

# hi-fi news

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& Record Review

## STEREO SCI-FI

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# Electrocompaniet ECD 2

Instantly recognisable as an Electrocompaniet product, the ECD 2 is the only full-sized DAC in this month's test. The company's signature black front panel has a blue LCD display on the left which gives information about selected source, sample-rate and volume level. In the centre is the power button and, to the right, four further gold buttons make up Electrocompaniet's navigator control. Up and down buttons regulate volume, while the left and right select input source.

At the rear can be found a pair of optical inputs, a pair of digital coaxial inputs and a single USB socket while the audio output is available via a choice of balanced XLRs and unbalanced RCA phono sockets. An RS232 D-Type socket permits control of the ECD 2 in the context of a home installation setup, with a pair of 12V trigger sockets for remote activation.

Internally, the ECD 2 is based around the popular XMOS USB solution with asynchronous upsampling courtesy of the equally popular Burr-Brown SRC4392 chip. As you might expect, the coaxial and USB 2.0 inputs support input rates up to 24-bit/192kHz while the pair of Toslink optical inputs run up to 24-bit/96kHz only. As befits the marque, its internal layout is methodical and the ECD 2 feels sturdy and well built.

## BALANCE AND ORDER

With Electrocompaniet's drivers installed on my PC, connection to the USB input was swift and seamless. I was very impressed by the overall demeanour of the ECD 2; it really came alive and the result was a superbly tight, punchy and crisp performance. Top end clarity



was impeccable, although the overall balance of the ECD 2 seems to have been expertly judged to avoid drawing attention to any one area of the frequency range.

In terms of atmosphere, the ECD 2 is right up with the best in the way in it sets out a capacious and beautifully ordered soundstage. It won't quite stretch images off into the very corners of your room but it still gives performers plenty of space, making every listening experience highly pleasing, effortlessly musical.

The interplay of instruments on the track 'Helios' from the Gaudete Brass Quintet's album was a masterclass in pinpointing the action as it jumped between the players, and the ECD 2 imbued each with a delicious rasp, bringing them alive.

Swapping to the coaxial input via the V-Link<sub>192</sub>, I was pleased to hear that very little changed. There was, I felt, a fraction more drive at the very low end, but the effects were very subtle, suggesting that the ECD 2 is a very consistent performer across its inputs. Swapping the source to CD showed that the unit can also make the best of this mere 16-bit format. Steely Dan lacked the superb clarity of the high-res version, but the ECD 2 offered a frisson of extra warmth across the midband which worked very nicely in conjunction with Donald Fagen's vocals.

Sound Quality: 85%

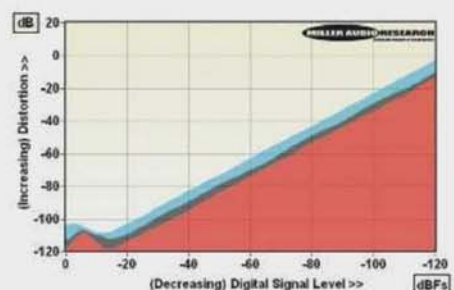


ABOVE: Instantly recognisable as an Electrocompaniet unit, the ECD 2 features the company's signature gold 'Navigator' controls and a large blue display

## HI-FI NEWS LAB REPORT

Electro's very new ECD 2 offers a fine technical performance thanks to its pair of CS4398 DACs. Distortion is very low through midrange frequencies from 0.0002% at its 4.4V maximum output down to 0.00013% from -10dBfs to -30dBfs [see red trace, Graph below]. There's a slight increase in THD at the frequency extremes - a function of Electro's analogue stage - but at just 0.0006% (20kHz and 20kHz) this is still very low indeed. Jitter, too, has a complex pattern but the cumulative total is still low at ~40psec for all 44.1-192kHz sample rates via S/PDIF and USB.

The frequency response(s) are also very flat and extended out to -0.17dB/20kHz (44.1/48kHz files), -1.8dB/45kHz (96kHz) and -6.2dB/90kHz (192kHz) while stereo separation is good to 120dB through bass and midrange. The 115.3dB A-wtd S/N ratio is the widest in this month's test but the 300ohm source impedance, while bang-on specification, is not especially low. The Thesycon-sourced USB 2.0 drivers install and operate without a hitch and, as such, the ECD 2's USB performance is all but indistinguishable from that via S/PDIF. PM



ABOVE: Distortion versus digital signal level at 1kHz (red/SPDIF, black/USB) and 20kHz (blue/USB) over a 120dB range

Maximum output level/Impedance	4.44Vrms / 300ohm
A-wtd S/N ratio (S/PDIF / USB)	115.3dB / 115.1dB
Distortion (20Hz-20kHz/0dBfs)	0.00023-0.00063% (S/PDIF)
Distortion (20Hz-20kHz/0dBfs)	0.00025-0.00065% (USB)
Frequency response (20Hz-20kHz)	+0.00dB to -0.17dB
Digital jitter (S/PDIF / USB)	40psec / 40psec
Resolution @ -100dB (S/PDIF / USB)	±0.2dB / ±0.2dB
Power consumption	14W
Dimensions (WHD)	465x80x320mm



ABOVE: Both single-ended (RCA) and balanced (XLR) outputs are provided and the ECD 2 has additional trigger/RS232 connectivity for use in a fully integrated set-up