

# ATU44<sub>MK2</sub>

## User Manual



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# Introduction

## Universal input adapter unit

The ATU44MK2 is a universal input adapter unit for conversion between various audio level signals, offering a wide variety of connection and extension possibilities to audio systems. The speaker level input features various tapings for 100V, 70V, 50V and 33V audio levels, while a balanced line input allows conversion between balanced and/or unbalanced line level audio signals.

A typical application example is the conversion of any loudspeaker level audio signal to balanced or unbalanced line level signals. Any type of loudspeaker level signal can get applied to its input. This can be useful for expansion of any constant voltage distributed audio system and feeding the transformed output to an additional amplifier. Another typical application is connection of recording equipment on loudspeaker lines.

Using the galvanic isolation between all the in & outputs, it can be used as an audio isolation solution, solving hum and buzz problems caused by ground loops.

The front panel switch allows input signal selection between line or loudspeaker level input, while all inputs are connected using terminal block connectors. The line output is connected using a male XLR connector.

A variety of optionally available mounting brackets are allowing desk, closet or 19" equipment rack installation.

# Precautions

## READ FOLLOWING INSTRUCTIONS FOR YOUR OWN SAFETY

- ALWAYS KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE. NEVER THROW THEM AWAY
- ALWAYS HANDLE THIS UNIT WITH CARE
- CLEAN ONLY WITH DRY CLOTH
- HEED ALL WARNINGS AND FOLLOW ALL INSTRUCTIONS
- NEVER EXPOSE THIS EQUIPMENT TO RAIN, MOISTURE, ANY DRIPPING OR SPLASHING LIQUID. NEVER PLACE AN OBJECT FILLED WITH LIQUID ON TOP OF THIS DEVICE
- DO NOT INSTALL THIS UNIT NEAR ANY HEAT SOURCES SUCH AS RADIATORS OR OTHER APPARATUS THAT PRODUCE HEAT
- DO NOT PLACE THIS UNIT IN ENVIRONMENTS WITH A HIGH LEVEL OF DUST, HEAT, MOISTURE OR VIBRATION
- THIS UNIT IS DEVELOPED FOR INDOOR USE ONLY. DO NOT USE IT OUTDOORS
- PLACE THE UNIT ON A STABLE BASE OR MOUNT IT IN A STABLE RACK
- ONLY USE ATTACHMENTS & ACCESSORIES SPECIFIED BY THE MANUFACTURER.
- UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME
- CAREFULLY CHECK THE UNIT'S CONDITION AFTER UNPACKING. IF THERE IS ANY DAMAGE TO THE CARTON BOX OR THE UNIT ITSELF, INFORM YOUR VENDOR IMMEDIATELY.
- THE INSTALLATION, CONNECTION AND CONFIGURATION OF THE DEVICE SHOULD BE DONE BY QUALIFIED TECHNICIANS



### CAUTION – SERVICING

This product contains no user serviceable parts. Refer all servicing to qualified service personnel. Do not perform any servicing (unless you are qualified to do so.)



### EC DECLARATION OF CONFORMITY

This product conforms to all the essential requirements and further relevant specifications described in following directives: 2004/108/EC (EMC) and 2006/95/EC (LVD)



### WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

The WEEE marking indicates that this product should not be disposed with regular household waste at the end of its product life. This regulation is created to protect both the environment and human health.

This product is developed and manufactured with high quality materials and components which can be recycled and/or reused. Please dispose of this product at your local collection point or recycling centre for electrical and electronic waste. Do this to make sure that the product is recycled in an environmental friendly way, and help to protect the environment in which we all live.

### CAUTION

The symbols shown are internationally recognized symbols that warn about potential hazards of electrical products. The lightning flash with arrowpoint in an equilateral triangle means that the unit contains dangerous voltages. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the users manual.



These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

## **ADDITIONAL INFORMATION**

This manual is put together with much care and effort and is as complete as could be on the publication date. However, updates on the specifications and functionality may have occurred since publication. To obtain the latest version of this manual please visit the Audac website @ [www.audac.eu](http://www.audac.eu).

# Chapter 1

## Connections and connectors

### CONNECTION STANDARDS

The in- and output connections for AUDAC audio equipment are performed corresponding to international wiring standards for professional audio equipment.

#### XLR:

For balanced line output connections



- Pin 1:** Ground
- Pin 2:** Signal +
- Pin 3:** Signal –

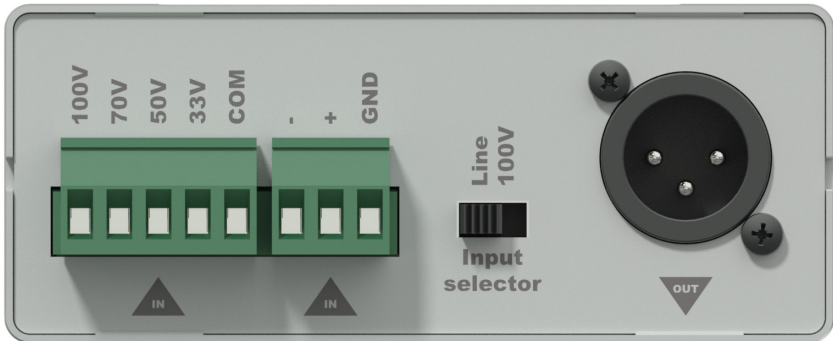
### ATTENTION

Make sure the power of the device and other connected devices is switched off, before any connections or wiring adjustments are being made. Disregarding this rule can lead to electrical shocks and/or permanent damage of the equipment.



# Chapter 2

## Overview ATU44MK2



The panel of the ATU44MK2 contains all connections for the loudspeaker level and line in & outputs, accompanied with an input selector switch.

### 1) Loudspeaker input:

The loudspeaker input is implemented using a 5-pin terminal block connector with various tapings for 100V, 70V, 50V and 33V audio levels. Depending of the available audio level, the input signal shall get connected to the appropriate tapings.

### 2) Balanced line level input:

The balanced line level input is implemented using a 3-pin terminal block connector. Line level input signals (balanced or unbalanced) shall be connected to this terminal.

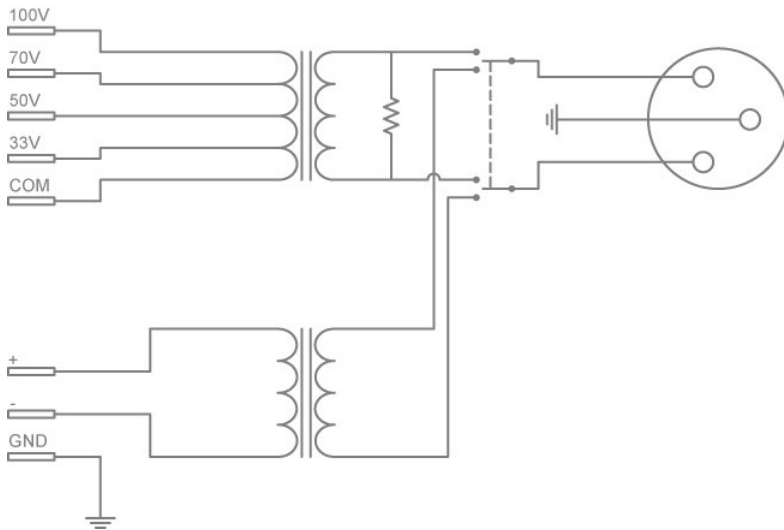
### 3) Input selector switch:

This switch allows selection of the input signal between line level (left position) or loudspeaker level (right position) inputs.

### 4) Balanced line level output:

The balanced and galvanic isolated output signal connection is available on the female XLR connection. The level of this output connection matches line level (depending of matching input levels), allowing it to be fed directly to any line level input on amplifiers or pre-amplifiers.

# Block diagram



## Chapter 3 Connections

### 1) Connection of constant voltage loudspeaker signals:

The ATU44 can be used for conversion of a constant voltage loudspeaker level signal as mainly used in distributed public address audio systems, into a balanced line level audio signal. Depending of the line voltage (100V, 70V, 50V or 33V), the correct terminals of the loudspeaker input (5-pin terminal block) connector shall be used. The line level output (available on the XLR connector) can then be fed directly to any line level input on amplifiers or pre-amplifiers. Make sure the input selector switch is in 100V (right) position.

## 2) Connection of low impedance loudspeaker signals:

The ATU44 can be used for conversion of a low impedance ( $8\Omega$ ) loudspeaker level signal into a balanced line level audio signal. Depending of the amplifier power, the corresponding terminals of the loudspeaker input (5-pin terminal block) connector shall be used. Below table gives an overview of the matching voltage tappings for various amplifier power:

Voltage tapping	Amplifier power
33 Volt	< 150 Watt amplifier power (@ 8 Ohm)
50 Volt	150 Watt < 300 Watt amplifier power (@ 8 Ohm)
70 Volt	300 Watt < 600 Watt amplifier power (@ 8 Ohm)
100 Volt	> 600 Watt amplifier power (@ 8 Ohm)

The line level output (available on the XLR connector) can then be fed directly to any line level input on amplifiers or pre-amplifiers. Make sure the input selector switch is in 100V (right) position.

## 3) Connection line level input signals:

The ATU44 can be used as a galvanic isolator between line level input signals allowing it for being used as an audio isolation solution, solving hum and buzz problems caused by ground loops. The line level input shall be applied to the 3-pin line level terminal block input connector.

For balanced input signals, Sig+ (XLR pin 2) shall be connected to the '+' terminal, Sig- (XLR pin 3) shall be connected to the '-' terminal, and GND (XLR pin 1) shall be connected to the 'GND' terminal. For unbalanced input signals, the signal shall be connected to the '+' signal and the 'GND' shall be connected to the '-' terminal.

The line level output (available on the XLR connector) can then be fed directly to any line level input on amplifiers or pre-amplifiers. Make sure the input selector switch is in Line (left) position.

# Chapter 4

## Technical specifications

Inputs	Type	<b>100V, 70V, 50V, 33V audio inputs</b>
	Connectors	5–pin terminal block (5.08 mm pitch)
	Type	<b>Balanced line level audio input</b>
	Connectors	3–pin terminal block (5.08 mm pitch)
	Impedance	600 Ohm
Outputs	Type	<b>Balanced line level audio output</b>
	Connectors	Male XLR
	Impedance	600 Ohm
Dimensions (W x H x D)		108 x 44 x 165 mm
Weight		0.45 Kg
Packaging		Carton box
Shipping weight & Volume		0.77 Kg – 0.0078 Cbm
Compatible devices		WLI18 Wall line input unit
		WMI18 Wall microphone input unit
Optional accessories	MBS1xx	Mounting brackets