

Graphit 10-2 + 10-4: Fine Sound Quality Subwoofers from Eton

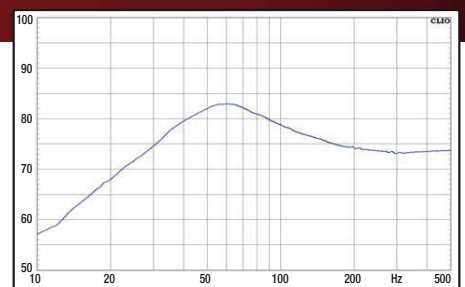
# High-end subwoofers



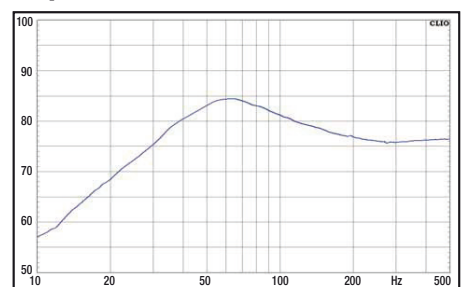
► With the Graphit Series Eton has something big in store. Woofers, mid-range speakers and tweeters are already lined up, and in contrast to the high-end lines Core and Onyx there are also the Graphit subwoofers.

In the small speaker segment Eton is excellently placed with something for everyone, from price-conscious first-time buyers to die-hard audiophiles. However, there is not so much out there in the way of subwoofers, partly for historical reasons, because in the past larger loudspeakers were difficult to make in Germany. For baskets up to 25 cm that is no longer a problem and so the Made in Germany label is also emblazoned on our Graphit 10 subwoofers. Eton continues to place importance on domestic production with the expectation of quality which is evident here. The Graphit woofers are beautifully made: from the stable cast aluminum baskets through the driver to the

smallest plastic part they have turned out to be real gems. Great surfaces, here and there with a milled or laser finish – one just cannot get enough of this Eton quality. All Graphit woofers have dual voice coils, with a choice of 2 x 2 ohms or 2 x 4 ohms so that there is something for everyone. The design of the die-cast basket has been an Eton brand signature for years among high-end series. The basket is held together by nice and airy triple spokes, and has rear vent openings for the space under the centering spider. The 64-mm voice coil is impressive for a 10-in woofer; Eton has not cut corners here, but conceived the Graphit woofers in the interest of high resilience. The coils are



The Graphit 10-2 with 2 x 2 ohms in series shows a very low cut-off frequency at the lower end, and that is very relevant for an enclosed subwoofer



The Graphit 10-4 with dual voice coils in parallel is one dB louder than the 10-2 when output-adjusted

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Large voice coils and high-tech fiber cones make the Graphit woofers into premium subwoofers

wound on an aluminum former acting as a heat sink. As an extra trick the developers have fitted an aluminum dust cap at the end of the coil former, which additionally provides a cooling surface. The cone is another special part that is characteristic for the Graphit Series. It was also probably the inspiration for the choice of name. It is of course not made of graphite but has a gray sheen with an irregular pattern, and there is some carbon in it. A sandwich of composite carbon fibers and glass fibers ensures enormous stability of the cone. And that is with a manageable material thickness and therefore low weight. This high-tech construction is certainly a worthy successor to Eton's legendary Hexacone cone that was patented in 1985 being the gold standard for decades.

## Measurements and Sound

What is the first thing to do with a single chassis subwoofer? Answer: measure the transient response and parameters, after which the Graphit 10 twins straightaway show what is going on. The 10-2 and 10-4 have very powerful drivers and low Q-factors, which also suggests operating them in ventilated enclosures. Eton has upheld this among other things, and in dauntingly small enclosures. However, the most prominent features of the woofers are the low resonant frequencies of 22 Hz for the 10-4 and only 20 Hz for the 10-2. This leaves the woofers screaming once again for enclosed housings. Installing them in an enclosure raises the resonance frequency, the more so the smaller the housing. Here the low resonance frequencies in free air of the Etons are really great because in a compact 16 liters they still achieve installed resonances of under 40 Hz. That is very low and means a lot of deep bass. And that is exactly what we experienced in the listening test. The Graphit units are incredible for ten inch speakers. They need a bit of power but the top class impression is rewarding. They follow complex bass lines with wonderful precision regardless of the pitch.

It is no effort to go right down into the deepest frequency basement. If you like listening to organ pipes then you will soon learn to value these woofers. But they also really go to town with a double base or



The build quality and wonderful driver are impressive

a booming base drum to the enjoyment of the listener. Peak level is perfectly in order for the demands of HiFi. Apart from that Eton has the Force woofers for sound pressure disciples. The Graphit woofers are clearly something for audiophiles, and in this field are pretty much the best there is.

## Summary

With the Graphit subwoofers Eton has created a really wonderful series for sound quality enthusiasts. Strongly recommended!



Subwoofer	Eton Graphit 10-2	Eton Graphit 10-4
Price	about 550 Euro	about 550 Euro
Distributor	ACR CH-5330 Zurzach info@eton-caraudio.eu eton-audio.com	ACR CH-5330 Zurzach info@eton-caraudio.eu eton-audio.com
Hotline		
Internet		

Summary			
▶ Sound quality	50 %	0,9	0,9
Bass foundation	12,5 %	1,0	1,0
Pressure	12,5 %	1,5	1,5
Clearance	12,5 %	0,5	0,5
Dynamics	12,5 %	0,5	0,5
▶ Lab	30 %	1,8	1,8
Frequency response	10 %	1,0	1,0
Efficiency	10 %	3,0	3,0
max. volume	10 %	1,5	1,5
▶ Workmanship	20 %	1,0	1,0

Technical data		
Diameter	26,5 cm	26,5 cm
Mounting diameter	23,5 cm	23,5 cm
Mounting depth	12,5 cm	12,5 cm
Magnet diameter	15,5 cm	15,5 cm
Weight	7,3 kg	7,3 kg
Nominal impedance	2 x 2 ohms	2 x 4 ohms
DC resistance Rdc	3,89 ohms	1,73 ohms
Coil inductivity Le	3,73 mH	1,37 mH
Coil diameter	64 mm	64 mm
Cone surface Sd	343 cm <sup>2</sup>	343 cm <sup>2</sup>
Resonance frequency fs	20 Hz	22 Hz
Mechanical quality Qms	4,80	5,46
Electrical quality Qes	0,41	0,45
Total quality Qts	0,38	0,41
Equivalent volume Vas	57,2 l	56,5 l
Moving mass Mms	185 g	147 g
Rms	4,81 kg/s	3,79 kg/s
Cms	0,35 mm/N	0,34 mm/N
B*1	14,85 Tm	8,96 Tm
Pressure 1 W, 1 m	83 dB	84 dB
Power handling	300 – 500 W	300 – 500 W
Test chamber	closed 16 l	closed 16 l
Port (d x l)	-	-

