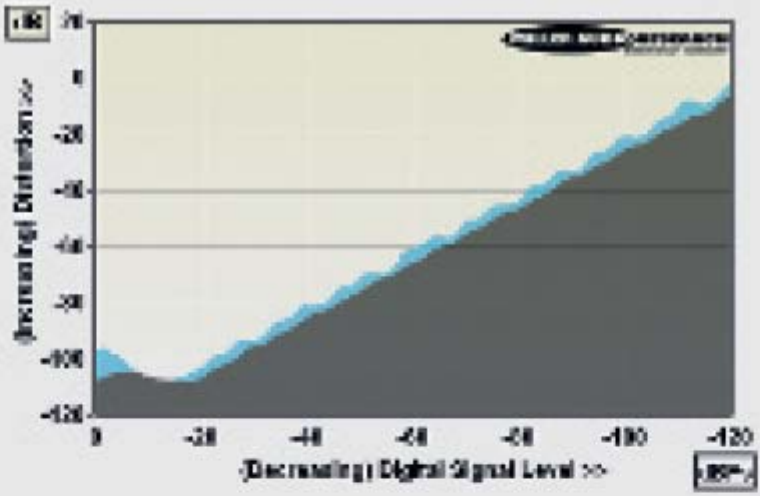
LAB REPORT

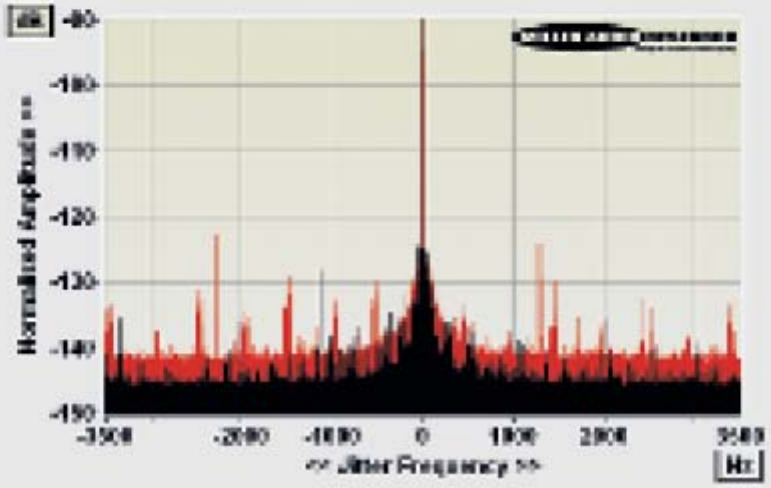
BRYSTON BDP-1/BDA-1 *(£2350/£2350)*

Tested as a combination, via its balanced AES/EBU connection, the performance of Bryston's BDP-1/BDA-1 is largely determined by the jitter rejection and general data management of the BDA-1 DAC itself. The latter does not utilise one of the new 32-bit DACs favoured by the audiophile community thesedays but the nine-year old CS4398 from Cirrus Logic, tied to an equally tried-and-tested SRC4392 192kHz asynchronous sample rate converter and buffered via a wholly discrete balanced analogue output, delivering a full 4.6V through a usefully low 70ohm impedance. The digital performance is first-rate with stopband rejection at 100dB and jitter suppressed to just 30psec with 24-bit/48kHz data and 20psec with 24-bit/96kHz data [black and red spectra, Graph 2, below].

Bryston's fabulous analogue stage really gets the best from this pair of CS4398 DACs, offering a full 115dB A-wtd S/N ratio (free of digital spuriae) and vanishingly low 0.0002% distortion over the top 20dB or so of its dynamic range peak [black trace, Graph 1 below]. Distortion increases with frequency, but not adversely so – 0.0016%/20kHz and 0.0025%/40kHz is still very low especially at these high output levels. The digital input receiver and DACs are all 192kHz-compatible, the BDA-1 offering a –3dB response of 65kHz with these highest-rate inputs, stretching out to –8.6dB/90kHz. The more likely 96kHz inputs extend to –1.7dB/45kHz while 48kHz data is flat to –0.1dB/20kHz. Readers are invited to view a comprehensive QC Suite test report for the Bryston BDP-1/BDA-1 combination by navigating to *www.hifinews.com* and clicking on the red 'download' button. **PM**



ABOVE: Distortion versus digital signal level over a 120dB dynamic range using 24-bit data at 1kHz (black) and 20kHz (blue)



ABOVE: High resolution jitter plots; 48kHz/24-bit (black spectrum) versus 96kHz/24-bit (red spectrum)

HI-FI NEWS SPECIFICATIONS

Maximum Output Level/Impedance	4.65Vrms / 70ohm
A-wtd S/N Ratio	115.3dB
Distortion (1kHz, 0dBFs/–30dBFs)	0.00021% / 0.00082%
Distortion (20kHz, 0dBFs)	0.0019%
Frequency response (20Hz-20kHz)	+0.0dB to –0.04dB (48kHz Fs)
Digital jitter (24-bit; 48kHz/96kHz)	30psec / 20psec
Resolution @ –100dB	±0.3dB
Power consumption	14W
Dimensions (WHD)	432x70x282mm (each)