



**HPA2602 / HPA4202**  
**Multi-Impedance High Power Amplifiers**



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

**Table of Contents**

Important Safety Instructions..... 3

Introduction ..... 5

Key Features..... 5

Front Panel Description ..... 6

Tamper Proof Security Cover ..... 6

Rear Panel Description ..... 8

Bridge Mode Operation..... 9

Remote Turn On ..... 10

Placement of the Amp ..... 12

Cabling..... 12

Wiring the HPA4202 AC Mains ..... 13

Connecting the HPA Amplifier to AC Mains - Best Practices..... 15

Optional Dante Input Card..... 16

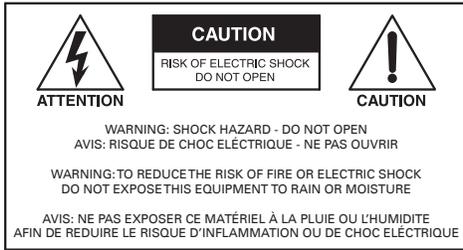
Specifications ..... 17

Warranty ..... 20



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

## Important Safety Instructions



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.

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. 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.
14. Unplug this device during lightning storms or when unused for long periods of time.
15. 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.
16. **WARNING:** To reduce the risk of fire or electric shock, this device should not be exposed to 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.



**WARNING - When The Device Is In Use**

- WARNING: For the terminals marked with symbol of ⚡ 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 3 1/2" 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.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

### Introduction

Thank you for purchasing the AtlasIED HPA Series amplifier. The AtlasIED high power amplifier "HPA" Series is designed for use in both commercial 70V/100V distributed systems and professional applications that require amplifiers to handle multiple impedance loads. The HPA is compact and lightweight in comparison to other models delivering similar power levels. The HPA Series features generation II Class I Output topology that provides similar efficiency to a Class D amplifier with the sound quality of a Class AB amplifier. The power supply is a switch mode, global auto sensing generation 3 design that maintains a stable output during fluctuating power conditions. The power supply and output stage collectively are designed to deliver exceptional dynamic high output voltage and current to virtually any loudspeaker load.

The HPA Series features front panel detented level controls with a security cover, remote turn on, balanced inputs, fault reporting and a rear panel accessory card slot for an optional Dante 2-channel digital audio interface. HPA Series amplifiers feature a unique output stage, low resistance direct coupled thermal transfer design that effectively maintains optimal temperature across all loads and output levels. HPA Series amplifiers are also energy efficient and meet Energy Star standards, drawing only 1W of power in standby mode.

Whether the application is a large distributed constant voltage sound system or a high SPL sound reinforcement system, the AtlasIED HPA Series is the answer for high power/cost effective amplification needs.

### Key Features

- Two channels
- 2, 4, 8 ohm & 70V operation (most models 100V)
- Meets Energy Star standards 1W standby mode
- Balanced inputs
- Dante™ accessory card slot
- Fault reporting
- Remote turn on
- Stepped attenuators with security cover
- Stereo, bridge, or parallel operation capability
- Auto sensing 120V~ AC mains power supply



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

**Front Panel**

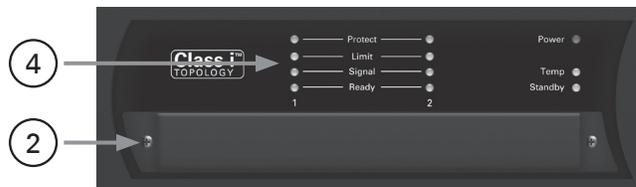


**1. Channel Level Controls**

Each channel of the HPA amplifier has an independent detented level control. When either of the potentiometers is turned down (left or FCC - fully counter clockwise) no signal will come out of the corresponding amp channel. When the potentiometer is turned up (right or FC - fully clockwise) the amp will be set for maximum level.

**2. Level Control Security Cover**

The HPA Series comes with a tamper-proof level control security cover. There are two screws that hold the security cover in place covering all level controls.



**3. Air Exhaust**

HPA amplifiers have fan assist cooling that draws cool air in from the rear of the amp and exhausts the hot air out the front panel.

**4. Status Indicators**

- A. Power** - When AC mains power is applied to the amplifier and the AC Mains Power Switch is in the "ON" position this LED will illuminate blue indicating the amplifier is active and ready for use.
- B. Standby** (Bicolor LED amber / red) - The Standby LED is a bi-color LED giving status of the amplifier power supply.
  - Illuminating amber - The HPA Amplifier is in Energy Save Mode and is not ready for use. The rear panel remote activation control port has to be triggered by applying 5-24DC Voltage or shorting the Contact Closure (CC) and ground (GND) pins together to activate the amplifier to ready status. **Note:** The HPA Amp is shipped with a shunt across the CC and GND contacts to activate the amp from Standby Mode. For the amplifier to be active or On, the Remote Turn On jumper must be in place and the amplifier switch must be in the "On" position. If the Standby LED is not illuminating and the front panel blue LED Power On is illuminated, the amplifier will be active and ready to use. Refer to Remote Turn On for more information.
  - Illuminating red - If the Standby LED is illuminating red, the AC Mains voltage applied to the HPA Amplifier is out of the safe operating range. The HPA Amplifier cannot be turned on until the AC Mains voltage is between 88V~ - 135V~. Refer to AC Mains Input for more information. If the Standby LED is not illuminating and the front panel blue LED Power On is illuminated, the amplifier will be active and ready to use.
- C. Temp** - This LED represents the temperature condition of the amplifier. The LED will illuminate yellow if any of the amplifier channels or power supply reaches 10% of their thermal protect threshold shut off. **Note:** Also refer to the Protect LED.

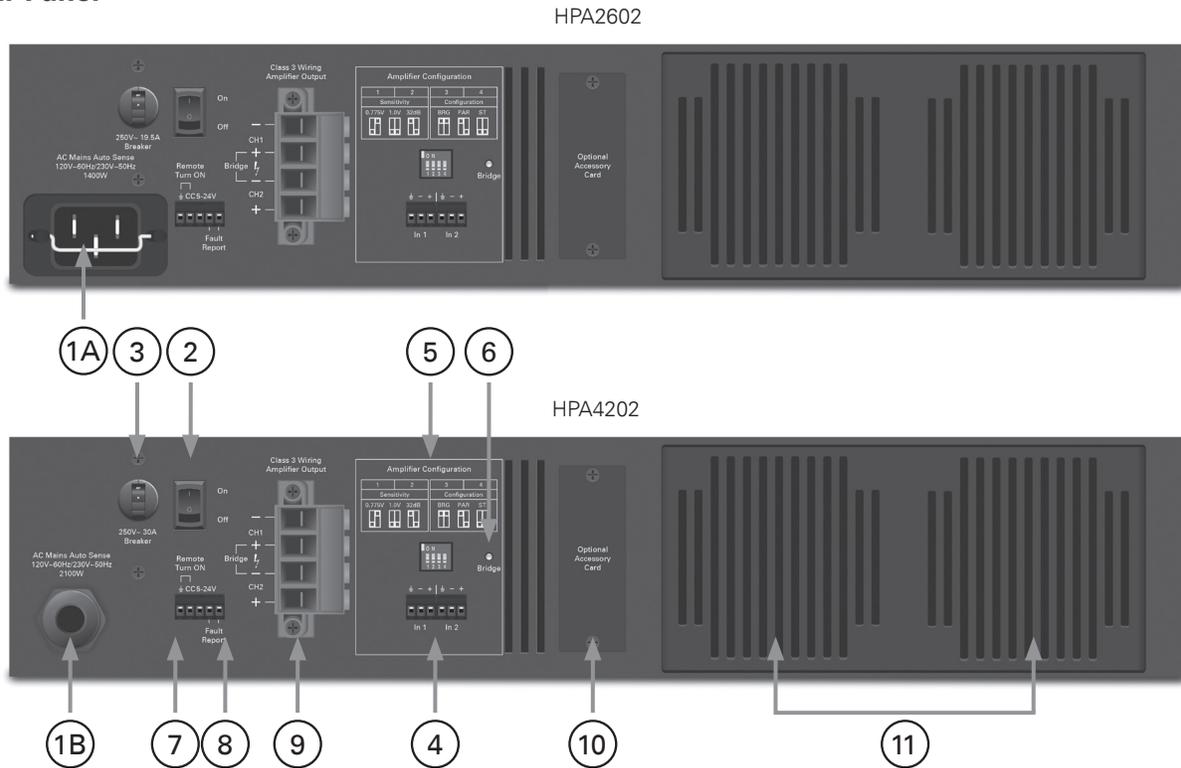
### Front Panel

- D. Ready** - The Ready LED will illuminate green when the amplifier channels are stable and ready for use.
- E. Signal** - The Signal LED will illuminate green when the amplifier output signal produces a 1W output.
- F. Limit** - The Limit LED will illuminate yellow when maximum amplifier output level is achieved.
- G. Protect** - The Protect LED will illuminate red during one the following four conditions. No output will occur while this LED is illuminated. Channel will reset itself after the condition has been corrected.
  1. Shorted loudspeaker output.
  2. Power Supply - If the amplifier exceeds its safe operating temperature, both output channels will be muted with both Protect LED's illuminating to show the amp is in Protect Mode. The power supply will remain in protect Mode until the temperature reduces to a safe operating temperature. **Note:** The Temp LED will also illuminate during this condition.
  3. Current Overdrive, if the amplifier channels are driving too low of a loudspeaker load.
  4. Failure of amp channel, if DC is present at the output the respective amp channel will go into protect.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

**Rear Panel**



**1. AC Mains Input**

The HPA amplifier incorporates an auto sensing wide range AC mains power supply. The amplifier will operate if the AC mains voltage is between 88V~ - 135V~ or 180V~ - 264V~. The HPA amplifiers will detect the AC mains voltage and automatically switch the power supply between 120V~ or 240V~ operation. If the AC mains is not within the AC Mains voltage requirement the amplifier will not turn on. The Standby LED will illuminate red as an indicator.

- A. HPA2602** - A 20A 16A/250V~ IEC-60320-C20 receptacle with a retainer clamp is provided for ease of power cord change out to meet global standards. A 3m 12-gauge power cord with a USA NEMA5-20 male plug is supplied in the carton. Insert the IEC power cord into the receptacle making sure it is securely placed with the retainer clamp. AtlasIED recommends for 88V~ - 135V~ operation, a 19.5A AC mains service, and for 180V~ - 264V~ operation, a 10A AC mains service.
- B. HPA4202** - Ships with a captive 3m 10-gauge cord with a removable Locking 125V 30A NEMA L5-30P plug. Due to the various types of global AC Mains receptacles, AtlasIED requests that a certified electrician select the plug type that meets the requirement. AtlasIED recommends for 88V~ - 135V~ operation, a 30A AC mains service, and for 180V~ - 264V~ operation, a 15A AC mains service. Refer to "Wiring the HPA4202 Amplifier AC Mains" for more information.

**2. Amplifier Switch**

The amplifier switch turns the amplifier power supply from Standby mode to Active On mode. Up is "On" and down is "Off". When on and AC is present the front panel Power LED will illuminate blue. **Note:** In order for the amplifier to go from Standby mode to Active mode, the amplifier switch must be in the Up (On) position, with either the Contact Closure in place or DC voltage present.

**3. AC Mains Breaker**

If the current drawn from the amplifier is greater than the rating of the AC Mains circuit breaker, the breaker will trip thus shutting the amplifier "Off." Turn the amplifier levels to minimum and reset the breaker to the up position to reset the breaker.

**4. Balanced Input**

Balanced line level signals connect to the (+) (-) and (G) terminals. **Note:** If connecting an unbalanced line level input, tie (short) the (G) and (-) terminals together.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

## Rear Panel

### 5. Amplifier Configuration Switches

There are four dip switches on the rear of the amplifier. Two for selecting the input sensitivity and two for selecting the mode of operation.

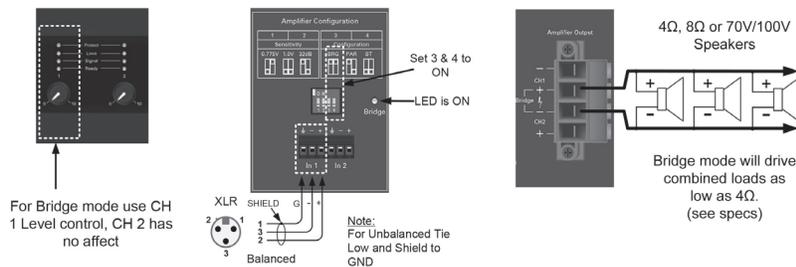
#### A. Input Sensitivity

- 0.775V, DP SW #1 down & #2 up
- 1.0V, DP SW #1 & #2 down
- 32dB Gain, DP SW #1 up & #2 down

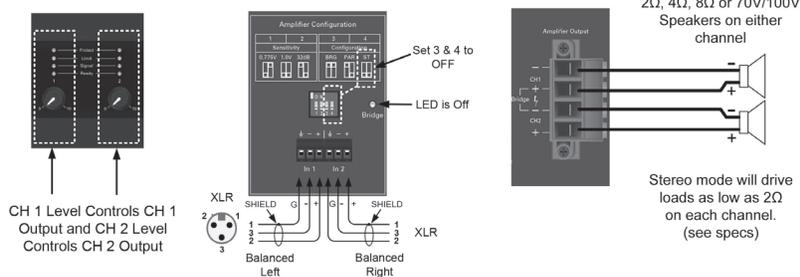
#### B. Configuration

- BRG (Bridge), DP SW #3 & #4 up  
Bridge Mode is when a mono signal is applied to Input 1 and the signal will be present at both amplifier output channels. The load is to be applied across both channels giving the loudspeaker load the combined power of both channels. Refer to Bridge Mode Operation.
- PAR (Parallel), DP SW #3 Up & #4 down  
Parallel mode is when Inputs 1 & 2 are internally connected together. This allows for an input signal to be applied to Input 1 and the signal applied to Outputs 1 & 2. In parallel mode both amplifier output channels have separate level controls.
- ST (Stereo), DP SW #3 & #4 down  
Stereo mode is when Input 1 is routed to Output 1 and Input 2 is routed to Output 2.

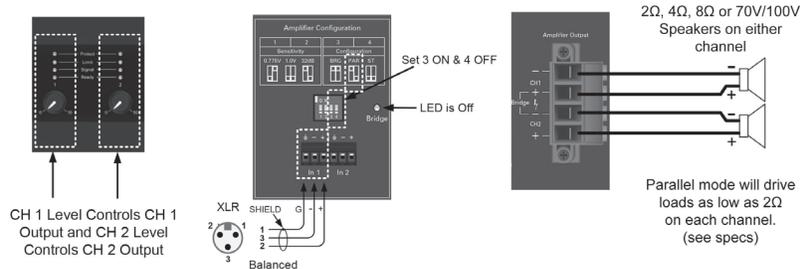
#### Bridged Mode



#### Stereo Mode



#### Parallel Mode



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

**Rear Panel**

**6. Bridge Mode Indicator**

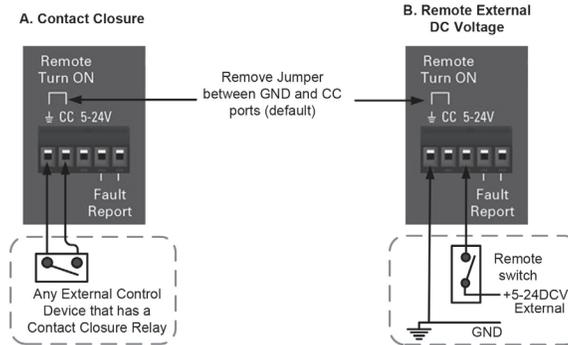
When this LED is illuminated yellow it indicates that the amplifier is in bridge operation. Refer to Bridge mode operation.

**7. Remote Turn ON Terminals**

The HPA amplifier can be turned on or activated from a remote location. **Note:** In order for the amplifier to go from Standby mode to Active mode, the amplifier switch must be in the Up (On) position, with either the Contact Closure in place or DC voltage present. One of these two must be active to turn on the amplifiers power supply. If not, the Standby LED will illuminate amber. Factory shipping default includes a shunt applied across the Ground and CC terminals.

- A. **Contact Closure** - Using a latching contact switch short the Ground and CC ports together.
- B. **DC Voltage** - Applied 5V - 24V DC to these ports.

**Remote Activation**

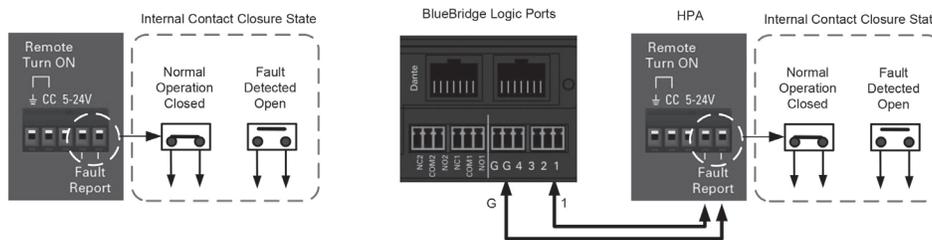


**8. Fault Reporting Terminals**

The HPA incorporates a fault reporting system to inform a system administrator if there is something wrong with the amplifier that needs to be attended to by a system technician. The ports are shorted together (NC, Normally Closed) when the amplifier is operating ok. The ports open up under the following conditions indicating there is an issue with the amplifier.

- A. Shorted loudspeaker output.
- B. Thermal, the temperature of the amplifier channel exceeds its safe operation.
- C. Current Overdrive, if the amplifier channels are driving too low of a loudspeaker load.
- D. Failure of amp channel, if DC is present at the output the power supply will go into protect.

**Fault Reporting**

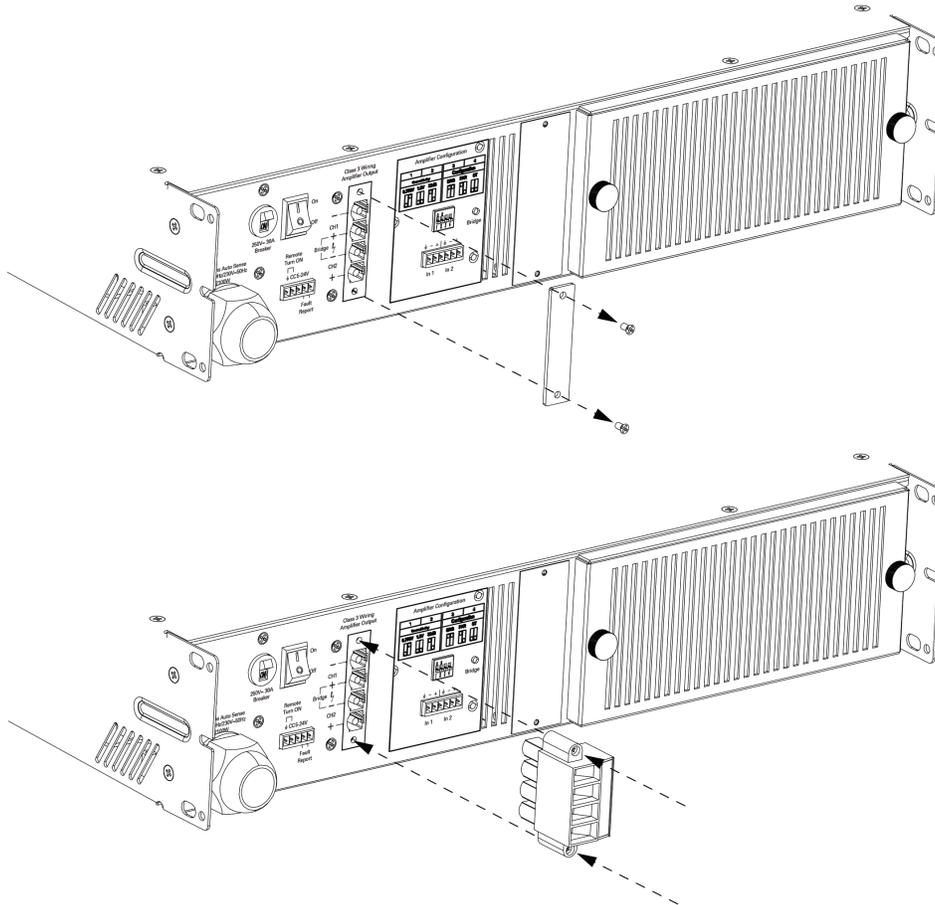


This example shows the HPA Remote Fault connected to a BlueBridge® Logic port to create an AMP Status Indicator on a Touchscreen.

## Rear Panel

### 9. Loudspeaker Connections

The HPA amplifiers ship with a protective plate covering the loudspeaker terminal pins. This is required by safety approval agencies due to high voltage produced. Remove this cover and install the Euro Block type connector to connect loudspeakers to the amplifier. Any connections to the Euro Block type connector are to be made by a qualified electrical technician. **Note:** Make sure the amplifier is unplugged from the AC mains power source before starting the process because of the potential high voltage electrical risks involved. Discard the cover after it is removed and the loudspeaker terminal is installed. The removable Euro block connector is a 4 position, 10.16mm pitch and is connected to the chassis by 2 incorporated screws. It is recommended to use 12-gauge wire or lower for connection to the loudspeaker. The terminals can accept wire sizes of 6 - 18 gauge Class 3. Properly preparing the wire is critical to ensure a secure connection for safety and audio quality. First strip the wire back 0.250" (5mm). We do not recommend tinning (soldering the wire). Insert the wire into the terminal block slot and secure by tightening the screws firmly. Failure to do so, could cause shock or damage the amplifier.



### 10. Accessory Card Slot

The accessory card slot is for optional input cards such as the HPA-DAC2 (2 Channel Digital Audio Input Card). Contact AtlasIED for a full list of accessory cards. **Note:** Accessory card installation must be done by a qualified technician.

### 11. Air Inlet and Filters

The rear air inlet has a removable filter grill that is connected to the mains chassis via magnets. Filters are to remain clean at all times to assure proper air flow for amplifier cooling.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

## Placement of the Amp

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 HPA 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 HPA 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 113° F (45°C) when equipment is in use.

## Cabling

The HPA 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 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** - Use 2 conductor w/shield for low level signals of 20-22 gauge is best. 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 2 conductor unshielded wire of the appropriate gauge. If you are unsure about this, contact AtlasIED Tech Support at 1-800-876-3333. Make sure you know how many loudspeakers you need and what tap value you intend to use.

### Why choose 230V over 120V?

It is a good idea to provide an AC Mains voltage of 208-240v with a product that requires high amount of AC Mains current. This configuration has advantages over a supply voltage of 120V. Ohms law states that when voltage is high the current is lower. At 120V, the HPA4202 requires 30A of current and at 230V requires 15A of current.

One major advantage is the cost savings in the wire required to provide the current from the electrical panel to the receptacle. The minimum wire gauge needed to deliver 30A is 10AWG. For longer distances of 50ft - 150ft, 8AWG should be used. For 230V, only 15A is required and the wire gauge needed for that is only 14AWG. The cost between 14AWG & 8AWG is significant. Both methods only need 3 conductor. 208V - 240V in the USA requires a dual breaker. The cost of a dual breaker is similar in cost to a 120V 30A breaker.

The second advantage is with less current draw or demand there is less voltage sag in the AC Mains line. With less AC Mains voltage sag the amplifier will be able to produce more dynamic audio power when required.

Either 120V or 230V will work equally well, but keep in mind for a 120V service, using the proper wire gauge is very important to get the maximum performance out of the amplifier.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

### Wiring the HPA4202 Amplifier AC Mains

The HPA amplifier can be connected to an AC mains source of 120V~ 60Hz and 230V~ 50Hz. The HPA4202 delivers a very large amount of audio amplification. To achieve this high output power, the amplifier needs a stable AC Mains power source that can deliver enough AC Voltage & AC Current to allow the amplifier to produce the audio power required. In the world market, there are many different AC mains sockets available and in many places they are limited to the specific type that can be used dictated by the local code requirements. It would be difficult to provide an AC Mains power plug that would mate with all AC mains receptacles. Many lower power products use the international IEC socket and power cord that allow the installer to use the appropriate power cords to mate with the installations AC Mains receptacle. The HPA4202 exceeds the current rating of the 15A or 20A IEC power cord and ships with a removable Locking 125V 30A NEMA L5-30P AC mains plug attached to the power cord. If the amplifier needs to be configured for 208V - 240V North America or 230V for Europe, the AC 125V 30A AC plug can be removed and replaced by the appropriate AC plug as defined below. **Note:** The removal of the AC plug must be done by a approved electrician. We allow the installer to choose the connectivity method that meets the AC Mains installation requirements. Connection to the mains shall be done in accordance with the local codes and/or national requirements of the countries where the unit is sold and to be used.

#### Wiring for 120V~ 60Hz AC Main Requires a 30A AC Mains Breaker

Power Cord Wiring:

- Green / Yellow - Earth Ground
- White - Neutral
- Black - Load / Hot

#### For North America 120V Only

As a convenience to the installer, a Locking 125V 30A NEMA L5-30P plug has been included. This is the most common 30A 125V plug used, and mates with the AtlasIED ECM-30 AC power module spike suppressor and sequenced outlet. This plug must be installed by a qualified technician. Follow the installation instructions included with the plug. Visit [www.atlasied.com/power-distribution](http://www.atlasied.com/power-distribution) for information on AtlasIED power distribution products.



Locking 125V 30A NEMA L5-30P

## **Wiring the HPA4202 Amplifier AC Mains**

### **For North America 208V-240V Only**

AtlasIED recommends using a 208V - 240V power source. In most applications that require a high current demand, it is usually less expensive to pre wire a facility for 220V than 120V because of the reduced wire gauge requirements. In addition, there is far less potential for AC line voltage sag with 220V circuits than 120V circuits. Reduced line sag allows the amplifier to deliver the maximum audio amplification possible. The HPA4202 requires 3 conductors for both 120V or 220V circuits. The HPA4202 features auto sensing circuitry for either 120V or 220V operation, with no rewiring or switches to select. When selecting the AC plug there are many options available. The HPA4202 requires a 15A circuit for 220V. AtlasIED suggests using a locking 15 Amp, 250VAC Voltage, NEMA Configuration: L6-15P, 2 pole plug, or a 20 Amp, 250VAC Voltage, NEMA Configuration: L6-20P, 2 pole plug. Either 15A or 20A 250V models will work. There are many other 220V AC connections available to select from. **Note:** The HPA4202 ships with a removable 125V 30A NEMA L5-30P plug on the power cord. Replacement of the plug must be done by a electrician or technician.

### **Wiring for 208V~240V 60Hz AC Main Requires a minimum of 15A AC Mains Breaker**

Power Cord Wiring:

- Green / Yellow - Earth Ground
- White - L1 Load / Hot
- Black - L2 Load / Hot

### **For Europe - Wiring for 230V~ 50Hz AC Main Requires a 15A AC Mains Breaker**

Power Cord Wiring of the HPA4202:

- Green / Yellow - Earth Ground
- White - Neutral
- Black - Hot



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

## Connecting the HPA Amplifier to AC Mains - Best Practices

### Do Not Do!

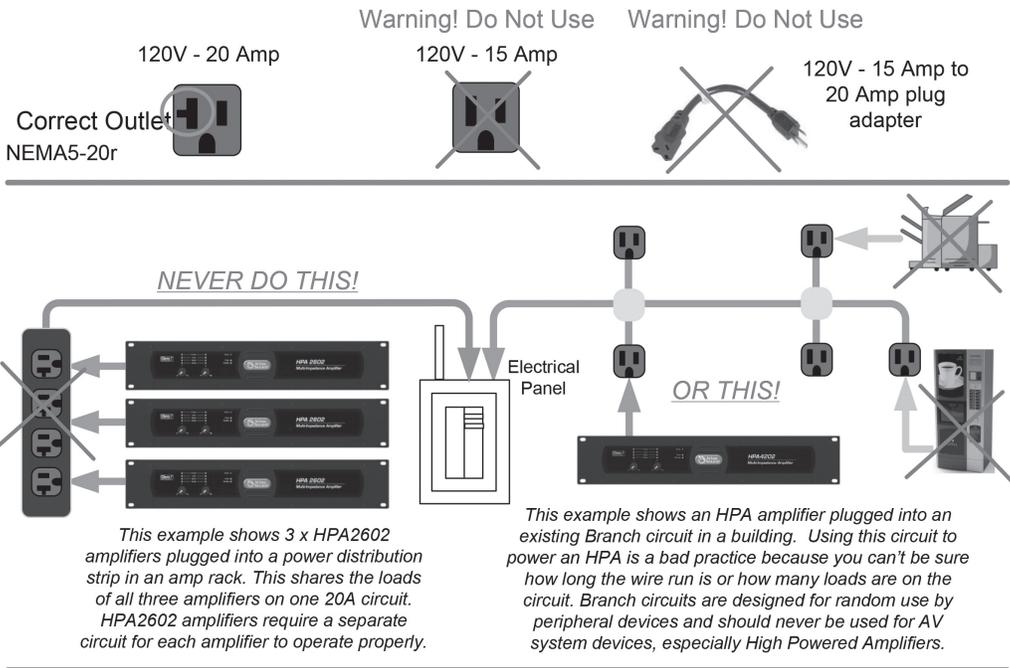
1. Never plug an amplifier into a circuit without knowing what other products are connected to the same circuit.
2. Never plug an HPA2602 or HPA4202 into a power strip. Always connect directly to a dedicated circuit wall receptacle. Power strips are not designed to deliver high amounts of continuous or peak current.
3. Never plug a high power amplifier into an extension cord.

### Best Practices

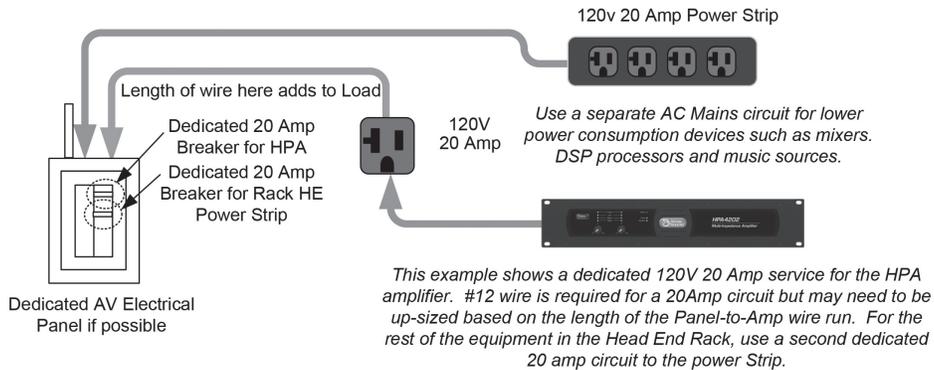
1. Each high power amplifier should have its own dedicated AC Mains line.
2. Consider using a 208V-240V AC mains power source.

### HPA (HIGH POWER AMPS) REQUIRE SPECIAL ATTENTION TO AC POWER

**Know the type of outlet you are going to use and never use an adapter!**



### BEST PRACTICE

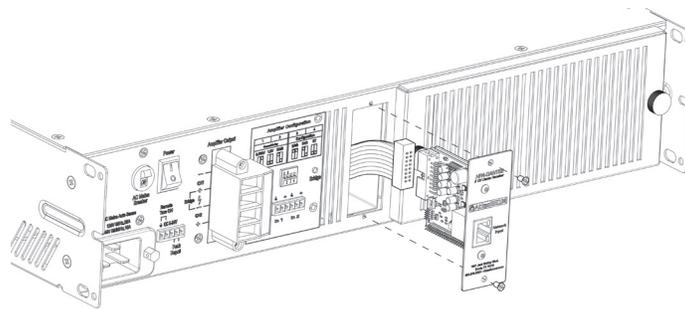


1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

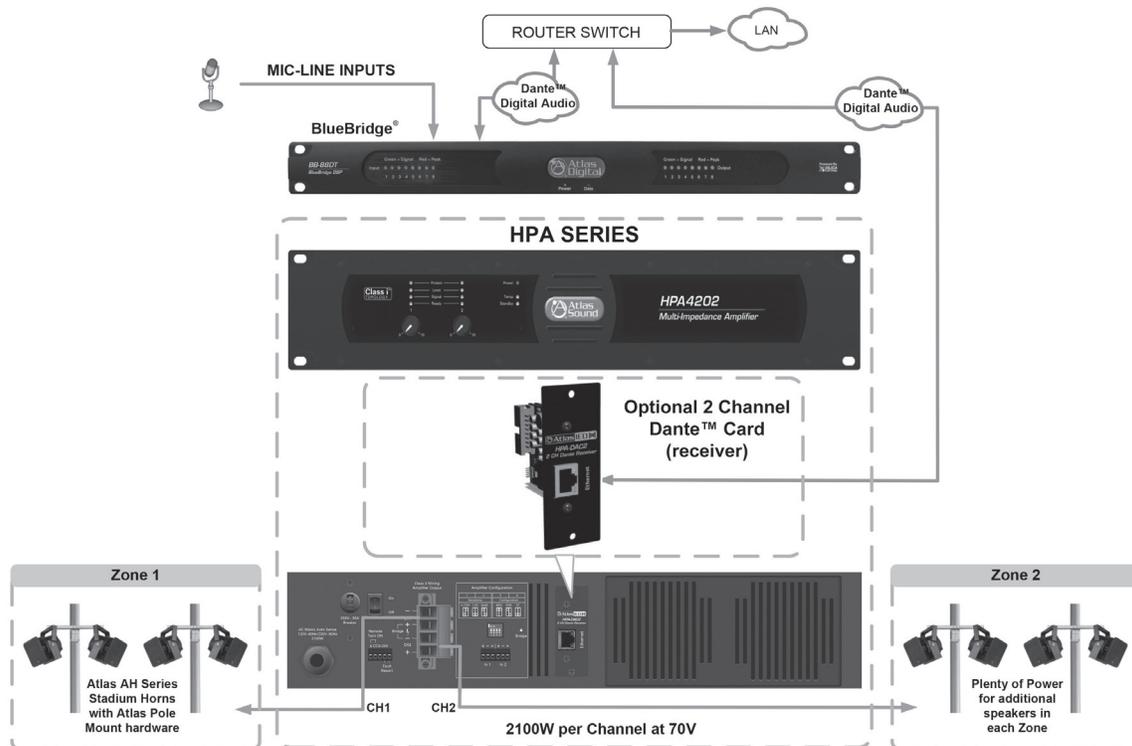
**HPA Amplifier Dante™ Accessory Card Installation**

The HPA amplifier series allows for an optional HPA-DAC2 2-Channel Dante™ receiver card to be installed into the HPA amplifier. Contact AtlasIED for a list of accessory cards. **Note:** Accessory card installation must be done by a qualified technician.

1. Remove the HPA amplifier from the AC mains source.
2. Remove the two screws (M3 x 8mm Pan Head Black) holding the HPA accessory blank panel. Be careful and do not lose the screws.
3. Remove the ribbon cable from the cover plate PCB connector.
4. Connect the accessory card to the ribbon cable by carefully aligning the ribbon cable connector to the mating PCB connector. If aligned correctly the cable will mate easily.
5. Carefully guide the accessory card into the slot without forcing the PCB or cable.
6. After the card is inserted and the accessory panel is flush to the chassis, align the two screw holes and secure them together by using the M3 x 8mm screws.



**HPA SERIES AMPLIFIERS USING OPTIONAL 2 CHANNEL DANTE™ CARD**



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

<b>System</b>		
Type	Power Amplifier, 2 Channel	
Power Supply Type	Auto Switch Mode 120V / 220V	
Amp Topology	Class I	
Number of Fixed Inputs	2	
Accessory Inputs	2	
Optional Card Slot	Yes	
<b>Output Power (Note 1)</b>	<b>HPA2602</b>	<b>HPA4202</b>
100V x 2 CH	NA (Note 5)	2 x 2100W
70.7V X 2 CH	2 x 1300W	2 x 2100W
8Ω x 2 CH	2 x 800W	2 x 1200W
4Ω x 2 CH	2 x 1300W	2 x 2100W
2Ω x 2 CH	2 x 1800W	2 x 2500W
8Ω Bridged	1 x 2500W	1 x 3800W
4Ω Bridged	1 x 3200W	1 x 4800W
<b>Factory Default Settings (As Shipped)</b>		
Amplifier Configuration	2 CH	
Level Controls	Front Panel	
Control Ports (Rear Panel)	Remote Turn On/Off , Enable On	
Input Sensitivity	.775 / 0dBu	
<b>Inputs</b>		
Input Quantity	2-Balanced Inputs, Expandable to 4 via Accessory Card	
Input Type (Line Balanced or Unbalanced)	Balanced	
Input Impedance	20KΩ (Balanced) 10KΩ (Unbalanced)	
Input Sensitivity	775mV / 1.0V / 32dB (Selectable)	
Input Connectors Type	3.5mm Euro Block	
Accessory Slot	2 Input Dante™ Digial Card (HPA-DAC2)	
<b>Level Control</b>		
Front Panel Manual	Stepped Attenuators with Security Cover	
<b>Status Indicators</b>		
Power	Blue Indicator	
Standby	Amber	
AC Mains Out Of Safe Operating Range	Red	
Temp	Yellow	
Ready	Green	
Signal	Green	
Output Limit	Yellow	
Output Protect	Red	
Bridge	Yellow (Rear Panel)	
<b>GPIO Ports (Rear Panel)</b>		
Number of Ports	Qty 5	
Type of Connector	Euro Block 3.5mm	
Functions	Remote Turn ON via Contact Closure	
Functions	Remote Turn ON via DC Voltage 5-24V	
Functions	Fault Report	



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
 Telephone: 800.876.3333 • Fax: 800.765.3435

<b>Output Terminals (Speaker)</b>			
Output Connectors Type	Removable Euro Block, 10.16mm Pitch, Locking		
Output Connectors Number of Terminals	4 Position		
Wire Size	6-18 Gauge (Class 3 Wire)		
Current Rating	57A per Terminal		
<b>Electrical Specifications (General)</b>		<b>HPA2602</b>	<b>HPA4202</b>
Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power	0.05%		
Signal to Noise Ratio	>85dB Below Rated Output (A-Weighted)		
Frequency Response	20Hz - 20kHz (+0/-1.5dB)		
Input Sensitivity	0.775V / 1.0V / 32dB (Selectable)		
Slew Rate	>10V/ $\mu$ s		
Damping Factor (20Hz to 400Hz)	>800		
Crosstalk CH1-2 & CH 2-1	>70dB		
Gain	40dB (8 $\Omega$ Factory Ship or 32dB Assignable)		
Max Voltage Per Output 8 $\Omega$	82V	103V	
Max Current per Output 4 $\Omega$	16.6A	26A	
Protection	Soft Start, Input RF, DC, Short Circuit, Current Overload, Clip Limit, AC Mains Under / Over Voltage Shut Off, Peak Current Limit, Over Temp		
<b>AC Power Requirements</b>			
Operating Voltage Auto Switch, 50/60Hz	88V-135V & 180V -264V		
Minimum Power-Up Voltage	88V		
Maximum Operating Voltage	264V		
Mains Connector	C20 IEC Receptacle / Locking	Removable 30A 125V NEMA L5-30 Male Plug or User Select	
Power Cord (Ships With)	IEC 12-Gauge 1.5M Cord w/ NEMA 5-20 Male Plug	Fixed, 10-Gauge 3M Cord, 1.5M	
<b>Power Consumption &amp; Current Draw @ 120V AC Mains (HPA2602)</b>			
Standby Mode	330mA	0.6W	2 BTU
Idle Active	1.48A	85W	267 BTU
Average Power 4 Ohm, All CH Driven	13A	1560W	3121 BTU
Average Power 70.7V, All CH Driven	13.1A	1572W	3134 BTU
Max Power 4 Ohm, All CH Driven	18A	2160W	4857 BTU
Max Power 70V, All CH Driven	18.4A	2208W	4751 BTU
<b>Power Consumption &amp; Current Draw @ 120V AC Mains (HPA4202)</b>			
Standby Mode	212mA	0.6W	2.05 BTU
Idle Active	1.05A	96W	328 BTU
Average Power 4 Ohm, All CH Driven	7.46A	407W	1389 BTU
Average Power 70.7V, All CH Driven	10.87A	500W	1707 BTU
Max Power 4 Ohm, All CH Driven	25.66A	1288W	4396 BTU
Max Power 70V, All CH Driven	25.66A	1288W	4396 BTU



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435

Cooling		
Cooling System	Fan (Variable With Temperature)	
Air Inlet Filter	Yes, Rear, Washable	
Cooling Air Flow Direction	Rear to Front	
Dimensions and Weight	HPA2602	HPA4202
Rack Mount Requirements	2 RU, 19"	
Dimensions - Unit	19"W x 3.5"H x 15"D (483mm x 89mm x 381mm)	
Dimensions - Shipping	23"W x 6.5"H x 22"D (584mm x 165mm x 558mm)	
Weight - Unit	28.5 lbs. (12.8kg)	29.2 lbs. (13.2kg)
Weight - Shipping	34.5 lbs (15.5kg)	35.2 lbs. (15.9kg)
Agency Approvals		
North America Agency	ETL	
Testing Standard North America	60065	
FCC Class A (Conducted & Radiated Emissions)	Part 15 of the FCC Rules	
CE	Yes (Includes RoHS & WEEE)	
Optional Accessories		
HPA-DAC2 - Dante™ Digital Audio Interface	2 Channel Receive (Only)- Field Installable	

### Notes:

1. Power Level - Test is defined as follows: 1Hz sine wave signal burst of 20 cycles (20mS) at 1% THD+N, followed by 480 cycles of a 1kHz sine wave at 10% of the max power. Other power measurements available upon request.
2. Power measured with Ethernet connected. Without Ethernet connected deduct 0.2W.
3. Average Power is defined as Pink Noise input signal applied to achieve 1/4 of the 4Ω or 70.7V power rating.
4. Max Power is defined as 1KHz input signal applied to achieve the maximum power output before clip into a 4Ω or 70.7V load.
5. HPA2602 Max output Voltage is 85V.



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
 Telephone: 800.876.3333 • Fax: 800.765.3435

### **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 nonwarranty 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 HPA Series Multi-Impedance Amplifier require service, please contact the AtlasIED warranty department at 1-877-689-8055, ext. 277 or [support.atlasied.com](mailto:support.atlasied.com) to obtain an RA number.

AtlasIED Tech Support can be reached at 1-800-876-3333 or [support.atlasied.com](mailto:support.atlasied.com).

Visit our website at [www.AtlasIED.com](http://www.AtlasIED.com) to see other Atlas products.

©2016 Atlas Sound L.P. The Atlas "Circle A", Soundolier, and Atlas Sound are trademarks of Atlas Sound L.P. IED is a registered trademark of Innovative Electronic Designs LLC. All Rights Reserved. All other trademarks are the property of their respective owners. All specs are subject to change without notice. ATS005254 RevB 10/16



1601 Jack McKay Blvd. • Ennis, Texas 75119 U.S.A.  
Telephone: 800.876.3333 • Fax: 800.765.3435