

# ANI-AD100

Amplifier with LR/Optical/CATx Input Mixer with MIC





## SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualified service personnel when:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the equipment.
  - C. The equipment has been exposed to rain.
  - D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
  - E. The equipment has been dropped, or the enclosure damaged.

**▶ CONTENTS**

INTRODUCTION & CONTENTS .....1  
 FEATURES.....2  
 SPECIFICATIONS .....3  
 OPERATION CONTROLS & FUNCTIONS .....4  
 RS-232 & TELNET COMMANDS .....6  
 SOFTWARE APPLICATION & TELNET CONTROL .....7  
 WEBGUI CONTROL .....8  
 CONNECTION DIAGRAM .....9

**DEAR CUSTOMER**

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

**INTRODUCTION**

The ANI-AD100 Amplifier with Optical/LR/Microphone/CAT6 has a built-in Mixer combining MIC input to be mixed with other input sources. Output to speakers in either mono or stereo mode. The addition of an optional CAT6 transmitter supports both digital and analog audio source selections at a input distance up to ~985ft/300M away. Controls like Telnet & Built-in WebGUI allows the user to adjust all settings and the front panel buttons with the aid of LED indicators for easy control of the device. This product has a 3 year warranty.

**PACKAGE CONTENTS**

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- ANI-AD100 Amplifier with Optical/LR/CAT Input Mix w/ MIC
- 24V/2.7A DC Power Supply & Power Cable
- Users Guide

**APPLICATIONS**

- Entertainment Room / Karaoke
- Show Room / Demo Room
- Audio equipment central control

**SYSTEM REQUIREMENTS**

Input source equipment such as CD /DVD player via optical or analog output, audio transmitter and microphone input, speakers and connection cables.

**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.

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**FEATURES**

- Digital to Analog audio Conversion (DAC)
- Optical input sampling rate up to 192kHz
- Optical, L/R, CAT inputs and 48V/Line Microphone
- Audio CAT input up to ~985ft/300M
- Speaker Output up to 50W
- Output sound supported up to 20dB
- Microphone sound up to 18dB
- Stereo or Mono output
- Volume control from On-panel, Telnet or Built-In WebGUI or RS-232 through Audio CAT
- Control switch by single button press
- CAT supports RS-232 input control for Baud Rate 115200bps
- Microphone sound mixer into output sound
- Microphone Individual Input support

**OPTIONAL TRANSMITTERS**

**ANI-03TCDTX**



- S/PDIF IN/OUT and RS-232 control
- Optical S/PDIF audio sampling rates up to 192kHz
- S/PDIF with 192kHz sampling rate over a single CAT5e/6/7 cable up to ~328ft/100M, 96kHz sampling rate for cables up to ~492ft /150M and 48kHz sampling rate for cable up to ~ 984ft/300M
- LPCM 2CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH (Pass through)
- Powered via the ANI-AD100

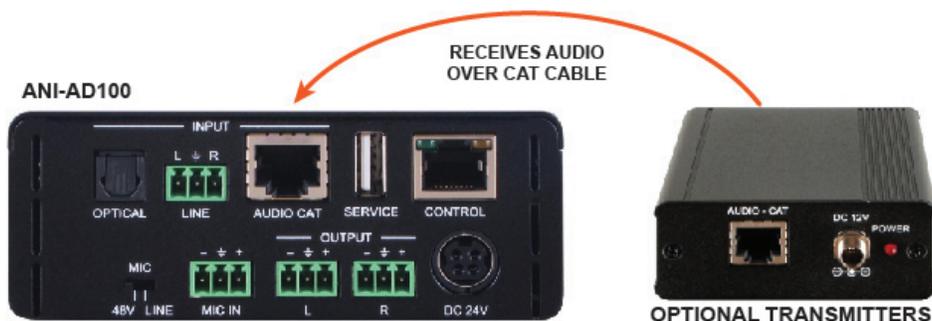
**NOTE:** Some features become disabled when connected to the ANI-AD100

**ANI-23TCDTX**



- Supports Analog stereo audio and RS-232 extension over a signal CAT5e/6/7 cable up to ~985ft/300M
- Transmitter supports Power over Cable (PoC) to the Receiver unit
- Bi-directional RS-232 control
- Powered via the ANI-AD100

**NOTE:** Some features become disabled when connected to the ANI-AD100



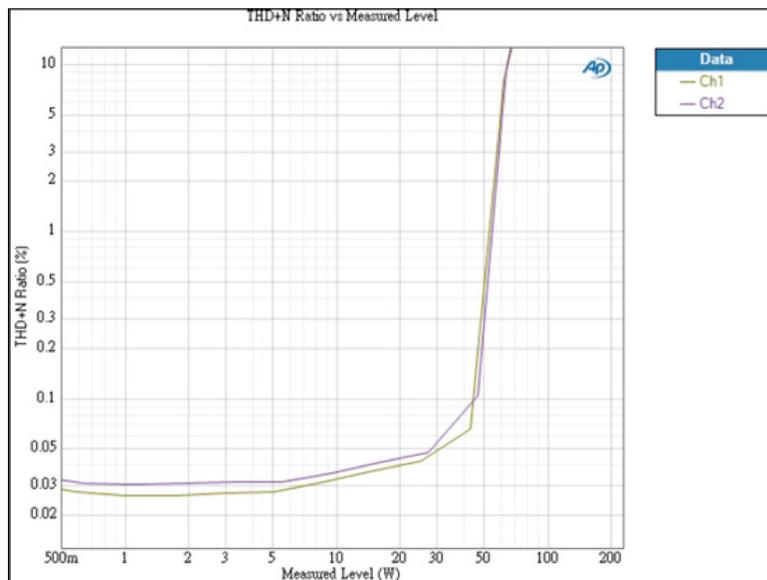
SPECIFICATIONS

- **Input Ports:**
  - Optical
  - L/R (Terminal Block)
  - CAT5e/6/7
  - Mic (Terminal Block)
  - IP Control (RJ-45)
  - USB (Service only)
- **Output Ports:** L/R (Terminal Block)
- **Power Supply:** 24V/2.7A DC (US/EU standards, CE/FCC/ UL certified)
- **ESD Protection Human Body Model:**
  - ± 8kV (air-gap discharge)
  - ± 4kV (contact discharge)
- **Audio Specifications:**
  - (2) 50W @4Ω<10% THD+N
  - (2) 50W @8Ω<10% THD+N
  - Frequency Response: < +/- 3dB
  - SNR>70dB@20Hz – 20kHz A weighted
  - THD+N @1w<1% @1kHz
  - Crosstalk @1w<-60dB @20Hz–20kHz
- **Audio CAT Spec (CAT5e/6/7):**

<b>Sample Rate:</b>	48kHz	96kHz	192kHz
<b>Cable Length:</b>	~985ft/300M	~492ft/150M	~279ft/85M

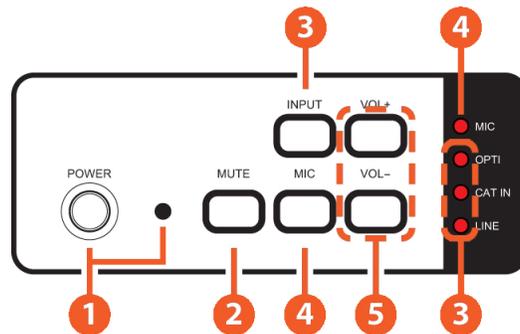
- **Dimensions (WxDxH):** 4.3 x 6.1 x 1.7 in (109.5x155x43mm) / 4.3 x 6.2 x 1.9 in (109.5x157x48mm) Jacks Included
- **Weight:** 644g / 1.4 lb
- **Chassis Material:** Metal
- **Silkscreen Color:** Black
- **Operating Temperature:** 0°C ~ 40°C / 32°F ~ 104°F
- **Storage Temperature:** -20°C ~ 60°C / -4°F ~ 140°F
- **Relative Humidity:** 20 ~ 90% RH (Non-condensing)
- **Power Consumption:** 58.3W

AMPLIFIER SPECIFICATIONS



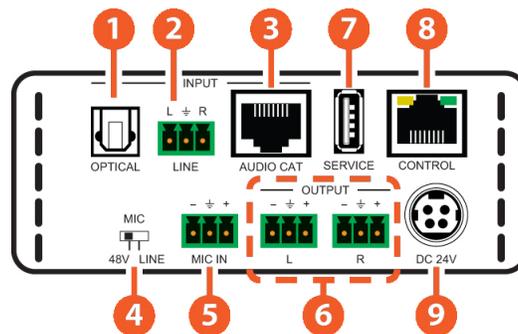
As product improvements are continuous, specifications are subject to change without notice.

## FRONT PANEL



- 1 POWER BUTTON & LED:** Press this button to turn ON the device and the LED will turn off or to set it to standby mode and the LED will illuminate in Red. When muting is enabled, Power LED will illuminate in Green: Press for 4 seconds, the LED will flash and unit will revert back to Factory Default.
- 2 MUTE BUTTON:** Press this button to mute the output sound or press again to unmute.
- 3 INPUT BUTTON & LEDS:** Press this button to select input source from Optical or CAT or Line and the LED will illuminate accordingly.
- 4 MIC BUTTON & LED:** Press this button to allows microphone's sound to be embedded with input signal and output to speakers the LED will illuminate. Press is again to terminate the microphone sound and the LED will disappear.
- 5 VOL +/- BUTTON:** Press these buttons to adjust output volume sound from -50dB to +20dB.

BACK PANEL



- ① **OPTICAL INPUT:** This slot is to connect with input source's optical output port with optical cable.
- ② **L/R INPUT:** These slots are to connect with input source's L/R output port with terminal block jacks.
- ③ **AUDIO CAT INPUT:** This slot is to connect from the optional AUDIO-CAT Transmitter unit using a CAT5e/6/7 cable for distance up to ~984ft (300M).
- ④ **48V/MIC/LINE:** Switch this switch for select microphone input format.
  - 48V PHANTOM MODE:** The MIC input will provide 48V phantom power. It normally used for condenser microphone. "+" connects to positive, "-" connects to negative and " " connects to ground
  - MIC NORMAL MODE:** The MIC input is used for connecting with dynamic microphone. "+" or "-" connects to microphone signal and " " connects to ground.
  - LINE MODE:** The MIC input is used for connecting with normal audio. "+" connects to Left channel, "-" connects to Right channel and " " connects to ground.
- ⑤ **MIC INPUT:** These slots are to connect with microphone input signal with terminal block cable.
- ⑥ **L/R OUTPUT:** These slots are to connect with output speakers with terminal block connector cable.
- ⑦ **SERVICE:** This slot is reserved for USB firmware update use only.
- ⑧ **CONTROL:** This slot is to connect from active inter/intra net service for Telnet/WebGUI controls with RJ-45.
- ⑨ **DC 24V:** Connect the adaptor included in the package and connect to AC wall outlet for power supply.

**RS-232 & TELNET COMMANDS**

COMMAND	DESCRIPTION	PARAMETER
<b>P0</b>	Power off (standby)	None
<b>P1</b>	Power on	None
<b>SOURCE N</b>	Source selection	N=0~3 or ? (0=Optical, 1=Audio CAT, 2=Line In, 3=Mic In)
<b>VOL N</b>	Output volume setting	N=-50~20dB or ?
<b>MUTE N</b>	Output volume mute control	N=0~1 or ? (0=Unmute, 1=Mute)
<b>MICVOL N N</b>	Mic volume control	N=-10~18dB or ?
<b>MICMIXER N</b>	Set mic mixer mode	N=0~1 or ? (0=Disable, 1=Enable)
<b>MICMODE</b>	Get current mic mode	None
<b>MONO N</b>	Set momo or stereo mode	N=0~1 or ? (0=Stereo, 1=Mono)
<b>NAME N1 N2</b>	Set input source name	N1=0~3 or ? (0=Optical, 1=Audio CAT, 2=Line In, 3=Mic In) N2=The Name of Input (Up to 24 characters)
<b>IPCONFIG</b>	Show IP configuration status	None
<b>SETIP N1 N2 N3</b>	Set IP [address] [netmask] [gateway] Set static IP address	N=X.X.X.X (X=0~255)
<b>RSTIP</b>	IP configuration reset to <DHCP>	None
<b>VER</b>	Show unit firmware version	None
<b>REBOOT</b>	System reboot	None
<b>FADEFAULT</b>	Factory reset	None
<b>ETH_FADEFAULT</b>	Ethernet parameter set factory default	None
<b>? (CMD)</b>	Show description of command	None
<b>HELP (CMD)</b>	Show description of command	None

**NOTE:** Any commands will not be executed unless followed by a carriage return. Commands are not case-sensitive.

## SOFTWARE APPLICATION

Please download the software from our website and save it in a directory where you may use it later.

Find Devices on Network

Product Name	Description	IP Address	MAC Address

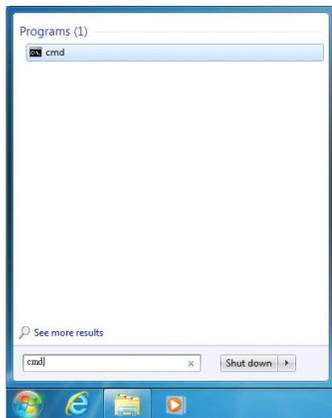
MAC Address	F8:22:85:00:00:02
IP Address	192.168.1.50
Subnet Mask	255.255.255.0
Gateway IP	192.168.1.254
DNS	0.0.0.0
IP Mode	Static
Web GUI Port	80
Telnet Port	23
S / N	SN:123-456
Firmware Version	V0.23
Hardware Version	PCB-2371

Connect the amplifier with **MULTI-CONTROL** with an active network system and open the software application from the directory on a PC/Laptop. Click on **“Find Devices”** on the network and a list of the devices connected to the **Control System** will show up.

Double click on the product name and an **InfoFrom** page will appear to show the products’ details or use the IP Address listed to control the device directly.

**NOTE:** Device default IP mode is Static mode, default IP dress is 192.168.1.50

## TELNET CONTROL



To access the Telnet control in Windows 7, click on the **‘Start’** menu and type **“cmd”** in the search field then press **ENTER**. Under Windows XP go to the **‘Start’** menu and click on **“Run”**, type **“cmd”** then press **ENTER**.

With Mac OS X, go to **Go→Applications→Utilities→Terminal**. See reference.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator> telnet 192.168.1.50
```

```
Welcome to TELNET.
?

Command List
-----
P0      POWER OFF (Standby)
P1      POWER ON
SOURCE  SOURCE SELECTION
UOL     OUTPUT VOLUME SETTING
MUTE    OUTPUT VOLUME MUTE CONTROL
MICUOL  MIC VOLUME CONTROL
MICMIXER SET MIC MIXER MODE
MICMODE GET CURRENT MIC MODE
MONO    SET MONO OR STEREO MODE
NAME    SET INPUT SOURCE NAME
IPCONFIG Displays IP address configure
RSTIP   IP CONFIGURATION RESET TO <DHCP>
SETIP   SETIP [address] [Netmask] [Gateway]. Set static IP address
UER     SHOW UNIT FIRMWARE VERSION
REBOOT  SYSTEM REBOOT
FAEFAULT ALL CONFIGURE SET TO FACTORY DEFAULT
ETH_FAEFAULT ALL ETHERNET CONFIGURE SET TO FACTORY DEFAULT
HELP    SHOW DESCRIPT OF COMMAND
?       SHOW DESCRIPT OF COMMAND
```

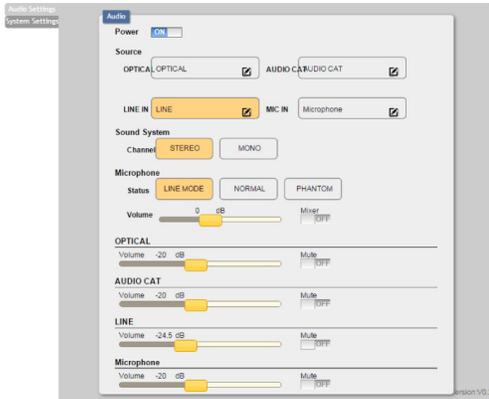
Once in the CLI (Command Line Interface) type **“Telnet”** followed by the IP address of the unit and **“23”**, then hit **“Enter”**. The IP address can be found in the OSD within the **“Ethernet”** menu item.

This will connect us to the unit we wish to control. Type **“\$help”** or **“\$?”** to list the available commands.

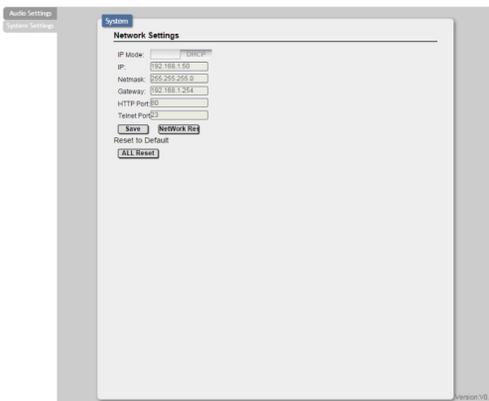
**NOTE:** Commands will not be executed unless followed by a carriage return. Commands are not case-sensitive. If the IP address is changed then the IP address required for Telnet access will also change accordingly.

WEBGUI CONTROL

On a PC/Laptop that is connected to an active network system, open a web browser and type device's IP address on the web address entry bar. The browser will display the device's Audio and System Settings for users to control.

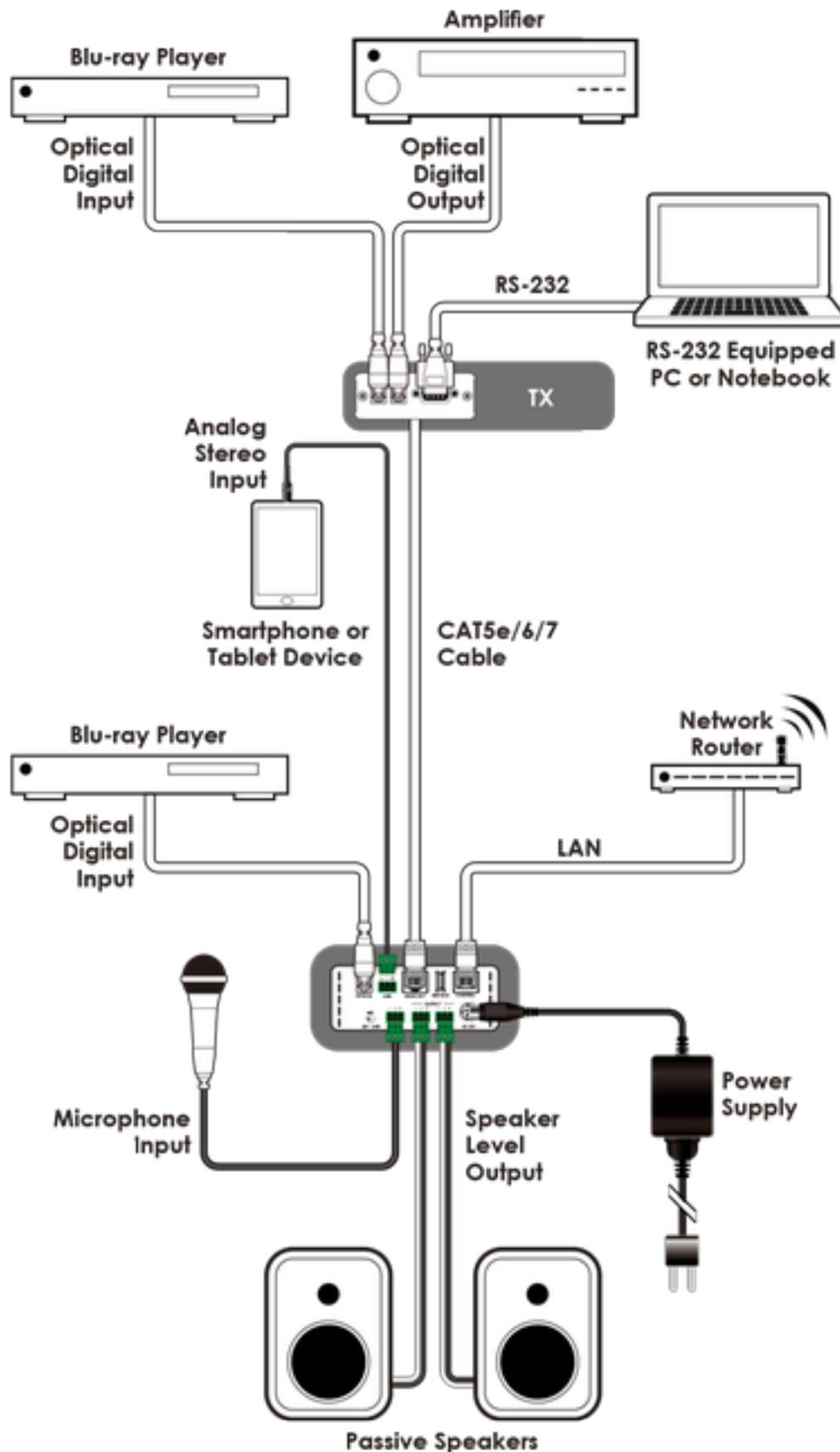


Click on **Audio Settings** to control the device's power status, rename sources, select the audio system, microphone format, volume and audio mute.



Click on **System Settings** to set the IP detail settings or reset the device back to system default settings.

CONNECTION DIAGRAM



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