



# DCT-1D

**Optical to Analog Audio Converter  
with Dolby® Digital Decoder**



**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.
- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

## VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
VS1	2013/03/29	First Release
VR2	2013/05/13	Add USB Cable Accessory

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## 1. INTRODUCTION

The Optical to Analog Audio Converter (DAC) with Dolby® Digital Decoder provides the ideal solution for converting an optical digital audio signal to analog stereo audio. With audio sampling rate support up to 48 kHz (Dolby Digital)/96 kHz (LPCM) and I/O data rate support up to 24-bit, it provides high quality sound conversion. The Dolby Digital Decoder function guarantees that Dolby digital audio signals are downmixed to analog stereo without loss of quality.

This unit is perfect for use in computer audio systems or digital mixing consoles and can be powered from any spare USB port allowing it to be used with USB equipped HDTVs, Blu-ray players or computers without the need for a separate power supply.

## 2. APPLICATIONS

- Converting digital optical audio into analog stereo
- Converting Dolby Digital formatted audio into analog stereo
- HDTV with only digital audio output to analog amplifier input
- Improving the digital to analog conversion quality from any stereo optical digital audio source

## 3. PACKAGE CONTENTS

- Optical to Analog Audio Converter with Dolby Digital Decoder
- Mini-USB to USB A type cable
- Operation Manual

## 4. SYSTEM REQUIREMENTS

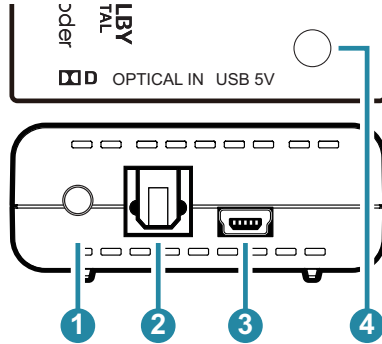
Digital audio source device such as DVD/Blu-ray player or Media player with an optical output cable and to a device such as an amplifier or AV receiver with analog stereo input.

## 5. FEATURES

- Supports optical digital audio signal input and conversion into analog audio signal L/R output
- Supports uncompressed digital LPCM stereo or Dolby Digital 5.1CH audio inputs
- Supports LPCM 2CH audio sampling rates from 32 to 96 kHz (32, 44.1, 48, 88.2 and 96 kHz)
- Supports Dolby Digital 5.1CH audio sampling rates of 48 kHz
- Supports Dolby Digital audio downmixing to 2-channel audio
- Supports S/PDIF bitstream 24-bit of data for the left and right channels
- Compact, elegant design and easy to install

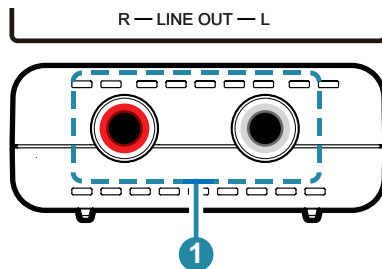
## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



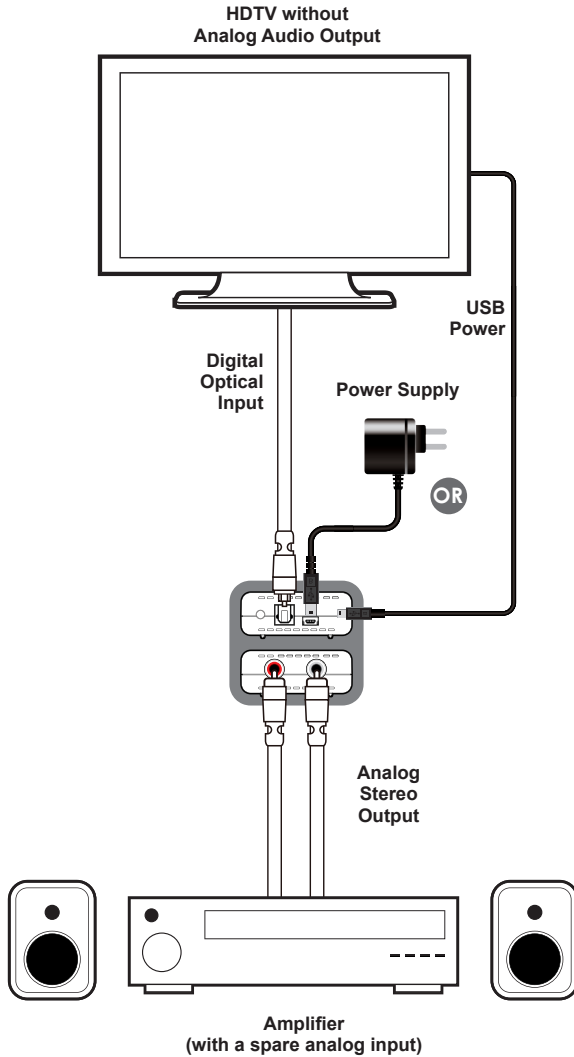
- 1 Dolby/PCM LED Indicator:** When the source audio is encoded with Dolby Digital the LED will illuminate.
- 2 OPTICAL IN:** Connect the Optical input to an Optical digital audio source, such as a Games Console, HDTV or Set-top Box.
- 3 USB 5V:** Connect the USB power port to any powered USB with a Mini-USB cable or Mini-USB to AC adaptor.
- 4 Power LED:** The LED will illuminate when connected to power.

### 6.2 Rear Panel



- 1 R/L LINE OUT:** Connect the R/L analog audio output to the input of your AV Receiver or audio system.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

<b>Input Port</b>	1×Optical
<b>Output Port</b>	1×L/R (2×RCA)
<b>Power Supply</b>	Powered by USB bus
<b>Output Level</b>	1Vrms ± 10%
<b>THD+N</b>	<0.018%
<b>Frequency Response</b>	±1 dB
<b>SNR</b>	>80 dB
<b>Crosstalk</b>	<-80 dB
<b>Dimensions</b>	55 mm (W)×82 mm (D)×22.5 mm (H)
<b>Weight</b>	46 g
<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>Relative Humidity</b>	20~90% RH (non-condensing)
<b>Power Consumption</b>	1.8 W

## 9. ACRONYMS

<b>ACRONYM</b>	<b>COMPLETE TERM</b>
<b>DAC</b>	Digital to Analog Converter
<b>RCA</b>	Audio Connector (Radio Corporation of America)
<b>S/PDIF</b>	Sony/Philips Digital Interconnect Format
<b>SNR</b>	Signal-to-noise Ratio
<b>THD</b>	Total Harmonic Distortion
<b>USB</b>	Universal Serial Bus





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