



On-camera Field Monitor

Model No.: M702-4K Series

User Manual

Contents

Welcome.....	03
FCC Notice.....	03
Disposal Notice.....	04
Precautions before Use.....	04
Package Contents.....	08
Main Features.....	09
Parts & Functions.....	10
Get Started.....	12
● Install Sun-Hood.....	12
● Open / Close Sun-Hood.....	12
● Install Battery Plate / Battery.....	13
● Connect AC Power Supply.....	15
● HDMI Locking Connector.....	16
OSD Menu & Settings.....	17
Menu Operations.....	18
● Picture Menu.....	18
● Color Menu.....	19
● Guide Box Menu.....	20
● Function Menu.....	21
● F Key Menu.....	25
● System Menu.....	26
Product Specifications.....	27
Trouble Shooting.....	28
WEEE Directive & Product Disposal.....	29
Customer Support.....	29

Welcome

Thank you for purchasing the MustHD M702 series 7" monitor for the professional cinematographer. We recommend reading this manual first before using it to get the most out of your monitor.

There are two models in this series:

M702H with HDMI Input / Loop-through

M702S with 3G-SDI & HDMI Input / Loop-through.

FCC Notice (Federal Communications Commission)

This equipment has been tested and found to comply with the limits for class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interface when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instruction, it may cause harmful interference to radio communication. There is no guarantee that interference will not occur in an installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on the off, the user is encouraged to try to correct the interference by one or more of the following suggestions.

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to a different power outlet other than the one where the receiver is connected.
- Consult an experienced television or radio technician for help.

Disposal of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packing indicates that this product shall not be treated as household waste. Instead it should be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent damage to the environment and human health, which is caused by inappropriate disposal of the product. Proper recycling also helps to conserve natural resources.

Precautions before Use

- Always use the correct voltage. (DC 12V)
- All operating instructions must be read and understood before the product is operated. These safety and operating instructions should be kept in a safe place for future reference.
- All warnings on the product and in the instruction manual must be read and observed.
- All operating instructions must be followed.
- Do not use accessories not recommended by the manufacturer. Use of those accessories can result in accidents, injury, or damage to the product.
- This product must be operated by a power source that meets the specifications on the product label.
- If you are not sure of the type of power supply used in your home, consult your dealer or local power company. For units designed to operate on batteries or another power source, refer to the operating instructions.

- The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the outlet and at the product.
- When using a 12V DC adapter not provided by the manufacturer, please check the proper load capacity (current capacity) and that it has a stable voltage output.
- Do not overload DC outlets or extension cords. Overloading can cause electric shock or fire.
- Never insert an object into the product through vents or openings or spill water or other liquid on the product as it can cause electric shock and/or short internal components due to the high voltage present in the product.
- Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Servicing should only be done by a qualified service person.
- If any of the following conditions occurs, disconnect all power sources to the monitor, and request a qualified person to perform repairs.
 - 1) When the power cord or plug is damaged.
 - 2) When the product has been dropped or damaged.
 - 3) When liquid has spilled on the product or when objects have fallen into the product.
 - 4) When the product has been exposed to rain or water.
 - 5) When the product does not operate properly as described in the operating instructions. Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which may require recalibration by a qualified technician.

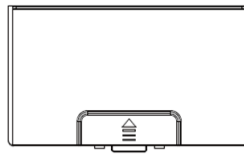
- 6) When the product displays an abnormal condition in the product this indicates that the product needs servicing.
- In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other dangerous conditions.
 - Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
 - When mounting the monitor on a wall or ceiling, be sure to install it according to the method recommended by the manufacturer. Use only the mounting hardware recommended by the manufacturer.
 - Disconnect all power sources from the monitor before cleaning the monitor. Use a damp cloth to clean the product. Do not use liquid cleansers or aerosol cleaners.
 - Disconnect all power sources from the monitor if you will not use it for a long period of time.
 - Do not use the monitor near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool, or other wet area.
 - Keep the monitor away from direct sun-light.
 - Do not place the monitor on an unstable cart, stand, tripod or table. Placing the monitor in an unstable manner can cause it to fall, resulting in serious personal injuries as well as damage to the monitor. Use only a cart, stand, tripod, mounting plate or table recommended by the manufacturer or sold with the product.
 - When moving the monitor on a cart, it should be secured to prevent it from falling, and the cart moved carefully. Sudden stops, and uneven floor surfaces can cause the product to fall from the cart.

- The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and shorten the life of the monitor. Do not place the monitor on a bed, sofa, rug, or other similar surface, since it can block the ventilation openings. This monitor is not designed for built-in installation. Do not place the monitor in an enclosed place such as a bookcase or rack, unless proper ventilation is provided and the manufacturer's instructions are followed.
- In case of installation in a confined space, the inside of the monitor product may overheat due to heat from other devices nearby and restricted air circulation, which could damage to the monitor. To prevent damage, please ensure sufficient space for the monitors and use fans to remove heat and maintain the correct operating temperature. (refer to the specifications of the monitor).
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impacted. Be careful not to be injured by broken glass pieces if the LCD panel breaks.
- Keep the product away from heat sources such as radiators, heaters, stoves and other heat generating products (including amplifiers).

Package Contents



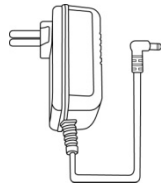
M702 Series Monitor



Sun-Hood



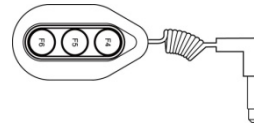
User Manual



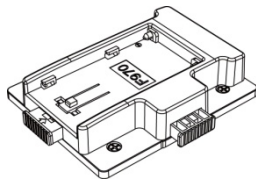
DC Power Adapter



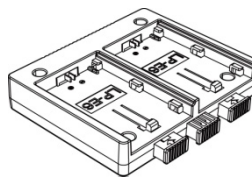
HDMI Cable



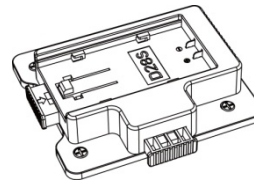
External Wired Remote



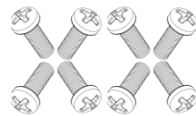
Battery Plate
F970



Battery Plate
LP-E6 (optional)



Battery Plate
D28S (optional)



Screws (8pcs)



Carrying Bag
(optional)



Tripod Ball Head
(optional)

Main Features

Professional Grade Field monitor

The M702-4K is a professional field monitor with a 7" IPS panel and a native resolution of 1920x1200 pixels. Multiple battery plate options make it easy to use anywhere. The dual control knobs, multiple function keys, and wired remote allow for quick and easy menu access. Multiple markers including center marker, safety area marker, aspect marker, and display size insure the entire scene will be captured correctly. A dedicated camera button for DSLR scaling insures there is no black screen when video recording starts, no distortion, and the display size is maximized.

Multiple Input / Output options

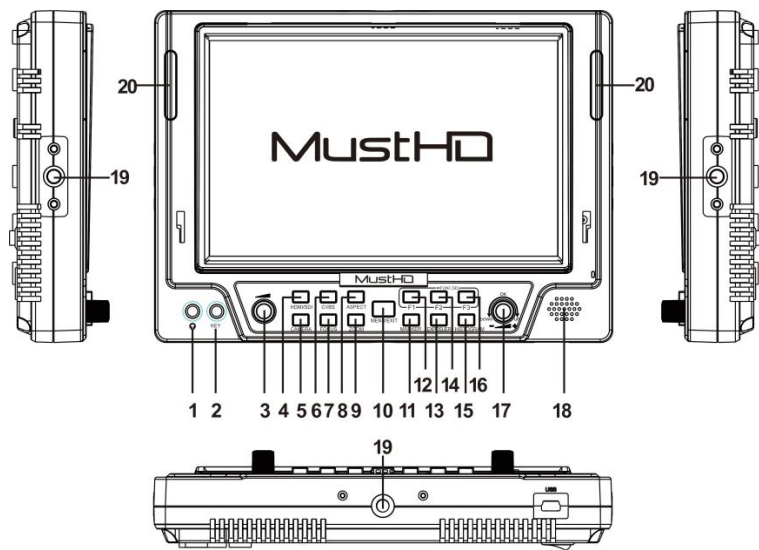
- 3G-SDI Input / Output at 4K (M702S only)
- HDMI Input / Output
- CVBS Input
- Tally
- Internal speaker / Stereo audio out through phone jack.

Comprehensive Feature Set

- Focus Assist
- Histogram
- False Color & Single Color
- Exposure(Zebra)
- Audio Column
- Safety Marker & Nine Grid
- Aspect Ratio
- Pixel to Pixel
- H/V Mirror
- Zoom

Parts & Functions

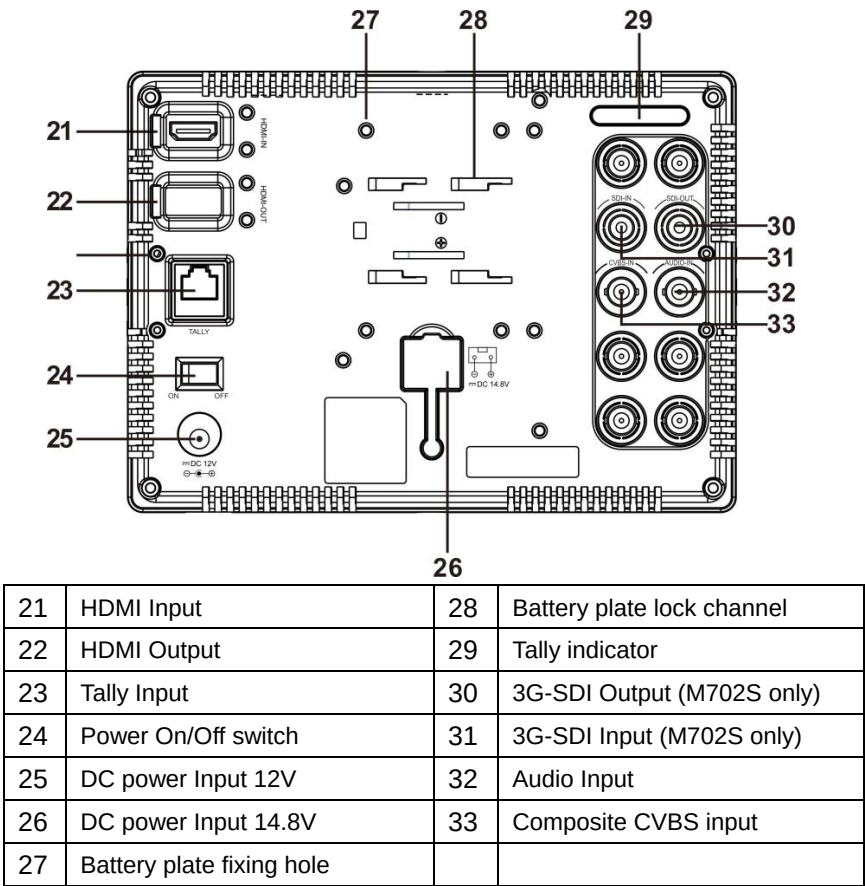
FRONT / SIDE / TOP



1	Earphone Jack	11	Fit Marker
2	F Key Jack	12	User-definable function Key#1
3	Contrast/Brightness Adjustment	13	Exposure
4	Select SDI/HDMI as Input	14	User-definable function Key#2
5	Camera (see page 24)	15	Histogram
6	Select CVBS as Input	16	User-definable function Key#3
7	Focus Assist	17	Control Knob (Up/Down/Confirm)
8	Aspect ratio adjustment	18	Speaker
9	Zoom	19	1/4"-20 threaded mounting hole
10	Menu/Exit	20	Tally indicator

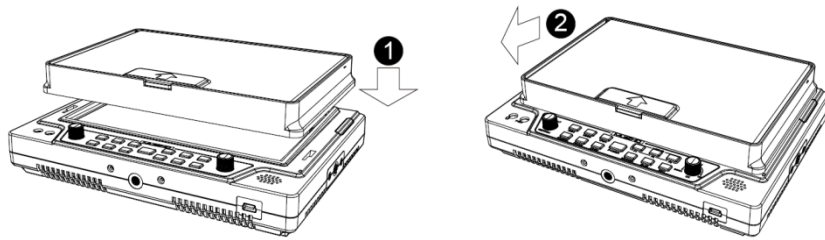
Parts & Functions

BACK



Getting Started

[1] Install Sun-Hood on the Monitor

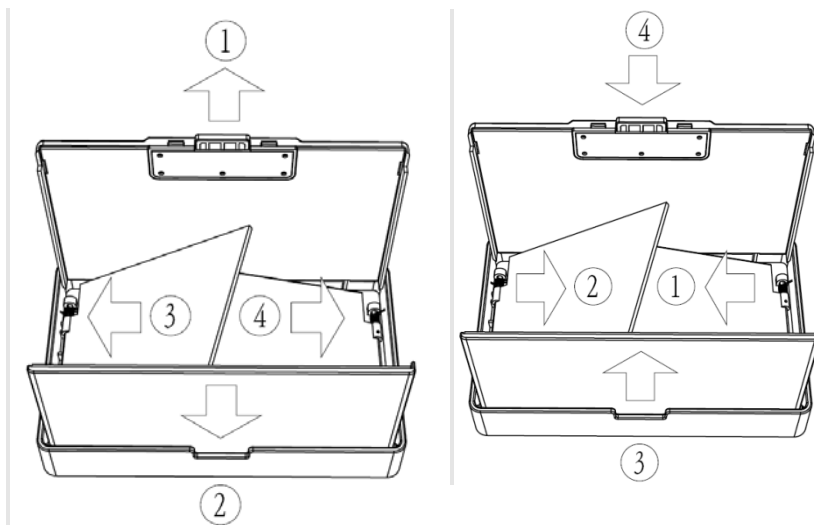


[2] Open / Close the Sun-Hood

Please follow the step sequence to open or close the hood.

Open the Sun-Hood

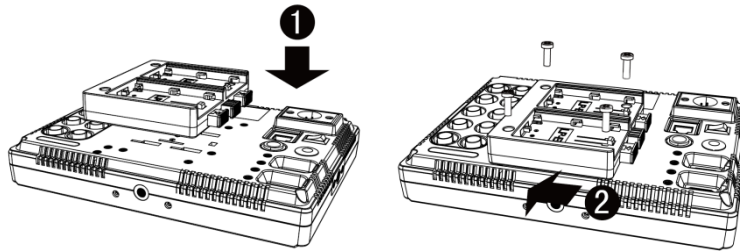
Close the Sun-Hood



[3] Install Battery Plate on the Monitor

The following illustration is based on the optional LP-E6 battery. The standard F970 and optional D28S plates are installed the same way.

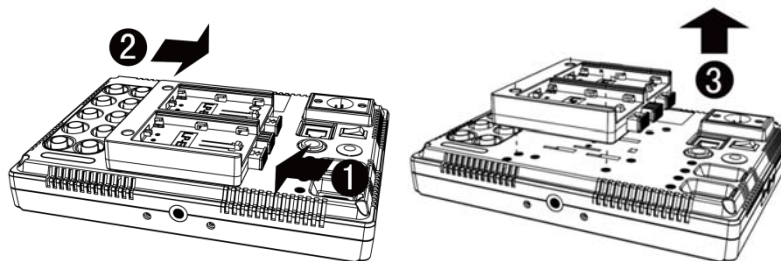
- 1) Put the plate with the tabs in the channel on the monitor back.
- 2) Slide the plate to lock in into position.
- 3) Use the four screws that come in the box to attach the plate tightly.



[4] Uninstall Battery Plate from the Monitor

The following illustration is based on the optional LP-E6 battery. The standard F970 and optional D28S plates are installed the same way. Remove the screws holding the plate

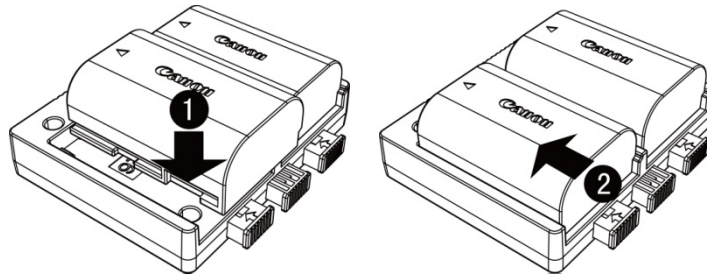
- 1) Press and hold the lock button in the middle while pushing the plate outward.
- 2) Lift the plate upward.



[5] Install Battery on the Battery Plate

The following illustration is based on the optional LP-E6 battery. The standard F970 and optional D28S plates are installed the same way. Position the battery on the plate.

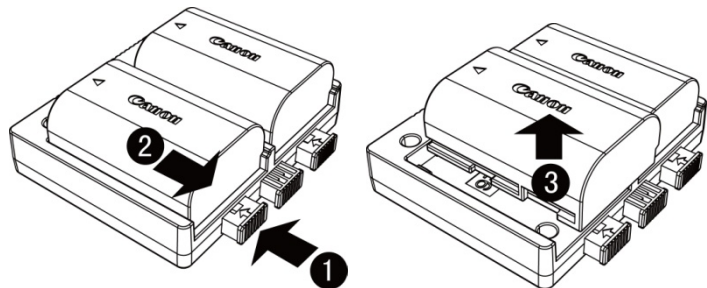
- 1) Push the battery until it clicks in place.



[6] Uninstall Battery from the Battery Plate

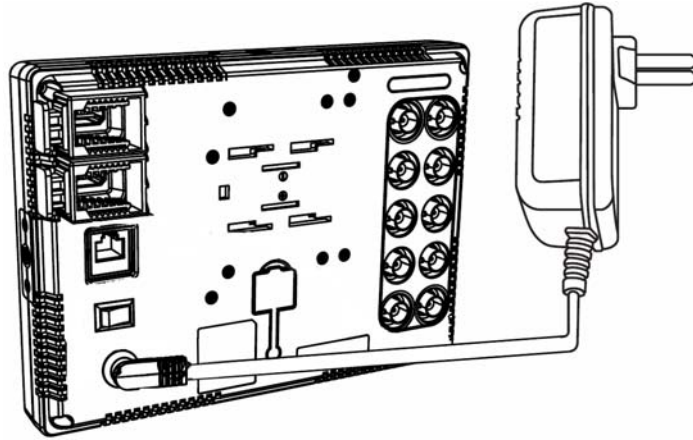
The following illustration is based on the optional LP-E6 battery. For the standard F970 and optional D28S are installed in the same way.

- 1) Press the lock button inward and hold while pushing the battery outward.
- 2) Lift the battery to remove it.



[7] Connect AC Adapter to the Monitor

The external AC adapter that comes with the monitor may be used to power the monitor. Plug the power plug into the monitor and then plug the AC adapter into a power outlet and turn on the monitor. The AC adapter automatically adjusts from 100-240VAC 50/60Hz and outputs 12VDC. Please only use the adapter that comes with the monitor to ensure correct operation and to prevent damage to the monitor. Using an incorrect AC adapter may cause damage to the monitor and hazardous conditions may result. It will also void the warranty of the monitor.

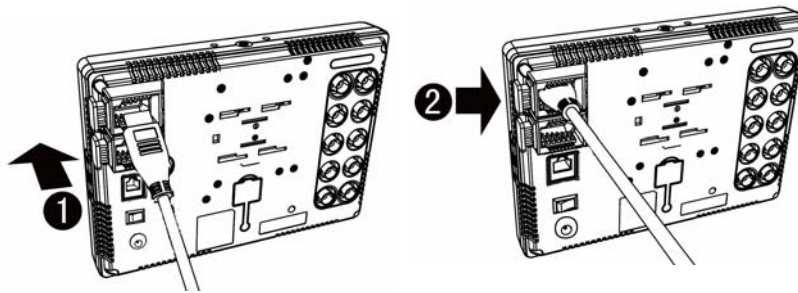


[8] HDMI Locking Connector

The uniquely-designed HDMI locking mechanism helps eliminate accidental disconnection of the cable from the monitor.

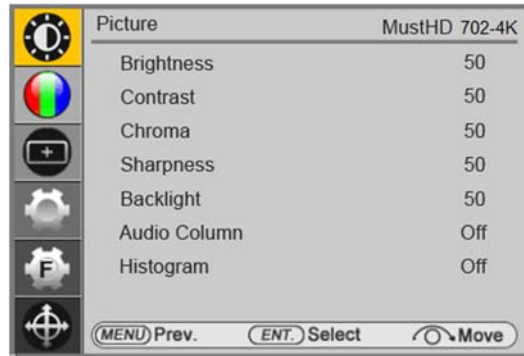
To use the HDMI lock

- 1) Pull the locking clip outward from the monitor and insert the cable into the HDMI port.
- 2) Push the locking clip into the monitor to firmly secure the cable to the monitor.
- 3) To remove the cable, pull the locking clip outward from the monitor to release the cable and then pull the cable to remove it from the monitor.



OSD Menu & Settings

The OSD (On-Screen Display) Menu helps you use and set various functions and settings. The following picture is the menu structure for M702-4K Series Monitor.



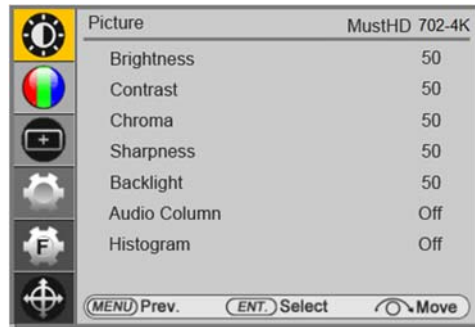
The user can control the various functions and settings by using MENU button and control knobs on the front panel of the monitor.

Menu Control Sequence

1. Press MENU button to activate the OSD menu.
2. Move to a desired menu by turning the control knob.
3. Press the control knob to select a menu and move to select a sub-menu by turning the control knob.
4. Press the control knob to select a desired sub-menu. (The selected sub-menu will be highlighted)
5. Press the control knob to save the new value after adjusting the value by turning the control knob.
6. Press MENU button to return to the previous menu and if there is no previous menu, the OSD menu will be removed from the screen.

Menu Operations

[1] Picture Menu



Brightness: To set the brightness (Offset) level from 0 to 100

Contrast: To set the contrast (Gain) level from 0 to 100

Chroma: To set the chroma level from 0 to 100

Sharpness: To set the sharpness level from 0-100

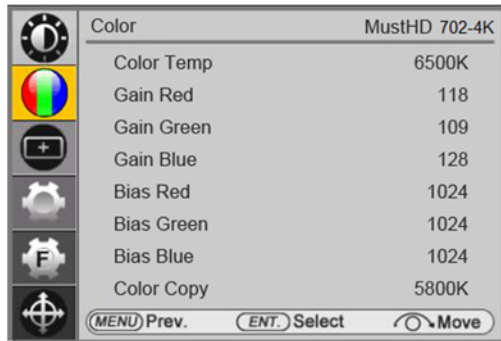
Backlight: To set the backlight level from 0-100

Audio Column: To set audio column function On / Off

Histogram: To set the histogram function On / Off

Note: The user can also press the control knob when the OSD menu is not on the screen to quickly choose brightness, contrast, chroma, sharpness and speaker volume. A menu will appear on the left side of the screen. Set the values by turning the control knob and pressing it to move to the next setting. The menu disappears after 3 seconds.

[2] Color Menu



Color Temp

Controls color temperature and allow instant access to preset color temperature settings. Available color temperature settings are:

3200K, 5800K, 6500K, 9300K and User 1/2/3.

In User 1, User 2, and User 3 modes, custom RGB GAIN and BIAS (Offset) values can be defined.

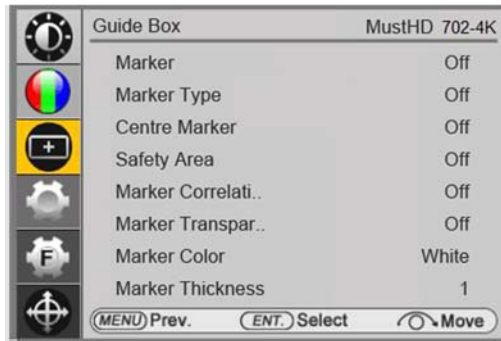
Gain Red/Green/Blue

Used to set R/G/B Gain (or picture, contrast) level from 0 to 255. These settings can only be used in User 1, User 2, and User 3 modes.

Bias Red/Green/Blue

Used to set R/G/B Bias (or Offset which mainly affects black level) from 0 to 2047. These settings can only be used in User 1, User 2, and User 3 modes.

[3] Guide Box Menu

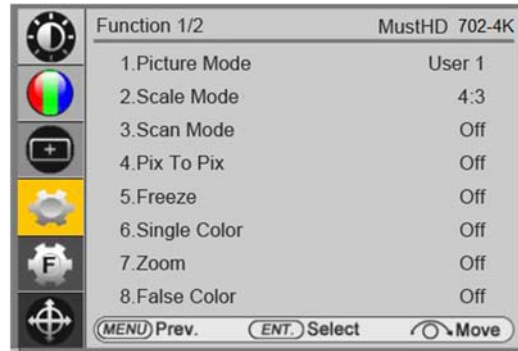


This menu allows the user to activate or deactivate the Marker functions. When the Marker is activated, a border line of the Safety Area will be displayed inside the marker. The marker type may be set to 15:9, 16:9, 16:10, 17:9, 1.85:1, 2.35:1 and 4:3 aspect ratios.

User can also define the maker type, marker transparency, marker color and marker thickness. To do this:

1. Press MENU button to activate the OSD menu.
2. Move to Marker by turning the control knob.
3. Press the control knob to select marker and move to select a sub-menu by turning the control knob.
4. Press the control knob to select a desired sub-menu. (The selected sub-menu will be highlighted).
5. Turn the control knob to select the desired option and press the control knob.
6. Press MENU button to return to the previous menu and if there is no previous menu, the OSD menu will be removed.

[4] Function Menu 1 of 2



1. Picture Mode

In the User 1, User 2, User 3 picture modes, the user can define regularly-used values of brightness, contrast, chroma, sharpness and backlight. User can set the values in the picture mode settings.

2. Scale Mode

This sets the display scale mode between auto, 15:9, 16:9, 16:10, 17:9, 1.85:1, 2.35:1 and 4:3.

3. Scan Mode

The user can set over or under scan via scan mode settings.

4. Pixel to Pixel

It provides pixel count information by using Pixel to Pixel mode.

5. Freeze

Freeze or unfreeze the current display by turning the control knob and scrolling up and down.

6. Single Color

This is an assistant function to help adjust camera color settings. Under the single-color mode, red, green, blue or mono (gray) pixels are used to generate the image. When this is done the hue and saturation can be quickly and accurately adjusted.

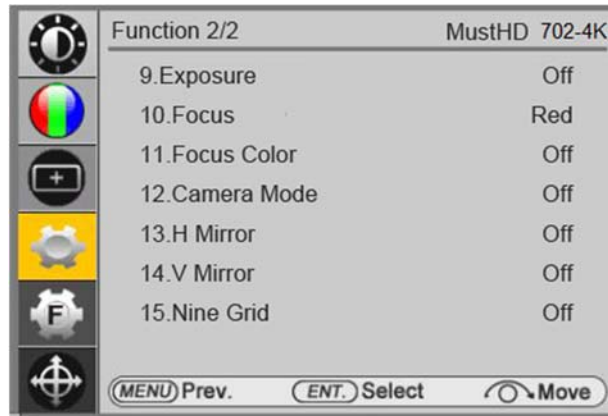
7. Zoom

Used to magnify the image up to 1.1X to 1.9X on a pixel basis and is displayed on full screen. This is useful in checking sharpness or focus of the image.

8. False Color

The False Color filter is used to aid in the setting of camera exposure. When the camera aperture is adjusted, elements in the image will change color based on the luminance or brightness values. This enables proper exposure to be achieved without the use of costly, complicated external test equipment.

[5] Function Menu 2 of 2



9. Exposure

This superimposes zebra over the on-screen image, indicating if an area of the shot is overexposed.

Note: When the OSD menu or ON/OFF menu is removed from the screen, the exposure function will be activated or deactivated.

10. Focus

This helps the user to easily find the right focus by adding a sharp outline on the shape or boundaries of the object until the color indicator outlining the desired area indicates optimal focus.

Note: When the OSD menu or ON/OFF menu is removed from the screen, the focus function will be activated or deactivated.

11. Focus Color

The focus peaking has three color options Red, Green and Blue.

Note: When the OSD menu or ON/OFF menu is removed from the screen, the focus color function will be activated or deactivated.

12. Camera Mode

The Camera mode (activated by pressing the front panel button) turns on DSLR Scaling. Some cameras do not display the correct output and this corrects the problem. When the using Camera mode it will:

- 1) Fill the screen and remove the black area that can be seen in auto-mode.
- 2) Prevent distortion.
- 3) There will not be a black clip when starting video record.

13. H Mirror (Horizontal)

This allows the image to be flipped horizontally.

14. V Mirror (Vertical)

This allows the image to be flipped vertically.

15. Nine Grid

When this feature is turned on it helps frame the image easily. Two equally spaced vertical and horizontal lines are put on the screen dividing it into thirds in each direction creating 9 equal boxes. When the grid is displayed each of the nine boxes can be selected by turning the control knob. When a box is selected, pressing the control knob will magnify that box and fill the complete screen. Pressing the control knob again to return the display to the full screen mode.

[6] F KEY Menu

The F KEY function allows the user to define the functions assigned to the following keys:

- F1 / F2 / F3 keys on the front panel the monitor
- F4 / F5 / F6 keys on the external wired remote

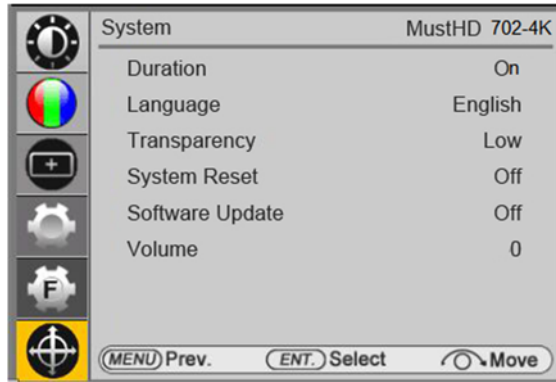
Steps to define a key function:

1. Please press a button (F1 to F6) and do not release your finger until the function menu list displays at the right side of the screen.



2. Turn control knob to scroll up and down to choose the function that is to be assigned to that button.
3. Press the control knob to confirm the selection.

[7] System Menu



Duration: The menu display time can be set at 5 seconds, 10 seconds, 15 seconds, or always (On). When set to On, the menu will stay on the screen until the menu button is pressed.

Language: To select the OSD language in the order of:

English/Chinese/Germany/French/Spanish/Portuguese/Russian/

Transparency: To set transparency between low, medium and high.

•**System Reset:** To change the system configuration back to default setting; When you choose “on”, please press the knob to confirm it.

•**Software Update:** To update software via USB port.

•**Volume:** To set the volume values from 0-100

Product Specifications

LCD	Model	M702-4K Series
	Size	7-inch IPS Panel
	Resolution	1920*1200
	Pixel Pitch	0.078 (H) x 0.078 (W) mm
	Viewing Angle	H: 178 degrees, V: 178 degrees
	Color Depth	16.7M (8-bit)
	Brightness	450 cd/m ² (Center)
	Contrast Ratio	1100:1
	Display Area	151.2 (H) x 94.5 (W) mm
Input	HDMI	1 x
	3G-SDI	1 x (M702S-4K only)
	Composite	1 x RCA CVBS Input
	TALLY	1 x RJ45
Output	HDMI	1 x
	3G-SDI	1 x (M702S-4K only)
Input & Output Signals Supported		480i/480p/576i/576p/720p/1080i/1080p@ 60Hz 3840X2160 @ 24 / 25 / 30 / 60Hz 4096X2160 @ 24 / 25 / 30 / 60Hz,
Audio Out		Analog Stereo (phone jack) Internal speaker (Mixed Mono)
Power		DC 6-20V
Power Consumption		10 Watts (typical)
Operating Temperature		0°C to 45°C (32°F to 113°F)
Storage Temperature		-20°C to 60°C (14°F to 140°F)
Main Body Size (mm/inch)		197.5 x 143.6 x 50.6 (7.78 x 5.65 x 1.99)
Weight		480g

Trouble Shooting

Problem	Solution
The unit does not turn on and/or the power indicator is not on.	• Ensure the power adaptor connected to the monitor correctly. • Ensure the battery has enough electricity. • Check if the connecting pins of the battery plate are in good condition and making solid contact with the monitor.
The monitor is powered on but does not display a signal.	• Ensure that the signal cable is connected correctly. • Ensure that the input channel on the monitor matches the output channel of your camera.
Image is jittery on screen or displayed abnormally.	• Ensure input signal is supported by the monitor.

WEEE Directive & Product Disposal



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

Customer Support

For after sales service and tech support, please contact your local distributor or us by the following email:

support@musthd.com