



MW 6.5 MW 8 MW 10 MW 12 • TEST REPORT CAR&HIFI 5/2024

Eton MW 6.5 + MW 8 + MW 10 + MW 12:
Power subwoofers of the old school

Bass power times four

► At Eton the upgrading of its subwoofer lineup is in full swing. There are three new series of subwoofer single chassis of which our MW are the biggest. Here it is to do with serious bass at full level and not about hidden little mini woofers.

Already last year Eton pointed the way with the Graphit series, namely in the area of sound quality. Great new cones, filigree die-cast baskets and small woofers in 8 and 10 inches with a choice of 2 or 4-ohm dual voice coils. In comparison our new MW woofers seem less elegant, but are three times

more powerful instead. All sizes up to 12 inches are offered, so we have four MWs in the sizes 6.5, 8, 10 and 12 inches respectively. Eton has made sure that every single component of the woofers is highly stable and resilient. Let's begin with the thick yet excellently ventilated baskets made of die-cast

aluminum. Below the centering planes there is a clear view of the coil formers. These are made of perforated aluminum for optimum heat dissipation. The centering spiders are doubled for all woofers: in each case two centering spiders are mounted on a plastic ring to keep the raw forces of large excursions in check. Mechanically, in one direction these are: 20 mm for the MW 6.5, 25 mm for the MW 8, even 45 mm for the MW 10 and 35 mm for the 12-incher. The voice coil overhangs

and hence the electrical excursion of the woofers are also generously sized; even the small 6.5 has 15 mm, while the M 12 has an impressive 24 mm. The voice coils are 2 x 2 ohm types throughout, have 4-layer windings and are blackened for optimal heat dissipation. Even the small 16-cm has a two-inch coil diameter, the 20-cm has a 2.5-in and both the largest MWs come away with arm-thick 3-in and 76-mm coil diameters respectively. Fat double ferrite pieces take care of the magnet power and ultimately ensure adequate field strengths in the air gap. They are also largely responsible for the large number of kilos that the MW woofers weigh in at. The hardware also contributes a good bit to that, particularly the finely machined pole plates, which are a pure joy to look at. Like many subwoofers the Eton units have an extended pole design. The pole cores extend within the coil formers beyond the plane of the upper pole plate. This makes for greater flux density in the air gap and therefore a stronger drive. All the design features previously described are the same for all four MW woofers, the only differences apart from size being in the details. Thus the small 6.5 cm speaker manages with 20-mm thick ferrite rings, whereas the larger woofers are fitted with 25-mm thick rings. The terminals differ in design, which has to do with the fact that the woofers are so chunky that they barely fit into their installation cut-outs. This particularly applies to the two small woofers, so that the MW 6.5 is equipped with hard-wired connection leads and the MW 8 with narrow Allen terminals. In the case of the 25 and 30



The MW 6.5 has soldered-on leads so that it just fits into the installation hole.

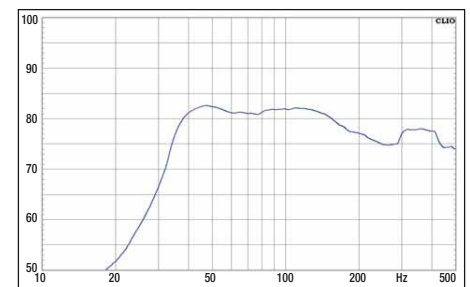
cm speakers there is sufficient space for regular spring terminals for taking even thicker connection leads.

Measurements and Sound

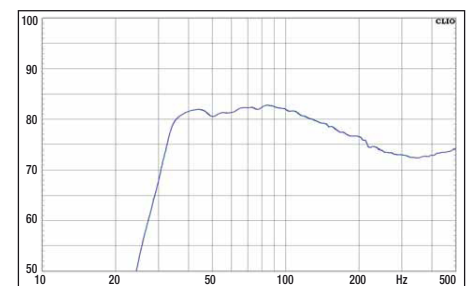
After determining the Thiele-Small parameters, the MW 12 reveals a familiar set of parameters that make it a universally applicable all-rounder. With a resonant frequency of 35 Hz, a Q factor of 0.39 and an equivalent volume of 20 liters it is good for any amount of deep bass. The high moving mass also contributes to this, which is not surprising given the solid construction. Naturally this is true for all the MW woofers. In spite of the high masses the resonant frequencies for the 6.5 and 8-cm drivers are nevertheless rather high: so does any bass come out? Yes indeed it does. 'At fault' are the rock hard suspensions necessary to cushion the high masses. This in turn results in tiny equivalent volumes. The woofers then require relatively large enclosures in order to produce deep bass. The advantage of all this is that the woofers are very well mechanically controlled and are not reliant on an air spring, even in closed enclosures. The woofers, at least the two larger ones, also work in closed enclosures, but we opted for reflex boxes to maximize the sound pressure level. And we have given the woofers the space they need – it won't be super compact with the MWs anyway. The results are: 13.5 liters for the 6.5-cm speaker; 21.5 liters for the 8-cm; the classic ,unitary encl-

Sturdy fellow with solid die-cast basket, double spider, perforated coil former and blackened voice coil.

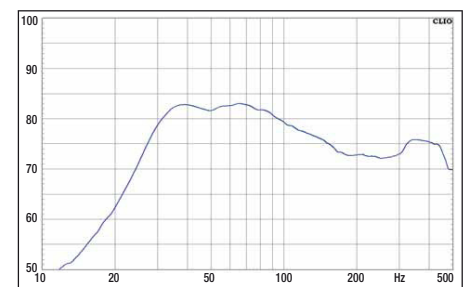
sure' of 30 liters with a 10 x 30 cm port tube for the 10-cm; and finally, 56 liters for the 12-inch. Guided purely by the nominal diameters of the woofers, this is nowadays all much more compact, but if you are looking for something like the Eton MW you should also have room for a full-size bass cab. And definitely for full-size power amps, be-



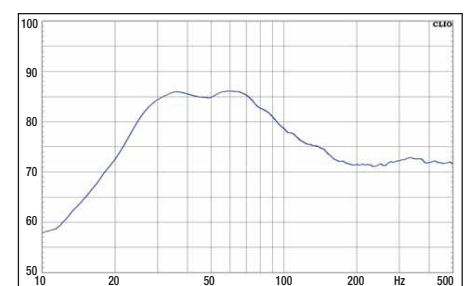
Even the little MW 6.5 reaches down to almost 40 Hz into the frequency basement



The MW 8 also achieves only 82 dB in 21.5 liters, but you do get 40 Hz at full level



The MW 10 offers 35 Hz and 83 dB out of 30 liters, a very classic tuning situation



The MW 12 runs louder and a little lower than its smaller brothers



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your stomach. If that's what you like, you'll get the full package with the 12-cm speaker.

Summary

The Eton MW series is reasonably priced and does not skimp on finely finished materials. If you are looking for real old school bass from real subwoofers, then you will find it here, and tailored in four sizes to boot.

All MW woofers have finely turned pole plates and large pole core boreholes with an additional circle of holes.

BEST PRODUCT
Middle-Class
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BEST PRODUCT
Upper-Class
CAR & HIFI 5/2024

LEVEL-TIP
Top-Class
CAR & HIFI 5/2024

cause the woofers not only tolerate enormous power – they also need it. In the car the small MW 6.5 should not be underestimated: it pumps out bass at lightning speed – which is really fun if the music is appropriately fast. Moreover, in the normal upper and mid bass regions the little speaker sounds nice and fat, though of course around the lower end it is somewhat lacking. You would simply have to concede that to a 16 cm woofer for 120 Euros. Much more mature is how the MW 8 gets to work. This is also more of a small woofer in terms of cone surface area, but it does have a powerful stroke so the pressure is right. The 8-cm speaker also sounds very crisp yet powerful. The MW 10 then shifts this performance slightly towards the low frequencies, which is when the fans of low electronic sounds get their money's worth. It sounds very powerful, and one woofer is easily enough even for higher levels. Finally, the MW 12 shows what is possible in terms of sound level. Now the synth sounds are really humming, and even the good old bass drum kicks into the pit of

Subwoofer	Eton MW 6.5	Eton MW 8	Eton MW 10	Eton MW 12
Price	\$329 RRP	\$499 RRP	\$799 RRP	\$899 RRP
Distributor	Custom Car Sound eton-audio.com	Custom Car Sound eton-audio.com	Custom Car Sound eton-audio.com	Custom Car Sound eton-audio.com

Summary

Sound quality	50 %	1,0	1,0	1,0	1,0
Bass foundation	12,5 %	1,0	1,0	1,0	0,5
Pressure	12,5 %	1,0	1,0	1,0	0,5
Clearance	12,5 %	1,0	1,0	1,0	1,5
Dynamics	12,5 %	1,0	1,0	1,0	1,5
Lab	30 %	1,7	1,7	1,7	1,5
Frequency response	10 %	1,0	1,0	1,0	1,0
Efficiency	10 %	3,0	3,0	3,0	2,5
Max. SPL	10 %	1,0	1,0	1,0	1,0
Workmanship	20 %	0,5	1,0	1,0	1,0

Technical data

Diameter	17,8 cm	21,5 cm	27,5 cm	32,5 cm
Mounting diameter	15,2 cm	18,5 cm	24,2 cm	28,5 cm
Mounting depth	10,7 cm	13,9 cm	17,2 cm	17,8 cm
Magnet diameter	13,5 cm	16,0 cm	19,0 cm	19,0 cm
Weight	4,6 kg	7,9 kg	13,8 kg	14,6 kg
Nominal impedance	2 x 2 ohms	2 x 2 ohms	2 x 2 ohms	2 x 2 ohms
DC resistance Rdc	4,02 ohms	4,05 ohms	3,93 ohms	3,79 ohms
Coil inductivity Le	2,34 mH	2,71 mH	3,32 mH	4,35 mH
Coil diameter	52 mm	63 mm	76 mm	76 mm
Cone surface Sd	137 cm²	201 cm²	314 cm²	499 cm²
Resonance frequency fs	68 Hz	54 Hz	40 Hz	35 Hz
Mechanical quality Qms	9,41	8,51	7,34	7,83
Electrical quality Qes	0,62	0,56	0,40	0,41
Total quality Qts	0,58	0,52	0,38	0,39
Equivalent volume Vas	1,7 l	3,0 l	7,5 l	21,4 l
Moving mass Mms	85 g	161 g	289 g	345 g
Rms	3,85 kg/s	6,42 kg/s	9,92 kg/s	9,55 kg/s
Cms	0,07 mm/N	0,05 mm/N	0,05 mm/N	0,06 mm/N
B*I	15,31 Tm	19,93 Tm	26,63 Tm	26,22 Tm
Pressure 1 W, 1 m	82 dB	82 dB	83 dB	84 dB
Power handling	200 – 400 W	200 – 600 W	300 – 800 W	300 – 800 W
Test chamber	br 13,5 l	br 21,5 l	br 30 l	br 56 l
Port (d x l)	7 x 25 cm	7 x 25 cm	10 x 30 cm	10 x 30 cm

Middle-Class 1,1
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Price/performance: very good

Upper-Class 1,2
CAR & HIFI 5/24
Price/performance: very good

Top-Class 1,2
CAR & HIFI 5/24
Price/performance: very good

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"Very successful power woofers for fat bass."