



## PU-305BDA-TX & RX

Bi-Directional Analogue Audio over Single CAT  
Transmitter/Receiver

**OPERATION MANUAL**



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Version 1.1

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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
v1.00	13/08/14	First release
v1.01	26/06/19	Updated Diagram
v1.02	02/04/25	Updated Front Cover Image

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## 1. INTRODUCTION

The PU-305BDA-TX/RX is an analogue Stereo over CAT5e/6/7 Transmitter and Receiver which can send and receive analogue audio signals over a single run of CAT5e/6 cable up to 300m. It has the added benefit of RS-232 pass-through allowing control of devices and the Power over Ethernet (PoE) function can power the receiver unit eliminating the need for a second power supply. As the units have bi-directional capabilities, this device can also send audio signals back to the connected transmitter/receiver.

This transmitter or receiver is designed to be used with the corresponding PU-305BDA-TX Analogue Audio Transmitter/Receiver or with the PU-305BD-TX Digital Audio Transmitter/Receiver. When combined with the PU-305BD-TX digital transmitter/receiver, the analogue audio signal will be converted and outputted as digital audio by that unit's built-in digital to analogue converter (DAC).

## 2. APPLICATIONS

- /// Extending a Home sound system
- /// Sharing the audio in a Conference and meeting room audio system
- /// Extend an audio signal and RS-232 control to a remote location

## 3. PACKAGE CONTENTS

- /// 1 x Analogue stereo audio Transmitter or Receiver
- /// 1 x 12V power Adaptor
- /// Operation Manual

## 4. SYSTEM REQUIREMENTS

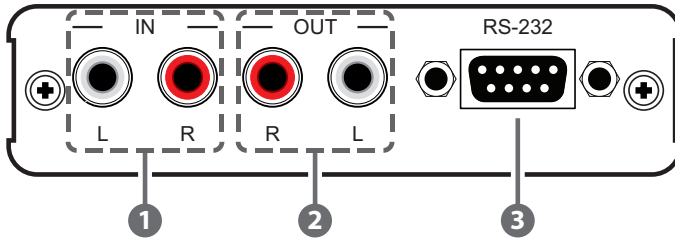
Input source equipment such as Blu-ray/DVD/PS3 player or Set-Top-Box with L/R output and output connect to audio amplifier with L/R input.

## 5. FEATURES

- /// Supports Analogue stereo audio and RS-232 extension over a single CAT5e/6/7 cable up to 300 metres
- /// Supports Power over Ethernet (PoC) to the Receiver unit
- /// Bi-directional RS-232 control

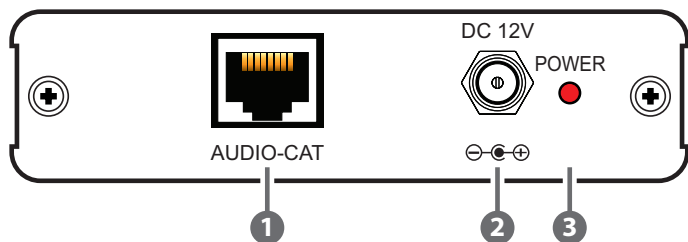
## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel (TX/RX)



- 1 L/R IN:** Connect to analogue audio source such as DVD/Blu-ray player, Set-Top Box or game console. The audio will be output from the AUDIO OUT on the receiver unit.
- 2 L/R OUT:** Connect to an audio output device such as an amplifier with an analogue audio input or active speakers. It will output the audio from the device connected to the AUDIO IN on the receiver unit.
- 3 RS-232:** Connect to a PC/Laptop or RS-232 control system for passthrough of RS-232 commands to the device connected to the RS-232 port on the receiver unit.

## 6.2 Rear Panel (TX/RX)



- ① **AUDIO-CAT:** Connect the AUDIO-CAT output to the AUDIO-CAT input of the receiver unit using a single CAT5e/6/7 cable.
- ② **DC 12V:** Connect the unit to the supplied adaptor and plug into an AC wall outlet for power supply. Note: Only the transmitter needs to be powered for both units to work.
- ③ **POWER indicator:** This LED will illuminate once the device is connected to an active power supply.

## 6.3 RS-232 Pin Definition

		Remote Controller	
PIN	Definition	PIN	Definition
1	NC	1	NC
2	TxD	2	RxD
3	RxD	3	TxD
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8	NC
9	NC	9	NC

Baud Rate: 110 ~ 921600

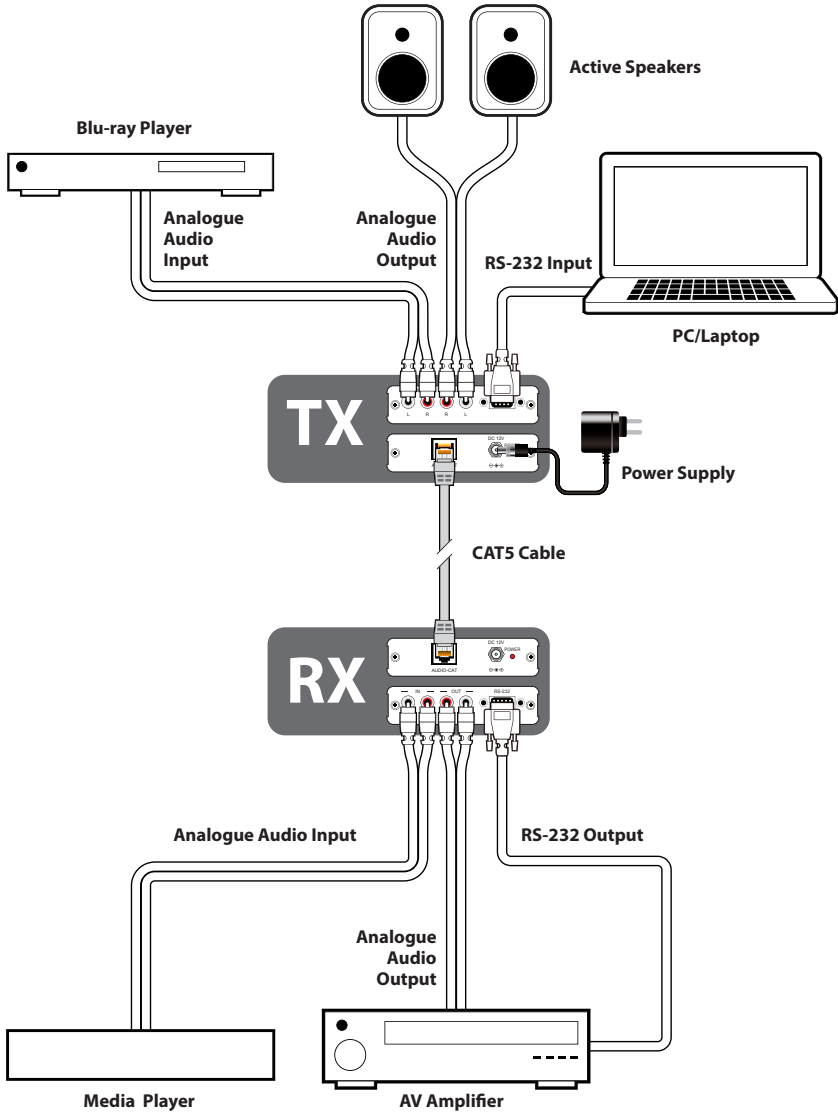
Data Bit: 8 bits

Parity: None

Stop Bit: 1 bit

Flow Control: None

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### *Transmitter*

<b>Inputs</b>	1 × Analogue Stereo (2-RCA), 1 × RS-232
<b>Outputs</b>	1 × Analogue Stereo (2-RCA), 1 × AUDIO-CAT

### *Receiver*

<b>Inputs</b>	1 × Analogue Stereo (2-RCA), 1 × AUDIO-CAT
<b>Outputs</b>	1 × Analogue Stereo (2-RCA), 1 × RS-232

**Audio Formats** Analogue Stereo 2CH

### **Output Level**

**THD+N** 80 dB

**SNR** 95 dB

**Frequency Response** ± 3 dBFS/Vrms

**Crosstalk** -88 dB

**CAT Cable Distance** 300 m

**Power Supply** 12V DC/1.25A (US/EU standards, CE/FCC/UL certified)

**ESD Protection** Human body model:  
± 8kV (air-gap discharge)  
± 4kV (contact discharge)

**Dimensions** 102mm (W) x 102mm (D) x 25mm (H)/Jack  
Excluded  
102mm (W) x 116.5mm (D) x 25mm (H)/Jack  
Included

**Weight** 242g

**Chassis Material** Metal

**Silkscreen Colour** Black

**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 (no condensation)

**Power Consumption** 1.65W





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