

7" Camera Control Monitor
with 2000 nits Ultra Brightness and Touch Screen.

User Guide



Important Safety Instructions



The device has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the device should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Please do not place the display screen towards the ground to avoid scratching the LCD surface.
- Please avoid heavy impact.
- Please do not use chemical solutions to clean this product. Simply wipe with a soft cloth to keep clean of the surface.
- Please do not place on uneven surfaces.
- Please do not store the monitor with sharp, metallic objects.
- Please follow the instructions and trouble-shooting to adjust the product.
- Internal adjustments or repairs must be performed by a qualified technician.
- Please keep user guide for future reference.
- Please unplug the power and remove the battery if long-term no-use, or thunder weather.

Safety Disposal For Old Electronic Equipment

Please do not regard the old electronic equipment as municipal waste and do not incinerate old electronic equipment. Instead please always follow local regulations and hand it over to the applicable collection stand for safe recycling. Ensure that these waste materials can be effectively disposed of and recycled to prevent our environment and families from negative effects.

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1. Main Features

Features

- Capacitive touch screen
- Camera control
- HDMI 2.0 input & loop output
- 3G-SDI input & loop output
- 2000 cd/m² high Brightness
- Dual Batteries plate
- 100% BT.709
- HDR (High Dynamic Range) supporting HLG, ST 2084 300/ 1000/ 10000
- 3D-Lut option of color production includes 17 default camera logs and 6 user camera logs
- Gamma adjustments (Off/ 1.8/ 2.0/ 2.2/ 2.35/ 2.4/ 2.6/ 2.8)
- Color Temperature (3200K/ 5500K/ 6500K/ 7500K/ 9300K/ User)
- Markers & Aspect Mat (Center Marker, Aspect Marker, Safety marker, User Marker)
- Check Field (Red, Green, Blue, Mono)
- Assistant (Waveform, Vector scope, Peaking, False Color, Exposure, Histogram)
- FN User-definable function button

2. Production Description

2.1 Buttons & Interfaces



1) Light Sensor: Auto dimming function.

2) **TOUCH** Button:

- Short press: To power on. Also for touch function switch on/off.
- Long press: To power off.

3) Power Indicator: The indicator light turns green when powered on.

- 4) INPUT Button: Switch the signal between SDI and HDMI.
- 5) FN Button: User-definable function button. Default as Peaking function.
- 6) Battery Slot (Left/Right): Compatible with NP-F series battery.
- 7) Battery Release Button: Push button to remove the battery.
- 8) Earphone Jack: 3.5mm earphone slot.
- 9) 3G-SDI Signal Input.
- 10) 3G-SDI Signal Loop Output.
- 11) USB: For 3D-LUT load and firmware upgrade.
- 12) HDMI 2.0 Signal Input.
- 13) HDMI 2.0 Signal Loop Output.
- 14) DC 7-24V Power Input.
- 15) LANC Port: To connect LANC cable for camera control.
- 16) 1/4 inch screw mount: For Hotshoe Mount

2.2 Battery Mount Plate



With Uninterruptible Power Supply Design.

- Battery Placement

Please slide NP-F series battery down to the bottom.

- PUSH Button:

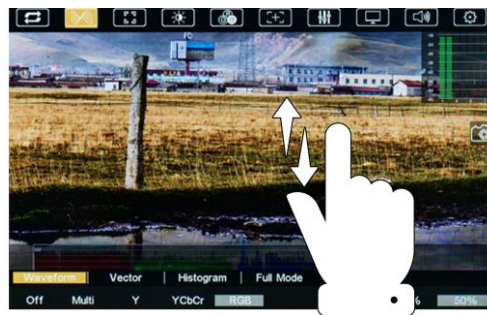
Press the “PUSH” button, and slide the battery up to remove it.

3. Menu Setting

Before setting the functions, please make sure the device is connected correctly.

3.1 Shortcut Touch Gestures

- Center swipe up or down: Activate or hide the menu.



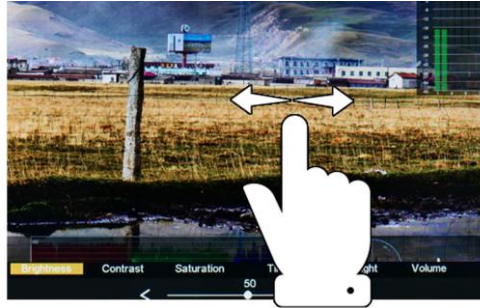
- Left swipe up or down: Adjusting the back light level.



- Right swipe up or down: Adjusting the volume level.



- Swipe left or right: Activate or hide the shortcut menu.



- Two-finger zoom: When no menu, zoom-in and zoom-out of image, and support moving image when zooming-in.



- Short press the Power Button to switch the touch function off/on.

3.2 Menu Operation

3.2.1 Input



Input signal option: SDI/HDMI.

3.2.2 Waveform



- **Waveform**

- When activated, select one of the waveform modes from among [Multi], [Y], [YCbCr] and [RGB].

[Multi]: Display waveform, histogram, vector, and level meter simultaneously.

[Y]: Display Y Waveform.

[YCbCr]: Display YCbCr Waveform.

[RGB]: Display R/G/B Waveform

- Adjust the transparency of the waveform, histogram and level meter among [off], [25%] and [50%].

- [Off]: The background of waveform / histogram / level meter is shown at 100% black.

- [25%]: The background of waveform / histogram / level meter is shown at 75% black.

- [50%]: The background of waveform / histogram / level meter is shown at 50% black.

- **Vector**

Use this item to activate or deactivate Vector

- **Histogram**

Use this item to activate or deactivate the histogram.

- **Full Mode**

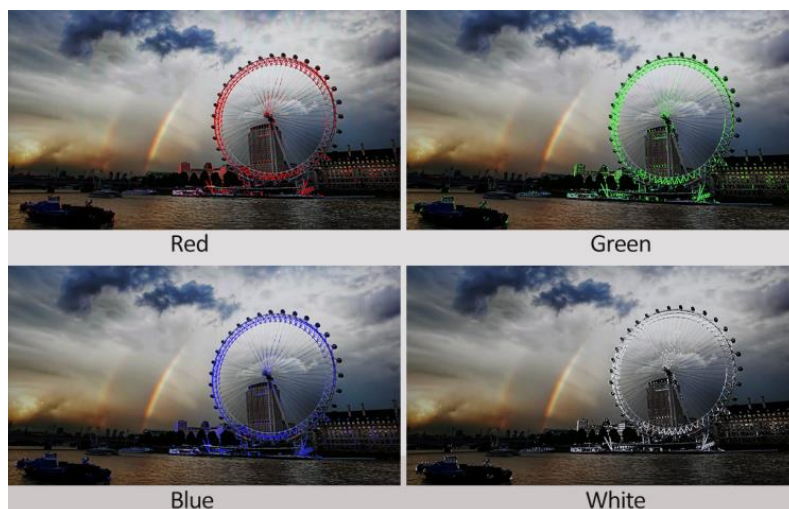
When activated, select one of the waveform, Vector and Histogram mode from among [Off], [Y], [YCbCr], [RGB], [Vector] and [Histogram].

3.2.3 Peaking

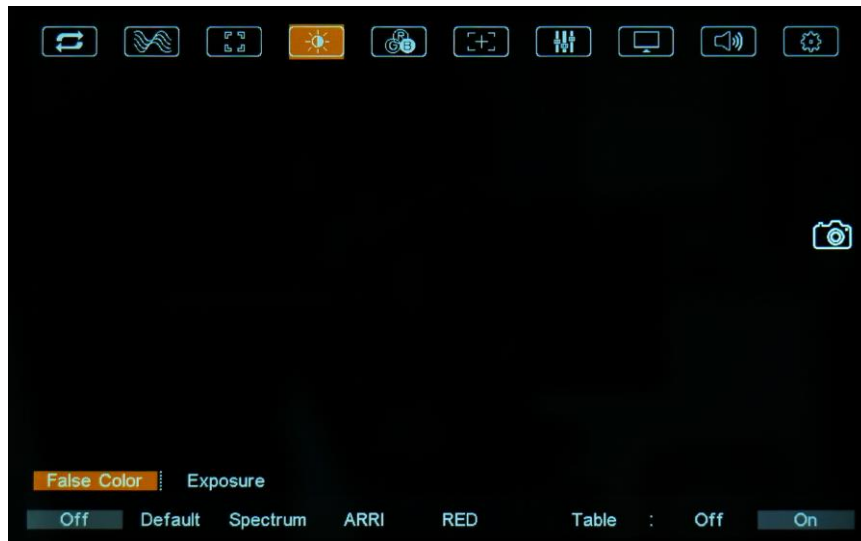


Use this item to activate or deactivate the peaking function. It is used to aid the camera operator in obtaining the sharpest possible picture.

- Peaking Level: Adjust the level of peaking from 1-100, default is 50. The higher peaking level is, the more obvious peaking effect is.
- Peaking Color: Choose the color of focus assist lines among [Red], [Green], [Blue], and [White].



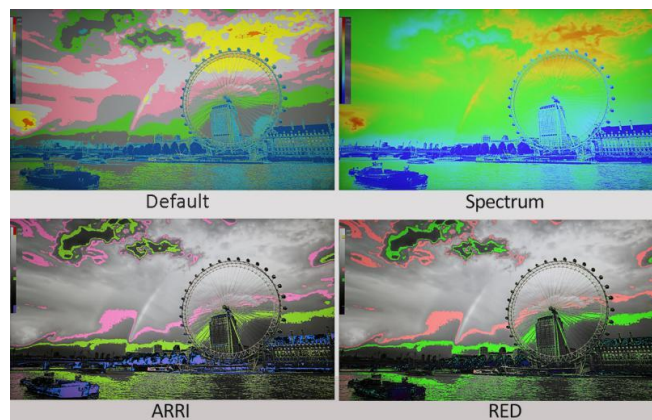
3.2.4 Luminance Distribution



● False Color

The function represents the exposure levels of the image by replacing the colors of the image with a standard set of colors.

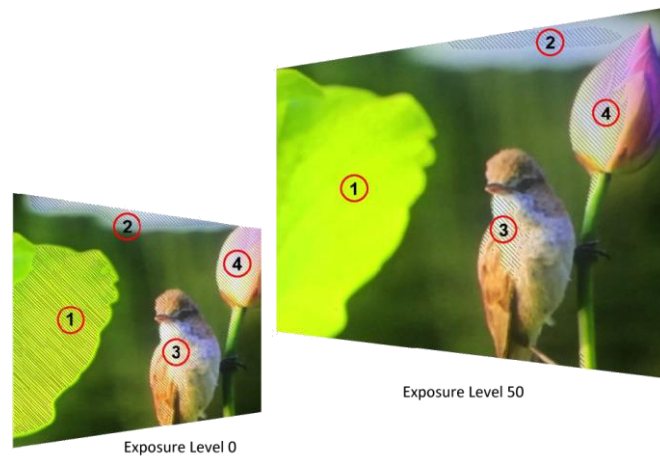
- When activated, [Default], [Spectrum], [ARRI] and [RED] are for optional.
- False Color Table: Activate or deactivate the false color table. The range of the false color table is between 0-100 IRE.



● Exposure

The exposure feature helps the user achieve optimum exposure by displaying diagonal lines over areas of the image that exceed the setting exposure level.

- Activate or deactivate the exposure function.
- Exposure Level: Adjust the level of exposure among 0-100. Default value is 100.



3.2.5 Color Calibration



- **Camera LUT**

When activated, select one camera LUT mode among [Def. LUT] and [User LUT].

- **Def. LUT**

17 kinds of default LUT models are for optional:

[SLog2ToLC-709], [SLog2ToLC-709TA], [SLog2ToSLog2-709], [SLog2ToCine+709],
 [SLog3ToLC-709], [SLog3ToLC-709TA], [SLog3ToSLog2-709], [SLog3ToCine+709],
 [ArriLogCTo709], [ArriLogCToP3DCI], [CLogTo709], [VLogToV709], [JLogTo709],
 [JLogTo709HLG], [JLogTo709PQ], [Z7 NLogTo709] and [D780 NLogTo709].

- **User LUT**

Use this item to choose one of the user LUT modes (1-6). Please load the user LUT as the following steps:

- The user LUT must be named with .cube in the suffix.

Note! The device only supports the file with 17x17x17 / 33x33x33 and with BGR for both Data format and Table format. If the format does not meet the requirement, please use tool “Lut Tool.exe” to transform it.

- Naming the user LUT as User1-User6.cube, then copy the user LUT into USB flash disk. Insert the USB flash disk to the device, the user LUT is saved to the device automatically at the first time. The power indicator will flash during saving the user LUT, then stop flashing when saved completely.

If the user LUT is not loaded for the first time, the device will pop up a prompt message, please choose whether to update or not. If there is not a prompt message, please check the format of document system of the USB flash disk or format it (The document system format is FAT32). Then try it again.

Note! After saving the LUT through the USB flash disk, please restart the device.

● Gamma/HDR

- Gamma

Use this item to choose the display Gamma: [Off], [1.8], [2.0], [2.2], [2.35], [2.4], [2.6] and [2.8].

- HDR

When activated, the display reproduces a greater dynamic range of luminosity, allowing lighter and darker details to be displayed more clearly. Effectively enhancing the overall picture quality.

Select one of the HDR presets: [ST 2084 300], [ST 2084 1000], [ST 2084 10000] and [HLG].

HDR OFF



HDR ON

- **Color Space**

Select the display gamut from among [Native], [SMPTC-C], [Rec709] and [EBU].

- **Calibration**

- Select [Off] or [On].

If the device needs to be calibrated color, please operate as following,

- Connect the device with the PC via HDMI interface.
- Make sure the device and color calibration equipment to work more than 30 minutes.
- After the previous step, activate the Color Calibration function of the device and color calibration software to calibrate the color (See the document “CMS Color Calibration Process” for details).
- It will generate a document “Rec709.cube” after calibrated, then copy this document to USB flash disk.
- Insert the USB flash disk to the device and save the document. This document “Rec709.cube” will be found under Color Space Option.

- **Comparison En**

Use this setting to activate or deactivate the Comparison En function. When activated, the screen displays the comparison of both original image and customized image as shown.



Option: [Off], [Gamma/HDR], [Color Space], [Camera LUT]. Default: [Off].

3.2.6 Marker

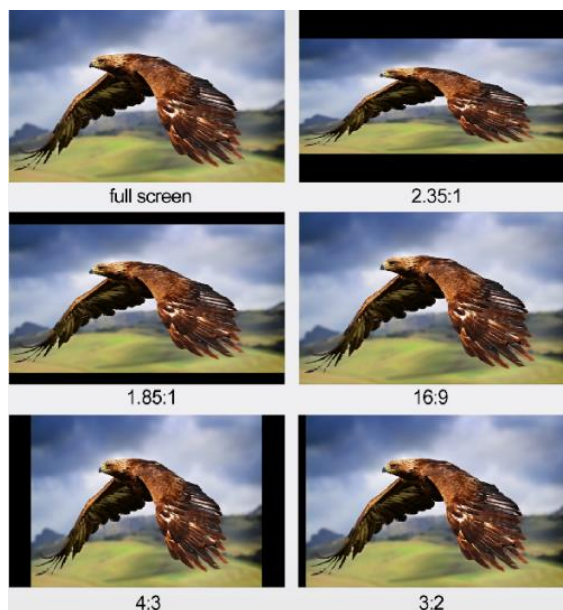


- **Center Marker**

Select [On] to display the center marker “+” and [Off] not to display it.

- **Aspect Marker**

Select the aspect ratio of the marker: [Off], [16:9], [1.85:1], [2.35:1], [2.39:1],[4:3], [3:2], [Grid], [User].



- **Safety Marker**

Used to select and control the size and availability of the safety area. Select the size of the safety markers: [95%], [93%], [90%], [88%], [85%], [80%].

Note! When [Aspect Marker] is selected as [Grid], the safety marker cannot be displayed.

- **Marker Color**

Select the color of marker displayed on the screen: [Black], [Red], [Green], [Blue], and [White]. Default: [White]

- **Aspect Mat.**

-Thickness: Adjust the line width of the center marker, aspect marker and safety marker among [1-15]. The step value is 1. Default value: 6.

- Aspect Mat.: Darkens the area of the outside of Marker. The degrees of darkness are from [0] to [7]. Default: [Off].



- **User H1**

Adjust user marker in the position of vertical markers from 1 to 1920, default value is 1 (Step value is 1) .

- **User H2**

Adjust user marker in the position of vertical markers from 1 to 1920, default value is 1920 (Step value is 1).

- **User V1**

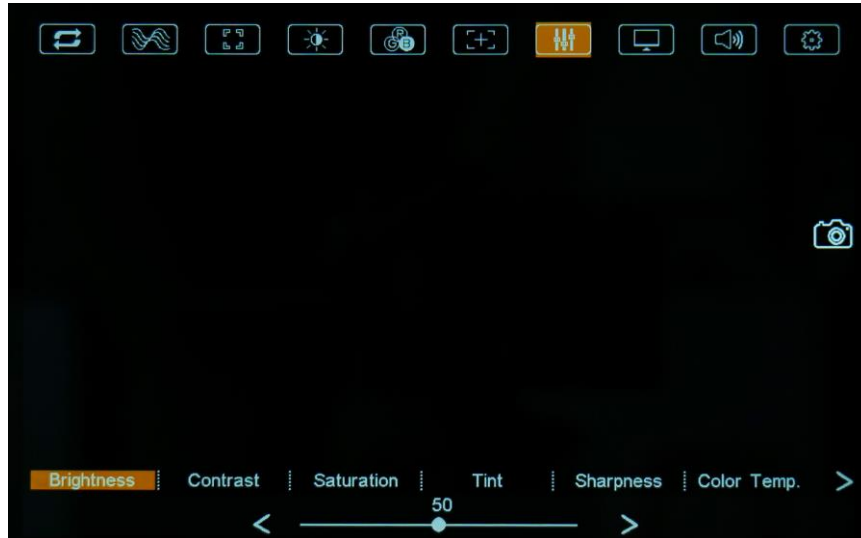
Adjust user marker in the position of horizontal markers from 1 to 1200, default value is 1 (Step value is 1).

- **User V2**

Adjust user marker in the position of horizontal markers from 1 to 1200, default value is 1200 (Step value is 1).

Note: User maker only in [Aspect Maker]- [User] mode available.

3.2.7 Parameter Adjustment



- **Brightness**

Control the degree of brightness between 0-100, default value: 50.

- **Contrast**

Control contrast ratio between 0-100, default value: 50.

- **Saturation**

Adjust the color intensity between 0-100, default value: 50.

- **Tint**

Adjust tint between 0-100, default value: 50.

- **Sharpness**

Control sharpness of the image between 0-100, default value: 0.

- **Color Temp.**

Use this item to choose one of the color temperature presets: [3200K], [5500K], [6500K], [7500K], [9300K], [User]. Default: [6500K].

Note! Only under [User] mode, R/G/B Gain and Offset can be adjusted.

- **R Gain**

Adjust the R Gain of the current color temperature from 0 to 255. Default value: 128.

- **G Gain**

Adjust the G Gain of the current color temperature from 0 to 255. Default value: 128.

- **B Gain**

Adjust the B Gain of the current color temperature from 0 to 255. Default value: 128.

- **R Offset**

Adjust the R Offset of the current color temperature from 0 to 511. Default value: 255.

- **G Offset**

Adjust the G Offset of the current color temperature from 0 to 511. Default value: 255.

- **B Offset**

Adjust the B Offset of the current color temperature from 0 to 511. Default value: 255.

3.2.8 Display



- **Scan**

- Adjust the scan mode among [Aspect], [Pixel To Pixel], and [Zoom].

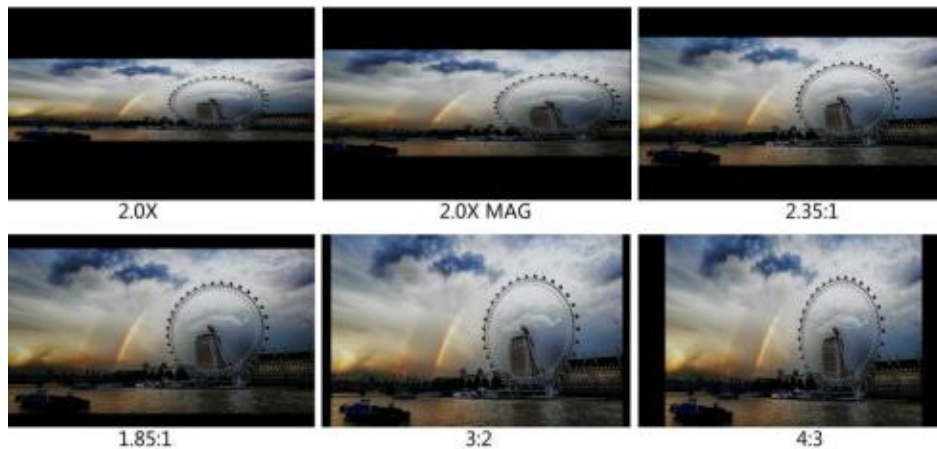
Note:

- Only when the [Aspect] mode under [Scan] is selected, the markers including center marker, aspect marker and safety marker can work.

- Only when the [Zoom] mode is selected, the zoom scale can be adjusted among [10%], [20%], [30%], [40%], [50%], [60%], [70%], [80%], [90%] and [User].

- **Aspect**

- Select the aspect of the image among [Full], [16:9], [4:3].



- Overscan: Activate or deactivate overscan.

Note! Only when the [Aspect] mode under [Scan] is selected, the aspect and overscan function can be adjusted.

- **Anamorphic De-squeeze**

Restore the deformation of image caused by anamorphic lens. Select the option among [Off], [1.33X], [1.5X], [1.8X], [2X] and [2X MAG].

- **H/V Delay**

Select one of the H/V modes: [Off], [H], [V], [H/V]. When H/V Delay on, the blanking portions of the input signal will be displayed horizontally or vertically.

- **Freeze**

Choose [On] to capture one frame of current image on the screen, and choose [Off] to close freeze function.

- **Image Flip**

Allow the displayed image to be flipped horizontally or vertically by selecting one of flip mode among [H], [V], [H/V].



- **Check Field**

Use the check field modes for monitor calibration or to analyze individual color

components of an image. In [Mono] mode, all color is disabled and only a grayscale image is shown. In [Red], [Green], and [Blue] check field modes, only the selected color will be shown.

- **Time code**

Use this item to activate or deactivate the Time Code. When activated, [LTC], [VITC] are for optional. Default: [Off].

Note: Time code is only available under SDI mode.

3.2.9 Audio



- **Volume**

Adjust the volume among 0-100. Default Value: 50.

- **Level Meter**

Select whether to activate or deactivate level meter. Default: [On].

- **Audio Channel**

In HDMI mode, select one of the audio channels among [CH1&CH2], [CH3&CH4], [CH5&CH6], [CH7&CH8]. Default: [CH1&CH2]

In SDI mode, select the audio channels among [CH1&CH2].

3.2.10 Setting



- **UI Config**

- Language: [English] and [中文] for optional.
- OSD Display Timer: [10s], [20s], and [30s] for optional. Default: [10s].
- OSD Transparency: [Off], [25%], [50%] for optional. Default: [25%].

- **HDMI**

- HDMI EDID

Select HDMI EDID between [4K]and [2K], default: [4K].

- RGB Range

Select RGB Range between [Limited] and [Full], default: [Limited].

- **Back Light**

Adjust the level of the back light from [Auto], [Standard], [Outdoor], [Custom], Custom Value: 0-100. Default: [Auto].

- **Color Bar**

Option: [Off], [100%], [75%], default: [off].

- **F Config**

Select FN "Configuration" for setting. Functions of FN button can also be customized: [Peaking], [False Color], [Exposure], [Histogram], [Full Mode], [Waveform], [Vector], [Timecode], [Mute], [Level Meter], [Center Marker], [Aspect Marker], [Safety Marker], [Overscan], [Scan], [Aspect], [Anamorphic], [Color Space], [HDR], [Gamma], [Camera LUT], [Check Field], [H/V Delay], [Freeze], [Image Flip], [Color Bar].

Default: [Peaking].

- **System**

- Reset

When select [On], restore the factory settings.


- Fan

Option: [Auto], [Off], [On]. Default: [Auto].

[Auto]: The monitor will automatically turn on/off the fan according to the setting value of fan auto temp.

3.2.11 Camera Control



Tapping the “Camera” icon  on the right edge to access the UI of camera control. Action in the UI of camera control are reflected to video camera in real time.

- REC

Controlling the record function of video camera on and off

- FOCUS


Controlling the focus of video camera.

- ZOOM

Controlling the zoom in and out of video camera lens.

- IRIS

Controlling the aperture size of video camera.

-  Click the icon to activated Play back function

Menu--Controlling the menu items in video camera



-- To scroll up the item of menu



--To scroll down the item of menu



--On the menu, used to return to the previous menu.



--On the menu, used to enter the submenu menu of the selected item

OK----- To confirm the selection.



--Play back the record files of video camera

DISP---Displaying the current status information of video camera

FUNC---Controlling the menu function

MAG----Control the ZOOM IN function of video camera

Note: This camera control feature only supports Sony brand cameras with S-Lanc function.

4. Product Parameters

| | | |
|------------------|---------------------|---|
| Display | Touch Screen | Capacitive touch |
| | Panel | 7" LCD |
| | Physical Resolution | 1920×1200 |
| | Aspect Ratio | 16:10 |
| | Brightness | 2000 cd/m ² |
| | Contrast | 1200: 1 |
| | Viewing Angle | 160°/ 160°(H/V) |
| Power | Input Voltage | DC 7-24V |
| | Power Consumption | ≤16W |
| Source | Input | HDM 2.0 x1 3G-SDI x1 |
| | Output | HDMI 2.0 x1 3G-SDI x1 |
| Supported Format | 3G-SDI | 1080P 24/25/30/50/60, 1080pSF 24/25/30, 1080i 50/60, 720p 50/60 |

| | | |
|-------------|-----------------------|---|
| | HDMI 2.0 | 2160p (24/25/30/50/60) 1080P 24/25/30/50/60, 1080i (50/60), 720p 50/60 |
| Audio | HDMI | 8ch 24-bit |
| | Ear Jack | 3.5mm-2ch 48kHz 24-bit |
| | Speaker | 1 |
| Environment | Operating Temperature | 0°C~50°C |
| | Storage Temperature | -20°C~60°C |
| General | Dimension (LWD) | 186x128x29mm |
| | Weight | 520g |

*Tip: Due to constant effort to improve products and product features, specifications may change without notice.

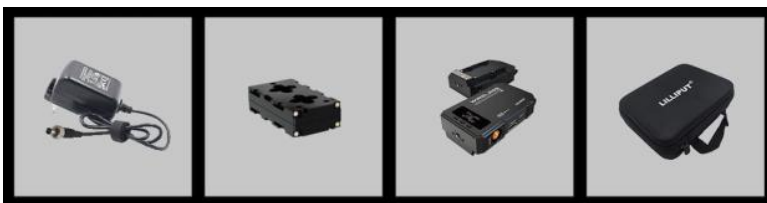
5. Accessories

● Standard Accessories



- | | |
|------------------------|-----|
| 1) 0.8M HDMI A-D cable | 1pc |
| 2) LANC Cable | 1pc |
| 3) Hot Shoe Mount | 1pc |
| 4) USB Drive Disk | 1pc |

● Optional Accessories



- | | |
|--------------------------------|------|
| 1) 12V 2A DC Powder Adapter | 1pc |
| 2) Battery Plate Adapter | 1pc |
| 3) Wireless Video Transmission | 1set |
| 4) Handbag | 1pc |

6. 3D-LUT Loading

6.1 Format Requirement

- LUT format
 - Type: .cube
 - 3D Size: 17x17x17
 - Data Order: BGR
 - Table Order: BGR
- USB flash disk version
 - USB: 2.0
 - System: FAT32
 - Size: <16G
- Color calibration document: lcd.cube
- User LUT: User1.cube ~User6.cube

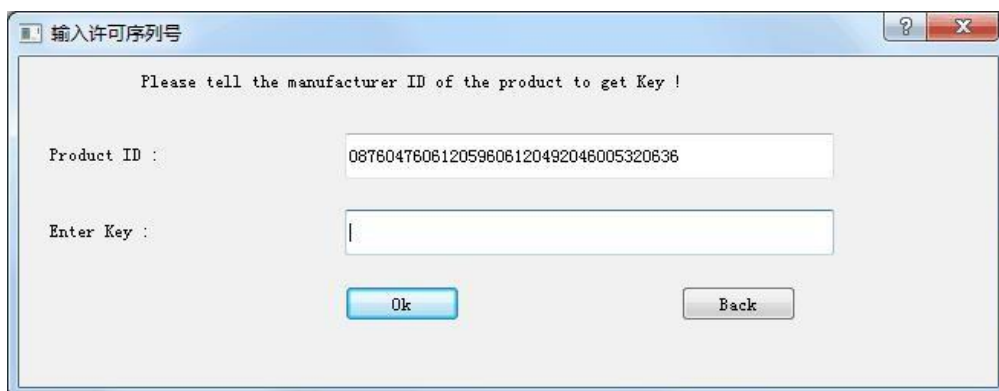
6.2 LUT Format Conversion

The format of LUT should be transformed if it doesn't meet monitor's requirement.

It can be transformed by using LUT Converter (V1.3.30).

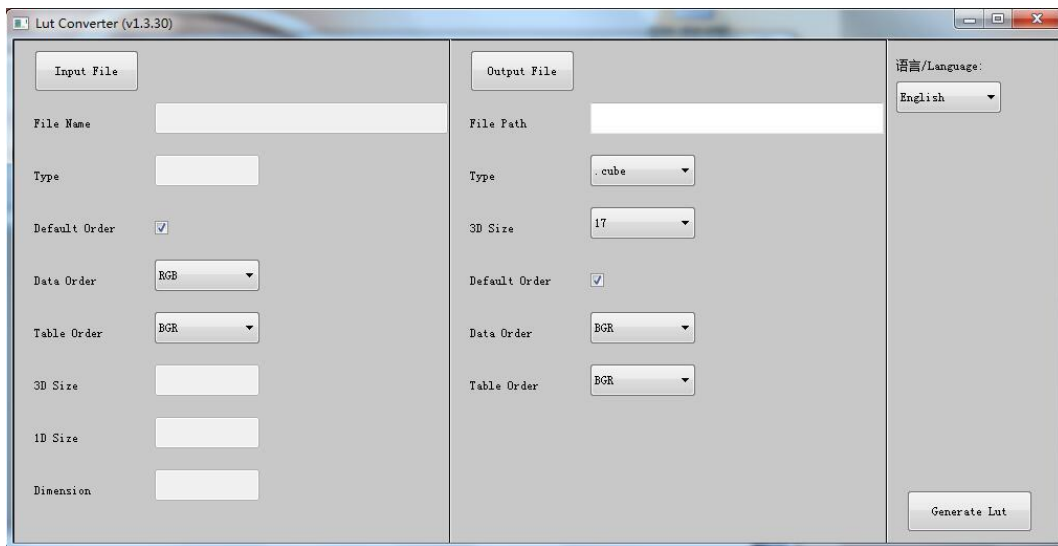
6.2.1 Software User Demo

- Activate LUT converter.

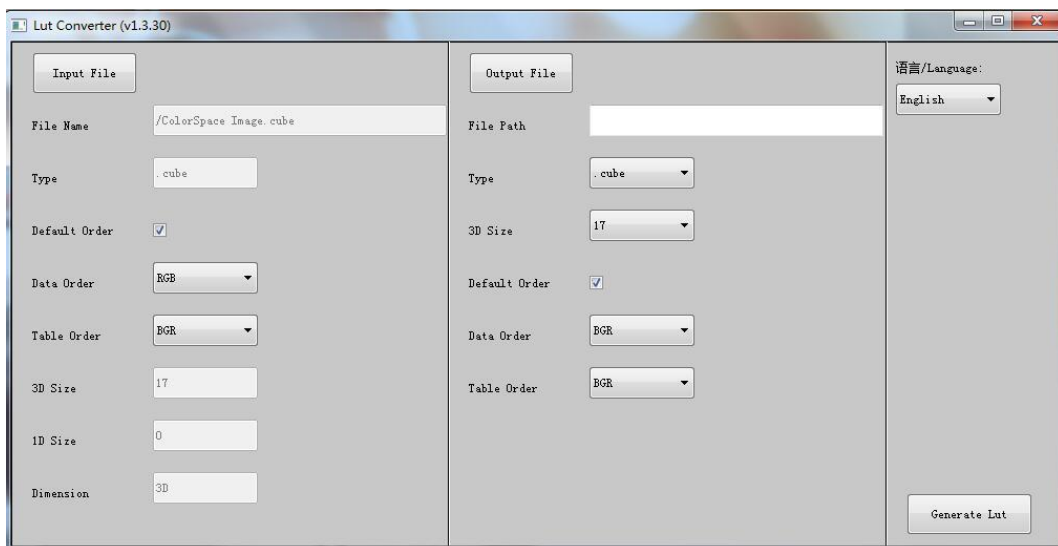


One individual Product ID for one computer. Please send the ID number to Sales to get an Enter Key. Then the computer gets the permission of the LUT Tool after input the Enter Key.

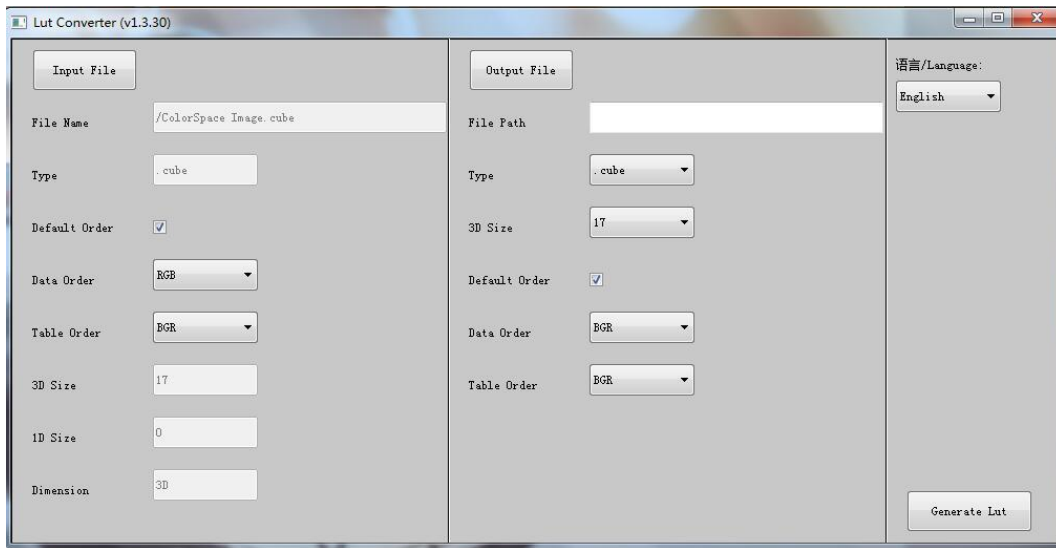
- Enter the LUT Converter interface after input the Enter Key.



- Click Input File, then select *LUT.



- Click Output File, choose the file name.



- Click Generate LUT button to finish.

6.3 USB Loading

Copy the needed files to the root directory of the USB flash disk. Plug the USB flash disk into USB port of the device after power on.

When the LUT is loaded, the monitor will be automatically loaded after the USB flash disk is inserted. (If the device doesn't pop-up the prompt window, please check if the LUT document name or the USB flash disk version meets monitor's requirement.)

It will pop-up a prompt message if the update completed.

7. Trouble Shooting

- 1) Only black-and-white display:

Check whether the color saturation is properly setup or not.

- 2) Power on but no pictures:

Check whether the cable of HDMI is correctly connected or not.

Whether the signal source has output or the input source mode is not switched correctly.

- 3) Wrong or abnormal colors:

Check whether the cables are correctly and properly connected or not. Broken or loose pins of the cables may cause a bad connection.

4) When on the picture shows size error:

Press “MENU → DISPLAY → ASPECT →OVERSCAN” to zoom in/out pictures automatically when receiving HDMI signals. Or the ZOOM in function is turned on.

5) How to delete 3D-LUT User camera log:

The User camera LUT cannot be deleted directly from the monitor, but can be replaced by reloading the camera log with same named.

6) Other problems:

Please press “MENU” button and choose “SYSTEM→ Reset →On”.

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