

Zen and the art...



Small as the Zen CAN headphone amplifier from iFi is, it packs a big punch. But can it deliver when it comes to sound quality? Chris Frankland listens closely.

Boasting trickle-down Class A balanced circuitry from its £1,700 flagship Pro iCAN, the £149 Zen CAN headphone amplifier from iFi is my first exposure to this brand.

The Zen CAN is its cheapest dedicated headphone amplifier, but the company also makes an extensive range of headphone amps, DACs, a Bluetooth streamer, various accessories, an all-in-one music system and a 'Retro' integrated amplifier and LS3.5 speakers, which iFi says are a reworking of the BBC design.

iFi was started in the UK in 2012 by high-end brand Abbingdon Music Research (AMR) to deliver portable and desktop products designed to give consumers better sound from their headphones, TVs, phones and portable devices. Products are designed at iFi's HQ in

Southport (UK), but I note that the Zen CAN is assembled in China.

The Zen CAN should easily drive most headphones, with a quoted power output of 1.6W (7.2V) into 32 Ohms single-ended or 1.8W (11V) into 64 Ohms balanced. A balanced output is unusual at this price level.

It is reassuringly weighty (515g) despite its small size (35mm H x 160mm W x 117mm D) and has a dark grey, wraparound trapezoidal aluminium case with brushed silver front and back panels. On the front there is an on/off button, input selector, four gain settings (0dB, 6dB, 12dB, 18dB), a volume control, a 6.3mm standard headphone output jack, a 4.4mm Pentacore balanced headphone jack output, then a final button that selects the XBass and 3D functions.

The rear panel carries three inputs: phono, a 3.5mm jack and a

4.4mm jack. There is also a balanced jack output that could feed an active speaker.

The Class A symmetrical dual-mono discrete output buffer, which it shares with the flagship Pro iCAN, uses four of iFi's own custom-made wide-bandwidth FET op-amps. In addition, the Zen CAN uses high-grade surface-mounted components, such as TDK C0G and Panasonic ECU capacitors, low-noise thin-film resistors and a Tokyo Cosmos volume potentiometer.

The XBass function is an active EQ circuit to give low frequencies a boost, while '3D' is claimed to give an "out of head" experience to make it sound as though the music is in the room.

SOUND QUALITY

I hooked the Zen CAN up to Pro-Ject's excellent Stream Box S2 Ultra streamer and PreBox



Front panel sports a power switch, input selector, gain selector, rotary volume control, a 6.3mm headphone jack and a 4.4mm Pentaconn balanced output. Buttons on far right select the XBass and 3D functions.

RS2 Digital DAC to stream from Tidal. Headphones used were Sennheiser HD599 and Focal Clear; the 0dB gain setting was more than adequate with these 'phones. An L30 headphone amp (£125) from Topping was on hand to serve as a useful benchmark. I listened to the 6.3mm single-ended headphone output as well as the 4.4mm balanced and, as expected, the sound was superior on the latter – cleaner, with subtle vocal and instrumental detail better conveyed.

Starting with Groovin' from guitarist Peter White's superb album of that name, I was impressed with Zen CAN's detailed and dynamic sound. Percussion was crisp and snappy and well focused with good inner detail, while White's guitar had body, note shape and attack. The bass line was tuneful and moved the track along well. The Topping L30 was also good and detailed, but the bass line was lighter and just a tad sloppier, while White's guitar seemed a little lacklustre after the Zen CAN.

On Broad Daylight from Ben Sidran's The Doctor Is In, the iFi once again was tight and tuneful on the bass line, while Sidran's vocals were open and expressive. Piano also had good body and dynamics. The Topping lacked some of the dynamics of the iFi and it was not as easy to follow what was happening on drums and percussion.



iFi supplies a 3.5mm to 6.3mm headphone adaptor with the Zen CAN. Shame they don't supply an XLR to 4.4mm Pentaconn adaptor!

Switching to March Winds in February from Van Morrison's Three Chords and The Truth, I again found vocals more open and articulate on the Zen CAN, with more delicacy on percussion and more weight and movement in the bass line.

Before I hung up my headphones, I just had to try the XBass and 3D functions. XBass certainly added weight to bass lines. Some may find that exciting, but I found it also muddled detail

on percussion and guitars as well as vocals and saxes. Unless your headphones are noticeably lacking in bass, I am not sure it would be needed.

Then there was the 3D 'experience'. I have to say that when I played Racing in the Streets from Bruce Springsteen's Darkness on the Edge of Town, I thought piano took on a strange, closed-in quality and was less dynamic using 3D. Vocals too seemed more natural and open without it. Did it move the sound out of my head and into the room? Not that I noticed.

CONCLUSION

All in all, I found the Zen CAN to be an excellent product. Its sound was detailed, articulate and dynamic and I thoroughly enjoyed my time listening to it. It is well made and delivers where it matters. I highly recommend it.

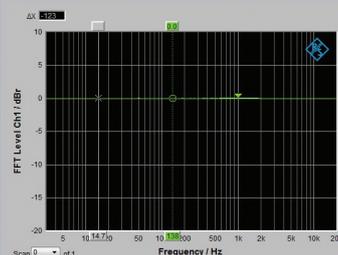


Rear panel provides RCA and 3.5mm single-ended outputs and a 4.4mm Pentaconn balanced input. A balanced output allows it to be connected to an active speaker.

MEASURED PERFORMANCE

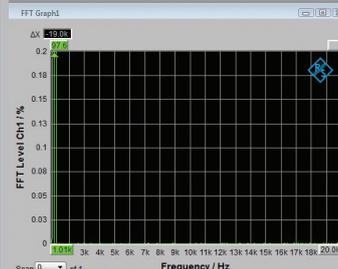
Frequency response ran flat from 3Hz to over 100kHz (-1dB limits) and distortion measured 0.004% at 1V out (6dB gain setting), which is more than enough to drive most headphones shatteringly

FREQUENCY RESPONSE



DISTORTION

THD all d	Level RMS	Frequency
0.0043 %	1069.3 mV	1000.0 Hz
OFF	OFF	OFF



loud. However, headphone amps carry a lot of margin these days to cope with low sensitivity magnetic planars and the Zen CAN is able to swing up to 7.5V out before overload, to drive such types. This upper limit only lessens with the 0dB gain setting where (input) overload of 3.5V sets the ceiling. With 6/12/18dB gain settings the 7.5V output limit becomes effective so most range is available at these higher settings.

The gain values stated were accurate, 100mV in giving 800mV out with '+18dB' selected for example, from the 6.3mm (1/4in) stereo output jack. However, the balanced 4.4mm Pentaconn output doubles all values measurement showed.

The iFi Zen CAN headphone amplifier measured very well in all areas.
NK

Frequency response (+/-1dB)
3Hz-100kHz

Gain x1 – x8

Noise -118dB

Distortion (1V out, 6dB gain) 0.004%

Maximum output 7.5V

iFi ZEN CAN
£149



OUTSTANDING - amongst the best.

VALUE - keenly priced.

VERDICT

Sounds as good as it looks. Packs a lot of performance into a small box.

FOR

- great sound quality
- well made and finished
- balanced output

AGAINST

- instructions don't give a lot away!
- XLRs would have been nice for balanced output

iFi Audio
+44 (0) 1704 227 204
www.ifi-audio.com