

# FoMaKo

## Live Stream Video Mixer Switcher User Manual V2.0



### FoMaKo

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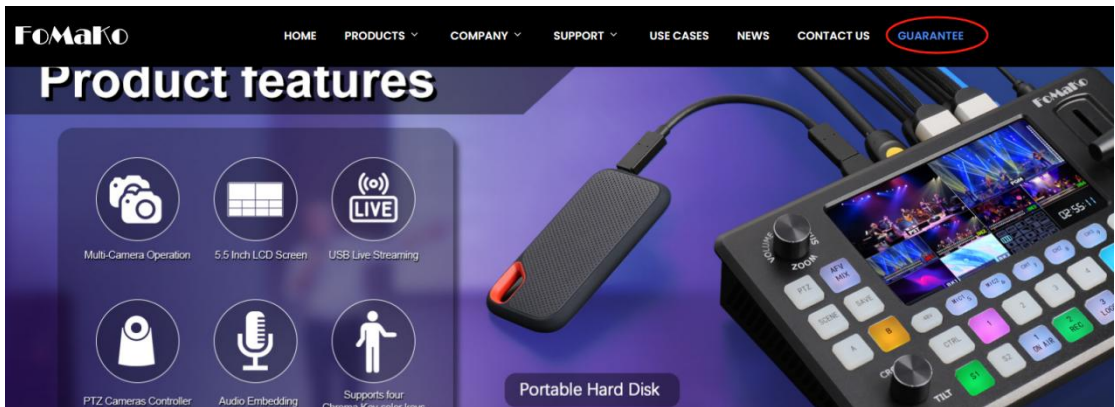
# Guarantee Registration

Dear Friend,

Thank you very much for ordering FoMaKo products.

To ensure your after-sales service rights, please do the “Guarantee registration” on our official website as soon as possible after receiving the product.

FoMaKo Official Support website: [www.fomako.net](http://www.fomako.net)



Input your Email , OrderID , Name and Products Model ID and Submit.

it will help us supply better after-sales service for you.

Before using the product, please read the quick start , it will help you use the product more easily.

# Quick Start

Dear Customers,

Thanks for ordering FoMaKo video switcher panel, before using the panel, please read this quick start first. It will help you to use the video switcher panel easier.

## **One Operator Multiple Live Broadcast Tasks**

FoMaKo live stream video switcher panel is the world's first 5.5-inch 10 display monitor with multi-layer video processing, YUY2 Lossless UVC streaming, VENC hard-encoding record, professional sound card-level audio processing, 4cameras live broadcasting production, highly integrated and compact audio and video live stream with broadcast-level live production by 4xcameras PTZ control simultaneously. Only by 29 buttons, 3 knobs and T-Bar can operator use the M/E panel to realize single-person live broadcasting friendly and easily.

## **Accelerate Live Production**

Production is easier and fun with FoMaKo video switcher panel

FoMaKo video switcher panel is a very advanced video switcher, it contains a number of new technologies and functions: 4 x HDMI signal source, 2 x background pictures can realize three layers and layers switch, 4 chroma keys and 2 luma keys are ideal for high-end production and virtual scenes.

You can connect to various video sources such as cameras, TV, play boxes, PowerPoint and animations etc.. Through powerful Chroma Key, various creative transitions, image pools, downstream KEY, audio mixer, multi-view and other functions, operator can create exciting live productions.

FoMaKo live streaming switcher can bring you wonderful multi-camera live production! Designed with professional Preview and Program switching via TBAR, operator will enjoy the style of self-directed and self-acted video production. By zoom, crop and layer move freely, can be realized pixel-level layer editing, with a highly flexible layer layout and mix engine.

FoMaKo video switcher panel unique operation design, by using the panel to control the option, the operator can connect the 4 inputs as you like. The PTZ camera control signal is used to load and save preset points, and it is very convenient to simulate different movement of 4 x cameras.

Edit and preset the scenes according to different applications, by the powerful functions and excellent operation panel to make your video live production more fun and easier.

## 1. Cable Connections



Here is the classic connection diagram.

- (1) Connect HDMI video sources and audio sources to video switcher
- (2) MVR/PGM HDMI video out for local preview
- (3) USB 3.0 for Live streaming, USB 2.0 for PGM recording
- (4) Network connection: Use network cable connect all devices(cameras, PTZ controller joystick, video switcher, computer) to network switch.

*You'd better have a router in the network(LAN), then, router will assign IP addresses for all the devices.*

## 2. Common Shortcut Keys

**Menu+ M/E:** Switch to transition effect mode, use “SCALE PAN” knob to choose transition effect.

**Menu+Record:** Turn on/off record mode

**Menu + Logo:** Control logo on/off, if you haven't upload logo file to video switcher, it will show a logo box;

**MENU + ON Air:** Start or Stop network stream

## 3. About Layers

The video switcher has 4 layers.

**Top layer=**Logo layer

**Layer 2=**Layer A, is usually a picture in picture or a secondary preview screen.

**Layer 3=** Layer B, is the signal source .

**Bottom layer=**Background layer

## 4. Layer Control

**Top layer:** Logo layer can turn on/off by “Menu+Logo”

When layer A chosen, layer A can be control.

When layer A chosen, layer B can be control.

### 5. The functions of background layer

- Disable layer A&B, output background
- WIPE (Graphic Slide) picture
- Customs effects
- Background work with Luma Key

## 6. PTZ Control Function

If you want to control your PTZ cameras more professional and effective , please get another device: FoMaKo KC608 Pro controller joystick.



The video switcher panel and cameras must connect to the same router by network cable. Video switcher and cameras' IP addresses must be in the same segment, keep the first three parts are the same ,  
for example: 192.168.1.xxx, these IP addresses are in the same segment and first three parts are the same.

- Max control 4 PTZ cameras
- The IP List 1, 2, 3, 4 in the menu settings correspond to IN1, IN2, IN3, IN4 video source
- When press “PTZ” button, the button light up, now, you can control the PTZ camera in

PST(1 2 3 4)

- If A B layer shown in PST preview at the same time, you need choose A or B layer to do PTZ control

- Save Preset Position: When “PTZ” button light up, then press “Save” button, now, you can preset position to 0~9

-Call Preset Position: when “PTZ” button light up, then press “Scene” button, now, you can call preset position 0~9.



## 7. How to use scene

**Save Scene:** Set the layer or layers' style in PST, Press "Scene" button, then press "Save" button, now, can save scene to 0~9

**Call Scene:** Press "Scene", now you can call the saved scene from 0~9



Scene is used to save layers, layers' style (such as: Picture in Picture, two pictures in PST, background), cameras' preset position, so that it can be quickly called during operation.

Now, let's use a complex example to explain it:

### **Scene 5 prepare:**

- PST set to show A&B layer
- Layer A is IN1(Camera 1), Layer B is IN2(Camera 2)
- Save as Scene 5.

### **Scene 6 Prepare:**

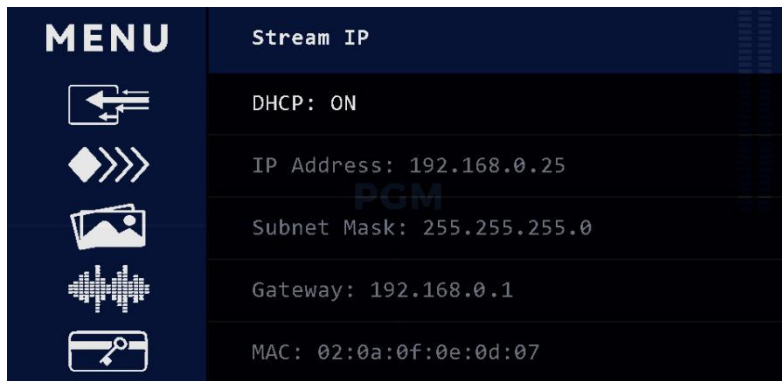
- Change Layer A&B style in PST, now set to B is bigger, A is smaller
- Change Camera 1 and camera 2 shooting direction
- Save as Scene 6.

Now, press "Scene" button to call Scene 5 and Scene 6, you will see both the layers' style and camera's preset position are changed with Scene 5 and Scene 6.

## 8. Network Streaming

Please make sure video switcher and computer are connected to the same router .  
(If you connect video switcher and computer to network switch, make sure the network switch connected to the router.)

Go to menu settings-> System -> Network -> Stream IP



You can see the stream IP address which assigned by router.

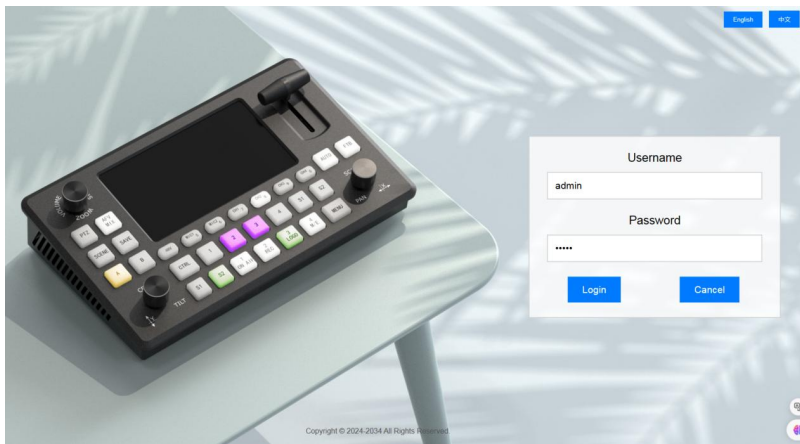
(Important: when network IP streaming settings finished, high recommend to turn off DHCP.

Because keep DHCP on, when router or video switcher power off and power on again, router maybe assign new IP address for video switcher.)

Visit the “stream IP” in computer web browser,

Default user name: admin

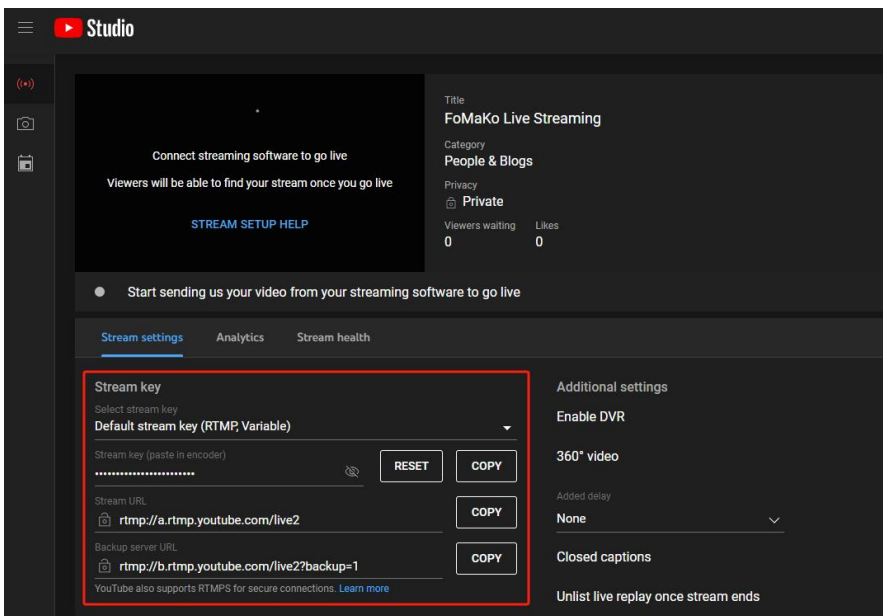
Default Password: admin



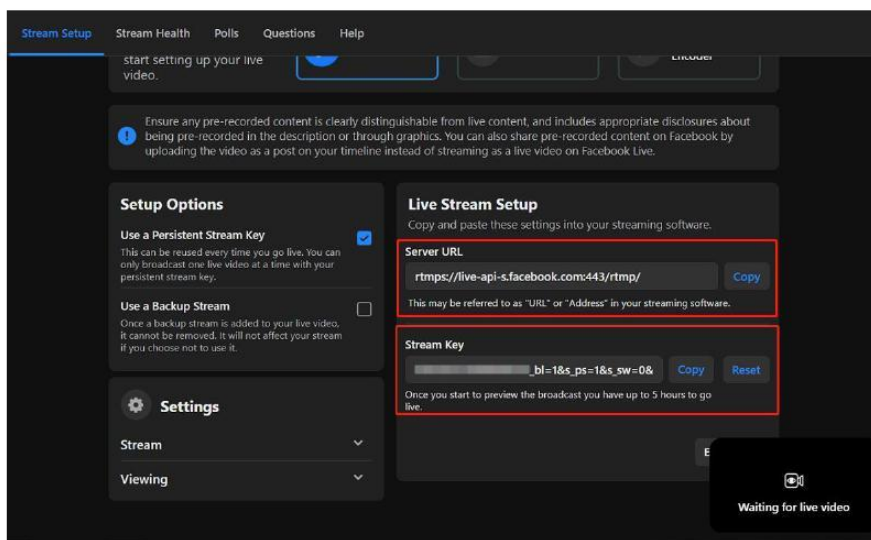
Now, let's stream to YouTube and Facebook for example:

- Login Your YouTube/Facebook account, you can see your live stream URL and stream key here:

**YouTube:**



## Facebook:



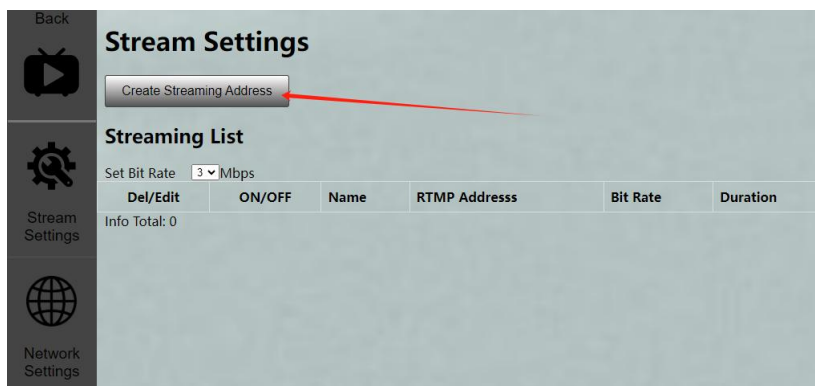
Now, you can input the RTMP stream address to the video switcher.

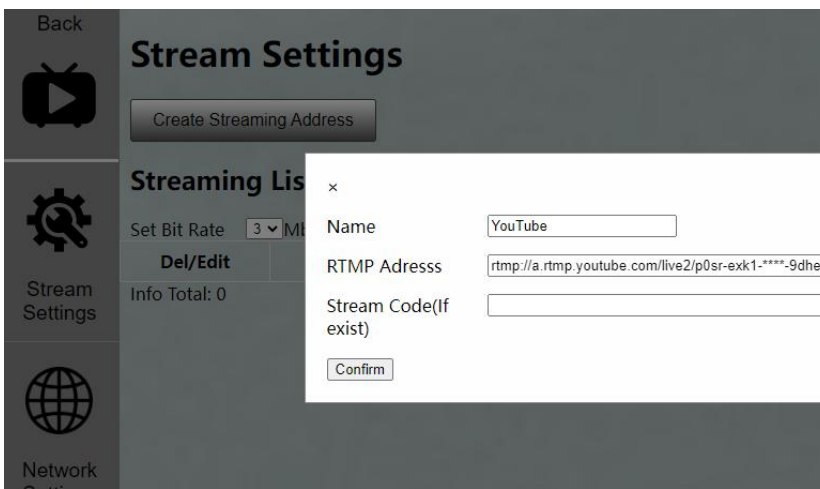
**RTMP Stream Address Format:** Stream URL/Stream Key

**YouTube for example:** rtmp://a.rtmp.youtube.com/live2/p0sr-exk1-\*\*\*\*-9dhe-41y0

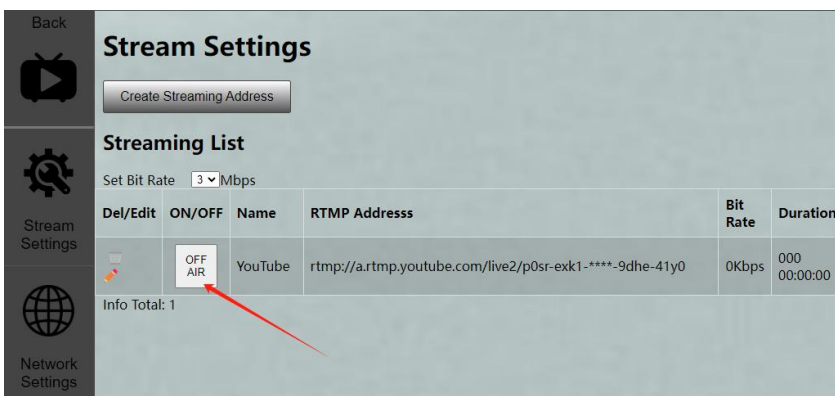
**Facebook for example:**

rtmps://live-api-s.facebook.com:443/rtmp/FB-38347018451\*\*\*4xGj4bTrzs0

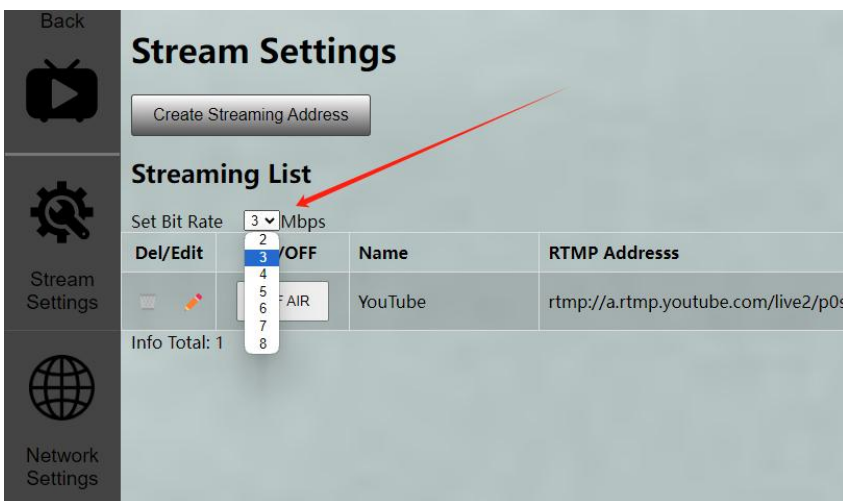




You can control the IP streaming on/off by the “air on /off” button, can also use combo keys: “MENU+ ON AIR” to control IP streaming on/off .



Adjust the streaming rate to 2-8 Mbps. If the network conditions are poor or restricted, users can lower the rate to ensure better and smoother streaming performance.



[If you need more supports, please contact us at: ivan@fomako.net, normally, we can reply you within 12hours.](mailto:ivan@fomako.net)

**FoMaKo Supports Team**

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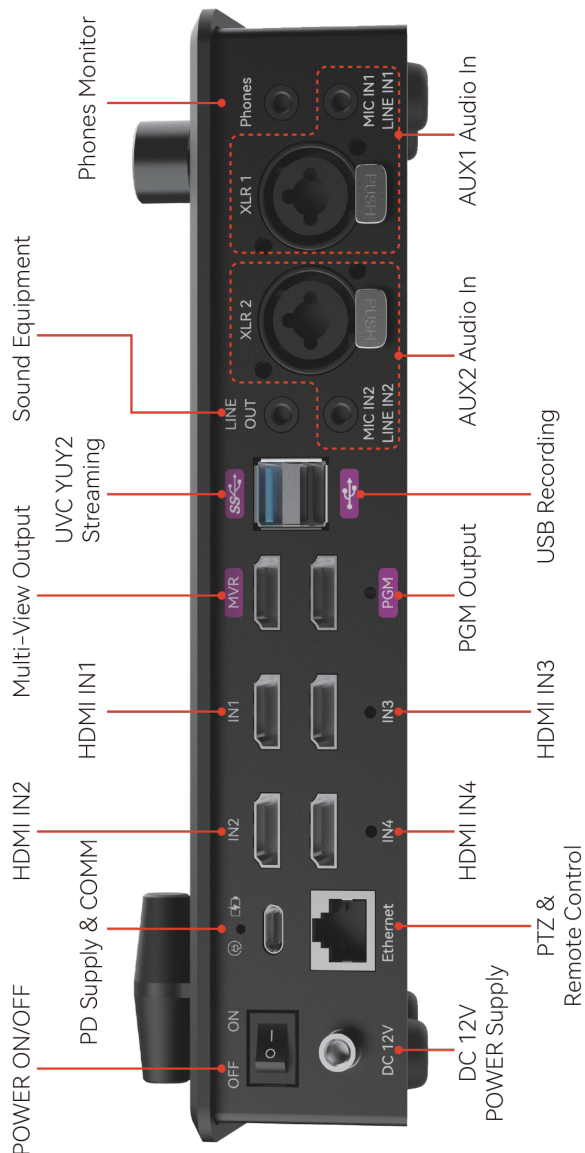
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# 1. Product Introduction

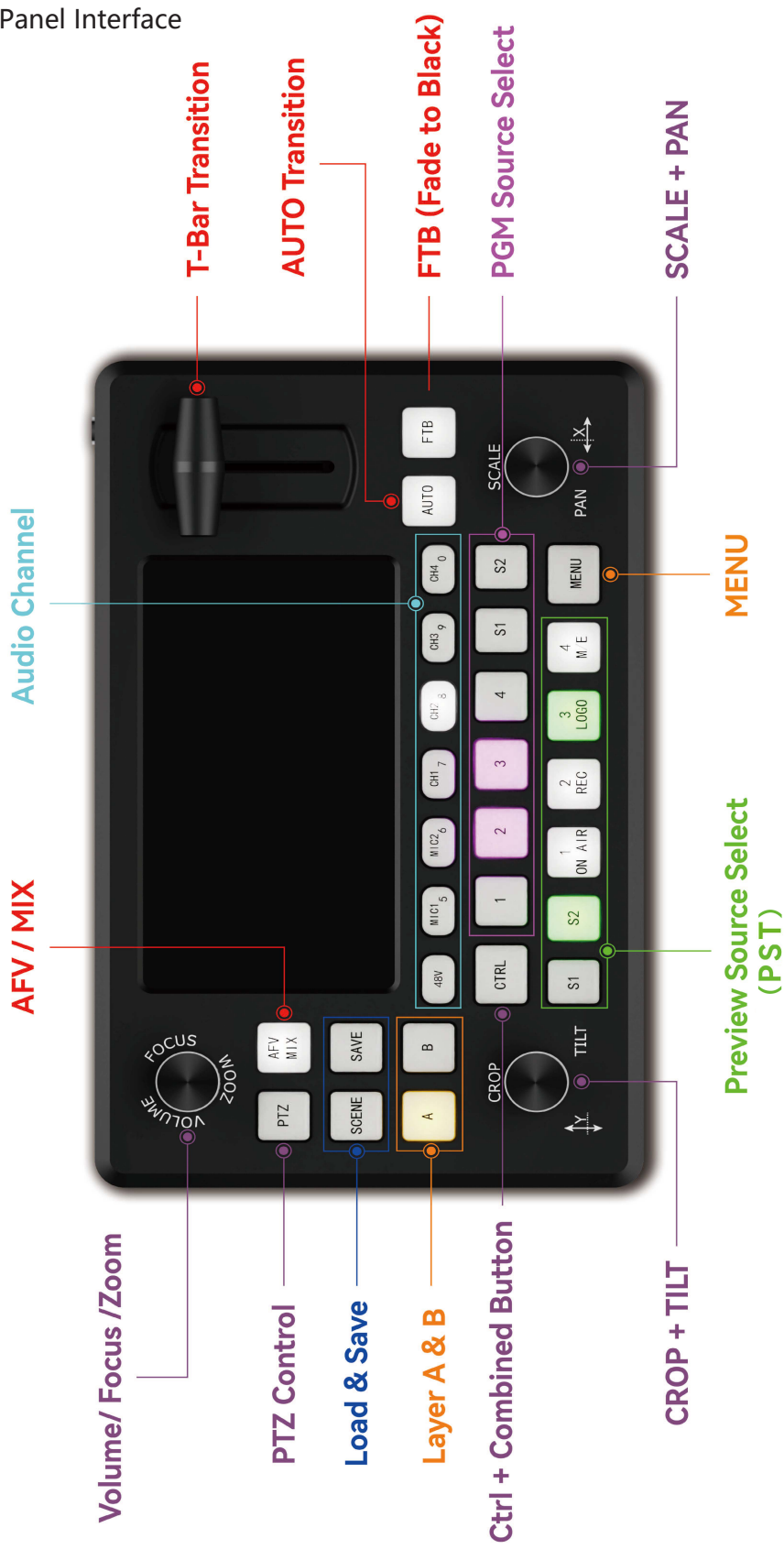
## 1.1 Overview

FoMaKo video switcher is the world's first 5.5-inch 10 display monitor with multi-layer video processing, YUY2 Lossless UVC streaming, RTMP IP streaming, VENC hard-encoding record, professional sound card-level audio processing, 4 cameras live broadcasting production, highly integrated and compact AV live streaming switcher, with broadcast-level live production by 4 x camera PTZ control simultaneously. Only by 29 buttons, 3 knobs and T-Bar can operator use the M/E panel to realize single-person live broadcasting friendly and easily.

## 1.2 Connectors Interface



### 1.3 Control Panel Interface



## 2. 2. Key Button and Operation Instructions

### 2.1 Video Operation

#### 2.1.1 Preview/Preset (PST) bus button

Number 1, 2, 3, 4 Buttons: Represent the current signal status, when there is no signal input, the button is off. While, the button is on white when there is a signal input, and the button is on green if the signal is selected in the PST.

S1, S2 Buttons: Represent the status of the two BK pictures under PST. If BK2 is selected, S2 will light up in green;

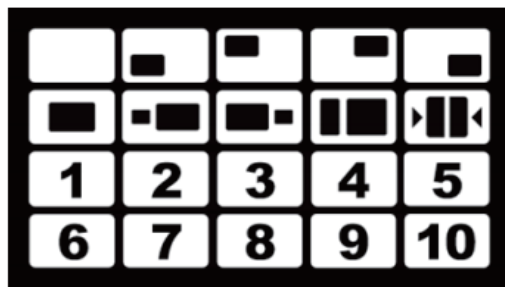
#### 2.1.2 Program (PGM) bus button

Number 1, 2, 3, 4 Buttons: Indicates the selected signal source in PGM, the selected one is purple color, and the unselected one is off; If the PGM has only one layer ( A or B is available), press the 1, 2, 3, 4 buttons to quickly switch the PGM layer; If PGM contains two layers: A and B, press the 1, 2, 3, 4 buttons to quickly switch the layer B of PGM. Press CTRL+1, 2, 3, and 4 buttons to quickly switch the layer A of PGM.

S1, S2 Buttons: Represent the status of the two BK pictures under PGM. If BK1 is selected, S1 will light up purple, and S2 will not light up. It can also be used as Page Function, If you choose BK2 Page, S1 and S2 will light up in cyan, and S1 can be turned to the previous page, S2 is the next page.

#### 2.1.3 SCENE Button

Press the button, quickly select the preset/custom scene through number 1-10 or knob X/Y.



#### 2.1.4 SAVE Button

Press the SAVE button, the yellow light is on, and the edited layer under PST can be saved through 1~10 number button.

### 2.2 Audio Operation

The panel also has an excellent audio mixer function, supporting professional XLR balanced input, 6.35-inch balanced input, 3.5-inch MIC input or LINE input, which can be mixed with embedded audio source from four HDMI inputs in real

time to create Powerful mixing function, and the output supports 5-BAND EQ sound processing, through the convenient button switch and simple menu settings, you can create real-time mixing and 5-BAND EQ sound to bring professional sound quality enjoyment.

### **2.2.1 Audio Mixer Diagram**

Two AUX analog audio channels can drive one to two analog-sound respectively. AUX1 is responsible for the mixing of XLR 1, MICIN1 or LINE IN1 sound channels, and AUX2 is responsible for the mixing of XLR2, MICN2 or LINE IN2 sound channels, that is, it supports at most four channels of external analog audio inputs and four channels of HDMI digital audio, in this case, there are a total of eight channels of real-time audio source processing.

### **2.2.2 AFV mode**

Long press and hold the AFV/MIX button to activate the AFV mode and light up red. At this time, the main output is the sound of MASTER, which is the built-in audio source of selected layer on the PGM and the real-time MIC audio mixing (Operator can set embedded audio source or mute in each input under AFV menu). In AFV mode, MIC1 and MIC2 can still be turned on or off freely.

### **2.2.3 MIX mode**

Press and hold the AFV/MIX button to switch to MIX mode and light up white. At this time, the main output is the sound of MASTER, which is the real time mixer under MIC1, MIC2, CH1, CH2, CH3, CH4 buttons, under MIX mode, these 6 audio sources can be freely turned on or off.

### **2.2.4 Audio Monitor**

Through the phone jack, the menu can be set to monitor the sound of MIC1, MIC2, CH1, CH2, CH3, CH4 or MASTER channel. or by pressing and holding the button CTRL + MIC1, MIC2, CH1, CH2, CH3, or CH4. can monitor the audio of the corresponding channel, and when free the button, monitoring channel restored.

### **2.2.5 Volume adjustment**

In pre-listen state, hold down either CTRL + MIC1, MIC2, CH1, CH2, CH3, or CH4, then rotate the volume knob, you can adjust the volume of the corresponding audio channel independently. In normal state, the upper left knob can adjust the MASTER volume, press the knob to mute the MASTER, press it again to resume the sound.

## **2.3 PTZ Control**

By the unique operation panel and its convenient and friendly operation, operator can control and load 4 x PTZ cameras at the same time.(Note: The video switcher and cameras' IP must be in the same segment.)

### **2.3.1 PTZ basic operations**

press the button, the cyan light is on, enter the PTZ mode, press the PTZ button again to close. In PTZ mode, turn the knob X to control the Pan and move left and right, knob Y to control Tilt and move up and down, and the knob Zoom to control the zoom in and out of the lens. If the focus mode is set to manual mode, Press CTRL+knob ZOOM can adjust the FOCUS of the camera.

### **2.3.2 Save preset points**

In PTZ mode, press the SAVE key, the yellow light is on; Button 1, 2, 3, 4 under Program/PGM , and 5.6.7.8.9 and 0 displayed in audio buttons, when purple lights is on, it indicates the 10 preset save channels for the current camera position, click any number keys can quickly save the corresponding preset to the channels.

### **2.3.3 Recall preset points**

In PTZ mode, press the SCENE key, the blue light is on; Number buttons 1, 2, 3, and 4 under preview /PST, press the corresponding button to select different camera position, and it will light up green; Button 1, 2, 3, 4 under Program/PGM , and 5.6.7.8.9 and 0 displayed in audio buttons, when purple lights is on under the 10 numbers, it indicates the 10 preset save channels for the current camera position, click any number keys can quickly load the corresponding preset of the position.

### **2.3.4 Multi-Camera PTZ Connection**

Connect an external Ethernet switch, enter to the video switcher menu to set IP of each PTZ camera. Activate the PTZ mode, and select different camera to operate through the buttons 1, 2, 3, and 4 under Preview (PST).

### **2.3.5 PTZ Control Protocol**

Support Visca Over IP protocol.

## **2.4 Knob**

### **2.4.1 Knob X**

You can move the position of selected layer horizontally under PST.

### **2.4.2 Knob Y**

You can move the position of selected layer vertically under PST.

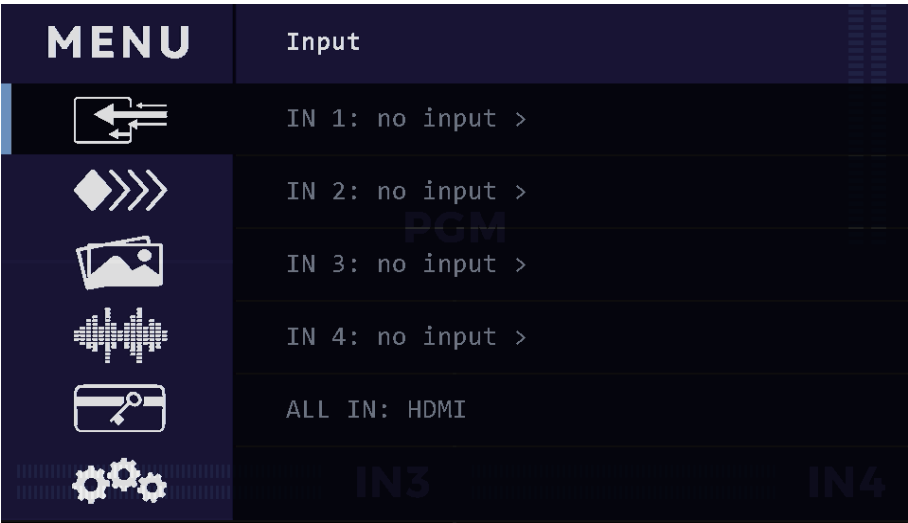
### **2.4.3 Knob Z**

In normal mode, the MASTER volume can be adjusted. Press the knob to mute the MASTER, and press again to reply to the sound.

In PTZ mode, the lens can be controlled to zoom in and out.  
(Another CTRL + Knob combination operation will be explained in detail later!)

# 3. MENU Function Introduction

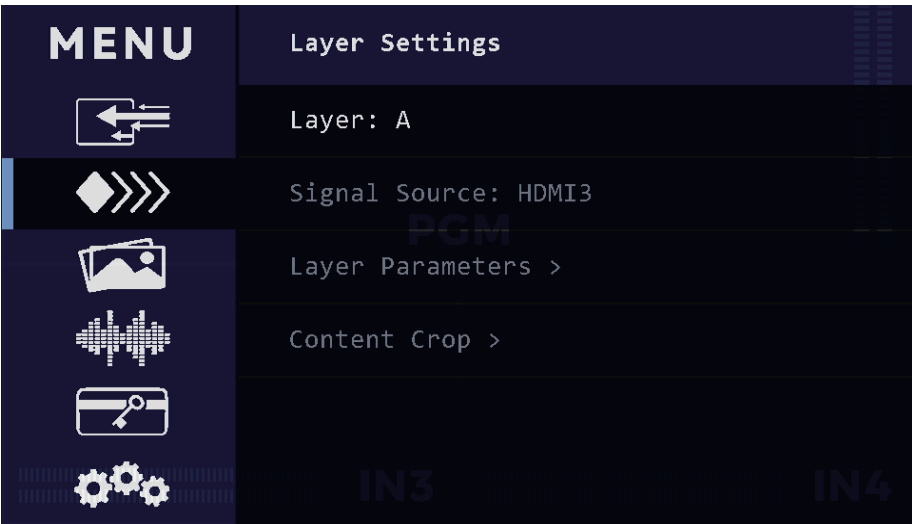
## 3.1 Input & Output



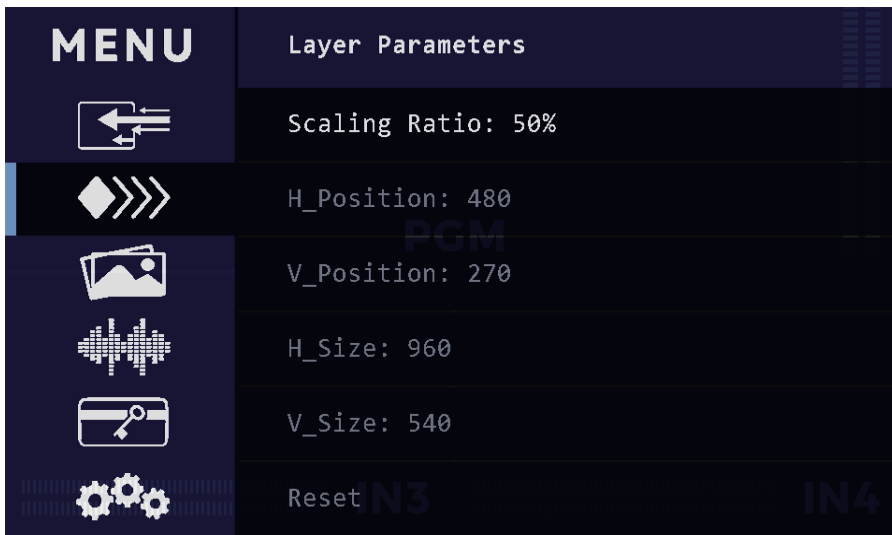
### 3.1.1

The input setting includes four HDMI input. When there is an HDMI signal present, it will read and display the resolution of the corresponding source.

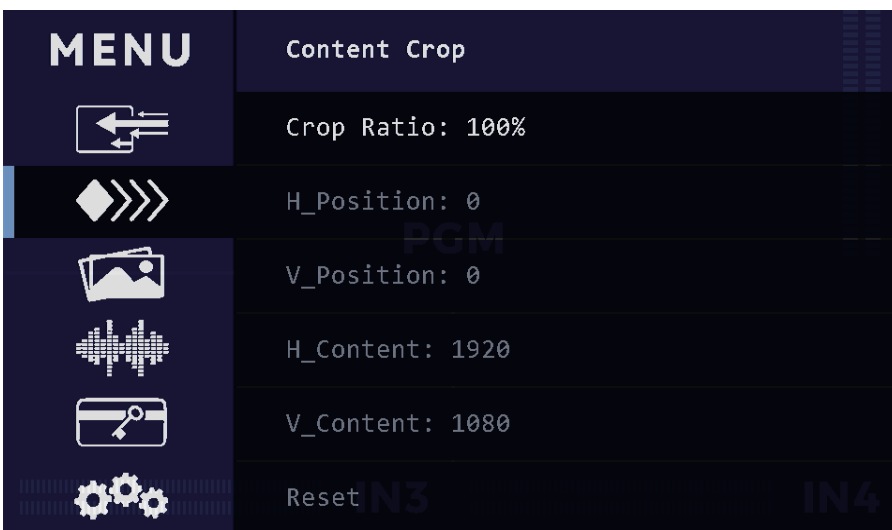
## 3.2 Layer Settings



- 3.2.1 Layer: A layer, B layer or A and B layer can be opened together.
- 3.2.2 Signal Source: Select the input source for the current layer.
- 3.2.3 Layer parameters: Set the position, size for current scaling ration of layer, and reset to the initial value with one click.



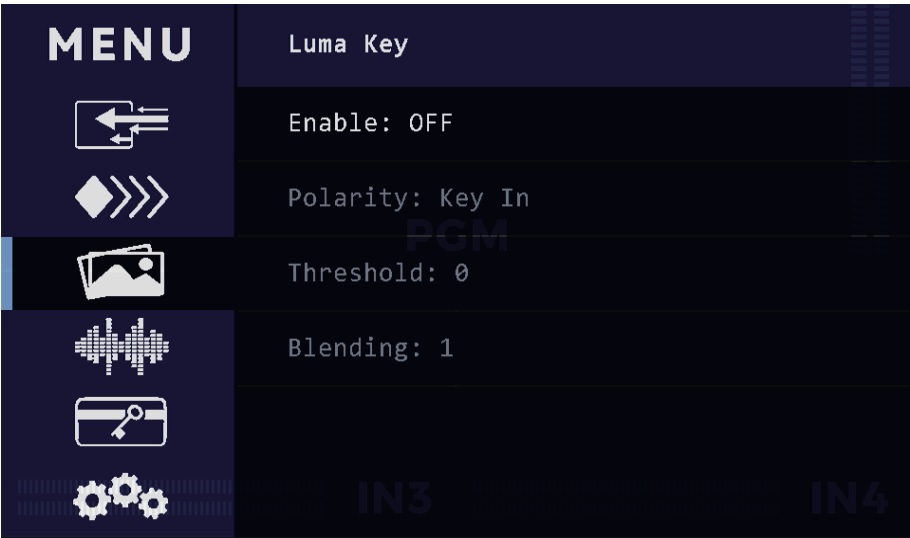
- 3.2.4 Content Crop: Set the position, content for current crop ration of layer, and reset to the initial value with one click.



### 3.3 Picture Setting (can import 16 pictures)

- 3.3.1 BK1: assign the picture of BK1 from picture pool.
- 3.3.2 BK2: assign the picture of BK2 from picture pool.

- 3.3.3 Picture Reload: Reload the imported pictures, either singly or ALL of them.
- 3.3.4 BK layer Setting: The panel has 2 luma keyers for two BK pictures. in PST interface, the BK picture be brought to front or sent to bottom, when BK picture sent to bottom, the luma key will be disable.



- 3.3.5 LOGO Setting (can import 2 logos) : support PNG files with alpha transparency, select logo1 or logo2, enable the logo, set the position and size of the logo.



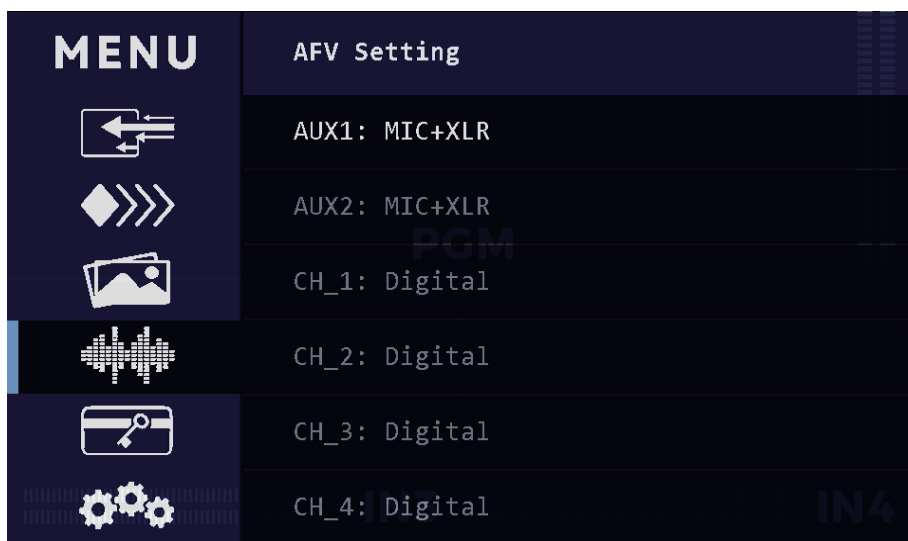
## 3.4 Audio Settings

3.4.1 Audio Channel: set on/off for CH1, CH2, CH3, CH4, AUX1, AUX2 channel, you can be open multi-channel audio at the same time, simply for audio mixing.

3.4.2 Volume: adjust the volume of CH1, CH2, CH3, CH4, AUX1, AUX2, Master or Monitor.

3.4.3 Input delay: set the delay time of AUX1 and AUX2.

3.4.4 AFV Setting: Audio following video, optional LINE or MIC input, the master output is determined by the signal source in PGM, for example the IN1 signal is on PGM, the IN1 audio will be assigned as master output, the corresponding CH1 button light on. In AFV mode, the CH1, CH2, CH3, and CH4 buttons cannot be operated.



3.4.5 Audio Monitor: MASTER, HDMI1, HDMI2, HDMI3, HDMI4, AUX1, AUX2 can be monitored.

## 3.5 Advanced

### 3.5.1 PTZ

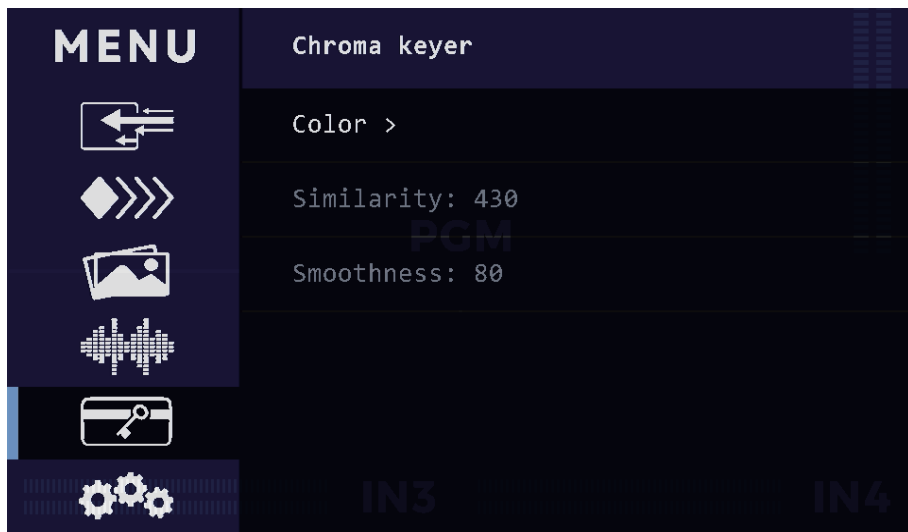
3.5.1.1 PTZ Setting: one camera PTZ control can be directly connected to video switcher Ethernet port, multiple PTZ need to use a router or switch to connect video switcher and PTZ at the same IP gateway, then you can perform pan, tilt, zoom, focus adjustment.



3.5.1.2 PTZ IP list & PTZ PORT List: Corresponding to the IP address and port number of cameras.

3.5.1.3 Preset point: Save and call the preset point.

3.5.2 Chroma Key: The video switcher has 4 powerful USK, which can do chroma key for each HDMI source. Select one HDMI source, enable chroma key, select color mode and set the parameters in keyer. The key color mode supports green, blue or automatic mode.



### 3.5.3 Transition

3.5.3.1 Graphic Slide Setting: Two BK pictures can be set to slide 1 and slide 2 respectively.



**Luminance Threshold:** When sliding, the content smaller than the luminance threshold will be deducted, and only the content larger than the luminance threshold will be displayed.

**Slide direction:** from Left to Right, or from Top to Bottom.

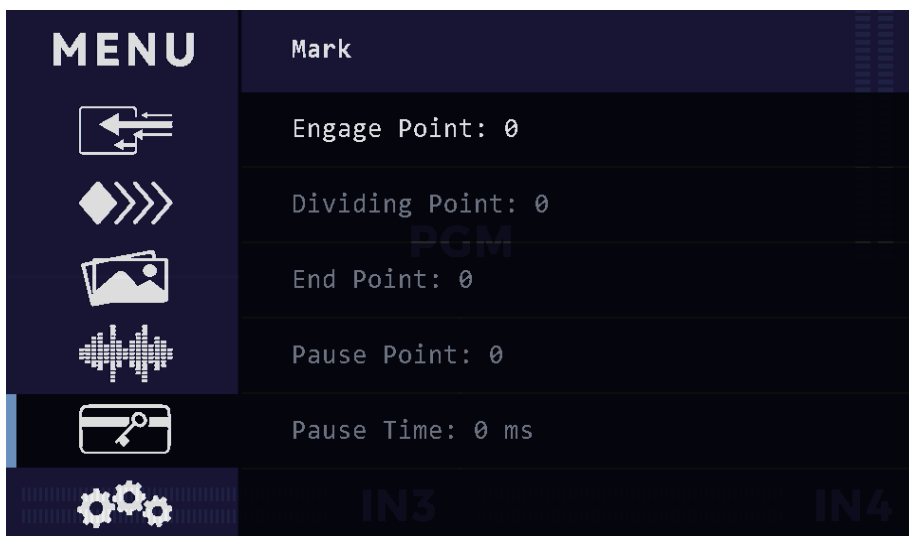
**Engage point:** Take the edge of the BK image direction as the start point and display the coordinates of the graphic.

**Dividing Point:** In the process of graphic slide, the actual division coordinates of the two screens, engage point < dividing point < end point.

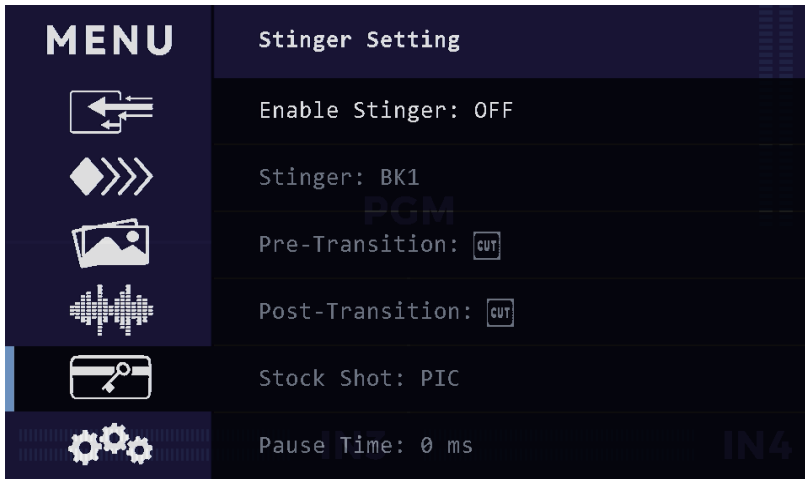
**End Point:** take the edge of the BK image direction as the start point, and end the coordinates of the graphic.

**Pause Point:** graphic content stagnation coordinates, engage point < pause point < 1920 (from Left to Right) or 1080 (from Top to Bottom).

**Pause Time:** Set between 0 and 5 seconds, 0.5 seconds for the step.

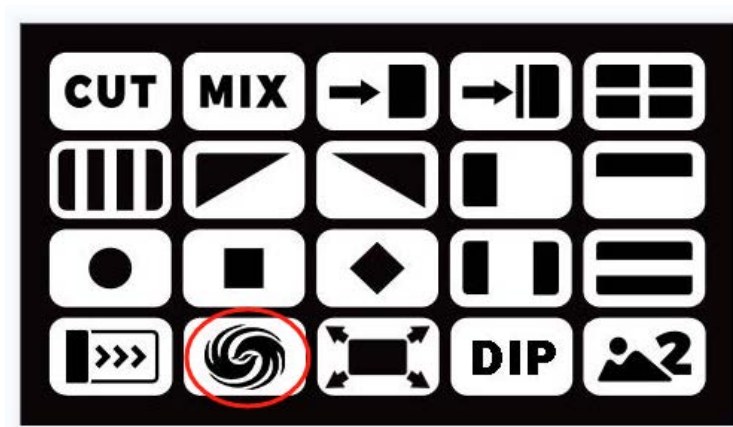


3.5.3.2 Stinger Setting: You can choose image BK1 or BK2 as transitional materials for the transition.



In the process of stinger effects, use the one-way method when using AUTO transition, and use the two-way method when using T-BAR transition.

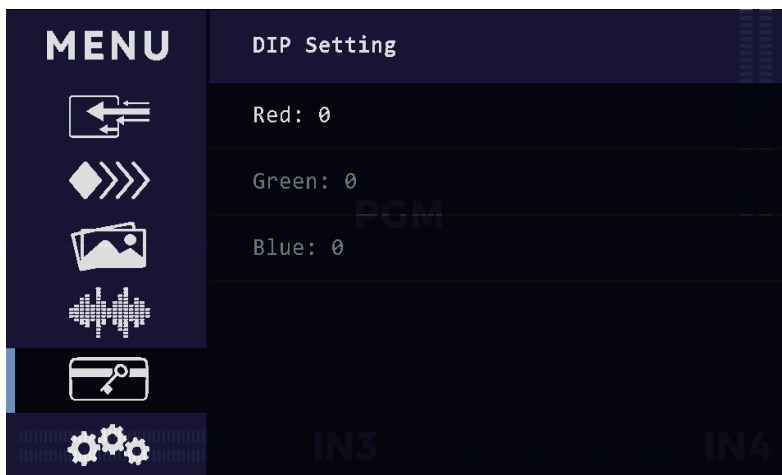
Pre-Trans & Post-Trans: CUT, MIX, DVE Push, DVE Squeeze, Cross Wipe, Venetian Blinds, Diagonal NWSE, Diagonal NESW, Horizontal Wipe, Vertical Wipe, Circle Wipe, Box Wipe, Diamond Wipe, L&R Barn Doors, T&B Barn Doors.



Customized special effects: freely unleash your transition creativity, and through BK's customized grayscale gradient images, you can create various fantastic and cool on-site stacked special effects; You can freely create various DIY images, supplemented by convenient S1 and S2 page flipping operations, to quickly achieve various on-site productions.

Stock Shot: BK1/BK2

Blending: 1-255



### 3.5.4 Video Out Settings

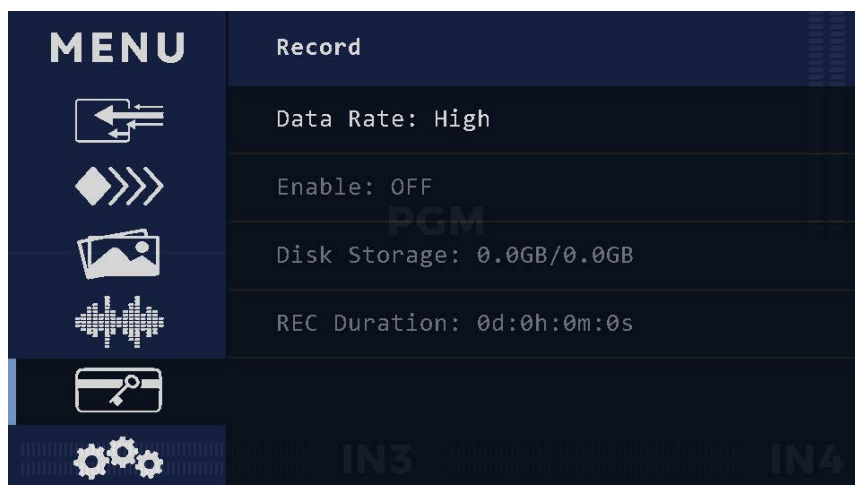
HDMI can choose PGM/PST output, USB can choose PGM/PST output.

### 3.5.5 Scenes

After finishing editing in the PST interface, scenes can be saved, and up to 10 scene banks can be supported.

### 3.5.6 Recording

Connect USB flash drive or portable hard drive (FAT and exFAT formats) to the USB 2.0 port of the video switcher, to easily enable recording functions in the menu or by combining the shortcut keys MENU+REC. During the recording process, users can flexibly choose between low, medium, and high recording rates. In addition, the menu interface will clearly display the current disk capacity and recording duration, providing users with comprehensive recording information.



After starting recording, the time interface displays REC..... in progress



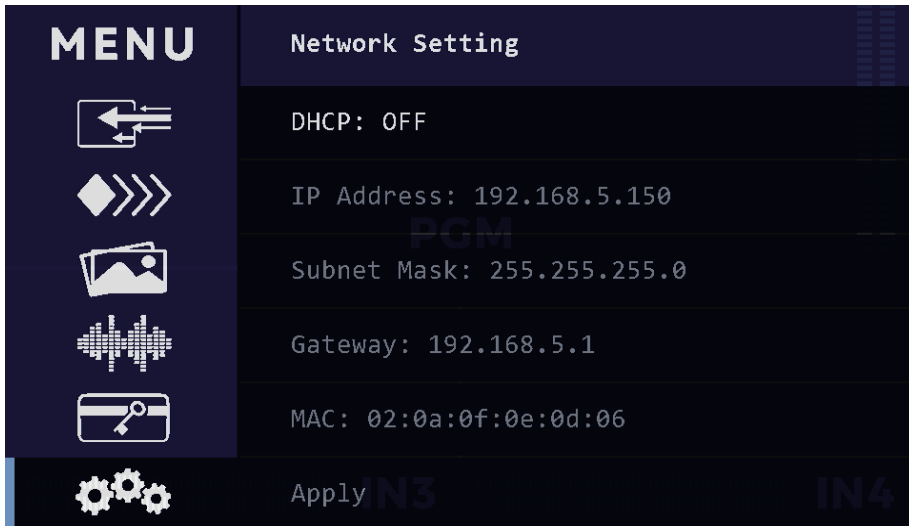
Press the shortcut key combination MENU+REC again to stop recording. When the "Record file saved" prompt pops up, you can unplug the USB drive

3.5.7 Network streaming  
Please check "Quick Start"

## 3.6 System

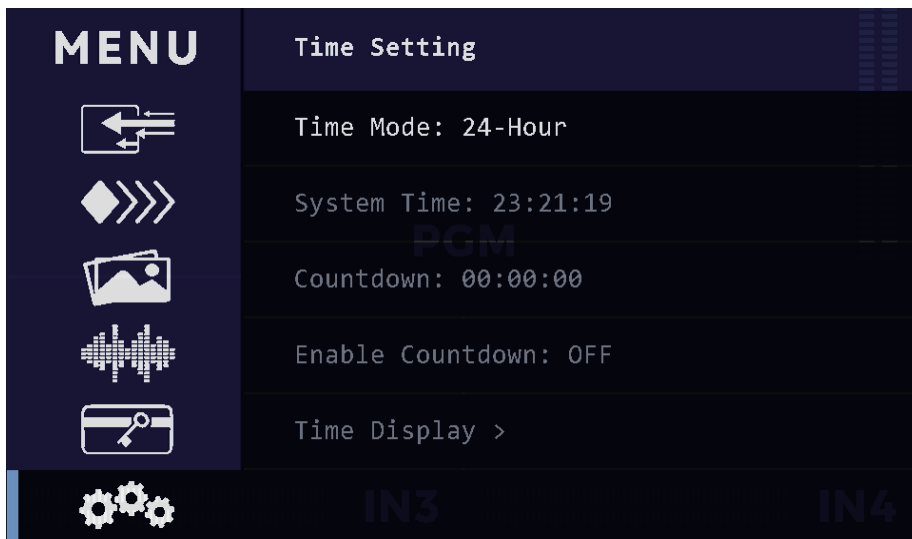
### 3.6.1 Network Setting

In network settings, you can open the DHCP dynamic host configuration protocol to automatically obtain the IP address; Alternatively, turn off DHCP, manually set the IP address, subnet mask, and default gateway, and then select Apply.



### 3.6.2 Time setting

Change time mode, set system time, countdown, display time in PST or PGM interface, and adjust the position.



### 3.6.3 Operation Setting

Set fan speed, keypad brightness, LCD screen brightness, PGM S1/S2 Custom button, and FTB Custom button.

## 4. Shortcut Keys Instruction

### 4.1 Video related shortcut keys

4.1.1 A & B buttons: which represent two layers, the selected layer shows yellow, and the layer shows no color when the layer is closed.

4.1.2 CTRL + PST Bus button (S1, S2, 1, 2, 3, 4 at the bottom)

Press CTRL + S1 | S2, and the BK picture can be brought to front or sent to bottom;  
Press CTRL + 1, 2, 3, 4 button to perform chroma key on the corresponding signal source.

4.1.3 CTRL + PGM Bus Button (middle row 1, 2, 3, 4) CTRL + 1, 2, 3, 4 button, then quickly switch the A layer when PGM owns two layers.

4.1.4 CTRL + Knob

Knob X: Press CTRL + Knob X to perform SCALE operation.

Knob Y: Press CTRL + Knob Y to perform CROP operation (ROI).

Knob Z: If the camera's focus mode is set to manual mode, CTRL + Knob Z can adjust the focus.

4.1.5 MENU

MENU + Knob X: You can select the left and right regions of the ROI content;

MENU + Knob Y: You can select the upper and lower regions of the ROI content;

MENU + M/E: Enable the selection of transition effect;

MENU + LOGO: Enable the LOGO;

MENU + REC: Start or Stop Recording.

MENU + ON Air: Start or Stop network stream

### 4.2 Audio related shortcut keys

4.2.1 Pressing and holding the button CTRL + MIC1, MIC2, CH1, CH2, CH3, or CH4. can monitor the audio of the corresponding channel, and when free the button. monitoring channel restored.

4.2.2 In pre-listen state, hold down either CTRL + MIC1, MIC2, CH1, CH2, CH3, or CH4, then rotate the volume knob, you can adjust the volume of the corresponding audio channel independently.

4.2.3 In normal state, the upper left knob can adjust the MASTER volume, press the knob to mute the MASTER, press it again to resume the sound.

4.2.4 Long pressing AFV/MIX button light up in red, enable AFV mode, long pressing again to close.

4.2.5 When the microphone input is 48V, long pressing the 48V button light up in red, enable phantom supply, and long pressing it again to close.

## **5. Pictures and LOGO Import**

### **5.1 Pictures Import**

Please contact technology support to get detail instruction

### **5.2 LOGO import**

Please contact technology support for detail instruction.

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<b>Picture</b> 	<b>Model ID</b>	FMK20SDI Pro FMK30SDI Pro	<b>Picture</b> 	<b>Model ID</b>	BH202 BH302
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		<b>Features: Bundle Product</b> <ul style="list-style-type: none"> <li>- 20x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		
<b>Picture</b> 	<b>Model ID</b>	KN20A Pro KN30A Pro	<b>Picture</b> 	<b>Model ID</b>	BN202 BN302
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- NDI ,HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		<b>Features:Bundle Product</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- NDI ,HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		
<b>Picture</b> 	<b>Model ID</b>	FMK12UH Pro(20x) FMK30UH Pro	<b>Picture</b> 	<b>Model ID</b>	BH201 BH301
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- AI Auto Tracking</li> <li>- HDMI, USB 3.0 , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> </ul>		<b>Features: Bundle Product</b> <ul style="list-style-type: none"> <li>- 20x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		
<b>Picture</b> 	<b>Model ID</b>	FMK20UH NDI FMK30UH NDI	<b>Picture</b> 	<b>Model ID</b>	BN201 BN301
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- AI Auto Tracking</li> <li>- NDI, HDMI, USB 3.0 , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> </ul>		<b>Features:Bundle Product</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- NDI ,HDMI, 3G-SD, USB , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> </ul>		
<b>Picture</b> 	<b>Model ID</b>	K820N/K820	<b>Picture</b> 	<b>Model ID</b>	BN402 BN502
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 20x Optical zoom lens</li> <li>- 4K 60fps video out</li> <li>- NDI ,HDMI, 3G-SDI, USB3.0 , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> <li>- LCD Screen</li> <li>- AI Auto Tracking</li> </ul>		<b>Features:Bundle Product</b> <ul style="list-style-type: none"> <li>- 20x/30x Optical zoom lens</li> <li>- 1080P 60fps video out</li> <li>- AI Auto Tracking</li> <li>- NDI, HDMI, USB 3.0 , IP Streamig</li> <li>- True to Life Colors</li> <li>- PoE Support</li> <li>- Faster Auto Focus</li> </ul>		
<b>Picture</b> 	<b>Model ID</b>	KC601 Pro	<b>Picture</b> 	<b>Model ID</b>	KC608 Pro KC608N
	<b>Features:</b> <ul style="list-style-type: none"> <li>- 4CH HDMI video mixer switcher</li> <li>- 5.5" LCD Screen</li> <li>- USB 3.0 , IP Steaming</li> <li>- 1080p 60fps USB high bit rate recording</li> <li>- 4 Power Chroma Keys &amp; 2 Luma Keys</li> <li>- T-bar switching, more than 30 effects</li> <li>- Simple PTZ control</li> </ul>		<b>Features:</b> <ul style="list-style-type: none"> <li>- Professional PTZ Camera controller</li> <li>- Camera video preview</li> <li>- 7 cameras quick select</li> <li>- 4D Joystick</li> <li>- PoE Support</li> <li>- P/T/Z, focus, presets, PTZ Speed control</li> <li>- NDI optional</li> </ul>		