

Emphaser EM-FTF1 + EM-VWF1: 2-Way Component Speakers for Fiat Ducato and VW T5



Sound for the Road

► The Fiat Ducato is the number 1 in the motorhome aftermarket, and the VW camper van is also popular with campers. We present here two speaker sets for a better sound.

Vehicle-specific retrofits are becoming ever more popular, promising a quick way to get a good sound without destroying the trim. You may therefore want to retrofit speakers that can be exchanged 1:1 against the original, so it is not only for leased vehicles. For quick installation the retrofit speakers are then similarly fitted with the correct plugs for the vehicle so that installation is really smooth plug-and-play. Emphaser has now adopted two vehicles that are highly popular with travelers. They are – naturally – the Fiat Ducato and its relatives from Citroen and Peugeot of identical construction, the Series III from 2006 to the present. The second of them is the VW camper, that is not only popular with campers. One peculiarity of the T5 series is the fact that the VW speakers in general use do not

fit, hence the effort to find a solution. The Emphaser EM-FTF1 for the Ducato has become a neat 16-cm two-way system. Naturally the woofer basket fits perfectly with three fasteners and original plug. A ferrite magnet provides the energy for the 25-millimeter voice coil that in turn drives a cone made of black anodized aluminum. In addition, the tweeter radiates via a metal cone with a 25-mm coil involving the use of the material titanium. Its housing is very small as it clips exactly into the brackets of the original tweeter. Low frequencies are kept away from the tweeter by a crossover that has a steep third-order filter and is integrated into the supply cable, suitably cut to length and made-up. The Emphaser EM-VWF1 is based on a similar principle. Again there is a fer-



The woofers come with vehicle-specific injection molded baskets with integrated crossover branches

rite magnet, 25-mm coil and aluminum cone, only in this case suitable for the T5 in the bigger 20-centimeter format. Generous space is also available for the tweeter in the camper, an extra large 28-mm woven dome making itself at home on a triangular bracket. In return for this piece of a rather expensive T5 system the tweeter gets the luxury of level adjustment, its crossover sitting in a little plastic box.

Measurements and Sound

We can certify that results were good for both Emphasers in front of the measurement microphone. The 16-cm system

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In the case of the T5 system the crossover is in a small housing that can be installed using VW plugs per plug and play

EM-FTF1 runs very well, while the crossover works perfectly. At 25 kHz the resonant frequency of the tweeter lies outside the audible range and is not disturbing. The 20-cm system EM-VWF1 runs even better; the woofer in particular shines with full-range reproduction and a flat amplitude response. The 20-cm is an absolute stunner for it plays with little distortion right up to the highest levels. Its 16-cm stable mate on the other hand shows a little distortion peak; with the smaller cone surface it cannot be so loud. The sound from the Ducato system is fresh and vibrant. The 16-cm does perform solidly in the bass and plays extremely punchy bass drums. Voices and instruments cut through well and tend to be on



The T5 tweeter is mounted on a suitable plate

The T5 tweeter crossover has a 12 dB filter and level adjustment

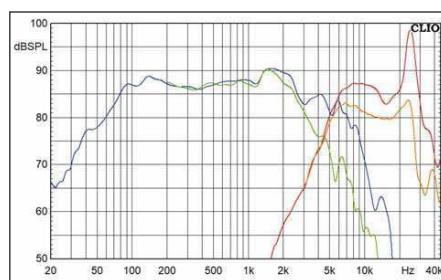


The crossover of the Ducato tweeter sits in the connection cable

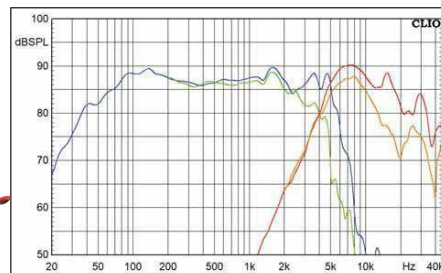
the bright side. The 20-cm T5 system goes one better in the bass, going lower into the frequency basement and the bass sounds richer, though always very precise. Tweeter range and spatiality delight with a silky brilliance and detailed response. The harmonics of natural instruments are also well balanced. Altogether both of these systems offer the potential for good sound.

Summary

Fast upgrade with perfect fit and and plug and play connection for a decent gain in sound quality. Owners of Ducato & Co. and T5 drivers take note – there is sound potential here!



Fiat: Only slight ripple in mid-range, but the titanium tweeter peaks at 25 kHz. That can be lived with as the high frequencies are outside the audible range



VW: The woofer delivers plenty of bass and runs perfectly up to 5 kHz. The tweeter delivers sound pressure up to 20 kHz

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BEST PRODUCT
Fiat-speakers
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LEVEL-TIP
VW-speakers
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Fiat / VW-speakers

Emphaser EM-FTF1

Emphaser EM-VWF1

Distributor	ACR CH-5330 Zurzach info@acr.eu acr.eu	ACR CH-5330 Zurzach info@acr.eu acr.eu
Hotline		
Internet www.		
▶ Sound quality	55 % 1,3	1,3
Bass	11 % 1,5	1,0
Neutrality	11 % 1,5	1,5
Transparency	11 % 1,5	1,0
Soundstaging	11 % 1,0	1,5
Dynamics	11 % 1,0	1,5
▶ Lab	30 % 1,5	1,2
Frequency	10 % 1,0	1,0
Max. volume	10 % 1,5	1,0
Distortion	10 % 2,0	1,5
▶ Practice	15 % 1,2	1,2
Installation	5 % 1,0	1,0
Crossover	5 % 1,5	1,5
Workmanship	5 % 1,0	1,0

Technical data

Chassis diameter	165 mm	200 mm
Mounting depth	43 mm	34 mm
Magnet diameter	80 mm	99 mm
TW dome diameter	25 mm	28 mm
TW housing diameter	38 mm	105x68 mm
Slope	6/8 dB	12/12 dB
Tweeter protection	-	-
Tweeter volume adjustment	-	0,3 dB
Fits in here *	Ducato III + similar	T5 front
other	-	-
Nominal impedance	4 ohms	4 ohms
DC resistance R _{dc}	3,32 ohms	3,41 ohms
Coil inductivity L _e	0,19 mH	0,61 mH
Coil diameter	25 mm	25 mm
Cone surface S _d	141 cm ²	214 cm ²
Resonance frequency F _s	73 Hz	52 Hz
Mechanical quality Q _{ms}	6,24	7,00
Electrical quality Q _{es}	1,01	0,95
Total quality Q _{ts}	0,87	0,83
Equivalent volume V _{as}	10,4 l	29,8 l
Moving mass M _{ms}	12,6 g	20,1 g
R _{ms}	0,93 kg/s	0,94 kg/s
C _{ms}	0,38 mm/N	0,47 mm/N
B* _l	4,36 Tm	4,86 Tm
Pressure 2 V, 1 m	88 dB	88 dB
Power handling	20 – 80 W	20 – 1000 W

Summary

Price	about 200 Euro	about 300 Euro
Sound quality	50 % 1,3	1,3
Lab	30 % 1,5	1,2
Practice	15 % 1,2	1,2
Price/performance	very good	very good

CAR & HiFi
edition 3/2019
Mark

Fiat-speakers

1,3

VW-speakers

1,3

„Sound potential, for Ducato and T5.“