



## AU-11DD

Dolby® Digital Downmixer with Digital/Analogue  
Audio Conversion

**OPERATION MANUAL**



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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, 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 any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

## REVISION HISTORY

| VERSION NO. | DATE     | SUMMARY OF CHANGE   |
|-------------|----------|---------------------|
| v1.01       | 25/09/13 | Preliminary Release |
|             |          |                     |

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## **1. INTRODUCTION**

The AU-11DD is designed to decode and downmix Dolby Digital audio signals to analogue stereo. All outputs are simultaneous which is excellent for multi-room audio environments where both digital and analogue zones are required

## **2. APPLICATIONS**

-  Analog audio to digital audio signal conversion (ADC)
-  Digital audio to analog audio signal conversion (DAC)
-  Simultaneous digital and analog audio output
-  Downmixing of Dolby Digital signals

## **3. PACKAGE CONTENTS**

-  1×AU-11DD
-  5 V/1 A Power Adaptor
-  Operation Manual

## **4. SYSTEM REQUIREMENTS**

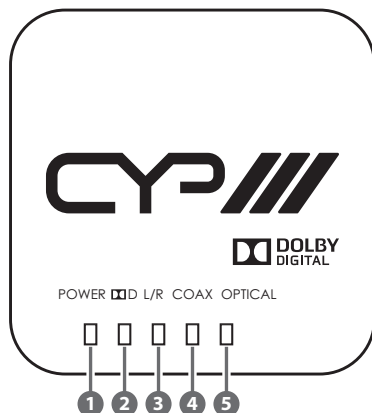
Audio source equipment such as CD/DVD Player with connection cable(s) and AV receiver or similar for audio output.

## **5. FEATURES**

- ///** Dolby Digital decoder technology embedded
- ///** Integrated digital interpolator filter and Digital-to-Analog Converter (DAC)
- ///** Integrated Analog-to-Digital Converter (ADC)
- ///** Supports LPCM input sampling rates from 32 to 96 kHz
- ///** Output sampling rates is adjusted to 48 kHz
- ///** Supports Dolby Digital audio downmixing to 2CH audio
- ///** Supports Dolby Digital sampling rate 48kHz
- ///** Provides electromagnetic-noise-free transmission
- ///** Easy to install and operate
- ///** Compact and elegant design

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Top Panel



#### 1 POWER LED Indicator

The LED will illuminate in blue when the power is connected and in red when switched off.

#### 2 Dolby Digital LED Indicator

When the source is Dolby Digital formatted the LED will illuminate in red and will remain off if not.

#### 3 L/R IN LED Indicator

When selecting the L/R input, the blue LED will turn on.

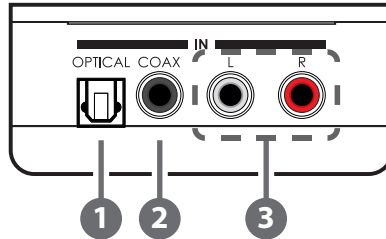
#### 4 COAX IN LED Indicator

When selecting the Coaxial input, the blue LED will turn on.

#### 5 OPTICAL IN LED Indicator

When selecting the Optical input, the blue LED will turn on.

## 6.2 Right Panel



### 1 OPTICAL IN

Connect to the audio source's optical output.

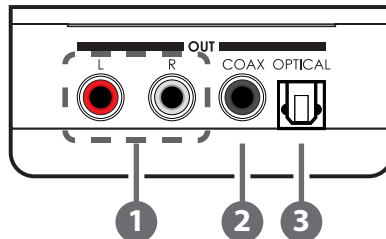
### 2 COAX IN

Connect to the audio source's coaxial output.

### 3 L/R IN

Connect to the analog audio source with a stereo RCA cable.

## 6.3 Left Panel



### 1 L/R OUT

Connect to a compatible audio equipment, such as a TV or amplifier with a stereo RCA cable.

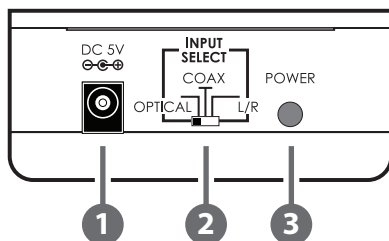
### 2 COAX OUT

Connect to an audio system's coaxial input.

### 3 OPTICAL OUT

Connect to an audio system's optical input.

## 6.4 Rear Panel



### 1 DC 5V

Connect the 5 V/1 A DC power supply to the unit and plug the adaptor to an AC wall outlet.

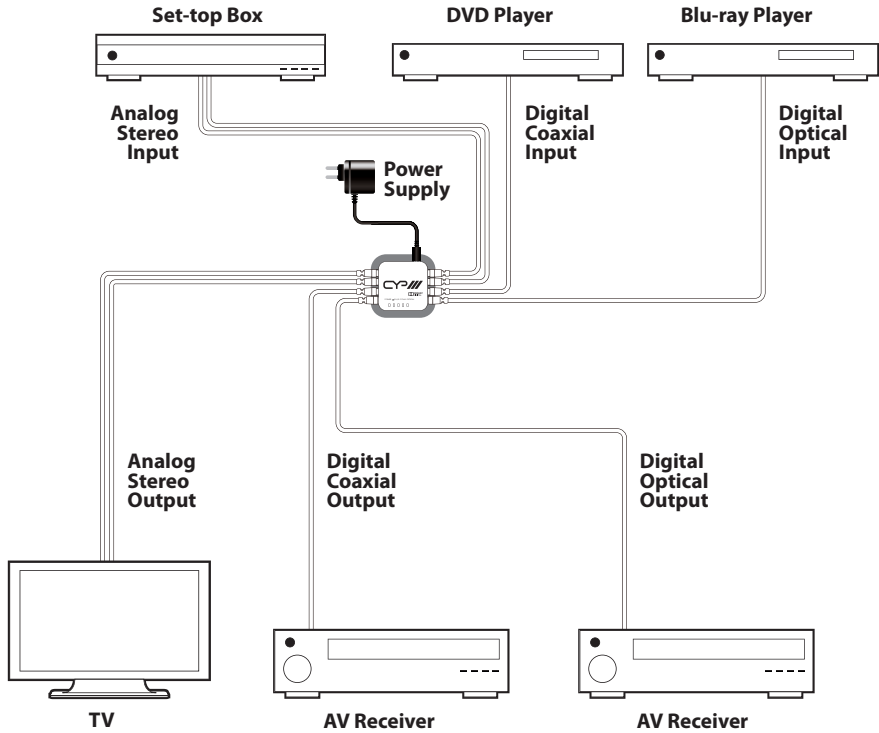
### 2 INPUT SELECT

Selects the current audio source, either optical, coaxial or L/R (Analog).

### 3 POWER

Push the button to turn the unit on or off.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

|                              |                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------|
| <b>Input Ports</b>           | 1×Optical, 1×Coaxial,                                                                  |
| <b>Input Format</b>          | 1×Analog Stereo (L/R)<br>LPCM 2CH & Dolby Digital from Optical/<br>Coaxial             |
| <b>Sample Rates</b>          | 32 ~ 96 kHz                                                                            |
| <b>Output Ports</b>          | 1×Coaxial, 1×Optical,<br>1×Analog Stereo (L/R)                                         |
| <b>L/R Input Impedance</b>   | 47K $\Omega$                                                                           |
| <b>L/R Output Impedance</b>  | 600 $\Omega$                                                                           |
| <b>ESD Protection</b>        | Human body model:<br>$\pm 10$ kV (air-gap discharge)<br>$\pm 6$ kV (contact discharge) |
| <b>Power Supply</b>          | 5 V/1 A DC (US/EU standard, CE/FCC/UL<br>certified)                                    |
| <b>Dimensions</b>            | 97 mm (W)×85 mm (D)×35 mm (H)                                                          |
| <b>Weight</b>                | 110 g                                                                                  |
| <b>Chassis Material</b>      | Plastic                                                                                |
| <b>Colour</b>                | Black                                                                                  |
| <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>Relative Humidity</b>     | 20~90 % RH (non-condensing)                                                            |
| <b>Power Consumption</b>     | 2.1 W                                                                                  |

### Audio Specifications:

| OUT<br>IN        | Output   | Output Level | T.H.D+N<br>(A-Weight) | Frequency<br>Response | SNR     | Crosstalk |
|------------------|----------|--------------|-----------------------|-----------------------|---------|-----------|
| Optical<br>0dBFS | Optical  | 0 dBFS       | <0.00005%             | 0 dBFS                | >140 dB | <-155 dB  |
|                  | Coaxial  | 0 dBFS       | <0.00005%             | 0 dBFS                | >140 dB | <-155 dB  |
|                  | Line-Out | 2Vrms+/-0.1  | <0.01%                | <0.5 dB               | >90 dB  | <-100 dB  |
| Coaxial<br>0dBFS | Optical  | 0 dBFS       | <0.00005%             | 0 dBFS                | >140 dB | <-155 dB  |
|                  | Coaxial  | 0 dBFS       | <0.00005%             | 0 dBFS                | >140 dB | <-155 dB  |
|                  | Line-Out | 2Vrms+/-0.1  | <0.01%                | <0.5 dB               | >90 dB  | <-100 dB  |
| Line<br>2Vrms    | Optical  | 0 dBFS       | <0.01%                | <0.5 dB               | >140 dB | <-77 dB   |
|                  | Coaxial  | 0 dBFS       | <0.01%                | <0.5 dB               | >140 dB | <-77 dB   |
|                  | Line-Out | 2Vrms+/-0.1  | <0.01%                | <1 dB                 | >90 dB  | <-77 dB   |

### Input Audio to Output Audio Chart:

| Audio Input         | Input Format  | Audio Output   |                        |         |
|---------------------|---------------|----------------|------------------------|---------|
|                     |               | Analog L/R     | COAXIAL                | OPTICAL |
| Analog L/R          | Analog 2CH    | Analog 2CH     | LPCM 2CH               |         |
| COAXIAL/<br>OPTICAL | LPCM 2CH      | Analog 2CH     | LPCM 2CH               |         |
|                     | Dolby Digital | Decoding Lt/Rt | Bitstream Pass-through |         |

## 9. ACRONYMS

| ACRONYM     | COMPLETE TERM                |
|-------------|------------------------------|
| <b>Ω</b>    | Ohm                          |
| <b>ADC</b>  | Analog to Digital Conversion |
| <b>COAX</b> | Coaxial                      |
| <b>DAC</b>  | Digital to Analog Conversion |
| <b>LPCM</b> | Linear Pulse Code Modulation |





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