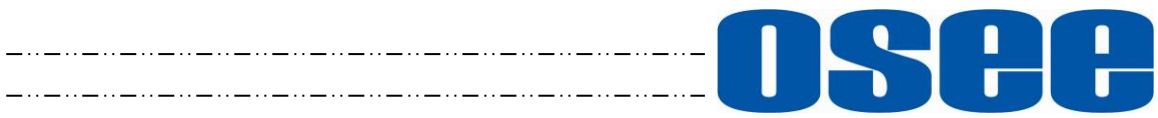
Mega 22S4
LCD Monitor

User Manual



OSEE TECHNOLOGY LTD.

Product Information

Model: Mega 22S4 LCD Monitor
Version: V010000
Release Date: Nov 07, 2025

Company

OSEE TECHNOLOGY LTD.

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About this manual

Important

The following symbols are used in this manual:

Tips

- The further information or know-how for described subjects above which helps user to understand them better.

Warning

- The safety matters or operations that user must pay attention to when using this product.

Contents

The user manual applies to the following device types:

❖ **Mega 22S4**

The images of Mega 22S4 are adopted in the following descriptions. Before reading the manual, please confirm the device type.

Contents

Chapter 1 Overview

Mega 22S4 is a high-performance broadcast-grade professional monitor specifically designed for efficient multi-camera collaborative production and monitoring. It perfectly aligns with today's mobile and lightweight trends in multi-screen live streaming, outdoor short video creation, and event production, committed to providing users with an integrated, cost-effective monitoring solution.

The core advantage of Mega 22S4 lies in its powerful multi-screen processing capability and scenario adaptability: The monitor can simultaneously input and smoothly switch between up to 4 channels of 1080p high-quality video signals. It supports various flexible layout modes including Picture-in-Picture (PIP), Picture-by-Picture (PBP), and multi-split-screen displays, enabling directors or camera operators to monitor, compare, and switch between multiple camera angles in real-time on a single screen. This significantly enhances on-site production efficiency and decision-making speed. Notably innovative is Mega 22S4's deep integration with the mobile live streaming ecosystem—it can natively display vertical (portrait) video signals from multiple cameras without additional transcoding devices. This greatly simplifies mobile live streaming and portrait short video production workflows, while its integrated design substantially reduces the barriers and costs of video production.

In terms of ensuring professional performance, Mega 22S4 adopts an advanced 10-bit broadcast-grade image processing engine, integrating 3D comb filter and deinterlacing technologies to ensure smooth multi-screen switching without tearing or stuttering. Equipped with a high-resolution (1920x1080) broadcast-grade TFT panel supporting High Dynamic Range (HDR) mode and wide color gamut, combined with excellent brightness, contrast, and 178° ultra-wide viewing angle, it delivers precise, clear color reproduction and detail presentation even in outdoor bright-light environments. It also features a comprehensive suite of professional assistive tools—including waveform monitor, vectorscope, histogram, RGB parade, false color, zebra patterns, audio meters, and various markers (safe area, center markers, aspect markers)—along with preloaded camera LUTs and professional log curves. Support for loading custom LUTs facilitates real-time color grading, exposure control, and precise framing during outdoor shooting.

Mega 22S4's connectivity and expandability are equally robust. It provides up to 3 channels of 3G/HD/SD-SDI input and 3 channels of HDMI input, compatible with various signal sources including professional cameras and action cameras. Simultaneously, it includes 1 channel of SDI output and 1 channel of HDMI output for signal loop-through or downstream connection. Its design fully considers outdoor and mobile scenarios, enabling rapid deployment to meet the agility requirements of teams ranging from professional studios to street live broadcasts and outdoor short video production crews.

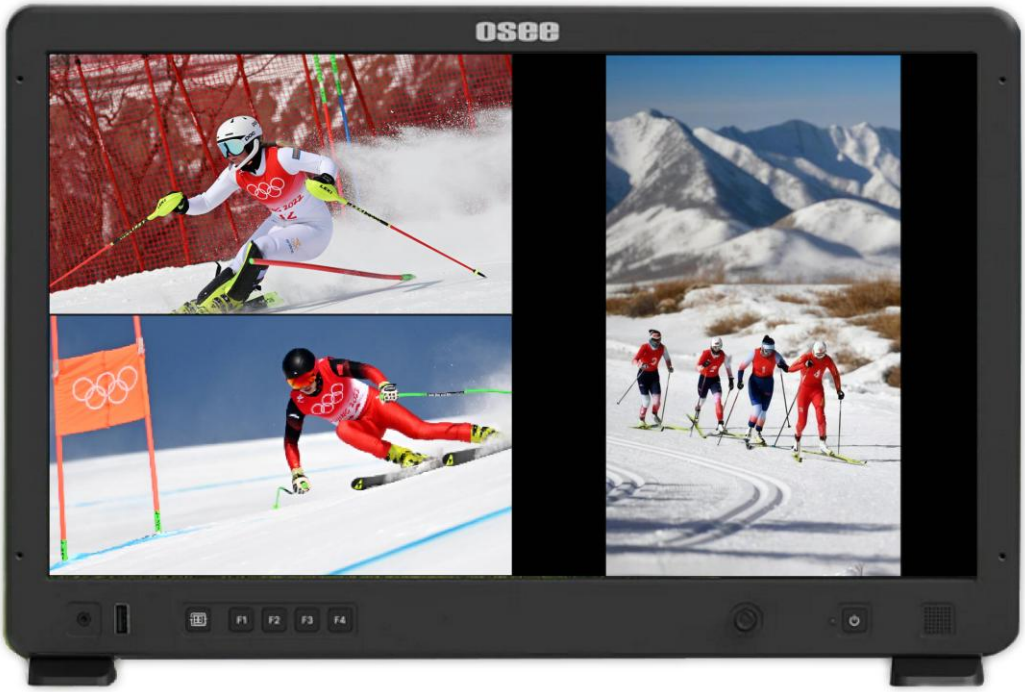


Figure 1 A Diagram of Mega 22S4 Monitor

Features

- Adopts a high-strength engineering plastic narrow-edge structure
- 178° ultra-wide viewing angle with no color shift at any angle, ideal for team collaborative monitoring scenarios
- Full-format signal input supporting hybrid 3G/HD/SD-SDI×3 and HDMI×3 connectivity, compatible with broadcast/consumer-grade equipment
- Broadcast-grade FULL HD TFT display with 1920×1080 resolution for precise image detail reproduction
- 10-bit color depth processing engine delivers 1.07 billion color handling capability, eliminating color banding for smoother gradient transitions
- Supports HDR high dynamic range imaging technology, expanding brightness range and contrast while preserving highlight/shadow detail hierarchy
- Professional image assist toolkit integrating focus assist, false color exposure warning, zebra pattern overexposure alert, and sharpness enhancement calibration
- Built-in waveform monitor/vectorscope/RGB histogram/audio phase meter for precise audiovisual parameter quantification
- Multi-dimensional safety framework with configurable triple composition guides: safe area markers, center positioning markers, and custom aspect markers

Chapter 2 Safety

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 B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

Warnings:

Read, keep and follow all of these instructions for your safety. Heed all warnings.

Warning

Device

- Install in accordance with the manufacturer's instructions.
- Do not beat with a hard object or scratch the LCD display.
- Do not make the freeze picture displaying on the screen time too long, otherwise, it will leave the afterimage on the screen.
- If the brightness is adjusted to the minimum, then it might be hard to see the display screen.
- Refer all servicing to qualified service personnel. Servicing will be required under all of the following conditions:
  - ☐ The unit has been exposed to rain or moisture.
  - ☐ Liquid had been spilled or objects have fallen onto the unit.
  - ☐ The unit has been damaged in any way, such as when the power-supply cord or plug is damaged.
  - ☐ The unit does not operate normally.
- Clean only with dry cloth.
- Specifications are subject to change without notice.

Warning

Position

- Do not block any ventilation openings.
- Do not use this unit near water.
- Do not expose the unit to rain or moisture.
- Do not use this unit near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat.

- A nameplate indicating operating voltage, etc., is located on the rear panel.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

Warning

Power Supply Cord

- Do not defeat the safety purpose of the polarized or grounding-type plug.
- Do not damage the power cord, place heavy objects on the power cord, stretch the power cord, or bend the power cord.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the unit.
- If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord. It may cause fire or electric shock.
- Unplug this unit during lighting storms or when unused for long periods of time.
- Disconnect the power cord from AC outlet by grasping the plug, not by pulling the cord.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

Chapter 3 Unpack and Installation

Unpack:

When unpacking the components of Mega 22S4 monitor, please verify that none of the components listed in Table 3.1 are damaged or lack. If there is any missing, contact your distributors or Osee Technology Ltd. for it.

Table 3-1 Packing List

No.	Item	Quantity
1	Monitor	1
2	Desktop Feet	2
3	VESA&C-stand Adapter	1
4	Battery Plate with a D-tap to XLR Cable	1
5	Cheese Plate (V mount, AB mount)	2
6	Sunhood (V & H mount)	1
7	Quick Start Guide	1

Installation:

1. **Prepare for installation**

Please follow the procedures below before installing Mega 22S4:

- Check the equipment for any invisible damage that may have occurred during transit.
- Confirm all the items listed on the packing list have been received.
- Remove all the packing material including electrostatic-resistant packing.
- Retain these packing materials for future use.

2. **Mount a Mega 22S4 in your desired location. Adequate ventilation is required when installed to prevent possible damage to the Mega 22S4.**

There are screw holes at the rear panel of the monitor, which are labeled in the following figures. Assemble the parts of the stands, then insert the stands into the case, and fasten it with the screws provided. The stands installation for Mega 22S4 are as follows:

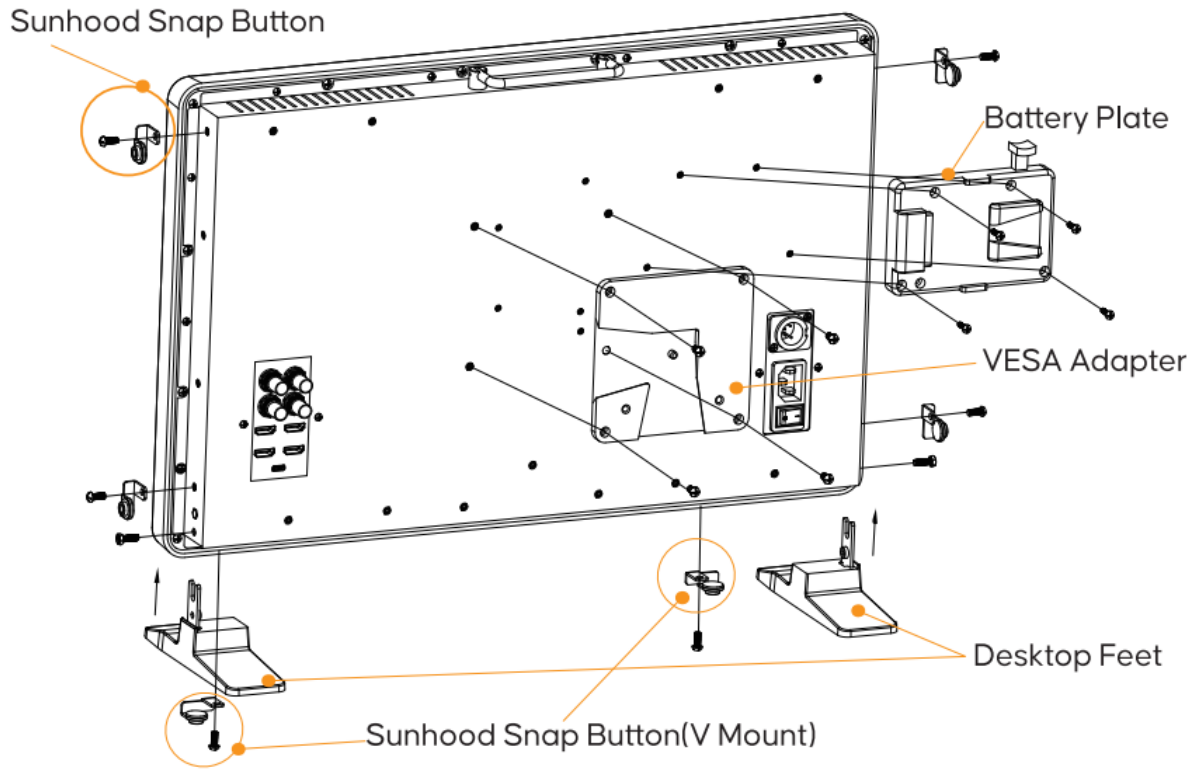


Figure 3-1 Stands and Accessories for Mega 22S4

Battery plate has 2 options: AB or V-mount, figure shows V-mount, D-tap to XLR cable not shown. Cheese plate, and battery plate are pre-installed before shipping.

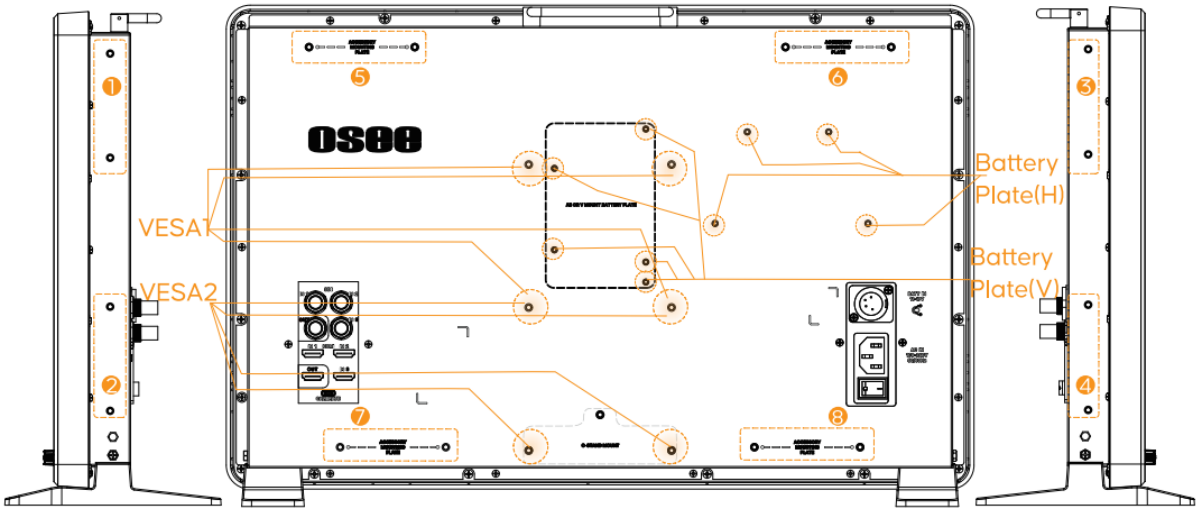


Figure 3-2 VESA and Battery Plate(horizontal) Postition for Mega 22S4

Tips

- Please notice that once the HDMI cable lock is inserted into the lock hole, it CAN'T BE REMOVED unless the rear panel is disassembled.

3. **Connect required cables for signal input and output. For BNC connections use 75Ω rated connectors.**
4. **Connect 100～240V50/60Hz AC or 11～17V3A DC battery(with optional battery plate) using the power cord.**
5. **Connect the power cord to the power interface.**
6. **Fasten the power protect accessory.**
7. **As a final step, turn on the device by pressing the corresponding power switch located on the front panel.**

Tips

- The pedestal and the monitor are packaged separately.
- Connect a standard signal line to the corresponding input port. All BNC connector impedance must be 75Ω.
- Please use the power cord supplied to avoid unnecessary trouble.

Chapter 4 Features

This chapter describes the features of Mega 22S4 monitor. The features of Mega 22S4 monitor are as shown as below.

4.1 Parts and Functions

The parts of Mega 22S4 are shown as below, there are various input and output interfaces for Mega 22S4 monitor, as shown in Figure 4.1-1 and Figure 4.1-2.

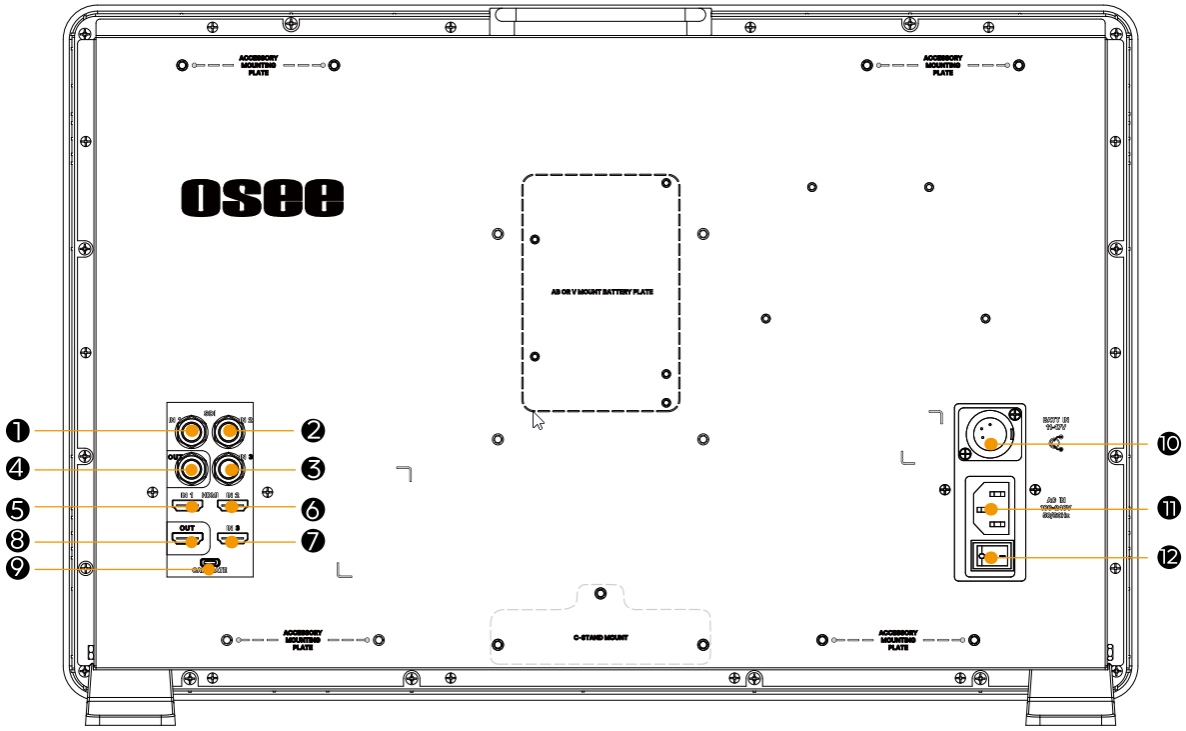


Figure 4.1-1 Parts in Rear Panel

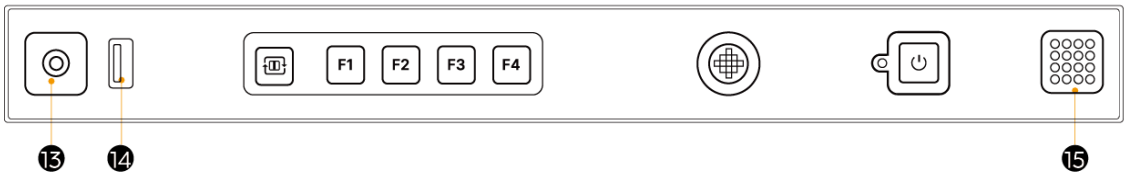


Figure 4.1-2 Parts in Rear Panel

No.	Connector	Description
1	SDI IN1	SDI input interface
2	SDI IN2	SDI input interface
3	SDI IN3	SDI input interface
4	SDI OUT	SDI output interface
5	HDMI IN1	HDMI input interface, supports HDCP, compatible DVI1.0, HDMI 2.0
6	HDMI IN2	HDMI input interface, supports HDCP, compatible DVI1.0, HDMI 2.0
7	HDMI IN3	HDMI input interface, supports HDCP, compatible DVI1.0, HDMI 2.0
8	HDMI OUT	HDMI output interface, supports HDCP, compatible DVI1.0, HDMI 2.0
9	CALIBRATE	Type-C, used for color calibration
10	Battery Input	BATT IN, External AB or V-mount battery, XLR 3pin connector, 11～17V
11	AC IN	AC power input, 100~240 50/60HzV
12	Power Switch	Switch to “—” position to power on; and switch to “O” position to power off
13	Headphone	Headphone output jack, 3.5mm stereo Jack
14	USB	U disk slot, the U disk is used to load the customized LUT tables, and update firmware.
15	Speaker	Internal speaker

4.2 Buttons and Functions

4.2.1 Buttons Arrangement

The monitor provides a few buttons at the front panel, as shown in Figure 4.2-1. It is used for input selection, function buttons, power on and so on.

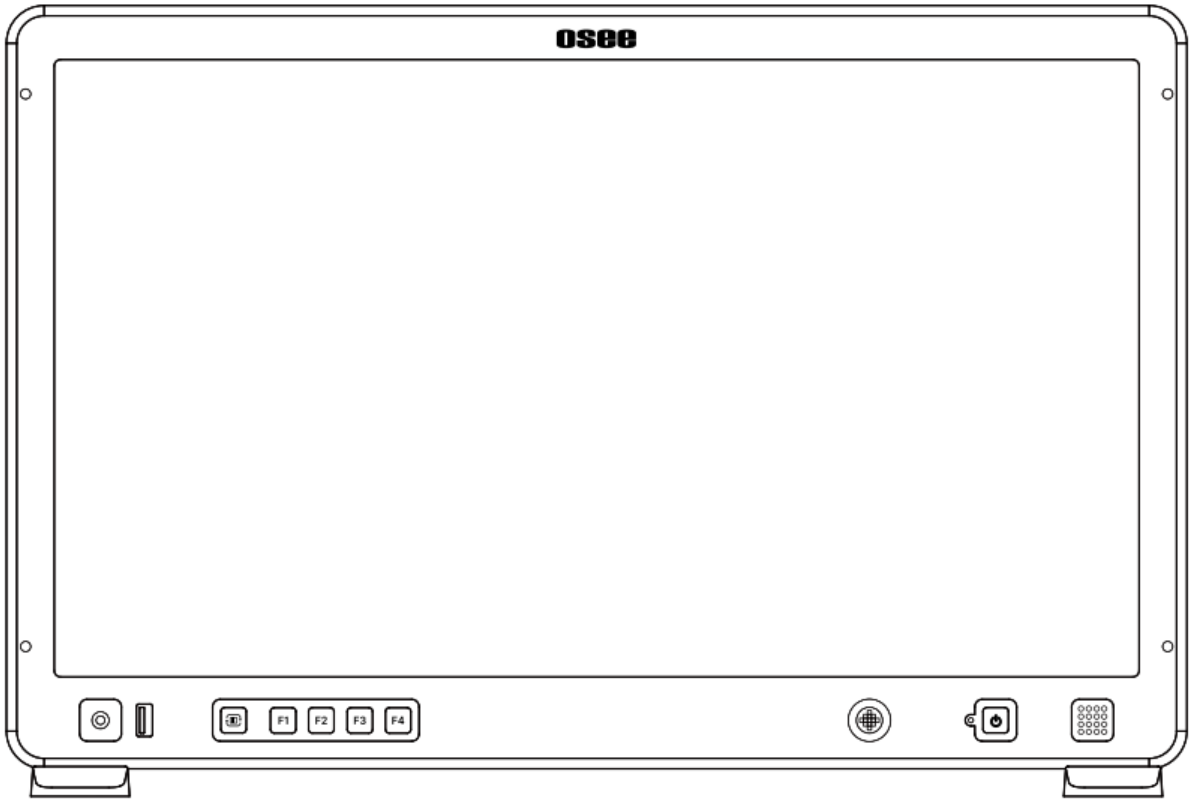


Figure 4.2-1 Buttons in Front Panel

Buttons	Name	Function
	Mode	Switch input sources and layout modes
	F1	Choose the tool assigned to F1 button
	F2	Choose the tool assigned to F2 button
	F3	Choose the tool assigned to F3 button
	F4	Choose the tool assigned to F4 button
	Joystick	Monitor settings, tool settings and MySet operations
	Power	Power on or off

4.2.2 Joystick Operations

The monitor provides a Joystick at the front panel, as shown in Figure 4.2-1. It is used for monitor settings, adding tools for scenes, tools settings, zoom image and so on.

Use the joystick as a navigation tool to scroll between scenes and set features. The joystick provides multiple functions with five operation directions, **Up, Down, Left, Right**, **Straight Down**, and **Clockwise Rotation** or **Counterclockwise Rotation**, as shown in Figure 4.2-2.

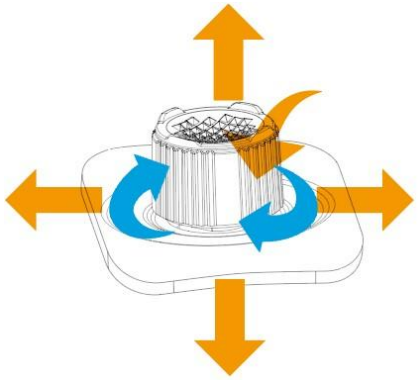


Figure 4.2-2 Five Operation Directions for Joystick

 Switch MySet

 Enter Tool Bar

 Enter Zoom&Pan menu(with signal input)

 Enter Menu Bar(Volume adjustment, Backlight adjustment, Monitor settings, Add MySet and Delete MySet)

 Confirm current Operation

The details about the joystick operations are described as shown in the following table:

Direction	Operation
UP	Without any menu, scroll up to access ZOOM mode. Keep scrolling up, and switching among these three modes FULL→2X→4X; In ZOOM 2X or ZOOM 4X editing mode, scroll up the joystick to move the starting position of the enlarged image; In monitor settings, scroll up to select the previous item in the second level submenu;

Direction	Operation
	In scene tool bar, scroll up to select the previous item.
DOWN	In ZOOM mode, scroll down to exit ZOOM mode. In ZOOM 2X or ZOOM 4X editing mode, scroll down the joystick to move the starting position of the enlarged image; In monitor settings mode, scroll down to select the next item in the second level submenu; In scene tool bar, scroll down to select the next item.
LEFT	In ZOOM 2X or ZOOM 4X editing mode, scroll left the joystick to move left the starting position of the enlarged image; In monitor settings mode, scroll left to return to the previous level menu; In a tool bar of a scene, scroll left to return.
RIGHT	Without any menu, scroll right to display the tool bar; In ZOOM 2X or ZOOM 4X editing mode, scroll right to move right the starting position of the enlarged image; In monitor settings menu, scroll the joystick right to access the next level menu; In a tool bar of a scene, scroll right to access the tool settings panel or tool menu list.
STRATIGHT DOWN	In ZOOM 2X or ZOOM 4X mode, press straight down to access editing mode where the zoomed image can be panned up/down/right/left; In ZOOM 2X or ZOOM 4X editing mode, press straight down to exit editing mode; In monitor settings menu or tool settings panel, press straight down the joystick to confirm the selection.
Rotate in clockwise or counterclockwise	Without any menu, rotate to switch MySet; In monitor settings mode, rotate to select the previous or the next menu item or option; In a tool bar of a scene, rotate the joystick to enable or disable the selected tool; In tool menu list, rotate the joystick to select a tool; In tool settings panel, rotate to switch the item value.

Tips

- Before you can manage (add/delete) or switch scenes, or using Zoom&Pan function, please switch to single-view mode. Multi-view display is only supported in the 'MySet8' scene.
- You can also rotate the joystick in clockwise or counterclockwise to increase or decrease, or adjust the related selection. You can rotate clockwise or counterclockwise. Clockwise rotation achieves rapid downward scrolling or

incremental operations, while counterclockwise rotation enables fast upward scrolling or decrement operations.

4.2.3 Power On

The power switch is on the right corner of the rear panel of Mega 22S4. Use it to power the monitor on or off. It provides one AC power switch to switch on or switch off. As shown in Figure 4.2-3, push the button to the direction “-” to switch on the power, or push the button to the direction “O” to switch off the power.

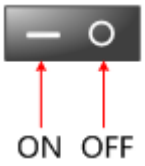


Figure 4.2-3 Power Switch

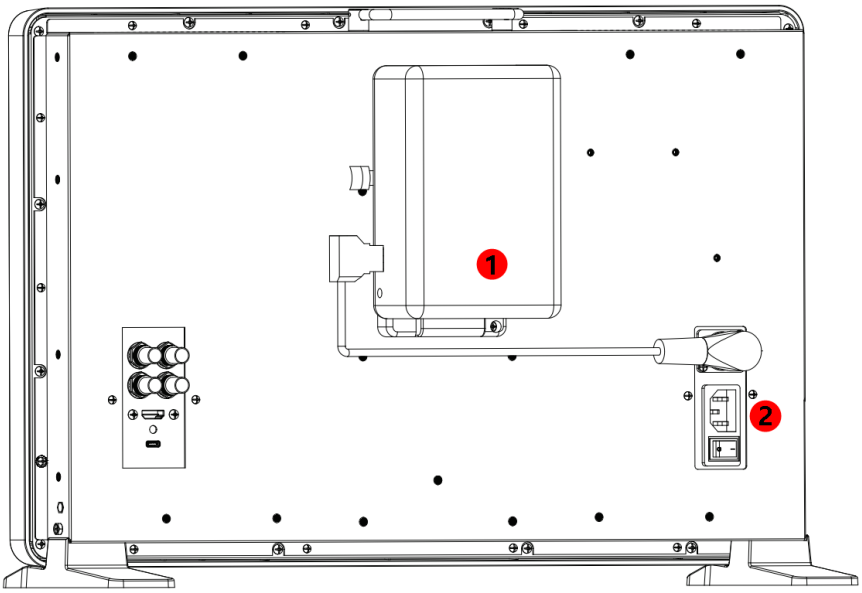


Figure 4.2-4 Power On

- **Power Method**

There are two methods for powered the monitor as below:

Method 1: Powered by battery. Mount the battery plate and battery at the rear panel of the monitor. It supports AB or V-mount batteries(11～17V), then connect the battery to BATT IN with D-tap to XLR cable.

Method 2: Powered by AC power input. (100～240V50/60HzAC)

- **Power On Operation**

First, install the battery and connect to BATT IN, or connect the AC power cord.

Second, switch the power switch to "⎓" position when using the AC power input;

At last, press the power button on the front panel, and the power indicator is lit up in highlight orange.

Tips

- It will display the boot screen after power on for 3~4 seconds.
- Press the front power button to turn on the device, and the indicator will change from green to solid orange. During operation, a short press will switch the device to standby mode, while holding the button for 4 seconds will power it off-indicated by a red light.

Warning

- Only use the adapter and the power cord specified by the manufacture for your safety！

4.2.4 Multi-Screen Window and Smart Layout

The Mega 22S4 monitor features an advanced multi-screen processing engine, supporting flexible layouts from single-screen to quad-screen (1×1 to 2×2). This enables efficient simultaneous monitoring of 1~4 signal sources on a single display, eliminating frequent window switching.

The multi-screen function offers the following settings:

- **Flexible Screen Splitting:**

  Whether in full-screen mode, side-by-side dual-screen comparison, or complex triple/quad-screen displays – all layouts (1x1, 1x2, 2x1, 2x2, etc.) can be switched instantly via the **Mode** button.

- **Flexible Screen Orientation:**

  The display area supports both conventional landscape mode and portrait mode, as shown in Figure 4.2-5 and Figure 4.2-6, significantly enhancing vertical information visibility.

- **Hybrid Orientation Layout:**

Combines landscape and portrait screens for personalized mixed arrangements. Dynamically allocates display areas to boost workflow efficiency. The OSD menu automatically adapts to the current orientation for seamless operation.

- **Diverse Signal Sources:**

With multiple input interfaces, the Mega 22S4 effortlessly connects and simultaneously displays signals from diverse devices (desktops, laptops, cameras, surveillance systems) via HDMI, SDI.

- **Smart Multi-Screen Layouts:**

Provides preset templates (single, dual, triple, quad-view) with one-touch switching via physical buttons. Supports Picture-in-Picture (PIP)/Picture-by-Picture (PBP) overlay modes.

Number of signal sources	Illustration and abbreviation for Layouts		
2	PBP HH	PBP VV	
			
3	TRI HHH	TRI VVV	TRI HHV
			
4	QUAD1	QUAD2	
			

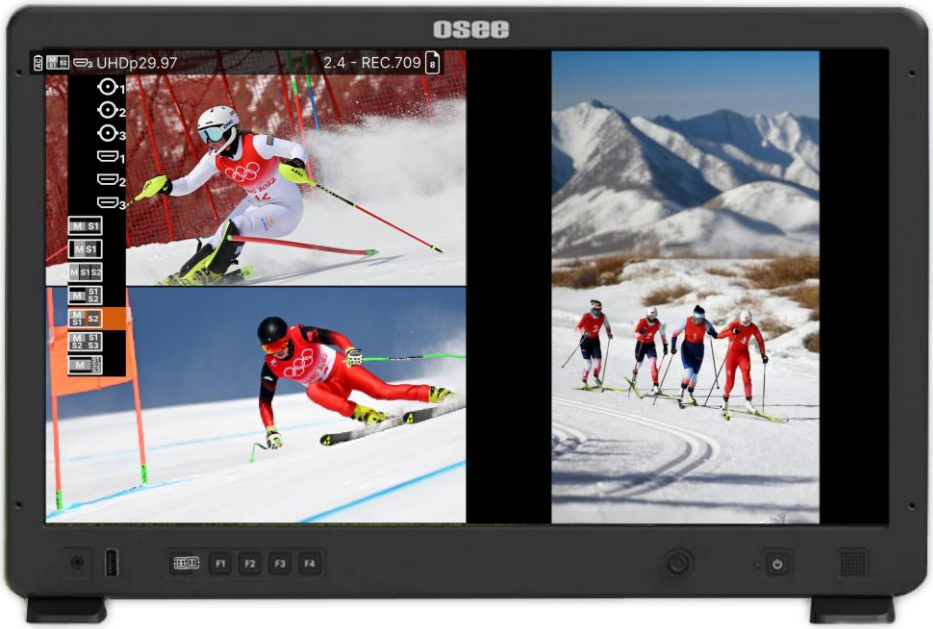


Figure 4.2-5 Landscape Mode

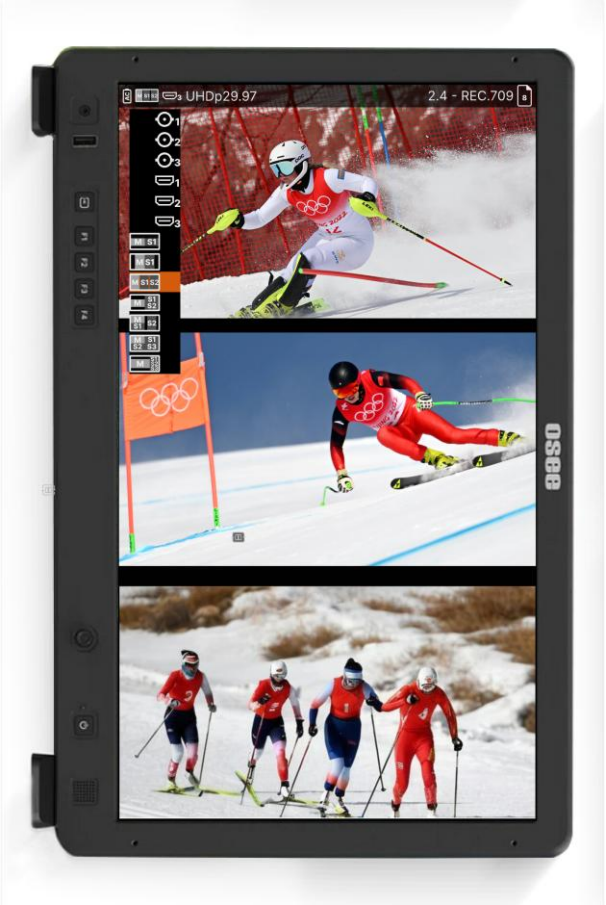


Figure 4.2-6 Portrait Mode

Tips

- Picture-in-Picture (PIP) feature is integrated within the waveform monitor tool, allows a miniature waveform or another signal to be overlaid on the video image. For detailed configuration settings, please refer to section “6.1.2 Expose Tools”.

4.2.5 Signal Source and Mode Selection

The Mode button in this section is a multi-function key for quickly switching input sources and changing screen layout modes.

4.2.5.1 Basic Operation of the Mode Button

Pressing the Mode button immediately displays a menu containing all available signal sources and layout modes in the upper left corner of the screen, as shown in Figure 4.2-7.

1. Browsing and Selection Methods (choose either one)

- ☐ Repeatedly press the Mode button: Cycle through all options in the menu.
- ☐ Scroll the Joystick: After the menu is invoked, use the Joystick for more precise and rapid selection.

2. Visual and Operational Feedback

- ☐ The currently selected option is highlighted in bright orange.
- ☐ After a selection is made, please wait for the screen display to stabilize before proceeding with further operations.

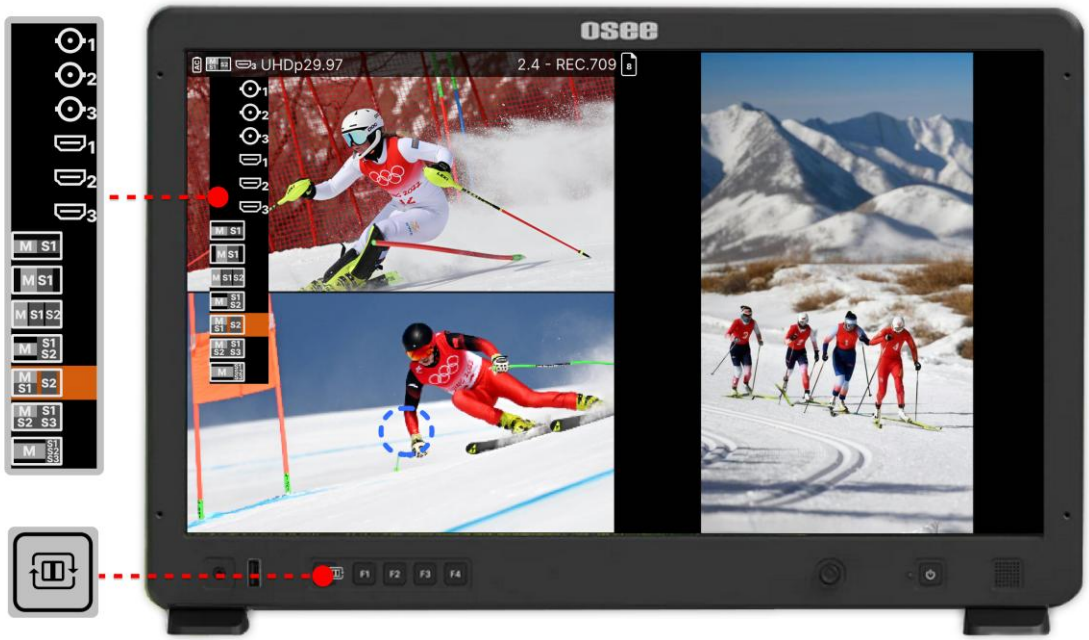


Figure 4.2-7 Mode Menu-Drop List for the Mode Button

3. Mode Menu Details

Each icon in the menu represents a specific signal source or layout mode.

The correspondence between icons in the mode menu and their respective modes/sources is described in Table 4.2-1:

Table 4.2-1 Mode Menu Icon Descriptions

No.	Icon	Mode Abbr.	Mode Description
1		SDI1	Single-screen mode, Source: SDI IN1
2		SDI2	Single-screen mode, Source: SDI IN2
3		SDI3	Single-screen mode, Source: SDI IN3
4		HDMI1	Single-screen mode, Source: HDMI IN1
5		HDMI2	Single-screen mode, Source: HDMI IN2
6		HDMI3	Single-screen mode, Source: HDMI IN3
7		PBP HH	Dual-screen mode (horizontal arrangement)
8		PBP VV	Dual-screen mode (vertical arrangement)

No.	Icon	Mode Abbr.	Mode Description
9		TRI HHH	Triple-screen mode (horizontal arrangement)
10		TRI HHV	Triple-screen mode (two horizontal + one vertical hybrid)
11		TRI VVV	Triple-screen mode (vertical arrangement)
12		QUAD1	Quad-screen mode (horizontal arrangement)
13		QUAD2	Quad-screen mode (one main + three sub-screens horizontal)

Tips

- Refer to the physical monitor's display for the exact icon styles.

4. Mode Menu Item Management (Customization and Visibility Control)

To accommodate different system scales and user preferences, the mode menu supports item-level customization management. You can individually enable or disable any item within the mode menu based on your workflow needs, creating a streamlined, efficient, and personalized quick-access menu.

- ☐ **Granular Control**: Enable or disable each independent item in the mode menu (e.g., SDI1, PBP HH, TRI VVV in Table 4.2-1).
- ☐ **Personalized Menu**: Disabling infrequently used options shortens the cycling list, allowing for quicker switching between commonly used sources and modes.

■ **Operation**

Select **Monitor Settings** → **System**→ **Function Key,** as shown in Figure 4.2-8, scroll right to enter the menu, the function key menu is as shown in Figure 4.2-9. Select **MODE Key** → **Layout Config** item, you will see a complete list corresponding to Table 4.2-1.

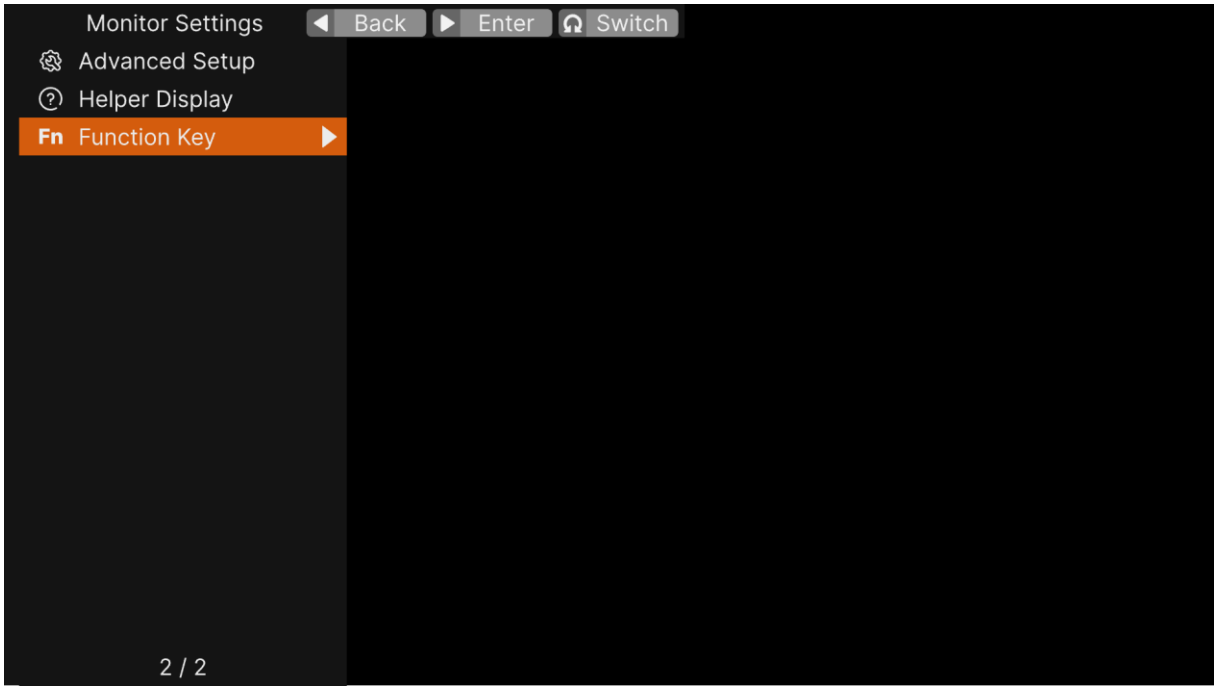


Figure 4.2-8 Function Key Item in Monitor Settings

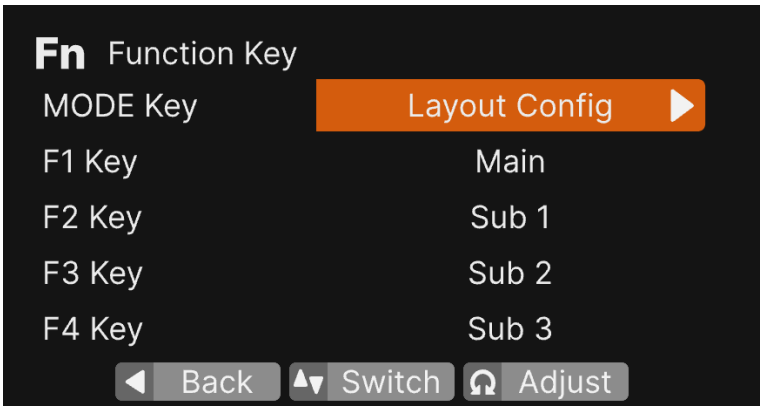


Figure 4.2-9 Function Key Menu

Use the Joystick to select the item you wish to modify and toggle its state between **ON** and **OFF**, as shown in Figure 4.2-10.

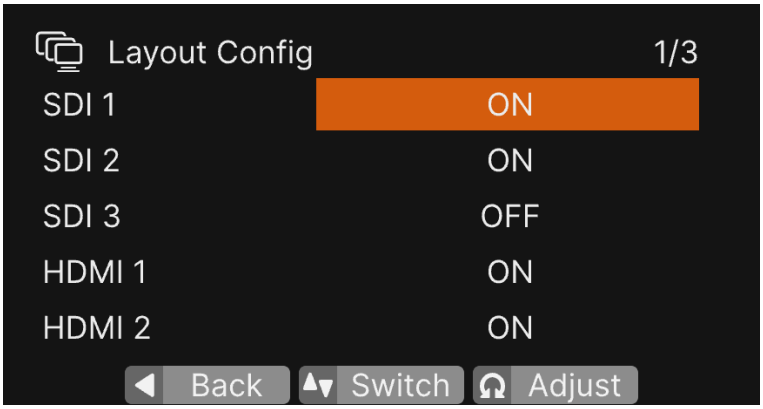


Figure 4.2-10 Layout Config for Mode Menu Display

Settings are saved automatically. After exiting, press the Mode button again; the pop-up menu will only display the items you have enabled.

Tips

- To prevent the menu from being completely disabled and becoming unusable, the system will forcibly ensure that at least one mode remains.

4.2.5.2 Window Management in Multi-Screen Mode

When a multi-screen mode comprising 2 to 4 windows is selected:

- **Default Layout:**

All sub-windows are arranged sequentially in a clockwise direction. Taking the quad-screen mode as an example, the sub-windows are distributed sequentially from top to bottom, left to right, as shown in Figure 4.2.6.

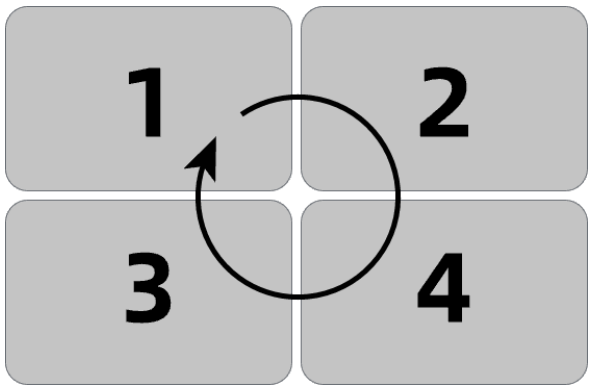


Figure 4.2-11 Window Sequence Diagram

- **Icon Identification:**

In the mode menu icons, each window is identified by a letter. The correspondence between windows and icon meanings is shown in Table 4.2-2.

Table 4.2-2 Description of Window Letter Identifiers in Mode Icons

No.	Window ID	Identifier Description
1	M	Main, represents the main window (Window 1)
2	S1	Sub1, represents sub-window 1 (Window 2)
3	S2	Sub2, represents sub-window 2 (Window 3)
4	S3	Sub3, represents sub-window 3 (Window 4)

4.2.5.3 Signal Source Assignment in Multi-Screen Mode

In multi-screen mode, signal sources must be assigned individually to each window via the monitor settings menu. Follow the instructions below:

Step 1 Access Monitor Menu

Scroll the Joystick down to display the menu bar at the top of the screen. The default highlighted option is the monitor menu icon ("**Monitor Settings**") as shown in Figure 4.2-12. Scroll the Joystick down again to enter the **Monitor Settings** menu as shown in Figure 4.2-13.

Figure 4.2-12 Menu Bar

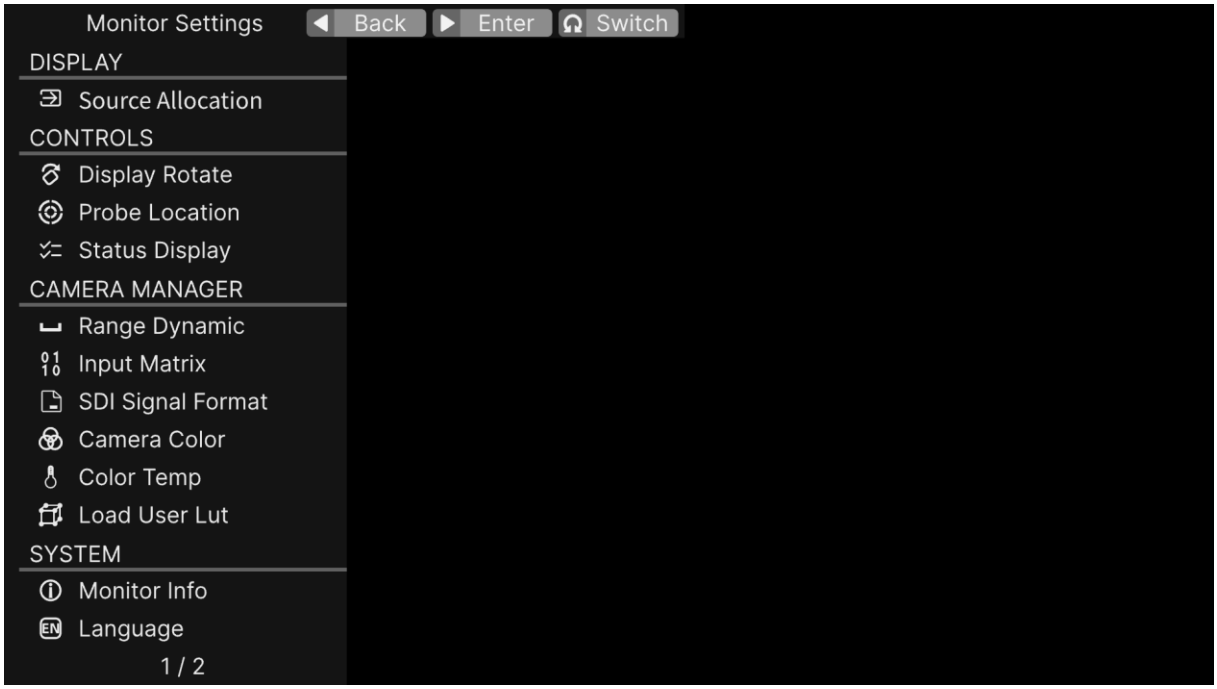


Figure 4.2-13 Monitor Settings Menu

Step 2 Input Source Assignment

Select **Display→ Source Allocation** item, then scroll right to enter the **Source Allocation** sub-menu. Scroll up or down to assign source to the **Main Window**, **Sub-Window 1**, **Sub-Window 2**, and **Sub-Window 3** separately. The available options include: **SDI1, SDI2, SDI3, HDMI1, HDMI2, HDMI3**, as shown in Table 4.2-3:

Table 4.2-3 Signal Sources for Each Window

Window	Default	Value Range	Description
Main Window	SDI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for the Main window
Sub1 Window	SDI2	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 1
Sub2 Window	HDMI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 2
Sub3 Window	HDMI2	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 3

■ **Operation**

As shown in Figure 4.2-14, scroll the Joystick up or down to select the target

window, then scroll left or right to browse and switch between different input source options, The system automatically saves the setting once a selection is made.

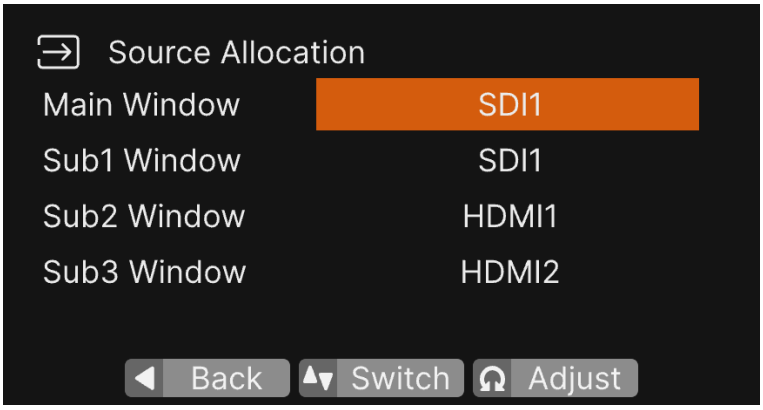


Figure 4.2-14 Input Source Assignment Window

4.2.5.4 Signal Source Setting in Single-Screen Mode

In single-screen mode, switch sources via the **Mode** button.

Press the **Mode** button to display the mode menu in the top-left corner of the screen, as shown in Figure 4.2-15. Repeatedly press Mode button to cycle through from Option 1 to Option 6, or scroll the Joystick after the mode menu is invoked to switch the single-screen signal source for single display.

The correspondences between the options and the modes are as shown in Table 4.2-1.

The current selected option highlights in bright orange. Wait for screen stabilization before proceeding.

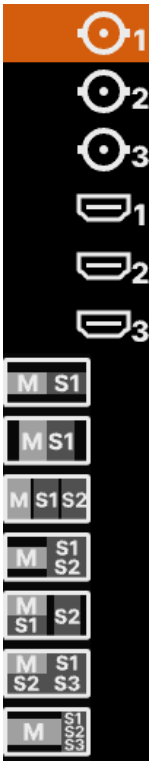


Figure 4.2-15 Mode Menu-Drop List for the Mode Button

4.2.5.5 Multi-Screen Mode and Scene Association Rules

Multi-screen mode scene association rule: Multi-screen mode is permanently assigned to Scene 8 (MySet8).

- **Entering Multi-Screen Mode**: When switching to any multi-screen layout mode, the system will automatically enable the MySet8.
- **Exiting Multi-Screen Mode**: When returning to single-screen mode, the system will automatically restore the last-used single-screen scene (from MySet1 to MySet7) before switching to multi-screen mode. The following operations will revert to single-screen mode:

  - ☐ Using shortcut keys (F1~F4): Switch to a specified screen (Main Window, Sub1 Window, Sub2 Window, Sub3 Window);

  - ☐ Using the Mode button: Switch to single-screen mode (SDI1, SDI2, SDI3, HDMI1, HDMI2, HDMI3).

4.2.6 ZOOM&PAN

You can get closer view to show you more details of your image in ZOOM mode. It provides 2X ZOOM mode and 4X ZOOM mode, that is you can double(2X) or

quadruple(4X) the image, and move the starting position of the enlarged image. When in menu clear status and with a signal input, scroll up once to enter Zoom 2X mode, twice to enter Zoom 4X mode, and scroll down to change from Zoom in to Zoom out.

1. ZOOM 2X

■ **Enter Zoom 2X Mode**

Rotate the joystick in clockwise or counterclockwise to switch and access a scene, and then scroll up the joystick to access **Zoom 2X** mode, the image is enlarged twice as much as the original one. There will be a Zoom 2X icon at the bottom left of the screen, as shown in Figure 4.2-16:

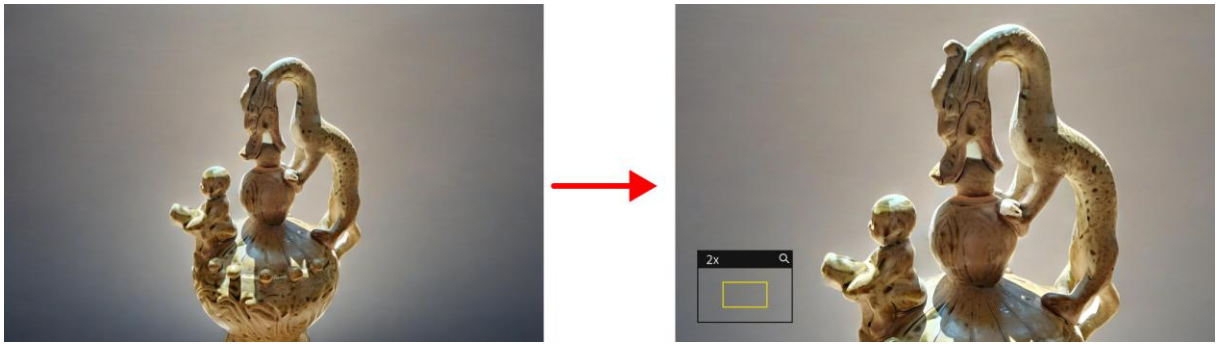


Figure 4.2-16 Zoom 2X Mode

■ **Zoom 2X Pan Mode**

After accessing the Zoom 2X Mode, press straight down the joystick to enter Pan mode, then scroll left, right, up or down to pan the image, press again to exit Pan mode.

In Pan mode, you can move the starting position of the enlarged image. There will be a Zoom 2X Editing icon at the bottom left of the screen, as shown in Figure 4.2-17. The small rectangle with four direction arrows in this icon represents the current full screen image in the monitor, you can judge where this area is in the original image.

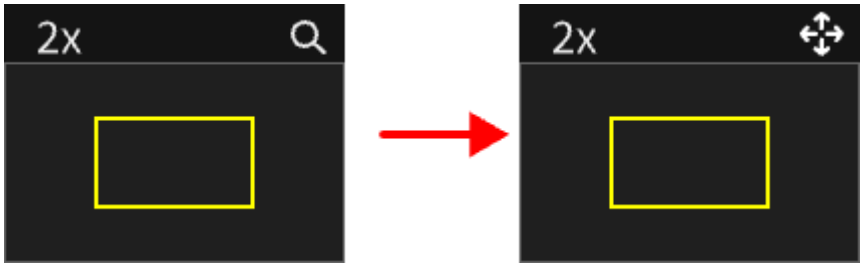


Figure 4.2-17 Zoom 2X Pan Mode

2. ZOOM 4X

■ **Enter Zoom 4X Mode**

Scroll up the joystick to show the **Zoom 2X** mode, and then keep scrolling the up the joystick to show the **Zoom 4X** mode, the image is enlarged by four times as much as the original one. There will be a Zoom 4X icon at the bottom left of the screen, as shown in Figure 4.2-18:

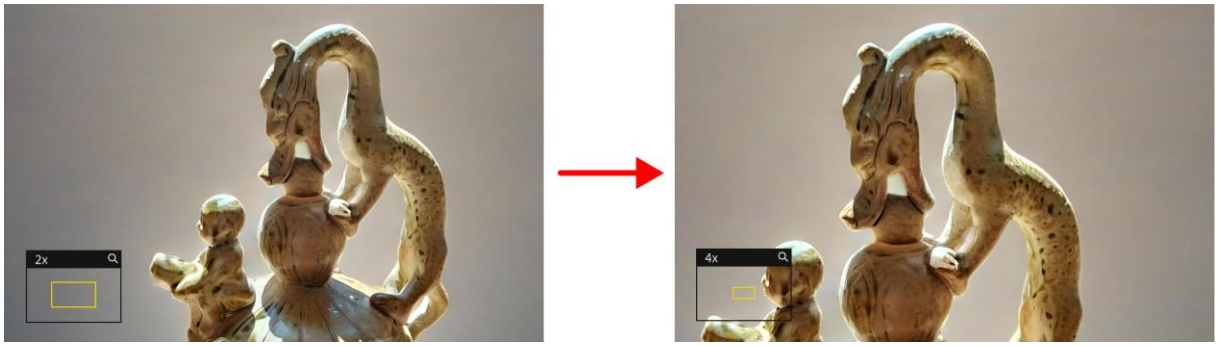


Figure 4.2-18 Zoom 4X Mode

- **Zoom 4X Pan Mode**

After accessing the Zoom 4X Mode, press straight down the joystick to enter Pan mode, scroll left, right, up or down to pan the image, press again to exit Pan mode.

In Pan mode, you can move the starting position of the enlarged image. There will be a Zoom 4X Editing icon at the bottom left of the screen, as shown in Figure 4.2-19. The small rectangle with four direction arrows in this icon represents the current full screen image in the monitor, you can judge where this area is in the original image.

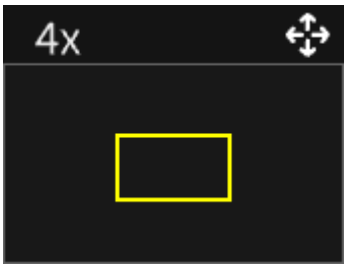


Figure 4.2-19 Zoom 4X Editing Mode

3. Original Image Mode

- Original Image Mode

In Zoom 2X mode or Zoom 4X mode, press down to recover and display the original image.

4. Hide/Show On-screen Menu in Zoom Mode

In zoom mode, the on-screen menu is displayed as shown in Figure 4.2-20. The zoom icon is located in the lower-left corner of the screen, and the status bar (with Operation Aid) is shown at the top. In this state, scroll the Joystick left to hide the entire on-screen menu, leaving only the pure image content, while

press any button to show the menu again.

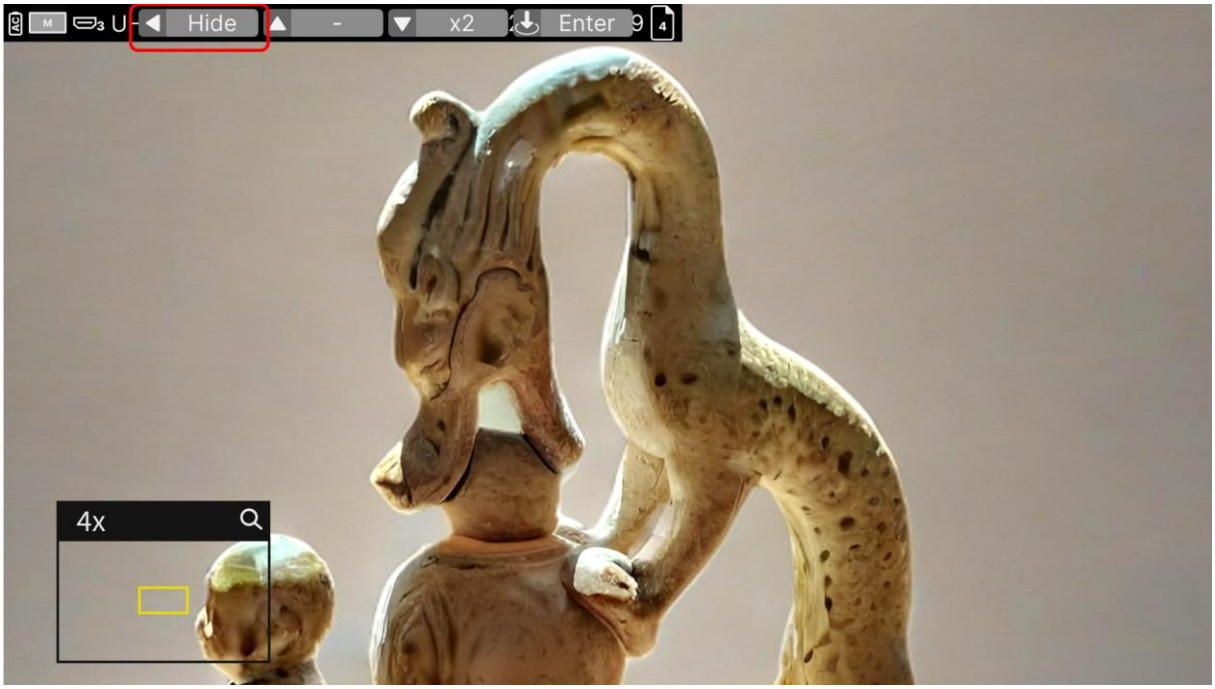


Figure 4.2-20 On-screen Menu in Zoom Mode

Tips

- The scene tools are not editable in ZOOM 2X or ZOOM 4X mode.

4.3 Supported Signal Format

The supported signal format for this device is as shown in Table 4.3-1, Table 4.3-2:

Table 4.3-1 Supported Signal Format for Inputs

Signal Format		SDI	HDMI
HD(1280X720)	P50	✓	✓
	P60/59.94	✓	✓
3G(1920X1080)	I50	✓	✓
	I60/59.94	✓	✓
	P24/23.98	✓	✓
	P25	✓	✓

Signal Format		SDI	HDMI
	P30/29.97	✓	✓
	P50	✓	✓
	P60/59.94	✓	✓
2K(2048x1080)	PSF24/23.98	✓	
	PSF25	✓	
	PSF29.97	✓	
	PSF30	✓	
	P24/23.98	✓	✓
	P25	✓	✓
	P30/29.97	✓	✓
	P50	✓	✓
	P60/59.94	✓	✓
UHD(3840x2160)	P24/23.98		✓
	P25		✓
	P30/29.97		✓
	P50		✓
	P60/59.94		✓
4K(4096x2160)	P24/23.98		✓
	P25		✓
	P30/29.97		✓
	P50		✓
	P60/59.94		✓

Table 4.3-2 Supported Signal Format for Outputs

Signal Format	SDI	HDMI
1080P50	✓	✓
1080P60	✓	✓

Chapter 5 Menu Operations

The chapter describes the structure and functionality of the monitor settings, and introduces how to modify and customize the monitor settings.
Monitor settings contain the following menus as shown in Figure5-1.

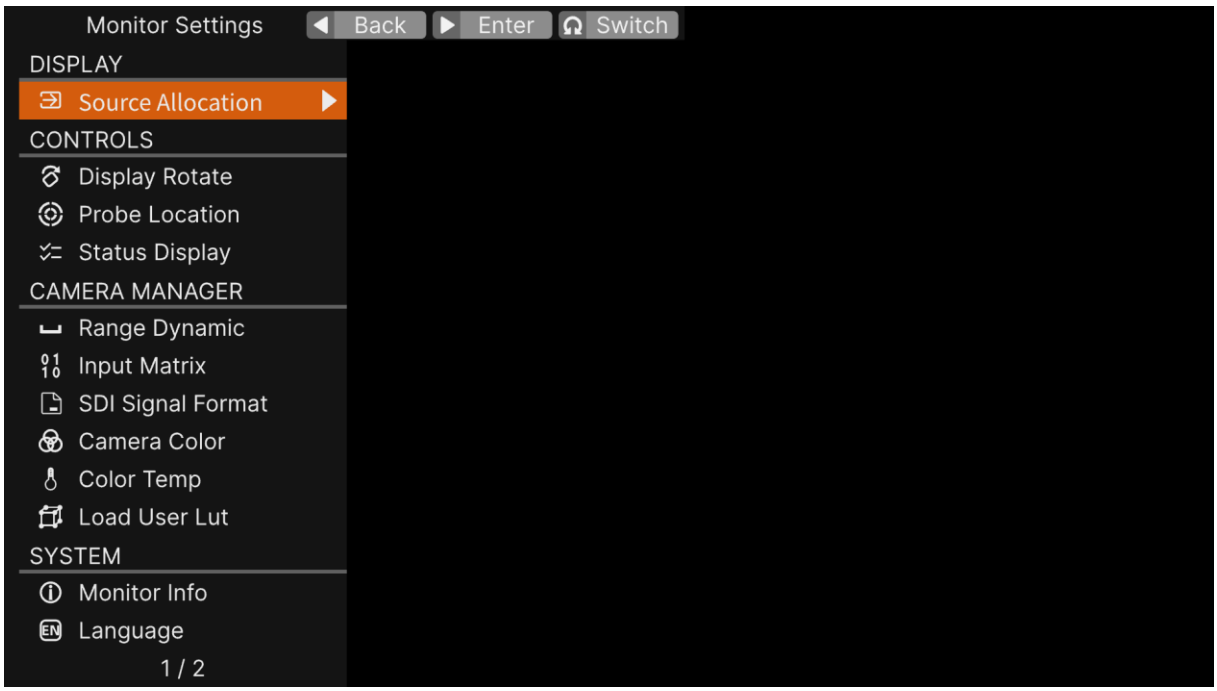


Figure 5-1 Monitor Settings

5.1 Monitor Settings

Checking or modifying the monitor settings with the Joystick.

Scroll the joystick down to display the menu bar button at the top center of the screen, as shown in Figure 5.1-1. The default selection icon is just the **Monitor Settings**, then press the joystick down to confirm the selection, it will display the monitor settings, as shown in Figure 5.1-2:

Figure 5.1-1 Menu Bar

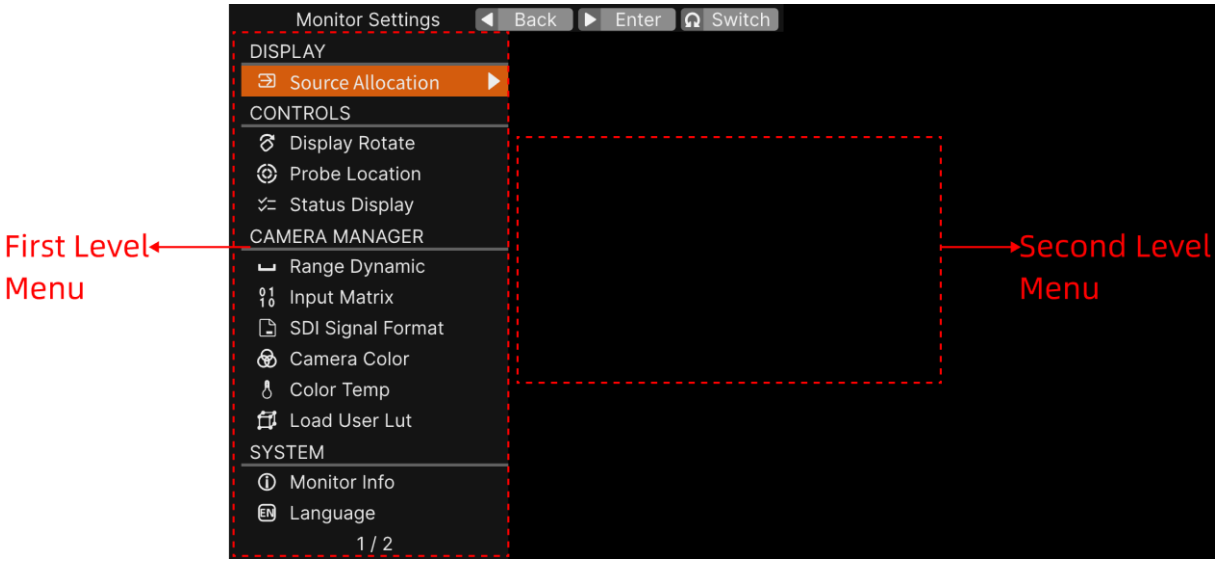


Figure 5.1-2 Structure of Monitor Settings

The menu interface is divided into two parts:

1. **First level menu**

   It contains the menu list of the monitor settings, containing **Display, Controls, Camera Manager** and **System**. Scroll up or down to choose an item, the selected one is labeled in highlight orange.

2. **Second level menu**

   After selecting a menu item in the first level menu list, scroll right to access the corresponding menu item to enter the second level of menu list. It will pop up the second level menu dialog box in the center of the monitor, as shown in Figure 5.1-3. Scroll up or down to choose the second level item, and rotate the joystick in clockwise or counterclockwise to modify the value of the item. Then, scroll left to quit this operation and return to the first level menu.

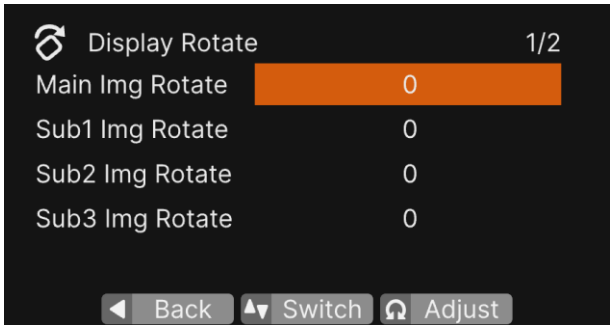


Figure 5.1-3 Second Level Menu in Monitor Settings

■ **Control Icon**

There is an orange control icon when you choose the menu or its value in the

menu list.

Tips

- The menu item is selected when the control icon which is in highlight orange.

5.2 Monitor Menu

The following will introduce the contents and functionality of these menu items in sorts.

5.2.1 DISPLAY

The **DISPLAY** menu items are used to assign signal source for each display window. The menu items are as shown in Figure 5.2-1:

Figure 5.2-1 DISPLAY Menu

Table 5.2-1 Description of DISPLAY Menu Items

Menu	Items	Default	Value Range	Description
Source Allocation	Main Window	SDI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for the Main window
	Sub1 Window	SDI2	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 1
	Sub2 Window	HDMI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 2
	Sub3 Window	HDMI2	SDI1/SDI2/SDI3/ HDMI1/HDMI2/HDMI3	Input source for Sub-window 3

Select **Display→ Source Allocation** item, then scroll right to enter the Source Allocation sub-menu, as shown in Figure 5.2-2. Scroll up or down to assign source to the Main Window, Sub1 Window, Sub2 Window, and Sub3 Window separately. The available options include: SDI1, SDI2, SDI3, HDMI1, HDMI2, HDMI3.

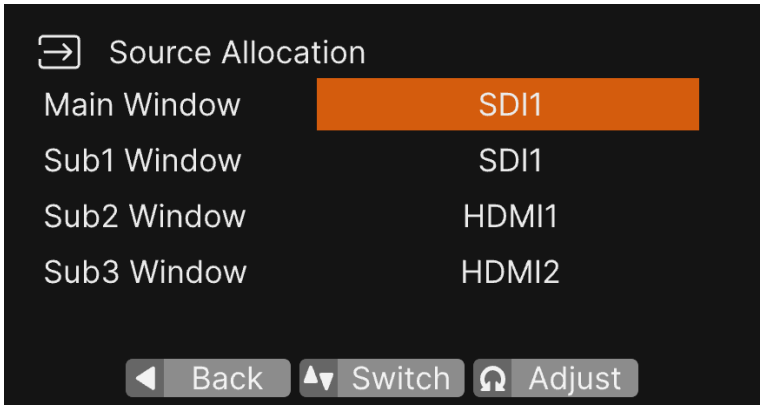


Figure 5.2-2 Input Source Assignment Window

The Mode button allows for rapid signal source switching in both single-screen and multi-screen modes.

Press the front-panel Mode button. The mode menu pops up in the top-left corner. The selected option is highlighted in bright orange, and it takes effect automatically after a 3-second timeout. For the source mapping relationship, please refer to the table below.

No.	Source	Physical Connector
1	SDI1	SDI IN1 (BNC)
2	SDI2	SDI IN2 (BNC)
3	SDI3	SDI IN3 (BNC)
4	HDMI1	HDMI IN1(HDMI Type A)
5	HDMI2	HDMI IN2(HDMI Type A)
6	HDMI3	HDMI IN3(HDMI Type A)

Tips

- Refer to "4.2.5 Signal Source and Mode Selection" for the details about signal source and mode selection.

5.2.2 CONTROLS

The **CONTROLS** menu items are used to adjust volume, backlight, rotating image, set probe position and status bar. The menu items are as shown in Figure 5.2-3:

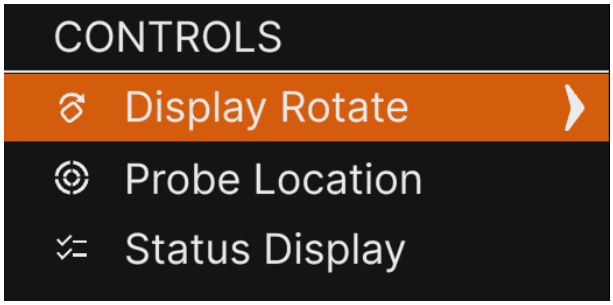


Figure 5.2-3 Controls Menu

Table 5.2-2 Description of Controls Menu Items

Menu	Items	Default	Value Range	Description
Display Rotate	Main Img Rotate	0	0/180/ 90/270	Set image rotation angle for Main Window
	Sub1 Img Rotate	0	0/180/ 90/270	Set image rotation angle for Sub-Window 1
	Sub2 Img Rotate	0	0/180/ 90/270	Set image rotation angle for Sub-Window 2
	Sub3 Img Rotate	0	0/180/ 90/270	Set image rotation angle for Sub-Window 3
	Main Img Mirror	OFF	OFF/ON	Enable/disable image mirroring for Main Window
	Sub1 Img Mirror	OFF	OFF/ON	Enable/disable image mirroring for Sub-Window 1
	Sub2 Img Mirror	OFF	OFF/ON	Enable/disable image mirroring for Sub-Window 2
	Sub3 Img Mirror	OFF	OFF/ON	Enable/disable image mirroring for Sub-Window 3
Probe Location	Options	After LUT	After LUT/ Before LUT	Set the probe before or after LUT loading. This probe will affect the collecting data from the input signal to the appearance of waveform, vector, histogram, false color and zebra.
Status Display	Options	AUTO	OFF/ON/ Simple Mode/ AUTO	Enable/disable the status bar at the top of the screen

1. Display Rotate

■ **Image Rotate**

Set **CONTROLS→Display Rotate→ XX Image Rotate** item to be **180** or **0**, only the input image will reverse vertically, as shown in Figure 5.2-4:

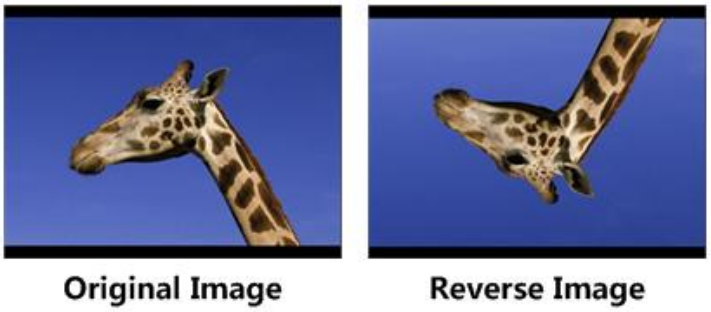


Figure 5.2-4 Vertical Rotate

■ **Image mirror**

Set **CONTROLS→Display Rotate→ XX Image Mirror** item to be **ON** or **OFF**, only the input image will reverse horizontally, as shown in Figure 5.2-5:

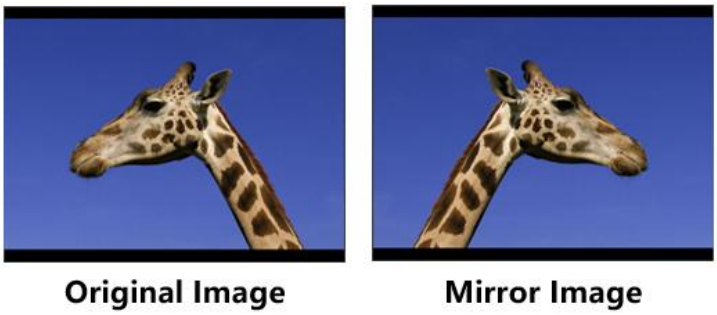


Figure 5.2-5 Horizontal Rotate

Tips

- Per-Window Independent Operation: Image rotation and mirroring functions can be individually applied to any designated window in multi-screen mode!
- Orientation-Adaptive Configuration: When setting image rotation, for horizontally mounted monitors, use 0° or 180° parameter values, and for vertically mounted monitors: Use 90° or 270° parameter values.

2. STATUS BAR Management

Set **CONTROLS→Status Display** item to be **ON**, it will display the Status bar at the top of the screen, including these items from left to right in the following order:

Power Status (Battery Level Indicator), Operation Mode, Input Interface Type, Input Signal Format, Gamut Space, and Current MySet Name.

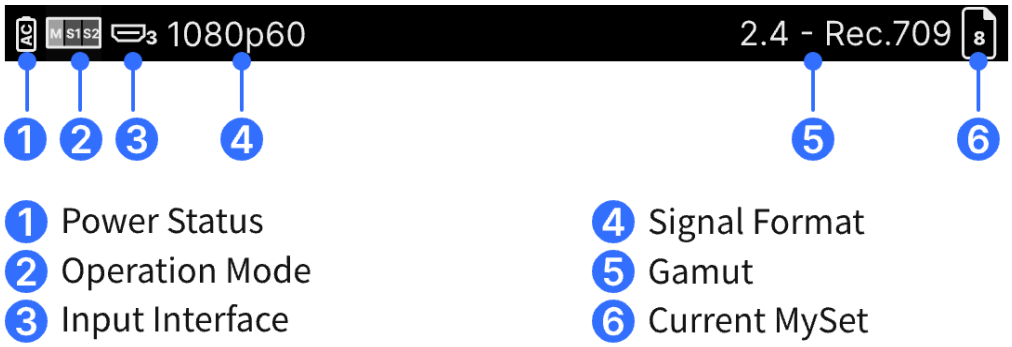


Figure 5.2-6 Status Bar

■ Display Mode Settings

The Status bar offers several display modes to suit user preferences:

- ☐ **ON**: The full status bar is displayed persistently;
- ☐ **OFF**: Turn off the status bar;
- ☐ **AUTO**: The status bar is displayed for 15 seconds before automatically disappearing, while press any button to show it again.
- ☐ **Simple Mode**: Only critical information is shown: Power Status, Operation Mode, and Input Interface Type.

Figure 5.2-7 Status Bar in Simple Mode

Power Status Indicators: The power status icon provides real-time information about the device's power supply, as detailed in the table below. When the device is operating on battery power and the charge is critically low, a battery warning message will appear, as shown in Figure 5.2-8. Please replace the battery in time, and press OK button to close this prompt. And it will display an AC indicator when powered by AC power input.

Figure 5.2-8 Battery Warning

Range of battery level	Illustration
100%	
>80%	
<80%, >60%	
<60%, >40%	
<40%, >20%	
<10%	
Nearly running out	
Powered by AC	AC

Tips

- For the differentiation of battery providers, the illustrations and values for various battery levels in the above table are for reference only, please don't take it for granted and judge it as the real battery level!

■ Operation Aid Bar

The **operation aid bar** prompts a bar of buttons which indicates the auxiliary information to the Joystick for your current operation step by step. Select **SYSTEM→ Helper Display → Operation Aid** item to enable or disable this prompt.

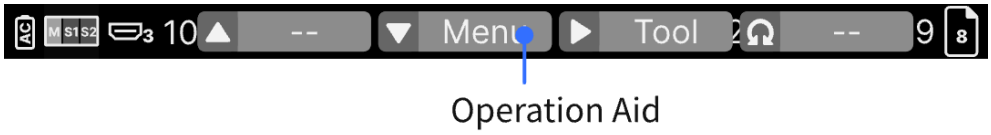


Figure 5.2-9 Status Bar

Tips

- Refer to "5.2.4 SYSTEM" for the details about Operation Aid.

■ **INPUT FORMAT**

The **Input Source Format** usually displays as the following situations:

☐ **NO SIGNAL**: appears if an unsupported signal is input or if no signal is detected.

☐ **Normal**: the signal format is displayed as HDMI 1080i59.94, etc. when the input is supported by the monitor.

5.2.3 CAMERA MANAGER

The **CAMERA MANAGER** menu items are used to set the Input Range, Input Matrix, SDI Signal Format, Camera Color, Color Temp and Load User LUT, the menu items are as shown in Figure 5.2-10:

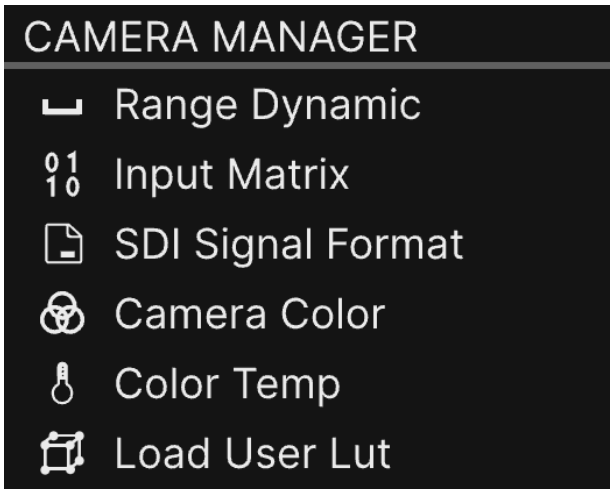


Figure 5.2-10 CAMERA MANAGER Menu

Table 5.2-3 Description of Camera Manager Items

Menu	Items	Default	Value Range	Description
Range	Source	SDI1	SDI1/SDI2/SDI3/	Set signal source

Menu	Items	Default	Value Range	Description
Dynamic			HDMI1/HDMI2/ HDMI3	
	Data Range	0~1023	64~940/ 0~1023	Set data range
	Dynamic Mode	No Clip	No Clip/SDR Soft Clip/HDR Soft Clip	Set the dynamic range
Input Matrix	Source	SDI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/ HDMI3	Set signal source
	Options	Auto	Auto/ Rec 601(SD)/ Rec 709(HD)/ Rec 2020(UHD)	Set color matrix
SDI Signal Format	Source	SDI1	SDI1/SDI2/SDI3	Set signal source
	Options	Auto	Auto, 422 YCBCR 10BIT, 422 YCBCR 12BIT, 444 YCBCR 10BIT, 444 YCBCR 12BIT, 444 RGB 10BIT, 444 RGB 12BIT, 444 XYZ 10BIT, 444 XYZ 12BIT	Set signal format, available for SDI.
Camera Color	Source	SDI1	SDI1/SDI2/SDI3/ HDMI1/HDMI2/ HDMI3	Set signal source
	LOG/HDR	Standard	Standard /LOG/ User LUT	Set color mode
	Format	EBU	EBU/DCI	Choose a color profile, refer to Table 5.2-5 for the relationship among color profile, gamma and gamut(Available when LOG/HDR set as Standard)
	Profile	ARRI	ARRI/BMD/ Canon/FUJI/ Nikon/ Panasonic/ RED/SONY	Choose a color profile, refer to Table 5.2-6 for the relationship among color profile, gamma and gamut(Available when LOG/HDR set as LOG)
	Gamma	--	Refer to Table	Set Gamma (Available

Menu	Items	Default	Value Range	Description
			5.2-5, Table 5.2-6	when LOG/HDR set as Standard or LOG)
	Gamut	--	Refer to Table 5.2-5, Table 5.2-6	Set Gamut (Available when LOG/HDR set as Standard or LOG)
	ID	LUT1	LUT1~LUT10	Choose a user LUT ID
	Intensity	100%	0~100%	Set the intensity of the LUT effected to current display
	User LUT Name	--	--	Display the user LUT name selected in ID
Color Temp	Color Temp	D65	D65/D93/User	Select a color temperature standard for the panel
	User Color Temp	6500K	3200~11000K	Set custom color temperature
	R-GAIN	512	0~512	Adjust the Red Gain
	G-GAIN	512	0~512	Adjust the Green Gain
	B-GAIN	512	0~512	Adjust the Blue Gain
Load User LUT	Execute Load LUT File	--	LUT1~ LUT10	Load a color look profile from U disk

Availabl e when LOG/H DR set as User LUT

Tips

- Before setting the Range Dynamic, Input Matrix, SDI Signal Format, or Camera Color, first select the target signal source by modifying the corresponding item under **CAMERA MANAGER→ Range Dynamic (or Input Matrix, SDI Signal Format, Camera Color) → Source**.

1. Set Color Mode

To meet the display requirements of various professional shooting scenarios, this monitor provides three professional color modes, which can be set via **CAMERA MANAGER→ Camera Color → LOG/HDR** item. The specific modes are shown in Table 5.2.4.

Table 5.2-4 Color Mode

LOG/HDR	Description
Standard	Turns off all LUTs and displays in the monitor's native mode (e.g., Rec.709).
LOG	Enables the built-in camera LOG mode. Select the corresponding camera Log curve (e.g., S-Log3). This monitor supports color profiles from multiple mainstream camera brands.
User LUT	Loads user-defined LUT files for personalized color configuration. Custom ".cube" files can be loaded from a memory card as user LUTs.

2. Color Management in Standard and LOG Modes

To meet different end-display requirements, this monitor offers rich color management modes.

■ **Using Standard Color Mode**

In Standard Color Mode, the monitor provides industry-standard color configuration presets, using built-in EBU/DCI modes. In this mode, the monitor displays signals from the camera using its own default and color-accurate gamma curves that comply with relevant industry standards, restoring color information. The preset relationships are shown in Table 5.2-5.

For example:

Set **CAMERA MANAGER→ Camera Color → LOG/HDR** item to **Standard**, and select **EBU** or **DCI** standard via **CAMERA MANAGER→ Camera Color → Format** item, and configure the gamma and color gamut.

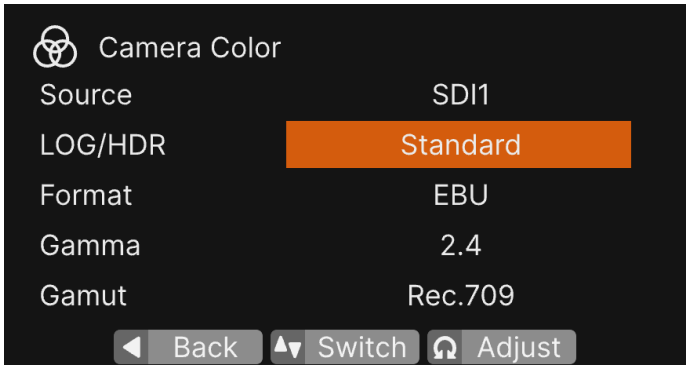


Figure 5.2-11 Camera Color Settings

Table 5.2-5 Color Configuration Presets in Standard Mode

PROFILE	GAMMA	GAMUT
EBU	2.2	Rec 709

PROFILE	GAMMA	GAMUT
	2.4	Rec 709
	HLG	Rec 709, Rec 2100
	PQ	Rec 709, Rec 2100
DCI	2.6	P3 D65, DCI-P3

■ Using LOG Color Mode

LOG Mode supports color profiles for multiple brands of cameras, providing accurate color reproduction and monitoring solutions for different camera systems. These include ARRI, BMD, Canon, DCI, EBU, FUJI, NIKON, Panasonic, RED, and SONY. The specific formats are shown in Table 5.2-6 below:

Table 5.2-6 Color Configuration Presets in LOG Mode

PROFILE	GAMMA	GAMUT
ARRI	EI160	Rec.709, ALEXA Wide Gamut
	EI200	
	EI250	
	EI320	
	EI400	
	EI500	
	EI640	
	EI800	
	EI1000	
	EI1280	
	EI1600	
BMD	BMD Film	BMD 4K Film, BMD 4.6K Film, BMD Pocket 6K Film
	BMD 4K Film	
	BMD 4.6K Film	
Canon	C LOG	Rec.709, Canon Cinema, Rec 2100, DCI-P3, DCI-P3+
	C LOG2	
	C LOG3	
FUJI	F-LOG	Rec.709, F-Gamut

PROFILE	GAMMA	GAMUT
Nikon	N-Log	Rec 2100
Panasonic	V-LOG	Rec.709, V-Gamut
RED	Redlogfilm	Rec.709, DRAGONcolor, DRAGONcolor2, REDcolor2, REDcolor3, REDcolor4, REDWideGamut
	Log3G12	
	Log3G10	REDWideGamut
Sony	S-LOG	Rec.709, S-Gamut, S-Gamut3, S-Gamut3.Cine, Rec 2100
	S-LOG2	
	S-LOG3	

Tips

- The color profiles supported by this monitor will be constantly updated and improved.
- It is recommended to determine the LOG/HDR settings to be used before shooting, and then select the matching color configuration parameters.

3. Load User LUT File

The monitor could be equipped with versatile color lookup profiles for different image effect requirements. Add these customized LUT files from U disk through **LOAD USER LUT** item in monitor setting, then choose and apply USER LUT through USER LUT tool in the scene.

Step 1 Enable User LUT Mode

Enter the monitor menu, select **CAMERA MANAGER→ Camera Color → LOG/HDR** item, and set it to User LUT to enable the user-customized color configuration mode, as shown in Figure 5.2-12.

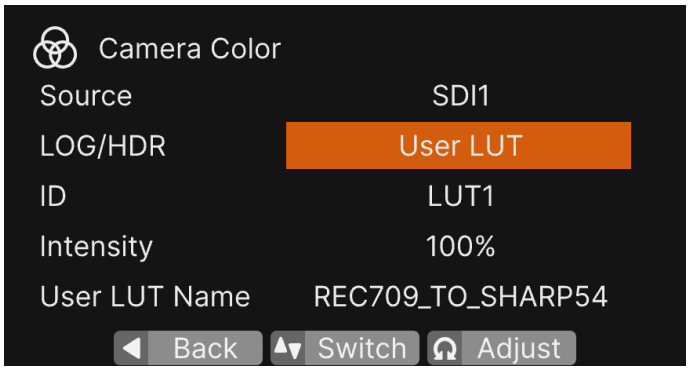


Figure 5.2-12 Select User LUT Option

Step 2 Load LUT Files to the Monitor

- **Preparation**: Prepare a USB drive formatted as FAT32 with a capacity of less than 32GB. Ensure the LUT file has the extension ".cube".

Follow the steps below to load the user LUT to the monitor:

Operation: Insert the USB drive containing the LUT files into the monitor. Select **CAMERA MANAGER→ Load User LUT → LUT*** (where * represents a number from 1 to 10) to enter the LUT list interface, as shown in Figure 5.2-13, The profile name displayed on the right side of each LUT ID is empty by default.

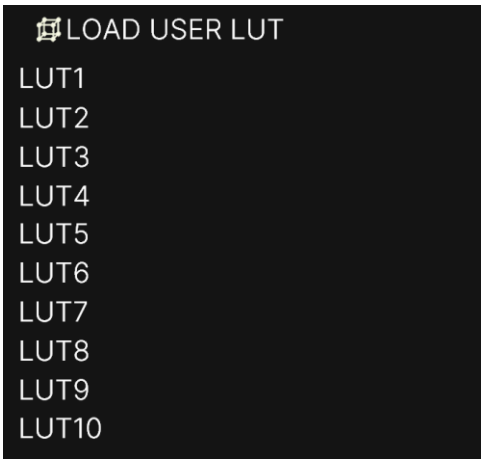


Figure 5.2-13 LUT Storage Directory

Scroll the joystick down to select a LUT ID, and press down to confirm the selection. Then, it will pop up a prompt for reminding you overwriting operation for LUT file, as shown in Figure 5.2-14, press **CONFIRM** to continue loading the LUT. Select the target LUT file from the USB drive. The file must have the extension ".cube".

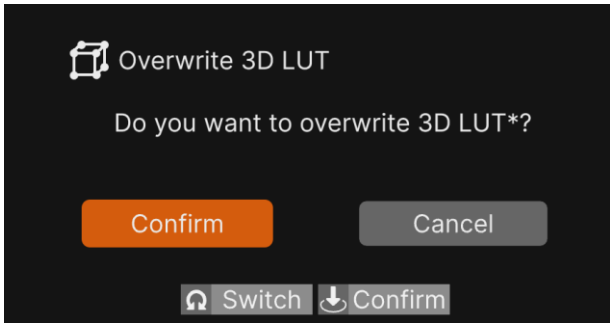


Figure 5.2-14 Prompt for Overwriting LUT

After confirmation, the system will start writing the LUT file. Upon completion, a "File Write Complete" message will be displayed.

Note: Do not cut off the power supply during the writing process. After successful loading, the name of the loaded LUT will be displayed on the right side of the

corresponding LUT number in the LUT list. The monitor supports up to 10 user LUTs.

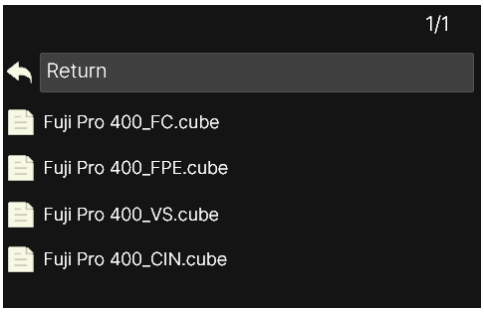


Figure 5.2-15 Calibration USER LUT Directory

Example: Load a user LUT into **LUT1**. In the LUT list, select **LUT1**, press the joystick straight down to load the LUT from the USB drive, select the target LUT file, and confirm the write. The write prompt is shown in the figure below. After successful writing, a "Write Complete" message will appear. In the LUT list, the name of the LUT can be seen on the right side of LUT1.

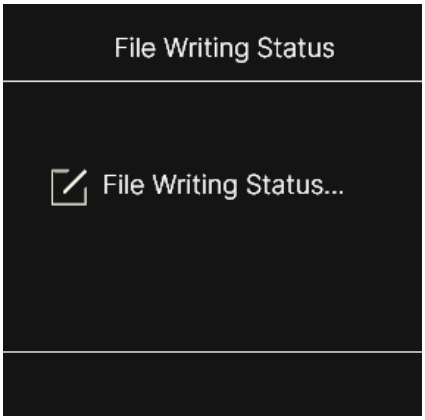


Figure 5.2-16 Prompt for File Writing

Step 3 Apply User LUT in the Scene

Operation: Select **CAMERA MANAGER→ Camera Color → LUT***, choose **ID** item as **LUT1**, and **INTENSITY** as **100%**, thus, it will apply **LUT1** to current scene display, as shown in Figure 5.2-17:

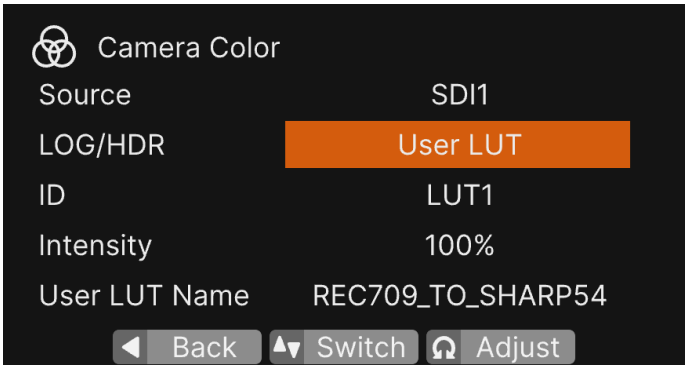


Figure 5.2-17 User LUT Tool

After activating a LUT file, it will be loaded to the image display immediately, as shown in Figure 5.2-18:

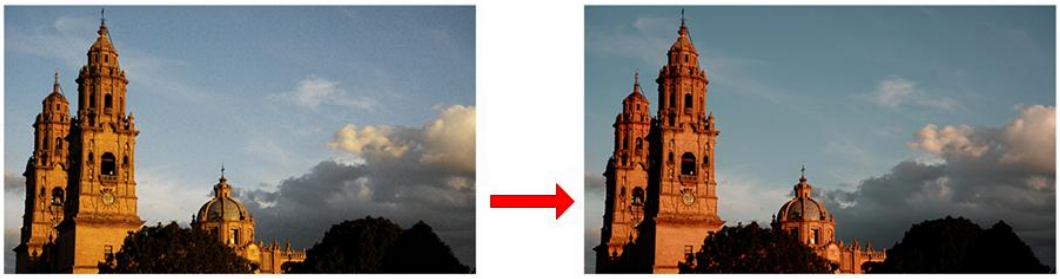


Figure 5.2-18 Output Image Applied with a LUT File

Tips

- There will a “File format not support!” prompt for unavailable LUT file when executing file writing operation.
- The recommended USB drive format is FAT32, with a capacity of less than 32GB.
- Mega 22S4 supports Color Calibrate command in monitor settings currently, the customized 3D LUT profiles (*.cube) produced by other software could be loaded to U disk by a control computer.

■ **If detecting no U disk during the operation, it will prompt ”**No Media**”; if any other wrong happened, it will pop up the relevant prompt, please check it according to this prompt.**

4. Range Dynamic & Camera Color

To accommodate input signals with different dynamic ranges, the Dynamic Mode allows selection of no-gain, SDR, or HDR dynamic input ranges. This, when combined with loading different camera LOG profiles as needed through color settings, delivers richer display effects.

First, configure the monitor's Dynamic Mode. Based on the intended display output, switch the monitor to either SDR or HDR mode to define its luminance and color gamut standards.

Set **CAMERA MANAGER→ Camera Color → Dynamic Mode** item in monitor settings to be **SDR Soft Clip**, **HDR Soft Clip** or **No Clip,** as shown in Figure 5.2-19:

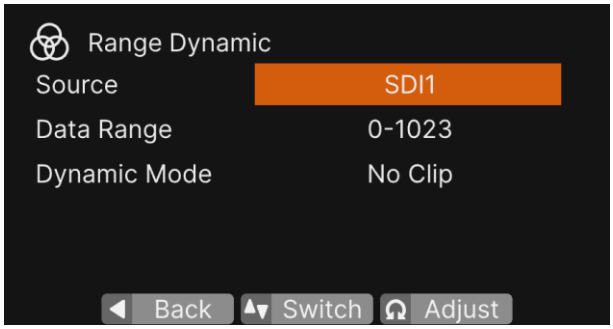


Figure 5.2-19 Dynamic Mode Settings

Then select **CAMERA MANAGER → Camera Color → Source/ Format/ Gamma/ Gamut** items according to your camera connected with Mega 22S4, the settings panel is as shown in Figure 5.2-20.

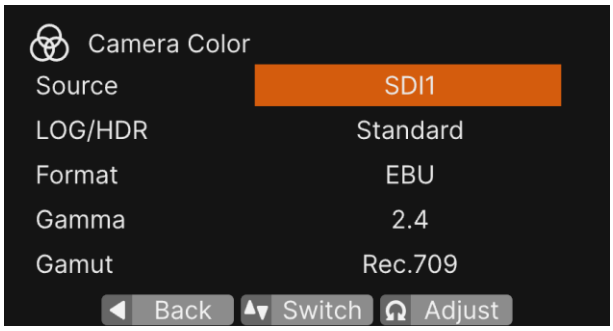


Figure 5.2-20 Camera Color Settings

5.2.4 SYSTEM

The **SYSTEM** menu provides monitor info, language selection and factory reset operations, as shown in Figure 5.2-21:

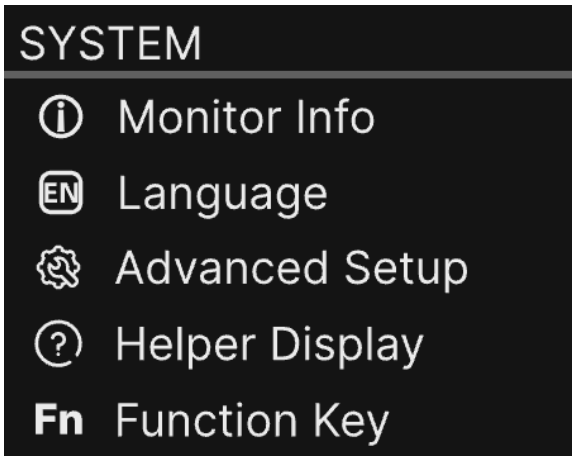


Figure 5.2-21 System Menu

Table 5.2-7 Description of System Menu Items

Menu	Items		Default	Value Range	Description
Monitor Info	Version		--	--	Show the firmware versions
	Build Info		--	--	Show build information
	Serial Number		--	--	Show serial number
	Model		--	--	Show device model
Language	Options		English	Chinese/ English	Choose a language mode
Advance Setup	Execute Factory Reset		--	--	Revert the factory settings
	Factory Manage		ON	ON/OFF	Enable/disable factory manage functions
	Color Calibrate		--	--	Execute color calibrate process
Helper Display	Boot Prompt		ON	ON/OFF	Enable/disable the helper prompt display
	Operation Aid		ON	ON/OFF	Enable/disable the operation aid prompt display
Function Key	MODE Key	SDI1	ON	ON/OFF	Enable/disable SDI1 item
		SDI2	ON	ON/OFF	Enable/disable SDI2 item
		SDI3	OFF	ON/OFF	Enable/disable SDI3 item
		HDMI1	ON	ON/OFF	Enable/disable HDMI1 item
		HDMI2	ON	ON/OFF	Enable/disable HDMI2 item
		HDMI3	OFF	ON/OFF	Enable/disable HDMI3 item
		PBP HH	ON	ON/OFF	Enable/disable PBP HH item
		PBP VV	ON	ON/OFF	Enable/disable PBP VV item
		TRI HHH	ON	ON/OFF	Enable/disable TRI HHH item
		TRI HHV	ON	ON/OFF	Enable/disable TRI HHV item
		TRI VVV	ON	ON/OFF	Enable/disable TRI VVV item
		QUAD1	ON	ON/OFF	Enable/disable QUAD1 item
		QUAD2	ON	ON/OFF	Enable/disable QUAD2 item
	F1	Main Window	Main Window/ Sub1~3 Window/ TOOL1~8		Set command linked to F1 key
	F2	Sub1	Main Window/		Set command linked to F2 key

Menu	Items		Default	Value Range	Description
		Window	Sub1~3 Window/ TOOL1~8		
	F3	TOOL3	Main Window/ Sub1~3 Window/ TOOL1~8		Set command linked to F3 key
	F4	TOOL4	Main Window/ Sub1~3 Window/ TOOL1~8		Set command linked to F4 key

1. Helper Display

The helper display contains two prompts for helping operating the monitor. One is the Boot Prompt, and the other is a dynamic operation aid for your current operation on the monitor.

■ **Boot Prompt**

Boot prompt is used to indicate how to operate with the Joystick, as shown in Figure 5.2-22. Select **SYSTEM→ Helper Display → Boot prompt** item to enable or disable this prompt. The prompt will be shown after powered on.

Figure 5.2-22 Helper Prompt for Joystick Operation

■ **Operation Aid**

Operation Aid is used to indicate how to operate with the Joystick for your current operation step by step. Select **SYSTEM→ Helper Display → Operation Aid** item to enable or disable this prompt. The operation aid prompt will be shown during your various monitor operations.

For example, open your monitor settings on your monitor, as shown in Figure 5.2-22, you will see a series of prompts as your operation aids during your operations step by step.

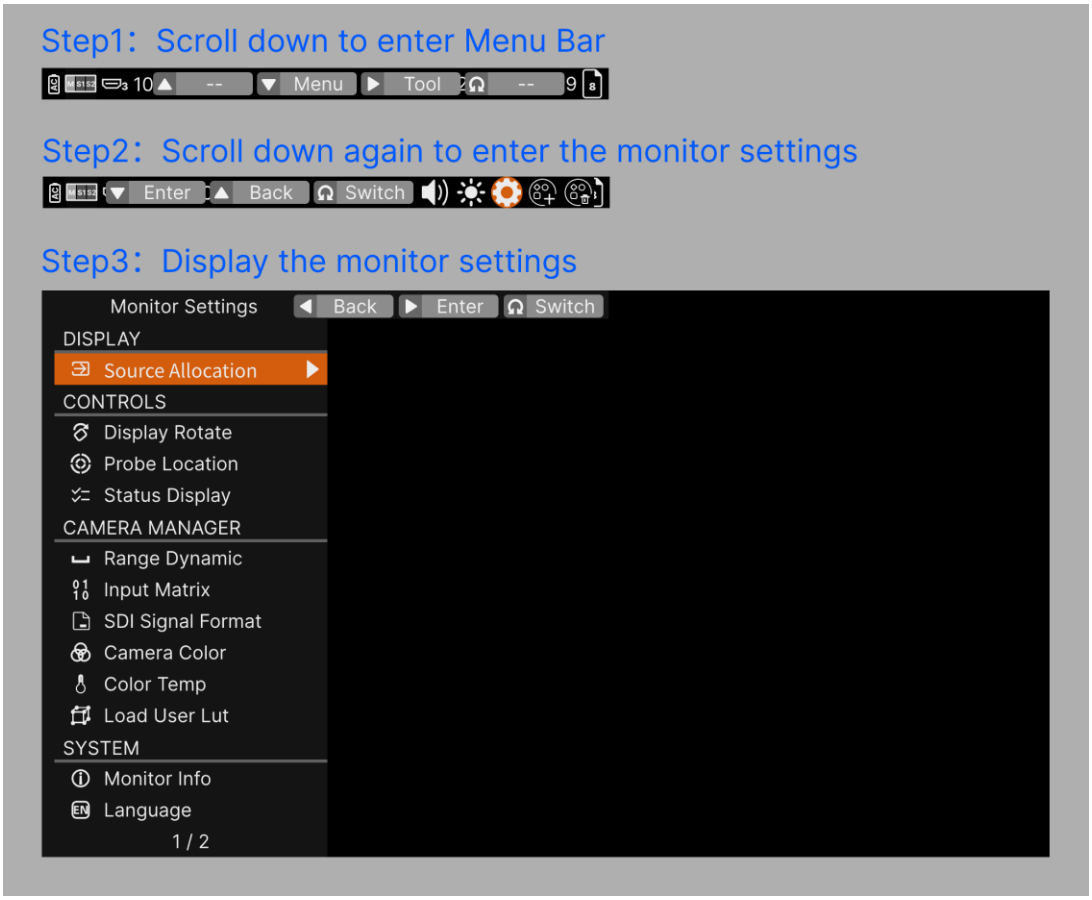


Figure 5.2-23 Operation Aids for Entering the monitor settings

2. Language

Set **SYSTEM →Language → Options** item as Chinese, English, Français or Espanol to switch the language mode for the monitor OS.

Tips

- Current language settings are preserved during factory reset.

3. Firmware Update

Insert the U disk containing your upgrade file whose format should be with a file extension of ".bin", power on the device and it will upgrade automatically, then after successfully upgraded, it will prompt as shown in Figure 5.2-24:

Figure 5.2-24 UPDATE

At last, please restart the device manually.

Make sure you have inserted your USB disk with the stored firmware files into the USB interface of the monitor, or it will inform you a "**Can't Detect USB**" error.

Tips

- Please keep the monitor on, and don't remove the USB drive during the firmware upgrading.
- It is recommended to use a 3.0 USB!
- Restart the monitor after successful firmware update, and the new files will take effect.

4. Factory Reset

Select **SYSTEM→ Advance Setup → Execute Factory Reset** item to initialize the settings to default values, it will pop up a prompt, as shown in Figure 5.2-25 , scroll right to select **Reset** command, and press the joystick straight down to confirm the selection.

Please pay some patience during the reset operation, and it lasts about one minute. The device will be in black screen mode for a short time after confirming reset operation, and then it will display the Boot Screen for successful reset operation, as shown in Figure 5.2-26. At last, please restart the device by

manual.

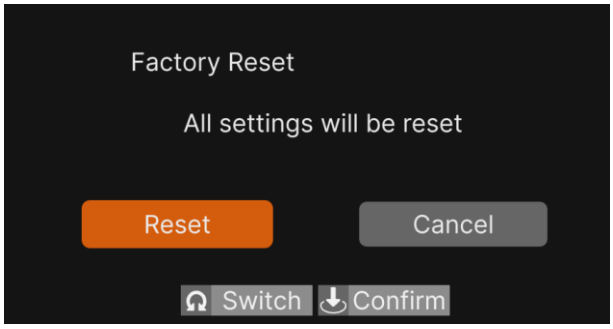


Figure 5.2-25 Prompt for Factory Reset

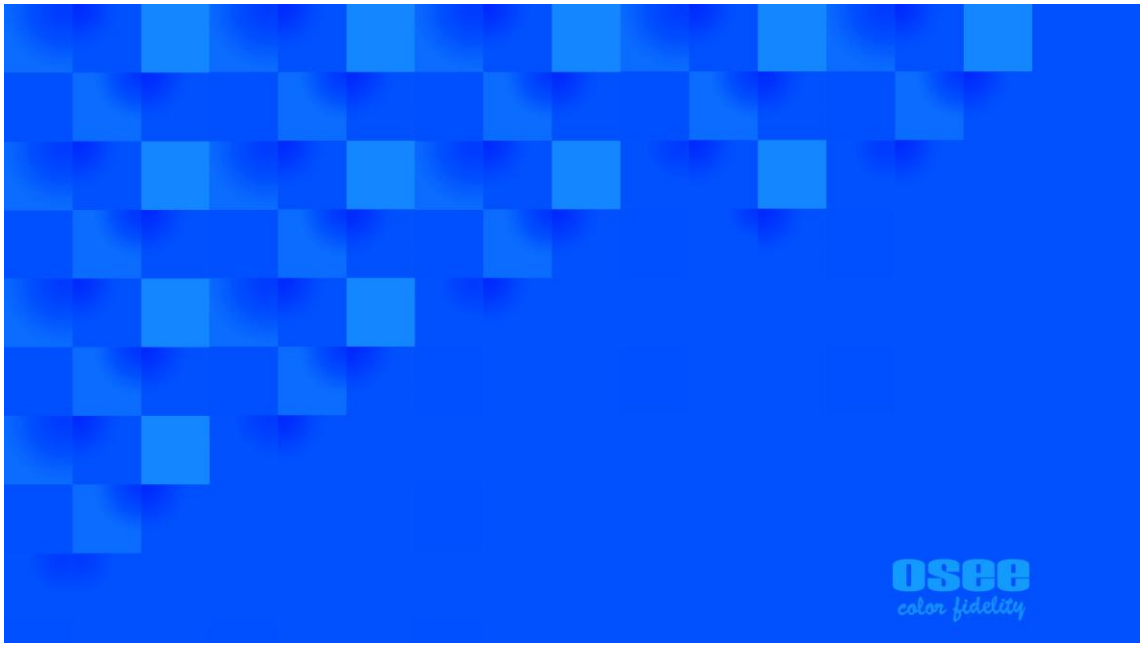


Figure 5.2-26 Boot Screen

Tips

- It lasts about one minute for restarting operation, please don't do any operations during restarting the device.

5. Mode Key Settings

Select **SYSTEM→ Function Key → Mode Key**, as shown in Figure 5.2-27. This menu is used to customize the display content of the mode menu summoned by the Mode Key. After configuration, pressing the Mode Key will pop up a menu in the upper left corner of the screen containing all available signal sources and layout modes, as shown in Figure 5.2-28.

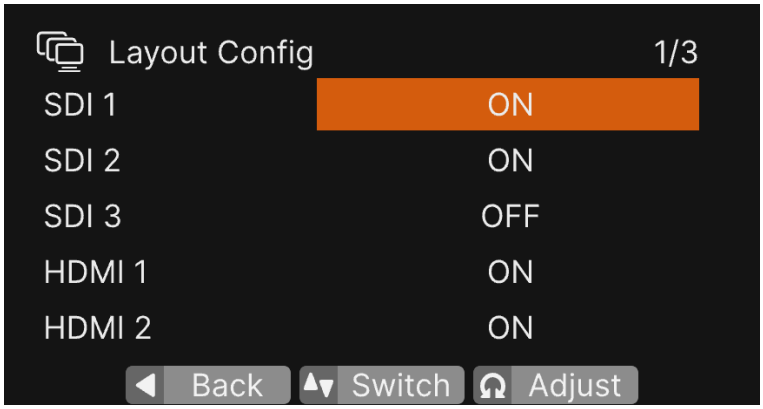


Figure 5.2-27 Layout Config Menu

Figure 5.2-28 Mode Menu-Drop List for the Mode Button

Tips

- For more details about operational procedure of Mode Key, please refer to the content in "4.2.5.1 Basic Operation of the Mode Button"; it will not be reiterated here.

6. Function Key Settings

Select **SYSTEM→ Function Key → F1/F2/F3/F4**. This menu is used to assign specific menu commands to function keys F1~F4.

Users can bind frequently used functions (e.g., quickly switching windows or activating tools) to the corresponding function keys based on their usage habits. Once set, pressing a function key will instantly switch to the target window or tool. Simultaneously, the status bar at the top of the screen will display the name of the switched window and the signal interface information.

The value range and descriptions for the function key settings are shown in Table 5.2-8 below:

Table 5.2-8 Description of Function Keys

Item	Description
Main Window	Activates the main window and displays its screen in full screen
Sub1 Window	Activates sub-window 1 and displays its screen in full screen
Sub1 Window	Activates sub-window 2 and displays its screen in full screen
Sub1 Window	Activates sub-window 3 and displays its screen in full screen
TOOL1	Activates Tool 1 in the toolbar under the current MySet
TOOL2	Activates Tool 2 in the toolbar under the current MySet
TOOL3	Activates Tool 3 in the toolbar under the current MySet
TOOL4	Activates Tool 4 in the toolbar under the current MySet
TOOL5	Activates Tool 5 in the toolbar under the current MySet
TOOL6	Activates Tool 6 in the toolbar under the current MySet
TOOL7	Activates Tool 7 in the toolbar under the current MySet
TOOL8	Activates Tool 8 in the toolbar under the current MySet

The function keys on the monitor device are used to switch to a specified window or activate a specified tool.

7. Color Calibration

Select **SYSTEM→ Advance Setup → Color Calibrate** item to initialize the settings to default values, it will pop up a prompt, as shown in Figure 5.2-25 , scroll right to select **Reset** command, and press the joystick straight down to confirm the selection.

We provide two methods for screen color calibration for your Mega monitor. One is using the built-in autonomous calibration, the other is using the professional color management software **Osee Calibrator**, as detailed below.

Follow these steps to calibrate your monitor.

Tips

- Before calibration, warm up your monitor and put the probe at a proper location.

  ☐ **About Monitor Warm-up**

  The monitor should be provided a stable status before starting the calibration. That is, before calibration, make sure your monitor has been powered up for a certain time (we recommend at least 20 minutes), thus, this will warm up the monitor and make it in an excellent status, and please make sure there is no intense light bursting on the monitor.

  ☐ **About the Detector Position**

  Put the detector of your probe at the center of the monitor. as shown in Figure 5.2-29.

- You should make sure there is no other light source in your color calibration system, recommended a totally black environment.
- You'd better lean the desktop monitor in a certain degree to be close to the meter.

Figure 5.2-29 Calibration Probe on Screen

■ **Method 1: Autonomous Calibration**

☐ **Calibration Preparation**:

Connect the calibration probe to the **CALIBRATE** connector of your monitor using the calibration cable, as shown in Figure 5.2-30.

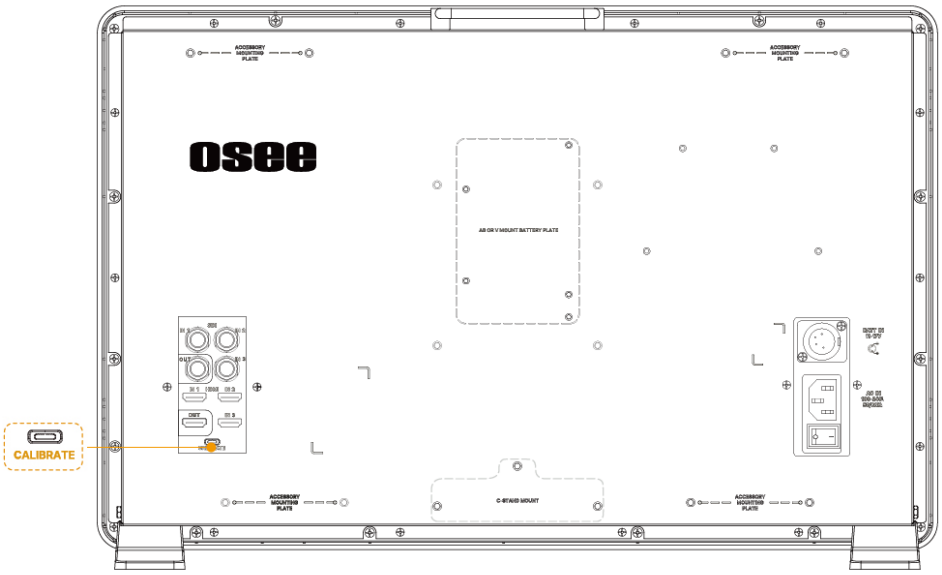


Figure 5.2-30 Calibration Connector on Mega Monitor

☐ Calibration Steps

First, ensure that the autonomous calibration method is activated. Select **SYSTEM→ Advance Setup → Factory Manage** item in the monitor settings, and confirm this parameter is set to the default state **OFF**. During autonomous calibration, the system will automatically use the default setting, and no modification is required for **Factory Manage** item. Now, you can start the device's autonomous calibration process.

Next, select **SYSTEM→ Advance Setup → Color Calibrate** in the monitor settings. A prompt box will appear, as shown in Figure 5.2-31. Press the joystick down to select "**Confirm**" to start autonomous calibration.

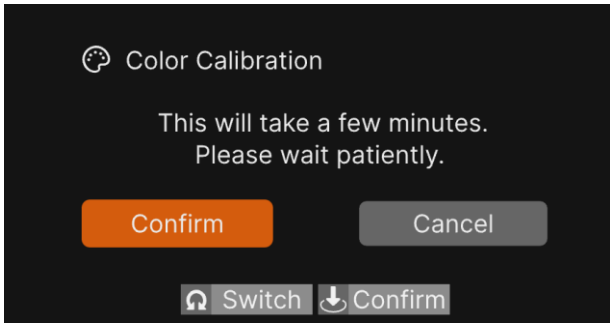


Figure 5.2-31 Autonomous Calibration Prompt

Once the calibration starts, select "**START**", as shown in Figure 5.2-32. and press the joystick down to confirm and proceed with the calibration. A prompt indicating the probe placement will appear, as shown in Figure 5.2-33.

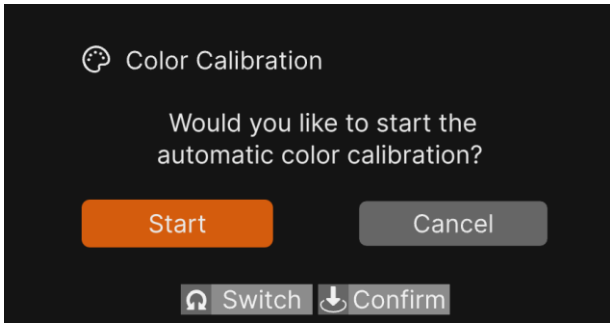


Figure 5.2-32 Start Calibration Prompt

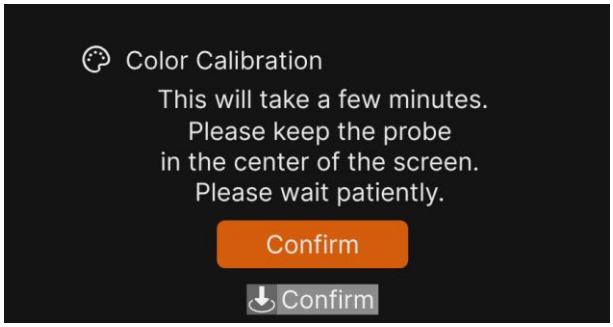


Figure 5.2-33 Probe Placement Prompt

Tips

- When the probe placement prompt appears as shown in Figure 5.2-33, a center marker will automatically load in the center of the screen to facilitate probe placement.

Press the joystick down to select "**Confirm**". The prompt "Calibration in progress" will appear, as shown in Figure 5.2-34.

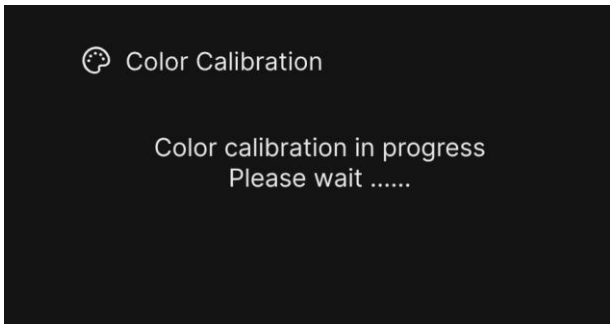


Figure 5.2-34 Calibration in Progress

Once calibration is complete, it will pop up a calibration preview&apply prompt,

as shown in Figure 5.2-35. Click " **PREVIEW NEW**" to view the calibration result, scroll the joystick down and right to select "**APPLY**", press the joystick down to confirm the selection, it will apply the new calibration data. Otherwise, choose the "**REVOKE**" option to cancel the calibration.

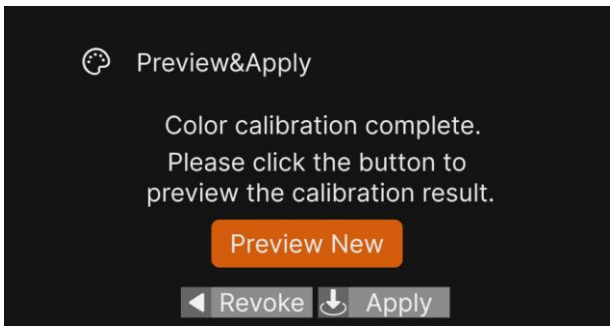


Figure 5.2-35 Calibration Preview and Apply Prompt

■ **Method 2: Software Calibration Using Osee Calibrator**

☐ **Calibration Preparation**:

Connect the USB interfaces of the control computer to both the target monitor and the calibration probe through the calibration cable.
Connect the first USB interface of the control computer to the **CALIBRATE** interface of the OSEE monitor, and connect the second USB interface to the calibration probe(the probe usually comes with a dedicated calibration cable), as shown in Figure 5.2.28, and power on the devices.

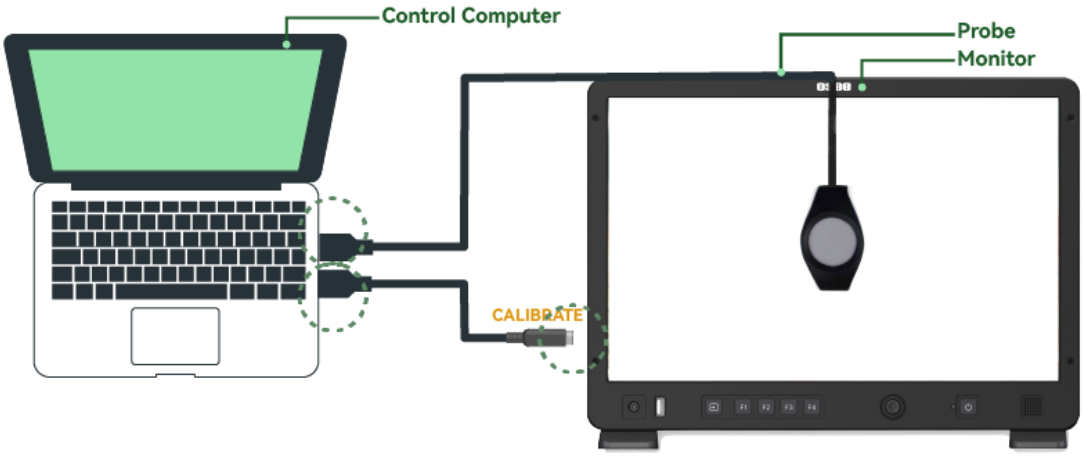


Figure 5.2-36 Device Connection-Osee Calibrator Calibration

Tips

- When using Osee Calibrator to calibrate the monitor, you can add a center marker

tool by selecting **ADD NEW TOOL→ Frame → Center**, and activate it, then you can take this marker as a reference to align the center of the monitor and the detector center. Make sure the probe has connected with computer and put upon the monitor screen.

☐ **Calibration Steps**

First, disable the autonomous calibration method. ensure that the autonomous calibration method is activated. Select **SYSTEM→ Advance Setup → Factory Manage** item in the monitor settings, and set it to the state **ON**. Now, you can proceed with the professional color management software **Osee Calibrator**.
Next, launch the **Osee Calibrator** software on your control computer and start the software to calibrate.
For instructions on using the Osee Calibrator software, please refer to the software's user guide.

Tips

- For information on downloading and using the Osee Calibrator calibration software, you can scan the QR code on the About page of this manual to access technical support from Osee.

5.3 Menu Settings

When checking or modifying the value of the menu item, cooperating with the Joystick:  .

1. Operations to the first level menu

■ **Display the monitor settings**

Scroll the joystick down to display the menu bar button at the top center of the screen. The default selection is the monitor settings icon in the center of the bar, and scroll the joystick down to confirm the selection, it will display the monitor settings panel.

Figure 5.3-1 Menu Bar

- **Display the first level menu**

  After displaying monitor settings, scroll up or down to choose an item in the first level menu list.

- **Back to the first level menu**

  After entering to the second level menu item or second level menu item value, scroll left to return the first level menu area.

- **Close the Monitor Settings**

  Scroll left to close the monitor settings when the control icon is in the first level menu item.

2. Operations to the second level menu

- **Display the second level menu**

  After display monitor settings, scroll right to select the second level menu.

- **Switch second level menu item**

  Scroll up or down to choose or switch to an item of the second level menu.

- **Back to the first level menu**

  Scroll left to go back to the first level menu.

3. Operations to second level menu item value

- **Switch second level menu item value and confirm the selection**

  When the control icon is in second level menu item value, rotate the Joystick in clockwise or counterclockwise to select the target value. Release to confirm the current selection.

4. Other Operations in Menu Bar

- **Adjust Volume**

Scroll the joystick down to display the menu bar button at the top center of the screen. Rotate the joystick in counterclockwise to the leftmost volume icon, as shown in Figure 5.3-2.

Scroll down to display the VOULME panel, as shown in Figure 5.3-3. Rotate in counterclockwise to decrease the volume, or rotate clockwise to increase the volume. Scroll the joystick up to confirm the modification and quit this panel. The range of the volume is 0~31, and the default value is 16.

Figure 5.3-2 Volume Icon in Menu Bar

Figure 5.3-3 Volume Panel

■ Adjust Backlight

Scroll the joystick down to display the menu bar button at the top center of the screen. Rotate the joystick in counterclockwise to the backlight icon, as shown in Figure 5.3-4.

Scroll down to display the BACKLIGHT panel, as shown in Figure 5.3-5. Rotate in counterclockwise to decrease the backlight, or rotate clockwise to increase the backlight. Scroll the joystick up to confirm the modification and quit this panel.

The range of the backlight is 0~10, and the default value is 5.

Figure 5.3-4 Backlight Menu

Figure 5.3-5 Backlight Menu

Chapter 6 Scenes and Tools

6.1 Tools Settings

You can create customized scenes pages with different features and settings. The features on the screen are as shown in Figure 6.1-1.

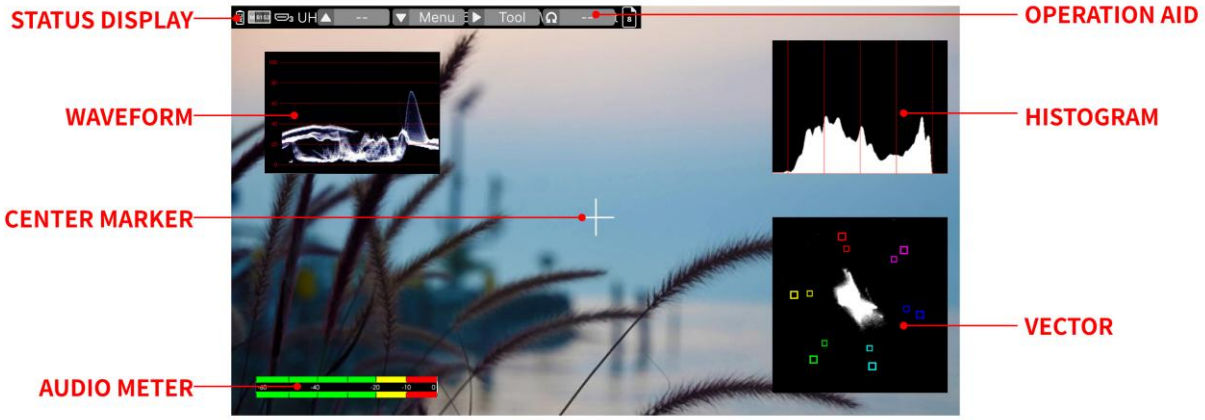


Figure 6.1-1 Tools for Scene

In a scene, scroll the Joystick right to show the tool bar. The tool bar provides access to tools aiding in composition, focus and exposure for a scene, you can add several tools on a scene, and then they will be listed in a tool bar.
The available tools in a scene are listed as shown in Figure 6.1-2 and Table 6.1-1:

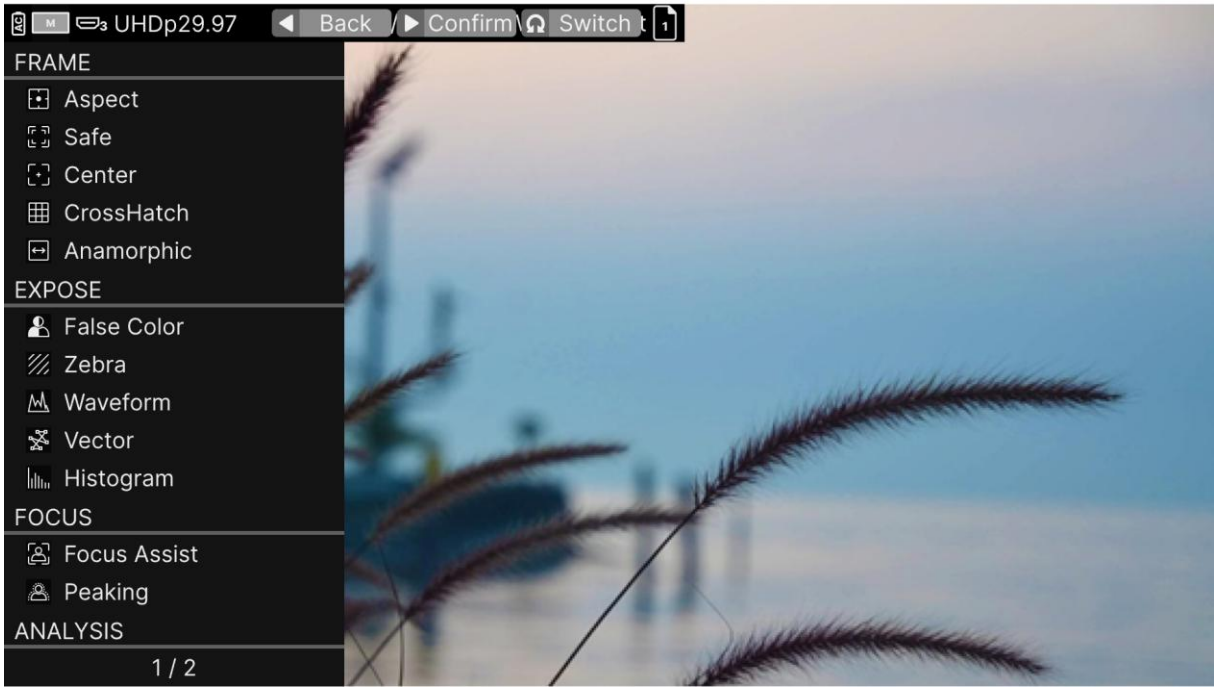


Figure 6.1-2 Tool List for A Scene

Table 6.1-1 Tool Icons

Tool	Icon	Tool	Icon
ASPECT		VECTOR	
SAFE		HISTOGRAM	
CENTER		FOCUS ASSIST	
CROSSHATCH		PEAKING	
ANAMORPHIC		MULTI-SCOPES	
FALSE COLOR		AUDIO METER	
ZEBRA		TIME CODE	
WAVEFORM			

The tools menu provides access to tools aiding in composition, focus and exposure for a scene, you can add several tools on a scene, and then they will be listed in a tool bar, as shown in Figure 6.1-3. After adding tools to the tool bar of a scene, scroll down to select a tool and scroll right to enter the tool settings menu, you can edit the tool's attributes by its tool settings menu, as shown in Figure 6.1-4:

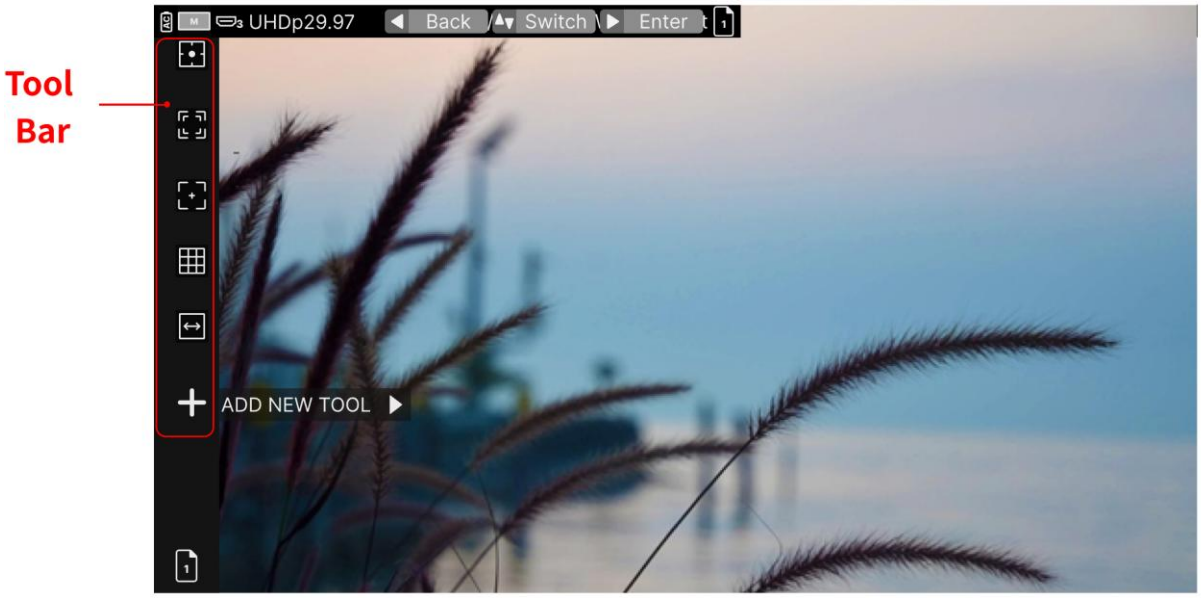


Figure 6.1-3 Tool Bar for A Scene

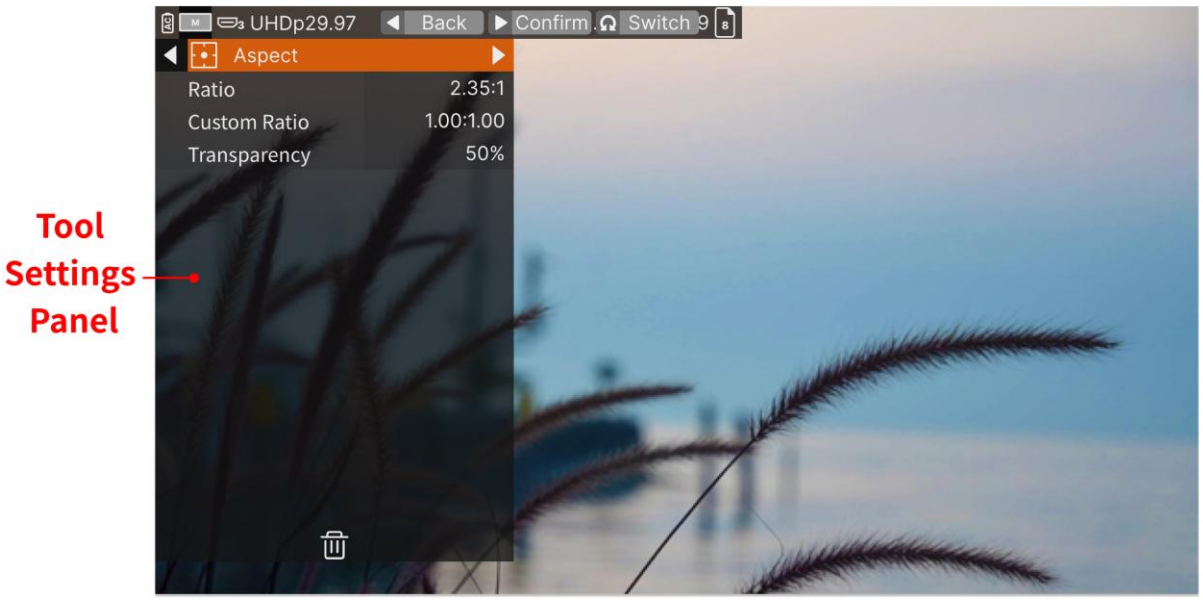


Figure 6.1-4 Tool Settings Menu

It will introduce the tools and their attributes in the following section, and refer to “6.2 Scenes and Tools Operations” for the details about tools operation.

6.1.1 Frame Tools

Frame tools assist to set viewing frame, including aspect area, safe area, center and crosshatch. Show or hide these markers by pressing down on their icons in the tool bar, and their display style and transparency are adjustable.

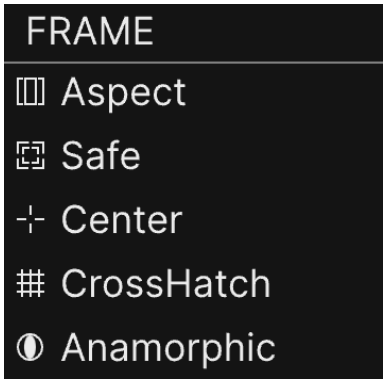


Figure 6.1-5 Frame Tools

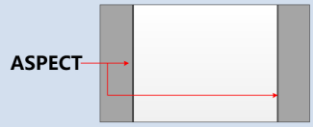
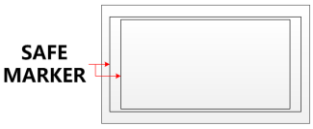
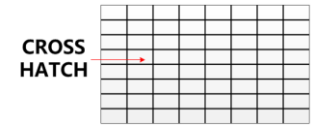
Table 6.1-2 Description of Frame Tools

Tool	Items	Default	Value Range	Description
Aspect	Ratio	2.35:1	9:16 (Phone)/ 4:5/1:1/ 4:3 (SD TV)/ 1.375:1(Cinema)/ 1.85:1(Cinema)/	Set the display ratio of the marker

Tool	Items	Default	Value Range	Description
			1.91:1/2.35:1/ 2.37:1(Cinema)/ 2.41:1/ 16:9 (HD TV)/ 2:3/5:4/3:2/ 2:1/2.41:1/ Custom	
	Custom Ratio	1:1	3:1 ~1:3	Set the width of the matte area in Custom mode, the step is 0.01
	Transparency	0	0% 25% 50% 75%	Set the transparency of the matte darken area
Safe	Action	OFF	OFF/ON	The safe marker is displayed as an outside frame, proportional to 92% of the Aspect Ratio
	Title	OFF	OFF/ON	The safe marker is displayed as an inside frame, proportional to 80% of the Aspect Ratio in horizontal direction, and 90% of the Aspect Ratio in vertical direction.
Center	Style	Cross	Cross/ Hollow	Set center marker style
CrossHatch	Grid	2X2	2X2/3X3/4X4/ 5X5/6X6/7X7/ 8X8/9X9	Set the cross line number
Anamorphic	Magnify	OFF	OFF/ON	Enable/Disable magnify the image, that is to draw the image full screen after de-squeezing the image with the selected anamorphic ratio, cut the part which extend outside the screen
	Ratio	1.33X	1.33X/1.4X/ 1.5X/1.6X/1.8X/ 1.79X/1.9X/2X/ 1.25X/1.65X	Set the anamorphic ratio
	Lens Direction	Horizontally	Horizontally/Vertically	Set the lens direction

1. Marker

Marker	Illustration	Description

Marker	Illustration	Description
Aspect (Area Marker)		This marker identifies an area with a specified aspect ratio and a covered matte, and the area's transparency could be adjusted.
Safety Marker		This marker displays a rectangle to identify the safety area with a specified percentage in Area Marker.
Center Marker		This marker enables easier checking the center portion's focus.
Cross hatch		This marker displays multiple vertical and horizontal lines to help when users check the composition of a picture.

2. Area Marker

Set the area marker **Aspect → Ratio** item as **Custom**, the ratio of the marker is adjustable as your requirement.

And the outside area of the area maker is filled with matte with two white lines labeled the area marker, you can set the transparency for this matte area.

For example, tap **Aspect → Transparency** item as **50%,** the outside area of marker is 50% transparency of the background with two white lines, as shown in Figure 6.1-6:

Figure 6.1-6 Area Marker

3. Set Anamorphic Ratio

This feature enables you to de-squeeze signals coming from camera utilizing anamorphic lenses that may not have a built-in de-squeeze feature of their own. This is quite useful in applications, such as outdoor post production, onset monitoring, real-time de-squeezing, etc.

The valid area which will fill the screen is controlled by the ratio selection, tap **Anamorphic→ Ratio** item to cycle through these anamorphic ratios: 1.33X, 1.4X, 1.5X, 1.6X, 1.8X, 1.9X, 2X, 1.25X, 1.65X, 1.79X. There will be black blank area at the surrounding of the image.

For example, the resolution of the input and output are as shown in Table 6.1-3:

Table 6.1-3 Resolution Relationship Between Input and Output

ANAMORPHIC	INPUT SIGNAL	INPUT	OUTPUT
1.33X	1080P/1080I	1920x1080	1920x812
	720P	1280x720	1920x812
1.4X	1080P/1080I	1920x1080	1920x771
	720P	1280x720	1920x771
1.5X	1080P/1080I	1920x1080	1920x720
	720P	1280x720	1920x720
1.6X	1080P/1080I	1920x1080	1920x650
	720P	1280x720	1920x650
1.8X	1080P/1080I	1920x1080	1920x600
	720P	1280x720	1920x600
1.9X	1080P/1080I	1920x1080	1920x568
	720P	1280x720	1920x568
2X	1080P/1080I	1920x1080	1920x540
	720P	1280x720	1920x540
1.25X	1080P/1080I	1920x1080	1920x864
	720P	1280x720	1920x864
1.65X	1080P/1080I	1920x1080	1920x654
	720P	1280x720	1920x654
1.79X	1080P/1080I	1920x1080	1920x603
	720P	1280x720	1920x603

■ Magnify

This item will magnify the image of anamorphic ratio to full-fill the screen. Set **Anamorphic→ Magnify** item as **On**, it will enlarge and display the image at full screen, removing those useless blank bars, as shown in Figure 6.1-7:

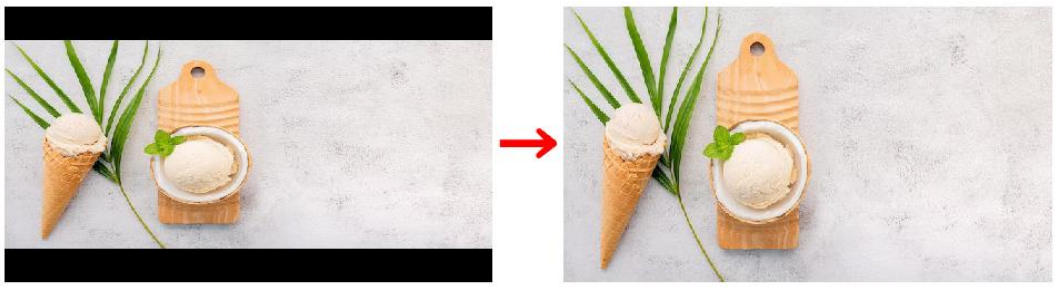


Figure 6.1-7 MAGNIFY

6.1.2 Expose Tools

Expose tools provide false color, zebra, waveform, vector and histogram, as shown in Figure 6.1-8:

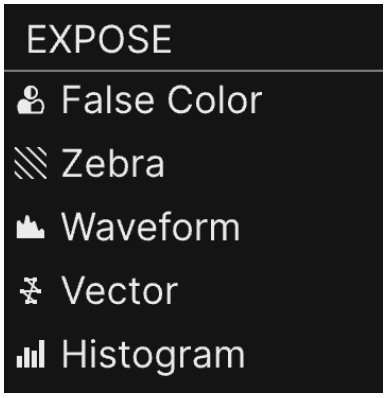


Figure 6.1-8 Expose Tools

Table 6.1-4 Description of Expose Tools

Tool	Items	Default	Value Range	Description
False Color	Style	Spectrum	Follow Camera/ Spectrum/Custom	Set the type of the false color display
	Black Clip	3%CV	1-99%CV	Set black clip, the step is 1%
	Near Black	4%CV	2-100%CV	Set near black, the step is 1%
	Tone1 Min	46%CV	0-99%CV	Set minimum of tone1, the step is 1%
	Tone1 Max	55%CV	1-100%CV	Set maximum of tone1, the step is 1%
	Tone2 Min	77%CV	0-99%CV	Set minimum of tone2, the step is 1%
	Tone2 Max	90%CV	1-100%CV	Set maximum of tone2, the step is 1%
	Near White	96%CV	0-98%CV	Set near white, the step is 1%
	White Clip	98%CV	1-99%CV	Set white clip, the step is 1%
Zebra	Tone1 Min	0%CV	0-99%CV	Set the TONE1 minimum reference level of detecting luminance.
	Tone1 Max	4%CV	1-100%CV	Set the TONE1 maximum reference level of detecting luminance.

Tool	Items	Default	Value Range	Description
	Tone2 Min	97%CV	0-99%CV	Set the TONE2 minimum reference level of detecting luminance.
	Tone2 Max	100%CV	1-100%CV	Set the TONE2 maximum reference level of detecting luminance.
Waveform	Style	LUMA	LUMA /RGB/ Parade/PIP	Set the type of the waveform
	Size	Small	Small/ Large/ Bottom	Set the size of the waveform
	Position	Bot Left	Top Right/ Bot Right/ Top Left/ Bot Left	Set the position of the waveform, only available for small size waveform
	Density	50%	1~100%	Set the density of the waveform, the step is 1%
	Transparency	0%	0% 25% 50% 75%	Set the transparency of the waveform
Vector	Position	Bot Right	Top Right/ Bot Right/ Top Left/ Bot Left	Set the position of the vector
	Gain	X1	X1/X2	Set the gain of vector
	Density	50%	1~100%	Set the density of the waveform, the step is 1%
	Transparency	0%	0% 25% 50% 75%	Set the transparency of the vector
Histogram	Style	LUMA	LUMA: luminance histogram RGB: RGB histogram	Set the type of the histogram
	Position	Top Right	Top Right/ Bot Right/ Top Left/	Set the position of the histogram

Tool	Items	Default	Value Range	Description
			Bot Left	
	Transparency	0%	0% 25% 50% 75%	Set the transparency of the histogram

1. False Color

False Color is also known as Exposure Assist, this function generates an artificial luminance map of the input signal that can be useful to identify over exposed areas (exposure). This is a quick way to gauge the exposure levels of an image in a clear way.

Select **False Color** tool to the current scene, and tap it to activate the **False Color** tool. You can customize some parameters such as **Black Clip**, **Near Black** in **Custom** style.

For example: Add and Enable a **False Color** tool, set **Style** item as **Spectrum**, as shown in Figure 6.1-9:

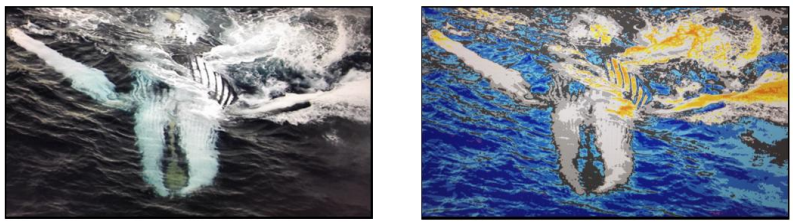


Figure 6.1-9 Comparison Mode- Original Image and Normal Mode Image

Tips

- The Zebra tool is incompatible with the False Color tool. That is, enable the Zebra tool, the False Color tool will be disabled automatically, and enable the False Color tool, the Zebra tool will be disabled automatically.

2. Zebra

The **Zebra** function is used to display images on the screen with a zebra pattern to adjust the camera exposure parameter. It will compare the signal luminance with the zebra parameters. You can set two limitations as **Tone1** and **Tone2. Tone1** is limited between **Tone1 MIN** and **Tone1 MAX**, **Tone2** is limited between **Tone2 MIN** and **Tone2 MAX**. The relevant image area will be filled with a white and black stripe zebra pattern if the luminance is in the range of **Tone1.** Besides, it will be filled with a white and blue stripe zebra pattern if the luminance is in the range of **Tone2**.

For example, set **Tone1 MIN** as 0% and **Tone1 MAX** as 4%, **Tone2 MIN** as 97% and **Tone2 MAX** as 100%, the compared results are as shown in Figure 6.1-10,

the special Area is filled with a zebra pattern.

Figure 6.1-10 Illustration for ZEBRA Function

3. Waveform

Waveform displays the luminance level of the input signal on a graph, matching with the image from left to right.

- Waveform Size

Set **Waveform→Size** item to adjust the size of the waveform, there are three kinds of sizes for waveform:

- Small size waveform: set **Size** item as **Small,** and this kind of waveform could be located at any one of the 4 positions listed in **Position** item;
- 75% waveform: set **Size** item as **Large,** and this kind of waveform is located at the center of the screen, and it can't be moved;
- Full size waveform: set **Size** item as **Bottom,** and this kind of waveform is located at the bottom of the screen from left to right, and it can't be moved.

- Waveform Type

Set **Waveform→Style** item to display the following three kinds of waveform as LUMA, RGB, Parade, as shown in Figure 6.1-11:

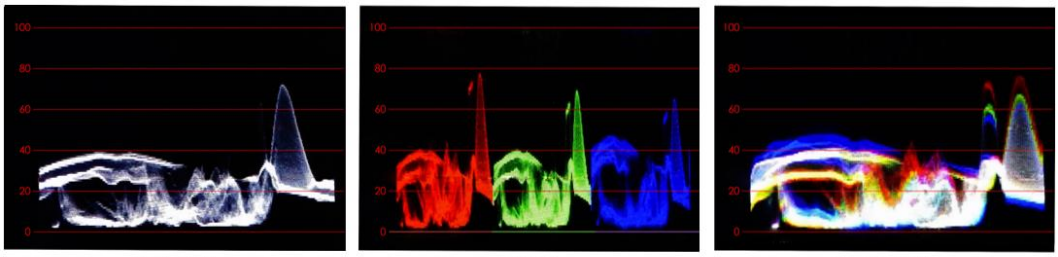


Figure 6.1-11 LUMA and RGB and PARADE Waveform

4. Vector

Tap **Vector** item to add a vector.

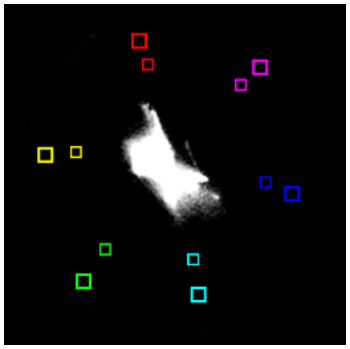


Figure 6.1-12 Vector

5. Histogram

Histogram assists in judging the distribution of luminance in the image.

■ **Histogram Type**

Set **Histogram→Style** item as LUMA or RGB, these two histogram types are as shown in Figure 6.1-13:

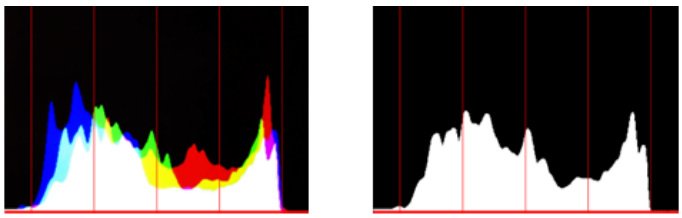


Figure 6.1-13 RGB and LUMA Histogram

6. Position

There are 4 positions for display the histogram, waveform and vector on the screen, as shown in Table 6.1-5 and Figure 6.1-14. Move them through the **Position** item.

Table 6.1-5 Position Settings

Locations	
Top Right	Top Left
Bot Right	Bot Left

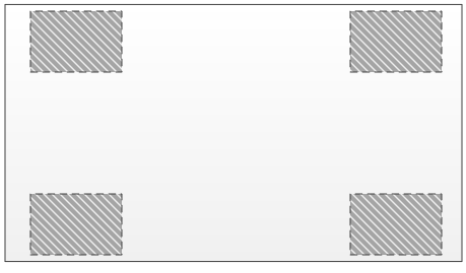


Figure 6.1-14 Position of the Assistant Elements

7. TRANSPARENCY

There are 4 degrees of opacity for display the histogram, waveform and vector on the screen. Set the transparency through the **Transparency** item.

- ☐ 0%: when opacity set to 0%, the assistant element (histogram, waveform or vector) is opaque, not transparent.
- ☐ 75%: when opacity set to 75%, the assistant element (histogram, waveform or vector) is proportional to 75% opacity.
- ☐ 50%: when opacity set to 50%, the assistant element (histogram, waveform or vector) is proportional to 50% opacity.
- ☐ 25%: when opacity set to 25%, the assistant element (histogram, waveform or vector) is proportional to 25% opacity.

For example: set **EXPOSE→Histogram → Transparency** as 100%, 75%, 50%, 25% separately, the comparisons are as below:

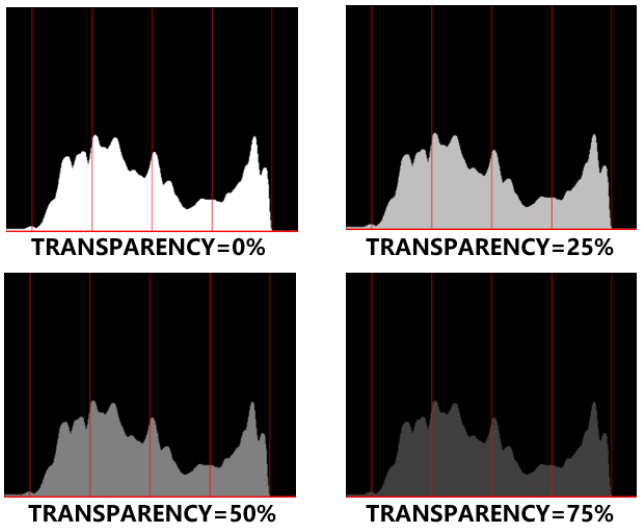


Figure 6.1-15 Different Transparency for Histogram

8. PIP

PIP (Picture-in-Picture) is an efficient display feature provided by multi-screen monitors, allowing users to embed and view content from other signal sources in a sub-window (picture-in-picture) while monitoring the main screen. Users can focus on the details of the main picture while simultaneously monitoring the status of other critical signal sources, eliminating the need for cumbersome screen switching operations.

In a single-screen environment, PIP breaks through the limitations of single-signal display, achieving "multi-purpose use of one screen." Without additional physical monitors, users can obtain more information on the same screen, effectively saving costs and workspace.

First, select the signal source by assigning an input source to the PIP window arbitrarily.

Set the signal sources for the main and sub-picture in the monitor menu:

- Set the signal source for the main picture: Navigate to **Display→ Source Allocation→ Main Window** item;
- Set the signal source for the sub-picture: Navigate to **Display→ Source Allocation→ Sub1 Window**;

Then, configure the waveform tool to activate the PIP function.

Set up and launch PIP in the tool menu:

- Select the PIP function: After adding the Waveform tool, set **Waveform→Style** to **PIP**, as shown in Figure 6.1-16;
- Activate the PIP function: In the current MySet, scroll right the joystick to display the tool menu on the left side of the screen. Select the Waveform tool, then rotate the joystick clockwise to activate it. The **Waveform** icon will highlight in orange, and the PIP sub-screen will be displayed, as shown in Figure 6.1-17.

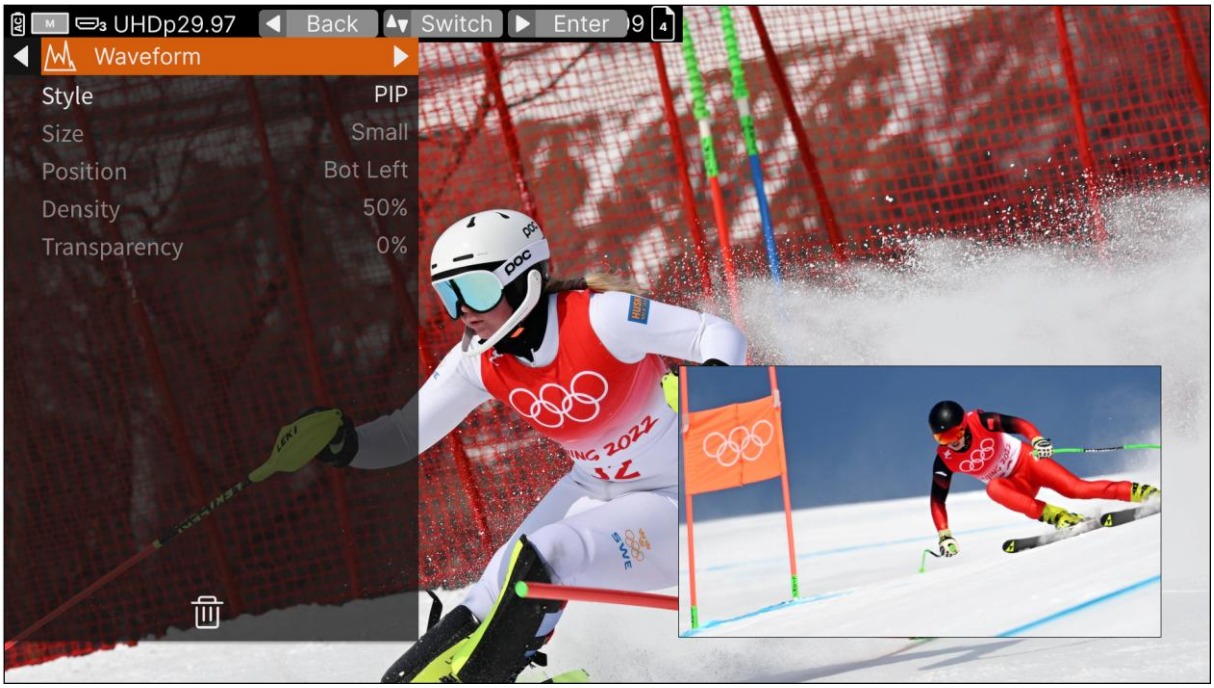


Figure 6.1-16 Select Waveform Tool

Figure 6.1-17 Activate Waveform Tool

6.1.3 Focus Tools

Focus tools provide the focus assist function and the peaking function. Set display color, sensitivity and display type for focus assist, and set intensity for peaking detecting.

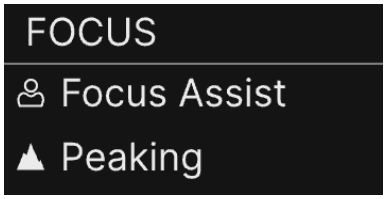


Figure 6.1-18 Focus Tools

Table 6.1-6 Description of Focus Tools

Tool	Items	Default	Value Range	Description
Focus Assist	Color	Red	White /Red /Green /Blue	Choose the color of the focus assist edge. The intensified edges highlight in selected color.
	Sensitivity	5	1～10	Set the edge difference value between the edges in an image, and take this value as the reference value. Larger value means more detail detection.

Tool	Items	Default	Value Range	Description
	Background	Color	Color: Color Mode B&W: BlacK &White Mode	Set the Focus Assist display mode: color mode or black&white mode.
Peaking	Intensity	5	1~10	Set the sharpness level of the image. The higher the value, the sharpener the image.

1. Focus Assist

The Focus Assist function is used to display images on the screen with intensified edge to help camera focus operation. The intensified edges are those areas whose difference value exceeds the reference focus level (**Sensitivity**), and the intensified edge are displayed in the designated color set by **Color**.

- **Focus Assist Mode**

  - ☐ **Color Mode**: Set **Focus Assist** → **Background** item as **Color**, the image is in color mode, then set **Focus Assist** →**Color** to color the intensified edge.

  - ☐ **B$W Mode**: Set **Focus Assist** → **Background** item as **B&W**, the image is in black and white mode, that is removing all colors and only leaving the luminance data of the signal.

Figure 6.1-19 Illustration for FOCUS ASSIST Function

Figure 6.1-20 Illustration for FOCUS ASSIST Function

6.1.4 Analysis Tool

Analysis tool is used to swiftly display or hide all common used analysis charts on screen, including audio meter, waveform, histogram and vector, as shown in Figure 6.1-21 and Figure 6.1-22:

Figure 6.1-21 Analysis Tools

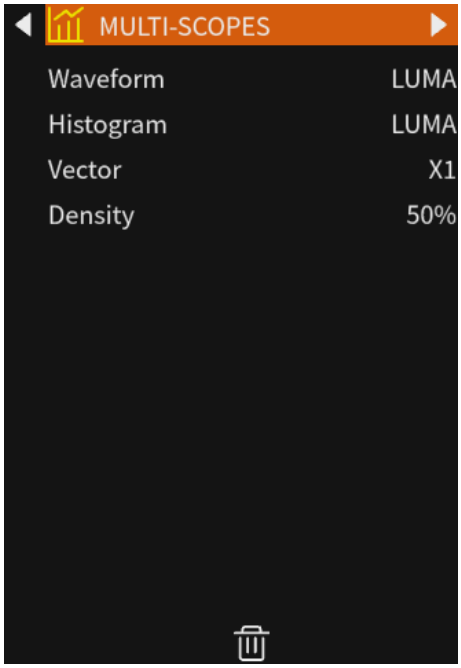


Figure 6.1-22 Multi-Scopes Settings Panel

Table 6.1-7 Description of Multi-Scopes Tool

Tool	Items	Default	Value Range	Description
Multi-Scopes	Waveform	LUMA	LUMA/RGB/ Parade	Set the type of the waveform
	Vector	X1	X1/X2	Set the gain of vector
	Histogram	LUMA	LUMA/RGB	Set the type of the histogram
	Density	50%	0~100%	Set the density of current waveform, histogram and vector displayed on screen, the step is 1%

This tool puts multiple analysis charts and the image together.

- **Activate Analysis Tools**

Select **ANALYSIS→ MULTI-SCOPES** tool and enable it**,** it will zoom out to display the signal on the top left area, and show all common used analysis tools including vector, histogram, waveform and audio meter which are all activated. The layout of these tools on screen are as shown in Figure 6.1-23:

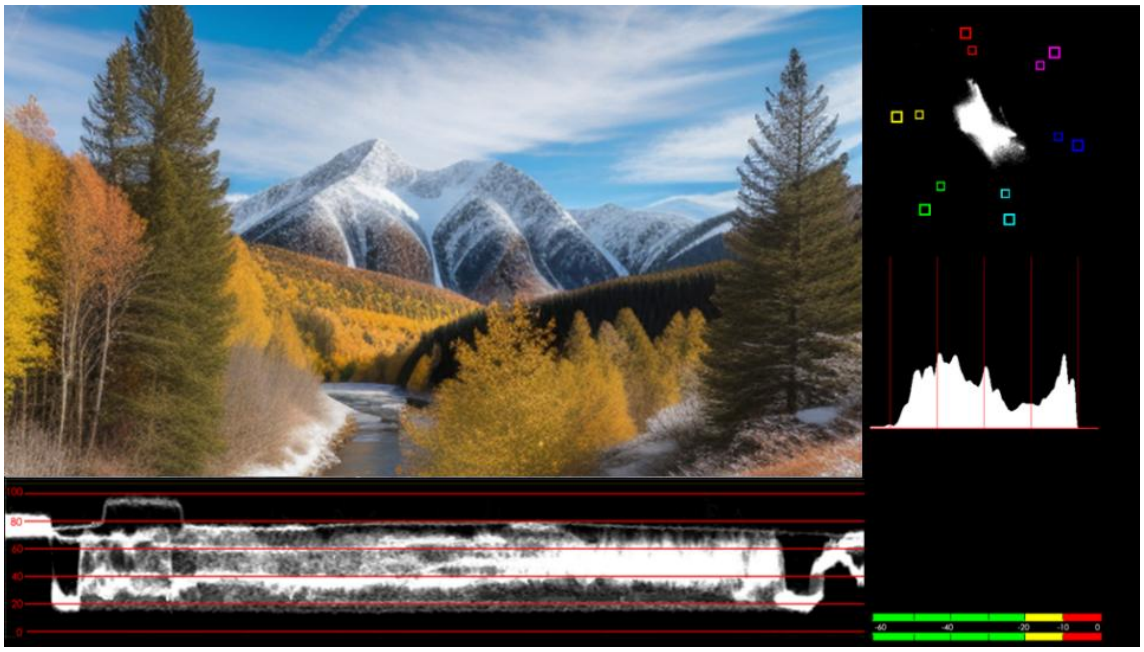


Figure 6.1-23 Analysis Tools

- **Type & Density**

You can choose different types for these charts through their corresponding items in this tool, but their positions can't be modified. Adjust density of these tools all together through the **Density** item.

6.1.5 Meter Tool

Meter tool provides adding audio meter to current scene, as shown in Figure 6.1-24:

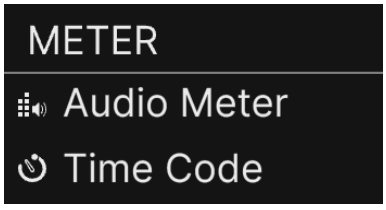


Figure 6.1-24 Meter Tools

Table 6.1-8 Description of Meter Tools

Tool	Items	Default	Value Range	Description
Audio Meter	Position	Bot Left	Bot Left/ Bot Right	Set the position of the audio meter

Tool	Items	Default	Value Range	Description
	Transparency	0%	0% 25% 50% 75%	Set the transparency of the audio meter
	Meter Select	CH1-2	CH1-2 CH3-4 CH5-6 CH7-8 CH9-10 CH11-12 CH13-14 CH15-16	Choose an audio channel
Time Code	Transparency	0%	0% 25% 50% 75%	Set the transparency of the time code

- Audio Meter

Select **Audio Meter** tool and enable the display of Audio Meter on screen. The audio meter could be displayed at the left bottom or right bottom of the screen, and the transparency could be set from 0% to 75%. Refer to “6.1.2 Expose Tools ” for the details about Transparency.

The volume in normal range appears in green, above -20dB but below -10dB appears in yellow, and above -10dB appears in red, as shown in Figure 6.1-25:

Figure 6.1-25 Audio Meter

- Time Code

Select **Time Code** tool to adjust the transparency of embedded timecode on screen, only valid for SDI input signal.

Timecode is displayed as the format of “HH:MM:SS:FF” at the bottom center of the screen, and if there is no available timecode, it will not appear.

Figure 6.1-26 Timecode

6.2 Scenes and Tools Operations

It will introduce how to edit scene and configure tools in this section.

6.2.1 Add a MySet

We support 8 scenes in Mega 22S4, you can customize each scene with various tools as your requirement, and switch among these scenes by rotating the joystick in clockwise or counterclockwise direction in menu clear status.
Scroll the joystick down to display the menu bar button at the top center of the screen. Rotate clockwise to select the fourth icon, as shown in Figure 6.2-1:

Figure 6.2-1 Menu Bar

Press the joystick down to confirm the selection, and it will pop up the add a new MySet dialog box, as shown in Figure 6.2-2.
The scene will be numbered in sequence, and the name will be displayed at the left bottom of the screen, as shown in Figure 6.2-3.

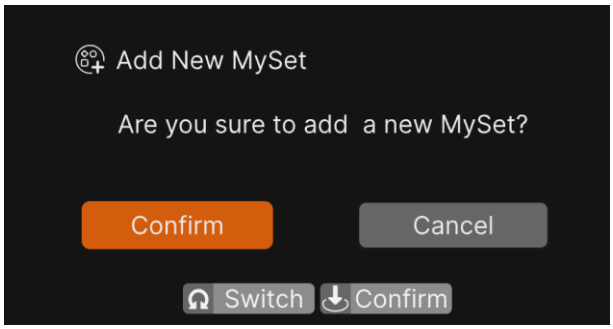


Figure 6.2-2 Add a Scene

- Switch Scenes

  Rotate the joystick in clockwise or counterclockwise to switch among scenes when the screen is clean with no bars.

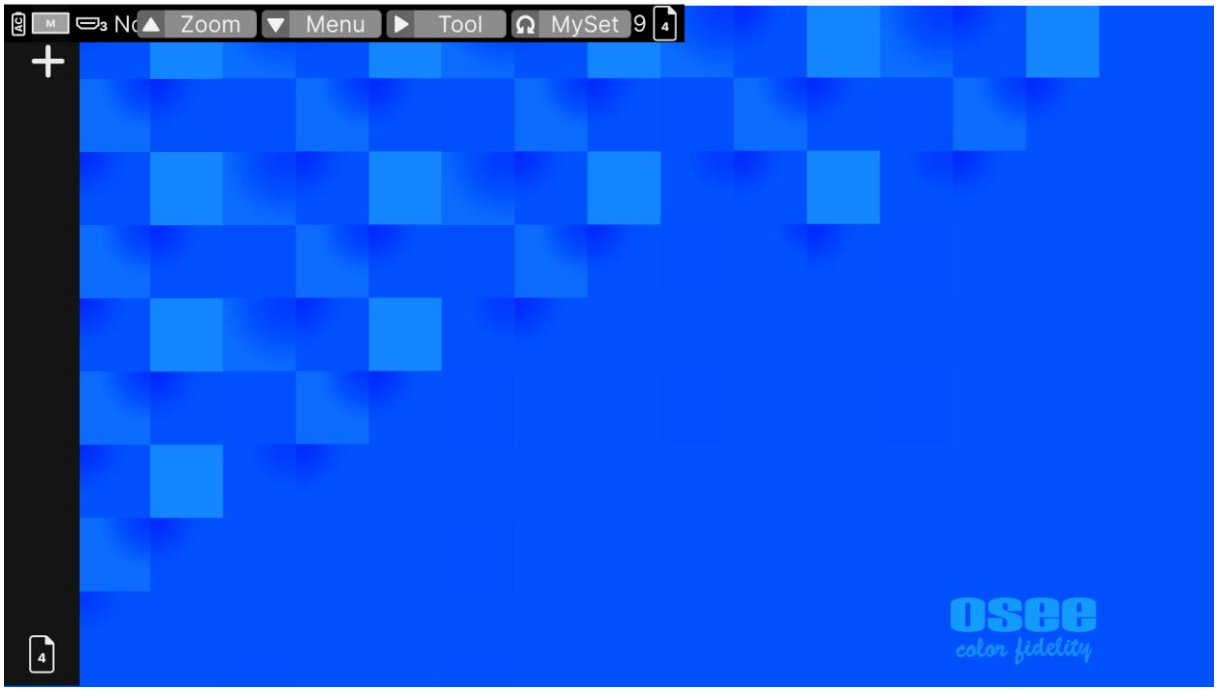


Figure 6.2-3 A New Scene

Tips

- Mega 22S4 supports up to 8 customized scenes.
- No.1 scene(MySet1) exists by default and undeletable.
- Factory has 3 MySets (frame, exposure, focus) preset, you can edit them as your preferences.
- Multi-screen display mode is fixed to MySet8.
- Multi-screen Mode is an exclusive feature of the scene "MySet8". To add, delete, or switch scenes, first return to Single-screen Mode. Subsequent instructions regarding scene management will assume you are in Single-screen Mode.

6.2.2 Delete a MySet

Scroll the joystick down to display the menu bar button at the top center of the screen. Rotate clockwise to select the delete MySet icon and scroll down to select it, then it will display the delete dialog box, as shown in Figure 6.2-4:

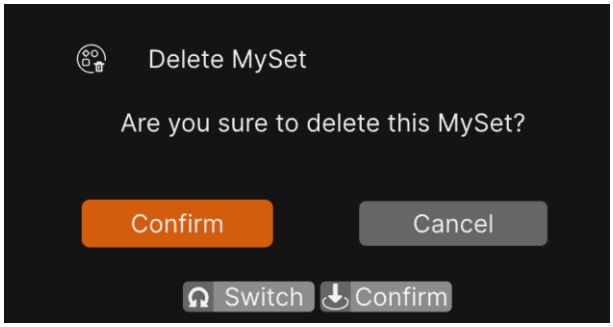


Figure 6.2-4 Delete a Scene

Scroll left to select **CONFIRM** button and press down to confirm the deletion. Wait until the prompt disappeared, then the scene will be cleared completely.

6.2.3 Add a Tool

After creating a scene, add some tools to assist in composition, for example, add a marker, waveform, histogram or audio meter, etc.

Tips

- Each scene supports up to 8 scene tools.
- You can add more than one of the same tool in a scene.

Scroll right to display tool bar at the left side of the screen, it will show all the added tools in current MySet. Scroll down to select the Add icon and show the **ADD NEW TOOL** command, as shown in Figure 6.2-5. Scroll right to display the **Tools Menu** on screen, as shown in Figure 6.2-6:

Figure 6.2-5 Add a New Tool

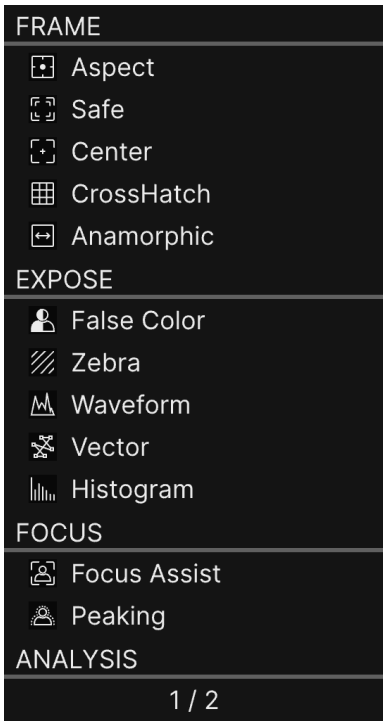


Figure 6.2-6 Tools Menu for Scene

Rotate the joystick in clockwise or counterclockwise to choose your desired scene tool, and scroll right to confirm, the selected tool will be added to **Tool Bar** of the current scene.

For example: Follow these steps to add histogram to Tool Bar

Step 1 Load Tool Bar

Scroll right to display tool bar, and scroll down to choose the Add icon, it will pop up the **ADD NEW TOOL** command, as shown in Figure 6.2-5. Scroll right to display the **Tool Menu** on screen as shown in Figure 6.2-7:

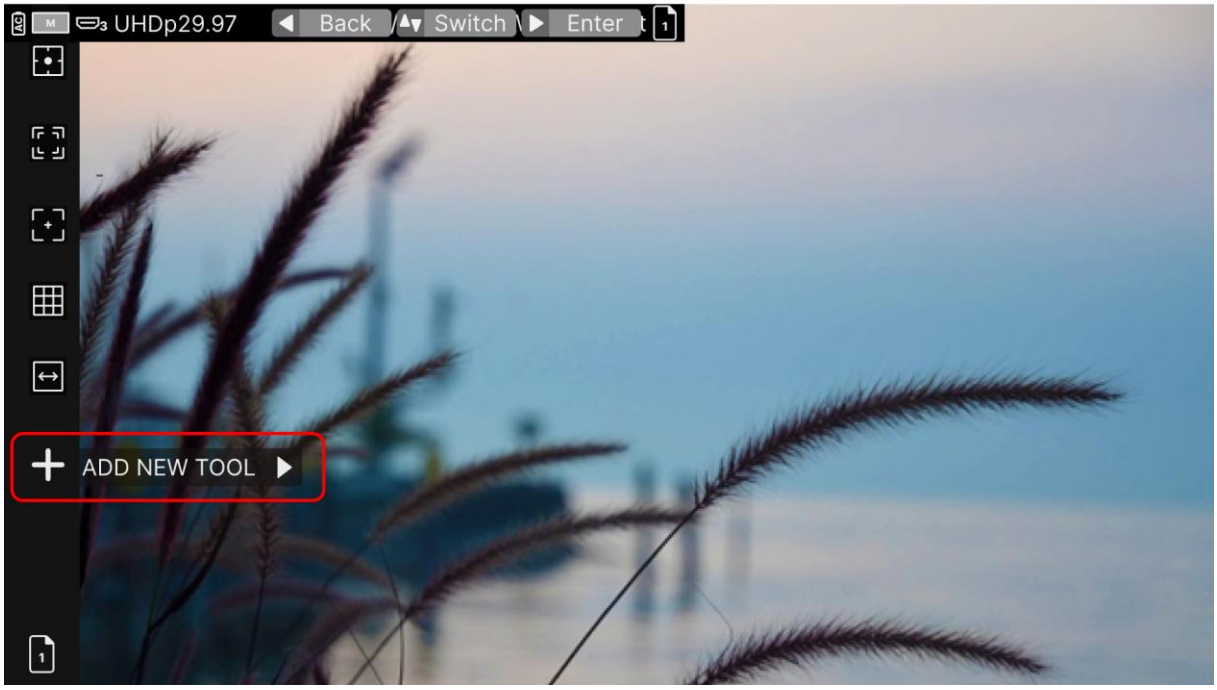


Figure 6.2-7 Show Tool Bar

Step 2 Add Histogram Tool

Rotate clockwise to select **Histogram** item in the tool menu, as shown in Figure 6.2-8. Scroll right to confirm the selection, the **Histogram** tool icon will be added into the tool bar, as shown in Figure 6.2-9:

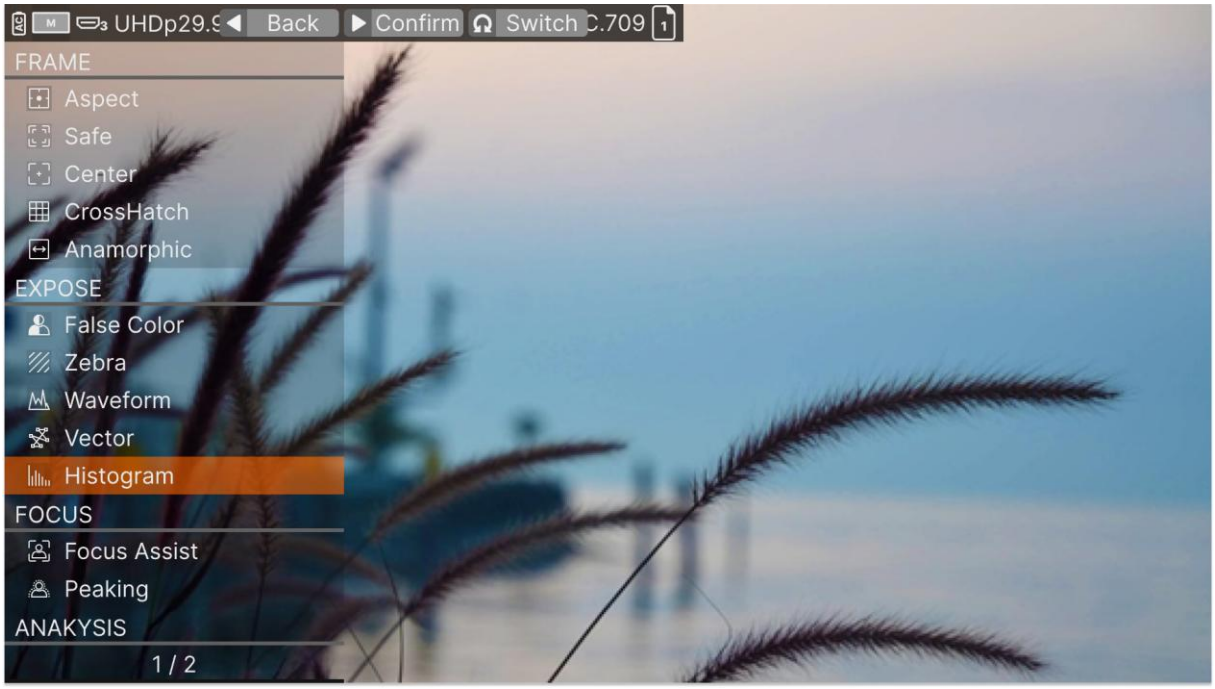


Figure 6.2-8 Show Tool Menu

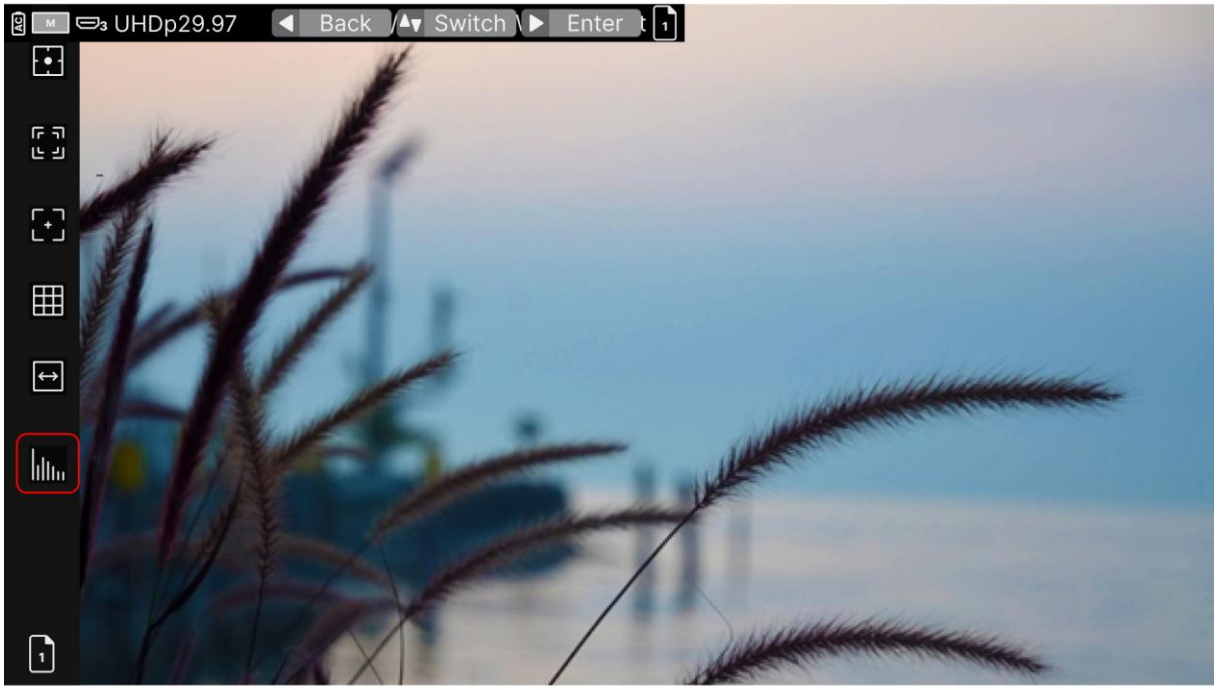


Figure 6.2-9 Histogram in the Tool Bar

Continue to add other tools for the scene, and you can add up to 8 tools in a scene.

6.2.4 Tool Management in Multi-Screen Display Mode

1. Load Tool Bar

Press Mode button to switch to the multi-screen display mode, then scroll the joystick right to display the toolbar list on the left side of the screen. This list displays the auxiliary tools currently loaded in the scene. The tool bar will be displayed at the leftmost of the screen, as shown in Figure 6.2-19.

Figure 6.2-10 Tool Bar in Multi-Screen Display Mode

2. Toolbar Characteristics in Multi-Screen Mode

- **Unlike the Single-Screen mode, a single window in Multi-Screen mode supports up to 5 frame tools (including Aspect Marker, Safe Marker, Center Marker, Crosshatch, and Anamorphic), but only two tools per window can be displayed simultaneously, as shown in Example 1.**
- **When a window is disabled, the corresponding window tools are also disabled, as shown in Example 2.**
- **Multi-screen display mode is fixed to MySet8**.

Example 1:

Select the **QUAD1** mode from the mode menu, the mode icon displayed in the top status bar is M S1 S2 S3, as shown in Figure 6.2-10. This example demonstrates a four-screen mode. The relationship between tools and windows is shown in Table 6.2-1 below:

Table 6.2-1 Default Tool Configuration for Four-Screen Mode

Window Name	Window Identifier	Default Tools
Main Window	M	Area Marker + Safety Marker
Sub1 Window	S1	Area Marker + Safety Marker
Sub2 Window	S2	Area Marker + Safety Marker
Sub3 Window	S3	Area Marker + Safety Marker

Example 2:

Switching from four-screen mode to three-screen (horizontal) mode.

Switch from the **QUAD1** mode  in the mode menu to the **TRI VVV** mode  . The Sub3 window is closed, and its window tools are automatically disabled and cannot be operated, as shown in Figure 6.2-11.

Figure 6.2-11 Tool Bar in TRI VVV Display Mode

3. How to Replace Tools in Multi-Window Mode

Example 3:

Take a **TRI VVV** mode as an example, switch the current aspect marker tool of Window 2 to the center marker tool.

Follow the steps below to replace the tool for Window 2, switching from the aspect marker to the center marker tool (in **TRI VVV** mode).

Step 1 Switch to TRI VVV Mode

Press the Mode key to display the mode menu in the upper left corner of the screen, as shown in Figure 6.2-12. Press the mode key repeatedly to switch to **TRI VVV** mode  .

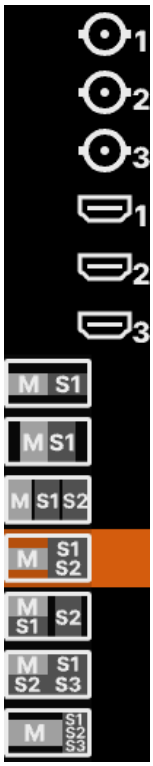


Figure 6.2-12 Mode Menu

The system will still keep in MySet8, as shown in Figure 6.2-13.

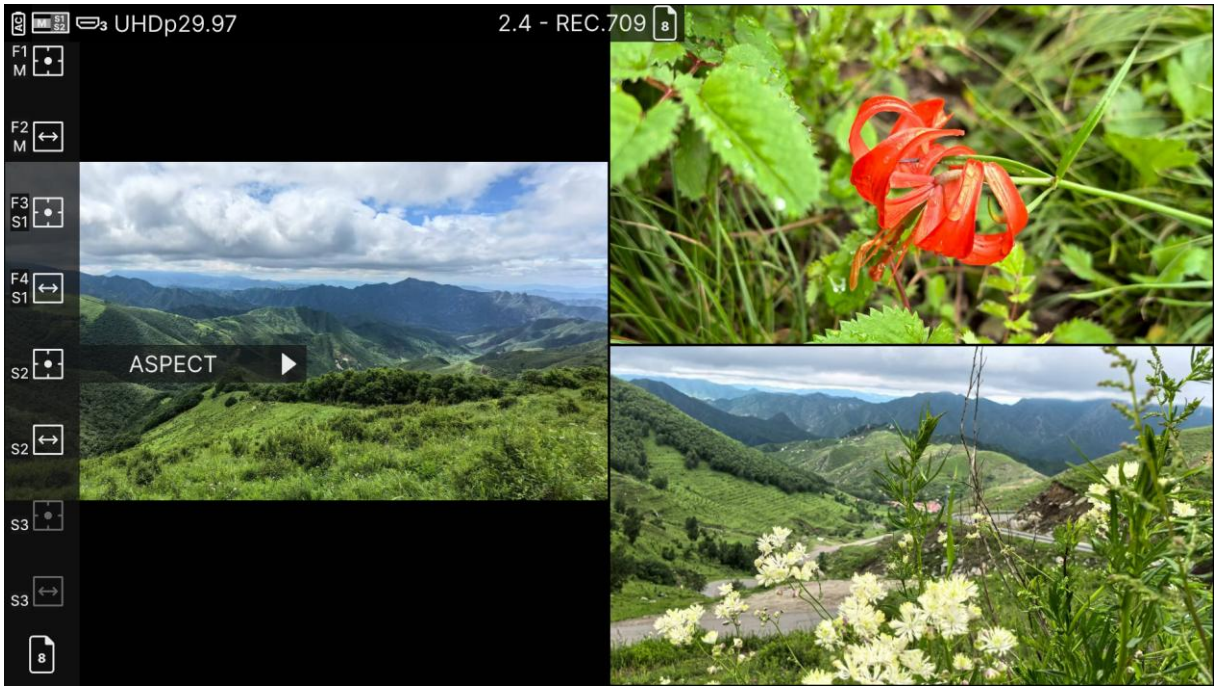


Figure 6.2-13 Switch to TRI VVV Display Mode

Step 2 Load the Toolbar

Scroll the Joystick right to load the toolbar, which appears on the leftmost side of the screen. Scroll the Joystick down to select the area marker tool for the S2 window, as shown in Figure 6.2-14.

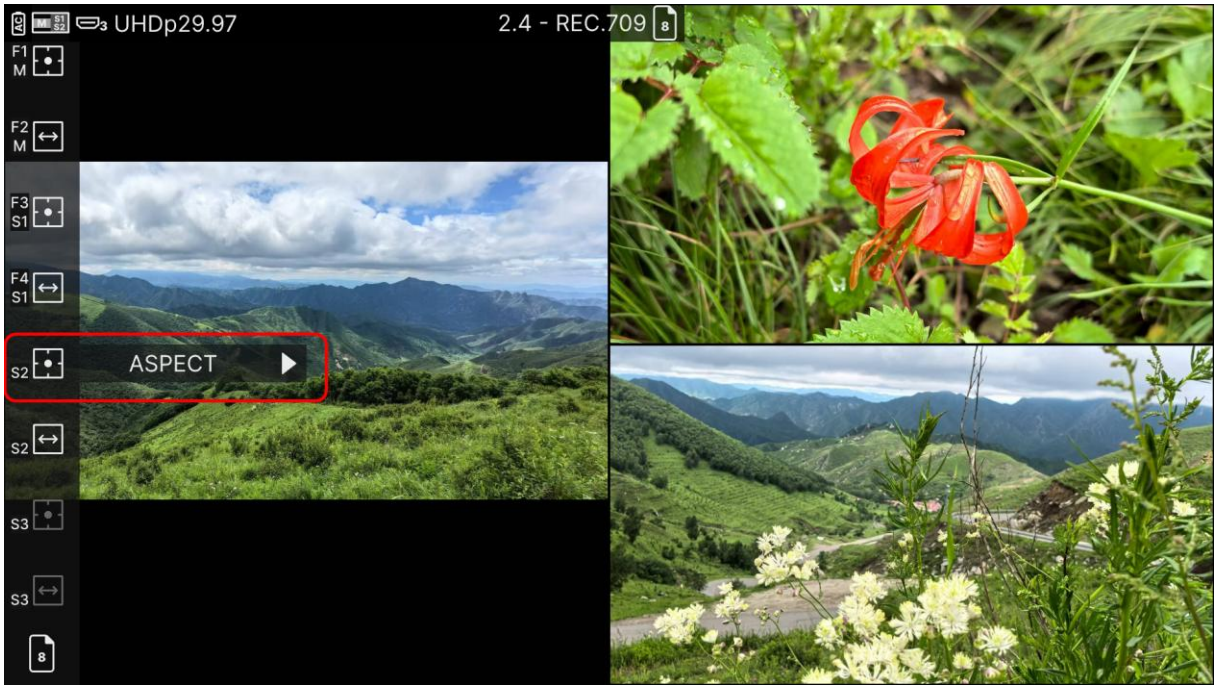


Figure 6.2-14 Select the Target Tool in TRI VVV Display Mode

Step 3 Change the Target Tool

Scroll the Joystick right to load the tool's settings menu, as shown in Figure 6.2.14.

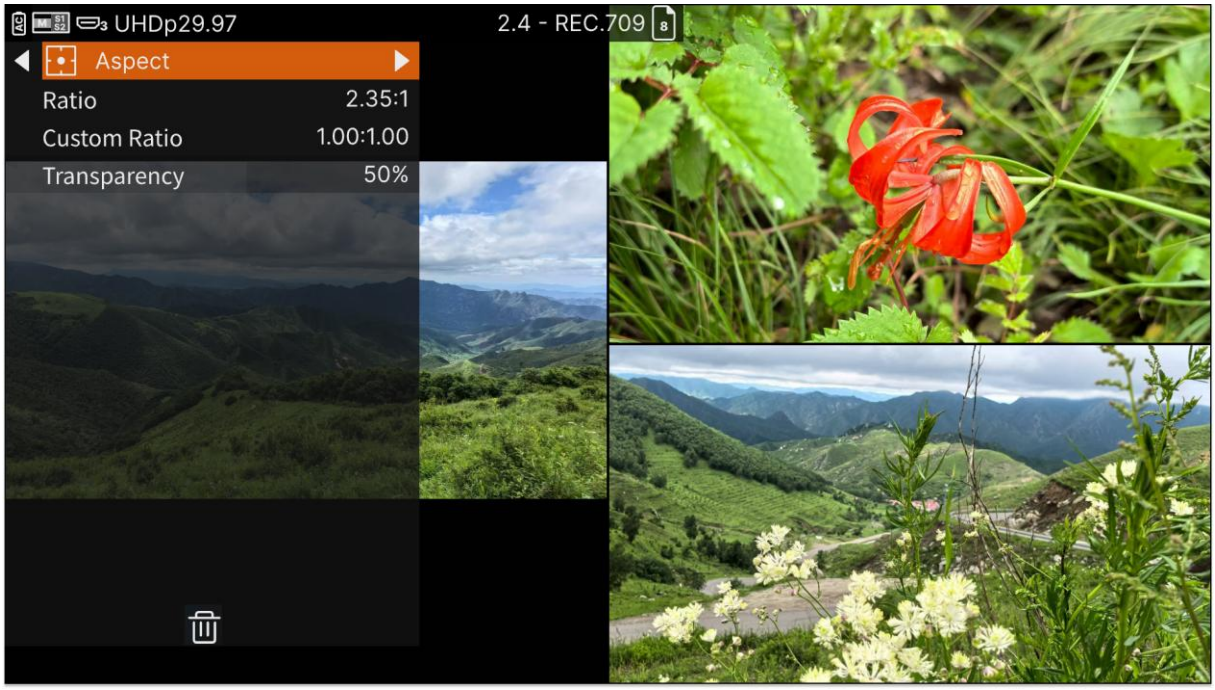


Figure 6.2-15 Tool Settings Menu in TRI VVV Display Mode

The tool title row (the first item) is selected by default, and scroll the Joystick right directly to display the tool menu on the left, as shown in Figure 6.2-20.

Figure 6.2-16 Change a Tool

Scroll the Joystick down to select the **Center** marker tool, as shown in Figure 6.2-17. Scroll the Joystick right to confirm the selection, and the new tool is listed in the tool bar, as shown in Figure 6.2-18.

Figure 6.2-17 Change a Tool

Figure 6.2-18 New Tool in the Tool Bar

Tips

- Window Tool Enable Principle: Only tools in the current layout's windows can be operated.
- In the toolbar, disabled tools are displayed with a dark grey icon. Disabled tools retain their configurations and are automatically restored when the window is re-enabled.
- Multi-screen display is automatically bound to MySet8. When switching to multi-screen display, the scene automatically switches to MySet8.

6.2.5 Load/Close Tool Bar

Follow the instructions below to load or close tool bar in a scene.

- **Load Tool Bar**

  First, rotate the joystick in clockwise or counterclockwise to access a scene;

  Second, scroll right to load the tool bar for the current scene, the tool bar will be displayed the leftmost of the screen, as shown in Figure 6.2-19, the bar labeled in the red rectangle is the tool bar for the current scene.

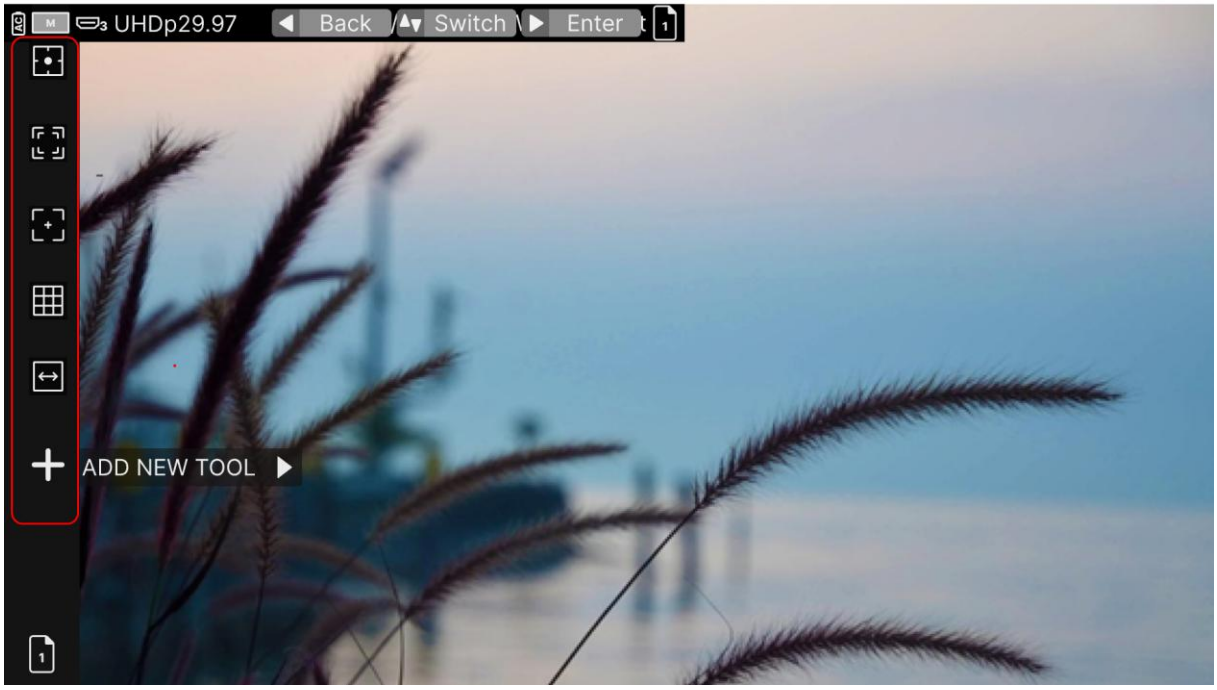


Figure 6.2-19 Tool Bar for A Scene

- **Close Tool Bar**

  After loading a tool bar, scroll left to close the tool bar.

  When in tool setting panel, scroll left to return to tool bar and close the tool bar.

6.2.6 Turn ON/OFF a Tool

In tool bar, follow the instructions below to turn on or off a tool swiftly:

- **Turn on a Tool**

  After adding a tool, rotate the joystick in clockwise to turn it on in tool bar, the icon will turn from white to highlight yellow.

- **Turn off a Tool**

  After turning on a tool, rotate the joystick in counterclockwise to turn the tool off in tool bar, the icon will turn from highlight orange to white.

- **Open tool setting panel**

  After adding a tool, scroll the joystick right to access tool settings panel, as shown in Figure 6.2-20:

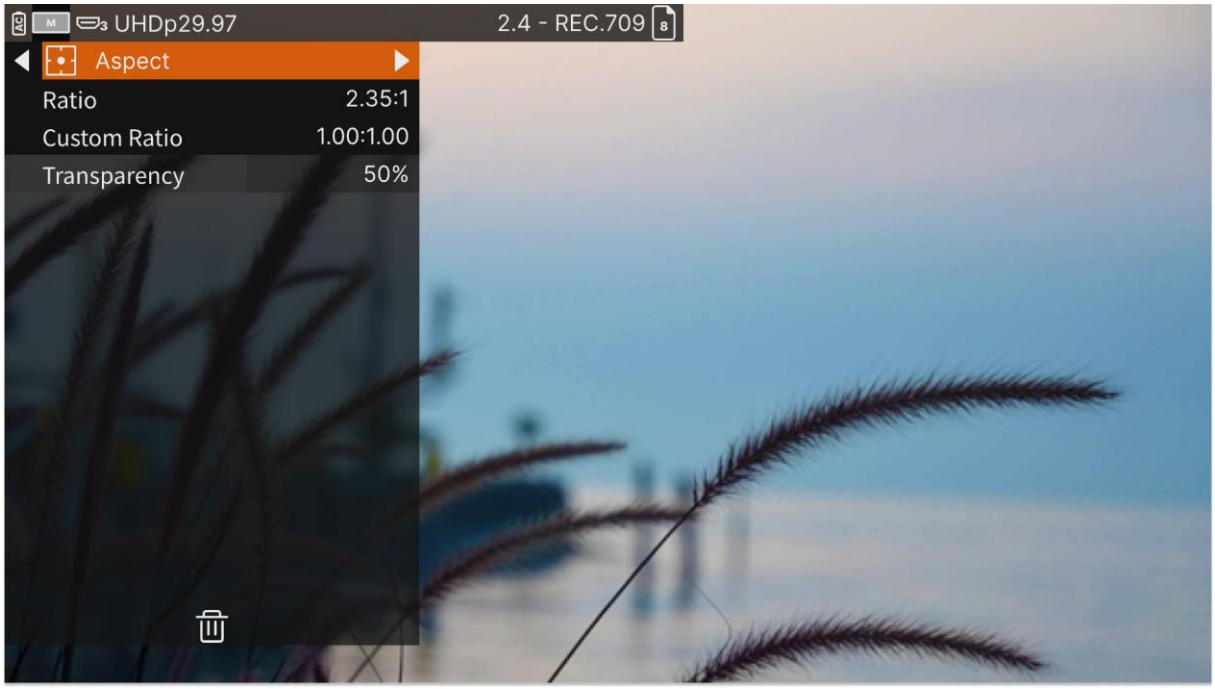


Figure 6.2-20 Turn off a Tool

Scroll left to return to tool bar and close the tool bar.

- **Choose a Tool**

After loading the tool bar, scroll up or down to choose a tool in current tool bar.

Tips

- The tool could only be turned on or off in the tool bar.

6.2.7 Tool Settings

All your custom tool settings can be saved into the user preset "MySet". This function allows you to create dedicated configurations for different working scenarios and achieve quick one-click activation.

Add & Configure Tools: Add or configure tools for specific scenes through the tool settings menu. How to: After selecting the target tool, scroll the Joystick right to bring up the detailed settings menu for that tool.

View & Manage Tool List: When you switch scenes by rotating the joystick in clockwise or counterclockwise, the system does not automatically display the tool list for that MySet by default. How to: Simply scroll the Joystick right again to view all tools added under the current MySet.

How to change the appearance of a tool? In the tool settings menu, you can freely define parameters such as display style, position, size, and more. Adjustable properties may vary for each tool. Refer to “6.1Tools Settings” for the details of each tool's options.

Here, take the histogram for example.

For example: Follow these steps to edit histogram in a scene.

Step 1 Load Tool Bar

In a MySet, scroll the joystick right to display the tool bar at the left side of the screen. Scroll up or down to move the cursor onto Add button, as shown in Figure 6.2-21:

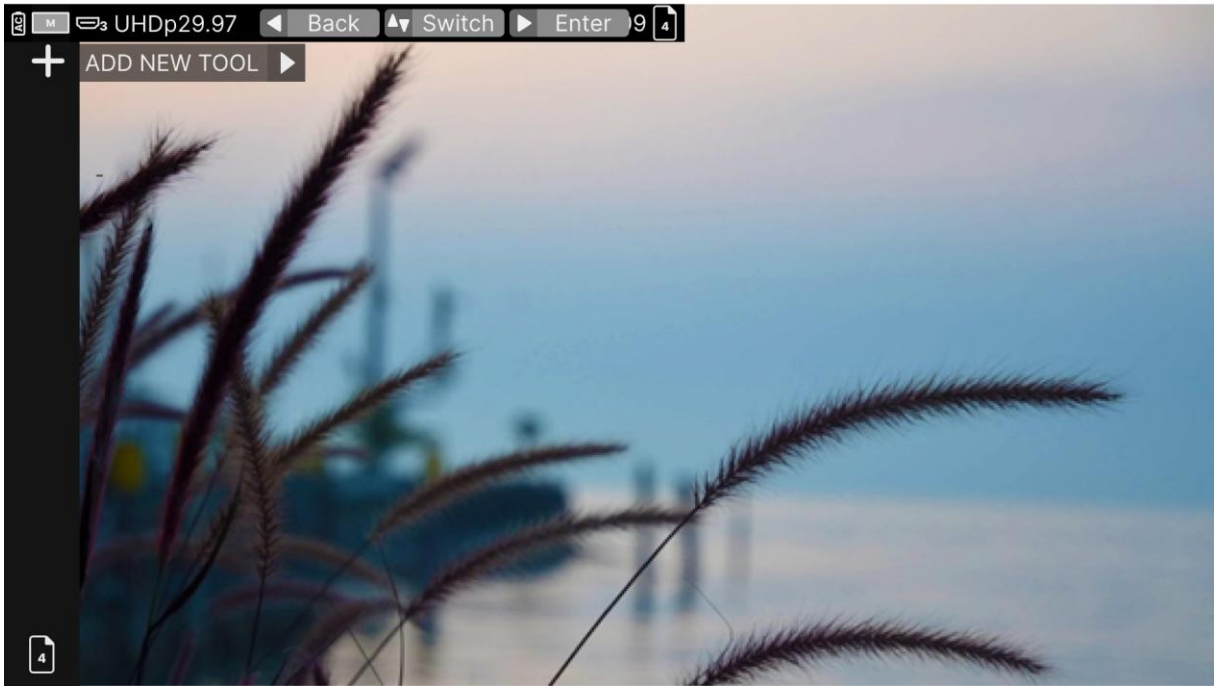


Figure 6.2-21 Load Tool Bar

Step 2 Load the Tool Menu Panel

Scroll right to load the tool menu panel, and scroll down to select **HISTOGRAM,** as shown in Figure 6.2-22.

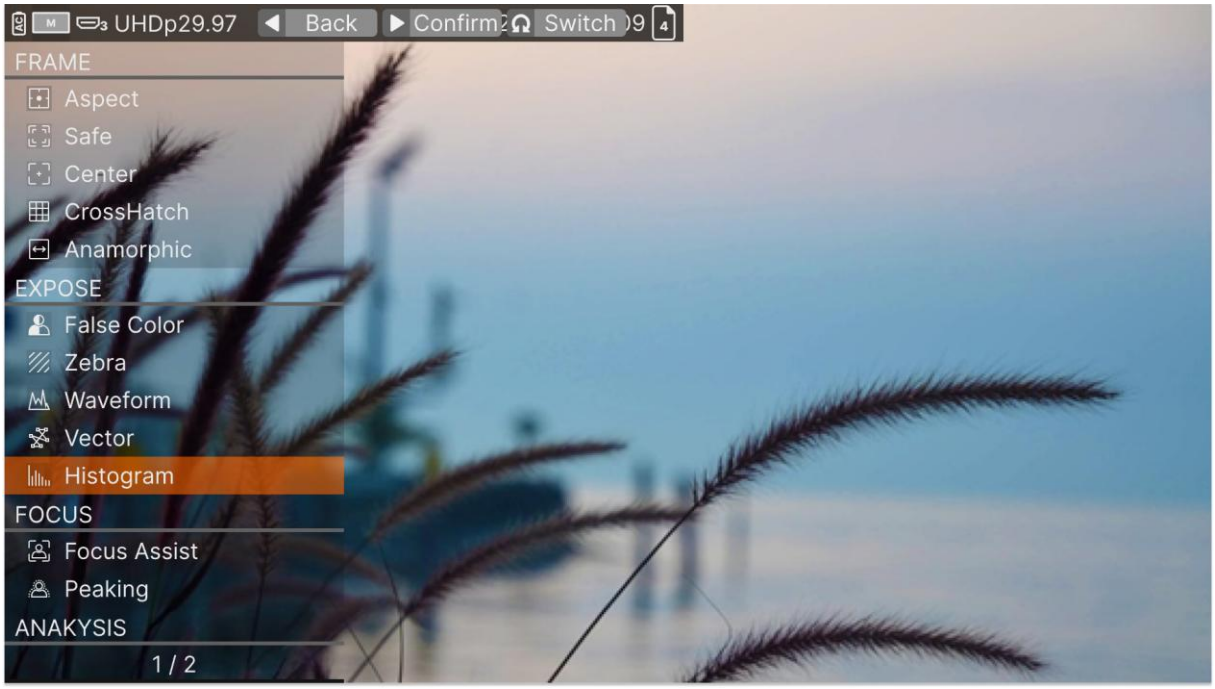


Figure 6.2-22 Load Tool Menu Panel

Then scroll right to add this tool, the histogram tool has been added to the tool bar, as shown in Figure 6.2-23:

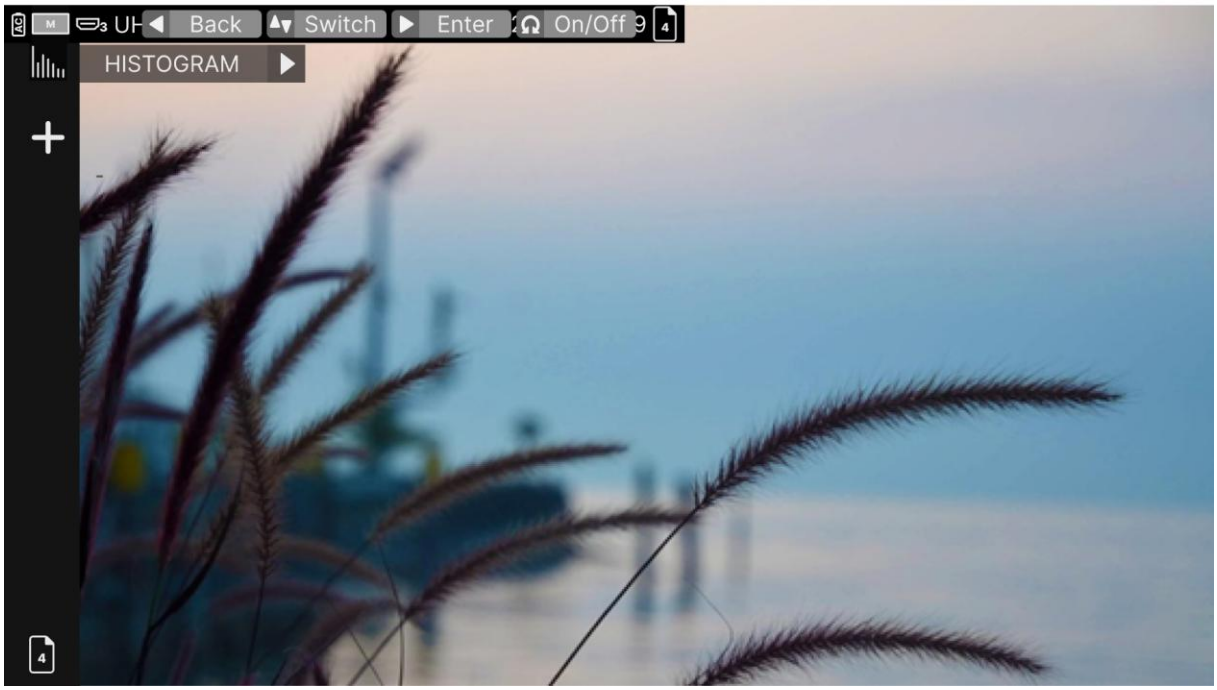


Figure 6.2-23 Add a Tool

Step 3 Activate Tool

Rotate in clockwise on **HISTOGRAM** tool in the tool bar to activate it, and the icon of histogram turns highlight orange, as shown in Figure 6.2-24.

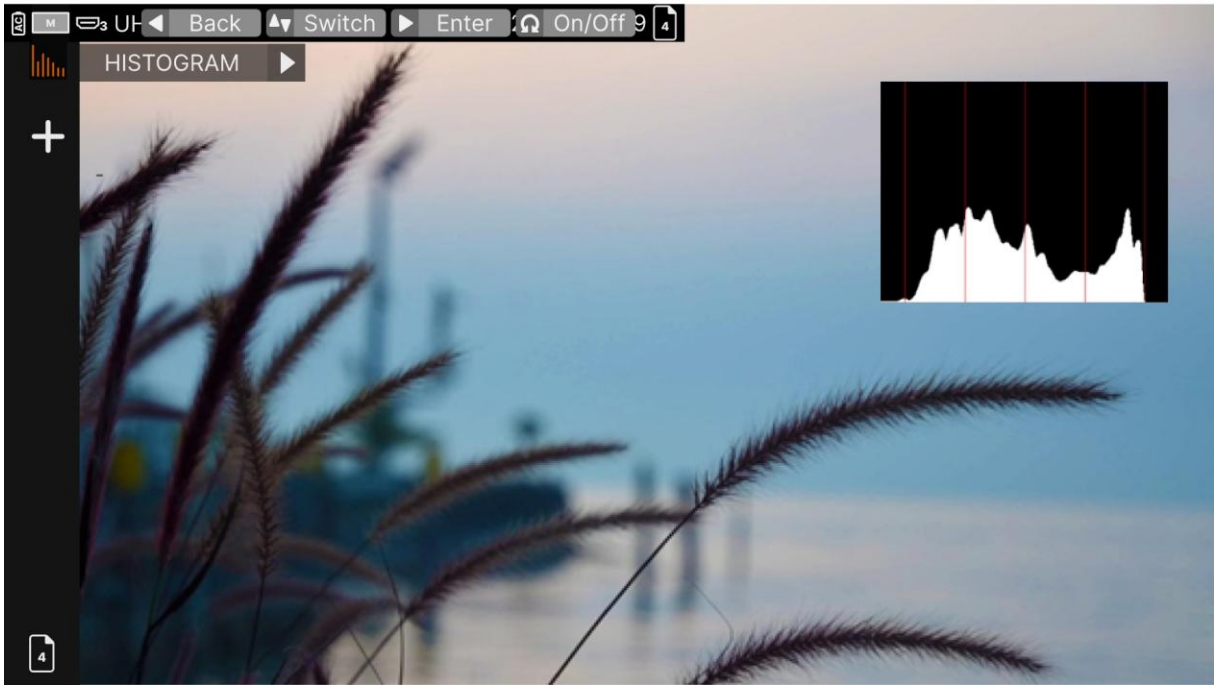


Figure 6.2-24 Activate a Tool

Step 4 Switch Tool Settings Menu for the Target Tool

Scroll right to access the Tool Settings menu, it will display the histogram settings panel, as shown in Figure 6.2-25. It lists the characteristics of histogram in this menu, such as Style, Position, Transparency and Delete button. After finish the parameter settings, scroll left to close this panel.

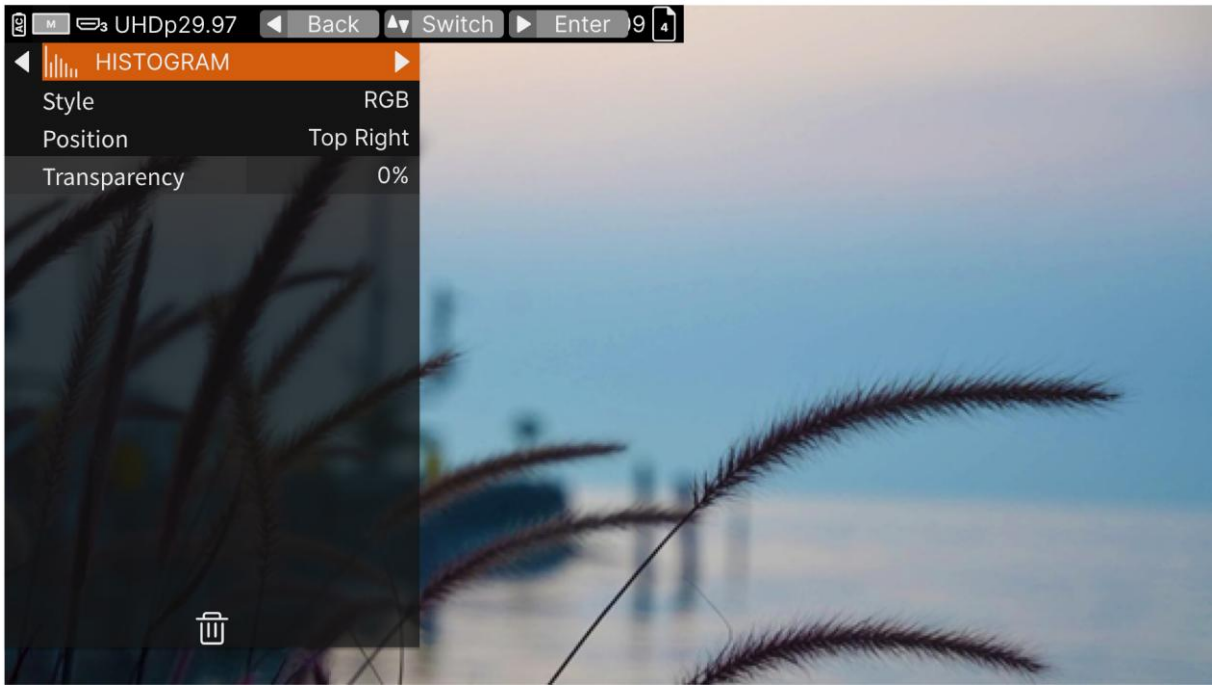


Figure 6.2-25 Tool Settings Menu-HISTOGRAM

6.2.8 Delete a Tool

In a MySet, scroll right to display the tool bar for current MySet, and scroll the joystick up or down to choose the tool which you want to delete, then scroll right to access the tool setting menu, and scroll down to select **DELETE** command at the end of the menu list, as shown in Figure 6.2-26:

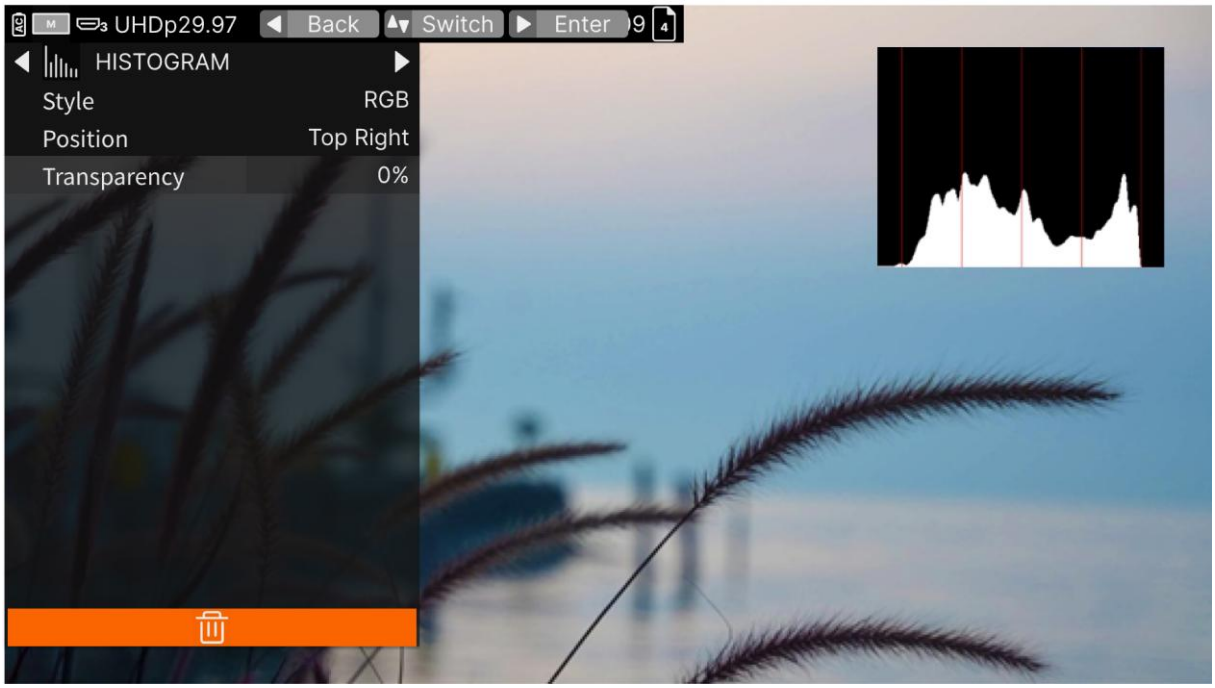


Figure 6.2-26 Delete a Tool

Press the joystick straight down to confirm the selection, and it will pop up a prompt to confirm the deletion, as shown in Figure 6.2-27, press down again to confirm, then the tool will be deleted from its tool bar.

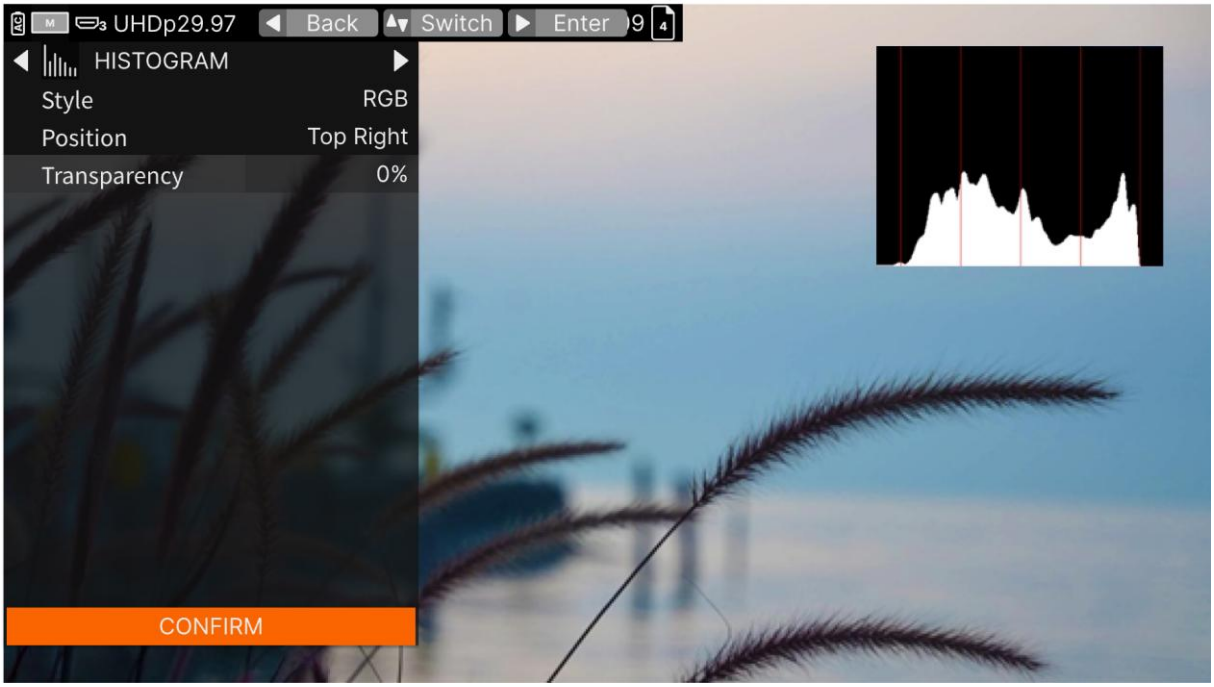


Figure 6.2-27 Delete a Tool

Tips

- The effect or window displayed on the current MySet will be closed after the relevant tool is deleted.

Chapter 7 Specifications

1. Product detailed information

Specification	Values
Model	Mega 22S4
Dimension	21.5”
Dimension(WxHxD)	523.4x350.6x153.8mm
Pixel Pitch (WxH)	0.24795×0.24795mm
Aspect Ratio	16:9
Display Area (WxH)	476.064×267.786mm
Viewing Angle (HxV)	178° x178°
Color Depth	1.07B colors
Resolution	1920×1080
Contrast (Typ.)	1100:1
Luminance (cd/㎡)	1500
Response Time (ms)	14
Backlight	WhiteLED
Backlight Life(Hrs)	20000
Work Temperature	0° C~40° C
Power Supply	100～240V50/60HzAC /11～17V3A DC battery
Power Consumption (Typ/Max)(W)	48/60
Video Input Interface	SDI(X3)
	HDMI(X3)
Video Output Interface	SDI(X1)
	HDMI(X1)
Audio Input Interface	3.5mm Jack
Audio Output Interface	3.5mm Jack (Headphone)
Control Interface	Type-C(Calibrate)
	USB
HDMI IN	

Specification	Values
Signal Formats	4K (4096x2160): 23.98/24/25/29.97/30/50/59.94/60P UHD (3840x2160): 23.98/24/25/29.97/30/50/59.94/60P, 2K (2048x1080): 23.98/24/25/50 3G(1920x1080):23.98/24/25/29.97/30/50/59.94/60P, 50/59.94/60I HD (1280x720): 50/59.94/60P
SDI IN	
Signal Formats	2K (2048x1080): 23.98/24/25/29.97/30/50/59.94/60P, 23.98/24/25/29.97/30Psf 3G(1920x1080):23.98/24/25/29.97/30/50/59.94/60P, 50/59.94/60I HD (1280x720): 50/59.94/60P
SDI/HDMI OUT	
Signal Formats	1080P50/60
Connector	BNC per IEC 169-8
Impedance	75Ω
Return Loss	>18 dB 5 to 270 MHz >15 dB 270 MHz to 1.5 GHz >10 dB up to 3 GHz
Maximum Signal Level	800 mV pk-pk 10%
Signal Amplitude	800 mV pk-pk 10%
DC Offset	0 V ±0.5 V
Overshoot	<10%
Jitter	<0.2 UI
Rise/Fall Time	<700 ps for SD <270 ps for 1.5 Gb/s HD <135 ps for 3 Gb/s HD
Extinction Ratio	>8
Back Reflection	<-14 dB

2. Dimensions

The description of the product dimensions is shown as in the following figures:

■ Mega 22S4

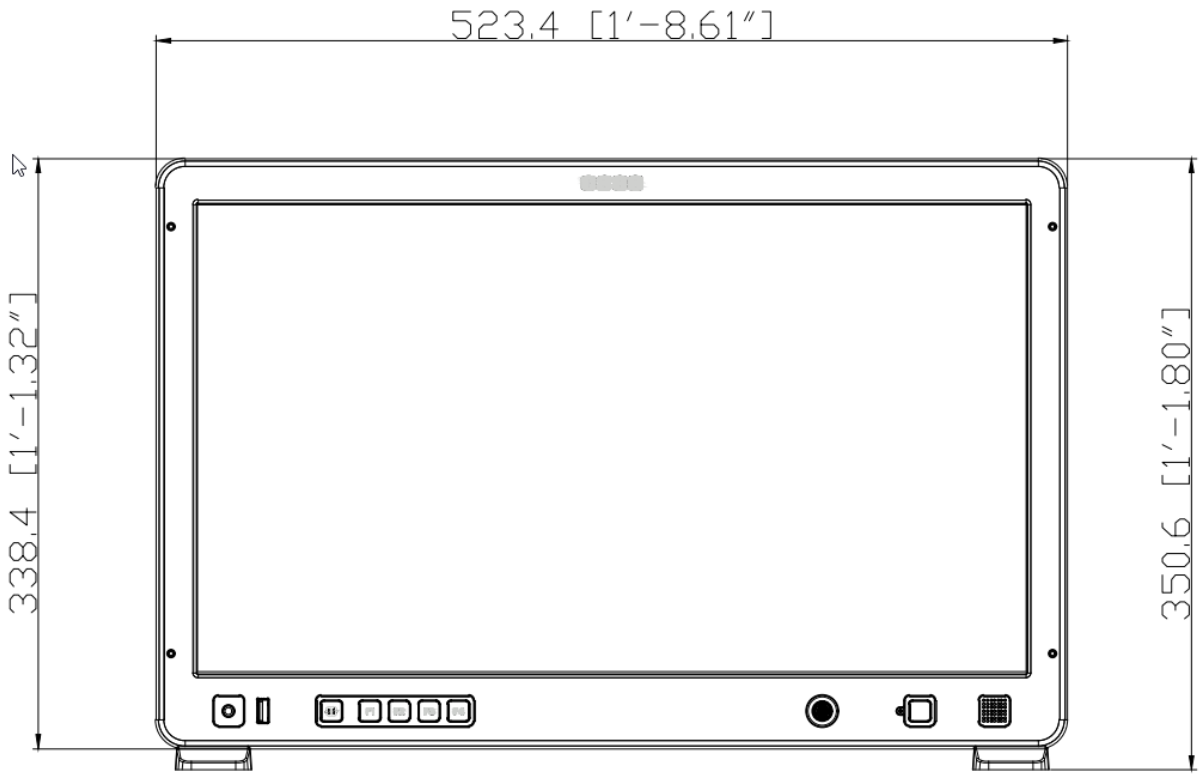


Figure 7-1 Front Panel(Unit: mm)

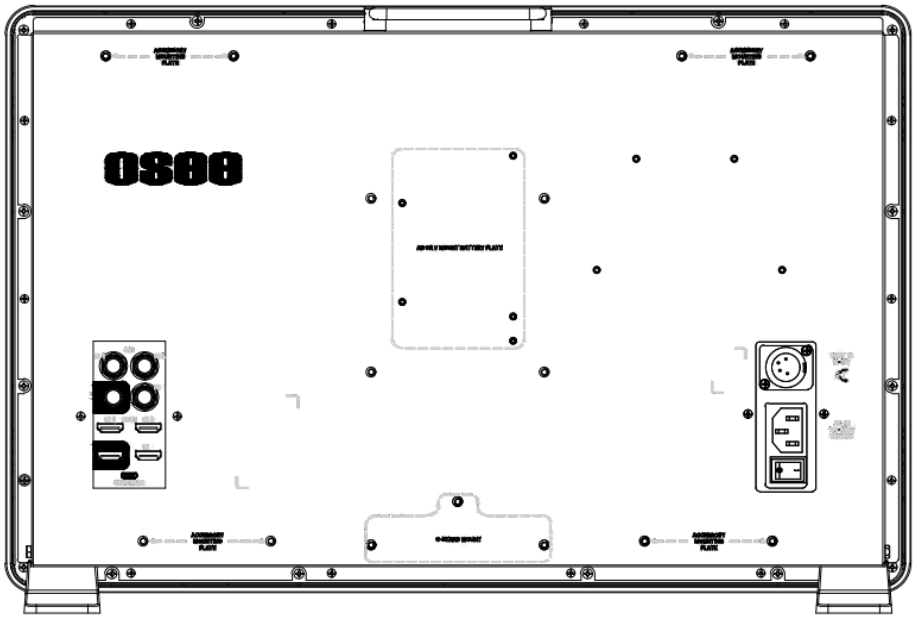


Figure 7-2 Rear Panel(Unit: mm)

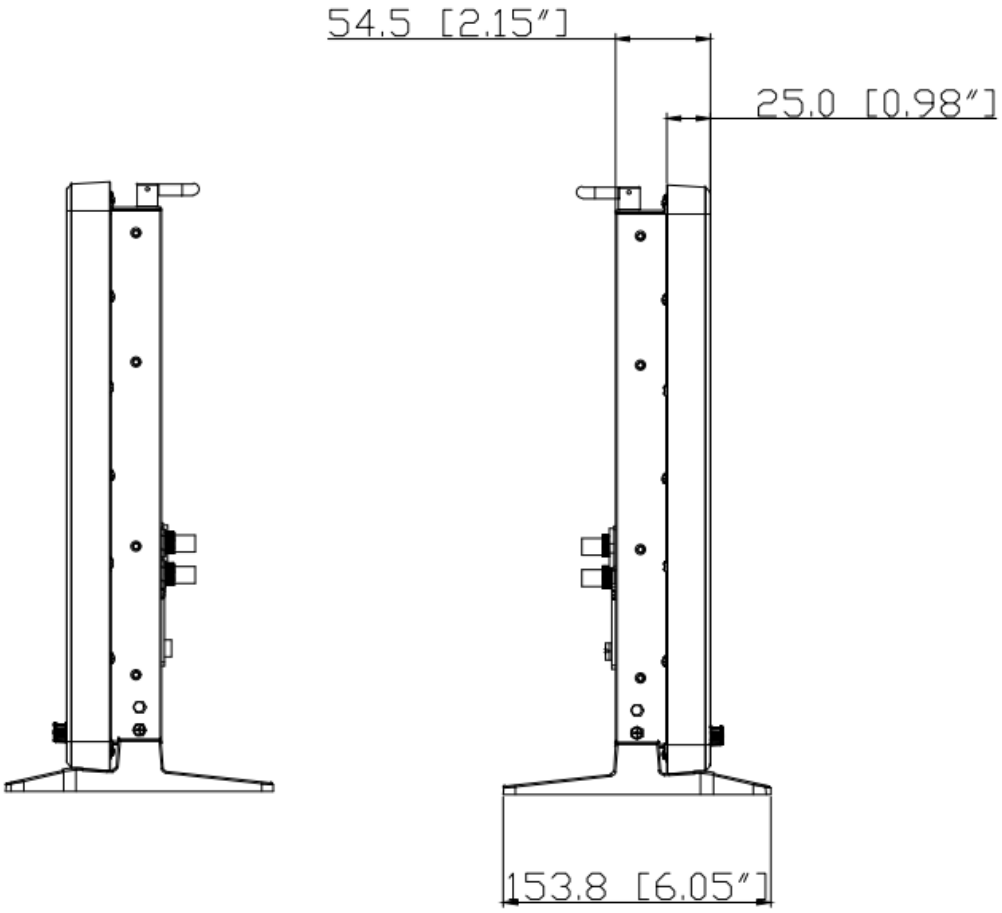


Figure 7-3 Side View(Unit: mm)

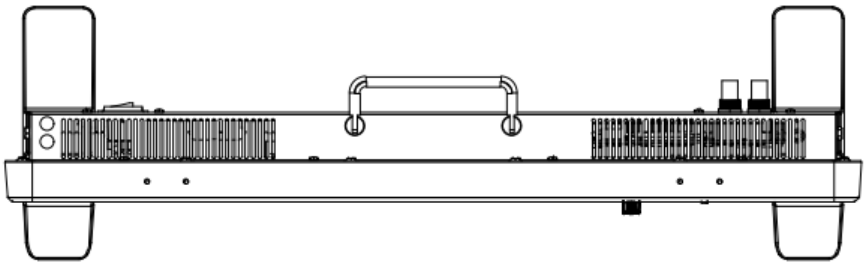


Figure 7-4 Top View(Unit: mm)

Tips

- Specifications are subject to change without notice.

----------No Text Below----------

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