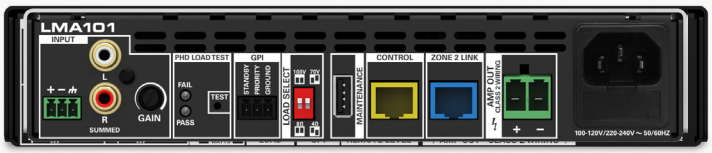
LMA SERIES

LINKABLE MIXER AMPLIFIERS

LMA101 / LMA201 / LMA401

OWNER'S MANUAL



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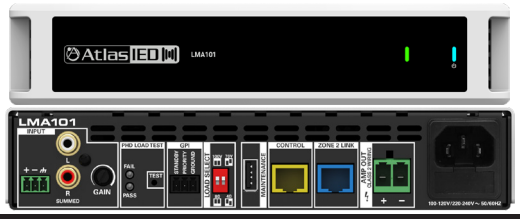

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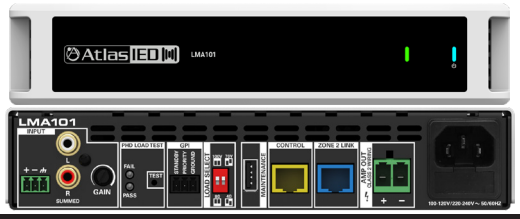


OWNER'S MANUAL

IMPORTANT SAFETY INSTRUCTIONS

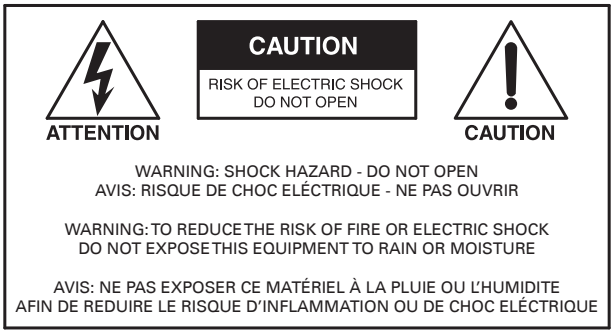
1. Read these instructions..
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other device that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
11. Only use attachments / accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart / device combination to avoid injury from tip-over.

13. Unplug this device during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
16. WARNING: To reduce the risk of fire or electric shock, this device should not be exposed to dripping, splashing, rain, or moisture, and objects filled with liquids, such as a vase, should not be placed on this device.
17. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
18. The mains plug of the power supply cord shall remain readily operable.
19. Protective earthing terminal. The apparatus should be connected to a mains socket with a protective earthing connection.

CAUTION - SHOCK RISK

The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



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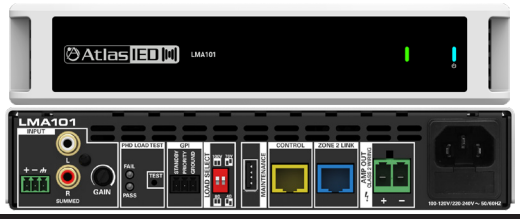

OWNER'S MANUAL

IMPORTANT SAFETY INSTRUCTIONS

WARNING - WHEN THE DEVICE IS IN USE:

- **WARNING**: For the terminals marked with symbol of ϟ may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.
- WARNING: The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
- **WARNING**: The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
- To prevent electric shock, do not remove the product cover as there are high voltage components inside. Refer all servicing to AtlasIED.
- Should any of the following irregularities occur during use, immediately switch off the power, disconnect the power cord from the AC outlet and contact AtlasIED. Do not to attempt to continue operation with the product as this may cause fire or electric shock:
  - Smoke or strange smell coming from the unit.
  - If the product falls or the case is damaged.
  - If water or any metallic objects falls into the product.
  - If the power supply cord is damaged in any way.
  - If the unit is malfunctioning.
- Do not insert or drop metallic objects or flammable materials into the ventilation holes of the product's cover, as this may result in electric shock or fire.
- Do not place any containers with liquid or metallic objects on the top of the product. If any liquid spills into the unit, fire or electric shock may result.
- Never operate this product or touch the power supply cord during an electrical storm, electric shock may result.
- Never exceed the power rating on the product when connecting equipment. Fire and/or property damage may result
- Operate the product only with the voltage specified on the unit. Fire and/or electric shock may result if a higher voltage is used.
- Do not modify, kink, or cut the power cord. Do not place the power cord in close proximity to heaters and do not place heavy objects on the power cord, including the product itself, doing so may result in fire or electrical shock.
- Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.
- Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage.

CAUTION - WHEN INSTALLING THE PRODUCT:

- Plugging in or unplugging the power cord with wet hands may result in electric shock.
- Never move the unit with the power cord plugged into the wall, as damage to the power cord may result.
- When unplugging the cord from the wall, grasp the plug, NOT the cord.
- Never install this product in humid or dusty locations, nor in direct sunlight, near sources of heat, or in areas where sooty smoke or steam are present. Fire and electric shock may result.
- Keep all sides of the unit at least 3½" away from objects that may obstruct air flow to prevent the unit's internal temperature rise.

CAUTION - WHEN THE PRODUCT IS IN USE:

- Never place heavy objects on the product, causing it to fall and/or break, resulting in personal injury and property damage. In addition, the product itself may fall and cause injury and property damage.
- Contact AtlasIED for instructions on cleaning the inside of the unit. Large accumulations of dust inside the unit may result in heat buildup and fire.
- Ensure that the power supply plug is securely plugged into the wall outlet. Never allow dust to accumulate on the power plug or inside the wall outlet.
- When cleaning the unit or the unit is not to be operated for an extended period, unplug the power cord from the wall.

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LINKABLE MONO AMPLIFIERS

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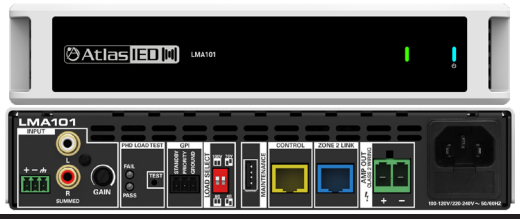

OWNER'S MANUAL

INTRODUCTION

The AtlasIED LMA series are single-channel, multi-impedance amplifiers designed for use as a standalone zone amplifier or as a second zone amplifier when linked with an AtlasIED DMA series mixer-amplifier.

All amplifiers in the LMA series share the same design features, differing only in their power handling capabilities. Choose from the 100 W LMA101, 200 W LMA201, or 400 W LMA401.

The LMA series are engineered for maximum versatility, making them ideal for both commercial 25 V/70.7 V/100 V distributed audio systems and sound reinforcement applications that demand amplification for low impedance loads such as 2, 4, or 8 ohms. The advanced switch mode, global auto-sensing power supply ensures consistent performance even under fluctuating power conditions. Together, the power supply and output stage are precisely designed to deliver exceptional dynamic output, providing high voltage and current simultaneously to drive virtually any loudspeaker load with reliability and clarity.

The LMA Series is equipped with a wide range of integrator-friendly features, including balanced line inputs, electronically summed RCA jacks, rear panel detented gain control, remote level control, and GPI control ports for low power standby mode or priority override. The amplifiers feature an automatic speaker system test known as Push Here Diagnostic (PHD). With a single press of the PHD button, the amplifier checks connected speaker lines for wiring and impedance errors. Once all speakers are installed, the circuit automatically confirms that tap settings do not exceed the amplifier's rated power, ensures no speakers are incorrectly tapped at 8 Ω, and verifies that the wiring is free from shorts.

The LMA series is designed to seamlessly integrate with DMA Series mixer-amplifiers, serving as the second channel to act as an independent Zone 2, subwoofer, or Zone 1 expansion. Connection is simple, requiring only standard Ethernet cable. With Zone 2 Link ports, audio and data are gain-matched for consistent performance between amplifiers. The LMA can be installed up to 100 meters from the DMA amplifier, offering flexible placement options.

Whether your application involves a large distributed constant voltage sound system, a high SPL sound reinforcement system, or both, the AtlasIED LMA Series is the solution for a multi-functional, high-power, and cost-effective amplifier.

KEY FEATURES

- LMA101, LMA201, LMA401 Linkable Mono Amplifiers
- Individual channel load configurations of 2 Ω, 4 Ω, 8 Ω, 25 V, 70.7 V & 100 V
- Balanced inputs
- Unbalanced RCA inputs
- Priority Mute
- Energy saving standby
- Rear panel attenuators
- Auto Sensing 100 V–240 V AC mains power supply
- Meets Energy Star standards for power consumption in Standby Mode
- Convection cooling in Idle Mode; Fan assist under signal

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FRONT PANEL

1. VENTILATION / COOLING

LMA amplifiers are equipped with fan-assist cooling, which functions by drawing cool air in from the rear of the amp and expelling hot air through the front and side panels. The cooling system of the LMA Series includes an idle mode with convection cooling and variable-speed fan assist cooling during amplification. Notably, the design of the LMA Series is such that air filters are not necessary. However, in environments with high levels of dust or dirt, occasional cleaning may be required to ensure optimal performance.

2. AC MAINS & POWER SUPPLY STATUS INDICATOR

The LMA Power Supply Status indicator utilizes RGB LED technology to provide a visual indication of various conditions related to the incoming AC mains and the amplifier's power supply.

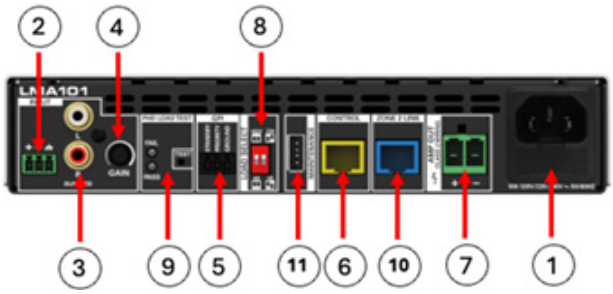
A. Idle Mode (Blue - Blinking) - The LED will blink blue to indicate the amplifier is in a low-power state. The fans are off during this state with the amplifier operating in convection cooling mode. The amplifier is ready to receive a signal and has no wake-up delay
B. Power On Mode (Blue - Steady) - The LED will illuminate a steady blue state when proper AC mains power is applied to the amplifier, indicating that the amplifier is active and ready for use.
C. Standby Mode (Yellow - Steady) - A steady yellow state indicates Standby mode, wherein the amplifier's power supply is in Energy Save Mode, and the amplifier is not ready for use. To activate Standby mode, the rear panel remote activation control GPI must be triggered by shorting the (STB) pin and ground (G) pin together. In Standby mode, the LMA power consumption is less than 1 watt, and the amplifier will not pass audio.
D. Protect Mode (Red - Steady) - The LED will be steady red in the event of a fault condition with the power supply. If this occurs, unplug the amplifier from the AC mains and have the AC mains inspected by a qualified technician. If the AC power is stable, plug the LMA amplifier back in. If the LED remains red, contact AtlasIED Tech Support.
E. AC Fault (Red - Blinking) - The LED will blink red when there is low or high AC mains voltage, indicating a fault condition with the AC mains powering the amplifier. Under this condition, the amplifier will not function until the AC mains are within the amplifier's voltage requirements. LMA AC mains operating voltage requirements are 100 V–132 V and 208 V–240 V.
Note: If one of the speaker outputs has a short, the amplifier will go into protect mode with all Channel LEDs and the AC main LED blinking Red. The amplifier will attempt to reset itself every 20 seconds until the short condition has been removed.
F. Thermal Protection (Yellow - Blinking) - This LED represents the temperature condition of the amplifier. It will blink yellow if the power supply's thermal protection is triggered, reducing output power. This allows the amplifier to cool down while remaining in operation.

3. CHANNEL STATUS INDICATORS

The LMA Channel Status indicator employs RGB LED technology to offer a visual indication of various conditions related to the channel's operation. Each channel has a separate indicator:

A. Clear (Off) - The LED will not illuminate, indicating that the amplifier channel is stable and ready for use.
B. Green (Blinking) - The LED will blink green when 25 mV if an input signal is applied to the amplifier.
C. Yellow (Blinking) - The LED will blink yellow when the maximum amplifier output level is achieved.
D. Red (Blinking) - The LED will blink red when the amp channel exceeds the maximum current settings, indicating a incorrect load selection. Confirm that the load applied to the amp channel and the load switch selection match.
Note: If one of the speaker outputs has a short, the amplifier will go into protect mode with all Channel LED's and the AC main LED blinking Red. The amplifier will try to reset itself every 20 seconds until the short has been removed.
E. Red (Steady) - The LED will be steady red when the amp channel is in protect mode. Remove the speaker load from the amp channel, and if the LED turns off, look for a short in the speaker line. If the LED continues to illuminate and the speaker load is removed from the amp channel, contact AtlasIED Tech Support.
F. Yellow (Steady) - The LED will be steady yellow when the channel is in a thermal protect condition. Once the thermal condition is resolved, the yellow LED turns off.

REAR PANEL



1. **AC MAINS INPUT**
   The LMA Series is equipped with a global, wide-range AC Mains power supply that functions on 100 V–120 V and 220 V–240 V 50/60 Hz power sources. The amplifiers feature an IEC-600320-C14 receptacle and come with a detachable 1.8-meter, 14-gauge NEMA 5-15 power cord. Insert the IEC connector of the power cord into the IEC receptacle of the LMA Series amplifier, ensuring it is securely connected. For applications outside North America, refer to local electrical code requirements to select the appropriate power cord.

2. **BALANCED INPUT**
   Connect balanced line level signals to the (+) (–) and (G) terminals. **Note:** If connecting an unbalanced line level input, short the (G) and (–) terminals together.

3. **RCA INPUTS**
   The Left and Right RCA connectors accept balanced signals. These inputs are electrically summed into a mono signal. **Note:** The RCA inputs are always active along with the balanced input. Their signals are combined prior to the gain control stage.

4. **GAIN/LEVEL CONTROL**
   Each channel of the LMA amplifier features an independent detented level control. When either potentiometer is turned completely to the left (fully counterclockwise), no signal will come out of the corresponding amplifier channel. When turned completely to the right (fully clockwise), the amp will be set for maximum level.
   A. Low Audio Level Applications - If the audio levels are producing only a few watts, we recommend setting the level controls around the 12 o'clock position and increasing the input signal to optimize the system's gain structure and reduce the noise floor. For 70.7 V and 100 V applications at any power level, it is recommended to set the level controls at the 3 o'clock position and increase the input signal to optimize the noise floor gain structure.
   B. LMA & Atmosphere Gain Structure - Pairing an LMA amplifier with an Atmosphere AZM4 or AZM8 audio processor is an excellent match. AZM units are designed with commercial-grade zone output stages. When starting to configure the system, and to achieve a good balance with the gain structure, we recommend setting the LMA level controls at around the 12 o'clock position.

5. **GPI CONTROL PORT**
   The LMA GPI control port serves two functions:
   A. **Standby Mode** - Connect Pin 1 (STB) to Pin 3 (G) via a switch to activate Standby Mode. (See Figure A below.) This mutes all channels and places the amplifier in Energy Save Mode. When in Standby Mode, the AC Mains Power LED illuminates a steady Yellow state, and power consumption is less than 1 W. Switch requirements are a low-voltage and low-current SPST.
   B. **Priority Mode** - Connect Pin 2 (PRI) to Pin 3 (G) via a switch to activate Priority Mode. (See Figure B below.) This mutes all inputs, and all channel LEDs will blink Red. Switch requirements are a low-voltage and low-current SPST.

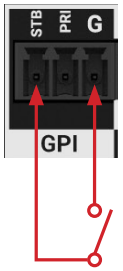


Figure A: Standby Mode

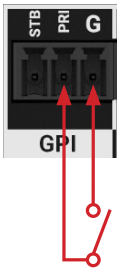


Figure B: Priority Mode

REAR PANEL - (CONTINUED ON NEXT PAGE)

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REAR PANEL- (CONTINUED)

CONTROL PORT ACCESSORIES

6. CONTROL PORT - REMOTE LEVEL CONTROL

LMA AMPLIFIER AND DMA-V (Volume Control) Accessory - The LMA amplifier level can be adjusted remotely using a DMA-V accessory up to 330 feet away. Connectivity from the LMA amplifier to the DMA-V wall plate is via industry standard CAT 5/6e cable with RJ45 connectors. LMA and DMA-V connectors are color coded (Yellow) to make the identification quick and simple. **Note:** This port is not a network port. The Control Port operates on a 10 kΩ-based system, and it is recommended to use the optional AtlasIED DMA-V wall control for this purpose. Follow these guidelines for proper setup:

DMA + LMA + DMA-VS (Volume Control and Source Selection) Accessory - When the LMA is used as a Zone 2 amplifier and connected to a DMA amplifier, the AtlasIED DMA-VS accessory can be used for both level control and source selection. The DMA App is used to assign sources to switch selections.

CONTROL PORT RJ45 CONNECTOR WIRING PIN-OUT

If the DMA-V does not meet installation requirements for level control, the pins of the Remote Level Control can be accessed by an external potentiometer or audio processor. Table 1 shows the Control Port RJ45 pin assignments for level control.

Table 1 - LMA Control Port Pin Assignments

Pin 1	Do not connect
Pin 2	RMT Level Return 010 V
Pin 3	GND Audio
Pin 4	Power Out +10 VDC
Pin 5	Do not connect
Pin 6	Do not connect
Pin 7	Do not connect
Pin 8	Do not connect

Figures 1 and 2 below illustrate the use of a generic RJ45 break-out board with screw terminals to control an LMA amplifier power level externally.

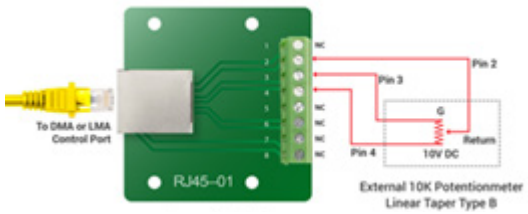

Figure 1: Remote level control with external potentiometer

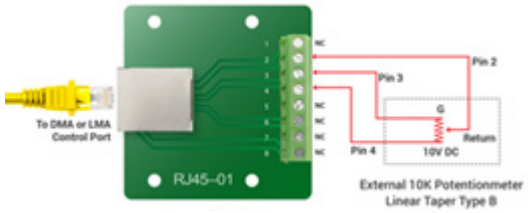

Figure 2: Remote level control with external control system

REAR PANEL - (CONTINUED ON NEXT PAGE)

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REAR PANEL- (CONTINUED)

Wiring Details

In Figure 1, the wiper of the potentiometer connects to the channel return (Pin 2) of the RJ45. Ground connects to Pin 3 of the RJ45 and Pin 4 is (10 VDC) connects to the potentiometer. When 10 VDC is applied to the channel return (Pin 2), the amplifier will be at full power.

In Figure 2, the control voltage from the audio control processor connects to the channel return (Pin 2) of the RJ45 port. You will need to connect a ground. Return voltage current requirements are very low at 25 mA. When 10 VDC is applied to the channel return (Pin 2), the amplifier will be at full power.

Note: If the level control is not operating with the level control set completely to the right (fully clockwise), the amplifier output at maximum and with the level control completely to the left (fully counterclockwise), the +10 V and the G pins are reversed.

7. LOUDSPEAKER CONNECTIONS

LMA Series amplifiers are equipped with a locking Euroblock connector. Please follow these guidelines when working with the connector, keeping safety in mind.

- Safety Precautions - Before starting the process, ensure that the amplifier is unplugged from the AC mains source to avoid potential high voltage electrical shock.
- Connector Details - The removable Euroblock connector is a 2-position, 7.62 mm pitch design.
- Wire Gauge Recommendation - It is recommended to use 14-gauge or greater diameter wire for connecting to the loudspeaker.
- Wire Size Acceptance - The terminal can accept wire sizes of 18-gauge to 10-gauge Class 3 wiring.
- Wire Preparation - Properly prepare the wire by stripping it back 0.25" (6 mm). It is not recommend to tin (apply solder to) the wire.
- Connection Process - Insert the wire into the terminal block slot and secure it by tightening the screws firmly. This step is critical to ensuring a secure connection for both safety and optimal audio quality.
- ⚠Caution - Failure to tighten screws securely could lead to electrical shock or damage to the amplifier.

Always follow safety guidelines and manufacturer recommendations when working with audio equipment. If you have any doubts or concerns, consult the user manual or contact the manufacturer's support for clarification and assistance.

8. AMPLIFIER LOAD CONFIGURATION SWITCHES - IMPORTANT!

The LMA Amp series provides flexibility in configuring load requirements, allowing independent load selections for each channel. Each channel can be configured for 2 Ω, 4 Ω, 8 Ω, 25 V, 70.7 V, and 100 V loads. Two DIP switches dedicated to each specific channel are used for configuring the amplifier channels' load selections. Refer to Table 2 below.

- Safety Precautions - Before starting the process, ensure that the amplifier is unplugged from the AC mains source to avoid potential high voltage electrical shock.
- Connector Details - The removable Euroblock connector is a 2-position, 7.62 mm pitch design.
- Wire Gauge Recommendation - It is recommended to use 14-gauge or larger diameter wire for connecting to the loudspeaker.
- Wire Size Acceptance - The terminal can accept wire sizes of 18-gauge to 10-gauge Class 3 wiring.
- Wire Preparation - Properly prepare the wire by stripping it back 0.25" (6 mm). It is not recommended to tin (apply solder to) the wire.
- Connection Process - Insert the wire into the terminal block slot and secure it by tightening the screws firmly. This step is critical to ensuring a secure connection for both safety and optimal audio quality.
- ⚠Caution - Failure to tighten screws securely could lead to electrical shock or damage to the amplifier.

Table 2 - Load Selection & DIP Switch Positions

Load Setting	DIP Switch #1	DIP Switch #2
100 V	Up	Up
70.7 V	Up	Down
8 Ω	Down	Down
4 Ω	Down	Up

Note: For 2 Ω loads or 25 V systems, use 4 Ω switch settings. Refer to the power specifications for power ratings corresponding to the selected load. By following the provided chart and ensuring the correct DIP switch positions, you can tailor the amplifier's load configuration to suit your specific needs. Always refer to the user manual for additional details and specifications.

REAR PANEL - (CONTINUED ON NEXT PAGE)

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REAR PANEL- (CONTINUED)

2 Ω OPERATION

The LMA amplifier is indeed versatile, designed for both high-voltage and high-current demands, making it adaptable to both distributed 100 V systems and low-impedance setups down to 2 Ω. In distributed systems, where an amplifier needs to output 70.7 V or 100 V to drive multiple speakers over long distances, It is a challenge for low-power amplifiers (under 200 W) to step up the voltage. The DMA amplifiers accomplishes this by maintaining voltage at these high levels effectively.

For low-impedance systems (2 Ω , 4 Ω, or 8 Ω) the amp delivers high current. While the voltage demands are lower, the amplifier's Class D output stage ensures stable, efficient current delivery for 8 Ω and 4 Ω loads and can handle 2 Ω loads, as well. Power availability for 2 Ω is contingent upon the power supply available current. A 2 Ω load, for example, requires twice the current of a 4 Ω load. Hence, the specification is conservatively rated. In practical applications, the delivered power at 2 Ω often surpasses these figures. For 2 Ω setups, use the 4 Ω settings. The DMA will automatically sense 2 Ω loads.

25 V OPERATION

In a 25 V distributed audio system, the current requirements are significantly higher compared to systems operating at 70.7 V or 100 V. A 25 V system can be considered a low impedance audio system, in which the power and voltage required results in lower impedance loads applied to the amplifier.

For example, in a system with twenty 25 V speakers tapped at 10 W each, the total power requirement from the amplifier would be 200 W at 25 V. To determine the load impedance applied to the amplifier, use Ohm's Law. The formula is: $V^2 \div \text{Power} = Z$ (25 V × 25 V)= 625. Six hundred twenty-five volts divided by 200 W = 3.1 Ω. This is the load applied to the amplifier.

For optimal performance in 25 V systems, the DMA loads switch should be set to 4 Ω. DMA amplifiers are designed to auto-sense the load within a range of impedances. However, if the power requirement exceeds 200 W, the load impedance will drop below 2 Ω, which will limit the amplifier's power output. This is why model LMA401 reduces power from 400 W to 200 W for 25 V applications.

9. PHD LOAD TEST SWITCH & LEDS

The LMA Series includes an integrated amplifier diagnostic feature known as PHD (Push Here Diagnostic®). This easy-to-use and effective tool tests the speaker wiring and load impedances on 70.7 V speaker systems to assure the proper load is applied to the amplifier. The proper load will assure a long-lasting, trouble-free audio experience with your new LMA series amplifier. Many amplifiers fail because an incorrect load is applied to the amplifier. This is especially true when using the amplifier in a 25 V or 70.7 V distributed audio speaker system. There are a few common failure points that can occur during system installation that are listed in the ***PHD Load Test section***.

10. ZONE 2 LINK PORTS

The LMA zone amplifier is designed to work in conjunction with the DMA amplifier using the Zone Link bus on the rear panel of each unit. The amplifier link port is color coded blue on both amplifiers. The connection between the LMA Zone 2 amplifier and the DMA Zone 1 amplifier uses standard CAT5/6e cable with RJ45 connectors. **Note:** This port is not a Network Port.

REAR PANEL - (CONTINUED ON NEXT PAGE)

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REAR PANEL - (CONTINUED)

11. MAINTENANCE PORT

LMA series amplifiers have a built-in USB-A port for firmware updates. Insert a USB flash drive with the firmware preloaded. The USB flash drive must be of a FAT32 configuration. Refer to the section on page 18 of this manual for more information.

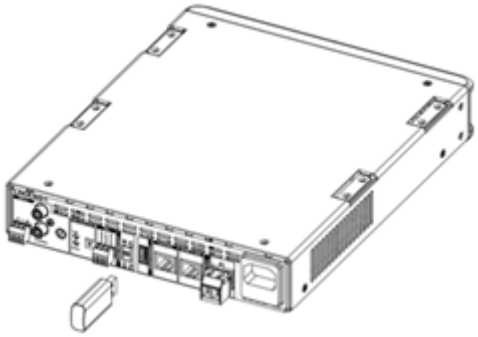

Figure 3: USB-A port for USB flash drive firmware updates

LINKED DMA & LMA APPLICATIONS

The following diagrams show common applications for a linked LMA and DMA amplifier system.

A. 2-ZONE SYSTEM

B. 1-ZONE WITH EXPANDED AMPLIFICATION

C. 1-ZONE WITH EXPANDED AMPLIFICATION

REAR PANEL - (CONTINUED ON NEXT PAGE)

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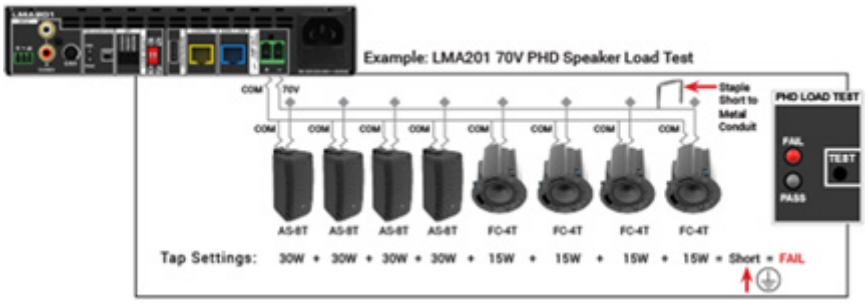
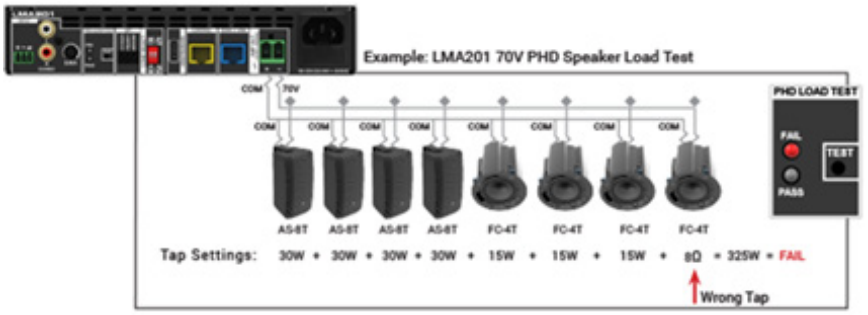
PHD DIAGNOSTIC LOAD TESTING

The following are three commonly occurring critical wiring errors in 70.7 V / 100 V distributed audio systems.

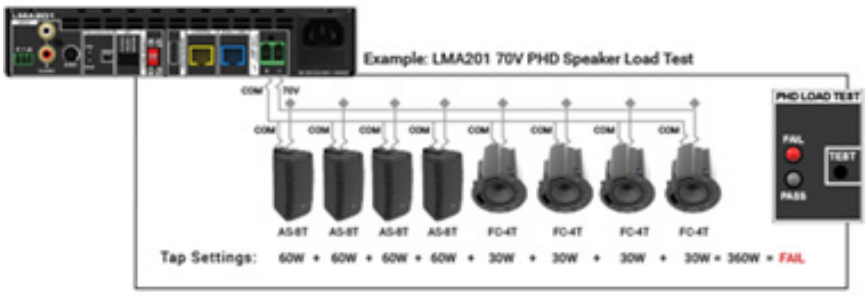
1. **Short in speaker wiring** - It is common for speaker cable to become nicked or cut through during installation in a metal conduit, exposing the copper wire to the conduit wall and thereby causing a short to ground. A staple coming into contact with exposed core wire is another common cause of a short to ground during installation.



2. **Incorrect Speaker Tap Setting** - Selecting an 8 Ω setting in a 70.7 V / 100 V speaker system in most cases will cause the amplifier to fail within a few days of use.



3. **Speaker Power Tap Overload** - This occurs when there are too many speakers connected to the amplifier or the wrong power taps are selected. For example, if a 200 watt, 70.7 V amplifier is used in a 70.7 V distributed system and there are eight speakers intended to be tapped at 10 W, but instead three of the speakers are accidentally tapped at 30 W, this equates to 160 W of power required to drive the system properly. While this may work at low volume levels, increasing the volume will strain the amplifier and cause it to fail over time.

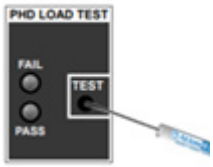


CONDUCTING A SELF-DIAGNOSTIC TEST USING THE PHD FEATURE

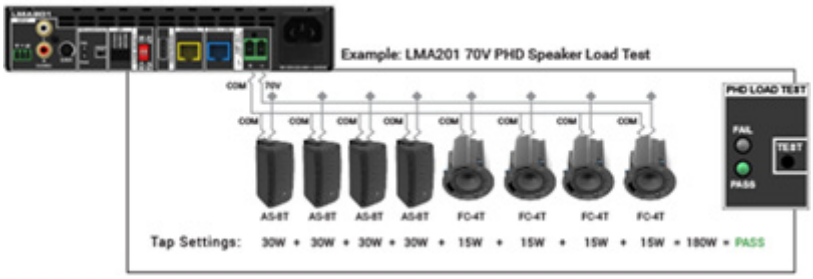
The Push Here Diagnostic® (PHD) is designed to check connected loudspeaker lines in a 70.7 V distributed system for wiring and impedance errors. This test can be conducted once all speakers are connected. The self-diagnostic and the circuit automatically detects whether the attached speakers' tap settings exceed the amplifier's rated power, any speakers are mistakenly tapped at 8 Ω, and whether speaker wire has shorted to ground

To use the PHD feature:

1. Install the DMA amplifier.
2. Install the 70.7 V / 100 V distributed speaker system according to the design and double-check the speaker tap settings. The total power for all the speakers should NOT exceed the maximum power rating of the amplifier installed.
3. Connect the speaker system to the amplifier. Pay special attention when connecting the speaker leads to the proper terminals on the amplifier. **Note:** All speaker power taps must be on a 70.7 V or 100 V setting.
4. Activate power to the amplifier.
5. Activate the PHD test circuit by inserting a small, pointed tool through the hole on the rear panel labeled TEST.
6. Press the momentary switch for 1 second and then release.



A. The Pass LED will illuminate Green if the speaker load is correct, the system is set up properly, and there were no errors found in the system. Continue the installation.



B. If the FAIL LED illuminates Red, there is an issue within the speaker system. Determine the cause and correct the issue before continuing installation. The FAIL LED should be never remain illuminated, or damage may occur to the amplifier or sound system.

REAR PANEL - (CONTINUED ON NEXT PAGE)

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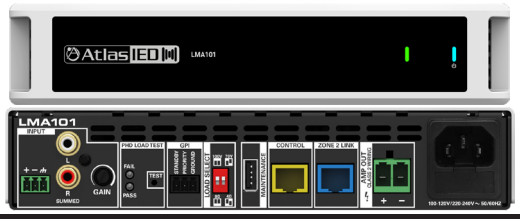
LMA SERIES

LINKABLE MONO AMPLIFIERS

LMA101 / LMA201 / LMA401



OWNER'S MANUAL

PLACEMENT OF THE AMPLIFIER

Turn off all equipment before making connections. Install the amplifier in a standard-width 19" rack. It can be mounted above or below anything that does not generate excessive heat. Although the unit's chassis is shielded against radio frequency and electromagnetic interference, extremely high fields of RF and EMI should be avoided.

Ventilation - The appliance should be situated so that its location or position does not interfere with proper ventilation. For example, the DMA amplifier should not be situated in a sealed cabinet or on a shelf with obstacles on it that may impede the flow of air through the ventilation openings. It is recommended that it be rack mounted into an equipment rack.

Heat - The DMA amplifier should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce excessive heat. Ambient temperatures should not exceed 95° F (35° C) when equipment is in use.

CABLING

The DMA amplifier can be used with either balanced or unbalanced sources, and the outputs can be used with either balanced or unbalanced loads, provided the proper cabling is used. A balanced line is defined as a two-conductor shielded cable with the two center conductors carrying the same signal but of opposite polarity when referenced to ground. An unbalanced line is generally a single-conductor shielded cable with the center conductor carrying the signal and the shield at ground potential.

Balanced Input - AtlasIED recommends using either 20-gauge or 22-gauge 2-conductor wire with shield for low level signals. Maintain the proper polarity, (+) to (+), (–) to (–), and shield to ground. **Note:** The ground center pin of the Phoenix connector is common for both channels.

Loudspeaker Outputs - Use Class 2, 2-conductor unshielded wire of the appropriate gauge. Contact AtlasIED technical support at 1-800-876-3333 with questions regarding wire gauge. The number of loudspeakers connected and their tap settings will be required for technical support to properly recommend wire.

CONNECTING THE LMA AMPLIFIER TO AC MAINS

Observe the following precautions when connecting an LMA amplifier to AC mains.

- Never plug an LMA Series amplifier into a circuit without knowing what other products are connected to the same circuit.
- Never plug an LMA Series amplifier into a power strip. Always connect directly to a dedicated circuit wall receptacle. Power strips are not designed to deliver high amounts of continuous or peak current.
- Never plug an LMA Series amplifier into an extension cord.

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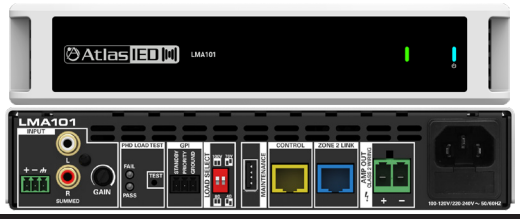
LMA SERIES

LINKABLE MONO AMPLIFIERS

LMA101 / LMA201 / LMA401



OWNER'S MANUAL

RACK KIT INSTALLATION

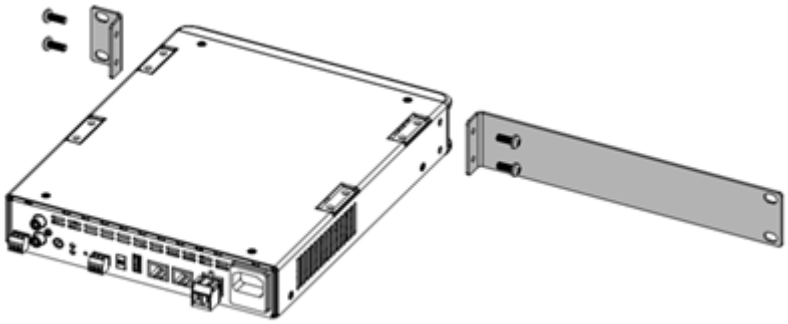
The LMA Series amplifier can be rack mounted as a single amp or side by side with any other AtlasIED half-rack model in a 19"-inch rack. The LMA rack kit also supports the LMA into half-rack cabinets. All parts required to rack mount one or two amps side by side are included with the LMA amplifier. Depending on the rack mounting method, there may be parts that are unused; disregard them. Follow the illustrations below for kit assembly.

Kit Contains:

- Rack ears - Short, Qty 2
- Rack ear to chassis screws M3 × 10 mm, Qty 4
- Rack ear - Long (for single-unit mounting), Qty 1
- Top & bottom chassis joiner plates, Qty 4
- 4-40 × 3/8" flat head black screws to secure joiner plate to chassis, Qty 16
- 10/32" × 1" rack mount screws, Qty 4
- 10/32" plastic washers, Qty 4

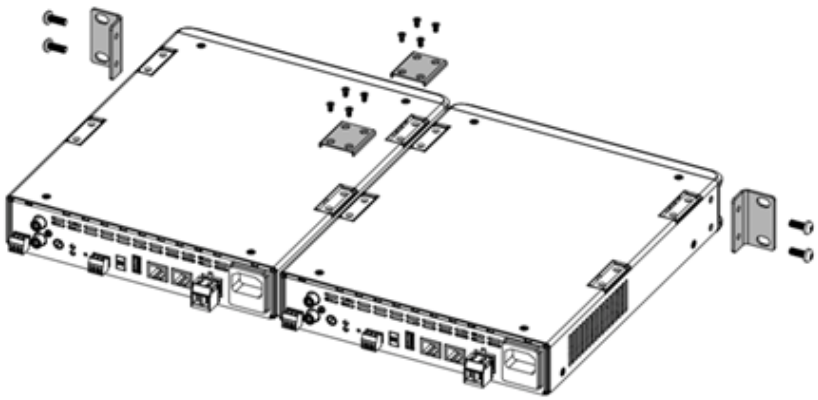
SINGLE LMA AMPLIFIER RACK MOUNT IN A 19"RACK

Mounting the LMA Amplifier into a 19"-inch rack requires using one (1) short rack ear and one (1) long rack ear. Chassis joiner plates are not used.



SINGLE LMA AMPLIFIER RACK MOUNT IN A 19" RACK

Mounting two LMA Amplifier side by side into a 19"-rack requires using two short rack ears and four joiner plates. Secure the joiner plates to the top and bottom of the chassis.



RACK KIT INSTALLATION - (CONTINUED ON NEXT PAGE)

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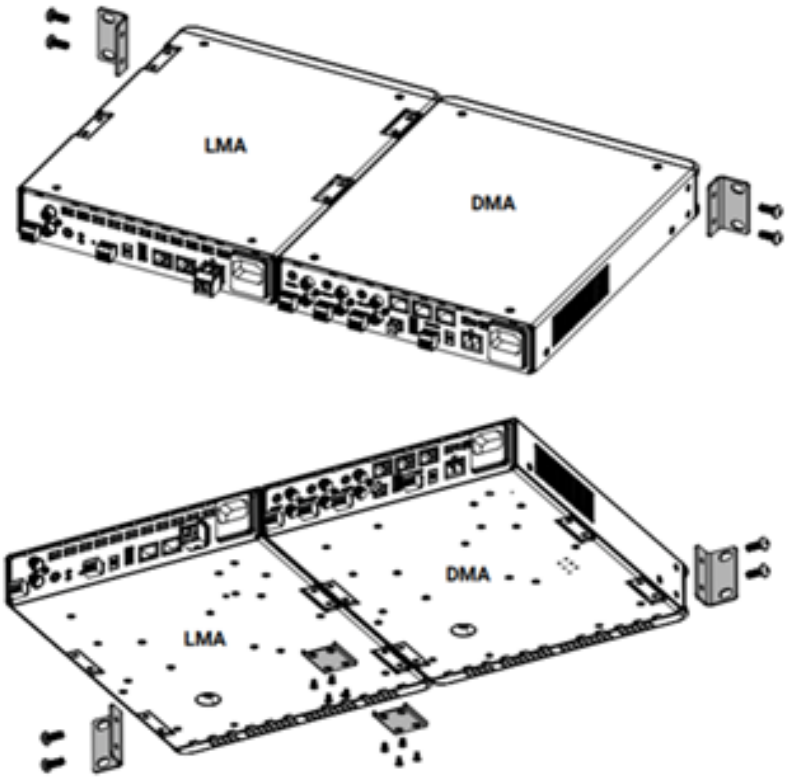
RACK KIT INSTALLATION - (CONTINUED)

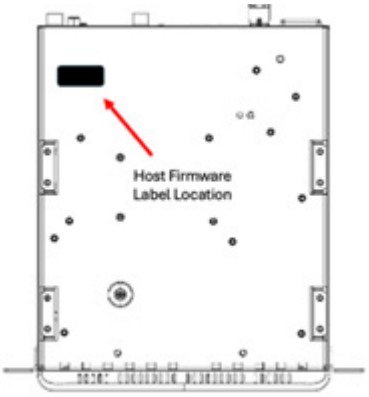
LMA & DMA AMPLIFIER RACK MOUNT IN A 19" RACK

Mounting a LMA Amplifier and a DMA amplifier side by side into a 19"-inch rack requires using two (2) short rack ears and two (2) long joiner plates. Secure the joiner plates to the bottom of the chassis only.



IDENTIFYING LMA FIRMWARE

The version of the LMA firmware that was installed at the factory is printed on the bottom of the case near the INPUT connections.



UPDATING LMA FIRMWARE

LMA firmware is upgraded through the USB-A interface on the unit's rear panel using files from a USB flash drive that have been downloaded from the AtlasIED website.

Note: The USB flash drive must be in the FAT32 file system format.

Note: Drives that are preconfigured for FAT32 have a storage capacity of 32 G or less.

To update LMA firmware, do the following:

1. Navigate to the LMA product page on the AtlasIED website.
2. Locate the firmware file in the directory. **Note:** Firmware for LMA101, LMA201, and LMA401 are located in separate zip files.
3. Copy the relevant firmware to the Flash drive. **Note:** Firmware files for more than one LMA model may be stored on the same USB drive. The LMA amplifier will select the correct version.

4. Unplug the LMA from AC mains power. Wait for 1 minute, even if the power LED goes off. **Note:** The power supply must be fully discharged for the firmware update process to function correctly.
5. Insert the USB drive into the USB port located on the rear panel of the LMA amplifier.
6. Activate power to the amplifier. The firmware update will begin automatically.
7. The PHD LOAD TEST LEDs labeled FAIL (Red LED) and PASS (Green LED) are used to indicate the status of the firmware update in the following situations.

- **During firmware update** – The PHD Load Test LED's will flash 6 times and then the amplifier will boot up normally.
- **Firmware update verification** – Power cycle the amplifier with USB drive installed. The LEDs flashes twice if the version programmed matches the file on the USB drive.

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AUDIO SPECIFICATIONS/PERFORMANCE

System			
Model	LMA101, LMA201, LMA401		
Type	Power Amplifier, 1 Channel		
Power Supply Type	Switch Mode - Wide Range 100-132V/208-264V		
Amplifier Topology	Class D		
Number of Fixed Inputs	1		
DSP Internal	No		
Network	No		
Optional Card Slot	No		
Output Power[1]	**LMA101**	**LMA201**	**LMA401**
Power 1 Channel			
4 Ω, 8 Ω, 70.7 V, 100V	100 W	200 W	400 W
25 V[7]	100 W	150 W	200 W
2 Ω[8]	50 W	100 W	200 W
Factory Default Settings (As Shipped)			
Amplifier Configuration	1 Channel		
Level Controls	Rear Panel		
Control Ports (Rear Panel)	Standby OFF, Priority Mute OFF		
Load Configuration	70 V		
Inputs			
Input Quantity	Qty. 1		
Input Type	1 Balanced Line, 1 RCA (L & R are summed); Connectors are in parallel		
Input Connectors Type	3.5 mm Euroblock, 3-position		
Input Impedance	20 kΩ (Balanced), 10 kΩ (Unbalanced)		
Input Sensitivity	775 mV Balanced, 316 mV RCA		
Maximum Input Level dBu	Balanced: 20 dBu, RCA:16 dBu		
Level Control			
Rear Panel	Recessed rotary detented attenuator		
Status Indicators Front Panel			
AC Mains/Power Supply Status Indicator, Multi-Color			
Power	Blue		
Standby	Yellow		
AC Mains Out of Safe Operating Range	Red (Flashing)		
Temp	Yellow (Flashing)		
Protect/Fault	Red		

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

Channel Status Indicator, Qty. 1 Per Channel, Multi-Color	
Signal	Green
Output Limit	Yellow
Output Protect	Red (Steady)
Over Current / Fault	Red
Temp Condition	Yellow (Steady)
GPI Port (Rear Panel)	
Number of Ports	3 (Standby, Priority, Ground)
Type of Connector	Euroblock, 3.5 mm pitch, 3-position
Functions	Standby (Energy Save Mode), Contact Closure Enables Standby
Functions	Priority Mute, Contact Closure Enables Mute
Control Port (Rear Panel)	
Number of Pins	1
Type of Connector	RJ45 - Yellow (Not Ethernet)
Functions - Remote Level Control	Connects to DMA-V Accessory - 1 Control for Remote Level
Functions - Source Selection	Connects to the DMA-VS Accessory; 1 Control for Remote Level + 1 Control for Input Source Selection when connected to a DMA Amplifier
Control Port Max Distance	100 m maximum distance between LMA Amplifiers and DMA-V or DMA-VS accessory
Zone 2 Link Port (Rear Panel)	
Number of Ports	1
Type of Connector	RJ45 - Blue (Not Ethernet)
Functions - Zone 2 Link BUSS	Connects to DMA Amplifier, Bi-Directional communication between DMA and LMA Amplifiers, Balanced Audio Line Input (1 V)
Zone 2 Link Max Distance	100 m maximum distance between DMA and LMA Amplifiers.
Configuration Settings (Rear Panel)	
Gain (Level)	Rotary potentiometer
Load Selection	DIP switch for 4 Ω, 8 Ω, 70.7 V, 100 V settings
PHD Load Test (Load Diagnostic Test) (Rear Panel)	
Activation Switch	Momentary - Pinhole Button
Diagnostic Indicators	Pass=Green, Fail=Red
Maintenance Port (Rear Panel)	
Hardware Firmware Update	USB 2.0
Output Terminals (Speaker - Rear Panel)	
Output Connectors -Type	Removable Euroblock, 7.62 mm pitch, locking
Output Connectors - # of Terminals	One (1) 2-position
Wire Size	28-10 Gauge (Class 2 Wire)
Current Rating	30 A RMS per Terminal

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

Electrical Specifications (General)			
Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power	≤0.15%		
Signal-to-Noise Ratio (8 Ω)	>93 dBA Below Rated Output (A-Weighted),		
Frequency Response	20 Hz–20 kHz (+0/-1.5dB) in 2-, 4-, 8-Ohm, 25 V Modes; 50 Hz–20 kHz (+0/-1.5 dB) in 70.7 V, 100 V Modes		
Input Impedance Balanced (Nominal)	100 Ω Balanced Line-to-Line		
Input Sensitivity	0.775 V Balanced, 316 mV RCA		
Slew Rate	>18 V/µs		
Damping Factor (20 Hz to 400 Hz)	>250		
Input Gains & Input Sensitivity	**LMA101**	**LMA201**	**LMA401**
Balanced Input - Sensitivity	775 mV	775 mV	775 mV
Balanced Input Gain - 100 V Mode	42.2 dB	42.2 dB	42.2 dB
Balanced Input Gain - 70.7 V Mode	39.2 dB	39.2 dB	39.2 dB
Balanced Input Gain - 8 Ω Mode	31.2 dB	34.2 dB	37.2 dB
Balanced Input Gain - 4 Ω Mode	28.2 dB	31.2 dB	34.2 dB
RCA Summed Input - Sensitivity	316 mV	316 mV	316 mV
RCA Summed Gain - 100 V Mode	50 dB	50 dB	50 dB
RCA Summed Gain - 70.7 V Mode	47 dB	47 dB	47 dB
RCA Summed Gain - 8 Ω Mode	39 dB	42dB	45 dB
RCA Summed Gain - 4 Ω Mode	36 dB	32 dB	35 dB
Max Voltage Per Output - 100 V Setting	145 V		
Max Current per Output - 4 Ω Setting	LMA101= 7 A, LMA201=10 A, LMA401=14 A		
Protection	Soft Start, Input RF, DC, Short Circuit, Current Overload, Clip Limit, AC Mains Under-/Over-Voltage Shut-Off, Peak Current Limit, Over Temp		
Cooling			
Cooling System	Idle Mode is Convection for all models; Audio Signal Sense (Fan, Variable with Temperature - LMA201 & LMA401 only)		
Cooling Air Flow Direction	Rear-to-Front, no filters (LMA201 & LMA401 only)		
Fan Noise Idle @ 1 m	0 dBu		
Fan Noise Max @ 1 m	42 dBu		
Environmental			
Operating Temperature	10° F–104° F (-12° C–40° C)		
Relative Humidity	0–95%, non-condensing		
AC Power Requirements, All LMA Models			
Operating Voltage Auto Switch, 50/60Hz	100 V–132 V/208 V–264 V		
Minimum Power-Up Voltage	95 V		
Maximum Operating Voltage	264 V		
Mains Connector	IEC C14		
Power Cord (Ships With)	IEC C13 plug/18 AWG 1.8 m cord/NEMA 5-15 plug		

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

Power Consumption & Current Draw @ 120 V AC Mains	LMA101		
	Amps	Watts	Btu/hr[4]
Standby Mode, Meets Energy Star Standards	0.02 A	0.4 W	1.4 Btu
Low Power Mode[9]	0.1 A	5.8 W	20 Btu
Idle Active	0.2 A	11.0 W	38 Btu
Average Power - 2 Ω[2, 8]	0.3 A	18.5 W	63 Btu
Average Power - 4 Ω[2]	0.3 A	18.9 W	64 Btu
Average Power - 8 Ω[2]	0.3A	19.6 W	67 Btu
Average Power - 25 V[2, 7]	0.3A	19.0 W	65 Btu
Average Power - 70.7 V[2]	0.3A	19.2 W	66 Btu
Average Power - 100 V[2]	0.3 A	20.2 W	69 Btu
Pink Noise Power - 2 Ω[3, 8]	1.1 A	82.3 W	281 Btu
Pink Noise Power - 4 Ω[3]	1.2 A	86.9 W	297 Btu
Pink Noise Power - 8 Ω[3]	1.2 A	86.8 W	296 Btu
Pink Noise Power - 25 V[3, 8]	1.1 A	83.5 W	285 Btu
Pink Noise Power -70.7 V[3]	1.1 A	83.4 W	285 Btu
Pink Noise Power - 100 V[3]	1.1 A	85.2 W	291 Btu
Burst Power - 2 Ω[4, 8]	0.5 A	46.2 W	158 Btu
Burst Power - 4 Ω[4]	0.6 A	47.9 W	163 Btu
Burst Power - 8 Ω[4]	0.6 A	48.0 W	164 Btu
Burst Power - 25 V[4, 7]	0.6 A	48.4 W	165 Btu
Burst Power - 70.7 V[4]	0.6 A	48.1 W	164 Btu
Burst Power - 100 V[4]	0.6 A	48.8 W	167 Btu
Music Power - 2 Ω[5, 8]	0.9 A	94.8 W	323 Btu
Music Power - 4 Ω[5]	1.0 A	95.5 W	326 Btu
Music Power 25 V[6, 8]	1.0 A	96.9 W	331 Btu
Music Power 70.7 V[5]	1.0 A	96.7 W	330 Btu
Music Power -100 V[5]	1.1 A	98.2 W	335 Btu
Sine Wave Power - 2 Ω[6, 8]	1.3 A	109.6 W	374 Btu
Sine Wave Power - 4 Ω[6]	1.5 A	117.7 W	402 Btu
Sine Wave Power - 8 Ω[6]	1.5 A	120.6 W	412 Btu
Sine Wave Power- 25 V[6, 7]	1.5 A	115.4 W	394 Btu
Sine Wave Power- 70.7 V[6]	1.4 A	114.8 W	392 Btu
Sine Wave Power - 100 V[6]	1.4 A	115.2 W	393 Btu

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

Power Consumption & Current Draw @ 120 V AC Mains	LMA201		
	Amps	Watts	Btu/hr[4]
Standby Mode, Meets Energy Star Standards	0.02 A	0.4 W	1.4 Btu
Low Power Mode[9]	0.1 A	5.9 W	20 Btu
Idle Active	0.2A	11.7 W	39 Btu
Average Power - 2 Ω[2, 8]	0.6 A	46.2 W	157 Btu
Average Power - 4 Ω[2]	0.8 A	57.8 W	197 Btu
Average Power - 8 Ω[2]	0.7 A	50.2 W	171 Btu
Average Power - 25 V[2,7]	0.6 A	44.6 W	152 Btu
Average Power - 70.7 V[2,7]	0.6 A	45.3 W	154 Btu
Average Power - 100 V[2]	0.6 A	47.8 W	163 Btu
Pink Noise Power - 2 Ω[3, 8]	2.1 A	156.5 W	532 Btu
Pink Noise Power - 4 Ω[3]	2.1 A	158.7 W	541 Btu
Pink Noise Power - 8 Ω[3]	2.0 A	149.3 W	509 Btu
Pink Noise Power - 25 V[3]	2.0 A	142.6 W	486 Btu
Pink Noise Power - 70.7 V[3]	2.0 A	145.5 W	496 Btu
Pink Noise Power - 100 V[3]	2.1 A	157.2 W	536 Btu
Burst Power - 2 Ω[4, 8]	1.0 A	69.4 W	236 Btu
Burst Power - 4 Ω[4]	1.2 A	82.2 W	260 Btu
Burst Power - 8 Ω[4]	1.1 A	78.3 W	267 Btu
Burst Power - 25 V[4]	1.1 A	7 0.8 W	241 Btu
Burst Power - 70.7 V[4]	1.1 A	72.3 W	246 Btu
Burst Power - 100 V[4]	1.1 A	70.5 W	240 Btu
Music Power - 2 Ω[5, 8]	2.0 A	156.2 W	532 Btu
Music Power - 4 Ω[5]	2.2 A	197 W	672 Btu
Music Power - 25 V[6, 8]	2.0 A	142.7 W	486 Btu
Music Power - 70.7 V[5]	2.0 A	140.8 W	480 Btu
Music Power -100 V[5]	2.1 A	147.9 W	504 Btu
Sine Wave Power - 2 Ω[6, 8]	3.1 A	237.6 W	808 Btu
Sine Wave Power - 4 Ω[6]	3.2 A	242.3 W	826 Btu
Sine Wave Power - 8 Ω[6]	3.2 A	240.5 W	820 Btu
Sine Wave Power - 25 V[6, 7]	3.1 A	235.2 W	802 Btu
Sine Wave Power - 70.7 V[6]	2.9 A	220.4 W	752 Btu
Sine Wave Power - 100 V[6]	3.0 A	225.6 W	769 Btu

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

Power Consumption & Current Draw @ 120 V AC Mains	LMA401		
	Amps	Watts	Btu/hr[4]
Standby Mode, Meets Energy Star Standards	0.02 A	0.4 W	1.4 Btu
Low Power Mode[9]	0.1 A	4.8 W	16 Btu
Idle Active	0.2A	9.7 W	33 Btu
Average Power - 2 Ω[2, 8]	1.0 A	71.4 W	244 Btu
Average Power - 4 Ω[2]	1.2 A	78.1 W	266 Btu
Average Power - 8 Ω[2]	1.1 A	76.6 W	261 Btu
Average Power - 25 V[2,7]	1.0A	70.8 W	242 Btu
Average Power - 70.7 V[2,]	1.1 A	76.3 W	260 Btu
Average Power - 100 V[2]	1.1 A	75.2 W	257 Btu
Pink Noise Power - 2 Ω[3, 8]	3.0 A	238.8 W	815 Btu
Pink Noise Power - 4 Ω[3]	3.3 A	254.5 W	868 Btu
Pink Noise Power - 8 Ω[3]	3.2 A	242.6 W	828 Btu
Pink Noise Power - 25 V[3, 8]	3.2 A	246.2 W	840 Btu
Pink Noise Power - 70.7 V[3]	3.2 A	251.7 W	859 Btu
Pink Noise Power - 100 V[3]	3.2A	250.9W	856 Btu
Burst Power - 2 Ω[4, 8]	1.7A	151.3W	516 Btu
Burst Power - 4 Ω[4]	1.8 A	161.8W	552 Btu
Burst Power - 8 Ω[4]	1.7A	150.2W	513 Btu
Burst Power - 25 V[4, 7]	1.7 A	147.9 W	505 Btu
Burst Power - 70.7 V[4]	1.8 A	156.3 W	533 Btu
Burst Power - 100 V[4]	1.8 A	155.2 W	530 Btu
Music Power - 2 Ω[5, 8]	3.3 A	265.6 W	906 Btu
Music Power - 4 Ω[5]	3.5 A	276.4 W	943 Btu
Music Power - 25 V[6, 8]	3.3 A	263.8 W	900 Btu
Music Power - 70.7 V[5]	3.4 A	270.2 W	922 Btu
Music Power -100 V[5]	3.4 A	271.5W	926 Btu
Sine Wave Power - 2 Ω[6, 8]	5.0 A	403.5 W	1377 Btu
Sine Wave Power - 4 Ω[6]	5.3 A	436.0 W	1488 Btu
Sine Wave Power - 8 Ω[6]	5.2 A	420.3 W	1434 Btu
Sine Wave Power - 25 V[6, 7]	5.1 A	415.6 W	1418 Btu
Sine Wave Power - 70.7 V[6]	5.1 A	417.2 W	1424 Btu
Sine Wave Power - 100 V[6]	5.1 A	412.8W	1409 Btu

Notes:

1. Power Level - Test is defined as follows: A 1 kHz sine wave signal burst of 20 cycles (20 ms) at 1% THD+N, followed by 480 cycles of a 1 kHz sine wave at 10% of the max power. Other power measurements available upon request. All power tests were conducted at 120 V.
2. Average power draw is defined as pink noise input signal applied to achieve 1/4 of the 4 Ω or 70.7 V power rating.
3. Maximum pink noise power current draw is defined as pink noise applied as the signal source to the amplifier to achieve 100% of the 4 Ω or 70.7 V power rating. Using pink noise for testing amplifiers is a strenuous test that provides a consistent signal across the entire audio spectrum. Pink noise also provides a 6 db crest factor signal that injects a balance of RMS and peak signals providing realistic amp draw data for audio applications.

AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED ON NEXT PAGE)

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AUDIO SPECIFICATIONS/PERFORMANCE - (CONTINUED)

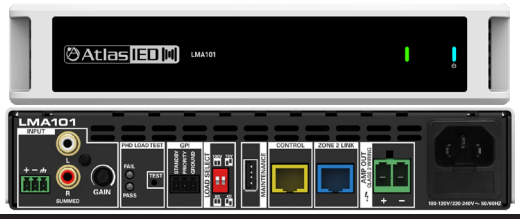
4. Maximum burst power draw is defined as follows: A 1 kHz sine wave signal burst of 20 cycles (40 ms) at 100% of the 4 Ω or 70.7 V power rating, followed by 480 cycles of a 1 kHz sine wave at 10% of the maximum power repeated. **Note:** The amp draw/watt data is the peak power consumed and not steady-state amplifier draw. This complies with the UL 62368-1 standard and testing for maximum peak amp draw for a 120 v, 15 A AC mains.
5. Music power draw is defined as dynamic input signal applied to achieve the maximum rated power into a 4 Ω or 70.7 V load. This test also represents realistic current draw data for audio applications. The current draw data is the maximum peak amp/watt and not steady-state amp draw. This complies with the UL 62368-1 standard and testing for maximum peak amp draw for a 120 V, 15 A AC mains. **Note:** When specifying this amplifier for power consumption, AtlasIED recommends using the Max Music Power Amps/Watt rating data.
6. Sine wave power draw is defined as 1 kHz input signal applied to achieve the maximum power output before clip into a 4 Ω or 70.7 V load. This data should be used as a reference of the maximum current the amplifier can draw. Steady-state sine wave signals over 3 seconds should not be applied and may trip a 15 A, 120 VAC Mains breaker.
7. Twenty-five volt systems using 4 Ω Load Selection Settings.
8. Two-ohm loads using 4 Ω Load Selection Settings.

Package Contents			
LMA Model	**LMA101**	**LMA201**	**LMA401**
Power Cord: IEC C13 Plug/18 AWG 1.8 m cord/NEMA 5-15 plug	Qty. 1	Qty. 1	Qty. 1
Input Connector: 3-position, 3.5 mm pitch	Qty. 1	Qty. 1	Qty 2
GIP Connector: 3-position, 3.5 mm pitch (black)	Qty. 1	Qty. 1	Qty. 1
Remote Level Connector: 5-position, 3.5 mm pitch	Qty. 1	Qty. 1	Qty. 1
Speaker Connector: 2-position, 7.62 mm pitch	Qty. 1	Qty. 1	Qty. 1
Rack Kit for Single & Dual mounting	Qty. 1	Qty. 1	Qty. 1
Installation Sheet with QR Code	Qty. 1	Qty. 1	Qty. 1

Dimensions	**LMA101/LMA201/LMA401**
Rack Mount Requirements	1 RU, 8.5 " or 19" with Rack Kit extension ear
Dimensions - Unit, All LMA Models	8.75" W × 1.75" H × 11.23" D (222 mm × 44 mm × 285 mm)
Dimensions - Shipping, All LMA Models	15.35" W × 5.04" H × 12" D (390 mm × 306 mm × 128 mm)

Weight	**Unit**	**Shipping**
LMA101	4.85 lbs. (2.2 kg)	8.95 lbs (4.06 kg)
LMA201	5.3 lbs (2.4 kg)	9.4 lbs (4.26 kg)
LMA401	5.75 lbs (2.61 kg)	9.85 lbs (4.47 kg)

Agency Approvals	
North America Agency	TÜV
Testing Standard North America	62368-1
FCC Class A (Conducted & Radiated Emissions)	Part 15 B of the FCC Rules
CE	Yes (Includes RoHS & WEEE)



NOTES

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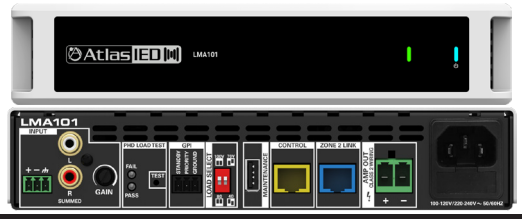

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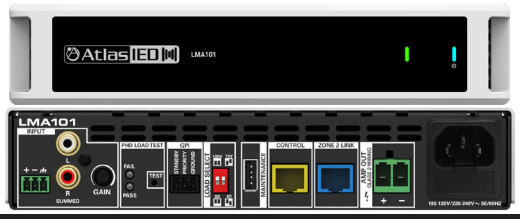
LMA SERIES

LINKABLE MONO AMPLIFIERS

LMA101 / LMA201 / LMA401



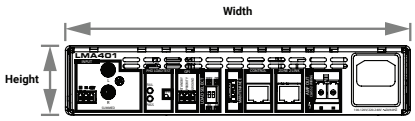
OWNER'S MANUAL

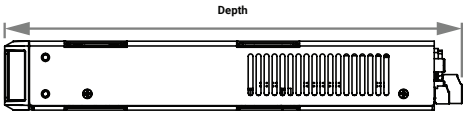
DIMENSIONAL DRAWINGS

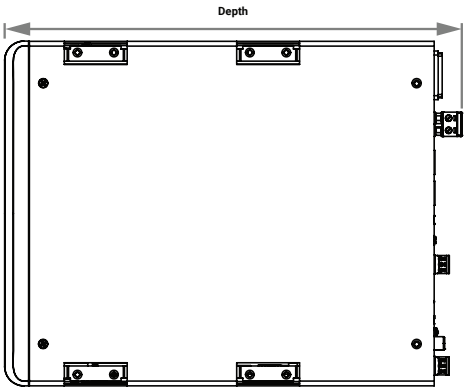
LMA Series

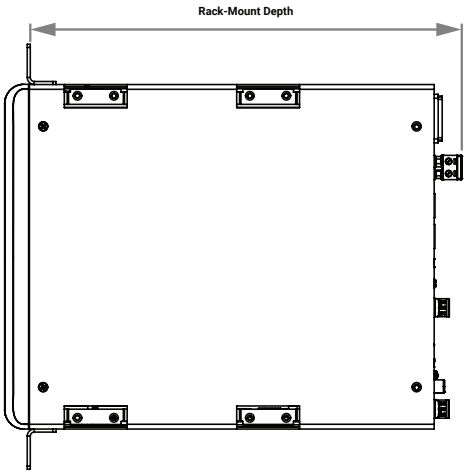
Product Dimensions

Width	8.50" (216mm)
Height	1.70" (43mm)
Depth	11.27" (286mm)
Rack-Mount Depth	10.64" (270mm)









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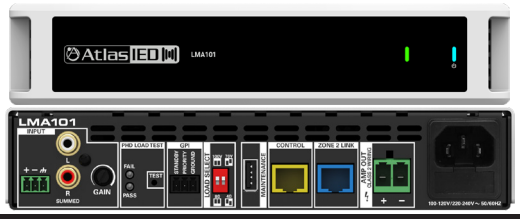
LMA SERIES

LINKABLE MONO AMPLIFIERS

LMA101 / LMA201 / LMA401



OWNER'S MANUAL

LIMITED WARRANTY

All products manufactured by AtlasIED are warranted to the original dealer / installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all AtlasIED products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. AtlasIED will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to AtlasIED do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any non-warranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLASIED SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

AtlasIED does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability.
This warranty gives you specific legal rights and you may have other rights which vary from state to state.

SERVICE

Should your LMA Series Amplifier require service, please contact the AtlasIED warranty department through the online warranty claim process.

Online Warranty Claim Processes

1. Warranty submissions are accepted at: https://www.atlasied.com/warranty_statement where the type of return Warranty or Stock return can be selected.
2. Once selected, you will be prompted to enter your login credentials. If you do not have a login, register on the site. If already logged-in, navigate to this page by selecting "Support" and then "Warranty & Returns" from the top menu.
3. In order to file a Warranty Claim, you will need:

   A copy of the invoice / receipt of the purchased item
   B. Date of Purchase
   C. The product name or SKU
   D. The serial number for the item (if no serial number exists, enter N/A)
   E. A brief description of the fault for the claim
4. Once all required fields are completed, select the "Submit Button". You will receive 2 emails:

   (1) with a confirmation of the submission .
   (2) with a case# for your reference should you need to contact us.

Please allow 2-3 business days for a response with a Return Authorization (RA) number and further instructions.

AtlasIED Tech Support can be reached at
1-800-876-3333
atlasied.com/support

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