

Axton A101 + A401 + A601 - new compact amplifiers under test

New Axton Digital Amplifiers

► **These have become real designer pieces, Axton's new A-series. We have the mono, four and six channel models under test.**

A very good price/performance is always paramount for Axton. Thus the power amps from Axton are traditionally good and affordable. But that does not have to mean that you must content yourself with outdated or second-rate technology. In fact the new A-series shines with modern construction and the latest features. The series consists of the monoblock A101, the two-channel power amp A201, the four-channel A401 and the six-channel model A601. Prices lie between 180 and 280 euros. Common to all is a smart matte look design which is why the amplifiers appear very high quality. The cabinets are made completely of aluminum continuous casting, with only the front terminal panels being made of sheet metal. And they have become compact, as is usual these days. Owing

to space constraints we also find Molex connectors instead of RCA sockets and speaker terminals; only on the mono are there still massive connection terminals for the subwoofer. The mono at only 18.5 centimeters in length is also the smallest, but even the A401 is just 23 centimeters, while the length of the A601 is a good 28 centimeters. The mono is even 1-ohm stable, while all the multi-channel models take loads of 4 or 2 ohms. The entire series is naturally designed in accordance with the class D principle of operation, the method of choice when it comes to getting high output from little space. The reason is the higher efficiency compared to class AB amplifiers, which leads to less heat dissipation so that smaller heat sinks are sufficient. The configuration for the A101 is very good: not only is a level

remote control included, there is also a quite generous filter configuration with low pass, subsonic filter and boost. The multi-channel models are somewhat more sparsely configured: here each channel pair has only either high pass or low pass up to 400 Hz as desired so that a subwoofer and small speakers can be controlled. The input terminal contact options are commendable for all power amps. There is a switch for selecting a High Level or normal RCA signal, and there is an auto turn-on that detects the DC-offset of common car radios as well as switching on if there is a signal input. In the case of the A401 and A601 there is additionally the practical option of providing all channels with a pair of inputs. The internal design of the new A amplifiers is characterized by the use of space. Naturally tiny SMD components are used and the circuit boards are full of them. The mono is still the most sparse-



The front panels of the A-series measure only 105 x 40 mm. The signal is input using Molex connectors, either High or Low level as desired

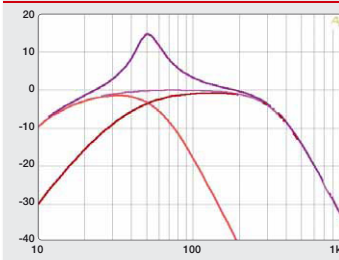
ly doted, with only particularly thick components like the transformer and coils taking up much space as a lot of power has to be pushed through. The mono channel can then also work with four transistors, whereas for the multi-channel models two are sufficient. The four-channel model is clearly laid out. Here we find filtering, the power supply unit, buffering and PSU regulation on one side, while the other half of the circuit board is occupied by four banks of amp channels. The power transistors are mounted on the sides of the heat sink, and for each channel there is a driver chip and class D filtering, recognizable by the large coil. Naturally, in the A601 we find 6 channels of the same design, only they are not all on one side of the cabinet, but distributed 5 + 1 to cut down the length. The layout is therefore more labyrinthine; for example the power transistors are on the opposite side to the driver stages and filtering. The PSU regulation is placed

on a daughter board so that the A601 overall is only a little longer than the A401. It pushes out almost 100 watts per channel at 4 ohms and this soars up to 174 watts at 2 ohms. This also makes it a quite serious power amp even for power hungry speaker systems or woofers, e.g. as in BMW and

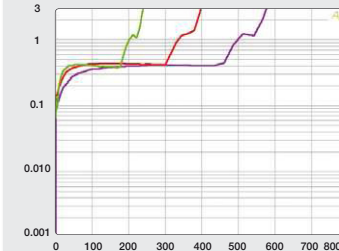
a few watts less than its four-channel sister. That is worth all due credit and

Technik

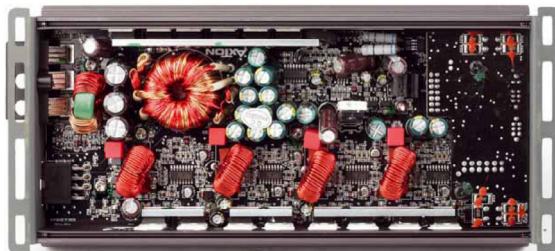
• Axton A101



The A101 has everything under control, including subsonic filter and bass boost: there is nothing to fault here



The A101 is one of the 1-ohm stable mini power amps. Then there is 550 watts, but at 2 and 4 ohms there is also plenty of power



Mercedes cars. The distortion figures level out at a low 0.1 %, which is ok, though nothing to shout about for a four-channel power amp. The six-channel A601 does it better and power wise into 4 ohms is in no way inferior to A401. Even into 2 ohms it puts out only

All amplifiers are class D working with one driver IC per channel and MOSFETS

Mono amp

Axton A101

Price
Distributor
Hotline
Internet www.

about 180 Euro
ACR
CH-5330 Zurzach
info@acr.eu
acr.eu

Summary

Sound quality	20 %	1,1	■■■■■
Bass foundation	5 %	1,0	■■■■■
Pressure	5 %	1,0	■■■■■
Accuracy	5 %	1,5	■■■■■
Dynamics	5 %	1,0	■■■■■
Lab	55 %	1,7	■■■■■
Power	40 %	1,5	■■■■■
Damping factor	5 %	2,0	■■■■■
Distortion	5 %	2,5	■■■■■
Signal/Noise Ratio	5 %	2,0	■■■■■
Practice	25 %	1,2	■■■■■
Features	15 %	1,0	■■■■■
Workmanship electr.	5 %	1,5	■■■■■
Workmanship mech.	5 %	1,5	■■■■■

Technical data

Channels	1
Power @ 4 ohms	228
Power @ 2 ohms	375
Power @ 1 ohms	553
Sensitivity max mV	370
Sensitivity min mV	9,0
THD+N (<22 kHz) 5W	0,075
THD+N (<22 kHz) half load	0,350
Signal/Noise Ratio DB(A)	65
Damping 20 Hz	106
Damping 40 Hz	124
Damping 60 Hz	124
Damping 80 Hz	131
Damping 100 Hz	131
Damping 120 Hz	131

Features

Lowpass	70 – 250 Hz
Highpass	–
Bandpass	20 – 150k Hz
Bass-boost	0 – 15 dB/50 Hz
Subsonicfilter	20 – 50 Hz/12 dB
Phaseshift	–
High-Level inputs	• (adapter)
Autosense	•, DC or signal
RCA outputs	–
Start/Stop compatible	• (7,6 V)
Dimensions (L x W x H mm)	285 x 105 x 40
Other	remote

Upper-Class 1,5

CAR & HIFI 6/21

Price/performance: excellent

“Modern, powerful and affordable.”

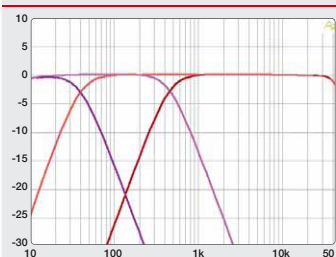
a sign of a soundly dimensioned power supply. As regards distortion, it is in fact way better than the rest, and despite the many components makes no more noise than the A401. With that the A-series successfully passes the lab test, the A601 being particularly commendable.

Measurements and Sound

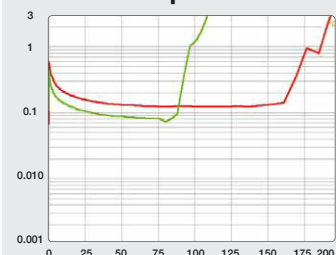
The bass power amp A101 shows a very mature power output. Even into 4 ohms the output at just 230 watts is sufficient for a small to medium subwoofer. Into 2 ohms there is 375 watts available which is more than good enough for any normal sub. What is by no means obvious is that the A101 can also drive a 1-ohm subwoofer. Here it releases a good 550 watts, which also satisfies any hunger for ambitious sound levels. All other measurements lie in the green zone; there are no top scores, but nothing to find fault with. The A401 also impresses with plenty of power. Soundwise the A101 has lots of impressive deep bass response. Even with quite dark electro beats it demands something from the subwoofer. With R'n'B it shakes through the car pretty good, and the pressure build up is absolutely right. Aside from the wicked shaking the A101 feels good, not being frightened of a rocky bass drum and does an effective job with fast techno beats. The multi-channel power amps also have enough gusto, even at deep tones, to ask the best from the speakers when it gets really dynamic. When worked hard they also do not lose their puff that fast, so the sound remains clean even at higher volumes. The mid-range and the highs are managed faultlessly, everything sounding as expected, whatever the music genre. Drum cymbals get a nice sparkle, and male as well as female vocalists sound realistic.

Technics

• Axton A401

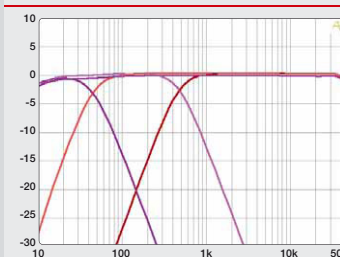


The filters of the A401 run from 40 to 400 Hz. That is adequate for separating subwoofers and component speaker systems, but there is no bandpass

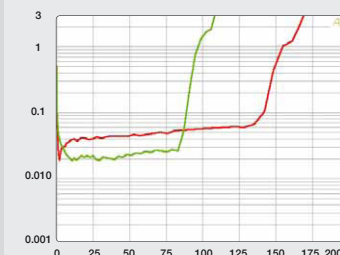


At 0.1 % the A401 produces little distortion, though that is nothing to shout about

• Axton A601



For the A601 all channel pairs have the same filters as the A401, there being no differentiation between controlling subwoofers and tweeters etc.



The A601 delivers its output of approx. 100 and 150 W with very low distortion. With figures around 0.02 % and 0.04 % respectively it is very good in this respect

Summary

For little money the new A-amplifiers put a lot of music into the car. They have become compact and powerful and are technically abreast the times.

BEST PRODUCT
Upper-Class
CAR&HIFI 6/2021

Multi-channel amps

	Axton A401	Axton A601
Price	about 200 Euro	about 280 Euro
Distributor	ACR CH-5330 Zurzach info@acr.eu acr.eu	ACR CH-5330 Zurzach info@acr.eu acr.eu
Hotline		
Internet www.		

Summary

▶ Sound quality	40 %	1,2	1,2
Bass foundation	8 %	1,5	1,5
Pressure	8 %	1,0	1,0
Transparency	8 %	1,0	1,0
Accuracy	8 %	1,0	1,0
Dynamics	8 %	1,5	1,5
▶ Lab	35 %	1,6	1,3
Power	20 %	1,0	1,0
Damping factor	5 %	3,5	2,5
Distortion	5 %	1,0	1,5
Signal/Noise Ratio	5 %	2,5	1,0
▶ Practice	25 %	1,5	1,5
Features	15 %	1,5	1,5
Workmanship electr.	5 %	1,5	1,5
Workmanship mech.	5 %	1,5	1,5

Technical data

Channels	4	6
Power @ 4 ohms	96	6 x 96
Power @ 2 ohms	174	6 x 154
Power @ 1 ohms	0	0
Sensitivity max mV	348	3 x 308
Sensitivity min mV	0	0
THD+N (<22 kHz) 5W	440	440
THD+N (<22 kHz) half load	9,3	8,6
Signal/Noise Ratio DB(A)	0,171	0,025
Damping 20 Hz	0,084	0,023
Damping 80 Hz	93	87
Damping 400 Hz	46	81
Damping 1 kHz	45	84
Damping 8 kHz	45	86
Damping 16 Hz	43	81

Features

Lowpass	40 – 400 Hz	40 – 400 Hz
Highpass	40 – 400 Hz	40 – 400 Hz
Bandpass	–	–
Bass-boost	–	–
Subsonicfilter	–	–
Phaseshift	–	–
High-Level inputs	• (adapter)	• (adapter)
Autosense	•, DC or signal	•, DC or signal
RCA outputs	–	–
Start/Stop compatible	• (7,5 V)	• (8,6 V)
Dimensions (L x W x H in mm)	230 x 105 x 40	282 x 105 x 40
Other	2, 4 CH in	2, 6 CH in

Upper-Class 1,4

CAR&HIFI 6/21

Price/performance: very good

"Modern, powerful and affordable."

Upper-Class 1,3

CAR&HIFI 6/21

Price/performance: excellent

"Modern, powerful and affordable."