

The King of spin

Pioneer's premium-priced LX91 Blu-ray marries sonic thrills with visual skills.

Richard Stevenson wonders whether it's the best BD deck yet made...



In the last issue of *HCC*, Sony's incredible £1,200 BDP-S5000ES kicked my reference Denon DVD-2500BT into touch and became the new daddy of Blu-ray players – the home cinema source against which all other video sources will be judged. Well, briefly. Mere weeks later, Pioneer delivers its first third-generation BD player, the BDP-LX91. The King is dead, long live the new King.

Get the Pioneer out of its box, and the player's 14kg bulk and substantial build ooze class and quality. The mirror black fascia, metal trim and blue LEDs are right up there with the 'phwoar' hot SC-LX81 (see p56) and the overall look is very much EVE to the rest of the field's WALL-Es. Far be it for me to be swayed by simple cosmetic appeal, the BDP-LX91 also comes to the table with full Profile 2.0 support with a

Final fantasy: With Profile 2.0 support and 4GB of internal memory, this deck is definitely future-proofed

class-leading 4GB of memory, no less than eight Wolfson DACs for on-board analogue audio conversion, and tuning by AIR studios. Better yet, you get twin HDMI outputs and Pioneer's Precision Quartz Lock System (PQLS – more on this later) to buff up your audio.

The player's Setup Navigator is the equivalent of having a well-informed tour guide holding your hand, pointing out hidden facts and



plying you with additional information. I didn't leave a tip, though, because it missed out the BDP-LX91's comprehensive video adjustment menus.

The twin HDMI outputs are the only part likely to confuse the unwary, as the manual recommends making a direct connection to your display with the sub-HDMI output and using the prime HDMI output direct to your amp in order to achieve highest-quality sound. If you set the player to its Pure Audio Mode 1, then no video is output via the Prime HDMI connection. Alternatively, you can take advantage of dual provision – **hook up a plasma and a projector without swapping wires.**

High speed HDMI

Just to add a further layer of mystique around the HDMI implementation there is much rhetoric in the documentation about using High Speed HDMI cable to maximise performance. The HDMI organisation now categorises HDMI into Cat 1 (which guarantees delivery

of 1080i) and Cat 2 (which accommodates Deep Colour and 1080p). From personal experience, many different cable brands seem to fall somewhere between the two standards. Consequently, there's still some suck-it-and-see experimentation required to assess the impact of Pioneer's proprietary High Speed Transmission system. Setting the High Speed mode to On in the player will enable a 10/12/16bit output (depending on the display). If you are using the LX91 with a 9G Pioneer Kuro, and you use a bog-standard Cat1 HDMI lead you may well get no picture at all! (Don't panic, just press the Stop button on the player's fascia which will switch off the High Speed setting.). For what it's worth, I sucked everything from the universally-ridiculed Sky HD giveaway HDMI cable to a £300 exercise in precious metal conductors, and managed to receive a 1080p/60Hz picture over all of them.

Perhaps if I'd noticed some issues with the picture it would have stopped me getting a dry mouth and

sore throat as I watched *The Mummy: Tomb of the Dragon Emperor* with my jaw resting on my chest. I did occasionally stop to say things like 'wow' and 'awesome' and 'this is the sort of player that makes the billions of R&D yen spent worth every single cent'. With even the most minor of calibration tweaks, using the BDP-LX91's comprehensive-if-slightly-coarse video adjust menu, the picture is certain to impress.

The deep, deep blacks are pure midnight with a blindfold on, the colour rendition is rich and gorgeously natural without a hint of over-egging the pudding, and the motion handling is phenomenal.

The intro sequence to *The Mummy...* Blu-ray disc is a fast-paced romp through faux Chinese history complete with blur-quick fight sequences and enormous panning camera scenes. It is enough to make you giddy with motion sickness as the Pioneer smoothly pans, scrolls and ekes out every picture detail along the way. When the Emperor is attacked in his bed, many of the fight movements are beyond the speed the human eye >

AV/CV

Product: Profile 2.0, high-end Blu-ray player

Positioning: Pioneer's top-flight BD-spinner

Peers: Sony BDP-S5000ES; Denon DVD-3800BT; Marantz BD-8002



HOME CINEMA
Choice
Reference Status

The player's PQLS-enabled HDMI devilry promises audiophile-quality CD audio



Fat beauty:
The LX91
weighs a
reassuring
14.3kg

can follow (well, my human eyes anyway...) but the Pioneer never blurs or judders. Watching in slow-motion you can see the mid-frame motion-smearing of the original film recording, but the LX91 never reveals this as anything but high-speed ultra-crisp motion at full rate.

As the scene changes to the temple, the fire-lit chamber is exceptionally realistic, with extensive detailing in the shadows. The scene is full of visual clues to enhance the viewer's fear and apprehension, and the BDP-LX91 will have you wound like a coil-spring with sheer tension. Switch to a high-quality animated movie like *WALL-E* and the picture lures you into to the android equivalent of Romeo and Juliet with everything but the balcony. The detail is scorchingly crisp and the Pioneer's incredible motion-processing ensures EVE's fastest fly-pasts are smooth and richly textured.

Fight club

In a head-to-head shoot-out using my best reference 1080p BDs, the Pioneer's picture is all but indistinguishable from the drop-dead gorgeous video performance of its nearest rival, Sony's BDP-S5000ES. In my system the Sony nudges ahead by scant pixels and a wider perceived contrast ratio and a very slightly sharper, deeper image. The Pioneer fights back with superior upscaling of standard-def DVDs, being noticeably sharper and keener around edge detail with SD than the Sony.

It's a close fight – until the Pioneer wheels out its audio artillery. Not only is the LX91 festooned with audiophile DACs for each of its eight

channels – resulting in exceptional multichannel analogue output – the promise of improved audio over PQLS-enabled HDMI is tempting.

PQLS synchronises the data-clock in a PQLS-enabled BD-player with the data-clock in an equally PQLS-enabled amplifier using HDMI's CEC channel. In a standard non-PQLS system the audio data from the player is re-clocked in the amp prior to converting into analogue, which adds all sorts of signal-degrading hash into the data stream known as jitter. PQLS offers near jitter-free digital CD audio transfer, and with it the promise of true audiophile-quality sound over HDMI – an interconnecting standard with all the hi-fi cred of an Edison Phonograph.

With PQLS switched on the result is a stunning audio fiesta of sound; rich, crisp, potent and articulate. From Mozart to Megadeth, there is a tautness and punch to the audio that makes the analogue output sound positively sluggish. For the first time ever, **here is a video disc-spinner that could have die-hard hi-fi fans binning their phono cables.**

PQLS currently only works with CD playback, but it is featured on all of Pioneer's current BD range (the BDP-LX08, BDP-51F and BDP-LX71).

Packed with features, functions and superior AV performance, I suspect the LX91 is destined to be the deck of choice for hi-end cinephiles. Indeed, the BDP-LX91 can be considered today's reference home cinema source. Mind you, I said that last issue about another product. I wonder what's coming next... ●

→ Specifications

Video upscaling: YES Up to 1080p24
Multiregion: NO Region B (BD); R2 (DVD)
HDMI: YES 2 x v1.3
Component: YES BNC with adapters
Multichannel phono audio: YES 7.1-channel
Digital audio: YES coaxial/optical/PQLS
HDMI
SACD/DVD-A playback: NO Sadly missing
Dolby TrueHD/DTS-HD/DTS-MA decoding:
YES/YES
Dolby TrueHD/DTS-HD/DTS-MA bitstream:
YES/YES
Profile 2.0: YES BD Live function via
Ethernet
Dimensions: 420(w) x 143(h)
x 365(d)mm
Weight: 14.3kg
Also featuring: Profile 2.0; BD Live;
BonusView; AVCHD playback; Kuro
Link; PQLS jitter elimination circuit;
DivX compatible; JPEG, AVI, WMA,
and MP3 playback

→ Tech Labs

DVD Playback

Audio jitter: 203.6ps 1 2 3 4 5
Video jitter: 3ns 1 2 3 4 5
Video S/N ratio (composite): -76.0dB 1 2 3 4 5
Video S/N ratio (S-video Y): -75.4dB 1 2 3 4 5
**Video S/N ratio (interlaced
component Y):** -71.5dB 1 2 3 4 5
Chroma AM: -75.2dB 1 2 3 4 5
Chroma PM: -65.5dB 1 2 3 4 5
Chroma Crosstalk: -56.0dB 1 2 3 4 5
**Response @ 5.8MHz
(composite):** -2.0dB 1 2 3 4 5
**Response @ 5.8MHz
(S-video):** -1.1dB 1 2 3 4 5
**Response @ 5.8MHz
(component, interlaced):**
-0.2dB 1 2 3 4 5

HQV Benchmark Jaggies test: PASS
HQV Benchmark Text Crawl test: PASS

With its solid aluminium construction and gold-plated terminals, this is a premium player with top performance. You name it, the LX91 supports it, from BD-Live via the Ethernet port to 48bit HDMI Deep Colour, x.v.Colour, Dolby TrueHD and DTS-HD Master Audio. All tests including HQV Benchmark deliver impressive results



HCC VERDICT

Pioneer BDP-LX91
£1,800 Approx

Price check: www.techradar.com/532605

Highs: Stunning picture; great sound; packed with features and sexy as hell

Lows: PQLS only functions with CD

Performance: 1 2 3 4 5

Design: 1 2 3 4 5

Features: 1 2 3 4 5

Overall: 1 2 3 4 5