



Flashback

Emphaser EA-M4 + EA-M4X

► Can digital power amps be old-school? These days digital amplifiers vie to see who can be the first to squeeze a kilowatt out of an IC the size of a finger nail, without the whole thing being bigger than a cigarette packet. Emphaser, however, looks back to the good old times.

In times in which car hifi first and foremost has to be kept small, Emphaser presents quite unashamedly a new series of amplifiers that goes against the trend. The designation Monolith already suggests heavy caliber, and the three power amps EA-M4, EA-M4X and EA-M1 present a beefy appearance. They are not amplifiers to hide away but to show off. The fat massive heat sinks have a nice heavy feel in the hand, the amps are very solidly built, and are blessed with large connection terminals and firmly attached Cinch sockets. They are like amplifiers from another age. Here we are dealing with the four-channel M4 and M4X

The M4X is considerably larger than its relative, the M4. With twice the number of power transistors the M4X has a lot more power

models; the M1 appears in this issue in a comparative test. For the Monolith amps Emphaser has written right at the top of the requirements specification what amplifiers are all about: Top-class performance! That requires, in spite of all the retro attitude, the application of modern technology. Obviously this means digital class D technology. Not a contradiction as you might think,

since digital amplifiers can certainly be old-school. To recall: The first serious class D amplifiers came on the market with Bang & Olufsen's legendary ICE power amps at the turn of the century – that is already almost 20 years ago. At that time it was still not de rigueur for the heat sinks to be brushed, and the Emphaser units also come with enclosures that owe their look to sand-blasting. The configuration is also like it was 20 years ago: we find high-pass and low-pass crossovers that can be individually activated — otherwise not much else. The only luxury is the input selector switch which uses only two of the inputs; and the socket for the optional remote control that works with all three Monolith amps. Modern features like high-level inputs, automatic turn-on, and start-stop capability were not an issue 20 years ago, and have been strictly left out here. On the PCBs of the amps everything is generously arranged for this. The boards use modern two-layer construction and are populated with SMDs. The M4 and M4X are very different in length and power output, while maintaining the same featuring. Even the M4 is anything but slim. We find a solid power transformer and four discrete amplifier channels that supplied from a four-channel driver chip. Everything is at least a size bigger on the M4X. The transformer is as big as a child's fist. Four fat electrolytic capacitor buffers are available, and the four class D coils are wound from such thick wire that you can push through a huge amount of power. For the drivers there is a bit more space available so that each channel has been allowed the luxury of a 'beetle-looking' component to do the job.

Measurements and Sound

The amplifiers run cleanly up to 40 kHz, while the crossovers work perfectly.



EMPHASER

EMPHASER AMPS • TEST REPORT CAR&HIFI 5/2019

Saves space: Only the smaller M4 has the quadratic driver chip that controls all four channels

The principle of class D operation is clearly seen in the distortion curves, which rise continuously up to maximum power. And there is plenty of that. Even the 'little' M4 pushes out 106 and 180 watts into the 4 and 2-ohm impedances respectively. The M4X has even considerably more power with 214 watts per channel into 4 ohms and a whopping 354 watts into 2 ohms. That makes the M4X the most powerful four-channel power amp in the top class up to 500 euros and, except for very few amps on the market, even the more expensive competition must watch out. This awesome power is not bought at the expense of a poorer lab performance, as our other measurements were all absolutely in the green zone. Soundwise everything is just fine. The EMPHASER units set to work with dedication and above all great gusto. They particularly seem to like fat bass sounds, where they really go to town. To be sure the M4 has even demanding speakers firmly under control, but when the M4X plays the reserves of level and dynamic range seem simply limitless. The Emphaser amps can also handle the little subtle tones as well. Here the pure sound freaks may prefer smaller, more high-end power amps, but those who are in it for the fun will love the M4 and especially the M4X.

Summary

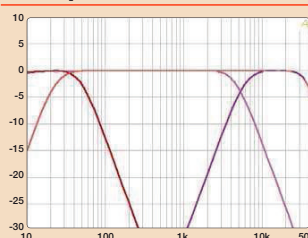
They are still about – the freaks that enjoy „real fat“ car hifi systems. The Emphaser EA-M4 and EA-M4X are the right amplifiers for them. For most people the M4 will easily be enough; but if you need the ultimate performance boost, go for the M4X.



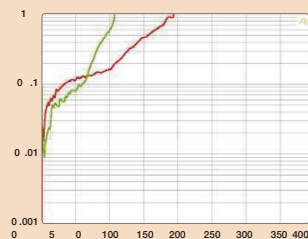
Both amplifiers come with same features and very stable Cinch sockets



• Emphaser EA-M4

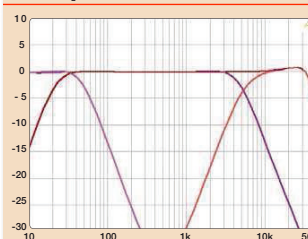


High and low pass extend to 5 kHz, so that everything at the speakers can be actively controlled

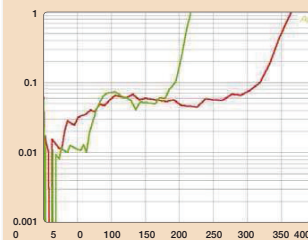


The power output curves show a constant rise in distortion, a behavior typical for class D

• Emphaser EA-M4X



Like its little sister, the M4X offers bandpass crossovers from 20 to 5000 Hz so that everything is possible from infrasonic filter to tweeter



The M4X impresses with no end of power. Into 4 ohms there is over 200 watts per channel, and into 2 ohms over 350 watts

BEST PRODUCT
Top-Class 250 - 500 €
CAR&HIFI 5/2019



4-channel amps

		Emphaser EA-M4	Emphaser EA-M4
Distributor		ACR, CH-Zurzach	ACR CH-Zurzach
Hotline		info@acr.eu	info@acr.eu
Internet www.		acr.eu	acr.eu
▶ Sound quality	40 %	1,2	1,2
Bass	8 %	1,0	0,5
Neutrality	8 %	1,0	1,0
Transparency	8 %	1,0	1,5
Soundstaging	8 %	1,5	1,5
Dynamics	8 %	1,5	1,5
▶ Lab	35 %	1,6	1,1
Power	20 %	1,5	0,5
Damping	5 %	2,5	2,5
Signal/Noise Ratio	5 %	1,5	1,5
Distortion	5 %	1,5	1,5
▶ Practice	25 %	1,4	1,4
Features	15 %	1,5	1,5
Workmanship electr.	5 %	1,5	1,5
Workmanship mech.	5 %	1,0	1,0

Technical data

	EA-M4	EA-M4X
Channels	4	4
Power @ 4 ohms (x4/x2)	106	214
Power @ 2 ohms (x4/x2)	180	354
Power @ 1 ohms (x4/x2)	0	0
Power bridged @ 4 ohms (x2/x1)	360	708
Power bridged @ 2 ohms (x2/x1)	0	0
Sensitivity max mV	220	290
Sensitivity min V	9,0	9,1
THD+N (<22 kHz) 5W	0,015	0,007
THD+N (<22 kHz) half load	0,085	0,070
Signal/Noise Ratio dB(A)	87	81
Damping 20 Hz	92	95
Damping 80 Hz	92	95
Damping 400 Hz	91	97
Damping 1 kHz	87	90
Damping 8 kHz	14	16
Damping 16 kHz	3	3

Features

	EA-M4	EA-M4X
Lowpass	50 - 5 kHz	50 - 5 kHz
Highpass	20 - 5 kHz	20 - 5 kHz
Bandpass	20 - 5 kHz	20 - 5 kHz
Sub-boost	-	-
Subsonicfilter	per HP	per HP
Phaseshift	-	-
High-Level inputs	-	-
Autosense	-	-
RCA-outputs	-	-
Start-stop compatible	• (8,6 V)	• (8,6 V)
Dimensions (L x W x H in mm)	240 x 185 x 65	350 x 185 x 65
Other	2 or 4 CH-in	2 or 4 CH-in

Summary

	EA-M4	EA-M4X
Price	about 350 Euro	about 450 Euro
Sound quality	1,2	1,2
Lab	1,6	1,1
Practice	1,4	1,4
Price/performance	very good	very good

CAR&HIFI
edition 3/2019

Mark

1,4

1,2

„Copact, powerfull, low price.“