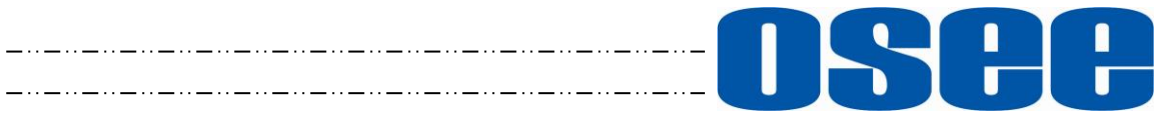
Mega 15S
Mega 22S
LCD Monitor

User Manual



OSEE TECHNOLOGY LTD.

Product Information

Model: Mega 15S/ Mega 22S LCD Monitor
Version: V010001
Release Date: May 16th, 2024

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.

MORE INFO

Firmware

User Manual

Support

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Contents

The user manual applies to the following device types:

- **Mega 15S**
- **Mega 22S**

The images of Mega 15S are adopted in the following descriptions. Before reading the manual, please confirm the device type.

Contents

Chapter 1 Overview

The Mega series LCD Monitor is a high performance field/studio monitor tailoring most applications from program production, intensive upload/download, playout to studio and intensive monitoring all sorts of business in TV Stations.

The front frame of the unit comes in a slim bezel design made from rubber mold. The professional TFT glass at full resolution of 1920x1200 UHD with LED backlight makes the Mega series LCD monitor capable of reproducing a natural color at quickest response time. In addition, the unit boasts a full wide viewing angle as well as excellent brightness and contrast ratio.

By adopting the advanced 10-bit digital signal processing technology plus 3D comb filter, de-interlacing capability and accurate scaling ensures the Mega series LCD Monitor to achieve a better effect of smoother and more natural image.

The Mega 15 series S LCD Monitor supports up to 2Ch 3G/HD/SD-SDI inputs, one HDMI input and 2Ch 3G/HD/SD-SDI output.

It also has a full package of video assisting tools like waveform, vector scope, histogram, zebra, audio meter, focus assist, exposure assist, TC and all kinds of markers.

Figure 1 A Diagram of Mega 15S Monitor

Features

- Prevailing slim bezel design
- Having multi-format input including 4K/3G/HD/SD-SDI and HDMI
- Adopting full HD, wide viewing angle TFT glass
- Using 10-bit signal processing technology plus advanced conversion technology between the interlacing and the progressive
- Support waveform, vector scope, histogram and audio meter
- Support HDR technology and wide range color space
- Support multiple color space: SMPTE-C, EBU, ITU709, ITU2020, P3
- Support multiple assistants: zebra, focus assist, exposure assist, etc.
- Support IMD remote control
- Support MARKER, Time Code, MET display

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 15S 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 with 2 Screws	2
3	Power cord	1
4	C-stand Adapter with 3 Screws	1
5	HDMI Cable Lock (2 parts)	1
6	Battery Plate with a D-tap to XLR Cable and 5 Screws	1
7	Cheese Plate with 2 Screws (V or AB mount)	1
8	Portable Bag	1
9	Quick Start Guide	
10	Service Card	1

Installation:

1. **Prepare for installation**

Please follow the procedures below before installing Mega 15S:

- 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 15S in your desired location. Adequate ventilation is required when installed to prevent possible damage to the Mega 15S.**

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 15S are as follows:

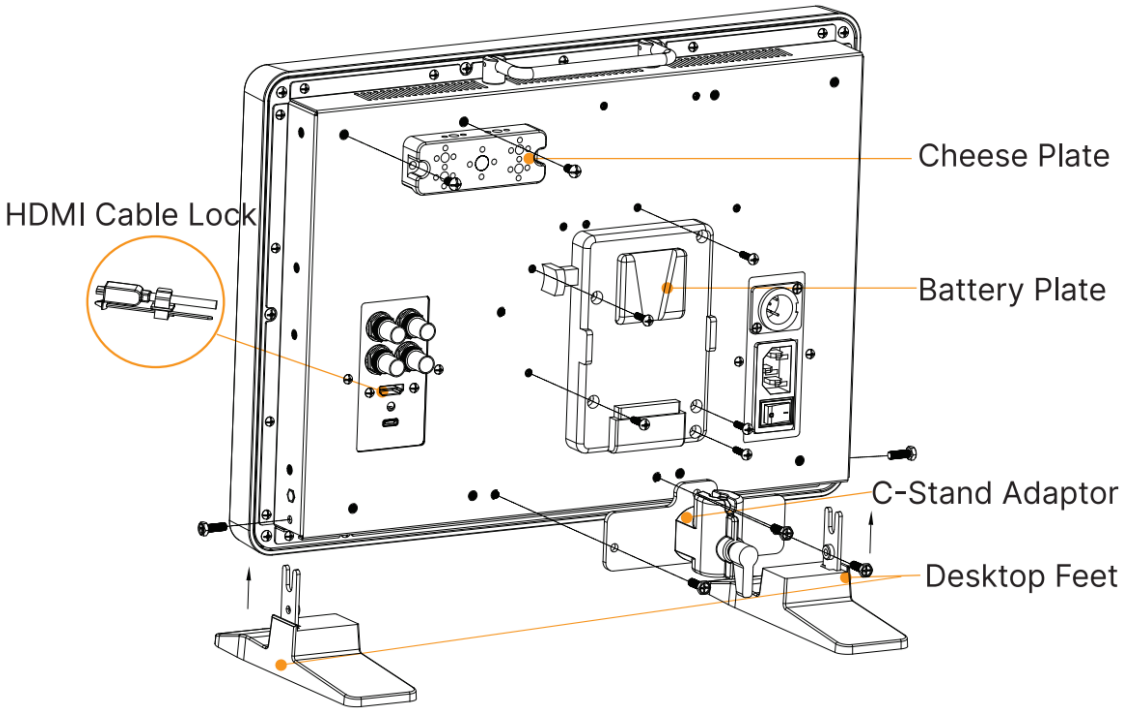


Figure 3-1 Stands and Accessories for Mega 15S

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

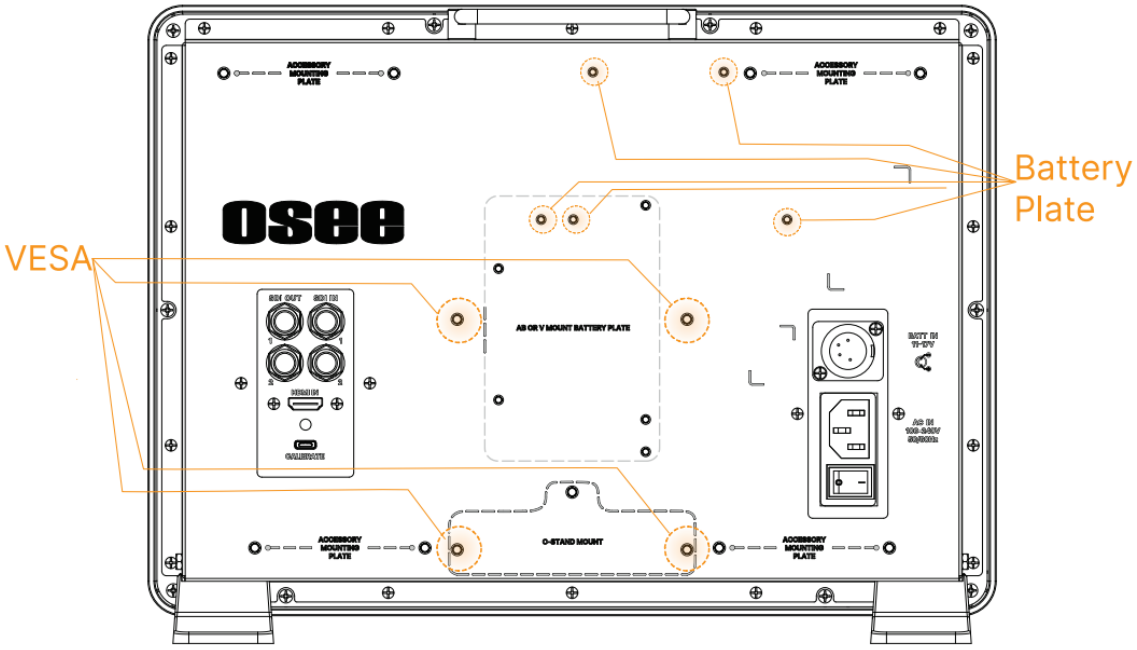


Figure 3-2 VESA and Battery Plate(horizontal) Postition for Mega 15S

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 15S monitor. The features of Mega 15S monitor are as shown as below.

4.1 Parts and Functions

The parts of Mega 15S are shown as below, there are various input and output interfaces for Mega 15S monitor, as shown in Figure 4.1-1 and Figure 4.1-2.

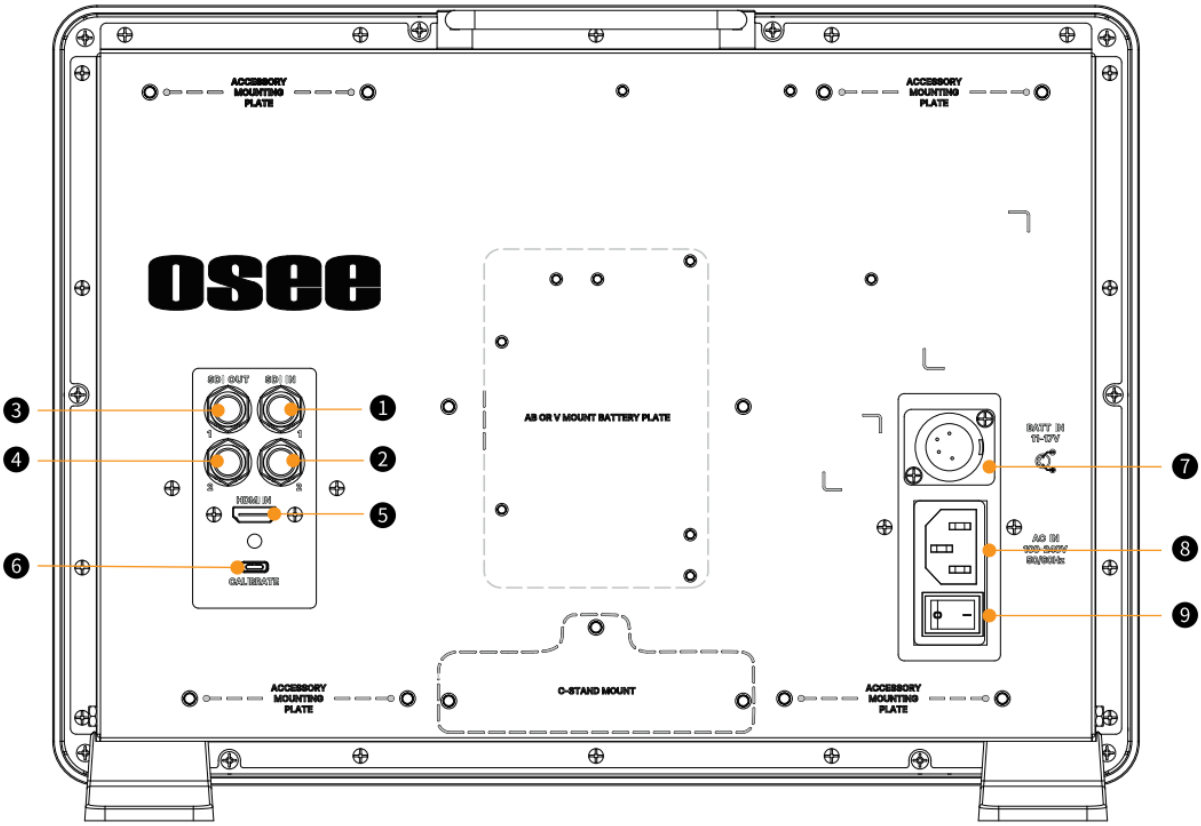


Figure 4.1-1 Parts in Rear Panel

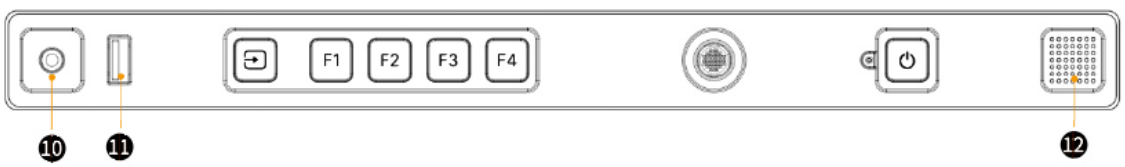


Figure 4.1-2 Parts in Rear Panel

No.	Connector	Description
1	SDI IN1	SDI input interface
2	SDI IN2	SDI input interface
3	SDI OUT1	SDI output interface
4	SDI OUT2	SDI output interface
5	HDMI IN	HDMI input interface, supports HDCP, compatible DVI1.0, HDMI 1.4
6	CALIBRATE	Type-C, used for color calibration
7	Battery Input	BATT IN, External battery NP-F/LP-E6, XLR 3pin connector, 11～17V
8	AC IN	AC power input, 100～240 50/60HzV
9	Power Switch	Switch to “—” position to power on; and switch to “O” position to power off
10	Headphone	Headphone output jack, 3.5mm stereo Jack
11	USB	U disk slot, the U disk is used to load the customized LUT tables, and update firmware.
12	Speaker	External speaker

*** Support SONY NP-F and Canon LP-E6 battery currently.**

4.2 Buttons and Functions

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.

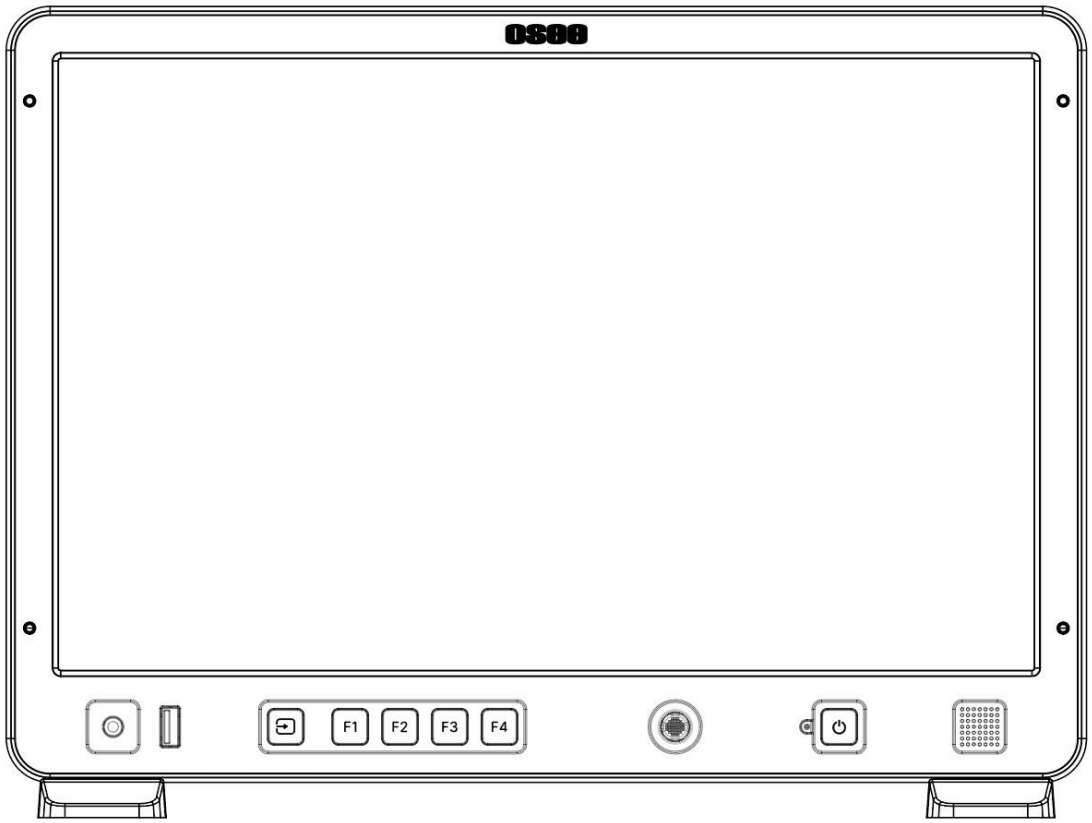


Figure 4.2-1 Buttons in Front Panel

Buttons	Name	Function
	Input	Choose the input source channel
	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

4.3 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 4.3-1.

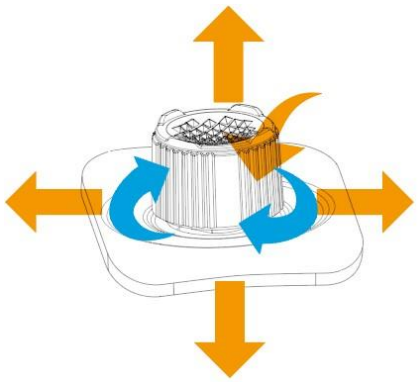


Figure 4.3-1 Five Operation Directions for Joystick

Switch to next MySet

Switch to last MySet

Enter Zoom&Pan menu(with signal input)

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

Enter Tool Bar

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;

Direction	Operation
	In scene tool menu, 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 scene tool menu, scroll down to select the next item.
LEFT	Without any menu, scroll left to the previous MySet; 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, or decrease the item value; In a tool bar of a scene, scroll left to return to the previous level menu or the downward adjustment the item value.
RIGHT	Without any menu, scroll right to Next MySet; 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, or increase the item value; In a tool bar of a scene, scroll right to access the next level menu or the upward adjustment the item value.
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 a scene, press straight down to display the Tool bar; In a tool bar of a scene, press straight down the joystick to enable or disable the selected tool; In monitor settings menu, press straight down the joystick to confirm the selection of the last level menu item and return to the previous level menu.

Tips

- 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.

4.4 Power On

The power switch is on the right corner of the rear panel of Mega 15S. 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 4.4-1, push the button to the direction “-” to switch on the power, or push the button to the direction “O” to switch off the power.

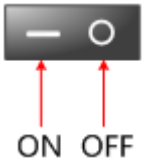


Figure 4.4-1 Power Switch

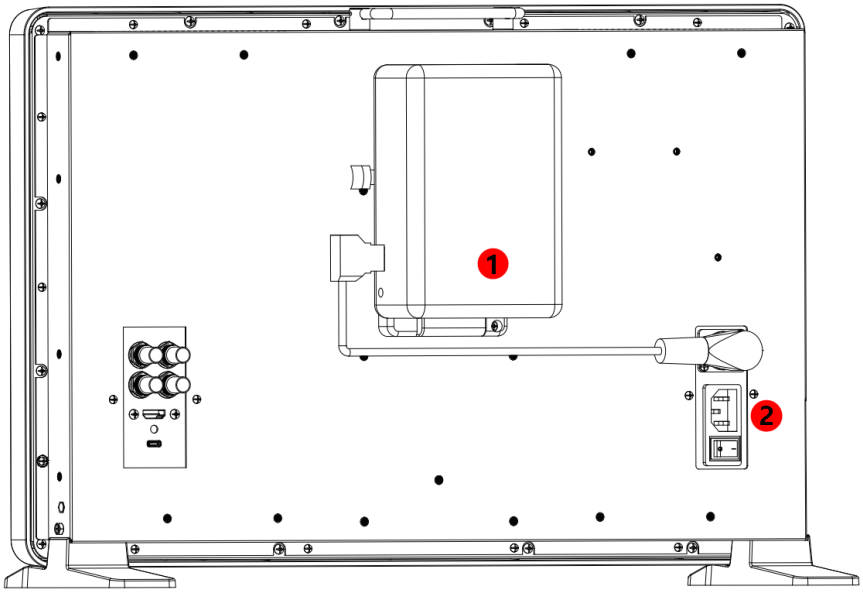


Figure 4.4-2 Power On

- 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 both SONY NP-F series and Canon LP-E6 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.
- After powered on, press the power button for 4s to turn it off.

Warning

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

4.5 Input Signal Selection

: Input Selection

Select the input signal from each input interface. Press this button to display the Input Source menu at the top right corner of the screen, as shown in Figure 4.5-1. Press the input button or UP/DOWN button to choose your input channel.

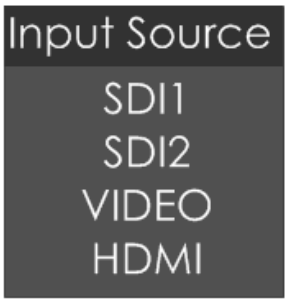


Figure 4.5-1 Source Menu

4.6 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**

Scroll right the joystick to 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 right of the screen, as shown in Figure 4.6-1:

Figure 4.6-1 Zoom 2X Mode

- **Zoom 2X Pan Mode**

After accessing the Zoom 2X 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 2X Editing icon at the bottom right of the screen, as shown in Figure 4.6-2. 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.

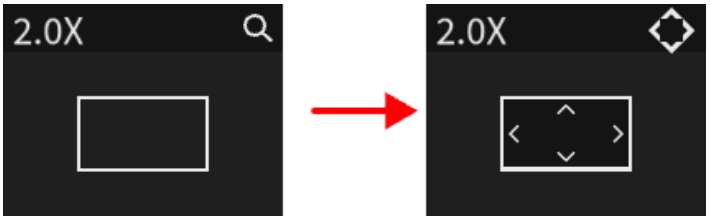


Figure 4.6-2 Zoom 2X Pan Mode

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 right of the screen, as shown in Figure 4.6-3:

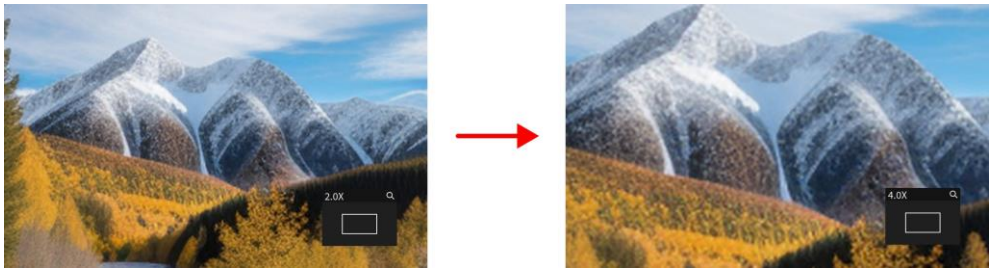


Figure 4.6-3 Zoom 4X Mode

■ **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 right of the screen, as shown in Figure 4.6-4. 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 4.6-4 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.

Tips

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

4.7 Supported Signal Format

The supported signal format for this device is as shown in Table 4.7-1:

Table 4.7-1 Supported Signal Format

Signal Format		SDI	HDMI
HD	720P24/23.98	✓	✓
	720P25	✓	✓
	720P30/29.97	✓	✓
	720P50	✓	✓
	720P60/59.94	✓	✓
	1080PSF24/23.98	✓	✓
	1080PSF25	✓	✓
	1080PSF29.97	✓	✓
	1080PSF30	✓	✓
	1080I50	✓	✓
	1080I60/59.94	✓	✓
	1080P24/23.98	✓	✓
	1080P25	✓	✓
	1080P30/29.97	✓	✓
3G	1080I50	✓	✓
	1080I60/59.94	✓	✓
	1080P24/23.98	✓	✓
	1080P25	✓	✓
	1080P30/29.97	✓	✓
	1080P50	✓	✓
	1080P60/59.94	✓	✓
2K	1080PSF24/23.98	✓	
	1080PSF25	✓	
	1080PSF29.97	✓	
	1080PSF30	✓	
	1080P24/23.98	✓	✓
	1080P25	✓	✓
	1080P30/29.97	✓	
	1080P50	✓	✓

Signal Format		SDI	HDMI
	1080P60/59.94	✓	
UHD	2160P24/23.98		✓
	2160P25		✓
	2160P30/29.97		✓
4K	4KP24/23.98		✓
	4KP25		✓
	4KP30/29.97		✓

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 contains the settings as shown in Figure5-1.

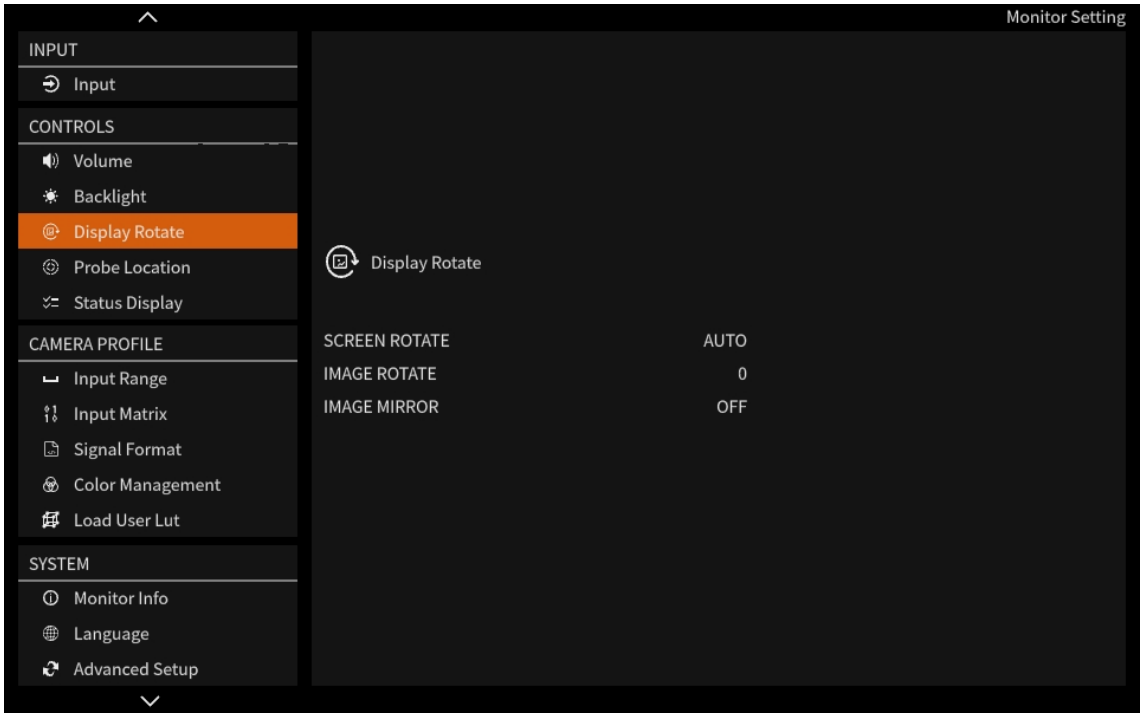


Figure 5-1 Monitor Settings

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 bottom center of the screen, as shown in Figure 5.1-1. Scroll right to select the second icon, and 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

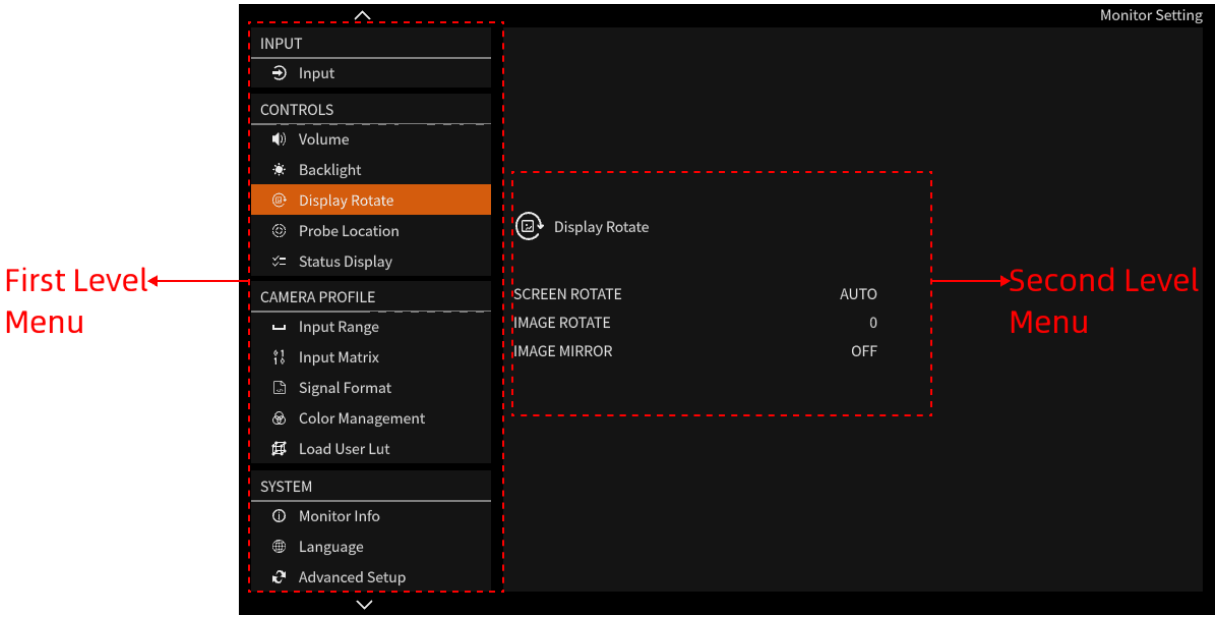


Figure 5.1-2 Structure of Monitor Settings

The menu interface is divided into two parts:

1. **First level menu**

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

2. **Second level menu**

   Scroll right to access the corresponding menu item to enter the second level of menu list. Scroll up or down to choose the second level item, and scroll left or right to modify the value of the item. Then, press **down** to modify the value modification.

■ **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 INPUT

The **INPUT** menu provides input sources selection, as shown in Table 5.2-1:

Figure 5.2-1 Input Menu

Table 5.2-1 Description of INPUT Menu

Menu	Items	Default	Domain Range	Description
Input	SOURCE	HDMI	HDMI: signal from HDMI IN SDI1: signal from SDI IN1 SDI2: signal from SDI IN2	Choose the input signal source

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 5.2-2:

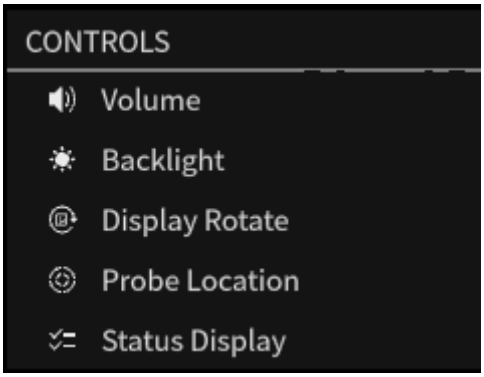


Figure 5.2-2 Controls Menu

Table 5.2-2 Description of Controls Menu Items

Menu	Items	Default	Domain Range	Description
Volume	OPTIONS	16	0～31	Adjust the volume
Backlight	OPTIONS	8	0～10	Adjust the backlight
Display	SCREEN	AUTO	AUTO/	Rotate the image and menus (not

Menu	Items	Default	Domain Range	Description
Rotate	ROTATE		0/180	supported currently)
	IMAGE ROTATE	180	0/180	Rotate the image in vertical direction
	IMAGE MIRROR	OFF	OFF/ON	Rotate the image in horizontal direction
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	OFF	OFF/ON/ BAT ONLY	Enable/disable the status bar at the top of the screen

1. Adjust Volume

Select **controls→VOLUME** item, scroll right to enter the VOULME menu, as shown in Figure 5.2-3. Scroll left or rotate counterclockwise to decrease the volume, scroll right or rotate clockwise to increase the volume. Press it down to confirm the modification and return to the previous level menu.

Figure 5.2-3 Volume Menu

2. Adjust Backlight

Select **controls→BACKLIGHT** item, scroll right to enter the BACKLIGHT menu, as shown in Figure 5.2-4. Scroll left or rotate counterclockwise to decrease, scroll right or rotate clockwise to increase the backlight.

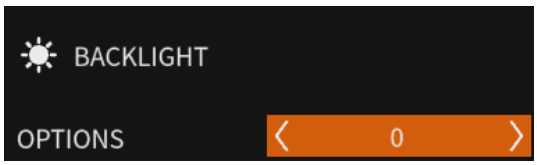


Figure 5.2-4 Backlight Menu

3. Display Rotate

- **Image Rotate**

Set **controls→Display Rotate→ Image Rotate** item to be **180** or **0**, only the input image will reverse vertically, as shown in Figure 5.2-5:

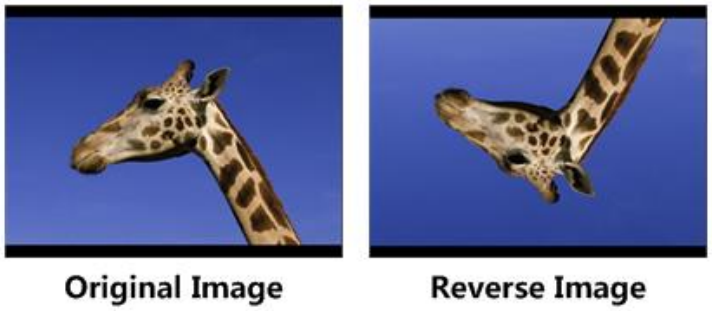


Figure 5.2-5 Vertical Rotate

- **Image mirror**

Set **controls→Display Rotate→ Image MIRROR** item to be **ON** or **OFF**, only the input image will reverse horizontally, as shown in Figure 5.2-6:

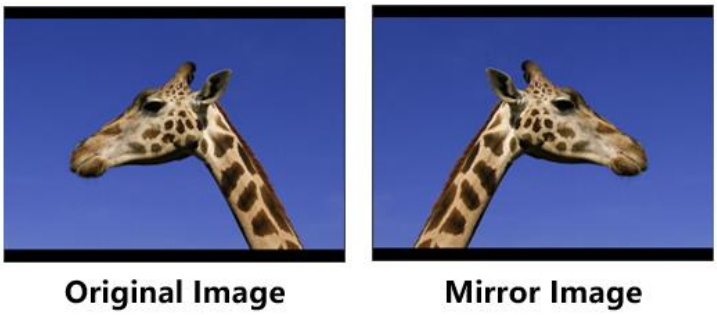


Figure 5.2-6 Horizontal Rotate

4. STATUS BAR

Set **controls→STATUS DISPLAY** item to be **ON**, it will display the Status bar at the top of the screen, including this information from left to right: Input source format, gamut, scene ID and battery capacity indication.

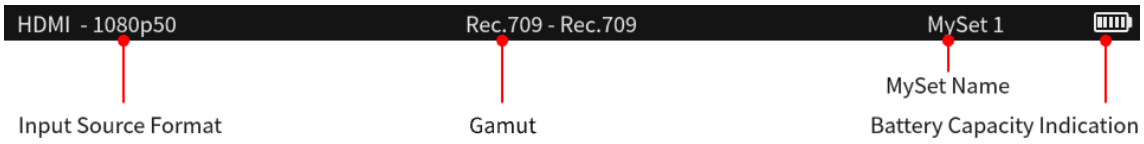


Figure 5.2-7 Status Bar

- **INPUT FORMAT**

The **Signal Format** usually displays as the following situations:

- **UNKNOWN**: appears if an unsupported signal is input.

- **NO SIGNAL**: appears if no signal is detected.

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

■ **Settings**

- **ON**: display the input channel, signal format, scene ID and battery indicator (available only when the battery level is 11~17V);

- **OFF**: turn off the status bar display;

- **BAT ONLY**: only display the battery indicator, and the illustrations are different according to the battery level as shown in the table below. When the battery capacity is running out, it will pop up a warning as shown in Figure 5.2-8, please replace the battery in time, and click OK 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	

Range of battery level	Illustration
Powered by 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!

5.2.3 CAMERA PROFILE

The **CAMERA PROFILE** menu items are used to set the Input Range, Input Matrix, Signal Format, Color Management and Load User LUT, the menu items are as shown in Figure 5.2-9:

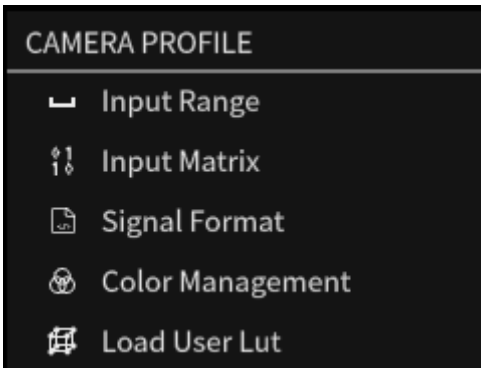


Figure 5.2-9 Camera Profile Menu

Table 5.2-3 Description of Camera Profile Items

Menu	Items	Default	Domain Range	Description
Input Range	OPTIONS	AUTO	AUTO/ 64~940/ 0~1023	Set color range
Input Matrix	OPTIONS	AUTO	AUTO/ Rec 601(SD)/ Rec 709(HD)/ Rec 2020(UHD)	Set color matrix
Signal Format	OPTIONS	AUTO	AUTO, 422 YCBCR 10BIT, 422 YCBCR 12BIT, 444 YCBCR 10BIT,	Set signal format, available for SDI.

Menu	Items	Default	Domain Range	Description
			444 YCBCR 12BIT, 444 RGB 10BIT, 444 RGB 12BIT, 444 XYZ 10BIT, 444 XYZ 12BIT	
Color Management	LOG/HDR	ON	ON/OFF	Enable/disable LOG/HDR function
	COLOR PROFILE	EBU	EBU/DCI/ ARRI/BMD/ Canon/FUJI/ Nikon/ Panasonic/ RED/SONY	Choose a color profile, refer to Table 5.2-4 for the relationship among color profile, gamma and gamut
	GAMMA	--	Refer to Table 5.2-4	Set Gamma
	GAMUT	--	Refer to Table 5.2-4	Set Gamut
Load User LUT	EXECUTE LOAD LUT FILE	--	LUT1~ LUT10	Load a color look profile from U disk

1. COLOR PROFILE

The monitor is equipped with versatile color profiles for different requirements. We provide the following color profiles:

Set **camera profile→ COLOR MANAGEMENT→ LOG/HDR** item **ON** and select **camera profile→ COLOR MANAGEMENT→ COLOR PROFILE** item according to your camera, then set GAMMA and GAMUT, as shown in Figure 5.2-10:

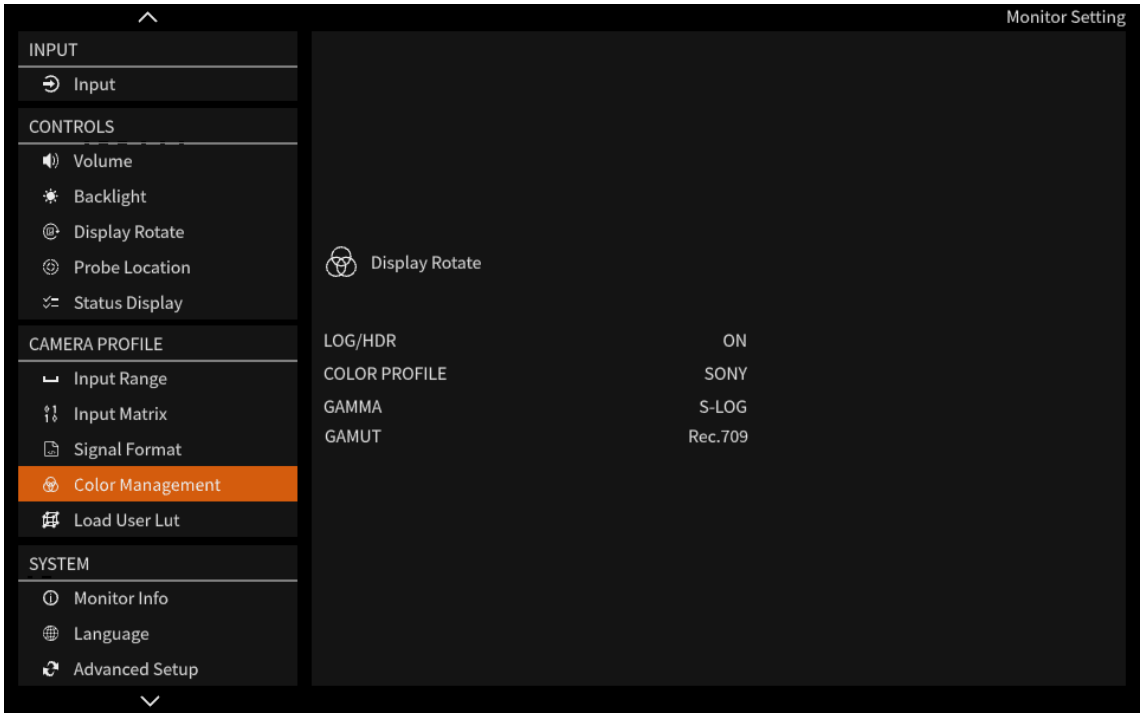


Figure 5.2-10 COLOR MANAGEMENT SETTINGS

■ Color Profile (For Versatile CAMERAs)

There are versatile color profiles for cameras of various brands, supporting ARRI, BMD, Canon, DCI, EBU, FUJI, NIKON, Panasonic, RED and SONY, etc.

Table 5.2-4 COLOR PROFILES FOR CAMERAS

PROFILE	GAMMA	GAMUT
EBU	2.2	Rec 709
	2.4	Rec 709
	HLG	Rec 709, Rec 2100
	PQ	Rec 709, Rec 2100
DCI	2.6	P3 D65, DCI-P3
ARRI	EI160	Rec.709, ALEXA Wide Gamut
	EI200	
	EI250	
	EI320	
	EI400	
	EI500	
	EI640	

PROFILE	GAMMA	GAMUT
	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
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 preset color profiles are constantly under development.
- Please confirm your LOG/HDR settings before shooting videos, then activate it through **DE-LOG** tool in scene.

2. 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.

First, write the designated LUT file to the monitor.

Operation: Select **camera profile→ LOAD USER LUT → LUT*** item to choose a LUT file from U disk, the User LUT file list is as shown in Figure 5.2-11, you can only see LUT ID without profile name in the list for the first time.

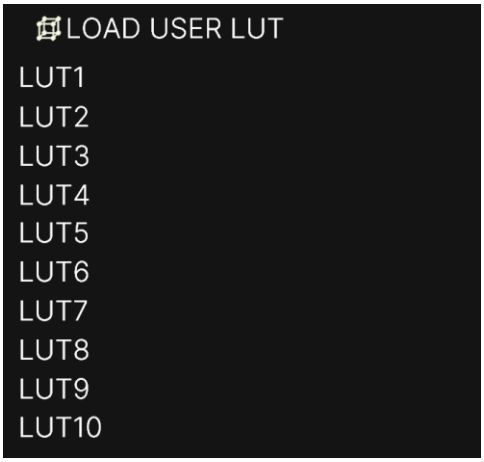


Figure 5.2-11 LUT Storage Directory

Scroll the joystick down to select **LOAD USER LUT** item, and press it straight down to enter the list, then scroll down to choose a designated LUT file, 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 5.2-13, press **OK** and select the target LUT from U disk, the file should be a LUT file with a file extension of ".cube", and specify its storage directory, please don't cut off the power during loading.

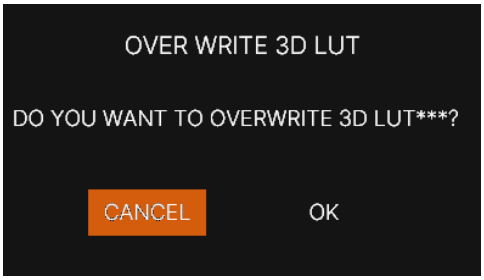


Figure 5.2-12 Prompt for Overwriting LUT

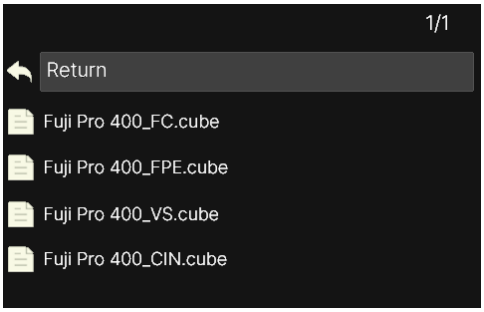


Figure 5.2-13 Calibration USER LUT Directory

For example: Load a LUT file to **LUT1**, scroll down to choose **LUT1** in the LUT list, press the joystick straight down to confirm the selection, it will pop up a series of directories for navigating to the designated LUT file, as shown in Figure 5.2-13, then choose a target USER LUT to be stored. Press the joystick straight down to confirm the selection, it will write the specified LUT file into the monitor from the U disk, it will prompt the writing status, as shown in Figure 5.2-14, then it will prompt file write complete after file loading. At last, you can see the profile name is on the left side of the current LUT ID in the list.

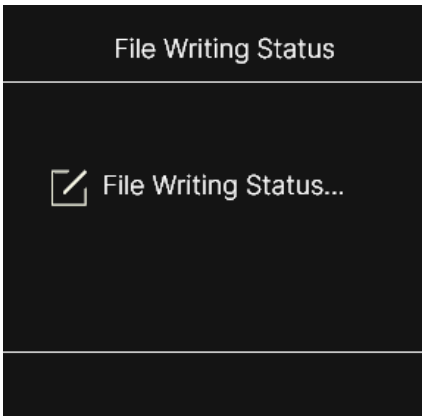


Figure 5.2-14 Prompt for File Writing

Second, use **USER LUT** tool to activate LUT to current scene.

Operation: scroll the joystick right to access a scene, and press straight down to load the **Tools** pane for the scene. Then, add the **USER LUT** tool, press down to enable this tool, for example, choose **ID** item as **LUT1**, and **INTENSITY** as **100%**, thus, it will apply **LUT1** to current scene display, as shown in Figure 5.2-15:

Figure 5.2-15 User LUT Tool

After activating a LUT file, it will be loaded to the image display immediately, as shown in Figure 5.2-16:

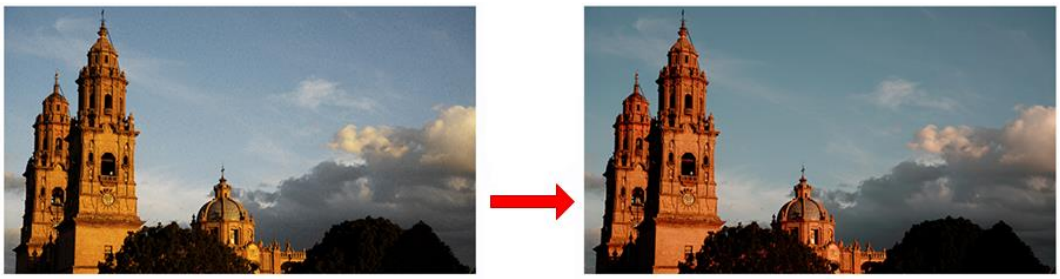


Figure 5.2-16 Output Image Applied with a LUT File

Tips

- There will a “File format not support!” prompt for unavailable LUT file when executing file writing operation.
- Refer to “6.1.4 Look Tool” for the details about applying the 3D LUT file.
- Make sure your U disk is FAT32 format, otherwise, it will not be supported in this monitor.
- Mega 15S 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.

5.2.4 SYSTEM

The **SYSTEM** menu provides monitor info, language selection and factory reset operations, as shown in Figure 5.2-17:

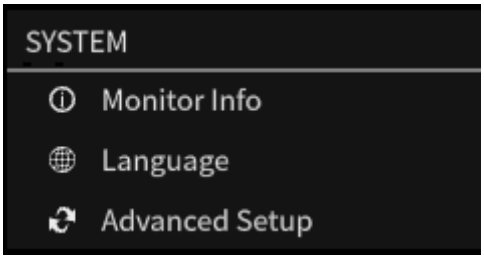


Figure 5.2-17 System Menu

Table 5.2-5 Description of System Menu Items

Menu	Items	Default	Domain 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/ Français/ Espanol	Choose a language mode
Advance Setup	FACTORY RESET	--	--	Revert the factory settings
	FACTORY MANAGE	ON	ON/OFF	Enable/disable factory manage functions
	COLOR CALIBRATE	--	--	Execute color calibrate process
Helper Display	OPTIONS	ON	ON/OFF	Enable/disable the helper prompt display
Function Key	F1	TOOL1	TOOL1~ TOOL8	Assigned a tool to F1 button
	F2	TOOL2	TOOL1~ TOOL8	Assigned a tool to F2 button
	F3	TOOL3	TOOL1~ TOOL8	Assigned a tool to F3 button
	F4	TOOL4	TOOL1~ TOOL8	Assigned a tool to F4 button

1. HELPER DISPLAY

The helper display prompt is used to indicate how to operate with the Joystick, as shown in Figure 5.2-18. Select **system→ HELPER DISPLAY → OPTIONS** item to enable or disable this prompt. The prompt will be shown after powered on.

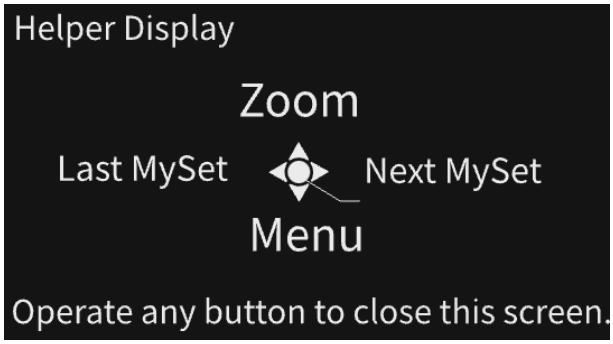


Figure 5.2-18 Helper Prompt for Joystick Operation

2. LANGUAGE

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

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 5.2-19:

Figure 5.2-19 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 → FACTORY RESET** item to initialize the settings to default values, it will pop up a prompt, as shown in Figure 5.2-20 , 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 5.2-21. At last, please restart the device by manual.

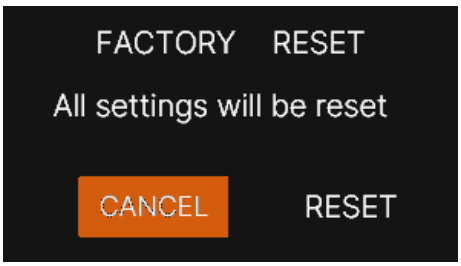


Figure 5.2-20 Prompt for Factory Reset

Figure 5.2-21 Boot Screen

Tips

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

5. 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 5.2-20 , 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 5.2-22.

- 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 5.2-22 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 5.2-23.

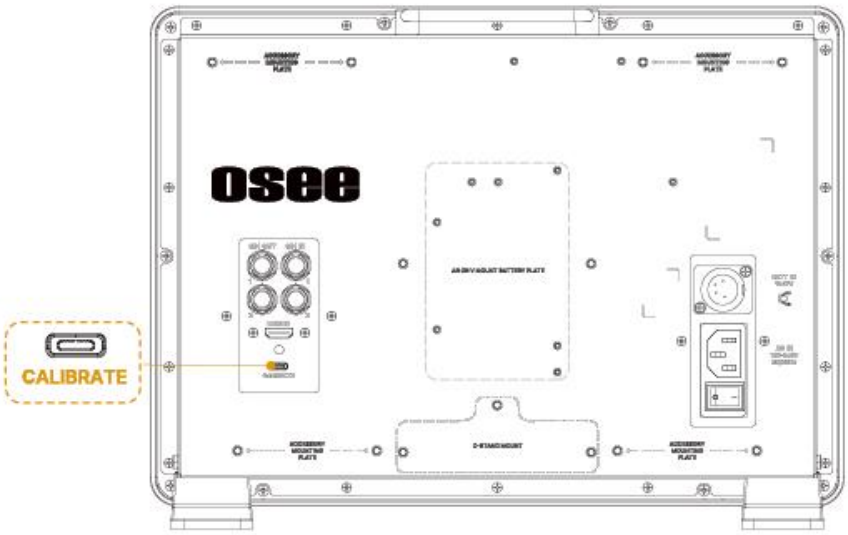


Figure 5.2-23 Calibration Connector on Mega Monitor

☐ 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 → FACTORY MANAGE** in the monitor settings. A prompt box will appear, as shown in Figure 5.2-24. Press the joystick down to select "**OK**" to start autonomous calibration.

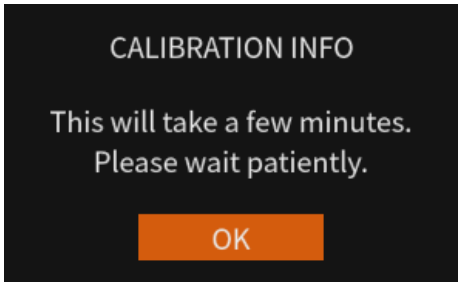


Figure 5.2-24 Autonomous Calibration Prompt

Once the calibration starts, select "**START**", as shown in Figure 5.2-25. and press the joystick down to confirm and proceed with the calibration. A prompt indicating the probe placement will appear, as shown in Figure 5.2-26.

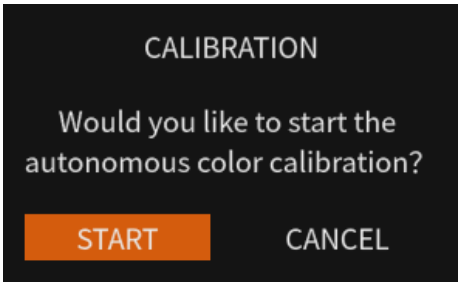


Figure 5.2-25 Start Calibration Prompt

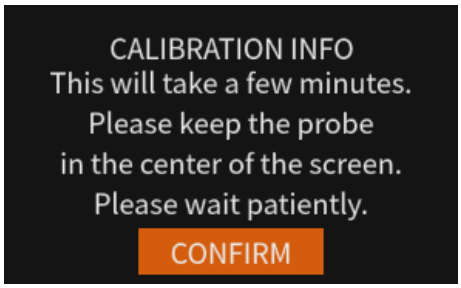


Figure 5.2-26 Probe Placement Prompt

Tips

- When the probe placement prompt appears as shown in Figure 5.2-26, 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 5.2-27.

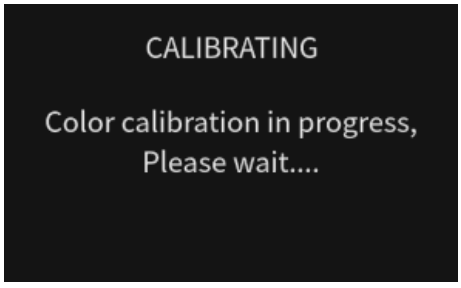


Figure 5.2-27 Calibration in Progress

Once calibration is complete, it will pop up a calibration preview&apply prompt, as shown in Figure 5.2-28. 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.

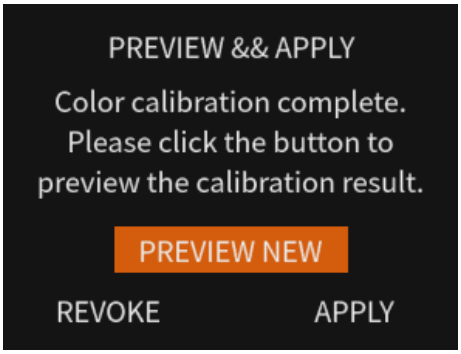


Figure 5.2-28 Calibration Preview and Apply Prompt

■ **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.

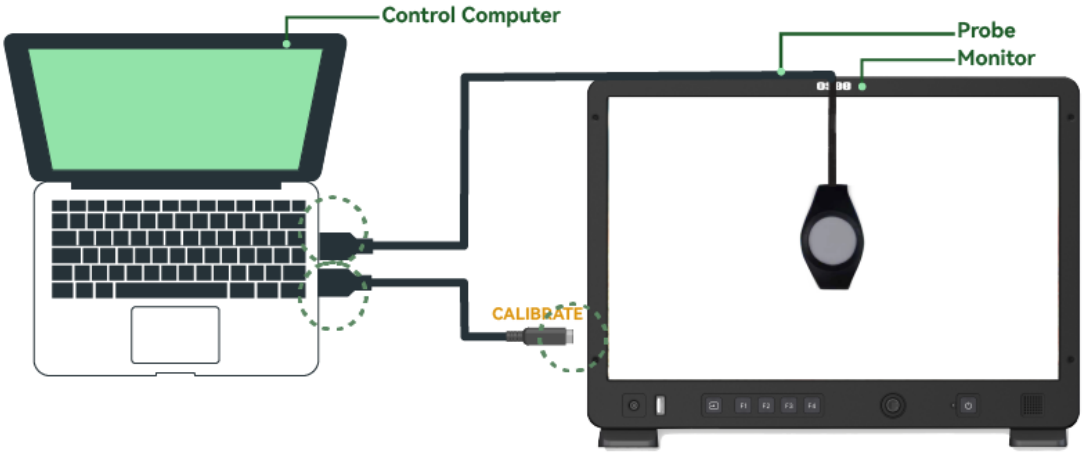


Figure 5.2-29 Device Connection-Osee Calibrator Calibration

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 bottom center of the screen. Scroll right to select the second icon, and press 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, press down 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**

  Press down to back to the first level menu.

3. Operations to second level menu item value

- **Switch second level menu item value**

  When the control icon is in second level menu item value, scroll left or right to switch among its value list.

- **Confirm the modification to second level menu item value**

  Press down to confirm the selection of a value, and the control icon is back to the first level menu area.

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.

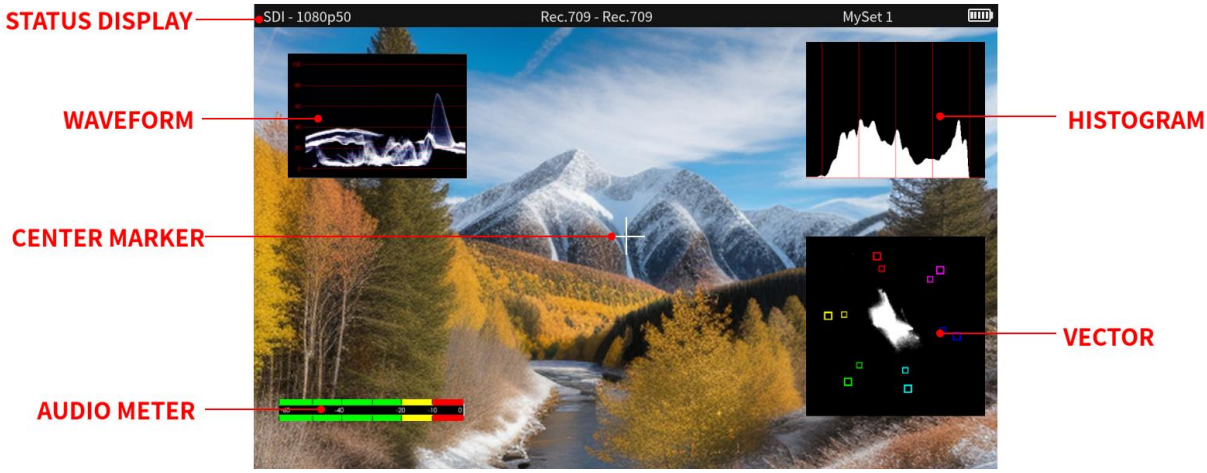


Figure 6.1-1 Tools for Scene

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:

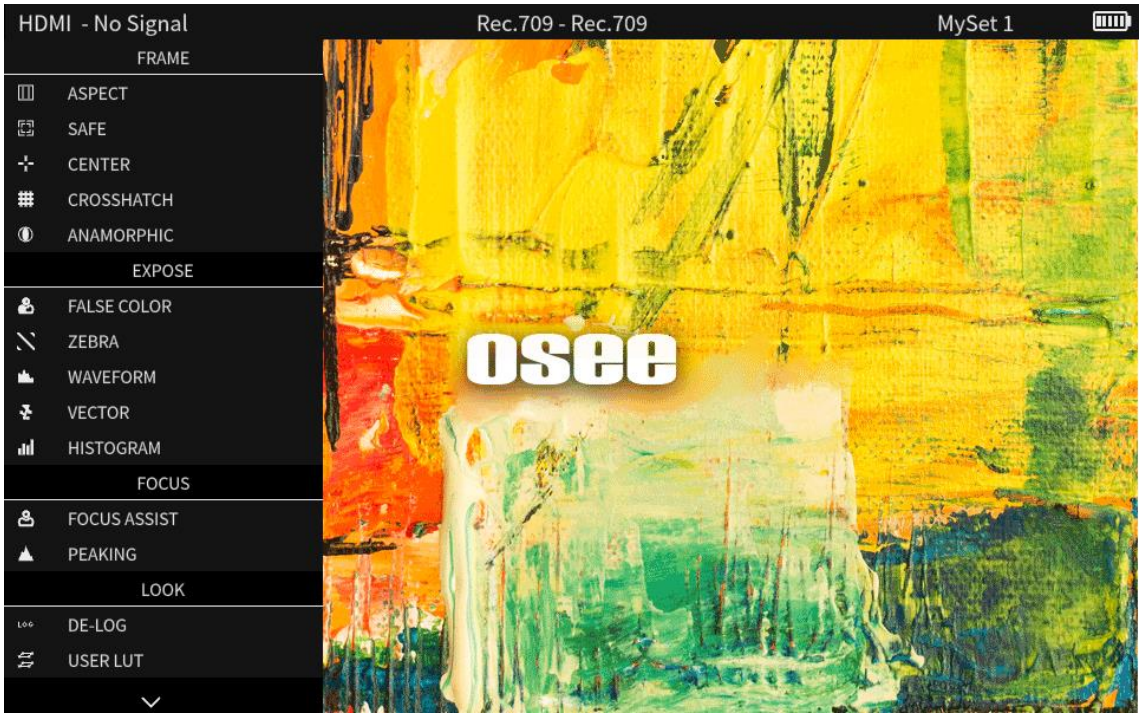


Figure 6.1-2 Tool List for A Scene

Table 6.1-1 Tool Icons

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

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, 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

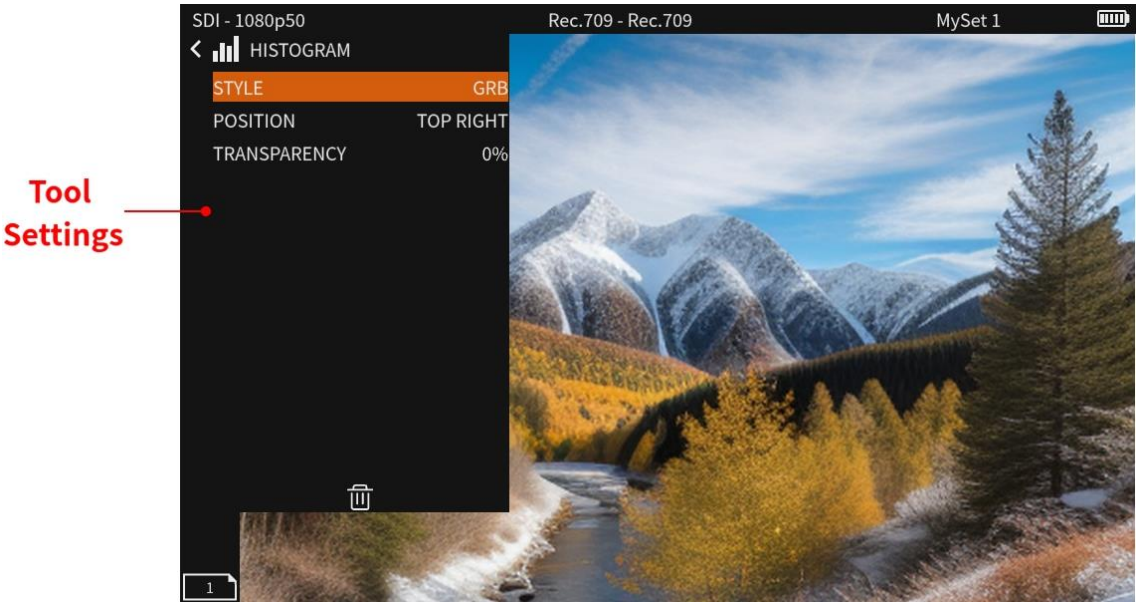


Figure 6.1-4 Tool Settings Menu

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.

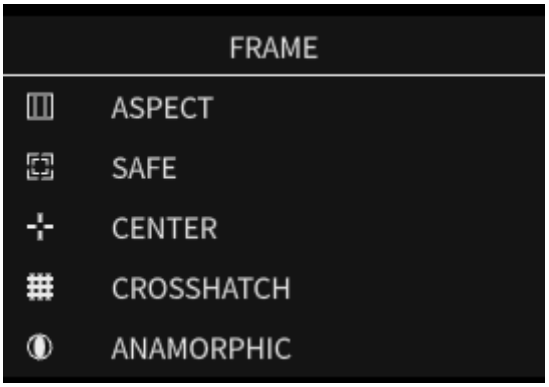


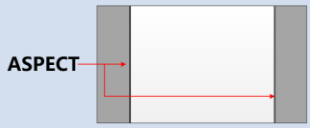
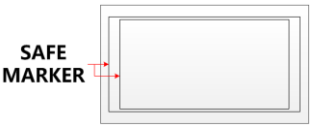
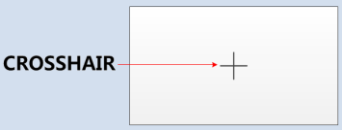
Figure 6.1-5 Frame Tools

Table 6.1-2 Description of Frame Tools

Tool	Items	Default	Domain Range	Description
ASPECT	RATIO	16:9 (HD TV)	9:16 (Phone)/ 4:5/1:1/2.41:1/ 4:3 (SD TV)/ 1.37:1(Cinema)/ 16:9 (HD TV)/ 1.85:1(Cinema)/ 2.37:1(Cinema)/ 1.91:1/2.35:1/ CUSTOM	Set the display ratio of the marker
	CUSTOM RATIO	1:1	3:1 ~1:3	Set the width of the matte area in CUSTOM mode, the step is 0.02
	OPACITY	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/	Set center marker style

Tool	Items	Default	Domain Range	Description
			HOLLOW	
CROSS HATCH	LINES	2X2	2X2/3X3/4X4/ 5X5/6X6/7X7/ 8X8/9X9	Set the cross line number
ANAMO RPHIC	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/ 1.9X/2X	Set the anamorphic ratio

1. Marker

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 → Opacity** 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. 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

- 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:

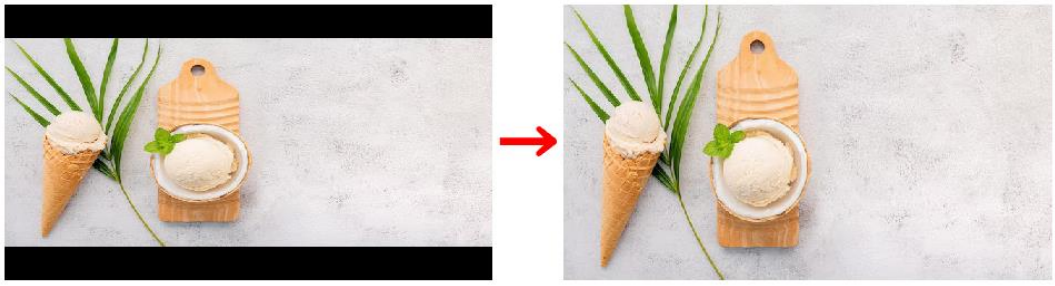


Figure 6.1-7 MAGNIFY

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	Domain 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	46%CV	0-99%CV	Set minimum of tone1, the step

Tool	Items	Default	Domain Range	Description
	MIN			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.
	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.
WAVE FORM	STYLE	LUMA	LUMA/RGB/ PARADE	Set the type of the waveform
	SIZE	SMALL	SMALL/ LARGE/ BOTTOM	Set the size of the waveform
	POSITION	TOP RIGHT	TOP RIGHT/ BOTTOM RIGHT/ TOP LEFT/ BOTTOM 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%
	TRANSPA	0%	0%	Set the transparency of the

Tool	Items	Default	Domain Range	Description
	RENCY		25% 50% 75%	waveform
VECTOR	POSITION	TOP RIGHT	TOP RIGHT/ BOTTOM RIGHT/ TOP LEFT/ BOTTOM 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/ BOTTOM RIGHT/ TOP LEFT/ BOTTOM LEFT	Set the position of the histogram
	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:

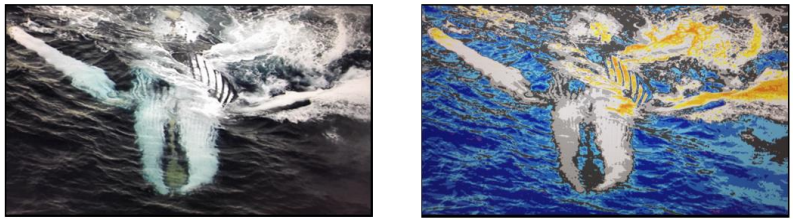


Figure 6.1-9 Comparison Mode- Original Image and Normal Mode Image

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.

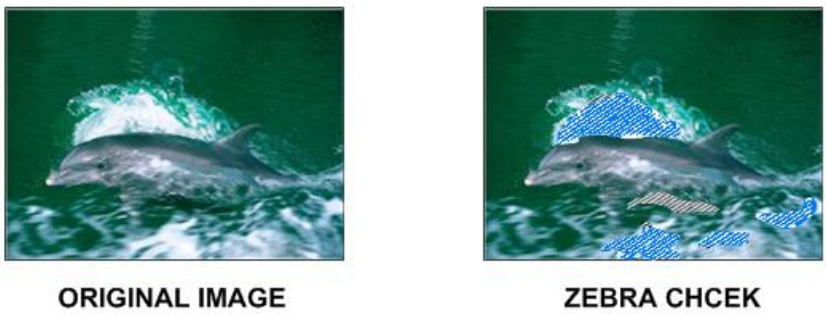


Figure 6.1-10 Illustration for ZEBRA Function

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 in any one of the 4 positions listed in **Position** item;
- ☐ 75% waveform: set **Size** item as **Large,** and this kind of waveform is located in 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 in 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:

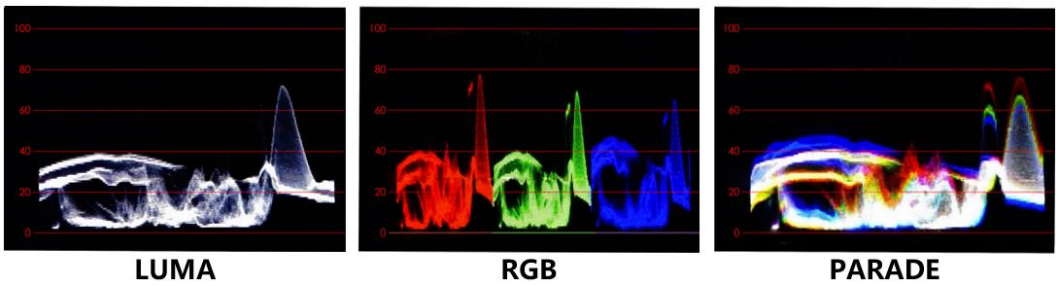


Figure 6.1-11 LUMA and RGB and PARADE Waveform

4. Vector

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

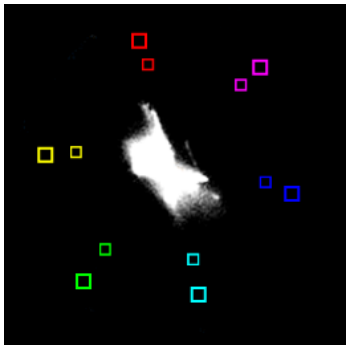


Figure 6.1-12 Vector

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:

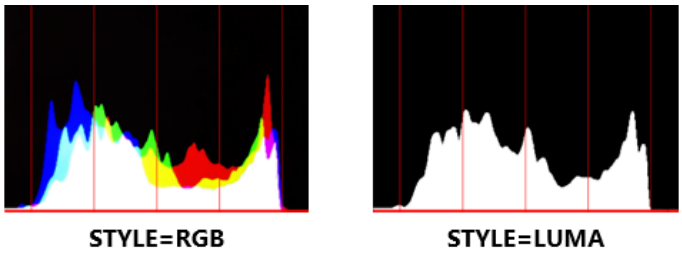


Figure 6.1-13 RGB and LUMA Histogram

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
Bottom Right	Bottom Left

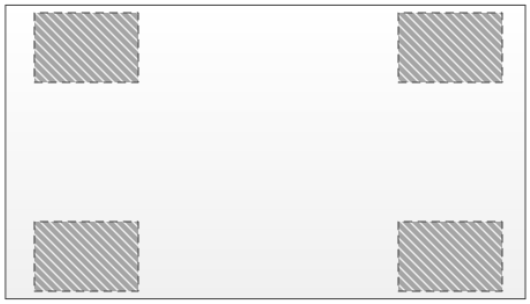


Figure 6.1-14 Position of the Assistant Elements

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:

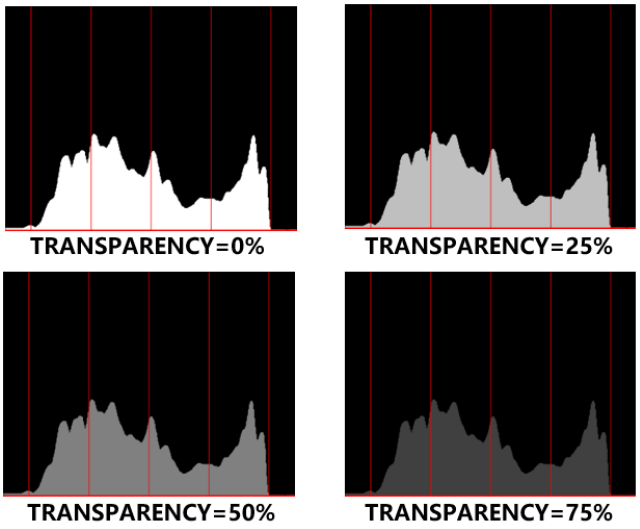


Figure 6.1-15 Different Transparency for Histogram

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.

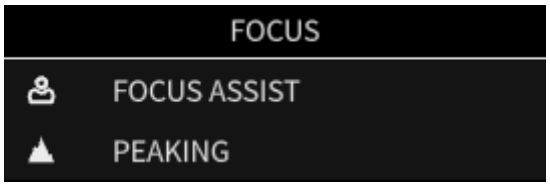


Figure 6.1-16 Focus Tools

Table 6.1-6 Description of Focus Tools

Tool	Items	Default	Domain Range	Description

Tool	Items	Default	Domain 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.
	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 6.1-17 Illustration for FOCUS ASSIST Function

Figure 6.1-18 Illustration for FOCUS ASSIST Function

6.1.4 Look Tool

Look tool provides loading 3D USER LUT and DE-LOG mode to current scene, as shown in Figure 6.1-19

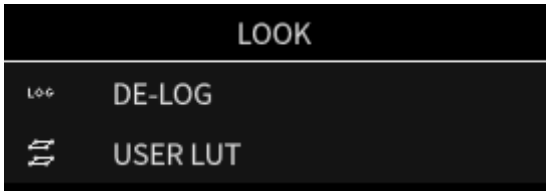


Figure 6.1-19 Look Tools

Table 6.1-7 Description of Look Tools

Tool	Items	Default	Domain Range	Description
DE-LOG	TYPE	SDR	SDR/ HDR	Choose a de-log type
USER LUT	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

1. DE-LOG & COLOR MANAGEMENT

The monitor is equipped with de-log tool(**Look**) to active HDR or SDR to current input signal for different dynamic range. Before activating de-log, you should choose a camera profile and active the LOG/HDR item on in monitor settings at

first.

As the precondition for de-log switch, set **camera profile→ COLOR MANAGEMENT → LOG/HDR** item in monitor settings to be **ON** and select **camera profile→ COLOR MANAGEMENT → COLOR PROFILE/ GAMMA/ GAMUT** items according to your camera connected with Mega 15S**,** the settings panel is as shown in Figure 6.1-20:

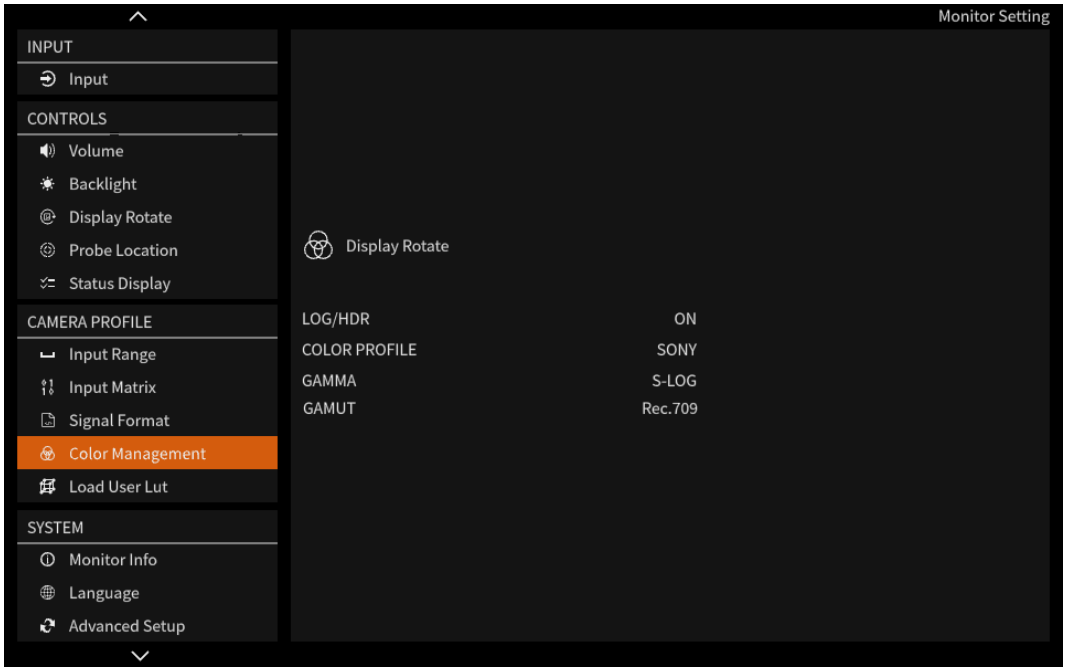


Figure 6.1-20 COLOR MANAGEMENT SETTINGS

After that, add a **DE-LOG** tool in scene, and press the tool again to enable it, then switch **HDR** or **SDR** through **TYPE** item, as shown in Figure 6.1-21:

Figure 6.1-21 DE-LOG SETTINGS

Tips

- Refer to “5.2.3CAMERA PROFILE” for the details of the COLOR settings and versatile color profiles.

2. User LUT File

Follow these steps to apply USER LUT tool.

If you want to apply a USER LUT tool to current signal displayed on screen, you should load the USER LUT in monitor settings at first.

First, write the designated LUT file to the monitor.

Operation: Select **camera profile→ LOAD USER LUT → LUT*** item in monitor settings, thus you can choose a LUT file from U disk, and you can see LUT ID in the list. Choose one LUT ID, then it will pop up a prompt for reminding you overwriting operation for LUT file, as shown in Figure 6.1-22, press **Confirm** and choose the target LUT from U disk, the file should be a LUT file with a file extension of “.cube”, and specify its storage directory, please don’t cut off the power during loading.

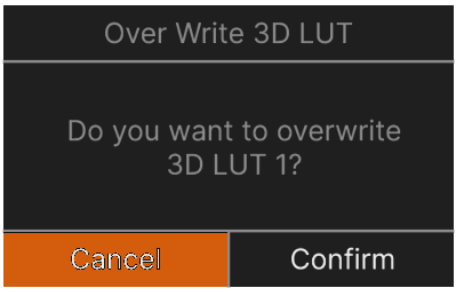


Figure 6.1-22 Prompt for Overwriting LUT

Figure 6.1-23 Calibration USER LUT Directory

It will prompt file write complete after file loading. Then, you can see the profile name is on the left side of the current LUT ID in the list. You can load up to 10 USER LUTs into the device, for example as shown in Figure 6.1-24.

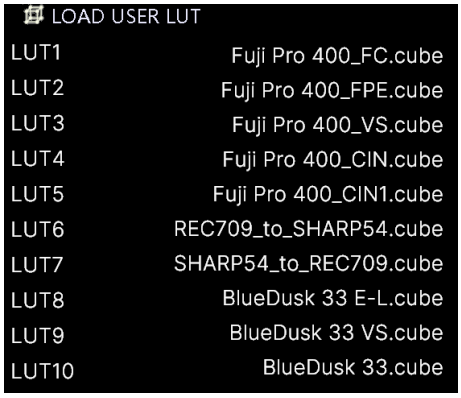


Figure 6.1-24 User LUT List

Second, apply USER LUT in the tool. Select and enable a Look tool in a scene, and choose **ID** item to your designated, the LUT name will be displayed in **USER LUT NAME** in gray, as shown in Figure 6.1-25:

Figure 6.1-25 User LUT Tool

Then, you can adjust intensity of this LUT effectiveness on screen through the **Intensity** item.

Tips

- Mega 15S 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.

6.1.5 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 6.1-26 and Figure 6.1-27:

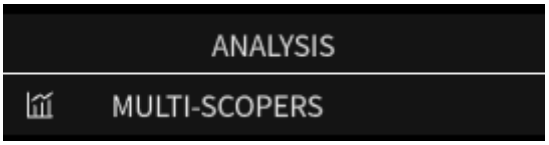


Figure 6.1-26 Analysis Tools

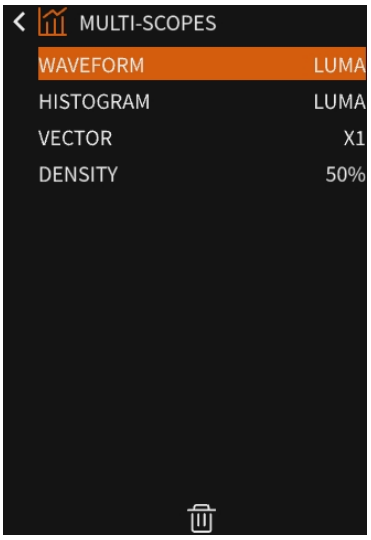


Figure 6.1-27 Multi-Scopes Settings Panel

Table 6.1-8 Description of Multi-Scopes Tool

Tool	Items	Default	Domain 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 6.1-28:

Figure 6.1-28 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.

6.1.6 Meter Tool

Meter tool provides adding audio meter to current scene, as shown in Figure 6.1-29:

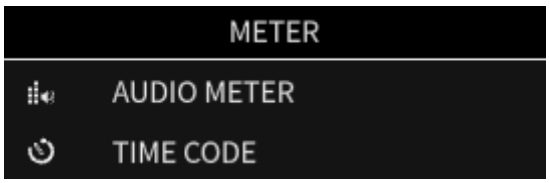


Figure 6.1-29 Meter Tools

Table 6.1-9 Description of Meter Tools

Tool	Items	Default	Domain Range	Description
AUDIO METER	POSITION	BOT LEFT	BOT LEFT/ BOT RIGHT	Set the position of the audio meter

Tool	Items	Default	Domain 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. Audio Meter tool only valid for SDI input signal.

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 6.1-30:

Figure 6.1-30 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.

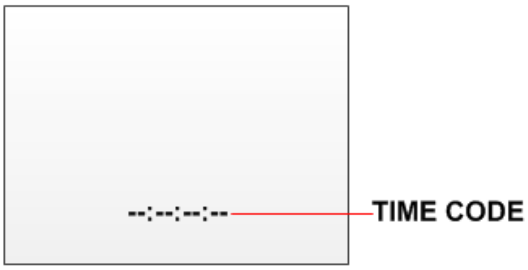


Figure 6.1-31 Timecode

6.2 Scenes and Tools Operations

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

6.2.1 Add a scene

We support 8 scenes in Mega 15S, you can customize each scene with various tools as your requirement, and switch among these scenes by scrolling left or right in menu clear status.
Scroll the joystick down to display the menu bar button at the bottom center of the screen. Scroll right to select the third 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. The name of current scene will also be displayed in the top right-center of the status bar.

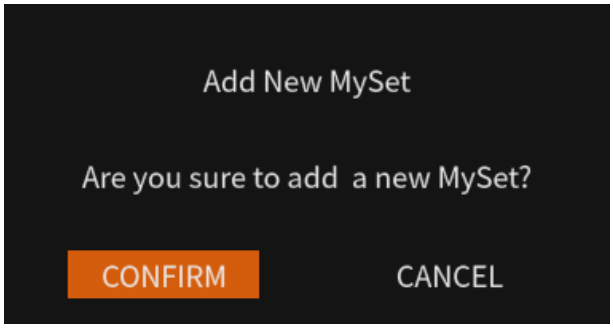


Figure 6.2-2 Add a Scene

■ **Switch Scenes**

Scroll left or right to switch among scenes when the screen is clean with no bars.

Figure 6.2-3 A New Scene

Tips

- Mega 15S supports up to 8 customized scenes.
- No.1 scene exists by default and undeletable.
- Factory has 3 MySets (frame, exposure, focus) preset, you can edit them as your preferences.

6.2.2 Delete a Scene

Scroll the joystick down to display the menu bar button at the bottom center of the screen. Scroll right to select the fourth icon, and it will display the delete dialog box, as shown in Figure 6.2-4:

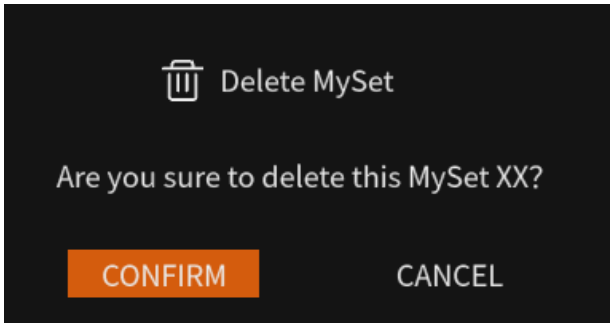


Figure 6.2-4 Delete a Scene

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.

Press down to display tool bar 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

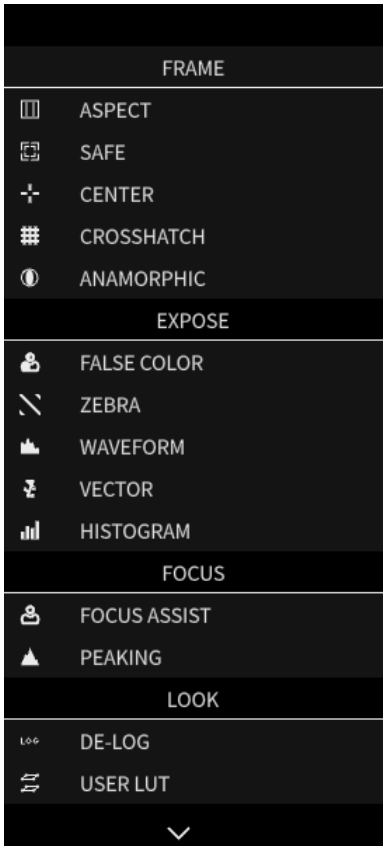


Figure 6.2-6 Tools Menu for Scene

Scroll up or down to choose your desired scene tool, and press the joystick straight down 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

Press down 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 HISTORGRAM Tool

Scroll up or down to **HISTORGRAM** item, as shown in Figure 6.2-8. Press down to confirm the selection, the **HISTORGRAM** tool icon will be added into the tool bar, as shown in Figure 6.2-9:

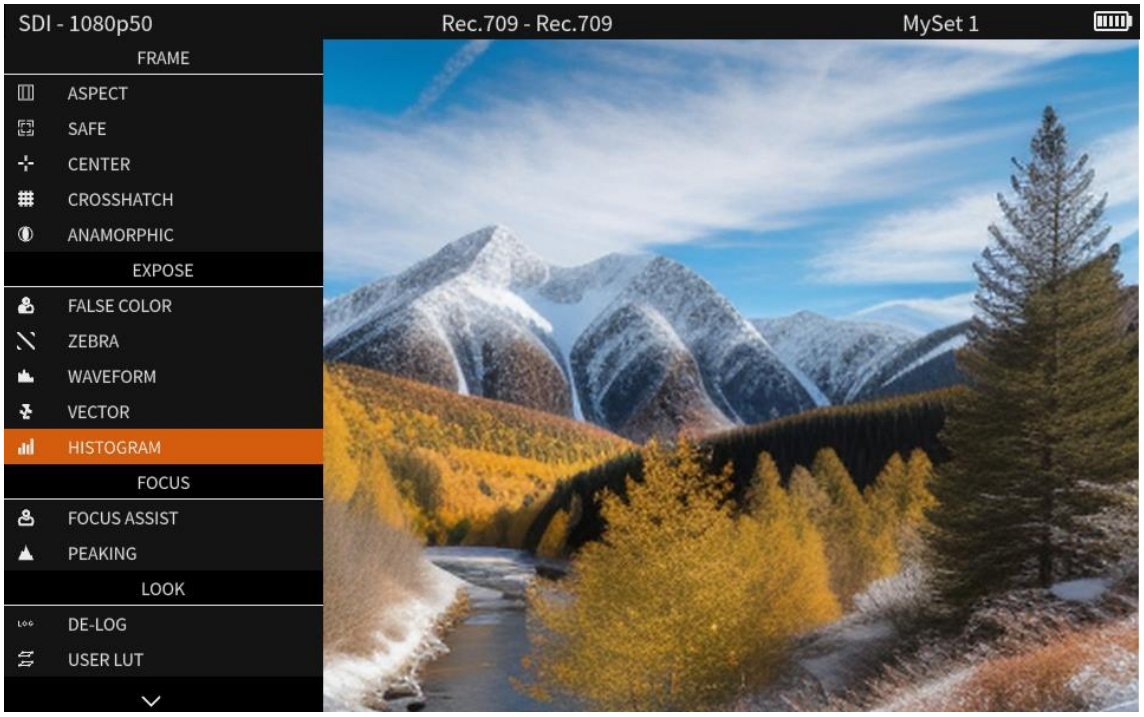


Figure 6.2-8 Show Tool Menu

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 Load/Close Tool Bar

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

- **Load Tool Bar**

  First, scroll the joystick right to access a scene;

  Second, press down to load the tool bar for the current scene, the tool bar will be displayed the leftmost of the screen, as shown in Figure 6.2-10. The bar labeled in the red rectangle is the tool bar for the current scene.

Figure 6.2-10 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, press down to return to tool bar and close the tool bar.

6.2.5 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, press down to turn it on in tool bar, the icon will turn from white to highlight orange.

- **Turn off a Tool**

After turning on a tool, press down again 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 6.2-11:

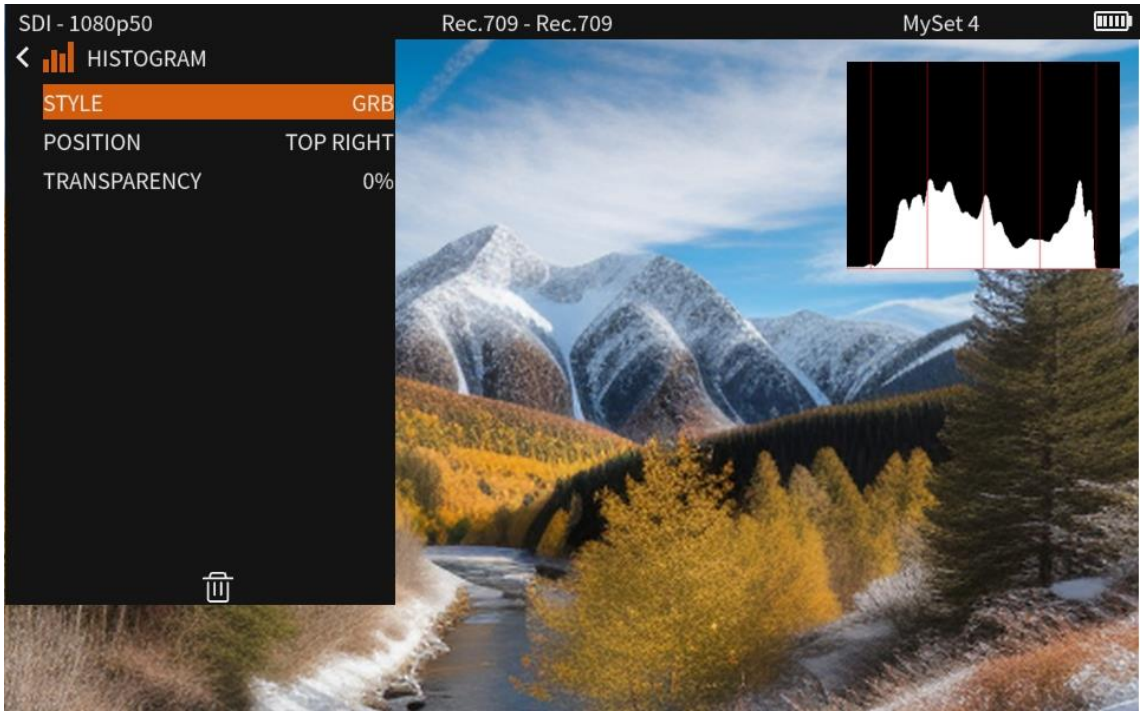


Figure 6.2-11 Turn off a Tool

Press down 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.

6.2.6 Tool Settings

Add tools for a scene through tool list, then, scroll right to set a tool's attributes by the tool settings panel.

Scroll left or right to switch among different scenes. The tool bar is hidden when switching to a scene by default. You should press the joystick straight down to display the tool bar for the current scene.

Refer to “0

Chapter 7 Scenes and Tools

Tools Settings" for the details of each tool.
Take the histogram for example.
For example: Follow these steps to edit histogram in a scene.

Step 1 Load Tool Bar

In a scene, press the joystick straight down 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 6.2-1:

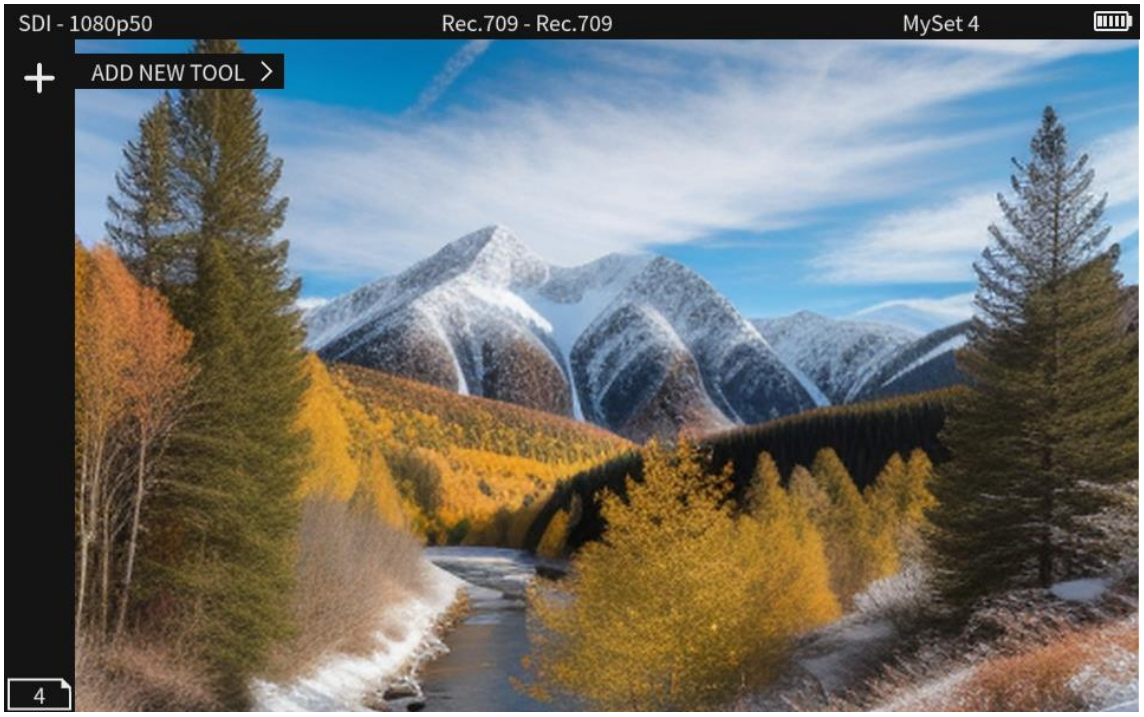


Figure 6.2-1 Load Tool Bar

Step 2 Load the Tool Menu Panel

Scroll right to load the tool menu panel, as shown in Figure 6.2-2. Scroll down to select **HISTOGRAM**:

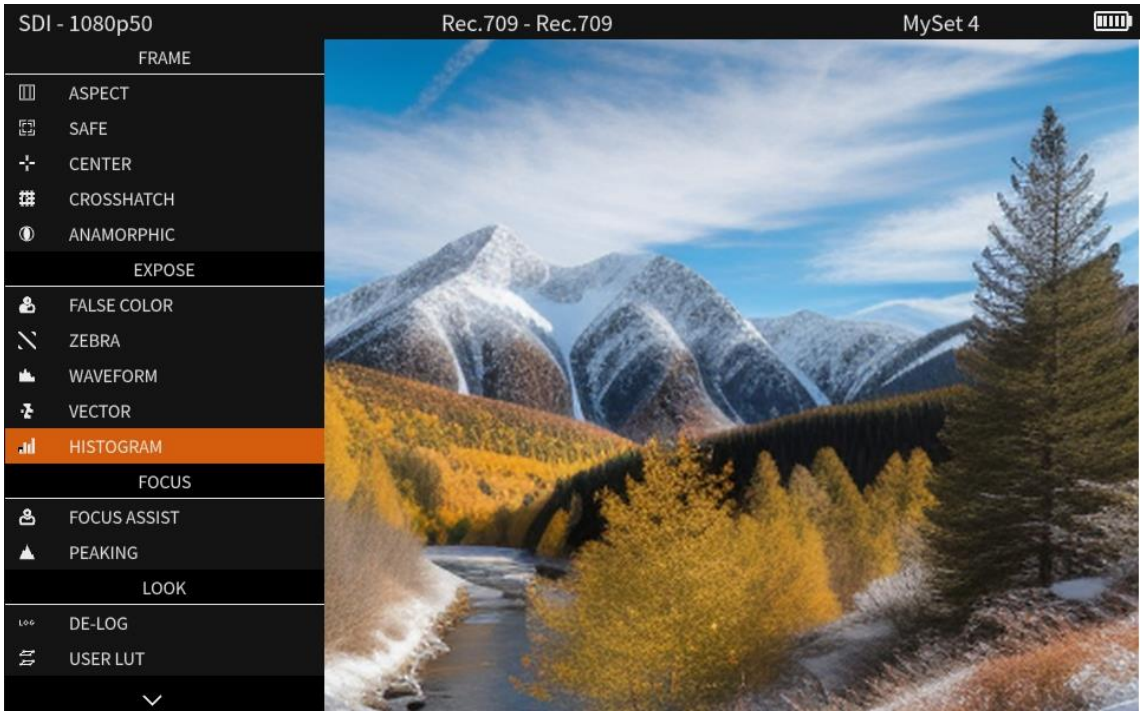


Figure 6.2-2 Load Tool Menu Panel

Then press down to add this tool, as shown in Figure 6.2-3:

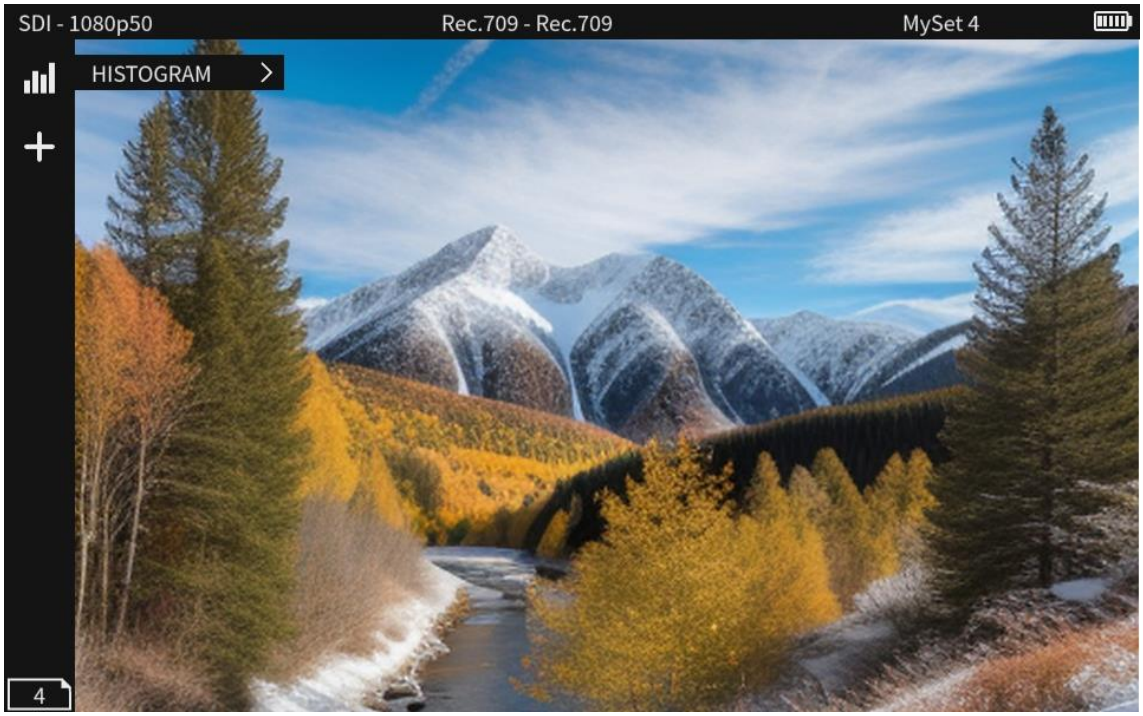


Figure 6.2-3 Add a Tool

Step 3 Activate Tool

Press down on **HISTOGRAM** tool in the tool bar to activate it, and the icon of histogram turns highlight orange, as shown in Figure 6.2-4.

Figure 6.2-4 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 6.2-5. It lists the characteristics of histogram in this menu, such as STYLE, POSITION, TRANSPARENCY and ENABLE switch. After finish the parameter settings, press down to close this panel.

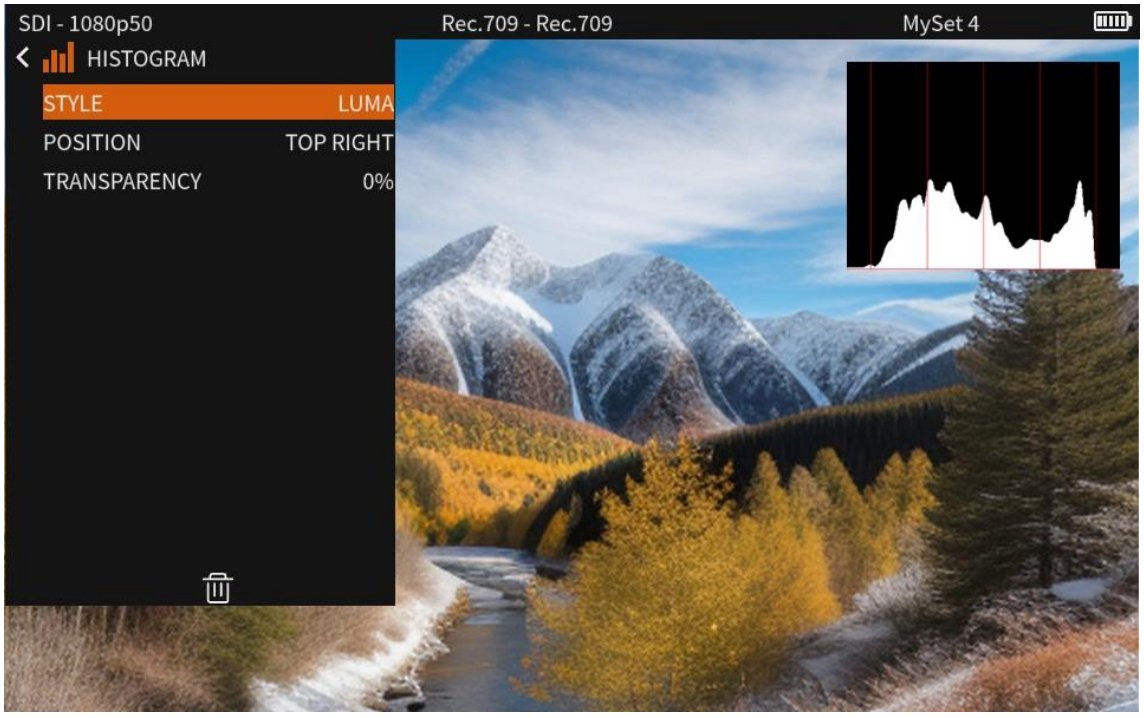


Figure 6.2-5 Tool Settings Menu-HISTOGRAM

Tips

- The parameters of the tool could not be modified until selecting the tool's settings.

7.1.2 Delete a Tool

In a scene, press down to display the tool bar for current scene, 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 6.2-6:

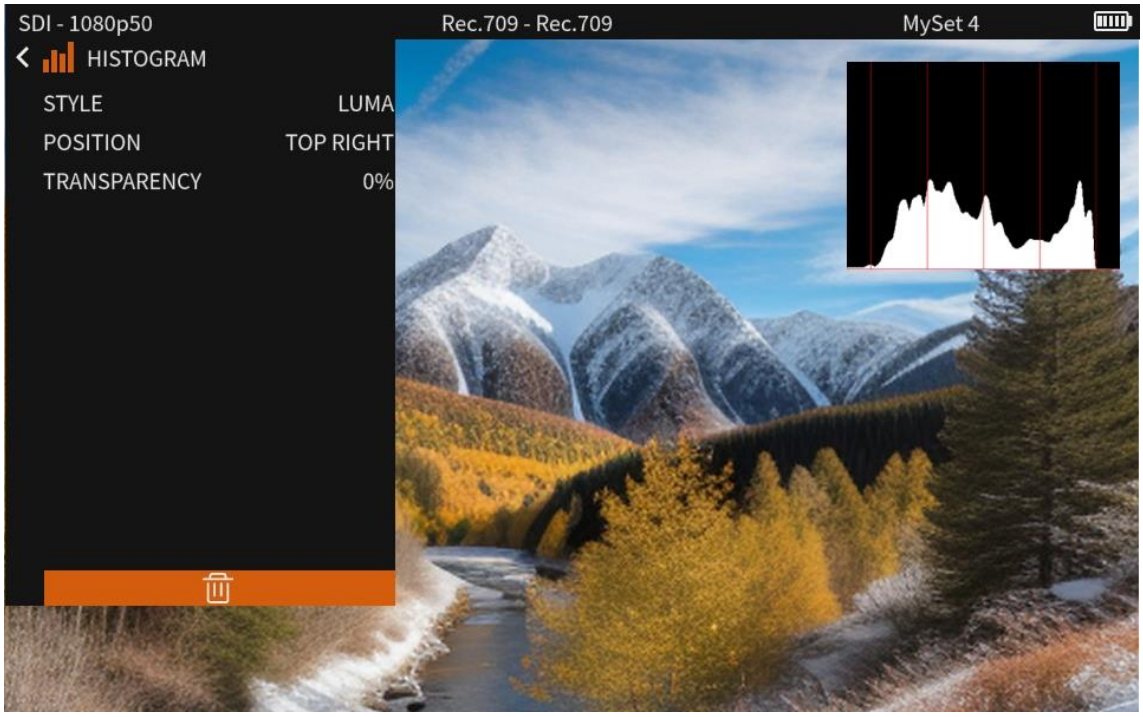


Figure 6.2-6 Delete a Tool

Press the joystick straight down to confirm the selection, and it will pop up a prompt to confirm the deletion, as shown in Figure 6.2-7, press down again to confirm, then the tool will be deleted from its tool bar.

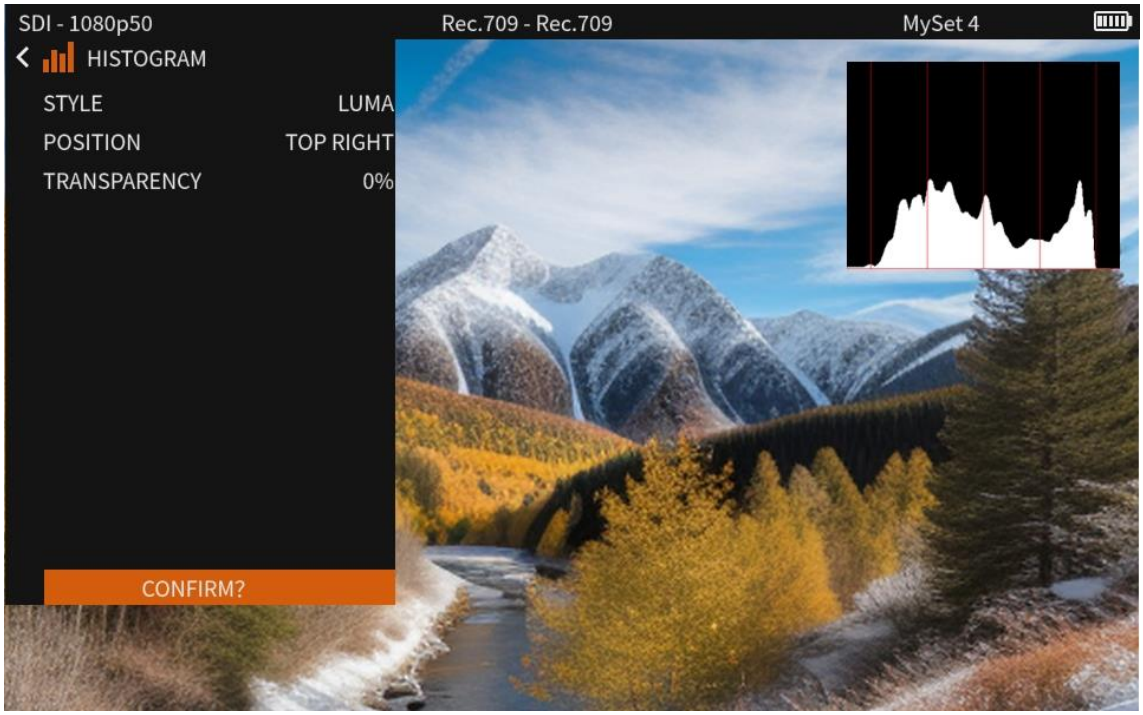


Figure 6.2-7 Delete a Tool

Tips

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

Chapter 8 Specifications

1. Product detailed information

Specification	Values	
Model	Mega 15S	Mega 22S
Dimension	15.4”	21.5”
Dimension(WxHxD)	368.9x264.9x 54.5mm	517.0x319.0x 74.3mm
Pixel Pitch (WxH)	0.1722×0.1722mm	0.24795×0.24795mm
Aspect Ratio	16:10	16:9
Display Area (WxH)	330.62×206.64mm	476.064×267.786mm
Viewing Angle (HxV)	178° x178°	
Color Depth	1.07B colors	
Resolution	1920×1200	1920×1080
Contrast (Typ.)	1450:1(Typ.)	1100:1
Luminance (cd/㎡)	1200	1500
Response Time (ms)	18	14
Backlight	WhiteLED	
Backlight Life(Hrs)	20000	20000
Work Temperature	0° C~40° C	
Power Supply	100～240V50/60HzAC /11～17V3A DC battery	
Power Consumption (Typ/Max)(W)	21.7/31.5	45.4/50.7
Video Input Interface	3G/HD/SD-SDI(X2)	
	HDMI(X1)	
Video Output Interface	3G/HD/SD-SDI(X2)	
Audio Input Interface	3.5mm Jack	
Audio Output Interface	3.5mm Jack (Headphone)	
Control Interface	Type-C(Calibrate)	
	USB	

Specification	Values
HDMI IN	
Signal Formats	4K (4096x2160): 23.98/24/25/29.97/30P UHD (3840x2160): 23.98/24/25/29.97/30P 2K (2048x1080): 23.98/24/25/50 HD (1920x1080): 23.98/24/25/29.97/30/50/59.94/60P, 50/59.94/60I HD (1280x720): 50/59.94/60P
SDI IN/OUT	
Signal Formats	2K (2048x1080): 23.98/24/25/29.97/30/50/59.94/60P, 23.98/24/25/29.97/30Psf HD (1920x1080): 23.98/24/25/29.97/30/50/59.94/60P, 50/59.94/60I HD (1280x720): 50/59.94/60P
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 15S

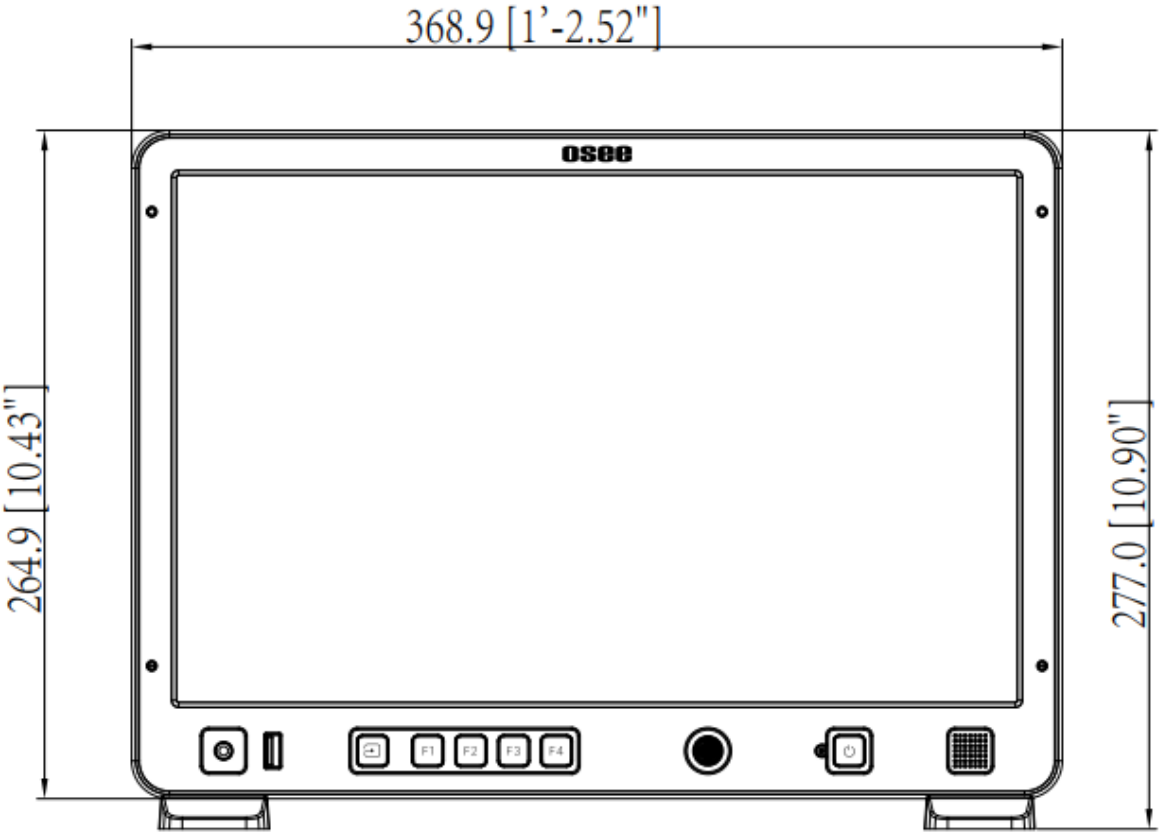


Figure 7-1 Front Panel(Unit: mm)

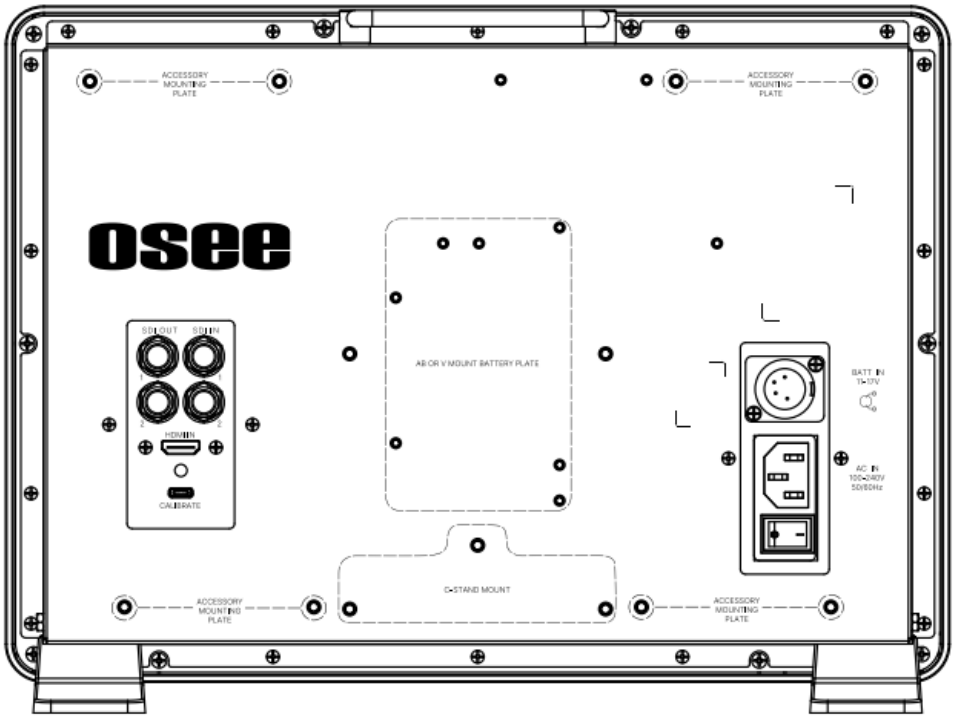


Figure 7-2 Rear Panel(Unit: mm)

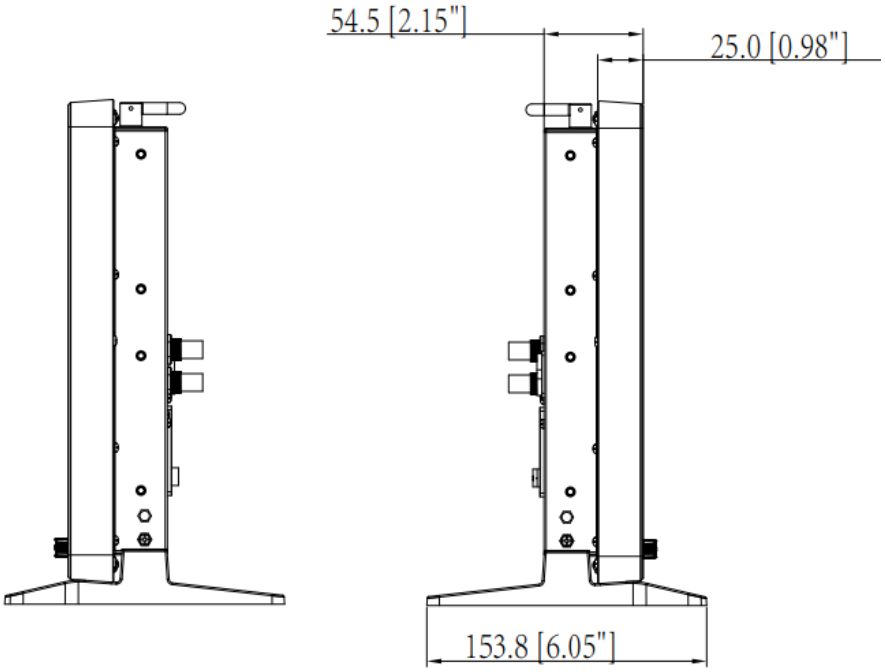


Figure 7-3 Side View(Unit: mm)

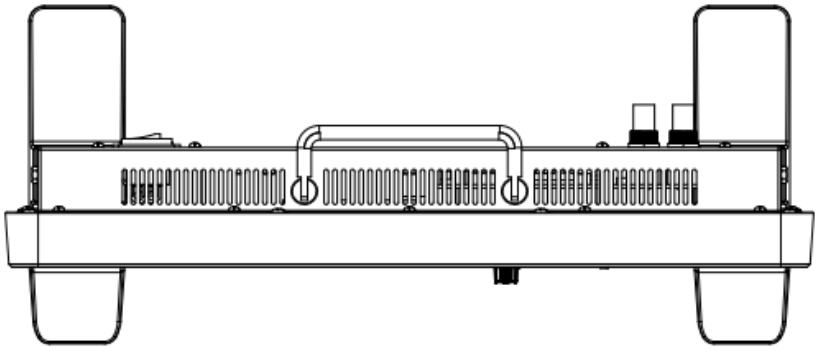


Figure 7-4 Top View(Unit: mm)

- Mega 22S

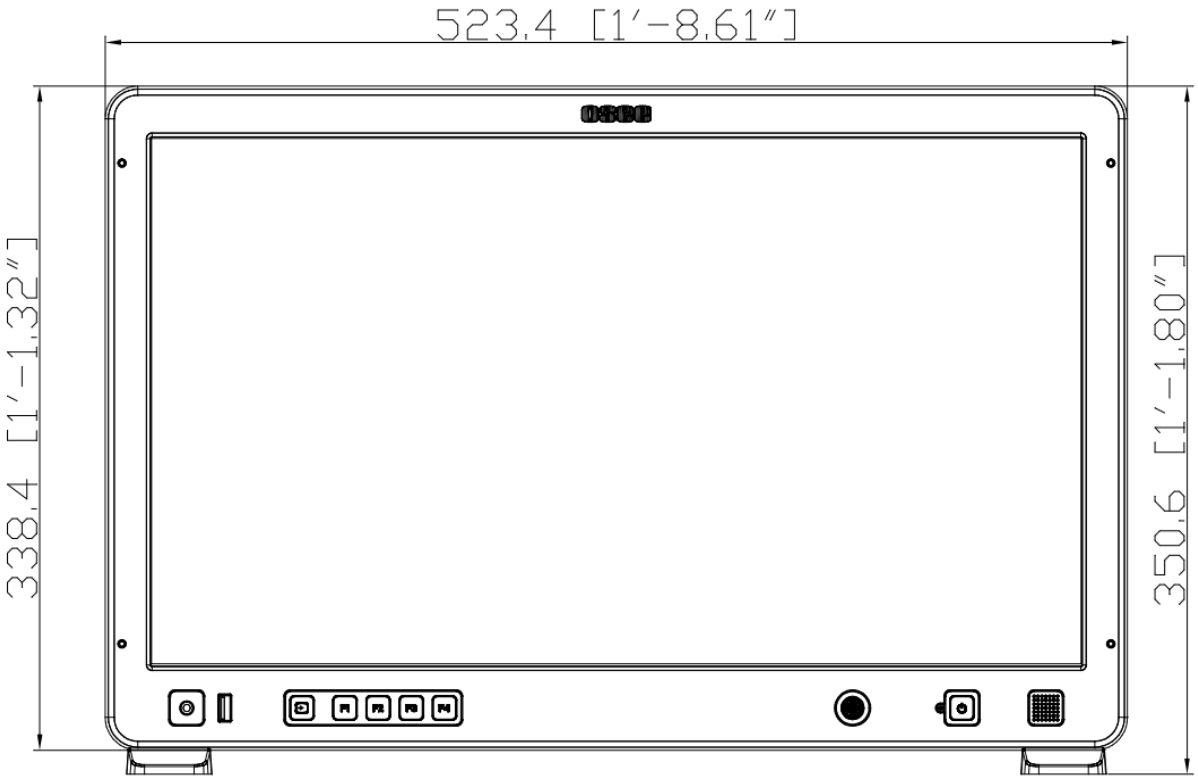


Figure 7-5 Front Panel(Unit: mm)

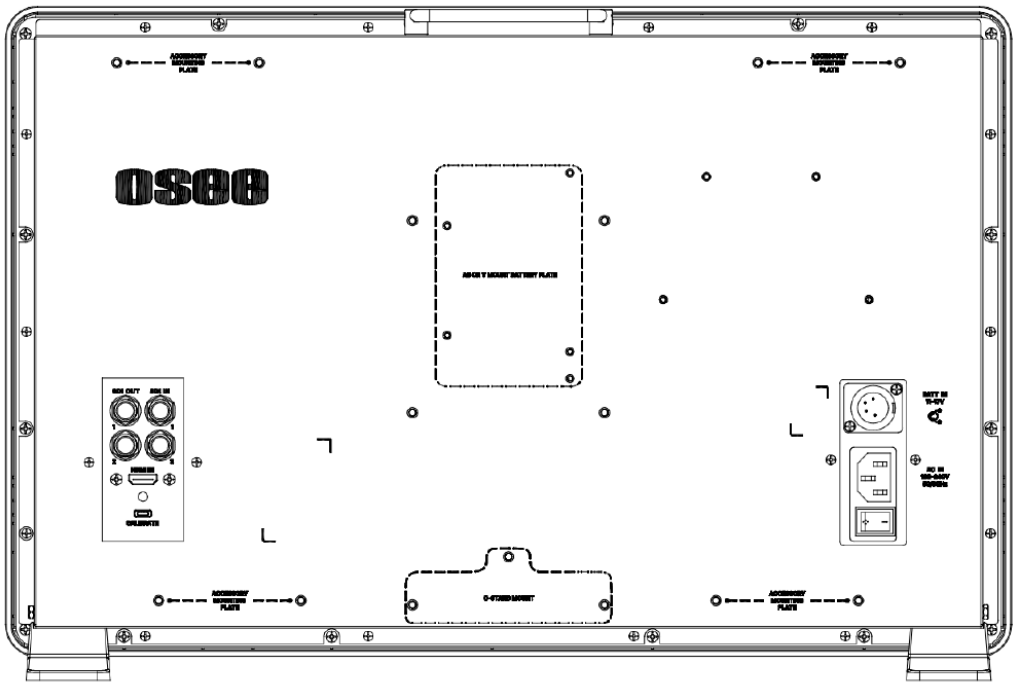


Figure 7-6 Rear Panel(Unit: mm)

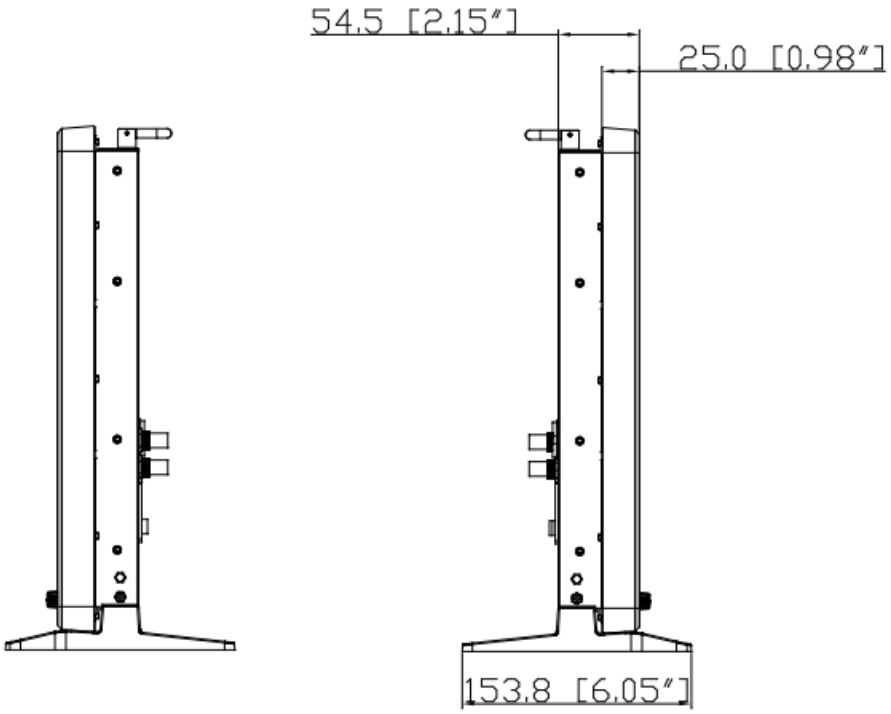


Figure 7-7 Side View(Unit: mm)

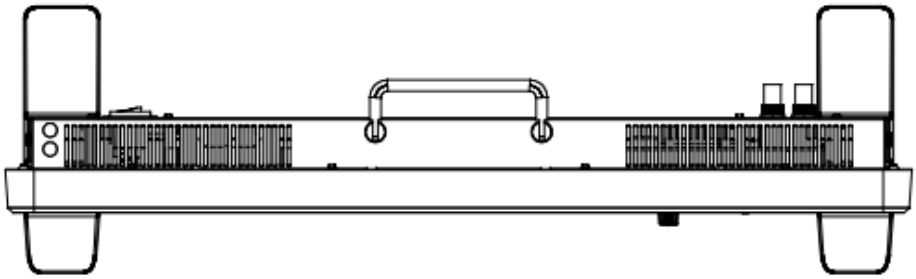


Figure 7-8 Top View(Unit: mm)

Tips

- Specifications are subject to change without notice.

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

FOR MORE INFORMATION PLEASE VISIT: http://www.osee-dig.com/
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