

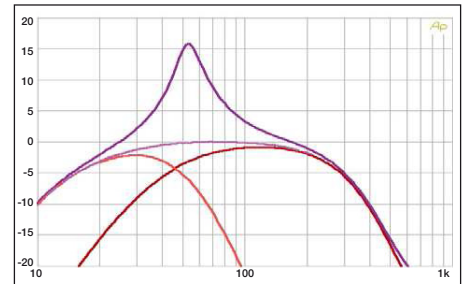
Axton AT101 + AT401: Compact Power Amps for Truck and Bus

Sound for Truckers

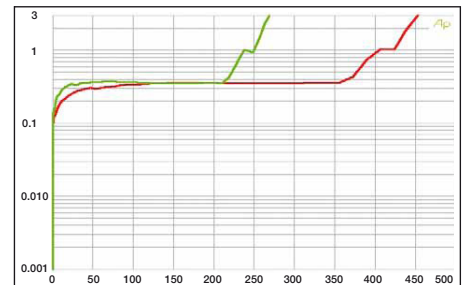
Whereas car drivers have no problems finding the right amplifier from the wide range on offer, the choice facing truck drivers is rather limited. Axton has now come to their aid with a snug fitting affordable power amp series.

Within the Axton power amp range the A Series goes from the mono A101, through the A201 and A401, and up to the six-channel A601. Now they have decided to also offer at least the two most important models in a 24 Volt variant. The result is the AT401 with 4 channels and the AT101 as a mono subwoofer power amp. These require a 24-volt working voltage and so are made for vehicles with a 24 V power supply, for example trucks, buses and some truck based motorhomes. Otherwise the AT amplifiers are no different from 'normal' 12 Volt models. Technically a power supply transformer is used with a winding ratio half the size so as to bring the supply voltage to the rail level of some tens of volts required for the amplifier circuitry. At this rail Voltage the amplifier can then output sufficient power to the speakers – which is how most car audio amplifiers work. The Axton AT amplifiers are naturally state of the art. Despite their

very compact size they pack a decent amount of power, which is made possible by the class D technology that is becoming ever more prevalent. Thanks to their very good efficiency not much heat is generated thereby reducing the requirement for heat sinks. The result is small enclosures with a stunning power performance potential. In addition to the above mentioned power transformer and buffering our AT401 includes 4 class D channels that except for a driver chip are of discrete construction. Therefore, the AT401 is stuffed with tiny SMD components. The output stage uses two power transistors per channel, followed by low pass filtering with large coils and film capacitors as is typical for class D. The AT101 looks similar, though the filter coil of the single channel has larger dimensions since it has to handle more power. Both amplifiers feature inputs that receive RCA signals as well as high levels from the radio speaker lines; auto turn-on,



The AT101 comes with full feature set. Boost and infrasonic variable, the low-pass goes up to 250 Hz

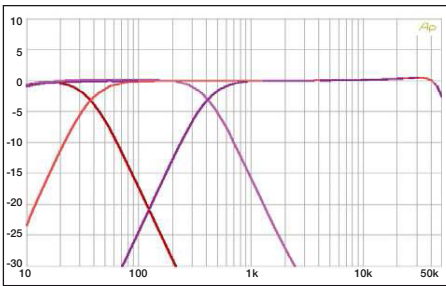


The AT101 offers its full power of 423 W at 2 ohms. A 4-ohm subwoofer or woofer is powered at 250 W

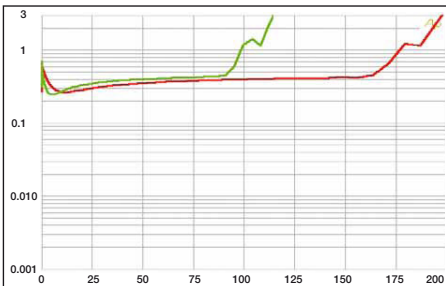
switchable from signal to DC-offset, makes a remote control redundant. The AT401 is equipped with high and low pass filters, with the option of controlling a speaker system, or upper-mid range or a subwoofer or woofer speakers. The mono AT101 can do much more: it has not only the obligatory low pass filter, but with an infrasonic filter and bass boost it can control subwoofers perfectly.

Measurements and Sound

In the lab the mono AT101 delivers impressive results. It is 2-ohm stable, pushing out an impressive 423 watts, which is astounding for a small low-priced power amp. This makes it suitable for also driving fully-fledged subwoofers or several small woofers. At 4 ohms that's about 250 watts, which is more than enough with a normal subwoofer for everyday operation. Distortion lies at around 0.3 % which is in the green zone. With its flat frequency response the four channel AT401 also qualifies for HiRes applications. With no great overshoots it easily masters the 50 kHz. Furthermore, in terms of power output, with 95 and 173 watts into 4 and 2 ohms respectively it has more than enough – no one needs more power for front speakers, and 2-ohm woofers or a 4-ohm sub in bridge mode is no



The AT401 has a standard filter configuration. Either high pass or low pass, each tunable from 40 to 400 Hz

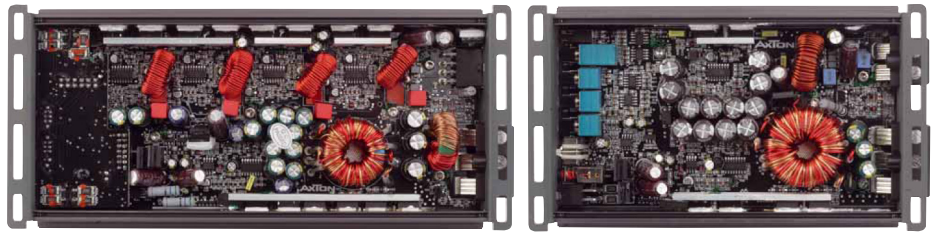


At around 100 W into 4 ohms the AT401 also boosts large component speaker systems. At 2 ohms it gives out 173 watts, or for a 4-ohm sub 346 watts

problem. Distortion-wise the curves for the AT401 closely resemble those for the AT101 – except for the absolute output level, naturally. This means that the four channel amp also has a distortion level of approx. 0.3 % and not a level lower than the mono as actually usual. Speaking of distortion, that is also the keyword for the AT101 in the hearing test. It pulls no punches in helping a subwoofer show its might in all situations. Solid kicks on the bass drum come over sonorous and clear, while electronic deep bass does not cause the little Axton to give up the ghost. Its four-channel cousin the AT401 really goes to town with vocals and instruments, which it clearly brings out of the sound. All musical players retain their colors even during jumps in dynamics while working harmoniously together. For bass having plenty of power is a big help to the 401: the 16-cm woofer is pushed to the limit, responding with a crisp punchy bass feel. In general, the AT401 provides atmosphere, playing crisply with a vibrant dynamic range.

Conclusion

The AT401 and AT101 are no exceptions to the Axton principle. Not expensive high end, but make super power amps at a fair price. Now available for truckers.



The AT101 and AT401 are Class-D amps. Easy to recognize: There is on driver-chip and one low-pass-coil per channel

Axton AT101

Price about 170 Euro
Distributor ACR, CH-5330 Zurzach
Hotline info@acr.eu
Internet www.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 % | 2,0 | ■■■■■ |
| Power | 40 % | 2,0 | ■■■■■ |
| 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 | 250 |
| Power @ 2 ohms | 423 |
| Power @ 1 ohms | 0 |
| Sensitivity max mV | 400 |
| Sensitivity min V | 9,0 |
| THD+N (<22 kHz) 5 W | 0,089 |
| THD+N (<22 kHz) half load | 0,337 |
| Signal/Noise Ratio dB(A) | 65 |
| Damping 20 Hz | 128 |
| Damping 80 Hz | 131 |
| Damping 400 Hz | 131 |
| Damping 1 kHz | 131 |
| Damping 8 kHz | 131 |
| Damping 16 kHz | 132 |

Features

| | |
|------------------------------|------------------|
| Lowpass | 50 – 250 Hz |
| Highpass | – |
| Bandpass | 220 – 150k Hz |
| Bass-boost | 0-18 dB/50 Hz |
| Subsonicfilter | 20 – 50 Hz/12 dB |
| Phaseshift | – |
| High-Level inputs | • (Adapter) |
| Autosense | •, DC or signal |
| RCA outputs | – |
| Start/Stop compatible | – (24 V) |
| Dimensions (L x W x H in mm) | 185 x 105 x 40 |
| Other | remote 24 V |

Axton AT101

Upper-Class 1,6

CAR & HiFi 5/21

Price/performance: excellent

“AT amplifiers are good power amps for 24-volt electrical systems at a very reasonable price.”

Axton AT401

Price about 200 Euro
Distributor ACR, CH-5330 Zurzach
Hotline info@acr.eu
Internet www.acr.eu

Summary

| | | | |
|---------------|------|-----|-------|
| Sound quality | 40 % | 1,2 | ■■■■■ |
| Bass | 8 % | 1,5 | ■■■■■ |
| Neutrality | 8 % | 1,0 | ■■■■■ |
| Transparency | 8 % | 1,0 | ■■■■■ |
| Soundstaging | 8 % | 1,0 | ■■■■■ |
| Dynamics | 8 % | 1,5 | ■■■■■ |

| | | | |
|--------------------|------|-----|-------|
| Lab | 35 % | 1,6 | ■■■■■ |
| Power | 20 % | 1,0 | ■■■■■ |
| Damping factor | 5 % | 3,5 | ■■■■■ |
| Distortion | 5 % | 1,5 | ■■■■■ |
| Signal/Noise Ratio | 5 % | 2,5 | ■■■■■ |

| | | | |
|---------------------|------|-----|-------|
| Practice | 25 % | 1,5 | ■■■■■ |
| Features | 15 % | 1,5 | ■■■■■ |
| Workmanship electr. | 5 % | 1,5 | ■■■■■ |
| Workmanship mech. | 5 % | 1,5 | ■■■■■ |

Technical Data

| | |
|---------------------------|-------|
| Channels | 4 |
| Power @ 4 ohms | 95 |
| Power @ 2 ohms | 173 |
| Power @ 1 ohms | 0 |
| Power bridge 4 ohms | 346 |
| Power bridge 2 ohms | 0 |
| Sensitivity max mV | 440 |
| Sensitivity min V | 9,7 |
| THD+N (<22 kHz) 5 W | 0,265 |
| THD+N (<22 kHz) half load | 0,396 |
| Signal/Noise Ratio dB(A) | 87 |
| Damping 20 Hz | 49 |
| Damping 80 Hz | 49 |
| Damping 400 Hz | 48 |
| Damping 1 kHz | 45 |
| Damping 8 kHz | 14 |
| Damping 16 kHz | 4 |

Features

| | |
|------------------------------|-----------------|
| Lowpass | 40 – 400 Hz |
| Highpass | 40 – 400 Hz |
| Bandpass | – |
| Bass-boost | – |
| Subsonicfilter | – |
| Phaseshift | – |
| High-Level inputs | • (Adapter) |
| Autosense | •, DC or signal |
| RCA outputs | – |
| Start/Stop compatible | – (24 V) |
| Dimensions (L x W x H in mm) | 230 x 105 x 40 |
| Other | 24 V |

Axton AT401

Upper-Class 1,4

CAR & HiFi 5/21

Price/performance: excellent

“AT amplifiers are good power amps for 24-volt electrical systems at a very reasonable price.”