# AS-AMP1™

# 40 Watt Digital Amplifier

## User Manual



Manual Number: 100818

# Safety and Notice

The **AS-AMP1**™ has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AS-AMP1 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.

- Do not attempt to service this unit yourself, except where explained in this manual.

- Provide proper ventilation and air circulation and do not use near water.

- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.

- Use only the power adapter and power cords and connection cables designed for this unit.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

The **AS-AMP1**™ is a small digital amplifier (Class D), with EQ control and MIC mixer function. It is in a small enclosure but with powerful functions including bridge connection, dual-mono, EQ control, microphone mixer, and more.

Applications include classrooms, small meeting rooms, lecture halls, bars, etc.
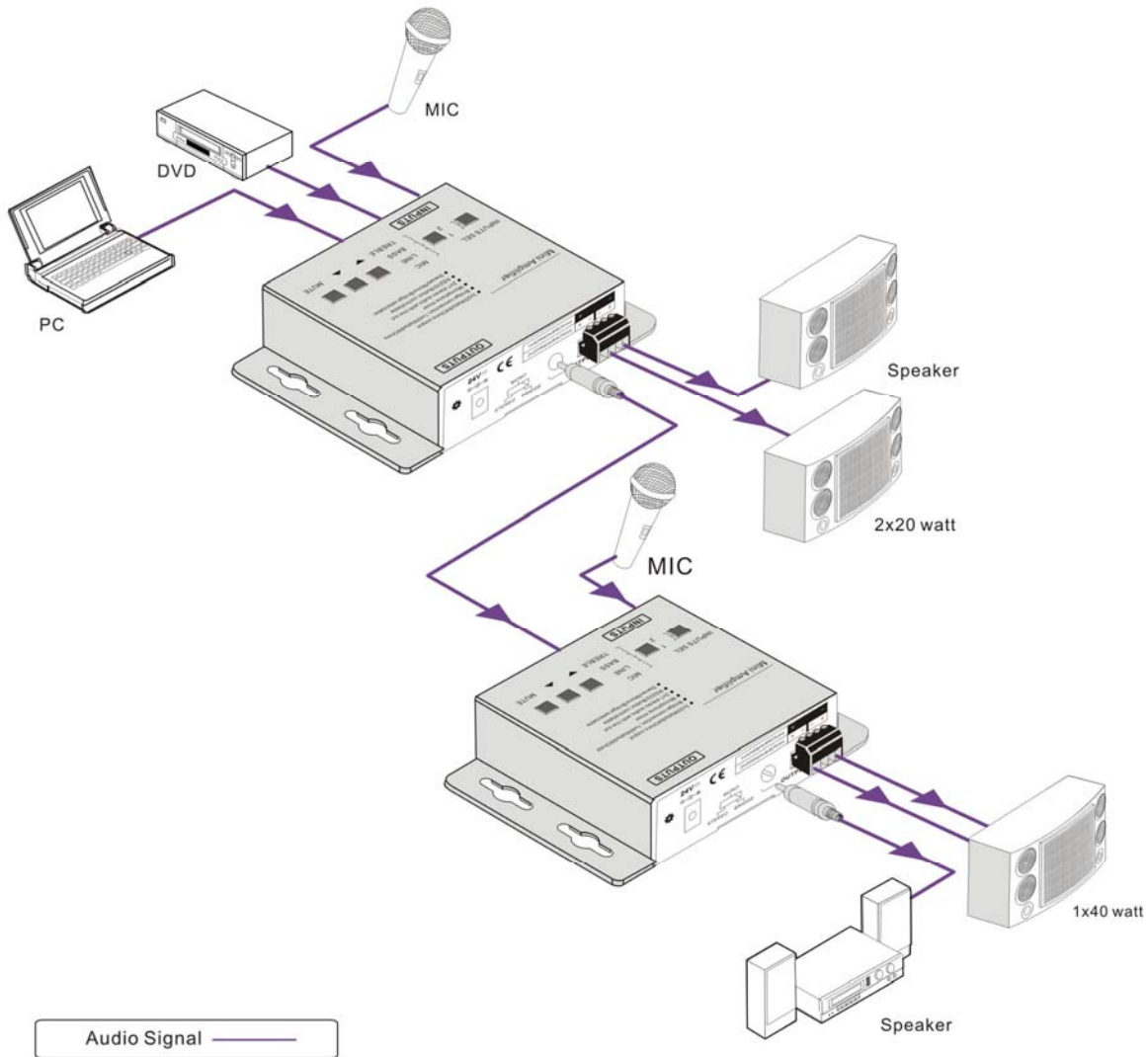
# Features

- 2x20 watt @ 4Ohm as the default amplifier output.
- Bridge connection function. The user can switch the AS-AMP1 to be 1x40Watt@8Ohm by bridge connection.
- Dual-mono function. The user can sum up the stereo audio to two times mono audio.
- Microphone mixer function. The microphone will be mixed to the line audio output, and separately controllable.
- Two stereo audio inputs, switchable by button, remote or RS232.
- Volume/Bass/Treble controllable by buttons or RS232.
- Line audio output, with volume controllable.
- Optional control solution, by IR remote or volume panel.
- RS232 control with smart feedback.
- Antistatic case design: providing good protection for long-term and stable performance
- Internal international power supply (100Volt~240Volt AC, 50/60Hz) For worldwide compatibility.
- Fast switching speed.
- LED indicator, for power and working status.

# Specifications & Package Contents

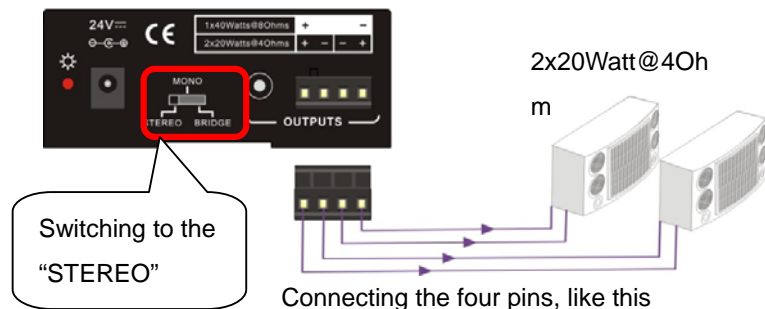| Model Name | | AS-AMP1™ |
|---|---|---|
| **Audio Input** | | |
| Input | | 2 Stereo audio, 1 MIC |
| Input Connector | | 2 RCA, 1 3.5mm jack, 1 6.5mm jack |
| Input Impedance | | >10KΩ |
| Frequency | | 20Hz ~ 20KHz |
| SNR | | 80dB at maximum output |
| Stereo Channel Separation | | >75dB@20Hz ~ 20KHz |
| Voltage Gain | | 32dB |
| **Audio Output** | | |
| Output | | 1 Amplifier, 1 Stereo audio |
| Output Connector | | 1 Captive screw connector(4 pole), 1 3.5mm jack |
| Output Impedance | | 50Ω/Stereo,    4~8Ω/Amplifier |
| CMRR | | >70dB@20Hz ~ 20KHz |
| Bandwidth | | 20Hz ~ 25KHz |
| THD + Noise | | 1%@1KHz, 0.3%@20KHz at nominal level |
| Power Output | | 2x20Watt    (4Ohm) |
| Control Port | | DE-9 [9-pin D-sub female] 2= TX, 3=RX, 5=GND |
| IR Remote | | Optional |
| **Mechanical** | | |
| Housing | | Metal enclosure |
| Dimensions [L x W x H] | Model | 123 x 87 x 38mm [4.84" x 3.43" x 1.5"] |
| | Package | |
| Weight | Model | .5Kg [1.10 lbs] |
| | Package | |
| Fixedness | | Wall Mount Key holes |
| Power supply | | 24V 3A DC |
| Power consumption | | |
| Operation temperature | | 0~40°C [32~104°F] |
| Storage temperature | | -20~70°C [-4~140°F] |
| Relative humidity | | 10~90% RH [no condensation] |
| **Package Contents** | | 1x AS-AMP1          1x 24V 3A PSU          1x User Manual |

## Top Panel



## Front Panel



## Rear Panel

**Default output: 2x20Watt@4Ohm**

The default output of the amplifier is 2x20Watt@4Ohm.



2x20Watt@4Ohm

Switching to the "STEREO"

Connecting the four pins, like this

**Bridge connection: 1x40Watt@8Ohm**

The AS-AMP1 has the bridge connection, to double the output power at 1x40Watt@8Ohm. It will sum up the input left channel and input right channel to be mono output, and the power is up to 40Watt.

The bridge connection is:



1x40Watt@8Ohm

Switching to the "BRIDGE"

Connecting the two pins, like this
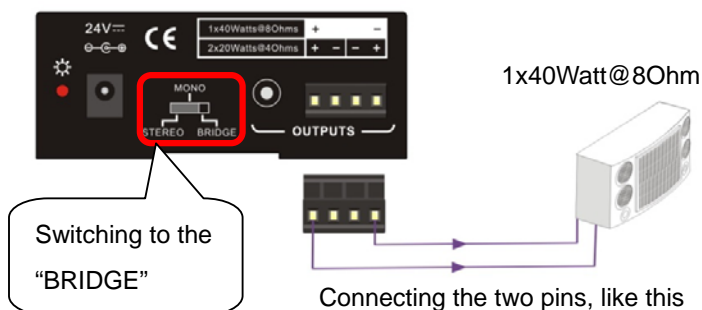
**Dual-mono output:**

The AS-AMP1 also has the function of double-mono output. It can sum up the left and right channel, to be the mono audio output. In this way, the both of the outputs are showing the same mono audio.
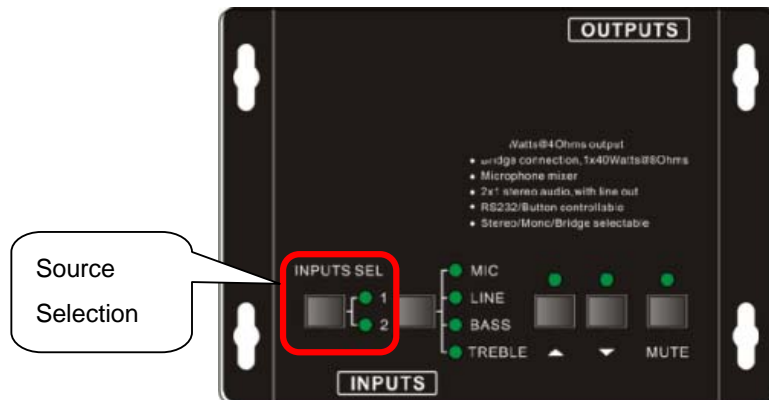
The connection is:



Switching to the "MONO"

Connecting the four pins, like this
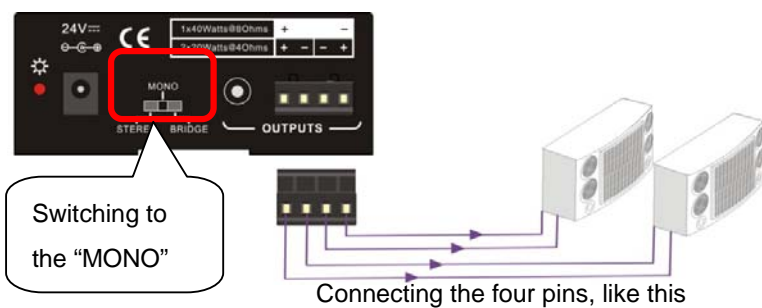
The buttons provide the control of volume/EQ and switching.

**Audio switching:**

There are two switchable stereo audio inputs, one 2xRCA input, and one 3.5mm jack input. It can be switched through the buttons as below:



**Volume/EQ controlling:**

The line volume and Microphone volume can be controlled by the buttons.

The Mic Volume, Line volume, Line bass, and Line treble can be selected by the buttons, and controlled up/down/mute by the function buttons.
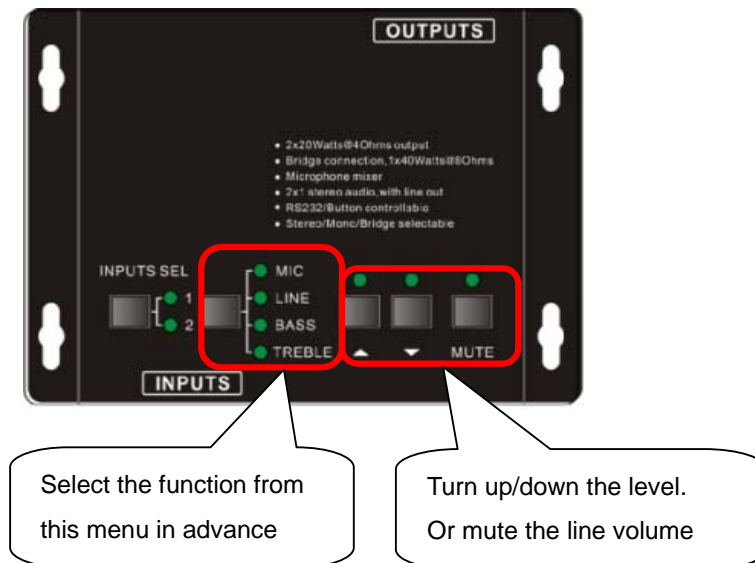


For example, to turn up the line volume, you should select the "LINE" first, and then press the button "▲".

# Communciation Protocol

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

DE-9 [9-pin D-sub female] 2= TX, 3=RX, 5=GND

| Command | Function Description | Feedback Code |
|---------|---------------------|---------------|
| 1A1. | Switching the audio to input 1 | A: 1 -> 1 |
| 2A1. | Switching the audio to input 2 | A: 2 -> 1 |
| 0A0. | Mute Audio | Mute Audio |
| 0A1. | UnMute Audio | UnMute Audio |
| 600% | Checking the working status | A: 1 -> 1<br>Volume :30<br>Bass     00<br>Treble 00 |
| 601% | MIC volume up | Volume of MIC : 51 |
| 602% | MIC volume down | Volume of MIC : 51 |
| 603% | Line volume up | Volume of LINE : 51 |
| 604% | Line volume down | Volume of LINE : 51 |
| 605% | Bass level up | Bass of LINE   :   04 |
| 606% | Bass level down | Bass of LINE   :   04 |
| 607% | Treble level up | Treble of LINE : 04 |
| 608% | Treble level down | Treble of LINE : 04 |
| 609% | Initialization, back to the default setting | A: 1 -> 1<br>Volume :50<br>Bass     07<br>Treble 07 |

| Command | Function Description | Feedback Code |
|---------|---------------------|---------------|
| 5[x][x]% | Preset MIC volume, [xx] is ranging from [00] to [60]. 61 degrees in total. | Volume of MIC :50 |
| 7[x][x]% | Preset line volume, [xx] is ranging from [00] to [60]. 61 degrees in total. | Volume of LINE :50 |
| 8[x][x]% | Preset the bass level, [xx] is ranging from [00] to [08]. 9 degrees in total. | Bass of LINE :   04 |
| 9[x][x]% | Preset the treble level, [xx] is ranging from [00] to [08]. 9 degrees in total. | Treble of LINE : 04 |

**Notice:**

1: The letter inside bracket [ ] is the variable code, which is the changeable.

2: The bracket [ ] is not included to the RS232 commands.

**Example 1**

Switching the input 2 to the line out. Send the RS232 command:  [2A1.]

**Example 2**

Turning up the volume of line audio. Send the RS232 command:  [603%]

**Example 3**

Preset the MIC volume to be "21" degree. Send the RS232 command: [521%]

**Example 4**

Checking the working status of AS-AMP1. Send the RS232 command: [600%]

# Limited 3 Year Warranty

Aurora Multimedia Corp. ("Manufacturer") warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product warranty period.

This warranty shall not apply if any of the following:

A) The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,

B) The product has not been operated in accordance with procedures specified in operating instructions: or,

C) The product has been repaired and or altered by other than manufacturer or authorized service center; or,

D) The product's original serial number has been modified or removed: or,

E) External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.

F) Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period.

This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

This product warranty extends to the original purchaser only and will be null and void upon any assignment or transfer.

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