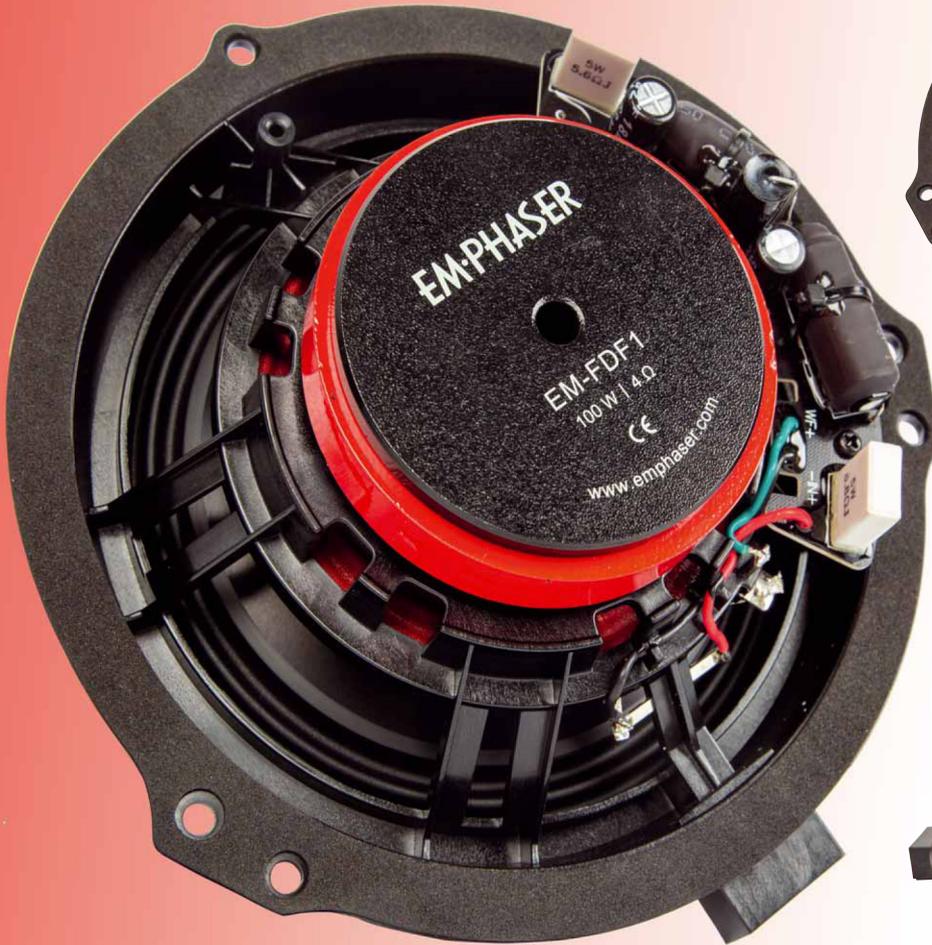


# EM-PHASER

Emphaser EM-FDF1 • TEST REPORT CAR&HIFI 5/2022

Emphaser EM-FDF1: Plug and play speaker for motorhome



The midwoofer carries its crossover directly on the basket



## Sound in Ford Transit

► The camper boom has produced an increased demand for good sound for the motorhome in parallel with the aftermarket. Here is a speaker set for the Ford Transit.

At Emphaser there is already a wide range of speaker systems available for motorhomes. The first base vehicle was of course the Fiat Ducato, which continues to be the most popular vehicle on the used market. Also covered are the VW Bus T5 and T6, and the Mercedes Sprinter is provided for beyond that. Naturally, that also applies for vehicles of other brands of identical construction. Even non-motorhomes can poten-

tially benefit from a sound upgrade. The next candidate is now the Ford Transit, more exactly the models Transit Custom 7th generation and Tourneo Custom 2nd generation. Here the new front system EM-FDF1 fits in the front doors. As always with vehicle-specific speakers Emphaser equips the set with vehicle connectors so that installation really is plug and play. The midwoofer for the door has a nominal diameter

of 16.5 centimeters, which also makes enough bass for everyday use without needing a subwoofer. Naturally, its plastic basket fits exactly in the space of the original. The crossover of the two-way system is split into its two branches so that we find the woofer branch attached to the basket of the midwoofer.



The midwoofer works with an aluminum cone in a corrugated surround

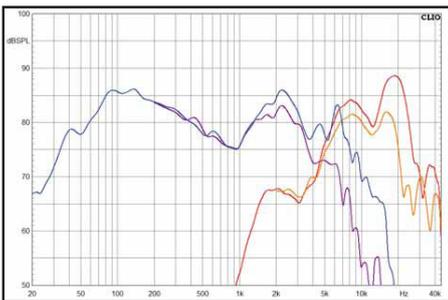
# EM-PHASER

## Emphaser EM-FDF1 • TEST REPORT CAR&HIFI 5/2022

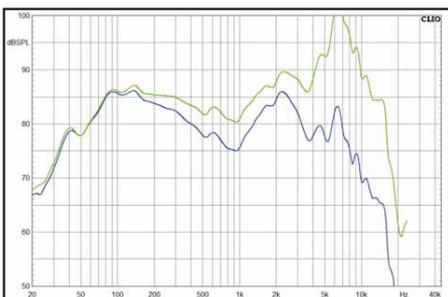
The tweeter comes with a cable crossover in which the high-pass filter and attenuation resistors are embedded



We already know the clever circuit from Emphaser. Here the developer makes use of the possibility not only to separate with a low pass filter but also to build in an equalizer tuned to the vehicle acoustics. The tweeter also fits in the space of the original location and is simply clipped in. Its crossover is integrated into the connection cable and separates the tweeter using a 12 dB high-pass filter. The high quality finish earns Emphaser our praise. Both chassis are cleanly made, the woofer very finely so with turned poles pieces, hole-punched voice coil former and stable aluminum cone.



In our acoustic baffle the woofer shows a deep dip around 1 kHz: this is intentional and matched to the vehicle acoustics



The midwoofer shows a hefty boundless resonance peak at 6.5 kHz. It is effectively tamed by the crossover in this frequency area and around 1 kHz

### Measurements and Sound

As already shown in past Emphaser reviews the Ford speakers are also cleanly designed. A comparison of the woofer with and without a crossover shows that the crossover takes effect at two places, namely at the upper end of the frequency response and in the region around 1 kHz. The result is anything but a flat frequency response, yet installed in the Ducato door it is fine. The tweeter appropriately cuts off around 4 kHz and the distortion measurements show everything in the green zone. Sonically the system is a solid performer, responding cheerfully with a fresh and lively sound. In the high range there is plenty of detail, while the aluminum woofer delivers clean lows that are really fun. Altogether, the FDF1 is always good for a stirring attack, setting itself apart from the original sound with its nice dynamics.

### Summary

With the EM-FDF1 Emphaser offers a successful aftermarket upgrade solution for the Transit and Tourneo. The system offers exactly what is expected of it, fitting effortlessly into the vehicle and improving the sound enormously.

**SOUND-TIP**  
Ford-Loudspeaker  
**CAR&HIFI** 5/2022

### Emphaser EM-FDF1

Price	about 280 Euro
Distributor	ACR, CH-5330 Zurzach
Hotline	info@acr.eu
Internet	www.acr.eu

### Summary

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

### Technical Data

Diameter TT	165 mm
Mounting depth TT	45 mm
Magnet diameter TT	85 mm
Tweeter dome diameter	25 mm
Tweeter housing diameter	42 mm
Slope	12/12 dB
Tweeter protection	-
Tweeter volume adjustment	-
Fits in here *	Transit/Tourneo from 2014+ other
Nominal impedance	4 ohms
DC resistance Rdc	3,68 ohms
Coil inductivity Le	0,13 mH
Coil diameter	25 mm
Cone surface Sd	133 cm <sup>2</sup>
Resonance frequency Fs	59 Hz
Mechanical quality Qms	6,03
Electrical quality Qes	0,80
Total quality Qts	0,71
Equivalent volume Vas	12,8 l
Moving mass Mms	14,1 g
Rms	0,86 kg/s
Cms	0,52 mm/N
B*I	4,89 Tm
Pressure 2 V, 1 m	85 dB
Power handling	20 - 80 W

### Emphaser EM-FDF1

## Ford-loudspeaker 1,3

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Price/performance: very good

"Cleanly done upgrade for Ford."