

## User Manual

# Stereo/Mono Audio Amplifier with 3 Inputs (2 x Stereo, 1 x MIC) AT-PA100



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## INTRODUCTION

The Atlona AT-PA100 is an Audio Amplifier with 3 Inputs (2 x Stereo, 1 x MIC). The PA100 is based on the digital amplification circuit (Class-D) and can operate in Stereo mode 2x20w or in Bridge mode (Mono) at 1x40W. The Atlona amplifier has a built-in EQ control to allow you to adjust Bass and Treble and also mix in a Mic signal.

It supports RS232 and IR for remote control which is useful in commercial applications when a 3rd party control systems is utilized.

## FEATURES

- Class-D Stereo/Mono Audio Amplifier
- 2x20Watt @ 4 Ω or 1x40Watt @ 8 Ω, amplifier can be used to amplify 2 speakers or one speaker when in Bridge mode.
- Dual-Mono mode combines left and right input channels, outputting a mono signal to 2 speakers.
- Microphone mixer function: A microphone can be mixed in with the line audio output signal and provide a discreet volume control.
- Two stereo audio inputs, one Microphone input, and Volume/Bass/Treble are controlled by the front panel buttons or RS232.
- RS232 control ability provides instant command status.
- Included universal power supply (110Volt~220Volt AC, 50/60Hz) for worldwide compatibility.

## SPECIFICATIONS

Audio Input		Audio Output	
<b>Input</b>	2 x stereo audio, 1 x MIC	<b>Output</b>	1 x Amplifier, 1 x stereo audio
<b>Input Connector</b>	2 x RCA, 1 x 3.5mm jack, 1 x 6.5mm jack	<b>Output Connector</b>	1 x 3.5mm jack, 1 x Phoenix connector, 4 pole
<b>Input Impedance</b>	>10KΩ	<b>Output Impedance</b>	50Ω/stereo, 4~8Ω/Amplifier
Audio General			
<b>Frequency Response</b>	20Hz ~ 20KHz	<b>CMRR</b>	>70dB@20Hz~20KHz
<b>SMR</b>	80 dB at maximum output	<b>Bandwidth</b>	20Hz ~ 25KHz
<b>Stereo Channel Separation</b>	>75 dB @ 20 Hz to 20 kHz	<b>THD + Noise</b>	1% @ 1 kHz, 0.3% @ 20 kHz at nominal level
<b>Voltage Gain</b>	32dB	<b>Power Output</b>	20 Watts X 2 (4 Ω)
Control Parts			
<b>Serial Control Port</b>	RS-232, 9-pin female connector	<b>Pin Configurations</b>	2 = TX, 3 = RX, 5 = GND
<b>Remote</b>	Optional IR remote	<b>Front Panel Control</b>	Optional mountable keypad
<b>Options</b>	TCP/IP control via RS232 to TCP/IP adapter		

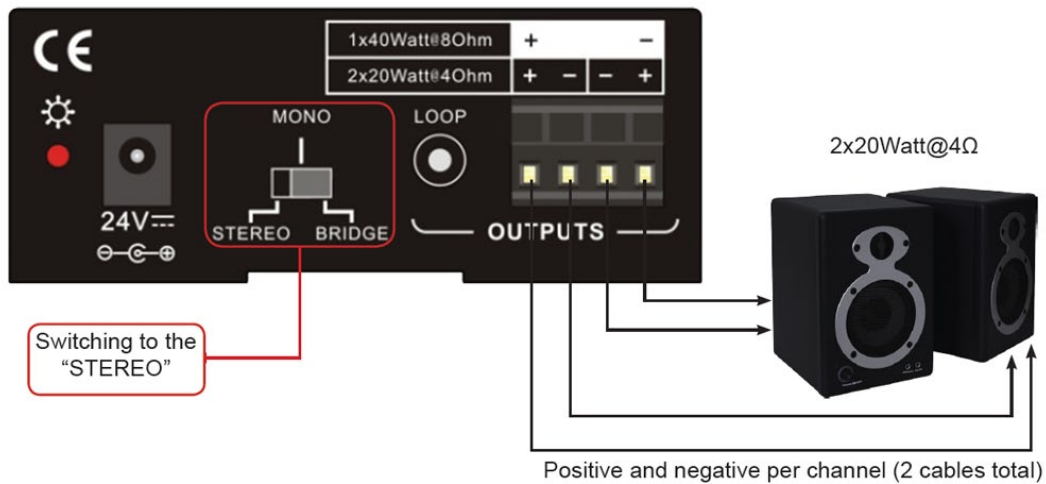
**NOTE:** All measurement levels are at ±10%.



## AUDIO CONNECTION

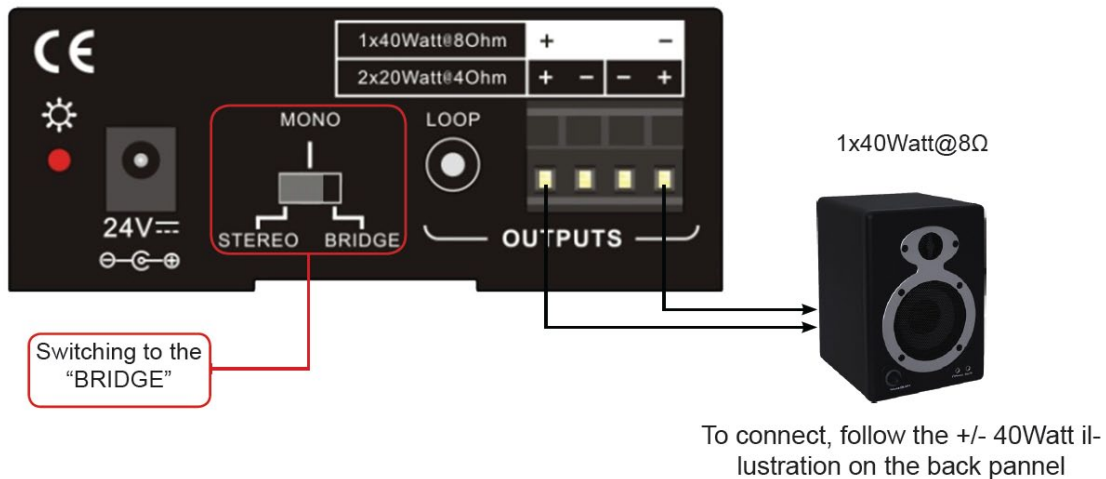
### 4.1 Default mode: 2x20Watt@4Ω

The PA100's default output of the amplifier is 2x20Watt@4Ω.



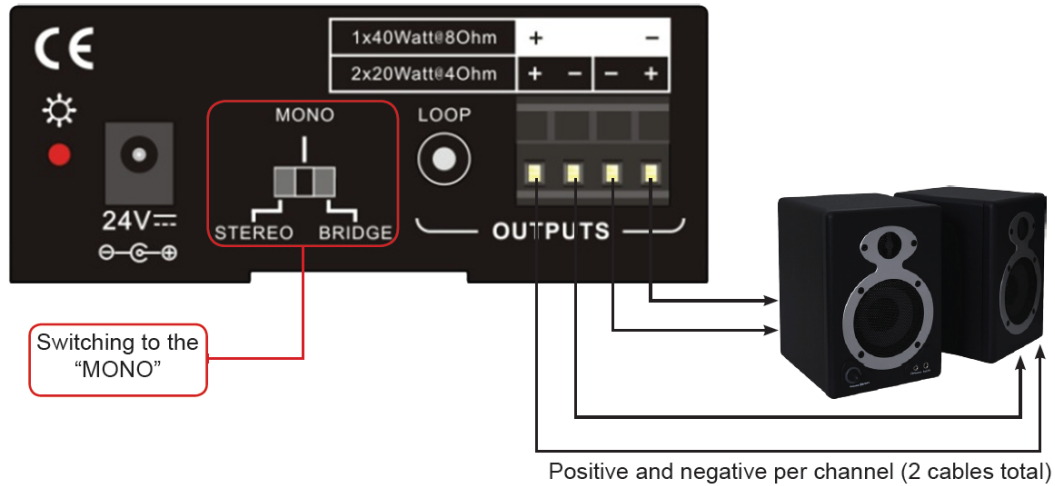
### 4.2. Bridge mode: 1x40Watt@8Ω

The PA100 has a Bridge-Mono mode, which allows you to double the wattage to 40Watts by combining 2 channels together and increasing the impedance to 8Ω.



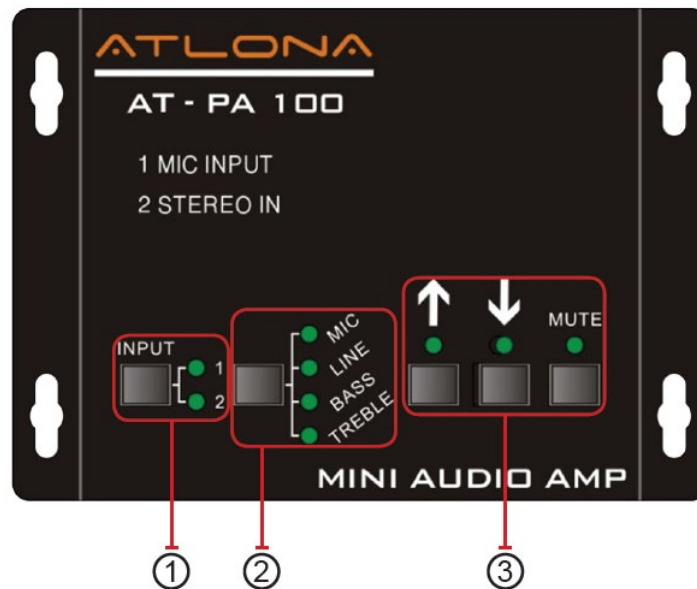
### 4.3. Dual-mono mode.

The AT-PA100 has a dual-mono mode. This mode sends the same L/R audio signal to both channels (speakers).



### PUSH-BUTTON CONTROLS

The PA100 has push-buttons for volume/EQ control and input switching.



1. Audio input switching: There are two switchable stereo audio inputs, Stereo RCA and Stereo 3.5mm terminals.
2. Use this button to select which option you wish to control.
3. The up and down buttons will raise and lower the level of the **2** options.

## RS232 COMMUNICATION PROTOCOL

Baud rate: 9600 - Data bit: 8 - Stop bit: 1 -Parity bit: none

Command	Function Description	Feedback Code
1A1.	Switching audio input to input 1	A : 1 -> 1
2A1.	Switching audio input to input 2	A : 2 -> 1
0A0.	Mute the Audio	Mute Audio
0A1.	UnMute the Audio	UnMute Audio
1A0.	Mute the Mic audio	Mute Mic
2A0.	Mute the Line Out audio	Mute LIN
600%	Current Status of the PA100	A: 1 -> 1 Volume : 30 Bass 00 Treble 00
601%	MIC volume up	Volume of MIC : 51
602%	MIC volume down	Volume of MIC : 51
603%	Line volume up	Volume of LINE : 51
604%	Line volume down	Volume of LINE : 51
605%	Bass volume up	Bass of LINE : 04
606%	Bass volume down	Bass of LINE : 04
607%	Treble volume up	Treble of LINE : 04
608%	Treble volume down	Treble of LINE : 04
609%	Reset to default settings	A : 1 -> 1 Volume : 50 Bass 07 Treble 07
5[x][x]%	Preset MIC volume, [xx] is set from [00] to [60]. 61 degrees in total	Volume of MIC : 50
7[x][x]%	Preset line volume, [xx] is set from [00] to [60]. 61 degrees in total	Volume of LINE : 50
8[x][x]%	Preset bass volume, [xx] is set from [00] to [08]. 9 degrees in total	Bass of LINE : 04
9[x][x]%	Preset treble volume, [xx] is set from [00] to [08]. 9 degrees in total	Treble of LINE : 04

### Notice:

- 1: The characters inside bracket [ ] are the variable code, which is the changeable.
- 2: The bracket [ ] is not included in the RS232 commands.

**Example 1:** Switching the input 2 to the line-out should be [2A1.]

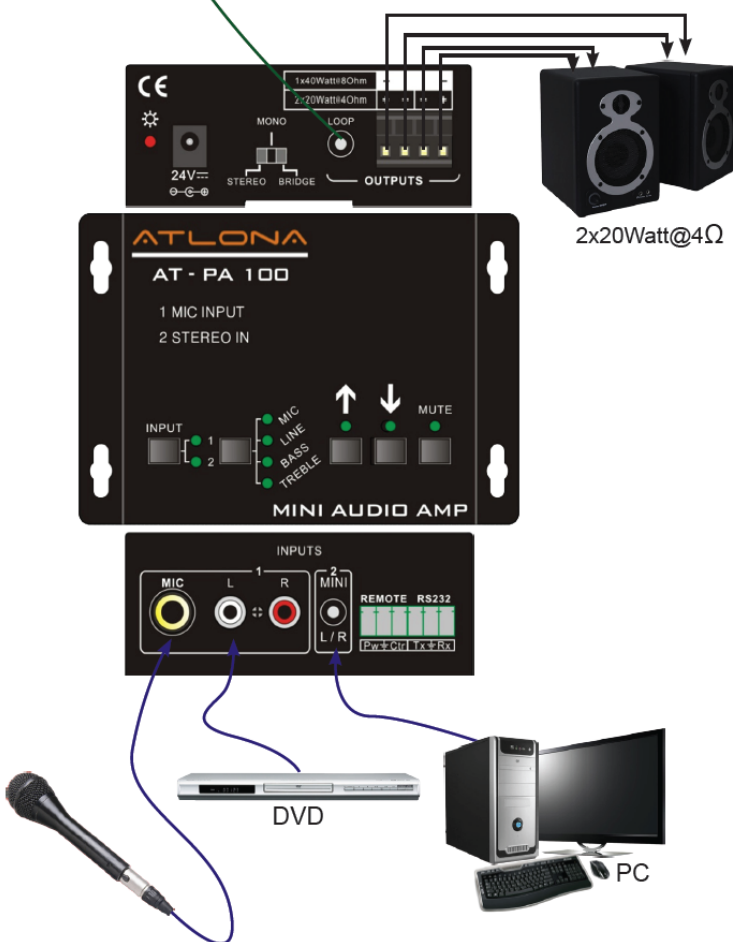
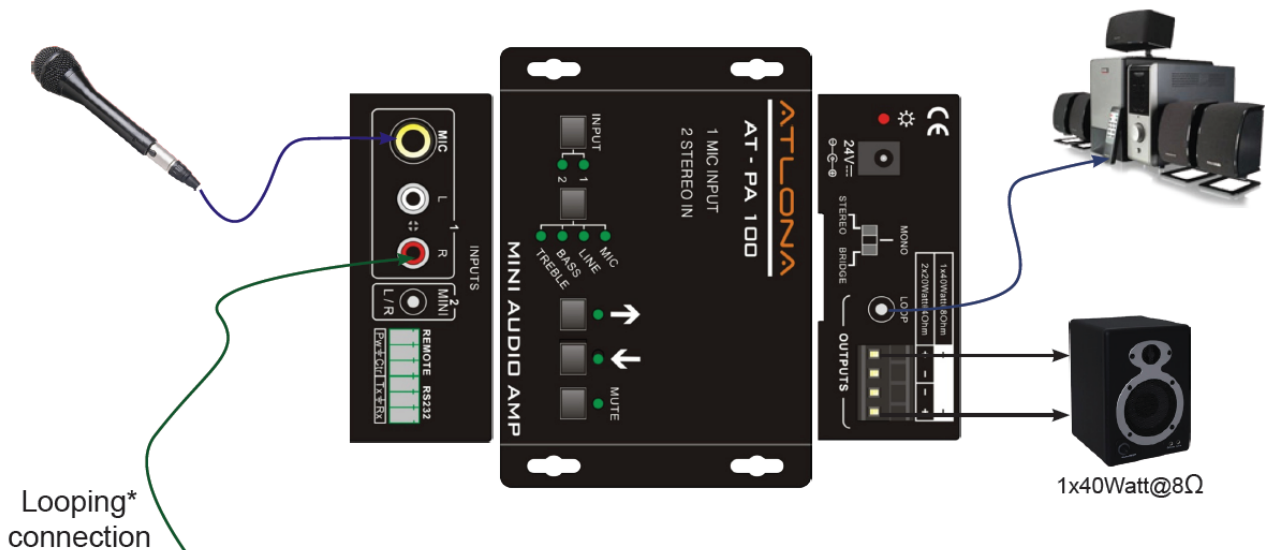
**Example 2:** Turning up the volume of the line audio should be [603%]

**Example 3:** Preset the MIC volume to be "21" degree should be [521%]

**Example 4:** Checking the current status of the PA100 should be [600%]



CONNECTION DIAGRAM



\* The "loop" out port allows a source to pass-through to another device.

## SAFETY INFORMATION

### Safeguards



To reduce the risk of electric shock, do not expose this product to rain or moisture



Do not modify the wall plug. Doing so will void the warranty and safety features.



If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.



This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

### Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-PA100. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.



## WARRANTY

### Limited Warranty

Atlona Technologies warrants that (a) its products (the AT-PA100) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

### Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

### No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

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## ATLONA PRODUCT REGISTRATION

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

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