

USER MANUAL

AVG-UHD4K-44 V2 Matrix Switcher 4K HDMI2.0 4x4

All Rights Reserved
Version: UHD4K-44 V2_2017V1.1

Features

- 4Kx2K@60Hz 4:4:4 & 1080p 3D signals
- HDMI2.0 & HDCP2.2 compatible, also backwards compatible with earlier versions
- Transmits 4Kx2K@60Hz 4:4:4 signal up to 5m via HDMI ports
- SPDIF and RCA ports for de-embedded HDMI audio output
- Variable level control for Analogue outputs
- Controllable via front touch panel, IR, RS232, TCP/IP and web-based GUI
- LCD screen shows real-time I/O connection status
- Convenient firmware upgrades through Micro USB port
- Easy installation with rack mounting design



The AVG-UHD4K-44 V2 is a professional 4K 4x4 HDMI Matrix Switcher with 4 HDMI inputs, 4 HDMI outputs, 4 SPDIF audio outputs and 4 analogue audio outputs.

This unit is designed to switch HDMI 2.0 and HDCP 2.2 compliant signals. It also features a powerful EDID management to ensure reliable AV distribution and routing.

**PLEASE READ THIS PRODUCT MANUAL CAREFULLY
BEFORE USING THIS PRODUCT.**

This manual is only for operation instruction only, and is not to be used in a maintenance capacity. The functions described in this version are current as at August 2017. Any changes of functions and operational parameters will be updated in future manual versions. Please refer to your dealer for the latest product details.

Version 1.0 26/9/17

SAFETY OPERATION GUIDE



In order to guarantee the reliable operation of the equipment and safety of the user, please abide by the following procedures in installation, use and maintenance:

1. The system must be earthed properly. Please do not use two blade plugs and ensure the AC power supply ranges from 100v to 240v and from 50Hz to 60Hz.
2. Do not install the switcher in an environment where it will be exposed to extreme hot or cold temperatures.
3. This unit will generate heat during operation, please ensure that you allow adequate ventilation to ensure reliable operation.
4. Please disconnect the unit from mains power if it will be left unused for a long period of time.
5. Please DO NOT try to open the casing of the equipment, DO NOT attempt to repair the unit. Opening the unit will void the warranty. There are high voltage components in the unit and attempting to repair the unit could result in serious injury.
6. Do not allow the unit to come into contact with any liquid as that could result in personal injury and or product failure.

TABLE OF CONTENTS

Introduction	1
Introduction to the AVG-UHD4K-44-V2	1.1
Features	1.2
What's in the Box	2
Product Appearance of the AVG-UHD4K-44-V2	3
Front Panel	3.1
Rear Panel.....	3.2
System Connection	4
Usage Precautions	4.1
Connection Diagram.....	4.2
Connection Procedure.....	4.3
System Applications	4.4
System Operation	5
I/O Connection Switching	5.1
I/O Connection Query	5.2
EDID Management.....	5.3
IR Control	5.4
RS232 Control.....	5.5
Installation/Removal of the RS232 Control Software	5.5.1
Basic Settings	5.5.2
RS232 Communication Commands.....	5.5.3
TCP/IP Control	5.6
Control Modes	5.6.1
Control Via TCP/IP Control	5.6.2
Control Via GUI.....	5.6.3
Scene Menu	5.6.3.1
Control Menu	5.6.3.2
Analog Audio Control.....	5.6.3.3
Configuration Properties	5.6.3.4
TCP/IP Configuration	5.6.4
GUI Update.....	5.6.5
Firmware Update through USB port	5.7
Specifications	6
Panel Drawing	7
Troubleshooting & Maintenance	8

1. Introduction

1.1. Introduction to the AVG-UHD4K-44 V2

The AVG-UHD4K-44 V2 is a professional 4K 4x4 HDMI Matrix Switcher with 4 HDMI inputs, 4 HDMI outputs, 4 RCA and 4 SPDIF audio outputs. It is designed to switch HDMI 2.0 and HDCP 2.2 compliant signals. It also features powerful EDID management to ensure reliable AV distribution and routing.

You can control the matrix via the front touch panel, IR, RS232, TCP/IP or a web-based GUI.

1.2. Features

- 4Kx2K@60Hz 4:4:4 & 1080p 3D signals
- HDMI2.0 & HDCP2.2 compatible, also backwards compatible with earlier versions
- Transmits 4Kx2K@60Hz 4:4:4 signal up to 5m via HDMI ports
- RCA and SPDIF ports for de-embedded HDMI audio output
- Controllable via front touch panel, IR, RS232, TCP/IP and web-based GUI
- LCD screen shows real-time I/O connection status
- Convenient firmware upgrades through Micro USB port
- Easy installation with rack mounting design

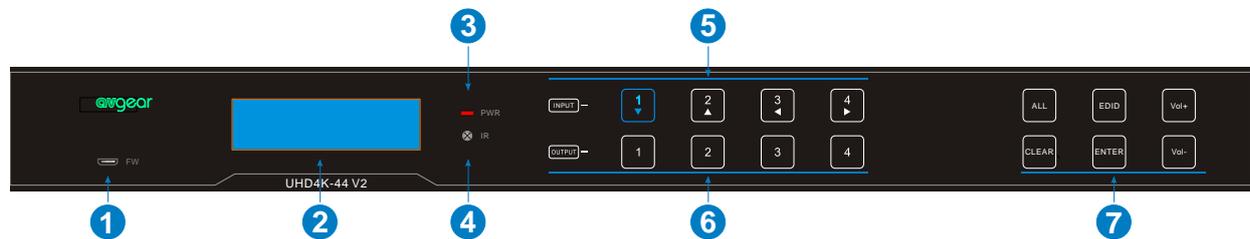
2. What's in the Box

- 1 x AVG-UHD4K-44 V2 Matrix Switcher
- 2 x Mounting Ears (6 x Screws)
- 1 x RS232 Phoenix Plug
- 1 x IR Receiver
- 1 x IR Remote
- 1 x Power Adapter (DC 24V 1.25A)
- 4 x Rubber Feet
- 1 x User Manual

Note: Please immediately contact your distributor if you found any damage or defect in the components.

3. Product Appearance of the AVG-UHD4K-44 V2

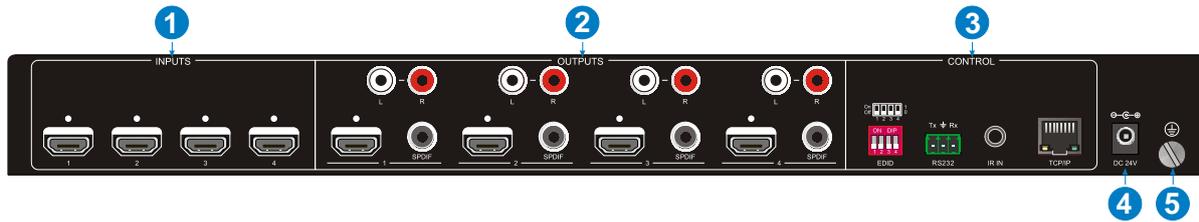
3.1 Front Panel



No	Name	Description
①	Firmware	Micro USB port for updating firmware.
②	LCD Screen	Displays real-time operation status.
③	Power Indicator	<ul style="list-style-type: none"> ▪ Illuminates green when powered on; ▪ Turns red in standby mode; ▪ Blinks red when updating.
④	IR sensor	Built-in IR Receiver, receives IR signals sent from the IR remote.
⑤	INPUT button	4 input selector buttons, press one of the buttons to select the input source.
⑥	OUTPUT button	4 output selector buttons, press one or more buttons to select outputs you want the input to switch to.
⑦	Function button	ALL: Select all inputs or outputs.
		EDID: EDID management button: Enable input port to manually capture and learn the EDID data of output devices.
		CLEAR: Cancel an operation like switching an output channel, learning EDID data before it comes into effect, etc. The matrix will return to its previous state.
		ENTER: Confirm operation. Press and hold it for 3 seconds to enter into Query mode.
		Vol+: Increase the RCA and SDPIF output audio volume.
		Vol-: Decrease the RCA and SDPIF output audio volume.

Note: Pictures shown in this manual are for reference only.

3.2 Rear Panel



No	Name	Description
①	INPUTS	HDMI input ports, 4 in total, connect to HDMI sources.
②	OUTPUTS	SPDIF: digital audio output ports for de-embedded HDMI audio, 4 in total.
		RCA: stereo audio output ports for de-embedded HDMI audio, 4 in total.
		HDMI: 4 in total, connect to your HDMI displays.
③	CONTROL	EDID: 4-pin EDID DIP switch to set EDID data, “1” stands for “On”, “0” stands for “Off”. Refer to <u>5.3 EDID Management</u> for more details.
		RS232: Serial control port, connect to your control device.
		IR IN: Connects an external IR receiver to control the Matrix Switcher via the IR remote.
		TCP/IP: Ethernet connection for TCP/IP control or web-based GUI.
④	DC 24V	Connect the 24VDC 1.25A power adaptor.
⑤	Ground	Connect to ground.

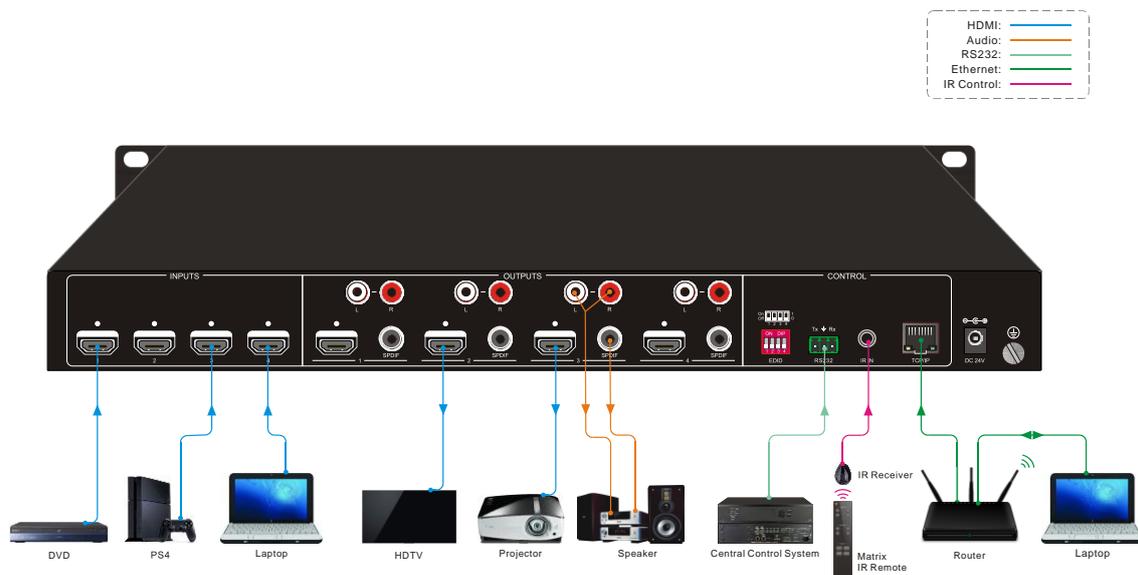
Note: Pictures shown in this manual are for reference only.

4. System Connection

4.1 Usage Precautions

- System should be installed in a clean environment with temperature and humidity maintained to within equipment specifications.
- All of the power switches, plugs, sockets and power cords should be insulated and safe.
- All devices should be connected before power is turned on.

4.2 Connection Diagram



4.3 Connection Procedure

- Step1.** Connect HDMI sources (e.g. DVD) to HDMI INPUTS with HDMI cables.
- Step2.** Connect HDMI displays (e.g. HDTV) to HDMI OUTPUTS with HDMI cables.
- Step3.** Connect speakers/ amplifiers to the AUDIO OUTPUTs with audio cables.
- Step4.** Connect the RS232 ports of the control device (e.g. a PC) and AVG-UHD4K-44 V2 to enable serial control.
- Step5.** Connect the TCP/IP ports of the control device (e.g. a PC) and AVG-UHD4K-44 V2 to enable IP control.
- Step6.** Insert an IR receiver to the IR IN port to enable IR control.

Notes:

- When connecting to HDMI 2.0 sources, make sure the HDMI cable is compliant with HDMI 2.0 to ensure reliable transmission.
- Plug a DC 12V power adapter to the power port of 4x4 HDMI Matrix Switcher.

4.4 System Applications

Reliable performance for control and transmission makes the AVG-UHD4K-44 V2 ideal for use in residential, IT, signal monitoring, big screen displays, conference systems, television broadcast, education, banking and security institutions etc.

5. System Operation

5.1 I/O Connection Switching

The front panel features four input and output selection buttons for switching the I/O connection.

1) To switch one input to an output:

Operation: “input” + “output” + “ENTER”

Example: input 2 to output 4



2) To switch an input to several outputs:

Operation: “input” + “output” + “output” + ... + “ENTER”

Example: Switch input 2 to output 2, 4



Note: Indicators of the pressed buttons will blink blue three times if the switching is successful, then turn off. If the switch fails, they will turn off immediately.

5.2 I/O Connection Query

Press and hold the button ENTER for 3 seconds to enter system enquiry mode, and then press INPUT 3/4 to select previous/next item, press INPUT 1/2 to turn previous/next page. The chart below shows information that can be inquired:

Function Items	Example	Description
Check the connection status of inputs	In 01 02 03 04 Connct Y Y N N	Y means the corresponding port is connected with input device, N means not.
Check the connection status of outputs	Out 01 02 03 04 Connct Y Y N N	Y means the corresponding port is connected with output device, N means not.
Correspondence between inputs and outputs	Out 01 02 03 04 In 01 02 03 04	Shows the correspondence between the 4 inputs and 4 outputs.
Check if the input is with HDCP	In 01 02 03 04 HDCP Y Y N N	Y means the input signal is with HDCP, N means not.
Check if the output is with HDCP	Out 01 02 03 04 HDCP Y Y N N	Y means the output signal is with HDCP, N means not.

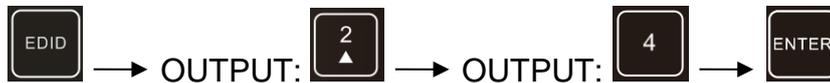
Check the output resolution	Resolution Out 1 1920x1080	Use the UP and DOWN direction button to check all the 4 output resolutions.
-----------------------------	-------------------------------	---

5.3 EDID Management

AVG-UHD4K-44 V2 features EDID management to maintain compatibility between all devices. It can be controlled via EDID learning and EDID programming.

EDID Learning (from output)

- One input port learns the EDID data of one output port
Operation: Press “EDID”, “INPUTS”+“OUTPUTS”+“ENTER”.
Example: Input 2 learns EDID data from output 4



- All input ports learn EDID data from one output port
Operation: Press “EDID”, “ALL” + “OUTPUTS” + “ENTER”.
Example: All input ports learn EDID data from output 4



Note: Indicators of the pressed buttons will blink blue three times if the process is successful, then they will turn off. If the process fails, they will turn off immediately.

EDID Programming

The rear panel feature a 4-pin EDID DIP switch to manage EDID. The EDID data and its corresponding DIP switch status are shown in the below list.

	Status	EDID
	0000	Pass though (default)
	0001	720P 2D Pass though CH
	0010	720P 3D Pass though CH
	0011	1080P 2D Pass though CH
	0100	1080P 3D Pass though CH
	0101	4K@30HZ Pass though CH
	0110	4K@30HZ 2.0CH

	0111	4K@30HZ 7.1CH
	1000	4K@60HZ 4:2:0 Pass though CH
	1001	4K@60HZ 4:2:0 7.1CH
	1010	4K@60HZ 4:4:4 Pass though CH
	1011	4K@60HZ 4:4:4 7.1CH
	1111	Enable Software EDID management mode: RS232 control or Web-based GUI control

5.4 IR Control

The AVG-UHD4K-44 V2 features a built-in IR receiver to receive IR signals from an IR remote for IR control. If the external IR receiver or other IR control device needs to be used, the IR IN port on rear panel can be connected.

Here is a brief introduction to the IR remote:

- Standby button, press it to enter/exit standby mode.
- **INPUTS:**
Input channel selection buttons.
- **OUTPUTS:**
Output channel selection buttons.

Menu buttons

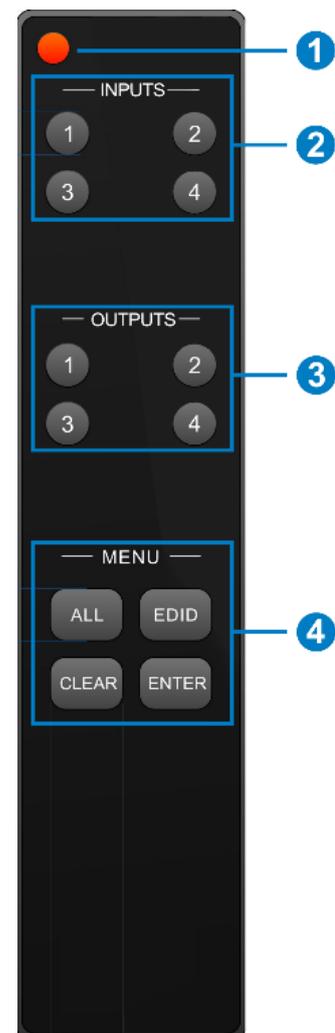
- **ALL:** Select all inputs/outputs.
To switch an input to all outputs:
Example: Input 1 to all Outputs:
→ Press INPUTS 1 + ALL + ENTER
- **EDID** management button:
One input port learns the EDID data from one output port.
Example: Input 2 learns EDID data from output 4:
→ Press EDID + INPUTS 2 + OUTPUTS 4 + ENTER

All input ports learn the EDID data from an output port.

Example: All input ports learn EDID data from output 3:

→ Press EDID + ALL + OUTPUTS 3 + ENTER

- **CLEAR:** Cancel operation.
- **ENTER:** Confirm operation.



5.5 RS232 Control

5.5.1 Installation/Removal of RS232 Control Software

- **Installation** Copy the control software file to the computer controlling the 4x4 HDMI Matrix Switcher.
- **Removal** Delete all the control software files in corresponding file path.

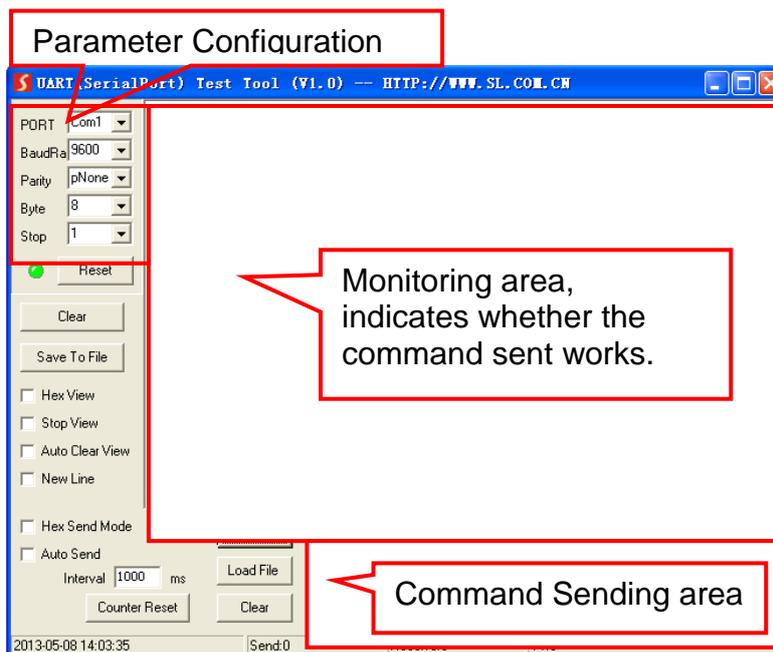
5.5.2 Basic Settings

Connect the 4x4 HDMI Matrix Switcher to the input devices and output devices. Then, control it with a PC using a RS232 control software program such as Putty, CommWatch or Realterm. Double-click the software icon to run this software.

Here we use the software **CommWatch.exe** as an example. The icon is shown as below:



The interface of the control software is shown below:



Set the parameters (baud rate, data bit, stop bit and parity bit) correctly to ensure reliable RS232 control.

Baud rate: 9600

Data bit: 8

Stop bit: 1

Parity bit: none

5.5.3 RS232 Communication Commands

- 1) “[“, “]” in the commands are for easy recognition only and not necessary in real operations. Other symbols including “.”, “,”, “/”, “%”, “:”, “^”. are parts of the commands.
- 2) The feedback listed in the column “Feedback Example” is only for reference, feedbacks may vary according to different operations and firmware.
- 3) Dial the EDID switcher to “1111” before sending commands pertaining to software EDID management (with grey background). Refer to 5.3 *EDID Management* for detailed information.

System Commands

Command	Function	Feedback Example
/*Type;	Report product model.	UHD4K-44 V2
/^Version;	Report the firmware version.	Vx.x.x
Demo.	Switch to the “demo” mode, convert input and output in turn like 1B1, 1B2, ...4B3, 4B4, 1B1... and so on .The switching interval is 2 seconds.	Demo Mode AV:01->01 AV:01->02 AV:01->03 AV:01->04 AV:02->01 ... Normal Mode
Undo.	Cancel the current operation.	Undo Ok!
PWON.	Power on system.	PWON
PWOFF.	Turn the system to standby mode, and then send the command “PWON.” to start.	PWOFF
STANDBY.	Turn the system to standby mode, and then press other buttons or send other commands to start.	STANDBY
%9962.	Report the system standby status.	STANDBY/PWOFF/ PWON
%9964.	Report the IP address.	IP:xxx.xxx.x.xxx
%0911.	Factory Default.	Factory Default

Front Panel Lock/unlock Commands

Command	Function	Feedback Example
/%Lock;	Lock the front panel buttons.	System Locked!
/%Unlock;	Unlock the front panel buttons (Default).	System Unlock!
%9961.	Report the panel buttons locking status.	System Locked/ Unlock!

Switching Commands

Command	Function	Feedback Example
[x]All.	Switch the input channel [x] to all output channels. (x=1~4)	01 To All.
All#.	Switch all inputs to its corresponding output channel respectively like 1->1, 2->2...	All Through.
All\$.	Switch off all the outputs.	All Closed.
[x]#.	Switch input [x] to output [x]. (x=1~4)	01 Through.
[x]\$.	Switch off the output [x]. (x=1~4)	01 Closed.
[x]@.	Switch on the output [x]. (x=1~4)	04 Open.
All@.	Switch on all outputs.	All Open.
[x1]V[x2].	Switch the input [x1] to one or several outputs ([x2], separate output channels with comma). (x1/x2=1~4).	AV: X1-> X2 (X1/X2=01~04)
Status[x].	Report the input channel on output [Y]. (x=1~4, y=1~4).	AV: Y-> X (AV: 04-> 01)
Status.	Report the input channel on output channel one by one.	AV:01->01 AV:01->02 AV:01->03 AV:01->04
%9971.	Report the connection status of the inputs.	In 01 02 03 04 Connect Y Y Y Y
%9972.	Report the connection status of the outputs.	Out 01 02 03 04 Connect Y Y Y Y
%9975.	Report inputs and outputs connection status.	Out 01 02 03 04 In 04 04 04 04
%9976.	Report the output resolution.	Resolution Out 1 1920x1080P Out 2 1920x1080P Out 3 1920x1080P Out 4 1920x1080P

Preset Commands

Command	Function	Feedback Example
Save[Y].	Store the current status to present[Y]. Y ranges from 1 to 10.	Save To F6
Recall[Y].	Recall present [Y].	Recall From F2
Clear[Y].	Clear the present [Y].	Clear F8

HDCP Compliance

Command	Function	Feedback Example
/%[Y]/[X]:[Z].	HDCP management command. Y=O is for output; X=1~4 is the number of the port, if the X=ALL, it means all ports; Z is for HDCP compliant status, the value may be 1 (HDCP compliant) or 0 (not HDCP compliant).	/%O/ALL:0.
%0801.	Auto HDCP management, activate carrier native mode	%0801
%9973.	Report the HDCP status of the inputs.	In 01 02 03 04 HDCP Y N Y N
%9974.	Report the HDCP status of the outputs.	Out 01 02 03 04 HDCP Y N Y N

EDID Configuration

The DIP switch status should be set as 1111 to enable Software EDID management mode: RS232 control or Web-based GUI control.

Command	Function	Feedback Example
EDIDH[x]B[y].	Copy the EDID of output [x] to input [y]. If the EDID data is available and the audio part supports not only PCM mode, then force-set it to support PCM mode only. If the EDID data is not available, then set it as initialized EDID data.	EDIDH1B1
EDIDPCM[x].	Set the input [x] audio to PCM format in EDID database, x=1~4.	EDIDPCM[x]
EDIDG[x].	Report EDID data from output [x], x=1~4.	Hexadecimal EDID data and carriage return character
EDIDMInit.	Restore the EDID factory default.	EDIDMInit.
EDIDM[X]B[Y].	The input [Y] learns the EDID data of output [X]. If the EDID data is not available, then set it as initialized EDID data.	EDIDM3B1
EDID/[x]/[y].	Set the built-in EDID data type [Y] to input port [X]. y= 0~11, correspond to the 12 embedded EDID data separately.	EDID/[x]/[y]
EDIDUpgrade[x].	Upgrade the EDID data of the input [x]. When the command applied, system prompts to upload the EDID file (.bin). Operation will be cancelled in 10 seconds.	Please send the EDID file EDID Upgrade OK!
GetInPortEDID[X].	Report the EDID data of input [x], x=1~4.	
%9979.	Report the DIP switch status.	EDID RS232 GUI CONTROL 1111

Audio Settings

Command	Function	Feedback Example
DigitAudioON[x].	Enable SPDIF and RCA audio output[x]. <ul style="list-style-type: none"> • x=1, 2, 3, 4, enable the group x. • x=5, enable all ports. 	DigitAudio ON with [x]/ ALL Outputs
DigitAudioOFF[x].	Disable SPDIF and RCA audio output port x. <ul style="list-style-type: none"> • x=1, 2, 3, 4, disable the group x. • x=5, disable all ports. 	DigitAudio OFF with [x]/ ALL Outputs
%9977.	Report digital audio outputs status.	Out 01 02 03 04 Audio Y Y Y Y
SetVolume[X]V[Y].	Set the volume of RCA audio [X] to Y. Y=0~60. X=1~4 or 5 for all Outputs.	Volume level: 50
%9927.	Get the RCA audio volume.	Volume level:50

5.6 TCP/IP Control

5.6.1 Control Modes

TCP/IP default settings: IP is 192.168.0.178, Gateway is 192.168.0.1, and TCP Port is 4001. The IP address can be changed as required, the TCP Port cannot be changed.

- **Control via a single PC**

Connect a computer to the TCP/IP port of the AVG-UHD4K-44 V2, and set its network address in the same range as the default IP of the Matrix (192.168.0.178). Set the Subnet mask to 255.255.255.0 and no gateway IP address is required.

- **Control by PC(s) in LAN**

The AVG-UHD4K-44 V2 can be connected with a router to make up a LAN with the PC(s), this allows it to be able to be controlled in a LAN. When controlling in this manner, just make sure that the AVG-UHD4K-44 V2's network subnet is the same as the routers. Please connect as per the following figure for LAN control.

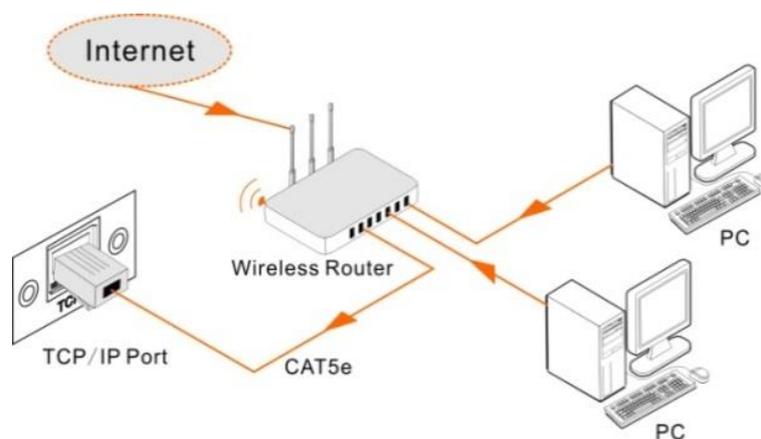


Figure 5- 5 Connect to LAN

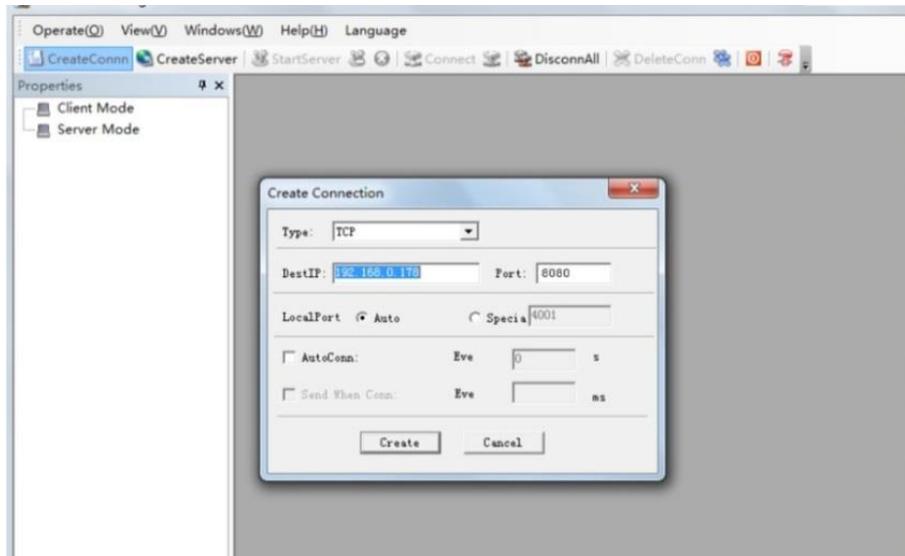
- Step1.** Connect the TCP/IP port of the AVG-UHD4K-44 V2 to an Ethernet port of the PC with twisted pair.
- Step2.** Set the PC's network subnet to the same as the Matrix Switcher. Please remember the PC's original network subnet setting.
- Step3.** Set the AVG-UHD4K-44 V2's network subnet to the same as the router.
- Step4.** Set the PC's network subnet to the original setting.
- Step5.** Connect the AVG-UHD4K-44 V2 and PC(s) to the router. In the same LAN, each PC is able to control the AVG-UHD4K-44 V2 asynchronously.

Control is then possible via the TCP/IP communication software.

5.6.2 Control via TCP/IP communication software

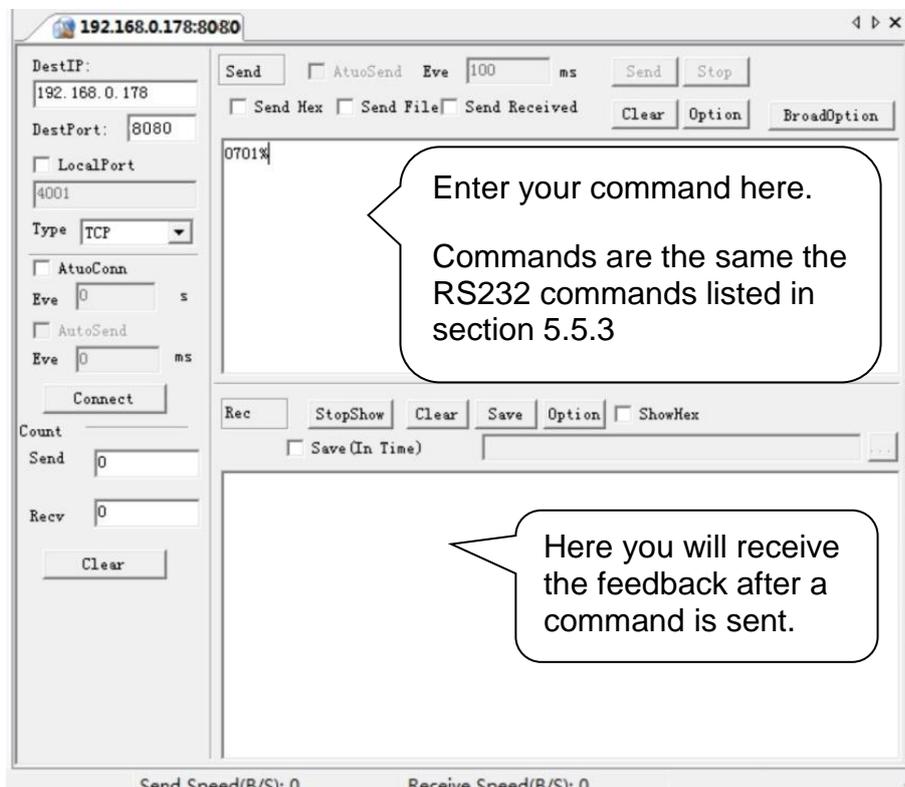
- 1) Connect a computer with TCP/UDP software to the AVG-UHD4K-44 V2. Open the

TCP/UDP software (or any other TCP/IP communication software) and create a connection, enter the IP address and port of AVG-UHD4K-44 V2 (default IP: 192.168.0.178, port:4001):



Connect using TCP/UDP software

- 2) Enter commands in designated area to control HDMI Matrix Switcher, shown below:



5.6.3 Control via GUI

The AVG-UHD4K-44 V2 Matrix Switcher can also be controlled via a web-based GUI. It allows users to interact with the HDMI Matrix Switcher through graphical icons and visual indicators.

Access GUI interface through any one of the following methods:

- 1) Access through web browser: Type the default IP **192.168.0.178** in the browser at first login. The IP address also can be found via sending “%9964.” on RS232 control software.
- 2) Access through UPnP: Go to My Network Place in your PC, and click the icon as below:



Note: PCs running Windows XP system may occur issues in finding the UPnP icon, follow these steps to switch on the UPnP protocol:

- ① Add UPnP component: go to “**Control Panel**” -> double-click “**Add/ Delete Programs**” -> double-click “Add/ Delete windows component” -> tick “UPnP” -> click “Next” -> click “OK”
- ② Enable Windows Firewall: go to “**Control Panel**” -> double-click “**Windows Firewall**” -> click “Others” -> tick “UPnP framework”
- ③ Enable UPnP auto-starting: go to “**Control Panel**” -> double-click “**Administrative Tools**” -> double-click “Services” -> find and click **SSDP Discovery Service** and **Universal Plug and Play Device Host** -> click “OK”
 - UPnP will now automatically start when you turn on your computer.
- ④ Reboot the device.

Type **192.168.0.178** in your browser, it will display the log-in page as shown below:

A screenshot of the web-based GUI login page for the AVG-UHD4K-44 V2. The page has a dark blue background. At the top left is the "avgear" logo in green. Below it are two white input fields: "User Name" and "Password", both containing the placeholder text "Please Enter". A green "Login" button is centered below the fields. At the bottom of the page, it says "User Interface for UHD4K-44 V2".

The matrix has an administrator and user mode.

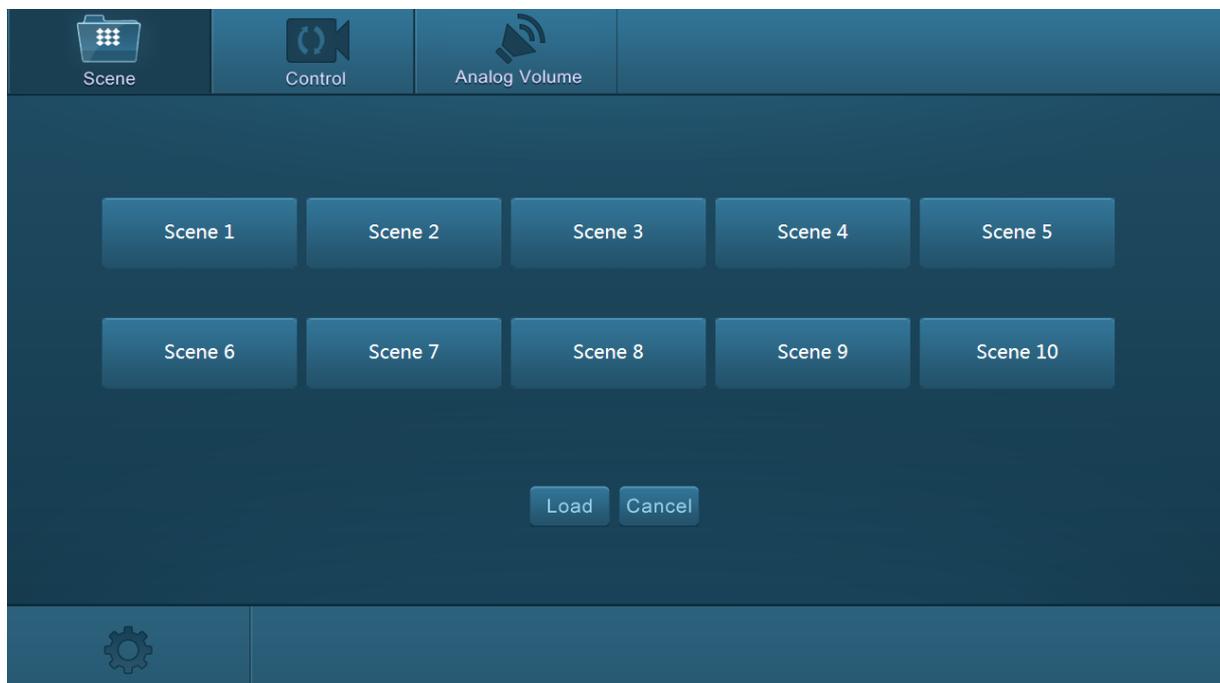
Administrator mode: User name: **admin**; Password: **admin** (default setting)

User mode: User name: **user**; Password: **user** (default setting).

Note: Log in as admin to access more configuration options than the user login. Here is a brief introduction to the interfaces.

5.6.3.1 Scene Menu

Type the user name: admin, password: admin, and then click **LOGIN**, it will display the Scene menu as shown below:



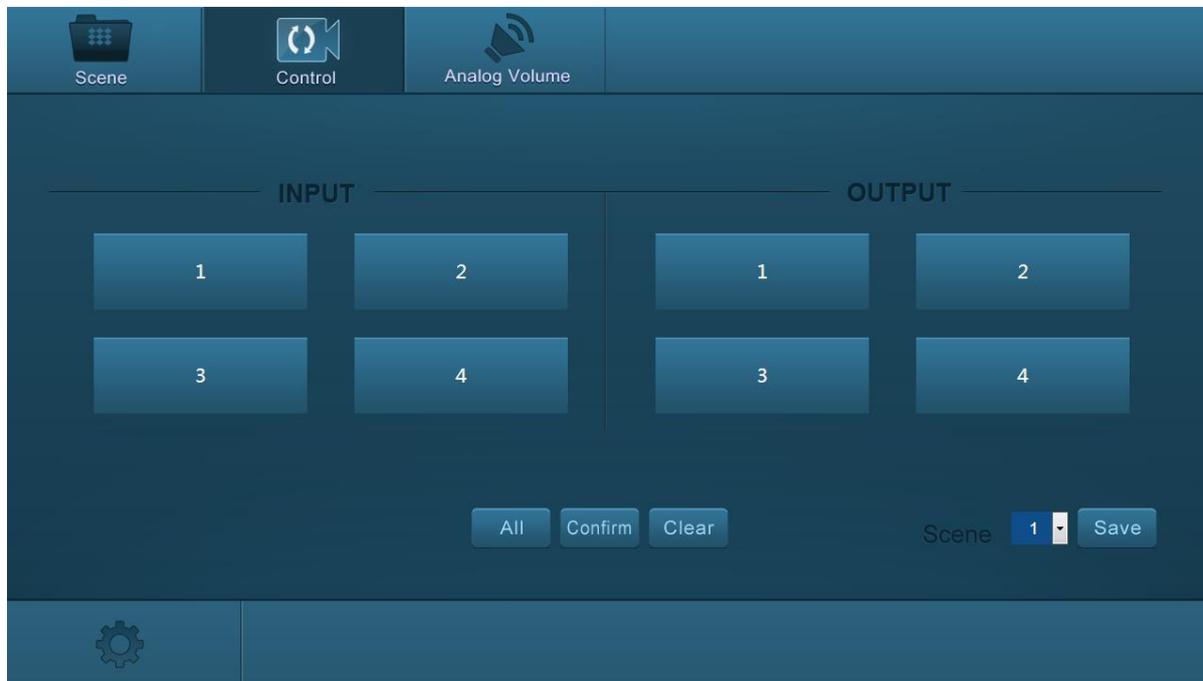
All ten scenes are shown in above interface.

Select a scene and then click “**Load**” to recall the selected scene.

Click “**cancel**” to cancel the current operation.

5.6.3.2 Control Menu

Click “**Control**” to enter the following GUI screen, it provides intuitive I/O connection switching.



The button matrix displays every possible connection between every input and output, users can select the connections by clicking the corresponding button.

The buttons at the bottom right corner allow for saving and recalling preset scenes. For example:

Step1: Select button 1 in the INPUT section

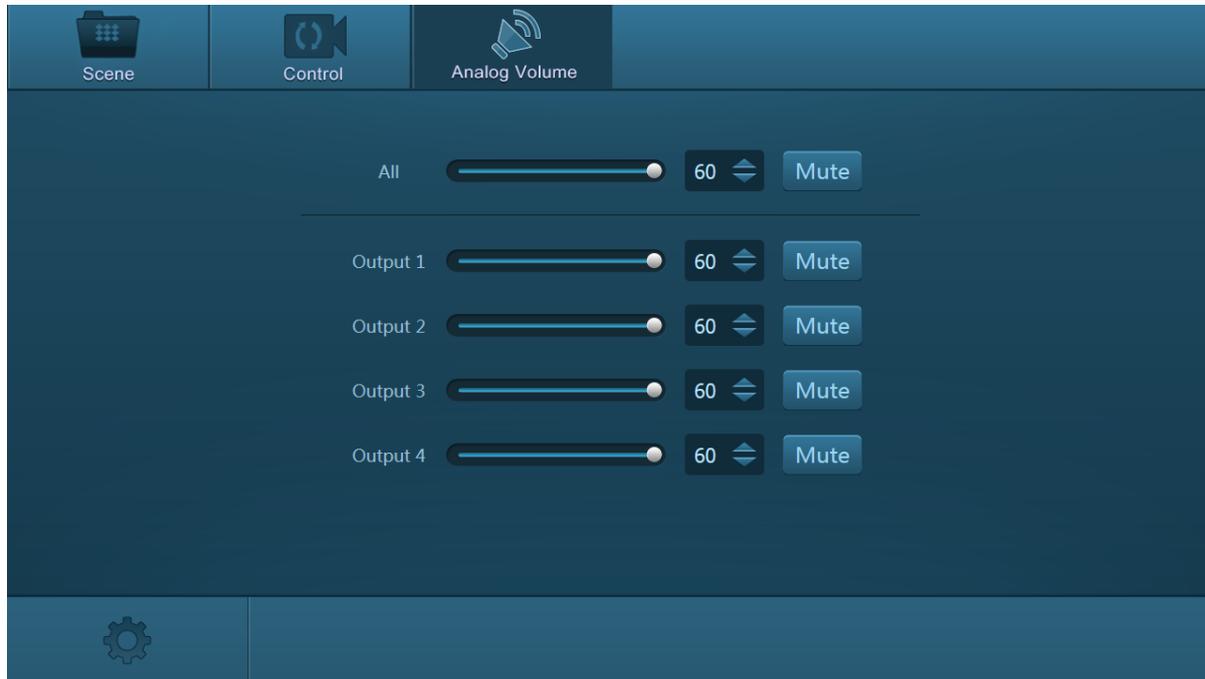
Step2: Select button 1 in OUTPUT section (If all OUTPUT ports are required, you only need to click “All” button.)

Step3: Choose a scene that you want to save your input/output configuration too.

Step4: Click “**Confirm**” to save the configuration or Click “**Clear**” to clear set up.

5.6.3.3 Analog Audio Control

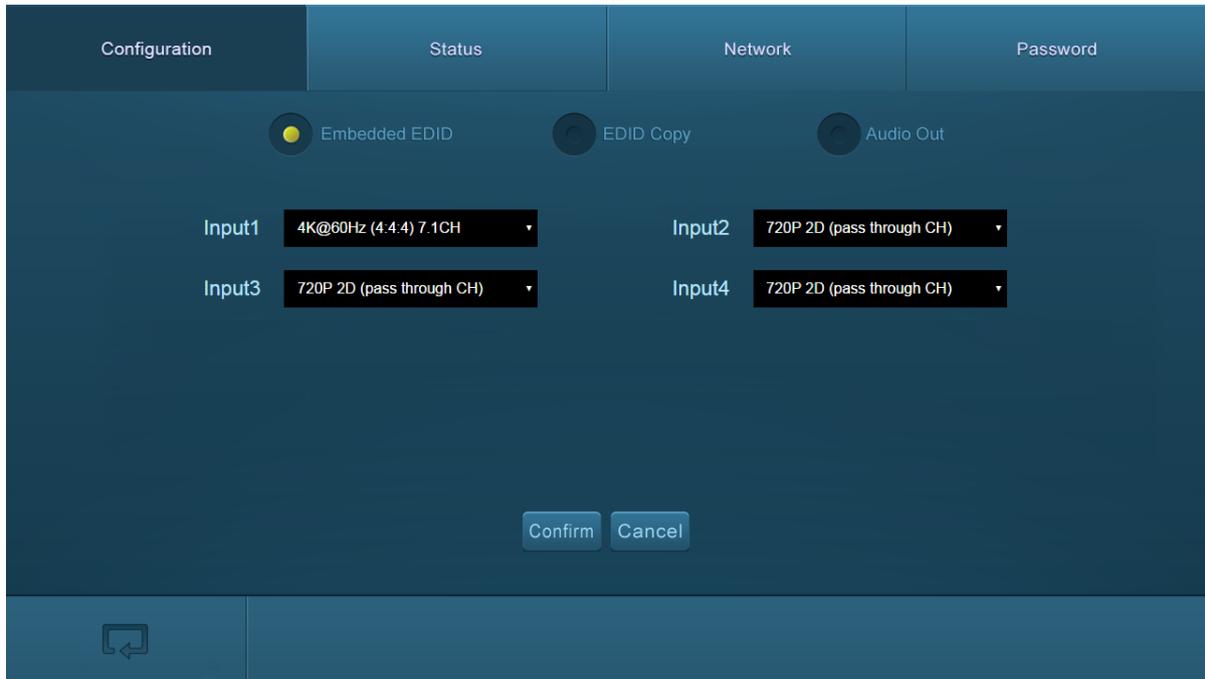
Click “**Analog Volume**” to enter the following control screen to set the audio outputs volume.



5.6.3.4 Configuration Properties

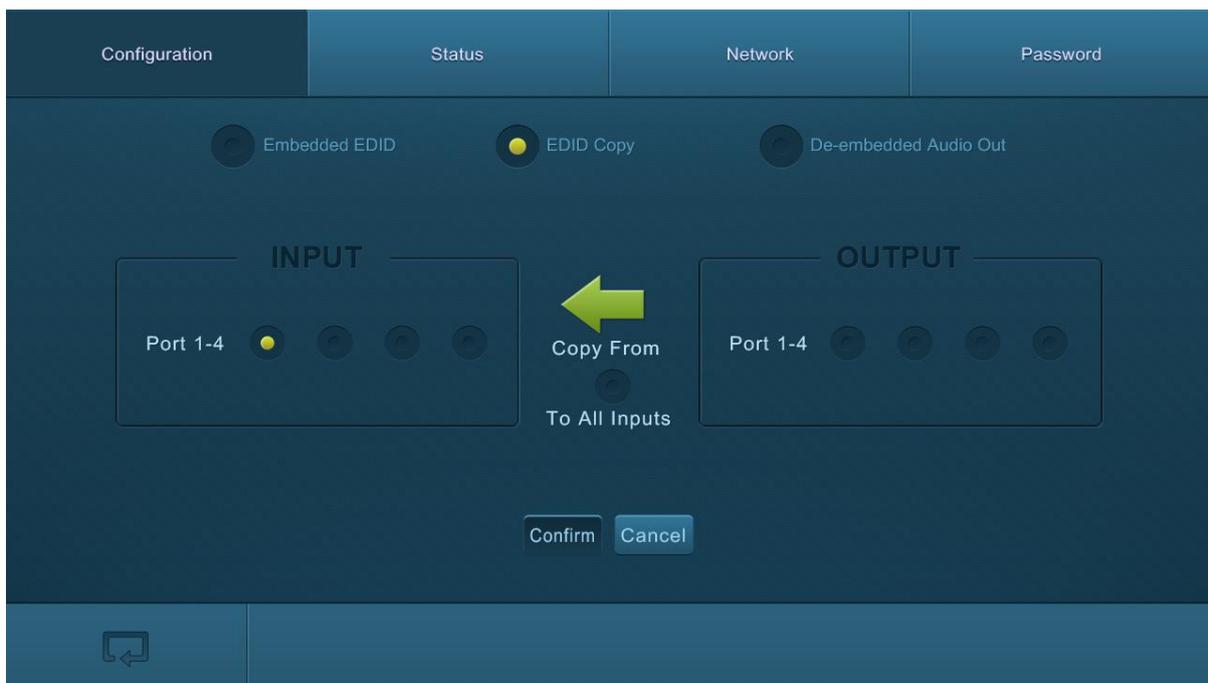
Embedded EDID

Click setting button  to enter GUI configuration screen.



EDID Copy

Select "EDID Copy" to enter the following GUI screen:



The EDID of the INPUT device can be obtained from the OUTPUT devices.

Step1: Select one INPUT port

Step2: Select one OUTPUT port which you want to copy its EDID.

Step3: Click “**Confirm**” to save the setting or click “**Cancel**” to cancel operation.

De-embedded Audio Out

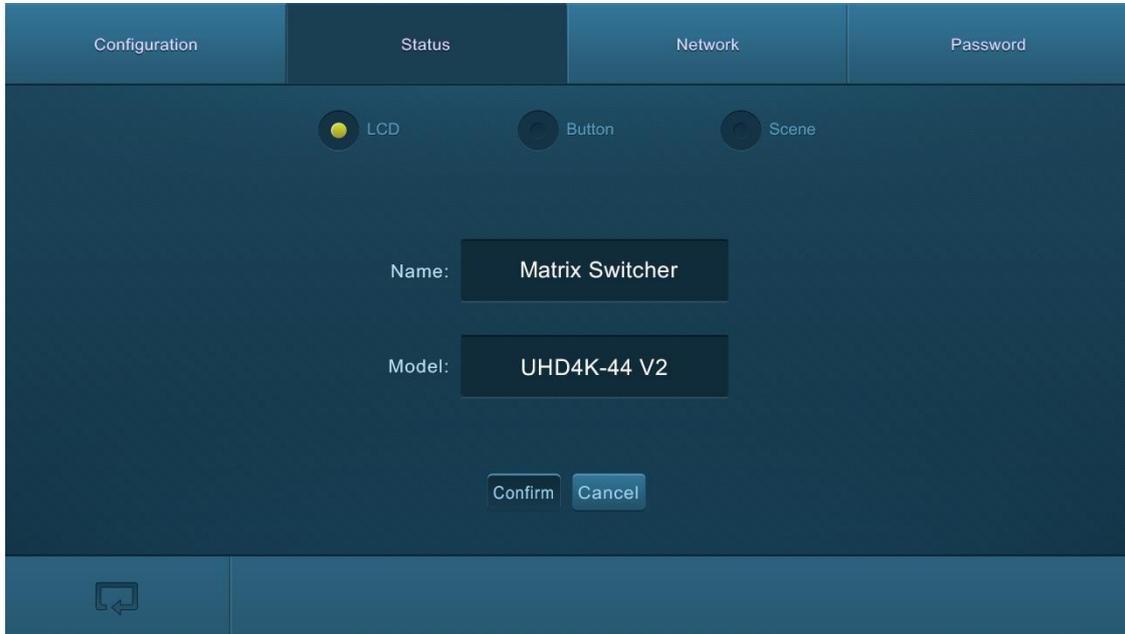
Select “**Audio Out**” to enter the following GUI screen to turn on/off the Audio Output channel.



Audio EDID

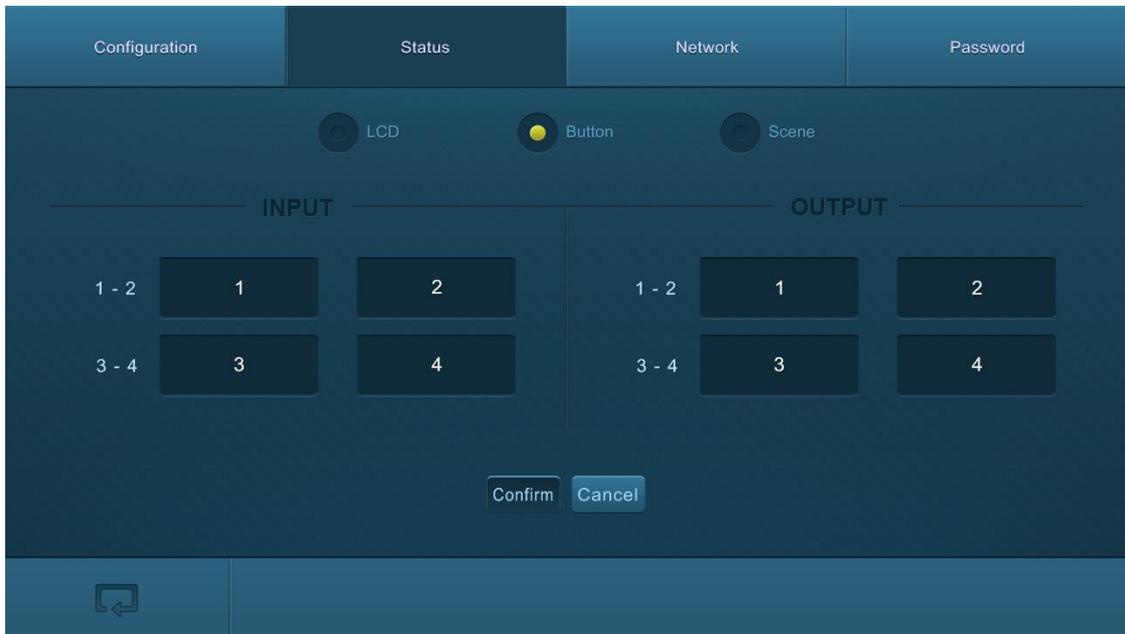
Status-LCD

At the top of the interface, click "Status" to enter the following interface to modify the name and mode of this machine, this will then be displayed on the front LCD screen.



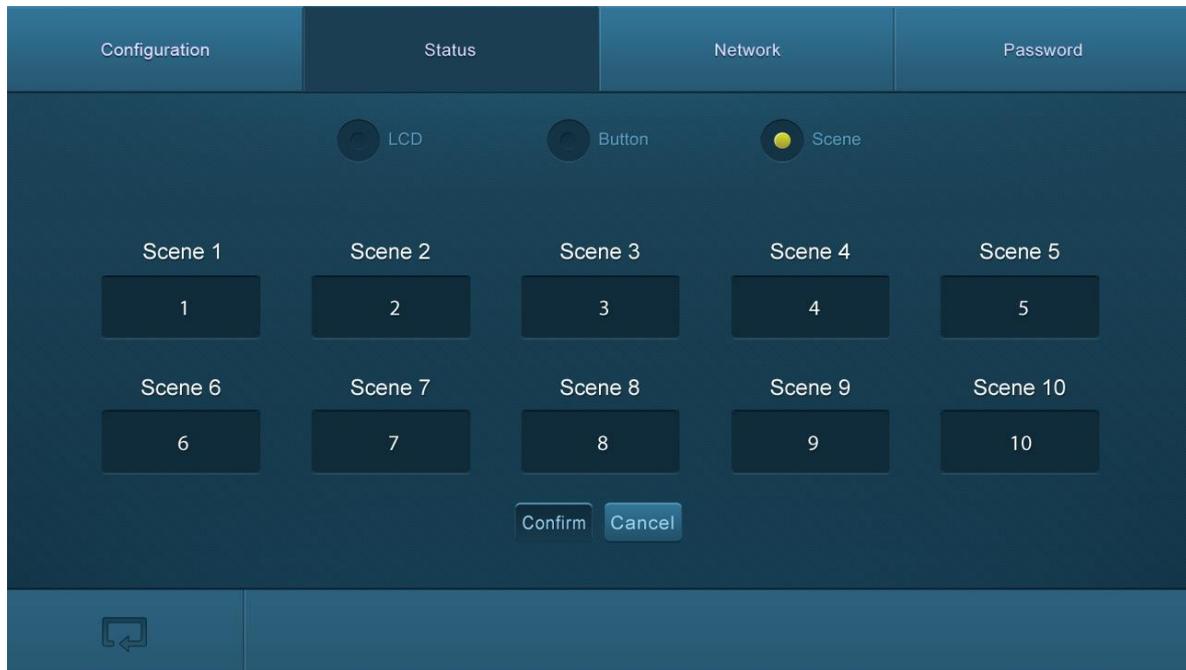
Status-Button

Select "Button" to enter the GUI screen to modify the names of buttons.



Status-Scene

Select **"Scene"** to enter the following GUI screen to modify the name of scenes.



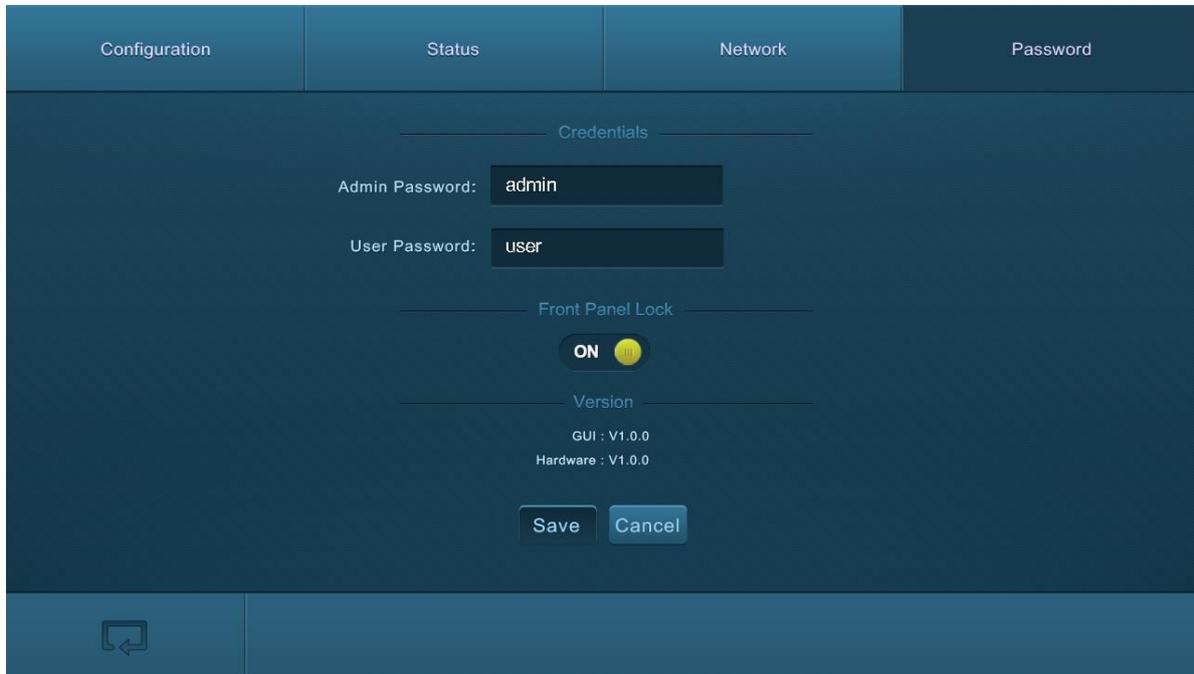
Network

At the top of the interface, click the **"Network"** tab to enter the following GUI screen to Query and configure network settings including MAC address, IP address, subnet mask, and Gateway.



Password

At the top of the screen, click the “**Password**” tab to enter the following interface to Query and modify the admin or user password.



The screenshot shows a web interface with four tabs: Configuration, Status, Network, and Password. The Password tab is active. Under the 'Credentials' section, there are two password fields: 'Admin Password' with the value 'admin' and 'User Password' with the value 'user'. Below this is the 'Front Panel Lock' section, which has a toggle switch currently set to 'ON'. Under the 'Version' section, it displays 'GUI : V1.0.0' and 'Hardware : V1.0.0'. At the bottom of the form are 'Save' and 'Cancel' buttons.

In the above page, click on the Front Panel to enable or disable Front Panel control.

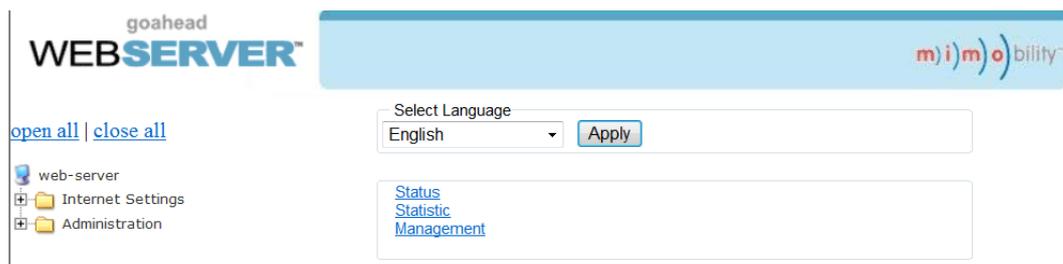
5.6.4 TCP/IP Configuration

IP address, subnet mask and the Gateway address of AVG-UHD4K-44 V2 can be modified via GUI from the above description, but beyond that users can configure the IP port, including IP reset, password reset, and IP module firmware update using the Webserver.

Type the Webserver address (Default: 192.168.0.178:100, changeable) in your browser. Enter correct username and password to log in the Webserver:

Username: admin; **Password:** admin

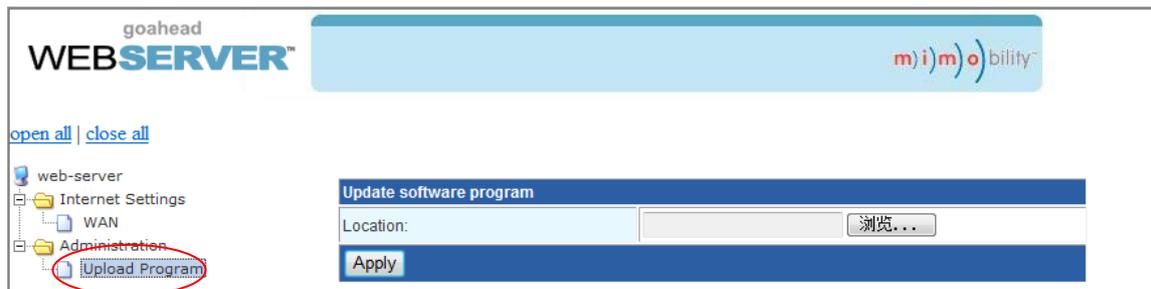
Here is the main configuration interface of the Webserver:



The screenshot shows the 'goahead WEBSERVER' interface. The top right corner features the 'mimobility' logo. On the left, there is a sidebar with a tree view containing 'web-server', 'Internet Settings', and 'Administration'. The main content area includes a 'Select Language' dropdown menu set to 'English' with an 'Apply' button. Below this are three links: 'Status', 'Statistic', and 'Management'.

5.6.5 GUI Update

The GUI for the 4x4 HDMI Matrix Switcher supports updates via <http://192.168.0.178:100>. Type the username and password (the same as the GUI log-in settings, modified password will be available only after rebooting) to log in to the configuration interface. After that, click **Administration** at the source menu to get to **Upload Program** as shown below:



GUI Update

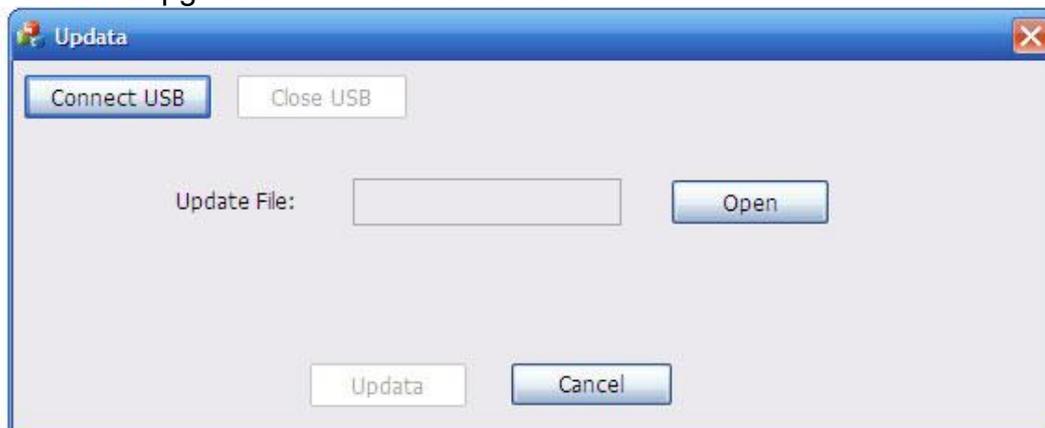
5.7 Firmware Upgrade through USB Port

The matrix switcher boasts a USB port for online firmware upgrade on the front panel. Follow these steps to upgrade firmware:

- Step1.** Copy the upgrade software and the latest upgrade file (.bin) to PC.
- Step2.** Connect the USB ports of the matrix switcher and the PC via USB cable.
- Step3.** Double-click the update software icon (see as below).



It will enter the upgrade interface shown as below:



- Step4.** Click Connect USB.
- Step5.** Click Open to load the upgrade file, then click Updata to start firmware upgrading.

Note: To ensure available control, the COM number of the PC should be 1~9.

6. Specifications

Input Signal	4 HDMI
Input Connector	Female Type-A HDMI
Output Signal	4 HDMI; 4 RCA stereo audio; 4 SPDIF digital audio
Output Connector	Female Type-A HDMI; COAX connector
Control Signal	1 IR IN; 1 TCP/IP; 1 RS232
Control Connector	3.5mm mini jack; female RJ45; 3-pin phoenix plug
Video Signal	HDMI2.0 & HDCP2.2
Audio Signal	Dolby Digital, DTS, DTS-HD
General	
EDID Management	In-built EDID data and manual EDID management
Resolution Range	640x480@60Hz ~ 4Kx2K@60Hz 4:4:4, 1080P 3D
HDMI Cable Length	≤5m
Power Supply	24VDC, 1.25A
Power Consumption	14W (Max)
Dimension (W*H*D)	437.0mm x 44.0mm x 236.5mm
Weight	1.75Kg
Temperature	-10°C ~ 55°C
Relative Humidity	10% ~ 90%

Note: AV Gear recommends using high quality HDMI cables to maintain preferred transmission distance and performance.

7. Panel Drawing



8 Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Color loss or no video signal output	The connection cables may not be connected correctly or may be faulty	Check whether the cables are connected correctly and in good working condition
	Failed or loose connection	Make sure the connection is firm
No output image when switching	No signal at the input / output end	Check with oscilloscope or multimeter if there is any signal at the input/output end
	Failed or loose connection	Make sure the connection is good
	Input source is with HDCP while the HDCP compliance is switched off.	Send command <code>/%[x]:[1]</code> . to change HDCP compliance status.
	The display doesn't support the input resolution.	Switch to another input source or enable the display to learn the EDID data of the input.
No audio output	The amplifier is not able to decode HDMI audio	Change amplifier
Cannot control the device via front panel buttons	Front panel buttons are locked	Send command <code>/%Unlock</code> ; to unlock
Cannot control the device via IR remote	The battery has run out	Change battery
	The IR remote is faulty	Send it to an authorized dealer for repairing
	Beyond the effective range of the IR signal or not pointing at the IR receiver	Adjust the distance and angle and point right at the IR receiver.
Power Indicator remains off when powered on	Failed or loose power connection	Check whether the cables are connected correctly
EDID management does not work normally	The HDMI cable is broken at the output end	Change for another HDMI cable in good working condition
There is a blank screen on the display when switching	The display does not support the resolution of the video source	Switch again
		Manage the EDID data manually to make the resolution of the video source automatically compliant with the output resolution.
Cannot control the device by control device (e.g. a PC)through RS232 port	Wrong connection	Check to ensure connection between the control device and the unit
	Wrong RS232 communication parameters	Type in correct RS232 communication parameters: Baud rate:9600; Data bit: 8; Stop bit: 1; Parity bit: none
	Broken RS232 port	Send it to an authorized dealer for repair

If your problem persists after following the above troubleshooting steps, seek further help from your authorized dealer.