

# 4x4 Seamless Switch 4K HDMI Matrix & Video Wall Controller

## OPERATION MANUAL



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.

## **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.

# CONTENTS

<b>1. DEAR CUSTOMER</b> .....	<b>4</b>
<b>2. FEATURES</b> .....	<b>4</b>
<b>3. NOTICE</b> .....	<b>4</b>
<b>4. SPECIFICATIONS</b> .....	<b>5</b>
<b>5. PACKAGE CONTENTS</b> .....	<b>5</b>
<b>6. OPERATION CONTROLS AND FUNCTIONS</b> .....	<b>6</b>
6.1 Front Panel .....	6
6.2 Rear Panel.....	6
6.3 Remote Control Description.....	7
<b>7. CONNECTING AND OPERATING</b> .....	<b>7</b>
<b>8. PANEL CONTROL</b> .....	<b>8</b>
8.1 Video switch operation.....	8
8.2 Video control.....	8
8.2.1 Video.....	9
8.2.2 Mode.....	18
8.2.3 Audio Settings interface.....	25
8.2.4 EDID Settings.....	27
8.2.5 Preset Settings.....	27
8.2.6 Setup interface.....	28
8.2.7 Query information interface.....	31
<b>9. CONNECTION DIAGRAM</b> .....	<b>32</b>
<b>10. IP CONTROL</b> .....	<b>33</b>
10.1 IP setting.....	33
10.2 Switch setting.....	34
10.3 Format.....	35
10.4 Video Offset.....	35
10.5 Store.....	35
10.6 Modify Port Name.....	36
10.7 Audio.....	37
10.8 EDID setting.....	37
<b>11. NETWORK INTERFACE DESCRIPTION</b> .....	<b>38</b>
<b>12. SYSTEM INTERFACE DESCRIPTION</b> .....	<b>39</b>
<b>13. THE FIRMWARE UPDATE</b> .....	<b>40</b>
13.1 MCU application layer upgrade.....	40
13.2 CPLD.....	40
13.3 GUI Application layer upgrade.....	41
13.4 GUI web page upgrade.....	41
<b>MAINTENANCE</b> .....	<b>42</b>
<b>PRODUCT SERVICE</b> .....	<b>42</b>
<b>WARRANTY</b> .....	<b>42</b>

## 1. 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.

The Matrix offers solutions for digital entertainment center, HDTV retail and show site, HDTV, STB, DVD and projector factory, noise, space and security concerns, data center control, information distribution, conference room presentation, school and corporate training environments.

## 2. Features

- Any one of the 4 sources to any one of the 4 displays.
- Seamless switching ensures no switching delay and pictures loss during transitions, the switching speed is less than 40 millisecond.
- Support video wall mode and output image mirror function
- Any one of the four outputs can be turned off independently.
- Support PCM 2CH audio.
- Support EDID management
- Compliant HDCP 2.2 and HDCP1.4
- Support high definition resolutions, including: 4K30HZ,1080p@60Hz@36 b/pixels, and other standard video formats.
- Support output downscale to 1080P/720P/2560\*1440/1920\*1200/1360\*768
- With panel button, Remote Control, RS232 Control, TCP/IP Control to select the source.And support for third-party platform control.
- 1U rack design ,easy installment.
- DC 12V 2A power supply.
- Unit size:L438\*W205\*H44mm.

## 3. NOTICE

Our company reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

#### 4. SPECIFACATIONS

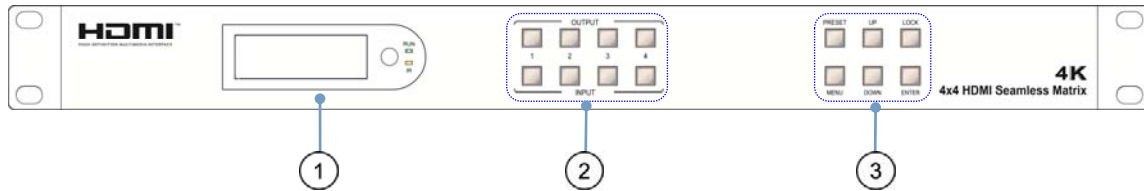
Operating Temperature Range	0 to +40°C (32 to +104°F)
Operating Humidity Range	5 to 90 % RH (no condensation)
Input Video Signal	0.5-1.0 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Video Format Supported	DTV/HDTV: 1080P/1080i/720P/ 576P/480P/4K
Audio Format Supported	LPCM 2.0
Input ports	4xHDMI
Output ports	4xHDMI
Matrix mode	4x4 Seamless switching
Video wall mode	Multiple video wall modes
Power consumption	20watts(Maximum)
Dimension (mm)	L438XW205XH44 mm
Weight	2710g

#### 5. PACKING CONTENTS

- 1). 4x4 Matrix x1pcs
- 2). Remote Controller x1pcs
- 3). CD ROM (user manual) x1pcs
- 4). Power Adapter 12V2A x1pcs
- 5). Mounting Ears x1pair

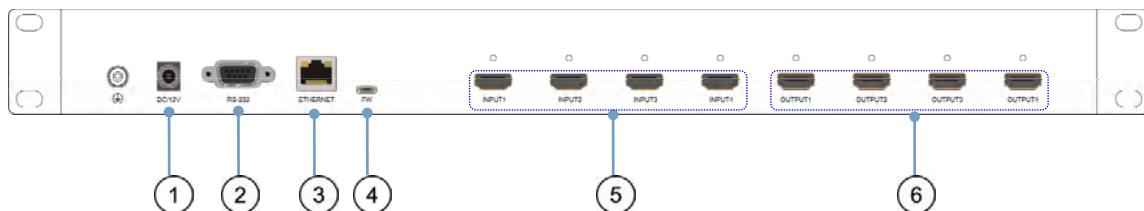
## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



- ① LCD screen and IR receiving port, indicator light
- ② **Input button IN1~4:** choose the desired input port from ports 1~4  
**Output button OUT1~4:** choose the desired output port from ports 1~4
- ③ **MENU button:** A function button, short press to enter the main menu interface or return to the previous menu interface  
**Enter button:** Short press indicates that the selected function is confirmed  
**UP button:** A navigation key, Short press means upward selection  
**DOWN button:** A navigation key, Short press means downward selection  
**Lock button:** lock and unlock the function of all the keys (press and hold on one second-----lock, press again and hold on one second-----unlock)

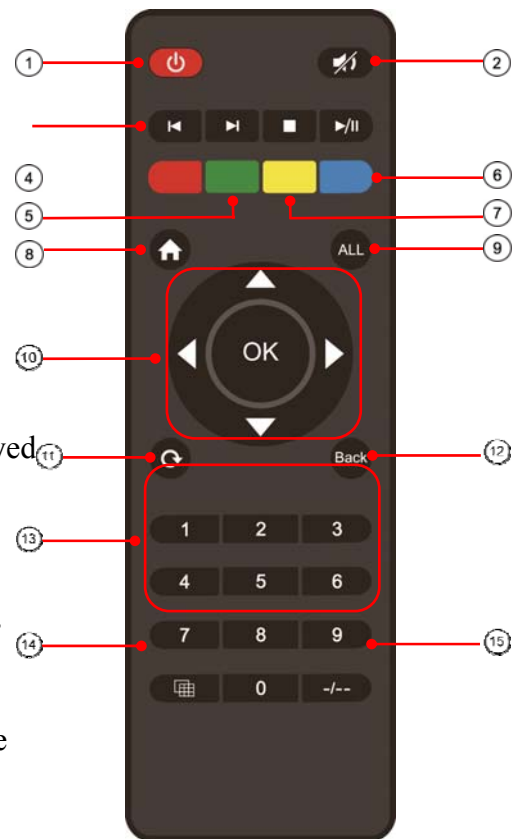
### 6.2 Rear Panel



- ① Power input: 12V2A
- ② RS232 port
- ③ LAN port
- ④ FW port (Firmware upgrade port)
- ⑤ HDMI input port
- ⑥ HDMI output port

### 6.3 Remote Control Description

- ① Power on/off
- ② Mute button
- ③ previous source and next source
- ④ Enter the seamless matrix mode(red)
- ⑤ Enter the video wall mode(green)
- ⑥ Enter the multi-viewer mode(blue)
- ⑦ Enter the mirror viewer mode(yellow)
- ⑧ MENU button: to enter the main menu interface or return to the previous menu interface
- ⑨ All button: choose all Output port.
- ⑩ ▲▼◀▶: Moves the highlight to select a displayed item.  
OK: Enters the selected item.
- ⑪ Display and mask the OSD menu
- ⑫ Same as the menu button
- ⑬ Select the input sources under video matrix mode, such as:Output 1 display input 1, or Output 1,2,3,4 display input 1 and so on.
- ⑭ The menu button that the scenario recalls and save
- ⑮ Output 1 display input 1,  
Output 2 display input 2,  
Output 3 display input 3,  
Output 4 display input 4.



### 7. CONNECTING AND OPERATING

1. Connect source devices to input ports of the matrix
2. Connect HDMI output port to TV or other HDMI sink devices.
3. Optional: connect RS232 cable from PC RS232 port .
4. Optional: connect an Ethernet cable from the TCP/IP port on the matrix to a local area network.
5. Connect 12V/2A POWER supply to DC power socket.
6. Power on the matrix ,HDMI sources and displays.

## 8. Panel control

### 8.1 Video switch operation

Signal switching includes 4 switching channels, which can be randomly configured as input/output according to requirements to form a matrix of 1×4~4×1. It can switch any input signal to 1 channel of output or all channels of output.

Operation format: "output channel" + "input channel"



Such as:

1. Switch output 1 to input 2 source

Operation: press "1" in Output area + "2" in IN area to complete the switch

2. Output 1,2,4 switch to input 3 source

Operation: press "1", "3" and "4" in Output area + "2" in IN source area to complete the switch

3. Switch all output port to input 4 source

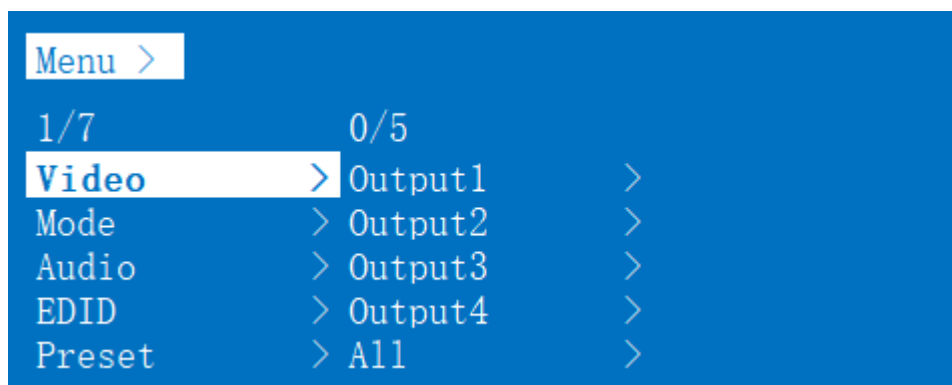
Operation: press any number in Output area + "4" in IN area to complete the switch

4. Go directly into the video wall mode of input 2 signal source

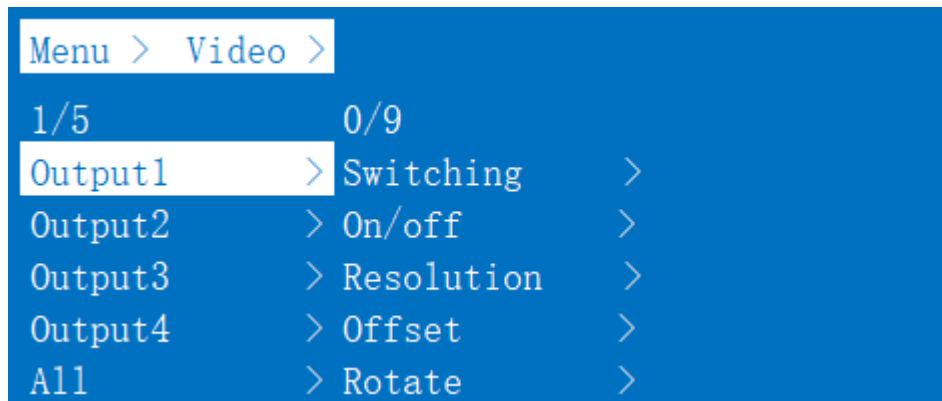
Operation: press the number "2" in the Input area to complete the switch

### 8.2 Video control

There are five submenus in the Video interface:





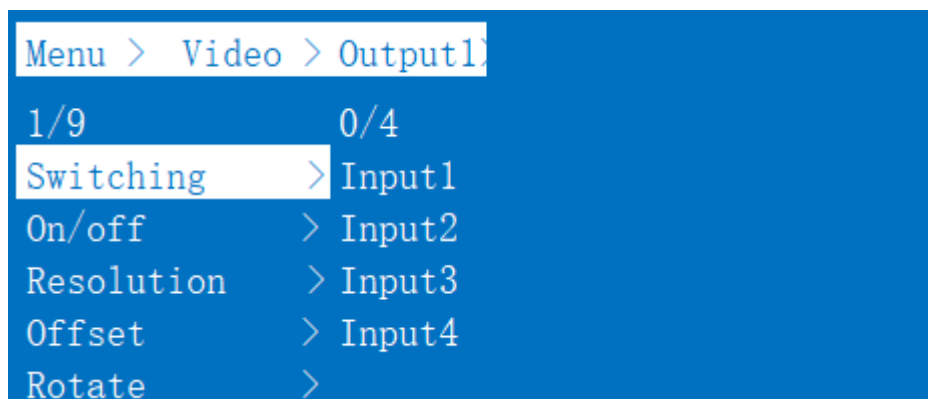


### 8.2.1 Video

#### 1). Video switch

Operation:

- ① In the main menu, select "Video" to press the "OK".
- ② press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ click on "OK" to enter the next submenu
- ④ Press the“ up and down” button to select "Switching" to select the input signal source. The bottom color of the selected input is white
- ⑤ click "OK" to enter the next submenu
- ⑥ Press the ”up and down” button to select the "Input" , and the color at the bottom of the selected input port becomes white
- ⑦ click on the "OK" button to complete switching



You can switch any output to any input, or all output to the same input.

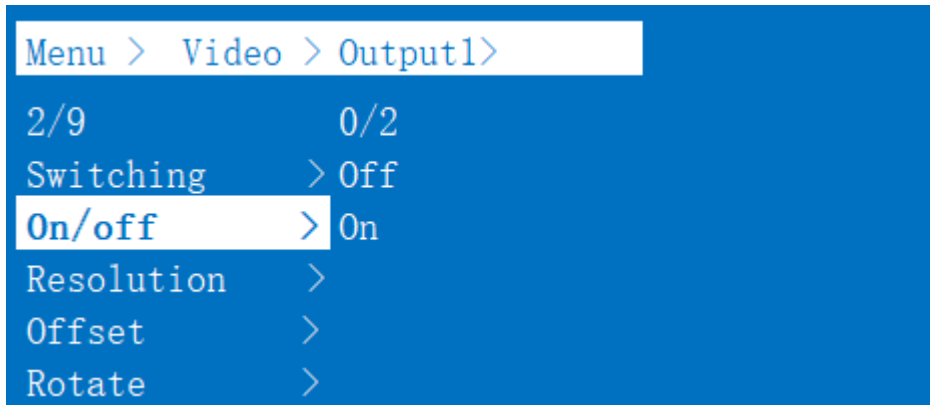
#### 2). Output switch control

You can open/close any of the output port, or open/close all output port.

Operation:

- ① in the main menu, select "Video" to press the "OK"
- ② press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu

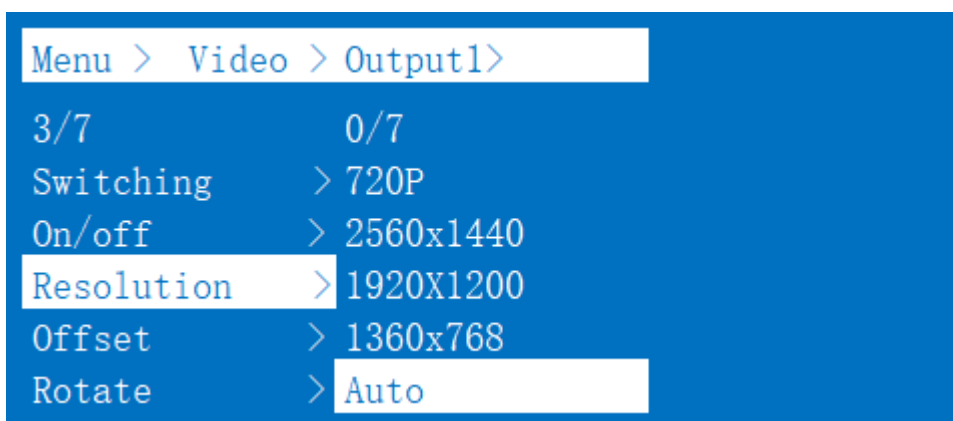
- ④ Press the “up and down” button to select the "On/Off"
- ⑤ Click "OK" to enter the next submenu
- ⑥ Press “up and down” button to select Off or On.
- ⑦ Press the "OK" button to confirm that the output port is open/ closed.

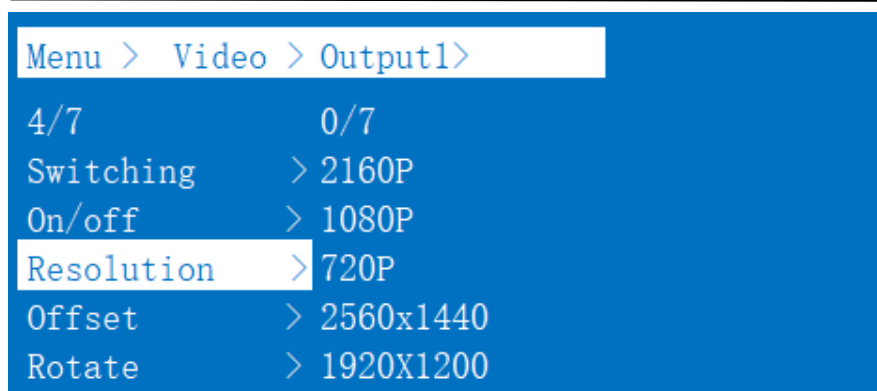


### 3). Output resolution selection

Operation:

- ① In the main menu, select "Video" to press the "OK"
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu
- ④ press the “up and down” button to select "Resolution"
- ⑤ Click "OK" to enter the next submenu
- ⑥ Press the”up and down” bottom to complete selection (There are 6 output resolution : 4K 30 Hz, 1080P 60 Hz, 720P 60 Hz,2560 X1440, 1920X1200,1360 X768 and AUTO, as shown in the picture.the default is Auto,)The color of the bottom of the selected output resolution become white.
- ⑦ Click the "OK" button to complete the output video resolution setting



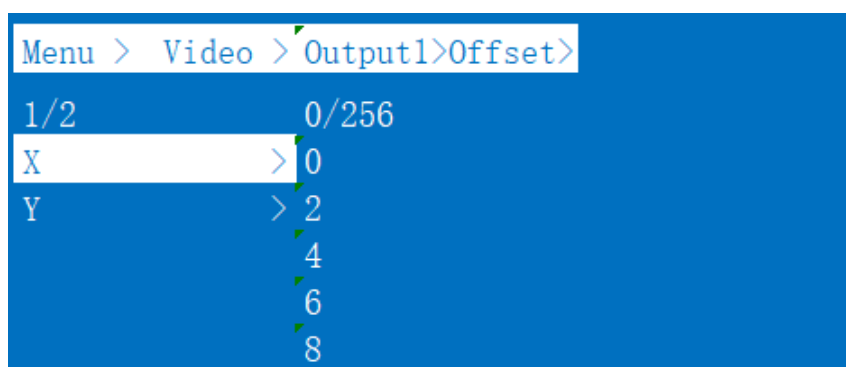
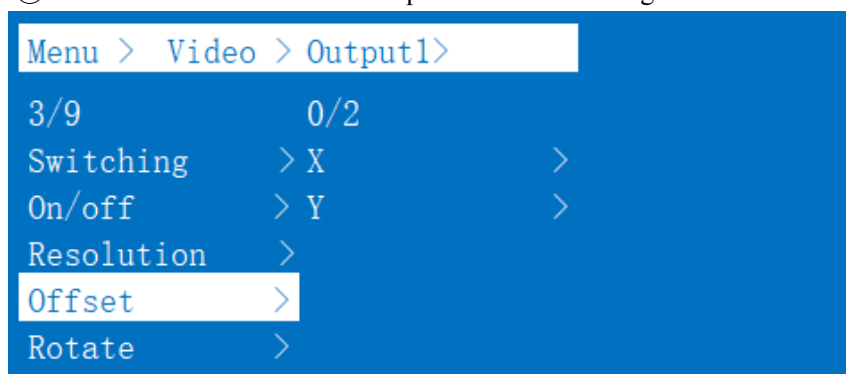


You can choose any one of the output video resolution, or choose all of the output video resolution, the system default use Auto (this option is the product according to the displays judgment).

#### 4). OffSet

Operation:

- ① In the video wall mode, select the "Video" in the main menu to press the "OK" button.
- ② Press the "up and down" button to select the "Output1" (select the output you want to adjust) or the 5th option "ALL" which means that all outputs are selected.
- ③ Click "OK" to enter the next submenu.
- ④ Press "up and down" button to select the "OffSet"
- ⑤ Click "OK" to enter the next submenu.
- ⑥ Press the "up and down" button to select X and Y. X and Y have 301 sub-items, the minimum is 0, the maximum is 600, the number adjustment interval is 2.
- ⑦ Click the "OK" button to complete the offset setting.

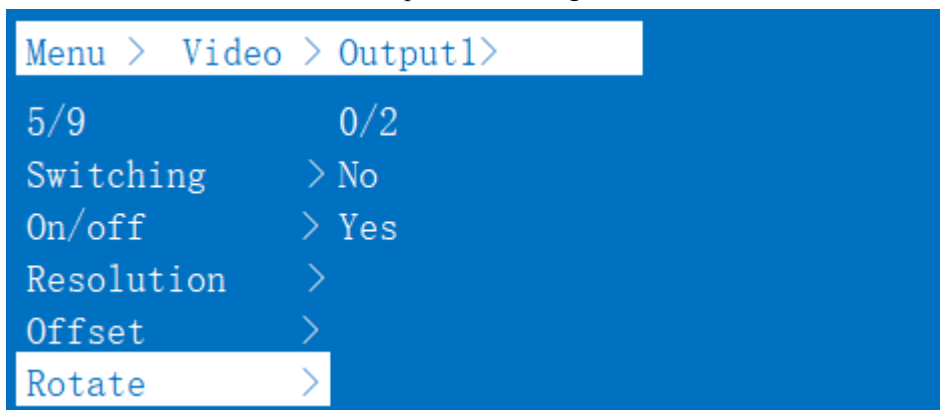


You can select the offset(The margin of the display screen) of any one of the output video, or select the offset for all of the output video screens. (Offset apply to video wall mode).

### 5). Rotate

Operation:

- ① In the main menu, select "Video" to press the "OK"
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down”to select the "Rotate"
- ⑤ Click "OK" to enter the next submenu.
- ⑥ Press the “up and down” button to select the "Yes" to open or the "No" is closed
- ⑦ Click the "OK" button to complete the setting.

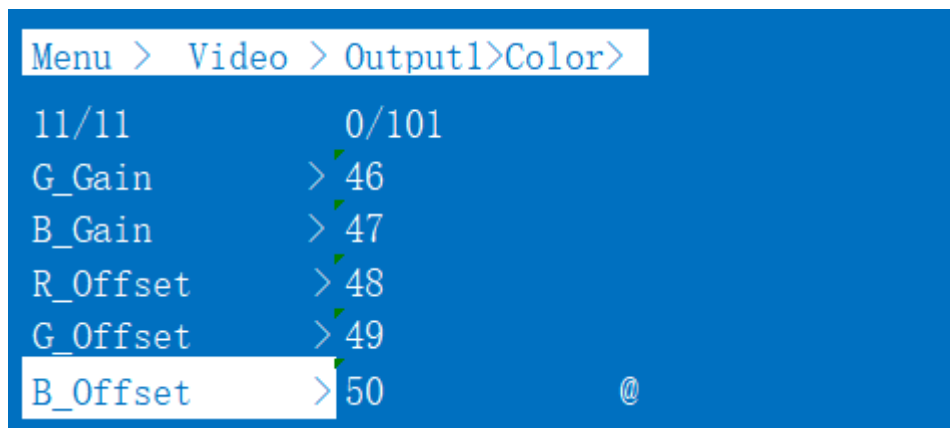
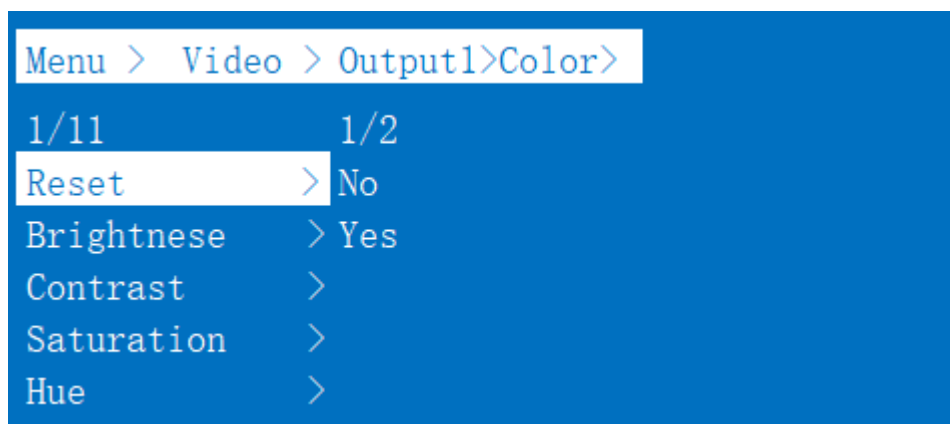
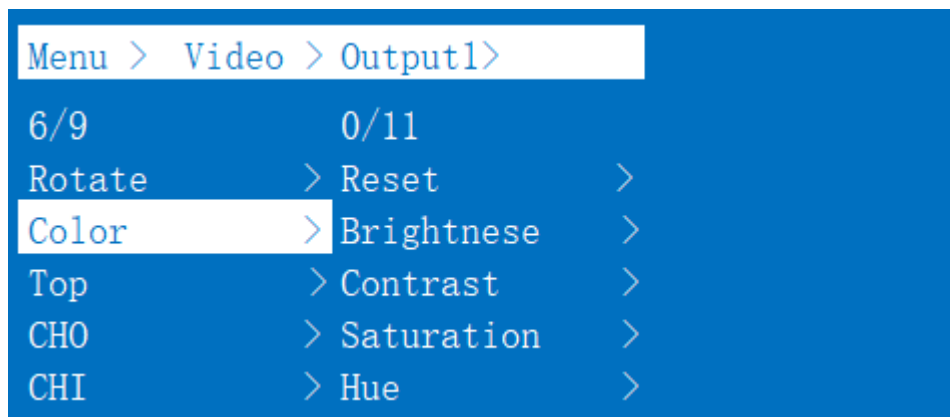


You can select any key to select output1 rotations or all the output rotations. The rotation is 180° clockwise

### 6). Color

Operation:

- ① In the main menu, select "Video" to press the "OK"
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down” button to select the "color"
- ⑤ Click "OK" to enter the next submenu.
- ⑥ Press the “up and down” button to select the "Yes" to open or the "No" is closed
- ⑦ Click the "OK" button to complete the color setting.



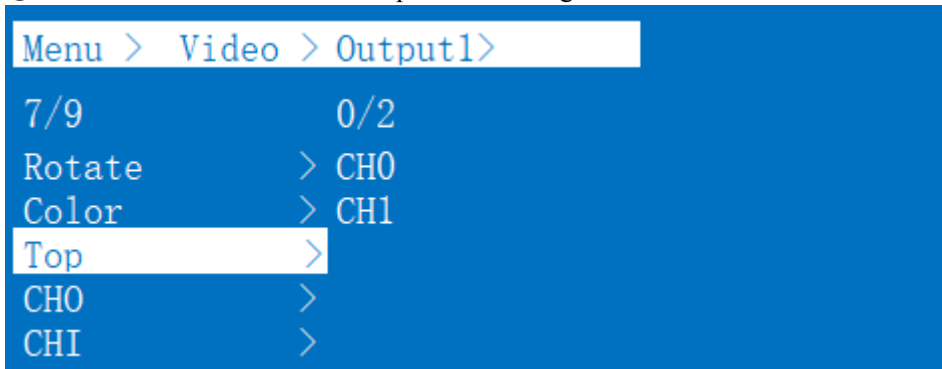
You can choose any output(such as **output1**)’s color Settings or select all output the picture color Settings, you can set the contrast, brightness, saturation, color, and R, G, B offset, etc.You also can choose the “Reset” to restore all the default Settings.Each option can be set 0-100 (the system default parameters for 50), the color of the above parameters can be set according to your own preferences.

### 7). Top

Operation:

- ① In the main menu, select "Video" to press the "OK" .
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down”button to select the "Top" .

- ⑤ Click "OK" to enter the next submenu.
- ⑥ Press the “up and down” button to select the "CH0" to close or the "CH1" is open
- ⑦ Click the "OK" button to complete the setting.



You can choose the **Top** area (one of the output port's) to display CH0 or CH1.

### 8). CHO

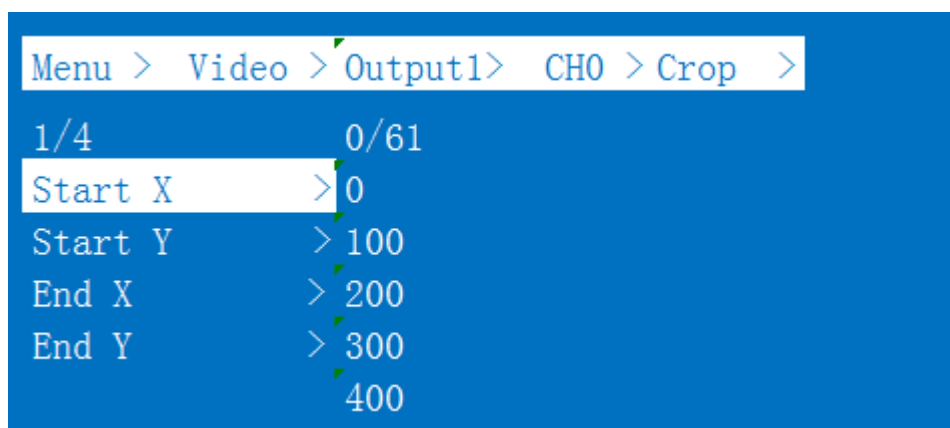
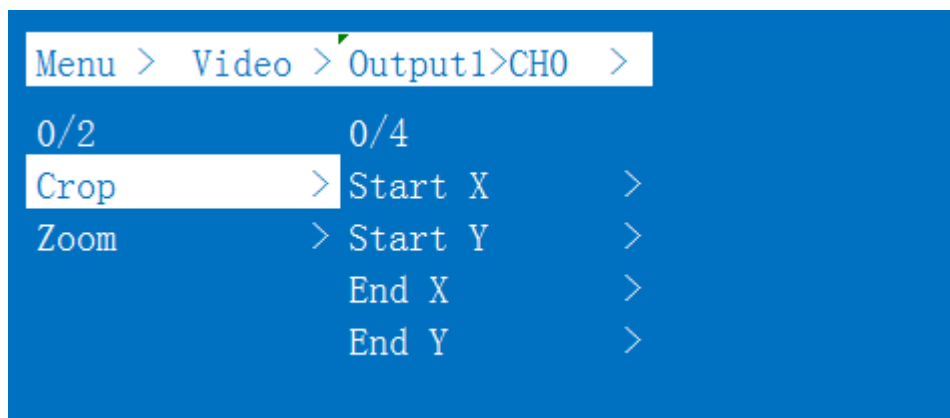
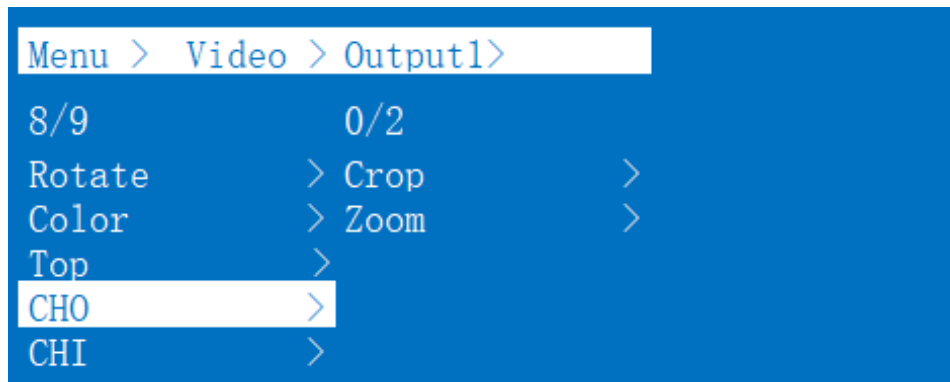
Operation steps:

- ① In the main menu, select "Video" to press the "OK" .
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ press the “up and down” button to select "CH0"
- ⑤ Click "OK" to enter the next submenu and there are two submenus of CH0: Crop,Zoom
- ⑥ Press the “up and down” button to select “Crop” to set Start x : 0, Start y : 0, End x :6000, End y: 6000 (There are 61 subitems under each coordinate, minimum 0, maximum 6000, each value interval 100, the defaults value of selected video:( the upper left corner **Start (0, 0)**, the lower right corner **End (6000, 6000)**, **midpoint (3000, 3000)**)
- ⑦ Click on the "OK"button to complete the setting.
- ⑧ Press the “up and down” button to select “Zoom” . There are four subitems under Zoom: Start x: 0, start y :0, End x:3000, End y:3000;
- ⑨ click on the "OK" button to complete the setting.

#### Start(0,0)



**END(6000,6000)**



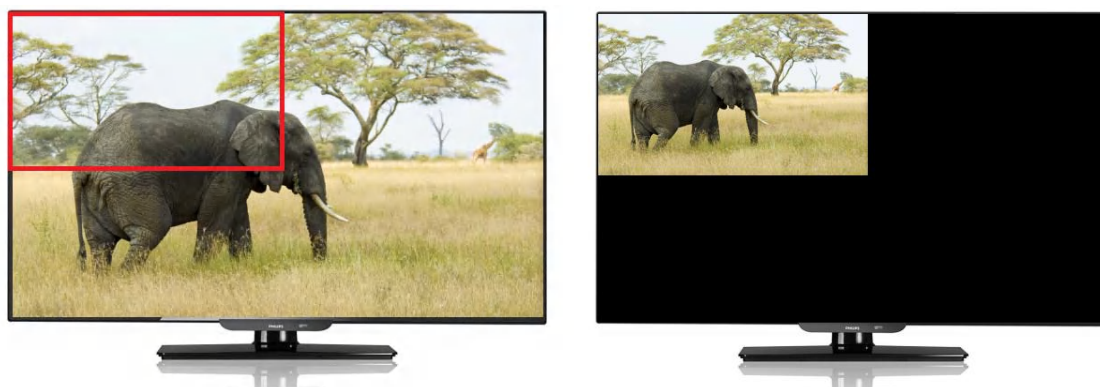
You can choose one of CH0 output video screen size and the size of the cutting video screen, or select all CH0 output video screen size and the size of cutting all output video image, the size of the coordinates of the out displays in the upper left corner and the lower right corner, full screen coordinates (0, 0, 6000600), adjust the picture size and cut size need to set the starting point and end point.

Set the image size of CH0's OU1 as 4/1, upper left corner, when the crop unchanged, CH1 does not change. TOP is CH0.

**Corp:**



**Zoom:**



**9). CH1**

CH1 has one more select Source function. Crop and Zoom are the same as the operation steps of CH0 main channel. You can select one of the CH1 output video screen size and the size of the cutting video screen, or select the size of all CH1 output video screen and the size of the all output cutting video screen.

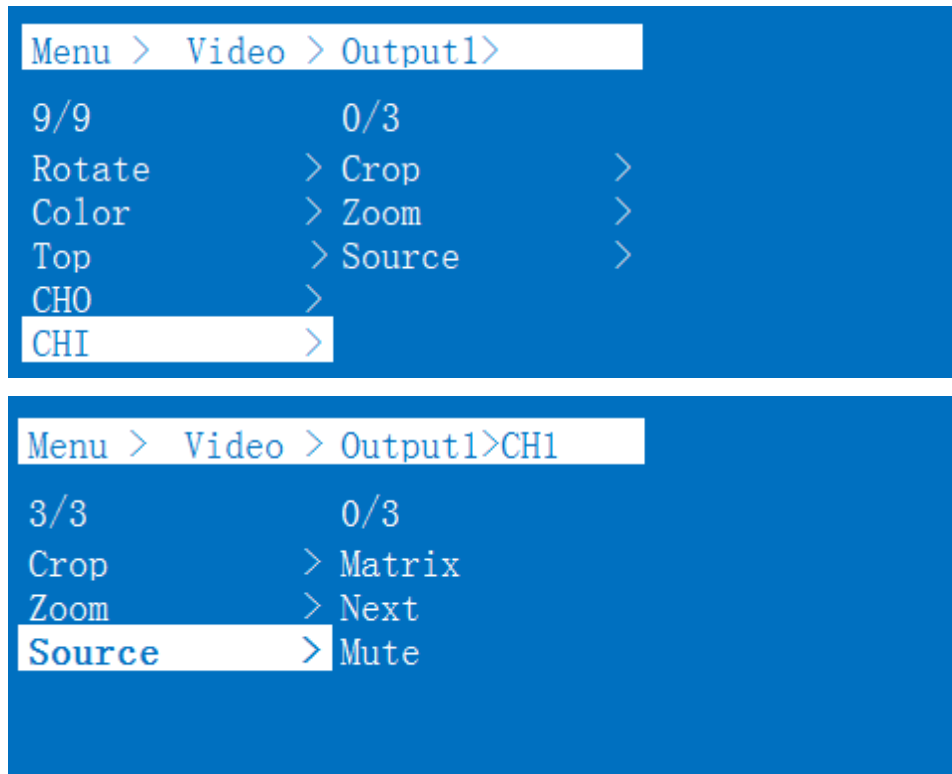
Operation:

- ① In the main menu, select "Video" to press the "OK" .
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press “ up and down” button to select ”CH1”
- ⑤ Click "OK" to enter the next submenu. There are 3 submenu: Crop、 Zoom、 Source.
- ⑥ Crop, Zoom is the same as the CH0 operation.
- ⑦ Click "OK" to enter the next submenu, and there are three subitems under Source: Matrix, Next, Mute
- ⑧ When we click "Matrix" , the CH1 is the same as the CH0 signal source, and the image is the same.



⑨ When we click "Next", then the signal source of CH1 is the next signal source, and the output screen is the image of the next signal source.

⑩ When we click "Mute", then close the CH1 image. After we select "Mute", the CH1 screen is black screen.



#### 10). CH0, CH1 mirror Settings

You can set CH0 or CH1 to mirror the X-axis or Y-axis image.

Operation:

- ① In the main menu, select "Video" to press the "OK".
- ② Press "up and down" button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the "up and down" button to select "CH0".
- ⑤ Click "OK" to enter the next submenu, press the "up and down" button to select "Crop"
- ⑥ Set Start x:0, Start y:6000, End x:6000, End y:0
- ⑦ Click the "OK" button to confirm
- ⑧ Horizontal mirror screen setup complete



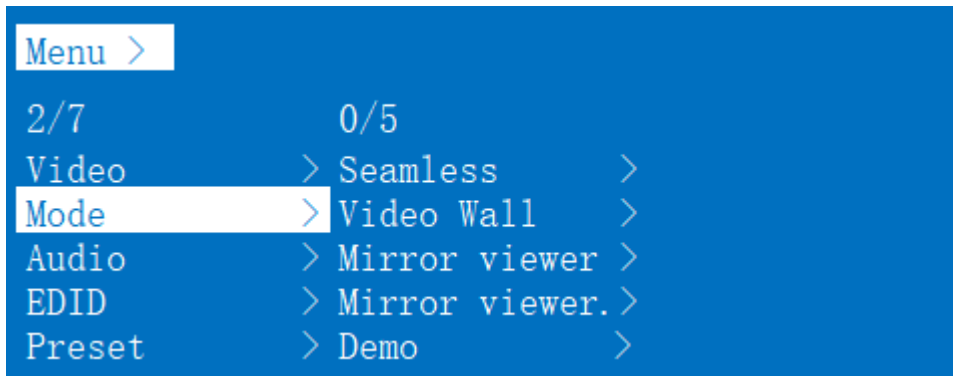
Vertical mirror diagram



Horizontal mirror diagram

### 8.2.2 Mode

The Mode control interface has 4 submenus:

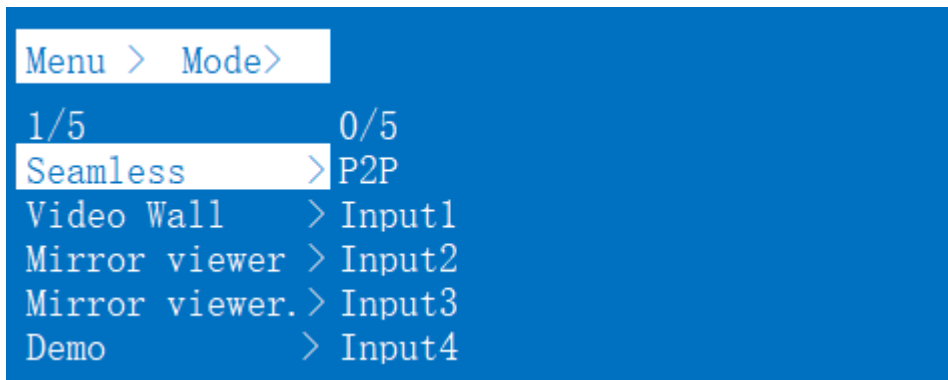


#### 1). Seamless matrix Mode

Seamless is the interface of Seamless switch of matrix, Seamless can seamlessly switch all input signal sources, can choose 1~4 signal sources, or choose P2P (one signal source to one screen)

Operation:

- ① In the main menu, select "Mode" to press the "OK" .
- ② Press the “up and down” button to select "Seamless"
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down” button to select the "Input" (the first option is P2P mode)
- ⑤ Click "OK" to complete the switch.

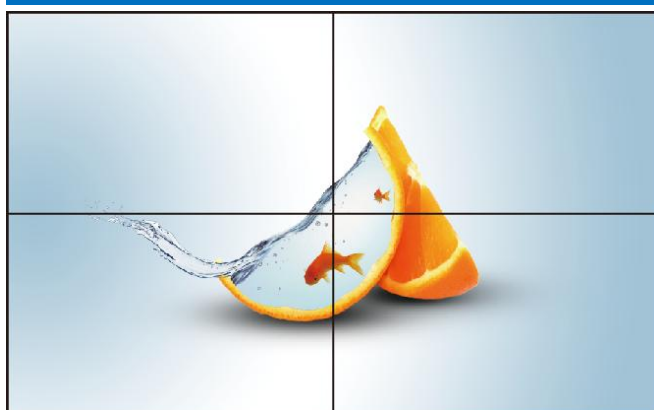
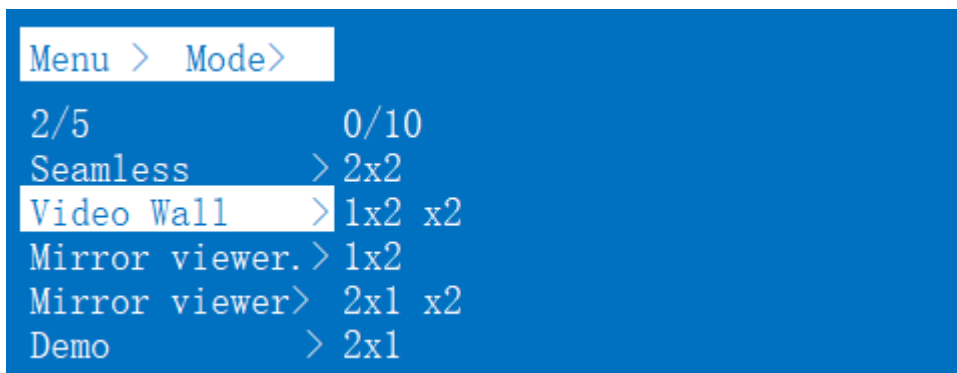


**2). Video-wall Mode**

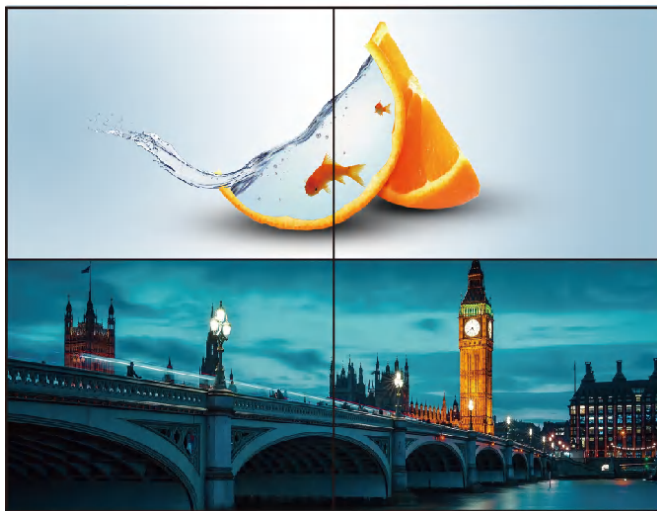
Video-wall can select 4 display sets to make a picture. There are 10 preset scenes (2x2, 1x2x2, 1x2, 2x1x2, 2x1, 2x1 1x2, 1x3, 3x1, 1x4, 4x1). After clicking, you can select the scene you need.

Operation:

- ① In the main menu, select "Video-wall" to press the "OK"
- ② Press the "up and down" button to select the scene you want
- ③ Click on the "OK" to complete the setting



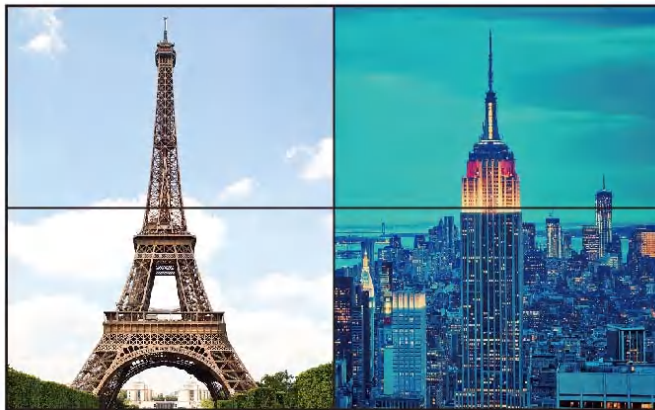
2x2



2x1x2



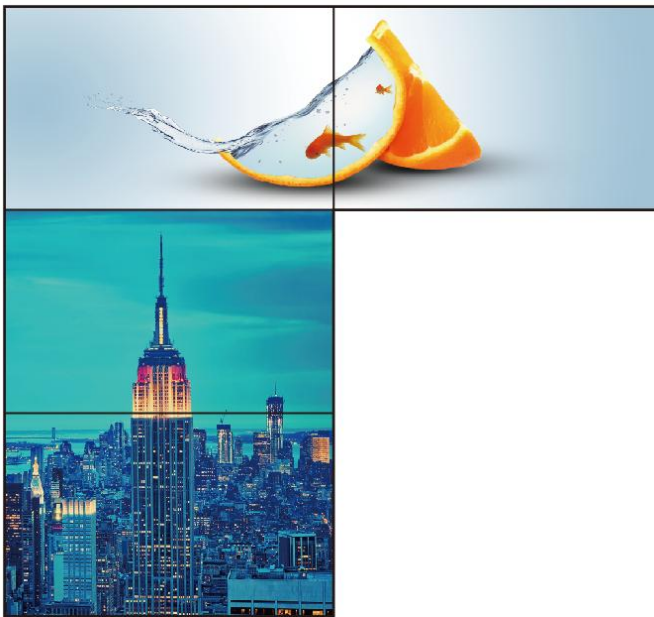
2x1



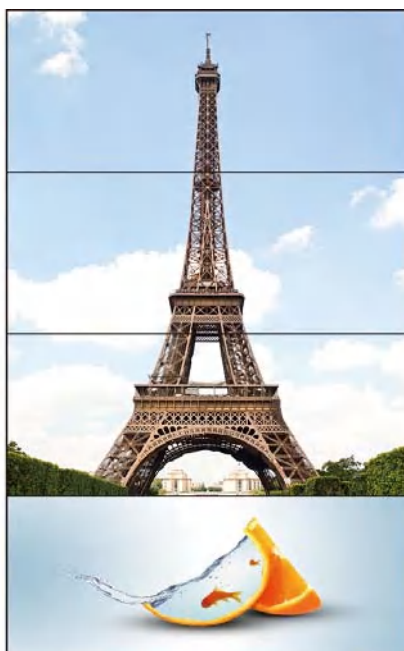
1x2x2



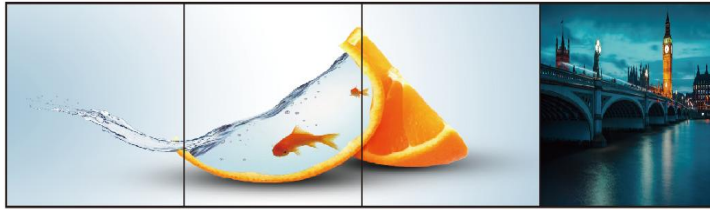
1x2



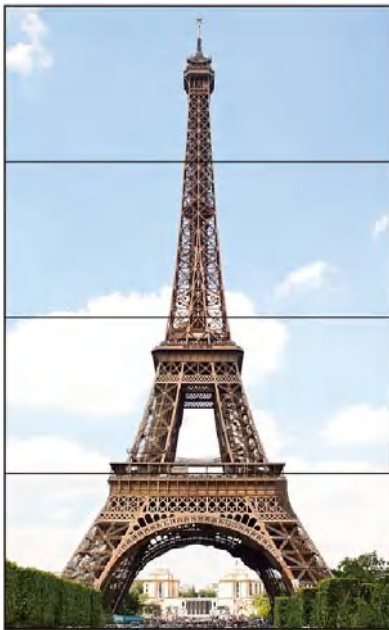
2x1 1x2



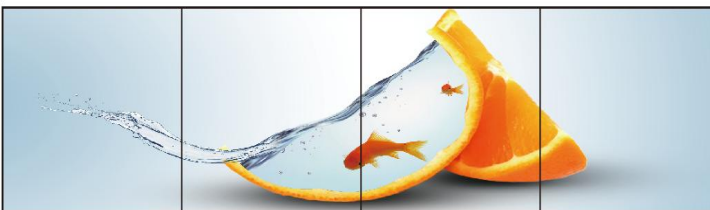
1x3



3x1



1x4



4x1

\* That's the Video wall preview. Each black frame represents a TV and each different picture represents different input source.

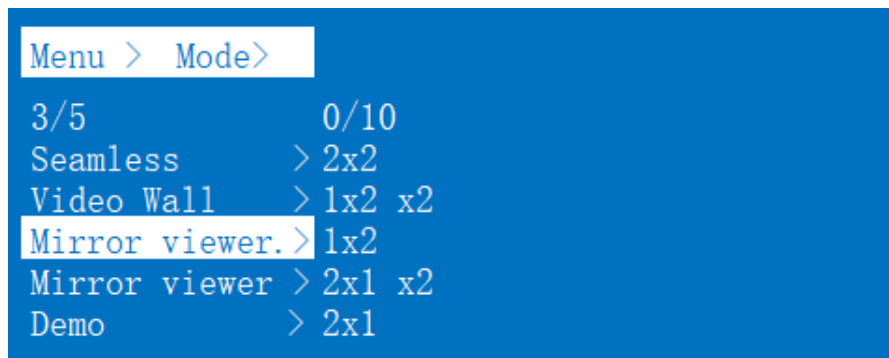
The same picture in multiple television means that the same input source is allocated to multiple TVs to make up the video wall.

### 3). Mirror video-wall Mode

Mirror video-wall can select 4 mirror display sets to make a picture, there are 10 preset scenes, click to select the required scene (this function is to Mirror the preset scene of Video wall)

Operation:

- ① In the main menu, select "Mirror Video-wall" to press the "OK" .
- ② Press the "up and down" button to select the scene you want
- ③ Click on the "OK" to complete the setting.

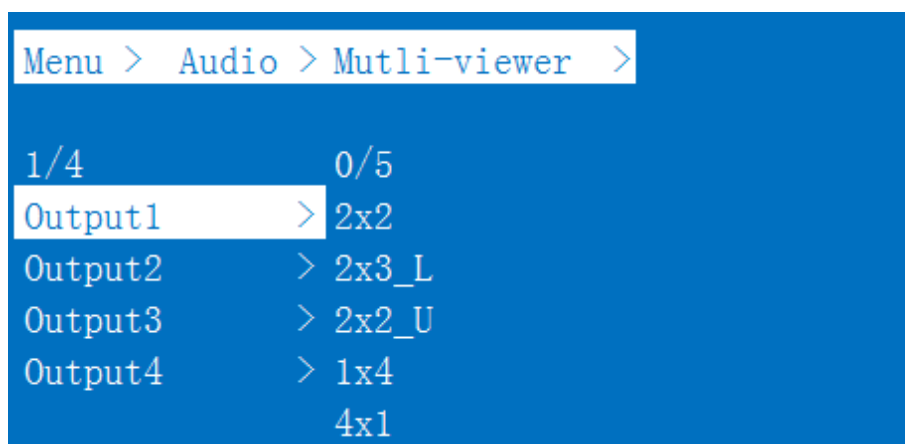
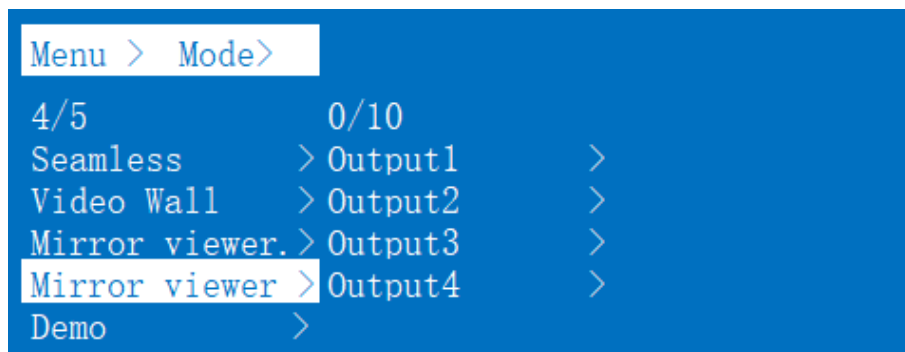


**4). Mutli-viewer mode**

Mutli-viewer can select a preset segmentation scene. The image segmentation can only one output way, not multiple output to segmentation.

Operation:

- ① In the main menu, select "Mutli-viewer" to press the "OK".
- ② Press the "up and down" button to select the "Output"
- ③ Click the "OK" button to confirm.
- ④ Press the "up and down" button to select multiviewer scene
- ⑤ Click "OK" to complete the setting.



Multi-viewer mode interface:



2x2



2x3 L



2x3 U



1x4



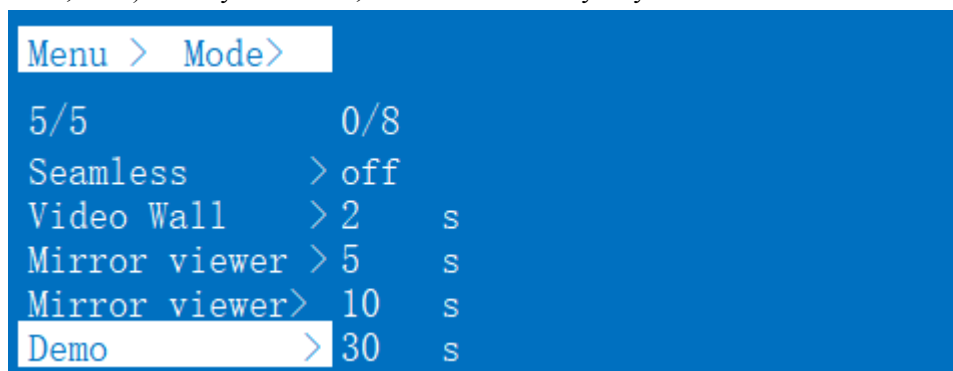


4x1

\* That's mutli-viewer preview. The black frame represents a TV ( the output1-4 you selected). The picture shows four input sources.If you choose a source to set the mutli-viewer , the other three screens will also change according to the input1-4, until you select the output screen.

### 5). Demo

Demo Mode is video preview. After opening this function, the product will automatically display all the scenes of the product (all scenes in Mode ), including matrix, video wall, multi-viewer, mirror, etc.Each screen playback can choose the preset time (default time includes: 2S, 5S, 10S, 30s, 60S, 180S, 600s). After you select it, it will automatically stay in the current screen.



### 8.2.3 Audio Settings interface

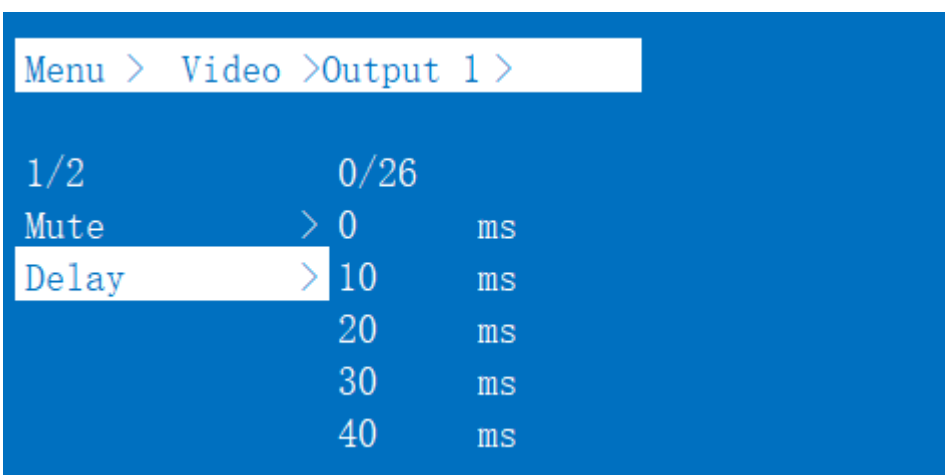
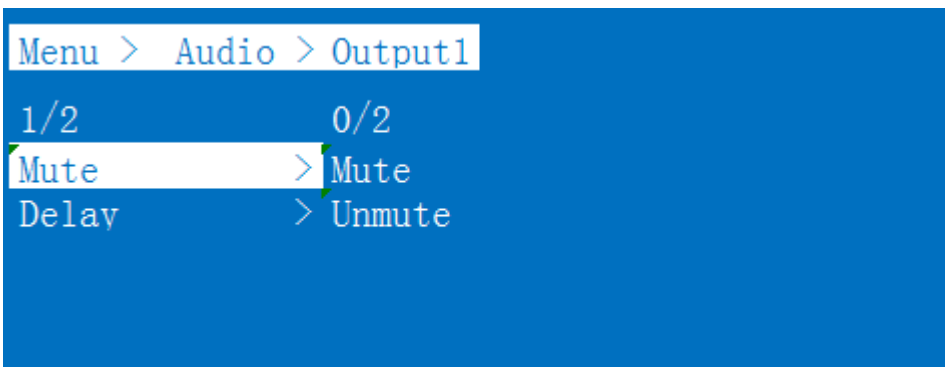
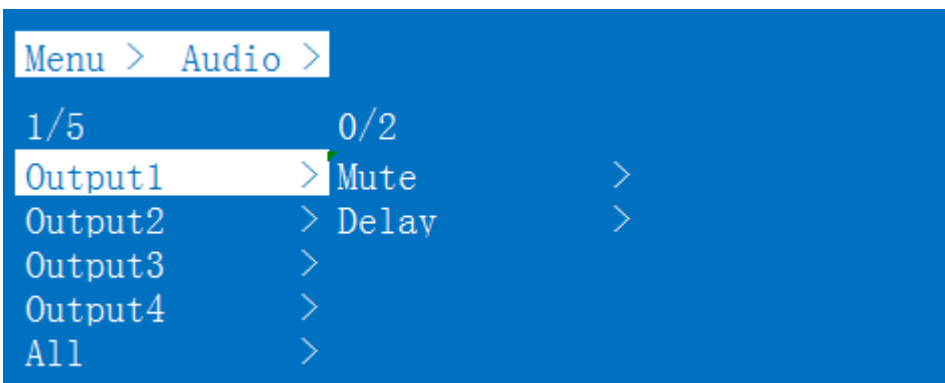
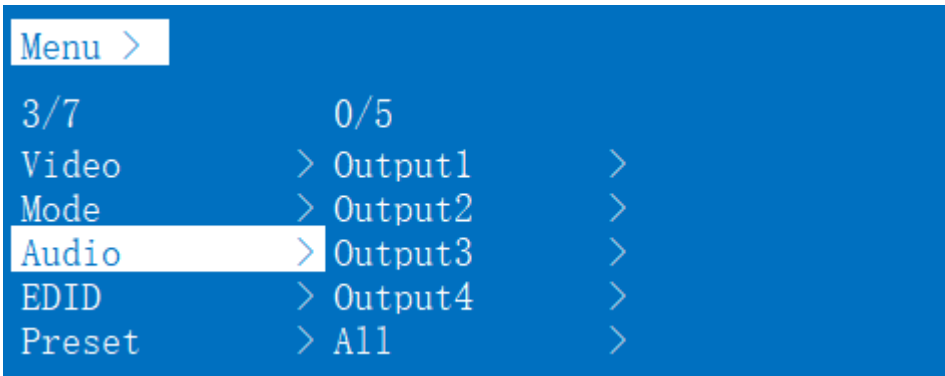
Audio control interface has five sub-menu:

- 1.Output1~4
2. ALL

you can choose Mute, speaker or Delay, select the corresponding output

Operation:

- ① Select the "Audio" in the main menu to press the "OK"to confirm.
- ② Press “ up and down” button to select "Output1" (The fifth ALL option means that all outputs are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down” button to select the "Delay"mode.
- ⑤ Click "OK" to enter the next submenu, select the number 30 (The factory settings default is 30)
- ⑥ Click "OK" to confirm
- ⑦ The audio delay setting is complete

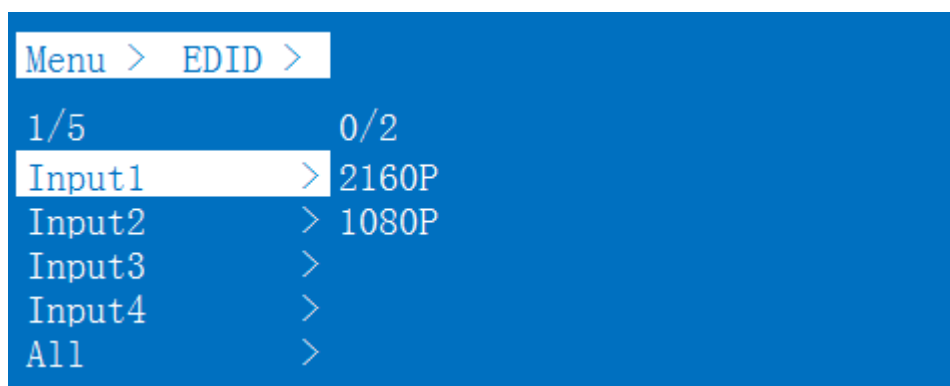
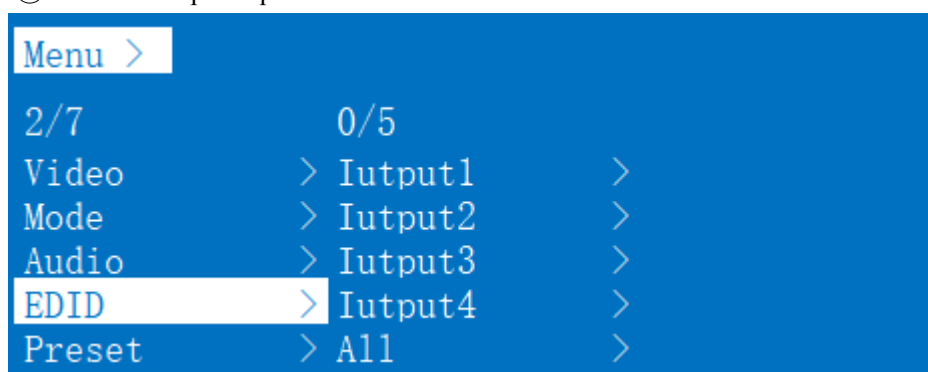


### 8.2.4 EDID Settings

EDID setting interface can set EDID of each input port, and you can choose one mode of built-in EDID, which has two resolutions: 2160P and 1080P.

Operation:

- ① In the main menu, select "EDID" to press the "OK".
- ② Press “ up and down” button to select "Intput1" (The fifth ALL option means that all inptus are selected)
- ③ Click "OK" to enter the next submenu.
- ④ Press the” up and down” button to select the resolution.
- ⑤ Click "OK" to confirm
- ⑥ EDID setup complete



### 8.2.5 Preset Settings

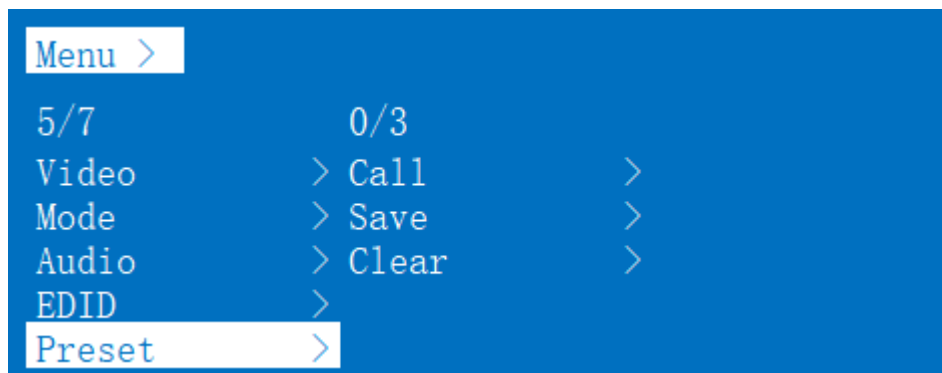
Preset control interface has three sub menu:

- ① The call scenario
- ② Save scene
- ③ Remove scene

three options operation steps are the same, can be stored for a total of eight different scenarios.

If you want to change the scene name needs to go to the web page, the web page will synchronize the name, the “Clear” will restore the default scene mode. When you click the “clear”, the name will not change. The name is restored to the default only when the device recovers the factory settings.

**Note:** Preset 1-8 is the default P2P mode

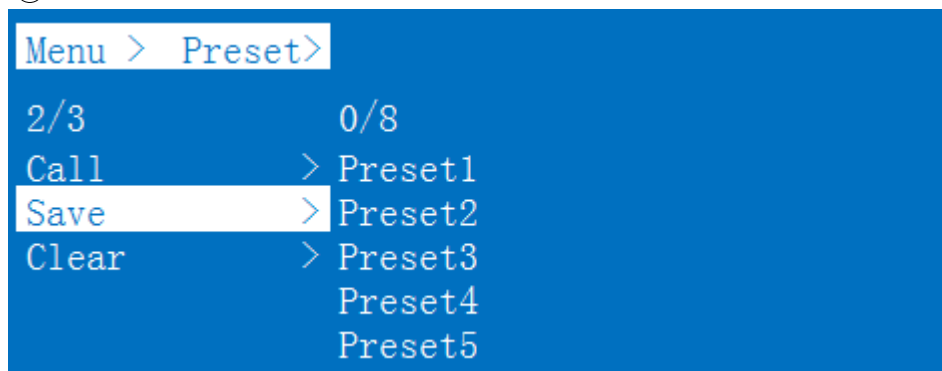


### 1). Save Settings

If there is no save scenario, the factory default P2P mode will be invoked.

Operation :

- ① Click the "Preset" button on panel.
- ② Press the “up and down” button to select the "Save".
- ③ Click "OK" to enter the next submenu.
- ④ Press the” up and down” button to select 1 ~! 8 saved scenes.
- ⑤ Click "OK" to confirm
- ⑥ Scene saved



## 8.2.6 Setup interface

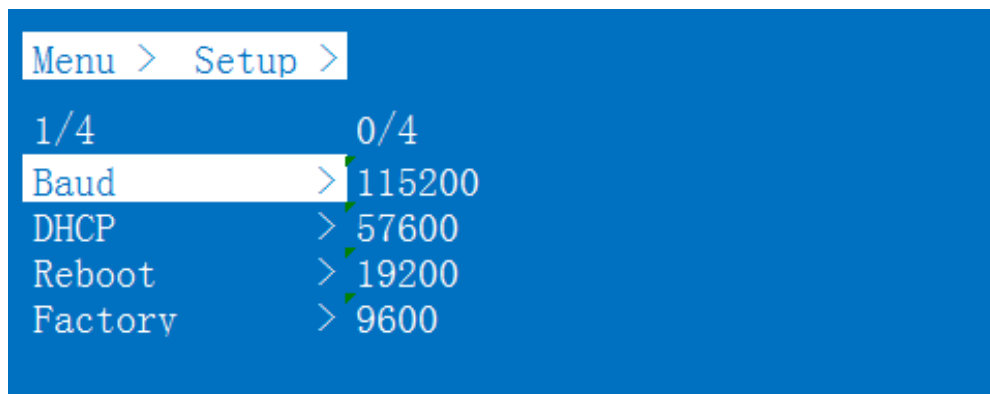
### 1). Baud rate Settings

Device baud rate offers 4 options,9600,19200,57600,115200.

The default serial port of the device is **115200**

Operation:

- ① In the main menu, select "Setup" to press the "OK" confirmation button
- ② Press the “up and down” button to select the "Baud" .
- ③ Click "OK" to enter the next submenu.
- ④ Press the “up and down button” to select baud rate (9600,19200,57600,115200)
- ⑤ Click on the "OK" to complete the baud rate setting

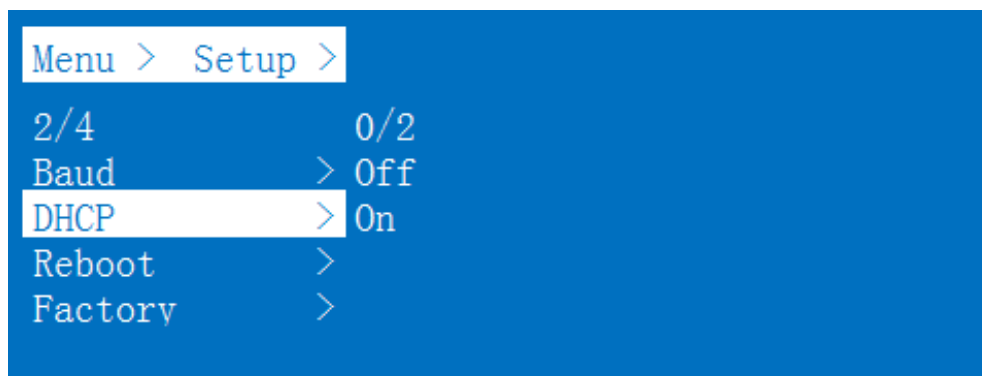


## 2). DHCP switch

The DHCP interface "On" is set as dynamic and "Off" is set as static. If the system restates factory ,the default DHCP as Off.

Operation:

- ① In the main menu, select "Setup" to press the "OK" .
- ② Press the "up and down" button to select the "DHCP"
- ③ Click "OK" to enter the next submenu.
- ④ Press the "up and down" button to select "Off" to close or "On" to open
- ⑤ Click "OK" to confirm

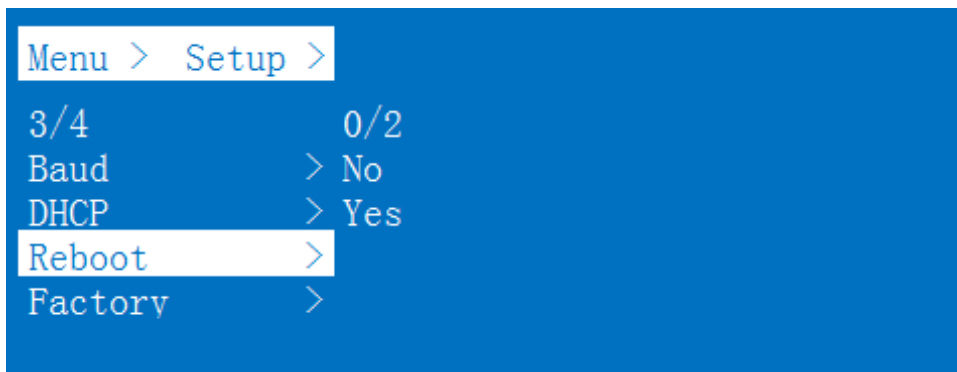


## 3). Reboot

Interface setting device restart setting.

Operation:

- ① In the main menu, select "Setup" to press the "OK" .
- ② Press the "up and down" button to select "Reboot" to restart settings.
- ③ Click "OK" to enter the next submenu.
- ④ Press the "up and down" button to select "No" or "Yes"
- ⑤ Click "OK" to confirm



#### 4). Factory setting

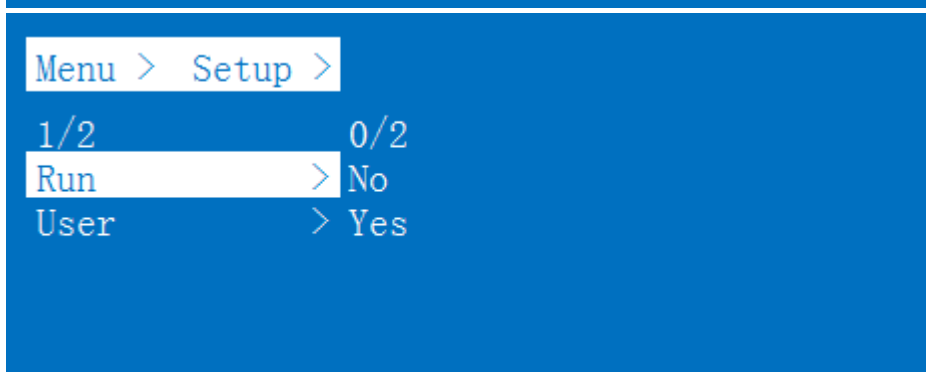
It is an initialization setting for the device function. There are two factory settings:

1. Factory-Run
2. Factory-User

Factory-Run is the recovery operation data. The factory-User can restore the factory settings for all settings.

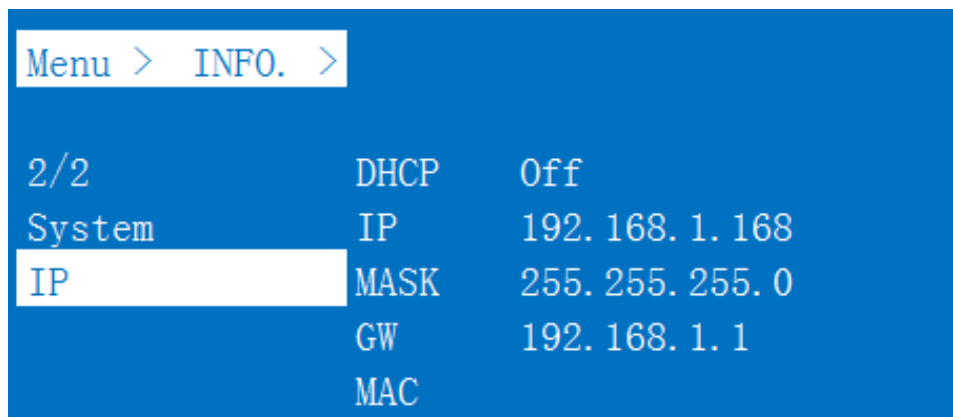
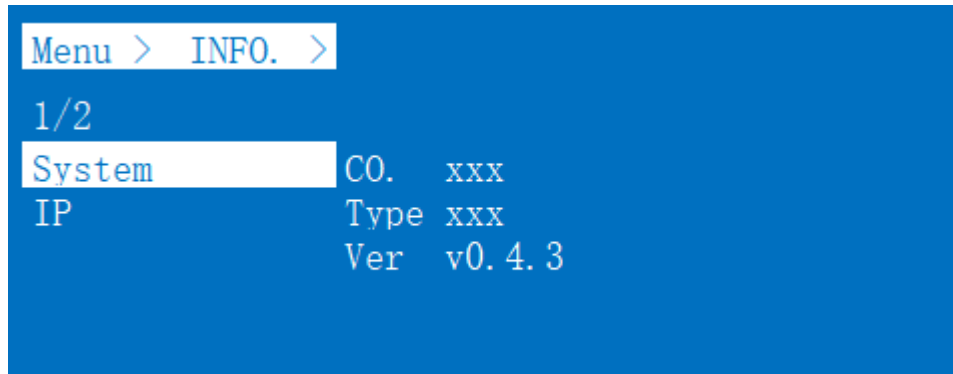
Operation:

- ① In the main menu, select "Setup" to press the "OK".
- ② Click "OK" to enter the next submenu.
- ③ Press the “up and down” button to select "Run" and “User”
- ④ Click "OK" to confirm
- ⑤ Press the “up and down” button to select "Yes" or “No”.
- ⑥ Click "OK" to confirm



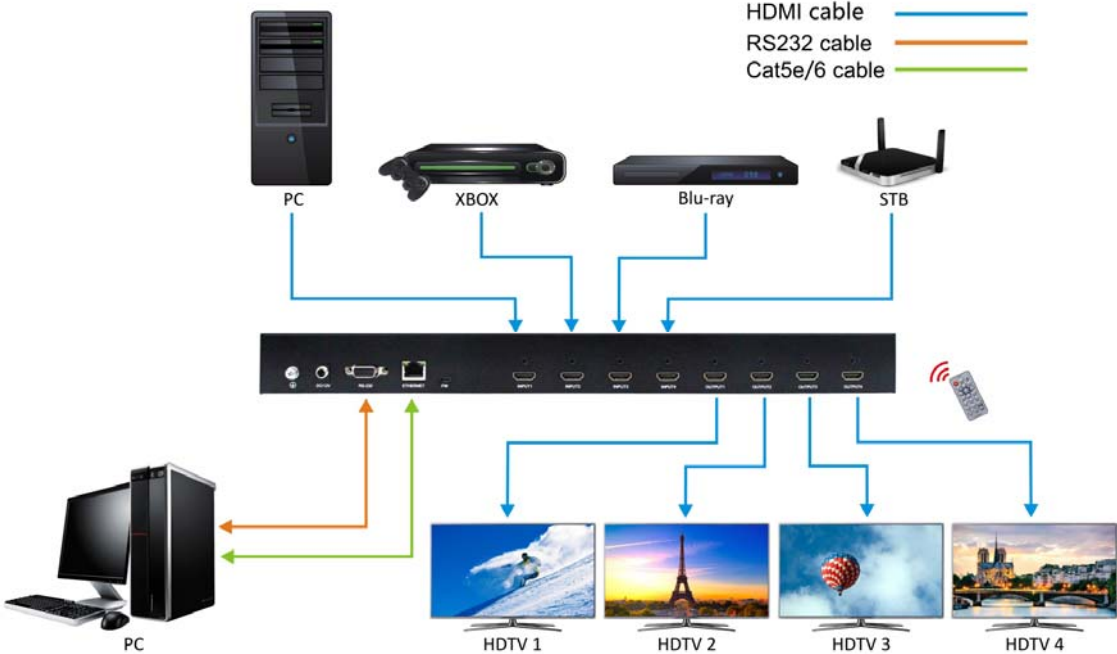
### 8.2.7 Query information interface

Inquiry device information, such as IP information, system information, each device different MAC , default IP is 192.168.1.168 and 255.255.255.0.

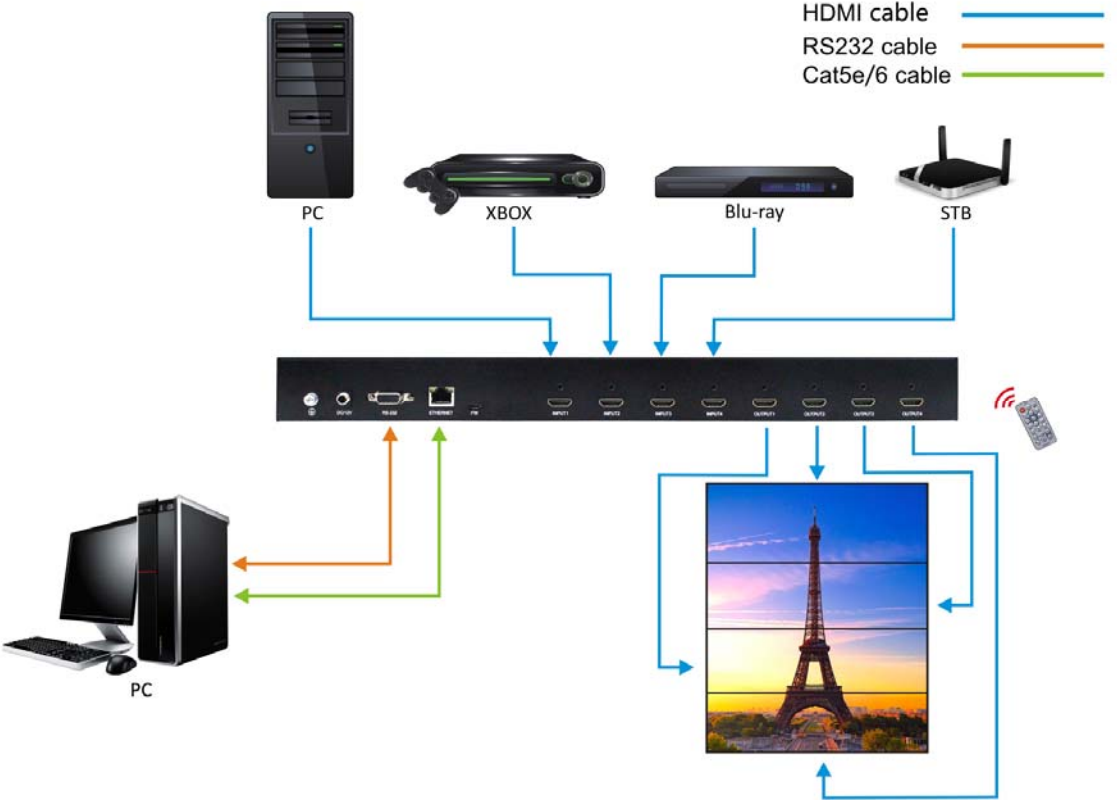


### 9. CONNECTION DIAGRAM

#### Application 1: Seamless Switch 4x4 HDMI Matrix



#### Application 2: Diagram of Video Wall Displaying

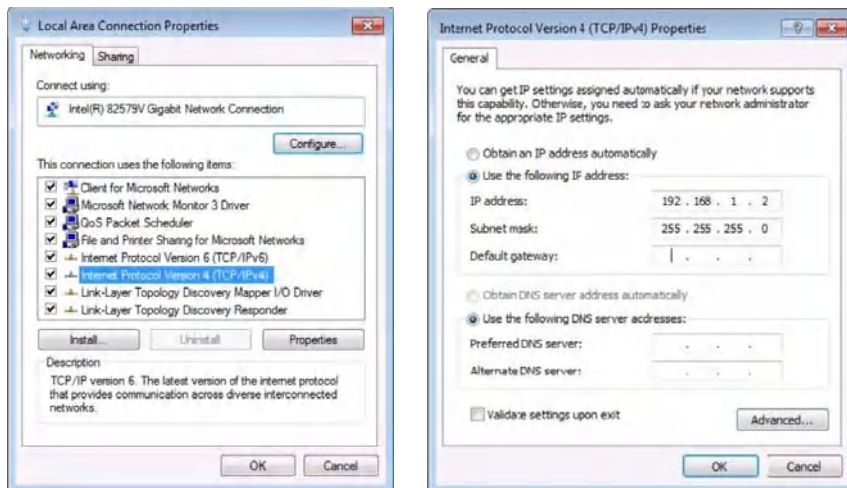




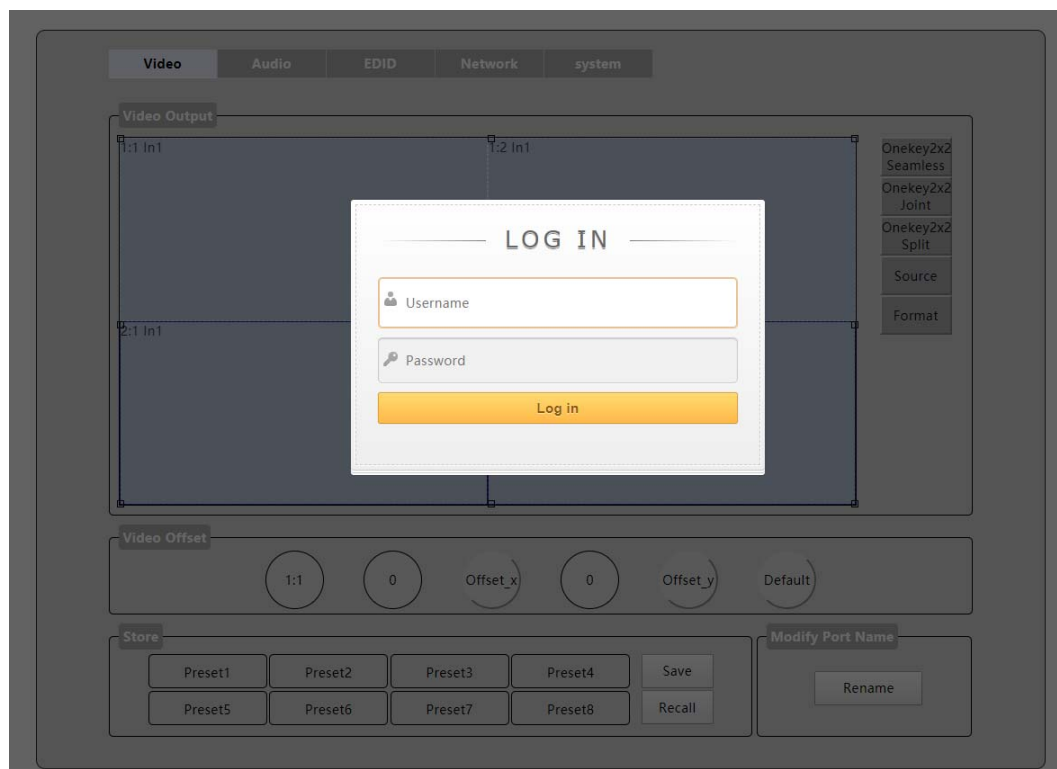
## 10. IP Control

### 10.1 IP setting

- 1). The default mode is “Static IP Address”, you just connect the matrix to your computer over the Ethernet cable
- 2). You can also select "Use the following IP Address",click "OK" button to set IP address (Make sure the IP address in the same range with your PC)



**Note: You need get an IP address from the Router or set Static IP Address first. ENTER the browser (it is recommended to use browsers above Google, firefox and IE8), input the default IP address:192.168.1.168,A web browser will be shown, input the default account: **admin** and the default password: **123456**, click LOGIN or press ENTER to LOGIN,The device controller page will be displayed.**

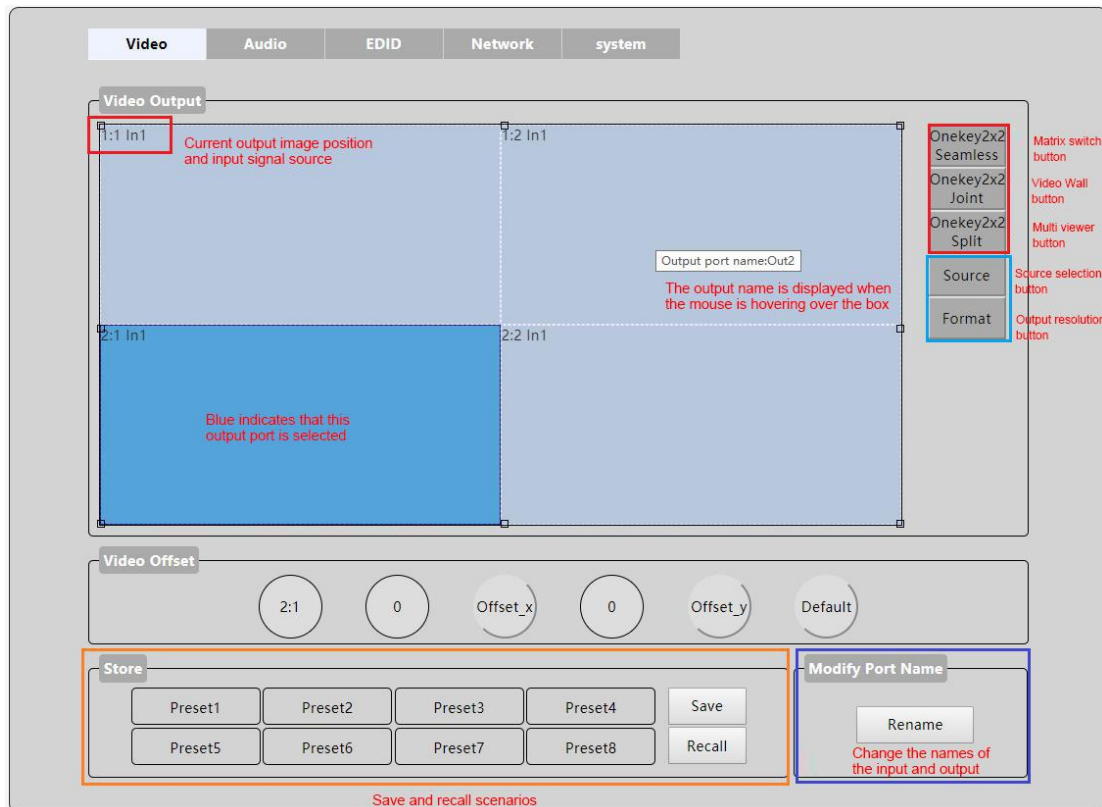


## 10.2 Switch setting

The Video interface is divided into:

- 1). Seamless matrix mode
- 2). Video wall mode
- 3). Mutli-viewer mode

The current state can be set through the Onekey2x2 button



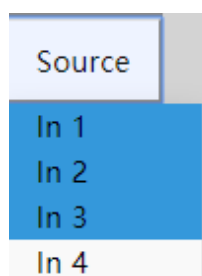
In the Video interface, one-to-one and one-to-many Video switching can be realized.

**One-to-one Video switching:** first click any Output in Video Output, then select signal Source in the Source button and click the corresponding signal Source (Input1~Input4) to complete the switching operation.

**One-to-many Video:** first press and hold the left mouse button in Video Output to select multiple outputs, and then select the signal Source (Input1~Input4) in the Source button. Click and complete the switching operation.

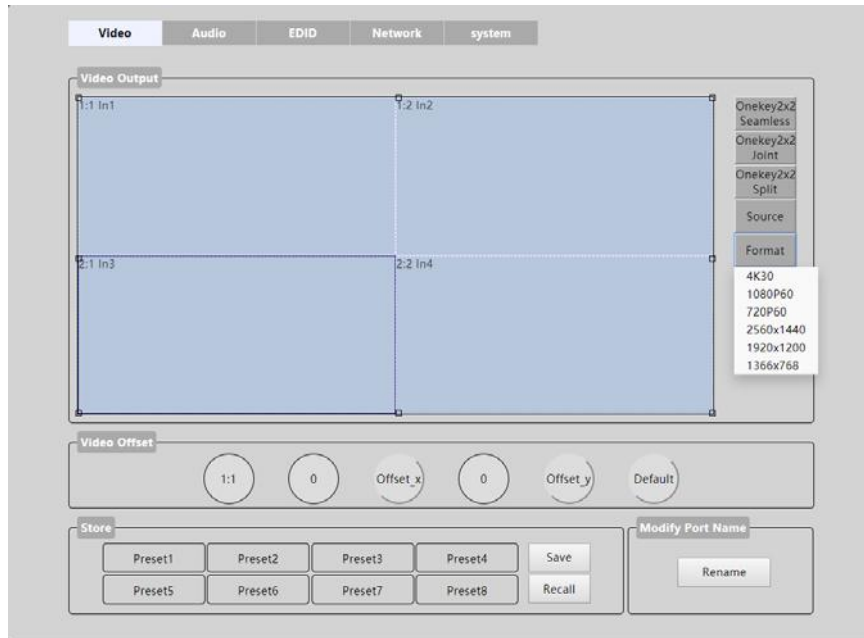
The Source button "In1~4" will show blue if there is a signal has connected in this input port.

If it show the white,it means that there is no signal.

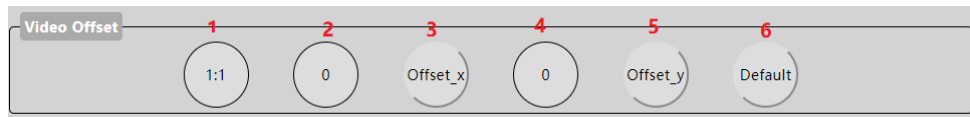


### 10.3 Format

Select Video Output that needs to be changed in Video Output, and the selected block will turn blue. Click on the Format button to change Output resolution (it support single select, multiple select or all select), and click on the resolution to set it successfully.



### 10.4 Video Offset



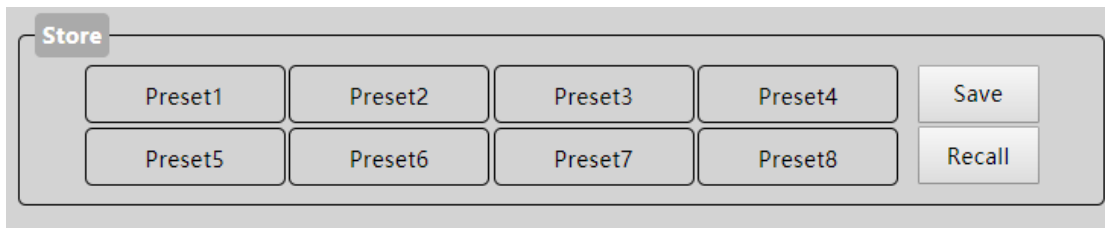
- 1). Represents the number of the selected display.
- 2). X-axis margin value display
- 3). X-axis margin value confirmed
- 4). Y-axis margin value display
- 5). Y-axis margin value confirmed
- 6). Restore default value

Offset function: adjust the Offset of X axis or Y axis in a single screen, the range is 0-300, increasing by 2 each time;The default is 0 for both X and Y.

### 10.5 Store

There are eight scenario schemes, **Preset1~ Preset8**, which can save the current state and recall the scenario scheme when it is used next time (the default 8 scenarios is shown in the figure).

**Note:** The default of the scene is the P2P mode. If you directly called, it is changed to the output 1 to the input 1, the output 2 is input 2, and the output 3 to the input 3 and the output 4 to the input 4.



**Scene save**

For example, input signal 1 to all output ports, then save it to Preset1,

Operation:

- ① Select the All button in the Output region and the 01 button in the Input region.
- ② Select Preset 1 in the Store region;
- ③ Then select “Save” to save the current scene and complete the operation.

**Scene call**

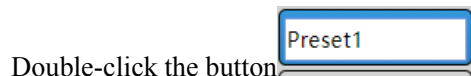
For example: call Preset1 to all output ports

Operation:

- ④ Select Preset1 in the Store area;
- ⑤ Then select “Recall”to extract the Preset1 scene and complete the operation.

**Scene name**

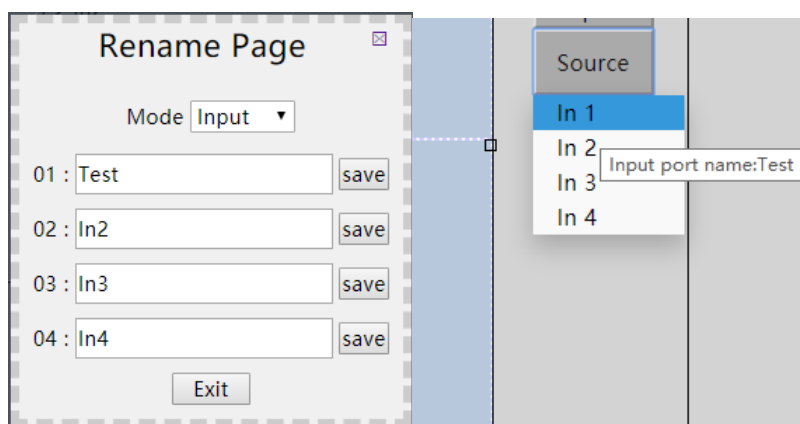
For example, change the scene name Preset1 to”best”



Then change to “best”, and click on another blank area to save it. (It can support 15 characters, Chinese and spaces are not supported)

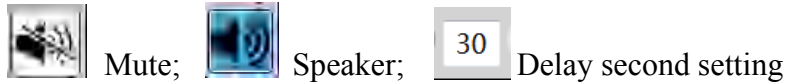
**10.6 Modify Port Name**

Click on: Rename button to modify the port names of input and output (Chinese and white-space are not supported, only 15 characters are supported), and click save button to save.



## 10.7 Audio

Audio interface can only control the output Audio and display the current Audio status in real time.



Audio operation: output1/2/3/4 corresponds to each Output, Output All corresponds to All Output, the operation is consistent;

Audio: click the corresponding output to close the output Audio or start Audio;

Delay: select the output Delay time of audio: range 0-250, with a range of 10 for each adjustment;

### NOTE:

**In Audio operation interface, click any button, all buttons are temporarily unavailable, when the WEB receives feedback, all buttons can click again. If there is a special case and no feedback is received, you can manually refresh the page.**

## 10.8 EDID setting

1). Introduction to EDID interface: preset two kinds of default EDID:

① 4K30 444 3D LPCM2.0

② 1080P60 444 3D LPCM2.0. the EDID of the four input port can be changed.

2). Blue indicates selection



EDID operation: select the Input port first. And then select 4K or 1080P to switch.

is displayed in the Input key to indicate the information of the first Input port EDID, followed by 01 to indicate the Input port. This button indicates that the default EDID1 is copied to input 1, and the Current EDID INFO area displays the EDID information for the Current port.

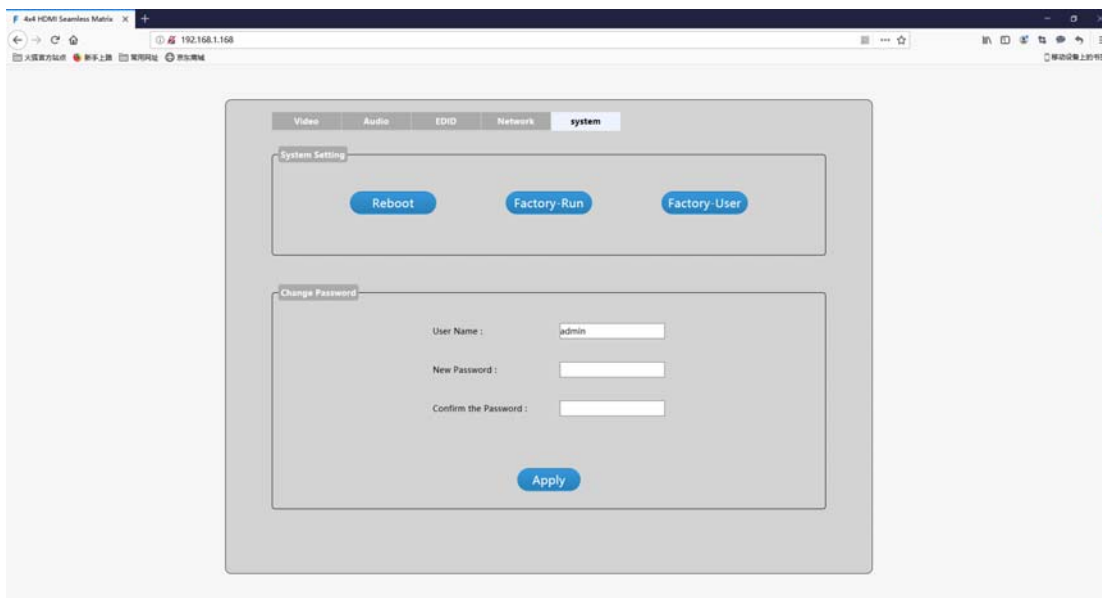
## 11. Network interface description

1. The MAC address can only be displayed and cannot be modified.
2. When static IP: when you use static IP, IP addresses can be modified, and after the application is in effect, the countdown to eight seconds will be performed
3. Then automatically re-enter the web interface.
4. The dynamic IP: you can use the panel switch to set to the "DHCP ON", the dialog box of the IP addresses turns gray, it can not be modified, but can display the current IP address information.
5. DHCP switch is a compound switch. It has both DHCP On and DHCP Off options, it indicating that the current DHCP is closed when the Off is displayed, and the current DHCP is turned on when the On is displayed (click the DHCP button to switch on the DHCP function without clicking on Apply).



## 12. System interface description

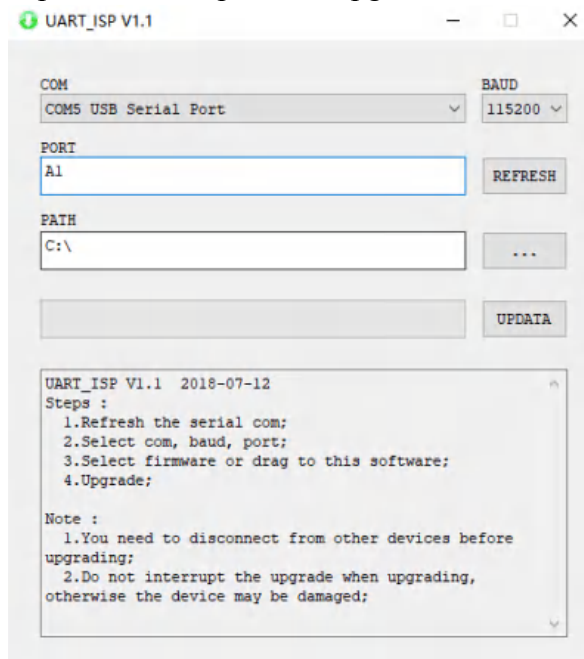
1. “user name” represents changing the user name
2. “new password” indicates the new password to enter the login interface
3. “Confirm the password” indicates that the new password is entered again. After the input is complete, click apply to complete the modification.
4. Modify the account and password. It Only support 6-15 character, alphanumeric and underline (You can only modify the account name and password of the currently logged-in account, and the next login takes effect).
5. Click the “reboot” to restart the device;
6. Click the ”Factory-run,”to restore the running data factory settings function and scene saving function ;
7. Click on Factory-user, to restore the factory settings function;
8. When you make the above settings, a confirmation box appears at the end. When you click confirm, the page will refresh again;



## 13.The firmware update

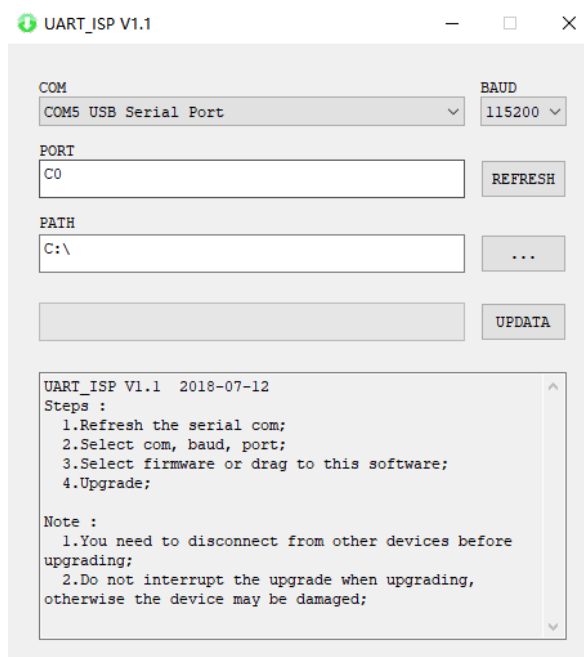
### 13.1.MCU application layer upgrade

Open the software [UART\\_ISP.exe](#) at the PC, select the correct port, the baud rate 115200, input the "A1" in port, and select the path (.bin format) of the program, and click “update” to complete the upgrade.



### 13.2 CPLD

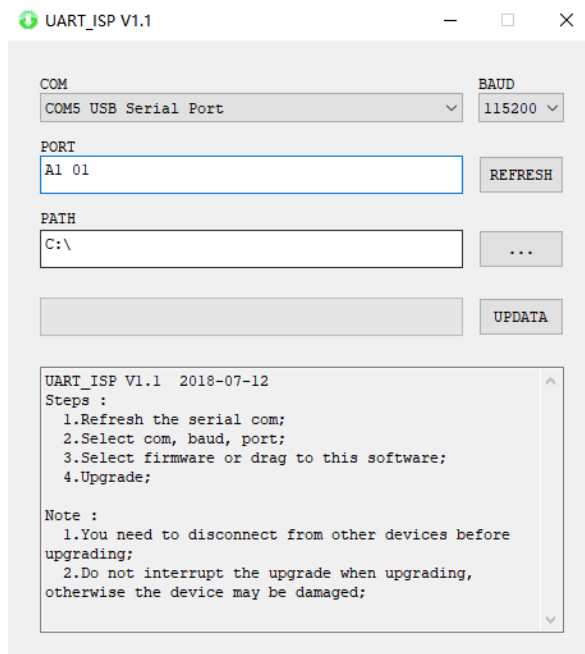
Open the software [UART\\_ISP.exe](#) at the PC, select the correct port, the baud rate 115200, enter the "C0" in port, and select the path (.vme format) of the program, and click “update” to complete the upgrade.





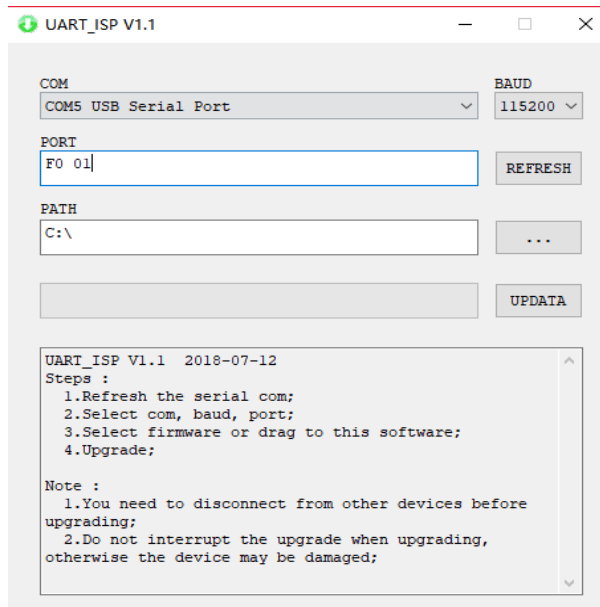
### 13.3 GUI Application layer upgrade

Open the software [UART\\_ISP.exe](#) at the PC and select the correct port, baud rate 115200, enter A1\_01 (\_ for spaces) in port. Then select the program (.bin format) in path, and click “update” to complete the upgrade.



### 13.4 GUI web page upgrade

Open software [UART\\_ISP.exe](#) in PC, select correct port, baud rate 115200, enter F0\_01 in port(\_ for spaces), select program (.html format) in path, click update to complete upgrade.



## MAINTENANCE

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzine to clean this unit.

## PRODUCT SERVICE

### (1) Damage requiring service:

The unit should be serviced by qualified service personnel if:

- (a) The DC power supply cord or AC adaptor has been damaged;
- (b) Objects or liquids have gotten into the unit;
- (c) The unit has been exposed to rain;
- (d) The unit does not operate normally or exhibits a marked change in performance; The unit has been dropped or the cabinet damaged.

**(2) Servicing Personnel:** Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.

**(3) Replacement parts:** When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other Hazards.

**(4) Safety check:** After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

## WARRANTY

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor" ) will, for the length of the period indicated as below, **(Parts)2Year, Labor(90) Days** 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.

## MAIL-IN SERVICE

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

## **LIMITED WARRANTY LIMITS AND EXCLUSIONS**

1). This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage.

The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicicer, or damage that is attributable to acts of God.

2). THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRNTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.)

3). PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY