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JVC upgrades its native 4K projectors by swapping lamps for lasers. **Steve Withers** trips the light fantastic

It wasn't a huge surprise when JVC announced its new NZ series of laser-powered projectors last autumn, but what did surprise was the full extent of the upgrade. These new beamers include all the features found on the previous generation, but add HDMI 2.1 inputs capable of handling 8K/60p and 4K/120p, an upgraded iteration of its 8K e-Shift technology (dubbed e-ShiftX), and support for HDR10+.

The new range is headlined by the DLA-NZ9 (£25,000), which offers a claimed brightness of 3,000 Lumens, a native contrast of 100,000:1, and a 100mm all-glass lens with 'ultra-high contrast' optics. The DLA-NZ8 tested here (£15,800) shares much of the same spec (including the improved optical path), but hits 2,500 Lumens, has a contrast of 80,000:1, and uses a smaller 65mm lens.

Finally, there's the DLA-NZ7 (£11,500). This is largely the same as the NZ8, but doesn't use upgraded optics, resulting in a brightness of 2,200 Lumens and contrast of 40,000:1. The NZ7 also misses out on a wide colour gamut filter found on the NZ8 and NZ9, and uses a less advanced form of e-Shift than that of its more expensive siblings.

Of course, expensive is a relative term, with even the 'entry-level' NZ7 setting you back nearly £12k. This puts JVC's new range beyond the reach of all but the most well-heeled home cinema enthusiast. In fairness to JVC the pricing is primarily dictated by Sony's existing 4K laser projectors – the VPL-VW790ES at £10,000 and the VPL-VW890ES, which costs £25,000.

It's interesting to note that the NZ8 doesn't have a direct competitor, and based on the specs listed above it also sits in the sweet spot of JVC's new lineup, offering some serious high-end bang for its not-inconsiderable buck.

Pieces of 8

Since the NZ8 directly replaces the outgoing N7 (see *HCC* #298), it's useful to run through the differences between these two projectors.

Firstly, and most obviously, the NZ8 uses a BLU-Escent laser diode light source, which means increased brightness, greater consistency, and a 20,000-hour lifespan. As a result, you should be able to watch a film a day for the next 20 years without worrying about image dimming or having to change the lamp.

The NZ8 uses the same three-chip 4K D-ILA device as the outgoing N7, but now includes 8K/e-ShiftX processing. A flavour of this feature, which shifted pixels in two directions to increase the perceived resolution of projected images, was introduced on the previous DLA-NX9 flagship model launched in 2019. While the entry-level NZ7 retains this approach, the NZ8 and NZ9 now shift the pixels in four directions, to display a full 8K resolution.

The ability to handle 8K sources is only possible due to another major upgrade – HDMI 2.1 inputs. And the NZ8's pair of 48Gbps ports not only accept 8K/60p but also 4K/120p, in addition to 3D and high dynamic range – specifically HDR10, HLG, and HDR10+.

Physically, the NZ8 looks identical to the older N7, with the same bulky matte black chassis and solid build quality. The only difference is at the rear, where there are slightly larger air vents and no removable dust filter. There's been no change to the supplied remote, which is well-designed and has a useful handy backlight.

The all-glass lens is again a 17-element, 15-group design, but has been upgraded to improve contrast performance by suppressing any reflected light, which explains how the brighter NZ8 can have the same contrast ratio as the N7.

Otherwise it's business as usual, with features such as Auto Tone Mapping, which reads HDR static metadata and automatically adjusts the tone mapping accordingly, and Frame Adapt HDR, which analyses an HDR signal and changes the tone mapping on the fly. JVC's Theatre Optimiser then tweaks the PJ's HDR delivery to better match your screen's size and gain factor.

Installation remains a breeze thanks to generous motorised focus, zoom and shift controls, along with precise lens memories for those rocking a 'Scope screen. The NZ8, designed for medium and large home cinemas, has a 2x zoom and can be stand or ceiling mounted – but whatever your installation plans, it's worth remembering this behemoth weighs 23.1kg and measures 50cm wide.

On the menu

JVC's onscreen display is predominantly the same as before, but there are a few changes reflecting upgrades made.

The Frame Adapt HDR tool now offers six settings, and the Theatre Optimiser allows you to specify if your screen aspect ratio is 16:9 or 2.35:1.

The biggest menu difference relates to the laser light source, which has three 'LD Power' options: low, mid, and high. There are also two Dynamic CTRL settings that dynamically adjust the brightness of the laser, with the second mode applying this more aggressively.

Anyone concerned about the laser's cooling being noisy needn't worry. In fact, the low and mid laser



AV INFO

PRODUCT: Premium 4K HDR home cinema projector with JVC's 8K e-ShiftX tech

POSITION: Mid-point between the DLA-NZ7 and DLA-NZ9

PEERS: Sony VPL-VW790ES; Sony VPL-VW890ES

1. A curved top-panel lessens the visual impact of the NZ8's large chassis

2. The remote handset is a carry over from JVC's earlier 4K PJ generation





A. JVC's onscreen menu offers comprehensive control of picture/input parameters and installation tools

B. Picture modes include Auto, Standard and HDR options, each with customisation potential

C. The e-Shift menu includes three tiers of processing, plus a trio of noise reduction options

D. Call up the info pane to view source details, including HDR10 metadata values

settings are as quiet as the low-lamp mode of the previous N7, allowing the NZ8's middle option to add extra brightness without creating an unwanted racket. Even the high mode isn't significantly louder, making it a viable option for those who really need additional luminance.

Perhaps the biggest surprise is the speed with which the NZ8 locks on to a video signal. Previous JVC models would take so long you could make a cup of tea before an image appeared, but perhaps because of the HDMI 2.1 upgrade, this new generation is decidedly nippy.

Come away with me

As always the most accurate picture mode is Natural, and watching the Blu-ray of *Samsara* revealed a series of gorgeous travelogue images. The picture looked spot-on to

my eye, and measurements confirmed it. JVC isn't telling porkies when it comes to the native contrast either, with the NZ8 consistently delivering around 80,000:1 in testing.

In the absence of any native 8K content, the 8K/e-ShiftX processing might seem like nothing more than a gimmick, but in actuality it proved very effective. A decent 1080p source like *Samsara* looked so good you'd swear it was 4K, and while the 'High-res 1' setting applies a degree of sharpening, even an old purist like me was beguiled by its charms.

If you feed the projector a native 4K image the results are exceptional; I'd wager even the most demanding pixel-peeper will be stunned. Kenneth Branagh's *Murder on the Orient Express* was shot on 65mm for a 4K DI, and the UHD disc uses this source to create breathtakingly detailed

pictures; through the NZ8 you can see every hair in Hercule Poirot's magnificent moustache, this sense of clarity undoubtedly benefiting from that all-glass lens.

Resolution and image processing are important, but I've long felt JVC projectors, with their tone-mapping toolset, are in a league of their own when it comes to HDR. This technical prowess is perfectly demonstrated in *Allied* (4K Blu-ray), where Brad Pitt is watching an air raid during the Blitz. A combination of the NZ8's expansive contrast and

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flawless tone-mapping produces deep blacks in the night sky, plus astonishing shadow detail. Tracer fire and flak are picked up with precision, highlighted against the darkness.

The NZ8 is equally impressive at the other end of the dynamic range, and when Jenny Lind sings 'Never Enough' in *The Greatest Showman* (4K BD) she appears luminescent in the spotlight, but you can still make out all the detail in her ivory dress.

The film also makes memorable use of the 4K Blu-ray format's wider colour gamut, with beautifully saturated images that are a feast for the eyes. The NZ8 uses a filter to render 100 per cent of the DCI-P3 colour space, and this is evident in the way the colours pop in scenes such as when Charity Hallett-Barnum sings 'Tightrope' surrounded by colourful flowers.

Interestingly, JVC's HDR10+ mode defaults to the normal rather wide colour setting, and since it's greyed out this can't be changed. The reason for this is that the colour filter reduces the light output by about 25 per cent, and the HDR10+ Alliance prioritises brightness over a wider colour gamut. On the plus side, the NZ8 detected the HDR10+ content without any issues, and the colour space was still covering 90 per cent of DCI-P3 – worth remembering if you're considering the cheaper, less colour-rich, NZ7.

A touch of flare

Watching the 4K Blu-ray of *1917* displays the dynamic metadata benefits of HDR10+, with some expertly tone-mapped images. The sequence set in a ruined village at night is simply stunning, with deep blacks contrasted against buildings illuminated by falling flares. These flares, and burning buildings, feel really intense, while the projector teases out detail in the shadows.

The effectiveness of the NZ8's dynamic laser control is also in evidence, particularly in one gob-smacking moment where the screen goes completely black. Claims of a dynamic contrast ratio of 'infinity to one' are a bit misleading, though – unless you're happy to always look at a black screen.

SPECIFICATIONS

3D: Yes. Active shutter **4K:** Yes. 4,096 x 2,160 (plus 8K/e-ShiftX) **HDR:** Yes. HDR10; HLG; HDR10+ **CONNECTIONS:** 2 x HDMI inputs; RS-232; USB; 12V trigger; Ethernet; 3D synchro port **BRIGHTNESS (CLAIMED):** 2,500 Lumens **CONTRAST (CLAIMED):** 80,000:1 (native); infinite (dynamic) **DIMENSIONS:** 500(w) x 234(h) x 505(d)mm **WEIGHT:** 23.1kg

FEATURES: D-ILA device; BLU-Escent laser diode; claimed average life of 20,000 hours in standard mode; all-glass high-quality 100mm lens; 8K/e-ShiftX; Auto Tone Mapping; Frame Adapt HDR; Theatre Optimiser; Low Latency mode; Clear Motion Drive; Motion Enhance; 1.43-2.92:1 throw ratio; motorised zoom, shift and focus; 10 lens memories; HDMI 2.1 with support for 8K/60p and 4K/120p; ISF certification; auto calibration

TESTED WITH



THE GREATEST SHOWMAN: This musical might be historical humbug, but it's wildly entertaining and chock full of catchy numbers. On UHD BD, the sumptuous native 4K visuals are delivered with eye-popping HDR and a colour palette that gives van Gogh a run for his money – making it the perfect demo showstopper.

With regular images the contrast was still impressive, and in general the dynamic laser control worked very well. However, during credit sequences the text would often appear too dim, and it would seem that both dynamic settings (but especially the second) are being too aggressive. It's really my only criticism of the NZ8; JVC needs to apply some fine tuning.

While you will need to invest in the optional synchro emitter and glasses, 3D looks as fantastic as anything else on the NZ8. There's no dedicated mode, but you can easily create one of your own and set the projector to default to it when 3D content is detected. *Oz the Great and Powerful* on 3D

Blu-ray revealed bright, detailed and colourful images that had plenty of depth and not a hint of crosstalk.

Live long and prosper

There's no denying the NZ8 represents a serious financial investment, but at least you might not need to buy another projector for twenty years. You also get an unparalleled level of performance, bleeding-edge tech, and a future-proofed set of features. The NZ7 is cheaper, and the NZ9 offers incremental improvements, but with no direct competitor the accomplished NZ8 is by definition the best projector in its price bracket ■

HCC VERDICT



JVC DLA-NZ8
→ £15,800 → www.jvc.co.uk

WE SAY: Peerless performance, long-life laser lighting and unrivalled features make JVC's DLA-NZ8 the 4K HDR projector to beat in its class.

