DCT-9DN

Universal Digital/Analog Audio Converter with Dolby® Digital Decoder

DOLBY DIGITAL

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 DD/MM/YY	SUMMARY OF CHANGE
VR0	26/08/13	Preliminary Release
VS1	11/11/13	Updated Text

CONTENTS

1. INTRODUCTION

The Universal Digital/Analog Audio Converter with Dolby Digital decoder is designed to convert audio between Optical, Coaxial and analog audio formats. With the ability to convert digital signals into analog and analog signals into digital, this device supports the simultaneous conversion of audio formats allowing you to choose between optical, coaxial or analog or all three at the same time. The Universal Digital/Analog Audio Converter with Dolby Digital decoder is the perfect choice when you need to deal with multiple audio formats.

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×Universal Digital/Analog Audio Converter with Dolby Digital decoder
- 1×5V/1A Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

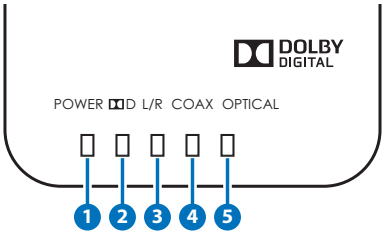
Audio source equipment such as a CD/DVD Player with suitable connection cable(s) and an AV receiver or similar device for audio output.

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

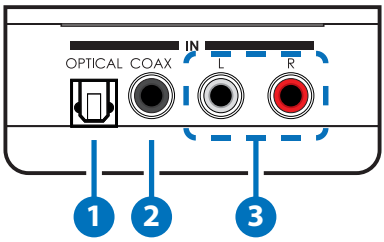
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Top Panel



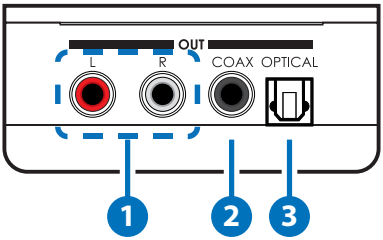
1. **POWER LED:** The LED will illuminate blue when connected to power and in red when switched off.
2. **Dolby Digital LED:** The LED will illuminate when the audio source is Dolby Digital encoded.
3. **L/R IN LED:** The LED will illuminate blue to indicate that the L/R input is selected.
4. **COAX IN LED:** The LED will illuminate blue to indicate that the COAX input is selected.
5. **OPTICAL IN LED:** The LED will illuminate blue to indicate that the OPTICAL input is selected.

6.2 Right Panel



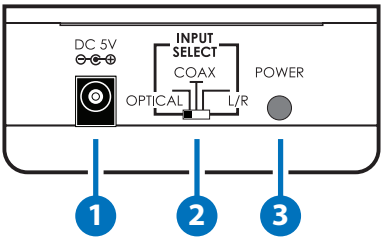
1. **OPTICAL IN:** Connect to the OPTICAL output of the audio source.
2. **COAX IN:** Connect to the COAX output of the audio source.
3. **L/R IN:** Connect to the analog (L/R) output of the audio source with a stereo RCA cable.

6.3 Left Panel



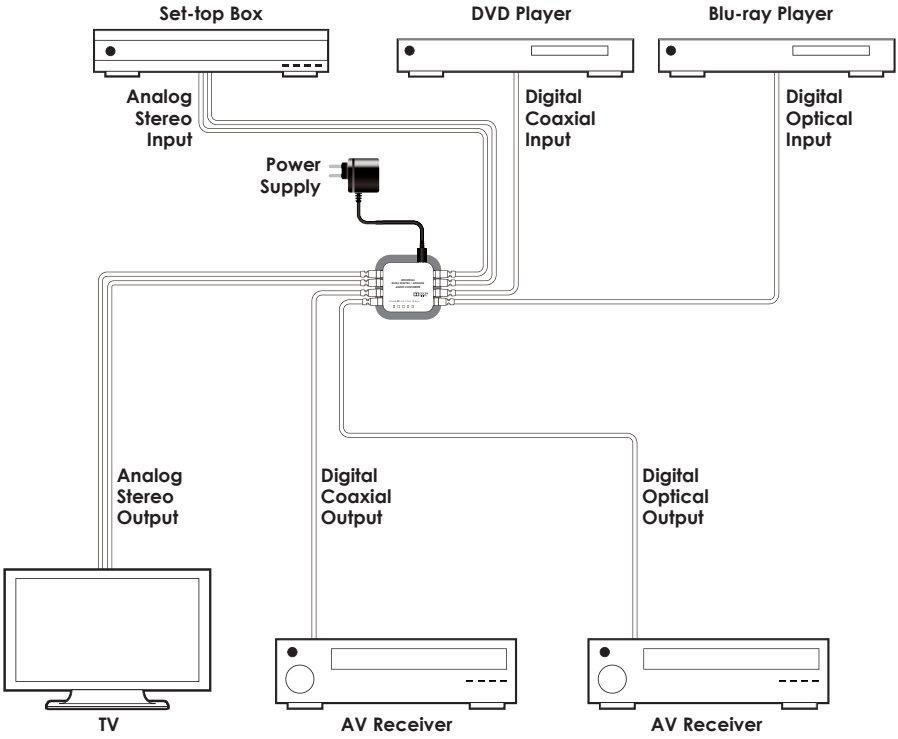
1. **L/R OUT:** Connect to the analog (L/R) audio input of the audio system such as a TV or amplifier with a stereo RCA cable.
2. **COAX OUT:** Connect to the audio system's coaxial input.
3. **OPTICAL OUT:** Connect to the audio system's optical input.

6.4 Rear Panel



1. **DC 5V:** Connect the 5V/1A DC power supply to the unit and plug the adaptor to an AC wall outlet.
2. **INPUT SELECT:** Selects the required 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

8.1 Technical Specifications

Input Ports	1×Optical, 1×Coaxial, 1×Analog Stereo (L/R)
Output Ports	1×Coaxial, 1×Optical, 1×Analog Stereo (L/R)
Optical/Coaxial Input Audio Formats	LPCM 2CH & Dolby Digital
Audio Sampling Rates	32~96 kHz
L/R Input Impedance	47 KΩ
L/R Output Impedance	600 Ω
ESD Protection	Human body model: ±10 kV (air-gap discharge) ±6 kV (contact discharge)
Power Supply	5 V/1 A DC (US/EU standard, CE/FCC/UL certified)
Dimensions	97 mm (W)×85 mm (D)×35 mm (H)
Weight	110 g
Chassis Material	Plastic
Color	White
Operating Temperature	0 °C~40 °C / 32 °F~104 °F
Storage Temperature	−20 °C~60 °C / −4 °F~140 °F
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	2.1 W

8.2 Audio Specifications

Input	Output	Output Level	T.H.D+N (A-Weight)	Frequency Response	SNR	Crosstalk
Optical 0 dBFS	Optical	0~1 dBFS	<0.01%	±1 dBFS	>80 dB	<−85 dB
	Coaxial	0~1 dBFS	<0.01%	±1 dBFS	>80 dB	<−85 dB
	Line-Out	2 Vrms±0.1	<0.01%	±1 dB	>80 dB	<−80 dB
Coaxial 0 dBFS	Optical	0~1 dBFS	<0.01%	±1 dBFS	>80 dB	<−85 dB
	Coaxial	0~1 dBFS	<0.01%	±1 dBFS	>80 dB	<−85 dB
	Line-Out	2 Vrms±0.1	<0.01%	±1 dB	>80 dB	<−80 dB
Line 2 Vrms	Optical	0~1 dBFS	<0.01%	±1 dB	>80 dB	<−80 dB
	Coaxial	0~1 dBFS	<0.01%	±1 dB	>80 dB	<−80 dB
	Line-Out	2 Vrms±0.1	<0.01%	±1 dB	>80 dB	<−80 dB

8.3 Audio Format Supports

Audio Input	Input Format	Audio Output		
		Analog L/R	Coaxial	Optical
Analog L/R	Analog 2CH	Analog 2CH	LPCM 2CH	
Coaxial	LPCM 2CH	Analog 2CH	LPCM 2CH	
Optical	Dolby Digital	Decoding L/R	Bitstream Pass-through	

9. ACRONYMS

ACRONYM	COMPLETE TERM
Ω	Ohm
ADC	Analog to Digital Convertor
COAX	Coaxial
DAC	Digital to Analog Convertor
LPCM	Linear Pulse Code Modulation

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