



MAXIMIZING THE MINIMUM.

Now before you wonder what on earth I mean by that byline, let's head back to 1975 when a small Israeli loudspeaker company was first conceived by music lover Meir Mordechai. His goal was pretty simple – he wanted to create the ultimate range of loudspeakers. If you fast forward to today and appreciate the amount of awards Morel has accumulated worldwide for its stunning range of high end loudspeakers you'll conclude that Mordechai certainly succeeded in his goal.

However for a long time Morel did struggle a little in one area – entry level speakers. It simply didn't have any and so for years Morel was simply out of the budget for many people because while the Morel speakers were not stratospheric in price, they weren't cheap either. To address this issue Morel developed an entry level range of components called Maximo and to this day they're selling great guns with their unique blend of fidelity and hard hitting force. But what about subwoofers? Well Morel had the same dilemma in that its top end was secure with the Ultimo range and the middle section was accommodated for via the SC range of subwoofers. However there was nothing for the entry level punters – until now.

PRIME PRIMO

The new Primo range is designed to fulfill Morel's overall subwoofer stable and handles the subsonic duties in the entry level realm.

They come in a variety of sizes including 8-, 10- and 12-inch and unlike most people that would just go straight for the 12-inch when given the opportunity we instead reached for the Primo 8. We're not sure why 8-inch units aren't more popular; we employ 8-inch subwoofers here in installations all the time, especially those installs that don't allow placement of titanic-sized subwoofers such as utilities and small hatches. Remember the drop-in facet too, as many factory systems utilise 8-inch subwoofers – you'll find them in models from Toyota, Subaru, Ford, Honda, Mercedes, etc.

There are also the times when a single quality 8-inch and some sound deadening will remedy all the sub-bass issues a factory system possesses. Physical output shouldn't be an issue either for when you consider that 8-inch subwoofers have a surface area of 50.27-inches compared to that of a single 12-inch with its 113.10-inches, a pair of 8-inch subwoofers is not far shy of a single 12. For example in a ute, if you want serious bass, consider having four of them lined across the back behind the seat.

Beware, however, of the misconception that smaller subwoofers necessarily sound better. A good quality subwoofer in the correct enclosure can sound stunning, but equally so if you're using the wrong enclosure, the best subwoofer can sound terrible.

So now that the picture has been painted of the best type of applications for these

subwoofers let's take a closer look at their physical design. The new Morel subs are not just somewhat different in design to the other subwoofers that comprise the Morel line – they're literally poles apart. The cone is the first radically different item. The Primo 8 uses a laminated paper instead of weaved Kevlar that the Ultimo and SC models utilise. What you might find quite surprising is that, despite the materials not being as exotic, it's still extremely strong and very hard to disfigure physically.

In the centre of the cone is a bronze-coloured polypropylene dust cap while around the outside is an extremely flexible butyl rubber surround which is quite wide and allows for considerable physical excursion. While that keeps the top of the moving components concentric, located within the stamped steel bronze-coloured basket is a flat woven black poly-cotton spider which is stiff but still allows for a sensitivity of 89dB. Looking beneath this spider you'll again find the major departure from the rest of the Morel designs; that of the magnet and motor. See, in order to allow for maximum cooling abilities the Morel Ultimo and SCs both possess massive-sized 5.1-inch voice coils and this is because the magnet is located within the middle and the voice coil surrounds it with its back to the wind. The Primo uses a more conventional design with a 51mm twin layer copper voice coil wrapped on a Kapton former being surrounded by a large high grade ferrite

magnet. This method also allows for cheaper magnetic materials to be employed because materials like rare-earth neodymium are not getting any cheaper. And remember the Primos are the entry level range.

Cooling has not been completely forgotten though and, to this end, there is a 20mm intake on the extended steel back plate and around the basket are eight large triangular mesh air expulsion vents allowing for hot air to escape, giving the motor a power handling of 250 watts continuous. If you feel like testing just how hard you can run it you can feed it around 500 watts maximum before it struggles with cooling. Overall size and weight of the unit is also kept to a minimum with it tipping the scales at less than four kilograms. The physical mounting depth of 110mm means it'll fit in most tight places.

SMALL SPACES

When using 8-inch subwoofers we're generally looking for the smallest enclosures possible but this often comes at the detriment of sound quality due to the enclosure QTC going through the roof in many applications. These enclosures tend to be very boomy as opposed to controlled and with low extension. I like to challenge this way of thinking in that it's not volume you often have an issue with but physical depth. When you think about most small enclosures, there are often little nooks and crannies all around them where you could have drawn more volume from – especially if you're handy with fiberglass. Never confuse "I couldn't get the volume required" with "I was too lazy to get the volume required".

SIGNIFICANT OTHERS



Alpine has its SWR-843D 8-inch subwoofer featuring 350 watts RMS and priced at \$299



Focal's 21V2 is a hike up to \$359 and has a slightly larger diaphragm at 8.25-inches while taking 250 watts nominally



Morel obviously agrees with this, because it's designed the Primo to run in an enclosure that offers the optimum QTC instead of aiming it to fit in the smallest enclosure possible. This means the Primo 8 requires around 17 litres sealed to achieve subsonic bliss and Morel believe that you'll work for that little extra space if the result is years of better quality bass. Now with our test car we had the luxury of having a larger area for the subwoofer to sit in but still had to do a little glassing to get the right volume, ending up with a QTC of 0.71.

I've had reason to be a big fan of most things Morel and in the past have actually owned both the Elate components and an Ultimo subwoofer. During this time I often claimed the Ultimo is perhaps one of the best sound quality subwoofers in the world and to this day I don't shy away from that opinion. So as you could imagine I was most interested to hear how the Primo would match-up because, after all, despite its parent being the mighty Morel, it still lacked some of the startling technology of its older siblings. Especially that titanic-sized voice coil and motor design.

I fired-up the subwoofer for the first time and began the run-in process by playing a sine wave at its resonant frequency of 43Hz before leaving it running overnight. First thing next morning, armed with plenty of music, we jumped in for a listen. Off the bat the Primo 8 moves extremely well and plays most music with fantastic clarity and accuracy. This is from high frequency bass notes – instruments like guitars and piano – right down to the lower notes of instruments such as tuba, pipe organ and double bass. You can also hear lots of detail in the music, such as breathing and scratching, as various instruments are played.

However it's not just the accuracy that makes it impressive for its price. So far as sound pressure output goes, and the subwoofers sheer volume capacity, it certainly thumps pretty hard. If you're planning on using

these in twin, triple or quad arrays you'll love the amount of bass the Primo outputs. However, again, this is not what makes it impressive. It's the sheer fact that you have a subwoofer which only has an asking price of \$249, yet despite this it sounds fantastic, and can also thump pretty hard. That's what makes it so good.

CONCLUSION

So if you have a small car, utility or are looking to upgrade your factory system, then you should start by looking at 8-inch subwoofers. And right at the top of your audition list should be units like the Primo 8 – units that have the pedigree stemming from arguably one of the best subwoofer manufacturers on the planet. ◀

MOREL PRIMO 8 8-INCH SUBWOOFER

TYPE: 8-inch single voice coil subwoofer

POWER HANDLING: 250 watts continuous, 500 watts maximum

FREQUENCY RESPONSE: 25Hz – 900Hz

IMPEDANCE: 4-ohms

COST: \$249

CONTACT: RM Audio on 0412 339 514

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- "Fantastic clarity and accuracy"
- Can thump hard
- Superb value for money

- Needs a larger than usual enclosure

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