

Pro-Ject Pre Box DS2 Digital/ Amp Box DS2 Stereo

The world's most prolific producer of turntables also offers an extensive range of bijou hi-fi separates. We look at the latest pre/power in its 'mid-range' Box Design series
Review: **Cliff Joseph** Lab: **Paul Miller**

Pro-Ject doesn't do things by halves. With an already intimidating array of amps, preamps and DACs in its Box Design range, the Vienna-based company has recently given its entire mid-range DS Line a complete revamp, with nine new products now available here in the UK and more to come as we head into 2018. The flagship of the new range is the updated Pre Box DS2 Digital, a compact but versatile preamp priced at £785. By way of partner, the company has also released the new Amp Box DS2, a Class-D powered stereo amplifier, rated at 100W/8ohm and priced at just £520.

Both devices are attractively compact, with the same dimensions – 240mm wide, 72mm high and 194mm deep – so you can easily stack them if space is a bit tight (the 220mm depth listed for the Pre Box includes the Bluetooth aerial at the back). You can choose either silver or black metal casings for each device, finished off with walnut or darker eucalyptus wood panels, to suit your taste. However, our two black test units would have benefitted from some sort of non-smudge coating to help reduce finger marks...

THE ULTIMATE HUB

The Pre Box DS2 has much in common with the company's DAC Box DS2 Ultra [*HFN* Jul '16]. The designs of both devices pre-date the recent arrival of John Westlake from Audiolab, and they share the same 'Velvet Sound' AK4490 DAC from Asahi Kasei, rather than the ESS Sabre DACs used in some of Pro-Ject's other recent releases. This supports audio formats up to 768kHz/32-bit via USB input, or 192kHz/24-bit via S/PDIF, and up to DSD256.

RIGHT: The Pre Box DS2 Digital's Wi-Fi/Bluetooth module [left] is from Shanghai Ehong Technology Ltd while the upsampler and DSD-ready DAC are both from AKM's high-end 32-bit Verita 'Velvet Sound' series

There's also an AK4137 upsampler on board as well, which works up to 768kHz.

However, the Pre Box DS2 casts its net a little wider than the DAC Box DS2. The UK distributors at Henley Audio describe it as 'the ultimate system hub', and the Pre Box DS2 includes both USB input for computers and Bluetooth wireless for streaming from mobile devices, along with support for the higher-quality AptX codec (although, of course, your mobile devices will also need to support AptX in order to use that option).

Alongside the digital inputs are an RCA phono input for MM/MC turntables and an RCA line-in. Output options include two pairs of RCA connectors for variable and fixed output, one subwoofer and – on the front panel – a 6.35mm headphone jack

socket. And, if you're using Pro-Ject devices like the Pre Box and Amp Box together, there are 'trigger' connectors on both devices that allow you to connect and turn them all on at the same time.

BLUETOOTH BLUES

It's certainly an impressive list of features, but there are some rough edges, both in technical terms and in presentation and ease of use. The lack of 3.5mm input won't be a deal-breaker for too many people, but the choice of a USB-B interface on the Pre Box effectively limits the use of the USB audio input to just Mac and PC computers, whereas many smartphones and other mobile devices use cables with the more common USB-A interface. It's true that Bluetooth is available for mobile devices,





LEFT: Optional eucalyptus and walnut wood sidecheeks are available to complement the Black and Silver box finishes. Inputs, Sound Mode and Digital Filters are selected by small buttons, but the LED indicators are pin-hole sized!

but Bluetooth is always a compromise and I'd have liked the option to connect my iPad via USB so that I could play hi-res audio from the online Qobuz streaming service without having to compress it all over again via Bluetooth. Sure, there are USB adapters available, but compatibility with some DACs and preamps can be a bit hit-and-miss.

The controls on the front of the Pre Box leave some room for improvement, too. The three sets of LED indicators that show the input source, filters, and 'sound modes' (the unhelpful term used for the various upsampling options) are very small and difficult to see clearly. You can adjust these settings from across the room with the hand-held remote control [p73],

'Exploring the Sound and Filter modes can get complicated!'

but you won't be able to see them unless you lean forward and peer right at the front panel. Thankfully, with fewer features and controls to worry about, the Amp Box DS2 suffers no such problems. This simply includes two pairs of input and output connectors on the back, and a single power button and LED up front.

VELVET SOUNDS

The external controls and documentation for the Pre Box DS2 might occasionally leave you

scratching your head, but the sound quality of this affordable two-piece set-up doesn't disappoint. The combination of the Pre Box DS2 and Amp Box DS2 copes admirably with a range of musical genres, although the gentle acoustic sound of 'The Blower's

Daughter' by Damien Rice [from *O*; 14th Floor Records 5050466-4788-5-6] is an easy-going curtain raiser.

Here the DS2-duo takes a calm, unfussy approach, allowing the hesitation in Rice's voice to show through in the opening sections of the song, while the strings ring out more emphatically to convey the lingering regret behind his words. It's quite forgiving of the album's lo-fi production too. By contrast, Pro-Ject's less expensive Pre Box S2 [HFN Aug '17] seemed to mercilessly highlight every finger-scratch on Rice's guitar playing, but the DS2 version manages to focus its attention on the rich acoustic guitar sound and discreetly allows all but the worst finger slips to step into the background.

After the simple intimate ballads of Rice, the more complex, intertwining choruses of 'Spem In Alium', performed by Pro Cantione Antiqua [Tallis – *Spem In Alium*; Alto – ALC1082] are certainly a step up. The vocal warmth of Damien

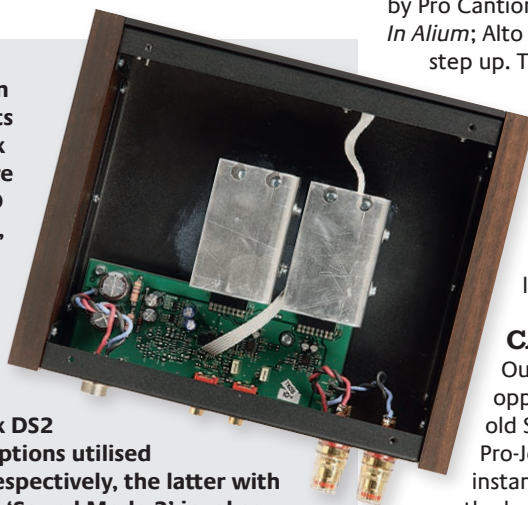
Rice is repeated 40-fold, but there's precision too in the DS2's handling as each distinct voice takes its place in the mounting chorus, creating a towering sense of space worthy of the loftiest cathedrals.

CANNED GOODS

Out of curiosity, I took this opportunity to plug my reliable old Sennheiser headphones into Pro-Ject's Pre Box DS2. In this instance the closer confines of the headphones actually seemed to intensify the impact of the music, making it clear that the headphone option provided here is no mere afterthought. ➔

RINGING THE CHANGES

It's all change for Pro-Ject inside its DS2 Box Design series as the Flying Mole Class D modules used in its DS series [HFN Mar '16] are replaced here by Hypex UcD180LP amplifiers [concealed in the inset picture by two C-sections of alloy heatsinking]. Still Class D in execution, but driven via a robust outboard PSU, the Amp Box DS2 benefits from Hypex's superior speaker load tolerance – so the frequency response dips by an imperceptible $-0.1\text{dB}/-0.2\text{dB}$ at 20kHz with each halving of load from 8 to 4 to 2ohm. The partnering Pre Box DS2 also features the high-end 'Verita' AK4137 upsampler and AK4490 DAC that we saw in Pro-Ject's DAC Box DS2 ultra [HFN Jul '16]. The key 'Filter 1' and 'Filter 2' options utilised here are linear phase and minimum phase types, respectively, the latter with no pre-ringing on transient signals. In conjunction, 'Sound Mode 2' invokes a sharp roll-off characteristic while Sound Modes 1 and 3 offer a slow treble roll-off. Sound Mode 2 is certainly the most 'distinctive' of Pro-Ject's options. PM

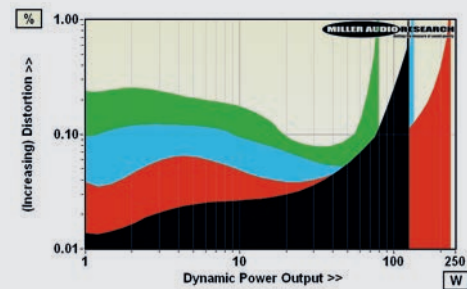


LAB REPORT

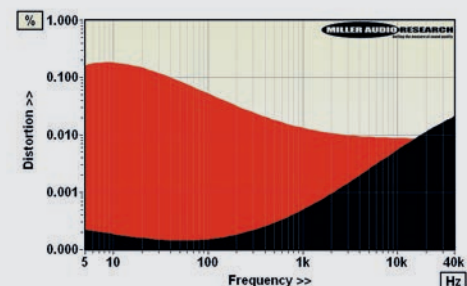
PRO-JECT BOX DS2 DIGITAL/STEREO

The move to adopt Hypex Class D modules for its Amp Box series ensures Pro-Ject a very reliable and fairly predictable performance [see boxout, p71], although the Amp Box DS2's S/N, in particular, would improve by some 6dB over the measured 81dB (re. 0dBW) if the spurious around 19kHz could be removed. Power output is well over the 100W/140W 8/4ohm specification at 120W/210W, respectively, with some very slight increase under dynamic conditions [see Graph 1, below]. Low impedance drive is limited by protection to 9A but the Amp Box DS2 will still go plenty loud with sensitive 8/6ohm nominal loudspeakers. Distortion increases with output and decreasing load, from 0.013%/1W to 0.03%/10W and 0.2%/100W at midrange frequencies, and increases still further at bass frequencies to 0.14%/20Hz at 1-10W/8ohm [see Graph 2].

The accompanying Pre Box DS2 Digital offers a gain of +5.4dB or -0.5dB (in +6dB/0dB modes) with a maximum output of 6V (analogue in) or 2.3V (fixed output, 0dBfs digital in). The output impedance is a usefully low 9.3ohm via the buffered variable output or a higher 46ohm via the fixed outputs. Under ideal conditions (200mV-2V out) distortion is a low 0.0003-0.008% (20Hz-20kHz), increasing to 0.02%/40kHz, while the inherent response is flat to within ± 0.1 dB from 40Hz-100kHz. Via the digital inputs, distortion is as low as 0.00008% (1kHz) and 0.0002% (20kHz) over the top 30dB of its dynamic range. Noise is much lower, relatively and absolutely, than via the Amp Box, resulting in wide A-wtd S/Ns of 97.3dB (re. 0dBV) and 109.3dB (re. 0dBfs). Jitter suppression is especially impressive with no more than 10psec recorded at any sample rate from 44.1kHz to 192kHz. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black), 4ohm (red), 2ohm (blue) and 1ohm (green) loads. Maximum current is 8.9A



ABOVE: Distortion vs. extended 5Hz-40kHz frequency (black, Pre Box at 0dBV; red, Amp Box at 1W/8ohm)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	120W / 210W
Dynamic power (<1% THD, 8/4/2/1ohm)	125W / 225W / 130W / 80W
Output impedance (20Hz-20kHz)	0.001-0.065ohm (9ohm/Pre Box)
Freq. resp. (20Hz-20kHz, Digital/Amp)	+0.0 to -0.3dB / -0.6 to -0.75dB
A-wtd S/N ratio (Digital/Amp Box)	109.3dB (0dBfs) / 81.0dB (0dBW)
Dist. (20Hz-20kHz, Digital/Amp Box)	0.0004-0.001% / 0.023-0.13%
Digital jitter (48kHz/96kHz)	<10psec / <10psec
Power consump. (Idle/Rated o/p)	10W/233W (6W, Pre Box)
Dimensions (WHD, each) / Weight	240x69x194mm / 2.1kg



ABOVE: Line and phono analogue ins are offered alongside coax, USB, wireless Bluetooth and two Toslink optical digital ins, with fixed/variable analogue, sub plus optical outs [Pre Box, top]. The Amp Box [below] has line in/loop outs on RCA and 4mm speaker terminals. Note the three-pin DIN 48V PSU connection

Switching from the sacred to the (frequently) profane, 'This Is How I Disappear' by My Chemical Romance [Welcome To The Black Parade; 44.1kHz/24-bit; Reprise 9362 4427-2] found the Pro-Ject pairing really flexing its muscles. There was great power and attack in the thrashing guitar riffs, yet the pre/power never lost sight of Ray Toro's precise, controlled playing – it's death by a thousand cuts rather than simply bludgeoning you unconscious with noise.

If you are in need of something a little more calming, then the ambient sound of Max Richter's 'Shadow Journal' [The Blue Notebooks; Deutsche Grammophon 479-4443] is just perfect. The Pro-Ject team gets the balance just right here, keeping the deep electronic bass firm and taut and with enough weight to underpin the delicate violin and ambient electronics that hover above. This is also a fine piece of music with which to explore the numerous filters and sound modes built into the Pre Box DS2 – although things can get a little complicated!

FILTER EFFECTS

There are five filters, and three 'sound modes' – which actually refer to the upsampling options provided by the Pre Box. However, the upsampling modes available depend on both the input source and sampling rate of the original audio file, and not all filters are available

in all three modes. In fact, even with my 44.1kHz/24-bit tracks, only the first two filters were generally available [see PM's boxout, p71], and neither exerted any substantial impact on the simple, sparse sound of 'The Blower's Daughter'.

Turning off the upsampling (Sound Mode 3) provides access to four of the filters, and it's the fourth that proves most effective, adding a subtle but audible broadening of the deep bass on 'Shadow Journal'. Ultimately, the default Sound Mode/Filter 1 seems like the most sensible starting point for day-to-day use.

My only real disappointment is the inability to connect my iPad via USB, my choice when listening to online services such as Qobuz and Spotify. Listening to my mobile devices via Bluetooth does produce good sound quality, but it still can't escape the inevitable air-brush effect that smooths out those subtle details. Inevitably, the Pre Box/Amp Box DS2 comes into its own with uncompressed hi-res sources. ☺

HI-FI NEWS VERDICT

The Pre Box DS2 and Amp Box DS2 are available separately, but there's no denying that they make an impressive team. With a combined price of around £1300, they provide a compelling sound, with power and precision that allow them to adapt to a variety of different musical genres. The compact design is both smart and versatile, and our only complaint is the reliance on Bluetooth for connecting mobile devices.

Sound Quality: 85%

