PIXELHUE

S16

4K Live Production Switcher

User Manual

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The latest edition of user manuals can be downloaded from the PIXELHUE website www.pixelhue.com.

Contents

1 General

Overview

- About This Manual
- Change History
- Symbols and Pictures

1.1 About This Manual

This user manual describes how to operate the S16 4K live production switcher. This manual is designed to be a reference for your daily use of our products. It contains a complete description of the hardware.

Note

Always check for the latest version of all documents at www.pixelhue.com.

1.2 Change History

Version	Date	Changes
V1.2.1	2026-05-26	Updated the description related to DVE button.
V1.2.0	2026-04-03	• Changed button indicator color from off to white backlight. • Added the description related to mode switching. • Added the description related to DVE button. • Added the description related to displaying the input source list in the expansion area. • Added the description related to button-menu sync. • Added the description related to internal sources. • Added YUY2 encoding format for streaming. • Added the description related to flipping. • Added the description related to DVE. • Added the description related to clean feed. • Updated the description related to AUX. • Added the description related to renaming input sources and presets. • Updated the description related to PTZ and streaming import template formats. • Updated the preferences section, adding options for mode switching, button-menu sync, etc. • Removed the S12 model and related descriptions.
V1.1.0	2025-11-20	• Updated the status of the AFV/ON button indicator for audio input. • Updated the **Media** interface. • Updated the description in **Peripheral** > **Camera**. • Added the description in **Advanced** > **Screen Brightness**. • Added the description in **Advanced** > **Preferences**.
V1.0.0	2025-08-15	First release

1.3 Symbols and Pictures

Symbol Overview

	Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.
	Warning	Indicates a hazard with a medium or low level of risk, which if not avoided, could result in minor or moderate injury.
	Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
	Note	Provides additional information to emphasize or supplement important points of the main text.

Picture Overview

Images and pictures given in this manual are used for illustration purposes only. The actual product may vary due to product enhancement. The content of the images can be slightly different from reality, such as device types, installed modules, form and position of software windows on the screen.

2 Safety

Overview

- General Considerations
- Device Carrying
- Device Mounting
- Cable Requirements
- Electrical Safety
- Unpacking and Inspection
- Device Labels
- Notes and Cautions

2.1 General Considerations

To ensure that you can use this product correctly and safely, please be sure to observe the following precautions:

- Before performing any operation, make sure that you have read all the operating instructions provided by the device, especially the instructions that may endanger the personal safety and device safety, such as dangers, warnings and cautions, to minimize the probability of accidents.
- All the operations must conform to local safety codes. When the safety and precautionary measures described in this manual conflict with local safety codes, please follow the local codes.
- The personnel responsible for installing and maintaining the device must be professionals who have been trained and have mastered the correct operation methods and all safety precautions. Only trained and qualified personnel can perform device installation and maintenance.
- This device must be used in an environment that meets the design specifications; otherwise, it may cause device failure. The resulting device function abnormalities or component damage, personal safety accidents, property losses and other situations are not included within the scope of the device warranty.

2.1.1 General Safety

- When operating the device, you must strictly abide by the local laws and regulations. The safety precautions described in this manual are only a supplement to the local safety laws and regulations.
- The "Danger", "Warning" and "Caution" items described in this manual are only supplementary instructions for all safety precautions.
- To ensure personal and device safety, please strictly follow all the safety precautions on the device labels and described in this manual when installing the device.

2.1.2 Environmental Requirements

- Ensure adequate air flow in the equipment room.
- Take necessary measures to prevent dust, water and static electricity.
- Avoid long-term direct sunlight.
- Keep the device away from heat and ignition sources.
- Do not place the device in an explosive atmosphere.
- Do not place the device in a corrosive environment.
- Do not place the device in a strong electromagnetic environment.

2.1.3 Device Safety

- Before operating, fix the device on the floor or other stable objects, such as a wall or mounting bracket.
- During transportation and use of the device and its packaging, the device must be fixed stably to avoid falling.

- Do not step on, hit and violently operate the device and its packaging to prevent damage to the device or packaging box.
- Do not block the ventilation openings during operation.
- Tighten the board or card screws with a tool.
- After the installation, remove the empty packing materials from the device area.
- Save the packing box and materials for possible storage and transportation in the future.
- Always wear anti-static wrist bands and insulating gloves when touching the static-sensitive components.
- Avoid dropping any object into the chassis.
- Keep the device away from conductors that are easy to induce lightning to avoid lightning strikes to the device.
- Do not make the circuit faces of the boards or cards contact each other.
- Do not touch the circuit, components, connectors or wiring slots of the boards or cards with bare hands.
- Do not repair the device without authorization. Only trained professionals can maintain the device. You can contact PIXELHUE at any time if needed.
- Always use the spare parts recommended by PIXELHUE.
- Regularly clean the dust on the heat dissipation holes to prevent the dust from blocking the holes and thus affect the heat dissipation of the device.

2.1.4 Personal Safety

- Place the device in a stable location to prevent personal injury caused by falling.
- Avoid bare wires and maintain or replace them in time when they are damaged.
- Do not operate the device and connect cables outdoors under thunderstorms.
- Do not wear watches, rings, or other metal jewelry when installing spare parts or maintaining the device.

2.2 Device Carrying

- Do not relocate a powered device, and do not take any objects that may cause danger to the relocation.
- Always pay attention to the wheels at the bottom of the flight case during transportation to avoid them being jammed by stones or deformed due to external forces.
- Always hold the handles of the flight case firmly when pushing a flight case with wheels. Do not stack other devices on the flight case.
- The relocated device should be repacked in the original factory packaging.
- Do not disassemble the components during the transportation of the flight case.
- When handling or placing the boards or cards, bare board components or modules, always package them individually.

- When carrying the device with your bare hands, always wear protective gloves to avoid injury.
- When carrying the device, handle it gently and always hold the handles of the device or drag the bottom edge of the device. Do not hold the handles of a device component.
- When the device weight exceeds the carrying limit of a single person, carry it with multiple people or use a carrying tool.
- When using a forklift or handcart for transportation, place the device stably to ensure the device will not tip over.

The following table lists the maximum weights that adults can carry at a time specified by some organizations for your reference.

Organization	Weight
CEN (European Committee for Standardization)	25 kg/55.13 lb
ISO (International Organization for Standardization)	25 kg/55.13 lb
NIOSH (National Institute for Occupational Safety and Health)	23 kg/50.72 lb
HSE (Health and Safety Executive)	25 kg/55.13 lb
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China	Male: 15 kg/33.08 lb Female: 10 kg/22.05 lb

2.3 Device Mounting

When the device is installed on a desktop, the desktop must bear at least 4 times the device weight.

2.3.1 Mounting on a Desktop

- Ensure the stability and grounding of the desktop or working table.
- Ensure that the device is placed horizontally and do not turn it over or hang it on the wall.
- Do not place other objects on the device.
- Do not put water cups, beverages and other containers with liquid close to or on the device to avoid liquid leakage and thus cause safety hazards.
- If any object or liquid accidentally enters the device, stop using the device and disconnect the power cord and all cables connected to the device immediately, and then contact the after-sales personnel.
- When handling a flight case with wheels, please lock and fix the wheels to prevent the device from sliding.
- When stacking, ensure all the devices are stacked stably to avoid device damage and personal injury caused by falling.

2.3.2 Grounding

- Connect the grounding wire first when installing a device, and disconnect the grounding wire at last when removing the device.

- The connecting surface of the grounding wire and the device must have good conductivity. Spray painting is strictly prohibited, and there must be sufficient fastening force between the connecting parts.
- Do not operate the device when the grounding conductor is not installed.
- There must be no joints in the middle of the grounding wire, and it is strictly prohibited to install a switch or fuse on the grounding wire.
- For devices using a three-pin socket, ensure that the ground terminal in the three-pin socket is well grounded.

2.4 Cable Requirements

2.4.1 Power Cords

Warning

Do not install or remove the power cord when the device is powered on. When the power cord core contacts the conductor, an electric arc or spark will be generated which may result in fire or eye injury.

- Protect the power cord properly to prevent it from being punctured to avoid personal injury or fire caused by a short circuit.
- To ensure the safety of the device and personnel, be sure to use the matched power cord.
- User-supplied cables must comply with local cable regulations and device cable requirements.
- Before installing or removing the power cord, turn off the device power first.
- Check the electrical plug regularly and wipe off the dirt or dust accumulated on the plug.
- Before connecting the power cord, read the labels or markings on the power cord to make sure it is a matched one.

The device is intended to operate from an AC power source with a voltage range of AC 100–240V~, 50/60Hz. Various standard plugs are shown in the figure below.

US NEMA5/15	Europe CEE 7	China GB 2099	UK BS 1363
			

E Earth N Neutral L Live

2.4.2 Signal Cables

- Before using a DVI signal cable, check whether the pins on the cable connector are vertical and even. If not, please replace the cable.
- Before connecting the signal cable to the device, check whether there is any object in the device connector. If yes, remove the object first.

- If the signal cable has not been used for a long time, discharge static electricity before using it.
- Under normal working conditions of the device, it is recommended that non-technical professionals do not perform hot-swapping to avoid device damage.

2.4.3 Miscellaneous

- Signal cables must be bound separately from strong current cables or high voltage cables.
- When the temperature is too low, severe shock and vibration may cause brittle cracking of the plastic sheath of the cable. All cables should be laid and installed when the temperature is above zero.
- If the storage temperature of the cable is below zero, the cable must be moved to room temperature and stored for more than 24 hours before laying and installation.
- When carrying cables, especially in a low-temperature environment, always handle the cable with care. Violent handling, such as pushing down the cables directly from a high place, is prohibited.

2.5 Electrical Safety

2.5.1 Battery

- The battery is not intended to be replaced.
- Always follow the relevant instructions to dispose of batteries.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

2.5.2 Electromagnetic Interference

- Keep the device away from transformers, high-voltage power lines and high-current devices.
- Keep the device away from high-power broadcast transmitters.
- If there is a mobile communication transmitter around the device, its interference degree should meet the requirements of relevant standards. If needed, take necessary measures to prevent interference, such as shielding and isolation.
- When using hand-held wireless communication devices, such as interphones, keep at least 30 cm away from the device.

2.5.3 Anti-Static

- Always wear anti-static wrist bands and insulating gloves when touching the static-sensitive components.

- Always hold the board by the edges to avoid touching the circuits or components, and do not touch the chip with your hands.
- The disassembled board must be packaged with anti-static packaging material before storage or transportation.

2.6 Unpacking and Inspection

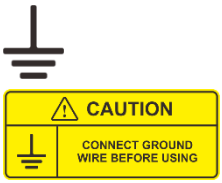
2.6.1 Unpacking

- After receiving the device, check whether the packing box is damaged. If there is any damage, do not open the box and contact the carrier in time to confirm the damage to the device and matters related to compensation.
- After unpacking, save the packing box and materials for possible storage and transportation in the future.

2.6.2 Inspection

- When the packing box is in perfect condition, unpack the box. Check the appearance of the device for damage. If there is damage, please contact the salesperson.
- Check the box contents according to the packing list described in the certificate of approval. If any item is missing, please contact the salesperson in time.

2.7 Device Labels

Labels	Description
	Warranty void if removed Do not open the chassis. If this label is damaged, the device will not be covered by the warranty.
	Grounding The two ends of the grounding wire are connected to the device and the grounding point respectively, which means that the device must be grounded through the grounding point to ensure the normal operation of the device and the personal safety of the operators.
	Sensitive electronic device Keep the device away from areas with strong electromagnetic radiation to avoid electromagnetic interference and thus affect the image output quality.
	Device carrying The device needs to be carried by multiple people.
	Removing cards Remove cards before taking out the motherboard.

2.8 Notes and Cautions

2.8.1 FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

2.8.2 Others

- This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.
- This product can only be placed horizontally. Do not mount vertically or upside-down.
- Please read the specifications thoroughly and use the product in accordance with the requirements. If you have any questions about the specifications, please contact us immediately. If you use the product improperly, not following the requirements, or for illegal purposes, you shall be solely responsible for any consequences arising therefrom.
- If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact PIXELHUE to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or PIXELHUE has the right to claim compensation.

3 Overview

About This Chapter

This chapter is designed to introduce you to the S16 4K live production switcher.

Overview

- Introduction
- Applications
- Initial Inspection

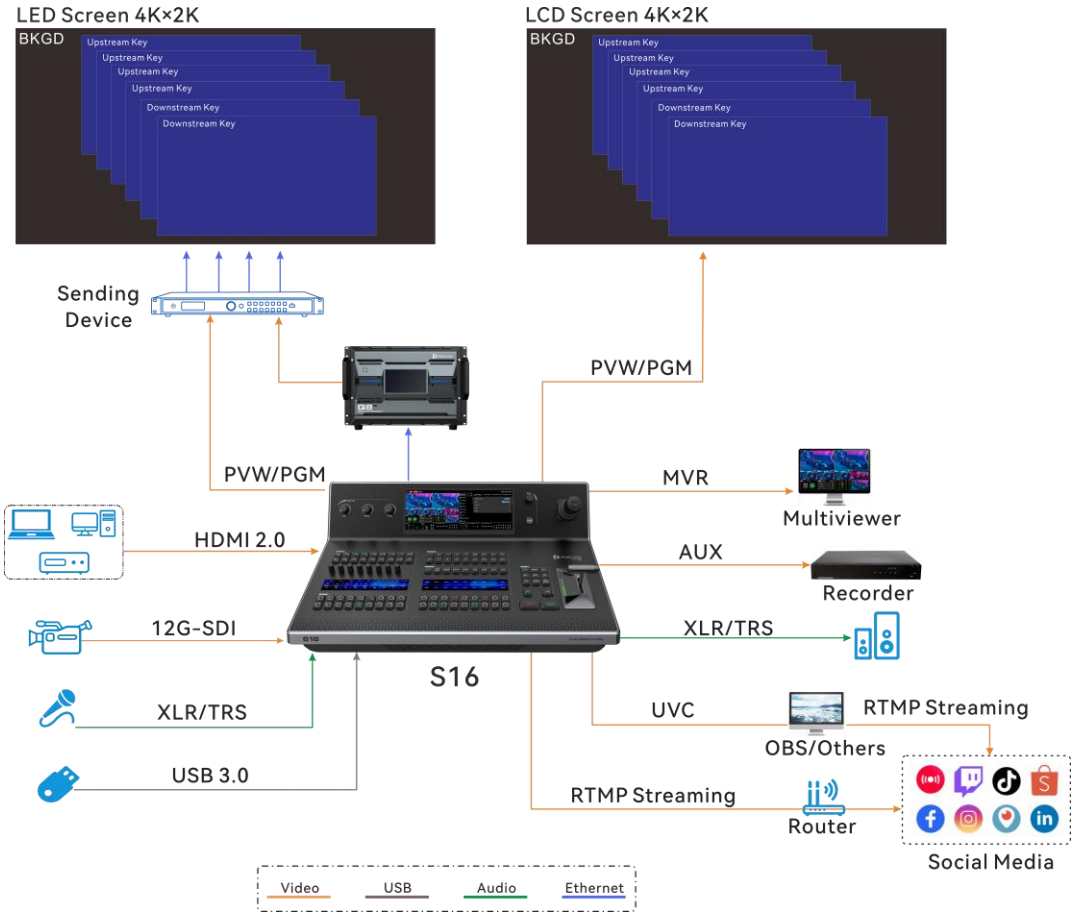
3.1 Introduction

The S16 is a high-performance 4K live production switcher, designed to meet the needs of professional broadcasting and multimedia productions. Featuring 4K input and output capabilities, it receives and transmits ultra-high-definition videos, ensuring premium visual effects in various events. It supports UHD, FHD, and custom resolution options, offering flexible resolution adaptation capability. More importantly, it boasts industry-leading layer resource configuration, including 1 BKGD, 4 upstream keyers, 2 downstream keyers, and 1 SuperSource, offering unlimited possibilities for creative live productions.

The S16 is equipped with a 10.25-inch LCD display, providing professional Multiviewer function, and comes with an industrial-grade control joystick, making on-site adjustments and operations more intuitive and precise. Its versatile live streaming module supports major streaming platforms globally, offers simultaneous 4-channel RTMP streaming, and provides 1080p@60Hz UVC output capability, meeting high-standard live streaming and online editing requirements. What's more, the S16 includes MIX, DIP, WIPE, and DVE transition effects, adding professional-quality visual effects to your streaming and recording.

With its high performance, flexibility, and innovative design, the S16 provides powerful and professional support for various live productions in corporate and commercial events, entertainment and cultural activities, sports events, community and religious gatherings, education and training, e-sports and game streaming, as well as personal and small studio productions.

3.2 Applications



3.3 Initial Inspection

General

Before shipment, the devices were inspected and found to be free of mechanical and electrical defects. As soon as the devices are unpacked, inspect for any damage that may have occurred in transit, and make sure there are no broken parts and the unit is free of dents. Save all packing material until the inspection is completed. If any damage is found, please contact PIXELHUE or your local distributor immediately.

After unpacking, please always place the device on a stable, flat and insulated support for handling or using.

Unpacking

After the unpacking, it is recommended you check carefully to see whether all accessories are included according to the provided packing list.

4 Hardware Introduction

About This Chapter

This chapter is designed to introduce you to the hardware configuration of the 4K live production switcher in detail.

Overview

- Front Panel
- Rear Panel

Note:

All product pictures shown in this chapter are for illustration purposes only. Actual product may vary.

4.1 Front Panel

No.	Area	Description
1	Output audio	Adjust the output volume.
2	LCD screen	Provide an intuitive LCD interface displaying menus and monitoring images.
3	Menu navigation	Choose menu options and configure relevant parameters.
4	Joystick	Precisely control the position, size, and direction of keyer and camera focus.
5	Input audio	Adjust the audio mix and volume.
6	Main program source switching	Quickly switch the BKGD source to the one bound to the button.
7	Auxiliary control	Perform operations such as delete, confirm, and enter numbers.
8	Comprehensive control	Edit keyers, load presets, and set camera presets.
9	Transition	Perform actions such as lock, live streaming, recording, and transition effects settings.

4.2 Rear Panel

Area	Connector	Qty	Description
INPUT (HDMI 2.0-12G SDI)	HDMI 2.0	4	• Each supports up to 4K×2K@60Hz 8-bit 4:4:4 inputs. • Support 8-bit, 10-bit, 12-bit input processing. • Support 4:4:4, 4:2:2, 4:2:0 format inputs. • Support EDID settings. • Support full and limited color ranges. • Support HDCP 2.2, downward compatible. • Support deinterlacing processing. • Support embedded audio (24-bit/48 kHz, dual channel). • Support custom resolutions. – Maximum width: 4096 pixels – Maximum height: 4096 pixels • Can be selected alternatively with 12G-SDI input 7, 8, 15, 16.
	12G-SDI	16	• Each supports up to 4K×2K@60Hz 10-bit 4:2:2 inputs. • Support ST-2081 (6G), ST-2082 (12G), ST-424 (3G), and ST-292 (HD) inputs. • Compatible with HD-SDI, 3G-SDI and 6G-SDI • Support YCbCr color space settings. • Support interlaced inputs. • Support embedded audio (24-bit/48 kHz, dual channel).

Area	Connector	Qty	Description
OUTPUT (HDMI 2.0-12G SDI)	HDMI 2.0	2	• Each supports up to 4K×2K@60Hz 8-bit 4:4:4 outputs. • Support 8-bit and 10-bit output processing. • Support 4:4:4 and 4:2:2 format outputs. • Support YCbCr and RGB color space settings. • Support for interlaced signal output • Support embedded audio (24-bit/48 kHz, dual channel). • Support custom resolutions. – Maximum width: 4096 pixels – Maximum height: 4096 pixels
	12G-SDI	2	• Compatible with HD-SDI, 3G-SDI and 6G-SDI • Support interlaced outputs. • Copy the output content from 2x HDMI 2.0. • Support embedded audio (24-bit/48 kHz, dual channel).
MVR (HDMI 2.0-12G SDI)	HDMI 2.0	1	• Each supports up to 4K×2K@60Hz 8-bit 4:4:4 outputs. • Support separate timing configuration. When the timing matches the main output 1 timing, output via AUX is supported.
	12G-SDI	1	
AUX (HDMI 2.0-12G SDI)	HDMI 2.0	4	• Each supports up to 4K×2K@60Hz 8-bit 4:4:4 outputs. • Support output of input sources, PVW, PGM, Multiviewer, and Clean Feed. • Support embedded audio (24-bit/48 kHz, dual channel).
	12G-SDI	8	
CONTROL	USB 3.0 (TYPE-C)	2	• USB 3.0 (TYPE-C) 1 – Connect to devices like USB drives for storage, firmware update, and log export. – Connect an external keyboard. • USB 3.0 (TYPE-C) 2 – Support selection of streaming output resolution, up to 1080p@60Hz. – Connect to devices like USB drives for storage, firmware update, and log export. – Connect an external keyboard.
	LTC (Reserved)	2	1x LTC IN, 1x LTC OUT • IN: Connect to an external LTC-format timecode input device. • OUT: LTC time code output

Area	Connector	Qty	Description
	GENLOCK	2	1x GENLOCK IN, 1x GENLOCK OUT A pair of Genlock signal connectors. Support Bi-Level and Tri-Level. • IN: Accept the sync signal. • OUT: Loop through the sync signal. Genlock signal supports frame rate range from 23.98 Hz to 60 Hz.
	ETHERNET	2	2x Gigabit Ethernet ports • Connect to the control PC software (reserved). • Support network Tally. • Support PTZ control.
AUDIO	XLR/TRS (IN)	2	2x Audio input connectors • XLR: 24-bit/48 kHz, mono • TRS: 24-bit/48 kHz, stereo
	XLR (OUT)	2	2x Audio output connectors 24-bit/48 kHz, mono, defaulting to output the left and right channels of PGM audio
	PHONES OUT	1	1x 6.35 mm TRS (24-bit/48 kHz, stereo) monitoring output connector Used for monitoring or transmitting unbalanced stereo audio signals
	Dante	2	2x Digital network audio connectors for input and output • RJ45 connector • Support network audio input and output. Support 64x64 channel audio routing.
LIGHT	-	1	Connect the gooseneck lamp.
Power connector	100-240V~, 50/60Hz	1	An AC power input

5 Device Operations

About This Chapter

This chapter introduces you to the buttons and system menus of the 4K live production switcher, including how the buttons are used and how the menus are accessed and the available functions and parameters.

Overview

- Button Operations

5.1.2 Button-Menu Sync

Enable the **Button-Menu Sync** toggle in **Advanced** > **Preferences**. When the LCD menu is open, operating certain buttons on the panel will cause the LCD menu to jump to the corresponding page. For a detailed list of buttons that support this feature, see the table below.

Table 5-1 Button-menu sync list

Button Area	Button Operation
Audio input and audio output	• Rotate the input/output volume knob. • Press the **AFV/ON** button. • Press the **SOLO** button.
Main program source switching	Press the input source/SuperSource/internal source button.
Comprehensive control-keyer	Press the keyer list button.
	Press the keyer source button.
	Operate the joystick.
Comprehensive control-camera	Press the configured camera button.
	Press the camera operation button.

	Operate the joystick.
Comprehensive control-Multiviewer	Press the MVR button.
	Press the MVR window button.
	Press the input source list button.
Transition control	Press the **STREAM** button.
	Press the **REC** button.
	Press the **MIX** button.
	Press the **WIPE** button.
	Press and hold the **WIPE** button.
	Press the **DIP** button.
	Press the **TEST** button.
	Press the **FTB** button.
Auxiliary function shortcuts	Press the **FN1** to **FN 6** buttons.

- LCD Menu Operations

Note:

All menu pictures shown in this chapter are for illustration purposes only. Actual product may vary.

5.1 Button Operations

5.1.1 Menu Navigation

Utilize the menu knob and BACK button to navigate the LCD menu options and configure relevant parameters.

Figure 5-1 Menu setup

- Knob: Press or rotate the knob to navigate through and confirm the LCD menu options.
  - Press: Confirm the selection.
  - Rotate: Select the menu items or adjust the parameter value.
- BACK button: Press to return to the previous menu level or cancel the current operation.

5.1.2 Joystick

Precisely control the keyer position, size, and camera direction and focus.

Figure 5-2 Joystick

- Omnidirectional tilt: Control the keyer positioning or camera pan/tilt direction.
- Rotate (L/R): Adjust the keyer scaling or camera zoom.
- Top Button: Instantly reset the current keyer to its native aspect ratio, proportionally scales it to fit the full screen, and centers the display.

5.1.3 Audio Input

Press the audio input button to adjust the audio mixing status; rotate the knob to adjust the audio volume.

Figure 5-3 Audio input area

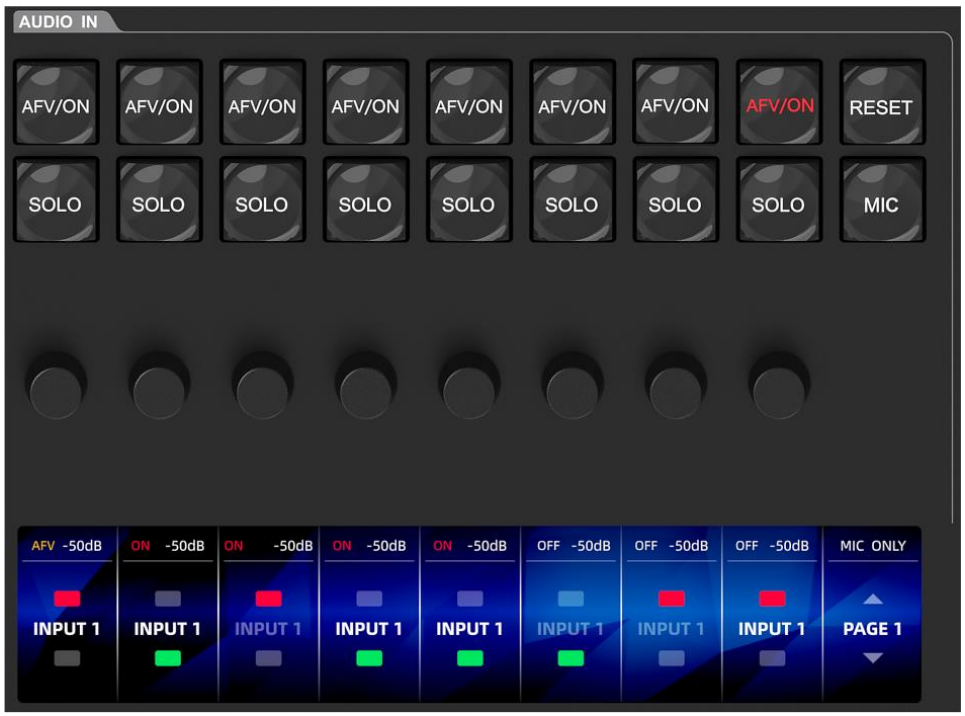


Table 5-2 Audio input button and indicator description - AUDIO IN

Button/ Knob	Button Description	Indicator	Indicator Description
Volume knob	Adjust the mixing volume of the input source, which is displayed in real time on the long LCD screen. • Volume+: Rotate clockwise. • Volume-: Rotate counterclockwise.	-	-
AFV/ON (Audio mixing switch)	Press to cycle through audio mixing states: Off (default), AFV, On.	Yellow	AFV is on, but the video source is not displayed on PGM.
		Red	Mixing output to PGM in progress
		White backlight	No audio output
SOLO	Monitor the post-mixed PGM audio from multiple channels.	Green	Enabled, and audio output in progress
		White backlight	Disabled
RESET	Reset all input audio mixing states.	White	Pressed

Button/ Knob	Button Description	Indicator	Indicator Description
		White backlight	Released
MIC	Press to toggle the filter switch of the source list on the long LCD screen below. It is off by default. • On: Only the sources with Mic input are displayed on the long LCD screen. • Off: All sources are displayed on the long LCD screen.	Green	Filter on
		White	Filter off

Note

At most one SOLO can be turned on at the same time. At this time, all audio mixing states are changed to off. When SOLO is turned off, the audio mixing switch (AFV/ON button) returns to the state before SOLO is turned on.

Long LCD Screen Description

Figure 5-4 Long LCD screen description - AUDIO IN

- Display the audio source list combined with video source list, supporting filtering of pure microphone sources by using the MIC button.
- Display the audio mixing states: Off (default), AFV, On.
- Display the audio level values.
- Display the audio tally states:
  - The SuperSource and media source do not support audio.
  - Mixing off: The audio mixing state text and level value text are white.
  - AFV on, video source not used to create a keyer: The audio mix state text is yellow.
  - Mixing output to PVW: The audio mixing state text is green.
  - Mixing output to PGM: The audio mixing state text is red.

5.1.4 Main Program Source Switching

The input source bound to each button can be viewed through the long LCD screen above. Press the input source button to switch the BKGD source.

Figure 5-5 Input source area - SOURCE

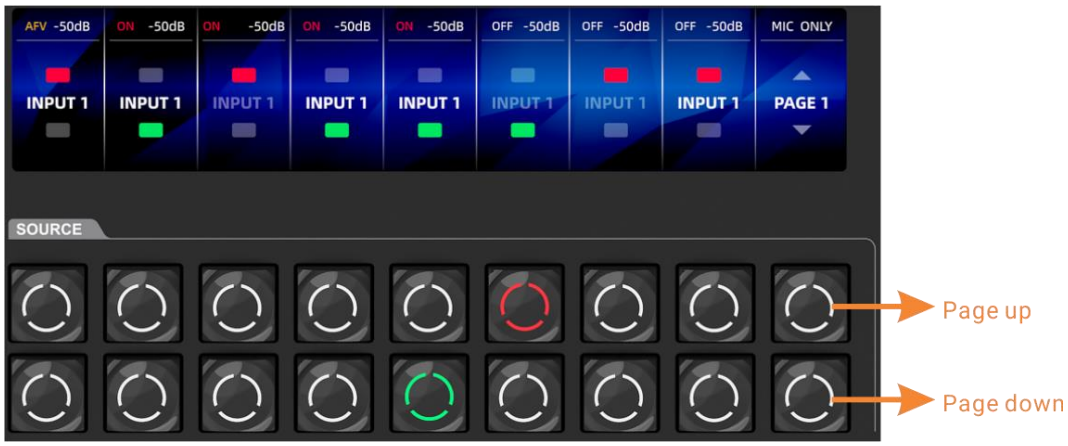


Table 5-3 Input source button and indicator description – SOURCE

Button	Button Description	Indicator	Indicator Description
Input source buttons	Quickly switch the BKGD source to the one bound to the button.	Red	The input source is currently being displayed in PGM and is being used by the selected BKGD.
		Green	The input source is currently being displayed in PVW and is being used by the selected BKGD.
		Flashing	The input source is bound but not displayed on the current page.
Page buttons (last column)	• Press (released): Page up or down the input source list by one page. • Hold down (duration ≥ 0.3s): Continuously page up or down the input source list. • Hold down (released): Restore the input source list to the page before pressing.	White	Pressed
		White backlight	Released

Long LCD Screen Description

Figure 5-6 Long LCD screen description - SOURCE

- The input audio list and the input source list can be paged simultaneously using the page button.
- When the MIC button filter is turned on, the SOURCE area button operations are invalid.
- Source name: Display the source state, distinguishing between signal (green), no signal (white), overload (red), unavailable (grey).
- Tally state:
  - Output to PGM: The input source state is red.
  - Output to PVW: The input source state is green.

5.1.5 Audio Output

Rotate the PGM/STREAM/PHONE knob to adjust the output audio volume.

Figure 5-7 Audio output area

- Volume+: Rotate clockwise.
- Volume-: Rotate counterclockwise.

5.1.6 Auxiliary Functions

The auxiliary function area includes number buttons, FN buttons, back button and confirmation button.

Figure 5-8 Auxiliary function area

Table 5-4 Auxiliary function button and indicator description – SHORTCUT

Button	Button Description	Indicator	Indicator Description
	The button is active when the input box in the LCD menu interface is activated. Press to move the cursor one space to the left and delete the previous character. If all the input content is selected, all content will be deleted.	Green	There is an activated input box in the LCD menu interface.
		White backlight	There is no activated input box in the LCD menu interface.
	When the input box in the LCD menu interface is activated, confirm the content and then exit the activation state.	Green	Always on
Number buttons (0 to 9)	• Number input: When the numeric input box is activated in the LCD menu interface, the numeric buttons are used to enter numbers. • Quick selection: When the LCD menu interface is displayed and the numeric input box is not activated, the number buttons serve as shortcut selection buttons for the LCD menu. Pressing a number button selects the menu option in the LCD menu interface that corresponds to the focused item in the menu list (e.g., number button 1 corresponds to the first menu option in the menu list). If neither situation is present, pressing the number button has no effect.	Green	An input box is activated in the LCD menu interface, or the focus is on the numeric parameter value.
		White backlight	Neither situation is present.
Shortcut buttons (FN 1 to FN 6)	Set each button's bound function in **Advanced** > **FN**, allowing binding to sync and capture functions. Pressing the button will navigate to the corresponding LCD menu interface.	Green flashing	Capturing in progress
		White	Not capturing
		Green	Sync enabled/sync failed/function bound
		White backlight	Sync disabled
		Off	Function unbound

5.1.7 Comprehensive Control

The comprehensive control area includes function switching buttons of key, key editing, preset, macro, output, camera, MVR, play, expansion and function operation buttons.

Figure 5-9 Comprehensive control area

Table 5-5 Button and indicator description – FUNCTION

Button	Button Description	Indicator	Indicator Description
Function switching area buttons	The 1st row buttons include function buttons for KEY, KEY EDIT, PRESET, MACRO, OUTPUT, CAM, MVR, PLAY, and EXP. Press (on release): Switch the corresponding operation area buttons (rows 2 and 3) to the selected function.	White	The function operation buttons are currently switched to this function.
		White backlight	The function operation buttons are not switched to this function.
KEY	Direct Control (default): Control the activation status of the keyer, with transition state switching not involved. Used in conjunction with the function operation buttons. • Row 2: Represent the keyer list on PGM. • Row 3: Represent the keyer list on PVW.	Red (function operation area)	Keyer is enabled on PGM.
		Green	Keyer is enabled on PVW.
		White backlight	Keyer is not enabled.
	Follow Transition: Control the activation status of the keyer and set the switching state for the next transition. Used in conjunction with the function operation buttons. • Row 2: Toggle the keyer on or off on PGM. • Row 3: Toggle whether the keyer will be switched in the next transition.	Red (function operation area)	Row 2: Keyer is enabled on PGM.
		Green	Row 3: Keyer is set to be switched in the next transition.
		White backlight	• Row 2: Keyer is disabled on PGM. • Row 3: Keyer will not be switched in the next transition.

Button	Button Description	Indicator	Indicator Description
KEY EDIT	Edit the currently selected keyer. Used in conjunction with the function operation area buttons. • Row 2: Display the list of keyers (excluding BKGD). Press to toggle the selection state of a keyer. By default, the most recently modified keyer is selected. Multiple selections are not supported. When a keyer is selected on the current page, its position and size can be adjusted using the joystick. • Row 3: The first eight buttons represent the input source list. Press to change the source for the selected keyer. The 9th button is the page turn button. Clicking it switches to the next page. It also supports a long press for temporary page switching.	Green	• Row 2: Keyer is selected. • First 8 buttons in row 3: Source is used by the selected keyer.
		Green (flashing)	First 8 buttons in row 3: Source is used but not on the current page.
		White	9th button in row 3: Pressed
		White backlight	• Row 2: Keyer is not selected. • First 8 buttons in row 3: Source is not selected and used • 9th button in row 3: Released
PRESET	Display the preset name and state, and allow loading presets into PVW or PGM, saving, or deleting presets. Used in conjunction with function operation area buttons. • First 7 buttons in row 2 and 3: Represent the preset list (content identical in both rows). Press the button in row 2 to load a preset into PGM, while press the button in row 3 to load a preset into PVW. • 8th buttons in row 2 and 3: Indicate the preset save and delete functions. Press the button in row 2 to enable or disable the save function, while press	Red	First 7 buttons in row 2: Preset is loaded into PGM.
		Green	First 7 buttons in row 3: Preset is loaded into PVW.
		Yellow (flashing at 0.5 second intervals)	8th buttons in row 2 and 3: Enter the preset save or delete state.
		White	9th buttons in row 2 and 3: Press to turn pages.
		White backlight	• First 7 buttons in row 2 and 3: Preset is not loaded. • 8th buttons in row 2 and 3: Not in save or delete state

Button	Button Description	Indicator	Indicator Description
	the button in row 3 to enable or disable the delete function. • 9th buttons in row 2 and 3: Indicate the page-turning function. Press the button in row 2 to page up in the preset list, while press the button in row 3 to page down.		
MACRO	Reserved	-	-
OUTPUT	Control or select the output signal. Used in conjunction with function operation area buttons. • First 8 buttons in row 2: Represent all output connector list, including OUT 1, OUT 2, AUX 1 to 12. • Press to toggle selection, and multiple selections not allowed. • 9th button in row 2: Control the page-turning for output connectors. • First 8 buttons in row 3: Represent selectable sources for output connectors, including PGM, PVW, input sources, media, etc. • 9th button in row 3: Control the page-turning for sources.	Green	First 8 buttons in row 2: Output connector is selected. First 8 buttons in row 3: Source is selected.
		Green (flashing)	Source is used but not on the current page.
		White	• 9th button in row 2: Pressed • 9th button in row 3: Pressed
		White backlight	• First 8 buttons in row 2: Output connector is not selected. • First 8 buttons in row 3: Source is not selected. • 9th button in row 2: Released • 9th button in row 3: Released
CAM	Add PTZ cameras and save camera presets. Used with function operation area buttons. • First 8 buttons in row 2: Represent the added cameras. Press to toggle the camera's selected state. • 9th button in row 2: Control the page-turning function. • 5~8th buttons in row 3: Load the presets 1 to 4,	Green	First 8 buttons in row 2: Camera is selected.
		Flashing (yellow)	9th button in row 3: Camera preset is being saved.
		White	• 9th button in row 2: Pressed • 5~8th buttons in row 3: Pressed
		White backlight	• First 8 buttons in row 2: Camera is not selected. • 9th button in row 2:

Button	Button Description	Indicator	Indicator Description
	allowing adjustment of camera parameters (focus, direction) with the joystick. • 9th button in row 3: Save a camera preset.		Released • 5~8th buttons in row 3: Released
MVR	Display and control the MVR windows. Used with function operation area buttons. • First 8 buttons in row 2: Represent the MVR windows (1~N, where N is the maximum number of windows). • Press to toggle the window's selected state. When selected, the window flashes. • First 8 buttons in row 3: Represent the source list supported by MVR. Press to select the source for the window. • 9th button in row 2: Press to page up. • 9th button in row 3: Press to page down.	Green	• First 8 buttons in row 2: MVR window is selected. • First 8 buttons in row 3: Source is selected.
		White	• 9th button in row 2: Pressed • 9th button in row 3: Pressed
		White backlight	• First 8 buttons in row 2: MVR window is not selected. • First 8 buttons in row 3: Source is not selected. • 9th button in row 2: Released • 9th button in row 3: Released
PLAY	Reserved	-	-
EXP	Change the buttons in the current area to display the BKGD source list. It supports independent page scrolling, which does not affect the page navigation of the source list on the left.	Red	The input source is currently displayed on PGM and is in use by the selected BKGD.
		Green	The input source is currently displayed on PVW and is in use by the selected BKGD.
		Flashing	The input source is bound but not displayed on the current page.
		White backlight	The input source is not selected.

Note

For function switching area buttons:

- Press and hold (≥ 0.3s): Temporarily switch the operation area to this function.
- Press and hold (released): Restore the operation area to the function prior to pressing.

For function operation area buttons:

- Press and hold page-turning button (≥ 0.3s): Temporarily switch the operation area to this function.
- Press and hold page-turning button (released): Restore the operation area to the function prior to pressing.

Long LCD Screen Description

Figure 5-10 Long LCD screen – keyer (follow transition)

- Row 2: Keyer state on PGM
  - Red: Keyer is enabled on PGM.
  - White: Keyer is not enabled on PGM.
- Row 3: Keyer transition follow state
  - Green: Keyer will follow next transition.
  - White: Keyer will not follow next transition.

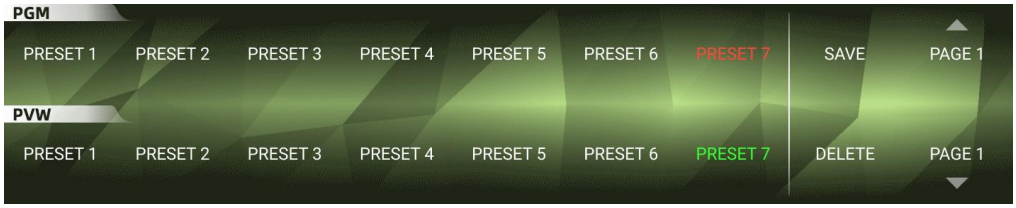
Figure 5-11 Long LCD screen – keyer (direct control)

- Row 2: Keyer list on PGM
  - Red: Keyer is enabled on PGM.
  - White: Keyer is not enabled on PGM.
- Row 3: Keyer list on PVW
  - Red: Keyer is enabled on PVW.
  - White: Keyer is not enabled on PVW.

Figure 5-12 Long LCD screen - key edit

- Row 2: Keyer selection state
  - Green: Selected
  - White: Not selected
- Row 3: Keyer source state
  - Signal state: White (signal accessed); dim white (no signal); red (overload)
  - Selection state: Green (selected); non-green (not selected)
  - Selection state takes precedence over signal state.
- 9th in row 3: Current page number

Figure 5-13 Long LCD screen - preset



- Saving state
  - White: Saved
  - Dim white: Not saved
- Loading state
  - Red (row 2): Loaded to PGM
  - Green (row 3): Loaded to PVW
  - White: Not loaded
  - Loading state takes precedence over saving state.

Figure 5-14 Long LCD screen - output

- Row 2:
  - Green: Selected
  - White: Not selected
- Row 3:

- Signal state: White (signal accessed); dim white (unavailable/no signal); red (overload)
- Selection state: Green (selected); non-green (not selected)

Figure 5-15 Long LCD screen - camera

- Row 2:
  - Green: Selected
  - White: Not selected
- Row 3:
  - White: Existing camera presets
  - Yellow (flashing): In saving

Figure 5-16 Long LCD screen - Multiviewer

- Row 2:
  - Green: Selected
  - White: Not selected
- Row 3:
  - Signal state: White (signal accessed); dim white (unavailable/no signal); red (overload)
  - Selection state: Green (selected); non-green (not selected)

Selection state takes precedence over signal state.

For the lock and wipe buttons in the transition control area, they can be used in conjunction with the function operation area buttons as shown in the table below.

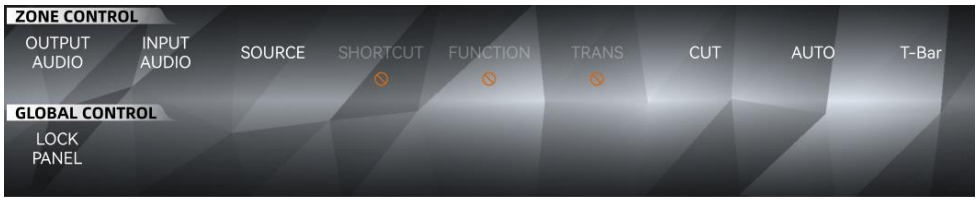
Table 5-6 Button and indicator descriptions - Lock/Wipe

Button	Button Description	Indicator	Indicator Description
Lock	Press to toggle lock on or off (default).	Orange	Locked
		White backlight	Not locked

Button	Button Description	Indicator	Indicator Description
	Used conjunction with the corresponding buttons in rows 2 and 3 of the function operation area will lock the respective functions. Lockable areas include input audio, output audio, input sources, auxiliary functions, comprehensive control, transition control, cut, auto, T-Bar, and other panel operations.		
Wipe	Used conjunction with the corresponding buttons in rows 2 and 3 of the function operation area. • Row 2: Press to select a pattern. • Row 3: Press to switch patterns.	Green	Selected
		White backlight	Not selected

Long LCD Screen Description

Figure 5-17 Long LCD screen - lock



Display a list of lockable areas.

- White: Not locked
- Grayed + lock icon: Locked

Figure 5-18 Long LCD screen - wipe

Display pattern items and parameter options.

- Green: Selected
- White: Not selected

5.1.8 Transition Control

The transition control area includes buttons for locking, live streaming, recording, and transition effects (mix, wipe, dip, etc.), as well as transition preview, test pattern, FTB, cut, auto, and T-Bar.

Figure 5-19 Transition control area

Table 5-7 Button and indicator descriptions - transition control

Button	Button Description	Indicator	Indicator Description
LOCK	• Pressed: The long LCD displays the lock page. • Released: Return to original display.	Green	Locked items
		White backlight	No locked items
STREAM	Toggle RTMP streaming on/off.	Green	Enabled
		White backlight	Disabled
REC	Toggle recording on/off.	Green	Enabled
		White backlight	Disabled
MIX	Set the next transition effect to mix.	Green	Selected
		White backlight	Not selected
WIPE	Set the next transition effect to wipe.	Green	Selected
		White backlight	Not selected
DIP	Set the next transition effect to dip.	Green	Selected
		White backlight	Not selected
DVE	Set the next transition effect to DVE.	Green	Selected
		White backlight	Not selected

Button	Button Description	Indicator	Indicator Description
STINGER	Reserved	-	-
PREV TRANS	Toggle transition effect preview on/Off. • On: PVW of both the Multiviewer interface and the main output match the PGM screen precisely. During T-Bar operation, both display the transition effects between PVW and PGM, reverting to PGM once complete. • Off: PVW of the Multiviewer interface shows PVW content. During transition, the transition effect is displayed on PGM.	Green	Enabled
		White backlight	Disabled
TEST	Toggle test pattern on/Off. • On: The LCD menu displays the test pattern settings menu. • Off: The LCD remains on the test pattern settings menu. **Note**: The test pattern and FTB are mutually exclusive and cannot be active simultaneously.	Green	Enabled
		White backlight	Disabled
FTB	Toggle FTB on/Off. **Note**: The test pattern and FTB are mutually exclusive and cannot be active simultaneously.	Red (flashing)	Enabled
		White backlight	Disabled
CUT	Press to switch the PVW to PGM without effects.	On	Pressed
		Red backlight	Released
AUTO	Press to switch the PVW to PGM using the selected effect.	Green flashing	In switching
		Green backlight	Not in switching
T-Bar	Manually push the T-Bar up or down to transition between PVW and PGM with effects.	-	LED indicates transition progress.

5.1.9 Button-Menu Sync

Enable the **Button-Menu Sync** toggle in **Advanced** > **Preferences**. When the LCD menu is open, operating certain buttons on the panel will cause the LCD menu to

jump to the corresponding page. For a detailed list of buttons that support this feature, see the table below.

Table 5-8 Button-menu sync list

Button Area	Button Operation
Audio input and audio output	• Rotate the input/output volume knob. • Press the **AFV/ON** button. • Press the **SOLO** button.
Main program source switching	Press the input source/SuperSource/internal source button.
Comprehensive control-keyer	Press the keyer list button.
	Press the keyer source button.
	Operate the joystick.
Comprehensive control-camera	Press the configured camera button.
	Press the camera operation button.
	Operate the joystick.
Comprehensive control-Multiviewer	Press the MVR button.
	Press the MVR window button.
	Press the input source list button.
Transition control	Press the **STREAM** button.
	Press the **REC** button.
	Press the **MIX** button.
	Press the **WIPE** button.
	Press and hold the **WIPE** button.
	Press the **DIP** button.
	Press the **TEST** button.
	Press the **FTB** button.

Auxiliary function shortcuts	Press the **FN1** to **FN 6** buttons.

5.2 LCD Menu Operations

5.2.1 Home Screen

After the device is powered on, the home screen showing device related information is displayed.

Figure 5-20 Home screen

Table 5-9 Home screen descriptions

No.	Area	Description
1	Status bar	• S16: Device model • REC: Recording in progress • ON AIR: Live streaming in progress • FTB: Screen blacked out • Test Pattern: Test pattern displayed • : Panel locked. The operations to input audio area, output audio area, input source area, auxiliary function area, comprehensive control area, transition control area, and device panel are not allowed. • 192.168.100.100: Device IP address. For device communication settings, please refer to 5.2.12.1 Communication.
2	Multiviewer	Displays the monitoring screen of PGM, PVW, input source, recording, live streaming and audio.
3	LCD menu	Allows you to navigate through all levels of menu items and adjust the parameter settings. • When the Multiviewer mode is selected as Copy, there is only one monitoring screen, and the right side of the LCD is fixed to displaying the menus.

No.	Area	Description
		• When the Multiviewer mode is selected as Independent, there are two monitoring screens, and the right side of the LCD displays either the menus or the monitoring screen.
4	Rear panel connectors	Display the states of the device rear panel connectors. • Green: The connector is accessed with a signal. • White: The connector is not accessed with any signal. • Gray: The connector is unavailable. • Red: The connector is overloaded. The 12G-SDI output connector is always displayed white whether there is a signal or not (the connection status is not displayed).

5.2.2 Input

5.2.2.1 Configure Input Source

5.2.2.1.1 Select Connector Type

Select the desired input connector to enable the corresponding physical connector.

Prerequisites

None

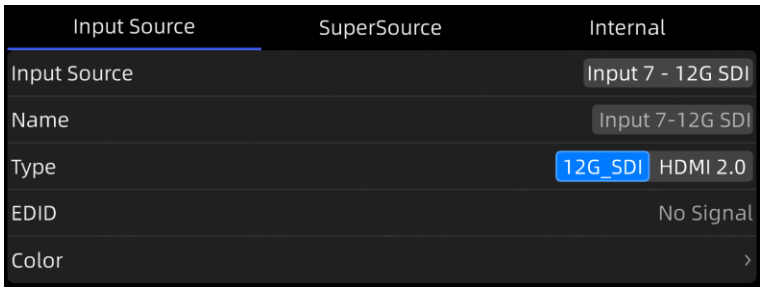
Notes

None

Menu Orientation

[Input > Input Source]

Menu Interface



Description

Parameter	Description
Input Source	Select the desired input source.

Parameter	Description
	Input 1 to 16 are available for selection. When the input source is selected as Input 7, Input 8, Input 15, or Input 16, you can choose between 12G-SDI and HDMI 2.0 input sources.
Name	Set a name for the input source or rename the input source.
Type	Select the input connector type. You can choose between 12G-SDI (default) or HDMI 2.0.

5.2.2.1.2 Configure InfoFrame Override

Set the override parameters of the input source so that the device can use them when performing some calculations. This operation will not change the original parameter values of the input source.

Prerequisites

An input source and connector type (HDMI 2.0) are selected. InfoFrame override settings are not available for the 12G-SDI connectors.

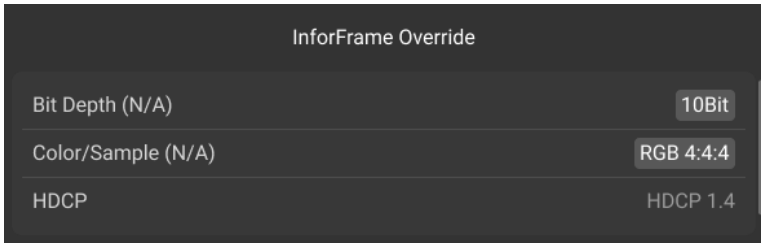
Notes

None

Menu Orientation

[Input > Input Source > InfoFrame Override]

Menu Interface



Description

Parameter	Description
Bit Depth (N/A)	Bit depth refers to the color information stored in an image. The options include **From Input**, **8Bit**, **10Bit** and **12Bit**.
Color/Sample (N/A)	The input color space and sampling rate The options include **From Input**, **RGB 4:4:4**, **YCbCr 4:2:2**, **YCbCr 4:2:0** and **YCbCr 4:4:4**.
HDCP	The options include **HDCP 1.4** and **HDCP 2.2**.

5.2.2.1.3 Configure Input EDID

Set the resolution and frame rate of the input connector. You can choose between standard resolution and custom resolution. You can also configure the Mac compatibility mode to solve the EDID incompatibility problem between the device and the Mac system.

Prerequisites

You have selected the input source and connector type.

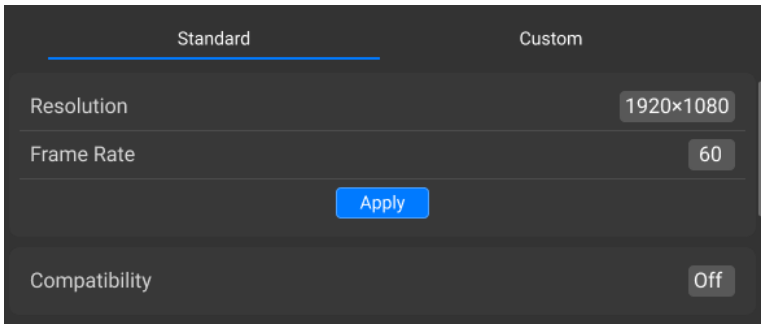
Notes

None

Menu Orientation

[Input > Input Source > EDID]

Menu Interface



Description

Type	Parameter	Description
Standard	Resolution	The commonly-used resolutions
	Frame Rate	The commonly-used frame rates (Hz)
	Compatibility	Turn on or turn Off the Mac system compatibility switch. • Off: The function is turned off. • Compatible with Mac: The function is turned on.
Custom	Width	The pixel width of the input source
	Height	The pixel height of the input source
	Frame Rate	The frames per second, in Hz
	Compatibility	• Off: The function is turned off. • Compatible with Mac: The function is turned on.

After the settings are done, click **Apply** to make them take effect.

5.2.2.1.4 Configure Input Color

Set the color parameters of an input connector so that the color effect can be applied to all the signal sources accessed from this connector.

Prerequisites

You have selected the input source and connector type.

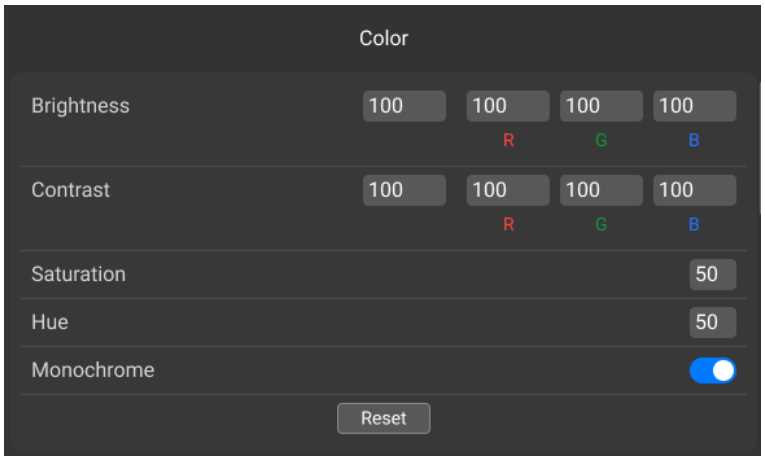
Notes

None

Menu Orientation

[Input > Input Source > Color]

Menu Interface



Description

Parameter	Description
Brightness	Brightness is the shading of lights in the image. RGB individual adjustments are supported.
Contrast	Contrast is the ratio of the luminance of the brightest color to that of the darkest color. RGB individual adjustments are supported.
Saturation	Saturation is the colorfulness of the image. The higher the contrast, the more vivid the image.
Hue	Hue is the relative degree of how bright or dark the image is.
Monochrome	Turn on or turn off the function. • : The function is turned on. The input image is displayed in black and white. • : The function is turned off.

5.2.2.2 Configure SuperSource

Combine and mosaic multiple input source images together to form a SuperSource.

Prerequisites

None

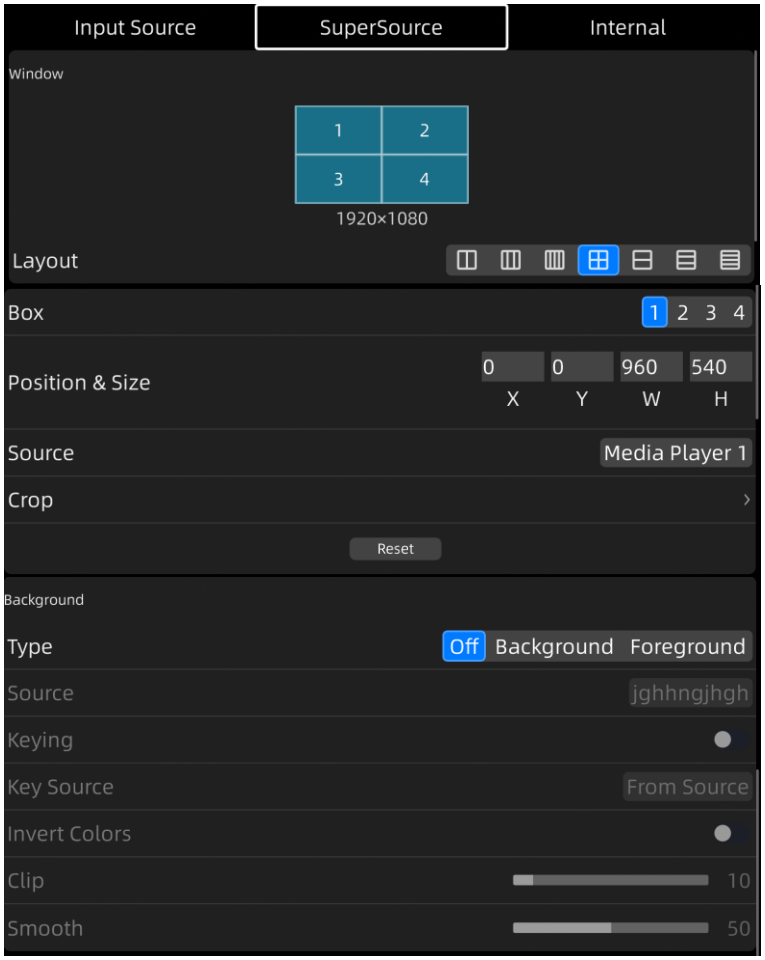
Notes

None

Menu Orientation

[Input > SuperSource]

Menu Interface



Description

Parameter	Description
Layout	Set the mosaic layout. At most 4 mosaic areas are supported and the layout options include , , , , , , and .
Box	Select the mosaic area.

Parameter	Description
Position & Size	Set the position and size of the selected mosaic area. • X: The horizontal starting position of the top left corner of the selected mosaic area in the mosaic source • Y: The vertical starting position of the top left corner of the selected mosaic area in the mosaic source • W: The horizontal size of the mosaic area • H: The vertical size of the mosaic area
Source	Select the input source for the selected mosaic area.
Crop	Set the position and size of the cropped area. • Status – : The function is turned on. – : The function is turned off. • Position & Size – X: The horizontal starting position of the top left corner of the cropped part upon the current input source – X: The vertical starting position of the top left corner of the cropped part upon the current input source – W: The horizontal size of the cropped area – H: The vertical size of the cropped area
Type	Set the background image type. The options include **Off**, **Background**, and **Foreground**. • Off: No background image is needed, and a transparent background will be displayed. • Foreground: The foreground is located above all other mosaic area boxes, which displays the other mosaic box images through keying technology and supports subsequent keying parameter adjustments. • Background: The background is located at the bottom of all other mosaic area boxes, which only supports input source replacement.
Source	Select the source that fills the background. This parameter is editable when **Type** is set to **Background** or **Foreground**.
Keying	Perform keying on the input source. This parameter is editable when **Type** is set to **Foreground**. • : The function is turned on. • : The function is turned off.
Key Source	Select the key out source for the foreground image. This parameter is editable when **Keying** is turned on.
Invert Colors	Invert the image colors. This parameter is editable when **Keying** is turned on. • : The function is turned on. • : The function is turned off.
Clip	Image content below the threshold will be removed completely. This parameter is editable when **Keying** is turned on.

Parameter	Description
Smooth	The softness of the transition area between the foreground and background The larger the value, the softer the transition. This parameter is editable when **Keying** is turned on.

5.2.2.3 Configure Internal Source

When no input source is connected to the device, use the device's built-in sources for configuration operations.

Prerequisites

None

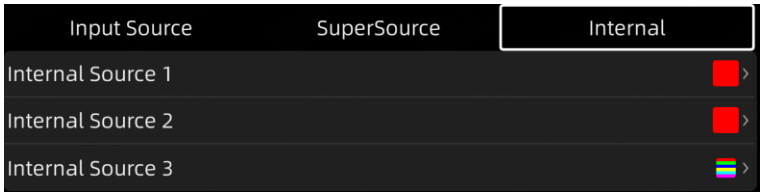
Notes

None

Menu Orientation

[Input > Internal Source]

Menu Interface



Description

Parameter	Description
Internal Source 1/2/3	The device supports three internal sources. • Internal Source 1/2: Support solid color patterns only. Configurable parameters include **Color** and **Brightness**. • Internal Source 3: Supports line patterns only. Configurable parameters include **Direction**, **Brightness**, and **Spacing**. – Direction: Can be set to **Horizontal** or **Vertical**. – Spacing: Options are **Auto** (evenly distributed line spacing) or a value from **1** to **8**.

5.2.3 Output

5.2.3.1 Configure Main Output

Set relevant parameters of main output.

Prerequisites

None

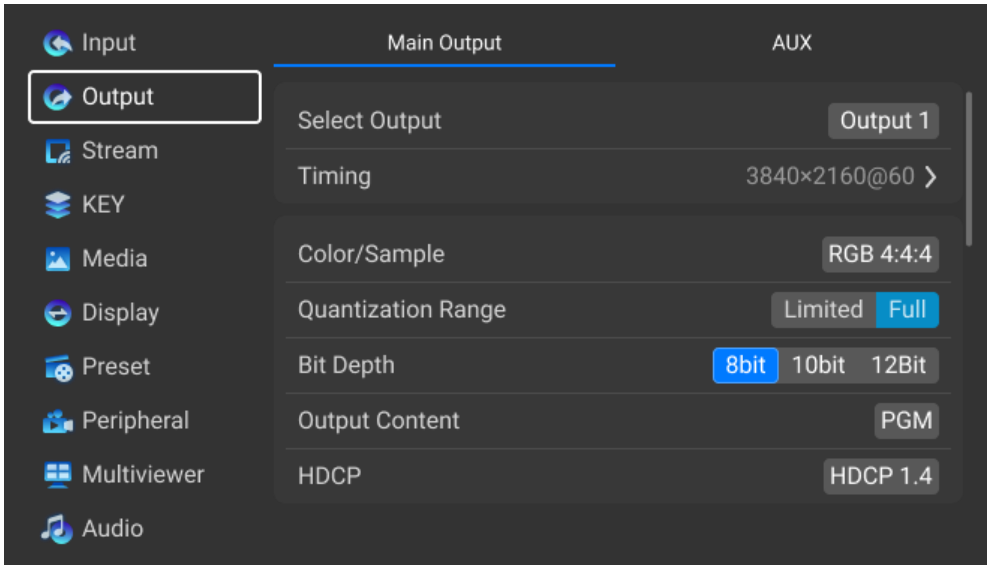
Notes

None

Menu Orientation

[Output > Main Output]

Menu Interface



Description

Parameter	Description
Select Output	Select the desired output connector.
Timing	Standard • Resolutions: The commonly-used resolutions • Frame Rate: The commonly-used frame rates (Hz) After the settings are done, click **Apply**.
	Custom • Width: The pixel width of the output image • Height: The pixel height of the output image • Frame Rate: The frames per second, in Hz After the settings are done, click **Apply**.
Color/Sample	Select the output color space and sampling rate. The options include RGB 4:4:4, YCbCr 4:2:2 and YCbCr 4:4:4.
Quantization Range	Select the output quantization range. The options include **Limited** and **Full**.
Bit Depth	Bit depth refers to the color information stored in an image. The options include **8bit**, **10bit**, **12bit**.

Parameter	Description
Output Content	Select the content output from the selected output connector. • PVW: Output PVW. • PGM: Output PGM. • Clean Feed 1: The image generated by removing the upstream key and downstream key based on PGM. • Clean Feed 2: The image generated by removing the downstream key based on PGM.
HDCP	Select the HDCP version of the output connector. The options include **HDCP 1.4** and **HDCP 2.2**.

5.2.3.2 Configure AUX Output

Select the output content from the AUX connector. The options include input source, media, SuperSource, PVW, PGM, Clean Feed, and MVR.

Prerequisites

None

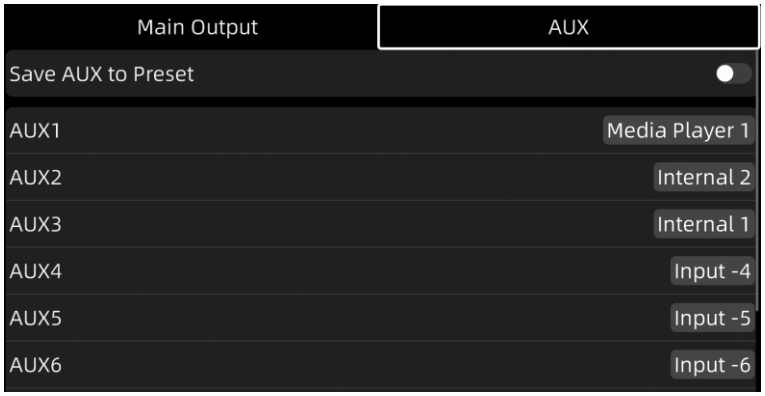
Notes

- The resolution of the AUX connector is always consistent with that of the main output.
- The default output content of AUX 1 to AUX 12 is Input 1 to Input 12.
- When the MVR resolution matches the main output 1 timing, output via AUX is supported.

Menu Orientation

[Output > AUX]

Menu Interface



Description

Parameter	Description
Save AUX to Preset	Turn on or turn off the function. • : The function is turned on. When a preset is saved, the output content for AUX 1 to 12 is saved simultaneously. • : The function is turned off.
AUX 1 to 12	Set the output content for the corresponding AUX.

5.2.4 Stream

5.2.4.1 Configure Basic Information

Multi-platform RTMP live streaming and live streaming settings are supported.

Prerequisites

None

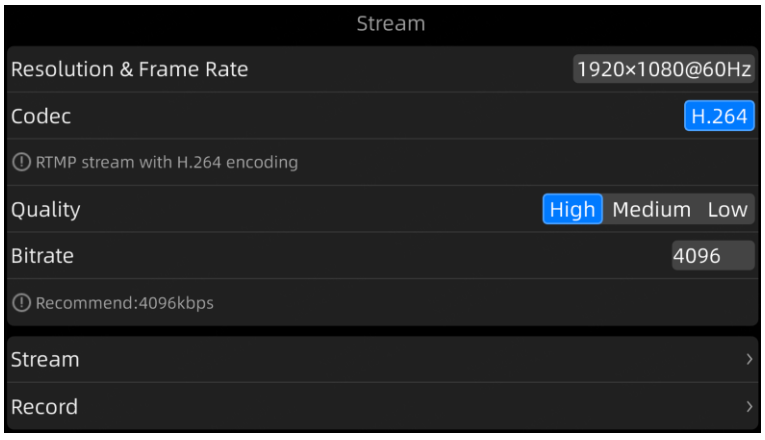
Notes

None

Menu Orientation

[Stream]

Menu Interface



Description

Parameter	Description
Resolution & Frame Rate	Set the resolution of the streaming signal. The options include **1280×720@30Hz**, **1280×720@60Hz**, **1920×1080@30Hz**, and **1920×1080@60Hz**.
Codec	Select the encoding format. Currently **H.264** and **YUY2** is supported.

Parameter	Description
	Note: The RTMP streaming is unavailable when **YUY2** is selected.
Quality	The image quality after encoding. The options include **High**, **Medium** (default), and **Low**.
Bitrate	The bitrate at which the encoded signal is pushed to the live streaming platform via RTMP. The streaming bitrate needs to be recommended to users based on the signal encoding quality and resolution.

5.2.4.2 Stream Management

Import the desired live stream platforms and view the relevant information.

Prerequisites

None

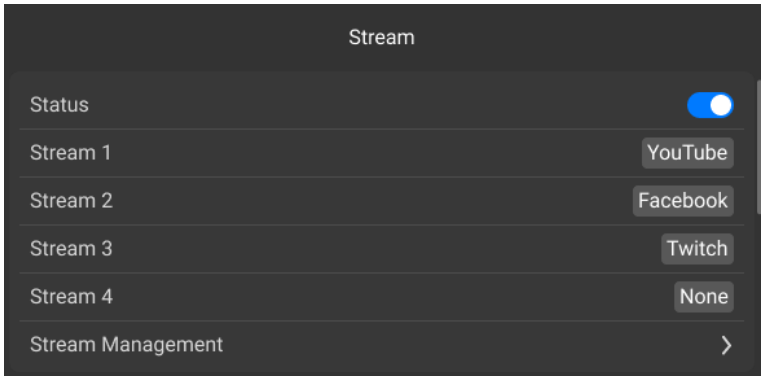
Notes

After the streaming is turned on, the live stream platforms and resolution cannot be modified, but other parameters can still be adjusted.

Menu Orientation

[Stream > Stream]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the streaming function. • : The function is turned on. • : The function is turned off.
Stream X	Select four desired stream platforms for Stream 1 to 4.
Stream Management	• Import the live stream platforms through the file (.csv/.xlsx/.xls) in the inserted USB drive.

Parameter	Description
	• The file path is: S16 > livestream > .csv/.xlsx/.xls. • The live stream platform information is as follows: – Stream Name: The live stream name – Platform Name: The platform name – Server Name: The server of the live stream platform – Server Address: The server address of the live stream platform – Stream Key: The streaming key of the live stream platform – Click **Delete** to delete the live stream platform.

5.2.4.3 Record Management

Save the recorded video files to local storage, supporting up to 2 channels of recording at the same time.

Prerequisites

None

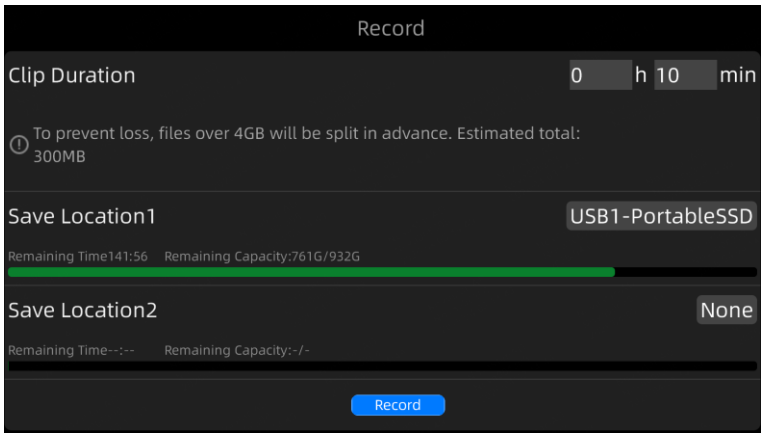
Notes

- During recording, **Clip Duration** and **Save Location** cannot be changed.
- Two save locations must be set to different storage paths.
- Ensure the USB drive has a capacity of at least 100 MB during the recording process.

Menu Orientation

[Stream > Record]

Menu Interface



Description

Parameter	Description
Clip Duration	Set the duration of the recording clip. Note: Files larger than 4 GB have poorer compatibility in playback software. Therefore, the recording will be automatically split into segments when a file reaches 4 GB.
Save Location	Set the storage path of the recorded files, with the remaining capacity of the selected storage device and the available recording time shown for user's reference.
Record	Click **Record** to start the recording.

5.2.5 KEY

5.2.5.1 Configure PGM Edit

Turn on or turn off the PGM editing function.

Prerequisites

None

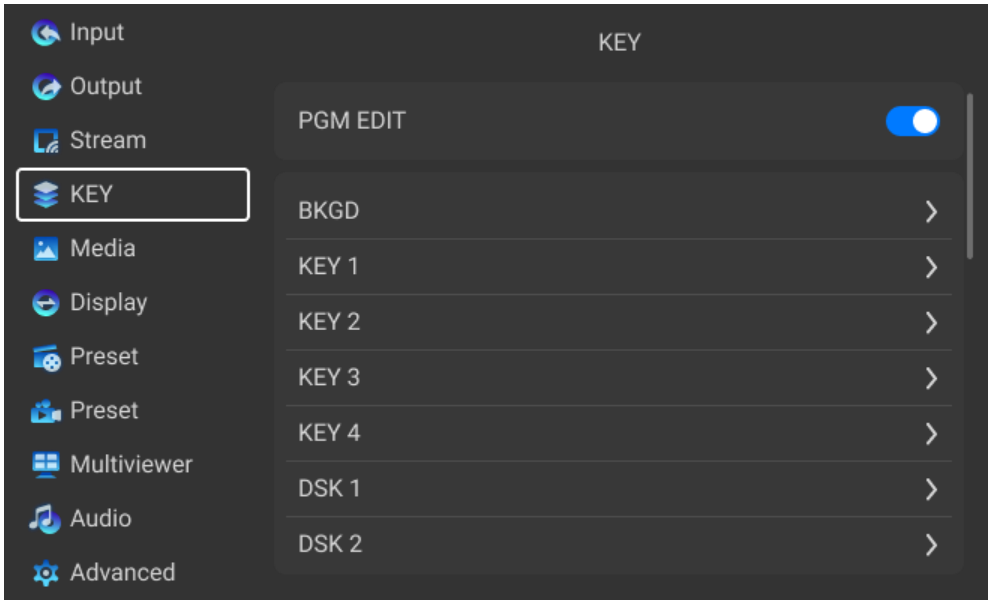
Notes

None

Menu Orientation

[KEY > PGM EDIT]

Menu Interface



Description

Parameter	Description
Configure PGM Edit	Turn on or turn off the PGM editing function. • : The function is turned on, and the keyer property settings are applied to the PGM keyers and are displayed in real time on the screen. • : The function is turned off, and the keyer property settings are applied to the PVW keyers.

5.2.5.2 Configure BKGD

Set the basic information of BKGD.

Prerequisites

None

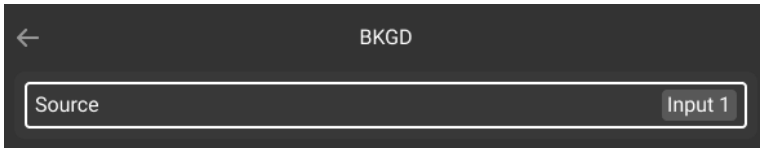
Notes

None

Menu Orientation

[KEY > BKGD]

Menu Interface



Description

Select the desired source for BKGD.

5.2.5.3 Configure KEY

5.2.5.3.1 Configure Basic Information

Set the basic information of the keyer.

Prerequisites

None

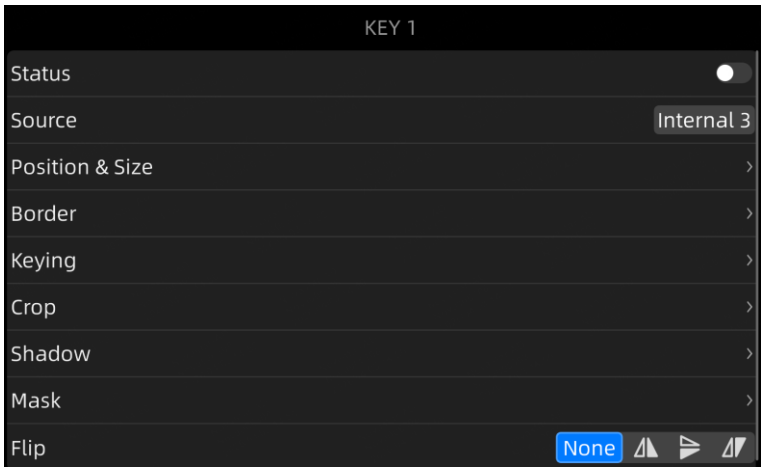
Notes

None

Menu Orientation

[KEY > KEY X]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the function. • : The function is turned on. • : The function is turned off.
Source	Select the keyer source. The options include input source, SuperSource, and media.
Position & Size	• Turn on or turn off the aspect ratio locking function. – : The function is turned on. – : The function is turned off. • Aspect Ratio: The ratio of the horizontal width to the vertical height of the keyer. The options include **4:3**, **5:4**, **16:9**, **16:10**, and **Custom**. • After modifying the aspect ratio, the keyer height remains unchanged and the device automatically calculates the width. • Position & Size: Set the keyer position and size. – X: The horizontal starting position of the keyer. The coordinates of the first pixel in the top left corner of the screen are (0,0). – Y: The vertical starting position of the keyer. The coordinates of the first pixel in the top left corner of the screen are (0,0) – W: The horizontal size of the keyer – H: The vertical size of the keyer • Reset: Restore the current keyer to its source (native) aspect ratio, proportionally scale it to fill the entire screen, and center the display.

5.2.5.3.2 Configure Borders

Set the borders of the keyer.

Prerequisites

None

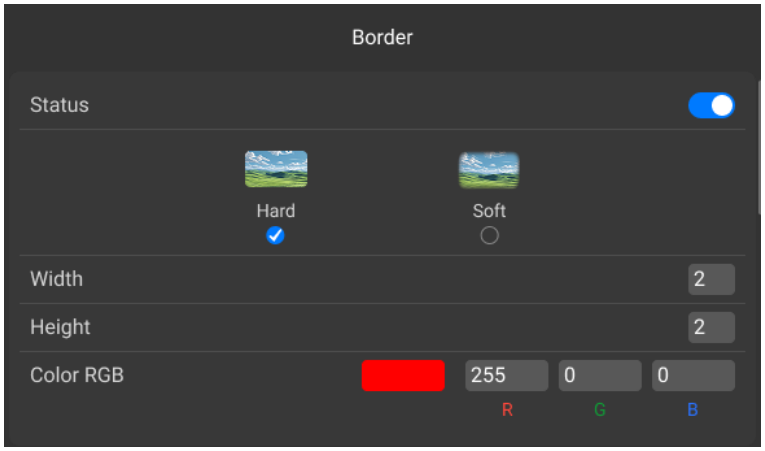
Notes

None

Menu Orientation

[KEY > KEY X > Border]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the keyer border function. • : The function is turned on. • : The function is turned off.
Type	Select the keyer border type. The options include **Hard** and **Soft**.
Width	Set the width of the left and right borders.
Height	Set the height of the top and bottom borders.
Color RGB	Set the color RGB values of the keyer borders. When **Soft** is selected as the border type, this parameter is unavailable.

5.2.5.3.3 Configure Keying

Perform keying on the keyer input source.

Prerequisites

The keyer is accessed with an input source.

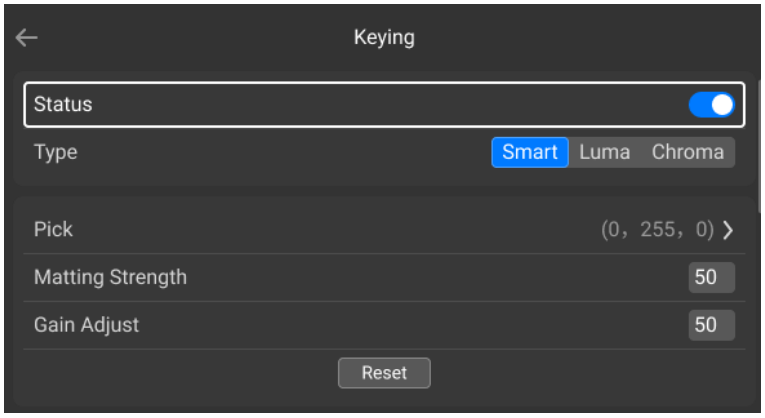
Notes

None

Menu Orientation

[KEY > KEY X > Keying]

Menu Interface



Description

Type	Parameter	Description
Public parameters	Status	Turn on or turn off the keying function. • : The function is turned on. • : The function is turned off.
	Type	The options include **Smart**, **Luma**, and **Chroma**. • Smart: Suitable for standard keying scenarios. This feature reduces the need for parameter adjustments, facilitating a more convenient and swift fulfillment of user requirements for image keying. • Luma: Suitable for application scenarios where the brightness of the background is significantly smaller than that of the foreground. The result of luma key is that the background becomes transparent and the foreground is keyed out. • Chroma: Suitable for application scenarios with a single background color, such as blue/green screen matting
Smart key parameters	Pick	The RGB values of the pick point • Config method 1: Click **Pick**, and then click the position to be picked in the input source image. • Config method 2: Set the RGB values. After the settings are done, click **Apply**. You can also adjust the following parameters to optimize the keying effect.

Type	Parameter	Description
	Matting Strength	Adjust the intensity with which the background is processed.
	Gain Adjust	Adjust the shadow or noise areas present in the foreground.
Luma key parameters	Key Source type	Select the desired source type. The options include input source, media, and SuperSource.
	Key Source	Select the desired keying source.
	Invert Colors	Turn on or turn off the function. • : The function is turned on. • : The function is turned off.
	Clip	Image content below the threshold will be removed completely.
	Smooth	Adjust the softness of the transition area between the foreground and background The larger the value, the softer the transition.
Chroma key parameters	Pick	The RGB values of the pick point • Config method 1: Click **Pick**, and then click the position to be picked in the input source image. • Config method 2: Set the RGB values. After the settings are done, click **Apply**. You can also adjust the following parameters to optimize the keying effect.
	Hue Clip	Adjust the hue range. The larger the value, the larger the removal area. The maximum value is the current value of Hue Ramp.
	Hue Ramp	Distinguish between the foreground and background.
	Saturation Clip	Distinguish between the foreground and background.
	Saturation Gain	Adjust the overall brightness of the image.
	Spill	Remove the overflow from the foreground image edges and semi-transparent areas
	Shadow	Remove the shadow areas.
	Highlight	Remove the highlight areas.

5.2.5.3.4 Configure Cropping

When there are black borders or unnecessary information on the input source, the crop function allows you to crop the input source and display the desired area to improve the utilization rate of the screen.

Prerequisites

The keyer is accessed with an input source.

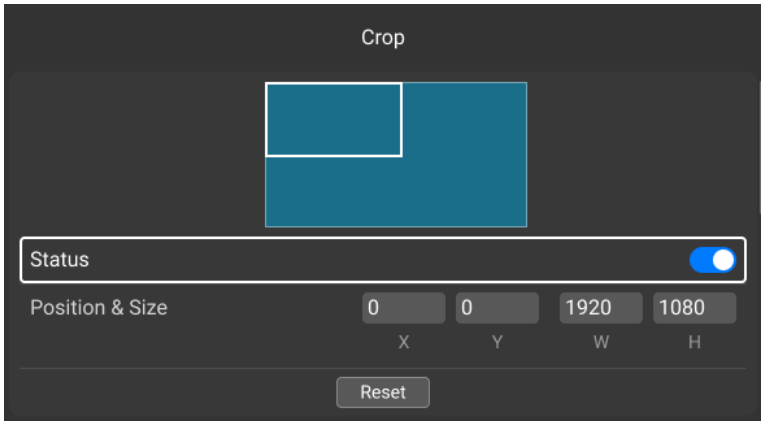
Notes

The input source status after cropping is the same as the original.

Menu Orientation

[KEY > KEY X > Crop]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the crop function. • : The function is turned on. • : The function is turned off.
Position & Size	Set the position and size of the selected mosaic area. • X: The horizontal start position of the cropped area relative to the original source • Y: The vertical start position of the cropped area relative to the original source • W: The horizontal size of the cropped area • H: The vertical size of the cropped area

5.2.5.3.5 Configure Shadow

Set the position, size, opacity, edge blur, and color of the keyer shadow.

Prerequisites

None

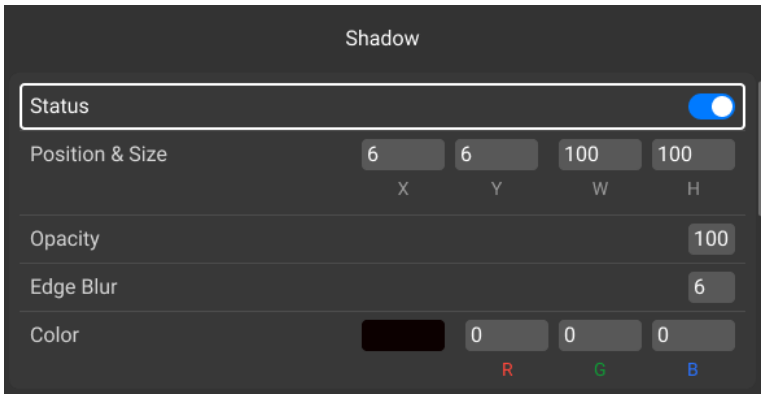
Notes

None

Menu Orientation

[KEY > KEY X > Shadow]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the shadow function. • : The function is turned on. • : The function is turned off.
Position & Size	Set the position and size of the shadow area. • X: The horizontal starting position of the shadow area The coordinates of the first pixel in the top left corner of the screen are (0,0) • Y: The vertical starting position of the shadow area The coordinates of the first pixel in the top left corner of the screen are (0,0) • W: The horizontal size of the shadow • H: The vertical size of the shadow
Opacity	Set the shadow opacity.
Edge Blur	Set how blurry the edges of the shadow are. The larger the value, the greater the blur.
Color	Set the shadow color.

5.2.5.3.6 Configure Mask

Set the mask-related parameters. The masked area will be transparent and invisible. The keyer resolution keeps unchanged.

Prerequisites

None

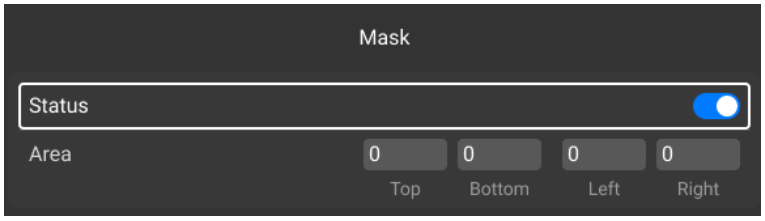
Notes

None

Menu Orientation

[KEY > KEY X > Mask]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the mask function. • : The function is turned on. • : The function is turned off.
Area	Set the size of the masked area. • Top: Set the masked area height from the top edge of the keyer. • Bottom: Set the masked area height from the bottom edge of the keyer. • Left: Set the masked area width from the left edge of the keyer. • Right: Set the masked area width from the right edge of the keyer.

5.2.5.3.7 Configure Flipping

Flip the content of the selected keyer horizontally, vertically, or both.

Prerequisites

None

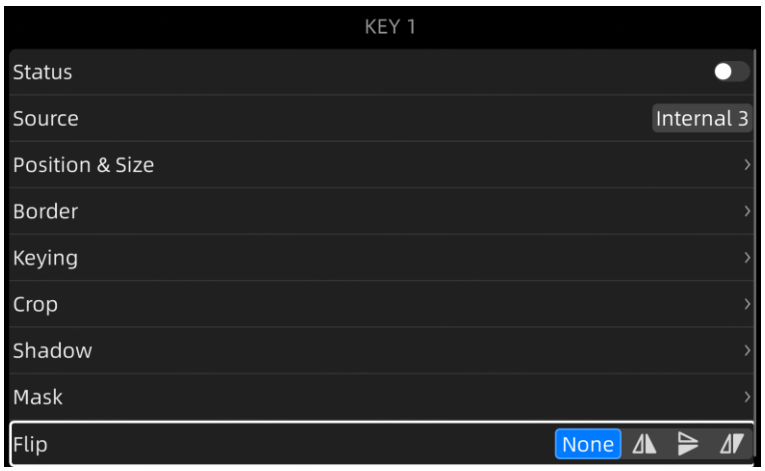
Notes

None

Menu Orientation

[KEY > KEY X > Flip]

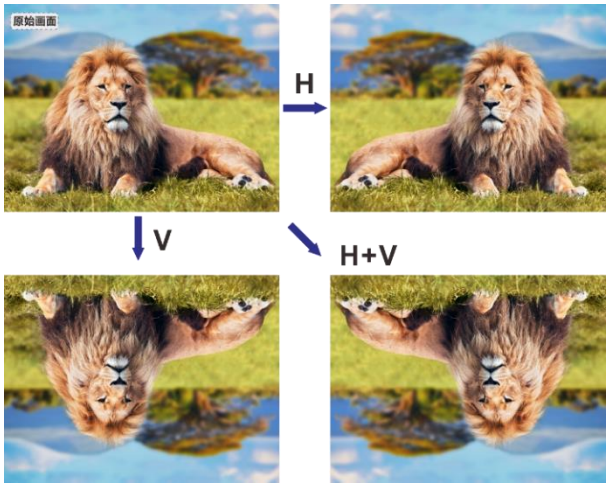
Menu Interface



Description

Parameter	Description
Flip	The method for flipping the keyer. • None: No flip. The keyer is displayed normally. • : Horizontal flip. The keyer is flipped horizontally. • : Vertical flip. The keyer is flipped vertically. • : Horizontal & vertical flip. The keyer is flipped both horizontally and vertically.

Effect Example



5.2.5.4 Configure DSK

Set the basic information of DSK.

Prerequisites

None

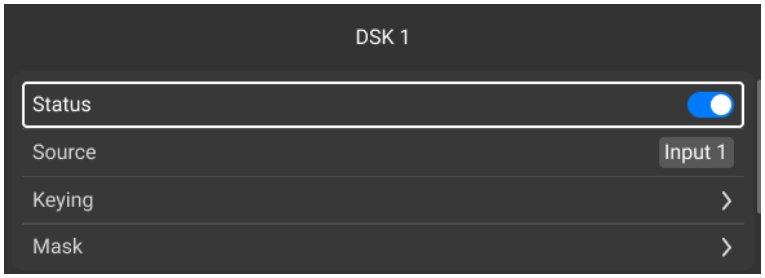
Notes

None

Menu Orientation

[KEY > DSK X]

Menu Interface



Description

Parameter	Description
Status	Turn on or turn off the DSK. • : The DSK is turned on. • : The DSK is turned off.
Source	Select the source for the DSK. The options include input source, SuperSource, and media.
Keying	Perform keying on the keyer input source. For detailed parameter settings, please refer to Configure Keying.

5.2.6 Media

Media management includes the players and media pool.

Prerequisites

None

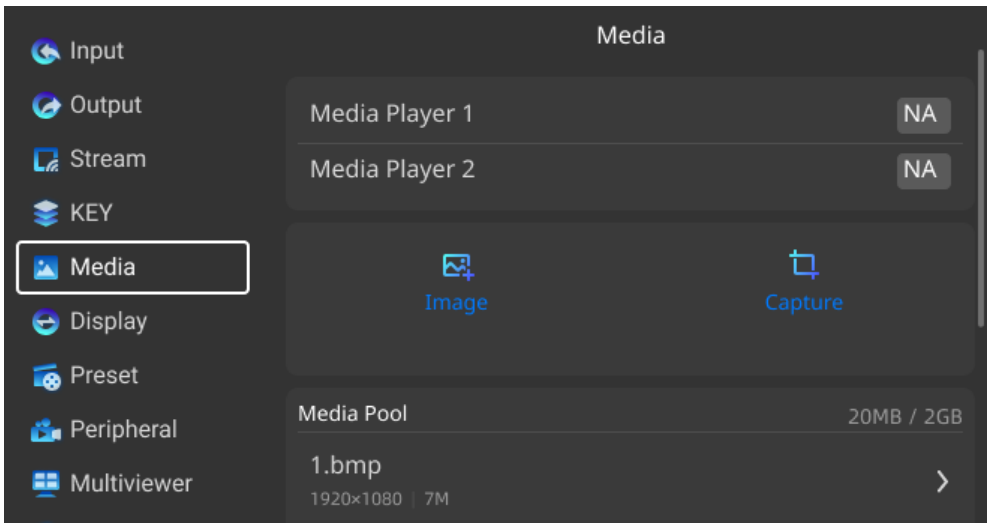
Notes

Only the media pool supports importing media files, and pictures in the players are used for keyers.

Menu Orientation

[Media]

Menu Interface



Description

Parameter	Description
Player 1/2	Play the media in the player.
Image/Capture	Import different types of media as needed and store them in the media pool. • Image: Import image media from the USB drive. • Capture: Select the capture source, including input source, PGM, media source, etc.

5.2.7 Display

Set the way to transition from PVW to PGM, as well as screen FTB, and test pattern.

Prerequisites

None

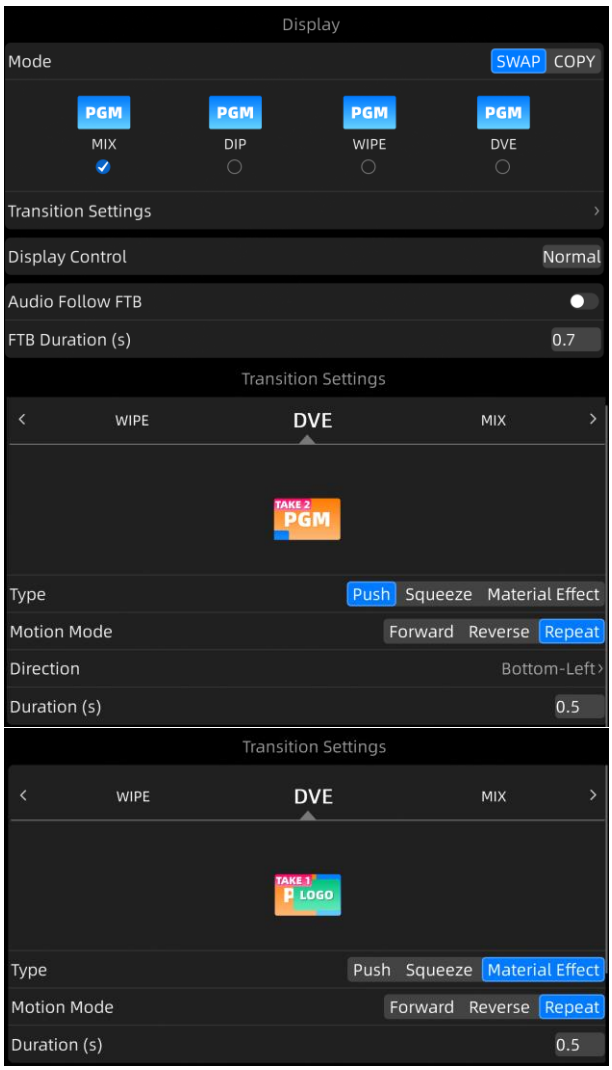
Notes

None

Menu Orientation

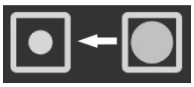
[Display]

Menu Interface



Description

Parameter	Description
Mode	Set the way to transition from PVW to PGM. • SWAP: Swap the PVW and PGM content. • COPY: Copy the PVW content to PGM.
Transition Effect	Select a transition effect. The options include **Mix**, **Dip**, **Wipe**, and **DVE**.
Transition Settings	• Mix: Set the transition duration of the mix effect. • Wipe: Set the wipe pattern, duration, direction, symmetry, start position, and border of the wipe effect. – Wipe pattern: Select the desired wipe pattern. A total of 14 patterns are provided. – Duration: Set the duration of the wipe effect. – Motion Mode: Set the direction of the wipe effect. The options include **Forward**, **Reverse** and **Repeat**.

Parameter	Description
	– Forward: The transition proceeds in normal direction from start to end. –  – Reverse: The transition goes in reverse direction from end to start. –  – Repeat: The transition cycles alternately between forward and reverse. – Symmetry (supported by the last 10 patterns): Set the symmetry of the transition pattern. – **50.0** means the pattern height/width = the vertical/horizontal resolution of the main output. – Start Position: Set the horizontal and vertical starting positions of the transition pattern on the screen. – Border: Set the width and softness of the borders. – Source: Select the filling source for the borders. • Dip: Set the transition duration and source of the dip effect. • DVE: Set the effect type, motion mode, direction, and transition duration. – Type: The options include **Push**, **Squeeze**, and **Media Effect**. – When **Media Effect** is selected, you can configure the fill source, Keying switch, key source, key source invert, clip, and softness. – Motion Mode: The options include **Forward**, **Reverse**, and **Repeat** (similar to the Wipe effect). – Direction: Set the direction of the transition. The options include Up, Down, Left, Right, Top-Left, Top-Right, Bottom-Left, Bottom-Right. – Duration: Set the duration of the transition effect.
Display Control	• Normal: Display the normal image. • FTB: Make the screen go black. • Test Pattern: Display the test pattern.
Test Pattern	• Type: Select the type of test pattern. The options include **Pure Color**, **Gradient**, and **Grid**. • Test Pattern: Select the desired pattern. • Brightness: Set the pattern brightness. • Spacing: Set the spacing of the grid lines. • When **Gradient** or **Grid** is selected, this parameter is available. • Line Width: Set the width of the grid lines. • When **Grid** is selected, this parameter is available. • Speed: Set the grid line moving speed. • When **Grid** is selected, this parameter is available.

Parameter	Description
Audio Follow FTB	Set whether the sound follows the screen FTB. • : Mute when FTB • : Sound continues when FTB
FTB Duration	Set the FTB duration.

5.2.8 Preset

Save PVW or PGM as a preset, load and delete existing presets.

Prerequisites

None

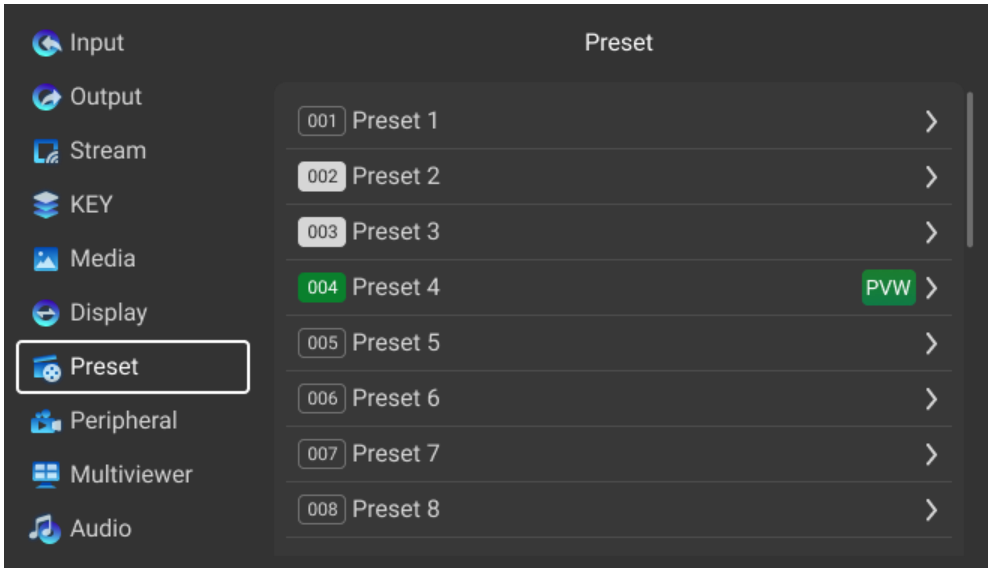
Notes

At most 128 presets can be saved.

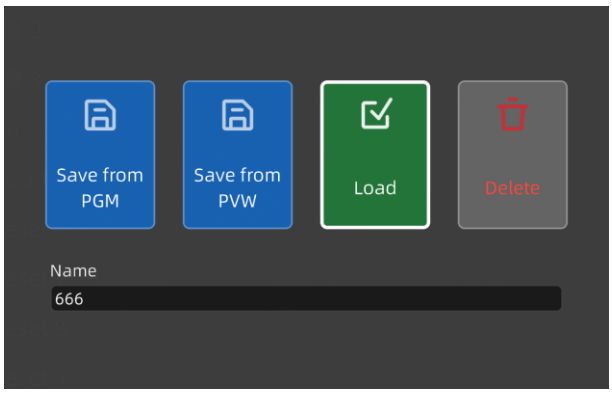
Menu Orientation

[Preset]

Menu Interface



Description



- Save from PGM: Save the PGM content as a preset.
- Save from PVW: Save the PVW content as a preset.

  After saving successfully, the preset status changes to **PVW** or **PGM**.
- Load: Select an existing preset and select **Load** in the pop-up window to load the preset to the screen.

  The preset can be loaded to PVW through LCD operation, and the preset can be loaded to PVW or PGM through button operation.
- Delete: Select an existing preset and select **Delete** in the pop-up window to delete.
- Rename: Rename the preset.

5.2.9 Peripheral

5.2.9.1 Add Cameras

Cameras can be added manually or by importing configuration data.

Prerequisites

None

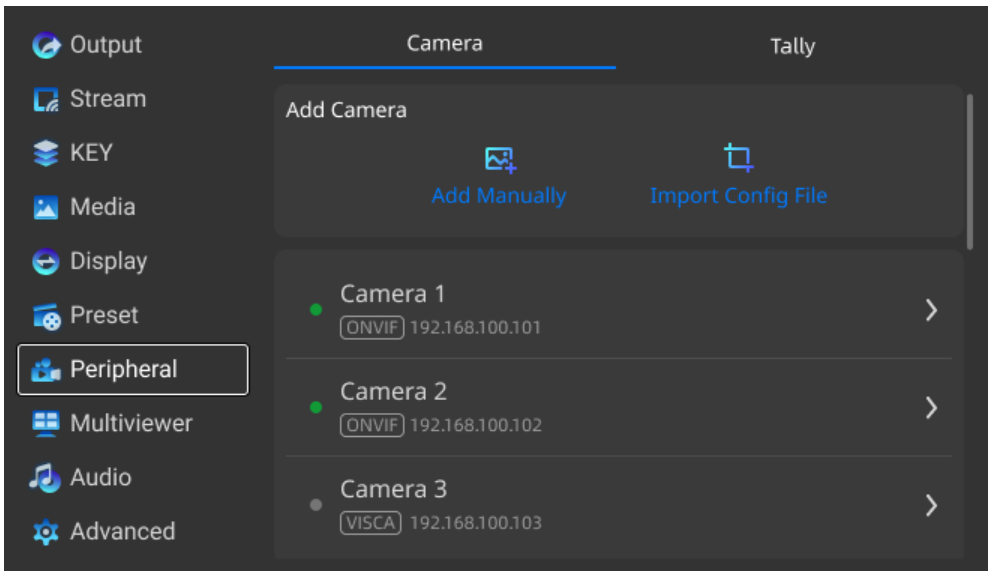
Notes

- At most 20 cameras can be added.
- When adding cameras by importing configuration files, the file template format must be .csv/.xlsx/.xls.

Menu Orientation

[Peripheral > Camera]

Menu Interface



Description

Type	Parameter	Description
Add Camera	Add Manually	Manually add the device information for the camera. • Name: The camera name • Config Method: Select the protocol type. The options include **ONVIF** and **VISCA**. • IP: The camera IP address • Port: The communication port number for the camera protocol (1-65535) • Username: Enter the username using the keyboard. This parameter is available when **ONVIF** is selected as the configuration method. • Password: Enter the password using the keyboard. This parameter is available when **ONVIF** is selected as the configuration method. • Manufacturer: Select the manufacturer. This parameter is available when **VISCA** is selected as the configuration method. Once the settings are complete, click **Apply**.
	Import Config File	Import a configuration file from a USB drive. File path: S16 > camera > .csv/.xlsx/.xls

5.2.9.2 Configure Cameras

Configure and manage the cameras connected to the live production switcher, allowing for remote adjustment of various parameters of cameras using different protocols.

Prerequisites

- The live production switcher and cameras must be on the same network segment.
- The camera's network control function must be enabled.
- The network latency should be below 300 ms to ensure smooth control.

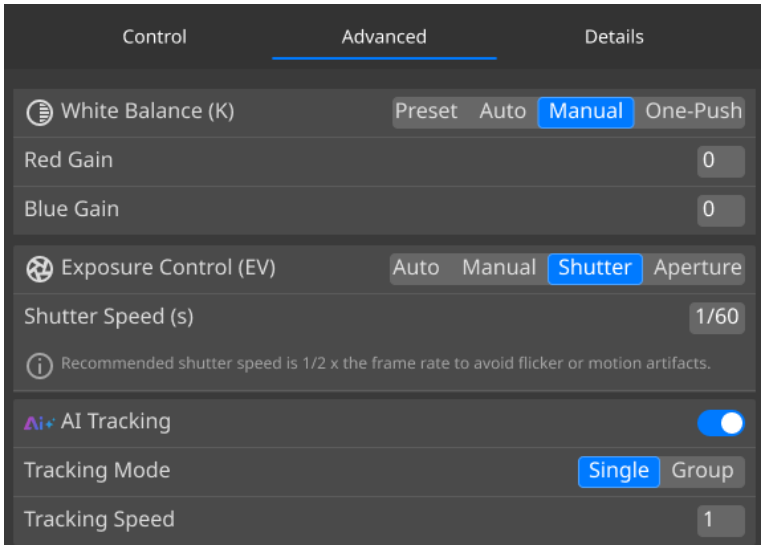
Notes

The speed parameter in the preset is set to the default value; updating and saving altered speed parameter in the preset is not supported.

Menu Orientation

[Peripheral > Camera]

Menu Interface



Description

Type	Parameter	Description
Camera *X* (ONVIF)	Control	• Speed: Adjust the camera's movement speed. The speed level ranges from 1 to 7, and defaults to 7 • Focus: Adjust the camera's focal point. • Zoom: Control the camera's zoom. • Aperture: Control the camera's aperture size. • Preset: Four preset slots are provided for saving or loading camera-related parameters.
	Details	View the camera configuration details. To remove a device, click **Delete**.
Camera *X* (VISCA)	Control	• Speed: Adjust the camera's movement speed. The speed level ranges from 1 to 7, and defaults to 7 • Focus: Adjust the camera's focal point.

Type	Parameter	Description
		• Zoom: Control the camera’s zoom. • Aperture: Control the camera's aperture size. • Preset: Four preset slots are provided for saving or loading camera-related parameters.
	Advanced	• White Balance (K): Correct the light source's color temperature to ensure white objects appear accurate. The options include **Preset**, **Auto**, **Manual**, and **One-Push**. Once **One-Push** is selected, click **One-Push Calibrate** for automatic white balance. • Red Gain: Adjust the red channel gain to correct for green or cyan tinges. Once **White Balance (K)** is set to **Manual**, this parameter is available. • Blue Gain: Adjust the blue channel gain to correct for yellow or red tinges. Once **White Balance (K)** is set to **Manual**, this parameter is available. • Exposure Control (EV): Select an exposure mode. The options include **Manual**, **Auto**, **Shutter**, and **Aperture**. • Shutter Speed: Control the exposure time per frame. Once **Exposure Control (EV)** is set to **Manual** or **Shutter**, this parameter is available. • Exposure Compensation: Manually adjust brightness while maintaining background and subject depth. Once **Exposure Control (EV)** is set to **Auto** or **Aperture**, this parameter is available. • Backlight Compensation: Automatically increase foreground brightness to counteract silhouette effects from strong backlighting. – : The function is turned on. – : The function is turned off. Once **Exposure Control (EV)** is set to **Auto** or **Aperture**, this parameter is available. • Gain: Enhance the brightness in darker areas. Once **Exposure Control (EV)** is set to **Manual**, this parameter is available. • AI Tracking: Engage continuous lock and tracking of persons in the frame. – : The function is turned on. – : The function is turned off. This parameter is available when the OBSBOT camera is selected. • Tracking Mode: Choose between **Single** and **Group** tracking modes.

Type	Parameter	Description
		• Tracking Speed: Set the camera's response speed for tracking.
	Details	View the camera configuration details. To remove a device, click **Delete**.

5.2.9.3 Configure Tally

Manage multiple cameras using red and green Tally lights to distinguish between live and standby signals, assisting on-site personnel in monitoring.

Prerequisites

The input source is selected and a screen is created.

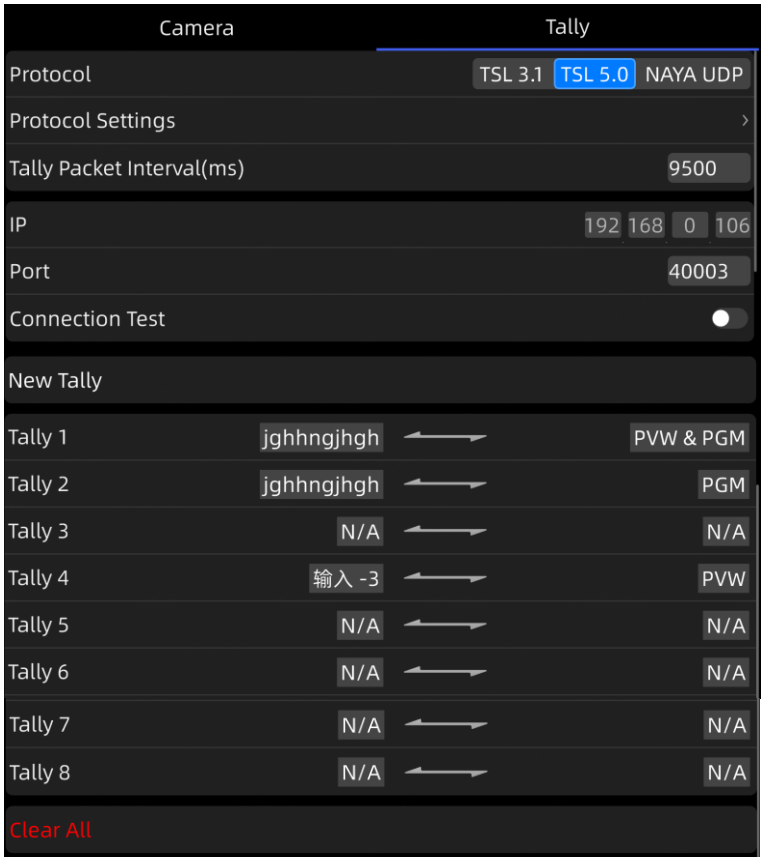
Notes

None

Menu Orientation

[Peripheral > Tally]

Menu Interface



Description

Parameter	Description
Protocol	Select the protocol type. The options include **TSL 3.1**, **TSL 5.0** (Default), and **NAYA UDP**. • TSL 3.1 and TSL 5.0 are universal protocols. • NAYA UDP is a proprietary protocol.
Protocol Settings	Configurable when **TSL 5.0** protocol is selected Set the left/right lights and text display format for different operational states. • The operational states include **PGM Status**, **PVW Status**, **Off**. • Left/right Tally light and text Tally configuration: – LH (Left Hand): Set the display color of the left Tally light for each state. The options include **Red** (PGM default), **Green**, **Off** (PVW/OFF default). – RH (Right Hand): Set the display color of the right Tally light for each state. The options include **Red**, **Green** (PVW default), **Off** (PGM/OFF default). – Text: Set the display color of the text Tally for each state. . The options include **Red** (PGM default), **Green** (PVW default), **Normal** (OFF default). • DLE/STX Sequence: Turn on and turn off the DLE/STX sequence functionality. – : The function is turned on. Add DLE/STX control sequences to the Tally data frame as required by the peer device. – : The function is turned off. Enable only if the peer device fails to recognize Tally data.
Tally Packet Interval (ms)	Set the frequency for sending Tally status updates, balancing response speed and system load. The value ranges from 500 ms to 20,000 ms and defaults to 500 ms.
IP	Set the IP address of the Tally device for network connection.
Port	Set the port number of the Tally device.
Connection Test	Turn on or turn off the connection test to test whether the network connection between the live production switcher and Tally device is normal. • : The function is turned on. • : The function is turned off.
New Tally	Below are the settings for the Tally lights for different input sources.
Tally X, input source, screen	Each Tally is bound to a specific input source. When the input source is selected as the program output, the corresponding Tally light will light up, indicating that the camera signal is on air. • Tally X: Select the desired Tally. At most 64 Tally lights are supported. • Input X: Select the signal source (each source can be selected

Parameter	Description
	twice). The options include input source, and SuperSource. • Screen: PVW, PGM, or PVW&PGM is displayed. The red Tally light indicates PGM or PVW&PGM, and the green Tally light indicates PVW.
Clear All	Clear all Tally device states, that is, turn off all Tally lights.

5.2.10 Multiviewer

Set the basic parameters of the MVR windows.

Prerequisites

None

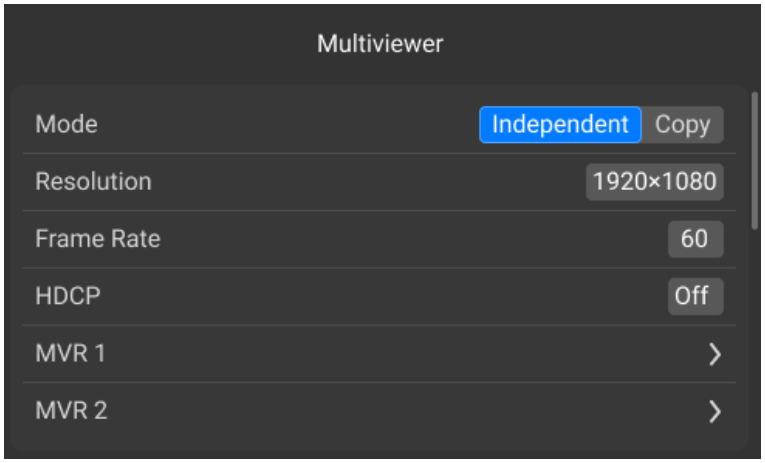
Notes

- The position and size of MVR windows cannot be adjusted.
- Recording, streaming, and audio content do not support setting a safety frame.

Menu Orientation

[Multiviewer]

Menu Interface



Description

Parameter	Description
Mode	Set the working mode of the MVR connectors. • Independent (default): MVR 1 and MVR 2 output the monitoring images independently, and the resolution of the two connectors are the same. • Copy: MVR 2 copies the monitoring image of MVR 1.
Resolution	Set the resolution of the MVR connectors.

Parameter	Description
Frame Rate	Set the frame rate of the MVR connectors.
HDCP	Select the HDCP version of the MVR connectors. The options include HDCP 1.4 and HDCP 2.2, and the function is disabled by default.
MVR 1/2	• Layout: Select the MVR window layout. • 6 layout templates are provided:  ,  ,  ,  ,  , and  . • In independent mode, MVR 1 defaults to a 10-window layout, while MVR 2 defaults to a 16-window layout. • After a layout template is selected, all connected input sources will be automatically displayed in the MVR windows. • Window: Set the MVR window area. At most 16 windows can be set. Upon selecting the MVR window on the LCD, the MVR button display changes accordingly. • Source: Set the MVR window source. The options include PGM, PVW, input source, SuperSource, streaming, audio, recording, Clean Feed, etc. **Note:** An audio source can only be added once across all MVR windows. • Level Meter: Turn on or turn off the function. • The function is used to display the strength of the audio signal, helping users monitor the audio output. –  : The function is turned on. –  : The function is turned off. • Safety Frame: Remind users to pay attention to the correct range of the image to ensure that the image information can be fully displayed on the screen. • UMD: Turn on or turn off the function. • The function is used to display the name and status of the source. –  : The function is turned on. –  : The function is turned off.

5.2.11 Audio

Adjust and control various audio parameters for perfect audio output.

Prerequisites

None

Notes

- Different input audio supports different mixing states:

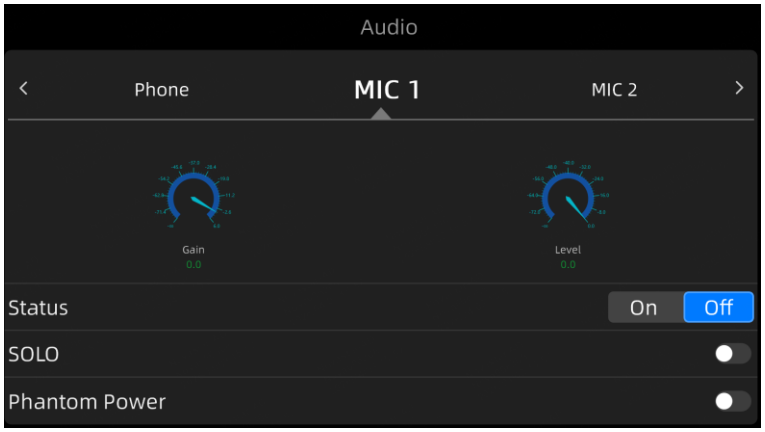
- MIC 1, MIC 2: On and off
- Input 1 to Input 16: AFV, On, and off.

- PGM, Stream, Phone: Only the level can be adjusted.
- SOLO takes priority over mixing state.

Menu Orientation

[Audio]

Menu Interface



Description

Parameter	Description
Audio	Supports setting gain and level for all audio sources, including MIC 1, MIC 2, Phone, input source, PGM, and Stream. • Gain: The gain knob is used to adjust the strength of the microphone input signal. The higher the gain value, the stronger the input signal. • Level: The level knob is used to adjust the volume level of the audio input.
Status	Set the input audio mixing state. • AFV: The audio synchronizes and switches with the video signal. • On: The audio is always output along with the video content. • Off: The audio will never be output with the video content.
SOLO	Turn on or turn off the function. • : On. Only the selected audio channel will be output. Even if other audio channels are in mixing state, no sound will be actually output. • : Off. All audio channels will be output normally according to the mixing status settings.

Parameter	Description
Phantom Power	Turn on or turn off the function. This parameter is available only when MIC 1 or MIC 2 is selected. • : On. Turn on the phantom power function. • : Off. Turn off the phantom power function.

5.2.12 Advanced

5.2.12.1 Communication

Manually set a static IP address for the device or allow the device to automatically obtain an IP address.

Prerequisites

None

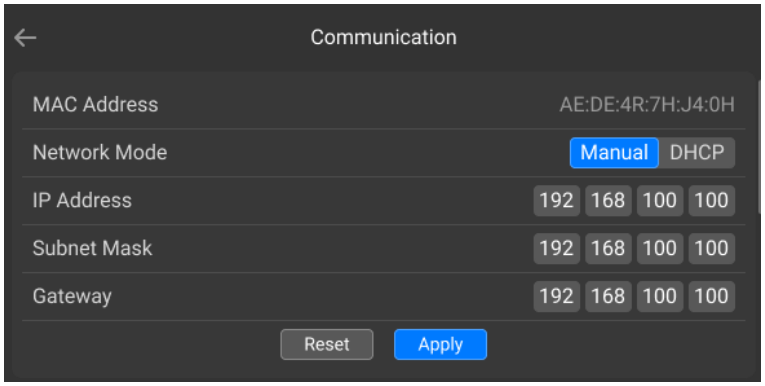
Notes

None

Menu Orientation

[Advanced > Communication]

Menu Interface



Description

Parameter	Description
MAC Address	The physical address of the device
Network Mode	The configuration method for the device IP address • Manual: Manually set a static IP address for the device. • DHCP: The device automatically obtains an IP address.
IP Address	The IP address of the device
Subnet Mask	The subnet mask of the device

Parameter	Description
Gateway	The gateway of the device

After the settings are done, click **Apply** to make them take effect.

5.2.12.2 Update

Update the device.

Prerequisites

You have stored the update file (.img) into the root directory of a USB drive and inserted the USB drive into the USB 3.0 (Type-C) port on the rear panel.

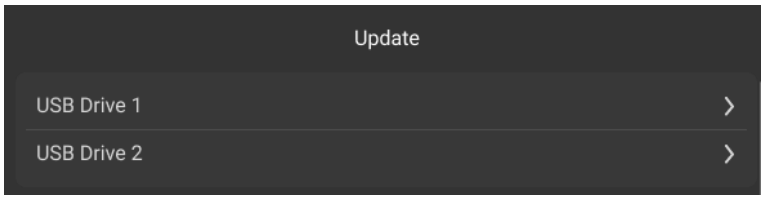
Notes

After a successful update, the device will automatically restart.

Menu Orientation

[Advanced > Update]

Menu Interface



Description

Select the desired USB drive to enter the update file list interface. Select the target file, select **OK** in the pop-up dialog box, and wait for the update to complete.

5.2.12.3 Project File

Import project files from a USB drive to the device, and export project files from the device to a USB drive. The project file contains configuration files and operation data.

Prerequisites

- Before using a USB drive to import a project file, make sure have stored the project file (.uprj) into the root directory of a USB drive and inserted the USB drive into the USB 3.0 (Type-C) port on the rear panel.
- Before exporting the project file to a USB drive, make sure you have inserted the USB drive into the USB 3.0 (Type-C) port on the rear panel.

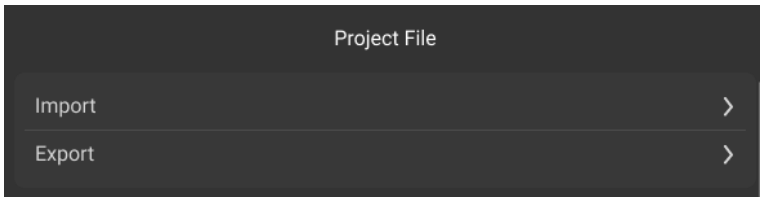
Notes

None

Menu Orientation

[Advanced > Project File]

Menu Interface



Description

- Import
  1. Select **Project File** to access the submenu.
  2. Select **Import** to open the project file list.
  3. Select the target project file.
  4. In the pop-up dialog box, select **OK** to import the project file (.uprj) from the USB drive to the device.
- Export
  1. Select **Project File** to access the submenu.
  2. Select **Export**.
  3. In the pop-up dialog box, select **OK** to export the project file (.uprj) to the USB drive.

5.2.12.4 Factory Reset

Reset the device data to the factory settings.

Prerequisites

None

Notes

- Please proceed this with caution.
- This operation does not affect the device firmware version.
- Power outage is not allowed during operation.
- After a successful reset, the device will automatically restart.

Menu Orientation

[Advanced> Factory Reset]

Menu Interface

Description

- Keep User Data

  Retain the EDID file, media and device language settings.

  1. Select **Factory Reset** to access the submenu.
  2. Select Keep User Data.
  3. Select **OK** in the displayed dialog box.

- Reset All

  Retain the network parameters and project files.

  1. Select **Factory Reset** to access the submenu.
  2. Select Reset All.
  3. Select **OK** in the displayed dialog box.

5.2.12.5 Synchronization

Set the synchronization signal source for the output signal.

Prerequisites

Before Genlock settings, make sure the synchronization signal source is connected to the Genlock connector on the device rear panel.

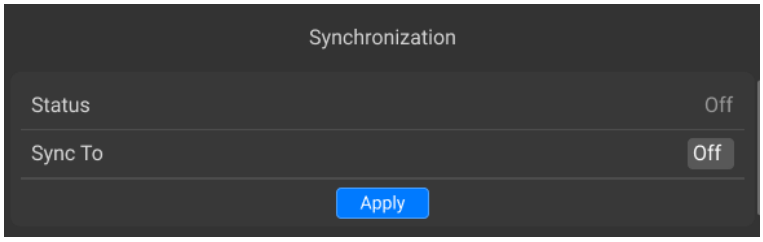
Notes

When the input source type is selected as HDMI, it is not allowed to be used as a synchronization source.

Menu Orientation

[Advanced > Synchronization]

Menu Interface



Description

Parameter	Description
Status	View the synchronization state. • Locked: Synchronization successful • Failed: Synchronization failed
Sync To	Select a synchronization source. • Genlock: Sync to the frame frequency of the Genlock input signal. • Input X: Sync to the frame frequency of the selected input source. X stands for the input source number.

After the settings are done, click **Apply** to make them take effect.

5.2.12.6 FN

Assign a function to the FN shortcut button on the front panel so that users can quickly access the assigned function. Functions that can be assigned to the FN button include synchronization and capturing.

Prerequisites

None

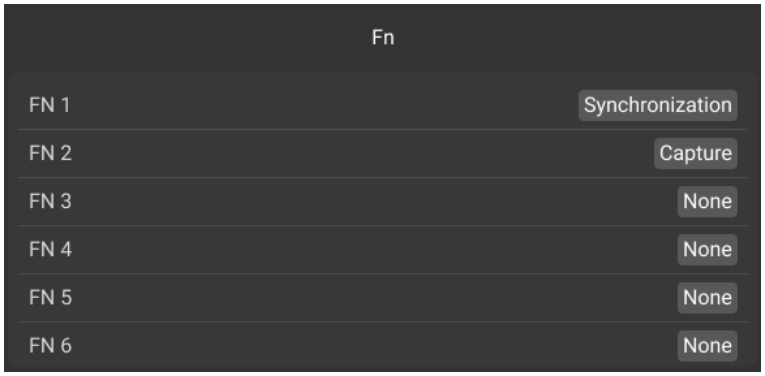
Notes

None

Menu Orientation

[Advanced > Fn]

Menu Interface



Description

Select **Fn** to access the submenu. Select **Synchronization**, **Capture** or **Button-Menu Sync** to bind the function to the FN button.

5.2.12.7 End-to-End Backup

Set the input source backup relations.

Prerequisites

None

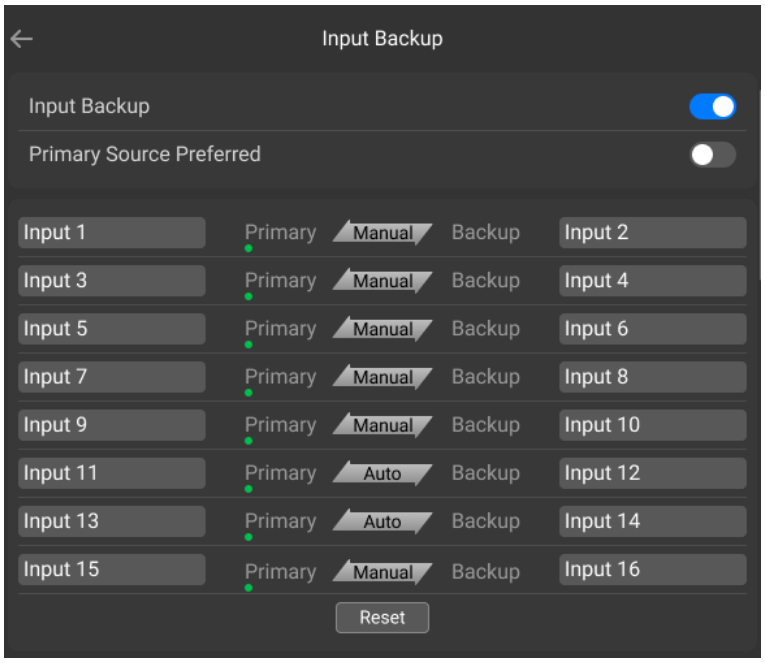
Notes

None

Menu Orientation

[Advanced > End-to-End Backup]

Menu Interface



Description

Parameter	Description
Input Backup	Turn on or turn off the function. • : The function is turned on. • : The function is turned off.
Primary Source Preferred	Turn on or turn off the function. • : On. When the primary source has a signal, it is given precedence. • : The function is turned off.

Select a primary source and a backup source respectively to establish a backup relationship.

Click **Reset** to reset all settings to defaults.

5.2.12.8 Diagnostics

Run diagnostics to identify and troubleshoot problems.

Prerequisites

None

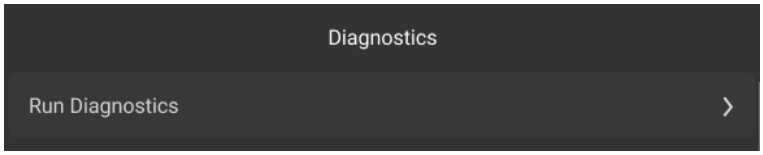
Notes

None

Menu Orientation

[Advanced > Diagnostics]

Menu Interface



Description

Select **Diagnostics** to access the submenu. Select **Run Diagnostics** and you can view the test results after the test is completed.

5.2.12.9 Preferences

Users can customize the keyer switching mode, input source ordering, set the **STREAM** and **REC** buttons in the control area to be triggered by a short or long press, and enable/disable the button-menu sync function.

Prerequisites

None

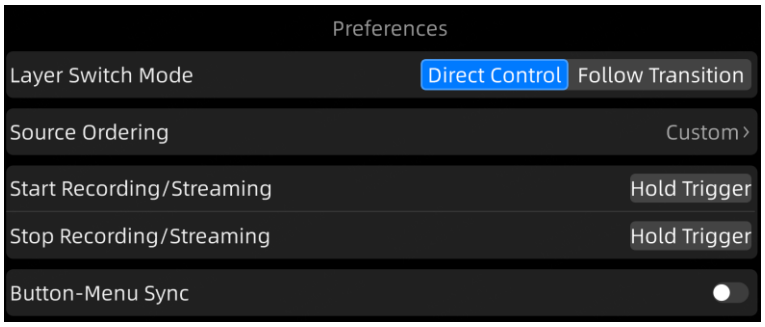
Notes

- When configuring source ordering, the sorting rule only affects the display order of input sources, not the actual signal processing logic.
- Setting the streaming and recording functions to trigger on a long press can prevent accidental activation and is suitable for scenarios requiring higher operational safety.

Menu Orientation

[Advanced > Preferences]

Menu Interface



Description

Parameter	Description
Layer Switch Mode	Sets the keyer switching mode. • Direct Control: Quickly switch keyers, without involving transition state changes. • Follow Transition: Control the state for the next transition using the two rows of buttons in the operation area below the function buttons.
Source Sorting	Set the sorting order for input sources. • No.: Sort according to the physical hardware slot order. • Active Source First: Prioritize input sources currently carrying a signal. • Custom: Allow manual assignment of an input source to each position.
Start Recording/Streaming	• Press trigger (default): A short press can start or stop the live streaming. • Hold trigger: Holding down the button for more than 1.5 seconds can start or stop the live streaming.
Stop Recording/Streaming	• Press trigger (default): A short press can start or stop the recording. • Hold trigger: Holding down the button for more than 1.5 seconds can start or stop the recording.
Button-Menu Sync	Turn on or turn off the function. • : The function is turned on. When the LCD menu is open, operating certain buttons will cause the LCD menu to jump to the corresponding page. No jump occurs when the LCD menu is closed. For details, see 5.1.9 Button-Menu Sync. • : The function is turned off. Button operations and the LCD menu are independent (Camera, keyer, MVR, and test pattern buttons can still trigger independent LCD jumps).

5.2.12.10 Log Export

Export logs from the device to a USB drive.

Prerequisites

A USB drive is inserted into the USB port on the front panel.

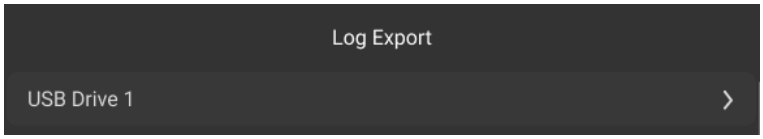
Notes

None

Menu Orientation

[Advanced > Log Export]

Menu Interface



Description

The log export path is: S16 > Logs > .csv.

5.2.12.11 T-Bar Calibration

When the T-Bar is pushed to the top and bottom, the progress bar on the left cannot reach 100% and 0%. At this time, T-Bar calibration is required.

Prerequisites

None

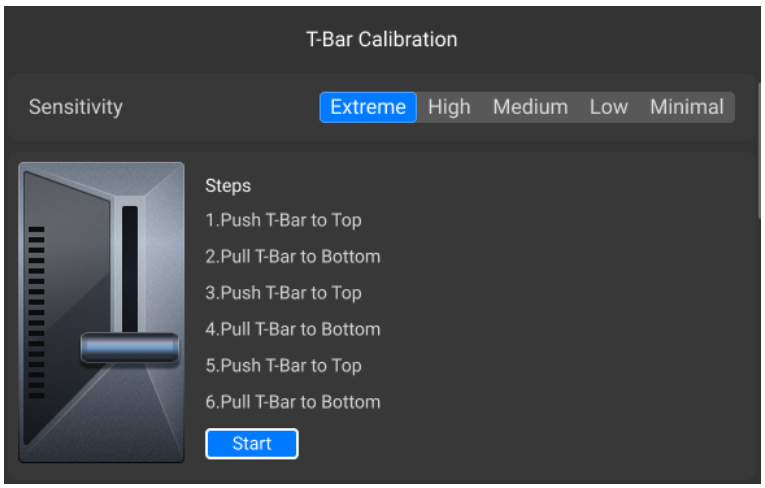
Notes

Other operations are not allowed during the calibration process. If other device areas are triggered, you need to try again according to the prompts.

Menu Orientation

[Advanced > T-Bar Calibration]

Menu Interface



Description

Select **T-Bar Calibration** access the submenu. Select **Sensitivity**. The options include **Extreme**, **High**, **Medium**, **Low**, and **Minimal**.

Select **Start** and follow the calibration steps one by one. After all the steps are completed, the message **Calibration completed** will be displayed.

5.2.12.12 Screen Brightness

Adjust the screen brightness according to the actual environment as needed.

Prerequisites

None

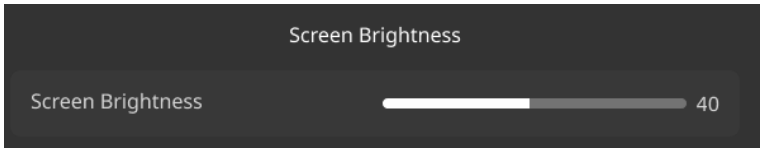
Notes

None

Menu Orientation

[Advanced > Screen Brightness]

Menu Interface



Description

In the **Screen Brightness** interface, adjust the brightness using the knob.

5.2.12.13 Clean Feed

Allow users to remove certain overlaid layers (such as upstream/downstream keyers) to obtain a clean video signal for operations like recording and rebroadcasting.

Prerequisites

None

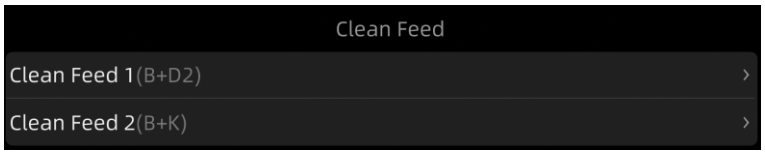
Notes

None

Menu Orientation

[Advanced > Clean Feed]

Menu Interface



Description

Select **Clean Feed 1/2** to access the submenu interface, where you can choose **Upstream Key** or **Downstream Key 1/2**.

5.2.13 About Us

View the company related information.