



## EQUIPMENT REVIEW

# The Tannoy Definition DC8 loudspeaker

By Paul Messenger

Perhaps because Tannoy is one of the oldest names in British hi-fi (as well as sound reinforcement and pro audio) loudspeakers, it has been through numerous changes of ownership over the years, including a less than glorious period as part of US conglomerate Beatrice Foods.

Such adventures notwithstanding, the company has been remarkably successful in preserving its engineering heritage, especially in the form of the unique Dual Concentric single-chassis two-way driver which first appeared way back in 1948.

The company is currently part of the Danish ProAudio operation TC Group, and since that merger back in 2002 its main attention seems to have been primarily focused on its sound reinforcement activities, rather at the expense of the hi-fi side of the business. However, the last couple of years has seen more effort going into the hi-fi side of things, first with the 2008 introduction of the under-£1,000 Revolution ranges, and now with the new and much more upmarket Definitions.

This £2,500/pair DC8 is the smallest of three Definition models, none of which bear much similarity to the range of the same name that was marketed back in the mid-1990s. It's the only stand-mount in the range (at this stage anyway), and as

the name suggests the heart of this beast is an 8-inch (200mm) Dual Concentric driver. For the uninitiated, the DC driver mounts two drive units on a single chassis, firing a horn-loaded tweeter through the acoustic centre of a bass/mid cone, where the pole-piece normally sits.

This is a simple two-way design, the Dual Concentric driver combining a 145mm flared paper bass/mid cone with a 25mm horn-loaded tweeter, so it's effectively a two-way full-range drive unit.

Interestingly, unlike the larger Definition models, whose 10-inch drivers have fabric surrounds formed into a 'double-S' profile, this smaller 8-inch driver has a conventional rubber roll surround. That's because rubber provides better termination for midrange frequencies across the shorter coil-to-surround cone radius.

Unlike the earlier, more costly but still current Dimension series, there's no extra ▶

▶ external supertweeter here. Because the tweeter used in this Definition model uses a titanium dome just 25 microns thick, it has a frequency response to 35kHz. As a bonus, Tannoy's 'tulip waveguide' tweeter horn keeps this delicate diaphragm well away from accidental damage.

Other engineering features include a crossover network whose components have received Deep Cryogenic Treatment (DCT). This technique, found in several hi-tech applications, involves cooling key components slowly to around minus 190 degrees Centigrade, then restoring them equally slowly to room temperature. It's believed the process relieves micro-mechanical stresses created during manufacturing. Although the evidence that DCT improves audio signals is largely anecdotal, Tannoy reckons: "DCT processed crossovers will sound more natural have greater resolution, more air and space, together with an absence of grain".

Twin terminal pairs are fitted for bi-wiring or bi-amping, and internal wiring is silver-plated high purity copper. A fifth terminal is also fitted, allowing the driver chassis to be earthed to the amplifier, to reduce RF interference and enhance dynamic range. In practice 5-core cables are very hard to find, though I did have a set of LFD-sourced and Tannoy-branded examples, allowing some exploration of this feature. A large port is also mounted on the narrow rear panel.



All this considerable engineering is packaged into a beautifully finished enclosure with notably clean contemporary lines. Our samples came in a mid-brown real cherry wood veneer, nicely figured and book-matched across the pair. Dark walnut and black finishes are also available, all three covered in a decent quality high gloss lacquer. A wide silver trim ring around the driver and a shaped silver strip across the lower edge provide decoration.

Behind the front panel, the sides are curved into a narrow back, to help disperse reflections and internal horizontal standing waves. The grille is held in place by magnets concealed beneath the front panel veneer, and these are therefore invisible if the grille ▶ is not used.

## TECHNICAL SPECIFICATIONS

**Type:** two-way Dual Concentric reflex-loaded stand-mount

**Bass/Mid Driver:** 1x 200mm, 140mm paper cone

**Treble Driver:** 25mm diam titanium dome

**Frequency Responses:**

**Spec:** 42Hz-35kHz (-6dB)

Measured (in-room) 38Hz-20+kHz +/-6dB

**Sensitivity:**

Spec: 88dB

Measured: 90dB

**Impedance:**

Nominal: 7.5 ohms

Minimum: 5.5 ohms

**Finishes:** high gloss over black or cherry, dark walnut wood veneers

**Weight:** 10kg

**Dimensions (WxHxD):** 27x47x26mm

**Price:** £2,500

**Manufacturer:**

Tannoy

Tel: +44(0)1236 420199

URL: [www.tannoy.com](http://www.tannoy.com)

**UK Distribution:**

Icon Distribution

Tel: 0845 603 1375

URL: [www.icondistribution.net](http://www.icondistribution.net)

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▶ Beneath the pretty presentation, the carcass is made from birch plywood, deliberately sourced from slow growing cold regions of the world for high density and tight grain. The bracing incorporates Tannoy's Differential Material Technology (DMT) techniques to couple the driver/enclosure interface rigidly, and with appropriate self-damping.

The measurements threw up some interesting findings, notably that the ports are tuned to a relatively high 55Hz. This came as something of a surprise, as Tannoy normally tunes its ports to a much lower frequency. (The ports of the larger DC10T I recently tested were tuned to 28Hz, a full octave below this smaller model.) That in turn is bound to restrict the DC8's bass extension somewhat, as indeed the in-room response traces confirm.

Although the far-field averaged in-room responses show little bass output below 40Hz (in marked contrast to its bigger brother), and rather too much mid-bass (50-80Hz), there was no sign of the crossover dip that had afflicted the DC10T. Instead the DC8 delivers an exceptionally smooth and flat response, give or take a couple of room modes, right up to 9kHz. The final octave or so (above 9kHz) looks rather uneven, but output is well maintained nonetheless.

Sensitivity is a very useful 90dB, the more so because the impedance represents a relatively straightforward and easy to drive amplifier load, only briefly dropping below 6 ohms to minima of 5.5 ohms. That said, the pair matching might have been closer at mid and high frequencies.

Most of the listening was carried out using my usual Naim-based system (NAC552 plus NAP500 amplification. Other amplification included an XTC PRE-1 pre-amplifier and a pair of MSB M200 Platinum monoblock power amps. Sources were a Naim CDS3/555PS CD player, a Linn/Rega/SoundSmith vinyl player, and a Magnum Dynalab MD103T FM tuner. Ancillaries included Vertex AQ and the five-conductor LFD-sourced Tannoy-branded speaker cables, while mains power was delivered via Phonosophie, Music Line, Vertex AQ and Synergistic Research components.

Clearly intended to be used well clear of walls, at the manufacturer's suggestion, the DC8s were Blu-tacked to the top plate of my normal Kudos S100 stands (rather than using spikes).

First impressions were mostly very positive, especially regarding the overall smoothness and neutrality. Although some lack of genuinely deep bass was obvious enough, the bass quality is firm and its relative level sounds well judged, with a crisp and clean delivery that's undoubtedly assisted by the 'true free space' benefits of a stand-mount-on-open-stand configuration.

A horn-loaded tweeter, like those used in Tannoy's Dual Concentric drivers, is different from direct radiator types in a number of respects. One practical bonus is that the fragile diaphragm is well hidden and therefore protected from prying fingers. Acoustically speaking it has high inherent efficiency and therefore plenty of headroom in reserve, so it never sounds strained even when working hard. The top end integrates well with the midrange, giving good

overall coherence, though it could perhaps sound a little smoother and sweeter.

Another consequence of horn-loading is that the treble output is concentrated into a 90 degree cone. This doesn't affect the sound reaching listeners directly from the speaker, but it does reduce the relative amount of room-reflected treble, and in consequence the stereo imaging is somewhat sharper and better focused, but some of the airiness and spaciousness is sacrificed. In practical terms this tends to give greater insight into the actual recording process, but it reduces the contribution of the room and the illusion of bringing the musicians into the listening room acoustic.

Certainly the imaging is exceptionally precise and focused here, and in most other respects there's not a great deal to criticise. However, there's no disguising a degree of midband coloration here, adding a slight 'cupped hands' character, alongside a mild degree of mid-forwardness. That said, it's hard to say whether the latter emphasises or is responsible for the former.

Whichever, one suspects that the use of a relatively large paper bass/mid cone might be responsible. Yet that is also probably the key ingredient that endows the Definition DC8 with unusually good dynamic expression for a compact stand-mount, and the sort of liveliness normally associated with much larger models.

As has always been the case, loudspeaker design involves making compromises. The DC8 isn't perfect, but it does a lot of the right things rather well, doesn't fall down in any significant respects. It's not exactly inexpensive, but it also just happens to be one of the most stylish and attractive speakers my better half as ever seen, and that's a factor that shouldn't be taken lightly. +