ATI ADA206XLR Analog Audio Distribution Amplifiers Instruction Manual

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ATI ADA206XLR Analog Audio Distribution Amplifiers

Product Information

The ADA206XLR, ADA208XLR, and ADA412XLR Analog Audio Distribution Amplifiers are high-quality audio devices designed for professional use. These amplifiers provide multiple distribution channels with balanced inputs and outputs. The ADA206XLR offers two 1×3 distribution amplifier channels, the ADA208XLR provides two 1×4 distribution amplifier channels, and the ADA412XLR features four 1×3 distribution amplifier channels. The amplifiers are equipped with XLR type input and output connectors, ensuring secure and reliable connections. The use of XLR connectors simplifies the setup process, although it may be challenging to parallel inputs for 1×6 or 1×12 operation.

The ADA amplifiers dissipate approximately 10 watts of power and are designed for rack mounting on standard EIA 1-3/4 inch centers. It is important to avoid excessive heat buildup to ensure maximum component life, especially when used in unventilated racks near power amplifiers. The amplifiers have master gain adjustments that control all outputs simultaneously, allowing for easy adjustment of varying input levels. Additionally, individual trimmers for each output provide a 20dB adjustment range to accommodate different signal levels ranging from 10dbu semi-pro up to +8dBm line levels.

Product Specifications

- Shipping Weight & Dimension: 12 lbs. (5.5kg), 22x12x5
- Models Available:
  - ADA206XLR – Dual 1X3 Active balanced outputs
  - ADA208XLR – Dual 1X4 Active balanced outputs
  - ADA412XLR – Quad 1X3 Active balanced outputs

Warranty

ATI provides a one-year limited warranty for these amplifiers. The warranty covers defects in materials and workmanship for theoriginal owner from the date of purchase. If the product is found to be defective, ATI will repair or replace it.To initiate a return, you must obtain a Proper Return Authorization Number from ATI. Please contact ATI at 856-719-9900 or email sales@daysequerra.com to receive the number and instructions for returning your unit. When returning the product, include a written statement with the name, address, daytime telephone number, and email address of the original owner. Also, provide the receipt from the original purchase and a brief description of the claimed defects. Parts or products replaced under warranty will become the property of ATI.

For more information, please visit www.atiaudio.com.

PRODUCT DESCRIPTION

The ADA206XLR, ADA208XLR and ADA412XLR Analog Audio Distribution Amplifiers provide two (206) or four (412) 1X3 distribution amplifier channels, and two (208) 1×4 distribution amplifier channels, with balanced inputs and outputs. A master, gain adjustment for each channel controls all three outputs together to adjust for varying inputs, while individual trimmers for each output allow adjustment over a 20dB range to accommodate 10dbu semi-pro up to +8dBm line levels. Another of the ADA206XLR, ADA208XLR and ADA412XLR Distribution Amplifiers many claims to fame is the use of XLR type input and output connectors. XLRs are easy to use but make paralleling inputs for 1X6 or 1X12 operation difficult. An LF347N quad bi-fet opamp forms the three variable gain output adjustment stages. These variable gain stages use a unique circuit arrangement that allows us to provide a smooth, logarithmic gain control for each output using an inexpensive (but good) linear cermet potentiometer. Since we actually reduce the stage gain for low outputs rather than taking the more conventional approach of reducing the input level to a fixed gain amplifier, you can use the ADA at low output levels with very little noise penalty. You can use the ADA to match consolemedium level inputs (-20dBu) or to drive semi-pro IHF inputs without requiring outboard attenuator pads. SSM2142 active balanced output drivers sense the voltage on their high and low output lines and will shut off drive to a grounded output line while doubling the drive on the other. This capability allows you to connect the outputs to balanced or unbalanced loads without regard to whether or which side of the output is grounded. Maximum output at clipping is +22dBm into balanced loads; however, even though the gain is the same under either condition, clipping output is reduced by 6dB when driving an unbalanced load since the full output swing capability of only one driver of the two is available. The ADA family operates from a 15W – 24VDC single output switching supply featuring universal AC input. Operating in the range of 85 – 264 VAC / 120 – 370 VDC, it offers low ripple and noise at a max 150mV peak to peak.

- www.atiaudio.com

INSTALLATION

The ADA is designed for rack mounting on standard EIA 1-3/4 inch centers. Each unit dissipates approximately 10 watts and is designed for use in an office environment. Avoid excessive heat buildup (such as might be due to nearby power amplifiers in unventilated racks) to ensure maximum component life.

AUDIO CONNECTIONS
XLR inputs and outputs are wired with pins 2 as HI and pins 3 as LOW. Pin 1 (shield) of all input and output connectors are permanently grounded in accordance with current AES recommendations. The pin 1 grounds are routed via a large, low impedance ground path directly to the chassis separately from any audio ground paths. Internal circuit ground is also connected to the chassis for shielding through an independent path. AC ground (green wire) is also separately grounded to the chassis. Active balanced outputs require a reference ground connection to the receiving device for proper operation. This ground is carried through pin 1. If the pin 1 shield ground is not carried through to the receiving device, the AC ground, rack frame, or studio ground system may complete this ground. Noisy grounds require excellent common mode rejection in the receiving device for quiet system operation. We have taken measures to keep RFI out of your ADA, including split and bypassed input networks, beaded, bypassed and isolated power inputs, nonconcentric wound, semi-toroidal power transformers, double ground plane PC boards and a nice enclosure to keep rain and snow off the circuit boards. However, in difficult broadcast applications, the RF shielding and suppression system can be no better than the ground system into which it is trying to dump the unwanted RF. For optimal product performance, be sure to have a good grounding system.

ADJUSTMENTS
The Master and individual Output level controls should all be set close to 2 o'clock to provide nominal +4dBm outputs for a nominal +4dBu input. These settings allow +6/-16dB output adjustment range around nominal, which will allow outputs of +10 to -12dBm to be set. In addition, the Master gain has +10dB to OFF adjustment range to compensate for input level variations from -6dBu to input clipping at +24dBu.

115VAC & 230VAC OPERATION
The ADA is ready for 115 VAC or 230 VAC. A single output switching power supply offers protections from short circuit, overload, and over voltage while capable of accepting VAC in the range of 85 – 264 VAC.

UL LISTING
The ADA206XLR, ADA208XLR and ADA412XLR are listed by Underwriter Laboratories as "Listed Professional Audio Equipment 2D65."

PRODUCT SPECIFICATIONS

- **OUTPUT LEVEL:** +22dBm peak into 600 ohm balanced load, +18dBm peak, typical, into unbalanced loads
- **DISTORTION:** THD .10% maximum, 20 to 20,000Hz at peak output, IMD .05% maximum, SMPTE measurement
- **SLEW RATE:** 13 Volts per microsecond
- **RESPONSE:** ± .25dB, 20 to 20,000Hz
- **NOISE:** -95dBm out at maximum gain, 20kHz bandwidth
- **GAIN:** 40dB maximum
- **CROSSTALK:** 70dB minimum at 10kHz, any path
- **OUTPUT** ISOLATION: 70 dB minimum at 1kHz. A shorted output does not affect any other output.
- **OUTPUTS:** Active balanced, servo controlled, ground sensing, 50 Ohm output impedance, DC coupled. XLR type male connectors, Pin 2-HI, 3-LO, 1-GND.
- **INPUTS:** 20Kohm active balanced, split and RF bypassed. +22dBm maximum input level, 60dB CMR at 60Hz. XLR type female connectors, Pin 2-HI, 3-LO, 1-GND.
- **POWER:** 85-264 VAC ±1%, Output Voltage 24 VDC, Ouput Power 15 W, 47 – 63Hz frequency range.
- **SIZE:** 19" (48.3cm) W X 1.75" (4.45cm) H X 7.5" (19cm) D

- **SHIPPING WEIGHT & DIMENSION:** 12 lbs. (5.5kg), 22”x12”x5”
- **MODELS AVAILABLE:** ADA206XLR Dual 1X3 Active balanced outputs, ADA412XLR Quad 1X3 Active balanced outputs, ADA208XLR Dual 1X4 Active balanced outputs

ONE YEAR LIMITED WARRANTY

ATI warrants this product to be free from defects in materials and workmanship to its original owner for a period of one year from date of purchase. ATI will repair or replace such product or part thereof, which upon inspection by ATI, is found to be defective in materials or workmanship.
The Proper Return Authorization Number must be obtained from ATI in advance of return. Contact ATI at 856-719-9900 or email sales@daysequerra.com to receive the number and instructions for return of your unit. A written statement providing the name, address, daytime telephone number and email address of the original owner, together with receipt from the original purchase, and a brief description of any claimed defects, must accompany all returns. Parts or product for which replacement is made shall become the property of ATI. The customer shall be responsible for costs of transportation and insurance to the factory of ATI, and shall be required to prepay such costs. ATI shall use reasonable efforts to repair or replace any product covered by this limited warranty within thirty days of receipt. In the event repair or replacement shall require more than thirty days, ATI shall notify the customer accordingly. ATI reserves the right to replace any product that has been discontinued from its product line with a new product of comparable value and function. This warranty shall be void in the event a covered product has been damaged, or failure is caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, or lightning, power fluctuations and other incidental or environmental conditions. Further, product malfunction or deterioration due to normal wear is not covered by this warranty.

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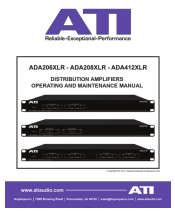
Documents / Resources

	ATI ADA206XLR Analog Audio Distribution Amplifiers [pdf] Instruction Manual ADA206XLR, ADA208XLR, ADA412XLR Analog Audio Distribution Amplifiers, Analog Audio Distribution Amplifiers, Distribution Amplifiers, Amplifiers

References

- ATI
- Search - Manual-Hub.com