

EMPHASER

EMPHASER EM-MBF2 EM-MBR2 • TEST REPORT CAR&HIFI 3/2022

Emphaser EM-MBF2 + EM-MBR2.
New door speakers for Mercedes

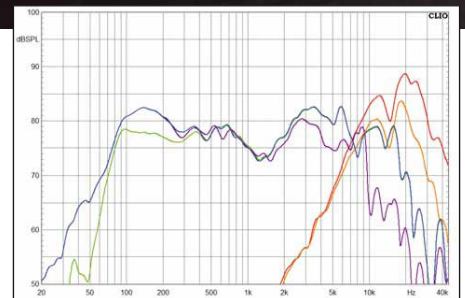
Sound in Mercedes

► If you want to beef up the OEM system of your Mercedes, you can find two new door systems for a straightforward sound upgrade from Emphaser.

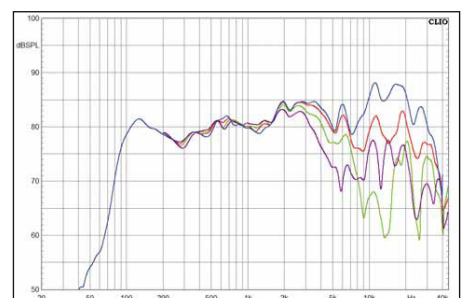
In almost all later Mercedes cars such as the C and E classes, and GLS we find an identical factory speaker mounting. The doors at the front and rear are fitted with mid-high range systems, and in the driver's and front passenger footwells the woofers for the bass are unobstrusive. If the original sound is unsatisfactory, door speakers and woofers can be very easily changed for aftermarket speakers independently of each other. This report concerns the new door sets EM-MBF2 and EM-MBR2 from Empha-

ser for front and rear doors. Both sets come in Emphaser's brand colors of black and red, and show attention to detail. The woofers are characterized by the typical Mercedes three-point mount with ball heads so that they can be rapidly changed without using screws. That is also true of the cabling, for the crossovers are connected using the vehicle connectors on the existing cabling without the need for soldering work. Equally quick to change are the tweeters of the front system that fit in the original mounts. The tweeter of the MBF2 front system uses a handsome 25-millimeter woven fabric dome, while the MBR2 coaxial speaker has

The front system comes with 25 mm woven tweeters that are clipped in instead of the originals



The EM-MBF2 has a switched high pass filter to relieve the 10 cm speaker; around 1.2 kHz a blocking circuit reduces the level



The EM-MBR2 shows a successful transition between woofer and tweeter with an overall pleasing tweeter level



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For installation in the tight openings of the Mercedes doors, compact neodymium drivers are used



BEST PRODUCT
Mercedes-loudspeaker
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a small woven fabric dome with a 13-mm voice coil. This is a pleasing distinction from cheaply made systems with a plastic dome. The 10 centimeter woofers come in specially designed injection molded baskets and are equipped with black aluminum cones. The crossover of the front system is very elaborately made and relies on quality components like film capacitors and air coils. Whereas the tweeter is wired up as usual with a high pass second order filter, the woofer has just one coil, though it is supported by a blocking circuit, which removes a defined frequency range like an equalizer does. Here the blocking circuit is used to lower the frequency range a little around 1.2 kHz so as to accommodate the acoustic conditions in Mercedes vehicles.

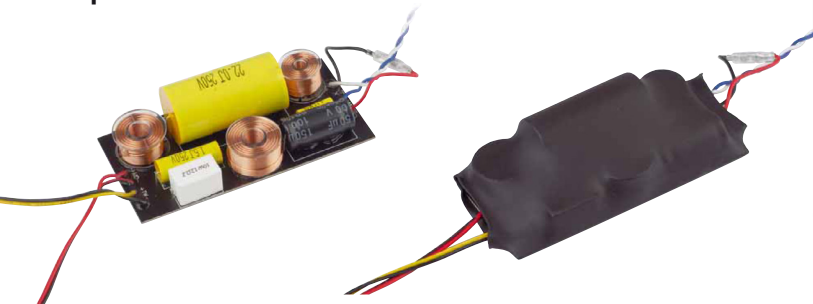
Measurements and Sound

Our frequency response measurement on the MBF2 shows the equalization on the crossover reduced by an equivalent dip in the level of the 10 cm woofer. Otherwise it runs without the peaky cone resonances that are now and then found with hard cones. The coaxial MBR2 also shows an overall linear curve so that are up to now we are very satisfied with the Mercedes systems. Finally, particularly favorable is the evaluation of the distortion figures. Here the 10 mm cones shine through the absence of distortion, which is not to be taken for granted. Soundwise the Emphaser sets impress with their lively, bright playing, which sets them very much apart from the standard factory configuration. Vocals and instruments sound crisp and unsmoothed, with many details in the highs reaching the ear. Front system and rear system sound generally balanced and deliver a sound thoroughly fit for everyday use that you will not get tired of listening to after a few minutes. Overall a very mature performance and a successful sound upgrade.

Summary

The Mercedes systems MBF2 and MBR2 are outstanding for their high quality with attention to details like neodymium magnets and crossovers that also pay off soundwise. They are nicely made and, thanks to the plug and play installation, make for a relatively hassle-free upgrade.

A lot of effort has gone into the crossover and frequency response correction of the 10 cm woofer



Mercedes-loudspeaker	Emphaser EM-MBF2	Emphaser EM-MBR2
Price	about 300 Euro	about 230 Euro
Distributor	ACR CH-Zurzach info@acr.eu www.acr.eu	ACR CH-Zurzach info@acr.eu www.acr.eu
Hotline		
Internet		

Summary			
▶ Sound quality	55 %	1,2	1,2
Bass foundation	11 %	1,5	1,5
Neutrality	11 %	1,5	1,0
Transparency	11 %	1,0	1,5
Soundstaging	11 %	1,0	1,0
Dynamics	11 %	1,0	1,0
▶ Lab	30 %	1,3	1,5
Frequency response	10 %	1,5	1,5
max. volume	10 %	1,5	1,5
Distortion	10 %	1,0	1,5
▶ Practice	15 %	1,2	1,3
Installation	5 %	1,0	1,0
Crossover	5 %	1,5	2,0
Workmanship	5 %	1,0	1,0

Technical data

Diameter TT	100 mm	100 mm
Mounting depth with ring	34 mm	34 mm
Diameter magnet	50 mm	50 mm
Tweeter dome diameter	25 mm	16 mm
Tweeter housing diameter	39 mm	-
Slope	6/12 dB	-/6 dB
Tweeter protection	-	-
Tweeter volume adjustment	-	-
Fits in here *	C-, E-class, GLC	C-, E-class, GLC
other	highpass switchable	highpass
Nominal impedance	4 ohms	4 ohms
DC resistance Rdc	3,55 ohms	3,34 ohms
Coil inductivity Le	0,16 mH	0,13 mH
Coil diameter	25 mm	25 mm
Cone surface Sd	83cm ²	83 cm ²
Resonance frequency fs	103 Hz	122 Hz
Mechanical quality Qms	4,35	5,00
Electrical quality Qes	1,03	1,23
Total quality Qts	0,83	0,99
Equivalent volume Vas	1,8 l	1,6 l
Moving mass Mms	5,3 g	4,4 g
Rms	0,79 kg/s	0,67 kg/s
Cms	0,45 mm/N	0,39 mm/N
B*1	3,45 Tm	3,00 Tm
Pressure 2 V, 1 m	80 dB	80 dB
Power handling	20 – 80 W	20 – 80 W

Mercedes-loudspeaker 1,2

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Price/performance: very good

"Well made plug and play upgrade for Mercedes."

Mercedes-loudspeaker 1,3

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