

### ATB120QBA: Active subwoofer from Axton



# Compact Active Subwoofer

► **Small, easy to handle and quickly installed: those are the attributes that make an active subwoofer desirable. Axton presents a perfect example with the ATB120QBA.**

Active subwoofers are the simplest solution for getting bass in the car, especially when nothing must be changed to the rest of the system. If you want to prescribe a little more bass to the music from a factory radio you will be pleased with these active subs because they do not need an extra amplifier – it is already built in. Our Axton has the dimensions of a shoe box and does not really take up much space in the trunk. Although it can be quickly disconnected it will probably mostly remain in the

car, as it hardly gets in the way when loading and you can also just place things on top of it. This is taken care of by the practical downfire principle: the woofer sits in the enclosure floor, with feet providing 2 cm of air space underneath. That is perfectly adequate to let the sound exit unhindered, being no problem at all for the long bass waves. Incidentally, that provides ideal protection for the woofer cone that for the ATB120QBA is further enhanced by a metal grille. On the sides of the MDF enclosure, which are very well made by the way, we first find the amplifier module and the bass reflex channel opposite. It sits in the form of a triangle in one of the top edges and

**The downfire principle with the woofer in the enclosure floor ensures the best protection for intensive everyday use**



**The small amplifier module has controls for sensitivity, boost, low pass and phase**

also needs a few centimeters of air to breathe. The amplifier module is compact and allows volume control via a cable remote. Nearby is a boost and a low-pass control for adjustment to the door speakers. There is almost nothing of the actual power amp to be seen, working in analog mode with one amplifier chip. This has the advantage





**AXTON has put together a fully-fledged 20 cm bass driver that would also cut a good figure in any other enclosed woofer**

that you can forget about any reception interference worries. The woofer mounted in the floor has a nominal diameter of 20 centimeters. The fellow in front of us is very well made and cuts no corners. Metal basket and ferrite drive are robustly made. The flat but stiff cone out of woven fiber glass is set in motion by a 38-millimeter voice coil.

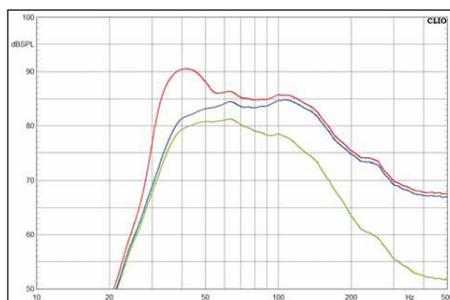
### Measurements and Sound

On the test bench the amplifier module reveals a fixed subsonic filter set at 35 Hz that effectively keeps frequencies that are too low away from the 20 cm woofer. Just above that the bass boost operates in a quite narrow band, although the ATB120QBA does not really need it. The little amplifier module easily makes almost 100 watts for the woofer. The 2-ohm design is exactly right for getting a lot of power from the circuit, and perfectly adequate for the 20 cm woofer in any case. The acoustic measurement is evidence that the woofer is finely tuned. Thanks to the low resonance of the bass reflex system the amplitude response extends down to below 40 Hz. That is authentic deep bass, and from an enclosure with an internal volume of just 11.5 liters. In the hearing test we were pleased

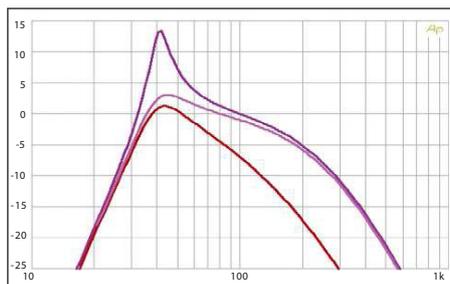


**At the rear of the amplifier module an unassuming aluminum heat sink block indicates that here we are dealing with power electronics**

about the clean reproduction of the little Axton reaching deep into the frequency basement. The ATB120QBA plays like a genuine cabinet subwoofer, bringing out powerful bass drums. Even with electronic beats it does not give up too soon. The 20 cm woofer sounds at least like a 25 cm one; only at maximum level does the cone surface eventually set limits. However, these are so comfortably located that the woofer always adequately finds its voice. Likewise we were very satisfied with the precision of the reproduction. Especially in the mid and upper bass regions the Axton performs solidly and plays nice punchy bass lines.



**Despite an internal volume of just 11.5 liters, the ATB120QBA achieves a breathtaking lower cut-off frequency of just under 40 Hz**



**The frequency response of the power amp shows an enhancement at the lower end, and a fixed subsonic filter to protect the woofer from ultra low frequencies**

### Summary

With its build format, the ATB120QBA is perfect for everyday use. A compact subwoofer that does not get in the way and delivers a very mature bass performance with a proper deep bass response. A very rewarding bass enhancement.



### Axton ATB120QBA

Price	about 230 Euro
Distributor	ACR, CH-5330 Zurzach
Hotline	info@acr.eu
Internet	www.acr.eu

### Summary

▶ Sound quality	30 %	1,3	■■■■■
Bass foundation	7,5 %	1,5	■■■■■
Pressure	7,5 %	1,5	■■■■■
Accuracy	7,5 %	1,5	■■■■■
Dynamics	7,5 %	0,5	■■■■■
▶ Lab	40 %	1,4	■■■■■
Frequency response	10 %	1,0	■■■■■
max. volume	10 %	1,5	■■■■■
Amp power	20 %	1,5	■■■■■
▶ Practice	30 %	1,2	■■■■■
Features	10 %	1,0	■■■■■
Workmanship electr.	10 %	1,5	■■■■■
Workmanship mech.	10 %	1,0	■■■■■

### Technical Data

Width	36,5 cm
Height	18,5 cm
Depth	26,5 cm
Volume	BR 11,5 l
BR port (d x l)	40 cm <sup>2</sup> x 26 cm
Weight	7,3 kg
Chassis diameter	20 cm
Nominal impedance	2 ohms
Coil diameter	38 mm
Power @ nominal impedance	94 W
Sensitivity max mV	120 mV
Sensitivity min V	1,2 V
THD+N (<22 kHz) 5 W	0,07 %
THD+N (<22 kHz) half load	0,18 %
Signal/Noise Ratio dB(A)	72 dB

### Features

Lowpass	70 – 150 Hz
Bass-boost	0-12 dB/45 Hz
Subsonicfilter	30 Hz/24 dB, fixed
Phaseshift	pole switching 180°
Low-Level inputs	•
High-Level inputs	•
Autosense	•, DC
Start/Stop compatible	• (7,3 V)
Remote	•, Gain
Other	-

### Axton ATB120QBA

**Upper-Class 1,3**

**CAR & HiFi** 1/22

Price/performance: very good

"Super compact active woofer for everyday use."