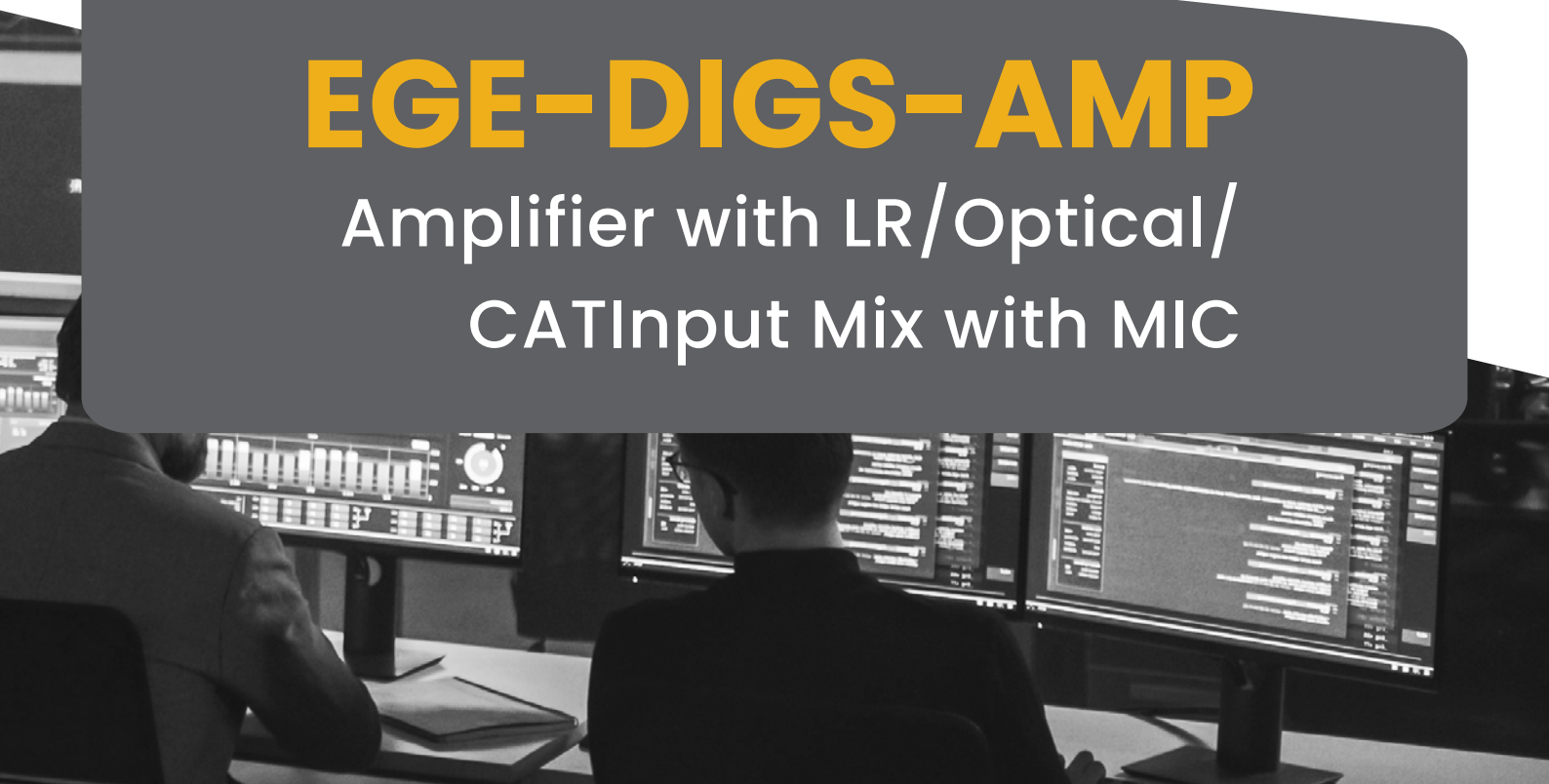
geratech®

EGE-DIGS-AMP

Amplifier with LR/Optical/ CATInput Mix with MIC



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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 nstall 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	23/10/15	Preliminary release

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1. INTRODUCTION

The Amplifier with Optical/LR/CAT Input Mix with MIC is a fabulous gadget for audio mixture with vocal sound and output to analog speaker with mono or stereo sound. Allowing user with both digital and analog audio source selections along and a distance input up to 300m away. Controls like Telnet & WebGUI allow user with easy adjustment and remote over the audio setting and on-panel control with LED indication adds-on the friendly use for the device.

2. APPLICATIONS

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

3. PACKAGE CONTENTS

- Amplifier with Optical/LR/CAT Input Mix with MIC
- 24V/2.7A DC Power Supply and Power Cable
- Operation Manual

4. SYSTEM REQUIREMENTS

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

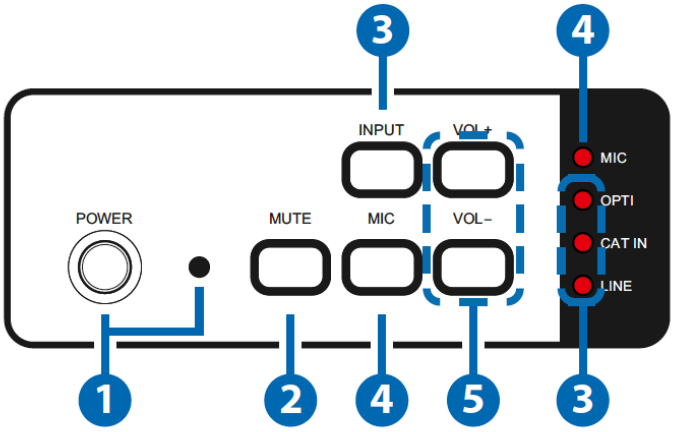
5. FEATURES

- Supports Digital to Analog audio Conversion (DAC)
- Supports Optical input sampling rate up to 192kHz
- Supports Optical, L/R, CAT inputs and 48V/Line Microphone
- Supports audio CAT input up to 300m
- Supports each output speaker up to 50W
- Output sound supports up to 20dB
- Supports Microphone sound up to 18dB
- Supports Stereo or Mono output
- Supports Volume control from On-panel, Telnet or WebGUI or RS232 through Audio CAT

- Control switch by single button press
- CAT Support RS-232 Input Control for Baudrate 115200bps
- Supports Microphone sound mix into output sound
- Supports Microphone Individual Input Support

6. OPERATION CONTROLS AND FUNCTIONS

6.1 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: Long press for 4 seconds, LED will flash and unit will back to Factory Default.

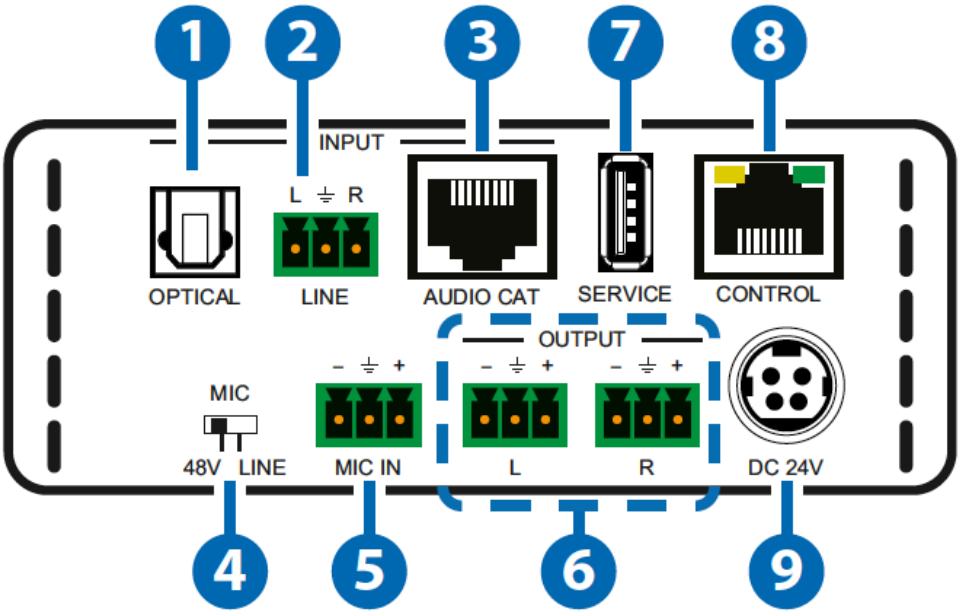
2 MUTE Button: Press this button to mute the output sound or press again to unmute.

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.

6.2 Rear 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 AUDIO-CAT Transmitter unit using CAT5e/6/7 cable with distance up to 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.

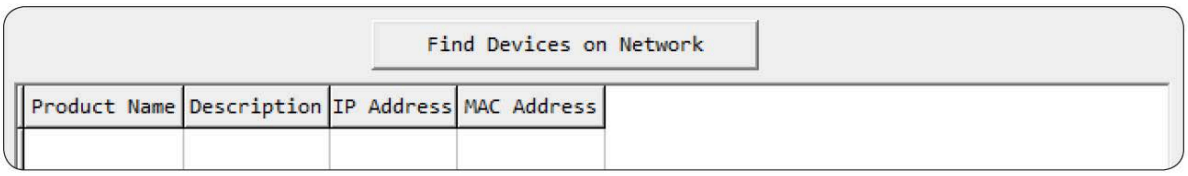
6.3 RS-232 and Telnet Commands

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

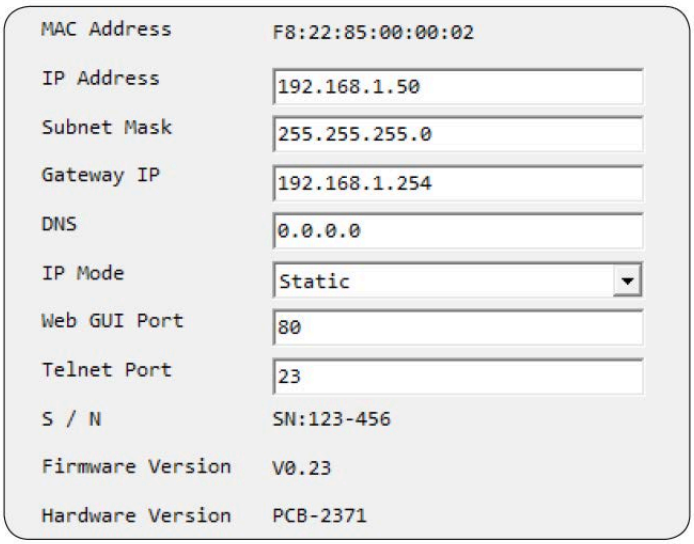
Note: Any commands will not be executed unless followed by a carriage return. Commands are case-insensitive.

6.4 Software Application

Connect the Amplifier With MULTI-CONTROL with an active network system and open the application from the directory in a PC/Laptop. Click on Find Devices on 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' detail or use the IP Address listed to control the device directly.



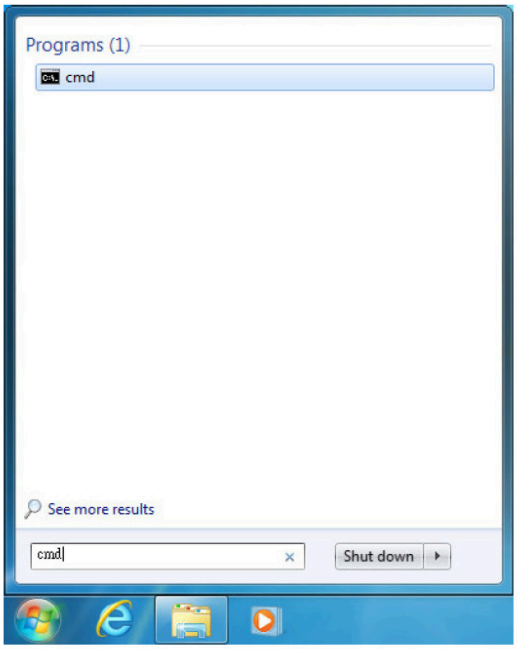
Note: Device default IP mode is Static mode, default IP dress is 192.168.1.50

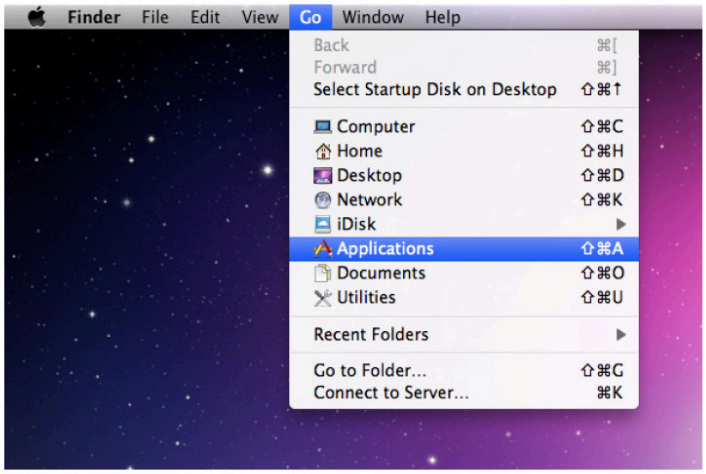
6.5 Telnet Control

To access the telnet control in Windows 7, click on ‘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” and press enter.

Under Mac OS X, go to “Go→ Application → Utilities →Terminal”.





Once in the command line interface (CLI) type “telnet”, then the IP address of the unit and hit enter.

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

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

Type "HELP" or "?" to bring out all the commands.

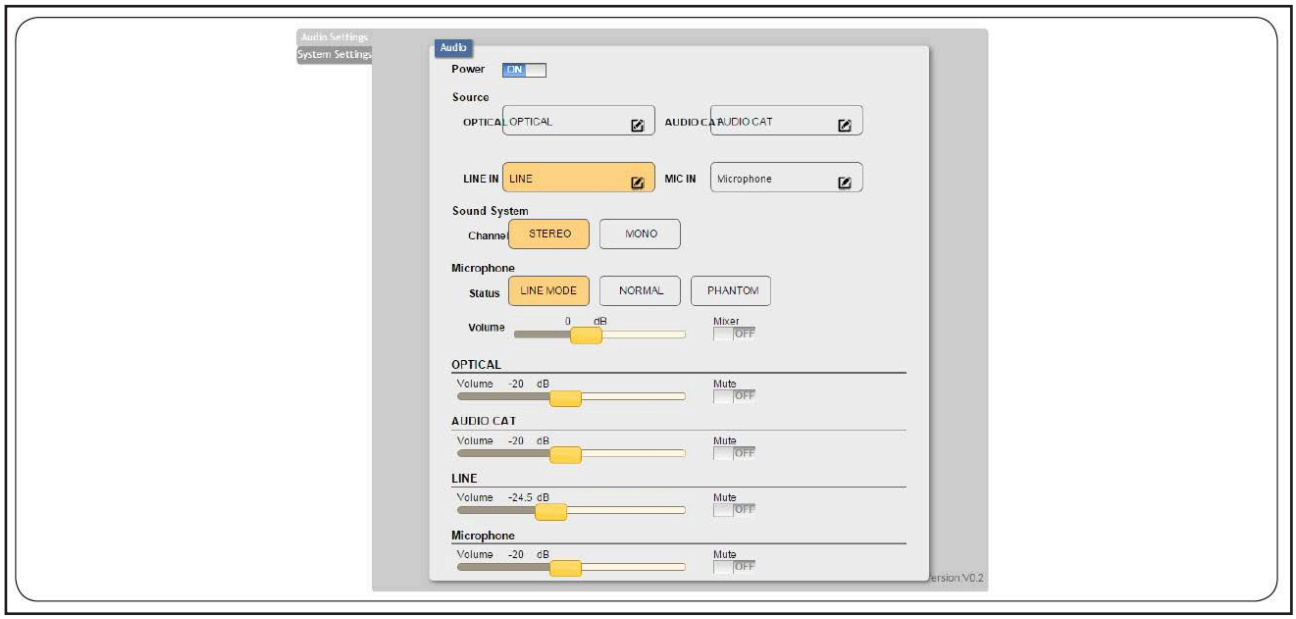
```
Welcome to TELNET.
?

Command List
------------------
P0              POWER OFF (Standby)
P1              POWER ON
SOURCE          SOURCE SELECTION
VOL             OUTPUT VOLUME SETTING
MUTE            OUTPUT VOLUME MUTE CONTROL
MICVOL          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 [Adderss] [Netmask] [Gateway]. Set static IP address
VER             SHOW UNIT FIRMWARE VERSION
REBOOT          SYSTEM REBOOT
FADEFAULT       ALL CONFIGURE SET TO FACTORY DEFAULT
ETH_FADEFAULT   ALL ETHERNET CONFIGURE SET TO FACTORY DEFAULT
HELP            SHOW DESCRIPT OF COMMAND
?               SHOW DESCRIPT OF COMMAND
```

Note: All the commands will be not executed unless followed by a carriage return. Commands are case-insensitive. If the IP is changed then the IP Address required for Telnet access will also change accordingly.

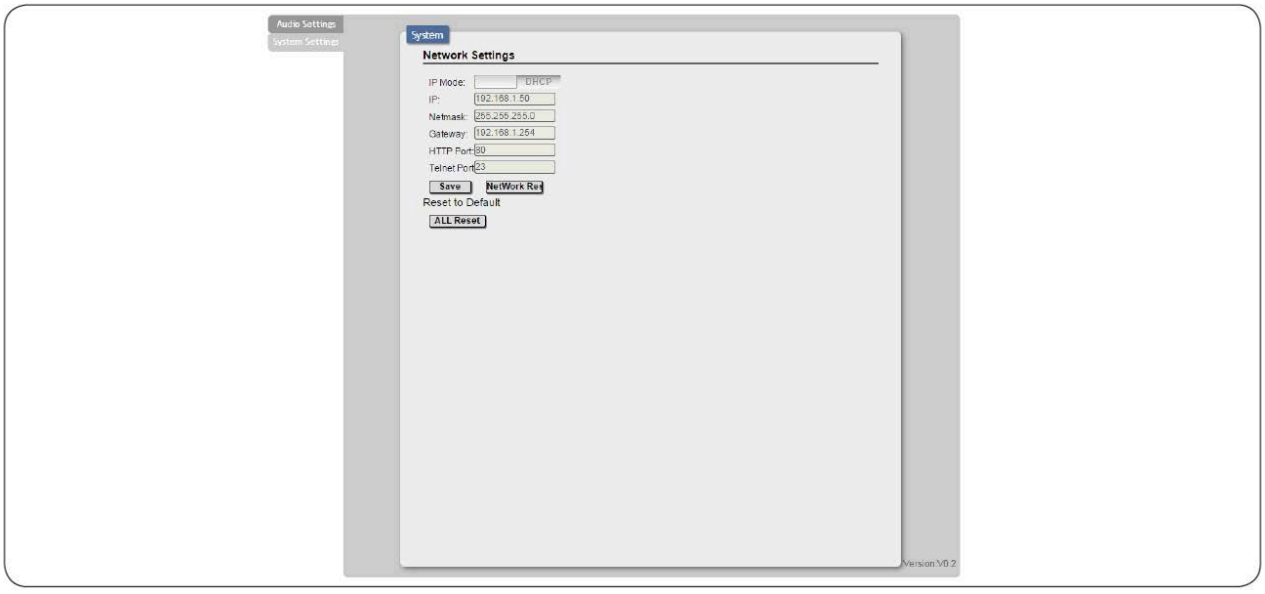
6.6 WebGUI Control

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.

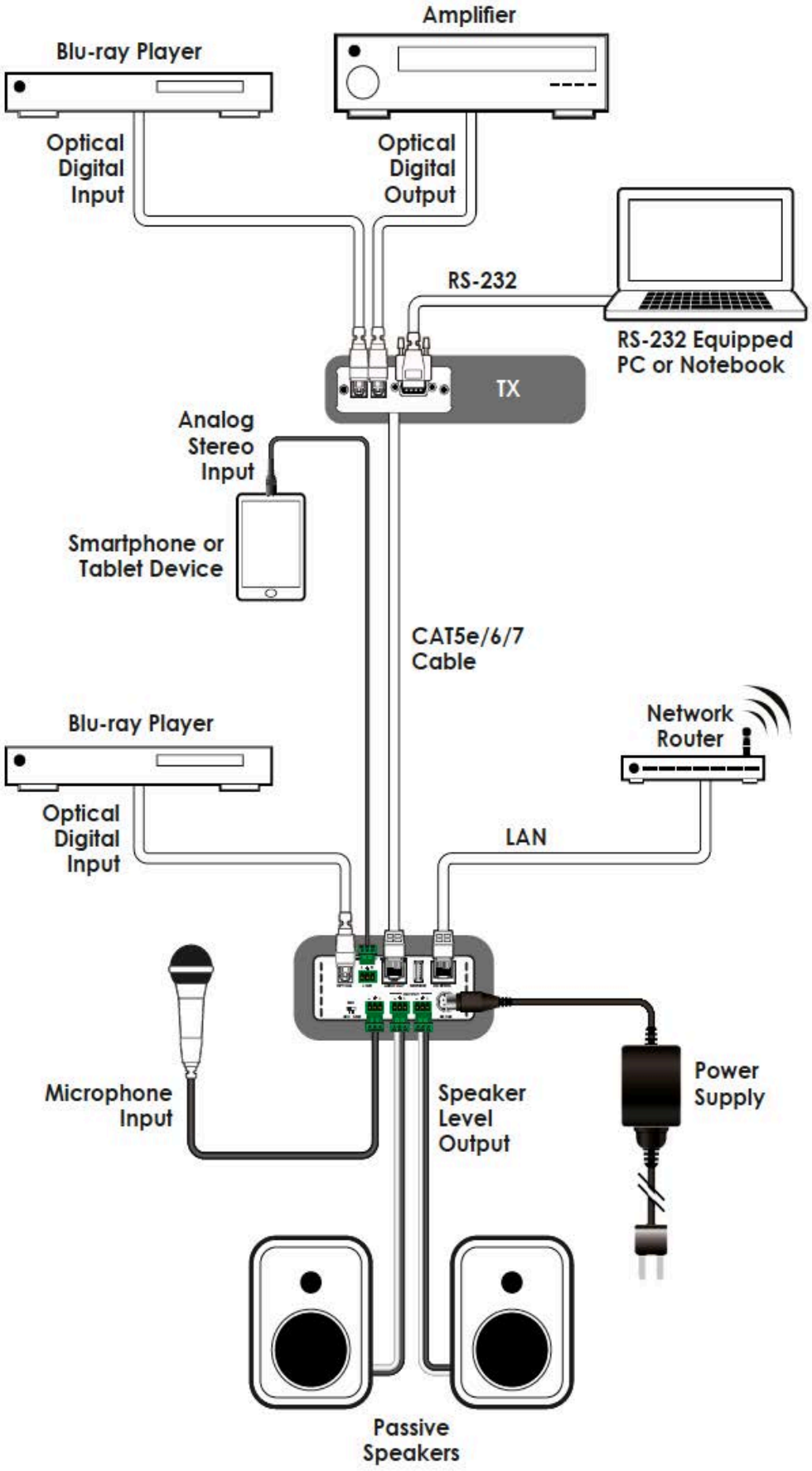
Click on Audio Settings to control the device's power status, rename sources, select the audio system, microphone format, volume, and audio mute.



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



7. CONNECTION DIAGRAM



8. SPECIFICATIONS

8.1 Technical Specifications

Input Port	1×Optical, 1×L/R (Terminal Block), 1×CAT5e/6/7, 1×Mic (Terminal Block), 1×IP Control (RJ-45), 1×USB (Service only)
Output Port	1×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)
Dimensions	109.5 mm (W)×155 mm (D)×43 mm (H)/ Jacks Excluded 109.5 mm (W)×157 mm (D)×48 mm (H)/ Jacks Included
Weight	644 g
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	–20˚C - 60˚C/–4˚F - 140˚F
Storage Temperature	-20˚C~60˚C / -4˚F~140˚F
Relative Humidity	20 - 90% RH (Non-condensing)
Power Consumption	58.3W

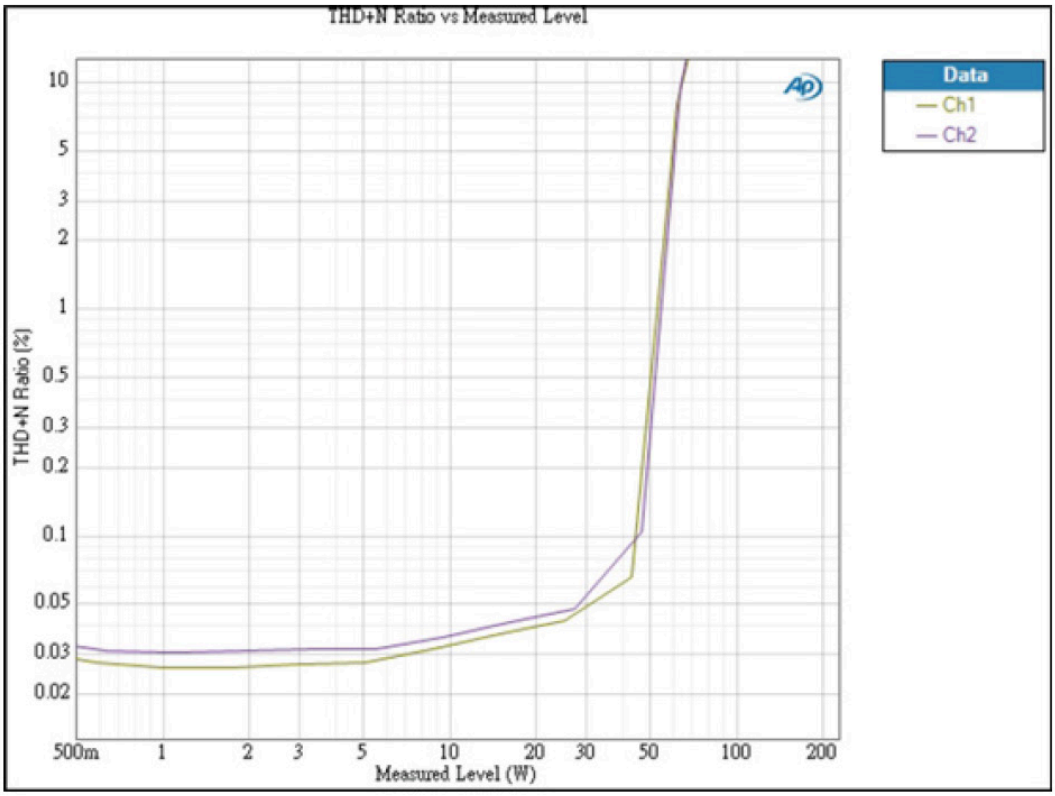
8.2 Audio Specifications

- 2 x 50W @ 4Ω < 10% THD+N
- 2 x 50W @ 8Ω < 10% THD+N
- Frequency Response < +/- 3dB
- SNR > 70dB @20Hz – 20kHz A weighted
- THD+N @ 1w < 1% @ 1kHz
- Crosstalk @ 1w < -60dB @ 20Hz – 20kHz

8.3 Audio CAT Spec (CAT5e/6/7)

Sample Rate	48 kHz	96 kHz	192 kHz
Cable Length	300 m	150 m	85 m

8.4 Amplifier Specification



9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CAT7	Category 7 Cable
CLI	Command Line Interface
GUI	Graphical User Interface
LAN	Local Area Network
MIC	Microphone

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