

Eton POW 20+ - affordable 20 cm system also for the car radio



New 20 cm component speaker system

► Directly after the POW 16+ Eton is now delivering a 20 cm system from the new successful POW series. With the larger woofer interesting applications arise that we would like to highlight here.

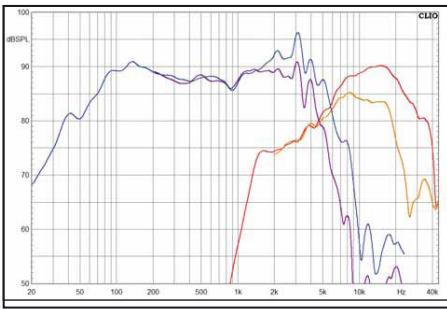
There are plenty of 20 cm systems on the market. Yet Eton was always rather alone with the POW 200 among manufacturers producing in Germany. The POW+ systems now bring fresh

wind into this successful series, which has remained affordable despite the Made in Germany tag. We are not dealing with entry level systems here, because the POWs soundwise clearly

play in a higher league. Technically they also have something to offer, even though the complexity does not lie at the high end as is the case with Onyx or Core speakers. Rather the POWs offer good sonic results for little amplifier performance so that they can also be operated with a factory radio without the need for an aftermarket amp. The key to success here is good efficiency, meaning that the speaker is expected to produce as much sound as possible from the electrical power supplied to it. For a tweeter that is no problem: the challenge is to do it for a woofer. To a certain degree a light construction is preferred here. Moreover, a good measure of magnetic energy can do no harm. This is where also using Eton's POW cone in the POW+ 20 comes into play. The cone is paper based with a specified admixture of fiberglass. This makes it very stable without much material effort. For the driver of the POW+



The crossover for the tweeter is accommodated in the cable



The woofer with no filter clean up to 3 kHz, the cone resonance is reasonably damped and disappears below the corner

Eton also relies on efficiency. Instead of a large voice coil with a diameter of 38 or 50 millimeters, they use a 25 mm coil as for the 16 cm speaker. Although that constrains the power handling ability, on the other hand it is good for the efficiency. And the compact magnetic field can also be adequately fulfilled with the moderate use of magnetic material. The POW 20+ woofer is therefore well matched to its application. Next to it is the brand new tweeter that packs a punch. Eton has managed to squeeze into the enclosure, without external modification, a woven dome with a large 28 millimeter cone. As if that were not enough, the new tweeter has also been given a small rear resonance chamber that is hardly bulky given the installation depth, but lets it run commandingly down below. The crossover for the POW+ has been made deliberately spartan. Thanks to the good-natured behavior of the POW cone, the woofer runs even without filter circuitry. Again that is good for the sound pressure level of the system as no coil is there just to gobble up a decibel. For the tweeter a slim cable crossover with a capacitor and level resistor is sufficient.



In the side view you can see that the tweeter is somewhat thicker due to the rear resonance chamber

Measurements and Sound

In front of the measurement microphone the POW 20+ easily produces 89 dB at just one watt power, thereby achieving the goal of making sound even with little power. The 20+ can also add some level on top of that when asked. The tweeter is a stunner with a really low resonance frequency of 1.4 kHz and a lot of sound pressure that nevertheless rolls off gently above 20 kHz. The 20 cm speaker is very linear over the entire mid range, its resonance peak at 3.1 disappearing off axis. In the listening test the woofer delivers a full-bodied, but not boomy bass that forcefully accentuates the bass drums. The audiophile character of the POWs has been maintained by the POW 20+, with vocals and natural instruments being very realistically and authentically represented. Especially female vocals are a pleasure, there being no lack of melodiousness. The new tweeter is responsible for that, and it does an excellent job. It always contributes the right amount of treble, while keeping characteristically pleasantly restrained. The entire system sounds self-contained and pleasantly mature so that even listening for a long period is not tiring or in any way irritating to the listener. All in all an all-round success that offers a bit of everything and that at a high level.

Summary

The POW 20+ convinces with a well thought-out design and Made in Germany quality. And then you get excellent sound for your money. Moreover, thanks to the good sound pressure level, the POW 20+ is one of the few 20 cm systems that also runs directly off the car radio.



Eton POW 20+

Price	about 290 Euro
Distributor	ACR, CH-5330 Zurzach
Hotline	info@eton-gmbh.eu
Internet	www.eton-gmbh.eu

Summary

Sound quality	55 %	1,2	■■■■■
Bass	11 %	1,0	■■■■■
Neutrality	11 %	1,0	■■■■■
Transparency	11 %	1,0	■■■■■
Soundstaging	11 %	1,5	■■■■■
Dynamics	11 %	1,5	■■■■■
Lab	30 %	1,5	■■■■■
Frequency response	10 %	1,5	■■■■■
max. volume	10 %	1,5	■■■■■
Distortion	10 %	1,5	■■■■■
Practice	15 %	1,7	■■■■■
Crossover	10 %	2,0	■■■■■
Workmanship	5 %	1,0	■■■■■

Technical Data

Diameter TT	208 mm
Cutout diameter TT	178 mm
Mounting depth TT	68 mm
Magnet diameter	84 mm
Tweeter dome diameter	28 mm
Tweeter housing diameter	45 mm
Slope	-12 dB
Tweeter protection	-
Tweeter volume adjustment	-
Grill	-
other	-
Nominal impedance	3 ohms
DC resistance Rdc	2,49 ohms
Coil inductivity Le	0,29 mH
Coil diameter	25 mm
Cone surface Sd	209 cm ²
Resonance frequency Fs	64 Hz
Mechanical quality Qms	4,88
Electrical quality Qes	0,91
Total quality Qts	0,77
Equivalent volume Vas	19,0 l
Moving mass Mms	19,9 g
Rms	1,64 kg/s
Cms	0,31 mm/N
B*I	4,67 Tm
Pressure 2 V, 1 m	89 dB
Power handling	20 – 80 W

Emphaser POW 20+

Top-Class 1,4

CAR&HIFI 3/22

Price/performance: very good

"Convincing sound and superbly made."