

DIGITAL DESIGNS

LE-M08

ENCLOSURE 8-INCH SUBWOOFER

AUCTION



THE LITTLE SUB THAT COULD.

REVIEWER MARTY PRICE

►►► If ever there was a company conducive to serious noise it's Digital Designs. The company often affectionately referred to simply as DD was started in 1986 in the United States and has henceforth expanded its operations from simple subwoofer manufacturer to nowadays offering a comprehensive suite of amplifiers, speakers and other ancillary components. Nevertheless subwoofers have always remained Digital Designs' core interest and it's what it's best at.

COMP SUBS

Although specialising primarily in extremely durable, sound pressure type competition subwoofers, for years Digital Designs has also offered a plethora of nice sounding units. Naturally this lends itself to a certain level of technical evolution, with it also becoming a master of enclosure and porting design over

the years. With its stable already in possession of some of the loudest pre-loaded enclosures on earth, engineers decided to head back to the drawing board in order to develop a range of enclosures that not only sound tremendous, but also consumed minimal space.

The resulting range is called LE-Mini and actually contains five enclosures spanning from 6.5-inch through to 12-inch. We've selected the LE-M08 to review this time around as we predict it'll be the one most frequently implemented, as it offers a superb balance of space, power and performance.

The LE-M08 is a single 8-inch subwoofer loaded into a specially designed ported enclosure; one which it must be said is deceptively high in build quality. I did stifle a slight yawn when I unpacked the back of the unit, however, flipping it over reveals quite a nice looking affair. It's covered in durable thick

black carpet with a bright red Digital Designs logo embroidered on the side while the sub driver has been mounted on the front face protected by a large black bar-type grille.

After scrutinising the enclosure's exterior we then removed the driver to inspect the enclosure's internal design. It's robustly manufactured, utilising 18mm fibreboard instead of the usual cheap 12mm chipboard that many of this ilk feature. The lengthy port is tuned to 43Hz and extends from one side right the way across the enclosure, the opposite end being supported by a brace which serves to strengthen the outer wall at this junction.

Continuing with the resilience theme; both the grille and the subwoofer are bolted in rather than screwed and upon the opposite end is a large terminal plate which allows for the twin voice coils to be wired with either an in series or parallel configuration. It's pleasant to see this flexibility offered at the terminal plate because many pre-built enclosures are wired internally thus removing the ability to change the impedance configuration. The port opening is specially profiled with a bell mouth to combat chuffing as air reciprocates in and out. Turning our attention to the driver itself, it does take a little effort to remove as both the grille and it are mounted so solidly. The driver is designed specifically for this enclosure, Digital Designs opting to take this path rather than simply employing an existing subwoofer. A simple but highly efficient design; it starts with a cone made from pressed paper to achieve a more natural sound. This is treated with a blackened chemical coating which adds ►

additional strength and helps ward off excess deformation when under duress. In the centre of the cone is the traditional large dust cap which is emblazoned with the DD logo and besides preventing foreign matter entering the voice coil gap this cap is married to the diaphragm at a strategically optimal point in order to offer maximum resistance to torsion and compression.

Due to the aforementioned properties the diaphragm enjoys exceptional damping and the ability to hold its shape most proficiently. Lining the cone is the inch-wide foam surround which is double stitched to the cone for extra strength. It's extremely flexible and works in conjunction with the flat rolled polycotton spider below giving the driver an efficiency of 92dB, being so strong in fact that it's actually very hard to bottom the motor out, resulting in a peak power handling ability in excess of 500 watts. Looking further into the lower portion of the driver, the motor lives within a black stamped steel frame which features thinner web fingers in order to afford a more aerodynamically transparent signature.

The motor comprises of a 50mm aluminium former which is wrapped with twin 2-ohms, four layer copper voice coil. Cooling is handled via a combination of induction through triple sets of seven vertical intake slits and expulsion via a 20mm pole vent in the centre of the magnet. The voice coil former itself also has additional port holes in it for cross flow and overall the cooling system allows the motor to handle over 250 watts continuously. The magnet is a twin stacked 70oz number, held in place by upper and lower 5mm steel plates. Peering in reveals the motor is carefully situated in relation to the magnet in order that it may exert maximum flux influence over



the motor, offering complete control over the 14mm Xmax (one way) when it's playing anything within its 30Hz – 300Hz allotted frequency range, although truth be told, it performs much over, say, 120Hz. Although irrelevant the overall depth of the driver itself is 120mm.

GOOD NOISE

Arriving at the testing stage I wasn't sure what to expect because while on the one hand Digital Designs is synonymous with big noise, especially insofar as subsonic bass is concerned – could it also have a serious shot at sound quality? As it wore in, it was immediately noticed how strong the unit is, as the bass presence is significant even at modest levels, thanks mainly to the efficiency of the suspension.

With the running-in complete we began the serious testing. It's a smooth subwoofer with only the slightest Andromeda effect thanks to the long throw design working in conjunction with the port which has been perfectly married to it. Ergo the LE-M08 doesn't suffer from the usual reciprocal response that tuned enclosures often do. Rather it's quite the linear little performer which will allow it to cover most genres with ease. Overall control and sphere of influence are equally interesting aspects of its performance. Traditionally-speaking pre-built 8-inch enclosures are usually boom-for-buck offerings while the actual sound quality in the true subsonic frequency regions remains quite low on the priority list. Digital Designs however has spent a fair dollop of time testing and developing the LE-M08 so that it may sound controlled and accurate in these areas.

So much so that it actually doesn't enjoy playing high frequencies that much, but instead revels in the deep subsonic regions. This in turn means that as opposed to sounding like a glorified midbass driver as many an 8-inch do, the LE-M08 instead plays low and deep. Playing anywhere on the volume dial from

'barely' through to 'cataclysmic' volumes, the suspension works in harmony providing good old fashioned clean, articulate sub-bass.

The good thing of course is that an 8-inch doesn't require much real estate and with the outer dimensions being 430mm x 240mm x 280mm this sub will hardly consume any room at all. So whether you're hammering out the tubes of a pipe organ or playing lightning fast blast beat drumming the sound is quite true to what the original composer intended.

With sound quality covered we turned our attention to sound pressure – and the LE-M08 can hit with surprising amount of force. It should be stipulated that I'm talking about loud performances playing normal music; I tend to like pushing subwoofers with standard dynamic sinusoidal waves of music rather than the straight sine waves of SPL or even square wave burps.

Pushing it hard won't result in a bottom out until extreme levels are reached, and let me tell you, you'll need a hell of a lot more than its allotted 500 watts before that voice coil former starts to become friendly with the back plate. Time permitting I'd love to see how the LE-M08 goes up against some of the more outlandish subwoofers on the market. Because, just between you and I, I suspect this thing could match it with many of them. The fact that there's also 14 square inches of port also expelling a ton of air greatly aids this cause. When it does come to absolutely hammering it through, it still performs superbly.

CONCLUSION

Overall Digital Designs has developed a winner of a pre-built sub here. Sure, it has a couple of idiosyncratic aspects inherent to enclosures of this ilk, however when you consider the price against what it'll cost you to get a standalone subwoofer and custom enclosure built to suit your particular car, you'll find the odds stacked heavily in favour of the LE-M08. Also given that it can handle all your subsonic requests without issue, and then some. **4/5**

DIGITAL DESIGNS

LE-M08

ENCLOSURE 8-INCH SUBWOOFER

TYPE: 8-inch single voice coil subwoofer in ported enclosure

POWER HANDLING: 250 watts continuous, 500 watts maximum

FREQUENCY RESPONSE: 30Hz – 300Hz

IMPEDANCE: 4-ohms

COST: \$329

CONTACT: Digital Designs Australia on 02 9482 5881

WEB: www.ddaudio.com.au

- Great sub-bass performance
- Can take lots of power
- Manageable size

- Nothing stood out