

FoMaKo

Live Stream Video Mixer Switcher User Manual V2.0



FoMaKo

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Please feel free to contact us if you have any questions.

Quick Start

Dear Customers,

Thanks for ordering FoMaKo 4K video switcher panel, before using the panel, please read this quick start first. It will help you to use the video switcher panel easier.

FoMaKo 4K video switcher supports 4K 60fps inputs, 4K loop-through, EDID management, magic AOI (Area of Interest) close-up, image quality optimization, MON monitoring and audition system, compatible with all microphone types, sound card-grade equalizer, unique six-direction layer adjustment, powerful network management (console IP, port, streaming IP, PTZ IP list, vMix Tally, etc.), higher-brightness screen, supported by nearly 36W power supply for full-load operation. This not only provides image quality equivalent to 4 benchmark capture cards on the market, but also features a user-friendly control panel that makes all operational logic intuitive at first glance, empowering seamless live production.

1. About resolution

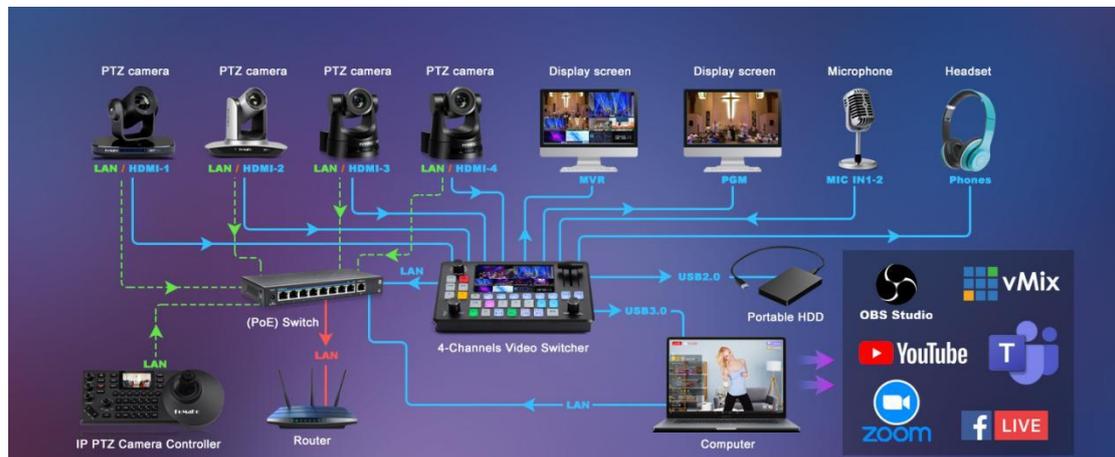
Input: HDMI 4K 60fps at maximum

Output: 1080P 60fps

Recording: 1080P 60fps

USB/IP Streaming: 1080P 60fps

2. 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.

3. Common Shortcut Keys

- MENU + LOCK:** Enable LOCK Function;
- MENU + LOGO:** Enable the LOGO;
- MENU + REC:** Start or Stop Recording;
- MENU + Stream:** Start or Stop IP Streaming;
- M/E:** Special effect choosing by “X” knob.

4. 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

5. Layer Control

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

Layer 2: Layer A, control by button “A”. Three states of this layer: Show/Off/**chosen**.
When layer A chosen, layer A can be control.

Layer 3: Layer B, control by button “B”. Three states of this layer: Show/Off/**chosen**.
When layer B chosen, layer B can be control.

Bottom layer: Background layer, when turn off layer A&B, this layer will show up.

6. The functions of background layer

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

7. PTZ Control Function

This video switcher panel only has basic 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 PTZ control protocol is Visca over IP, default port is: 52381 .
 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.



8. 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.

9. 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.

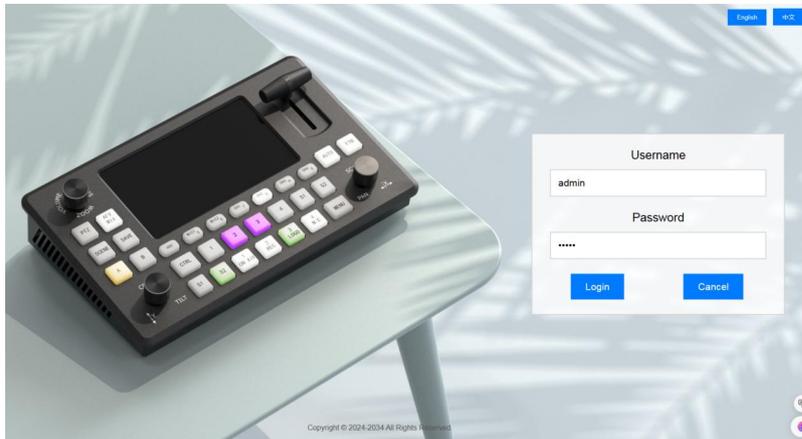
(Important: when network IP streaming settings finished, high recommend to turn off DHCP.)

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

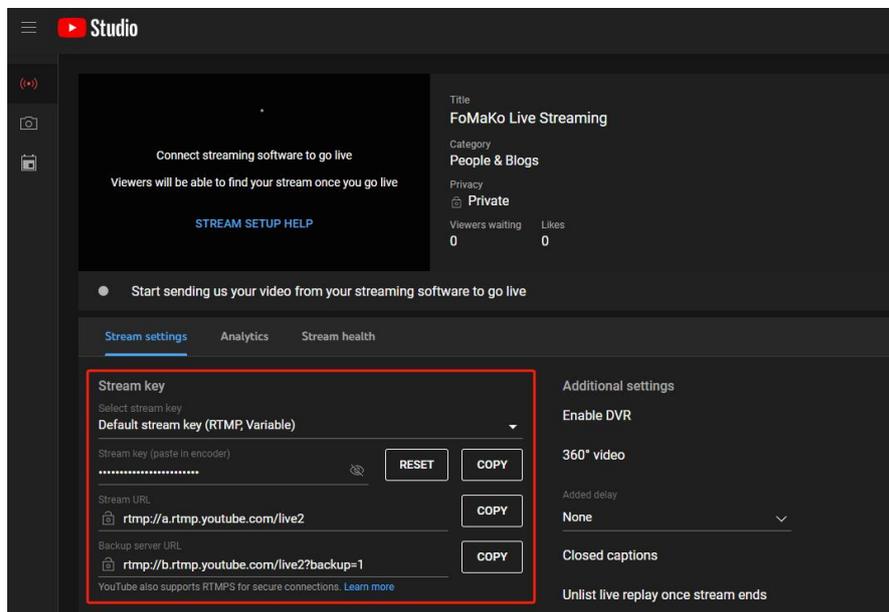
Default Password: admin



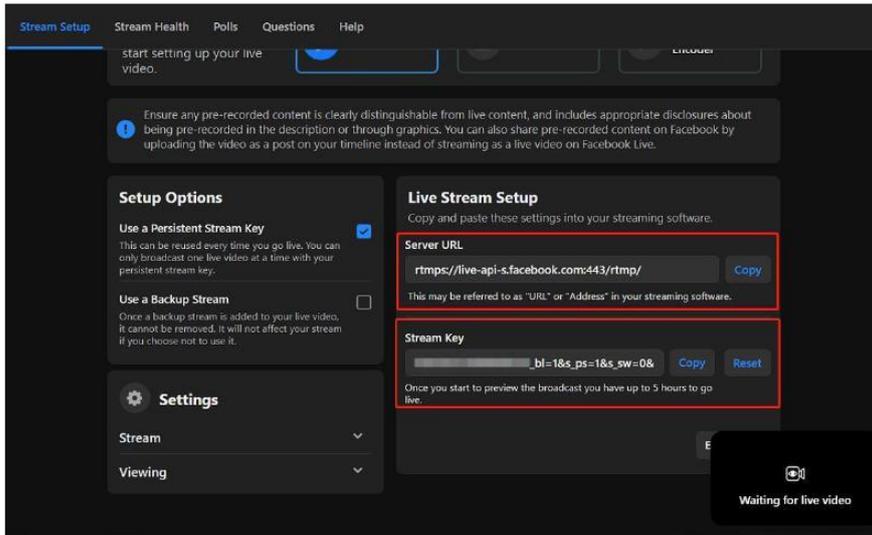
Now, let's stream to YouTube and Facebook for example:

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

YouTube:



Facebook:



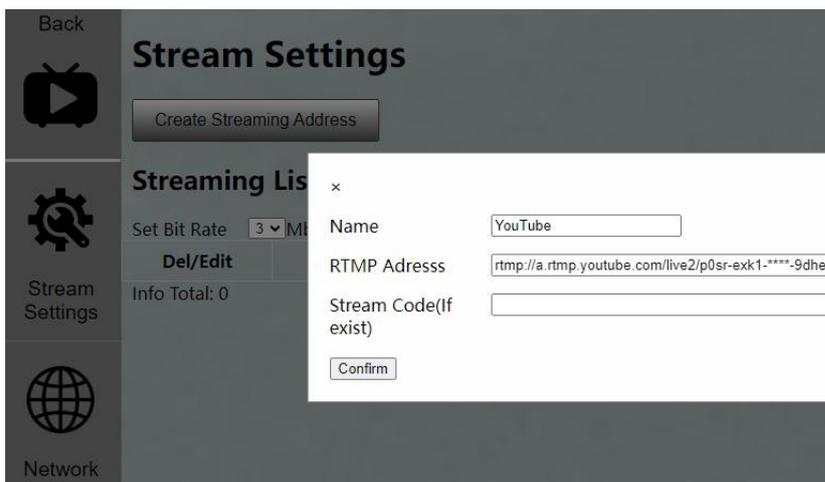
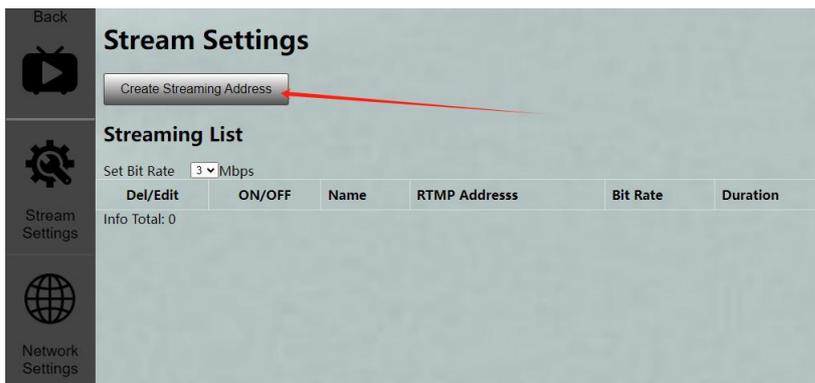
Now, you can input the RTMP stream address to the video switcher.

RTMP Stream Address Format: Stream URL/Stream Key

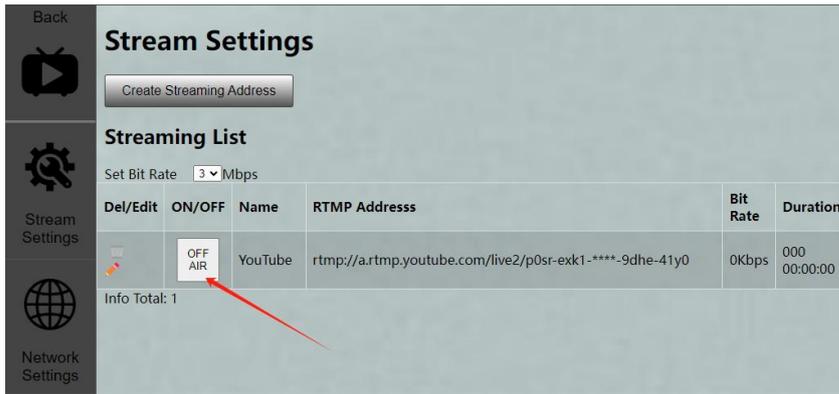
YouTube for example: `rtmp://a.rtmp.youtube.com/live2/p0sr-exk1-****-9dhe-41y0`

Facebook for example:

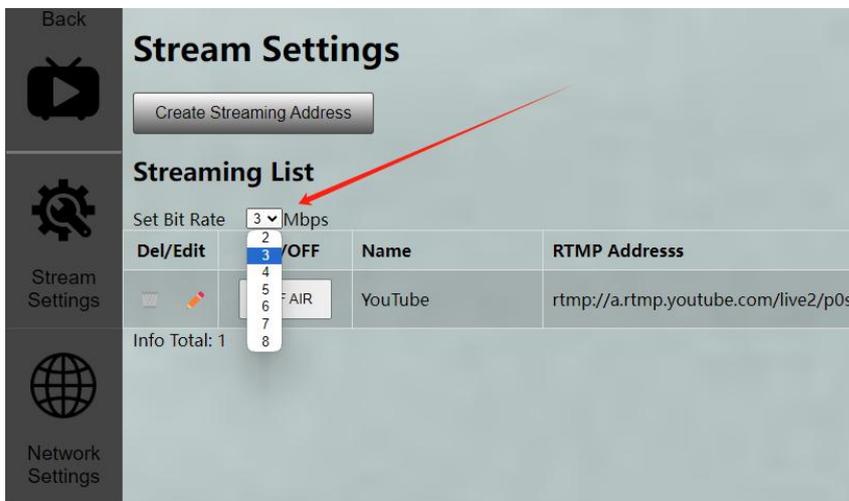
`rtmps://live-api-s.facebook.com:443/rtmp/FB-38347018451***4xGj4bTrzs0`



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



Adjust the streaming rate to 2-12Mbps. 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: support@fomako.net, normally, we can reply you within 12hours.](mailto:support@fomako.net)

FoMaKo Support Team

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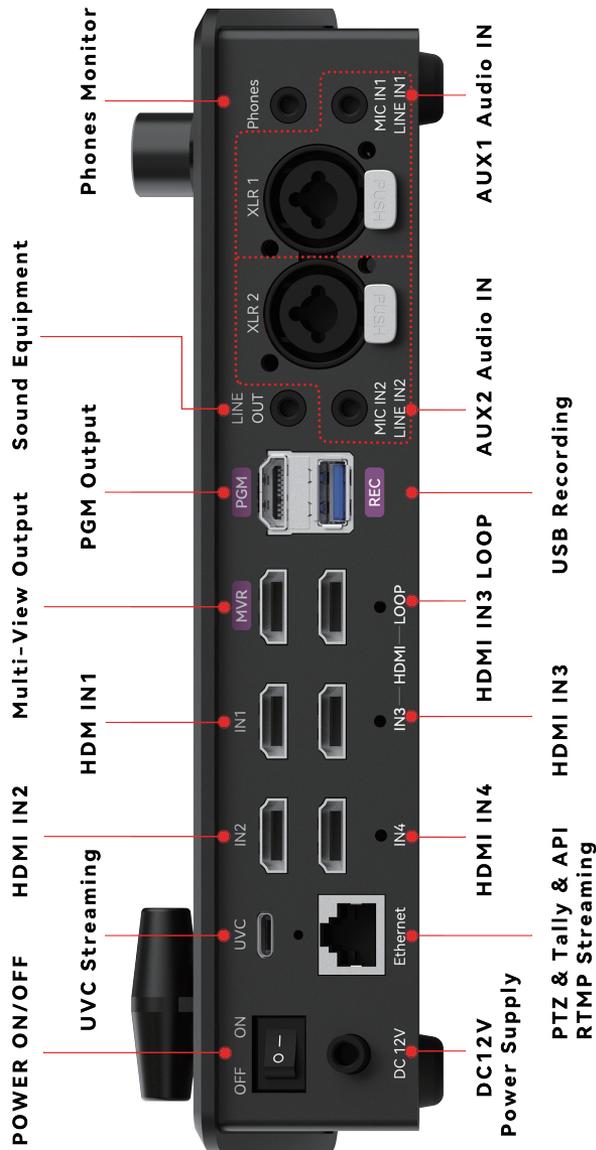
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1. Product Introduction

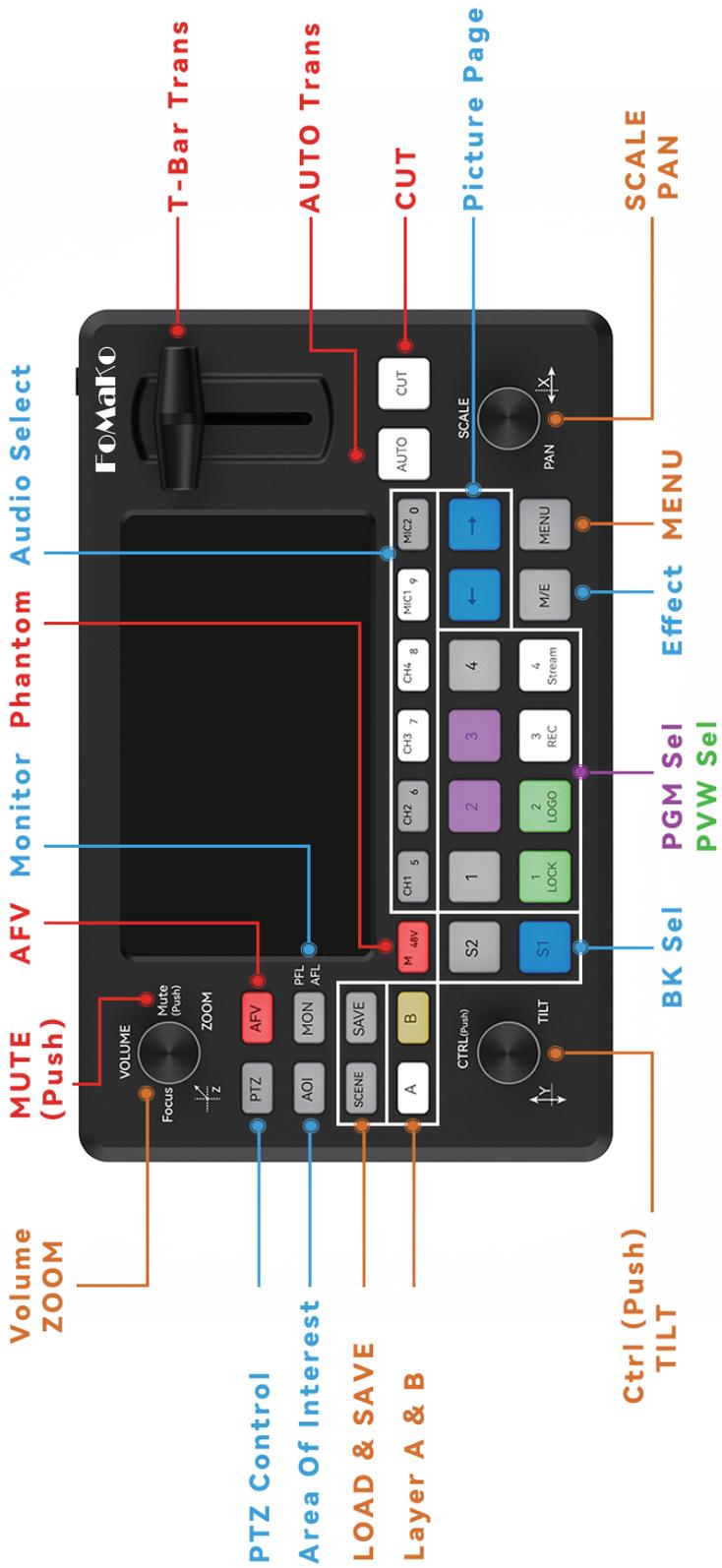
1.1 Overview

This Video Switcher is the world's first 5.5-inch 10 display monitor with four 4K Input, multi-layer RGB24 video processing, AOI adjust, Image Optimize, 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 use 31 buttons, 3 knobs and T-Bar of This Video Switcher panel to realize single-per son live broadcasting friendly and easily.

1.2 Connectors Interface



1.3 Control Panel Interface



Common Combination Keys: Ctrl|+SCALE; MENU+LOCK; MENU+LOGO; MENU+REC; Menu+Stream

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 cyan.

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 there are two layers on PGM, CTRL +1, 2, 3, 4 button, then quickly switch the A layer of PGM.

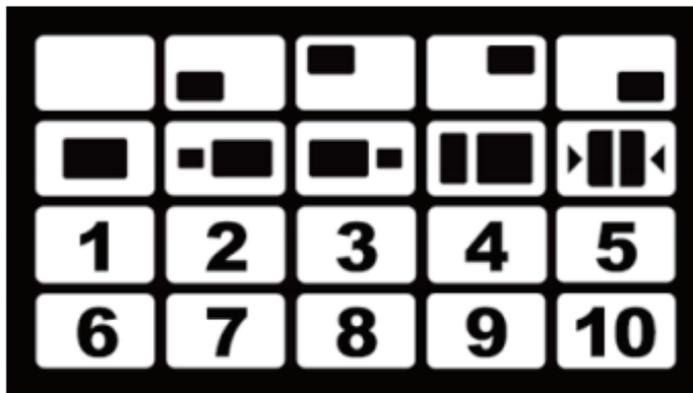
←、→Buttons: can be used as Page Function for BK pictures.

2.1.3 AOI Function

Press AOI button and light up in cyan, activate AOI function, adjust knob Z to zoom in and out of the selected layer's content, Continuing to adjust knobs X and Y can move the zoomed content up, down, left, or right.

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

This Video Switcher 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

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 two analog audio respectively. AUX1 is responsible for the mixing of XLR 1, MICIN1 or LINE IN1 audio channels, and AUX2 is responsible for the mixing of XLR2, MICN2 or LINE IN2 audio 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

Press and hold the AFV button to activate the AFV mode and light up red. At this time, the main output is the audio of MASTER, which is the built-in audio source of selected layer on the PGM and the real-time MIC audio mixing . In AFV mode, MIC1 and MIC2 can still be turned on or off freely.

2.2.3 Free MIX mode

Press the AFV button to switch to MIX mode and light up white. At this time, the main output is the mixing audio, 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 MON Audio Monitor

You can enter the audio menu, set to monitor the audio of Master, CH1, CH2, CH3, CH4, MIC1, MIC2 channel. or pressing MON button, and light up in cyan, activate MON mode, and select buttons M/48V (Master), CH1, CH2, CH3, CH4, MIC1, MIC2, the corresponding button will light up in purple. you can monitor the audio of the corresponding channel through 3.5 phones jack.

2.2.5 Volume adjustment

In MON mode, press CH1, CH2, CH3, CH4, MIC1, or MIC2, then rotate the volume knob Z, you can adjust the volume of the corresponding audio channel independently. In normal state, the knob Z can adjust the MASTER volume, press the knob Z to mute the MASTER, press it again to resume the audio.

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 Z to control the zoom in and out of the lens. If the focus mode is set to manual mode, Press CTRL+ knob Z 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 current bank had been saved, click any number keys can quickly save the corresponding preset point to the bank.

2.3.3 Recall preset points

In PTZ mode, press the SCENE key, the blue light is on; press the number buttons 1, 2, 3, 4 under preview /PST, to select different ptz camera, and it will light up green; Further more, the buttons 1, 2, 3, 4 under Program/PGM , and 5, 6, 7, 8, 9, 0 displayed in audio buttons, when purple lights is on under the 10 numbers, it indicates the current bank had been saved the preset point , click any number keys can quickly load the corresponding preset point of the camera.

2.3.4 Multi-Camera PTZ Connection

Connect an external Ethernet switch, enter to the This 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, Visca Over IP protocol.

2.4 Knob

2.4.1 Knob X

move the position of selected layer horizontally under PST or content of AOI.

2.4.2 Knob Y

move the position of selected layer vertically under PST or content of AOI.

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 resume the audio.

In AOI mode, the content of layer can be zoomed in and out.

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

EDID can choose whether it is 4K input or 1080p input. When an HDMI signal source is connected, it will read and display the corresponding resolution info. The resolution information of the signal source and the image optimize switch can improve chromaticity, saturation, etc.



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.

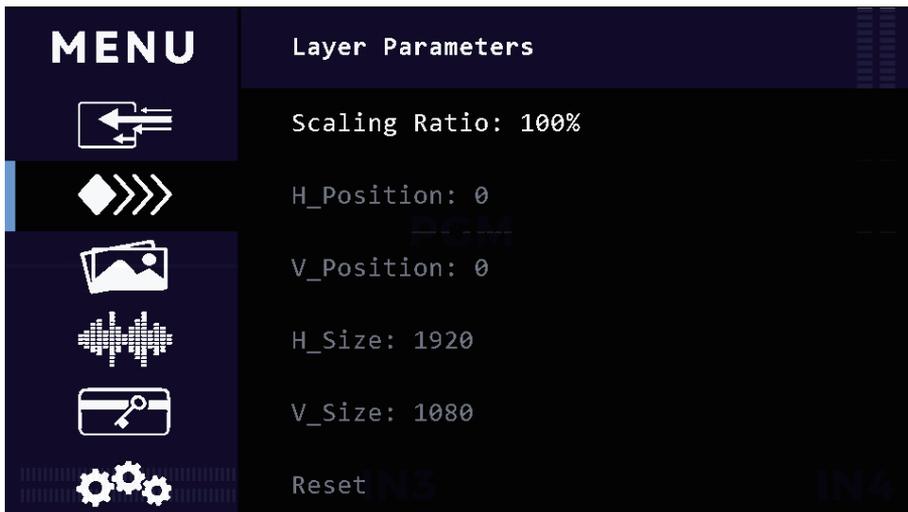
3.2 Layer Settings



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.

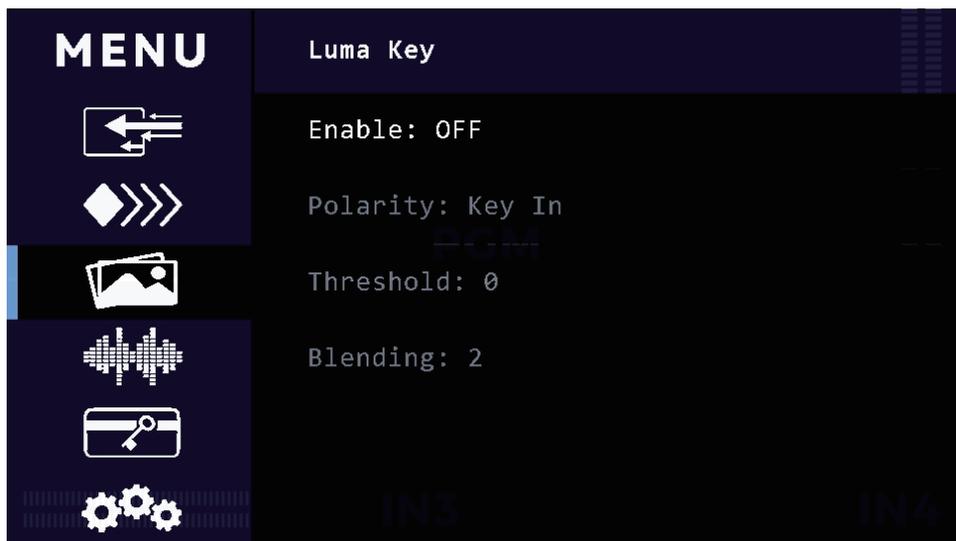


3.3 Picture Setting (can import 16 pictures)

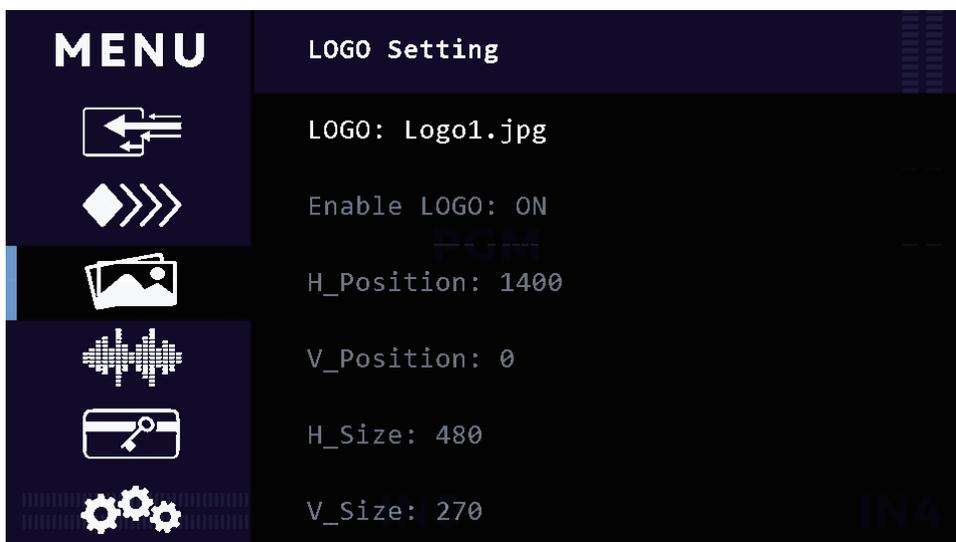
3.3.1 Background BK1: assign the picture of BK1 from picture pool.

3.3.2 Background 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: This Video Switcher has 2 luma keys 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.

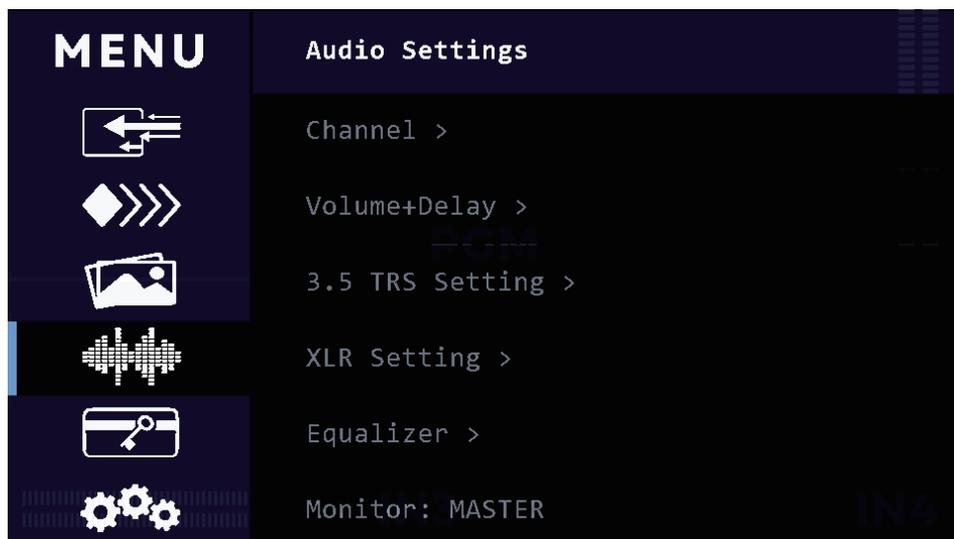
3.4.2 Volume: adjust the volume of CH1, CH2, CH3, CH4, AUX1, AUX2, Master or Monitor.

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

3.4.4 TRS Setting: 3.5 TRS can be selected as LINE IN or MIC IN or MUTE.

3.4.5 XLR Setting: When using dual XLR, it can be set to Mono Copy, or L/R Separate mode, where XLR1 represents the left channel and XLR2 represents the right channel.

3.4.6 Equalizer: you can select different EQ mode from Default, Communication, Movie, Gaming, or Custom.



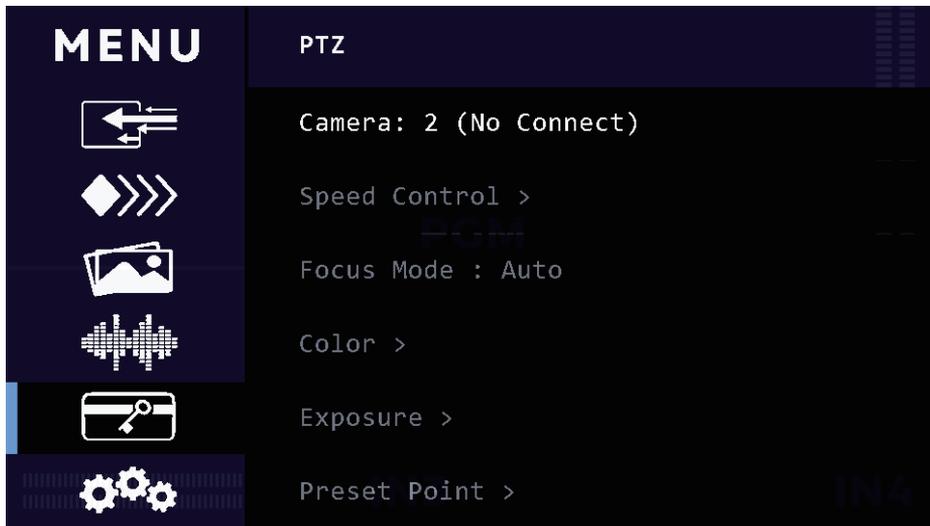
3.4.7 Audio Monitor: MASTER, HDMI1, HDMI2, HDMI3, HDMI4, AUX1, AUX2 can be monitored.

3.5 Advanced

3.5.1 PTZ

3.5.1.1 PTZ Setting: one camera PTZ control can be directly connected to This Video Switcher Ethernet port, multiple PTZ need to use a router or switch to connect

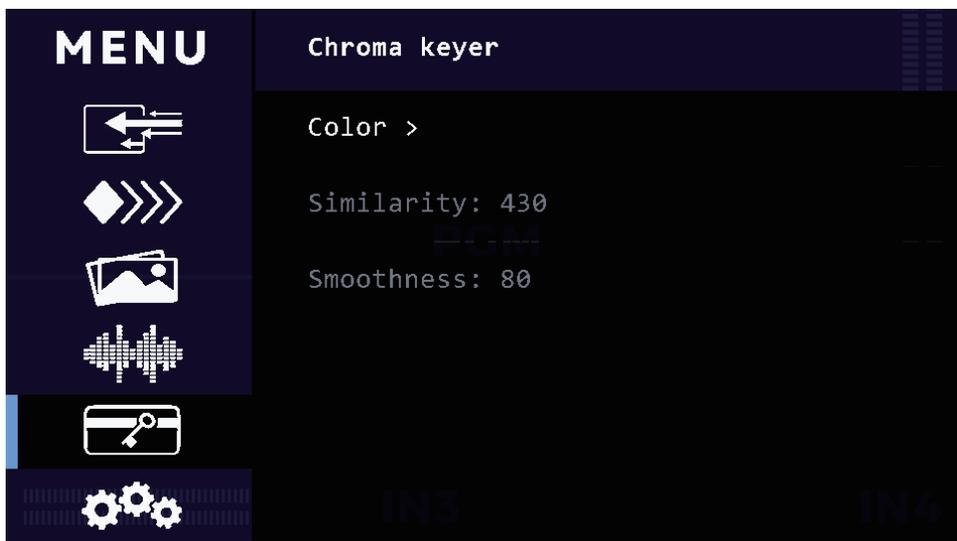
This Video Switcher and PTZ at the same IP gateway, then you can perform pan, tilt, zoom, focus adjustment.



3.5.1.2 PTZ IP list & PTZ PORT List: refer to System -> Network Setting.

3.5.1.3 Preset point: Save and call the preset point.

3.5.2 Chroma Key: This 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.

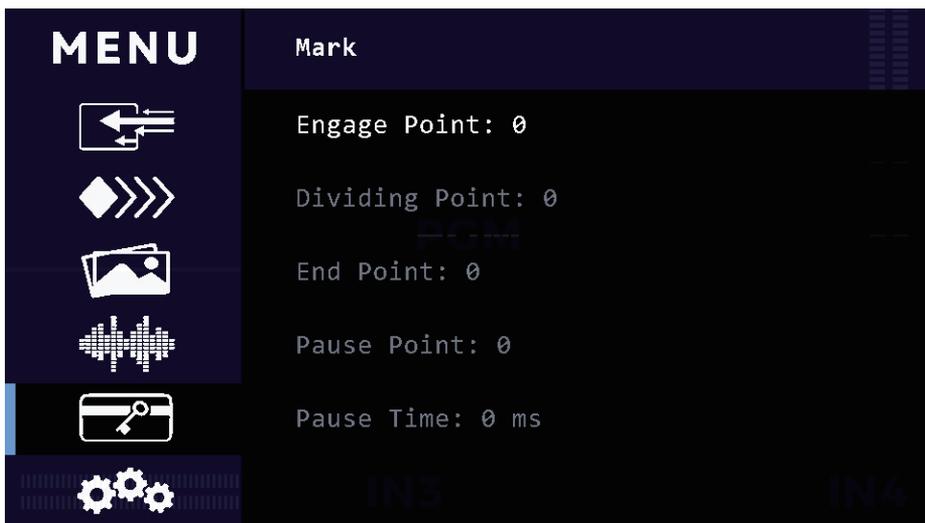
Engage point: Take the edge of the BK image direction as the start point and display the coordinates of the graphic.

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).

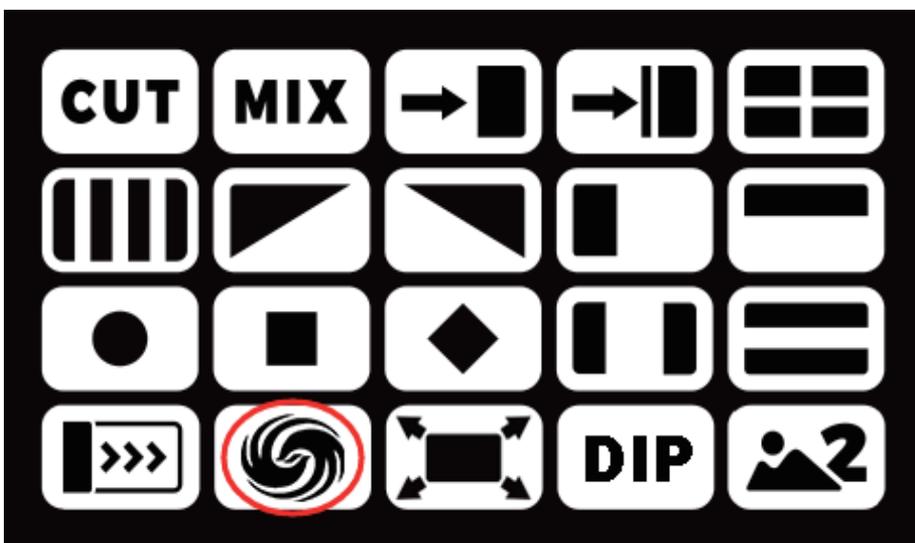
Pause Time: Set between 0 and 5 seconds, 0.5 seconds for the step.



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



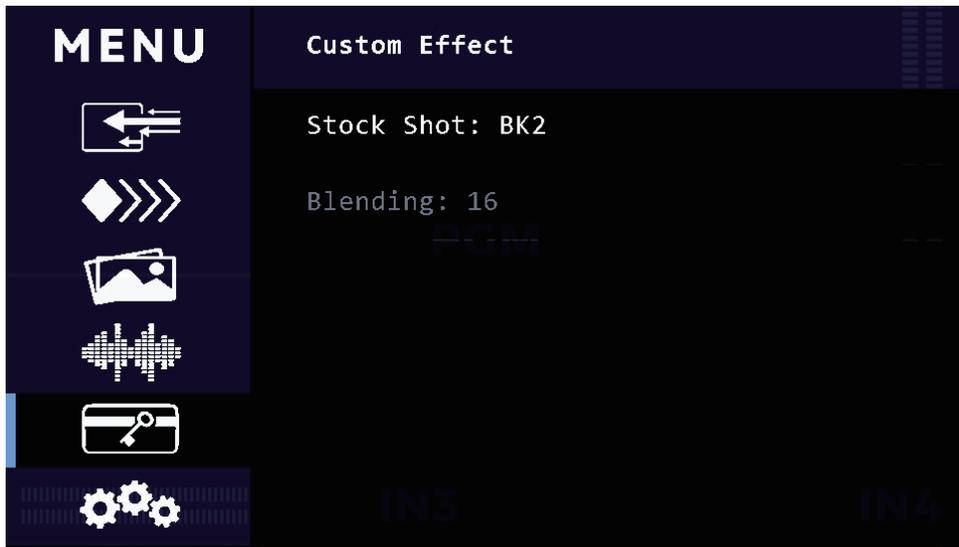
In the process of stinger effects, use the one-way method when using AUTO transition, and use the two-way method when using T-BAR transition.
 Pre-Trans & Post-Trans: CUT, MIX, DVE Push, DVE Squeeze, Cross Wipe, Venetian Blinds, Diagonal NWSE, Diagonal NESW, Horizontal Wipe, Vertical Wipe, Circle Wipe, 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 live productions.

Stock Shot: BK1/BK2

Blending: 1-255

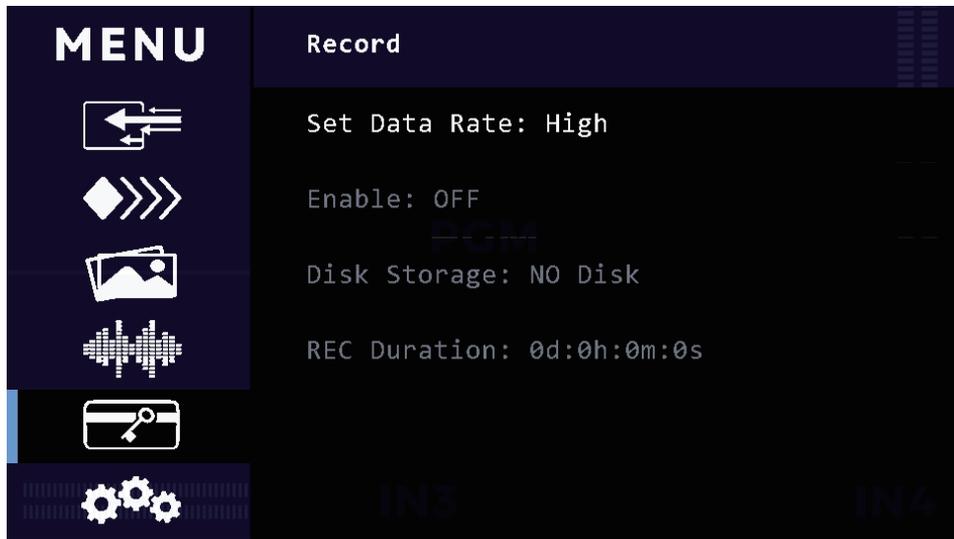


3.5.4 Scenes

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

3.5.5 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.

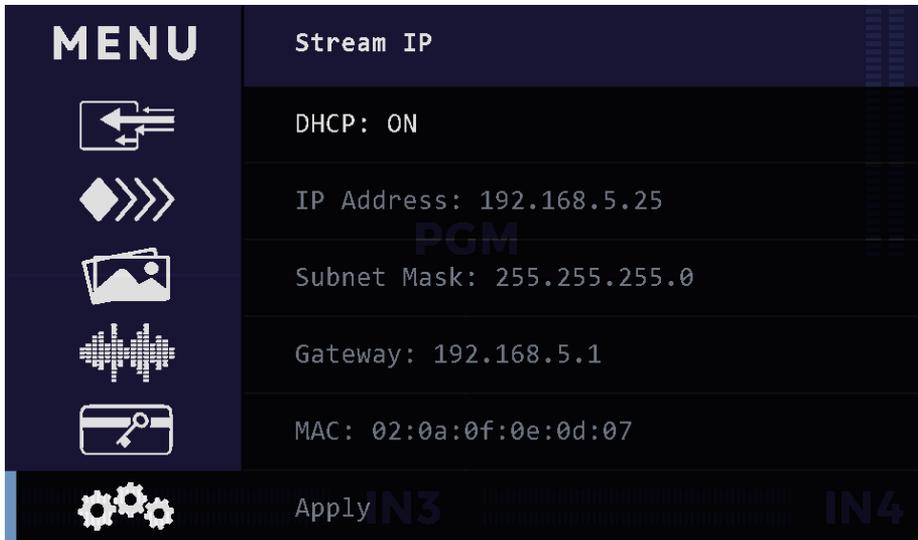


Press the shortcut key combination MENU+REC again to stop recording. When the "Record file saved" prompt pops up, you can unplug the USB drive.

3.5.6 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.

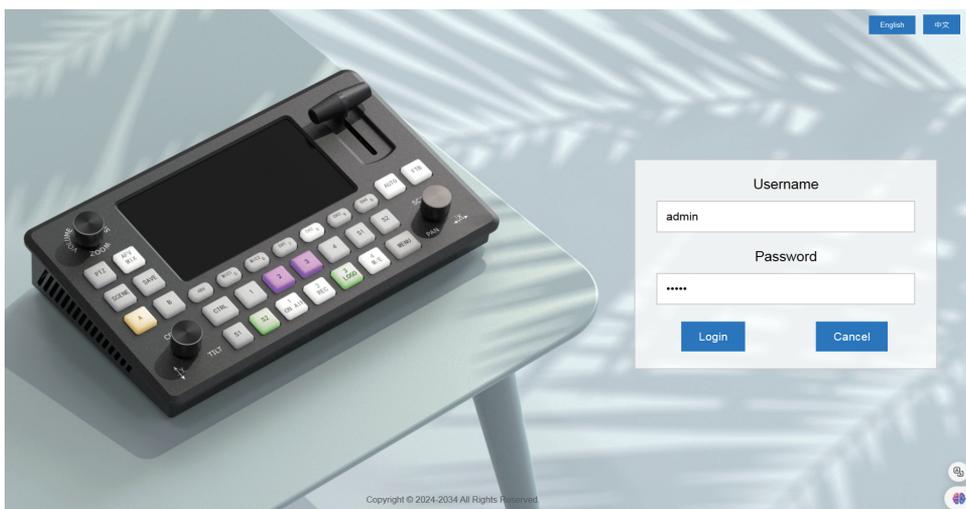
(Important: when network IP streaming settings finished, high recommend to turn off DHCP.

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

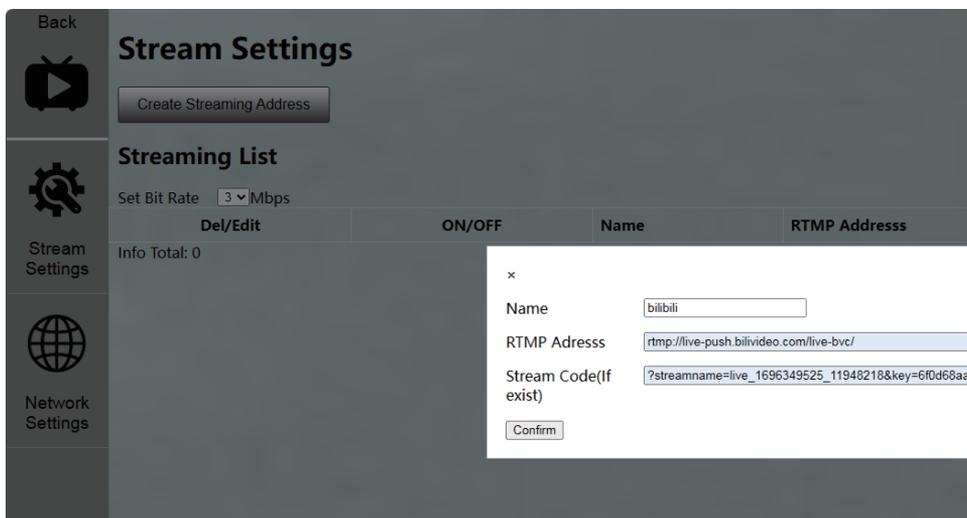
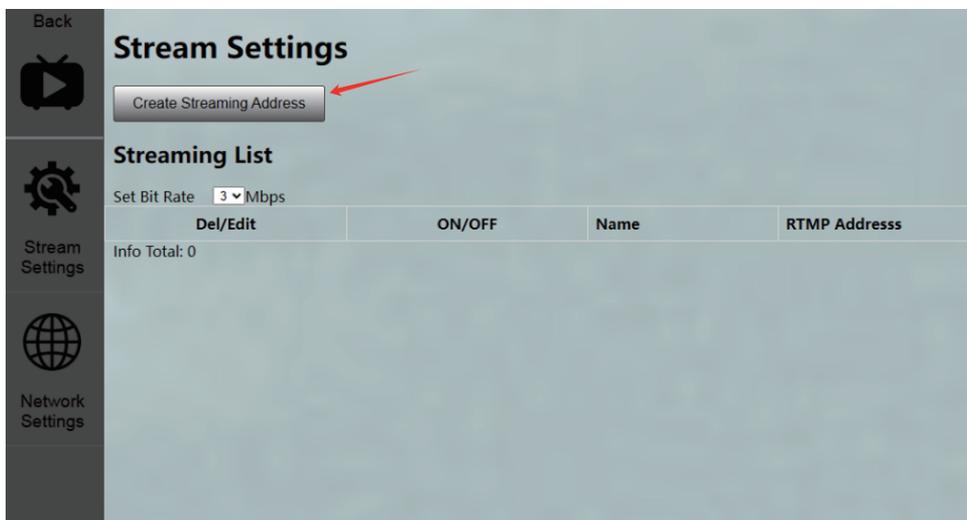
Visit the “stream IP” in computer web browser,

Default user name: admin

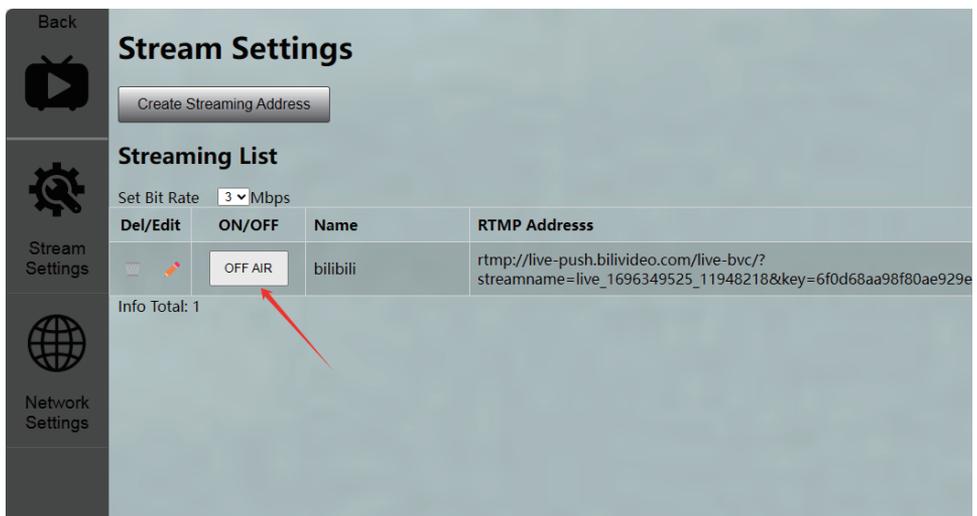
Default Password: admin



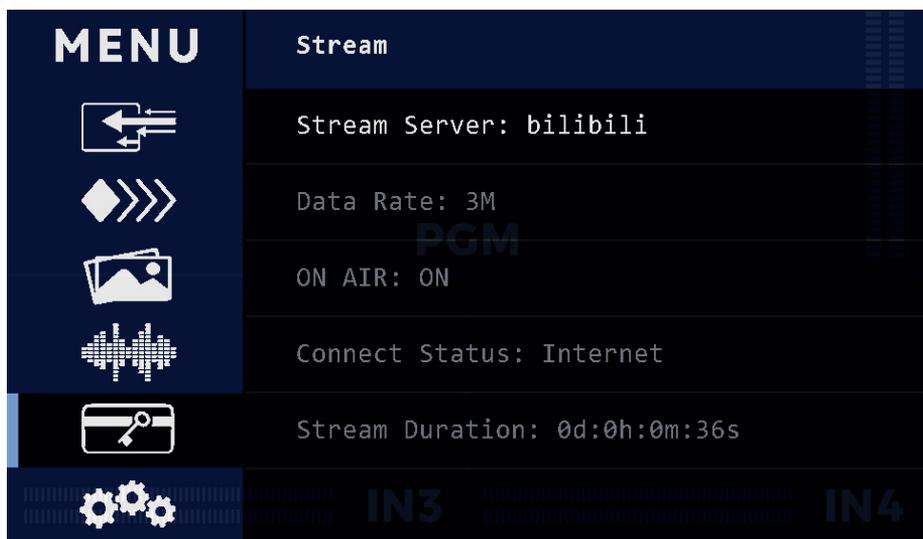
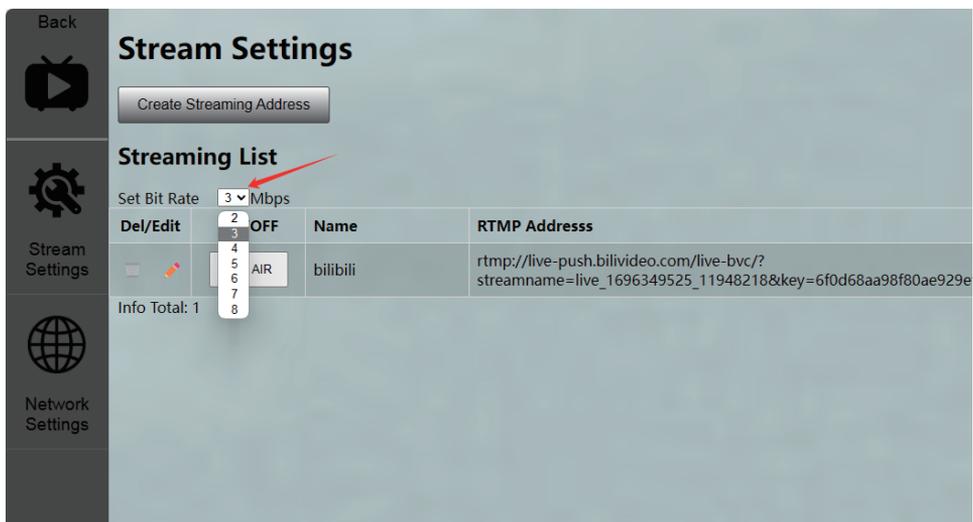
Now, you can input the RTMP stream address to the video switcher.



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



Adjust the streaming rate to 2-12 Mbps. If the network conditions are poor or restricted, users can lower the rate to ensure better and smoother streaming performance.



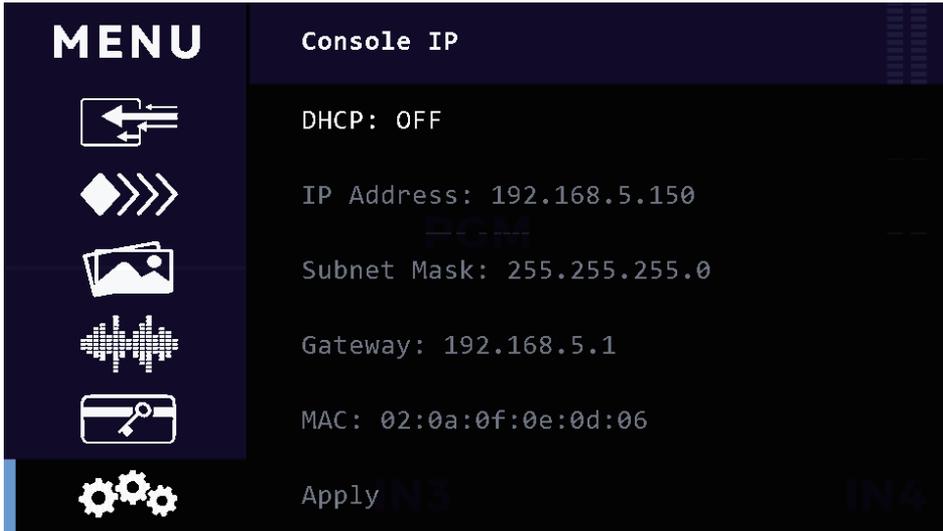
Start the streaming, and the time interface will display "ON AIR" indicating a successful streaming start.



3.6 System

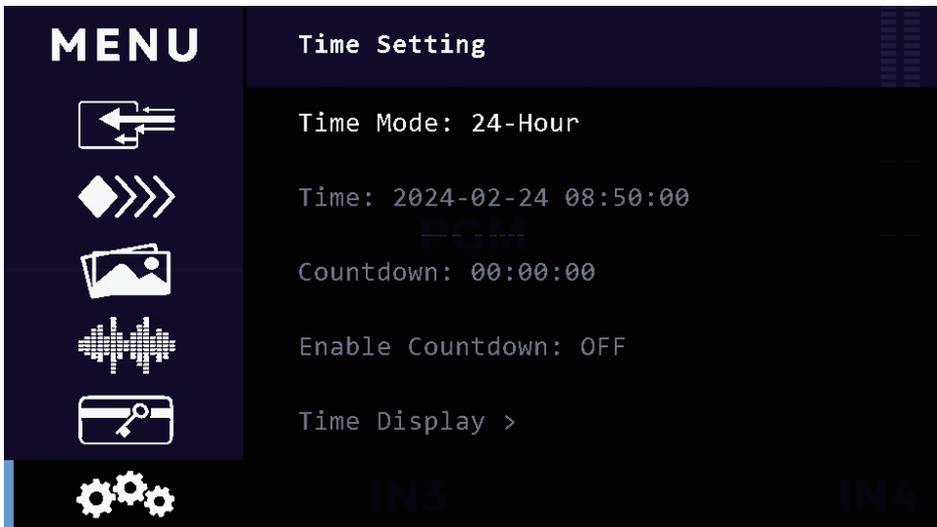
3.6.1 Network Setting

In network Settings, you can view MAC address, turn on/off DHCP (dynamic host configuration protocol), set IP address, subnet mask, default gateway, and apply after setting.



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 and LCD screen brightness, ←、→ Page button, and CUT 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)

(where pressing knob Y represents the CTRL key)

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

4.1.5 MENU

MENU + LOCK: Enable LOCK Function;

MENU + LOGO: Enable the LOGO;

MENU + REC: Start or Stop Recording;

MENU + Stream: Start or Stop IP Streaming.

4.2 Audio related shortcut keys

4.2.1 MON monitoring: Press to light up green and enter MON monitoring mode.

Press M/48 (Master), CH1, CH2, CH3, CH4, MIC1, or MIC2 buttons can independently monitor the sound for each channel.

4.2.2 In MON monitoring mode, press M/48 (Master), CH1, CH2, CH3, CH4, MIC1, or MIC2, and turn knob Z to adjust the volume of each channel.

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 Pressing AFV button light up in red, enable AFV mode, 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.

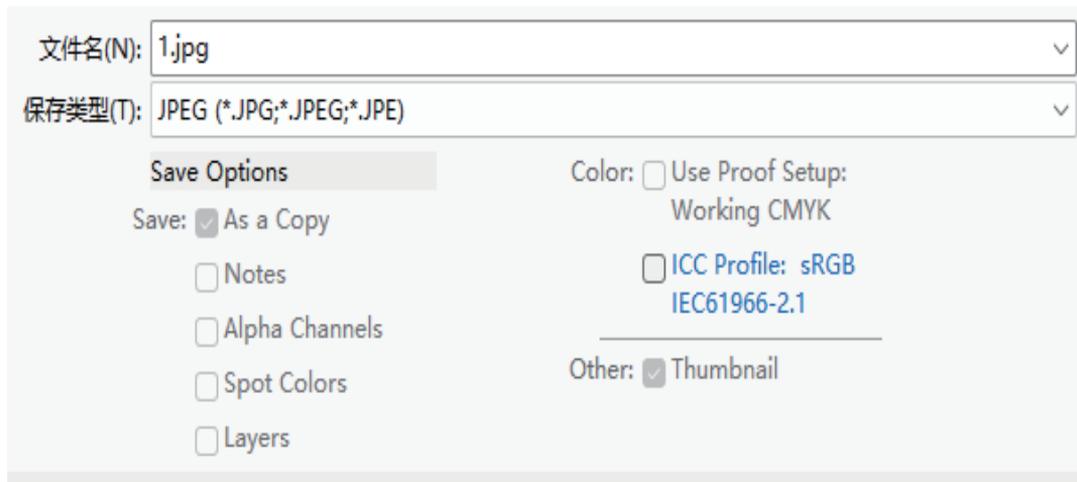
5. Pictures and LOGO Import

5.1 Pictures Import

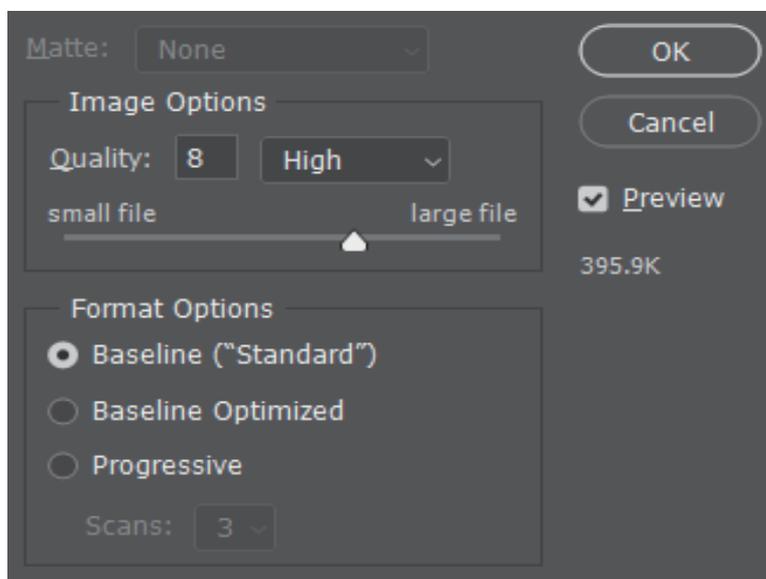
5.1.1 For general JPG images (usually baseline standard, size 1920x1080), directly use Connect the Type-C cable to the PC, and when U-FLASH appears, copy the image to the U-FLASH virtual drive;

5.1.2 Exporting Baseline JPG images (1920×1080) in Photoshop

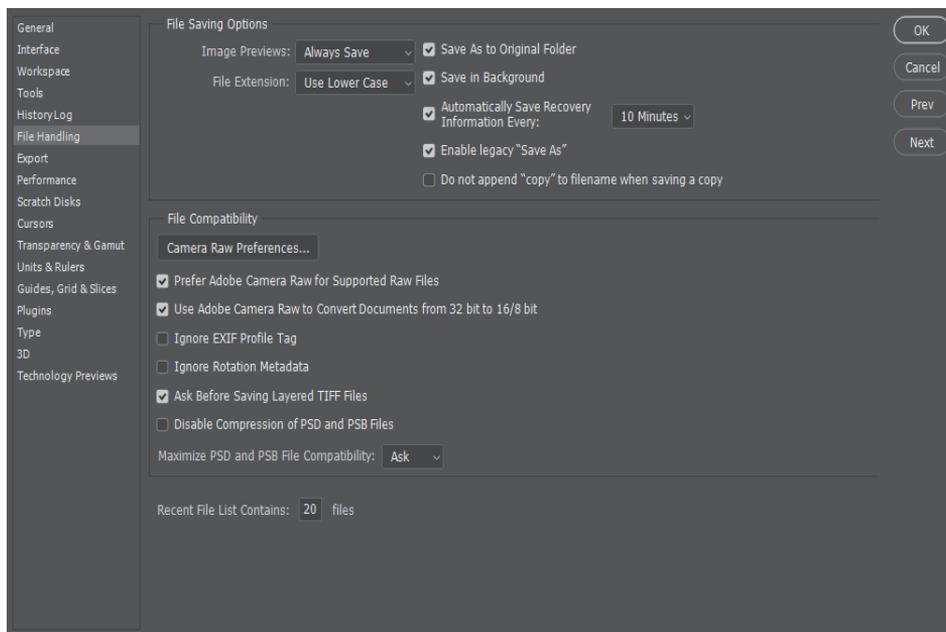
After completing the production of the picture in Photoshop, click the file option in the upper left corner, select Save As, select the Save type JPEG format, and click Save.



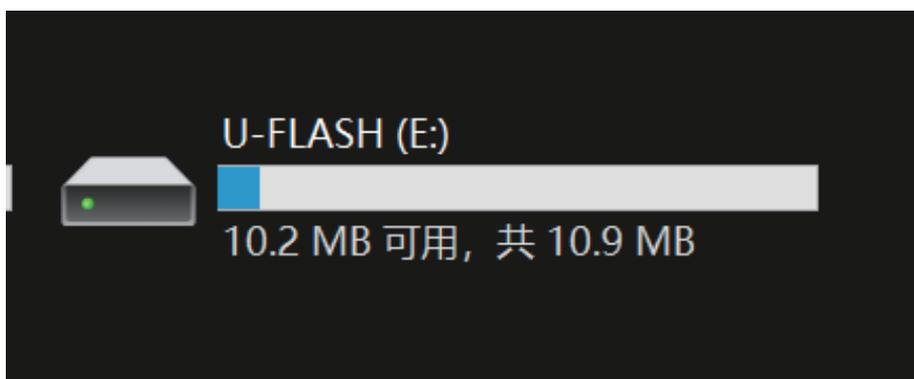
Pop up the Settings window, Quality Recommendation 8, Format option select baseline (" Standard ") or baseline optimized, click Save image, image size recommended 200-300KB.



Note: In the new version of Photoshop, the JPEG format option is turned off by default in the Save As option, you need to click Edit-Preferences-File Processing in the top right corner, and select the old version of "Save as".

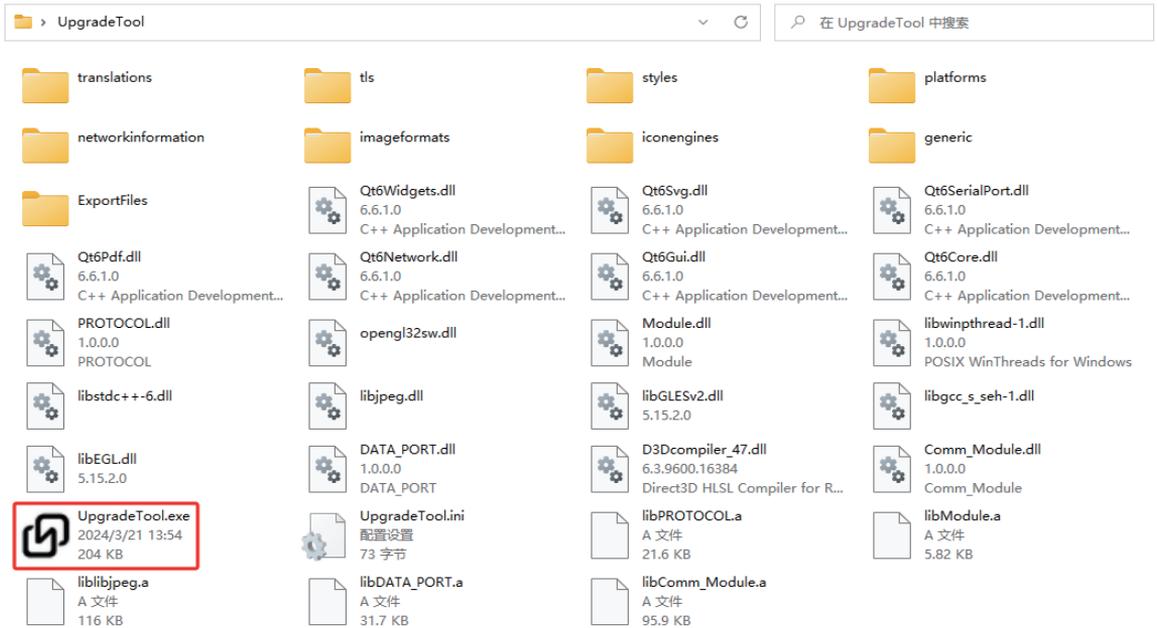


Use USB to type-c data cable to connect PC and This Video Switcher device, copy jpg pictures to U-FLASH disk and paste, the maximum number of pictures is 16.

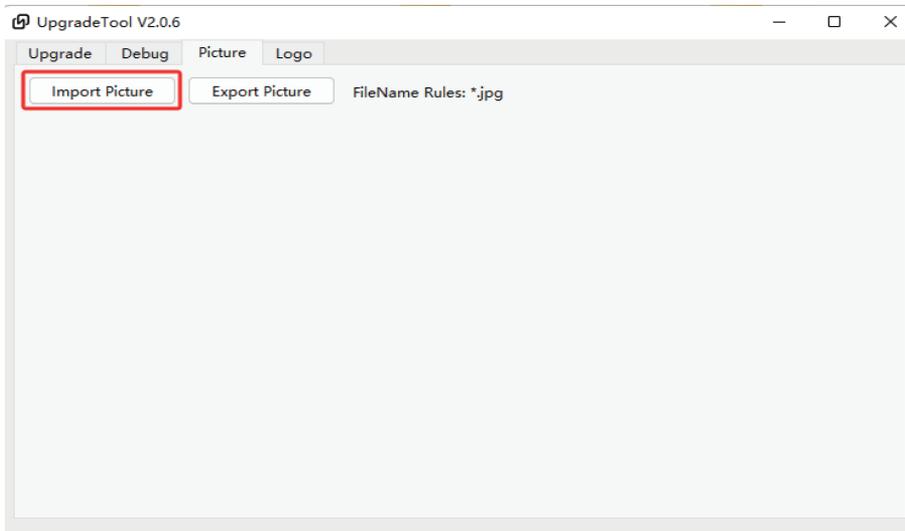


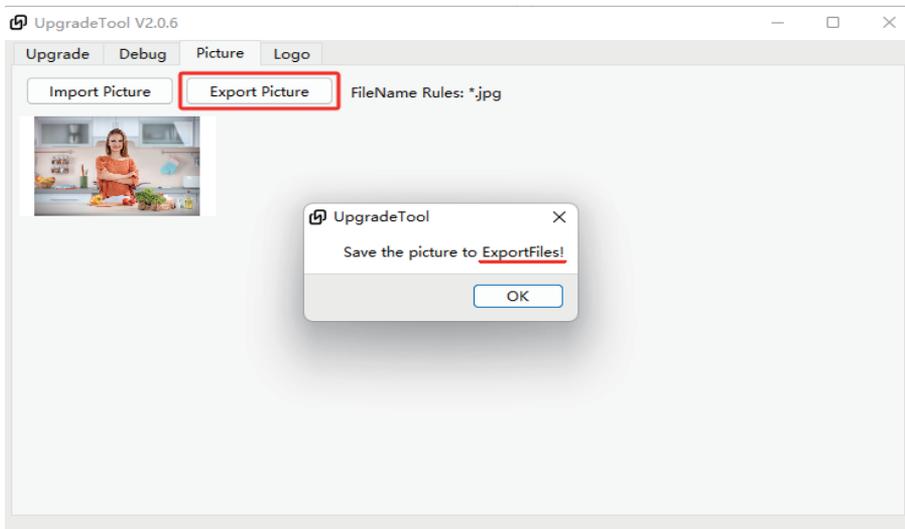
5.1.3 Converting and Exporting jpg Image (1920×1080) by Host Computer Software

Click the executable UpgradeTool.exe. **(Email FoMaKo to download the tool)**



Pop up the Picture default window, click Import Picture to select the picture, click Export Picture to export the picture. The saved picture will be in the "ExportFiles" folder.

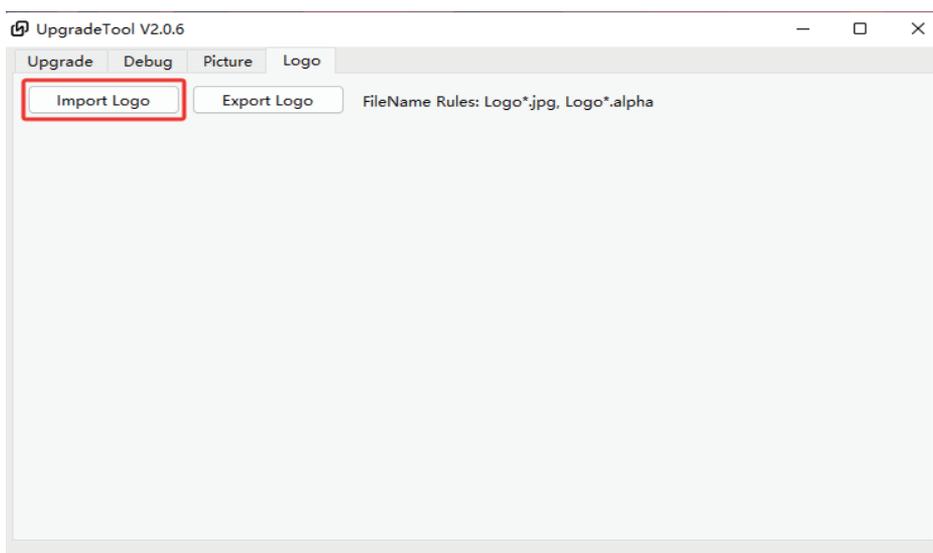


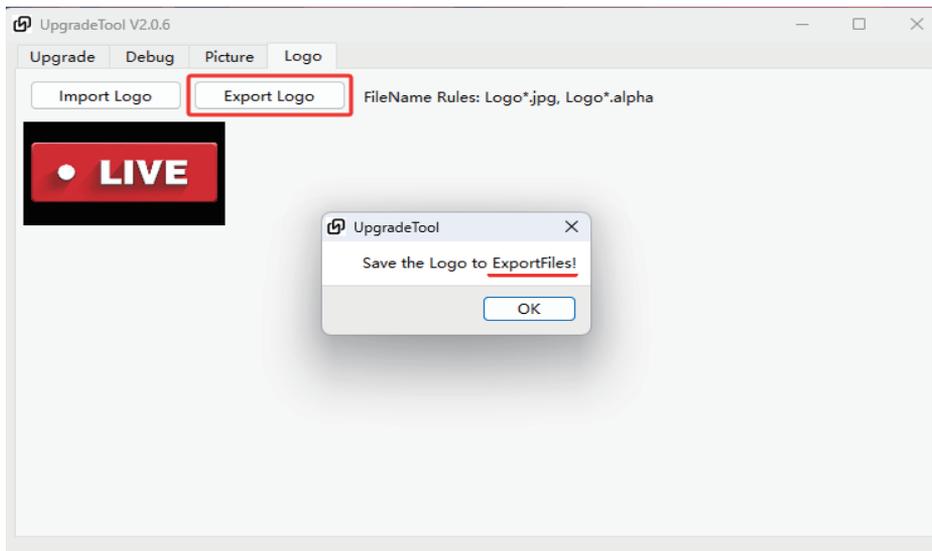


Use USB to type-c data cable to connect PC and This Video Switcher device, copy jpg pictures to U-FLASH disk and paste, the maximum number of pictures is 16.

5.2 LOGO import

Click the executable file UpgradeTool.exe, pop up the window and click the Logo option in the upper left corner, click Import Logo to select logo (480×270), click Export Logo to export .alpha files and .jpg images, and select the save path.





Use USB to type-c data cable to connect PC and This Video Switcher device, copy and paste .alpha files and .jpg pictures into U-FLASH disk, and the maximum number of logos is 2.

***All specifications are subject to change without further notice.*

One Operator Multiple Audiences

Accelerate Live Production

Production is Easier and Fun with Control Panel

Specification

| | | | |
|-------------------------|-------------------------|---|---|
| Connections | VIDEO | Input | HDMI Type A x 4 (INPUT 1--4), HDCP Supported |
| | | Output (PGM) | HDMI Type A x 1 (PGM OUT) |
| | | Output (MVR) | HDMI Type A x 1 (MULTI-VIEW OUT) |
| | | Output (LOOP) | HDMI Type A x 1 (IN3 LOOP) |
| | | UVC Streaming | USB3.0 Type-C x 1, YUY2 with image optimize, Locking Screw |
| | | IP Streaming | RJ45 x 1 , RTMP Streaming、 RTMPS Streaming |
| | | Recording Output | USB2.0 Type A x 1 |
| | Audio | Input | XLR, 1/4-inch TRS phone x 2, balanced, phantom power (DC 48 V, 10 mA Max) 3.5mm TRS phone type x 2, Mic In / Line In Supported |
| | | Output | 3.5mm TRS phone type x 2, Phones / Line Out |
| | Communication | RJ45 | 100/1000 BaseT x 1, PTZ / Tally / API Remote Control |
| USB Type-C | | USB Type-C x 1, Upgrade / Picture Import | |
| Performance | Input & Loop Resolution | HDMI | 2160p 60/59.94/50/30/29.97/25/24/23.98Hz |
| | | | 1080p 60/59.94/50/30/29.97/25/24/23.98Hz |
| | | | 1080i 60/59.94/50Hz |
| | | | 720p 60/59.94/50Hz |
| | Output Resolution | HDMI | Up to 1920 x 1080p60 |
| | Supported Standards | HDMI | 2.0 |
| | | USB | 3.0 |
| | | H.264 | ITU-T H.264 ISO/IEC 14496-10 AVC |
| | | H.265 | ITU-T H.265 ISO/IEC 23008-2 HEVC |
| | Supported Protocol | PTZ | VISCA & VISCA Over IP |
| | | UVC & UAC | Support UVC 1.0 & UAC 1.0 |
| | Video | Video Formats | HDMI 1.3 HDCP 1.4 |
| | | Video Sampling | RGB 24bit (HDMI IN & OUT) |
| | | UVC Color Space | YUY2 (USB3.0) with image optimize |
| | | Video Latency | 4 frames |
| Audio | Line In Delay | up to 8 frames | |
| | Audio Formats | HDMI: Linear PCM, 16 bits/48 KHz, 2 ch USB: Linear PCM, 16 bits/48 KHz, 2 ch | |
| Record/Storage | Disk Formats | FAT32(≤32 GB) exFAT(64GB~2T) | |
| | Recording Formats | MP4 | |
| Power Requirements | Input Voltage | DC 12V/3A | |
| | Max Power | 36W | |
| | Compatability | Power Socket, Φ5.5 x 2.1mm | |
| Operational Environment | Temperature | 0℃~60℃ | |
| | Humidity | 10%~85% | |
| Physical Specifications | Weight | Device | 1.19kg |
| | | Packaged | 2.16kg |
| | Dimensions | Device | Panel: 230mm x 144mm; Side: topline 45.6mm, baseline 22.4mm; |
| | | Packaged | 280mm×180mm×130mm |