

The Glow Of CD

As CD players fade out of the limelight, Icon Audio add a little glow to keep things alive. Noel Keywood warms to the sound.



Poor old CD! It seems to have silently gone over the edge of a cliff, without anyone noticing. Players are getting ever more scarce and talk has moved on to hi-res. digital, or back to LP. The silver disc has lost its lustre, it seems. As a manufacturer of valve amplifiers, Icon Audio don't pay much attention to market trends however, and recently they highlighted to us the existence of their CDX 2 player, as others slowly fade out of sight. So here it is on review for all those

looking around for an affordable frisbee spinner. We've all got a lot of the things after all, making the disappearance of quality players more than an inconvenience.

Naturally, as a manufacturer of valve amps Icon had to put a valve into this player somewhere, it's just that you can't readily see where. Usually they stick up above the case, signalling their presence with a soft red glow from the heaters when switched on – pretty in a low-lit room.

This also facilitates valve changing:

just pull the old one out and plug in a new one. But the player cannot be shipped with valve in place, the unit is less easy to keep free of dust and there are safety issues - pull a valve out and 250V becomes 'exposed' in that there is no insulant between you and the socket. In theory at least, a wire could be poked in and



theoretical death will result!

That means a cover must be fitted, or the valve tucked away to make it physically inaccessible.

In the CDX 2 Icon have done the latter. They've fitted a 12AU7 double-triode output valve internally on the circuit board, lit by a blue light emitting diode (LED). To keep dust out – and theoretical bits of wire – a small window has been placed over it. Peer into the gloom and there's the 12AU7 glowing away.

Valve output option apart, the CDX 2 is a fairly straightforward CD spinning package. It is sizeable and heavy, measuring 410mm wide, 350mm deep and 110mm high. At 9kgs this player is quite a lift and it feels solid and chunky – unlike most.

Mains connection is through an IEC connector and the mains power unit is on-board as with most CD players. Press the On button at far left and a modest central display lights up blue to show track number. The numerals are on the small side for viewing at a distance – about 10 feet is the maximum for easy legibility.

A row of buttons offer Play, Pause, Stop and Track Skip but most users will use the remote control for these functions and it also has a keypad for track number entry. Unfortunately, it does not have remote control of volume, nor a mute, although for the latter selecting Pause is a satisfactory alternative.



The 12AU7 is held in place by a spring clip. It is flanked by big, blue d.c. blocking capacitors.



At centre lies the disc mechanism with circular hub and, above it, sliding servo-controlled carriage with laser. At top right lies the 12AU7 output Tube, as it is called in this player. The blue items are large d.c. blocking capacitors.

CDs are loaded through a sliding door on top of the player, direct onto a small steel hub. The door mechanism controls power to the transport so the laser is automatically switched off with door open. I found it easy enough to put a CD onto the hub and then place a small magnetic puck on top to hold it in place. Sliding the door forward and closed starts the disc so its Table of Content can be read, whereupon the number of tracks available flashes up on-screen as per usual – and you are away.

The rear panel carries two sets of phono socketed outputs, marked OP AMP and TUBE. The former offers a conventional output for those uninterested in having a tube sound, or in case of tube failure. The latter routes the output signal through the 12AU7 that simply acts as a buffer stage with no gain. Measurement showed this stage has been made virtually transparent; the only sign of it was a bit more valve-type soft distortion at full output of 0dB – not a major issue. I was expecting to see either rolled-off high treble or low level noise, but neither exist in this player. There is a digital output too.

Icon Audio, in their manual, advise that the output valve is best not changed to another type, especially

the popular but noisier 12AX7/ ECC83 or the player's performance will not meet its published specification.

Tube rollers will like to know that you can change the tube yourself, to different makes of the same valve type, but there is some spanner work involved. A triode connected as a unity gain cathode follower is not going to affect the sound much, I know from experience with this common arrangement, but the way in which valves affect sound quality can be quite surprising all the same and experiment is tacitly accepted by Icon Audio, their instructions suggest. They address this issue where, with many valve-output CD players, the output valve is just a frippery.

In case you are wondering, by the way, you do not have to adjust bias when changing valves in this player; bias adjustment is only needed in big power valves. And generally, as Icon state, small-signal tubes have a long life, 10,000 hours being the usual value quoted; they will seemingly soldier on for ever, unlike power output tubes.

SOUND QUALITY

I used the CDX 2 in a few systems but mostly with a Creek Evolution



The rear panel carries OP AMP and TUBE output sockets, as well as a digital output. The Tube output is in effect a unity gain buffer stage placed after the Op Amp stage.

amplifier feeding the delightfully accurate and neutral Quadral Chromium Style 8 loudspeakers and, as an occasional alternative, Spendor SP200s, to appear in our next issue.

The Op Amp output behaved as expected, sounding evenly balanced and solid in its depiction of a soundstage, if with a flattening of perspectives that is a feature of CD, unless you are talking an ESS 9018 Sabre32 series DAC or Chord WTA, both of which impose altogether more advanced digital signal processing algorithms than the norm within CD players – and are very expensive parts.

The CDX 2 came across as firm and well-etched with classic rock, Skin having a strong presence at the mic singing Skunk Anansie's 'Hedonism', the bass line fluid and a tad stronger than that of many CD players.

Moving over to the Tube Output gently opened up the sound stage and brought with it a sense of dimension and atmosphere. The effect wasn't great but it was appreciable; now Skin sang within a three-dimensional space it seemed, and this was more convincing and captivating.

I found the effect nicely enhanced classical works in particular, the hall around the Boston Symphony Orchestra playing Rimsky Korsakov's 'Scheherazade' taking on a more obvious presence.

The CDX 2 doesn't deliver any large difference in balance between its two analogue outputs, just subtle differences in presentation.

Both sound solidly-etched and firm in imaging, with a strong low end that gave this player propulsive drive, adding a convincing sense of dynamic power to the synths in Safri Duo's 'Samb Adagio' for example.

Spinning Nigel Kennedy playing Vivaldi's 'Spring' through the revealing ribbon tweeters of Quadral's Chromium Style 8 loudspeakers showed the CDX 2 added a little edge to strings that our

Oppo BDP-105D with its Sabre32 DAC suggested was not there, a product of distortion from this player's BurrBrown DAC that lags the best.

What you have here subjectively is fairly minor and to those used to old TDA1541 Crown chips and the like, a bit of extra rhythmic snap over later delta-sigma DACs that some find smooth to the point of sounding ho-hum.

The CDX 2 by way of contrast offers a full-bodied sound with plenty of rhythmic drive, a solid low-

end and better dimensionality than your average 'op-amp output'.

CONCLUSION

As CD drifts off into the sunset, ever fewer hi-fi players remain available. Icon Audio's CDX 2 not only offers CD replay, it adds a little hi-fi pizzazz in the form of a Tube output.

This player gives CD a sense of heft, space and presence, plus snappy timing. It isn't perfect but it is very good if you want an all-in-one CD player package rather than a DAC.

MEASURED PERFORMANCE

Valve output CD players often get noisy at low levels but the CDX 2 avoids this. It uses a 12AU7 output valve (tube) from the preceding transistor circuits, likely as a unity gain cathode follower. Distortion at full digital level (0dB) measured 0.3% via Tube output, but this decreased to just 0.01% at -30dB, showing that the valve output in this player was fairly benign over most of the audio range. Op Amp output avoided high level distortion,

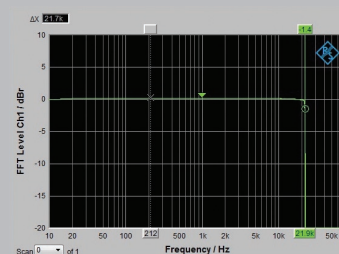
measuring 0.0006% at 0dB.

As signal level decreased, however, digital distortion rose progressively, as it does with digital, reaching 0.28% at -60dB through both outputs. This is a bit higher than usual, so the DAC in this player is not especially linear. As a result dynamic range, a measurement of distortion and noise, was low at 98dB; CD can reach 103dB so the CDX 2 falls short here through both outputs: tube was identical to Op Amp.

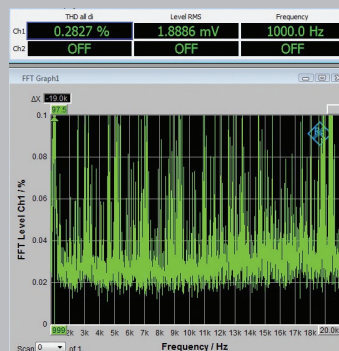
Frequency response also measured flat to 21kHz through both outputs – Tube does not roll down treble for a warm sound. Output level was normal at 2V, again from both outputs, and noise was no different too, although the player mutes at 0dB, giving the -127dB noise value.

The CDX 2's 12AU7 (ECC82) Tube output is almost transparent, little influencing measured performance. In particular, noise was minimal. The player's DAC was not especially linear however. **NK**

FREQUENCY RESPONSE



DISTORTION



Frequency response (-1dB)	
4Hz-21kHz	
Distortion (%)	24bit
0dB	0.3
-60dB	0.28
Separation (1kHz)	89dB
Noise (IEC A)	-127dB
Dynamic range	98dB
Output	2V

ICON AUDIO CDX 2 CD PLAYER £995



EXCELLENT - extremely capable

VERDICT

Firm CD sound, with dimensionality from Tube, but rivalled by modern DACs at its price.

FOR

- solid sound
- tube spaciousness
- solid build

AGAINST

- low dynamic range
- no remote volume
- no USB input

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