor' the slight restriction in green gamut might be seen as an acceptable recompense for this extra brightness and contrast. While

this shortfall looks dramatic compared with the extended green palette offered by the VP-15S1, in practice the difference in perceived green extension and saturation will be minimal. PM



HI-FI NEWS SPECIFICATIONS

Colour Temperature (Calibrated)	6800K
Reflected brightness @ 5m	10.3fL
Reflected contrast (0-100IRE window)	2200:1
Direct contrast through-the-lens @ 1m	3120:1
Gamma	2.1
Fan Noise (A-wtd, 20Hz-20kHz @ 1m)	33dBA