

“LITTLE POWERHOUSES”

Reprinted with permission from

AUSTRALIAN
HI-FI

“The Titans – represent real value for money – an ideal first step on the hi-fi ladder.”

by Steve Crowe

Canadian manufacturer Paradigm might be, relatively speaking, a newcomer to the audio industry, but it has wasted no time in firmly establishing a comprehensive range of speakers with a model to suit any application.

The Performance Series of speakers, consisting of seven models, recently underwent a technical and aesthetic revamp and, as our review of the new 9se Mk 11 model showed (see *Australian HI-FI Volume 23, Number 5*), the updates in technology have markedly improved the range. Now, in order to bolster the range at the entry level of the market, Paradigm has added a new book-shelf model, called the Titan.

THE EQUIPMENT

My dictionary defines a Titan as “... one of extraordinary size and strength,” which certainly does not refer to the cabinets themselves, but could be inferred as

The New Titan
(Improved over version reviewed for even better sound.)

describing the sound emanating from them. These speakers are a true book-shelf size, measuring only 316 mm high by 196 mm wide and 238 mm deep, which gives them a internal volume of just 11 litres. These dimensions mean the speakers can be situated with few problems on shelves or wall mountings. However, the use of tall stands is undoubtedly the best means of locating them in their optimum positions.

The cabinet is a two-way, bass reflex design, and makes use of a rear firing tuned port for low frequency extension. The cabinet is made from ordinary 12 mm particle board, and is unusually designed, in that the front grille is not removable. Entry to the box is only possible by unscrewing the rear panel and carefully extracting it from its very snug fit in the side panels. My review sample cabinet was finished with a black ash vinyl veneer, but the speaker apparently is also available in oak veneer and white.



"These little boxes deliver a remarkably big sound ... delightfully rich ..."

Both drivers have been mounted inside the cabinet in recesses in the front baffle. Typically, the bass/midrange driver sits below the tweeter, and the crossover is attached to the front baffle between the two drivers, but just off to one side. The crossover network is a second-order type aligned for 3 kHz, and has been configured in a quasi-Butterworth arrangement. It has been corrected for both frequency and phase. In terms of components, I counted one standard bipolar electrolytic capacitor (2.2 uF), an ordinary wire-wound ceramic resistor and a small iron-cored choke wound on a plastic former, all of which were glued to the front baffle in addition to being secured to it by a plastic pull-tie. There is no printed circuit board—all crossover connections are crimped and soldered.

"The bass response is the big surprise of the Titans. Strong, tight and punchy — and very convincing ..."

One of my review sample speakers (which had obviously been much used, judging by the number of spike-marks on the bottom of the cabinets), had been dropped, which had not only resulted in damage to the front grille but had also caused the bass driver to come adrift from the baffle. Because of the way the bass driver is mounted to the baffle (it is inserted into a circular recess chamfered from the 12 mm thick front baffle), the screws used to attach the driver don't have too much to grip on. Paradigm obviously recognizes this as a design weakness, because the bass drivers on our samples were also glued in position in three places. It appears that while this dual-fixing method may be secure enough for all normal circumstances, buyers would be advised not to drop their speakers from great heights.

The bass driver is designed and manufactured by Paradigm, and features a 115 mm

long-throw polypropylene cone which is attached to the 165 mm pressed steel frame by a foam roll surround. This means the Effective Cone Area (ECA) is 105 cm², providing a total CDA of 210 cm² for the pair. Each driver uses a 350 gram barium ferrite magnet. The voice coil is a 25 mm multi-layered type which is wound on a low-mass kapton former. As we have noted many times previously, the use of foam as a roll-surround substance means the speakers may be unsuitable for use in the far north of Australia (the tropics) or in marine applications, since high-humidity/high temperature environments, and exposure to salt air, are known to adversely affect some types of foam.

"The overall sound is quite well-balanced and relatively neutral in character ..."

The tweeter used in the Titan is the much-lauded Vifa D19Td 19 mm polyamide dome unit, which has been born-loaded for a claimed sensitivity of 92 dB, which is reduced to 88 dB by the crossover network—a technique Paradigm notes in a hand-out to distributors is intended to "increase reliability". The tweeter is ferro-fluid cooled and damped, and utilizes an aluminum former in the voice coil and a barium ferrite magnet.

Inside the speakers, we found that all interior connections are made by crimped sleeve connectors and that a single square of ordinary R4 fibreglass batt measuring 20 cm x 20 cm is inserted in each cabinet, directly behind the bass driver, for damping.

The tuned port is made from cardboard tube (painted black on the inside) and is 36 mm in diameter and 130 mm long. It backs directly onto the rear of the tweeter, and is tacked into place by epoxy that is applied after the tube is inserted, rather than before. We found that this meant that in one cabinet, the cardboard tube was able to be removed rather easily from its mounting—we'd suggest that Paradigm could perhaps be just a little more liberal with its glue!

The rear panel hosts a single pair of rather insubstantial spring-loaded

terminals, which was a little disappointing. Solid banana/screw terminals would offer a greater variety of termination options and much better electrical contact.

"They are as sophisticated and honest in character as any small speakers we have heard for quite some time and as such, can be considered among the frontrunners in this market niche."

Paradigm claims a frequency response from 75 Hz to 20 kHz (on-axis, ±2.0 dB), noting that the real response in a room according to DIN 45 500 will be around 55 Hz (-3 dB), depending on placement and room conditions. The company recommends an amplifier power range of 15 to 100 watts RMS, and a maximum power input of 60 watts. We note that this maximum figure is with a typical program source, using an amplifier that is driven into clipping for no more than ten percent of the time. The Titans have a nominal impedance of 8 ohms, but a minimum impedance of 4 ohms. As with all Paradigm speakers, the Titans are covered by a full, five-year manufacturer's warranty.

LISTENING TESTS

The Titans may be classified as bookshelf speakers, but to extract the most from them we suggest you procure a pair of solid stands which will place the tweeters at ear level for the main listening position. They are small and light enough to be positioned on a shelf or wall-mount device, but such a mounting position will almost certainly compromise their ability for reproduction accuracy. So if you are considering such a proposition, think about it carefully before taking the plunge.

And, if you are using wall-mount brackets which must be physically fixed to the cabinet, note that the wood used in the Titans is neither particularly thick, nor is it of high-density composition, so you would have to be careful with mounting

hardware. Also bear in mind that, as we have stated previously, speakers which are wall- or ceiling-mounted should have an additional, separately-anchored, wired restraint system as a sensible safety precaution. (Such anchors are mandatory if the speakers are installed in commercial premises.)

The Titans, we discovered, are very fussy about where they are positioned. This applies to all speakers, of course, but these little powerhouses are especially sensitive to placement with regard to the rear wall because of their rear-firing port. The time and effort expended in finding the right position will be amply rewarded with a startling jump in performance ability.

“The stereo image is very well focused, with a reasonable size which extends to the ‘boundary’ established by the speaker’s themselves . . .”

We found that a distance of about 30 cm from the rear wall provided the most accurate bass response—not the “biggest” response, but certainly the most balanced.

It took very little listening to understand why Paradigm called these speakers “Titans”. These little boxes deliver a remarkably big sound—big because of its full body and a well-extended soundstage that belies the actual size of the drivers that produce it.

During our listening tests, we varied the styles of music considerably, and included Dvorak’s Symphonies Nos. 7 and 8, by the Concertgebouw Orchestra, conducted by Sir Colin Daves, (Award, AWCD28280), Mozart’s Symphonies 19 to 23, by the Prague Chamber Orchestra with Sir Charles Mackerras (Telarc, CD-80217), Marc Cohn’s self-titled album (Atlantic, 7567-ab-82178-2), *On the Line*, by Lee Ritenour (GRP Records, GRP-D-9525), and *The Shouting Stage* by Joan Armatrading (Festival, TVD93278).

As in many other speakers, the Vifa tweeter here imparts a delightfully rich but

uncluttered treble. It never reaches towards harshness, regardless of the musical program, and displays a kind of soft sweetness that tends to give most music a warmth and hint of intimacy that would very much suit the bulk of rooms that will necessitate the use of such small speakers. The highs of some instruments—such as splash cymbals—could perhaps have done with a little more sheen and sizzle, but don’t for a moment imagine that this means they sound dull or lifeless—on the contrary—some tastes might simply prefer an extra degree of brilliance.

The midrange receives a different sort of treatment. There is a suggestion of reticence here, as if the range is very slightly muted, giving the overall sound a subtle moody darkness. Male voices sometimes sounded lightly recessed in the whole image and several instruments, especially acoustic, sometimes tended to lose a little of their timbral nuances. This is more a suggestion of colouration than anything like a dip in the midrange response, however.

The bass response is the big surprise of the Titans. Strong, tight, punchy—and very convincing—it lacks a little in speed thundering passages, with a subsequent loss of definition giving over to a hint of woolliness when the drivers are called upon to work overly hard. But remember the size of the drivers and cabinets, and the bass response is really quite marvellous, and certainly a match for some speakers that are twice the size (and price).

The overall sound is quite well-balanced and relatively neutral in character except for that hint of colouration in the midrange, and could perhaps best be described as ‘warm’.

The stereo image is very well focused, with a reasonable size which extends to the ‘boundary’ established by the speakers themselves and with more than sufficient height. The depth sometimes loses out, especially with orchestral works, which often suffer from some image depth compression when replayed through small transducers, but small ensemble work is handled very well by the Titans, with each instrument clearly defined and properly positioned. This would have to be considered their forte.

CONCLUSION

The Paradigm Titans may be small and inexpensive, but their sound could never be described in the same way. They are as sophisticated and honest in character as any small speakers we have heard for quite some time and as such, can be considered among the frontrunners in this market niche.

“Space-conscious rockers will be very impressed with their bass response, and lovers of orchestral works will enjoy the Titans’ ability to deliver dynamic power.”

Those who prefer to listen to acoustic and small band music will be more favourably disposed towards these speakers than hard rock and large orchestra listeners because of their “warm and intimate” presentation, but “big sound” listeners should not be discouraged from auditioning them. Space-conscious rockers will be very impressed with their bass response, and lovers of orchestral works will enjoy the Titans’ ability to deliver dynamic power.

Don’t forget to allow for some stands in your budget—the extra expense more than pays itself off in providing the Titans with every opportunity to show off their considerable charms and abilities. And even with this added expense, the Titans still represent real value for money—an ideal first step on the hi-fi ladder.