USER MANUAL

AC-MX1616-AUHD-HDBT

AVPro Edge's 4K60 (4:4:4) 18Gbps Matrix
Switcher comes with16 HDMI Inputs, 16 HDBaseT
Outputs and 8 mirrored HDMI Outputs

The AC-MX1616-AUHD-HDBT is a true HDMI/HDBaseT switch. This unit includes 16 HDMI inputs, 16 HDBaseT outputs, with 8 mirrored HDMI outputs (these mirror the odd numbered HDBaseT Ports 1, 3, 5, etc). This Matrix supports HDMI 2.0(a/b), HDCP 2.2, up to 4K video resolution, and up to 18 Gbps bandwidth. We are able to pass 18Gbps through category cable by using the new HDBaseT technology we have developed called "ICT". This switch allows any source (Blu-ray, UHD Blu-ray, satellite receiver, game consoles, PCs, etc ...) to be shown on any of the connected displays. This matrix equalizes and amplifies the output to ensure the HDMI signal can be transmitted through long HDMI cables without loss of quality.

Audio Delay is ″On-Board″ so you can manage lip-sync issue before it is a problem. Also with built in Scalers you don't have to forfeit that 4K signal just because you have a couple older displays. All that with Full EDID management allows maximum flexibility with today's wide mixture of sources and displays.

This is an ideal solution for digital entertainment centers, HDTV retail, show sites, data centers, schools, conference and training centers and more!

Features:

- HDMI 2.0(a/b)
- 18Gbps Uncompressed Bandwidth Support on HDMI
- 18Gbps with ICT on HDBaseT outputs
- 4K60 4:4:4 Support
- Ultimate HDR Support (HDR 10 & 12 Bit)
- Dolby Vision, HDR10+ and HLG Support
- HDCP 2.2 (and all earlier versions supported)
- 4K > 1080P Down Scaling on HDBaseT outputs
- Simple setup with front panel control screen
- WebOS for simple connectivity and control/management
- Digital Toslink Out (7CH PCM, DD, DD+, DTS, DTS-MA)
- Balanced Analog Out (2CH PCM)
- Advanced EDID Management
- IR, RS-232 and LAN Control Options
- Built in Test Pattern on Each HDBaseT Output to Verify Infrastructure
- Driver Support for Crestron, C4, RTI, ELAN and more!!!
- Extracted Audio has 3 Operating Modes. Bind to Input, Bind to Output, or Matrix (Independent)

In The Box:

- AC-MX1616-AUHD-HDBT Matrix
- Power Cable
- IR Remote Control
- IR Extension Cable
- Mounting Brackets & Phoenix Connectors

VIDEO:

VIDEO RESOLUTIONS	UP TO 4K 60HZ 4:4:4
VESA RESOLUTIONS	UP TO DCI 4K (4096X2160)
HDR FORMATS/RESOLUTIONS	420, 422, 444 (10 AND 12 DEEP COLOR) HDR10, HDR10+, DOLBY VISION (24/30 FRAMES), HLG
COLOR SPACE	YUV (COMPONENT), RGB (CSC: REC. 601, REC. 709, BT2020, DCI, P3 D6500)
CHROMA SUBSAMPLING	4:4:4, 4:2:2, 4:2:0 SUPPORTED
DEEP COLOR	UP TO 16 BIT (1080), UP TO 12 BIT (4K)
SCALERS (HDMI) PER OUTPUT OPTIONAL	1080P TO 4K (RESOLUTION ONLY, FRAMERATE STAYS THE SAME)
SCALERS (HDBASET) PER OUTPUT OPTIONAL	4K TO 1080P (RESOLUTION ONLY, FRAMERATE STAYS THE SAME)
HDMI OUTPUT	MIRRORED HDMI OUTPUTS (HDBASET 1-8)

AUDIO:

AUDIO FORMATS SUPPORTED HDMI	PCM 2.0 CH, LPCM 5.1 & 7.1, DOLBY DIGTAL, DTS 5.1, DOLBY DIGITAL PLUS, DOLBY TRUEHD, DTS-HD MASTER AUDIO, DTS-X, DOLBY ATMOS
AUDIO FORMATS SUPPORTED EXTRACTED (TOSLINK)	PCM 2 CH, LPCM 6 CH, LPCM 7 CH, DOLBY DIGITAL, DOLBY DIGITAL PLUS, DTS-HD MASTER AUDIO
AUDIO FORMATS SUPPORTED EXTRACTED (2CH PORT)	PCM 2 CH (NO DOWNMIX)
AUDIO EXTRACTION LOCATION	BIND TO INPUT, BIND TO OUTPUT OR MATRIX (INDEPENDENT)
AUDIO DELAY (PER OUTPUT, EXTRACTED)	UP TO 630MS

DISTANCE:

HDBASET OUT (4K60 4:4:4 & HDR) W/ AC-EX70-444-RNE	70 METERS / 230 FEET (CAT 6A)
HDBASET OUT (1080P) W/ AC-EX70-444-RNE	100 METERS / 330 FEET (CAT 6A)
HDBASET OUT (4K60 4:2:0 MAX) W/ AC-EX70-UHD-R	40 METERS / 131 FEET (CAT 6A)
HDBASET OUT (1080P) W/ AC-EX70-UHD-R	70 METERS / 230 FEET (CAT 6A)
HDMI IN/OUT (4K60 4:4:4)	UP TO 50 FEET (USING BULLET TRAIN HDMI)
HDMI IN/OUT (W/ AOC CABLE) (4K60 4:4:4)	UP TO 130 FEET (USING BULLET TRAIN AOC)

OTHER:

BANDWIDTH HDMI	18 GBPS UNCOMPRESSED
BANDWIDTH HDBASET	18 GBPS (USES ICT ABOVE 10.2 GBPS SIGNALS)
HDCP	HDCP 2.2 AND EARLIER
POH FOR RECEIVERS (NO NEED TO POWER RECEIVERS)	YES, ALL OUTPUTS

CONTROL:

PORTS	LAN, RS232, IR, MICRO USB
DRIVERS	C4, RTI, ELAN, CRESTRON, URC (FOR MORE - SEE DRIVERS PAGE)
LAN WEBOS	YES

PORTS:

HDMI	TYPE A
HDBASET	RJ45 W/ POH FOR HDBASET RECEIVERS
LAN	RJ45 W/ WEB INTERFACE/CONTROL
AUDIO (EXTRACTED DIGITAL)	TOSLINK
AUDIO (EXTRACTED ANALOG)	5 PIN TERMINAL BLOCK (BALANCED)
IR RX	3.5MM STEREO (3 CONDUCTOR)
RS232	3 PIN TERMINAL BLOCK

ENVIRONMENTAL:

OPERATING TEMPRATURE	23 TO 125°F (-5 TO 51°C)
STORAGE TEMPERATURE	-4 TO 140°F (-20 TO 60°C)
HUMIDITY RANGE	5-90% RH (NO CONDENSATION)

POWER:

POWER CONSUMPTION (TOTAL)	56 WATTS MAX
POWER SUPPLY - MATRIX	INPUT: AC 100-240V ~ 50/60HZ OUTPUT: DC 48V 2A

DIMENSIONS:

DIMENSIONS (UNIT ONLY HEIGHT/DEPTH/WIDTH)	MM: 134.87 X 406.4 X 441.45 INCH: 5.31 X 16 X 17.38
DIMENSIONS (PACKAGED HEIGHT/DEPTH/WIDTH)	MM: 209.55 X 558.8 X 571.5 INCH: 8.25 X 22 X 22.5
RACK UNITS	3U
WEIGHT (UNIT)	25 LBS (11.34 KG)
WEIGHT (PACKAGED)	29 LBS (13.15 KG)

*SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. MASS & DIMENSIONS ARE APPROXIMATE
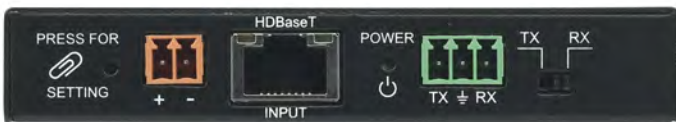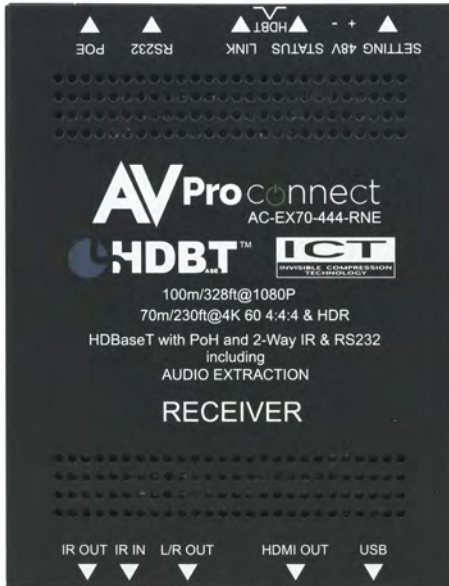
Compatible Receivers:

AC-EX70-444-RNE: (W/ICT)

- 70M 4K 60 4:4:4 & HDR
- 100M 1080P

  *NOTE: You MUST use this receiver to get 18Gbps ICT Video

AC-EX70-UHD-R:

- 40M 4K 60 4:2:0
- 70M 1080P

Indicator Troubleshooting Lights on the HDBaseT Port on Matrix and Receivers:

LINK - Above RJ45 (HDBT) Port & Below it on the Matrix: (Green) This indicator shows that the AV HDBT link between the Tx and Rx is in tact. This light should ALWAYS be solid.
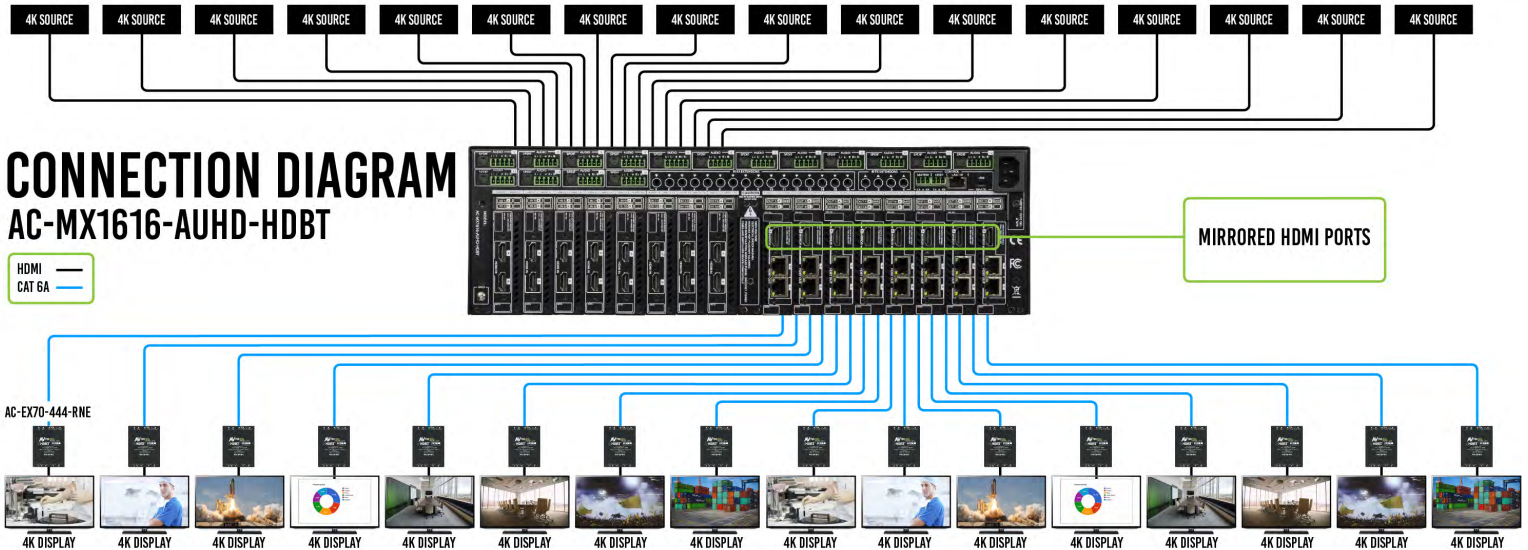
STATUS- Above RJ45 (HDBT) Port & Below it on the Matrix: (Amber) This is an indicator showing that the power is present between the Transmitter and Receiver. This light ALWAYS BLINKS steadily indicating everything is OK.

If the lights are not as discussed above - please check the following:

1. Check the length. The maximum distances and resolution compatibilities are:

   a. AC-EX70-444-RNE ~ 70m (230ft) on 4K 60 4:4:4 & HDR and 100m (330ft) on 1080P

   b. AC-EX70-UHD-R ~ 40m (131ft) on 4K 60 4:2:0 (NO HDR) and 70m (230ft) on 1080P

2. Remove any coils of cable and make sure that there is not excess cabling.

3. Bypass all patch panels and punch-down blocks.

4. Re-terminate connectors (pass-through style ends are NOT recommended). Sometimes, even if a cable tester indicates the run is valid, something may be slightly off.

5. Contact AVProEdge if these suggestions do not work.

Common Application Diagram & What Is ICT:

THIS 4X4 MATRIX HAS 4 HDMI INPUTS AND FEATURES DUEL MIRRORED HDMI AND HDBASET OUTPUTS FOR A TOTAL OF 8 PORTS. THE HDBASET OUTPUT IS UTILIZING ICT (INVISIBLE COMPRESSION TECHNOLOGY), GIVING IT THE ABILITY TO DELIVER 18GBPS FULL 4K60 (4:4:4) SIGNALING OVER STANDARD CATEGORY CABLE. IT DOES THIS BY USING AVPROCONNECTS PROPRIETARY ENCODING ALGORITHM INSIDE THE MATRIX, AND DECODING ALGORITHM INSIDE THE AC-EX70-444-RNE HDBASET RECEIVERS.

ICT
INVISIBLE COMPRESSION TECHNOLOGY

4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE 4K SOURCE

CONNECTION DIAGRAM
AC-MX1616-AUHD-HDBT

HDMI
CAT 6A

MIRRORED HDMI PORTS

AC-EX70-444-RNE

4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY 4K DISPLAY
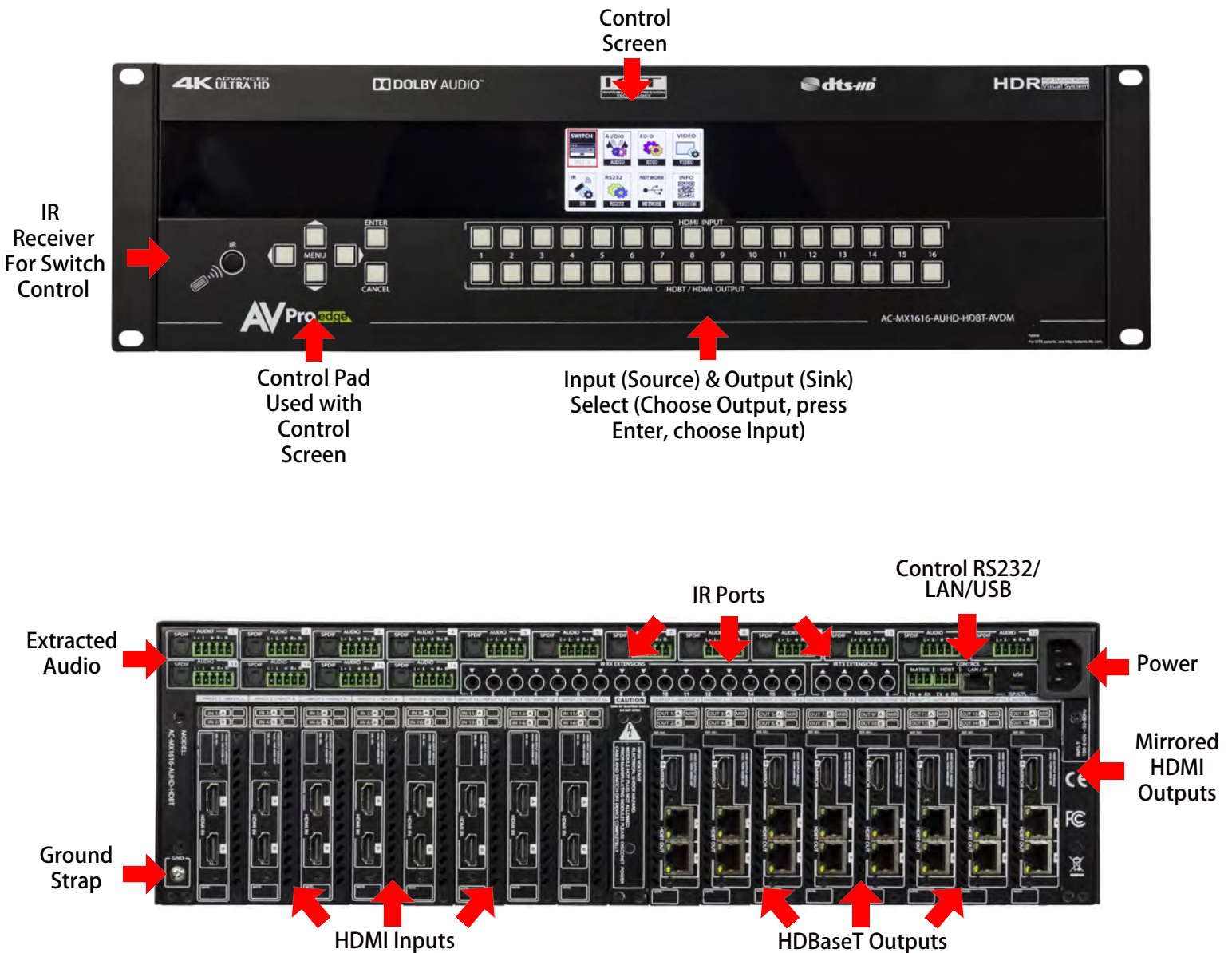
Device Feature Overview:

The AC-MX1616-AUHD-HDBT is a 16 input/output Matrix switch built to handle all the latest sources outputting 4K 60 (4:4:4) HDR video signals. What truly makes this switch the choice of integrators around the world is the ability to distribute 18Gbps 4K to some some zones and 1080p to others. We are able to accomplish this with our built in 4K to 1080p downscalers. This feature is one of many designed to help integrators throughout the installation process.

Supporting the full HDMI 2.0 a/b specification and supporting every flavor of HDR, this matrix will ensure you can get the most out of any system.   This 16x16 matrix switcher supports formats including HDR, HDR10, HDR10+, Dolby Vision, HLG, BBC and NHK. All of them are supported in up to 4K 60Hz and up to 12 Bit Deep Color. All color space compression is compatible.

This powerhouse matrix switcher is the ideal solution for a multizone setup that has 4K sources and up to 16 zones. Control's a breeze as this switch comes with a web GUI you can access via the IP address, as well as drivers for all the top control systems. Combine that with the LED setup screen on the front, and you won´t have any problems getting this switch up and running. The AC-MX1616-AUHD-HDBT is the integrators choice for large multizone distribution systems.

Control Screen

IR Receiver For Switch Control

Control Pad Used with Control Screen

Input (Source) & Output (Sink) Select (Choose Output, press Enter, choose Input)

Control RS232/ LAN/USB

IR Ports

Extracted Audio

Power

Mirrored HDMI Outputs

Ground Strap

HDMI Inputs

HDBaseT Outputs

Basic Setup:

Quick Setup:
1. Connect the HDMI input sources (Blu-ray, Set Top Box, etc...) to the AC-MX1616-AUHD-HDBT
2. Connect the HDMI output devices (AVR, Display, Distribution Amplifier, Extender) to the AC-MX1616-AUHD-HDBT
3. Power on the sources
4. Connect the power supply's into the AC-MX1616-AUHD-HDBT
5. Turn on output devices/displays
6. You may now use the front panel controls, supplied IR remote, Web Interface, or RS232/USB to control the switch.

Front Panel Control : Simple Switching

The AC-MX1616-AUHD-HDBT can be quickly switched via the front panel by pressing the OUTPUT # you want to set, then select the INPUT # you want routed.

1. Press the button (1 through 16) that corresponds with the OUTPUT (Display, or Sink Device) you would like to send a source.

2. Now select the desired INPUT on (1 through 16)

3. The route is now set.

4. You may also navigate to the "Switch" Menu on the Control Screen to manage the routes (See "Switch Routing" on next page)

STEP 2: Press ENTER   STEP 3: Select the desired INPUT

STEP 1: Select the desired OUTPUT
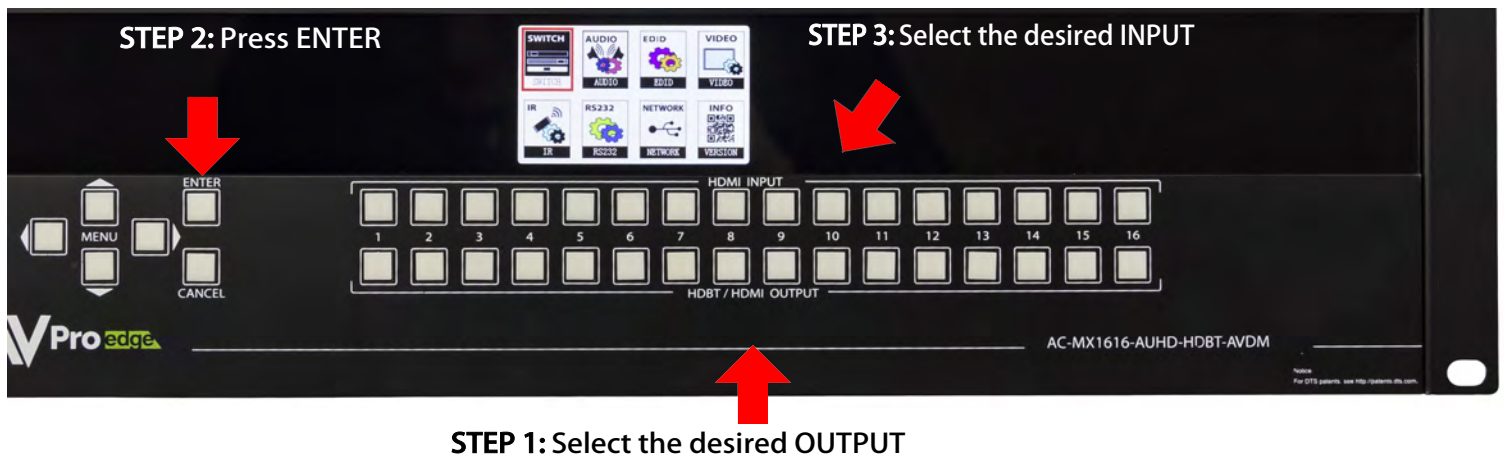
Switching with the front panel controls.
NOTE: Select the OUTPUT, press ENTER, and then select the INPUT

Navigating the Control Screen:

You can use the control screen to setup/control several key features including:

Home Screen

- *Switch* ~ Control the switching of Inputs and Outputs
- *Audio* ~ Set the default extracted audio mode to Bind to Input, Bind to Output or Matrix - When in Matrix, audio route can be selected.
- *EDID* ~ View, adjust EDID Configuration
- *Video* ~ View, adjust Video Mode
- *IR* ~ View and adjust IR Routing/setup
- *RS232* ~ View and adjust RS232 routing and status
- *Network* ~ View/Setup IP Address (Host/device, Gateway, Subnet), Toggle DHCP, set port number and view MAC Address
- *Info/Version* ~ View Firmware versions
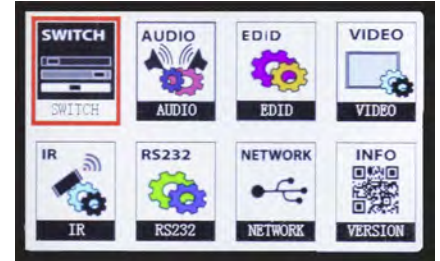
To navigate the control screen you have a 6-button control panel that control the "Control" Screen.

- **"Menu"** area consists of UP, DOWN, LEFT and RIGHT - These are your navigation buttons. Press these buttons to move through them menus to your desired selections. Your desired selection will be bordered or highlighted
- **"Enter"** Selects the highlighted item and advances to the next set of options or sets your selection
- **"Cancel"** Stops what you are doing and takes you back one menu or to the home screen

Control Screen Navigation Buttons
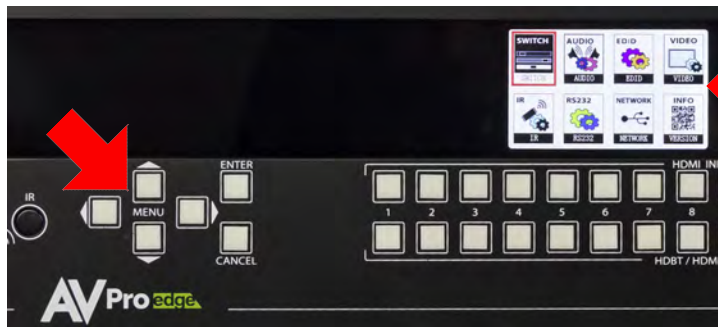
Control Screen

Control Screen - Switch Routing:

NOTE: The same settings can be found in the Web Interface under Sense Switch

Once you select the "Matrix" option, you have 2 primary functions:

- View the current rout settings so you can verify that your system is working properly and the routes are correct
- Set new matrix routes. You can change the matrix routes here as well, this is good for demonstrating switching. NOTE: When setting a new route, select OUTPUT first then INPUT
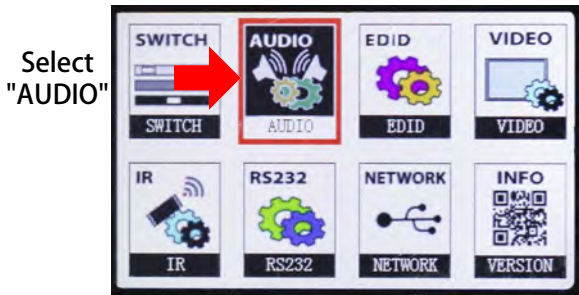
Select "SWITCH"
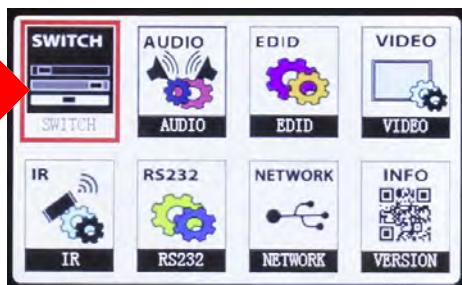
Select the OUTPUT First
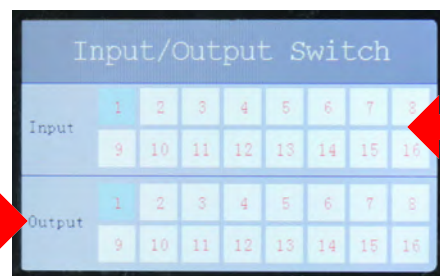
Then Choose the INPUT

Control Screen - Audio:

NOTE: The same settings can be found in the Web Interface under Audio Setting and Audio Matrix
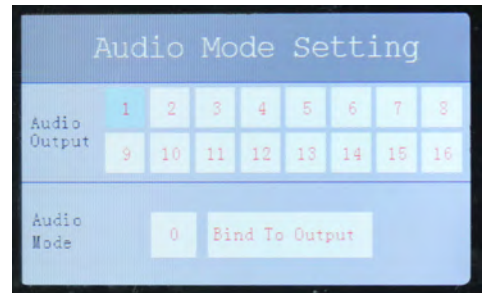
Select "AUDIO"

The Audio Settings Menu has Three Functions

- Audio Mode:
- Audio En/Dis:
- Audio Delay:

Function 1 - Set the default extracted **AUDIO MODE.** There are three options:

- BIND TO OUTPUT (extracted audio switches with the video, this is the default mode)
- BIND TO INPUT (extracted audio is fixed to the corresponding input by the same number)
- INDEPENDENT/MATRIX (extracted audio can be routed however you like and there are commands to allow it to function as a separate matrix)

1. Select the extracted AUDIO OUTPUT first by using the arrow keys to navigate to it
2. Press ENTER to set the selection
3. Use the UP/DOWN arrow keys to toggle Audio Mode (Bind to Input, Bind to Output, Matrix)
4. Press ENTER to set selection

When MATRIX Mode is selected if you hit ENTER again it will bring you to the routing screen where you can select the desired INPUT you want to route

Function 2 - **AUDIO ENABLE/DISABLE** Extracted Audio

1. Select the extracted audio first by using the arrow keys to navigate to it
2. Press ENTER to set the selection
3. Use the UP/DOWN arrow keys to toggle Audio Status ON or OFF (Enable/Disable)
4. Press ENTER to set selection
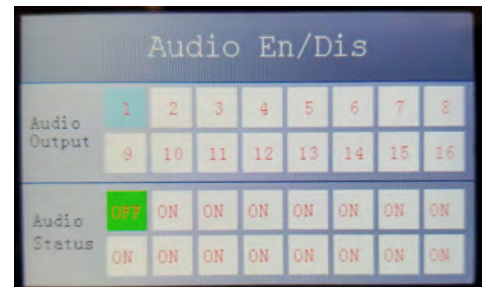
Function 3 - **AUDIO DELAY SETTINGS** Extracted Audio

1. Select the extracted audio OUTPUT first by using the arrow keys to navigating to it
2. Press ENTER to set the selection
3. Use the UP/DOWN arrow keys to select the desired delay. Delay settings are in increments of 90 milliseconds (*Default is 0MS/BYPASS) 0MS/BYPASS, 90MS, 180MS, 270MS, 360MS, 450MS, 540MS, 630MS
4. Press ENTER to set selection
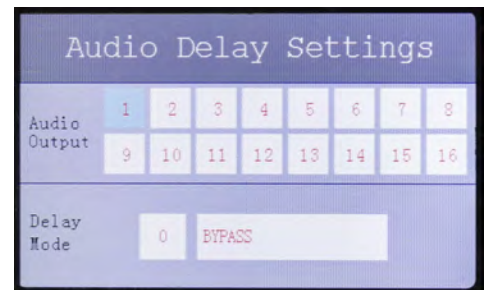
Control Screen – EDID Management:

**NOTE: The same settings can be found in the Web Interface under EDID Manage**

Instantly and easily set and manage EDID functions right from the front screen. EDID management will help you get the right signal from the source device adding additional security that nothing unsupported will be mistakenly fed into the system.

EDID effectively tells the source what the system is capable of handling, devices without robust EDID control just have to hope the source behaves how we want it to. With the AC-MX1616-AUHD-HDBT you control the sources:

To Set the EDID, just choose EDID from the "Home Screen" and then select the INPUT you want to set. Finally toggle through the EDIDs until you get the one you want. For the most plug and play compatibility, we recommend using "1080P 2CH". This is ideal for bars, restaurants, and homes. There is also the ability to upload a custom EDID is desired (Has to be done in Serial Control Software).

Available EDID options are listed below. Additionally, you can copy an EDID from a display using Serial (more later in this manual) - This is recommended for advanced users doing HDR distribution.

Select "EDID"
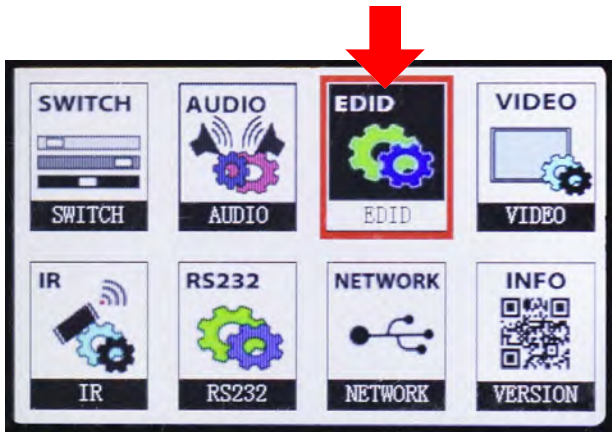
Choose Input to apply EDID to

Select the desired EDID

Available EDID's:

1080P_2CH
1080P_6CH
1080P_8CH
1080P_3D_2CH
1080P_3D_6CH
1080P_3D_8CH
4K30HZ_3D_2CH
4K30HZ_3D_6CH
4K30HZ_3D_8CH
4K60HzY420_3D_2CH
4K60HzY420_3D_6CH
4K60HzY420_3D_8CH
4K60HZ_3D_2CH
4K60HZ_3D_6CH
4K60HZ_3D_8CH
1080P_2CH_HDR
1080P_6CH_HDR
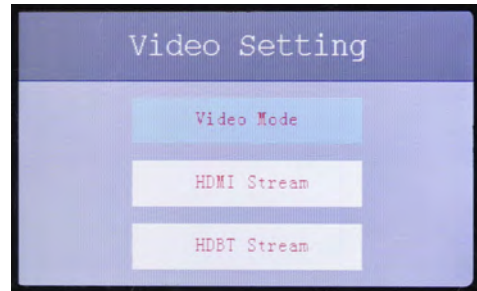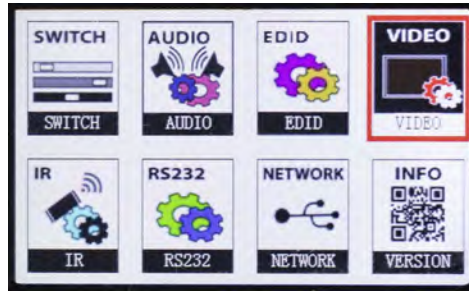
1080P_8CH_HDR
1080P_3D_2CH_HDR
1080P_3D_6CH_HDR
1080P_3D_8CH_HDR
4K30HZ_3D_2CH_HDR
4K30HZ_3D_6CH_HDR
4K30HZ_3D_8CH_HDR
4K60HzY420_3D_2CH_HDR
4K60HzY420_3D_6CH_HDR
4K60HzY420_3D_8CH_HDR
4K60HZ_3D_2CH_HDR
4K60HZ_3D_6CH_HDR
4K60HZ_3D_8CH_HDR
User EDID 1
User EDID 2
User EDID 3
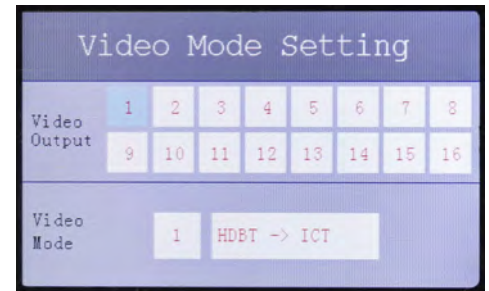
Control Screen – Video:

The VIDEO Settings Menu has Three Functions

- Video Mode
- HDMI Stream
- HDBT Stream

Function 1 - Set the Output Video Mode

- HDBT -> ICT
  - Enables ICT (18G) Compression mode on HDBT Port -*DEFAULT*
- 4K -> HD
  - If incoming signal is 4K, it will be downscaled to 1080P or 1900x1200
    depending on the input format

NOTE: ONLY THE ODD NUMBERED HDBaseT PORTS CAN BE DOWNSCALED**
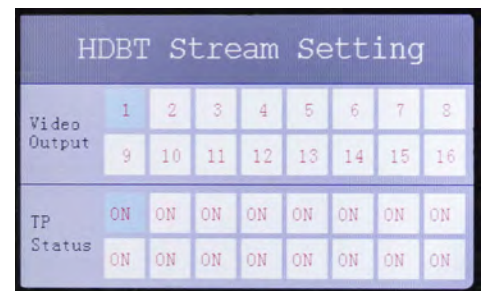
Function 2 - Set the HDMI Stream Setting

- HDMI Stream Settings
  - The 8 Mirrored HDMI Output Streams can be turned ON/OFF

    NOTE: These are the ODD NUMBERED Ports (1, 3, 5, etc)**

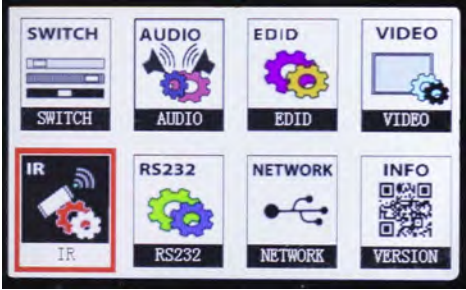
Function 3 - Set the HDBT Stream Setting

- HDBT Stream Settings
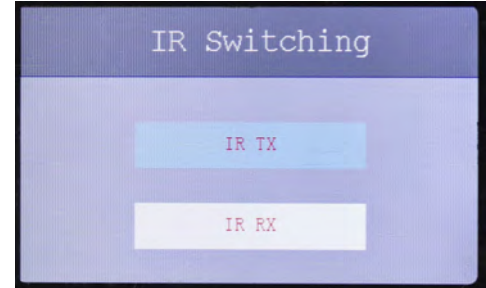 - The 16 HDBT Output Streams can be turned ON/OFF

Control Screen - IR:

NOTE: The same settings can be found in the Web Interface under "IR EX-Setting", and "IR & RS232 Control"
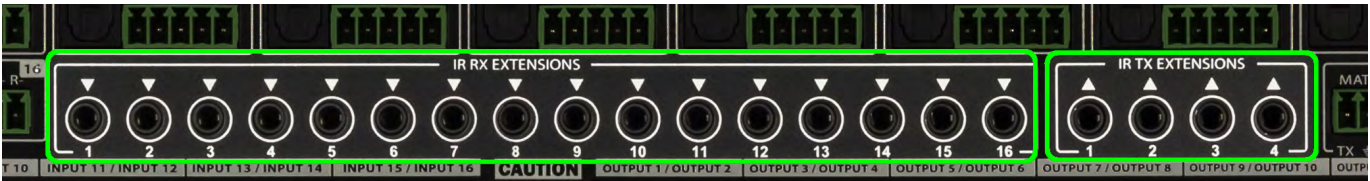
The IR Settings Menu has two Functions

- IR TX
    - o Routing
   - o ON/OFF
- IR RX
    - o Routing

IR Details:

The IR RX Extensions on this machine are designed for a direct connection from a control system only. These are not designed to be used with a IR Receiving Eye.

IR NOTES (On the Matrix):

1. By default the IR RX is routed to the corresponding HDBaseT Output number (ie. IR IN #1 --> HDBaseT Output 1, IR IN #2 --> HDBaseT Output 2, etc...)

    a. To change, use the arrow keys to select the HDBT Channel/RX Channel, hit ENTER and use the up/down arrow keys to change the route

2. By default the IR TX is automatically routed with the active source (ie. If you are watching INPUT 3 on HDBaseT OUTPUT 1, when you point a remote at an IR Receiver on the HDBaseT Rx connected the signal will be routed to IR OUT 3)

3. Each IR IN can be routed in any way you like (One to one or one to many) by using the command SET IRC EXT SW x1.x2.x3.x4 (See below).

4. Each IR OUT can be routed manually as well using the command SET IRT OUTx IS INy ({x=[0~16](0=all),y=[1~16]}). This can also be controlled by the Web Interface
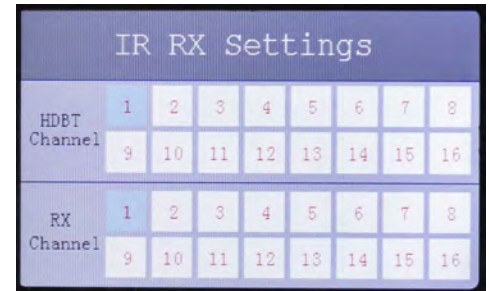

IR NOTES (On the HDBaseT Receiver):

1. **IR OUT** = IR Emitter for sending signals to a Display or Projector

    a. (Note - Use Provided Emitters)

2. **IR IN** = For sending IR signals back to the Matrix for switching AND to send IR signals to the IR TX (out) on the Matrix - by default the IR OUT on the matrix is automatically routed with the active source (ie. If you are watching INPUT 3 on HDBaseT OUTPUT 1, when you point a remote at an IR Receiver on the HDBaseT Rx connected the signal will be routed to IR OUT 3)

Control Screen -RS232 Management:

1. Here you can turn RS232 ON/OFF per OUTPUT
   a. Use the arrow keys to select the OUTPUT
   b. Press enter
   c. Use Up/Down arrow keys to change from ON/OFF
   d. Press Enter again to set
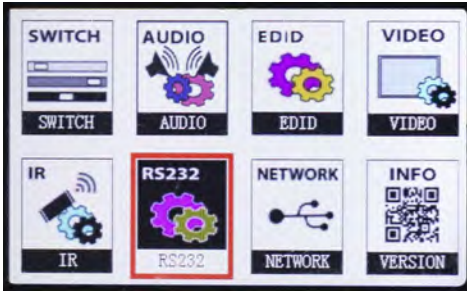
Control Screen -Network:

1. Here you can alter the Network settings
   a. Use the UP/DOWN arrow keys to select the setting (RIP, IP, MASK, TCP/IP, and DHCP)
   b. Press enter
   c. Use LEFT/RIGHT Arrow keys to move between digits
      i. (green highlighted section)
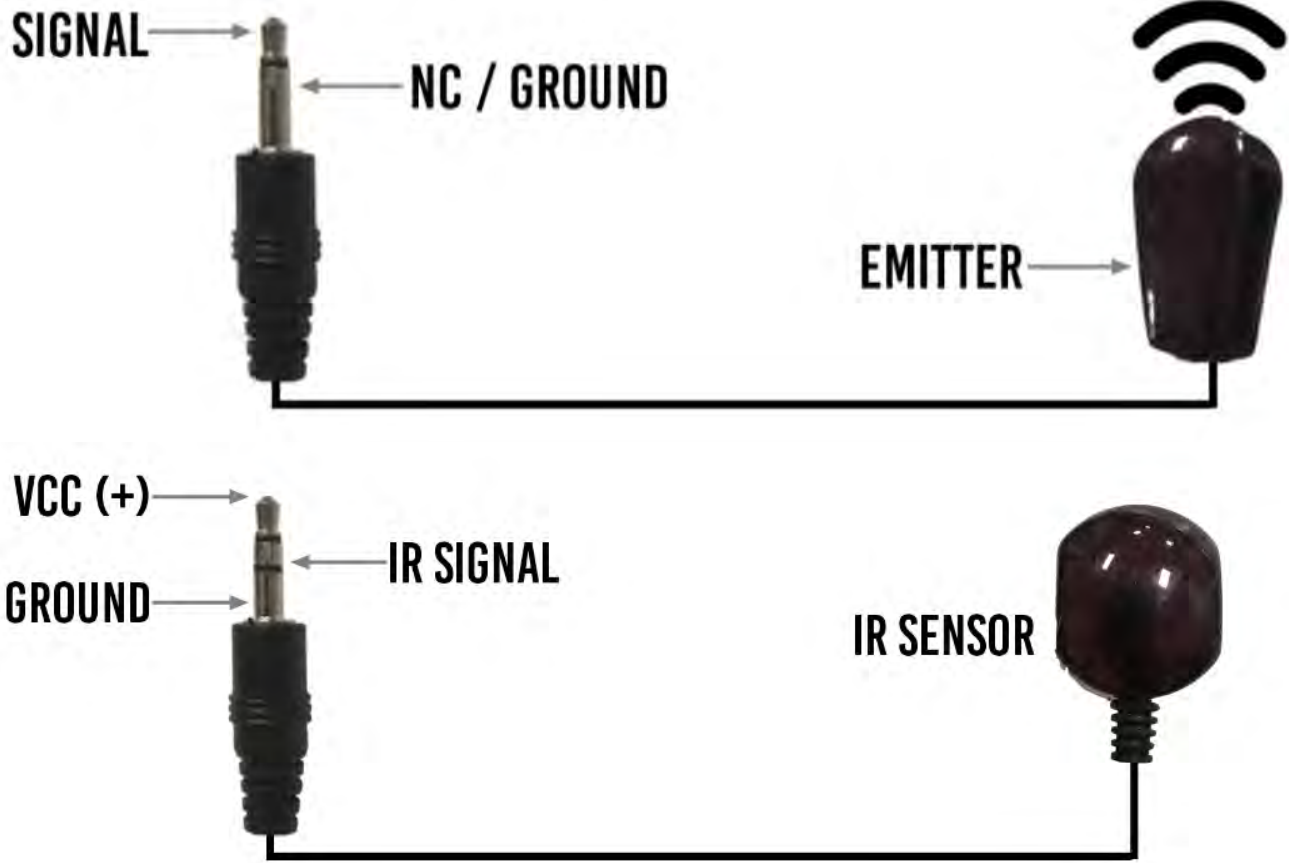   d. Use UP/DOWN to change numerical value
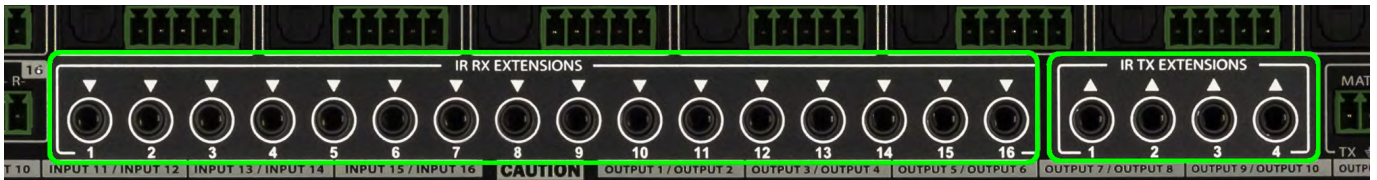   e. Press ENTER to set
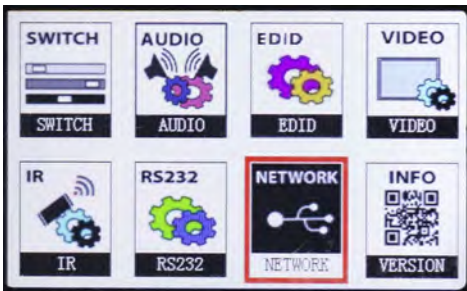
Control Screen -Info:

1. Here you can view the Firmware Versions currently loaded on the Matrix
   a. Note: There are two pages, use the UP/DOWN arrow keys to navigate between the two.
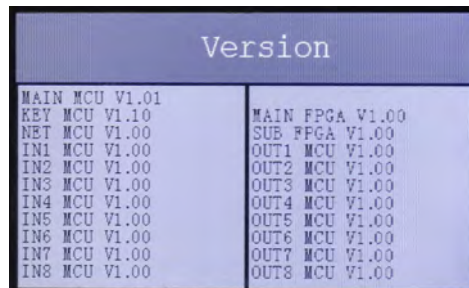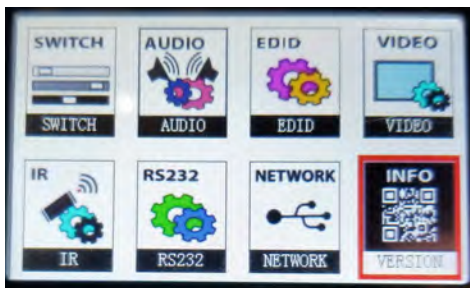
IR Details: HDBaseT Receiver

SIGNAL
NC / GROUND
EMITTER

VCC (+)
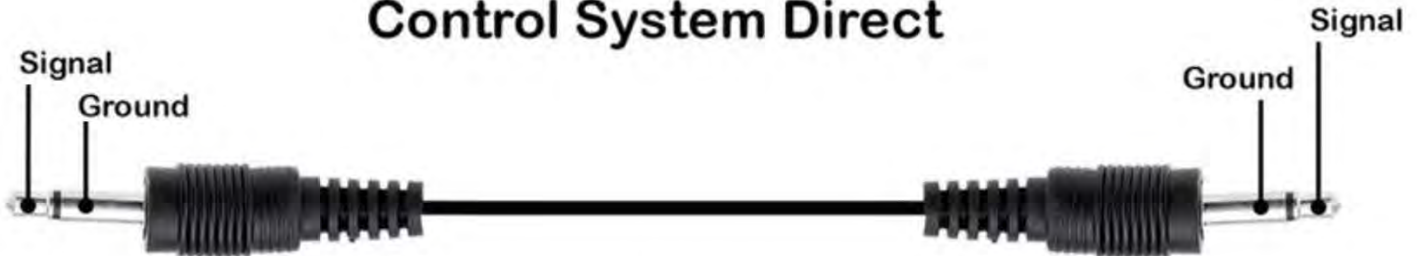IR SIGNAL
GROUND
IR SENSOR

IR Details: Matrix

The "IR RX EXTENTION" and "IR TX EXTENTION" ports on the back of the Matrix are designed to be directly connected to a control system. They are not designed to be used with IR Emitters/Receivers.

Control System Direct

Signal
Ground
Signal
Ground

Available for purchase, Part Number "AC-IR Mono Cable"

RS232 Details:

Here is a sample cable. in this example you can see how to connect or build and RS232 cable to use to control the Matrix. The pin configuration is shown here as well.
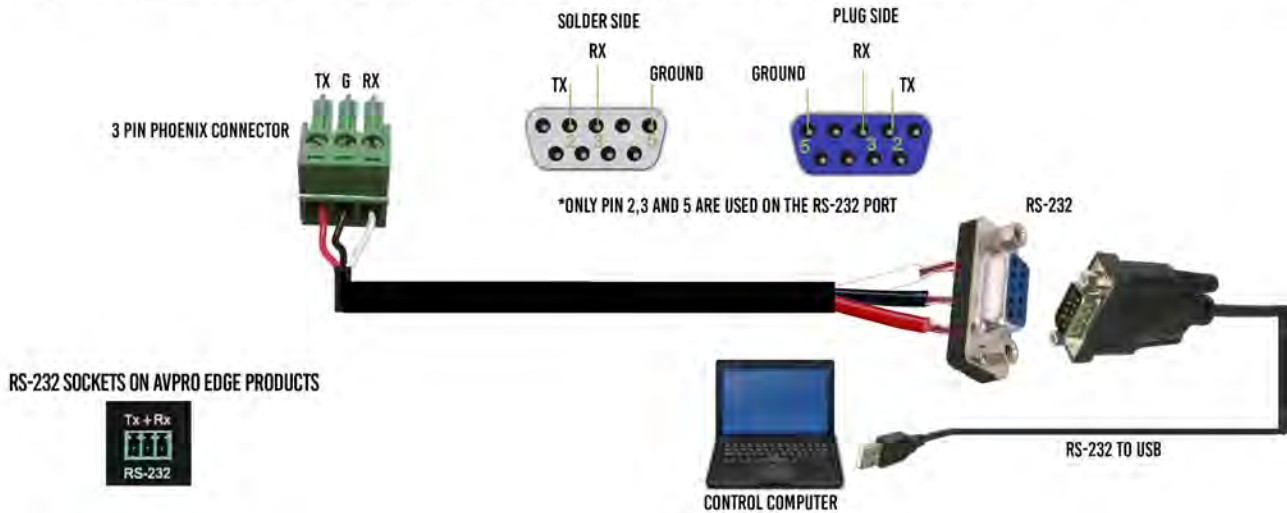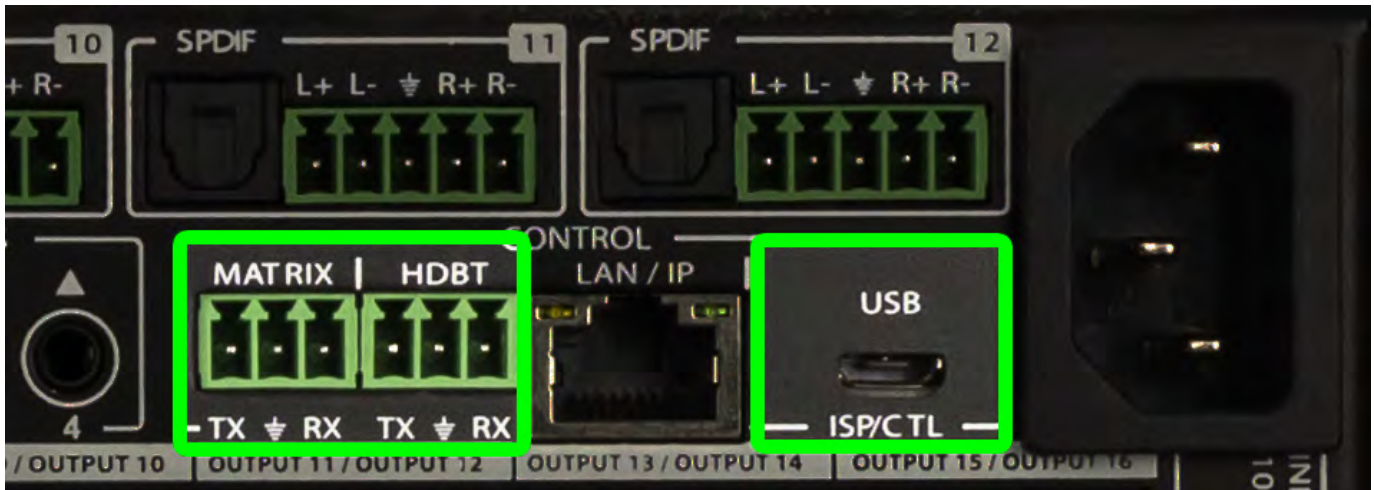

You can send serial commands in the 3-Pin port or the Micro USB port

3-Pin RS232
to control
Matrix

Has a built in Micro USB--
Serial driver, a com port will
be set up on the PC

3-Pin RS232
to HDBaseT
Receivers

RS-232 and TCP/IP Control:

The AC-MX1616-AUHD-HDBT can be controlled with either RS-232 or TCP/IP commands. Certain switching or format configurations can only be done using these commands. We recommend using either the MyUART (RS-232 - free) or Hercules (TCP/IP - free) apps as they are very easy to use for sending commands to the machine.

For TCP/IP control commands use Telnet Port 23.

For RS-232, use a null modem serial cable adapter and set the serial communications to: 57600,n,8,1 (baud: 57600, no parity, 8 data bits and 1 stop bit) with no handshaking.

Please add a return (Enter key) after each command when using direct commands.

The unified command list (ASCII) is listed below.

Serial Command List

=	H	: Help	=
=	STA	: Show Global System Status	=
=	SET RST	: Reset to Factory Defaults	=
=	SET RBT	: System Reset to Reboot	=
=	SET ADDR xx	: Set System Address to xx {xx=[00-99](00=Single)}	=
=	SET LCD ON Tx	: Set LCD Remain On Time{x=[0~3](0=Always ON,1=15,2=30,3=60Sec)}	=
=	SET KEY LOCK ON/OFF	: Set Key Lock On/Off	=
=	SET FAN SPEED x	: Set Fan Speed{x=[0~6]}	=
=	GET ADDR	: Get System Address	=
=	GET STA	: Get System Status	=
=	GET DEV TEMP	: Get Device Temperature	=
=	GET INx SIG STA	: Get Input x Signal Status{x=[0~16](0=ALL)}	=
=	GET INx VID FMT INF	: Get Input x Video Format Info{x=[0~16](0=ALL)}	=
=	GET LCD ON T	: Get LCD Remain On Time	=
=	GET KEY LOCK	: Get Key Lock Status	=
=	---		=
=	Output Setup Commands:	(Note:output number[0~16])	=
=	SET OUTx VS INy	: Set Output x To Input y{x=[0~16](0=ALL), y=[1~16]}	=
=	SET OUTx TP VIDEOy	: Set HDBT Output x VIDEO Mode y {x=[0~16](0=ALL), y=[2,5](2=4K->2K(Only Odd Num),5=ICT Mode)}	=
=	SET OUTx TP POEy	: Set HDBT Output x Power Mode{x=[0-16](0-ALL),y=[0-1](0-Auto,1-EN)}	=
=	SET OUTx EXA EN/DIS	: Set Ex-Audio Output x Enable/Disable{x=[0~16](0=ALL)}	=
=	SET OUTx EXADL PHy	: Set Ex-Audio Delay {x=[0~16](0=ALL), y=[0~7](0=Bypass,1~7=90,180,270,360,450,540,630MS)}	=
=	SET EXAMX MODEx	: Set Ex-Audio Matrix Mode{x=[0~2](0=Bind To Output,1=Bind To Input,2=Matrix}	=
=	SET OUTx AS INy	: Set Ex-Audio Output x To Input y{x=[0~16](0=ALL), y=[1~16]}	=
=	SET OUTx EXAUD LEVy	: Set Output x EQ-Audio Volume Levely{x=[1-16],y=[0~14]}	=
=	SET OUTx TP SGM EN/DIS	: Set HDBT Output x Signal Generator Enable/Disable{x=[0~16](0=ALL)}	=
=	SET OUTx HP STREAM ON/OFF	: Set HDMI Output x Stream ON/OFF{x=[0-15(Odd Num)](0=ALL)}	=
=	SET OUTx TP STREAM ON/OFF	: Set HDBT Output x Stream ON/OFF{x=[0~16](0=ALL)}	=
=	GET OUTx VS	: Get Output x Video Route{x=[0~16](0=ALL)}	=
=	GET OUTx TP VIDEO	: Get HDBT Output x Video Mode{x=[0~16](0=ALL)}	=
=	GET OUTx TP POE	: Get HDBT Output x Power Mode{x=[0-16]}	=
=	GET OUTx EXA	: Get Ex-Audio Output Enable/Disable Status{x=[0~16](0=ALL)}	=
=	GET OUTx EXADL PH	: Get Ex-Audio Output Delay Status{x=[0~16](0=ALL)}	=
=	GET EXAMX MODE	: Get Ex-Audio Matrix Mode	=
=	GET OUTx AS IN	: Get Output x Ex-Audio Route{x=[0~16](0=ALL)}	=
=	GET OUTx EXAUD LEV	: Get Output x EQ-Audio Volume Level{x=[0,16](0=all)}	=
=	GET OUTx TP SGM	: Get HDBT Output x Signal Generator Enable/Disable Status{x=[0~16](0=ALL)}	=
=	GET OUTx HP STREAM	: Get HDMI Output x Stream ON/OFF Status{x=[0-15(Odd Num)](0=ALL)}	=
=	GET OUTx TP STREAM	: Get HDBT Output x Stream ON/OFF Status{x=[0~16](0=ALL)}	=
=	GET OUTx HP EDID DATA	: Get HDMI Output x EDID DATA{x=[1-15(Odd Num)]}	=
=	GET OUTx TP EDID DATA	: Get HDBT Output x EDID DATA{x=[1~16]}	=

Command List Continued:

```
= -------------------------------------------------------------------------------------------------------------------------- =
= Input Setup Commands:                        (Note:input number(x)=HDMI(x),x=1-16)                                          =
= SET INx EDID y                               : Set Input x EDID{x=[0~16](0=ALL), y=[0~32]}                                  =
=        0:1080P_2CH(PCM)                    1:1080P_6CH                              2:1080P_8CH                             =
=        3:1080P_3D_2CH(PCM)                 4:1080P_3D_6CH                           5:1080P_3D_8CH                          =
=        6:4k30Hz_3D_2CH(PCM)                7:4k30Hz_3D_6CH                          8:4k30Hz_3D_8CH                         =
=        9:4K60Hz(Y420)_3D_2CH(PCM)          10:4K60Hz(Y420)_3D_6CH                   11:4K60Hz(Y420)_3D_8CH                  =
=        12:4K60HZ_3D_2CH                     13:4K60HZ_3D_6CH                        14:4K60HZ_3D_8CH                        =
=        15:1080P_2CH(PCM)_HDR               16:1080P_6CH_HDR                         17:1080P_8CH_HDR                        =
=        18:1080P_3D_2CH(PCM)_HDR            19:1080P_3D_6CH_HDR                      20:1080P_3D_8CH_HDR                     =
=        21:4K30Hz_3D_2CH(PCM)_HDR           22:4K30Hz_3D_6CH_HDR                     23:4K30Hz_3D_6CH_HDR                    =
=        24:4K60Hz(Y420)_3D_2CH(PCM)_HDR     25:4K60Hz(Y420)_3D_6CH_HDR               26:4K60Hz(Y420)_3D_8CH_HDR              =
=        27:4K60Hz_3D_2CH(PCM)_HDR           28:4K60Hz_3D_6CH_HDR                     29:4K60Hz_3D_8CH_HDR                    =
=        30:USER1_EDID                        31:USER2_EDID                           32:USER3_EDID                           =
= SET INx EDID CY OUTy HP                      : Copy HDMI Output y EDID To Input x(USER1 BUF){x=[0~16](0=ALL), y=[Odd Num]}  =
= SET INx EDID CY OUTy TP                      : Copy HDBT Output y EDID To Input x(USER1 BUF){x=[0~16](0=ALL), y=[1~16]}     =
= SET INx EDID Uy DATAz                        : Write EDID To  User y Buffer  of Input x{x=[0~16](0=ALL), y=[1~3],z=[EDID Data]} =
= GET INx EDID                                 : Get Input x EDID  Index{x=[0~16](0=ALL)}                                     =
= GET INx EDID y DATA                          : Get Input x EDID y Data{x=[1~16],y=[0~32]}                                   =
= -------------------------------------------------------------------------------------------------------------------------- =
= Network Setup Command:                       : ( xxx=[000-255], zzzz=[0001~9999]                                           =
= SET RIP xxx.xxx.xxx.xxx                      : Set Route IP Address to xxx.xxx.xxx.xxx                                      =
= SET HIP xxx.xxx.xxx.xxx                      : Set Host IP Address to xxx.xxx.xxx.xxx                                       =
= SET NMK xxx.xxx.xxx.xxx                      : Set Net Mask to xxx.xxx.xxx.xxx                                             =
= SET TIP zzzz                                 : Set TCP/IP Port to zzzz                                                      =
= SET DHCP y                                   : Set DHCP {y=[0~1](0=Dis,1=Enable)}                                          =
= GET RIP                                      : Get Route IP Address                                                         =
= GET HIP                                      : Get Host IP Address                                                          =
= GET NMK                                      : Get Net Mask                                                                 =
= GET TIP                                      : Get TCP/IP Port                                                              =
= GET DHCP                                     : Get DHCP Status                                                              =
= GET MAC                                      : Get MAC Address                                                              =
= -------------------------------------------------------------------------------------------------------------------------- =
= IR Route Setup Command:                                                                                                     =
=                                              : zz={x1.x2.x3.x4.x5.x6.x7.x8.x9.x10.x11.x12.x13.x14.x15.x16}                  =
= SET IRC OUTy MUX z                           : Set IR Route Channel Switch{x1~x16=[0,1](0=Disable,1=Enable),y=[0~4]}        =
= SET IRT OUTx IS INy                          : Set Output x IR Route{x=[0~16](0=all),y=[1~16]}                              =
=                                              : zz={x1.x2.x3.x4.x5.x6.x7.x8.x9.x10.x11.x12.x13.x14.x15.x16}                  =
= SET LIR EXT SW zz                            : Set Local IR Extender Switch{x1~x16=[0,1](0=Disable,1=Enable)}               =
=                                              : zz={x1.x2.x3.x4.x5.x6.x7.x8.x9.x10.x11.x12.x13.x14.x15.x16}                  =
= SET CIR EXT SW zz                            : Set Callback IR Extender Switch{x1~x16=[0,1](0=Disable,1=Enable)}            =
= GET IRC OUTy MUX                             : Get IR Route Channel Switch Status{x=[0~4](0=all)}                           =
= GET IRT OUTx IS                              : Get Output x IR Route{x=[0~16](0=all)}                                       =
= GET LIR EXT SW                               : Get Local IR Extender Switch Status                                          =
= GET CIR EXT SW                               : Get Callback IR Extender Switch Status                                       =
= -------------------------------------------------------------------------------------------------------------------------- =
= RS232 Route Setup Command:                                                                                                  =
=                                              : zz={x1.x2.x3.x4.x5.x6.x7.x8.x9.x10.x11.x12.x13.x14.x15.x16}                  =
= SET RS CHy MUX zz                            : Set the RS232 MUX{y=[1],x1~x16=[0-1](0=Disable,1=Enable)}                    =
=                                              : Set RS232 Control Pass Through to Outputx                                    =
= SET RS PTH OUTx LENy BRz                     {x=[0-16](0=ALL),y=[1~800],z=[0~5](0=9600,1=14400,2=19200,3=38400,4=57600,5=115200)} =
= GET RS CHx MUX                               : Get the RS232 MUX Status{x=[1]}                                              =
= -------------------------------------------------------------------------------------------------------------------------- =
= IR Code Setup Command:                                                                                                      =
= SET IR SYS xx.yy                             : Set IR Custom Code{xx=[00-FFH],yy=[00-FFH]}                                  =
= SET IR OUTx INy CODE mm.nn                   : {x=[1~16],y=[1~16],mm=[00~FFH,Output],nn=[00~FFH,Input]}                     =
= GET IR SYS                                   : Get IR Custom Code                                                           =
= GET IR OUTx INy CODE                         : Get IR Data Code{x=[1~16],y=[1~16]}                                          =
= -------------------------------------------------------------------------------------------------------------------------- =
```

Extracted Audio:

The extracted audio ports have distinct operating modes. Your desired mode can be set to suite your particular installation. The 3 modes are:

From Input ~ This is the default configuration. In this mode the audio port number corresponds to the INPUT signal. This is ideal for systems where audio is matrixed separately in a zoned amplifier.

From Output ~ This configuration will automatically have the audio follow OUTPUT, so the audio from the extracted port always matches the HDMI output. This is ideal for systems that use local AVR's for some of the zones.

Independent/Matrix ~ This mode allows you matrix the extracted audio outputs independent of HDMI. In this mode a new set of commands becomes available to be able to route audio however you want. This can be used as a separate zoned audio matrix with only using an amplifier.

Setting up Extracted Audio Routing:

You can set up Extracted Audio Routing from the front panel, WebOS, Driver or by sending the following command:

SET EXAMX MODEx -- Where {x=[0~2](0=Bind To Output,1=Bind To Input,2=Matrix}

If you set to "Matrix" you can use the following command to route the 16 extracted audio ports to any INPUT:

SET OUTx AS INy -- Where Set Ex-Audio Output x To Input y{x=[0~16](0=ALL), y=[1~16]}

NOTE: 2CH Balanced Audio Port - Supports 2CH PCM audio only, which is ideal for 2 Channel systems and zoned audio systems. NO DOWN-MIXING

Toslink Audio Port - Supports PCM, LPCM (up to 7CH), Dolby Digital, Dolby Digital Plus, DTS, DTS-HD, DTS Master Audio, which is ideal for multi-channel audio systems and older AVRs that do not support 18Gbps.

Audio Diagrams:

AUDIO MODE 1: FROM INPUT

AUDIO IS FIXED TO THE INPUT, THIS IS IDEAL IMPLEMENTING A SECONDARY AUDIO AMPLIFIER/MATRIX FOR YOUR ZONED AUDIO
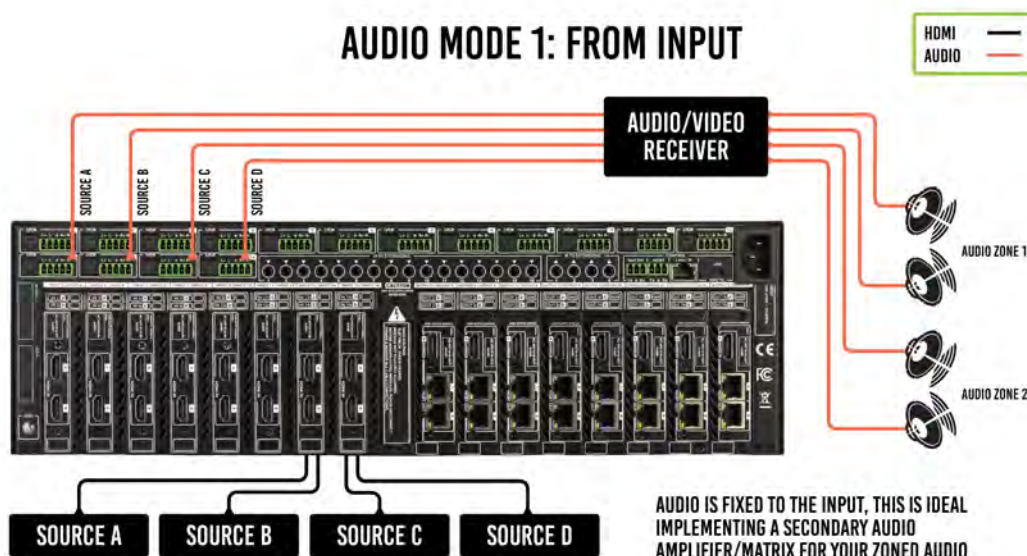
Extracted Audio cont:

Audio Diagrams:

AUDIO MODE 2: FROM OUTPUT

AUDIO AUTOMATICALLY FOLLOWS THE OUTPUT

IN THIS MODE THE AUDIO OUTPUT WOULD MATCH THE VIDEO BEING DISTRIBUTED IN THAT OUTPUT BLOCK
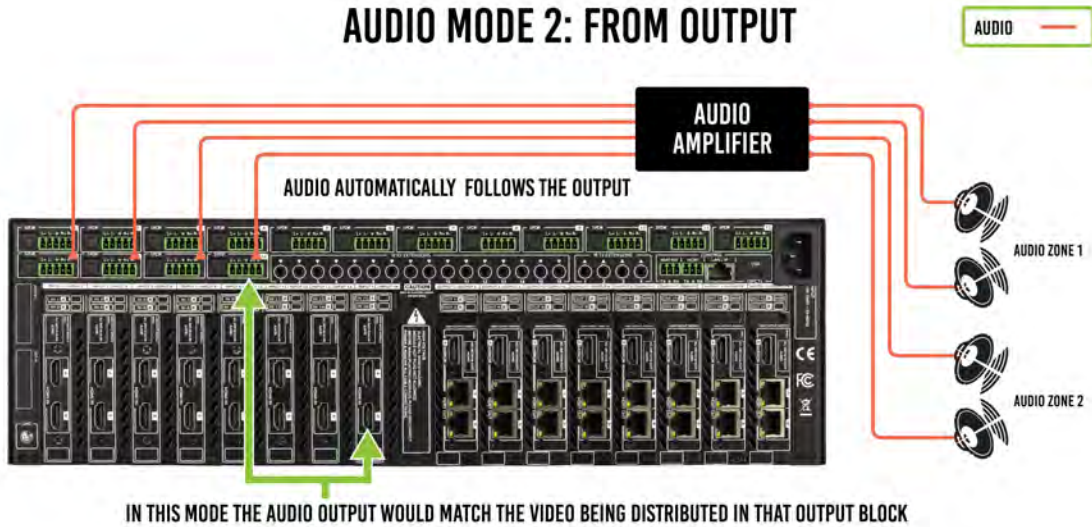
AUDIO MODE 3: INDEPENDENT

AUDIO IS ROUTED COMPLETELY INDEPENDENTLY FROM ANY OUTPUTS

VIDEO OUTPUT # WITH AUDIO OUTPUT #

Audio Wiring Diagram:

*make sure ground is always connected
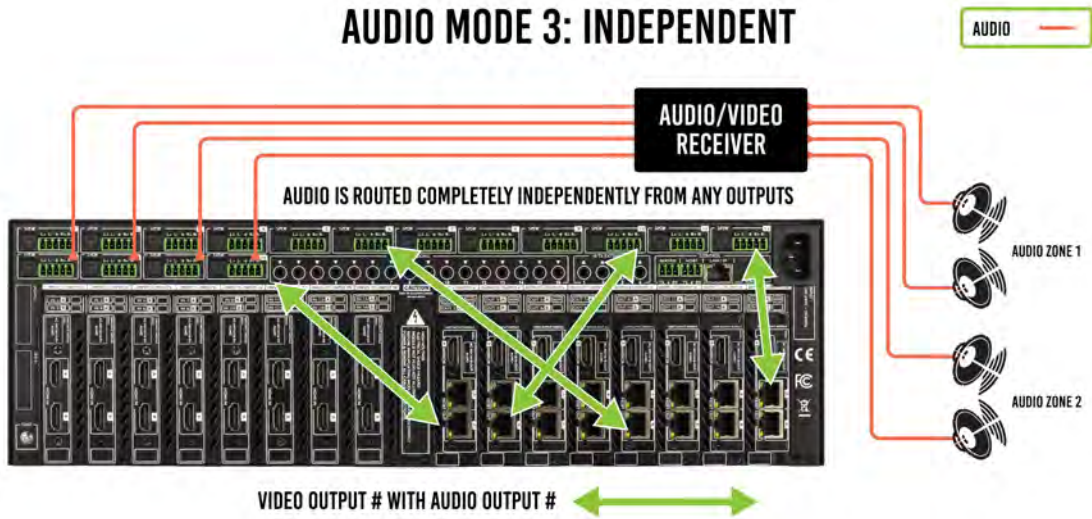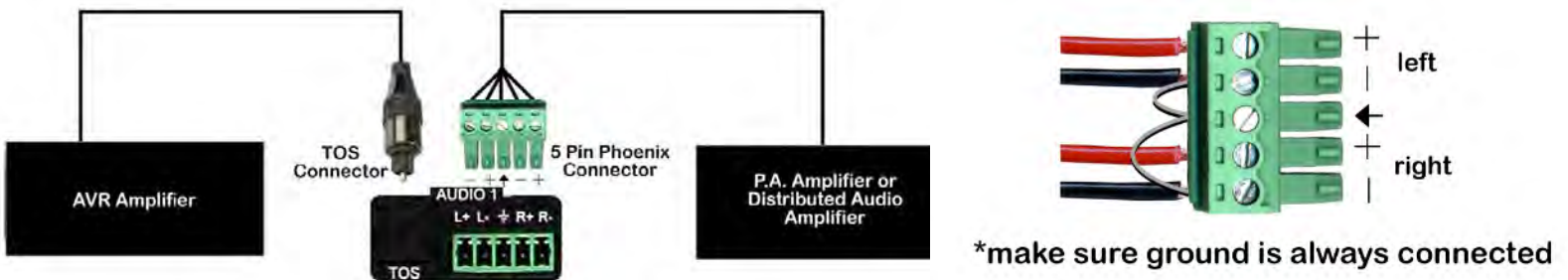
Web Interface: Sense Switch

Here you can switch INPUTS/OUTPUTS

Sense Switch	Link Info	Video Setting	Audio Setting	Audio Matrix	IR EX-Setting	IR & RS232 Control	EDID Manage	System Setting

Sense Switch

	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT1	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT2	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT3	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT4	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT5	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT6	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT7	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT8	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT9	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT10	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT11	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT12	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT13	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT14	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT15	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT16	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
ALL	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16

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Web Interface: Link Info

Here you can see video information for each INPUT.

Sense Switch	Link Info	Video Setting	Audio Setting	Audio Matrix	IR EX-Setting	IR & RS232 Control	EDID Manage	System Setting

VIDEO INFO

IN1	3840X2160P@62HZ YUV420	Refresh
IN2	1920X1080P@60HZ YUV422	
IN3	NO SIGNAL	
IN4	NO SIGNAL	
IN5	NO SIGNAL	
IN6	NO SIGNAL	
IN7	NO SIGNAL	
IN8	NO SIGNAL	
IN9	NO SIGNAL	
IN10	NO SIGNAL	
IN11	NO SIGNAL	
IN12	NO SIGNAL	
IN13	NO SIGNAL	
IN14	NO SIGNAL	
IN15	NO SIGNAL	
IN16	NO SIGNAL	

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Web Interface: Video Settings

1. HDBT Video Scaler Mode

    a. Odd number HDBaseT Ports can be either

        i. 4K-HD, any incoming 4K Signal will be downscaled to 1920x1080P

        ii. ICT MODE (18G), Our Invisible Compression Technology mode (Default) when paired with 444 HDBaseT Receiver will deliver a 18Gbps signal over HDBaseT

2. HDMI Output Stream

    a. Mirrored HDMI OUTPUTs can be turned ON/OFF

3. HDBT Output Stream

    a. Each HDBT Output can be turned ON/OFF

4. HDBT Output Signal

    a. Built in 1080P Test pattern can be turned ON/OFF per HDBT Output

Sense Switch	Link Info	Video Setting	Audio Setting	Audio Matrix	IR EX-Setting	IR & RS232 Control	EDID Manage	System Setting

AVPro edge

HDBT Video Scaler Mode	HDMI Output Stream	HDBT Output Stream	HDBT Output Signal
OUT1 4K-HD ICT MODE	OUT1 ON OFF	OUT1 ON OFF	OUT1 ON OFF
OUT3 4K-HD ICT MODE	OUT3 ON OFF	OUT2 ON OFF	OUT2 ON OFF
OUT5 4K-HD ICT MODE	OUT5 ON OFF	OUT3 ON OFF	OUT3 ON OFF
OUT7 4K-HD ICT MODE	OUT7 ON OFF	OUT4 ON OFF	OUT4 ON OFF
OUT9 4K-HD ICT MODE	OUT9 ON OFF	OUT5 ON OFF	OUT5 ON OFF
OUT11 4K-HD ICT MODE	OUT11 ON OFF	OUT6 ON OFF	OUT6 ON OFF
OUT13 4K-HD ICT MODE	OUT13 ON OFF	OUT7 ON OFF	OUT7 ON OFF
OUT15 4K-HD ICT MODE	OUT15 ON OFF	OUT8 ON OFF	OUT8 ON OFF
		OUT9 ON OFF	OUT9 ON OFF
		OUT10 ON OFF	OUT10 ON OFF
		OUT11 ON OFF	OUT11 ON OFF
		OUT12 ON OFF	OUT12 ON OFF
		OUT13 ON OFF	OUT13 ON OFF
		OUT14 ON OFF	OUT14 ON OFF
		OUT15 ON OFF	OUT15 ON OFF
		OUT16 ON OFF	OUT16 ON OFF

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Web Interface: Audio Settings

1. Extracted Audio Delay (MS)

   a. Each extracted Audio Port has the ability to delay the audio in 90 millisecond intervals.

      i. 90, 180, 270, 360, 450, 540, and 630 Miliseconds.

   b. Bp = BYPASS (Default).

2. Audio Status

   a. Each extracted Audio Port can be turned ON/OFF

Sense Switch	Link Info	Video Setting	Audio Setting	Audio Matrix	IR EX-Setting	IR & RS232 Control	EDID Manage	System Setting

Ex-Audio Output Delay(MS)

										Audio Status	
OUT1	90	180	270	360	450	540	630	Bp	OUT1	ON	OFF
OUT2	90	180	270	360	450	540	630	Bp	OUT2	ON	OFF
OUT3	90	180	270	360	450	540	630	Bp	OUT3	ON	OFF
OUT4	90	180	270	360	450	540	630	Bp	OUT4	ON	OFF
OUT5	90	180	270	360	450	540	630	Bp	OUT5	ON	OFF
OUT6	90	180	270	360	450	540	630	Bp	OUT6	ON	OFF
OUT7	90	180	270	360	450	540	630	Bp	OUT7	ON	OFF
OUT8	90	180	270	360	450	540	630	Bp	OUT8	ON	OFF
OUT9	90	180	270	360	450	540	630	Bp	OUT9	ON	OFF
OUT10	90	180	270	360	450	540	630	Bp	OUT10	ON	OFF
OUT11	90	180	270	360	450	540	630	Bp	OUT11	ON	OFF
OUT12	90	180	270	360	450	540	630	Bp	OUT12	ON	OFF
OUT13	90	180	270	360	450	540	630	Bp	OUT13	ON	OFF
OUT14	90	180	270	360	450	540	630	Bp	OUT14	ON	OFF
OUT15	90	180	270	360	450	540	630	Bp	OUT15	ON	OFF
OUT16	90	180	270	360	450	540	630	Bp	OUT16	ON	OFF

AC-MX1616-AUHD
V1.30

Web Interface: Audio Matrix

The Audio Setting tab allows to:

1 - Select the Ex-Audio Matrix

Mode:
- Bind To Output (Default) ~ Extracted audio will switch with the corresponding HDMI Output of the same number
- Bind To Input ~ Extracted audio will be fixed to the corresponding HDMI Input of the same number (Audio will never switch)
- Matrix ~ Extracted audio can be routed independently of the HDMI Matrix (NOTE: You can only use the "Audio Matrix" control grid when this mode is selected.

2 - Audio Matrix ~ This grid allows you to control the extracted audio route independently of the HDMI route.

NOTE:This function is only available if the Ex-Audio Mode is "Matrix"

Web Interface: IR EX-Settings
- IR RX Extensions:
- IR TX Extensions:

1. By default the IR RX is routed to the corresponding HDBaseT Output number (ie. IR IN #1 --> HDBaseT Output 1, IR IN #2 --> HDBaseT Output 2, etc...)

   a. To change, use the arrow keys to select the HDBT Channel/RX Channel, hit ENTER and use the up/down arrow keys to change the route

2. By default the IR TX is automatically routed with the active source (ie. If you are watching INPUT 3 on HDBaseT OUTPUT 1, when you point a remote at an IR Receiver on the HDBaseT Rx connected the signal will be routed to IR OUT 3)

3. Each IR IN can be routed in any way you like (One to one or one to many) by using the command SET IRC EXT SW x1.x2.x3.x4 (See below).

4. Each IR OUT can be routed manually as well using the command SET IRT OUTx IS INy ({x=[0~16](0=all),y=[1~16]}).

Sense Switch	Link Info	Video Setting	Audio Setting	Audio Matrix	IR EX-Setting	IR & RS232 Control	EDID Manage	System Setting

IR RX EXTENSIONS

	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT1	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT2	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT3	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT4	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT5	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT6	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT7	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT8	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT9	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT10	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT11	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT12	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT13	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT14	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT15	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT16	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
ALL	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16

IR TX EXTENSIONS

	IN1	IN2	IN3	IN4	IN5	IN6	IN7	IN8	IN9	IN10	IN11	IN12	IN13	IN14	IN15	IN16
OUT1	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
OUT2	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
OUT3	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
OUT4	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

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Web Interface: IR & RS232 Control

- RS232 Control:
    - ON (Default) - Allows RS232 signals to route through Matrix to HDBaseT Receiver
    - OFF - RS232 signals will not route through the Matrix to the corresponding HDBaseT Receivers
- Local IR Switch:
    - ON (Default) - Turns IR RX Extensions 3.5mm Ports on back of Matrix ON
    - OFF - Turns IR RX Extensions 3.5mm Ports on back of Matrix OFF
- Callback IR Switch:
    - ON (Default) - Turns IR TX Extension 3.5mm Ports on the back of the Matrix ON
    - OFF - Turns IR TX Extension 3.5mm Ports on the back of the Matrix OFF

IR RX Extensions

IR TX Extensions

Web Interface: IR & RS232 Control

Using the built-in EDID manager, a multitude of EDID's can be set for each input, and each input can be assigned a different EDID. This should be used to optimize or to manage infrastructure.

The EDID options are:

1080P_2CH	1080P_8CH_HDR
1080P_6CH	1080P_3D_2CH_HDR
1080P_8CH	1080P_3D_6CH_HDR
1080P_3D_2CH	1080P_3D_8CH_HDR
1080P_3D_6CH	4K30HZ_3D_2CH_HDR
1080P_3D_8CH	4K30HZ_3D_6CH_HDR
4K30HZ_3D_2CH	4K30HZ_3D_8CH_HDR
4K30HZ_3D_6CH	4K60HzY420_3D_2CH_HDR
4K30HZ_3D_8CH	4K60HzY420_3D_6CH_HDR
4K60HzY420_3D_2CH	4K60HzY420_3D_8CH_HDR
4K60HzY420_3D_6CH	4K60HZ_3D_2CH_HDR
4K60HzY420_3D_8CH	4K60HZ_3D_6CH_HDR
4K60HZ_3D_2CH	4K60HZ_3D_8CH_HDR
4K60HZ_3D_6CH	User EDID 1
4K60HZ_3D_8CH	User EDID 2
1080P_2CH_HDR	User EDID 3
1080P_6CH_HDR	

*You can copy the EDID from any output (HDMI and HDBaseT) and apply it to any input. Select "Copy EDID from Output x" (x=1-16) and click Apply. This will copy the EDID from the display and apply it to the selected input. The new EDID will be stored as "USER EDID1"

Web Interface: System Settings

- IP Settings
  - Host IP Address
  - Subnet Mask
  - Router IP Address
  - TCP Port
  - DHCP/Static
- Port Alias Settings
  - Rename/Label each INPUT and OUTPUT (limited to Six Characters)

| Sense Switch | Link Info | Video Setting | Audio Setting | Audio Matrix | IR EX-Setting | IR & RS232 Control | EDID Manage | System Setting |

IP Setting

MAC Address	F8:1D:78:A8:19:E4
Host IP Address	192.168.1.239
Subnet Mask	255.255.255.0
Router IP Address	192.168.1.1
TCP Port	23

DHCP | Static IP | Apply

Port Alias Setting

OUT1	OUT1	IN1	IN1	OUT9	OUT9	IN9	IN9
OUT2	OUT2	IN2	IN2	OUT10	OUT10	IN10	IN10
OUT3	OUT3	IN3	IN3	OUT11	OUT11	IN11	IN11
OUT4	OUT4	IN4	IN4	OUT12	OUT12	IN12	IN12
OUT5	OUT5	IN5	IN5	OUT13	OUT13	IN13	IN13
OUT6	OUT6	IN6	IN6	OUT14	OUT14	IN14	IN14
OUT7	OUT7	IN7	IN7	OUT15	OUT15	IN15	IN15
OUT8	OUT8	IN8	IN8	OUT16	OUT16	IN16	IN16

Apply

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- ▪ *Troubleshooting*

- Verify Power - Pg. 7
  - o Ensure the Power cord is properly connected, front panel HDBaseT port LED indicator lights should be active
- Verify Connections - Check that all cables are properly connected
- Not passing video, this may be an EDID issue. Out of the box the default is 1080P 2CH. Try a canned EDID or copy the connected displays EDID - Pg. 11, 18, 28
- IR Issues - Verify correct connections - P. 13, 15, 26
  - o Visibly flashing Emitters may not function properly, try the IR Cables that come in the box if you are experiencing issues
- Audio Issues - Pg. 10, 19, 20, 24, 25
  - o Verify Source is set to output 8ch if using TOSLINK
    - ➢ Note: This unit does NOT Down-Mix, for 2Ch port to function source must be set to 2Ch.
- Still having issues, contact us
  - o Support Direct -   +1-605-977-3477
  - o All inquiries -   + 1-605-274-6055
  - o Submit a support request ticket
    - ➢ https://support.avproedge.com/hc/en-us/requests/new

- ## *Maintenance*

  To ensure reliable operation of this product as well as protecting the safety of any person using or handling this device while powered, please observe the following instructions.

  - Use the power supplies provided. If an alternate supply is required, check voltage, polarity and that it has sufficient power to supply the device it is connected to.
  - Do not operate these products outside the specified temperature and humidity range given in the above specifications.
  - Ensure there is adequate ventilation to allow this product to operate efficiently.
  - Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive components that may be damaged by any mistreatment.
  - Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.
  - Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

- ## *Damage Requiring Service*

  The unit should be serviced by qualified service personnel if:

  - The DC power supply cord or AC adaptor has been damaged
  - Objects or liquids have gotten into the unit
  - The unit has been exposed to rain
  - The unit does not operate normally or exhibits a marked change in performance
  - The unit has been dropped or the housing damaged

- ## *Support*

Should you experience any problems while using this product, first, refer to the Troubleshooting section of this manual before contacting Technical Support. When calling, the following information should be provided:

- Product name and model number
- Product serial number
- Details of the issue and any conditions under which the issue is occurring

- ## *Warranty*

If your product does not work properly because of a defect in materials or workmanship, AVProEdge (referred to as "the warrantor") will, for the length of the period indicated as below, (Parts/Labor (10) Years), which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor. During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

This warranty extends to products purchased directly from AVPro or an authorized dealer. AVPro is not liable to honor this warranty if the product has been used in any application other than that for which it was intended, has been subjected to misuse, accidental damage, modification or improper installation procedures, unauthorized repairs or is outside of the warranty period. Please direct any questions or issues you may have to your local dealer before contacting AVPro.

Thank you for choosing AVProEdge!

Please contact us with any questions, we are happily at your service!

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