

Quad HDMI Video Switcher



Video Switcher

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1、 Introduction

1.1 Brief

The switcher is a multifunctional and professional quad HDMI video switcher. It's mini and portable, with 5" FHD LCD, five way rocker. Therefore, the users can easily monitor the sources and the PVW, conveniently control PTZ cameras. It's very suitable for live broadcast and streaming.

The switcher is high performance and accelerated by FPGA, with digital video effects, chroma key, flexible PIP/POP, Logo and other functions for broadcasting. The switcher supports UVC streaming, multi network streaming and local video recording.



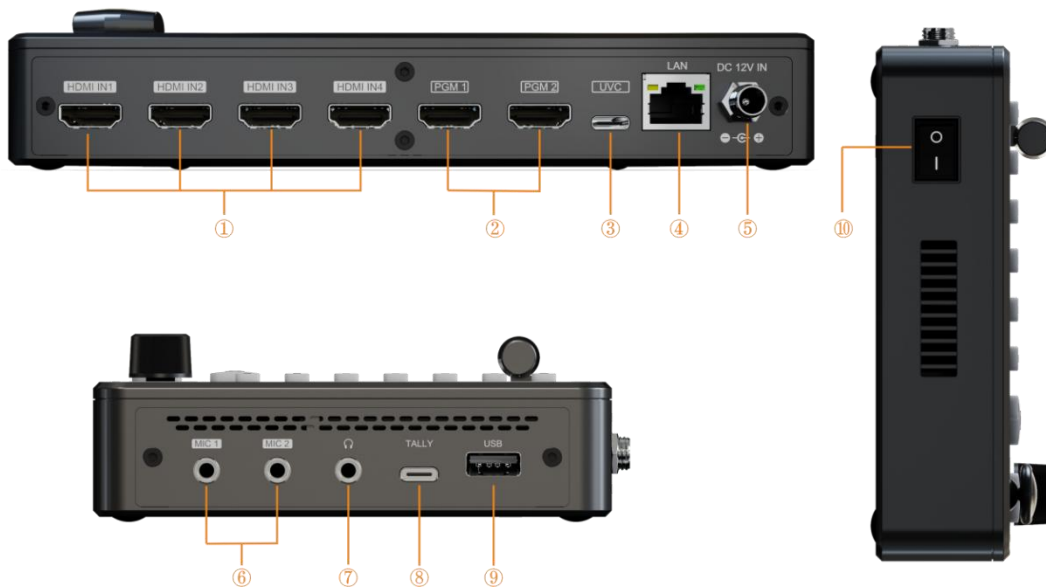
1.2 Features

- Easy to carry with mini size
- Easy to monitor and preview with 5" wide gamut FHD LCD
- Quad HDMI inputs, Dual HDMI outputs for PGM, One UVC streaming
- Dual audio inputs, support both Line-in and mic
- One audio output, with selectable sources
- T-bar switching, more than 30 effects
- Film grade chroma keying
- Inner media library, supports user defined pictures and imported pictures
- Logo with alpha channel, supports PNG format
- Flexible layers switching, each with position, size, chroma key and mask
- FTB and image freezing
- Five way rocker for agilely controlling PTZ
- Focus, white balance, position for PTZ control
- Local video recording
- RTMP multi live broadcast platform, with adjustable code rate and one key streaming
- Agilely control with web on PCs and phones, without additional installation.

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2、 Interfaces

2.1 Description



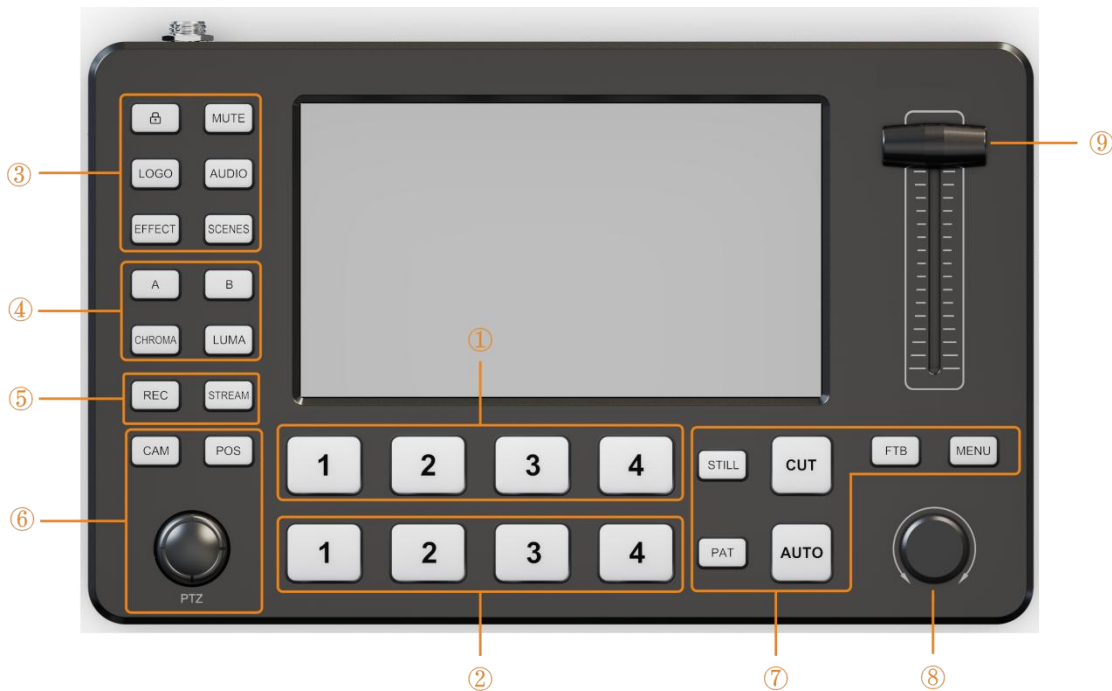
1	HDMI IN x 4
2	PGM Out x 2
3	USB TYPE-C (UVC streaming)
4	LAN (Web control and network streaming)
5	DC 12V IN (Power supply)
6	MIC/Line(3.5mm stereos)*2 (Audio input)
7	Line(3.5mm stereos)*1 (Audio output)
8	TALLY extend port, support external TALLY box
9	USB-A (Record video with usb disk, Logo/pictures import, Firmware update)
10	Power switch

3、 Configuration

parameters	
Video Source	HDMI IN x 4
Video Output	PGM x 2 UVC x 1
Audio Input	MIC/Line level(3.5mm stereos)x2
USB	USB x 1
Lan	LAN x 1
Power	DC 7~12V ≤12W
Function	
Switching	T-Bar/AUTO/ CUT
Effects	WIPE/MIX/DIP/PAT/STILL/MUTE/FTB
Layout	Multi Layout format(see 5.4.3)
Keying	Luma Key、 Chroma Key
Audio Sources	HDMI x 4 and MIC/ Line level x 2;
Audio Delay	0-5s
Media	Importable pictures and logos
Video format	
HDMI Input	1080p 60/59.94/50/30/29.97/25/24/23.98 1080i50/1080i60 720p 60/59.94/50/30/29.97/25/24/23.98 576i/480i/576p/480p
HDMI PGM output	1080p 60/50/30/25/24 1080i50/1080i60
HDMI color format	RGB/YUV
USB streaming	max 1080p60
Stream media	H.264 encoder, supports video recording and 2 network streaming, with adjustable code rate
Others	
Power Supply	7~24V
Size (LWD)	200.5*123*45mm
Weight	670g
Temperature	Working: 0℃~50℃, Storage: -30℃~70℃
Accessory	Transformer(12V 2A)x1; USB cable(A To C)x1(Optional); Tally Box(DB-15)x1(Optional); Hand box x1(optional)

4、 Front Panel

4.1 Front Panel Description



1	PGM KEY:1-4	PGM indicator and directly switching key. See 5.1
2	PVW KEY:1-4	PVW indicator and Layer A/B select key. See 5.1
3	Lock	Lock key, active with red blinking. It lock all the keys on front panel to avoid faulty operation.
	MUTE	PGM Mute, active with red blinking
	LOGO	LOGO key
	AUDIO	Audio menu. See 5.4.1
	EFFECT	Switching effect menu. See 5.4.2
	SCENES	Scenes menu. See 5.4.3
4	A/B	A/B layer select key for PVW
	CHROMA/LUMA	CHROMA KEY: Active with green light LUMA KEY: Active with red light For the same layer,the Keys are exclusive
5	REC	Active with green blinking
	STREAM	Active with green blinking
6	CAM	Camera mode, active with green blinking
	POS	POS: Camera position record. See 5.5
	PTZ	The Five way rocker is multifunction and these functions are exclusive: 1. Camera control.See 5.5 2. Layer control:Layer position, PIP/POP mask position,Logo position, UMD position
7	STILL	PGM freezing
	PAT	Pattern selection in PVW
	CUT	Switch PVW and PGM directly and immediately
	AUTO	AUTO: Switch PVW and PGM automatically with preset effect
	FTB	Force PGM to black immediately, as well as mute PGM audio

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		immediately. Active with red blinking
	MENU	System menu
8	MENU KNOB	Multifunctional: Menu selection Menu enter Layer size control
9	T-Bar	Manually switch with T-Bar

5、 Operation

5.1 Switching

Switching can be controlled by PVW, PGM, CUT, AUTO, PAT Keys and T-Bar.

PAT: Pattern select for current layer in PVW

PVW KEY 1-4: Source select for current layer in PVW

PGM KEY 1~4: Source select for directly switch in PGM. When there are two layers in PGM, the selected source will display as Layer B

CUT: Switch PVW and PGM directly and immediately

AUTO: Switch PVW and PGM automatically with preset effect

T-Bar: Switch PVW and PGM manually with preset effect

5.2 Layer control

Both PGM and PVW support up to two layers, Layer A and Layer B. Each layer can be separately configured, including source, size, position, mask and keying.

A KEY/B KEY: Layer A/B control

If A/B KEY isn't active, Layer A/B doesn't display in PVW and A/B KEY is pressed, the A/B KEY will be active and Layer A/B will display in PVW.

If A/B KEY isn't active, Layer A/B already displays in PVW and A/B KEY is pressed, the A/B KEY will be active and Layer A/B will display on the top layer in PVW.

If A/B KEY is active, and A/B KEY is pressed, the A/B KEY will be inactive and Layer A/B will be removed in PVW.

Note: PVW needs at least one layer. Therefore, if Layer A is inactive, B key will active and Layer B will display in PVW, and vice versa. If there is only one layer in PVW, the corresponding Key will be active and it will keep active even being pressed.

Five Way Rocker: When Five Way Rocker is idle, user can use it to move the selected layer

Menu Knob : When Menu Knob is idle, user can use it to adjust the size of the selected layer

5.3 ON/OFF Function Keys

LOGO: Set LOGO ON/OFF

CHROMA: Set chroma keying of the selected layer ON/OFF

LUMA: Set luma keying of the selected layer ON/OFF

REC: Set video record ON/OFF

STREAM: Set streaming ON/OFF

STILL: Set freezing PGM ON/OFF

5.4 Shortcut keys

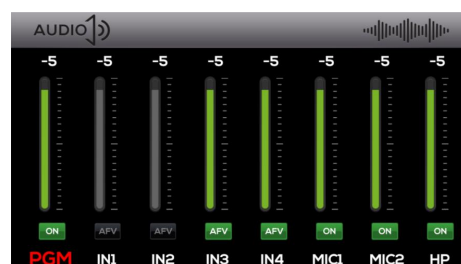
5.4.1 AUDIO: Audio Menu ON/OFF

User can evoke audio menu by pressing AUDIO key. In the Menu, user can:

1. Select audio channel with Five Way Rocker

2. Adjust volume of the selected audio channel with Menu Knob

3. Set ON/OFF of the selected audio channel by pressing Menu Knob



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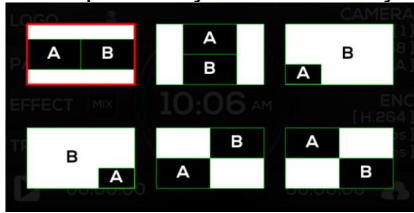
5.4.2 EFFECT: Switching Effect menu

User can evoke Switching Effect Menu by pressing EFFECT key. In the Menu, user can select preset switching type and style. And the Auto and T-BAR switching will implement the selected preset.



5.4.3 SCENES: AB Layout Menu

User can evoke AB Layout Menu by pressing SCENES key. In the Menu, user can select preset layout. And AB layers will display as preset.



5.5 PTZ Control

When there is at least one camera, and the connection is fine, the user can control the camera with CAM, POS and Five Way Rocker, PGM Keys, PVW Keys. The operations are:

1. Activate the camera: Press CAM Key. The PTZ Control Mode will be active. And the CAM light keep blinking.
2. Camera Control: Use PVW Keys 1-4 to control Camera 1-4. When the user press a PVW Key, the key will keep blinking and the corresponding camera is active. The left/right/up/down motion is controlled by the Five Way Rocker. And the Zoom In/Out is controlled by the Menu Knob. Therefore, the user can use both hands to implement camera motion and zoom at the same time.
3. Camera Position Record and Recall: When the user complete adjusting the camera and finding the view, the user can save the camera position and agilely evoke the camera moving to the saved position, without additional adjusting and finding.
4. Position Record: After activate the camera, press POS Key, then press PGM Key 1-4 to save the corresponding camera position.
5. Position Recall: After activate the camera, press the corresponding PGM Key to recall the saved position. The camera will automatically move to the position.

5.6 Lock

Long press the Lock Key for more than 2 seconds, and activate the Lock function with lock light blinking. When Lock is active, pressing any keys will not take effect. The Lock can keep the working status and prevent from faulty operation.

Long press again will inactivate the Lock function.

5.7 FTB

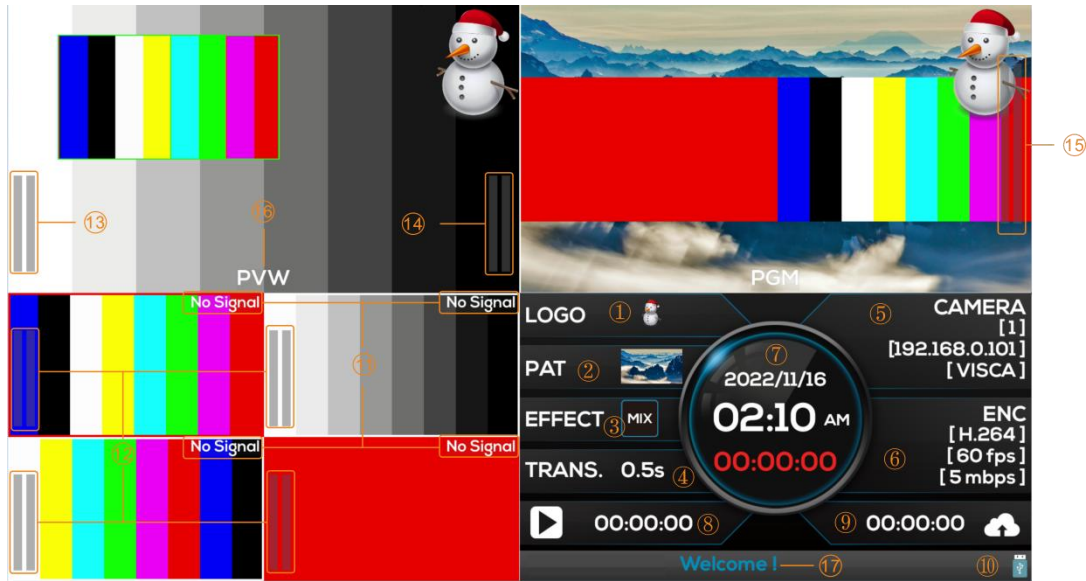
When pressing FTB, the PGM will be forced to black, and the volume of PGM will forced to mute.

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5.8 Key Leds

Key Leds	OFF	ON	Blinking
LOCK	OFF	-	Locking
MUTE	OFF	-	PGM MUTE
LOGO	OFF	Logo On	-
AUDIO	Audio Menu Off	Audio Menu On	-
EFFECT	Effect Menu Off	Effect Menu On	-
SCENES	Scenes Menu Off	Scenes Menu On	-
A	Layer A unselected	Layer A selected	-
B	Layer B unselected	Layer B selected	-
CHROMA	Chroma Key Off	Chroma Key On	-
LUMA	Luma Key Off	Luma Key On	-
REC	Off	-	Recording
STREAM	Off	-	Streaming
CAM	Off	-	Camera Activated
POS		Waiting Pressing PGM Key 1-4 to recall camera position	-
PGM1~4	Source unselected	Source selected	-
PVW1~4	Source unselected	Source selected	-
STILL	Off	-	PGM Freezing
PAT	Off	Activate pattern as source	-
AUTO	Off	Automatically switching	-
FTB	Off	-	PGM force to black and mute

6、LCD Monitor




①	LOGO	⑦	Date&Time	⑬	MIC1 Vol Meter
②	PAT	⑧	Recording Status	⑭	MIC2 Vol Meter
③	EFFECT	⑨	Streaming Status	⑮	PGM Vol Meter
④	TRANS Time	⑩	U-Disk Status	⑯	UMD
⑤	CAMERA Info	⑪	Signal Status	⑰	System
⑥	ENCODER Info	⑫	HDMI IN Vol Meter		

7、Menu

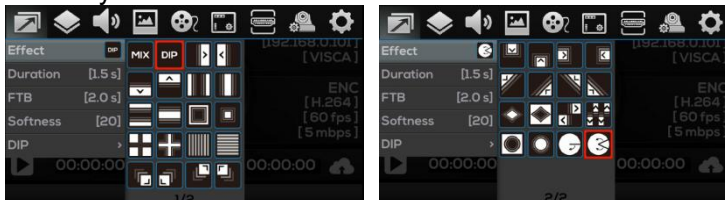
7.1 Transition

There are transitions including WIPE, MIX, DIP. The user can trigger a transition by pressing AUTO, or manually control the transition with T-BAR.

The user can enter the transition menu by pressing Menu Key or rotating the Menu Knob, then selecting  in the main menu.

7.1.1 Transition configuration

In the transition Menu, the user can select from MIX, DIP, WIPE, including more than 30 styles.



7.1.1.1 MIX

Select MIX in the transition menu, configure the transition time. Then the user can auto trigger or manually control the MIX transition.

7.1.1.2 DIP

Select DIP in the transition menu, configure the transition time. In the DIP menu, two styles can be select. One is DIP with color, and the default color is black. The other is DIP with background, which can be set in the library.

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7.1.1.3 WIPE

Select WIPE in the transition menu, configure the transition time. In the WIPE mode, there are plenty styles to be selected, including horizontal, vertical, corner, cross, circle, diagonal, etc. The user can also configure the smoothness. The smoothness can make the edge smoother.

7.1.2 Duration Time

In the transition menu, the user can set the duration time. Larger value of time means the transition will last a longer time, and vice versa. The time range could be 0.1s-5.0s and the default is 0.5s



7.1.3 FTB Time

In the FTB Time menu, the user can set the time from pressing the FTB Key to forcing PGM black.



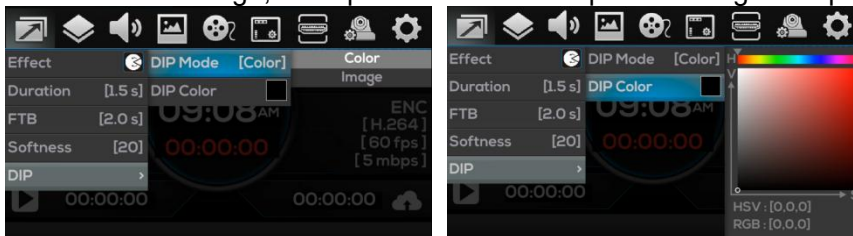
7.1.4 Softness

Select Transition Menu and select softness, turn the Menu Knob to change the softness. Smaller value means sharper edge, and greater value means smoother edge. The range is 0-100 and the default value is 20.



7.1.5 DIP Configuration

Select Dip to set Mode and Color. When select Color as Mode, the user can set the dip color. When select Image, the dip will work with the preset background picture.



7.2 Layer

The switcher supports A/B layers. So it can implement PIP/POP. And the size and position can be set as the user need.

Click Menu and enter the menu, select 

7.2.1 Layer Source

In the Layer menu, the user can select the layer source by turning the Menu Knob. The user can select PVW 1-4 or PAT as the Layer source.



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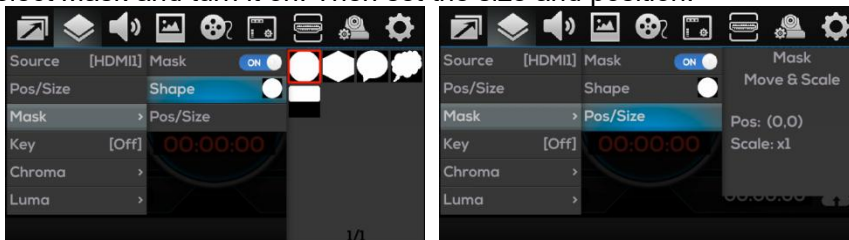
7.2.2 Position/Size

In the Layer menu, the layer size can be set by the Menu Knob, and the position can be set by the five way rocker. The position and the size information also displays in the menu.



7.2.3 Mask

In the Layer menu, the user can set the layer mask. Select Mask and turn it on. Then set the size and position.



7.2.4 Keying Configuration

The user can create lifelike virtual studio with Keying functions in the switcher. The keying function can work on multi stream and achieve very good keying result, including clean keying, detail retaining and edge balance, to meet the need of the users.



7.2.5 Chroma

Chroma Key is commonly used for virtual studio, such as weather broadcasts, news broadcast, film, gaming and so on. In the studio the presenter is actually standing in front of a green or blue background. In chroma key two images are combined using a special technique and the background color of one image is removed. Then the remaining foreground displays over another image.

In the Layer Menu, select chroma key, set the key color, the similarity and smoothness.

When press CHROMA KEY, it firstly works in PVW, and the CHROMA KEY will light green.



7.2.5.1 Color

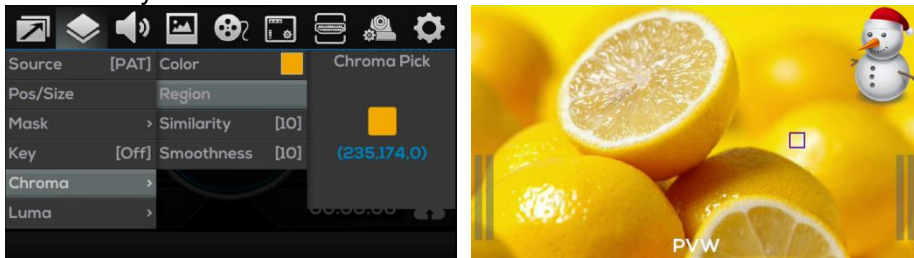
In Chroma Key menu, the user can set the HVS value of the key color.



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7.2.5.2 Region

In Chroma Key menu, select Region, there is a rectangle in the top layer of A/B. The size of the rectangle can be set by turning the menu key, and the position can be adjust with the five way rocker.



7.2.5.3 Similarity

In chroma key, the Similarity adjusts the color range from the set key color. The greater value means wide key range. The default is 0.

7.2.5.4 Smoothness

In chroma key, the Smoothness can help to remove the background very closed to the edge of the foreground. It's useful to get clear edge of the foreground, without any annoying artifacts visible. The greater value of smoothness means more clear and smoother edge. The default is 0.

7.2.6 Luma Key

The luma key using luma value to get a luma matte of the foreground video, which removes away the black background of the foreground video. And the remaining will display over another background video.

In the Layer Menu, select luma key, set the min, max, reverse, the similarity and smoothness.

When press LUMA KEY, it firstly works in PVW, and the LUMA KEY will light green.



7.2.6.1 Min/Max

The Min/Max adjust the range of luma key. And the luma value of the foreground video, out of the range, will be keyed away. The range is 16-235 and the default is 16.

7.2.6.2 Reverse

The Reverse keys away the luma value out of the range from min to max.

7.2.6.3 Similarity


In luma key, the Similarity adjusts the color range from the set key luma. The greater value means wide key range. The default is 0.

7.2.6.4 Smoothness

In luma key, the Smoothness can help to get smoother edge. The default is 0.

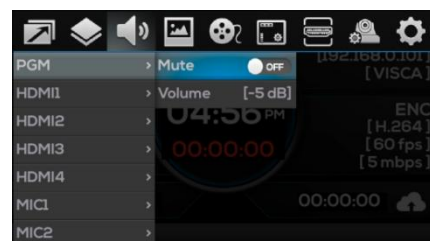
7.3 Audio

Support audios from 4 HDMI sources and 2 3.5mm mic sources. Each source has separate enable, volume, mix, delay control. The HDMI sources can be AFV.

Pressing Menu Key, in the menu select 

7.3.1 PGM Audio

In the PGM, the Mute will turn off the audio in the PGM. The Volume range is -60dB to 0dB. The default is -5dB.



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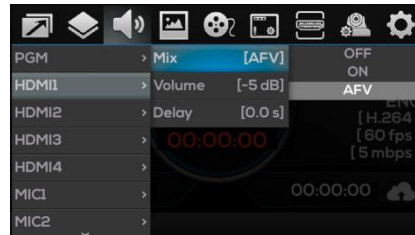
7.3.2 HDMI Audio

In the Audio Menu, there are 4 HDMI sources that can be set.

7.3.2.1 Mix Mode

The mix mode can be Off/On/AFV.

When set as AFV, the source audio will be active only when the video also displays in PGM.



7.3.2.2 Volume

The volume of each source can be adjusted separately. The range is -60dB to 0dB. The default is -5dB.

7.3.2.3 Audio Delay

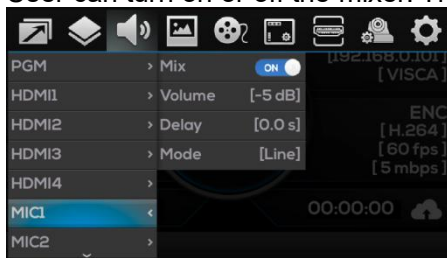
The audio delay of each source can be set separately. Adjust the delay and keep the synchronization between the audio and the video. The max delay is 5 secs. The default is 0 sec.

7.3.3 Mic 1/Mic 2

In the Audio Menu, Mic1/Mic2 can be set. The Mic source can be a linear audio device, desktop audio, lapel microphone, and so on.

7.3.3.1 Mix

User can turn on or off the mixer. The default is on.



7.3.3.2 Volume

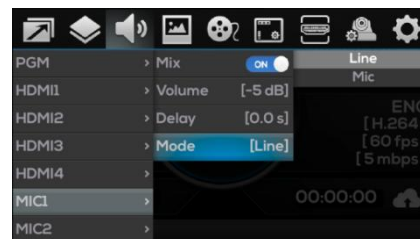
The volume of each source can be adjusted separately. The range is -60dB to 0dB. The default is -5dB.

7.3.3.3 Audio Delay

The audio delay of each source can be set separately. The max delay is 5 secs. The default is 0 sec.

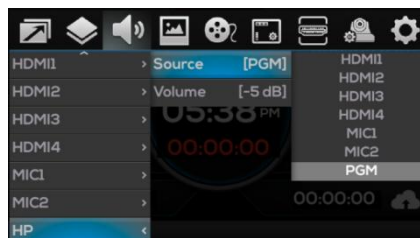
7.3.3.4 Mode

There are mic and line mode for Mic 1/Mic 2. When the source device is a microphone, set the mic mode. When the source device is a line device, set the line mode.




7.3.4 Headphone

There is a headphone output in the switcher. User can monitor the audios by the headphone. The source of the headphone can be PGM audio, any source of HDMI and Mics. The default source is PGM audio. The volume of the headphone can be adjusted, and the range is -60dB to 0dB. The default is 0dB.



7.4 Image

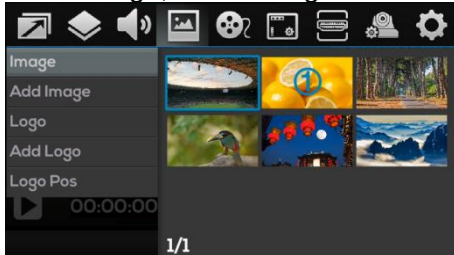
In the Image, the pattern, logo can be set.

Pressing MENU, select 

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7.4.1 Pattern

In the Image, select Image to show the pictures.



7.4.1.1 Image Selection

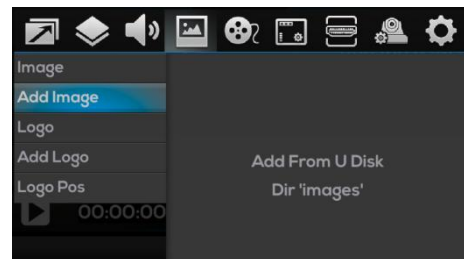
Select the image by turning the Menu Knob, then press the Knob. Select IMG1 at the bottom and press the Knob. The image is set as default background Pattern.

7.4.1.2 Image Deletion

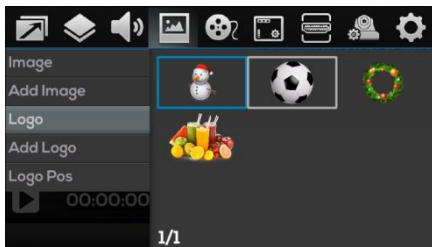
The operation is similar to Image Selection. The difference is select DEL in the bottom.

7.4.2 Add Image

Images can be import from U-Disk. Insert U-Disk and there will be a USB icon at the bottom. Please make sure the images are saved in the "images" directory. Then select the images and import to the switcher. **Ps:The max size supported is1920x1080.**



7.4.3 LOGO



7.4.3.1 LOGO Select

In Logo configuration, select LOGO and load preset LOGO.

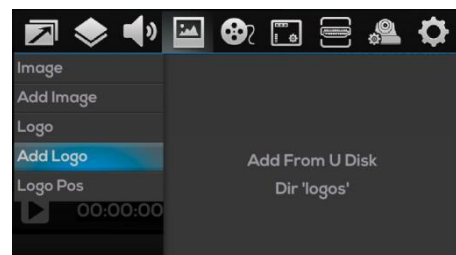
7.4.3.2 LOGO Deletion

Select the preset LOGO with the Menu Knob, then press the knob. Select DEL at the bottom of the menu and delete the LOGO.

7.4.4 Add LOGO

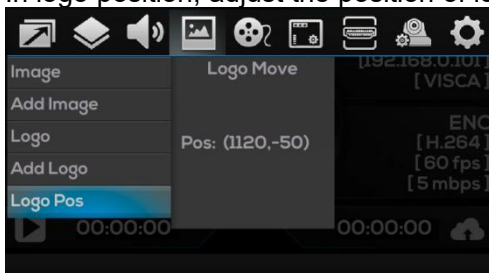
Save LOGOs in the "logos" directory in the usb -disk, insert the usb-disk and there will be a USB icon at the bottom of the status/menu page. Then add the logos from the logo add menu.

The size of the logos should not be larger than 960x540. And formats such as *.png, *.jpeg, *.jpg, *.bmp are supported.



7.4.5 LOGO Position


In logo position, adjust the position of logo with the five away rocker.



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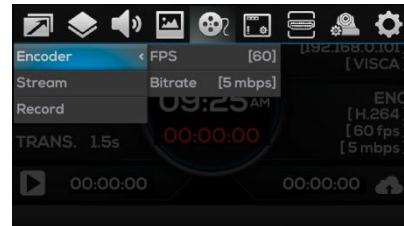
7.5 Multi Media

In the multi media, users can check and adjust the encoder, network streaming, recording.

Press MENU and then select 

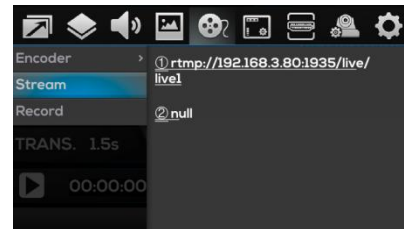
7.5.1 Encoder

In encoder, there are framer rate and code rate can be adjust. The range of frame rate is 10-60, the range of code rate is 1mbps-30mbps. The default frame rate is 60, and the code rate is 5mbps.



7.5.2 Stream

In Multimedia Settings, select Stream. Two streaming addresses can be saved in network streaming. Click STREAM to start streaming. If the streaming address is available, the STREAM button flashes green and starts streaming, and the streaming address is displayed in green. If the streaming address is abnormal, the streaming address is displayed in red and the STREAM button is off. (Note: if the output is set to i mode, streaming is not allowed)



The streaming address is configured through the Web host computer. See 8.3.1 Streaming Settings.

7.5.3 Record

The switcher records the picture and sound of PGM into the "video_rec" folder on the USB flash drive.

Support the USB flash disk format of FAT32 and NTFS (FAT32 can record 4G video at most)

When a USB key is inserted, a USB icon will appear at the bottom of the status/menu page. In Multimedia Settings, select Record to display the used capacity and available capacity of the USB flash drive. Click the REC button to start recording. The file name of the recorded file will appear below the pie chart, and the REC light will flash. Press REC again to stop recording.




Note: The system will automatically stop recording when the capacity of the USB flash disk is insufficient;

The recording will stop automatically when the FAT32 USB flash disk is 4G in size;

When the recording is not stopped normally (for example, the recording power is interrupted, and the USB stick is unplugged), the recording file cannot be used normally.

7.6 Screen Monitor

In the screen monitoring, you can operate the audio meters, input information and UMD.

Press Menu and select 

7.6.1 LevelMeter

Enter the screen monitoring settings and select the levelmeter. The levelmeter of four HDMI, two MIC and PGM can be turned off and turned on at the same time, or can be set separately.



7.6.2 Input Information

Enter the screen monitoring setting, select the input info, and you can set the information of the four HDMI input signals to turn on and off, font color, etc.

7.6.2.1 Visible

Turn on the Visible and display the information of four HDMI input signals. Otherwise, turn off the Visible, and close the information.



Video Switcher

7.6.2.2 Opacity

Opacity sets the opacity of the background of the four HDMI input information display, ranging from 0% to 100%.

7.6.2.3 Position/Size

Enter the screen monitoring setting, select the input information - position/size, control the size of resolution display through the knob, and control the display position of resolution through the PTZ rocker.

7.6.2.4 Font Color

Enter the screen monitoring settings, and select the input information font color to customize the font color of the input information.

7.6.2.5 Background Color

Enter the screen monitoring settings, select Input Information - Background Color to customize the background color of the input information.

7.6.3 UMD

Enter the screen monitoring settings, select UMD, and you can set the opening/closing, font color, etc. of UMD in PVW and PGM windows.

7.6.3.1 Visible

Turn on the Visible and display the information of PVW and PGM. Otherwise, turn off the Visible, and close the information.

7.6.3.2 Opacity

Opacity sets the opacity of the background of the UMD, ranging from 0% to 100%.

7.6.3.3 Position/Size

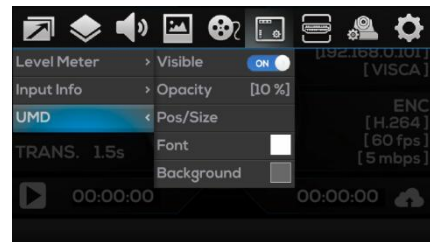
Enter the screen monitoring setting, select the UMD - position/size, control the size of resolution display through the knob, and control the display position of resolution through the PTZ rocker.

7.6.3.4 Font Color

Enter the screen monitoring settings, and select the UMD font color to customize the font color of UMD.


7.6.3.5 Background Color

Enter the screen monitoring settings, select UMD - Background Color to customize the background color of the UMD.



7.7 Output

In the menu, the output format and color can be set.

Press MENU and select 

7.7.1 Mode

Enter the output setting and select the mode. You can select different output modes through the knob. The default is 1080p60.

7.7.2 Color

Enter the output setting and select the color. You can select different color modes through the knob. The default is RGB Full.




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7.8 Camera

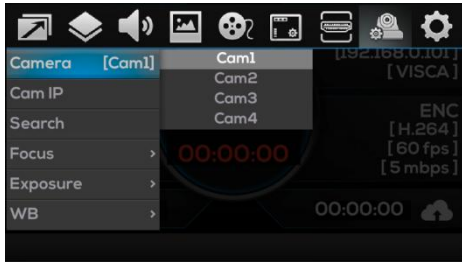
The switcher supports VISCA camera control protocol. The rocker and knob can be used to quickly and conveniently control camera movement. At the same time, camera focusing, exposure, white balance and other parameters can be set in the camera menu.

In addition, it also supports the camera position storage function, which can be quickly recalled (see "5.5 PTZ Control").

Press MENU and select 

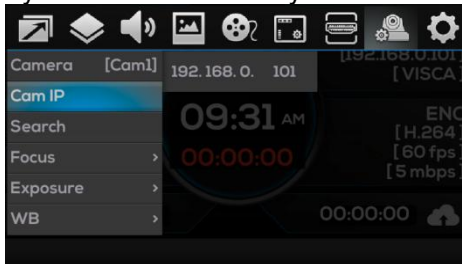
7.8.1 Camera Select

Enter the camera settings, select the camera, and use the knob to select the camera to be set.



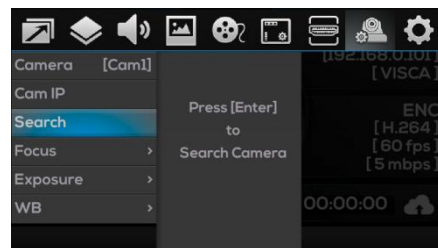
7.8.2 Camera IP

Enter the camera settings, select the camera IP, and the IP address of the camera is displayed. You can manually set the IP address.



7.8.3 Search

Enter Camera Settings, select Search, and all found camera IPs in the same LAN will be displayed. Select the camera IP through the knob.



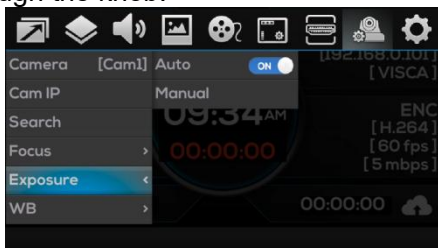
7.8.4 Focus

Enter the camera settings and select Focus. You can set auto focus and manual focus. Manual focus can be set through the knob.



7.8.5 Exposure

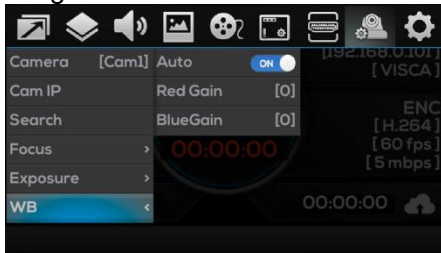
Enter the camera settings and select exposure to set automatic exposure and manual exposure. Manual exposure can be set through the knob.




Video Switcher

7.8.6 White Balance

Enter the camera settings, select white balance, and you can set automatic and manual gain. For manual, you can set the red gain and blue gain through the knob. The gain range is 0-255.



7.9 Setting

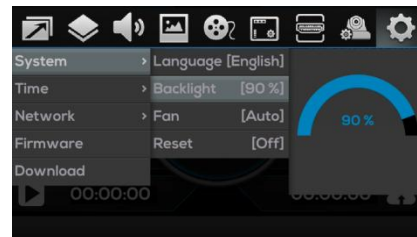
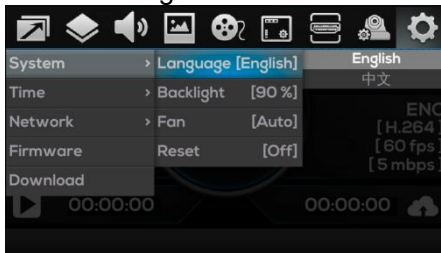
Press MENU, then select 

7.9.1 System Setting

Select system settings to set the system of the switch station, including the settings of language, backlight, fan and reset.

7.9.1.1 Language

Enter the system settings, select the language, and select the language with the knob. The default is English..



7.9.1.2 Backlight

Enter the system settings, select the backlight, and adjust the screen backlight through the knob. The range is 10% - 100%. The larger the value, the brighter the screen.

7.9.1.3 Fan

Enter the system settings, select the fan, and select the fan mode through the knob. The default is automatic mode.

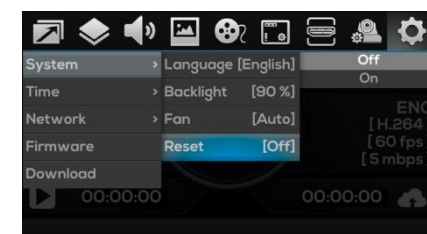
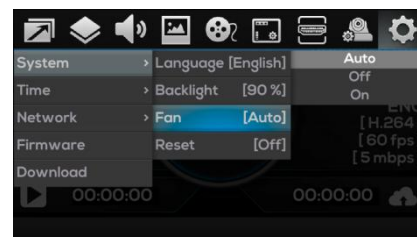
Automatic mode: the fan speed is controlled according to the working temperature. The higher the temperature, the faster the speed.

Off mode: turn off the fan and switch to automatic mode only when a certain temperature is reached.

On mode: the fan is always on.

7.9.1.4 Reset

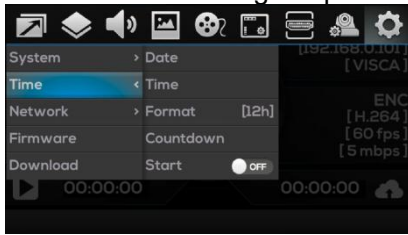
Enter the system settings, select Reset, select On through the knob, and the switch station will perform reset operation. After reset, all configurations will be cleared.



Video Switcher

7.9.2 Time Setting

Enter the time setting to operate the time, date, countdown, etc.



7.9.2.1 Date

Enter the time setting, select the date, and set the date manually.

7.9.2.2 Time

Enter the time setting, select the time, and set the time manually.

7.9.2.3 Time Format

Enter the time setting, select the format, and the time can be set to display in 12h/24h format on the status page.

7.9.2.4 Countdown

Enter Time Setting, select Countdown, and set the countdown time.

7.9.2.5 Start Countdown

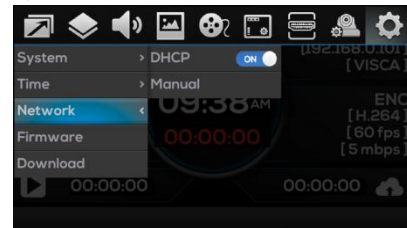
After the countdown time is set, select ON in the start countdown to start the countdown. The countdown is displayed on the status page.

7.9.3 Network

In Network Settings, you can select to automatically obtain the network IP or manually set it.

7.9.4 Firmware

Enter the firmware settings and scan the QR code to display the ID number and Version number.



7.9.5 Download

Enter the download settings, scan the QR code to enter the download link.

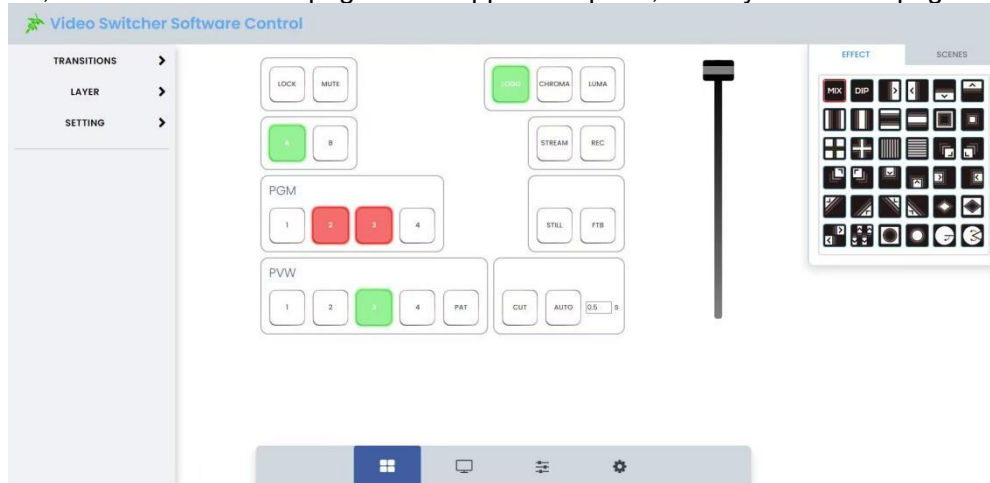


8、Upper Computer

8.1 Connect the upper computer

8.1.2 Using PC

Confirm that the computer and The switcher are connected to the same LAN by automatically obtaining or manually setting the network IP address of The switcher. Open the browser on the computer side, enter the IP address of The switcher and press Enter to connect, and enter the home page of the upper computer, namely the switch page.

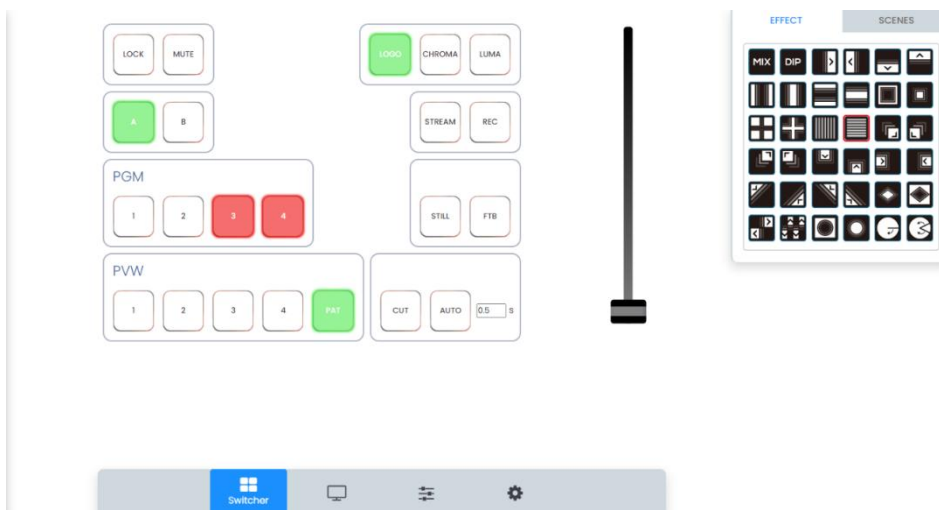


8.1.3 Using Phone

Ensure that the mobile phone and The switcher are on the same LAN. In the mobile browser, enter the IP address of The switcher and open it to connect to the upper computer.

8.2 Switcher Setting

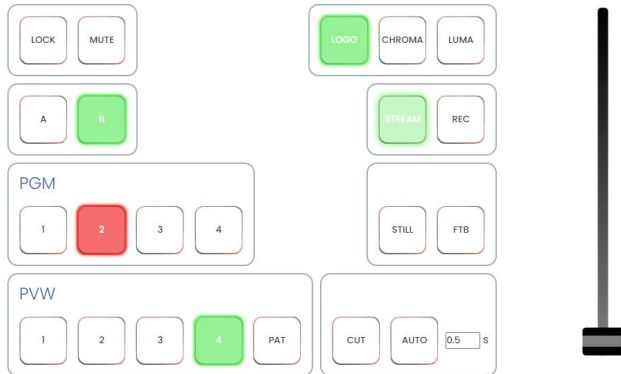
Enter the switch station setting page of the upper computer to control the switch station.



Video Switcher

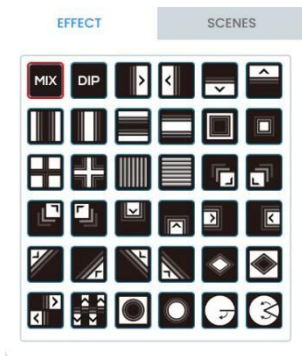
8.2.1 Front Panel

The front panel of the switching table contains buttons and push rods. Click the button to control the corresponding button on the switch table and set the transition time; Push the push rod to execute the push rod transition operation.



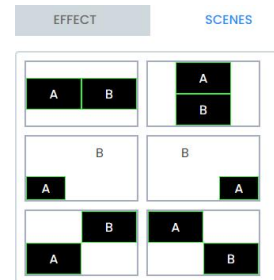
8.2.2 EFFECT

Enter the setting page of the upper computer, click the transition effect in the EFFECT on the right to select the corresponding transition effect.



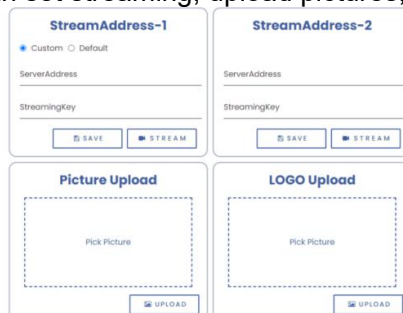
8.2.3 SCENES

Enter the switch station setting page of the upper computer, click SCENES on the right to select different scenes layouts.



8.3 Media Setting

Click the media module on the upper computer page to enter the media setting page, where you can set streaming, upload pictures, and upload LOGOs.



Video Switcher

8.3.1 Streaming Setting

8.3.1.1 Streaming Address

Custom streaming address:

Enter the media settings page, enter the streaming server address and streaming secret key (for streaming of live broadcast platforms such as Station B and Tiger Teeth) in Streaming Address-1 and Streaming Address-2, and click Save to save the streaming address to The switcher Settings Multimedia Network Streaming; Click the push stream button to push the stream.

The image shows two side-by-side configuration panels for streaming addresses. The left panel is titled 'StreamAddress-1' and the right is 'StreamAddress-2'. Both panels have a radio button selection for 'Custom' (selected) and 'Default'. Below this are two input fields: 'ServerAddress' and 'StreamingKey'. At the bottom of each panel are two buttons: 'SAVE' and 'STREAM'.

Default streaming:

Enter the media settings page, select the default streaming address - 1 (for local LAN streaming), and click the Save button to save the local streaming address to the address 1 in The switcher - Settings - Multimedia - Network Streaming; Click the push stream button to push the local stream.

The image shows the 'StreamAddress-1' configuration panel with the 'Default' radio button selected. The 'ServerAddress' field contains the text 'rtmp://192.168.0.177:1935/live/live1'. The 'StreamingKey' field is empty. The 'SAVE' and 'STREAM' buttons are visible at the bottom.

8.3.2 Picture Upload

Enter the media settings page, in the picture upload box, click to Pick picture, select the picture to upload, and click the Upload button to upload the picture to The switcher and automatically set it as a background picture.

The image shows a 'Picture Upload' dialog box. It features a large dashed rectangular area in the center with the text 'Pick Picture' inside. At the bottom right corner, there is an 'UPLOAD' button.

8.3.3 LOGO Upload

Enter the media setting page, in the LOGO upload box, click to pick picture, select the LOGO picture to upload, and click the Upload button to upload this LOGO picture to The switcher, and automatically set it as the current LOGO.

The image shows a 'LOGO Upload' dialog box. It features a large dashed rectangular area in the center with the text 'Pick Picture' inside. At the bottom right corner, there is an 'UPLOAD' button.

8.4 Audio Setting

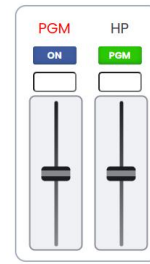
Click the audio module on the upper computer page to enter the audio setting page to set the audio for PGM, headset (HP), four input (IN1-4), and two microphones (Mic1-2).

The image shows the 'Audio' settings interface. It contains several control modules: 'PGM' and 'HP' (headset) with volume sliders; 'Mic1' and 'Mic2' (microphones) with volume sliders and 'Delay' buttons; and four input channels labeled 'IN1', 'IN2', 'IN3', and 'IN4', each with a volume slider and a 'Delay' button. At the bottom, there is a taskbar with a blue 'Audio' button and a settings gear icon.

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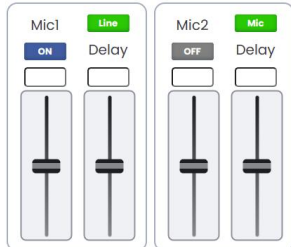
8.4.1 PGM/HP

Enter the audio setting page to set PGM mute and PGM volume; HP source selection, HP volume settings.



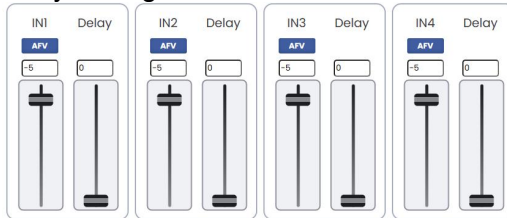
8.4.2 Microphone Audio Setting

Enter the audio setting page to set Mic1/Mic2 mixing, volume, delay and mode.



8.4.3 Quad HDMI Audio

Enter the audio setting page to set IN1-4 (4-way HDMI input) mixing, volume setting and delay setting.



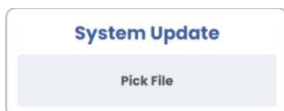
8.5 Update

Click Update on the upper computer page to enter the Update setting page, where you can Update the operating system and EDID.



8.5.1 System Update

On the update page, click the File button in the system update, select the file to update, and click Update to perform the update operation.



8.5.2 EDID Update

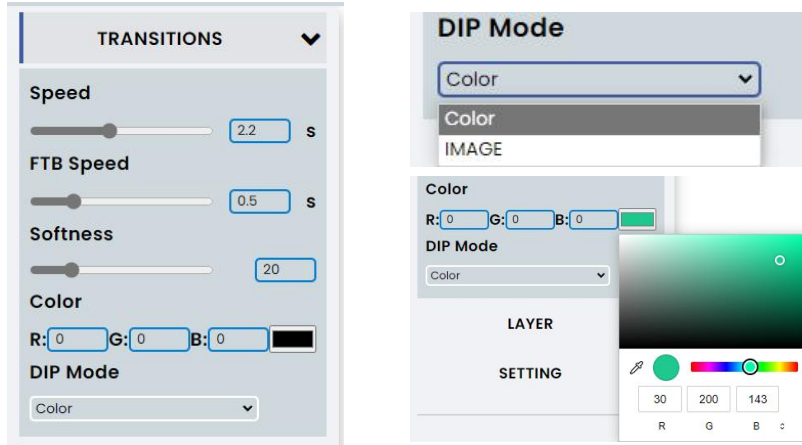
On the update page, click the File button in the EDID update, select the file to update, and click update to perform the update operation.



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8.6 Transitions

Enter the upper computer page, click TRANSITIONS on the left to set the transition, including the transition duration setting (Speed), black field duration setting (FTB Speed), flexibility setting (Softness), immersion color setting (Color), and immersion mode setting (DIP Mode).

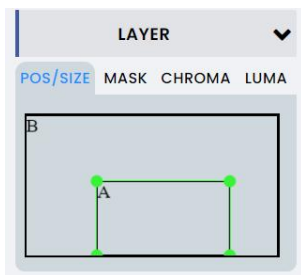


8.7 Layer

Enter the upper computer page, click LAYER on the left to set the layer, including layer position/size setting (POS/SIZE), mask setting (MASK), chroma key setting (CHROMA), and brightness key setting (LUMA).

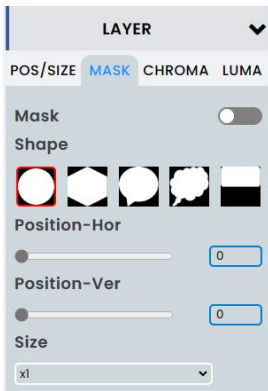
8.7.1 Layer Position/Size

Enter the upper computer page, click LAYER on the left, enter POS/SIZE, select A/B layer, press and hold the left mouse button in the box to move, and then set the layer position; Press and drag the left mouse button at the four corners to set the layer size.



8.7.2 MASK

Enter the upper computer page, click LAYER on the left, click MASK, select the mask icon, mask the horizontal position and vertical position, and pull down to select the size of the mask.



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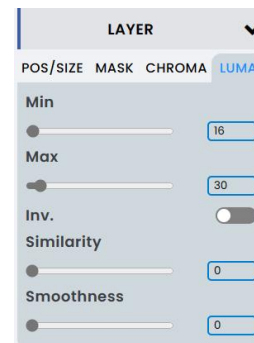
8.7.3 CHROMA Key

Enter the upper computer page, click LAYER on the left, and click CHROMA to set the color, similarity, and smoothness.



8.7.4 LUMA Key

Enter the upper computer page, click LAYER on the left, and click LUMA to set the minimum brightness, maximum brightness, inversion, similarity, and smoothness.

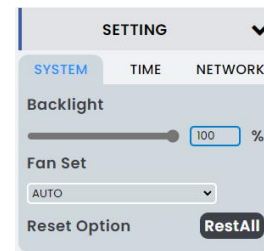


8.8 Setting

Enter the upper computer page and click SETTING on the left to set the system, time and network.

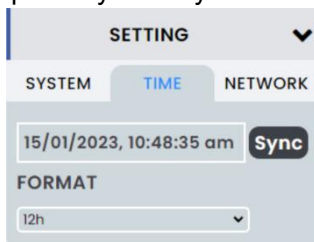
8.8.1 SYSTEM Setting

Enter the upper computer page, click SETTING on the left to enter SYSTEM, where you can set backlight and fan, and click RestALL to reset.



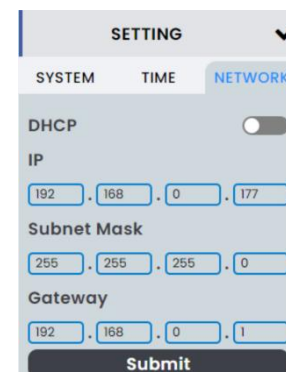
8.8.2 TIME Setting

Enter the upper computer page, click SETTING on the left, and click TIME to set the time format (FORMAT). The date and time are obtained from the computer system by default.



8.8.3 NETWORK Setting

Enter the upper computer page, click SETTING on the left, and click NETWORK to set the network. Open DHCP to automatically obtain the network IP; Close DHCP, enter IP, subnet mask and gateway, and click Modify to manually set the network IP.



9、 Appendix

9.1 Appendix A: Accessories

(The picture is for reference only, please refer to the real object)

- ①Transformer(12V 2A)x 1 thread
- ②USB (A to C)x 1(optional)
- ③Tally box (DB-15)x 1(optional)

9.2 Appendix B: Safety and Needs

★Before operating the machine, please read this manual and keep it properly for future reference.

★Do not open the cover by yourself to avoid damaging the machine.

★Please unplug the power when the machine is not used for a long time.

★In order to reduce the risk of fire or electric shock, please do not let the machine be exposed to rain, damp or liquid flow into the machine. The machine is not dust-proof, moisture proof and waterproof.

★Please keep good ventilation of the machine and do not block the ventilation of the machine.

★Please do not put heavy objects on this machine.

★To maintain high-definition audio and video, please use high-quality signal cables and connectors.

★The input voltage range of this product's power supply is 7~24V, please use the correct power supply.

★The working temperature of this product is 0 °C~50 °C, please use within this temperature range; The storage temperature is - 30 °C~70 °C, please store within this temperature range.

★This product is an electronic product. Please keep away from fire sources, water sources and flammable and explosive dangerous goods.

★If any abnormality is found, please turn off the power switch immediately and contact the dealer. Do not repair the equipment by yourself.