

Atlona Stereo/Mono Audio Amplifier

AT-PA100-G2



User Manual

Table of Contents

1. Introduction	.....	3
2. Package Contents	.....	3
3. Features	.....	3
4. Panel Descriptions		
a. Front Panel	.....	4
b. Rear Panel	.....	4
c. Top Panel	.....	5
5. MIC Connection	.....	5-6
6. Output Connection	.....	6-7
7. IR	.....	7
8. Connection and Installation	.....	8
9. RS-232	.....	9-10
10. Specifications	.....	10
11. Safety Information	.....	11
12. Warranty	.....	12-13
13. Atlona Product Registration	.....	13

Introduction

Small, energy efficient, and affordable the Atlona Stereo/Mono Audio Amplifier fits the needs of most offices, classrooms and more. Unlike traditional A/B amplifiers the Class D audio amplifier is energy efficient and easily integrated behind a TV where space is limited.

Package Contents

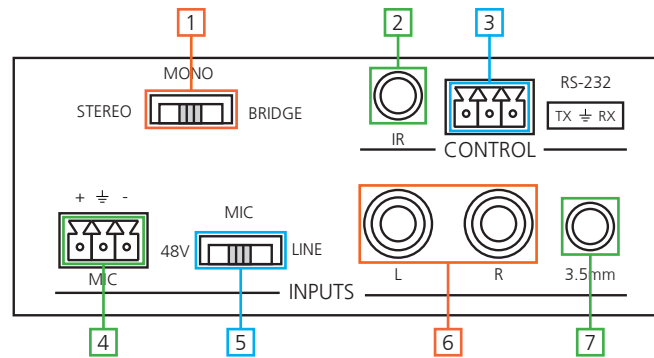
- 1 x AT-PA100-G2
- 1 x Locking AC Adapter
- 1 x User Manual

Features

- AT-PA100-G2 is a class D amplifier which uses less energy, doesn't require heat syncs or power transformers, making it smaller than a class A/B amplifier
- Stereo, mono, and bridge audio speaker output connections available through captive screw
- Has a variable 3.5mm audio loop out for cascading to another AT-PA100-G2 or connecting to other audio amplifiers
- 3 pin captive screw MIC input can support balanced and unbalanced signals (suppresses external noise)
- Energy efficient standby mode only requires 4Ws of power. AT-PA100-G2 goes into standby mode if an audio signal isn't present
- Control through the panel buttons, an (optional) IR remote, and RS-232
- 3 position input switch:
 - 48V phantom power - best for condenser MICs without battery power
 - MIC - Great for Dynamic MICs and battery powered condenser MICs
 - Line - Connect a Wireless MIC
- Volume, Bass, and Treble can be controlled through RS-232, IR, or panel buttons

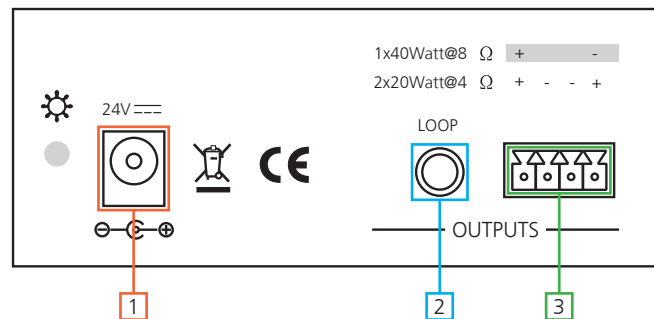
Panel Description

Front Panel



1. Audio output format switch: Use to switch between Stereo, Dual Channel Mono, and Bridged audio outputs
2. 3.5mm IR: Connect optional IR receiver here for use with optional IR remote (AT-PA1-IR-G2)
3. Captive Screw RS-232: Connect RS-232 here for control
4. Captive Screw Input: Connect a MIC
5. Audio input switch: Switch between 48V Phantom powered condenser MIC, Dynamic MIC, or LINE input
6. L/R audio: Connect Analog audio into this port
7. 3.5mm audio: Connect Analog audio into this port

Back Panel



1. Locking 24V Port: Connect included locking power supply here.
2. 3.5mm variable audio loop out: Loop out to another AT-PA100-G2 or audio amplifier with a 3.5mm stereo audio connector
3. Captive Screw Audio: Connect to speakers

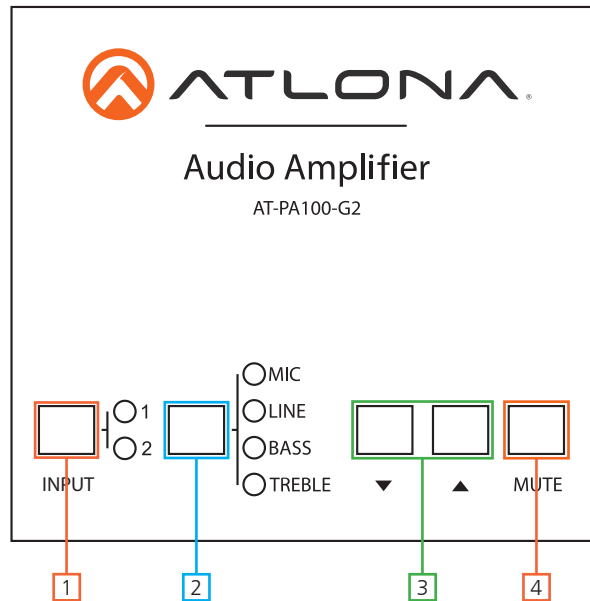
Note: In a cascading chain, the AT-PA100-G2s will share the source of the 1st AT-PA100-G2.

Note: When using the loop out, the output is variable and dependant on the volume level. If cascading, the 2nd AT-PA100-G2's volume will change with the 1st AT-PA100-G2.

Note: The volume status is available through RS-232 feedback from the first AT-PA100-G2.

Note: When cascading, the MIC is only available for the first AT-PA100-G2's speaker output.

Top Panel



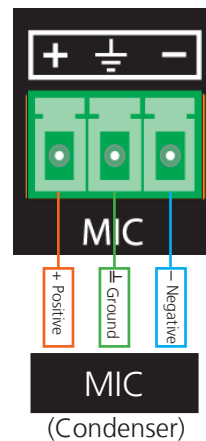
1. Input Selection Button: Toggle between the RCA input and 3.5mm audio input
2. Audio Control Button: Adjust the volume of the MIC, Line, or the level of Bass and Treble with this button
3. Volume adjustment buttons: Use the up and down arrows to turn the volume up or down or adjust the level of the Bass and Treble
4. Mute button: Use to mute the Line volume

MIC Connection

48V (Condenser MIC)



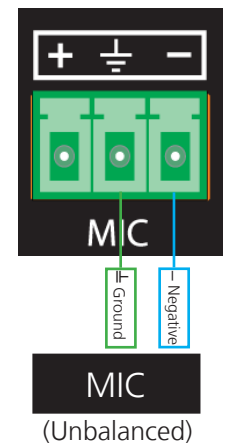
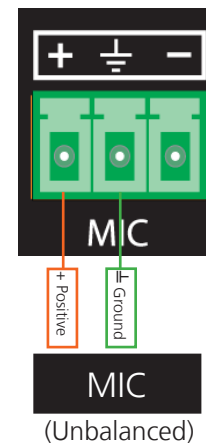
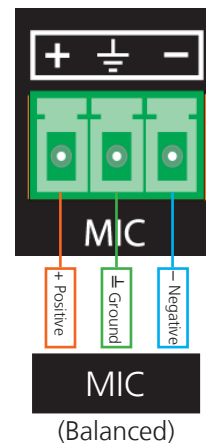
Connect a condenser MIC using Positive to the "+", negative to the "-" and your ground/power to the "⊥". The 48V option is for MICs that require phantom power from an external device. Typically used by condenser MICs. Only a balanced connection is used in this mode.



MIC (Dynamic MIC)

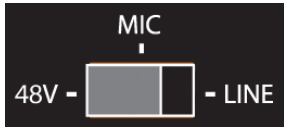


Connect Dynamic or Self-Powered Condenser MICs in this mode. Connections can be either balanced or unbalanced.

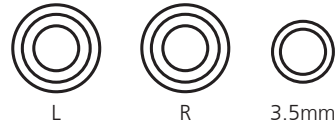


Either Unbalanced connection may be used.

Line Input (or Wireless MIC)



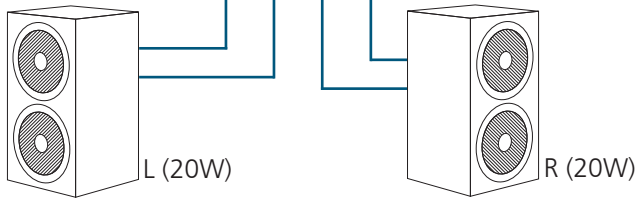
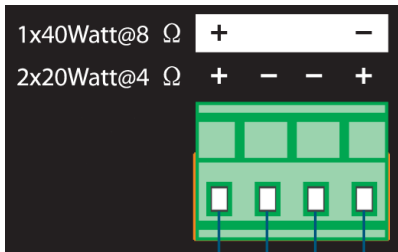
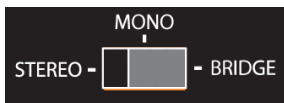
Connect Wireless MICs or line level inputs when this is selected.



NOTE: The MIC input has a power saving standby mode. When the MIC does not receive an audio signal for 8 seconds it will go into mutelstandby mode.

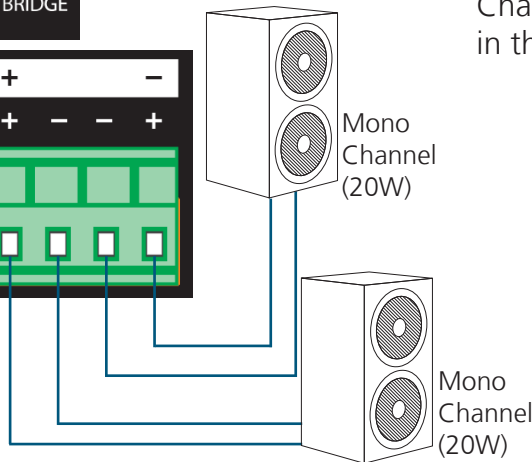
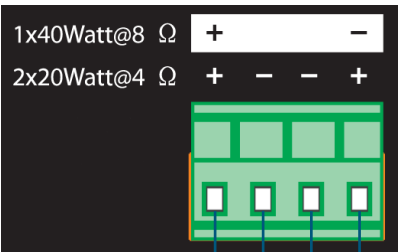
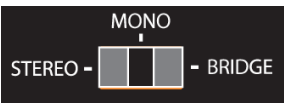
Output Connection

Stereo (Default)



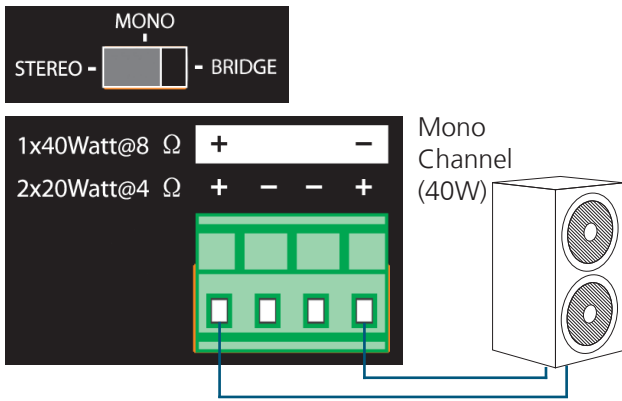
Default output connection is Stereo. Connect the "+" and "-" of the left side to the left speaker and the "+" and "-" of the right side to the right speaker. Each speaker receives 20W in this mode.

Mono (dual)



When Mono is selected, the audio output is Dual Channel Mono and will output 20W per channel in this mode.

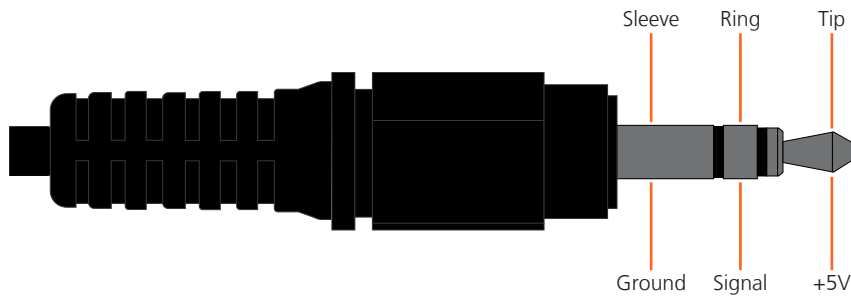
Bridged



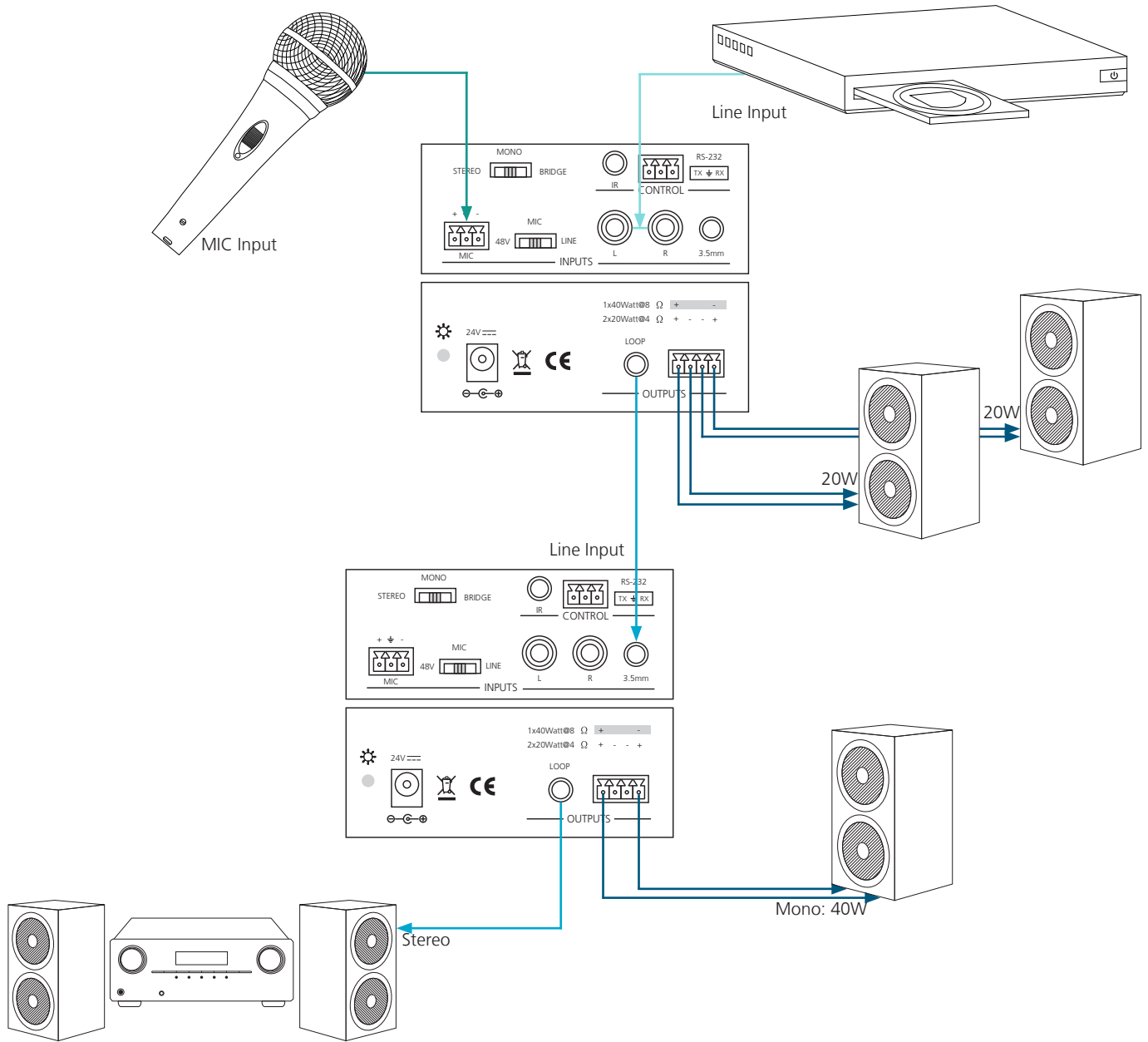
Bridged audio will combine both L and R channels into one and outputs 40W to a single speaker.

IR

The AT-PA100-G2 has the ability to be controlled by IR. Using a +5V 3.5mm IR receiver (e.g. AT-PA1-IR-G2), the inputs can be changed, outputs muted, and levels adjusted. The pin out for the IR connection has been provided below.



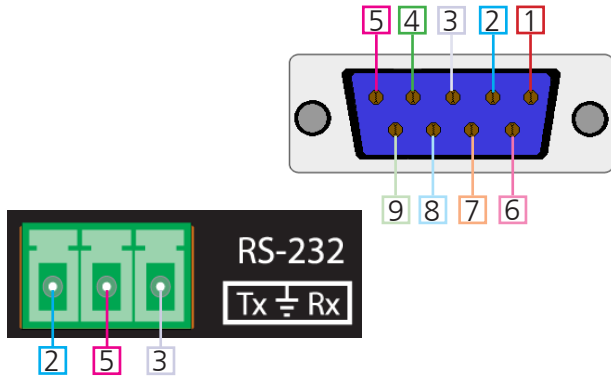
Connection and Installation



RS-232

Connection

RS-232 is connected through a 9-pin female D connector. The pins will have functions associated with them, some will be unassigned.



No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Baud Rate: 9600bps

Data Bit: 8bits

Parity: None

Stop Bit: 1bit

Command

The command codes are case sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
1A1.	1A1	Switching the audio to input 1
2A1.	2A1	Switching the audio to input 2
0A0.	Mute Audio	Mute Audio of MIC and Line out
0A1.	UnMute Audio	UnMute Audio
1A0.	Mute MIC	Mute audio of MIC
2A0.	Mute LINE	Mute audio of line out
600%	A: 1 -> 1 Volume: 30 Bass: 00 Treble: 00	Shows the audio status
601%	Volume of MIC: 51	MIC volume up
602%	Volume of MIC: 51	MIC volume down
603%	Volume of LINE: 51	Line volume up
604%	Volume of LINE: 51	Line volume down
605%	Bass of LINE: 04	Bass level up
606%	Bass of LINE: 04	Bass level down
607%	Treble of LINE: 04	Treble level up
608%	Treble of LINE: 04	Treble level down
609%	A: 1 -> 1 Volume: 50 Bass: 04 Treble: 04	Resets back to default settings
5xx%	Volume of MIC: xx	Preset MIC volume, [xx] arranges from [00] to [60]. Example: 509% --> Volume of MIC: 09
7xx%	Volume of LINE: xx	Preset line volume, [xx] arranges from [00] to [60]. Example: 723% --> Volume of LINE: 23

Command	Feedback	Description
8xx%	Bass of LINE: xx	Preset the bass level, [xx] arranges from [00] to [08]. Example: 803% --> Bass of LINE: 03
9xx%	Treble of LINE: xx	Preset the treble level, [xx] arranges from [00] to [08]. Example: 905% --> Treble of LINE: 05

Do not use a carriage return at the end of the commands. "." and "%" terminate the commands.

Note: Factory Default settings, when first turned on, are: volume 50, bass 4, and treble 4.

Note: The AT-PA100-G2 has last memory, so if the power is lost the volume, bass, and treble settings will remain the same as before the power loss.

Specifications

Audio

Rated Output	20 W x 2 40 W x 1 (Bridged Operation)
Gain	32dB
Frequency Range	20Hz to 20KHz
Signal/Noise Ratio	80dB (at max output)
Total Harmonic Distortion	1% (1KHz), 0.3% (20KHz) -- at nominal levels
Input Impedance	Input 1&2: >10KΩ
MIC Input Impedance	48V: 35KΩ MIC: 10KΩ LINE: 75KΩ
Output Impedance	3.5mm Loop Out: 50Ω stereo Speaker out: 4 ~ 8Ω Amplifier
Stereo Channel Separation	>75dB from 20Hz to 20KHz
Common Mode Rejection Ratio	>70dB from 20Hz to 20KHz
MIC Audio Detection Delay	1ms

Temperature

Operating	0°C to 30°C	32°F to 86°F
Storage	-20°C to 60°C	-4°F to 140°F
Humidity	20 to 90% non-condensing	

Power

Consumption	40W
Idle Consumption	4W
Supply	Input: AC100~240V 50/60Hz Output: DC 24V/2.71A

Dimension

H x W x D	38 x 96 x 87 (mm)	1.5 x 3.78 x 3.43 (inch)
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Weight

Device	0.3 kg	0.66 lbs
Shipping	0.98 kg	2.16 lbs

Certification

Power Supply	CE, FCC, RoHS, cULus
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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 product. 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.

Atlona, Inc. (“Atlona”) Limited Product Warranty Policy

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- A) repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping
- OR**
- B) replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products
- OR**
- C) refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona’s products is the purchaser’s exclusive remedy and Atlona’s liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona’s products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona’s Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser’s sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013
- Lifetime Limited Product Warranty for all cable products

Limited Product Warranty Terms – Refurbished (B-Stock) Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) hardware and electronic products purchased on or after June 1, 2013

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona.com for Atlona’s contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408- 962-0515 (US/international) or via Atlona’s website at www.atlona.com.

Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packing or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.
- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona's products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona's products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a "Consumer Product" under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona's Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona's authorized distributors, dealers and resellers can be found at www.atlona.com.

Atlona, Inc 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.

To register go to: <http://www.atlona.com/registration>