

Emphaser EM-VWF2: tailor-made speaker set for the VW-Bus T6

BEST PRODUCT
VW-Loudspeaker
CAR & HiFi 6/2021

VW Bus Loudspeaker

Simple installation — everyone wants that, but please without sacrificing a good sound. While in many vehicles standard speakers can be installed without a lot of effort, more and more vehicle manufacturers are coming to the idea of installing special speakers and mounts. Here you then have to work with adapters, if there are any, or to make them yourself. On the other hand it is much simpler to install speakers that have been specially designed for the vehicle model concerned. Now there is no need to work with adapters, and even a lay person is able to manage the installation job. In the case of the Emphaser VW T6 speakers EM-VWF2 even connecting up is done in no time. The set is plug & play connected at the woofer and tweeter crossover thanks to VW connectors — even an adhesive strip for the small crossover has been thought of. In the T6 the woofers build up a few centimeters on the unit carrier, so the Emphaser woofer basket comes with an injection molded basket made of fiber-reinforced plastic that has exactly the right dimensions. The 20 cm woofer features a black anodized aluminum cone that not only looks finely made, but also brings punchy bass into the Bulli. Conveniently the crossover branch of the woofer is directly integrated with it; here a coil, a capacitor and an extra RC element take care that the frequency response is optimal. In the case of the tweeter naturally this does not work: the little tweeter with the tailor-made three-point mounting has a cable crossover that is

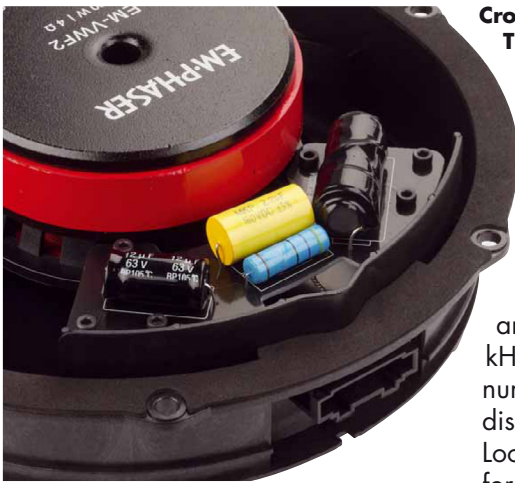


► Those looking for an easy way to do this will buy vehicle-specific speakers that can be installed without tinkering and hassle. For the VW Bus T6 there is now the EM-VWF2 from Emphaser.

Installation adapter and loudspeaker basket form an injection molded part tailor-made for the T6

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Crossover part 1:
The woofer branch sits on a circuit board behind the terminal socket; here we have a 12 dB filter and impedance linearization

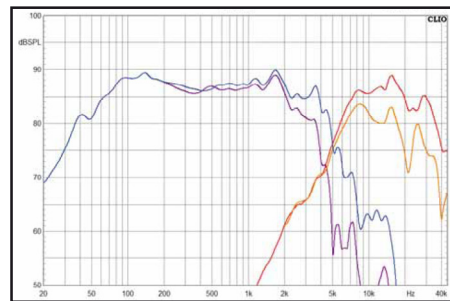
also plug & play connectable. Here too a second-order filter made up of a capacitor and inductor ensures the sound is right. The Emphaser is therefore provided with a quite sophisticated crossover compared to vehicle speakers of simpler construction. The only thing small about the tweeter is the housing: its 28 mm voice coil together with woven fabric dome are rather above the class average.

Measurements and Sound

In front of the measurement microphone our Emphaser system cuts a good figure. The tweeter runs up to 20 kHz and, if you forgive it the little dip above that, then even to 30 kHz. The

woofer also shows a wide operating range. The 20-cm woofer can be paired with the tweeter without any problem, when it runs up to 5 kHz. The crossover has the hard aluminum cone well under control so that no disturbing resonance peaks show up. Looking at the distortion figures, except for a benign K2 peak the tweeter is perfectly harmless. In the case of the woofer, resonance is evident at 4.6 kHz as two distortion peaks — nothing serious to worry about. Soundwise the EM-VWF2 tends to the crisp and fresh. As for bass, there is always enough of it available, and the deep tones are also performed at a high quality. The set produces deep clean bass tones – what more do you want? At the top end the richness of detail is right, and even at higher levels it is not unpleasant. In addition it has good spatial resolution and an overall airy sound. Also very important: The fun factor is never overlooked. The system is rousing and spirited, guaranteeing that no one will fall asleep.

The tweeter works with a 28 mm woven fabric dome and fits in the three-point mount in the mirror triangle



The woofer runs over a wide band, and with 88 dB at 1 W it delivers enough sensitivity for little amplifier power. The tweeter works up to 30 kHz

Crossover part 2:
The cable crossover for the tweeter works with a 12 dB filter and of course has the VW connector

Summary

The EM-VWF2 from Emphaser is a retrofit option for the T6 that works very well. It is fast to install, immediately bringing a lively, punchy sound into the vehicle.

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Emphaser EM-VWF2

Price	about 300 Euro
Distributor	ACR, CH-5330 Zurzach
Hotline	info@acr.eu
Internet	www.acr.eu

Summary

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

Technical Data

Diameter TT	200 mm
Mounting depth incl. ring	34 mm
Magnet diameter	99 mm
Tweeter dome diameter	28 mm
Tweeter housing diameter	42 mm
Slope	12/12
Tweeter protection	–
Tweeter volume adjustment	–
Fits in here *	T6 front
other	–
Nominal impedance	4 ohms
DC resistance Rdc	3,46 ohms
Coil inductivity Le	0,50 mH
Coil diameter	32 mm
Cone surface Sd	214 cm ²
Resonance frequency Fs	53 Hz
Mechanical quality Qms	6,88
Electrical quality Qes	0,95
Total quality Qts	0,84
Equivalent volume Vas	29,2 l
Moving mass Mms	19,7 g
Rms	0,95 kg/s
Cms	0,46 mm/N
B*1	4,88 Tm
Pressure 2 V, 1 m	88 dB
Power handling	20 – 120 W

Emphaser EM-VWF2

VW-Loudspeaker 1,2

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Price/performance: very good

“Simple and good sound upgrade”