TSD-PA20VG
1x20W Global Commercial Amplifier

AtlasSound
TSD-PA20VG
Commercial Power Amplifier

POWER
SIGNAL
PEAK

– +
LEVEL

1601 Jack McKay Blvd. • Ennis, TX 75119 • 800.876.3333 • AtlasSound.com

CE

USE ONLY
ATLAS APPROVED
POWER SUPPLIES

AtlasSound
AMPLIFIER POWER IS 20W

– +
24VDC
1000mA

G – +
INPUT 1

COM   4Ω   25V   70V   100V
AMPLIFIER OUTPUT
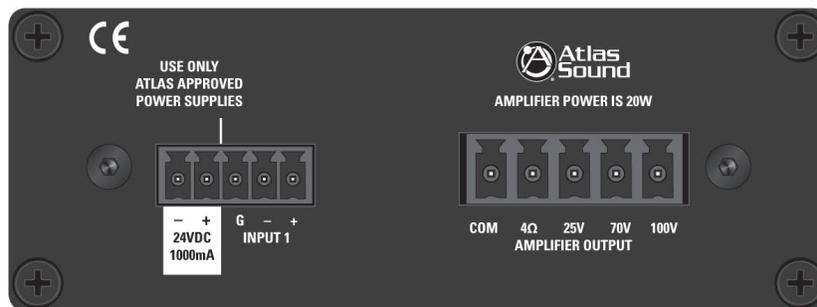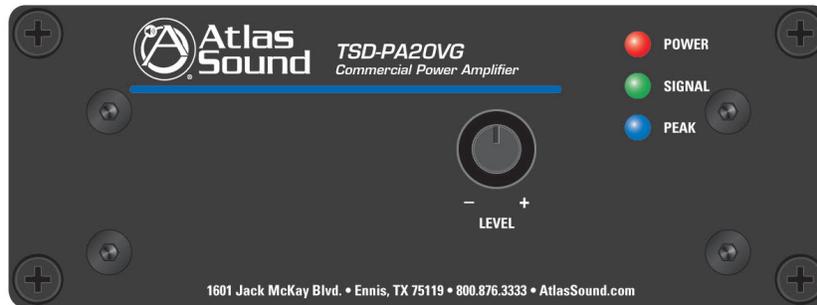
TSD-PA20VG

Owner's Manual

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Introduction

The AtlasIED TSD-PA20VG is a cost-effective mono amplifier for 4Ω and distributed constant voltage (25/70/100V) speaker systems. Applications such as house of worship cry rooms, hallways, restrooms, foyers, and classrooms will benefit from this compact reliable amplifier. The TSD-PA20V is also a cost-effective alternative for small projector systems as it can be used with as many as (16) 25/70/100V ceiling speakers (tapped at 1W each), plus the extremely small footprint allows for easy mounting. For sound masking applications the TSD-PA20VG has the capacity to drive up to 34 masking speakers tapped at .5W each on a 70.7V line.

Output is gain controlled from a potentiometer on the front panel with removable knob to facilitate installation of a tamper-resistant cover (included).

The TSD-PA20VG is part of a full line of AtlasIED Time Saving Devices. These compact (1.5" x 4" x 5.2") units are designed to solve some of the common audio system problems in the easiest, most efficient, and cost-effective way. All models are made from high quality components and include removable individual I/O connectors for quick and precise wiring, separate ground terminals for all I/Os assuring secured connections, and removable level controls that can be replaced with tamper-resistant security covers. The TSDs are highly efficient and meet most energy standards as one 24V DC power supply (available separately) can power multiple AtlasIED Time Saving Devices.

Key Features

- 20W Mono Amplifier
- 4Ω / 25 / 70 / 100V Output
- One (1) Balanced Input
- Removable Level Control with Set-It-And-Forget-It Security Cover
- Peak Indicator
- Input Signal Indicator
- Cable Management System
- Multiple Mounting Configurations
- Separate Ground Connections
- Removable Phoenix Style I/O Connectors
- Meets Most Energy Standards
- Compact Chassis Design

Applications

- Projector Amplifier
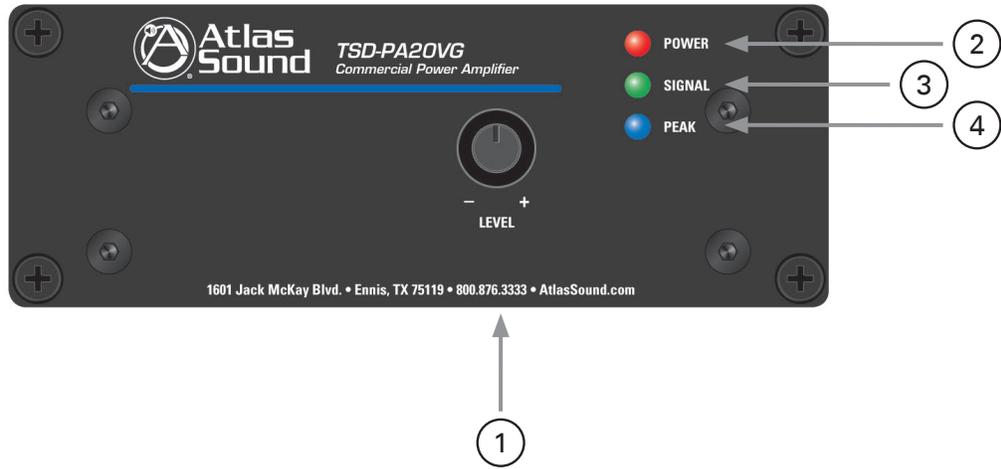- Zone Amplifier
- Paging Systems

Installation

- Courtroom
- Public Forums
- Churches
- Restaurants
- Schools
- Industrial Facilities
- House of Worship

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Front Panel

1. Input Level Control

Determines the output level at the loudspeakers on the PA20VG. Turn clockwise to increase the signal level and counter-clockwise to decrease the level. **Note:** The Input Level Control knob can be removed and replaced with a supplied security cover to prevent unauthorized adjustment.

2. Power LED

Illuminates Blue when 24VDC power is present.

3. Signal LED

Illuminates Green when the input signal strength reaches 25mV to verify a signal path.
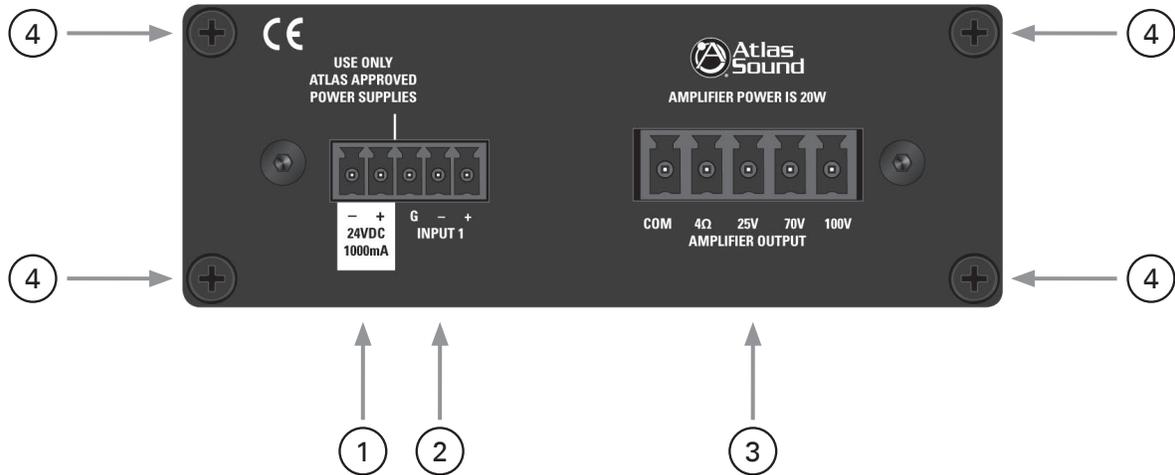
4. Peak LED

Illuminates Red when the input signal reaches 3dBV below when signal clipping will occur. Occasional flashing is normal but if this indicator is continuously On, then reduce the input level using the Input Level Control on the front panel.

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Rear Panel

TSD Input/Output connections are removable for easy system wiring. The connectors have a 3.5mm pitch between pins.

1. DC Power Input

Each TSD that requires DC power comes with a 2 position connector for an external 24VDC power supply (sold separately). Because of the TSDs low power consumption, a single external power supply may power more than one TSD. Please refer to the specifications on current requirements in milliamps to match with the appropriate power supply. Please observe the polarity of the wiring to this connector. **Note:** It is acceptable to exceed the current requirements of the TSDs but NOT safe to use a power supply that is below the current requirement of the device.

2. Balanced Line Input

Connect balanced line level signals to this phoenix style connectors. Your connection must be mated properly to the input connector or signal loss and/or noise may occur. **Note:** Unbalanced line level inputs can also be used by connecting the (G) and (-) terminals together.

3. Speaker Outputs

Connect the loudspeaker wiring to these terminals, observing the polarity shown on the rear of the chassis. For low impedance loads, use the "COM" and 4Ω terminals. For high impedance loads, use "COM" and the proper terminal for your system (25/70/100V). It is recommended to keep the sum total of tapped loudspeakers to 20W.
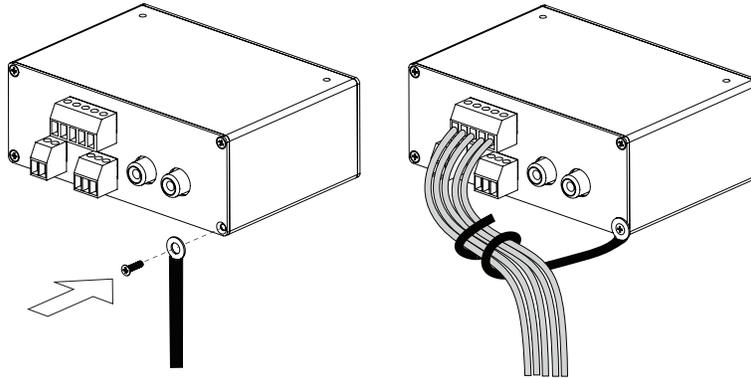
4. Cable Management Retainer Points

Each TSD includes two cable retainer straps for securing the included cable management retainers. Remove one of the rear panel screws, align the panel hole with a retainer and firmly tighten the screws.

Cable Management

Knob and Security Cover

All front panel level controls feature a removable knob that can be replaced with an included security cover. Follow these steps to prevent potentiometer damage or unwanted changes.

1. Knob Installation

Turn the potentiometer shaft fully counter-clockwise. Align the knob indicator to the lowest setting on the panel and the potentiometer shaft slot. Carefully press the knob onto the potentiometer shaft. Do not force or damage may occur to the potentiometer.
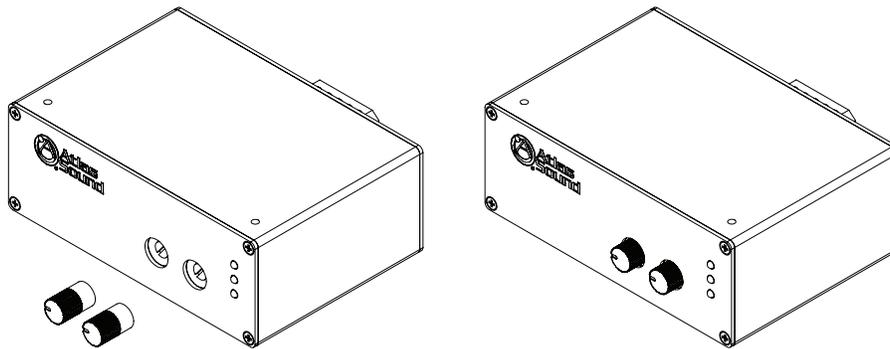
2. Security Cover Installation

Remove the knob from the panel and insert the cover. Small pliers may be required to remove the knobs. Align the security cover to the level control panel hole. Push the cover into the hole until it snaps into place. Do not force or damage may occur to the potentiometer.
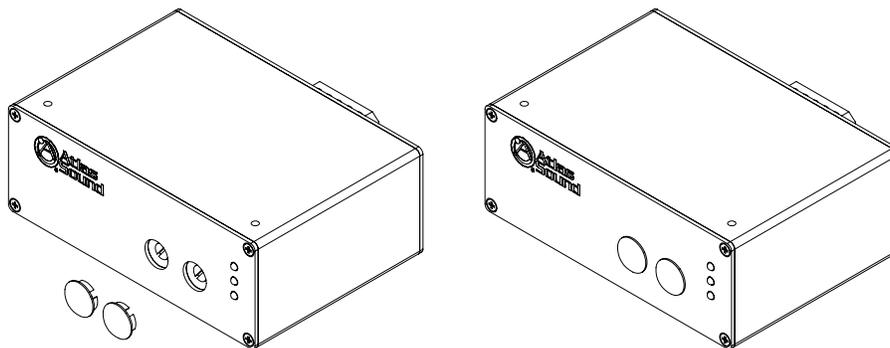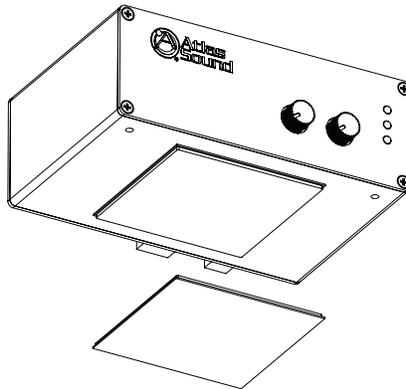
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Mounting

Listed below are the ways to mount the TSD and the optional accessories that can be purchased.

1. Velcro™

Each unit includes two 2" x 2" pieces of industrial-grade Velcro™ with adhesive backing to adhere to any flat surface. Clean all surfaces before applying the adhesive side of the Velcro™.

2. Multi Mount Plate

Each TSD includes a versatile multi-position mounting plate. This plate allows the TSD to be mounted to any surface; but is ideal for use with rear rack rails or side rack hat channels. Use the included M3 x 4mm screws to install the plate on the TSD. **Note:** Only use the included M3 x 4mm screws as other screws may be too long and will cause internal damage to the TSD. The multi-position mounting plate is a new addition being included with TSDs. If the TSD being used did not include the mounting plate, contact AtlasIED customer service at 1-800-876-3333.
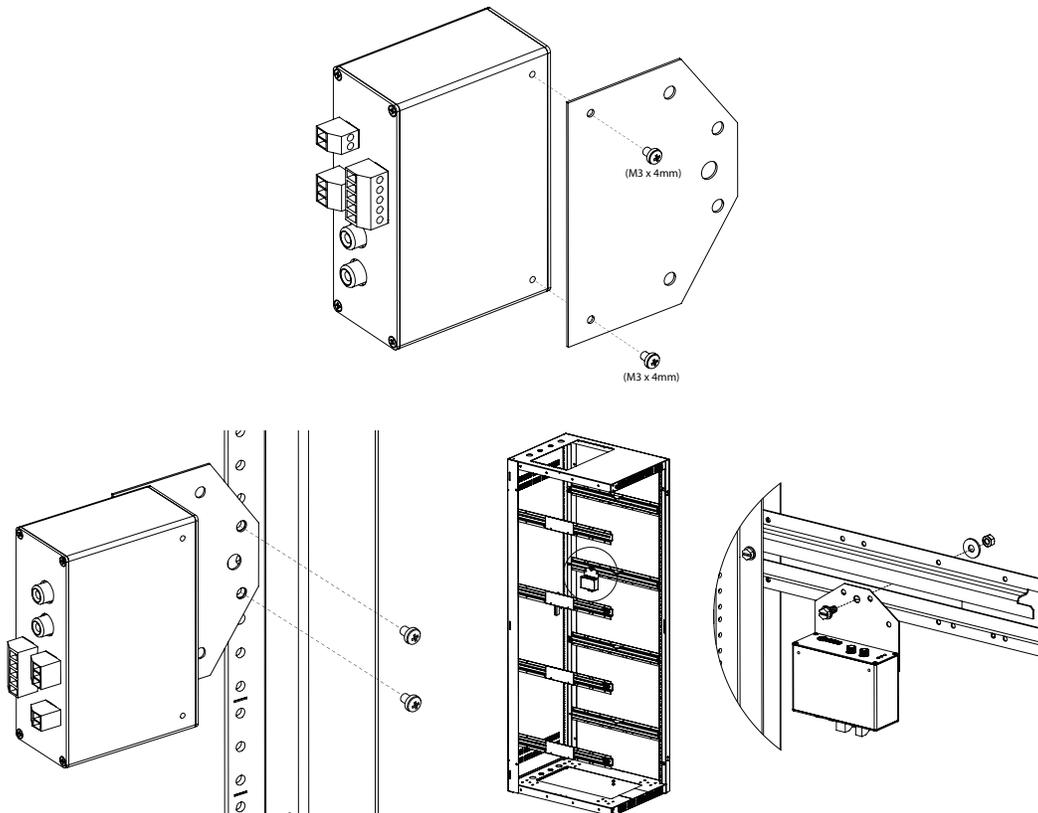
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Optional Mounting Accessories

1. TSD-RMK 19" Width Rack Mount Kit

For 19" rack mounting, AtlasIED offers an optional rack mount kit, the TSD-RMK. This rack mount kit can support up to four TSD units. The kit includes three blank panels designed to fill any unused slots. Use the included hardware to mount the TSD into the rack mount kit using the top mount screw holes on the TSD.
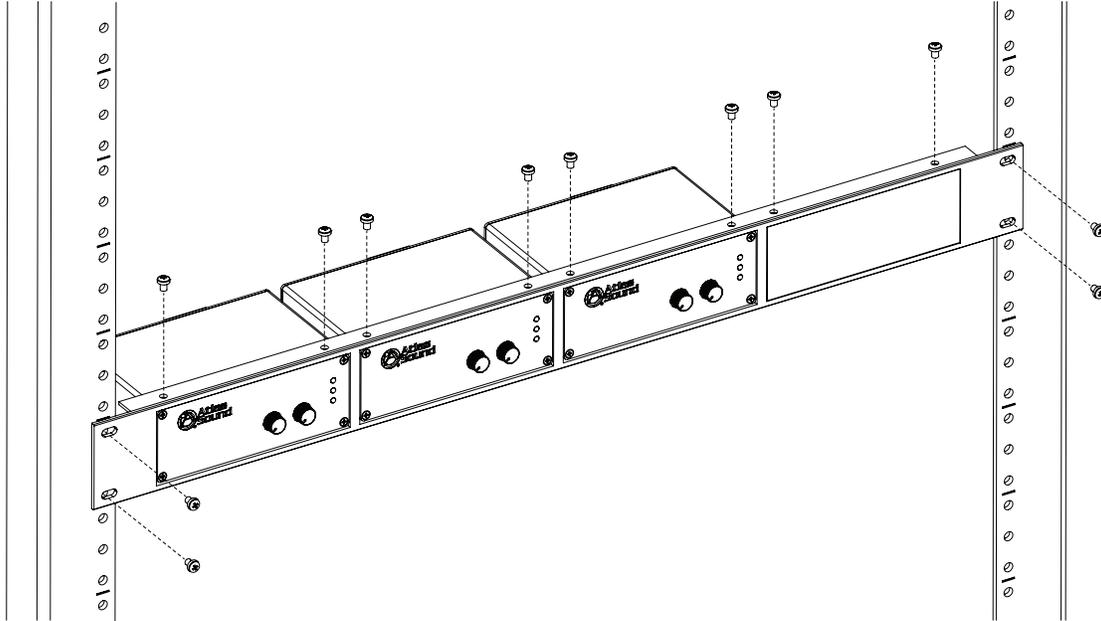
2. TSD-RMKHR Half Width Rack Mount Kit

AtlasIED offers an optional rack mount kit that can be used in half width rack applications including the AtlasIED WMA-HR and AWR-HR models. The TSD-RMKHR can support up to two TSDs. Included is an extra blank panel to fill one of the spaces if only one TSD is being used.
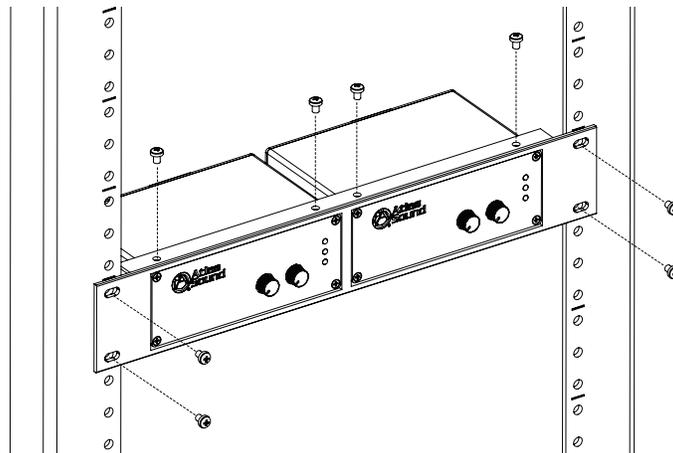
3. TSD-RRMK Rear Rack Mounting Kit

For complete flexibility in mounting a TSD or TSD external power supplies the optional TSD-RRMK is available. The TSD-RRMK can support mounting of either two larger TSDs with external power supplies or up to 4 TSD models. **Note:** Only use the included M3 x 4mm screws as other screws may be too long and will cause internal damage to the TSD.
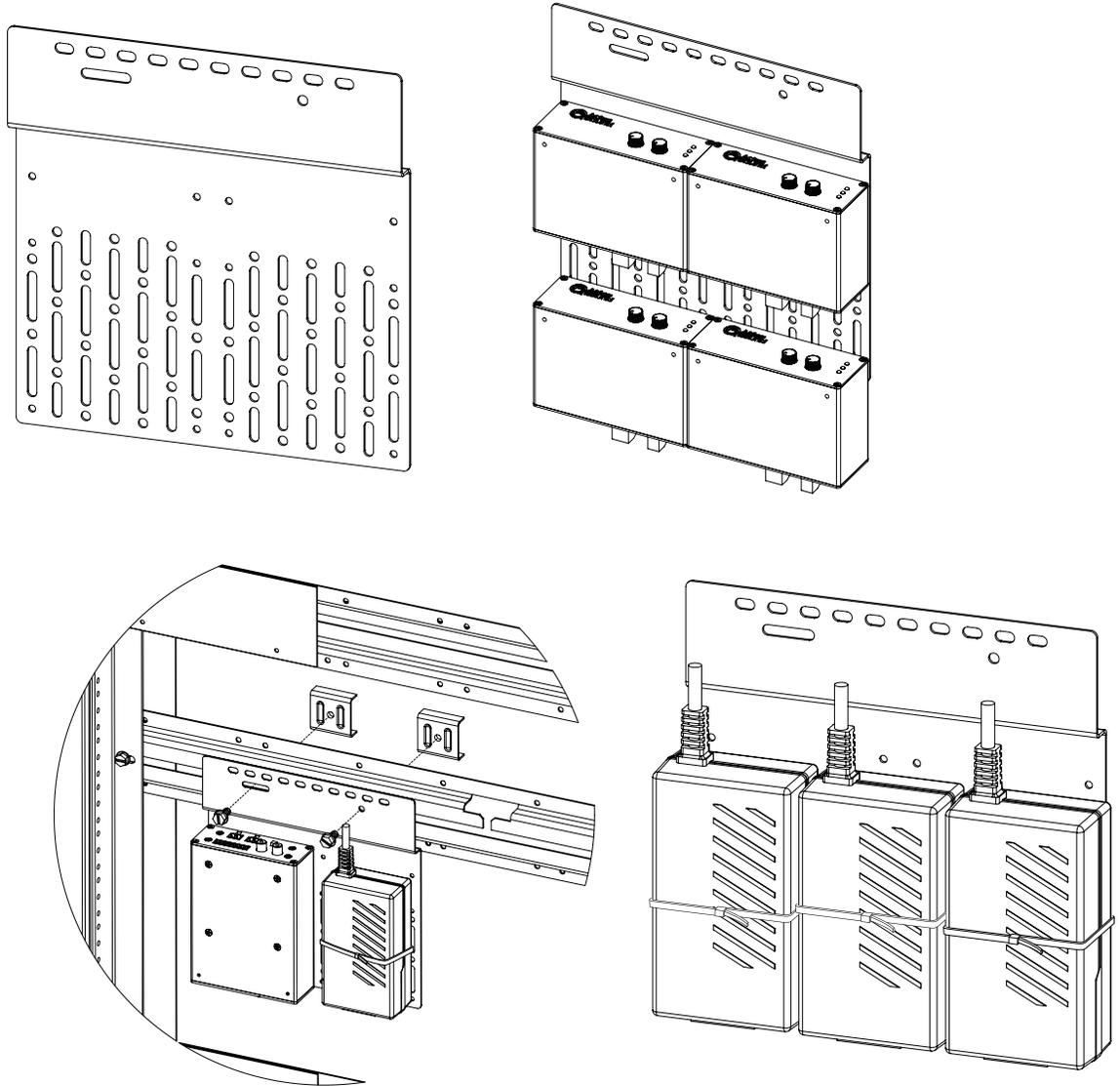
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System	
Type	1 x 20W Global Commercial Amplifier
Inputs	
Input Type	Balanced Line, Qty 1
Connection	Removable 3 Position Captive Screw 3.5mm Spacing
Impedance	10KΩ Balanced, 5KΩ Unbalanced
Line Input Level	500mV (-6dBV) Balanced
Outputs	
Output Type	Speaker Output, Qty 1
Taps	4Ω, 25V, 70V, 100V
Connection	Removable 5 Position Captive Screw 5mm Spacing
Wire Size	14 Gauge Max
Controls	
Level Control	Removable Knob with Security Cover, Qty 1
Indicators	
Input Signal	Green LED, 25mV On Threshold
Peak	Red LED, -3dB Before Clip
Power	Blue LED
Technical Data	
Frequency Response	40Hz - 20kHz (±3dB)
THD	15% @ 1kHz
Signal To Noise	78dBV
Load Rating	8Ω - 10W x 1 CH 4Ω - 20W x 1 CH 25/70.7/100V - 20W x 1CH
Power Requirements (Note 1)	
Load Taps	4Ω, 25V = 31Ω Load, 70V = 250Ω Load, 100V = 500Ω Load
Voltage	24VDC
Idle Current	50mA
Idle VA Watts	1.2W
Average Current	160mA
Average VA Watts	3.8W
Max Current	490mA
Max VA Watts	11.7W
Mechanical	
Chassis Finish	Black
Chassis Material	Aluminum
Product Dimensions (HxWxD)	1.5" x 4" x 5.2" (39mm x 101mm x 132mm)
Shipping Dimensions (HxWxD)	3" x 7" x 7" (76mm x 178mm x 178mm)
Unit Weight	0.375 lbs. (0.165kg)
Shipping Weight	2.7 lbs. (1.22kg)
Included Accessories	
Velcro™	Industrial-Grade
Multi-Mount Plate	Includes Two (2) M3 x 4mm Screws, Qty 1
Cable Retainers	Qty 2
Level Control Knob	Qty 1
Level Control Security Cover	Qty 1

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Optional Accessories	
TSD 24VDC	Power Supply
TSD-RMK	1 RU 19" Width Rack Mount Panel (Supports 4 TSD Units)
TSD-RMKHR	1 RU Half Rack Width Panel (Supports 2 TSD Units)
TSD-RRMK	Rear Rack Mounting Kit
Safety & Certifications	
Safety Listing (External Power Supply)	cUL, CE, RoHS, TUV

Note 1: All Current and Watt data is based on AC power consumption using the TSD-PS24V2500mA Power Supply.

TSD-PA2OVG

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Block Diagram

INPUT

SIGNAL
LED

PEAK
LED

LEVEL

AMP 20W

OT

100V

70V

4 ohm

COM

–

+

DC24V IN

DC OUT

+

POWER LED
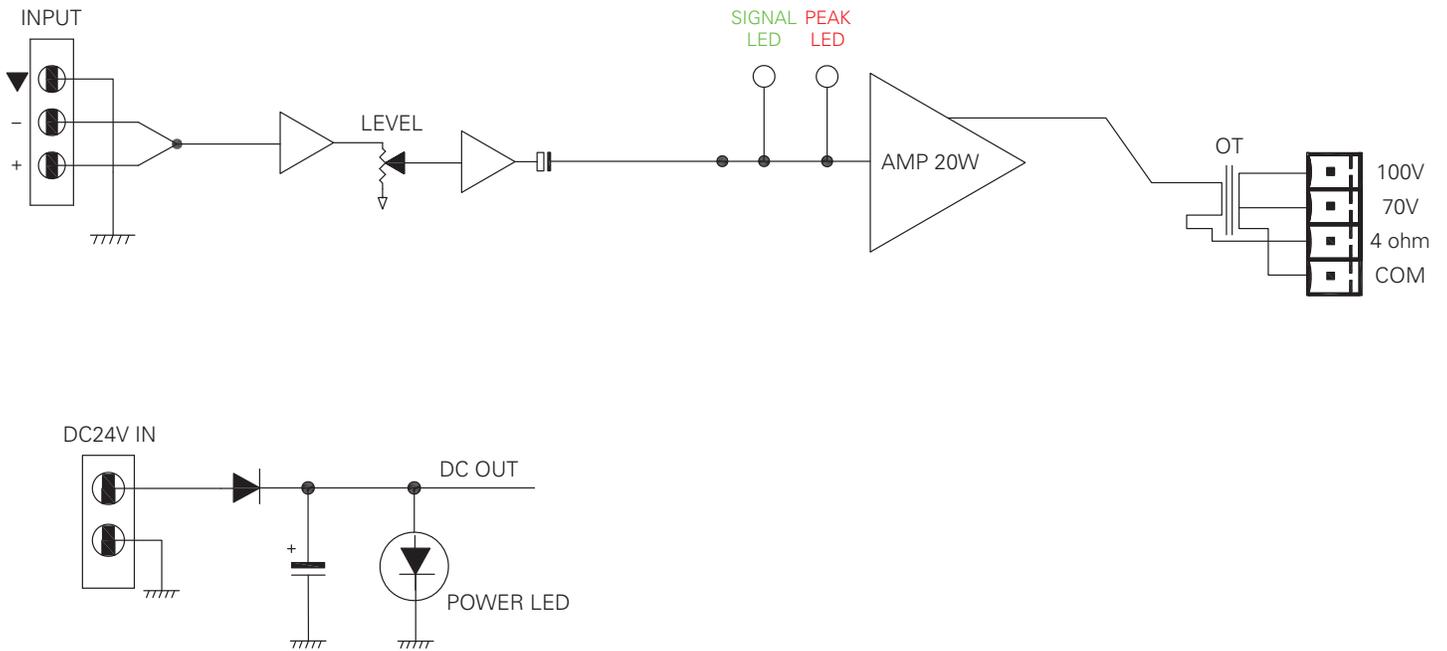
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Dimensional Drawings

4"
(101mm)

1.5"
(39mm)

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CE
USE ONLY
ATLAS APPROVED
POWER SUPPLIES

Atlas Sound
AMPLIFIER POWER IS 20W

− +
24VDC
1000mA

G − +
INPUT 1

COM   4Ω   25V   70V   100V
AMPLIFIER OUTPUT

5.2"
(132mm)

Notes:

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1601 JACK MCKAY BLVD.
ENNIS, TEXAS 75119 U.S.A.

TELEPHONE: (800) 876-3333
SUPPORT@ATLASIED.COM

AtlasIED.com

Notes:

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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 TSD-PA20VG 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. 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. One with a confirmation of the submission

    2. One 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 or atlasied.com/support.

Visit our website at www.AtlasIED.com to see other AtlasIED products.