

## 9. Acronyms

Acronym	Complete Term
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital content protection
HDMI	High-Definition Multimedia Interface

## 10. Warranty

Marshall Electronics warrants to the first consumer, that this VS-HAI HDMI Audio Inserter will, under normal use, be free from defects in workmanship and materials, when received in its original container, for a period of one year from the purchase date.

This warranty is extended to the purchasing end user only and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, Marshall Electronics reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to you.

This warranty does not apply to product exterior and cosmetics. Misuse, abnormal service or handling, improper alterations or modifications in design or construction, voids this warranty. No sales personnel of the seller, nor any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of Marshall Electronics, beyond the time period described above.

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# VS-HAI

## HDMI Audio Inserter



Operation Manual

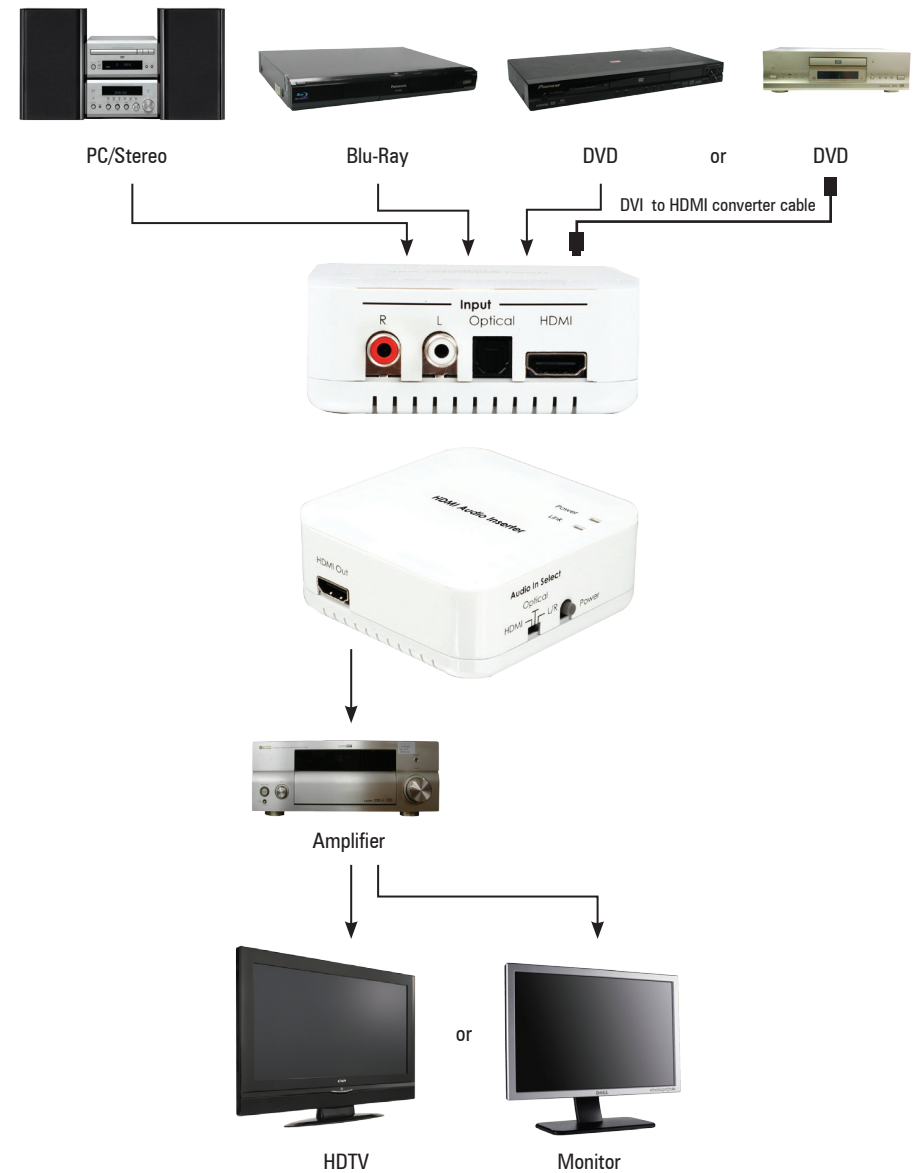
**Marshall Electronics**  
Broadcast Multimedia Division

## Safety Precautions

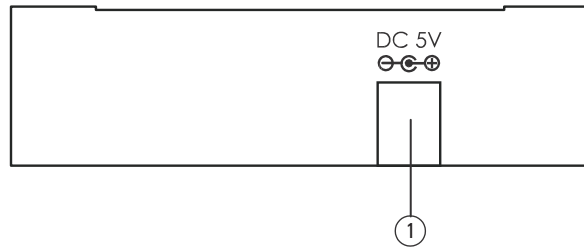
Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

## 8. Connection and Installation

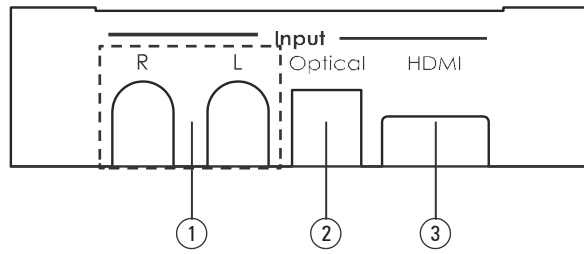


### 7.3 Left Panel



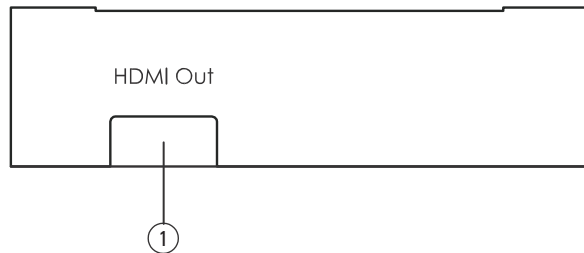
- ❶ DC 5V: This slot is where you plug the 5V DC power supply into the unit and connect the adaptor to an AC wall outlet.

### 7.4 Upper Panel



- ❶ Input R/L: These slots are to connect with audio source equipment such as CD player or Hi-Fi equipment with RCA jack for input audio signal.
- ❷ Input Optical: This slot is to connect with audio source equipment such as stereo system or Hi-Fi equipment with optical cable for input audio signal.
- ❸ This slot is to connect with input source equipments such as DVD/Blu-Ray player with HDMI cable for video and audio input signal.

### 7.5 Rear Panel



- ❶ HDMI Out: This slot is to connect with LCD TV or HD monitor for both video and audio display with HDMI cable.

## Table of Contents

1. Introduction	4
2. Applications	4
3. Package Contents	4
4. System Requirements	4
5. Features	4
6. Specifications	4
7. Operation Controls and Functions	5
7.1 Top Panel	5
7.1 Right Panel	5
7.3 Left Panel	6
7.4 Upper Panel	6
7.5 Rear Panel	6
8. Connection and Installation	7
9. Acronyms	8
10. Warranty	8

## 1. Introduction

The HDMI Audio Inserter is a device that lets you insert an external audio signal into your HDMI/DVI source. The device allows you to insert stereo and multi-channel surround sound signals to give users the capability to select their favorite audio formats while extending your audio signal, then the HDMI Audio Inserter is the perfect choice.

## 2. Applications

- External audio input to HDMI
- DVI video with audio to HDMI signal output
- Alternative audio selection to HDMI output

## 3. Package Contents

- HDMI Repeater with Audio In
- 5V / 1A Power Adaptor
- Operation Manual

## 4. System Requirements

Input source equipment such as PC or DVD player with connection cables and output HD monitor or LCD TV with HDMI cable.

## 5. Features

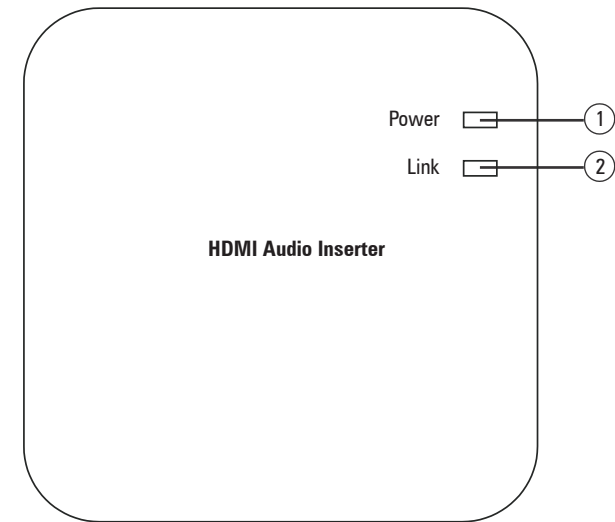
- Compliant with HDMI 1.3, HDCP 1.2 and DVI 1.0
- Supports HDMI Sample Rates up to 192 kHz
- Supports Optical Sample Rate up to 48 kHz
- Supports TMDS clock frequency rate 225MHz
- Supports high-bit-rate (HBR) audio
- HDMI cable distance test with 1080p 8/12-bit resolution, the input & output can run up to 10 meters
- Low power consumption
- Supports 3D signal

## 6. Specifications

<b>Input Port</b>	1 x HDMI, 1 x Optical, 1 x R/L
<b>HDMI Sample Frequency</b>	Up to 192 kHz
<b>Optical Sample Frequency</b>	Up to 48 kHz
<b>Output Port</b>	1 x HDMI
<b>HDMI Cable I/O Distance</b>	10M 1080p/12-bit, 15M 1080p/12-bit
<b>HDMI Audio Format</b>	PCM2/5.1/7.1, Dolby 5.1, DTS 5.1, DD+, D-TrueHD, DTS-HD
<b>Optical Audio Format</b>	PCM2, Dolby Digital, DTS Digital audio 5.1
<b>Power Supply</b>	5V/1A linear power adaptor (US/EU Standards, CE/FCC/UL Certified) Or 5V/1.2A switching power adaptor (with universal plug, CE/FCC/UL certified)
<b>ESD Protection</b>	Human body model: $\pm 8kV$ (air-gap discharge) $\pm 6kV$ (contact discharge)
<b>Dimensions(mm)</b>	90.7 (W) x 85.8 (D) x 34(H)
<b>Weight(g)</b>	90
<b>Chassis Material</b>	Plastic
<b>Silkscreen Color</b>	White
<b>Operating Temperature</b>	0°C~40°C / 32°F~104°F
<b>Storage Temperature</b>	-20°C~60°C / -4°F~140°F
<b>Power Consumption</b>	2.7W
<b>Relative Humidity</b>	20 ~ 90% RH (non-condensing)

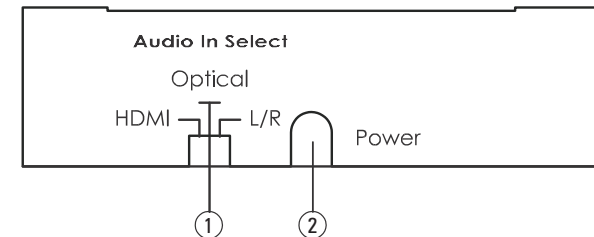
## 7. Operation Controls and Functions

### 7.1 Top Panel



- 1 Power LED: The red LED will illuminate when the power is connected with AC wall outlet.
- 2 LINK: The LED will illuminate in blue when both the source and the display are sync together. This LED will also blink once while the power is turned on.

### 7.2 Right Panel



- 1 Audio In Select: This switch allows user to select the audio input from HDMI, Optical or L/R. By switching the dip switch according to the printing from left to right HDMI, Optical and L/R.
- 2 Power Button: Press this button switch ON or set the device to standby mode.