

# Orpheus

## Aurora 3 Signature Loudspeakers

The 'Signature' version of the popular Aurora 3 design was released at the same time Orpheus speakers became available for the first time in Canada. According to designer Brad Serhan, this was simply a coincidence — in which case it's a very convenient one, because if you wanted to make a name for yourself in a new market, the Aurora 3s would be a great way to start. A recent *Best Buys* review concluded: "These speakers sound too musical for their own good!"

So how can you improve on a design that's garnered awards, won 'shoot-outs' and impressed everyone who's heard it? Simple! Upgrade the crossover...

### Equipment

Orpheus has a long association with the Danish company Peerless, and it seems this has survived the amalgamation of Peerless with Scan-Speak and Vifa (to form Tymphany), because the Aurora 3 Signature sports the same woven Kevlar-coned bass/midrange drivers and 25mm silk-dome tweeters. The Aurora 3 Signature employs two techniques to extract the maximum possible bass from these. First, Serhan has configured the two cone drivers so that both work at very low frequencies but only the upper one of the two delivers the midrange. Although many manufacturers use this '2 1/2-way' system, it works particularly well in this design because of the 153mm drivers.

Because these smaller units don't deliver as much bass as larger diameter drivers, the second technique Orpheus uses to improve bass is *differential bass loading*. Instead of having both drivers operate from a single internal chamber, sharing a single bass reflex port, the Aurora 3 has two internal chambers — one with a volume of 15 litres, the other of 29 litres — each of which is separately vented. This enables them to be tuned slightly differently to extend the bass further than would be possible with just a single chamber/reflex port.

We have long been concerned about bass reflex ports fitted to front baffles because of the tendency for the midrange to leak through; so we're pleased that on the Aurora 3 Signature, both ports are on the rear panel, so any midrange that leaks through either port will be absorbed or scattered behind the speaker.

Obviously, a twin-chamber, 2 1/2-way speaker requires a fairly sophisticated crossover network — and here more than usual because of Serhan's decision to use it to compensate for

diffraction loss as well as handling frequency division. The PCB-mounted crossover sports three, large, air-cored inductors that are cross-mounted so there can be no electromagnetic interaction between them. The Signature model has metal oxide resistors and metal-foil SER capacitors that are individually measured before being hand-soldered into place on the PCB; there are only two non-polarised electrolytics. The wires that connect the crossover network to the drivers are also soldered at both ends, to ensure there's no contact resistance to increase over the years, as happens with so many manufacturers who use spade-lug connections.

The cabinet is built entirely from 19mm medium-density fibreboard (MDF) and all internal surfaces are covered in non-allergenic foam sheets rather than fibreglass. Each cabinet stands 931mm high on a small, integrated plinth, and is 220mm wide and 330mm deep. Our review samples were finished in stunning Australian Jarrah veneer, but the speakers are also available in Black Oak and Cherry.

### Performance

The Aurora 3s are mirror-imaged, so one is for the left channel and the other for the right. Swap them at your peril: if you do, the imaging will become rather ragged and the sweet spot will shrink. The speakers work equally well close to a rear wall or well out from it, but you'll find the spaciousness of the sound alters subtly with different placements.

This mirror-imaging is typical of the care Orpheus lavishes on small details to extract the maximum sound quality. This same care is also evident in the midrange and tweeter mounting. The tweeter is rebated into the cabinet, so the edge of the midrange overlaps; this gets the acoustical centres of the drivers as close as possible, with the result that there's absolutely no image shift at the crossover frequency.



The Aurora 3 Signature's bass response extends authoritatively all the way down to around 40Hz, and can easily reproduce the lowest note on the piano keyboard (27.5Hz) at more than acceptable volume. The midrange is finely balanced, with sufficient presence to give vocals a nudge into the limelight, but not so much as to promote brightness. Orpheus provided a pair of standard Aurora 3s for comparison, and it was clear that the Signature version is cleaner and more spacious across the midrange and treble, and offers increased 'air' around the very highest frequencies. In achieving this superior transparency, however, the Signature version still manages to retain the rich, warm sound that made the original Aurora 3 famous.

### Conclusion

The Aurora 3 Signatures are certainly an improvement. Orpheus' only problem might be that its 'standard' Aurora 3s sound so good that some potential buyers may think twice about whether they need the extra lift in performance. **BB**

Orpheus Aurora 3 Signature Loudspeakers	
Price	\$2500
Warranty	Five years
	<ul style="list-style-type: none"> <li>• Musical and involving</li> <li>• Limited number of cabinet finishes</li> </ul>
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