INSTRUCTION MANUAL

ANI-MFAV

MULTI-FUNCTION INTELLIGENT AV SYSTEM





OPTIONAL CONTROL PANEL



A-NeuVideo.com
Frisco, Texas 75036

A▸NEUVIDEO®
AUDIO / VIDEO MANUFACTURER

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.

THIS SAFETY INFORMATION IS OF A GENERAL NATURE AND MAY BE SUPERSEDED BY INSTRUCTIONS CONTAINED WITHIN THIS MANUAL.

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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.

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-MFAV HDMI Extender Transmitter
- ANI-MFAV HDMI Extender Receiver
- 24V/3.75A DC Power Supply
- (2) Mounting ears
- Users Guide

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.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

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INTRODUCTION

The ANI-MFAV is a multi-function AV intelligent education system. It offers (2) HDMI and VGA video extension, video switching, system control and analog audio amplification. Uncompressed video and audio can be transmitted up to 230ft/70M. This design of HDBaseT™ technology allows for full usage of HDMI and controls over CAT5e/6/6A cable. The product supports Web GUI and panel button control.

Transmitter support HDCP 1.4 and can be switched manually, auto, hybrid or priority. And the maximum distance can be up to 230ft/70M at 1920x1200@60Hz or up to 131ft/40M at 4K@30Hz.

Receiver support a microphone input, analog audio output, 2x30 at 4 Ohms speaker output, and relay control to the projector screen rise and fall or RS-232 control to the display power on and off. A USB port on the receiver will transmit interactive display connections to the transmitter.

Optional Control Panel supports volume control and system control. At the same time, it can support (2) HDMI and one VGA input selection. This product has a 3 year warranty.

FEATURES

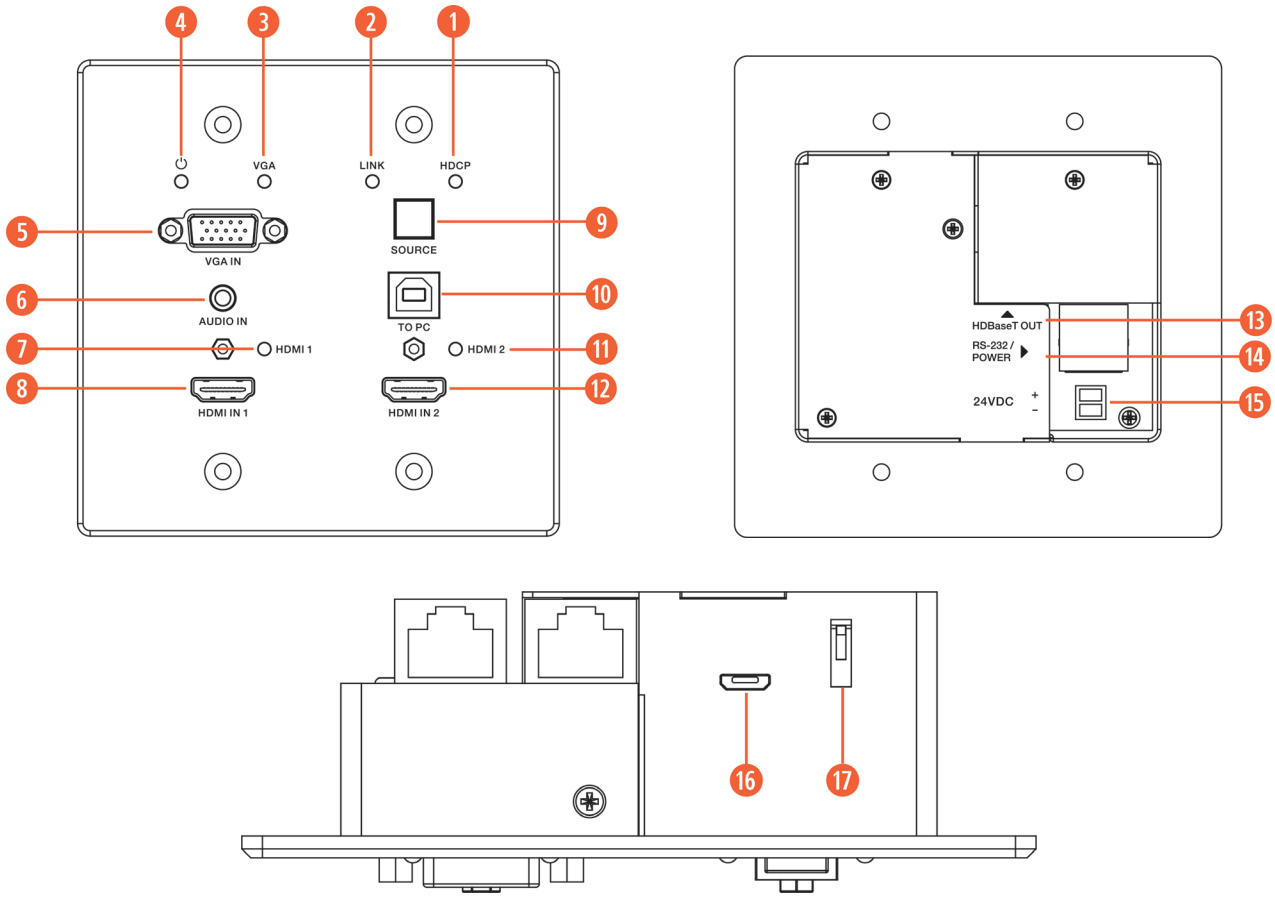
- HDMI 1.4b & HDCP 1.4 compliant
- Video resolutions up to 4K2K@30Hz, 1080p@120Hz and 1080P 3D@60Hz
- Audio up to 7.1 channels of High Definition audio pass through (LPCM, Dolby TrueHD, and DTS-HD Master Audio)
- HDBaseT™ over a single CAT5e/6/7 cable up to 230ft/70M distance
- Supports multi-VESA Standard VGA formats input
- Supports MIC input
- 2x30watts@4Ohms amplifier output
- Supports interactive display USB pass-through
- Supports Web GUI control
- Supports optional control panel volume control and system control
- Supports relay control
- Supports RS-232 control

SPECIFICATIONS

- **Transmitter Inputs/Outputs:**
  - (2) HDMI IN Type A [19-pin female]
  - VGA [DB15 VGA female]
  - AUDIO IN [3.5mm Stereo Mini-jack]
  - RS-232/POWER [RJ45]
- **Transmitter Outputs:** HDBaseT™ Out [RJ45]
- **Receiver Inputs:**
  - HDBaseT™ In [RJ45]
  - MIC IN [Screw Terminal]
  - USB [USB A TYPE]
  - TCP/IP [RJ45]
- **Receiver Outputs:**
  - HDMI OUT Type A [19-pin female]
  - RS-232 [Screw Terminal]
  - RELAY [Screw Terminal]
  - AUDIO OUT [Screw Terminal]
  - 2x30watts@4Ohms amplifier output [Screw Terminal]
- **HDMI Compliance:** HDMI 1.4
- **HDCP Compliance:** HDCP 1.4
- **Video Bandwidth:** 10.2 Gbps
- **Video Resolution:** up to 4K2K@30Hz,1080P@120Hz and 1080P 3D@60Hz
- **Color Space:** RGB, YCbCr 4:4:4, YCbCr 4:2:2
- **Color Depth:** 8/10/12-bit
- **HDMI Audio Formats:** LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
- **ESD Protection:** Human Body Model:
  - ±8kV (Air Discharge)
  - ±4kV (Contact Discharge)
- **Dimensions (WxDXH): Transmitter:** 4.6 x 4.5 x 1.5 in (115.9x114.3x38.7mm) / **Receiver:** 2 x 4 x 1.2 in (50x104x 30mm)
- **Weight: Transmitter:** .6 lb/305g / **Receiver:** 1.7 lb/758g
- **Housing:** Metal Enclosure
- **Color: Transmitter:** White / **Receiver:** 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:** 75W (max)
- **Power Supply:** Input: AC100 - 240V 50/60Hz, Output: DC 24V/3.75A (US/EU standards, CE/FCC/UL certified)

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

TRANSMITTER PANELS



1 **HDCP LED:** HDCP Compliance indicator.
- **OFF:** HDMI input is not carrying HDCP content.
- **ON:** HDMI input is carrying HDCP content.

2 **LINK LED:** HDBaseT™ Link status indicator.
- **OFF:** No Link.
- **GREEN:** Link successful.
- **Blink GREEN:** Link abnormal.

3 **VGA LED:** VGA signal indicator.
- **OFF:** There is no +5V HPD or VGA signal detected on input.
- **FLASHING:** +5V HPD or VGA signal is detected.
- **GREEN:** VGA is active input and VGA signal is detected.

4 **POWER LED:** System power indicator.

5 **VGA IN:** Connect to VGA source.

6 **ADUIO IN:** Connect to external audio source for VGA signal.

7 **HDMI 1 LED:** HDMI 1 signal indicator.
- **OFF:** There is no +5V HPD or HDMI signal detected on input.
- **FLASHING:** +5V HPD or HDMI signal is detected.
- **GREEN:** HDMI is active input and HDMI signal is detected.

8 **HDMI 1 IN:** Connect to HDMI source device.

9 **SOURCE:** Press it to select one source.

10 **TO PC:** Connect PC to transmit USB control signal from the Receiver USB device in.

11 **HDMI 2 LED:** HDMI 2 signal indicator.
- **OFF:** There is no +5V HPD or HDMI signal detected on input
- **FLASHING:** +5V HPD or HDMI signal is detected.
- **GREEN:** HDMI is active input and HDMI signal is detected

12 **HDMI 2 IN:** Connect to HDMI source device.

13 **HDBASET™ OUT:** Connect to HDBaseT™ Receiver with a CAT5e/6/7 cable.

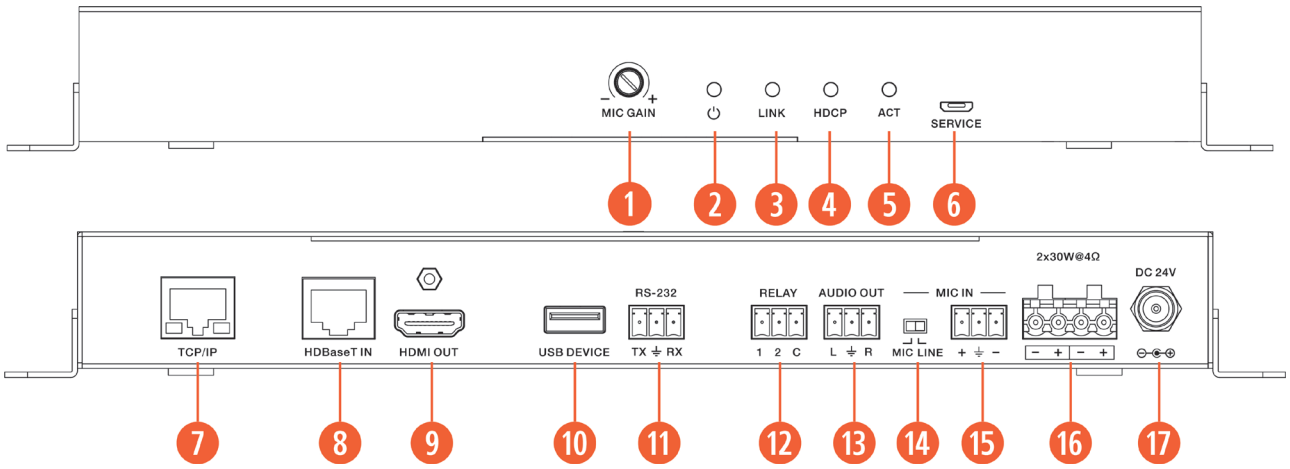
14 **RS-232/POWER:** Connect to optional Control Panel via CAT5e/6/7 cable.

15 **24VDC:** (OPTIONAL) Connects 24V/1A adaptor to AC wall outlet for power supply.

16 **MICRO-USB:** For firmware updated use.

17 **DIP SWITCH:** Select upgrade type.

RECEIVER PANELS



❶ **MIC GAIN:** Set the MIC input gain.

❷ **POWER LED:** System power indicator.

❸ **LINK LED:** HDBaseT™ Link status indicator.

- **OFF:** No Link.
- **GREEN:** Link successful.
- **Blink GREEN:** Link abnormal.

❹ **HDCP LED:** HDCP compliance indicator.

- **OFF:** HDMI input is not carrying HDCP content.
- **ON:** HDMI input is carrying HDCP content.

❺ **ACT:** System work indicator.

- **OFF:** System standby or power off.
- **Blink GREEN:** System working.

❻ **SERVICE:** For firmware updated use.

❼ **TCP/IP:** Connect to a PC access to the Web GUI for system setting.

❽ **HDBASET™ IN:** Connect to HDBaseT™ Transmitter with a CAT5e/6/7 cable.

❾ **HDMI OUT:** Connect to a HDMI display device.

❿ **USB DEVICE:** Connect to an interactive display.

⓫ **RS-232:** RS-232 control for the display.

⓬ **RELAY:** To control the projector screen rise and fall.

⓭ **AUDIO OUT:** Connect to a speaker.

⓮ **MIC LINE SWITCH:**

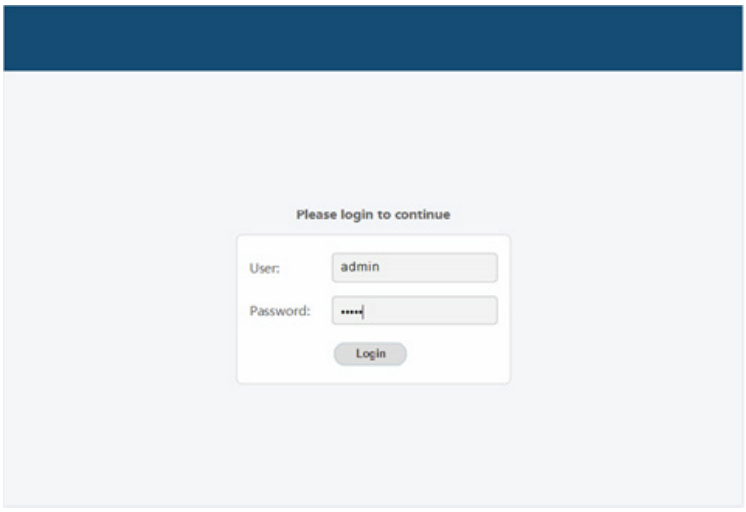
- When the switch is set to **"MIC"**, the microphone input is used to connect a dynamic microphone.
- When the switch is set to **"LINE"**, the microphone input is used for connecting a line level audio source or wireless microphone output.

⓯ **MIC IN:** Using Phoenix terminal cable to connect microphone input.

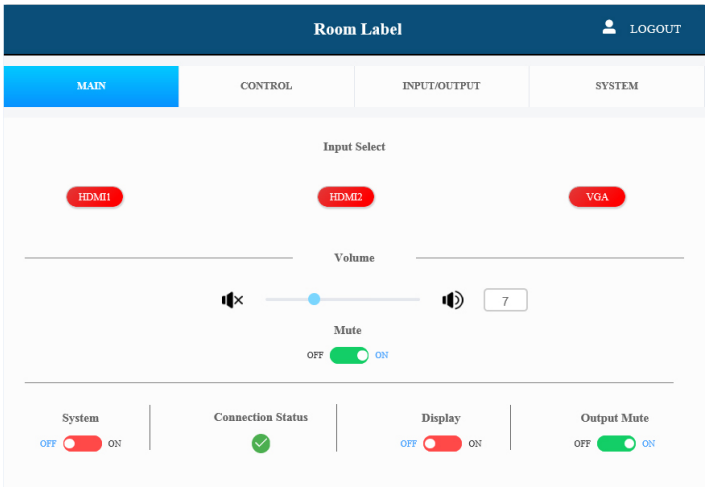
⓰ **2X30 WATTS @4Ω:** Connect to speaker out.

⓱ **DC 24V:** Connect 24V/3.75A adaptor to AC wall outlet for power supply.

The ANI-MFAV can be controlled via Web GUI through TCP/IP port. The default IP address is 192.168.2.100. When the product has finished connection. You can set the IP address to your PC/laptop Internet Explorer and click **"Search"** to enter Web GUI login page. In the login page, you need set the **'User'** and **'Password'**. The default **'User Name'** and **'Password'** for the admin are both **'admin'**. When you set it over and you need click 'Login' button to enter Web GUI function page. The login page likes below:



MAIN PAGE



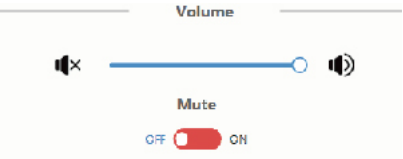


1. Shows the status of the input signal.

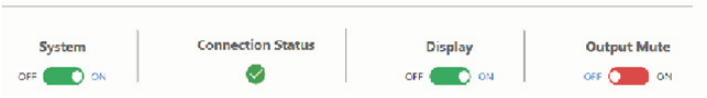
Green: The input port has connected an active signal.

Blue: The input port has connected success but it has not active signal.

Red: The input port has not connected.



2. **Volume control** outputs for the amplifier and the audio extractor. Adjusting the slider to increase or decrease outputs for the amplifier and the audio extractor. Toggle is the Mute setting to silence the amplifier and the audio extractor outputs. Mute setting does not silence the audio on the HDMI output line.



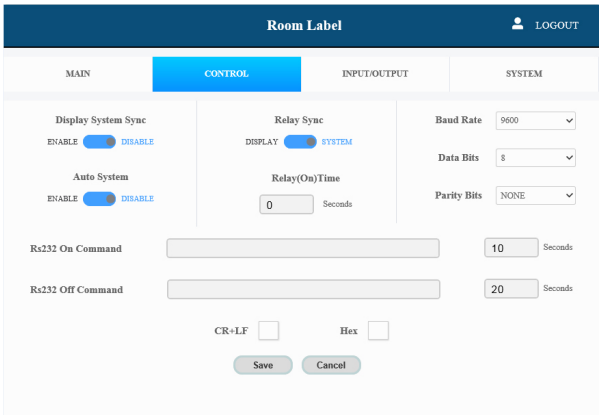
3. **System:** Runs the system on/off subroutine when switches the toggle.

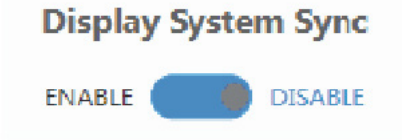
Connection Status: Indicates when the connection is well about the web server.

Display: Runs the display on/off subroutine when switches the toggle.

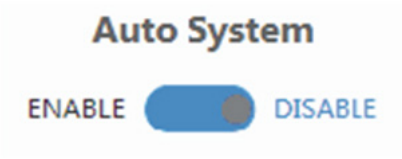
Output Mute: When on, turns off the video output but it does not mute audio.

CONTROL PAGE

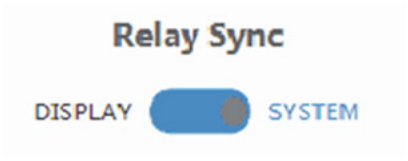




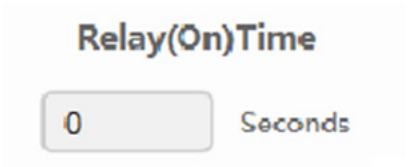
1. **Display System Sync:** When the toggle is in **'enable'** position, the display ON/OFF subroutine will run the system subroutine on/off every time.



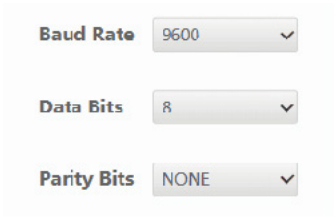
2. **Auto System:** When the toggle is in **'enable'** position, the system will turn off when no signals are actively connected to the plate for a programmable amount of time. See No Activity Timeout in the **INPUT/ CONTROL** section.



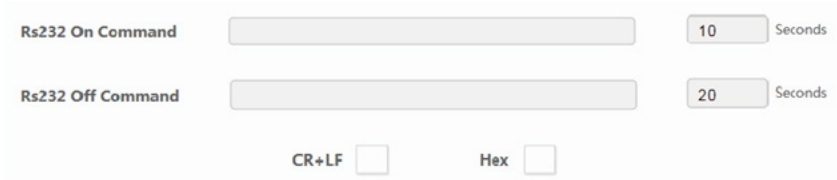
3. **Relay Sync:** Sets the relays to either be triggered with the display subroutine on/off or the system subroutine on/off.



4. **Relay (On) Time:** Sets the amount of time that the relay contacts will stay closed.



5. The RS-232 communication settings for the RS-232 port.



6. **RS-232 On Command:** Sends out data when Display On subroutine is called.

RS-232 Off Command: Sends out data when Display Off subroutine is called.

CR + LF: Appends a carriage return and line feed character to the end of the input strings as they are sent out.

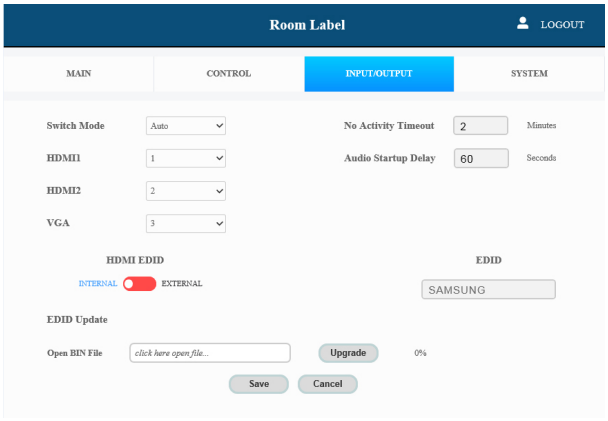
Hex: The commands can be input as hexadecimal numbers when the Hex checkbox is marked.

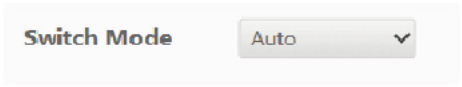


7. **Save:** After any setting has made, the settings must be saved by pressing the **'Save'** button.

Cancel: Wait for the popup window to close automatically before continuing to make further setting, while it saves.

INPUT/OUTPUT PAGE

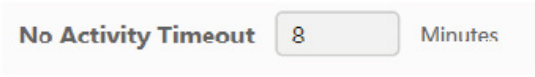




1. **Switch Mode:** Sets how the switcher plate will change between input signals. It includes **'Auto'** mode and **'Manual'** mode.



2. Sets the priority to use when the switch mode is set to priority mode. 1 is the highest priority and 3 is the lowest.



3. **No Activity Timeout:** Sets the amount of time it will take for the unit to turn itself off when there is not detected input signal.



4. **Audio Delay:** Sets how many seconds the audio that the amp is delayed.

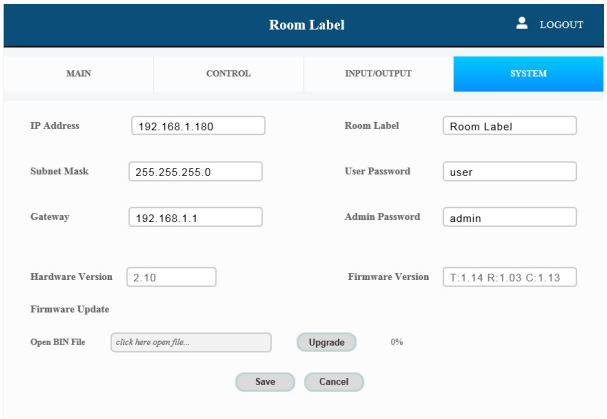


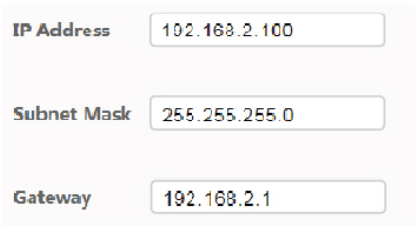
5. **HDMI EDID:** When set to Internal, the EDID communicated to the source is the one stored in the device's internal memory.

EDID: The name of the current EDID.

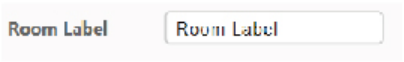
EDID Update: Upload **a.bin** file to change what EDID is stored in the device's internal memory that is used when EDID is set to internal.

SYSTEM PAGE

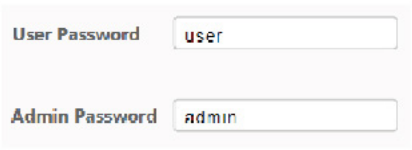




1. The network settings of the device's internal system.



2. **Room Label:** This is the user-assigned label that appears at the top of the web interface.

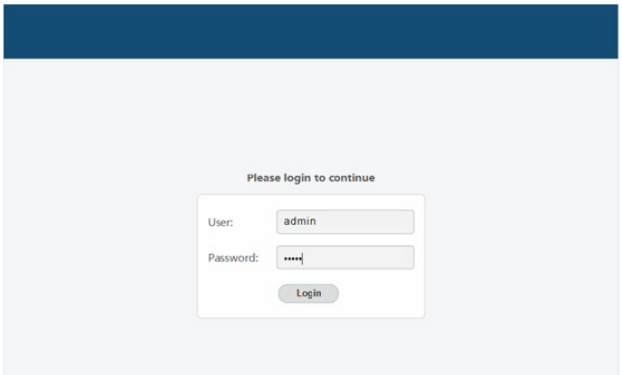


3. The user and the admin password settings.

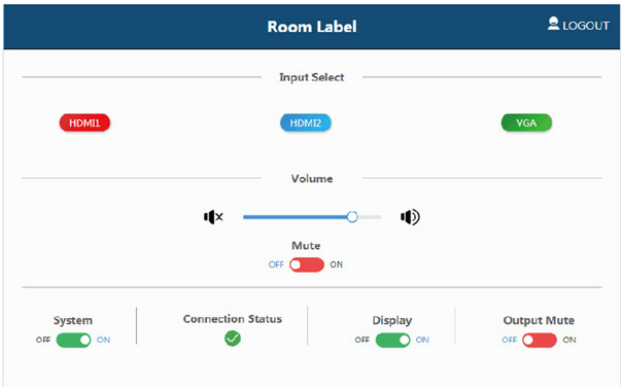


4. Upload new firmware versions and see current ones install. This can update the firmware of the optional control panel and the receiver box, not the two-gang transmitter. To update the firmware of the two-gang switcher, use the USB port on the plate.

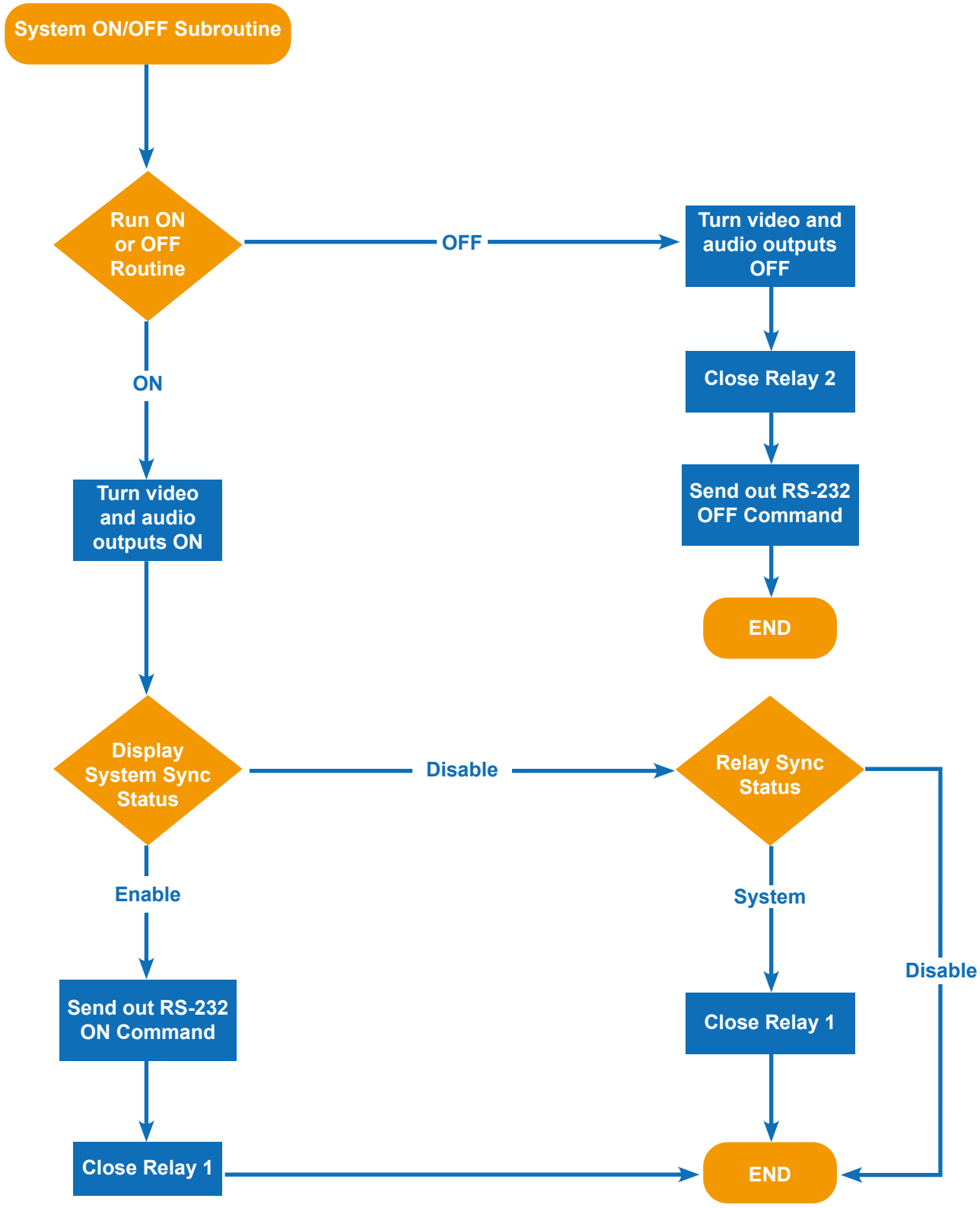
NOTE: *The default '**Username**' and '**Password**' for the user are both '**user**'. The user login limits the amount of functions accessible.*



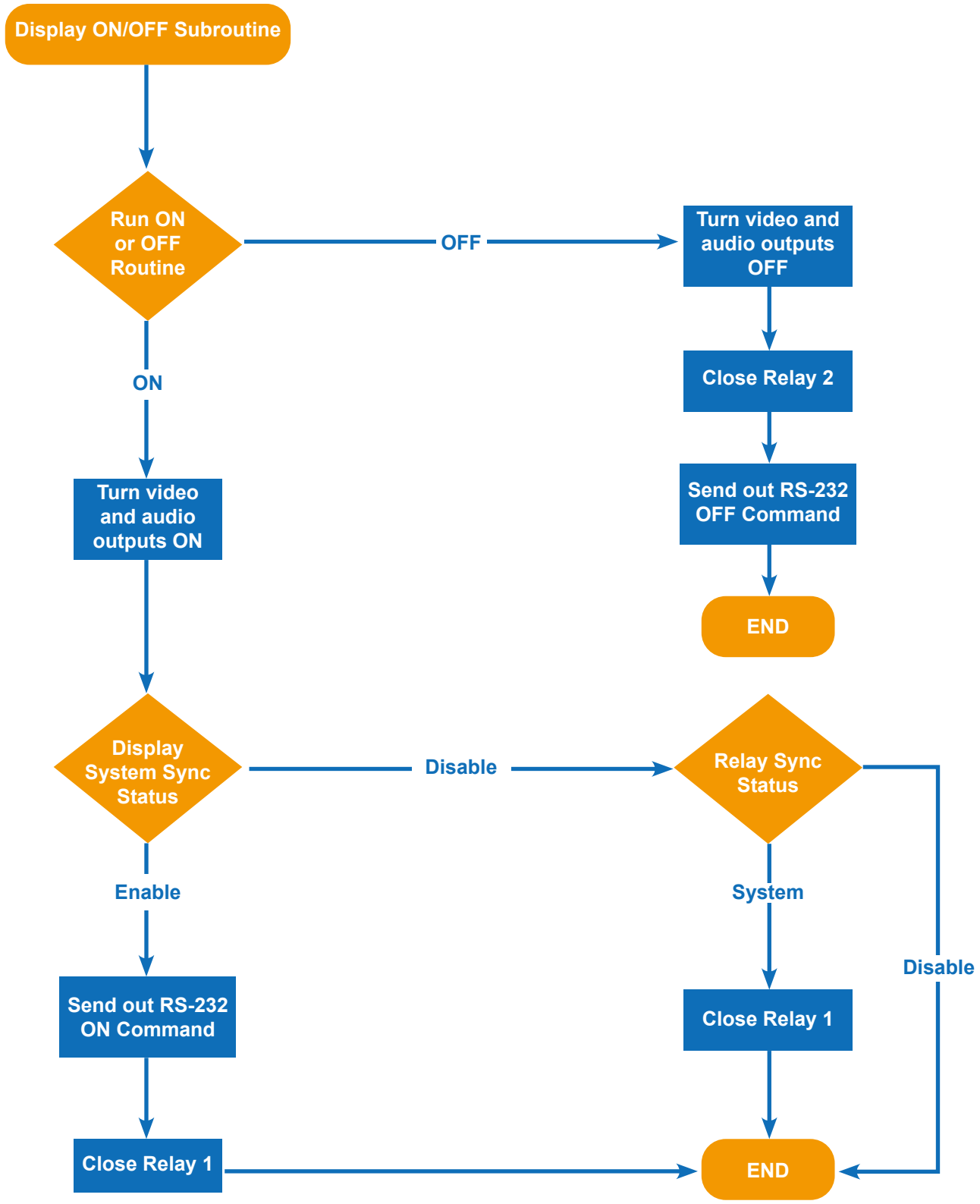
When you set it over and you can click **'Login'** button to enter Web GUI function page. The page likes below:



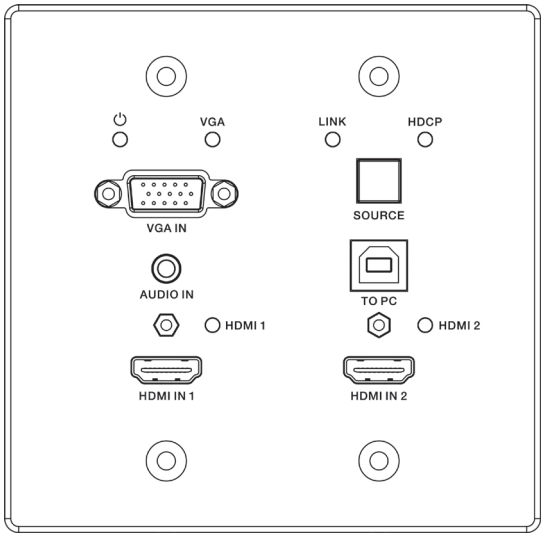
SYSTEM ON/OFF SUBROUTINE



DISPLAY ON/OFF SUBROUTINE



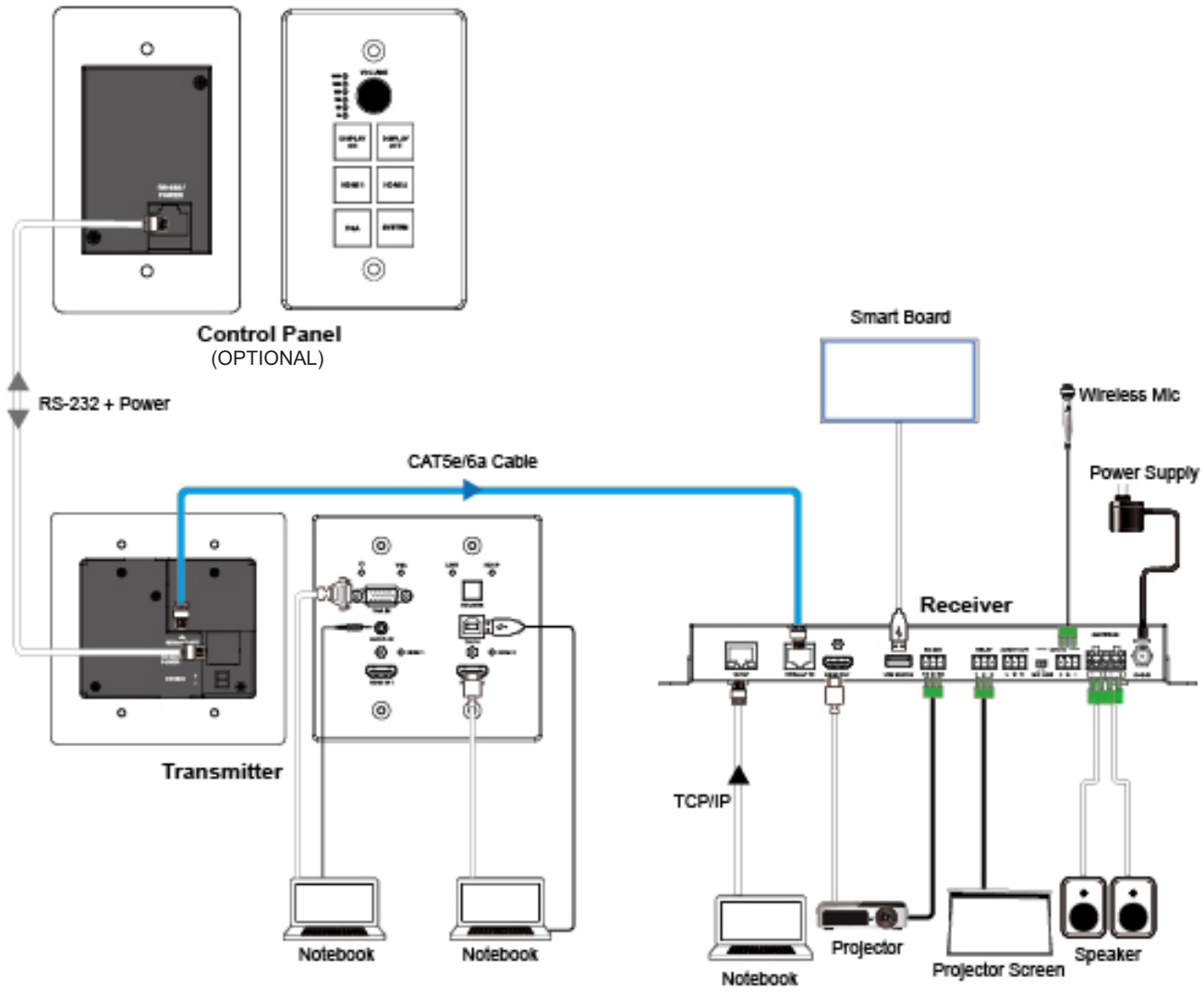
SYSTEM RESET



To perform a system reset:

- Hold the source button (SOURCE button) for 20 seconds until the HDCP light flashes (3) times.
- When the system is reset, user settings will return to their default values this includes:
  - Passwords
  - Room Label
  - Switching Mode
  - IP Address, etc.

APPLICATION EXAMPLE



OPTIONAL CONTROL PANEL



OPTIONAL CONTROL PANEL



TRANSMITTER

RECEIVER

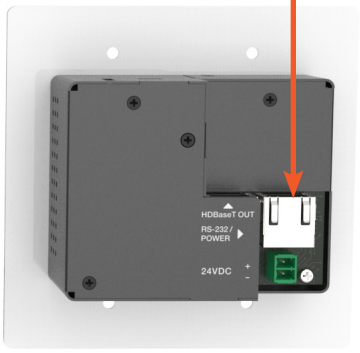


OPTIONAL CONTROL PANEL

The Optional Control Panel connects to the wall plate via the RJ45 jack marked **"RS-232/Power"** using CAT5e/6 cable.



TRANSMITTER



RECEIVER



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