

UADC-1

Utility Analog-Digital Converter / Switch



Installation and Set-up Manual

Product Description

The ATI UADC-1 Utility Analog-Digital Converter / Switch provides professional quality 24-bit Analog-to-Digital conversion, along with AES audio path insertion and interruption functions. The UADC-1 may be used as a standalone high quality A/D converter or to insert stereo analog inputs into an AES stream via remote control, making it a perfect companion for analog EAS encoders/decoders.

The UADC-1 is equipped for failsafe operation with relay bypass in case power is lost. The A/D converter is shipped to provide broadcast standard 44.1 kHz sample rates, with 32 kHz or 48 kHz sampling selectable via internal jumpers. XLR analog audio inputs are balanced when shipped from the factory, but may be switched to unbalanced, single ended inputs via internal jumpers. (See INSTALLATION Section for internal jumper settings.)

The front panel includes left and right analog input trimmers, Audio Present and Clipping LEDs for each analog input, and status LEDs to indicate Remote Active, Analog or Digital Input Selected and Power.

The rear panel includes XLR connectors for balanced left and right analog audio inputs, AES input and AES output. 3-pin connectors are provided for Unbalanced analog stereo input and remote control inputs. Power is supplied via a 110 VAC outboard power supply (included), which supplies 24 VDC to the unit.

Installation

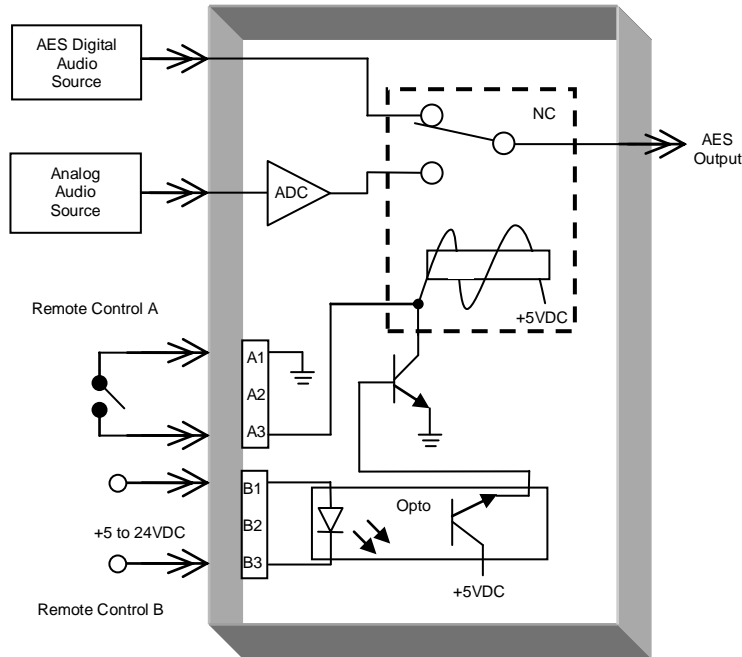
Please examine your UADC-1 Utility Analog-Digital Converter / Switch carefully for any damage that may have occurred during shipping. If damage is noted, please notify the shipper immediately and retain the packaging for inspection. The package contains the UADC-1 unit, one 24 VDC / 600 mA power supply and this manual. Please read this manual thoroughly before you install and operate the unit. **Do not use this product in any application where a life threatening condition could result due to its failure.**

Use care when installing the UADC-1 in high RF environments. Shielded cable is suggested for all audio connections. All shields should be tied to the "G" or ground connector pins. It is recommended that all cables connected to the UADC-1 be looped through ferrite cores to suppress RF. Power line surge protection with RF filtering is also suggested for the external power supply.

To gain access to the UADC-1 unit's internal configuration jumpers, disconnect power and remove the six Philips screws that secure the cover. When configuration is completed, reinstall the cover with the six screws and re-connect the power.

The ATI UADC-1 Utility Analog-Digital Converter / Switch can be rack mounted using the optional 21075-501 19" Rack Mount Shelf Assembly and 21098-501 ½ RU Filler Panel.

FUNCTIONAL BLOCK DIAGRAM:



INTERNAL CONFIGURATION JUMPERS:

Refer to the following table to change the XLR analog inputs from balanced to unbalanced, and to change the default 44.1kHz sampling rate to either 32kHz or 48kHz:

| FUNCTION | JUMPER SETTING | COMMENTS |
|-----------------------|--|-----------------------------------|
| XLR Input Termination | Jumper JM1 grounds the Left XLR inverting input. Jumper JM2 grounds the right XLR inverting input. | Factory Default: JM1 and JM2 open |
| 32 kHz Sample Rate | Jumpers JM3, JM4 and JM5 should be in the 32 position. Jumpers JM6 and JM7 should be in the 32/48 position. | |
| 44.1 kHz Sample Rate | Jumpers JM3, JM4 and JM5 should be in the 44/48 position. Jumpers JM6 and JM7 should be in the 44 position. | Factory Default Setting |
| 48 kHz Sample Rate | Jumpers JM3, JM4 and JM5 should be in the 44/48 position. Jumpers JM6 and JM7 should be in the 32/48 position. | |

REAR PANEL CONNECTIONS:

Refer to the following table when making rear panel connections to your UADC-1:

| AUDIO CONNECTION | DESCRIPTION & COMMENTS |
|---------------------------------|---|
| Left & Right XLR Analog Inputs | XLR connectors are Hi-Z, active balanced as supplied from factory, but can be unbalanced with internal jumper setting (see above). |
| Un-Balanced Stereo Analog Input | Via Euroblock connector; connect shield to G terminal. <i>Connect your source equipment to the appropriate left and right analog inputs. For monaural sources, tie the left and right inputs together. Be sure to observe correct phasing.</i> |
| AES XLR Input | For main AES Source input. When used as an EAS insert switcher, this would normally be the feed from your air chain. |
| AES XLR Output | This output will provide either the AES audio input or the A-to-D converted signal from the left and right analog inputs. The selected input is indicated on the front panel. |

REMOTE CONTROL INPUT CONFIGURATION:

Audio input switching can be actuated either via external contact closure or by external positive voltage from 5 to 24VDC. Refer to the following table for wiring instructions:

| CONNECTOR & FUNCTION | DESCRIPTION & COMMENTS |
|---|--|
| Connector A Dry, for use with external switch or relay | AES input is selected with pins A1 and A3 open. To select analog inputs short pins A1 and A3. Pin A2 is unused. |
| Connector B Wet, for use with +5 to +24VDC input | AES input is selected when no voltage is present on pin B1. To select analog inputs, supply a positive DC voltage between 5 and 24 volts to pin B1. Pin B3 should be connected to remote ground. Pin B2 is unused. |

FRONT PANEL CONTROLS AND INDICATORS:

| | |
|------------------------------|---|
| Power | Confirms the presence of 24VDC from the external power supply |
| Analog Input Present | Left and Right Present LEDs begin to illuminate at an input level of -28dBm. LEDs are fully illuminated when level reaches -24dBm. |
| Analog Input Clipping | Left and Right Clipping LEDs begin to illuminate with +18dBm input. LEDs are fully illuminated at +20dBm. |
| Analog Input Gain | With a nominal +4dBm analog input, adjust these controls to set the desired AES output level when the Analog Input is selected via remote control |
| Remote Active | Indicates that the remote control input on the rear panel has selected the Analog Input. Analog Input LED will also be illuminated. |
| Digital Input | Indicates that the remote control input on the rear panel has selected the Digital Input |

SPECIFICATIONS:

| | |
|------------------------|--|
| Analog Input Level | -10dBu to +24dBu +4dBu analog input provides -20dBfs AES output |
| Analog Input Impedance | 10k Ω balanced |
| Frequency Response | 10 – 20kHz, \pm 0.5dB |
| Distortion | < .02% THD / IMD |
| Noise | < -90dB EIN |
| AES Output Impedance | 110 Ω , balanced from analog / A-D input; passive when AES input is active |
| Power Requirements | 24VDC, 600mA, wall transformer, supplied |
| Size and Weight | 1/2 rack space; 5.0 lbs. shipping weight |
| Options | 21075-501 Rack Mounting Shelf; 21098-501 1/2 RU Blank Panel, WA100-2 90-264 VAC 47-63Hz Universal CE-approved External Power Supply |

ATI - Limited 1-Year 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 that 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 sales@atiaudio.com or 856.626.3480 to receive an RA Number and shipping information.

A written statement setting forth the name, address, and daytime telephone number 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 may 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.

ATI DISCLAIMS ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR USE, EXCEPT AS EXPRESSLY SET FORTH HEREIN. THE SOLE OBLIGATION OF ATI UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE THE COVERED PRODUCT, IN ACCORDANCE WITH THE TERMS SET FORTH HEREIN. ATI EXPRESSLY DISCLAIMS ANY LOST PROFITS, GENERAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM BREACH OF ANY WARRANTY, OR ARISING OUT OF THE USE OR INABILITY TO USE ANY ATI PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state. ATI reserves the right to modify or discontinue, without prior notice to you, any model or style product.

Please register your UADC-1 on our website www.ATIAudio.com. This will allow us to keep you informed of updates and related product information.