

Give or take a few foibles, the HD27 is an enticing compact 1080p DLP projector. **Steve May** blows up his video

Optoma asks for less to go large

It's genuinely astonishing what you can get at the budget end of the projection market. Optoma's new HD27 is a case in point: a compact, lightweight cutie that weighs just 2.5kg, is small enough to squirrel away beneath the stairs when not in use, yet more than equipped to front a convincing home cinema system. And it sells for about a tenth of the price of a 65in OLED TV.

It's a single-chip DLP model, and has plenty of rivals in this entry-level arena, but makes an effort to stand out by virtue of neat cosmetics. The white chassis has a smart gloss finish, while the bodywork is heavily ventilated (hot air ports from the front, just the ticket for keeping your sausage rolls warm...)

A keypad on the PJ's top offers full menu access, while the rear serves up two v1.4a HDMI inputs, one of which supports MHL smartphone connectivity (the projector also

works with Optoma's WHD200 wireless HDMI streamer, an optional extra available for around £200). There's also a USB port, but this is just for device charging and servicing, plus a minijack audio output and a 12V trigger, should you want to go the whole hog and integrate the HD27 with an electric screen.

Setup is generally straightforward, but with a couple of limiting factors. Firstly, the throw distance is a tad demanding. You'll need a fair amount of space to cast a seriously big image, and courtesy of the HD27's meagre 1.1x zoom, the throw ratio is a tight 1.48-1.62:1. Secondly, both zoom and focus controls are manual. There's a zoom lever for the former, while the serrated focus ring helps pull images sharp. Built-in test patterns make it easy to zero in. Image shifting is an option, plus vertical and horizontal keystone correction. For additional alignment, the PJ's feet are adjustable.

The fittingly compact IR remote control grants access to the onscreen menus, and is helpfully backlit with blue-glowing buttons.

Optoma quotes brightness at an impressive 3,200 Lumens (the same as the previous HD26), but I still wouldn't recommend the projector for use in areas with high levels of ambient light, as it just doesn't have the punch. However, you won't need a fully dark room, either. In this instance, give yourself enough light to find your popcorn, switch the PJ onto its bright lamp setting and you'll be in business.

Casual users can stick to a selection of image presets – Cinema, Vivid, Game, Reference, Bright and User. Deeper adjustment includes the usual calibration tools of Brightness, Contrast, Sharpness, Colour, Tint and Gamma (with preset curves for film, TV and graphics work). There's enough here to bag the HD27 certification from the ISF, with Day, Night and 3D slots available.

One inevitable downside of small DLP projectors is that they're rather noisy in operation, and the HD27 is no exception. The general fan hubbub can be tamed by running the lamp in Eco mode, but even then the projector can't be described as demur.

Beneath the lid is a 195W lamp, which has an expected lifespan of 6,000 hours in Eco mode. Power consumption in Bright mode is rated at 230W, dropping to 192W in Eco.

The projector supports active 3D when used with DLP's 3D emitter accessory. This includes support for a 144Hz rapid refresh rate; however, as no such gizmo was provided this went untested.

Grey matter

Like its predecessors, this beamer doesn't really do a deep black. Dark grey is about the best you can hope for. When ice rains from the skies in *Exodus: Gods and Kings*, there's no sense of depth or scale to the battered city, while the swirling vortex above looks as flat as a Sphinx's nose.

The projector has a Dynamic Black feature to adjust the lamp output on a scene-by-scene basis (automatically activated in Cinema mode), which is well judged enough

AV INFO

PRODUCT:
Affordable Full HD DLP projector

POSITION:
Below the Darbee-enabled HD28DSE; above the HD26

PEERS:
BenQ W1110S; Epson EH-TW5210

1. The HD27 is Optoma's newest budget Full HD PJ

2. The remote's buttons light up blue for dark-room use



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REVIEWS



not to be a major distraction in a dark room yet doesn't noticeably improve black levels. In fact, I didn't find any mode, or gamma adjustment/settings tweak, that delivered a true black without crushing out shadow detail.

That said, there's a colourful intensity to the image which is really engaging. When Julianne Moore is engulfed in flame, only to erupt out as a dragon, in fantasy flick *Seventh Son*, the HD27 delivers an orange fireball able to singe eyebrows. Texas Instruments' BrilliantColor

'If you're shopping for a high-value bigscreen experience, Optoma's cinematic HD27 doesn't disappoint'

processing is deliciously vibrant. Perhaps key to the projector's colour performance is an improved colour wheel, although Optoma is incredibly secretive about the upgrade, saying only that a new material has been used.

Steering clear of soap opera

Image processing technology is somewhat rudimentary, but appropriate given the price point. There are no high frame-rate picture modes offered here to retain motion resolution. This is a one-video-fits-all proposition.

On the plus side, that means no video soap opera effect. Films do actually look like films. And make no mistake, the HD27 does big cinema brilliantly. As Chris Pratt high-tails it from the pen of the Indominus Rex in *Jurassic World*, the more easily distracted amongst us will find themselves appreciating the green hues of the prehistoric foliage, and how they contrast with the screens in the control room. We may be some way away from the dizzy heights of HDR, but the white hard hat of a soon-to-be-eaten park employee pings out brilliantly.

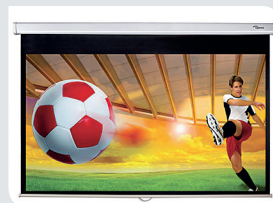
At 6.5ppf (pixels per frame), subjective motion resolution drops from 1080 lines to around 700. A test sequence devised by Japanese post-production house Q-Tec, which involves a passenger train rattling past a fixed camera, reveals passengers in each carriage,

SPECIFICATIONS

3D: Yes. Active Shutter via DLP Link (glasses optional) **4K:** No. 1,920 x 1,080 resolution (Full HD) **CONNECTIONS:** 2 x HDMI inputs; 3D Sync port; minijack audio output; USB charge/service port; 12V trigger **BRIGHTNESS (CLAIMED):** 3,200 Lumens **CONTRAST (CLAIMED):** 25,000:1 **ZOOM:** 1.1x optical **DIMENSIONS:** 298(w) x 230(h) x 96.5(d)mm **WEIGHT:** 2.4kg

FEATURES: Single-chip DLP projector; TI BrilliantColor; Dynamic Black image processing; 10W built-in speaker system; 195W lamp, life rated at 8,000 hours (dynamic), 6,000 hours (eco), 5,000 hours (bright); 26dB claimed operating noise; optional wireless HD transmitter; 1.48-1.62:1 throw ratio; keystone correction; lens shift; Brightness, Contrast, Sharpness, Colour, Tint and Gamma controls

PARTNER WITH



OPTOMA DS-9092PWC: Also available in a 72in (diagonal) iteration, Optoma's manual pulldown 16:9 projector screen (with self-lock feature) keeps the affordable vibe going thanks to its £70 asking price. Mount it either to your ceiling or wall.

rather than an indistinct blur. I noted some colour fringing aberration on the moving train, however.

While heavily-shadowed areas tend to flatten out, brighter sequences look terrific. When we cut to Havana in espionage sequel *Mission Impossible: Rogue Nation*, the Cuban city is bathed in tantalisingly warm sunlight, while the opulence of the Vienna Opera House later in the movie is a visual treat. Colours can oversaturate, but edging the menu-based slider down to the 10 setting seems to cure a lot of the heat.

As a single-chip model, that old DLP bugbear of rainbow fringing does raise its head, but only fleetingly in scenes of high contrast. I didn't find it intrusive, and fellow viewers didn't spot it at all.

This projector will prove a solid choice for gamers, too. Running through cartoony shooter *Overwatch* on the PlayStation 4, there was no appreciable lag to knobble my kills, and the HD27's predilection for rich colour was right at home here. Running in Game mode, I detected no overt resolution smearing. The picture was smooth and pixel-grid free. Everything played the way it should.

Budget multiplex

If you're shopping for a high-value bigscreen experience, then the HD27 doesn't really disappoint. This is a cinematic offering that's a doddle to settle up, and does a cracking job with HD content. And importantly, it's just as at home with next-gen games as it is with TV and movies. Just add a media streamer for Netflix, Amazon and YouTube, plus a sound system, and your budget multiplex is up and running. There are drawbacks, of course – the projector's innate black level is limited and that onboard sound system borders on painful – but for the money this is one home theatre offering that should have you beaming ■

HCC VERDICT



Optoma HD27

→ £550 → www.optoma.co.uk

WE SAY: This projector succeeds in its mission to offer largescale HD images at a price that won't break the bank. A solid, but not spectacular, all-round gaming and movie PJ.

3. One of the two HDMI inputs supports the MHL protocol

4. The top of the PJ offers menu navigation controls