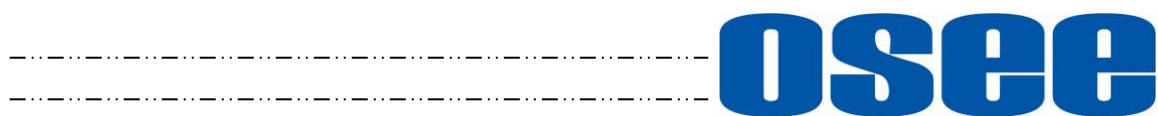


HCM-700 ON CAMERA Monitor

User Manual



Product Information

Model: HCM-700 ON CAMERA Monitor
Version: V010000
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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:

- **HCM-700**

The images and descriptions of HCM-700 are adopted as examples in the following document.

Before reading the manual, please confirm the device type.

Contents

Contents	I
Chapter 1 Safety.....	1
Chapter 2 Unpack and Installation	5
Chapter 3 Locations and Function of Parts and Control.....	7
3.1 Parts and Functions.....	7
3.2 Buttons and Functions	9
3.3 Operations	9
3.4 ZOOM	13
3.5 Supported Signal Format	16
Chapter 4 Monitor Settings	17
4.1 Menu Operations.....	18
4.2 Monitor Menu.....	19
4.2.1 INPUT and OUPUT	19
4.2.2 Controls	20
4.2.3 User	24
4.2.4 System.....	28
Chapter 5 Scenes and Tools	35
5.1 Scenes Tools Settings	35
5.1.1 Frame Tools	36
5.1.2 Expose Tools.....	39
5.1.3 Focus Tools.....	46
5.1.4 Look Tools	48
5.1.5 Scale Tools.....	51
5.2 Tools Operations.....	52
5.2.1 Add a Scene	52
5.2.2 Delete a Scene	53
5.2.3 Add a Tool	53
5.2.4 Load/Close Tool Bar	55
5.2.5 Open/Close a Tool.....	57
5.2.6 Tool Settings.....	57
5.2.7 Delete a Tool	60
Chapter 6 Specifications	63
6.1 Product detailed information	63

6.2 Optional Accessories.....	65
6.3 Dimensions.....	68

Chapter 1 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 is required if any of the following occurs:
 - 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, or has been dropped.
- Clean only with dry cloth.
- Do not block any ventilation openings. Leave enough space around the unit for ventilation.
- Do not use this unit near water.
- 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.
- To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture.
- To avoid electrical shock, do not open the cabinet. Refer all servicing to qualified service personnel.
- If the product needs replacement parts, make sure that the service person use replacement parts specified by the manufacture, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other damage.

- The panel used in this produce is made of glass. Therefore, it can break when it is dropped or applied with impact. Be careful not to be injured by broken glass pieces.
 - Specifications are subject to change without notice.
-

Warning

- Do not use attachments or accessories not recommended by the manufacture. Use of inadequate attachments may result in serious accidents.
 - Do not overload AC outlet or extension cord. Overloading can cause fire or serious electric shock.
 - Do not defeat the safety purpose of the polarized or grounding-type plug.
 - Do not damage the power cord, place the 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 lightning storms or when unused for long periods of time.
 - Disconnect the power cord from the 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.
-

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Chapter 2 Unpack and Installation

Unpack:

When unpacking the HCM-700 monitor, please verify that none of the components listed in Table 3.1 are damaged or missing. If there are any components missing, please contact your distributors or OSEE for it.

Table 3-1 Packing List

No.	Item	Quantity
1	HCM-700	1
2	Antenna	2
3	Adapter	1
4	User Manual	1
5	Warranty Card	1

Installation:

1. Prepare for installation

Please follow the procedures below before installing HCM-700:

- Check the package and equipment for any visible 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. Connect required cables for signal input and output. For BNC connections use 75 Ω rated connectors.

3. Connect the 11~17VDC power source using the included power supply or optional battery adapter and D-Tap to Power cable when not using Land Line power.

4. As a final step, turn on the device by toggling the power switch located on the rear of the unit near the power jack.

Tips

- Connect a standard signal line to the corresponding input port.
- Please use the power adapter supplied for AC power.

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Chapter 3 Locations and Function of Parts and Control

3.1 Parts and Functions

The parts of HCM-700 is shown as below, there are various input and output interfaces at the rear panel of HCM-700 monitor, as shown in Figure 3.1-1.

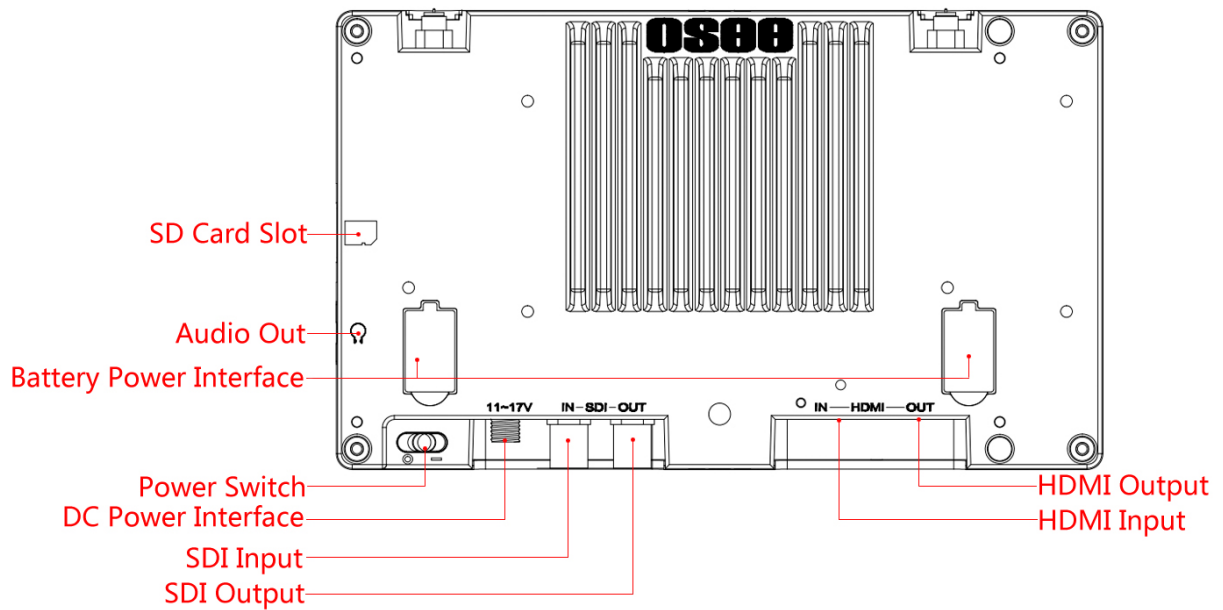


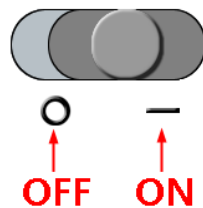
Figure 3.1-1 Parts in Rear Panel

1. Power Switch

Press this part to switch on or switch off the power.

Push the button to the “-” icon to switch on the power, and the backlight of buttons at the front panel are lit up.

Push the button to the “○” icon to switch off the power, and the backlight of buttons at the front panel are lit off.



i Tips

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

2. Power Input

Plug the power supply to this interface to provide power to the device.
The DC input voltage range is 11 to 17V.

3. Battery Power Input

Two battery input interfaces for battery powered, 6.0~8.4V from Battery IN. Batteries can be used either in a single or double arrangement.



Figure 3.1-2 Redundant Battery

4. SDI IN (BNC)

One SDI signal input interface, loop out, support multiple format HD/3G-SDI inputs.

5. SDI OUT(BNC)

One SDI signal output interface.

6. HDMI IN(HDMI)

One HDMI signal input interface, HDMI Type-A connector.


7. HDMI OUT(HDMI)

One HDMI signal output interface.

8. Audio Output

One headphone output jack at Ω position (3.5mm stereo Jack)

9. SD Card Slot

One SD card slot at  position, using general SD card to upload or save LUT files or others.

Warning

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

3.2 Buttons and Functions

The monitor provides some buttons at the left side of the front panel, as shown in Figure 3.2-1. They are used for monitor settings, adding tools for scenes, tools settings, zoom image and so on.

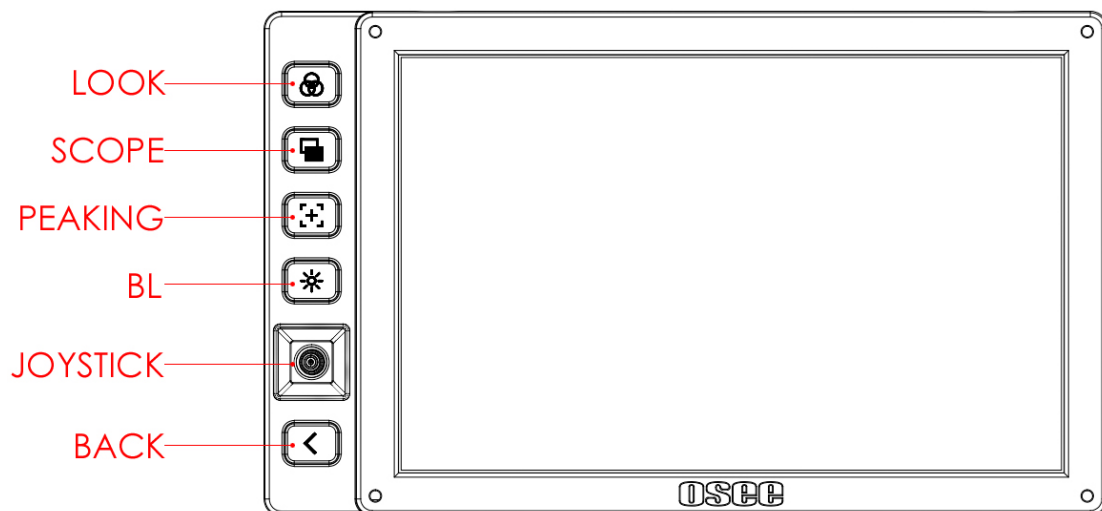


Figure 3.2-1 Buttons in Front Panel

1. **Shortcut Buttons: LOOK, SCOPE, PEAKING, BL**
2. **Joystick: navigate to menu, tool and scene settings**
3. **Back**


3.3 Operations

Shortcut Buttons

The four shortcut buttons are **LOOK**, **SCOPE**, **PEAKING**, **BL**, achieving swift operations for some designated functions. The details are as below:

1.  **LOOK: load or close a LUT table on scene**

Click this button to load or close the first LUT file added in current scene.

2.  **SCOPE: load or close the histogram, waveform, vectorscope or image scale tool on scene**

If there are already histogram, waveform, vectorscope or image scale tool added in the tool bar of the current scene, click this button to load or close these tools on scene.

Tips

- For the same type(HISTOGRAM, WAVEFORM, VECTORSCOPE or IMAGE SCALE) tool, only one tool with the most front position in the tool bar is valid and can be activated by SCOPE button. For example, there are two histogram tools and one vectorscope tool added in the tool bar of a scene, only the first histogram and the vectorscope will be activated by **SCOPE** button.

3.  **PEAKING: load or close the peaking function on scene**

Tips

- If you had not added the related function to **LOOK**, **SCOPE** or **PEAKING** button, click the button and there will pop up a prompt “The function not defined in the Myset!”.

4.  **Backlight: adjust the backlight**


Press the  backlight button to adjust the overall light output of the display, the menu is as shown in Figure 3.3-1. The range of backlight adjustment is from 0 to 100, and the step is 20.



Figure 3.3-1 Backlight Adjustment Menu

Joystick

Use the joystick as a navigation tool to scroll between scenes pages and set features. The joystick provides multiple functions with five operation directions, **Up Down, Left, Right, and Straight Down**, as shown in Figure 3.3-2.

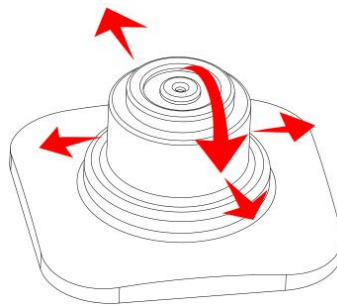



Figure 3.3-2 Five Operation Directions for Joystick

Direction	Operation
UP	<ul style="list-style-type: none"> Without any menu, scroll up to enter into 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 down to select the previous item or increase the item value; In scene tool menu, scroll down to select the previous item or increase the item value.
DOWN	<ul style="list-style-type: none"> Without any menu, scroll down to enter into 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 mode, scroll down to select the next item or decrease the item value;

Direction	Operation
	<ul style="list-style-type: none"> In scene tool menu, scroll down to select the next item or decrease the item value;; In scene page, scroll down to select the delete scene command.
LEFT	<ul style="list-style-type: none"> Without any menu, scroll leftmost to enter into the monitor settings menu; 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 back to the previous level menu, or the downward adjustment the item value.
RIGHT	<ul style="list-style-type: none"> Without any menu, scroll right to enter into a scene or create a scene mode ; In ZOOM 2X or ZOOM 4X editing mode, scroll right the joystick to move right the starting position of the enlarged image; In monitor settings menu, scroll the joystick right to enter into the next level menu, or increase the item value; In a tool bar of a scene, scroll right to enter into the next level menu, or the upward adjustment the item value.
STRATIGHT DOWN	<ul style="list-style-type: none"> In ZOOM 2X or ZOOM 4X mode, press straight down the joystick to enter into editing the starting position of the enlarged image mode; In ZOOM 2X or ZOOM 4X editing mode, press straight down the joystick to confirm and finish the adjusting of the starting position of the enlarged image; In a tool bar of a scene, press straight down the joystick to 在 enable or disable the selected tool; In monitor settings mode, press straight down the joystick to enter into the next level menu or confirm the selection of the last level menu item.

BACK

Back button  provides the following functionalities:

- Cancel the settings
- Return to the previous menu
- Quit menu settings

Power

The power switch is on the left corner of the rear panel of HCM-700. Use it to power the HCM-700 on or off.

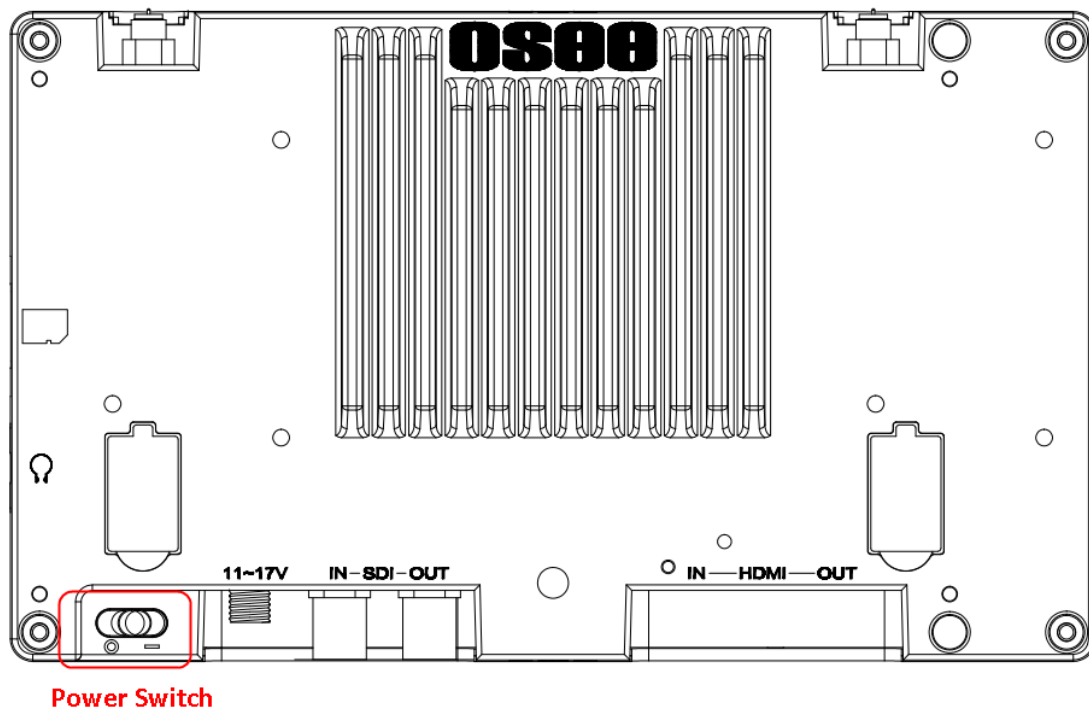


Figure 3.3-3 Power Switch

3.4 ZOOM

You can get closer view to 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.

1. ZOOM 2X

■ Enter Zoom 2X Mode

Scroll right the joystick to enter into a scene, and then scroll up the joystick to enter into **Zoom 2X** mode, the image is twice as large as the original one. There will be a Zoom 2X icon at the bottom right of the screen, as shown in Figure 3.4-1

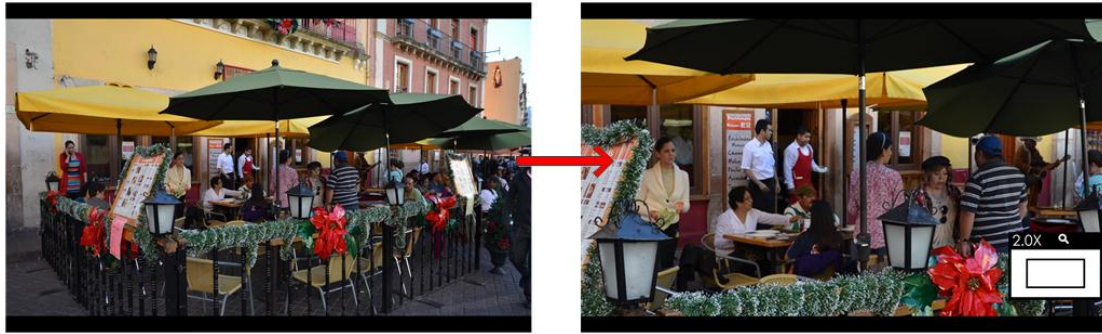


Figure 3.4-1 Zoom 2X Mode

■ Zoom 2X Editing Mode

After entering into the Zoom 2X Mode, press straight down the joystick to 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 3.4-2. 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.

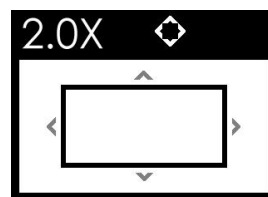


Figure 3.4-2 Zoom 2X Editing Mode

Meanwhile, scroll up, down, left or right the joystick to move the displayed area to the corresponding direction, then, press straight down the joystick to confirm and finish the movement and exit the Zoom 2X Editing 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 four times as large as the original one. There will be a Zoom 4X icon at the bottom right of the screen, as shown in Figure 3.4-3:



Figure 3.4-3 Zoom 4X Mode

■ **Zoom 4X Editing Mode**

After entering into the Zoom 4X Mode, press straight down the joystick to 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 3.4-4. 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

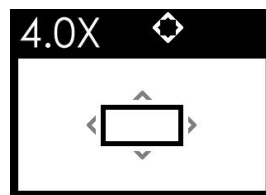



Figure 3.4-4 Zoom 4X Editing Mode

As the same as Zoom 2X editing mode, scroll up, down, left or right the joystick to move the displayed area to the corresponding direction, then, press straight down the joystick to confirm and finish the movement and exit the Zoom 4X Editing mode.

3. Original Image Mode

■ **Original Image Mode**

In Zoom 2X mode or Zoom 4X mode, press straight down the joystick or press BACK  button, it will recover and display the original image.

i Tips

- The scene tools are not editable in ZOOM 2X or ZOOM 4X mode.
- In ZOOM 2X mode, you need scroll the joystick 20 times from the origin of coordinate to the maximum in horizontal direction, and you need scroll the joystick 10 times from the origin of coordinate to the maximum in

vertical direction.

- In ZOOM 4X mode, you need scroll the joystick 40 times from the origin of coordinate to the maximum in horizontal direction, and you need scroll the joystick 20 times from the origin of coordinate to the maximum in vertical direction.

3.5 Supported Signal Format

The supported signal format for this device is as shown in Table 3.5-1:

Table 3.5-1 Supported Signal Format

	SDI	HDMI
720P24/23.98	○	
720P25	○	
720P30/29.97	○	
720P50	○	○
720P60/59.94	○	○
1080SF24/23.98	○	○
1080I50	○	○
1080I60/59.94	○	○
1080P24/23.98	○	○
1080P25	○	○
1080P30/29.97	○	○
1080P50	○	○
1080P60/59.94	○	○

Chapter 4 Monitor Settings

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 on input, output, volume, backlight, image rotate, anamorphic, output look, DSLR scale, status display menu, LUTs, language, firmware and so on, as shown in Figure5-1.

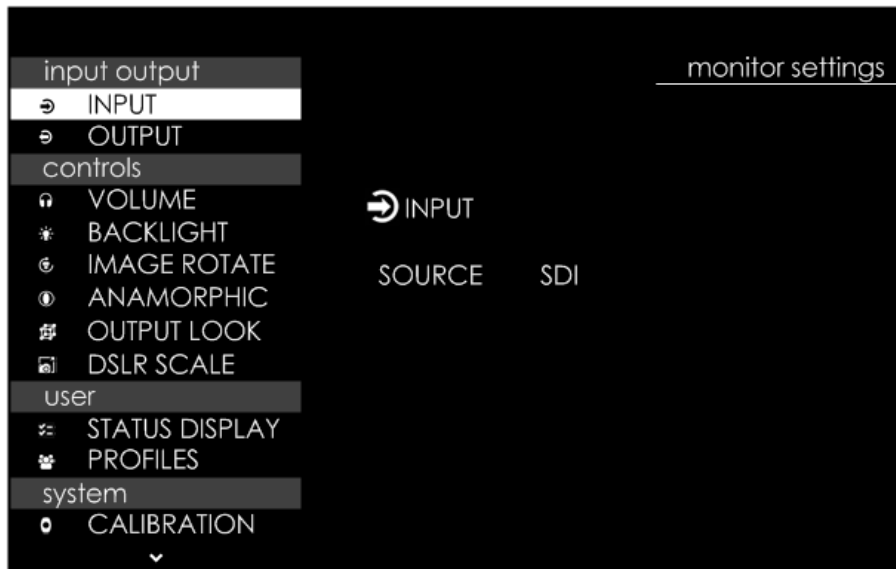


Figure 5-1 Monitor Settings Menu

The features on the screen are as shown in Figure 5-2:



Figure 5-2 Tools for HCM-700 Monitor

And there could be multiple accessorial objects on screen, such as status display information, aspect area, safe area, crosshair, waveform, audio meter, histogram,

focus assist, false color and so on.

Please refer to the corresponding sections for the details in this chapter.

4.1 Menu Operations

Display the Monitor Settings Menu

Scroll leftmost the **Joystick** to display the monitor settings Menu at the left side of the screen, as shown in Figure 4.1-1:

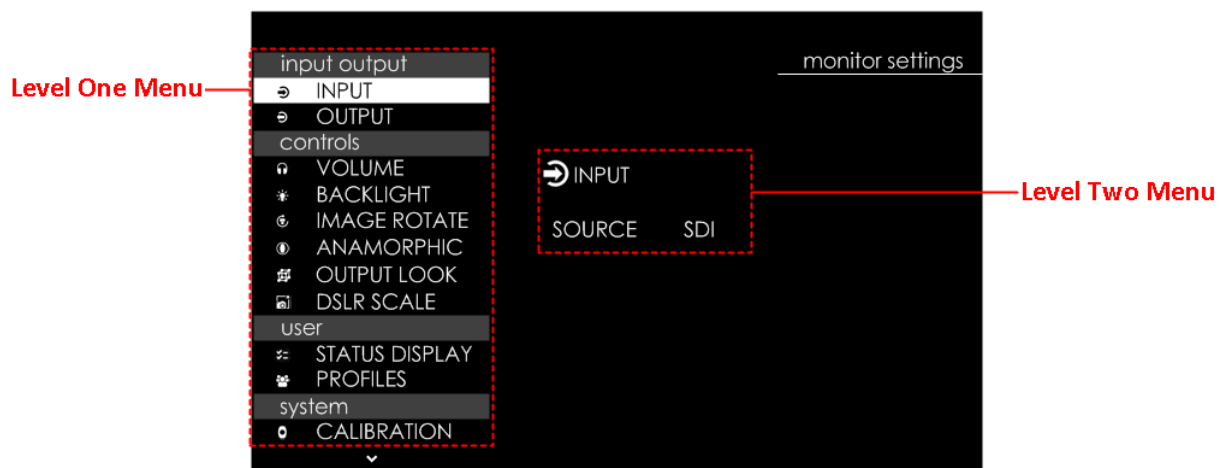


Figure 4.1-1 the Structure of the Monitoring Settings Menu

The menu interface is divided into two parts: **Level one menu** and **Level two menu**. Follow the instructions below:

Menu List for Monitor Settings

The level one menu is the main menu list for monitor settings, including **input output**, **controls**, **user**, and **system**.

Scroll up and down the **Joystick** to navigate to the level one menu of the monitor settings and select a menu item. The selected menu item will be highlighted in a control icon.

Submenu for Monitor Settings

The details of the selected menu item is displayed at the center right of the screen. You can check the content of the current menu item.

Scroll straight down the joystick, it will enter into the level two menu page, and the control icon followed. Then, scroll up or down to select the submenu item, after that, scroll left or right to switch or adjust the value of the selected submenu item, at last, Scroll straight down or press **BACK** button to return to the previous level menu and confirm the setting.

i Tips

- The control icon is displayed as a highlight white rectangle at the background of the current active item.

4.2 Monitor Menu

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

4.2.1 INPUT and OUPUT

The **INPUT and OUPUT** menu items are used to select signal source, and enable or disable the output interfaces.

Scroll leftmost the joystick to display the monitor settings menu, and the **INPUT and OUPUT** menu items are as shown in Figure 4.2-1:



Figure 4.2-1 Input and Output Settings

Table 4.2-1 Description of INPUT and OUTPUT Menu Items

Menu	Items	Domain Range	Description
INPUT	SOURCE	SDI/HDMI	Select the input signal source
OUTPUT	SDI	OFF/ON	Enable/Disable the SDI output interface
	HDMI	OFF/ON	Enable/Disable the HDMI output interface

1. Select the input signal source

Select **input output**→**INPUT** item, scroll left or right to set the input signal source as **SDI** or **HDMI**.



Figure 4.2-2 Select Input Source

2. Enable an output interface

After setting the input source, it will be output to the two output interfaces: **SDI OUTPUT** and **HDMI OUTPUT**. Whether you can get the signal source from the **SDI OUTPUT** interface or the **HDMI OUTPUT** interface, it is determined by the subitem setting of **input output→OUTPUT**.

- **Enable SDI output interface:** set **input output→OUTPUT→SDI** as **ON**, as shown in Figure 4.2-3, then you can get a signal source from the SDI OUTPUT interface.
- **Disable SDI output interface:** set **input output→OUTPUT→SDI** as **OFF**, then there will be no signal output from the SDI OUTPUT interface.

The setting for HDMI output interface is as the same as the SDI's above, no further description.



Figure 4.2-3 Enable SDI Output

For example: if the signal source is set as **HDMI**, enable the SDI output and disable the HDMI output, then, you can only get the HDMI image from the **SDI OUTPUT**, but can't get anything from the **HDMI OUTPUT**.

4.2.2 Controls

The **CONTROLS** menu items are used to adjust volume, backlight, rotating image, and set anamorphic ratio and image size from DSLR device. The menu items are as shown in Figure 4.2-4:

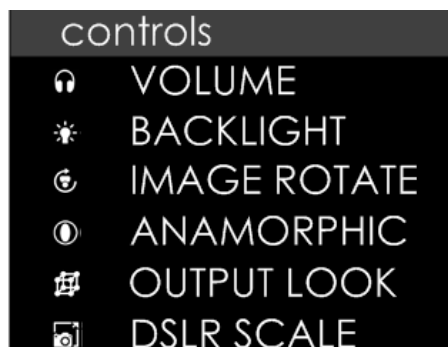


Figure 4.2-4 Controls Menu

Table 4.2-2 Description of Controls Menu Items

Menu	Items	Default	Domain Range	Description
VOLUME	VOLUME	50	0 ~ 100	Adjust the volume
BACKLIGHT	BACKLIGHT	50	0 ~ 100	Adjust the backlight
IMAGE ROTATE	ROTATE SCREEN	OFF	OFF/ON	Rotate the image vertically
ANAMORPHIC	OPTIONS	1X	1X/1.33X/ 1.5X/1.66X/ 2X/2XMAG	Set the anamorphic ratio
OUTPUT LOOK	OPTIONS	OFF	OFF/ON	Set whether the output signal will load a 3D LUT profile which is the same as the input signal's 3D LUT profile selected in LOOK menu or not
DSLR SCALE	OPTIONS	NONE	<ul style="list-style-type: none"> • NONE • CANON 5D MARK II • CANON 7D 	Enable the input signal from a variety of DSLR cameras to fill the screen of HCM-700. This item is particularly to CANON/NIKON DSLR.

1. Adjust Volume

Select **control**→**VOLUME** item, scroll straight down to confirm the selection and display the VOULME menu, as shown in Figure 4.2-5. Scroll left to decrease the volume, or scroll right to increase the volume. Press Back button to return to the previous level menu.



Figure 4.2-5 Volume Menu

2. Adjust Backlight

Select **control**→**BACKLIGHT** item, scroll straight down to confirm the selection and display the BACKLIGHT menu, as shown in Figure 4.2-6. Scroll left to decrease, or scroll right to increase the backlight.



Figure 4.2-6 Backlight Menu

3. Set Anamorphic Ratio

This feature enables you to de-squeeze HD-SDI, and 3G-SDI 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.

Select **control**→**ANAMORPHIC** item, scroll straight down to confirm the selection and display the **ANAMORPHIC**, as shown in Figure 4.2-7 scroll left or right to switch the anamorphic ratio among: 1X, 1.33X, 1.5X, 1.66X, 2X, 2XMAG.



Figure 4.2-7 ANAMORPHIC Menu

The resolution of the input and output are as shown in Table 4.2-3:

Table 4.2-3 Resolution Relationship Between Input and Output

ANAMORPHIC	INPUT SIGNAL	INPUT	OUTPUT
1X	1080P/1080I	1920x1080	1920x1080
	720P	1280x720	1920x1080
1.33X	1080P/1080I	1920x1080	1920x812
	720P	1280x720	1920x812
1.5X	1080P/1080I	1920x1080	1920x720
	720P	1280x720	1920x720
1.66X	1080P/1080I	1920x1080	1920x650
	720P	1280x720	1920x650
2X	1080P/1080I	1920x1080	1920x540
	720P	1280x720	1920x540
2XMAG	1080P/1080I	1290x720	1920x803
	720P	860x720	1920x803

4. Image Rotate

■ Vertical Rotate

Set **control**→**Image Rotate**→**Rotate Screen** item to be **ON**, the input image will reverse vertically, as shown in Figure 4.2-8:

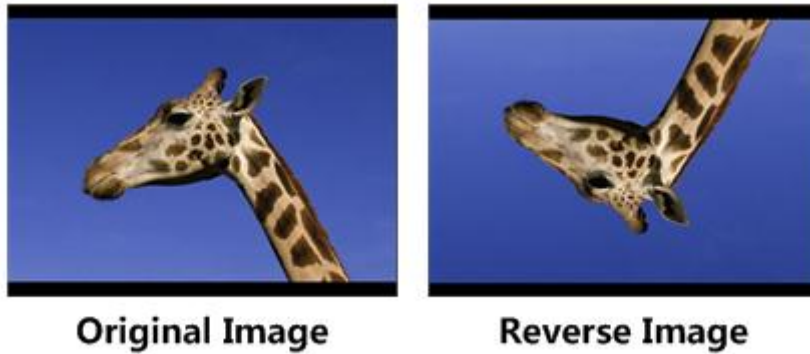


Figure 4.2-8 Vertical Rotate

5. DSLR SCALE

This function is designed for some DSLR cameras (CANON 5D MARK II, CANON 7D). The valid area which will fill the screen is controlled by **control**→**DSLR SCALE** item selection.

When the input source is coming from CANON 5D MARK II or CANON 7D DSLR device, but the **control**→**DSLR SCALE** item is set as **NONE**, the **DSLR SCALE** function is disable, there will be blank area at the surrounding of the image. Otherwise, set as the corresponding DSLR model, it will enlarge and display the image at full screen, removing those useless blank bars, as shown in Figure 4.2-9:



Figure 4.2-9 DSLR SCALE

For different **DSLR SCALE** item value, the resolution comparison of the input and output is as shown in the table below:

DSLR SCALE Item	INPUT RESOLUTION	OUTPUT RESOLUTION
NONE	1920X1080	1920x1080
CANNON 5D MARK II	(1920X1080)x0.85	1920x1080
CANNON 7D	(1920X1080) x0.85	1920x1080

4.2.3 User

The **User** menu items are used to set the status display bar, Fast mode, multiple images display mode and settings, backlight, auto standby mode, aperture, language mode, horizontal flip, and uniformity, the menu items are as shown in Figure 4.2-10:



Figure 4.2-10 User Settings Menu

Table 4.2-4 Description of User Menu Items

Menu	Items	Default	Domain Range	Description
STATUS DISPLAY	OPTIONS	OFF	OFF/ON	Enable/disable the status bar at the top of the screen
PROFILES	SAVE PROFILES TO SD CARD	--	--	Save the profiles data to the SD card
	LOAD PROFILES FROM SD CARD	--	--	Down load the data from SD card

1. STATUS BAR

Set **user**→**STATUS DISPLAY** item to be **ON**, it will display the Status bar at the top of the screen, including these information from left to right: Input source format, tally indicator and the two battery voltage indications.

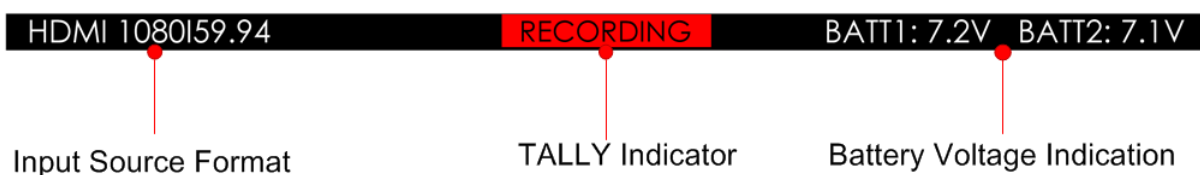


Figure 4.2-11 Status Bar

■ **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, SDI 1080i59.94, etc. when the input is supported by the monitor.

■ **TALLY Indicator**

- RECORDING** : Tally is on;
- RECORDING** : Tally is off.

3. **Data Save and Download**

■ **Save Settings: SAVE PROFILES TO SD CARD**

Save the menu settings data to the external SD card as backup. The backup file is saved in time sequence, and the file is named as "jtj_backup_yyyymmddhhmmss.bin".

Select **user**→**PROFILES**→ **SAVE PROFILES TO SD CARD** item, it will pop up a prompt, as shown in Figure 4.2-12. The old data in SD card will be erased, scroll the joystick right to select **SAVE** command, then, press the joystick straight down to confirm the selection, it will prompt not cutting off the power during saving profiles, as shown in Figure 4.2-13:



Figure 4.2-12 Prompt for Saving Data



Figure 4.2-13 Process of Saving Data

It will pop up a prompt after successful saving data, as shown in Figure 4.2-14, press the joystick straight down to confirm the completion.

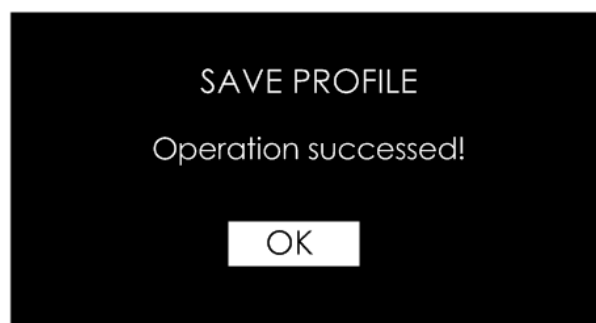


Figure 4.2-14 Prompt for Successful Saving Data

If detecting no SD card during the saving operation, it will prompt "**SD Card does not exist!**"; if any other wrong happened, it will pop up the corresponding prompt, please check it according to this prompt.

Tips

- The data saving to the SD card includes the settings on monitor and scenes, and the files are recorded in time sequence.
-

■ Load Menu Settings: LOAD PROFILES FROM SD CARD

Read menu setting data from SD card, load and recover these parameters to the current device.

Select **user**→**PROFILES**→**LOAD PROFILES FROM SD CARD** item, it will prompt a backup file list, as shown in Figure 4.2-15:

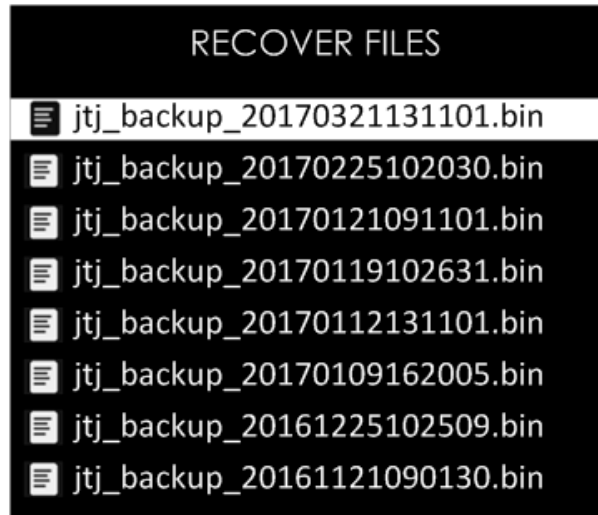


Figure 4.2-15 Backup File Selection List

Scroll the joystick up or down to the target file name, then press the joystick straight down to confirm the selection, it will prompt as shown in Figure 4.2-16:

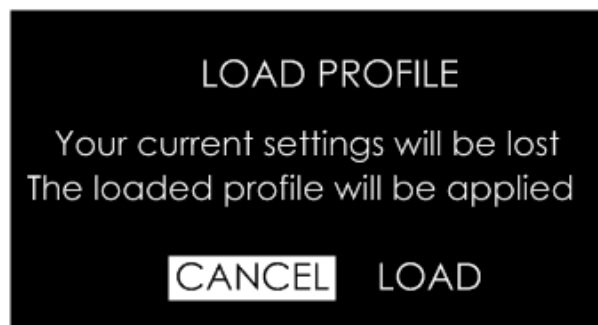


Figure 4.2-16 Prompt for Loading Profile

Select **LOAD** command, then press the joystick straight down to confirm the load operation, please don't cut off the power during loading, as shown in Figure 4.2-17:

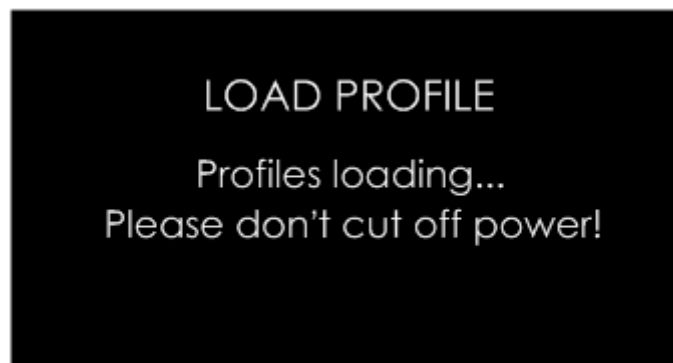


Figure 4.2-17 Prompt for Loading Profile

If detecting no SD card during the loading operation, it will prompt "SD Card does not exist!".

4.2.4 System

The **system** menu provides calibration, language selection, firmware check and factory reset operations, as shown in Figure 4.2-18:



Figure 4.2-18 System Menu

Table 4.2-5 Description of System Menu Items

Menu	Items	Default	Domain Range	Description
CALIBRATION	CALIBRATION	OFF	NATIVE/ D65/ HIGH BRIGHT/ USER CAL LUT	Select a calibration standard for the panel
	CALIBRATION LUT .../info/user_default.cl	--	--	Select a color look profile as your desired from SD card or internal LUT files
	RESET USER CALIBRATION LUT	--	--	Revert the LUT file to the default one
	BRIGHTNESS	50	0~100	Adjust the brightness
	R-GAIN	128	0~255	Adjust the Red Gain
	G-GAIN	128	0~255	Adjust the Green Gain
	B-GAIN	128	0~255	Adjust the Blue Gain
	RGB GAIN RESET	--	--	Reset R,G,B GAIN
LANGUAGE	OPTIONS	中文	ENGLISH/ 中文	Select a language mode
WIFI	WIFI	OFF	ON/OFF	Enable/Disable WIFI

Menu	Items	Default	Domain Range	Description
				function
	CHANNEL	AUTO	AUTO/ 1(2412 MHz)/ 2(2417 MHz)/ 3(2422 MHz)/ 4(2427 MHz)/ 5(2432 MHz)/ 6(2437 MHz)/ 7(2442 MHz)/ 8(2447 MHz)/ 9(2452 MHz)/ 10(2457 MHz)/ 11(2462 MHz)/	Set communication channel
	MAC	--	--	MAC address
	SSID	--	--	SSID name
	SSID PASSWORD	--	--	SSID password
	LOGIN	admin	--	Login name
	LOGIN PASSWORD	admin	--	Login password
	IP	192.168 .1.1	--	IP address
	SAVE WIFI SETTINGS	--	--	Save WIFI settings
	RESET WIFI SETTINGS	--	--	Reset WIFI settings
FIRMWARE	VERSION	--	--	Show the firmware versions
	SERIAL NUMBER	--	--	Show serial number
FACTORY RESET	--	--	--	Revert the factory settings

1. Enable/Disable Calibration

Set **system** → **CALIBRATION** → **DISABLE CALIBRATION** item as **ON**, it will be able to load LUT file.

Set **system** → **CALIBRATION** → **DISABLE CALIBRATION** item as **OFF**, it will be disable to load LUT file.

2. Load LUT File(1D LUT)

Select **system** → **CALIBRATION** → **CALIBRATION LUT**

`/system/info/default.cl` item to load a 1D LUT file from SD card.

Scroll the joystick right to display the menu, it contains two folders: **SD** and **internal**, as shown in Figure 4.2-19. Particularly, only the SD card provides 1D LUT file, so select the **SD** card, and scroll the joystick right again, it will list the LUT files list, scroll up or down to select a LUT file, and press the joystick straight down to confirm the selection, it will pop up a loading prompt, as shown in Figure 4.2-20:



Figure 4.2-19 Calibration LUT Directory

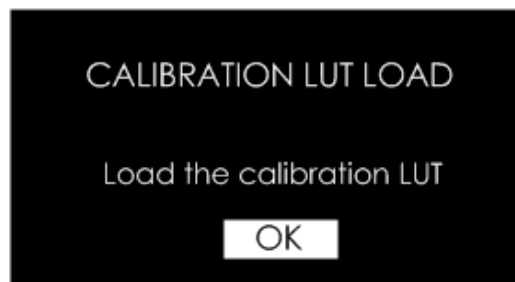


Figure 4.2-20 Load a LUT

After loading a LUT file, it will be loaded to the output image immediately, as shown in Figure 4.2-21:



Figure 4.2-21 Output Image Loading a LUT File

Tips

- Refer to “5.1.4 Look Tools” for the details about loading the 3D LUT file.

3. RESET CALIBRATION LUT

Select **system** → **CALIBRATION** → **RESET CALIBRATION LUT** item to restore the default LUT file, it will prompt as shown in Figure 4.2-22:



Figure 4.2-22 Reset CALIBRATION LUT

It will revert the Gain and Offset values to default values for the current profile selected in the **LOOK PROFILE** item.

4. BRIGHTNESS

Set **system** → **CALIBRATION** → **BRIGHTNESS** item to adjust the brightness. Scroll left to decrease the brightness, or scroll right to increase the brightness.

5. R/G/B GAIN

Set **system** → **CALIBRATION** → **R-GAIN/G-GAIN/B-GAIN** item to adjust the gain values. Scroll left to decrease the gain, or scroll right to increase the gain.

6. WIFI SETTINGS

Set **system** → **WIFI** → **WIFI** item as **ON** to activate WIFI function.



Figure 4.2-23 WIFI Menu

- **Connect WIFI:** Set **system** → **WIFI** → **WIFI** item as **ON**, and choose

system → WIFI → **SAVE WIFI SETTINGS** item, thus, it will connect a WIFI;

- **Disconnect WIFI:** Set system → WIFI → **WIFI** item as **OFF**, and choose system → WIFI → **SAVE WIFI SETTINGS** item, thus, it will disconnect a WIFI.

Tips

- Select **SAVE WIFI SETTINGS** item to effect the changes of WIFI or CHANNEL item.

7. FACTORY RESET

Select **system** → **FACTORY RESET** item to initialize the settings to default values, it will pop up a prompt, as shown in Figure 4.2-24 , 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, then it will display the Boot Screen for successful reset operation, as shown in Figure 4.2-25. At last, please restart the device by manual.



Figure 4.2-24 Prompt for Factory Reset



Figure 4.2-25 Boot Screen

i Tips

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

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Chapter 5 Scenes and Tools

5.1 Scenes Tools Settings

You can create customized scenes pages with different features and settings in HCM-700. In a scene, press the joystick straight down, and select **ADD NEW TOOL** command, and press the joystick straight down again, it will display the Tools Menu, as shown in Figure 5.1-1.

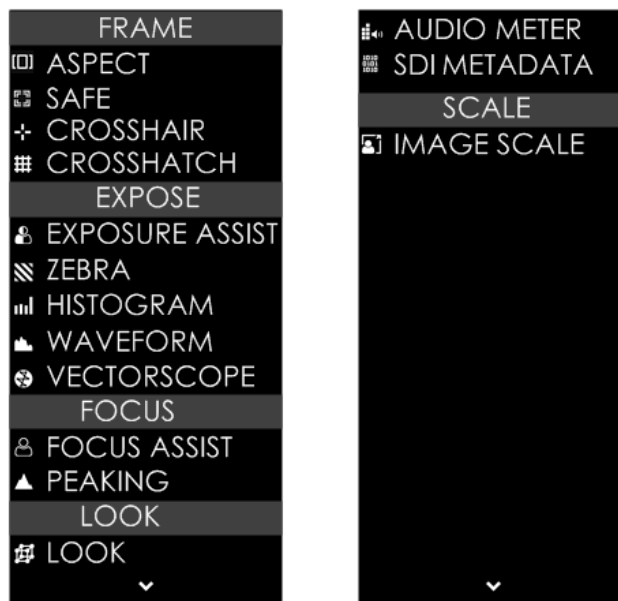


Figure 5.1-1 Tools Menu for Scene

The tools menu provides access to tools aiding in composition, focus and exposure for a scene, you can add several tools on a scene, then they will be listed in a tool bar, as shown in Figure 5.1-2. 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 5.1-3:

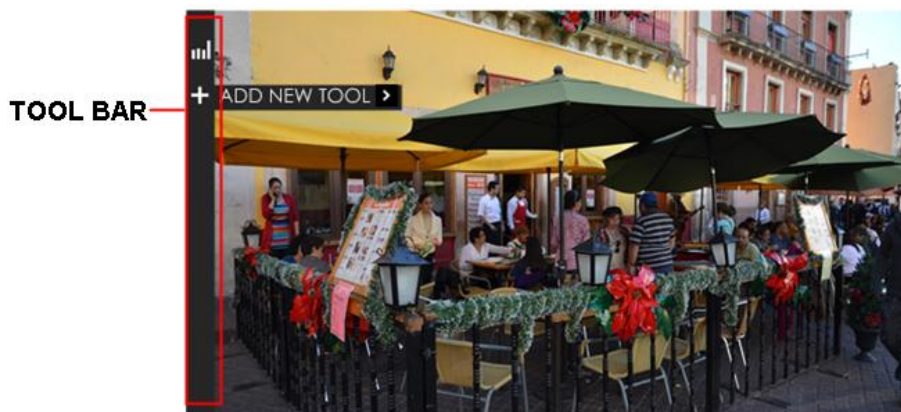


Figure 5.1-2 Tool Bar for A Scene



Figure 5.1-3 Tool Settings Menu

It will introduce the tools and their attributes in the following section, and refer to “5.2 Tools Operations” for the details about tools operation.

5.1.1 Frame Tools



Frame tools assist to set viewing frame, including: aspect area, safe area, crosshair and crosshatch. Show or hide these markers by their switches easily, and their display style and transparency are adjustable.



Figure 5.1-4 Frame Tools

Table 5.1-1 Description of Frame Tools

Tool	Items	Default	Domain Range	Description
ASPECT	ENABLE	OFF	OFF/ON	Enable/Disable area marker display
	RATIO	4:3	4:3/1.85:1/2.39:1/16:9/CUSTOM	Select the marker type
	WIDTH	75	25~100	Set the width of the mat area in CUSTOM mode
	HEIGHT	75	25~100	Set the height of the mat

Tool	Items	Default	Domain Range	Description
				area in CUSTOM mode
	STYLE	MATTE	MATTE/LINE	Set the mat area type is 50% darken area or line
SAFE	ENABLE	OFF	OFF/ON	Enable/Disable safe marker display
	FORMAT	16:9	16:9/14:9/4:3	Set the safe marker position
	ACTION	OFF	OFF/ON	The safe marker is displayed as an outside frame, proportional to 92% of the FORMAT
	TITLE	OFF	OFF/ON	The safe marker is displayed as an inside frame, proportional to 80% of the FORMAT in horizontal direction, and 90% of the FORMAT in vertical direction.
CROSSHAIR	ENABLE	OFF	OFF/ON	Enable/Disable crosshair display
	STYLE	HOLLOW	<ul style="list-style-type: none"> • HOLLOW:  • CROSS:  	Set the crosshair type is a hollow or a cross
CROSSHATCH	ENABLE	OFF	OFF/ON	Enable/Disable crosshatch display
	REGIONS	2	2~9	Set the cross line number

1. Marker

Marker	Illustration	Description
--------	--------------	-------------

Marker	Illustration	Description
ASPECT (AREA MARKER)		This marker identifies an area with a specified aspect ratio.
SAFETY MARKER		This marker displays a rectangle to identify the safety area with a specified percentage in Area Marker.
CROSSHAIR (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 by **FRAME→ASPECT** item. When set as **CUSTOM**, the **WIDTH** and the **HEIGHT** of the marker are adjustable as your requirement.

And the outside area of the area maker could be filled with **FRAME→ASPECT→STYLE** selection, you can choose it as **MATTE** or **LINE**. As **MATTE**,

- LINE:** there are two white lines labeled the area marker;
- MATTE:** the outside area of marker is 50% blackness of the background, and without lines, as shown in Figure 5.1-5:



STYLE=LINE



STYLE=MATTE

Figure 5.1-5 Marker Mat Style

5.1.2 Expose Tools

Expose tools provide exposure assist (False Color), zebra, histogram, waveform and vectorscope, as shown in Figure 5.1-6:



Figure 5.1-6 Expose Tools

Table 5.1-2 Description of Expose Tools

Tool	Items	Default	Domain Range	Description
EXPOSURE ASSIST	ENABLE	OFF	OFF/ON	Enable/Disable false color function
	STYLE	NORMAL	<ul style="list-style-type: none"> NORMAL ARRIR RED 	Set the type of the false color display
ZEBRA	ENABLE	OFF	OFF/ON	Enable/Disable the zebra function that will compare the signal luminance with the ZEBRA LEVEL , and fill the relevant image area whose luminance is higher than the ZEBRA LEVEL with a zebra pattern.
	LEVEL	50	0~100	Set the reference level of detecting luminance.
HISTOGRAM	ENABLE	OFF	OFF/ON	Enable/Disable histogram display
	STYLE	LUMA	<ul style="list-style-type: none"> LUMA: luminance 	Set the type of the

Tool	Items	Default	Domain Range	Description
			histogram <ul style="list-style-type: none"> • RGB: RGB histogram 	histogram
	LOCATION	TOP RIGHT	<ul style="list-style-type: none"> • TOP RIGHT • MID RIGHT • BOT RIGHT • MID BOT • BOT LEFT • MID LEFT • TOP LEFT • TOP MID 	Set the position of the histogram
	OPACITY	0	<ul style="list-style-type: none"> • 0: 100% • 1: 75% • 2: 50% • 3: 25% 	Set the transparency of the histogram
WAVEFORM	ENABLE	OFF	OFF/ON	Enable/Disable waveform display
	STYLE	LUMA	LUMA/RGB/PARADE	Set the type of the waveform
	SIZE	NORMAL	NORMAL/MODE1/MODE2/	Set the size of the waveform
	LOCATION	TOP RIGHT	<ul style="list-style-type: none"> • TOP RIGHT • MID RIGHT • BOT RIGHT • MID BOT • BOT LEFT • MID LEFT • TOP LEFT • TOP MID 	Set the position of the waveform
	OPACITY	0	0 ~ 3	Set the transparency of the waveform
VECTORSCOPE	ENABLE	OFF	OFF/ON	Enable/Disable vectorscope display
	LOCATION	TOP RIGHT	<ul style="list-style-type: none"> • TOP RIGHT • MID RIGHT • BOT RIGHT • MID BOT • BOT LEFT • MID LEFT 	Set the position of the vectorscope

Tool	Items	Default	Domain Range	Description
			<ul style="list-style-type: none"> • TOP LEFT • TOP MID 	
	OPACITY	0	0~3	Set the transparency of the vectorscope

1. FALSE COLOR

EXPOSURE ASSIST is also known as FALSE COLOR, 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.

Choose the **EXPOSURE ASSIST** tool to the current scene, and activate the FALSE COLOR tool. It provides three types of FALSE COLOR: **NORMAL**, **ARRIR**, **RED**.

The following illustration indicates what artificial color corresponds to what luminance level.

■ NORMAL Mode



Figure 5.1-7 NORMAL Mode- Mapping of Color and Luminance

■ RED Mode



Figure 5.1-8 RED Mode- Mapping of Color and Luminance

■ ARRIR Mode



Figure 5.1-9 ARRIR Mode- Mapping of Color and Luminance

For example: Set **EXPOSURE ASSIST →ENABLE** item as **ON**, and set **EXPOSURE ASSIST →STYLE** item as **NORMAL**, as shown in Figure 5.1-10:



FALSE COLOR=OFF



FALSE COLOR=ON

Figure 5.1-10 Comparison Mode- Original Image and Normal Mode Image

i Tips

- The LOOK tool is incompatible with the False Color(EXPOSURE ASSIST) tool.

That is, enable the LOOK tool, the False Color tool will be disabled automatically, and enable the False Color tool, the LOOK 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 LEVEL**, and fill the relevant image area whose luminance is higher than the **ZEBRA LEVEL** with a zebra pattern

For example, set the **ZEBRA LEVEL** as 80, the compared results are as shown in Figure 5.1-11, the special area is filled with a zebra pattern.



Figure 5.1-11 Illustration for LUMA ZOOM CHECK Function

3. HISTOGRAM

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

■ **Histogram Type**

Set **EXPOSE→HISTOGRAM→STYLE** item as LUMA or RGB, the two histogram types are as shown in Figure 5.1-12:

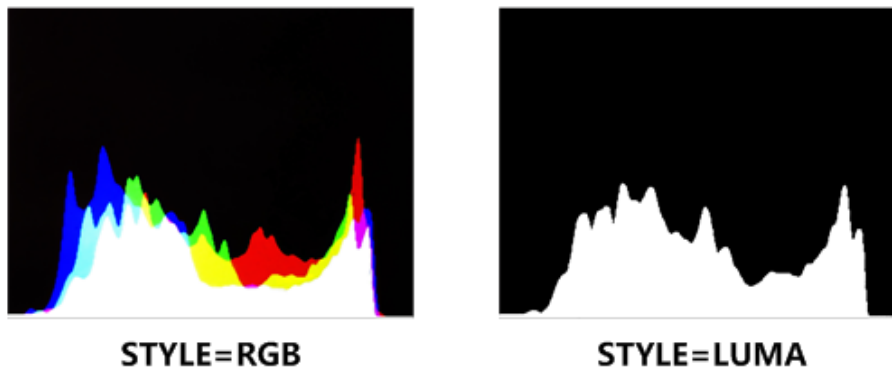


Figure 5.1-12 RGB Histogram and LUMA Histogram

4. WAVEFORM

■ **WAVEFORM SIZE**

Set **EXPOSE**→**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 **NORMAL**, and this kind of waveform could be located in any one of the 8 positions listed in **LOCATION** item;
- 75% waveform: set **SIZE** item as **MODE1**, and this kind of waveform is located in the center bottom of the screen, and it can't be moved;
- Full size waveform: set **SIZE** item as **MODE2**, and this kind of waveform is located in the bottom of the screen, and it can't be moved.

■ WAVEFORM TYPE

Set **EXPOSE**→**WAVEFORM**→**STYLE** item to display the following three kinds of waveform as LUMA, RGB, PARADE, as shown in Figure 5.1-13:

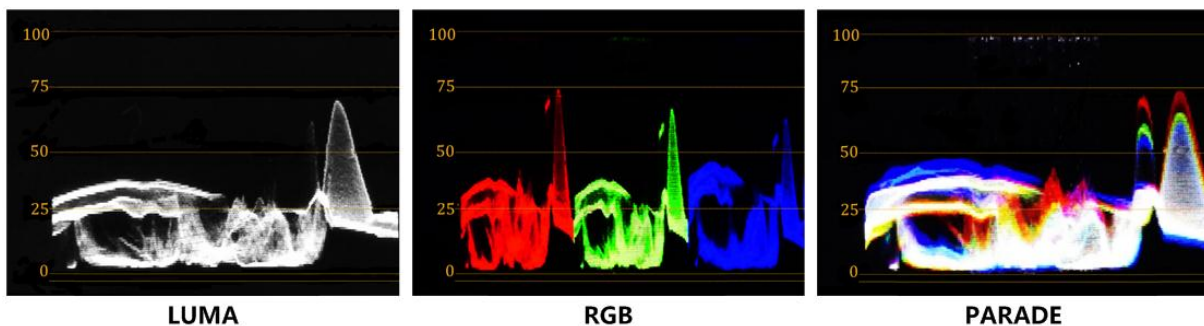


Figure 5.1-13 LUMA Waveform and RGB Waveform and PARADE Waveform

5. VECTORSCOPE

Set **EXPOSE**→**VECTORSCOPE**→**ENABLE** item to display or hide the vectorscope.

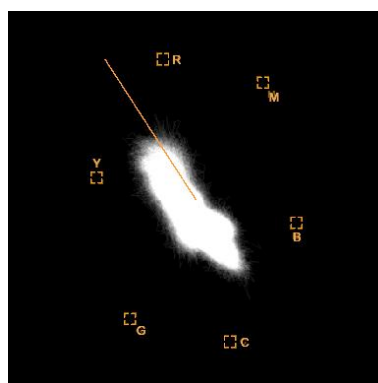


Figure 5.1-14 VECTORSCOPE

6. LOCATION

There are 8 positions for display the histogram, waveform and vectorscope on the screen, they are TOP RIGHT, MIDDLE RIGHT, BOTTOM RIGHT, MIDDLE BOTTOM, BOTTOM LEFT, MIDDLE LEFT, TOP LEFT, and TOP MIDDLE, as shown in Figure 5.1-15. Move them through the **LOCATION** item.

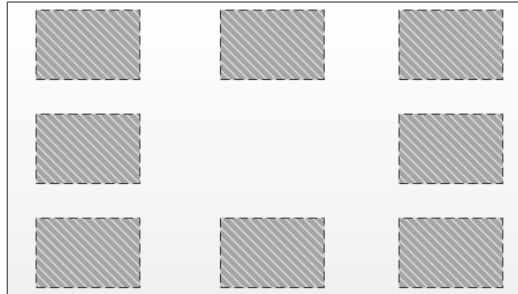


Figure 5.1-15 *Location of the Assistant Elements*

7. OPACITY

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

- 0: 100%, when opacity set to 0, the assistant element (histogram, waveform or vectorscope) is opaque, not transparent.
- 1: 75%, when opacity set to 1, the assistant element (histogram, waveform or vectorscope) is proportional to 75% opacity.
- 2: 50%, when opacity set to 2, the assistant element (histogram, waveform or vectorscope) is proportional to 50% opacity.
- 3: 25%, when opacity set to 3, the assistant element (histogram, waveform or vectorscope) is proportional to 25% opacity.

For example: set **EXPOSE**→**HISTOGRAM**→ **OPACITY** as 0, 1, 2, 3 separately, the comparison are as below:

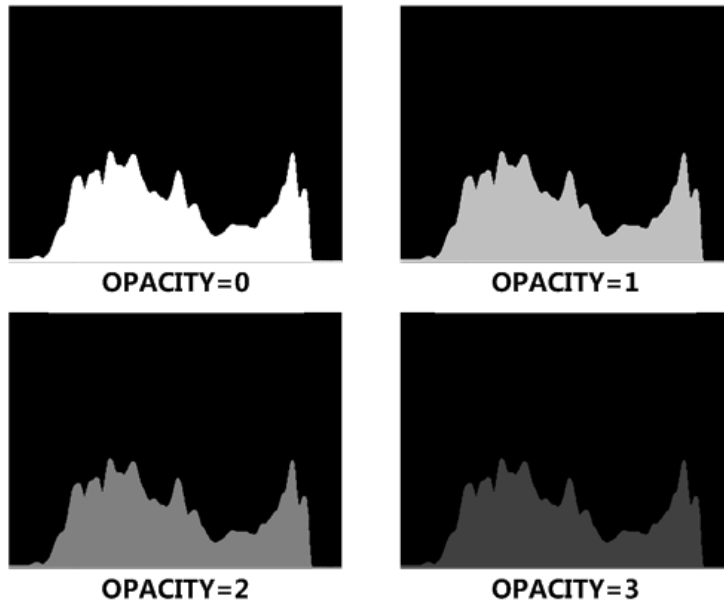


Figure 5.1-16 Different Opacity for Histogram

5.1.3 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 5.1-17 Focus Tools

Table 5.1-3 Description of Focus Tools

Tool	Items	Default	Domain Range	Description
FOCUS ASSIST	ENABLE	OFF	OFF/ON	Enable/Disable focus assist function
	COLOR	RED	STANDARD/ RED/GREEN/ BLUE	Select the color of the focus assist edge. For standard color, the intensified edges highlight in white.
	SENSITIVITY	5	1 ~ 10	Set the edge difference value between the edges in an image, and take this value as the

Tool	Items	Default	Domain Range	Description
				reference value. Larger value means more detail detection.
	B&W BACKGROUND	OFF	OFF: COLOR MODE ON: BLACK & WHITE MODE	Set the focus assist display mode: color mode or black&white mode.
PEAKING	ENABLE	OFF	OFF/ON	Enable/Disable peaking function Over sharpen the image.
	INTENSITY	5	1~10	Set the sharpness level of the image. The higher the value, the sharper the image.

1. FOCUS ASSIST

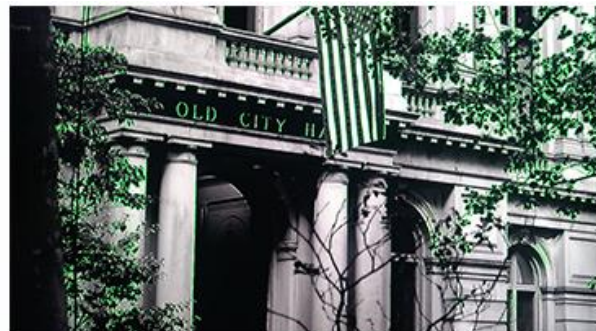
The FOCUS ASSIST function is used to display images on the screen with intensified edge to help camera focus operation. The intensified edges are those areas whose difference value exceeds the reference focus level (**SENSITIVITY**), and the intensified edge are displayed in the designated color set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

■ FOCUS ASSIST MODE

- COLOR MODE:** Set **FOCUS** → **FOCUS ASSIST** → **B&W BACKGROUND** item as **OFF**, the image is in color mode, then set **FOCUS** → **FOCUS ASSIST** → **COLOR** to color the intensified edge.
- B&W MODE:** Set **FOCUS** → **FOCUS ASSIST** → **B&W BACKGROUND** item as **ON**, the image is in black and white mode, that is removing all colors and only leaving the luminance data of the signal.



**B&W BACKGROUND=OFF
COLOR=RED**



**B&W BACKGROUND=OFF
COLOR=GREEN**

Figure 5.1-18 Illustration for FOCUS ASSIST Function



B&W BACKGROUND=ON

Figure 5.1-19 Illustration for FOCUS ASSIST Function

5.1.4 Look Tools

Look tools provides loading 3D LUT profile, adding audio meter or SDI metadata to current scene, as shown in Figure 5.1-20

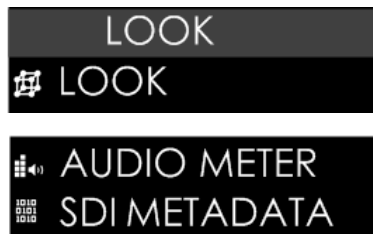


Figure 5.1-20 Look Tools

Table 5.1-4 Description of Look Tools

Tool	Items	Default	Domain Range	Description
LOOK	ENABLE	OFF	OFF/ON	Enable/Disable LUT profile function
	LOOK FILE	--	--	Select a 3D LUT profile for current scene
AUDIO METER	ENABLE	OFF	OFF/ON	Enable/Disable audio meter display
	LOCATION	BOT LEFT	BOT LEFT/ BOTRIGHT	Set the position of the audio meter

Tool	Items	Default	Domain Range	Description
	OPACITY	0	0~3	Set the transparency of the audio meter
SDI METADATA	ENABLE	OFF	OFF/ON	Enable/Disable SDI METADATA function
	TIEMCODE	OFF	OFF/ON	Enable/Disable TC code display
	RECORD	OFF	OFF/ON	Enable/Disable RTC function

1. LOOK PROFILE(3D LUT)

The monitor is equipped with versatile color lookup profiles for different requirements, we provide the following LUT profiles:

- Internal: 9 camera log**, as shown in Table 5.1-5;
- SD Card:** HCM-700 monitor is capable of loading customized calibration 3D LUTs from SD card.

Select **LOOK**→ **LOOK**→ **LOOK FILE** item to choose a 3D LUT file from SD card or internal files.

■ Preset LUT File(Internal)

There are 9 preset 3D-LUT tables, supporting the LUT files for ARRI, RED, SONY, Panasonic, Canon, BlackMagic and Panavision, etc.

Table 5.1-5 Internal LUT Files

Preset LUT File	Description
AlexaV3_EI0800_LC2_Rec709_EE.osl	ARRI
BMD CC Film to Rec709 v2.osl	BlackMagic
BMD PC 4K Film to Rec709 v2.osl	BlackMagic
Canon_EE_Cin_CL1_WDR.osl	Canon
Canon_EE_Cin_CL2_WDR.osl	Canon
Pana VLog_to_V709_forV35.osl	Panasonic
RED_EE_RLF_RG3.osl	RED
SONY_EE_Slog2_LC709A.osl	SONY
SONY_EE_Slog3C_L709A.osl	SONY

Tips

- The internal LUT files are constantly under development.
- HCM-700 supports color management software CalMAN currently, the customized 3D LUT profiles (*.cube) produced by these softwares could be loaded to SD card by a control computer.
- You can place the customized 3D LUT profiles (*.cube) directly on an SD card, either on the root directory or organize them by folders.
- The LOOK tool is incompatible with the False Color(EXPOSURE ASSIST) tool. That is, enable the LOOK tool, the False Color tool will be disabled automatically, and enable the False Color tool, the LOOK tool will be disabled automatically.

2. AUDIO METER

Set **LOOK**→**AUDIO METER**→**ENABLE** item as ON to 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 opacity could be set from 0 to 3. Refer to “5.1.2 Expose Tools--7 OPACITY” for the details about OPACITY.

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 5.1-21:



Figure 5.1-21 Audio Meter

3. TIME CODE

Select **SDI METADATA**→**Timecode** item to enable the display 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 5.1-22 Timecode

5.1.5 Scale Tools

Scale tool is used to adjust the horizontal and vertical size of the screen, as shown in Figure 5.1-23



Figure 5.1-23 Scale Tools

Table 5.1-6 Description of Scale Tools

Tool	Items	Default	Domain Range	Description
SCALE	ENABLE	OFF	OFF/ON	Enable/Disable image scale function
	SIZE	75	20 ~ 100	Set image display size
	LOACTION	TOP LIGHT	<ul style="list-style-type: none"> • TOP RIGHT • MID RIGHT • BOT RIGHT • MID BOT • BOT LEFT • MID LEFT • TOP LEFT • TOP MID • CENTER 	Set image position on screen

1. IMAGE SCALE

■ Activate Image Scale Function

Set **SCALE** → **SCALE** → **ENABLE** item as **ON**, the image scale is activated. The image size could be adjustable by **SIZE** item.

■ Image Size

Set **SCALE** → **SCALE** → **SIZE** item from 20 to 100 to change the image size.

After scaling down, the blank area will be filled with black, as shown in Figure 5.1-24:



Figure 5.1-24 Scale Illustration

■ **Image Position**

There are 9 positions for display the small image on screen, they are TOP RIGHT, MIDDLE RIGHT, BOTTOM RIGHT, MIDDLE BOTTOM, BOTTOM LEFT, MIDDLE LEFT, TOP LEFT, TOP MIDDLE and CENTER, as shown in Figure 5.1-25. Move it through the **LOCATION** item.

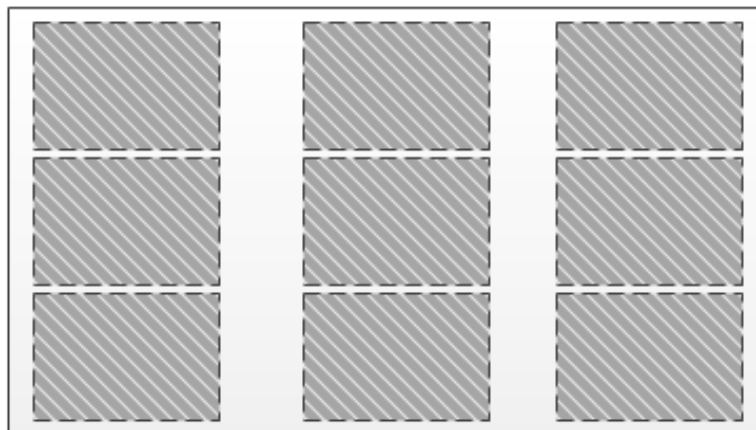



Figure 5.1-25 Image Position

5.2 Tools Operations

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

5.2.1 Add a Scene

You can customize up to 8 scenes in HCM-700 for various requirement, and switch swiftly among these scenes by joystick operations.

Scroll the joystick right to add a new scene, it will prompt “Add New MySet 

52

confirm the operation.

The scene will be numbered in sequence, and the name (a scene icon followed by a number) will be displayed at the bottom center of the screen, as shown in Figure 5.2-1:



Figure 5.2-1 A New Scene

i Tips

- HCM-700 supports up to 8 customized scenes.

Scroll the joystick left or right to switch among scenes.

5.2.2 Delete a Scene

Scroll the joystick down in a scene, it will display the **DELETE** command at the bottom of the screen, as shown in Figure 5.2-2. Press the joystick straight down to confirm deletion, and there will be a waiting prompt during the deletion. Wait until the prompt disappeared, then the scene deletion is completed.



Figure 5.2-2 Prompt for Delete a Scene

5.2.3 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 the joystick down, it will pop up the “**ADD NEW TOOL**” command, as shown in Figure 5.2-3. Press the joystick straight down to confirm, and it will pop up the **Tools Menu** on screen, as shown in Figure 5.2-4:



Figure 5.2-3 Add a New Tool



Figure 5.2-4 Tools Menu for Scene

Scroll the joystick up or down to select your desired scene tool, and press the joystick straight down to confirm, the selected tool will be added to the **Tool Bar** of the current scene.

For example: Add histogram to Tool Bar

Scroll the joystick up or down to **HISTORGRAM** item, as shown in Figure 5.2-5, press the joystick straight down to confirm the selection, the **HISTORGRAM**, tool will be added in the tool bar, as shown in Figure 5.2-6:



Figure 5.2-5 Choose Histogram Tool



Figure 5.2-6 Histogram in the Tool Bar

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

5.2.4 Load/Close Tool Bar

In a scene, after added the tools, you can load the tool bar or close the tool bar. The instructions are as below:

- **Load Tool Bar**




First, scroll the joystick right to enter into a scene;

Second, press the joystick straight 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 5.2-7. The bar labeled in the red rectangle are the tool bar for the current scene.



Figure 5.2-7 Tool Bar for A Scene

■ **Close Tool Bar**

- After loading a tool bar, scroll the joystick left or press **BACK** button  to close the tool bar.
- When in editing tool setting menu status, press **BACK** button  to return to the previous menu, then scroll the joystick left or press **BACK** button  to close the tool bar.

■ **Open tool setting menu**

After loading a tool bar, scroll the joystick right to enter into tool settings menu, as shown in Figure 5.2-8

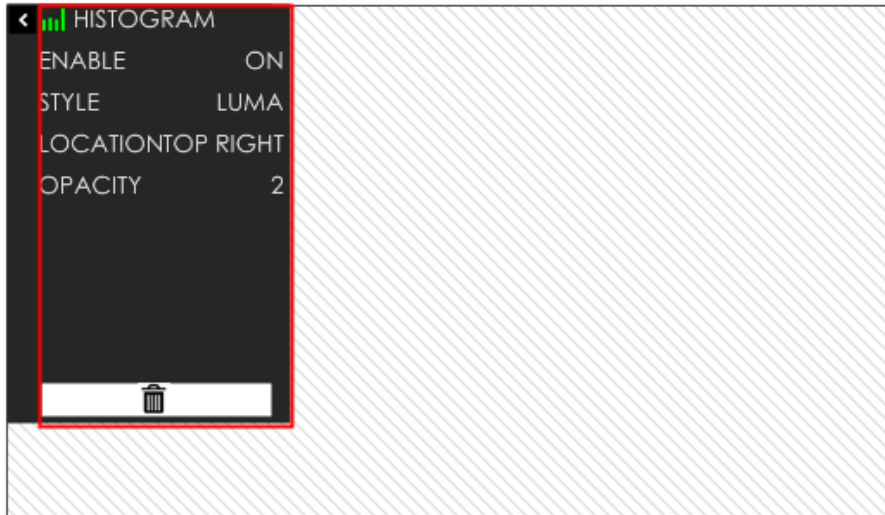



Figure 5.2-8 Tool Setting Menu

Press **BACK** button  to return to the tool bar and close the tool setting menu.

5.2.5 Open/Close a Tool

Follow the instructions below to open or close a tool swiftly:

- **Open a Tool**

First, press the joystick straight down to load the tool bar of the current scene;
 Second, scroll the joystick up or down to select a tool;
 At last, press the joystick straight down to open the tool.

- **Close a Tool**

Press the joystick straight down to close the tool after opened it.

- **Select a Tool**

Scroll the joystick up or down to select a tool after loading the tool bar.

Tips

- The tool icon in the tool bar will change in highlight green of opened status, and will change in white of closed status.

5.2.6 Tool Settings

Add tools for a scene through the tool settings, then, set a tool’s attributes by scrolling the joystick right, it will display the tool settings menu on the screen.

Scroll the joystick 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.

Operate the tool bar to display each tool settings menu, and set the style, location or size of the tool. Refer to “5.1 Scenes Tools Settings” for the details of each tool.

For example: Display histogram on a scene.

In a scene, press the joystick straight down to display the tool bar at the left side of the screen. Scroll the joystick down to move the cursor onto the **HISTOGRAM** tool icon, as shown in Figure 5.2-9:




Figure 5.2-9 Select HISTOGRAM

Press the joystick straight down to load the histogram window on the screen, and the histogram icon is lit in highlight green, as shown in Figure 5.2-10. Or press the joystick straight down again to close the histogram window.



Figure 5.2-10 Display the Histogram

Scroll the joystick right to enter into the next level menu, it will display the histogram settings menu, as shown in Figure 5.2-11. It lists the characteristics of histogram in this menu, such as STYLE, LOCATION, OPACITY and ENABLE switch. After finish the parameter settings, press BACK button  to return to the tool bar.

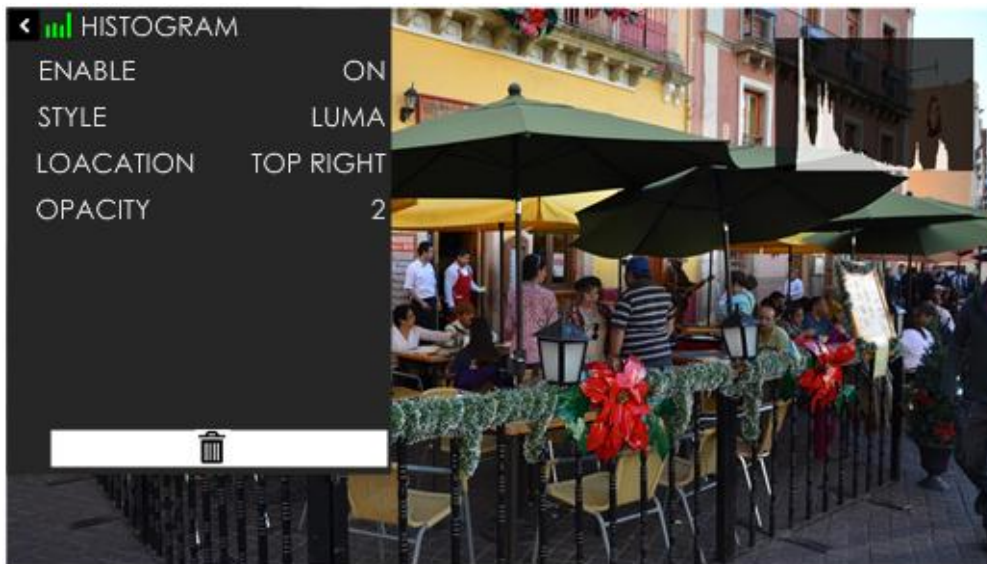


Figure 5.2-11 Settings Menu for Histogram

i Tips

- The parameters of the tool could not be modified until the tool is opened.

5.2.7 Delete a Tool

In a scene, press the joystick straight down to display the tool bar for current scene, and scroll the joystick up or down to select the tool which you want to delete, then scroll right to enter the tool setting menu, and select **DELETE** command at the end of the menu list, as shown in Figure 5.2-12.

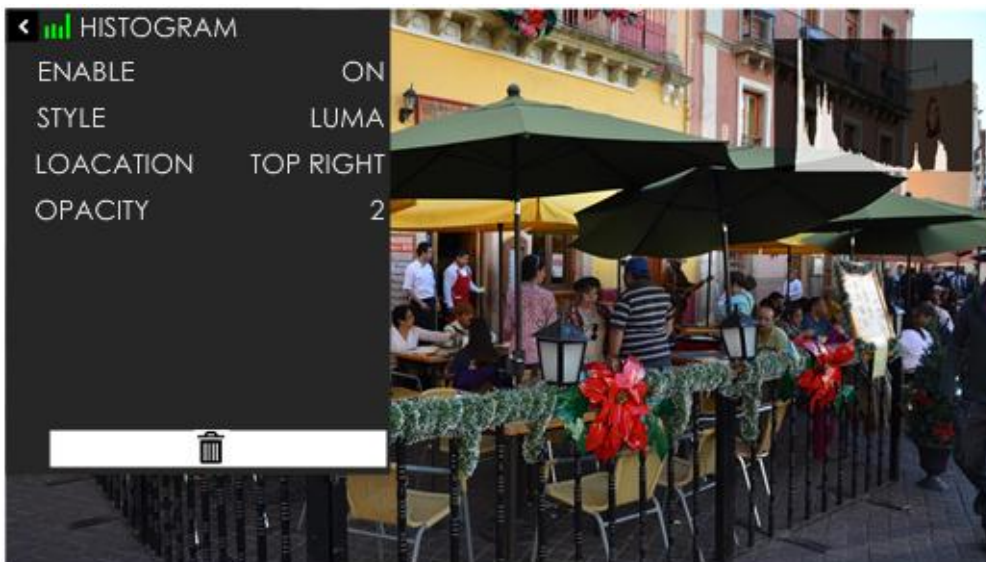


Figure 5.2-12 Delete a Tool

Press the joystick straight down to confirm the selection, and it will pop up a prompt to confirm the deletion, as shown in Figure 5.2-13, press straight down to delete, then the tool will be deleted from its tool bar.

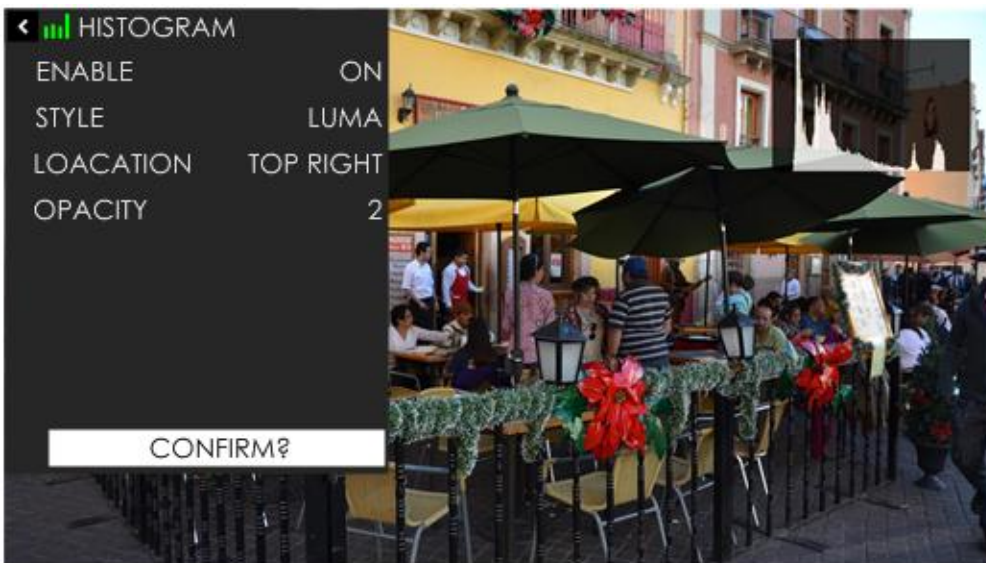


Figure 5.2-13 Prompt for Deleting a Tool

i Tips

- The effect or window displayed on the current scene will be closed after the corresponding tool is deleted.
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Chapter 6 Specifications

6.1 Product detailed information

Specification	Values
Model	HCM-700
Display	
Dimension	7"
Aspect Ratio	16:10
Viewing Angle (HxV)	178°
Color Depth	8bit
Resolution	1920×1200
Contrast	1200:1
Brightness	1100nits
Input/Output Signal Formats	
3G-SDI(Input/Output)	1080P60, 1080P59.94, 1080P50
HD-SDI(Input/Output)	1080p30, 1080p25, 1080p24, 1080p23.98, 1080i60, 1080i59.94, 1080i50, 1080pSF30, 1080pSF29.97, 1080pSF25, 1080pSF24, 1080pSF23.98, 720p60, 720p59.94, 720p50
HDMI(Input/Output)	1080P60, 1080P59.94, 1080P50, 1080p30, 1080p25, 1080p24, 1080p23.98, 1080i60, 1080i59.94, 1080i50, 1080pSF30, 1080pSF29.97, 1080pSF25, 1080pSF24, 1080pSF23.98, 720p60, 720p59.94, 720p50
Audio(Input)	SDI/HDMI Embedded
Connector Type	
SDI	BNC
HDMI	HDMI Type A
Audio	3.5mm Mini Jack
Power In	5.5/2.5mm Locking DC IN; Battery Plate
WIFI	SMA Female
Power	
Power Voltage	11 ~ 17V DC IN; 6.0~8.4V from Battery IN

Specification	Values
Power Consumption	12W Typ. 15W Max.
Battery Types	Canon LP-E6/ Sony L Series
Environmental	
Operating Temperature	30F ~ 90F/ 0° C~35° C
Storage Temperature	0F ~ 120F/ -20° C~50° C
Screen Protection	1mm Acrylic
Dimensions(Bare Monitor)	4.56”(11.57cm) × 7.61”(19.32cm) × 1.01”(2.57cm)
Weight(Item Only without Battery)	650g
Mount Points	(3)1/4-20 thread points(top, bottom, back)
Features	
Image Scale	Yes
Anamorphic De-squeeze	Yes
Image Rotate	Yes
Cross Hatch	Yes
Center Marker	Yes
Safe Marker	Yes
Area Marker	Yes
Focus Assist	Yes
Peaking	Yes
Pixel Zoom(2X & 4X)	Yes
False Color	Yes
Zebra	Yes
Waveform	Yes
Vectorscope	Yes
RGB Parade	Yes

Specification	Values
Histogram	Yes
Audio Meters	Yes
Pre-loaded LUTs for Cameras	Yes
LUT Loaded via SD Card	Yes
LUT Loaded via WIFI	Future Upgrade
Firmware Upgrading	Yes
Language(EN/CH)	Yes

*The unit about the appearance attributes in above table is mm.

6.2 Optional Accessories

You can select the following accessories for LCM-E series monitors optionally:

Type	Model	Description
Battery Plate	HCM-BM-SC	Battery plate
Sunhood suit	HCM-700-HOOD	Sunhood
Protective screen	HCM-700-Cover	Protective screen
Protective Case	HCM-700-PB	Protective Case

1. Battery Plate

If you want to use battery as your backup power supply, you can choose the battery plate listed in the optional accessories table above: as shown in Figure 6.2-1:

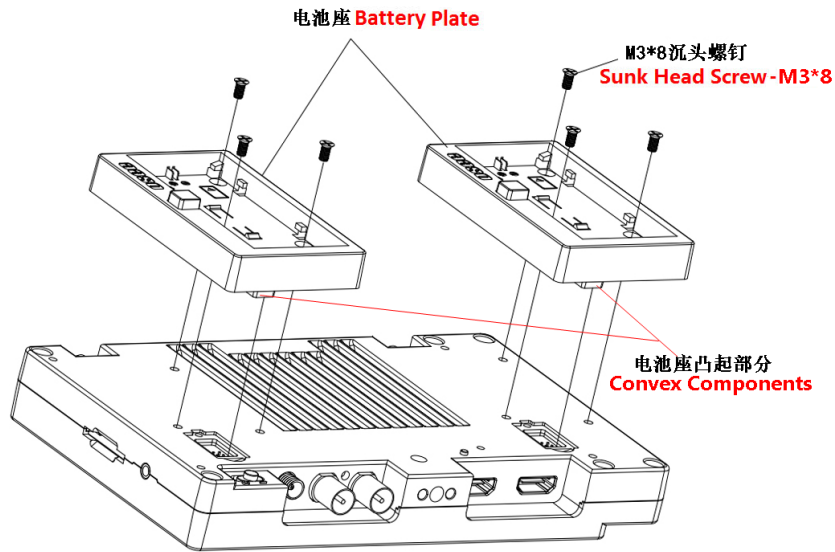


Figure 6.2-1 AB-mount Battery Plate in Landscape

2. Sunhood

In case of diffusion light and direct illumination, we can use sunhood for the HCM-700 monitor when supervising images. Mount the sunhood as shown in Figure 6.2-2, and Figure 6.2-3:

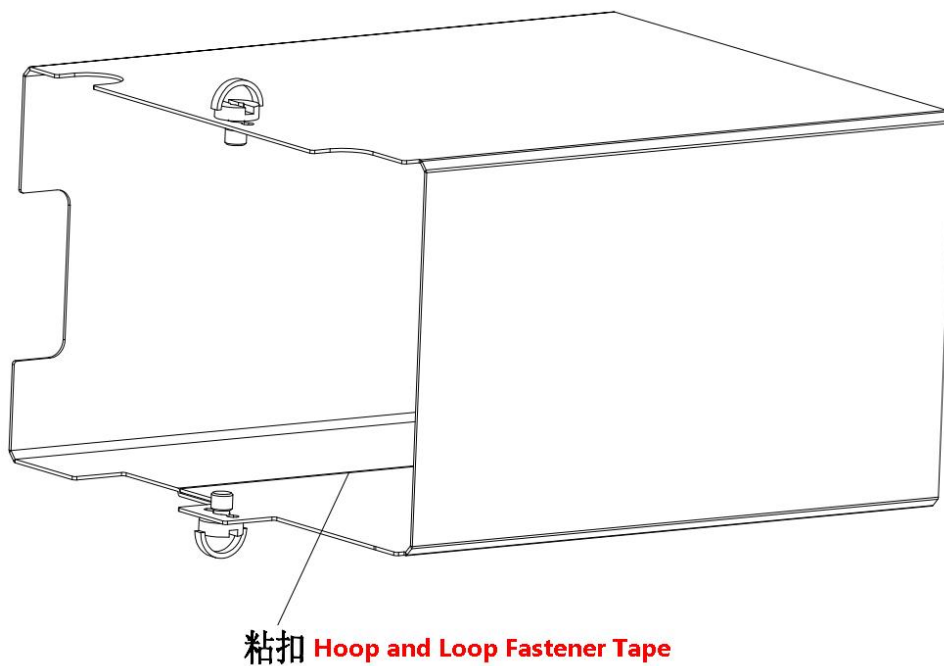


Figure 6.2-2 Mount a Sunhood

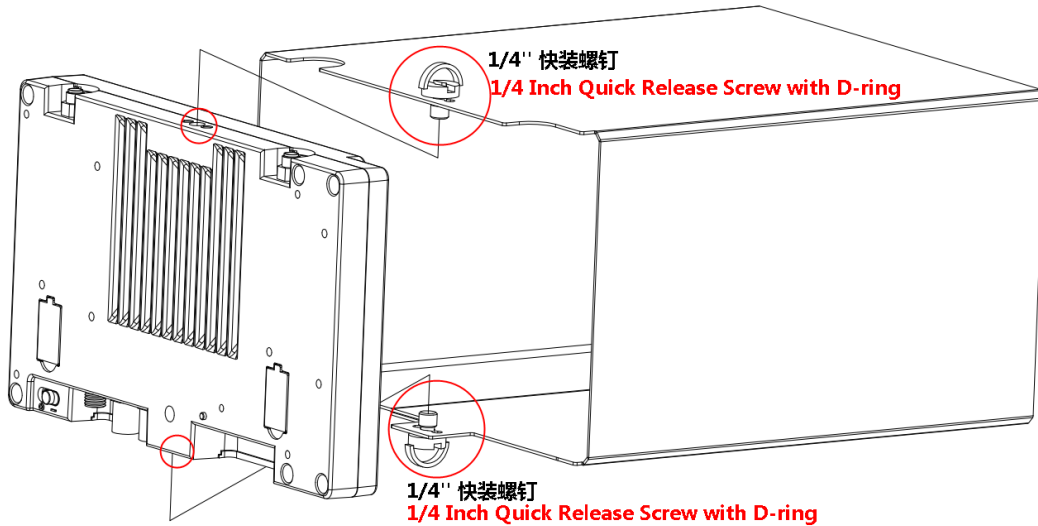


Figure 6.2-3 Mount a Sunhood

3. Protective Screen

Choose the protective screen to protect your monitor screen. Mount the protective screen as shown in Figure 6.2-4:

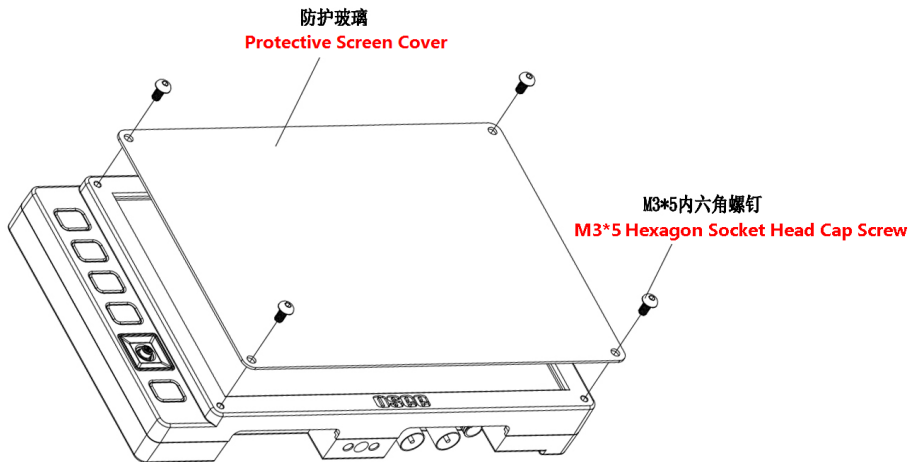


Figure 6.2-4 Mount a Protective Screen

4. Protective Case

Each monitor and its accessories can be set in an OSEE protective case for better protection and easy carry, as shown in Figure 6.2-5, and Figure 6.2-6:

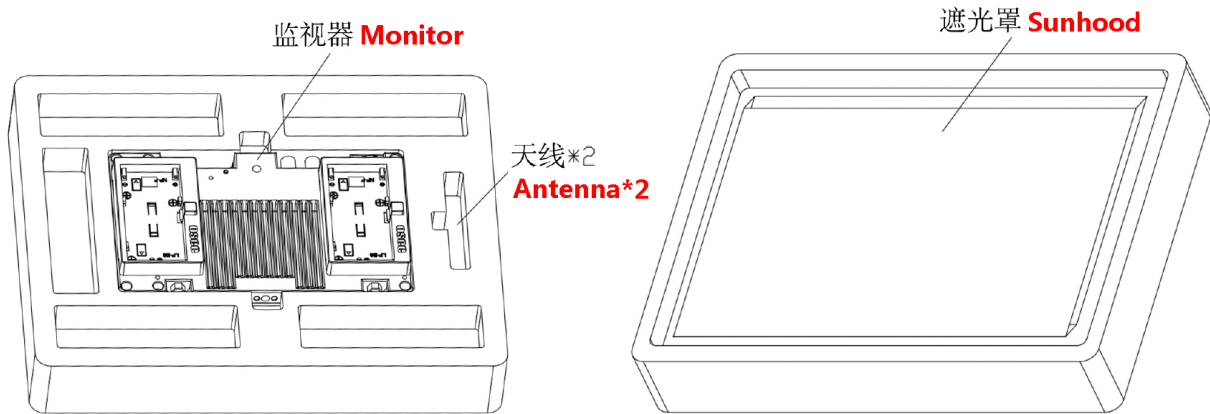


Figure 6.2-5 Adapter C-Stand to LCM-E Monitor

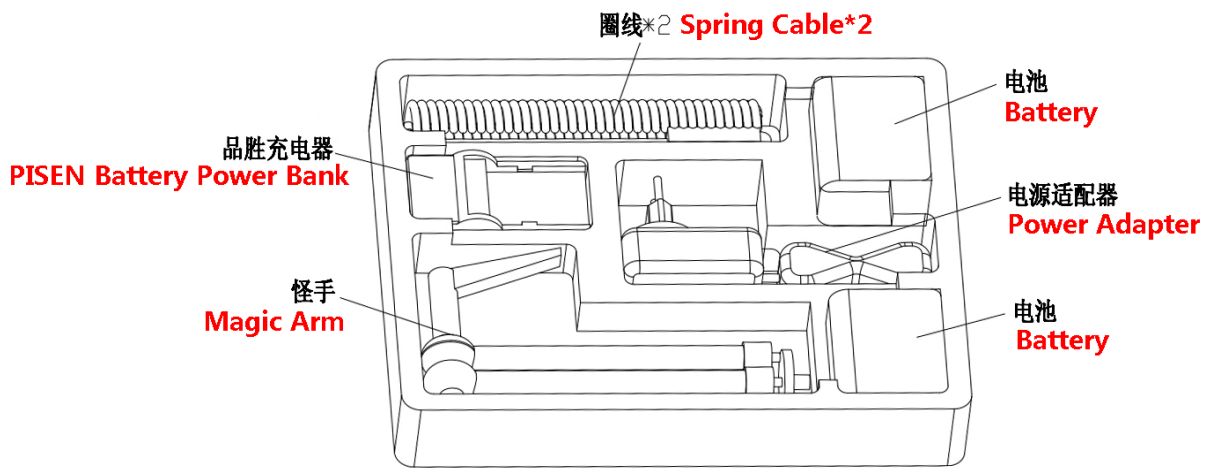


Figure 6.2-6 Connecting to Light Stand

6.3 Dimensions

The description of the HCM-700 dimensions are as shown in the following figures(Unit: mm):

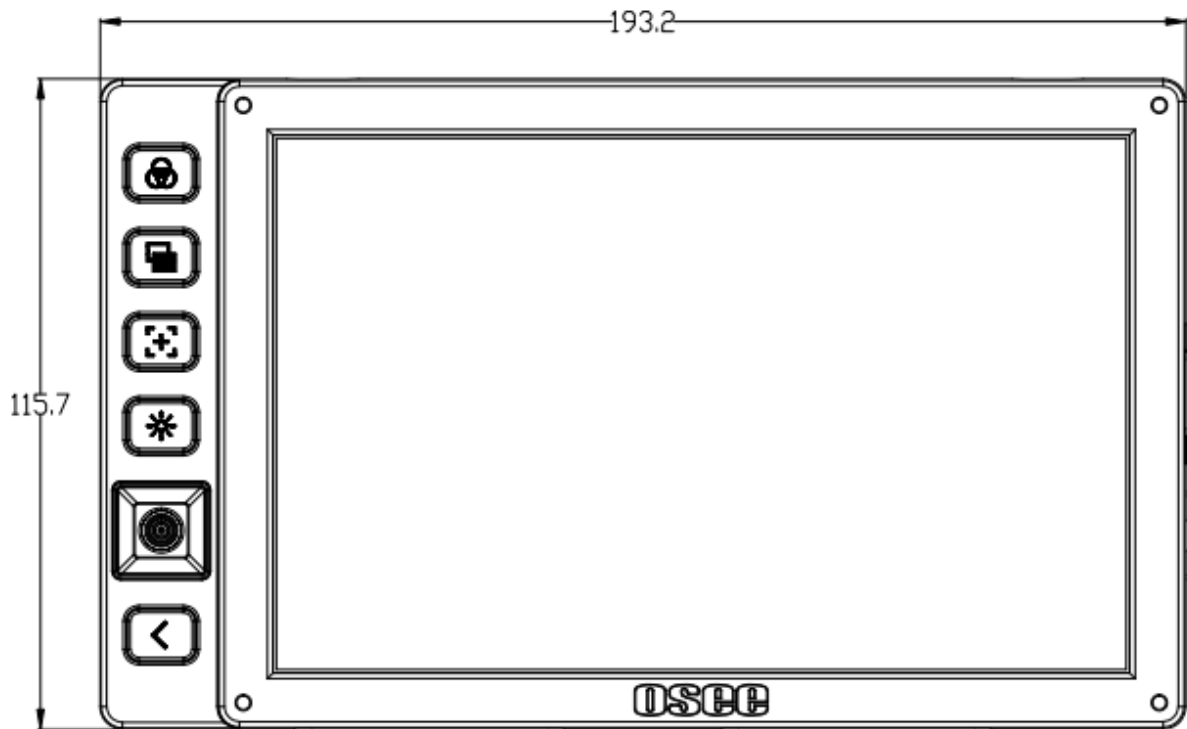


Figure 6.3-1 Front View(Unit: mm)

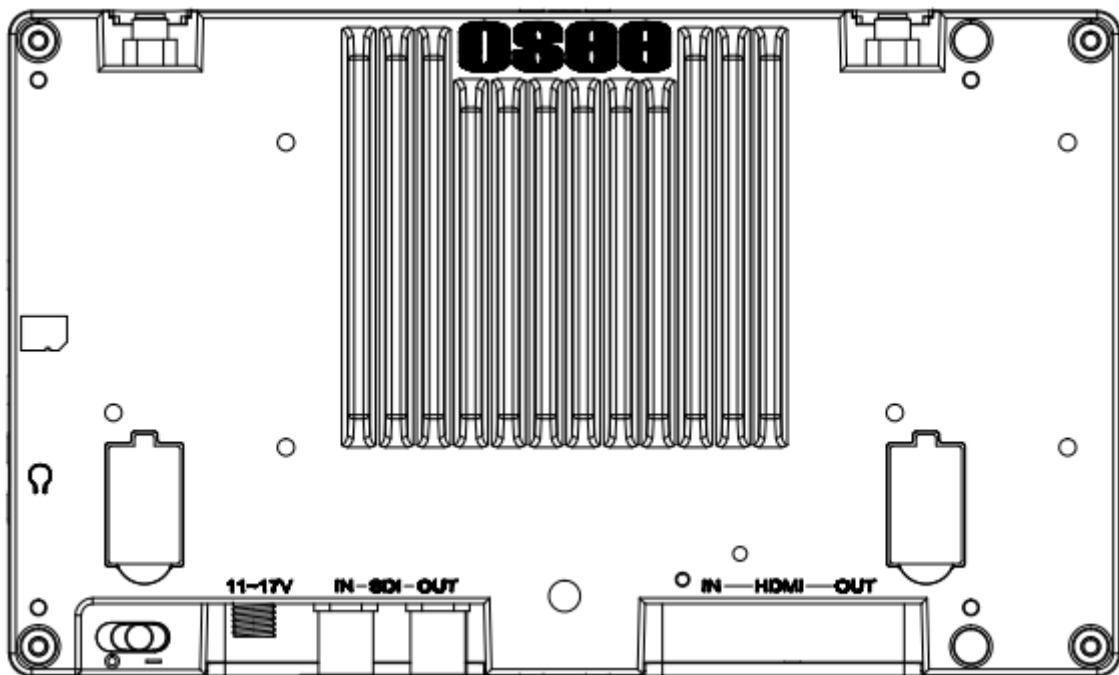


Figure 6.3-2 Back View(Unit: mm)

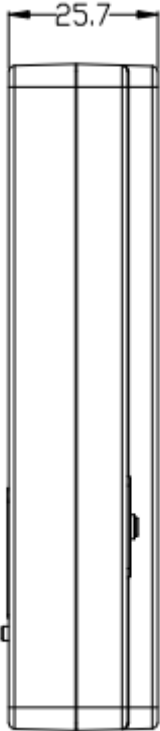


Figure 6.3-3 Side View(Unit: mm)

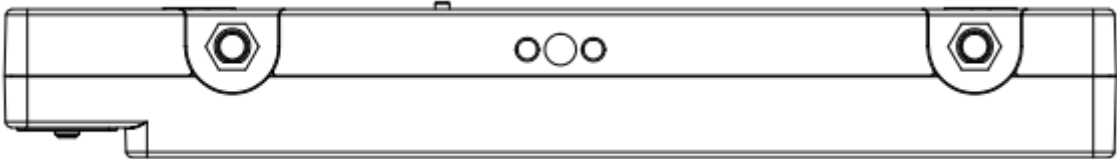


Figure 6.3-4 Top View (Unit: mm)

i Tips

- Specifications are subject to change without notice.

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