

INTRODUCTION

We are pleased that you have chosen one of these multichannel amplifiers from axxent. Please read the following instructions for optimal results when using it.

IMPORTANT FUNCTIONAL FEATURES

Amplifiers of the axxent series with additional designation „TS-D“ are network-compatible through digital Dante/AES67 input and have isolated constant voltage outputs for loudspeakers and loudspeaker lines with transformer matching. The amplifiers can also be operated with low impedance.

The AX-2120TS-D/AX-2240TS-D/AX-2360TS-D amplifiers have two discrete audio channels with a common power supply. All channels can be operated either low impedance or with the constant voltage outputs 70 V or 100 V. Since you may use each channel with low impedance OR high impedance (70/100 V), you will meet almost all requirements in installations.



IMPORTANT SAFETY PRECAUTIONS

On rear side of the amplifier you can find a CAUTION symbol.

To reduce the risk of electric shock, do not remove the cover. No user-serviceable parts inside. Refer servicing to qualified personnel.



CONTROLS ON THE FRONT

- 1: You will notice two buttons on the left front. These are the gain controls for the two channels of the amplifier. The gain controls are also commonly referred to as volume controls. The gain controls can be adjusted with control knobs or, for safety, covered with the blind plugs supplied with the amplifier. Of course, the potentiometer knobs must be removed first.
- 2: Each gain control has three LED indicators - green, green and red. The lower LED only indicates the operation of the power amplifier - when switched on. The middle green LED indicates that an input signal is present. The upper red LED indicates that the maximum input level has been exceeded and that the automatic limiter (signal limiter) is engaged.
- 3: To the right of the level controls you will find another two-stage LED display, yellow, red. The yellow LED at the bottom indicates bridge operation. This so-called bridge mode serves to double the power when the channels are operated in low-impedance mode, i.e. with the AX-2360TS-D: 2x360 W result in about 720 watts. Realistically, you can expect 650 watts. This power is then available at 8 ohms. This will be described in more detail later.
The upper red (Protect) LED indicates the self-protection of the amplifier. When this LED is on, you will no longer hear any sound, as the amplifier has switched off and can only start up again after the fault has been rectified. In this case, please call the technician!
Additional controls on the front of the amplifiers were deliberately omitted to prevent operating errors.



REAR OF THE AMPLIFIER (ALL AMPLIFIERS IDENTICAL)

- 1: On the far left you can see the large, sturdy **mains switch** at the top. This is a rocker switch - in the upper position on and the lower position off.
- 2: Below the mains switch is the **mains input socket** according to the international IEC standard. Deliberately, no permanently connected mains cable was used here, so that the mains cable can be easily removed in case of a possible malfunction of the amplifier. The mains cable is included with the amplifier. The mains input socket also includes a fuse holder.
If the amplifier malfunctions, i.e. if you have switched on the amplifier and the green „Power“ LEDs do not light up, the mains fuse may be defective. Please call the technician and, if possible, do not replace it yourself. Just in case: The mains fuse is 4 A (AX2120TS-D), 6.3 A (AX2240TS-D), 4 A (AX2360TS-D), slow-blow and has the dimensions 5x20 mm.
- 3: **Digital Dante/AES67 input:** To the right of the switch and the mains input socket you will see an RJ45 socket. This is the input socket for a digital Dante/AES67 signal. This digital input is fully compatible with the usual Dante audio standard. In case of a digital malfunction, there is a recessed reset button above the RJ45 socket. This resets the set digital parameters to the default settings. To the right of the RJ45 socket are the digital/analogue selector switches. Here you can select for each amplifier channel whether you want to use the digital or the analogue input. Below the selector switch you will see a push-button switch for selecting the digital input level. The default setting is 0 dBu. In the depressed position -9 dBu (see page 4)
- 4: **Analogue input sockets of the amplifier:** The analogue input sockets of the amplifier are designed as 3-pole XLR sockets. These can be found on the lower side, Input 2, Input 1. These inputs are electronically balanced and have an input impedance of 20 kOhm. Any standard microphone cable, designed according to international standards, can easily be used here for connection to mixing consoles or audio distribution units.
- 5: Each input connector features an output xlr male connector „SEND1“ and „SEND2“ for daisy-chaining to additional amplifiers.
- 5: Left of Input 1, there is a recessed **pressure switch**. This serves to activate the bridge mode.
- 6: **Output sockets of the amplifier:** You see two 5-pole, green terminal blocks. These are assigned with the constant voltage outputs 70 and 100 V as well as with the low-impedance connections. In European countries, 100 V operation is common. For constant voltage operation itself, axxent has a manual „Basics of 100 V loudspeaker systems“. The connections are designed as screw-terminal connections. As the screw terminals are quite tight for safety, please use a small tool (screwdriver or similar) to pull them out. Then you can simply attach your stripped connection cables to the terminals with a small slotted screwdriver.
- 7: **Fan operation:** The amplifiers use a two-stage fan for rear-to-front airflow. The speed of the fan is controlled by the temperature of the internal transistor heat sinks. During high-performance operation, the fan switches to level 2.
- 8: **SUBS._FILTER:** To the right of the XLR socket „SEND2“ is a recessed push switch. The switch activates a high-pass filter with a cut-off frequency of 70 Hz and a slope of 18 dB/octave.
Activating the filter is particularly recommended for high-performance operation in order to reduce the operating temperature of the amplifier. When using the constant voltage outputs 70 or 100 V, the filter serves to protect downstream components and to prevent transformer saturation, which can have a negative effect on the amplifier circuit.

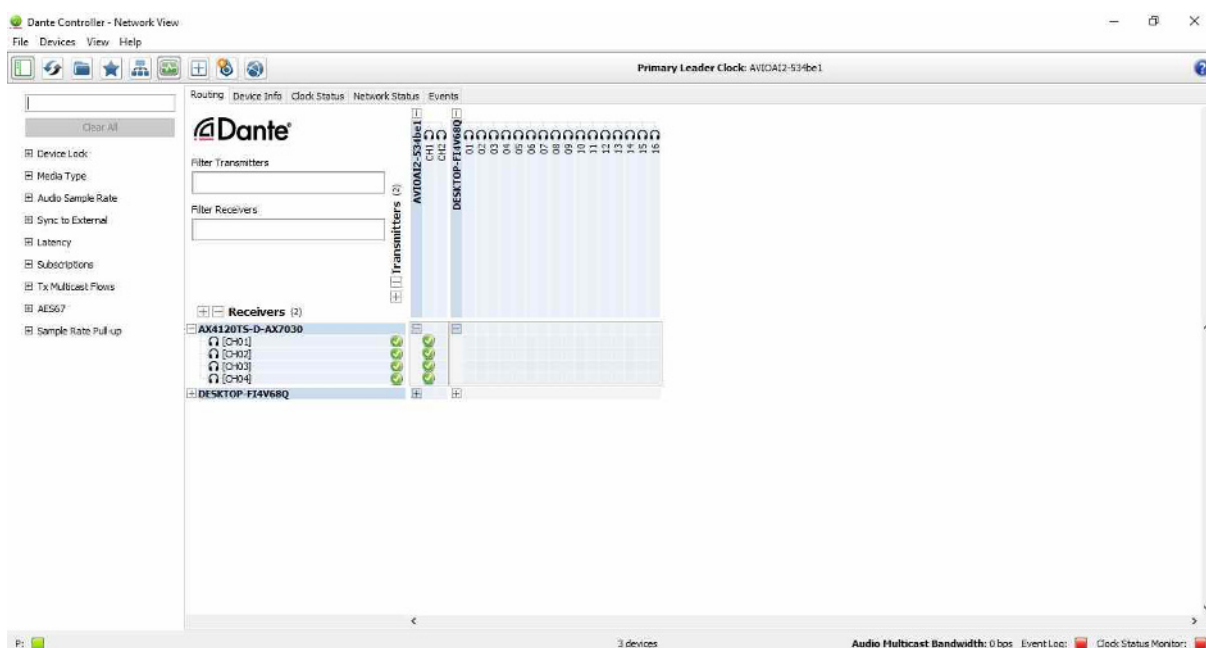
Bridge mode:

Bridge mode refers to the low impedance outputs of the amplifier. In single-channel mode, the AX-2120TS-D amplifier has a power of 120 W RMS. If you need more power, you can, for example, operate channel 1+2 in bridge mode and thus combine the power, i.e. mathematically double it. As described above, you have to accept a power cut of about 10 percent.

So you have a maximum of 220 watts into 16 ohms. This applies analogously to the other models. AX2240TS-D with 240 Watt per channel results in approx. 450 Watt at 8 Ohm and the AX2360TS-D 650 Watt at 8 Ohm.

Please note that in bridge mode you cannot use these outputs for 70/100 V operation.

Below is an example of the digital signal connection using Dante software.



Certificate of Conformity

PRODUCT TYPE: axxent AX-2120TS-D/AX-2240TS-D/
AX-2360TS-D

TYPE OF PRODUCT: Mains-connected audio amplifier for professional purposes

We hereby declare on our sole responsibility that this complies with the requirements set out in the Council Directives on the approximation of the laws of the member states of the European Community relating to the Electromagnetic compatibility (EMC) - 2014/30/EU and in the Low Voltage Directive 2014/35/EU are fixed.

The following standards were used to assess the products with regard to EMC interference radiation: EN55032:2015, Class B; EN61000-3-2, -3. For compatibility, the following standards were used: EN55024:2010+A1:2015; EN61000-4-2, 3,4,5,6,8,11.

The following standard was used to assess the products with regard to the Low Voltage Directive: EN60950-1 of 2006 + A11+A12+A2.

Furthermore, the product described above complies with the provisions of Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

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