

# Now you see it...

*To make a loudspeaker disappear, why not make it out of glass? But is the Victoria merely eye-candy?*

**PRODUCT** Waterfall Victoria TWN

**TYPE** Floorstanding loudspeaker

**PRICE** £2,000 per pair

**KEY FEATURES** Size (WxHxD): 22x100x22cm

• Weight: 15kg • Glass enclosure • Plinth houses port and crossover • 2x150mm main drivers • 25mm metal tweeter • Sensitivity/impedance: 89dB/4 ohms (min)

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It takes some bottle to build speakers out of glass. The aesthetic payoff is clear – a speaker with a tendency to disappear, though the practical constructional difficulties look decidedly daunting. As for the sonic implications, we'll get onto those in due course.

Waterfall is a French loudspeaker brand, located in the sunny south not far from Nice. It was founded, conceptually at least, about ten years ago, though it took a few years to iron out the manufacturing difficulties and actually get production under way. Processes were developed in conjunction with glassmakers to enable the sheets of glass to be sliced with sufficient precision and accuracy to ensure all the joints are properly sealed.

The complete current range consists of three stereo pairs, plus a centre speaker, a subwoofer and a satellite, many featuring glass enclosures in one form or another. The model under scrutiny here is the top-of-the-line Victoria TWN, a compact two-and-a-half-way floorstander that replaces the original Victoria we tested back in *HFC* 225.

Irrespective of the sonic characteristics of glass, creating a transparent enclosure imposes

a number of unusual constraints that don't apply if the box is conventionally opaque. You can't simply stuff the enclosure with damping material, because that would defeat the object of the glass design. Likewise, the internal wiring must be handled with due care and sensitivity, so that it remains unobtrusive.

These potential difficulties – and also the location of the crossover and the port – have all been handled with cunning creativity. Although the enclosure proper remains entirely undamped, a foam pad is fitted within a short cylinder attached to the driver frames immediately behind the cones. This provides a degree of resistive damping and absorption, while keeping everything neat and tidy. The cabling to the drivers is particularly neatly handled, consisting of six flat-section wires, evenly spaced and tensioned just behind the front panel. They look like a decorative motif, not cabling. The port and the crossover network are both concealed within a chunky little plinth, along with a single pair of gold-plated terminals. One small criticism, however, is that there's no spike provision here, and no real attempt to ensure secure floor coupling.

The glass panels used are 6mm thick – much thinner than those used by wood-based enclosures, but then glass is a lot denser than MDF and an all-up weight of 15kg is not too different from what one would expect from a conventional speaker of similar size. Glass also has the advantage of being notably stiff, and that is further enhanced by an additional and rather thicker bevelled-edge section fixed to the front baffle under the drivers. Though

indisputably elegant, glass does have rather sharp corners, and also a strong tendency to show up sticky fingerprints. Those with small children should perhaps look elsewhere.

The Victoria's drivers consist of two 150mm devices sourced from Triangle, one operating as a bass/mid unit, the other just augmenting the bass region. Both are apparently identical, and also somewhat unusual, in that they're significantly smaller than typical 165mm drivers, with paper cones just 85mm in diameter. Both also use wide-pleated fabric surrounds, rather than the much more common synthetic rubber roll. These two factors will both tend to favour the midband over the bass, and speed over coloration. The tweeter here has a small 20mm metal dome, with a short horn flare.

## SOUND QUALITY

The measured performance is in many ways impressive, if different from the norm. Under our regime, sensitivity registers an entirely respectable 89dB, which is just 1dB shy of the manufacturer's claimed 90dB, while the accompanying four-ohm load claim is fully justified, and actually represents the minimum, so this speaker should be easy enough to drive. The impedance trace reveals that the port output here is very well damped, and tuned to around 45Hz. Elsewhere, there's an obvious resonance at 190Hz (probably due to the enclosure acting as a tuned column), and minor unevenness around 400-800Hz (perhaps due to cone surround effects).

The averaged far-field in-room response is both impressive and revealing. Sited clear of walls, the bass alignment suited our listening room very well indeed, giving even and quite smooth bass down to below 40Hz. The total tonal balance is unusually flat overall, and despite some unevenness, it holds within impressive +/-3dB right up to the upper limits of audibility – all bar a significant notch centred on 800Hz, presumably due to reflection cancellation from the inside surface of the back panel, and the lack of enclosure damping. The majority of speakers show loss of presence zone energy in the far field, but the reverse is the case here, the small main driver contributing to quite strong output at 2-3kHz.

That is certainly one reason why this speaker makes voices – and especially speech – sound unusually open and explicit. The result is particularly convincing and effective when operating at low levels, giving unusually clear enunciation to lyrics. However, there is the corresponding downside that material recorded



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with a forward and/or aggressive balance and mix can sound uncomfortable and edgy when the volume is turned up loud.

That measured midband dip does contribute a degree of coloration, which was most noticeable when the speakers were initially connected up. Whether ears were adjusting, or the speaker itself was running in, is hard to say, but by day three, any coloration seemed largely irrelevant and the true strengths of this speaker came shining through.

Above all, the Victoria is exceptionally 'fast' and largely free from timesmear and overhang. The result is unusually good dynamic expression, plus an overall crispness and clarity that's rarely matched by conventional wood-bodied speakers. The lack of damping – and the glass itself – play a big part in this crispness.

It's difficult to pinpoint any specific character that the glass enclosure brings to the party, because it seems to have very little in the way of identifiable 'signature'. There's no boxiness here, and absolutely no tendency for the sound to cluster around the speakers themselves. Stereo imaging is consequently very impressive, as the speakers seem to 'disappear' sonically, leaving just the image, precisely focused and convincingly spread between and behind the speakers themselves.

The first reaction on seeing this speaker is to assume that the glass is primarily a cosmetic gimmick, with eye-candy appeal to the designer generation and its loft apartments. While we daresay such consumers will form part of its constituency, this is nevertheless an exceptional speaker in its own right, well capable of doing justice to serious hi-fi equipment. Glass has long since proved its sonic effectiveness in support furniture, and it is clearly well able to work some magic at the speaker end of the chain.

While the Victoria TWN might not match the sheer muscle and weight of some of its immediate competition, it more than makes up for this with fine agility and timing, plus good dynamic range and expression. Its exceptionally pretty face might first grab the attention, but this is a real sonic performer too. **HFC**

*Paul Messenger*

VERDICT	
<b>SOUND &gt;&gt; 87%</b> [Progress bar: 87% filled]	<b>PRO</b> Beautiful glass enclosure, with a crisp, lively and engrossing performance. Impressive timing and imaging, too.
<b>EASE OF DRIVE &gt;&gt; 85%</b> [Progress bar: 85% filled]	<b>CON</b> Sharp corners and fingerprint susceptibility are not exactly child-friendly, and floor coupling could be improved. Sound could have more weight and welly.
<b>BUILD &gt;&gt; 93%</b> [Progress bar: 93% filled]	
<b>VALUE &gt;&gt; 85%</b> [Progress bar: 85% filled]	
<b>CONCLUSION</b> Stunning see-through glass enclosure, and this crisp, lively and thoroughly engrossing performer has a delightfully open neutrality. It's a little lacking in ultimate grunt, and not kind to aggressive recordings, but has notably impressive timing.	
<b>HI-FI CHOICE OVERALL SCORE &gt;&gt; 87%</b>	

