Cambridge Audio Aeromax 6 loudspeaker

by Jason Kennedy

Cambridge Audio has used balanced mode radiator (or BMR) mid/treble drive units in its loudspeakers since the launch of its Minx range, but it was the company's Aero models of 2013 that really caught the enthusiast's eye. Aero couples a BMR mid/treble unit with conventional bass drivers, but does so in a cabinet that shows its limitations all too readily for some listeners. The latest Aeromax range (comprising Aeromax 2 standmount and the Aeromax 6 floorstander tested here) was created to provide superior enclosures, but ended up bringing more to the party.

Let's backtrack a moment, though. Precisely what is a 'balanced mode radiator'? It's impossible to write this without a lot of TLAs (three-letter acronyms), but a BMR is a radical piece of engineering, which came out of the DMT ('distributed mode loudspeaker') technology project developed by NXT in 2001. Unlike DMT designs, the BMR is all about wide bandwidth, with a usable range from around 250Hz all the way to 22kHz.

The BMR not only offers wide bandwidth but also wide-angle uniform dispersion over its entire operating range. It achieves these goals by acting as a regular pistonic driver at low frequencies, where the action of a drive unit behaves in a uniform manner, but then switches to the distinctive 'ripple-motion' operating mode of DMT drive units at higher frequencies. A BMR driver also limits timing or phase issues simply by covering the broadest possible frequency range with just one driver. Even loudspeakers with concentric acoustic centres (such as Tannoy's Dual Concentric drive units) arguably cannot achieve the same reduction in timing and phase problems, because they are still using two drive units ▶

that occupy the same loudspeaker frame or basket. Although a BMR driver starts as a piston and ends like ripples in a pond, it's all one drive unit, and the coherence it brings to the sound is clearly audible.

The theory behind balanced mode radiators is not easy to describe in print, but the technology is also hard to build, and harder still to put into a loudspeaker. This is one reason for the relatively small number of companies currently using the drive units (although both Naim and Rega also use the technology).

In the Aeromax 6, this BMR driver is a fourth-generation design, which isn't found in any other loudspeaker on the market. The drive unit is 46mm in diameter and has a flat radiator panel made out of a honeycomb structured material, the main improvement over the third-generation BMR used in the Aero. Essentially, it's a more uniform panel that has more consistent (or isotropic) properties, claimed to result in a smoother and more extended high frequency response.

As suggested earlier, the Aeromax models have a stiffer cabinet than the cheaper Aero designs, and the new Aeromax speakers look significantly better as a result. A plastic wrap veneer is replaced with black or white piano lacquer finishes, the cabling has been upgraded, and the cable terminals are more beefy. The changes are more than skin deep, as the cabinets have 'superior' bracing, which is additionally claimed to lock the drive units in place.

Both the cone drive units on the Aeromax 6 are bass drivers (or "high power subwoofers" as the website suggests), and despite appearances, this is a two-way loudspeaker. It's also a reflex design, with a front firing port on its near metre-high cabinet. The Aeromax 6 comes with a bolt-on plinth that leaves a shallow gap under the main box thanks to alloy spacers on each fixing. Threaded inserts are provided for the lethal-looking conical spikes or the more peace-loving press-in rubber feet. The overall fit and finish is exemplary for the price.

The Aeromax 6 produces wide yet precise soundstaging with decent temporal coherence and plenty of low-end clout. With some material, the reflex port makes itself heard in a thickening of bass notes, but to no greater extent than most front-firing designs. At the other end of the scale, the mid and top are clean and devoid of the usual crossover issues. This, combined with the inherent coherence of BMR drivers, makes for very pleasurable long-term listening. It's a fatigue-free driver that delivers plenty of level without complaint.

The stiffer cabinet is very beneficial, primarily because it no longer sounds boxy compared to its Aero stablemates; in fact, it is as inert as any speaker of the same size at anywhere near the price. Generally I would shy away from affordable floorstanders of this size because cabinet rigidity is usually compromised, but that's not the case here. The Aeromax 6 delivers an engaging and propulsive sound where the material requires; Goran Kajfes' *The Reason Why Vol.1* [Headspin] is the sort of high energy, complex music that needs a loudspeaker that won't trip over itself when things get dense. This Cambridge fits the bill with power and speed to match that of the musicians. The double bass on 'A Touch of Trash' [Patricia Barber, *Modern Cool*, Premonition] is a bit heavy-footed here, but the voice and guitar work are portrayed very nicely.

I wondered if the bass might be tauter with a less powerful amp than a 150 watt ATC P1, so I tried a pair of 50 watt, Valvet Class A monoblocks. Their use did calm things down in the low end and brought a delicacy to the overall sound. This worked wonders for tone, which means the shine of the brass on Henry Threadgill Sextett's 'Bermuda Blues' [*You Know The Number*, Novus] is to die for and the band sounds tactile and real. The dynamics of the recording are brought to the fore with minimal effort and the three horns remain coherent despite the musical mayhem unfolding.

I tried using the supplied port bungs to tighten up the bass, and they tilted the balance upward a bit and smoothed out the low end without significantly restricting extension. However, the dynamic life went out of the music, and this proved too high a price to pay, so the bungs came out. Another trumpet proved once again how good the Aeromax 6 is with brass; the vitality, pace, and intensity that it can deliver without shouting at you is very enjoyable indeed.

A more appropriately priced amplifier, in the form of the Roksan K3 integrated, showed that the Aeromax 6 can also deliver very nice violin tone in the context of good image depth. This is a melodically strong amp and it delivered a fluent and finely detailed sound through the Cambridge Audio

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Aeromax 6. A similarly priced alternative is Rega's remarkable Elex integrated, which lets the loudspeaker deliver a more 'warts 'n' all' sound that communicates the essence of each performance extremely well. There's greater emotional power, even if the overall picture is less glossy.

The Cambridge Audio Aeromax 6 is both technologically and sonically a remarkable loudspeaker for the price. The incorporation of the latest generation of BMR driver gives it advantages that only the best can compete with, and unless you want a brighter sound, the competition does not look that strong at the price. There is a danger that serious enthusiasts will overlook the Aeromax 6 due to its low price and even brand snobbery, but that would be a mistake. In short, the Aeromax 6 is a remarkably sophisticated loudspeaker and one that many will find extremely enjoyable. +

TECHNICAL SPECIFICATIONS

Type: Two-way, three-driver, floorstanding speaker with reflex enclosure.
Driver complement: One 43mm flat panel BMR mid/tweeter; two 165mm paper bass drivers.
Crossover frequencies: not specified.
Frequency response: 30Hz – 22kHz
Impedance: 8 Ohms nominal.
Sensitivity: 90dB/W/m
Dimensions (HxWxD): 980 x 240 x 344mm
Weight: 17kg/each
Finishes: black or white piano lacquer.
Price: € 1299 per pair

Manufacturer: Cambridge Audio
URL: www.cambridgeaudio.com

UK Distributor: Dimex
URL: www.dimex.nl