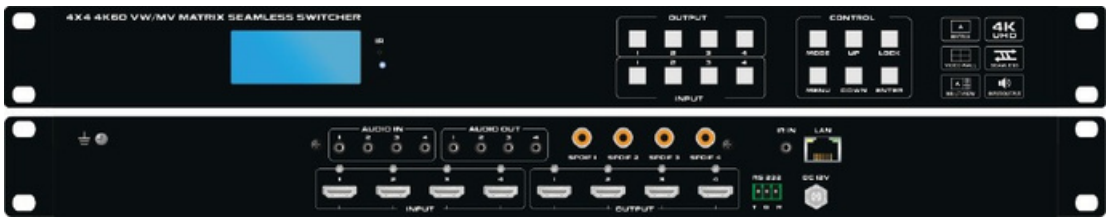
enquiry@driger.tech

USER MANUAL

MA404MVM

4K60 18Gbps 4X4 Seamless HDMI Matrix with Video Wall & Multiviewer&Scaling and APP&IR&IP&RS-232



Safety Reminder

To protect the device and operang personnel from electrosta discharge, you need to check and ensure that the device is grounding well before the device is powered on. Please observe the following when you install, use, maintain this equipment.



Make sure the device ground connecon.

Disposal Instrucon (US)

For beer protecon of our earth, please don't throw this electronic device into municipal trash bin when discarding.

To minimize polluon and ensure utmost protecon of the global environment, please recycle the product. For more

informaon about the collecon and recycling of Waste Electrical and Electronic Equipment (WEEE), please contact your local dealers.

Safety Instrucons

1. Please read these safety instrucons carefully.
2. Please keep this User Manual for later reference.
3. Please disconnect this equipment from connecter before cleaning. Don’t use liquid or prayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
4. Make sure the equipment is connected to the power source with the correct voltage, frequency, and ampere.
5. All cauons and warnings on the equipment should be noted.
6. Never pour any liquid into opening, this could cause re or electrical shock.
7. Never open the equipment. For safety reason, the equipment should only be opened by qualied service personnel.
8. If one of the following situaons arises, get the equipment checked by a service personnel :
   a. Liquid has penetrated into the equipment.
   b. The equipment has been exposed to moisture.
   c. The equipment has not work well or you can not get it work according to user’s manual.
   d. The equipment has dropped and damaged.
   e. If the equipment has obvious sign of breakage.
9. Ambient operaon temperature: 0 ~ 45 degrees.
10. Risk of overheang! Don’t put operang/installing equipment inside too closed space, be sure the installaon space at least 1 to 2 inches or 2 to 5 cm of space for venlaon. To ensure that other objects do not cover the equipment.

Noce: Peripheral devices

Only peripherals (input/output devices, terminals,player, etc.) cer

tied to comply with Class B limits may be aached to this equipment. Operaon with non-cer tied peripherals is likely to result in interference to radio and TV recepon.

Cau

Changes or modicaons not expressly approved by the manufacturer could void the user’s authority, which is granted by the Federal Communicaons Commission, to operate this equipment.

1. Product Introduction

This is advanced and powerful 4K60 18Gbps HDMI2.0 Matrix Switcher with 4 HDMI inputs and 4*HDMI Outputs. This unit can support seamless switching, video wall, mu-viewer and Scaler funcons. It can be controlled by the front push-buon, IR remote, TCP/IP WEB GUI or APP control, also support the RS232 control. It also support 4*3.5MM audio inputs and 4*3.5mm audio outs or 4*SPIF audio outs, it's capable of producing high-quality imagery with prisne detailing and rich color, all HDMI ports on this unit are HDCP 2.2 compliant. This device also supports analog audio extracon, and audio channels can be switched independently.

2. Product Features

- 4*HDMI2.0 with 4*3.5mm audio Inputs
- 4*HDMI2.0 with 4*3.5mm audio and 4*SPDIF Outputs.
- Seamless switching
- Supports Matrix switching, Video Wall and mulview funcon
- Supports audio independently switching
- Compliant HDCP 2.2 with EDID management
- Control by front-panel push buons, IR Remote, RS232, TCP/IP and APP
- Resoluon up to 4K@60Hz 4:4:4

3. Technical Datasheet

Name	4K60 18Gbps 4X4 Seamless HDMI Matrix with Video
Resolution	4K@60Hz,YUV4:4:4 8 bit, 4K@30Hz/1080P/1080i/720P
Input ports	4*HDMI2.0 with 4*3.5mm
Output ports	4*HDMI2.0 with 4*3.5mm audio and 4*SPDIF
Transmission distance	10m/30ft for 4K60, 15m/45ft for 1080P@60Hz(by qualified)
Bandwidth	18Gbps
HDCP Compliant	HDCP 2.2 and HDCP 1.4
Controlling	Front-panel push buons, IR Remote, RS232, TCP/IP and APP
Power Consumpon	22W(Max.)
Dimension(mm)	486 * 279 * 44(mm)
Weight	6Kg
Operang	-5 to +40°C(23 to +104 °F)
Storage Temperature	-10 to +60°C(-14 to +140 °F)

4. Packing Details

Matrix switch .....1 unit
Power cord .....1 pcs
User manual .....1 pcs
Rack ears .....1 pair

5. Panels

Front Panel



Name	Description	
LCD Screen	Operation information real-time Display	
POWER	light up after power on, it will light off after power off	
IR	IR remote control	
OUTPUT	4 output buttons	
INPUT	4 input buttons	
CONTROL	**MODE**	For the pre-built presets recall
	MENU	For the main settings
	UP	Up selection button
	DOWN	Down selection button
	LOCK	Long-press to lock or unlock push buttons
	ENTER	Enter button

Rear Panel:



Name	Description
AUDIO IN	4* 3.5mm Analog audio inputs
INPUT	4* HDMI inputs
AUDIO OUT	4* 3.5mm Analog audio outputs
OUTPUT	4* HDMI Outputs
SPDIF	4* SPDIF outputs
RS232	3-PIN RS232 control port
IR IN	For IR extension
LAN	For the WEB GUI, RS232, TCP/IP control
DC 12V	DC 12V power supply

6. Equipment Connection Diagram

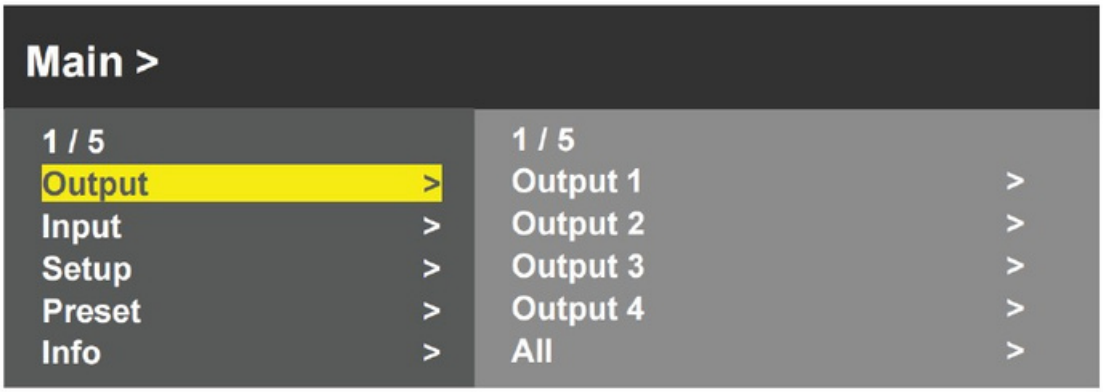


7. Equipment Operation and Instruction

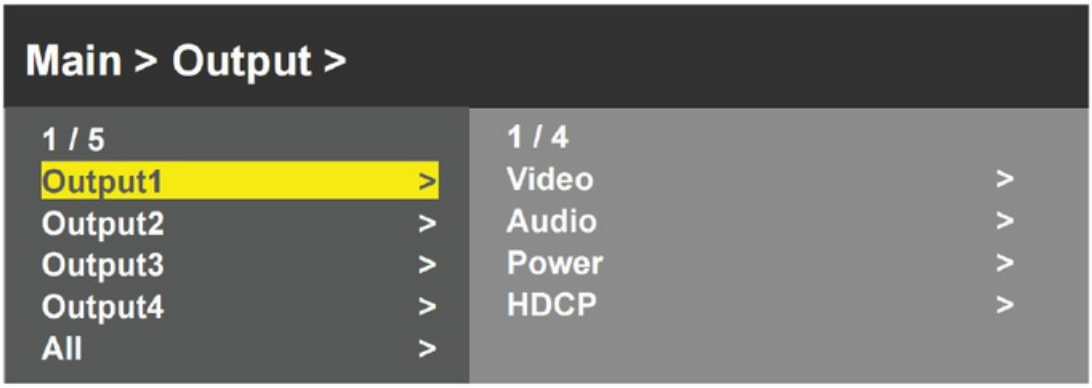
The LCD display screen will light up after power and turned on. It shows the current operation status, press MENU button, it will keep recycling between VIEW, SWITCH, SCENE, SETUP four different interface. The default interface is VIEW.

7.1 Front push-button control

7.1.1 MENU>OUTPUT

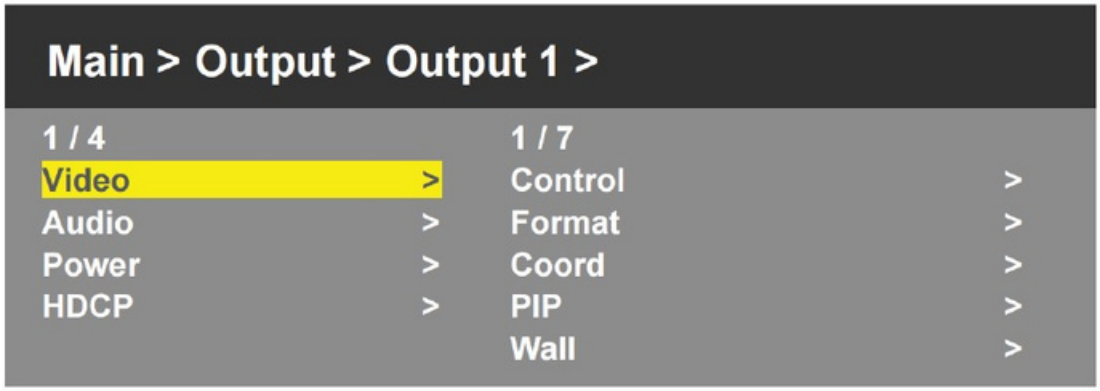


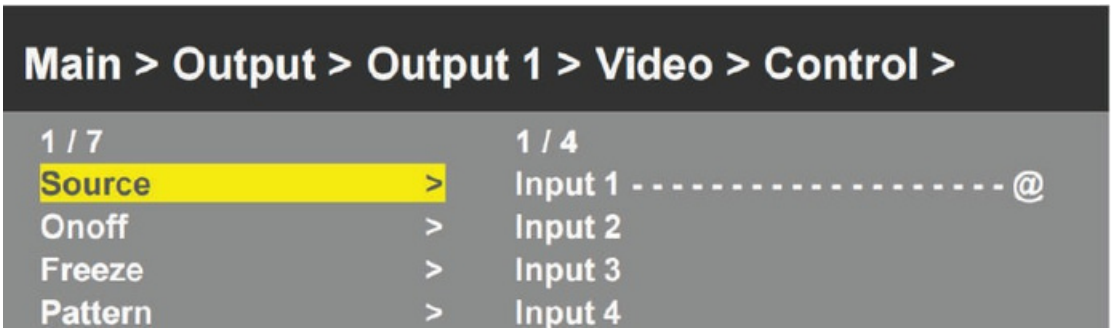
MENU>OUTPUT>Output 1

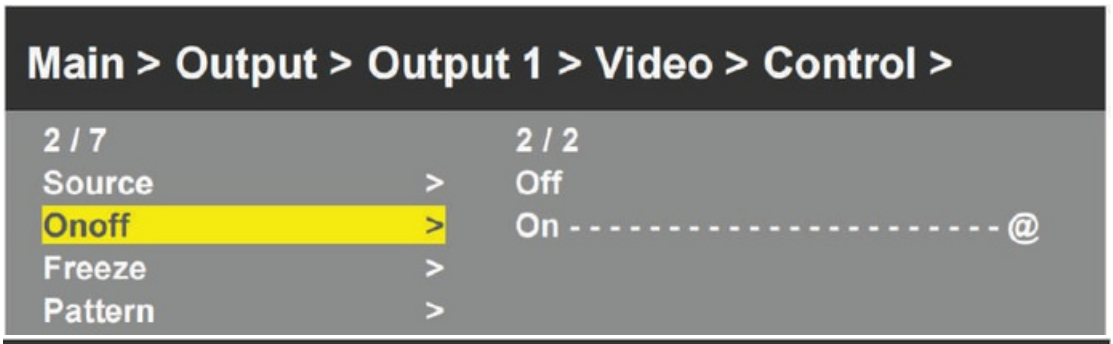


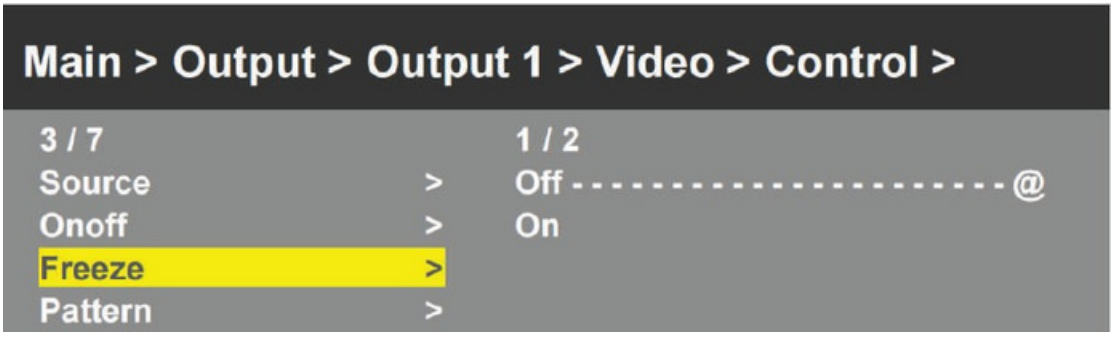
MENU>OUTPUT>Output 1>Control>Video

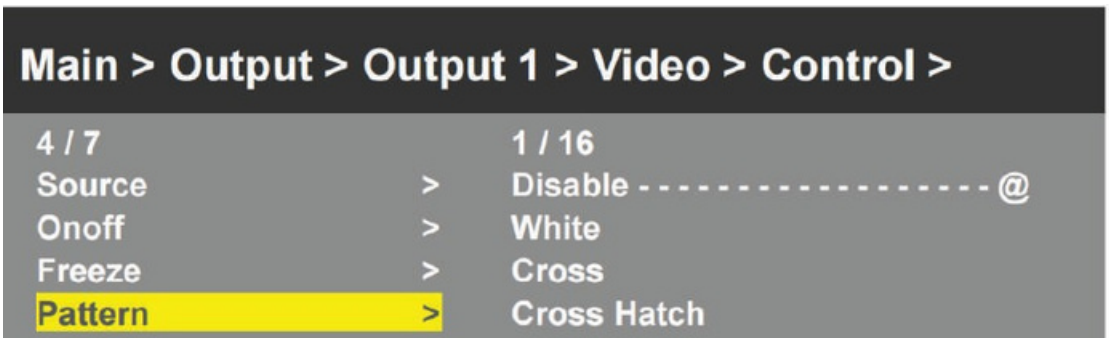
to setup the output video, including video ON/OFF, switch, test pattern

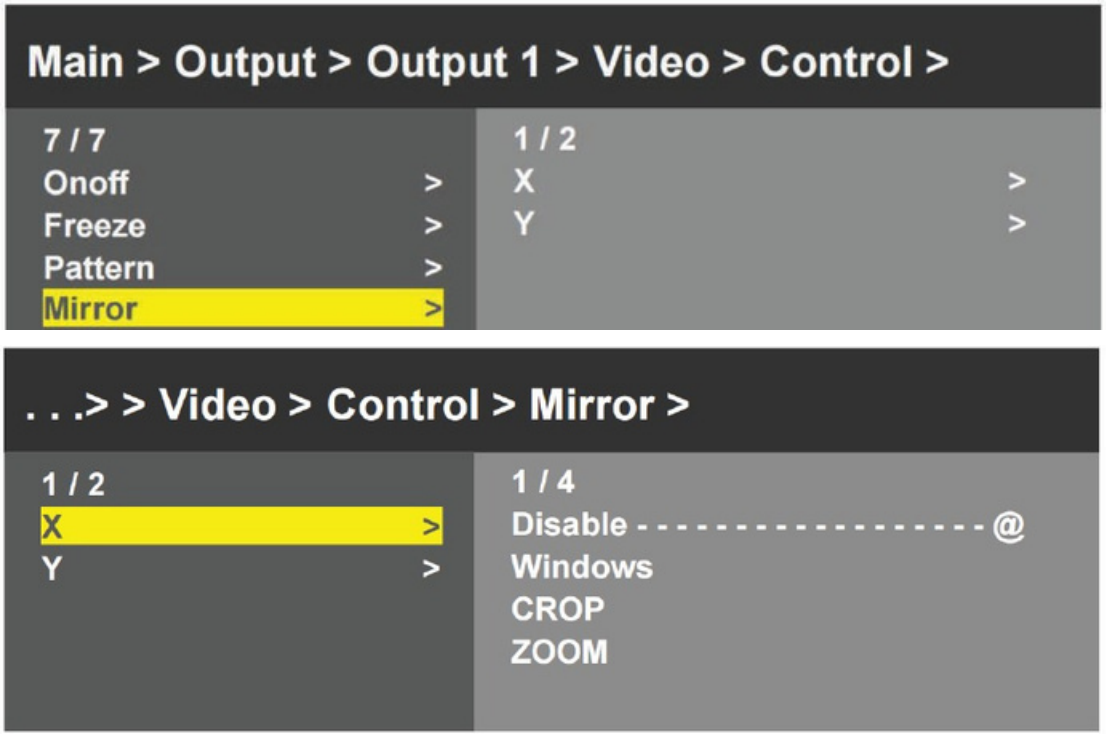




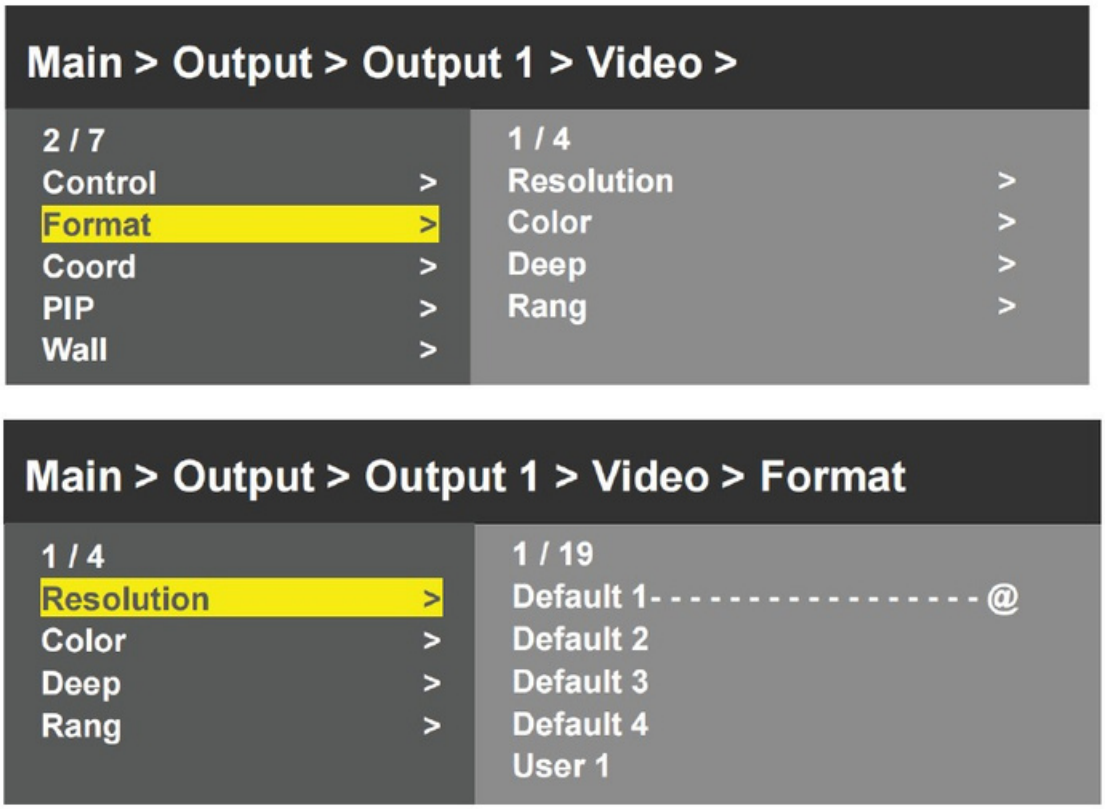




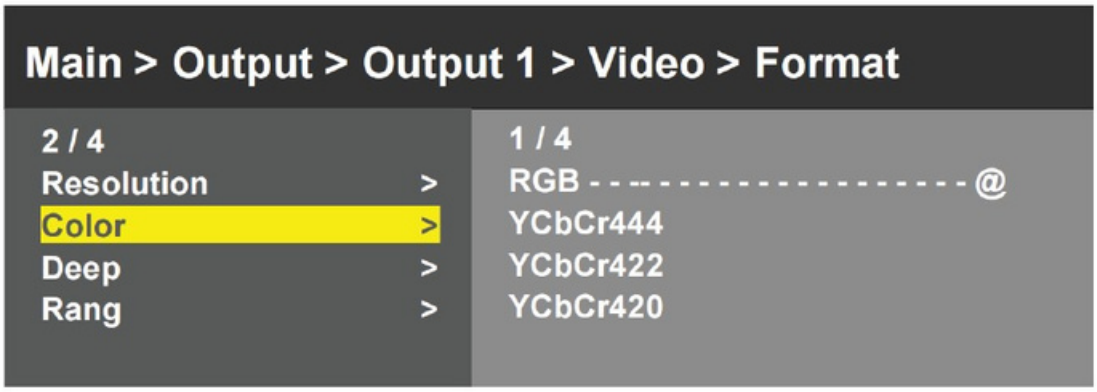


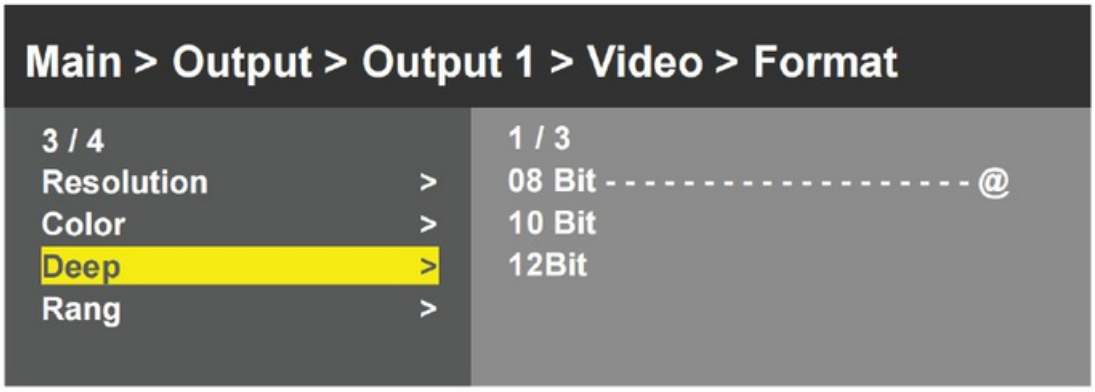


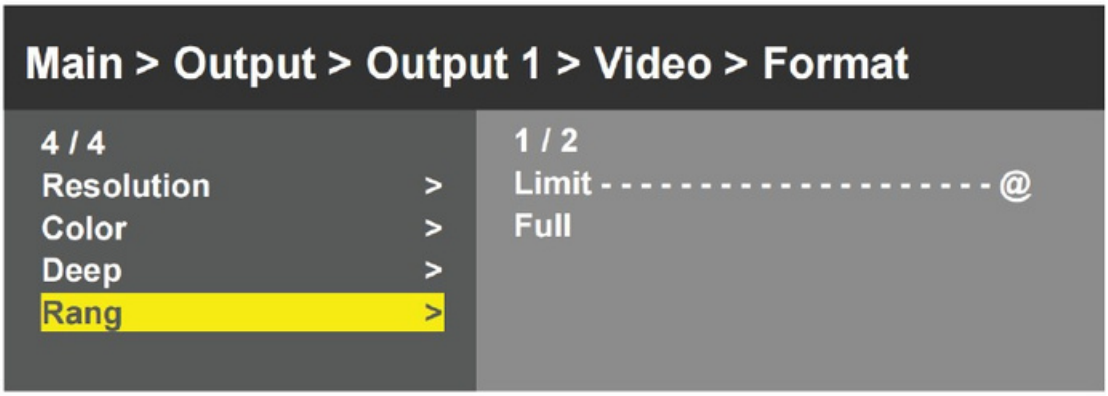
Format: to setup the output video format, resolution, color space



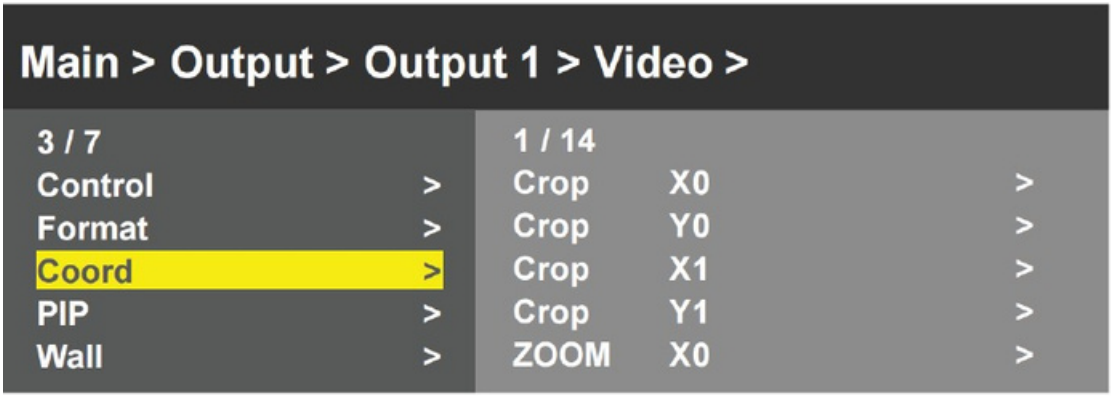
Default 1: 4K@60
Default 2: 4K@30
Default 3: 1080P@60hz
Default 4: 720P@60hz







Coord: to crop the output image



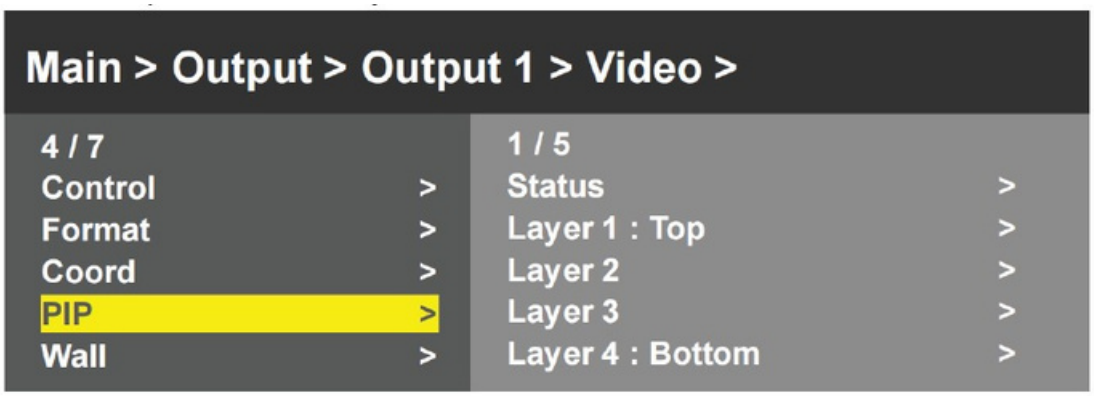
It will including Crop, Zoom, Offset and Gap.

Crop and Zoom image cropping or zooming

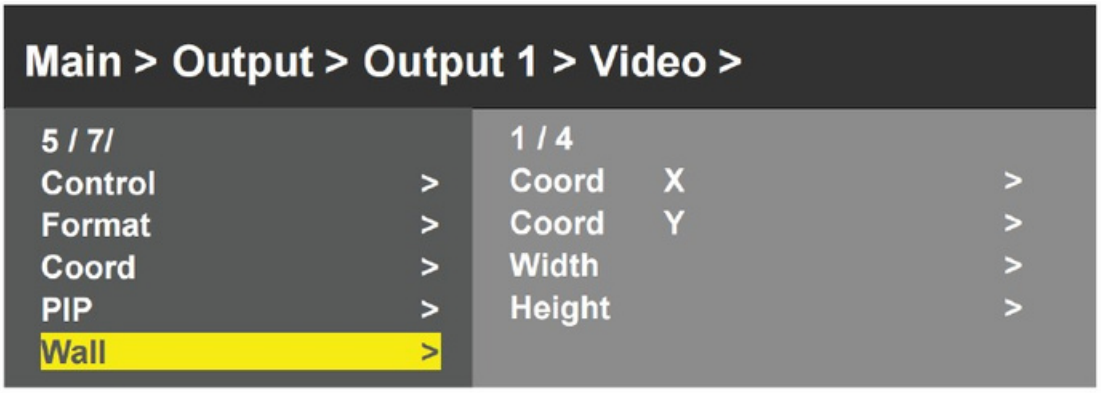
Crop start from: CropX0=0, CropY0=0; Crop ends with: CropY1=6000, CropX1=6000.

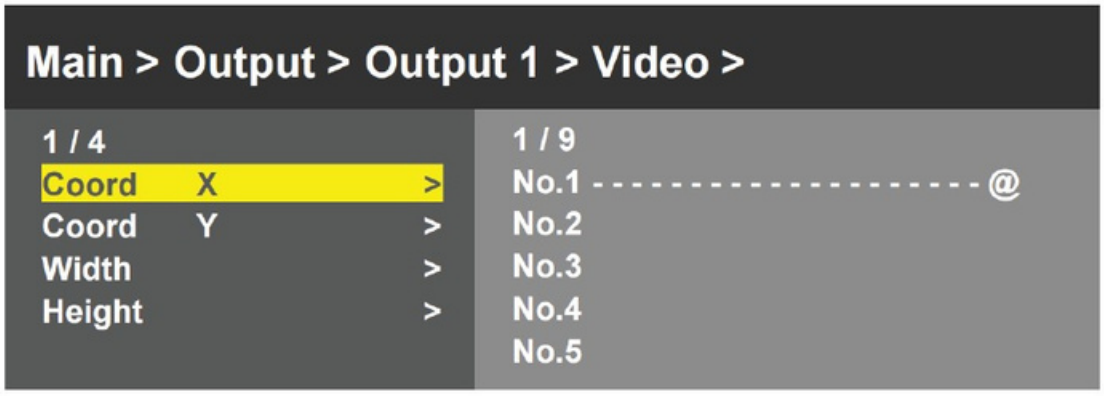
Zoom start from: ZoomX0=0, ZoomY0=0; Zoom ends with: ZoomX1=6000, ZoomY1=6000
Oset and Gap are for the video wall bezel correcons
Oset: Oeset U=0, Oeset D=0, Oeset L=0, Oeset R=0
Gap: GapX=0, GapY=0

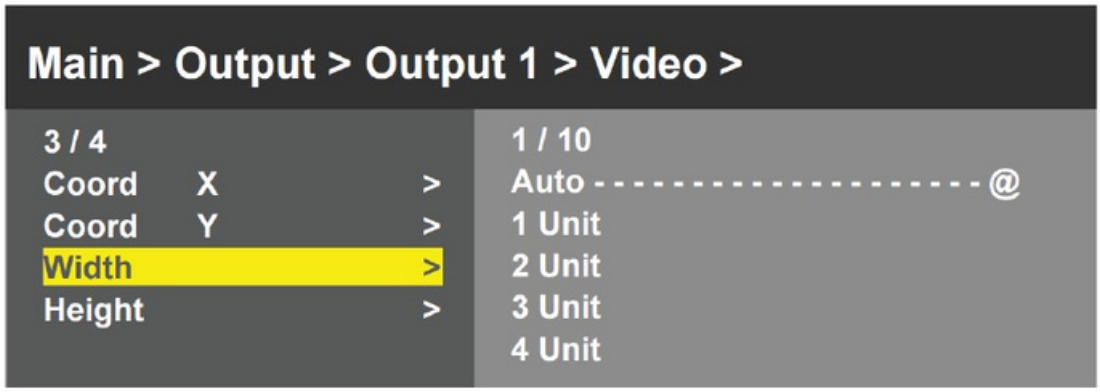
PIP: when output is mulview to adjust the layer



Wall: to set up video wall mode







Rotate: only for OUTPUT1 with any degrees rotation

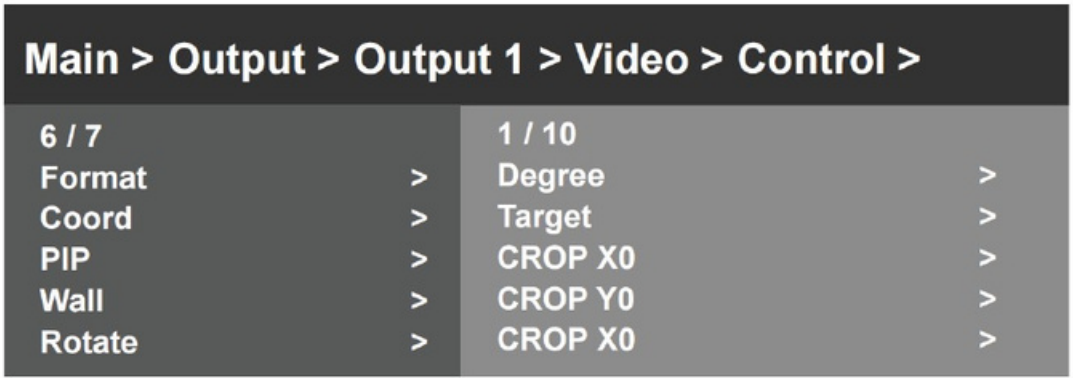
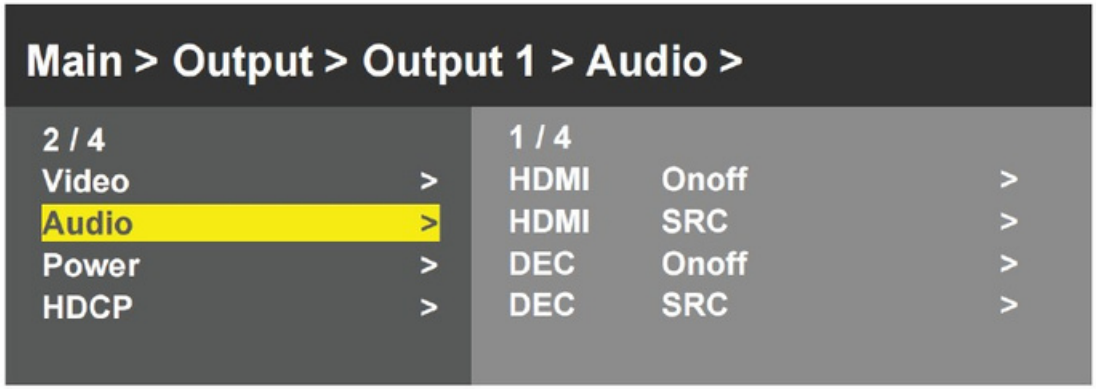


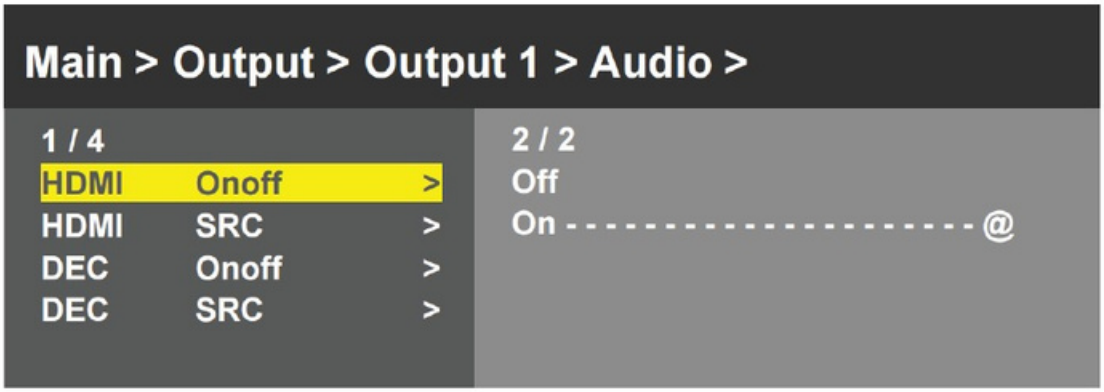
Image: for output image hue, brightness settings



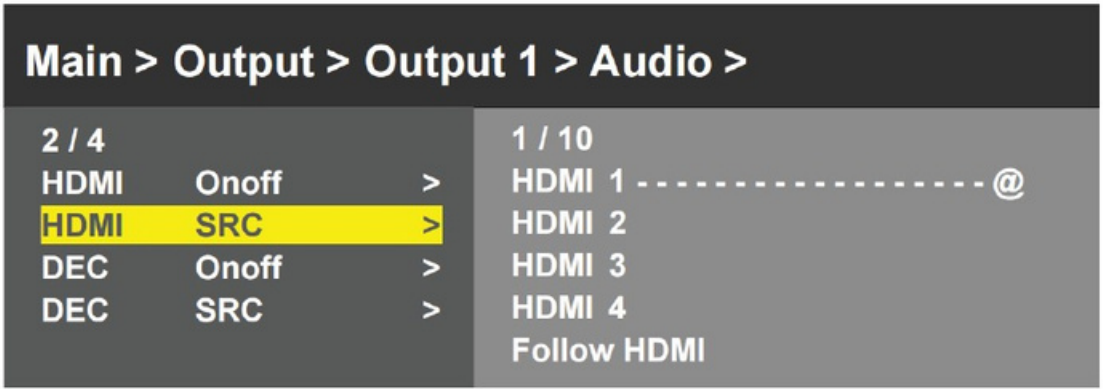
MENU>OUTPUT>Output 1>Audio



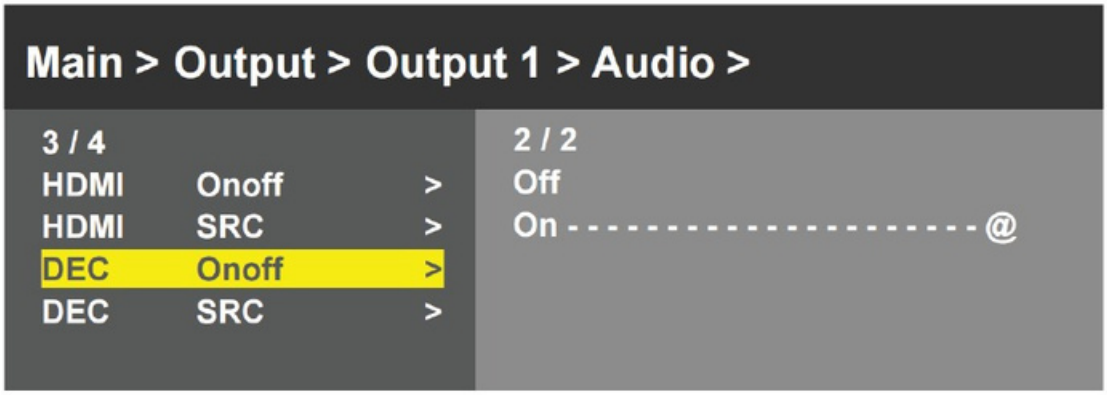
HDMI Onoff HDMI Audo ON/OFF



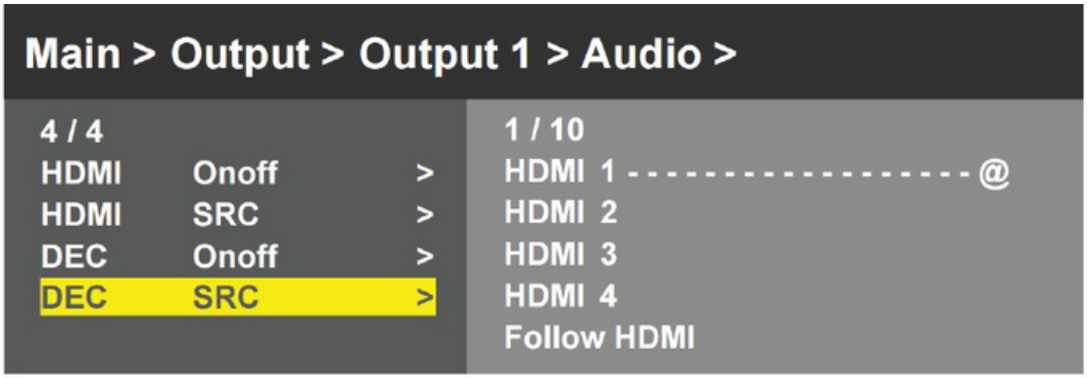
HDMI SRC: switch to different audio inputs



DEC Onoff De-embedded audio ON/OFF

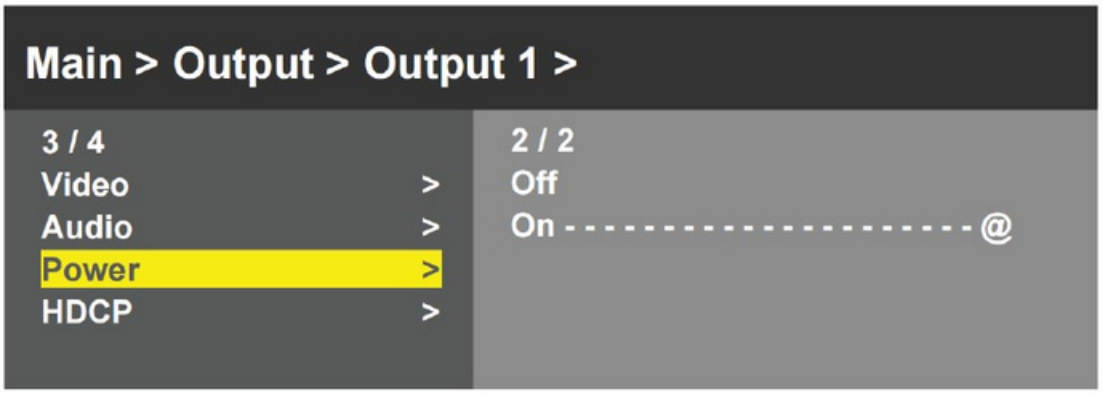


DEC SRC: De-embedded audio switching

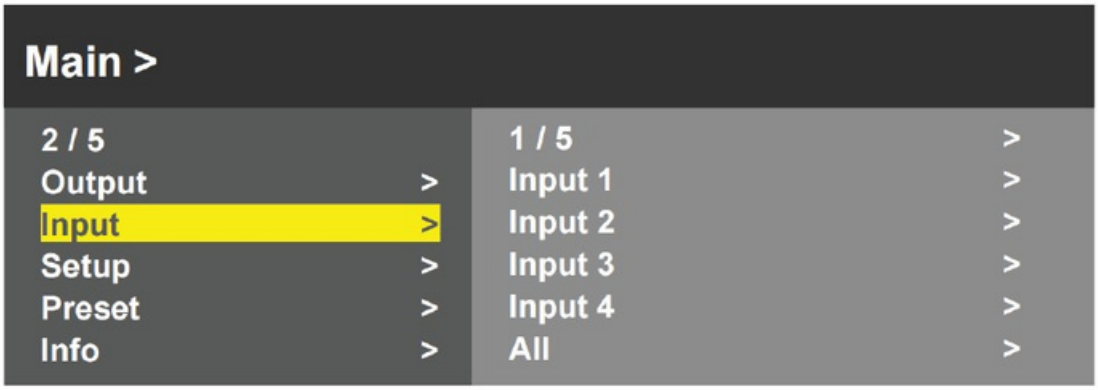


MENU>OUTPUT>Output 1>Power

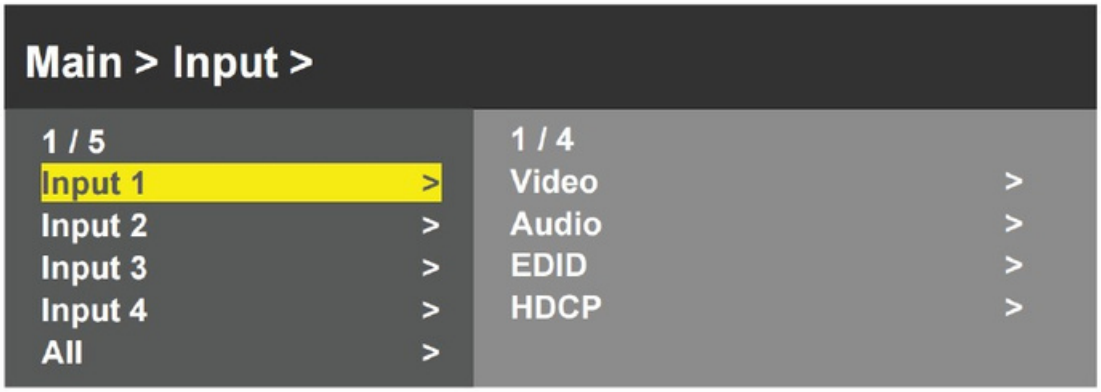
For the HDMI 5V ON/OFF

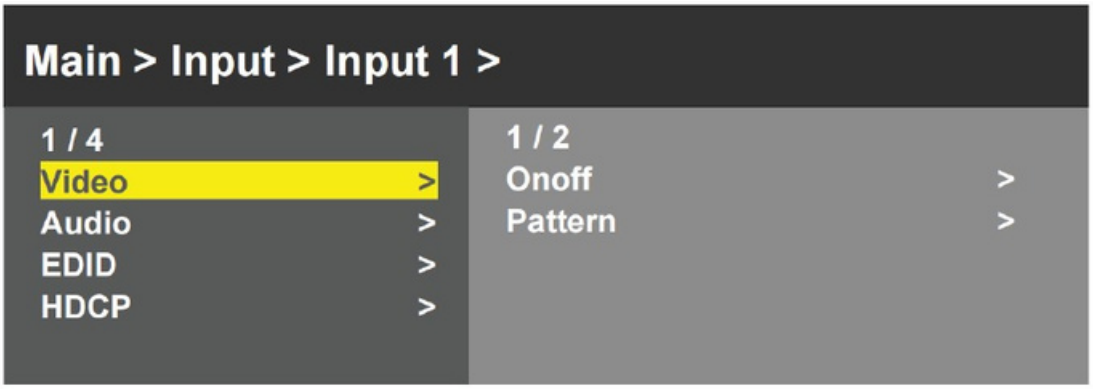


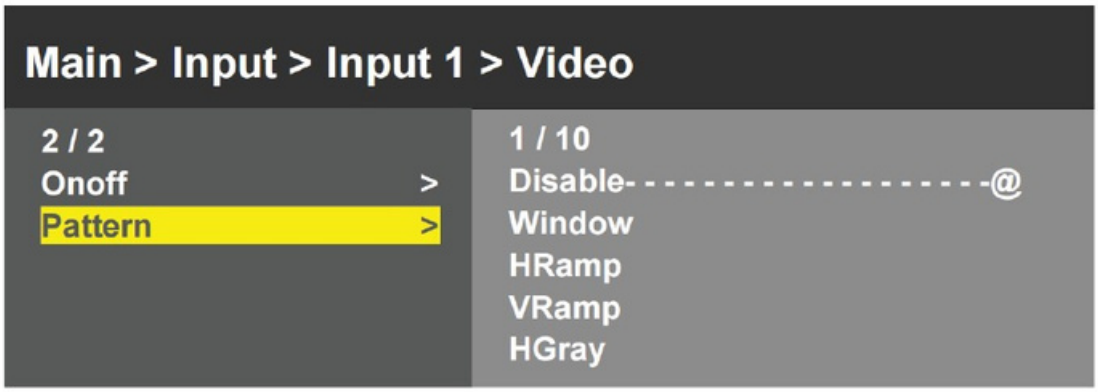
7.1.1 MENU>INPUT



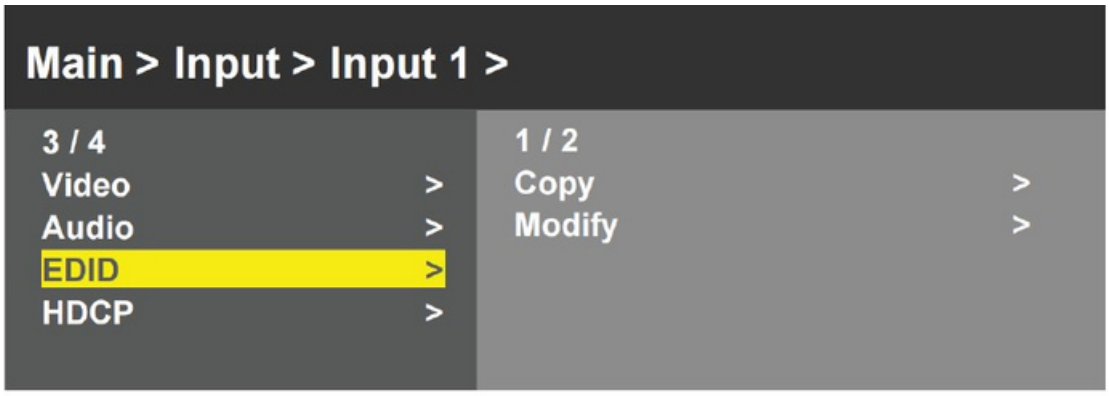
MENU>INPUT>Input

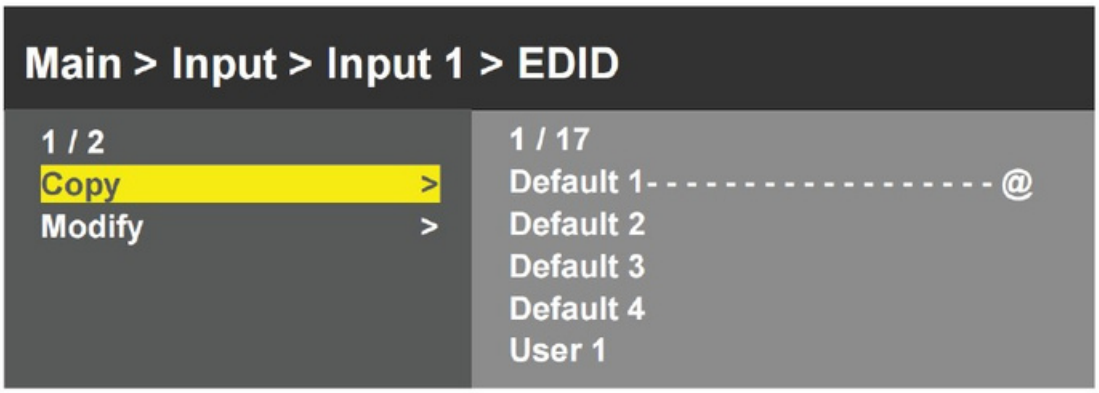


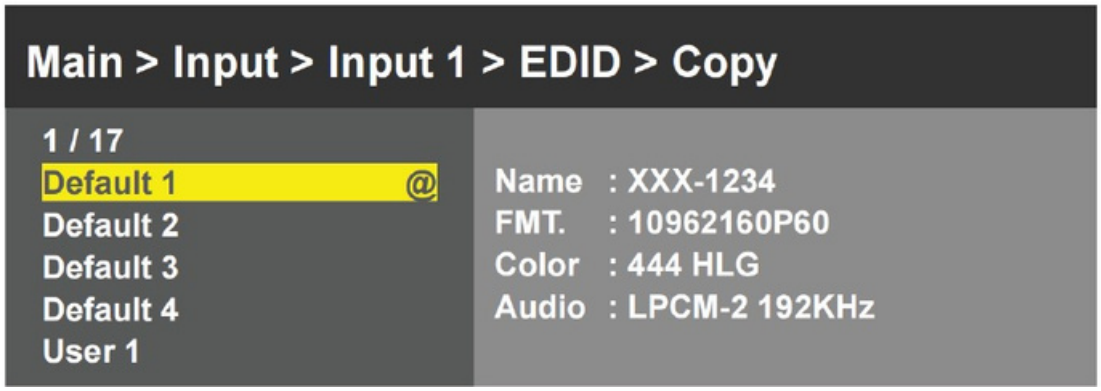




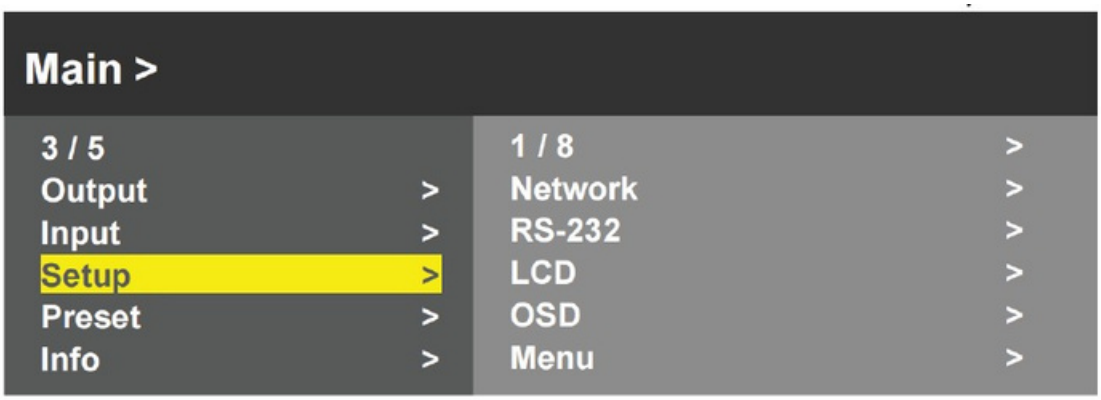
MENU>INPUT>EDID



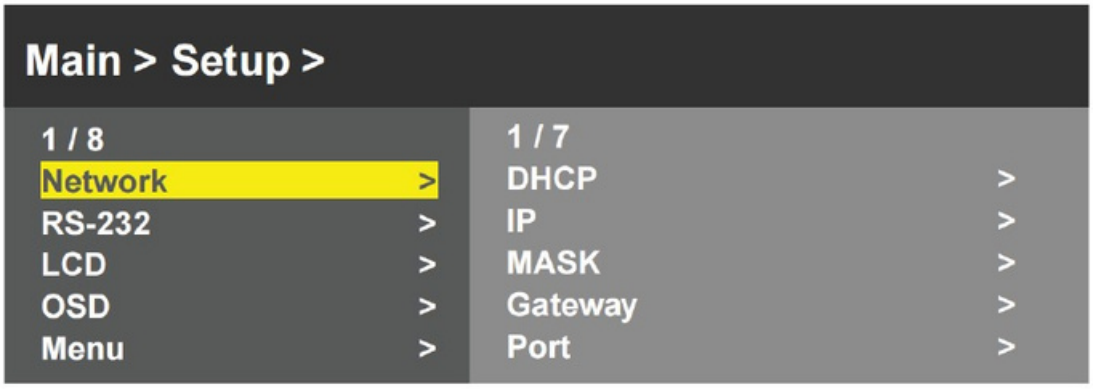


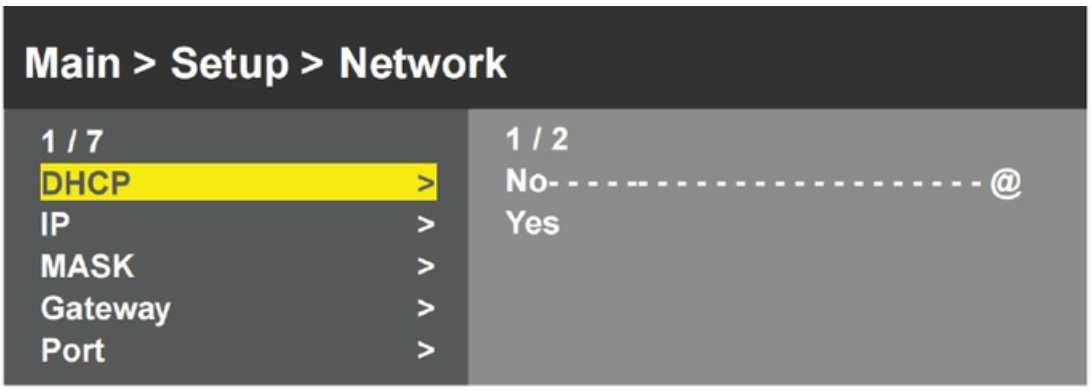


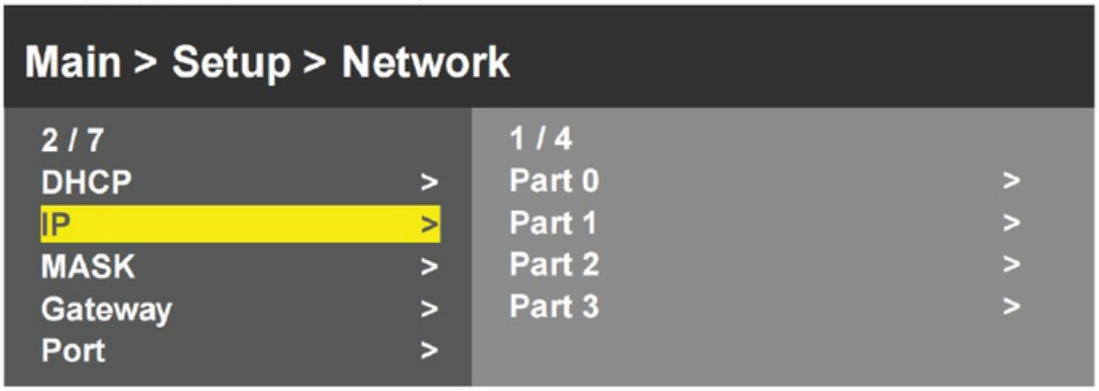
7.1.3MENU>SETUP

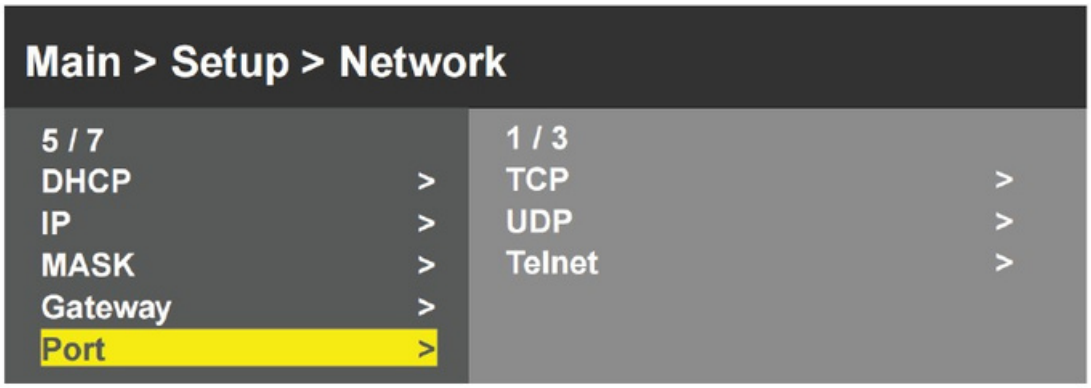


MENU>SETUP>Network



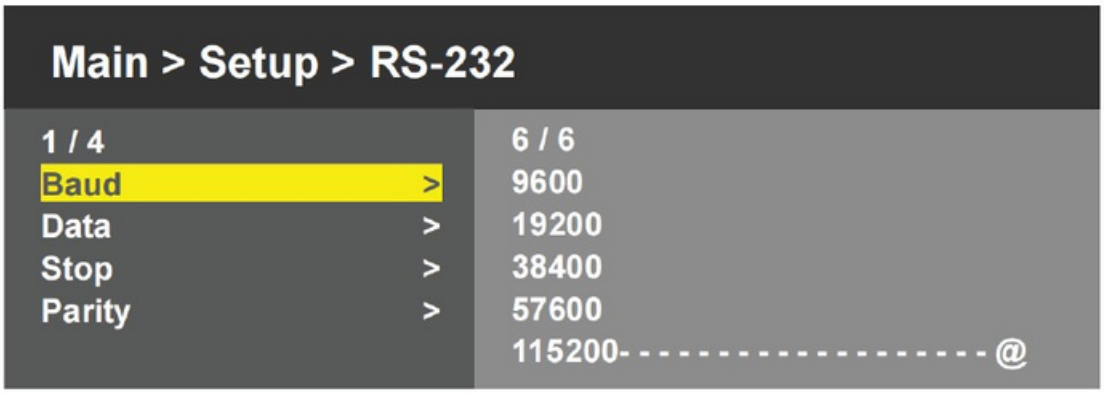




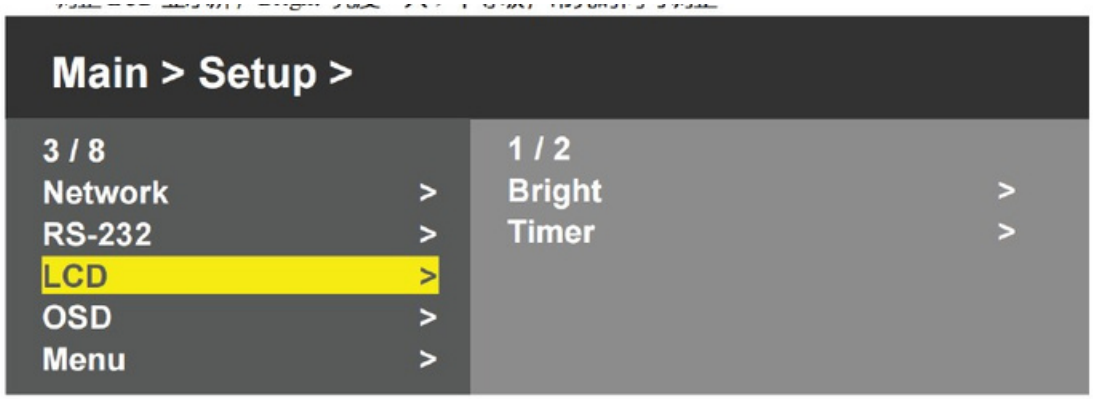


MENU>SETUP>RS232





MENU>SETUP>LCD

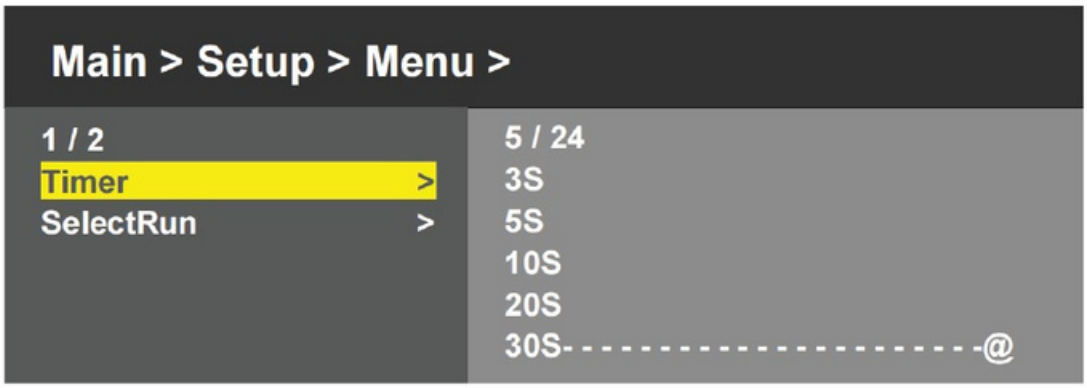


MENU>SETUP>OSD



MENU>SETUP>Menu





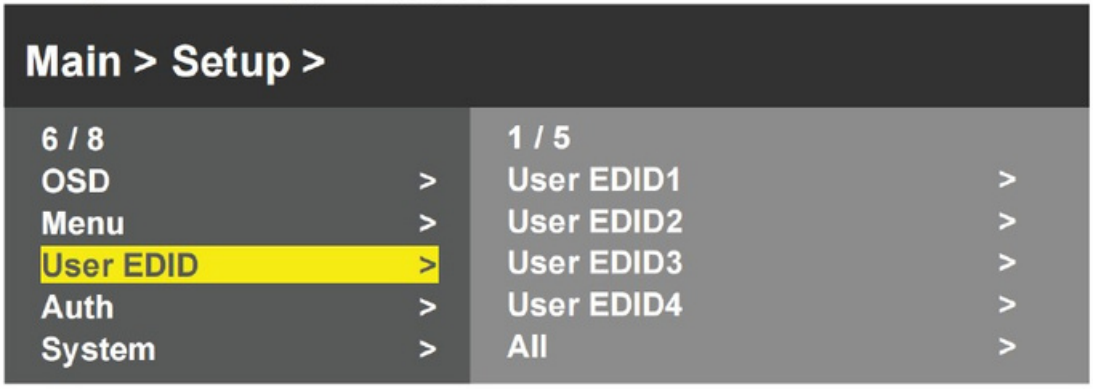
Timer for Menu to back the channel me

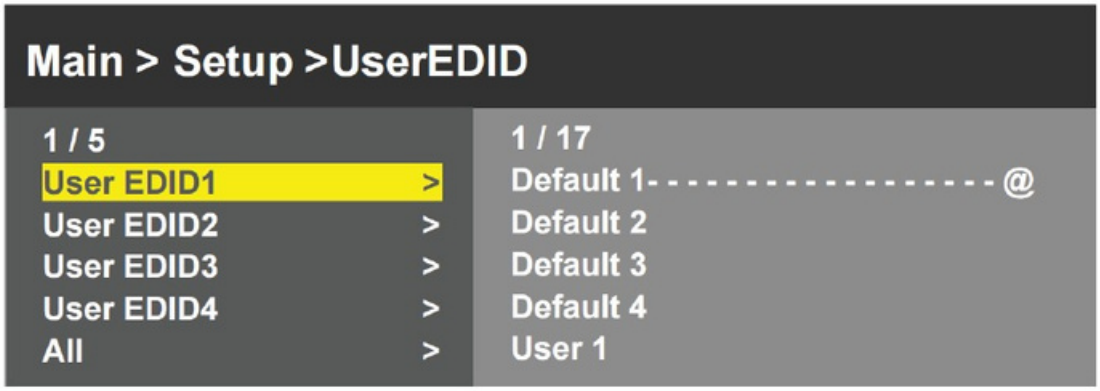


Disable means need to press Enter or OK to take action

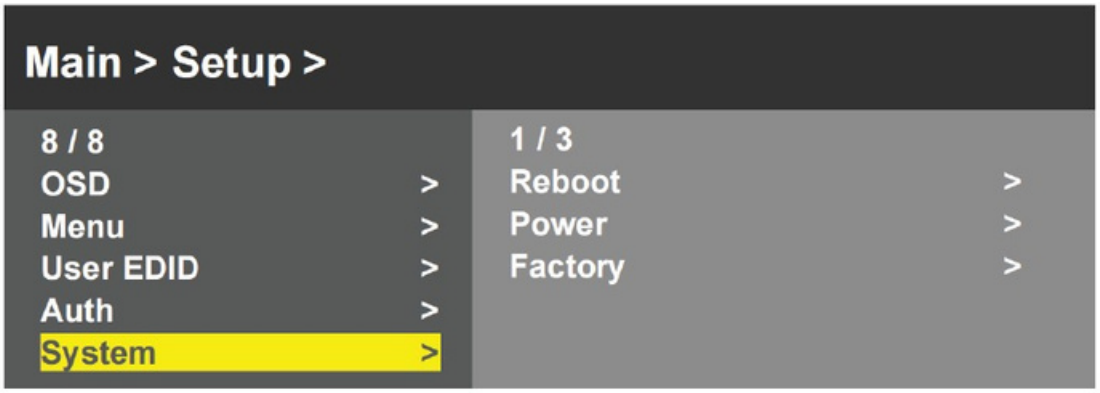
Enable means need need to press Enter or OK to run

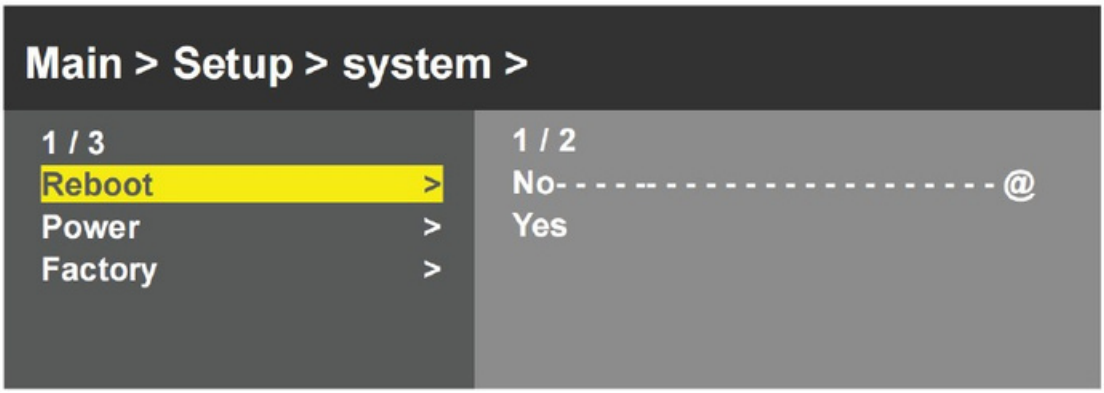
MENU>SETUP>User EDID

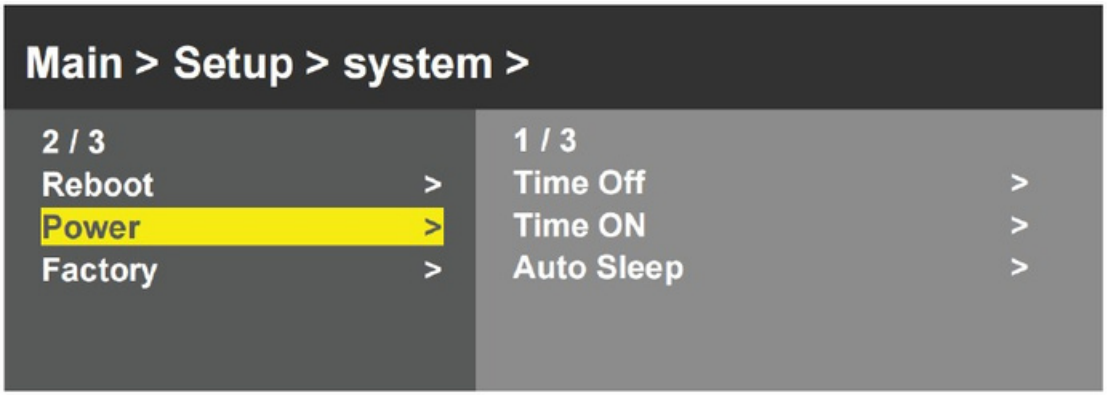




MENU>SETUP>System

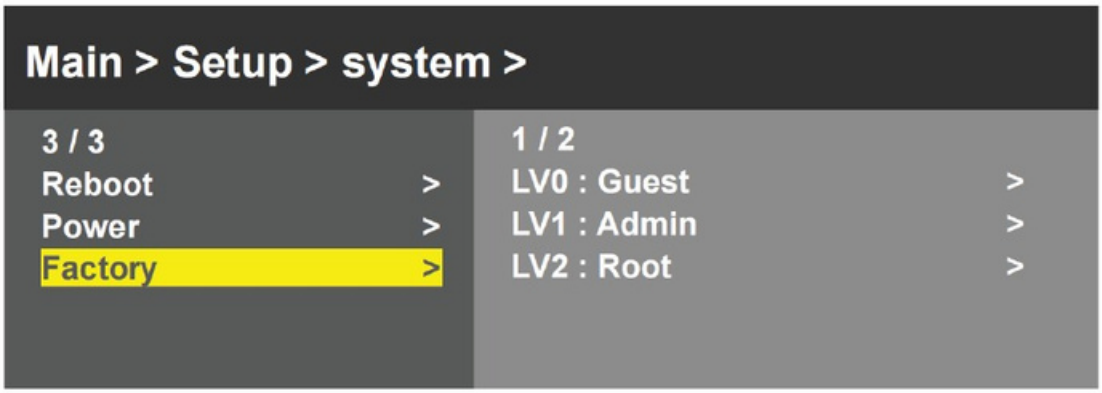




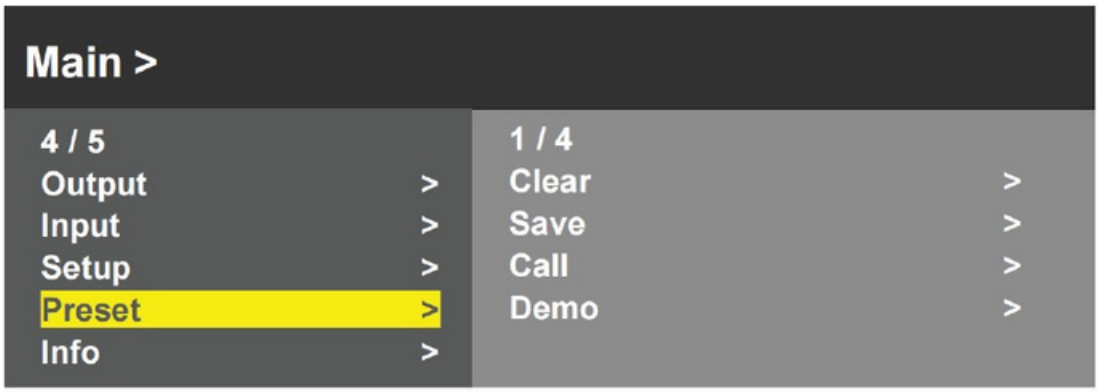


Timed off for set a me to o the matrix, default with endlessness
Timed on for set a me to start the matrix, default with endlessness
Auto sleep means for auto sleep

MENU>SETUP>System

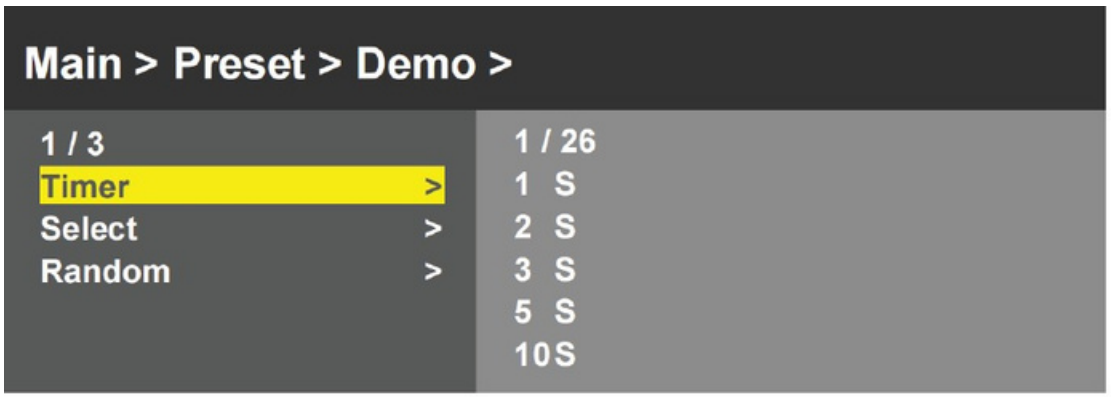


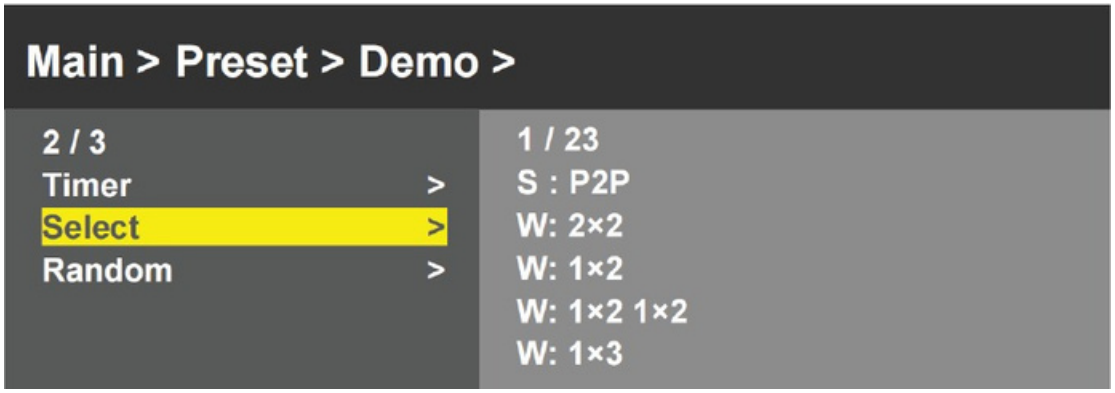
7.1.4 MENU>Preset

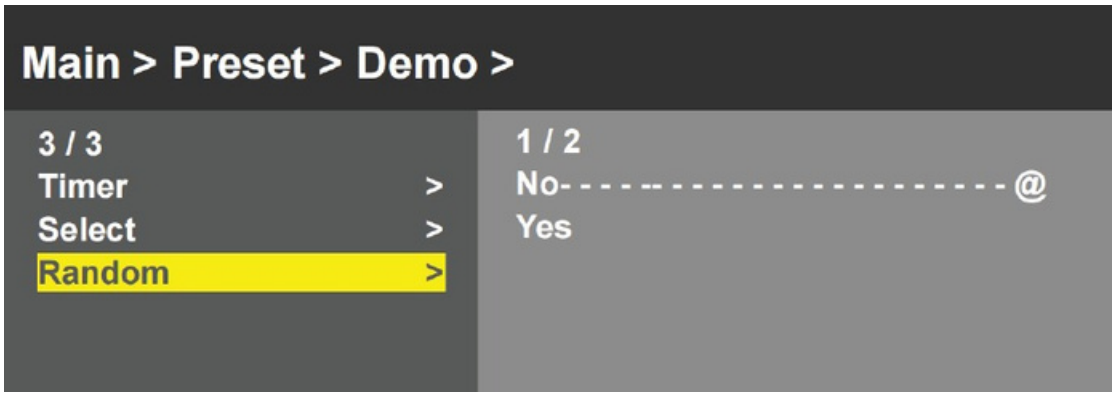

Main >
4 / 5
Output >
Input >
Setup >
Preset >
Info >
1 / 4
Clear >
Save >
Call >
Demo >
Main > Preset >
1 / 4
Clear >
Save >
Call >
Demo >
1 / 23
S : P2P - - - - - - - - - - - - - - - - - - - @
W: 2×2
W: 1×2
W: 1×2 1×2
W: 1×3
Main > Preset >
2 / 4
Clear >
Save >
Call >
Demo >
1 / 23
S : P2P - - - - - - - - - - - - - - - - - - - @
W: 2×2
W: 1×2
W: 1×2 1×2
W: 1×3
Main > Preset >
3 / 4
Clear >
Save >
Call >
Demo >
1 / 23
S : P2P - - - - - - - - - - - - - - - - - - - @
W: 2×2
W: 1×2
W: 1×2 1×2
W: 1×3



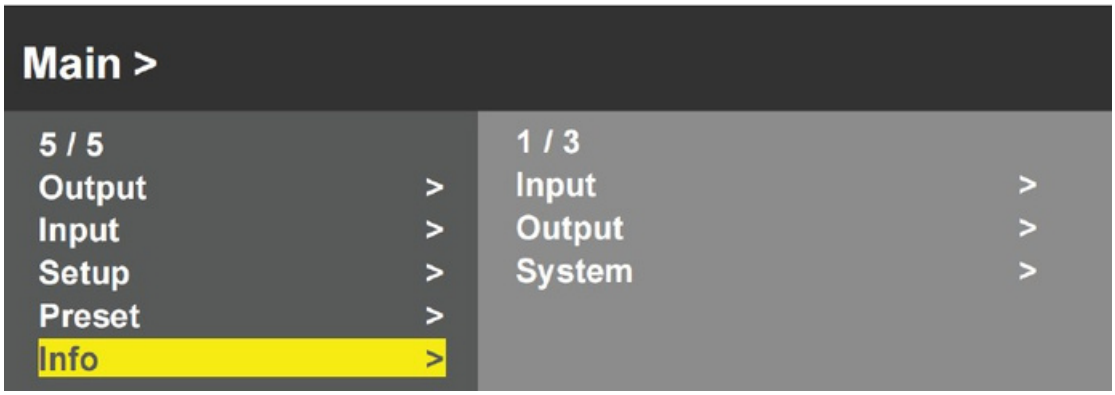
*Demo for the saved presets to cycling





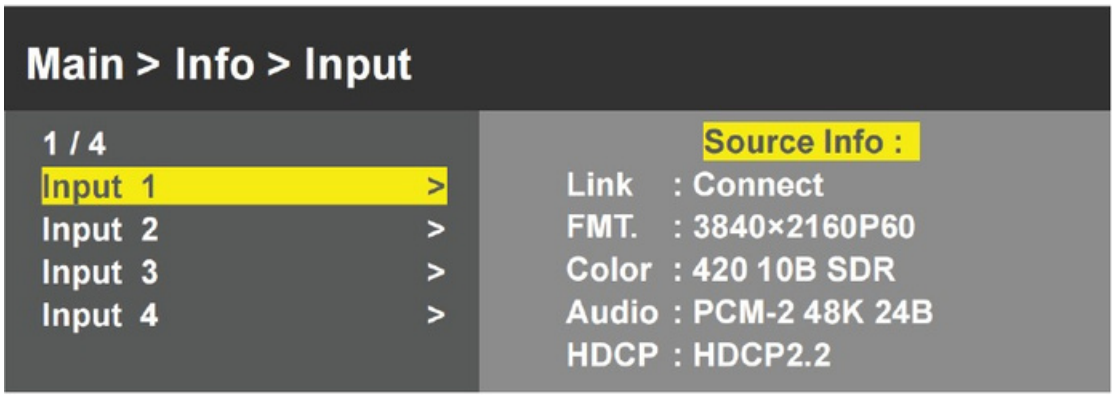


7.1.5 MENU>Info

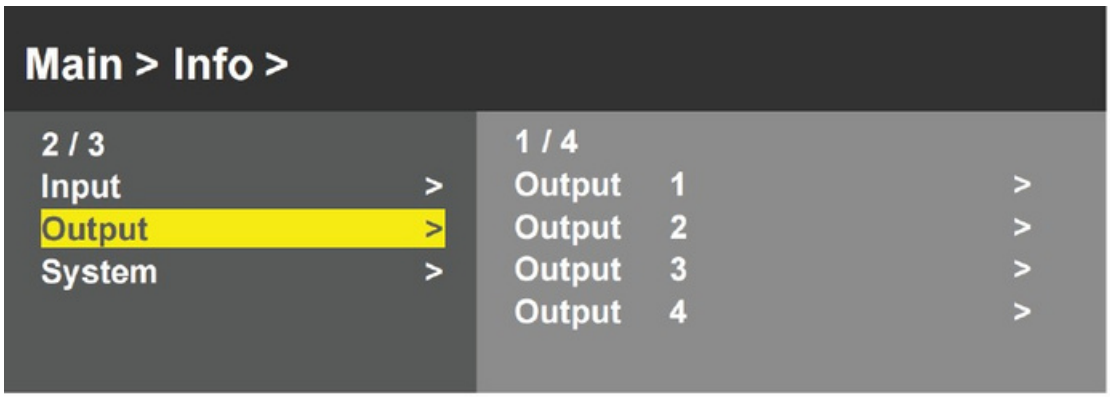


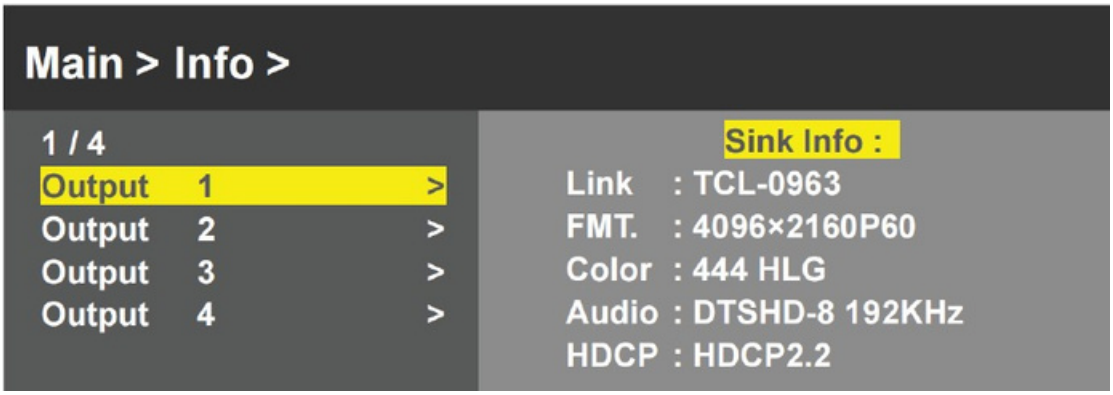
MENU>Info>input

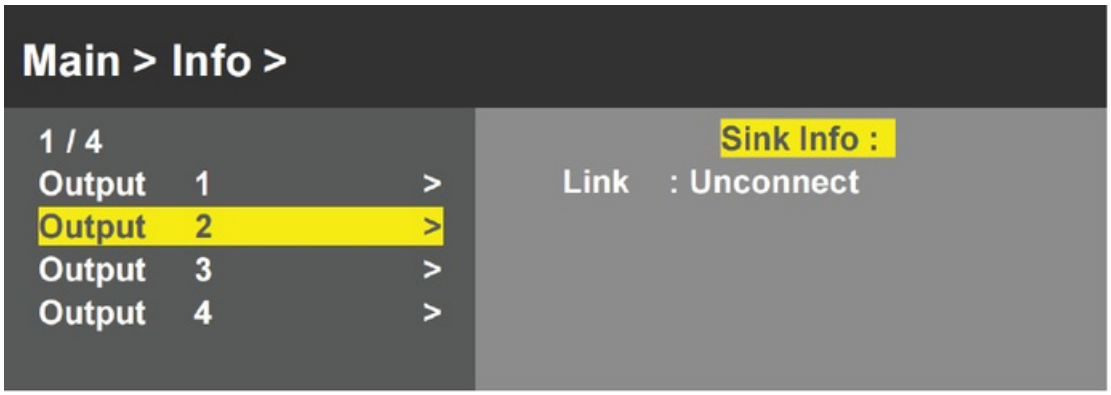




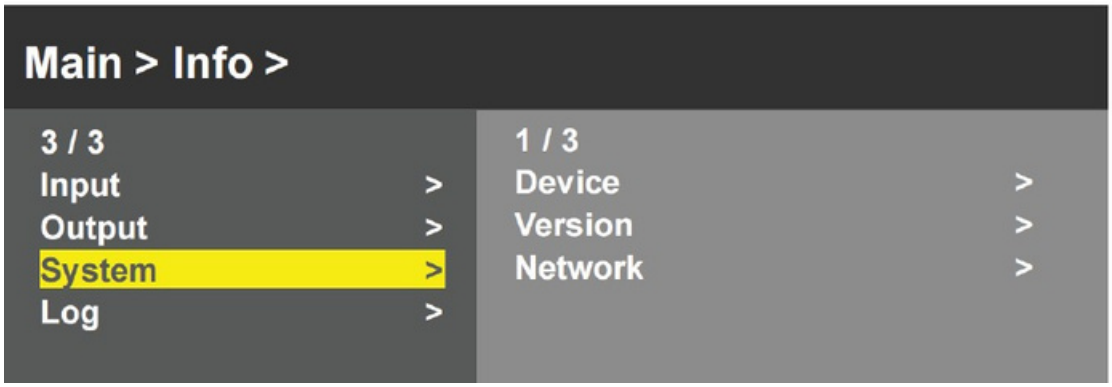
MENU>Info>output

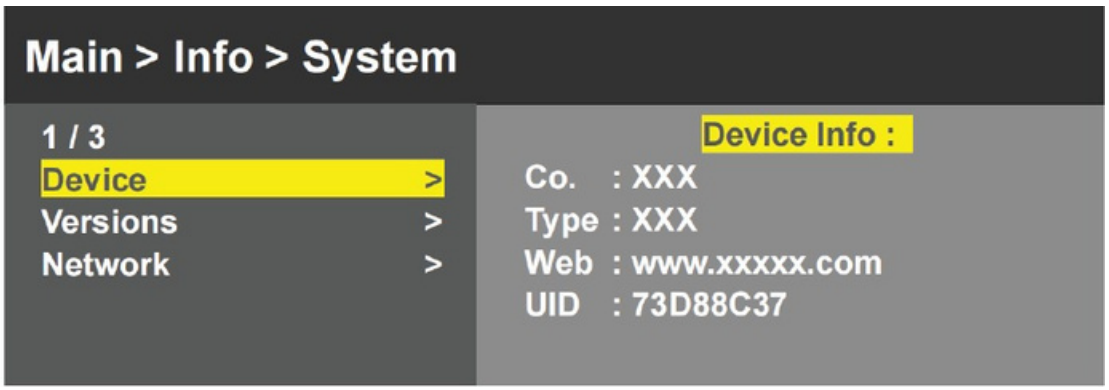






MENU>Info>System

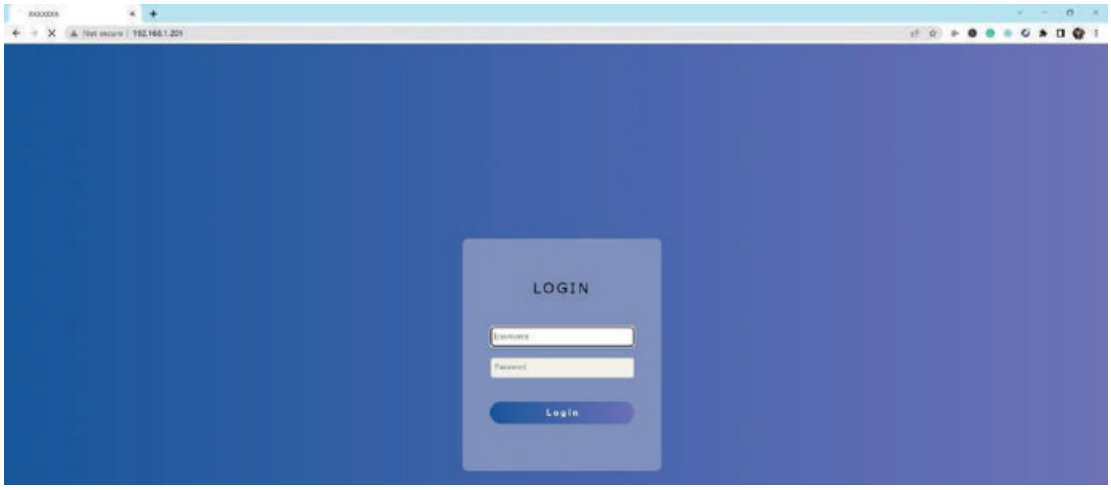




7.2WEB Control

Thedefault IP address are 192.168.1.200,

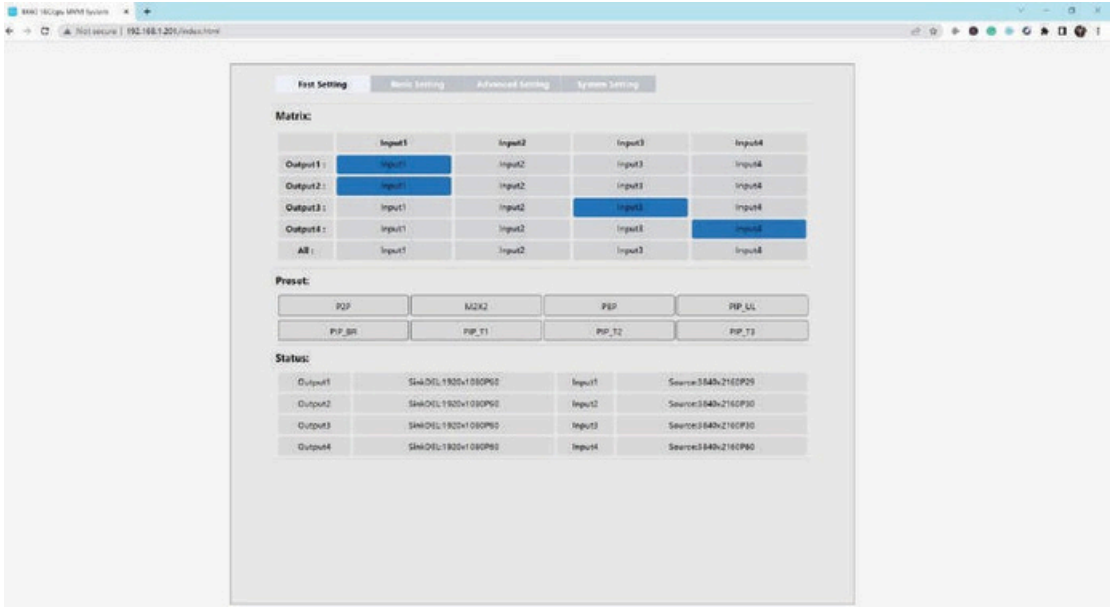
Accordingly to connected LAN port, enter the corresponding IP address, (Recommend with Google Chrome) as below:



Note: The default user name and password is the same: admin, click login after entering. Please make sure the control PC is at the same IP segment.

7.2.1 Fast setting

Mainly for the Matrix Switcher



Preset:

For the 8 multiviewer presets recalling



Status:

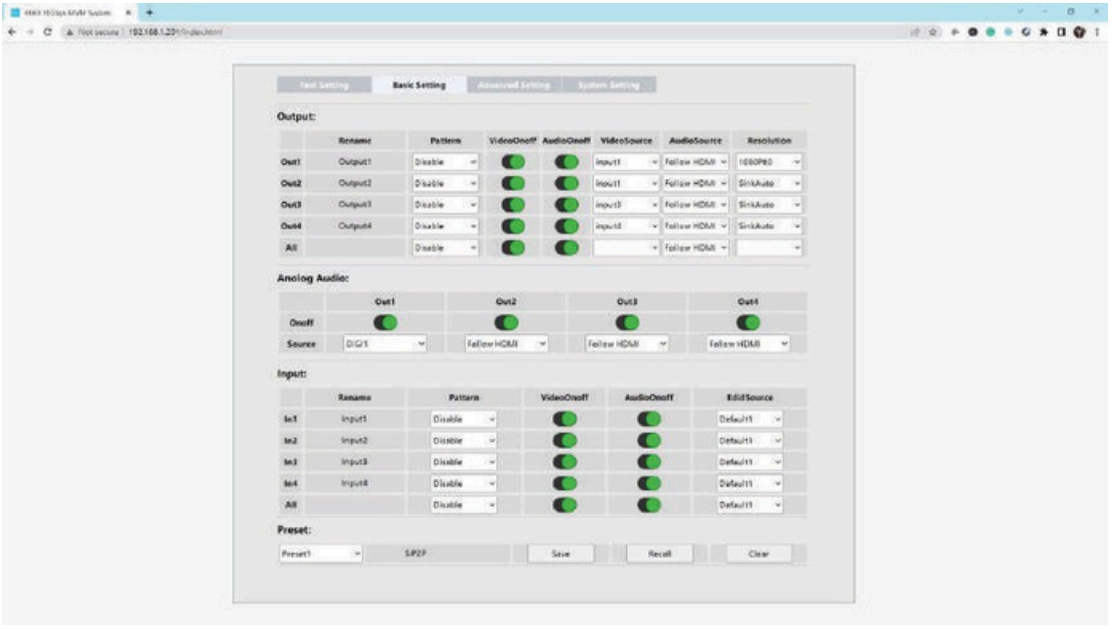
To show the current input and output info

Status:

Output1	SinkDEL:1920x1080P60	Input1	Source:3840x2160P29
Output2	SinkDEL:1920x1080P60	Input2	Source:3840x2160P30
Output3	SinkDEL:1920x1080P60	Input3	Source:3840x2160P30
Output4	SinkDEL:1920x1080P60	Input4	Source:3840x2160P60

7.2.2 Basic setting

Output rename pattern, video, audio, inputs, audio source and output resolution settings



Analog Audio switching:

Anolog Audio:

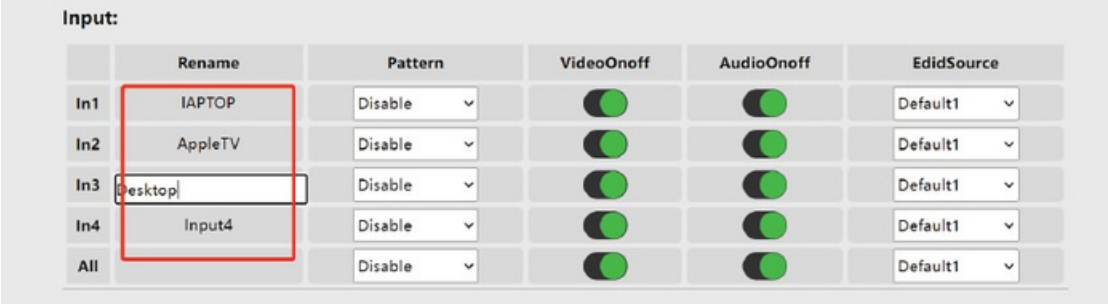
	Out1	Out2	Out3	Out4
Onoff				
Source	DIGI1	Follow HDMI	Follow HDMI	Follow HDMI

Input rename, parrent, video and audio ON/OFF, EDID

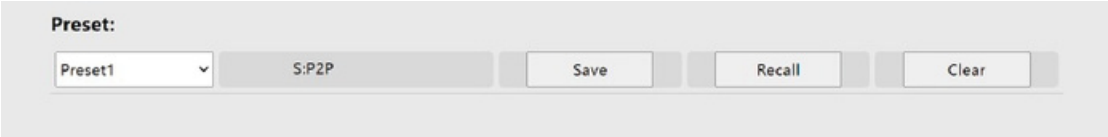
Input:

	Rename	Pattern	VideoOnoff	AudioOnoff	EdidSource
In1	Input1	Disable			Default1
In2	Input2	Disable			Default1
In3	Input3	Disable			Default1
In4	Input4	Disable			Default1
All		Disable			Default1

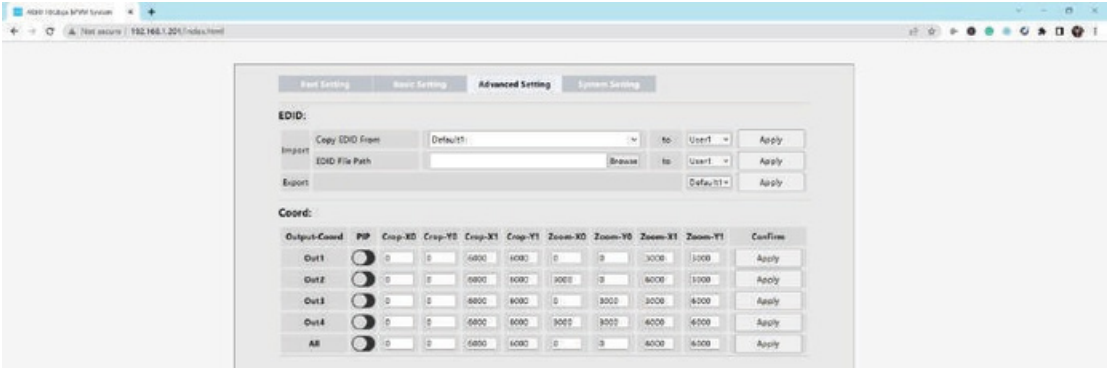
Double click the Rename Rows to rename



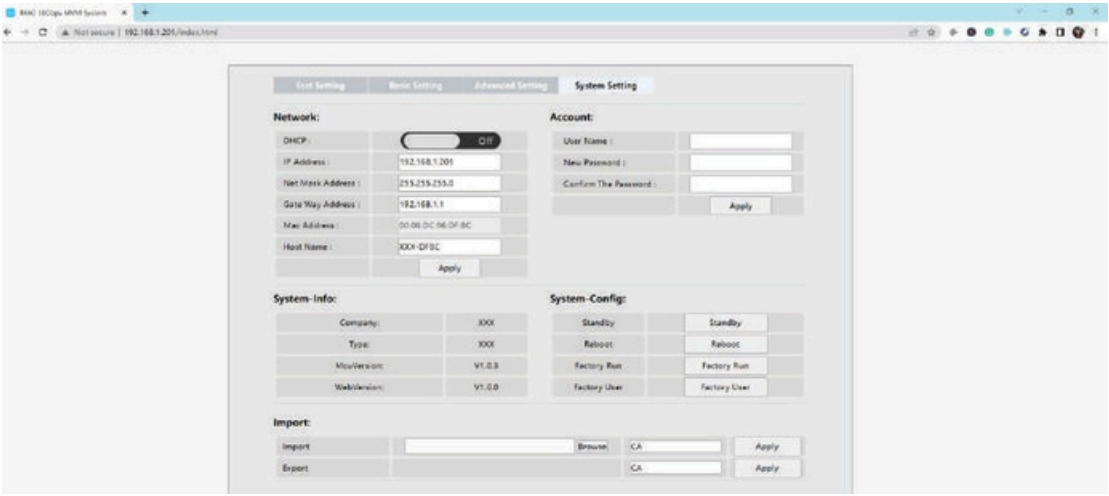
Preset selecgn, rename, save, recall and clear, up to 23 presets



7.2.3 Advanced setting

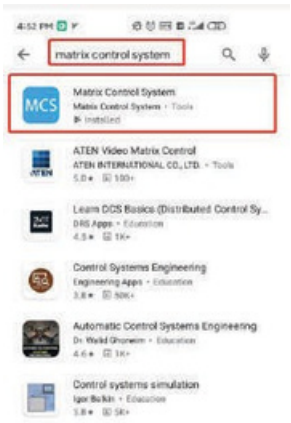


7.2.4 System setting

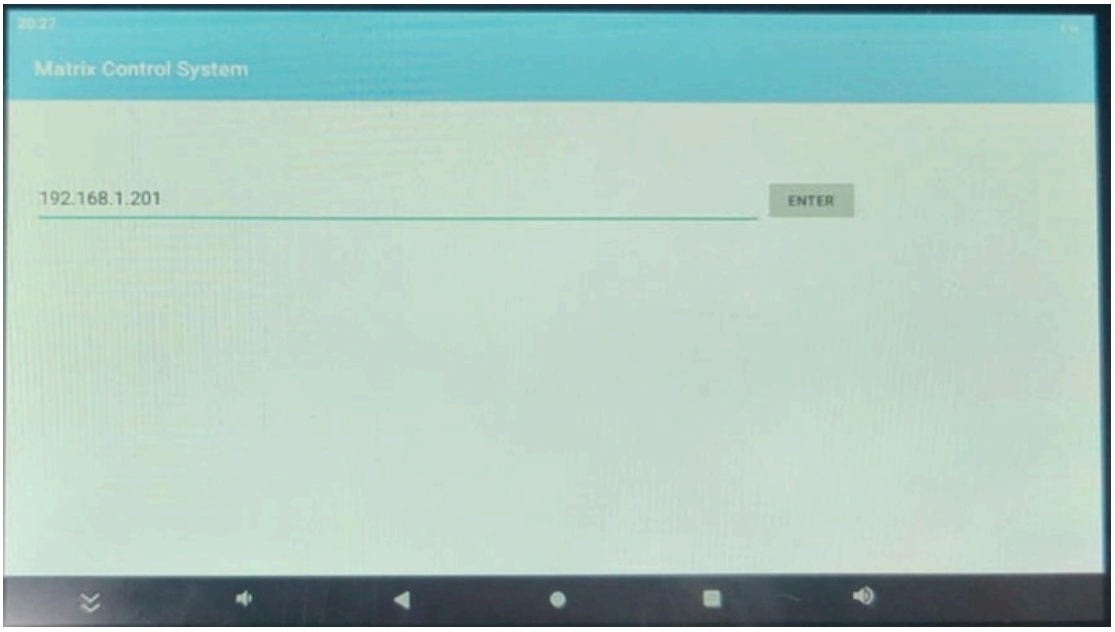


7.3 APP Control

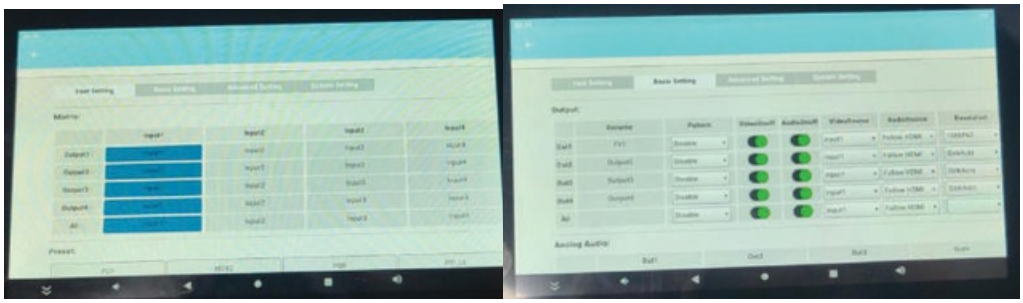
The matrix switchers also can support the iOS and Android APP control, users can search the keyword “Matrix Control System” in Apple store or the Google Play Store.



Step 1: Make sure the matrix well connected with the WIFI router, and the iPad/Android devices are connected to this same WIFI. Then open on the MCS(matrix control system) APP and Enter the IP address of the matrix switcher(the default IP addresses 192.168.1.200):



Step 2: After Enter the IP address, it will need to login, the default user name and password both are the admin, enter log in successfully, users can do the same funons as the WEB GUI operaon:



7.4 IR Remote Control

	Standby or power on		Menu
	Mute button	OK	OK
	Return to upper level		Enter
	Move to next level		Down
	Picture off		Return or exit
	Page turn by 100 of the last sub-menu	Back	Menu
	Page turn by 10 of the last sub-menu		When selecting Output, means Out1--out4 When selecting Input, means In1--In4
	Menu		Preset
ALL	All output	0	(N/A)
	Up	-/--	Point to Point



7.5 COM and TCP/IP Control Commands

RS232 cable with straight-through connection(USB-RS232 can be used directly to control)

Communication protocol:

Baud rate: 115200

Data bit: 8

Stop bit: 1

Check bit: None

The TCP port is 5000 and UDP is 4000

Commands	Explanation	Function description
YAll.	Y=1,2,3,4.....	Switch Input Y to all the outputs Eg. "**1ALL.**" means switch input 1 to all outputs
All1.	One to one	Switch all the channels to be one to one. Eg.1->1, 2->2, 3->3.....
YXZ.	Y=1,2,3,4..... Z=1,2,3,4.....	Switch Input Y to Output Z Eg. "**1X2.**" means switch Input 1 to output 2
YXZ&Q&W.	Y=1,2,3,4..... Z=1,2,3,4..... Q=1,2,3,4..... W=1,2,3,4.....	Switch Input Y to Output Z, Q, W Eg. "**1X2&3&4.**" means switch Input 1 to Output 2, 3, 4
SaveY.	Y=1,2,3,4.....	Save current status to scene Y Eg. "**Save2**." means saving current status to Scene 2
RecallY.	Y=1,2,3,4.....	Recall the saved scene Y Eg. "**Recall2**." means recall the saved Scene 2

Y?.	Y=1,2,3,4.....	Check the Input Y to outputs switching status Eg. "**1?.**" means to check Input 1 switching status

Note:

- Every command ends with a period "." and it can't be missing.
- The letter can be capital or small letter.
- Switch success will return as "OK", and failed will return as "ERR".'

Multiview modes:

M-2×2

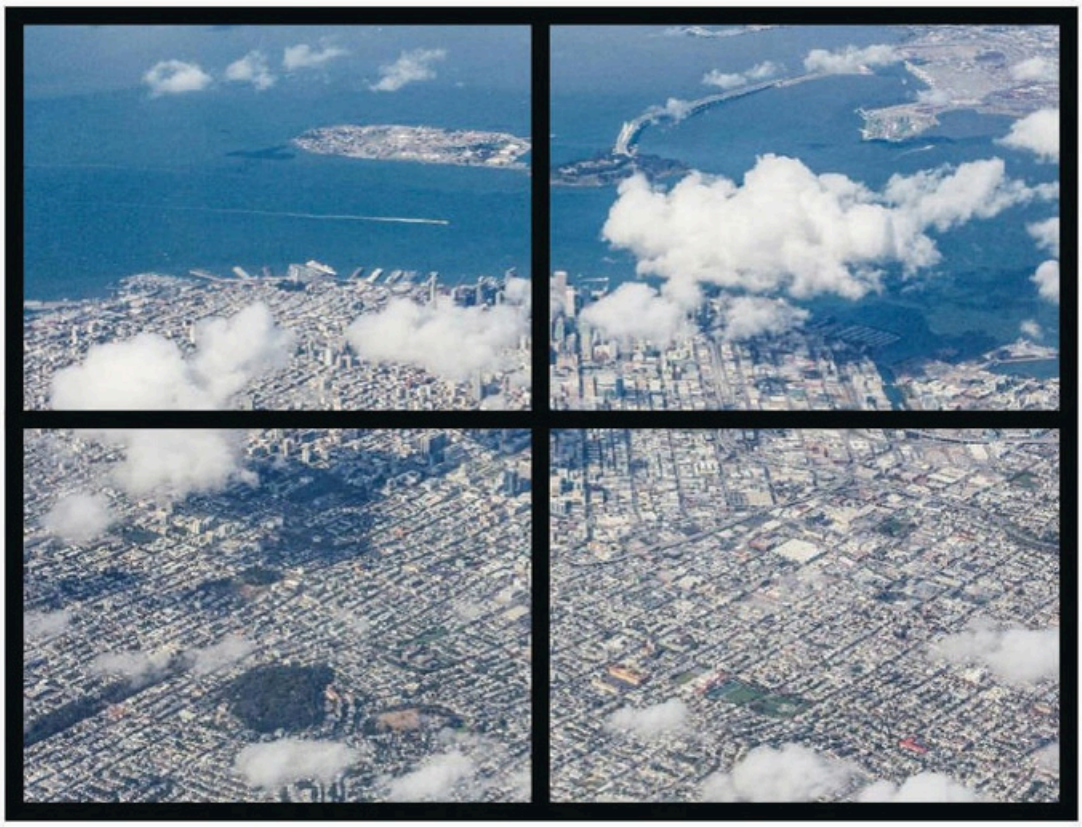


M-3×1 L



Video Wall

W-2x2



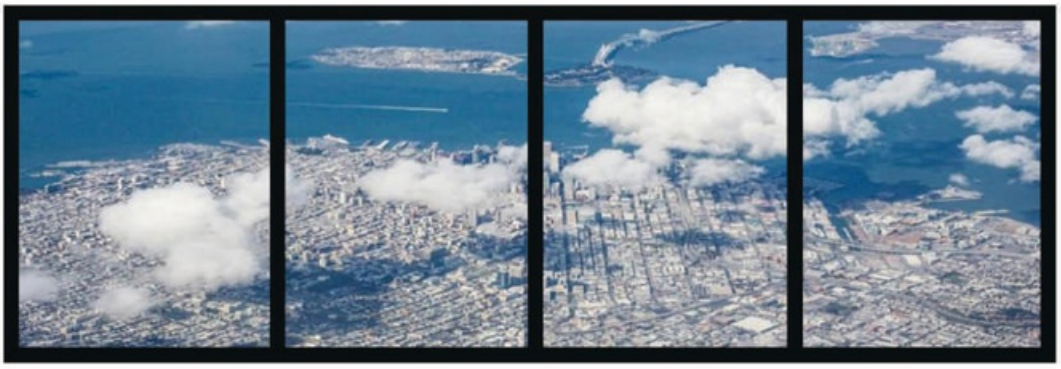
W-1x2 1x2



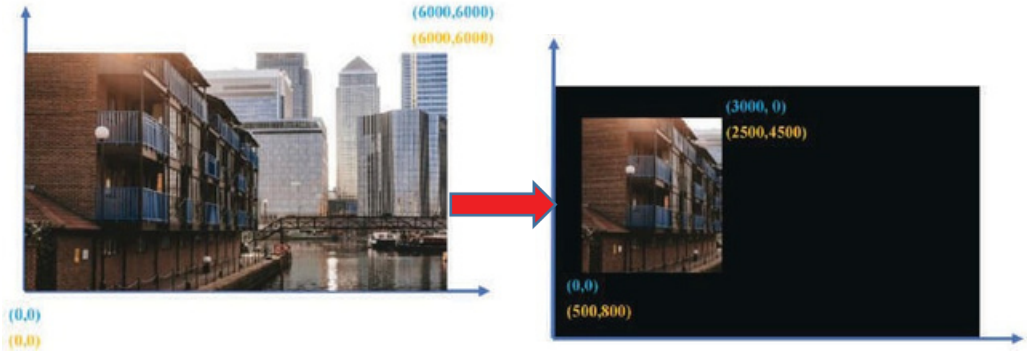
W-1x3



W-1x4



How to crop and zoom:



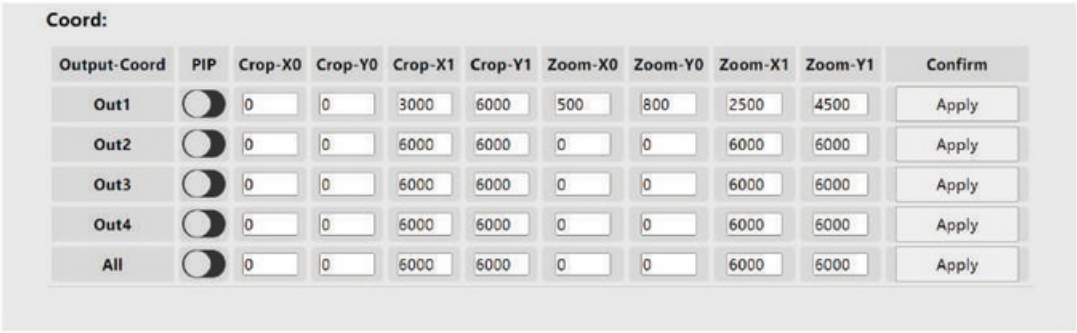
Way 1: By the front push button/IR remote with the OSD:

① 【MAIN】 -> 【Output】->【Output 1->Video->【 】 【Coord】

② Adjust Crop and Zoom

【Crop X0】 -> 【0】
【Crop Y0】 -> 【0】
【Crop X1】 -> 【3000】
【Crop Y1】 -> 【0】
【Zoom X0】 -> 【500】
【Zoom Y0】 -> 【800】
【Zoom X1】 -> 【2500】
【Zoom Y1】 -> 【4500】

Way2: By the WEB GUI control



8. Trouble Shooting and Attention

No signal on the display?

- Make sure all the power code well connected
- Check the display switcher and make sure it's in good condition
- Make sure the cables between the device and display are short than 10 meters for 4K
- Reconnect the cables and restart the system
- Make sure the signal sources are on
- Check the cables between the devices and displays are connected correctly.
- Make sure the display can support the output resolution.

9. After Sales

9.1 Warranty Information

The Company warrants that the process and materials of the product are not defective under normal use and service for 2 (2) year following the date of purchase from the Company or its authorized distributors.

If the product does not work within the guaranteed warranty period, the company will choose and pay for the repair of the defective product or component, the delivery of the equivalent product or component to the user for replacement of the defective item, or refund the payment which users have made.

The replaced product will become the property of the Company.

The replacement product could be new or repaired.

Whichever is longer, any replacement or repaired of the product or component is for a period of ninety (90) days or the remaining period of the inial warranty. The Company shall not be responsible for any soware, rmware, informaon, or memory data contained in, stored in, or integrated with the product repaired by the customer's return, whether or not during the warranty period.

9.2 Warranty limitations and excepons

Except above limited warranty, if the product is damaged by over usage, incorrectly use, ignore, accident, unusual physical pressure or voltage, unauthorized modification, alteraon or services rendered by someone other than the Company or its authorized agent, the company will not have to bear addonal obligaons. Except using the product properly in the proper applicaon or normal usage