

hi-fi news

The No. 1 for Home Entertainment Tests

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Polished act

MISSION 792

A slick performance from a slick-looking speaker, successfully building on 30 years of know-how



MISSION

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Tested by David Berriman

These new Mission 792s certainly have kerb appeal, or maybe that should be curve appeal. With their contoured sides, wrap-around grilles and sculpted front, no one could accuse them of not standing out from the crowd – even if their looks are sure to divide opinion sharply. The shiny black finish is actually genuine piano lacquer, with seven coats applied to create a truly deep and lustrous gloss. This approach is both labour and time intensive, as each coating must be dried for 24 hours before it is rubbed down by hand and re-sprayed. Most manufacturers just apply a gloss black paint and end the process there, but the finish on these Missions is in another league entirely. What's more, white and real rosewood veneer are also offered in the piano gloss finish.

The curves here are made by multi-layering three different materials, which are then held together with resin. Granitech – a kind of heavy stone-like material – is used to suppress resonances further. The curved sides will raise resonance frequencies, of course, which should avoid the deeper chesty modes typical of flat panel cabinets, but I suspect the choice of curved panels was as much a cosmetic as a technical decision.

Meanwhile, the magnetically-shielded 165mm woofer has a woven cone [see box out, below], a cast chassis with a slender frame in a bid to avoid reflections, and a solid phase plug without a dust cap which is fixed directly to the centre pole of the magnet system.

Like the woofer, the tweeter dome is also made from a woven material, called Viotex, about which Mission says little. It is effectively a 25mm cloth dome with a tiny neo magnet, ferrofluid cooling and a heat-sink on the back to keep the magnet and coil temperature down when the speaker is played loudly. The crossovers have OFC copper wire in the inductors.

INVERTED DRIVERS

Of course, the inverted bass/treble geometry will be familiar to all who remember early Mission loudspeakers, when the company's Technical Director Henry Azima cottoned on to this neat way of improving woofer/tweeter time alignment. Mission has used the arrangement extensively ever since.

Like the speakers, the stands are either beauties or beasts, depending on one's taste. With their black and chrome, I think they just fall on the side of stylish. The

LATTICE WORK

The bass/midrange cone in the 792 employs what Mission calls 'Parawave' technology, which is based on woven aramid fibres. Mission won't thank me for reminding readers that aramid fibres were first used in woofers by Bowers and Wilkins. I don't know how this cone differs, but Mission calls it a 3D lattice.

This kind of structure has very good damping properties and, as it is a composite, the cone can be light and stiff. This, of course, should help maintain both sensitivity and speed of response.



shallow cone spikes don't penetrate the carpet fully and so fail to stabilise the speakers completely. Yet they still dent the pile and so don't totally avoid the distaff niggles about marked carpets.

RICH AND WARM

I first fired up the Mission 792s, single-wired, on their own stands and positioned them about 20 to 30cm from the rear wall. This seemed to suit them well, as the bass output is quite full and warm, so close-to-wall placement may not be the best location, though this will depend on individual room acoustics, of course.

I was immediately struck by the rich and textured sound, the smooth treble and the neutral-to-mellow

ABOVE: The speaker terminals allow for bi-wiring and are connected directly to the crossover section inside for the shortest signal path. The 792 is reflex-loaded through a rear-firing port

'Even when Richter was punishing the keys mercilessly, the speakers handled the blast with control'

tonal balance. The treble was not so smooth as to lose essential clarity and attack, nor was the bass so rich as to overpower the mid and treble. Overall, the balance was an agreeable one, being quite even, with pleasing integration between the mid and treble. Maybe having a woven woofer and tweeter is a good idea, as the characteristics of the two are inherently similar, so aiding the homogeneity of the sound.

I could not resist a blast of Debbie Harry and 'Hanging on the Telephone' from the re-mastered re-issue of Blondie's *Parallel Lines*. Debbi's sultry, yet occasionally guttural, multi-tracked vocals came over very convincingly, while the sizzling cymbals had energy without drilling holes in the ear drums. All in all, quite a neat compromise. Likewise on 'One Thing or Another' the Missions preserved enough of the cutting edge without exceeding acceptability. In 'Fade Away', the Missions delivered much of the all-enveloping artificial reverb. They may not have captured the last ounce, but they made a fine fist of it.

On these three tracks the bass was powerful, though I wondered whether there could have been a touch more attack, punch and low frequency extension. Then I

AUDIO FILE

Two-way bookshelf speakers with an 11-litre reflex cabinet in a choice of piano finishes

Price: £500

Made by: Mission

Telephone: 01480 447700

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LOUDSPEAKER TEST



ABOVE: Both the 165mm woofer and 25mm tweeter use woven fabric materials of similar sonic characteristics

remembered that these were only 11-litre loudspeakers with good apparent sensitivity – Mission claims 89dB [see Lab Report] – and that you can't have everything!

Meanwhile, vocals were handled superbly. Sting's voice on 'Miss Gradencia' from *Synchronicity* – a tricky one for most loudspeakers to handle – was nicely positioned at the rear of the soundstage and I was impressed by the way it was conveyed without obvious colouration. Guitar and snares were crisp and clear, but not too much to the fore. Bass drum and guitar were again full and powerful, even if they lacked that last touch of impact, drive and aggression.

POWER AND POISE

Changing gear to classical music, I played an RCA Red Seal 'Best 100' CD of some old Richter RCA recordings (Liszt's 'Consolation', 'Hungarian Rhapsody' and 'Harmonies du Soir'). These were laid down at live performances in 1933 at Lubek City Hall. While Richter was not note perfect, the playing was inspired. The Missions, with their full, weighty bass and rich, textured sound did the old recordings justice. Even when Richter was punishing the keys mercilessly, the speakers handled the resulting blast with complete poise and control, while conveying the power, attack and impact in the notes through the mid and treble.

Playing Anton Dvorak's 'Slavonic Dances' – a DG Original Image re-issue – pushed all the same buttons. This time the Missions conveyed the lush, warm, clear but slightly over-brilliant treble sound of this 33-year-old recording. The Bavarian orchestra under Rafael Kubelik was reproduced delightfully and seemingly faithfully. One could simply, relax and enjoy the event. (1)

HI-FI NEWS VERDICT

This Mission combines warmth, transparency, strong bass, an even tonal balance and smooth, clear treble. Vocals are a particular strength. If, ultimately, it lacks a little bass impact, this is more than made up for with its even-handed delivery and unforced transparency. It's a sound without strong aberrations and therefore of universal appeal. The 792 handles all musical genres with aplomb.



MISSION 792 LOUDSPEAKER / £500

hi-fi news
LAB
RESULTS



The crossover is assembled on a heavy-gauge PCB and is directly coupled to the tweeter terminals. A second-order, 72dB/octave filter is specified.

This profiled baffle has been conceived for optimum dispersion, the narrow base and inverted driver geometry promising a uniform off-axis response.

The bass/mid unit features Mission's latest 'Parabolic' cone material – a weave of aramid fibres that combines light weight with high stiffness.

The HF driver uses both ferrofluid in the magnet gap and a cast alloy chassis to improve heat dissipation and reduce thermal compression.

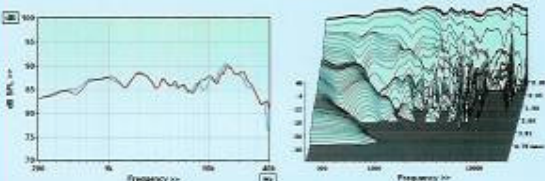
HI-FI NEWS LAB REPORT

Mission's claimed sensitivity of 89dB for the 792 is optimistic by our measurements, which recorded pink noise and music-shaped pink noise sensitivities both 2.3dB lower at 86.7dB. We also disagree about the 792's minimum impedance modulus. Mission claiming 5.6ohm while our measurements recorded a low of 4.2ohm at 278Hz, which doesn't sit comfortably with the speaker's nominal impedance of '8 ohms compatible'. Nevertheless, this is a relatively easy load for its partnering amplifier to drive with a minimum EPDR (equivalent peak dissipation resistance) of 2.6ohm at 430Hz.

Frequency response errors, from 200Hz to 20kHz, of ± 3.3 and ± 3.3 dB are respectable results, even if they bust Mission's claimed ± 3 dB from 58Hz to 20kHz. Pair matching error is not so good, though, at ± 1.9 dB but the largest disparities occur in the tweeter's

passband above 8kHz, where they will be less easily noticed. As the graph [below left] shows, the on-axis frequency response is convex between 200Hz and 7kHz, with the elevated output in the band 650Hz to 2.5kHz likely to impart a slightly mid-forward tonal balance that may also bring instruments forward in the soundstage. Above 7kHz the output then rises again to a peak at 14.5kHz.

Diffraction corrected near-field measurement of the bass output shows the low frequency response to be -6 dB at 52Hz (ref. 200Hz), which is a fair result for a speaker of this size and sensitivity. The cumulative spectral decay waterfall, though, is not as clean as some competitors', with evidence of bass-mid diaphragm breakup resonances above 2kHz and a tweeter resonance associated with the 14.5kHz response peak. KH



ABOVE LEFT: The slightly emphasised upper mid/treble response might yield a marginally forward sound; ABOVE RIGHT: The spectral decay waterfall is not as clean as possible, showing break-up modes above 2kHz

HI-FI NEWS SPECIFICATIONS

| | |
|--|------------------------------------|
| Sensitivity [mean/EC]music, 1m for 2.83V rms input | 87.7 / 86.7 / 86.7dB (200Hz-20kHz) |
| Impedance modulus min/max [20Hz-20kHz] | 4.2ohm @ 278Hz 20.4ohm @ 1.6kHz |
| Impedance phase min/max [20Hz-20kHz] | -4.7° @ 2.8kHz 45° @ 24Hz |
| Pair matching (200Hz-20kHz) | ± 1.9 dB |
| LF/HF extension [-6dB ref. 200Hz/10kHz] | 5.8Hz / 38.5kHz / 37.8kHz |
| THD 100Hz/1kHz/10kHz (for 90dB SPL at 1m) | 0.7% / 0.0% / 0.1% |