



Projectiondesign's PJs are designed by the same people who make Koenigsegg cars



Projection without compromise

Alvin Gold is wowed by a Pro-grade single-chip DLP projector designed for larger home theatres and deep pockets



Projectiondesign, which hails from Fredrikstad, Norway, is a quality high-tech manufacturer perhaps best known in the professional arena, but with a raft of mid- to high-end projectors intended for domestic use. It goes without saying that the avielo range (no capital A: that's Scandinavians for you) is at the top end of its consumer offerings and is based on the architecture of its professional products, which are widely used in the movie-making process – including the post-production of *Earth*, which I ended up using as my main demo disc.

Projectiondesign's products are designed by the same people who create Koenigsegg cars and (more importantly) with the same unsparing ethos. These are not warm words: I have toured the factory (projectiondesign and Koenigsegg) and spoken to the boffins in the backrooms, and I know how meticulous they are. The machines are hand-built in-house, and internally calibrated to D65, with internal settings (should

you need them) squirrelled away in cold store at the factory.

The optix reviewed here (no capital O either...) is one of the five-strong avielo range, second only to a three-chip DLP beast dubbed the helios. It's a single-chip model, using the latest high-contrast TI chipset, DarkChip 4, chosen over any of the LCD alternatives for various reasons, not the least of which is its inherent longevity.

The optix also takes an alternative approach to getting more light onto the screen, by using projectiondesign's proprietary DuArch architecture. This involves two 300W lamps and two colour wheels, and allows the lamps to be hot-swapped if one fails, and gives good performance even from a single lamp. The disadvantage of this tech is higher electricity consumption, and a more-than-usually-powerful fan cooling system, which though not noisy, is certainly not as quiet as some less well-endowed PJs.

Setup and go

RealColor is projectiondesign's

AV/CV

Product: High-end DLP projector for exacting use, especially with large screens

Position: Top single-chip projector in Avielo range

Peers: SIM2 C3X 1080; Marantz VP11S2

implementation of an accurate colour management system for projectors. It allows reasonably simple calibration and setup to any desired white point and greyscale tracking, with a minimum amount of effort. The RealColor software suite built into the unit's firmware gives access to necessary colour management adjustments; light output and contrast can be further tweaked in other ways, too, in particular using a dual iris which eliminates the usual step ladder geometric problems that are part and parcel of conventional digital keystone correction.

As for the unit itself, it's a bit of a looker, despite its hefty bulk. The optix is available in etruscan bronze (pictured here) or pearl white, and boasts some streamlined curves.

It's worth having a shufti at the backside, too. The connections are unusual, in that there's only a single HDMI input (the second digital option is DVI), and it's joined by BNC jacks, as well as the usual analogue sockets. Twin 12V triggers, an RS232 control port and a USB jack (for firmware updates) are also present. Biggest talking point is the tiny LCD screen, which lets you keep track of picture adjustments, source and lamp modes.

In use

It's not hyperbole to say I was bowled over by this model. The avielo optix is an astonishing projector, offering amazing detail and dynamics. Although small colour balance errors are not always obvious in practice, it was apparent



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Info panel:
Keep up to date with the optix's settings with this rear-side LCD screen

from the beginning that the visual field was remarkably evenly-lit, and for reasons that are not entirely clear, there was less glare than experienced from other projectors. I have seen few others – if any – that can hold a candle to the optix in this respect. This beauty's pictures are unusually easy on the eye.

Colour reproduction is extremely pure and accurate. The unit was set up using a Minolta colorimeter and delivered a best-in-class performance. **Fidelity is first-rate. All the primary colours appeared rich and intense,** and *Earth*, which is shot in a variety of surroundings, from the Arctic to the tropical rainforest, looked subtle and engaging even in very poorly-lit scenes. Blacks hardly ever drifted into the undifferentiated greys that many projectors are so adept at generating, except in the case of poorly-engineered material received from a satellite dish where the fault clearly lay with the source material. DarkChip 4 delivers an inherently smooth image, free from unwanted pixel structure. It's incredibly filmic.

For the record, I noted traces of what is commonly described as colour flashing or rainbow effect in areas of stark contrast. The causes of this effect are more complex than is often supposed, and there are multiple factors at play. The effect was more obvious in scenes with movement (that is, which require eye movement to track), and in scenes that included a lot of super-contrasty material. You'll probably see it when your eyes are working overtime following the action. For most users, I would suggest that this is a non-issue in practice.

The other effect that I identified was a hint – and it was just a hint – of video noise in large, brightly-lit areas, in particularly action scenes, or those that were in motion. Pause the picture and the effect dissipates. Again this is a micro quibble, but I have no doubt that the observation is real. I suspect it was related to the colour processing, and is perhaps made more obvious thanks to the unusually high inherent resolution of the projected image, which arises in part because the usual grid between rows and columns of pixels is effectively banished in this incarnation of TI's DMD. Or it could be an anomaly of the Blu-ray used for the bulk of my viewing sessions. Significantly, the HCC Tech Lab team did not identify any noise issues when the model went for independent evaluation.

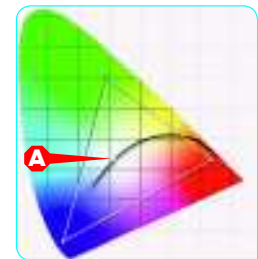
Best of breed

All this might suggest that projection technology has not yet been perfected, but in truth these are just pedantic observations that could diminish my appraisal when read in isolation. So let me quickly qualify by stating that this is an extremely fine DLP projector – probably amongst the best I have seen. It's images look natural, screen presence is considerable, blacks are pure, and the subtlety of tones across its spectrum is nothing less than exquisite. It's a genuine challenger to the Reference throne currently occupied by SIM2's Grand Cinema C3X1080, a similarly priced high-end DLP, albeit a three-chipper that is therefore free of the aforementioned rainbow effect. Still, overall, this is a model I would love to own...●

→ Specifications

HD Ready: yes up to 1080p
HDMI: yes 1 HDMI v1.3
Component: yes 1 input
PC input: yes via 15-pin D-Sub
Resolution: 1920 x 1080
Brightness (claimed): NA
Contrast ratio (claimed): 7,500:1
Dimensions: 510(w) x 223(h) x 376(d)mm
Weight: 12.6kg
Features: TI DarkChip 4 DMD; Signature quality interchangeable lens option with lens offset in vertical and horizontal axis; PixelWorks DNX deinterlacing & processing; 'DuArch' twin 300W hot-swappable lamps; adjustable iris; dual colour wheel; single chip DLP; 2,500 hours lamp life; Brilliant Colour proprietary colour processing; RS-232, USB; AMX; Crestron compatible; IR repeater input

→ Tech Labs



The first of the highly specified avielo range, the optix has oodles of configuration options, is suited for very large screens, and is claimed to have an outstanding dynamic range. Pre-calibration colour temperature was close enough to 6,500K that we needn't have bothered adjusting it (Point A), but manual adjustment delivered an almost perfect 6,502K

Before calibration

Colour temperature: 6,527K
RGB: 97/101/98 **Luminance:** 25,759fL
Contrast ratio: 1762:1

After calibration

Colour temperature: 6,502K (user)
RGB: 100/100/100 **Luminance:** 18,422.fL
Contrast ratio: 1718:1



HCC VERDICT

projectiondesign avielo optix
£23,000 Approx
Price check: www.techradar.com/596925

Highs: Bright, punchy picture; customisation via interchangeable lenses and extensive picture calibration options

Lows: Mechanical fan noise; some minor rainbow artefacts

Performance: 1 2 3 4 5

Design: 1 2 3 4 5

Features: 1 2 3 4 5

Overall: 1 2 3 4 5