5.5″ 12G SDI On-Camera Monitor

User Manual

Foreword

Thank you for purchasing our 5.5-inch 12G-SDI on-camera monitor. Please read this manual carefully before using the unit. Have a great experience!

Cautions

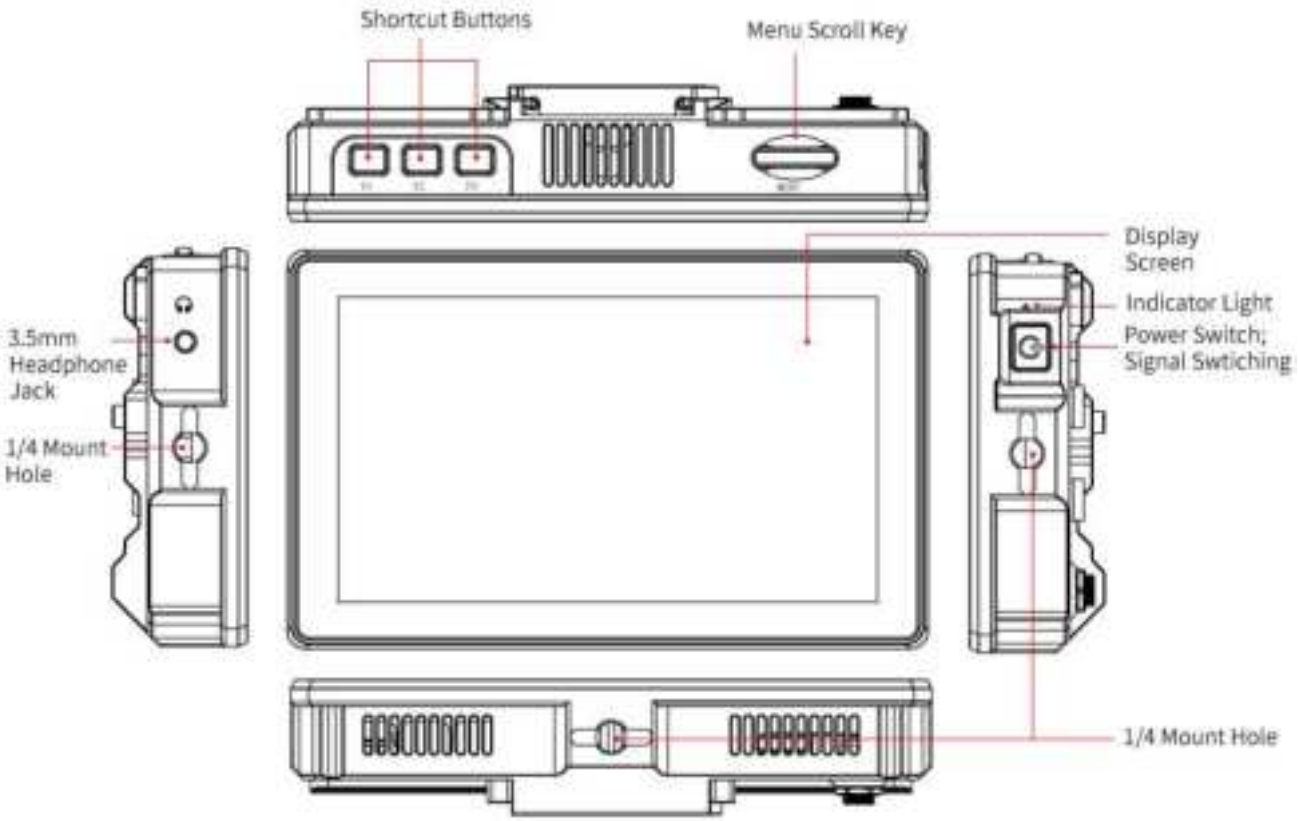
- Please avoid the heavy impact and drop onto the ground when move the product.
- The screen of this product is made of glass. Please do not drop the screen towards the ground. Keep away from injury if the screen is broken.
- Keep the product away from the heat source, and avoid the prolonged exposures to the sun as the LCD screen will be damaged.
- To avoid damaging the product, please do not take apart or repair the unit by yourself without the adjustable components in the unit.
- In order to better maintain the LCD screen and protect the cover, please follow the following ways to avoid damages.
  1. Please refrain from using the hard objects to hit the screen.
  2. Please do not force to wipe the screen.
  3. Please do not use the chemical solutions to clean the screen.
  4. Please do not spray any detergent on the screen.
  5. Please do not write on the screen directly.
  6. Please do not stick on the screen.
  7. Please simply wipe with a clean soft cloth and make sure no water on the screen.

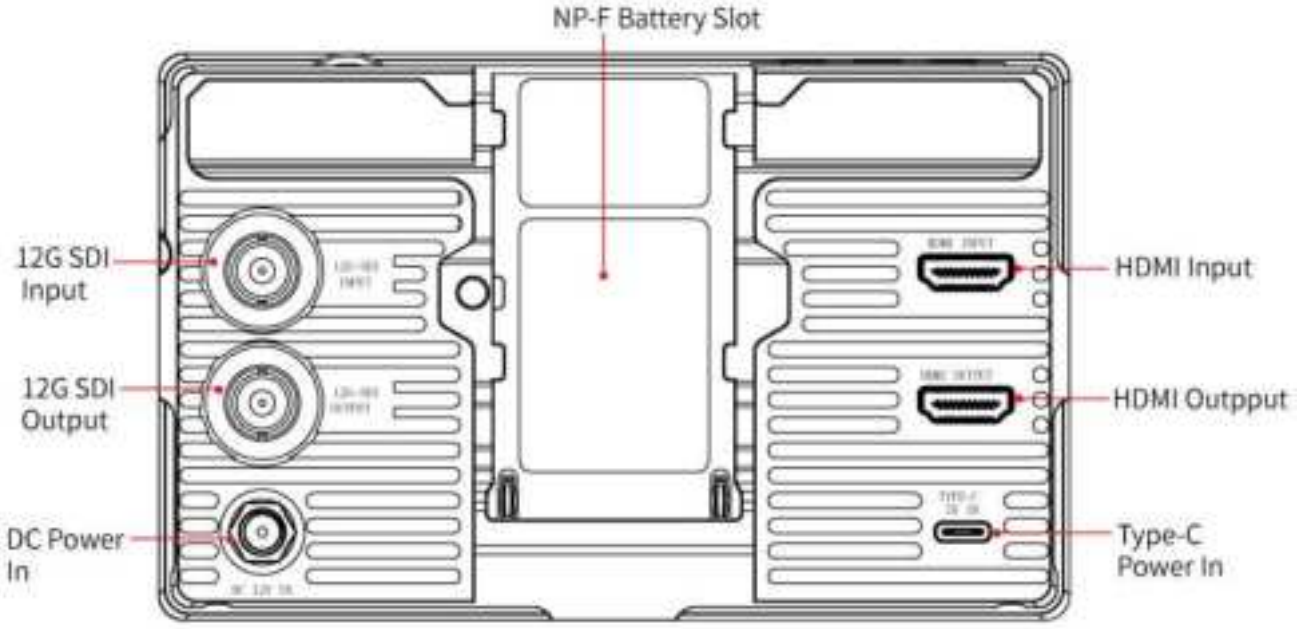
Key Features

- 5.5-inch full HD IPS screen with 10bit color depth
- Touch screen menu operation, improve shooting efficiency
- 1200nits daylight viewable
- Rugged aluminium housing
- 12G-SDI input and output, meet more professional production
- Calman software calibrates colors each unit before leaves the factory
- Support HDR monitoring, what you see is what you get
- Support 3D LUT Log to REC.709 and user 3D LUT upload(up to 32)
- With Waveform, Vector scope, Histogram, Focus Assist, Monochrome etc. functions, can help you accurately exposure and focus every shot.
- Stereo Earphone output

Contents

Product Overview





Power Supply Way

(1) The rear cover of the monitor is equipped with a NP-F battery plate, which is applicable to NP-F series of batteries.

- **Sony NP-F battery plate for battery of Sony DV:**

Sony F970 F960 F950 F930 F770 F750 F730 F570 F550 F530 series.

Remark: Please take off the battery from the monitor if you don't use the monitor in a long time.

(2) The rear of the monitor has a DC 12V input power port (suitable use 1.5A power adapter，DC5.5*2.1mm power plug) and supports 7 ~ 24V wide voltage. The DC power adapter need to be purchased separately.

(3) The rear of the monitor also has a Type-C 5V input power port. This port can be connected to the power bank for power supply and is not used for data transmission; it is recommended to be used only for local power supply, and it is not recommended to connect other devices to provide loop-out power.

Menu Operation Instruction

After the monitor is properly connected to the power supply, the indicator light display red .The monitor will turn on automatically and the indicator light turn s yellow. After the signal is connected, the indicator light turns green. Gently press ⏻ button can quickly switch signal mode.

Touch Screen Menu Operation (turn on the screen touch function)

①.The touch function can be set as a shortcut key via **Menu - -User Option - -Shortcut Key - -F1, F2 or F3- -Touch Switch**. When the menu is not displayed, you can press it directly turn on or off the touch function. For example, you set it as F1, please press F1

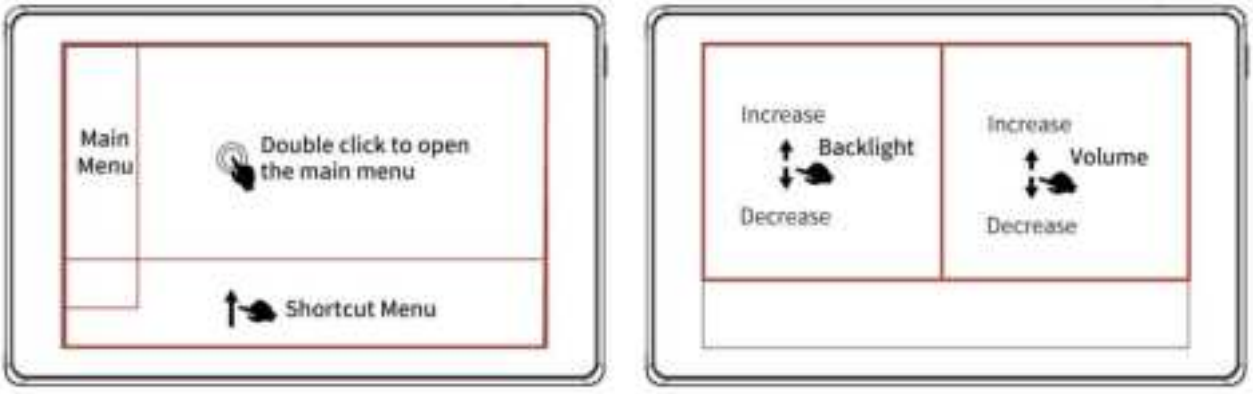
②. Double-click on the screen to open the main menu (show on the left side of the screen) and click on the corresponding menu to display the secondary menu. You can enter the corresponding function option and click directly to select or set. Click the touch screen to exit the menu.

③. When the menu is not displayed, swipe up from the bottom of the screen to open the shortcut menu, swipe left or right select the needed function and click on the corresponding menu box to turn on or turn off the corresponding function. (remark: the shortcut menu can't set the detail function or parameters, you can set on main menu)

④. When the menu is not displayed, on the left side of the screen (1/2 split screen), you can directly adjust the brightness of the screen backlight; on the right side of the screen (1/2 split screen), you can directly adjust the volume.

Menu Operation Instruction

Figure:



MENU Wheel Menu Operation

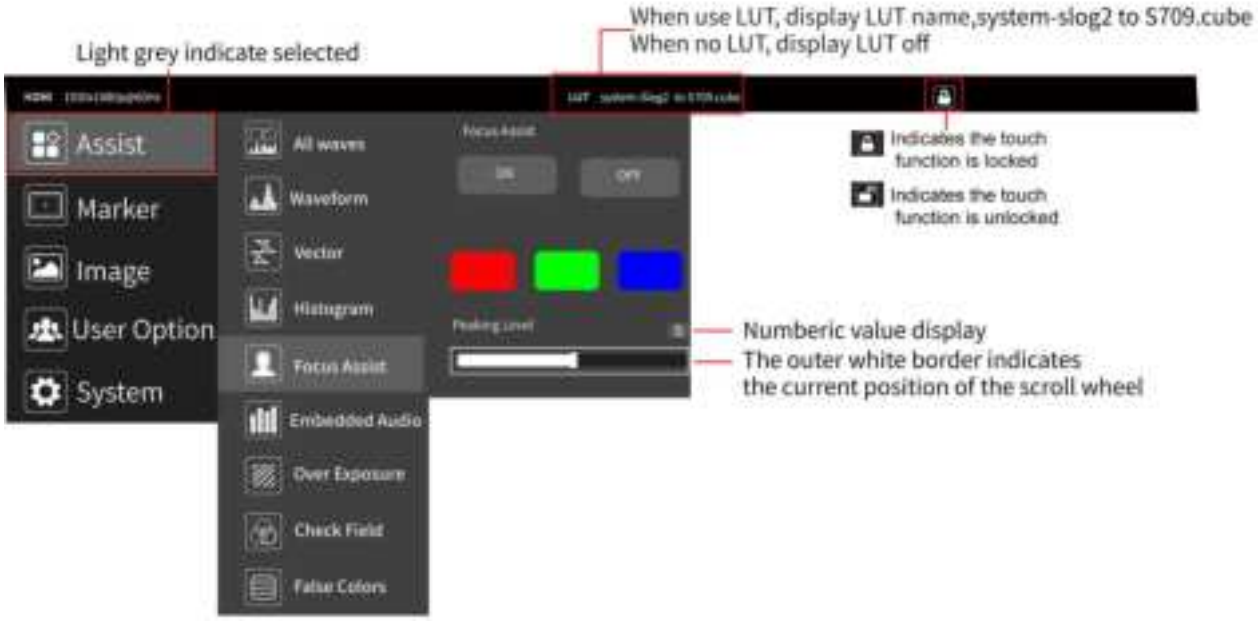
①. When the menu is not displayed, directly rotate the wheel to backlight or volume adjustment. The wheel option can be set to backlight or volume via menu --left right key

②. When the menu is not displayed, long press the MENU wheel to open the shortcut menu (below the screen), rotate the wheel to select the shortcut menu option, press the wheel to directly turn on/off the function.

③. Short press the MENU wheel to open the main menu (on the left side of the screen), rotate the wheel to select menu. After selected, press the wheel to show the secondary menu, then rotate the wheel to select. After selected, press the wheel to enter function menu, rotate the wheel to select or set option function, press the wheel to confirm after selected or set, then the icon will show gray.

④. Long press the MENU wheel to return or return the menu

MENU UI Instruction



Menu Function Instruction

Assist

 **All Waves**	**ON, OFF** After turning on, waveform, vector, histogram and embedded audio will be shown.
 **Waveform**	**ON, OFF** **Mode: RGB, YUV, Y** **Waves Trans.:Off, 25%,50%,75%** Position X: 0~100 (moving the waveform horizontally) Position Y: 0~100 (moving the waveform vertically) This essential feature assists with the calibration of professional video cameras. It shows the overall brightness of the image assisting the video professional in correcting exposure. The waveform feature also checks the evenness of the lighting when lighting a chroma key or background.
 **Vector**	**ON, OFF** **Position X: 0~100** (moving the Vector horizontally) **Position Y: 0~100** (moving the Vector vertically) Shows how saturated the image is and where the pixels in the image land on the color spectrum.
 **Histogram**	**ON, OFF** **Mode: RGB1, RGB2, Y** **Position X: 0~100** (moving the histogram horizontally) **Position Y: 0~100** (moving the histogram vertically) **Y Histogram** A quantitative tool to check the picture brightness, display different color for different brightness **RGB Histogram** It can display the graphic of color tone distribution, can intuitively display the exposure status of the image, and display overlapping histograms in red, green, and blue channels

Menu Function Instruction

 **Focus Assist**	**ON, OFF** **Color: Red, Green, Blue** **Peaking Level: 1~10** After turned on, the **Focus Level (1～10)** and **Focus Color** can be adjusted. It highlights the areas that are in focus so you are able to quickly focus the camera and not miss crucial shots.
 **Embedded Audio**	**ON, OFF** Display an audio diagram after enabled to help you understand the audio status being used. **Position X: 0~100** (moving the audio level horizontally) **Position Y: 0~100** (moving the audio level vertically)
 **Over Exposure**	**ON, OFF** After the exposure is turned on, the **Exposure Level (10RE～100IRE),,** can be adjusted.
 **Check Field**	**On, Off** **Mode: red, green, blue, gray** When enabled, hue and saturation adjusted quickly and accurately.
 **False Color**	**ON, OFF** **Mode: Normal, ARRI** An image that depicts an object in colors that differ from those a photograph (a true color image) would show.
 **Time Code** **(Only under SDI signal)**	**On, Off** **Mode: LTC, VITC**

Menu Function Instruction

Marker

 **Grids**	**ON, OFF** **Mode: 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8, 9x9, Custom** **Rows: 2~9** **Columns: 2~9** When selecting **Custom**, you can custom the rows and columns of the grid **Color: Red, Green, Blue, Black, White, Gray** The area of the picture can be divided into 4 ,9, 16, 25, 36, 49,64,81 equal grids or custom the grid.
 **Safe Frames**	**OFF, ON** **Mode: 80%, 85%, 90%, 93%, 96%, 2.35:1** **Marker Line Color: Red, Green, Blue, Black, White, Gray**
 **Center Marker**	**ON, OFF** **Marker Line Color: Red, Green, Blue, Black, White, Gray**
 **Ratio Marker**	**ON, OFF** **Mode: 4:3, 13:9, 14:9, 15:9, 16:9, 1.85:1, 2.35:1** **Marker Line Color: Red, Green, Blue, Black, White, Gray** **Modified Mark: 0~5**

Menu Function Instruction

Image

 **Scan Mode**	**Under Scan, Over Scan**
 **Aspect Ratio**	**Auto, 16:9, 16:10, 4:3, 5:4, 1.85:1, 2.35:1, Full Screen**
 **Anamorphic**	**ON, OFF** **Mode: 1.33x, 1.6x, 2.0x, 2.0x mag, User** **Under User, you can custom adjust nx (1.20x~2.00x)** Allows you to use anamorphic lenses or adapters and see the image unsqueezed, even if your camera does not de-squeeze in camera.
 **Image Flip**	**ON, OFF** **Mode: H Flip, V Flip, H_V Flip**
 **Zoom Mode**	**ON, OFF** **Mode: 2X, 4X, 9X, 16X, User** **Under User, you can adjust 100%~200%** It is HD signal in any part, an amplification for high quality close-up.
 **Image Freeze**	**ON, OFF**
 **P2P** **(Pixel to Pixel)**	**ON, OFF** Enable the filmmaker to check the image from the 1:1 signal source without scaling.This feature is essential for capturing optimum detail.

Menu Function Instruction

User Option

LUT	**ON, OFF** **LUT Import: Confirm** **LUT Table: display built-in SLOG2, SLOG3, LOGC, VLOG and the custom LUTs** LUT is a table for quickly looking up and output specific color data. By loading different 3D-LUT tables, it can quickly recombine color tone to form different color styles.
HDR	**HDR: ON, OFF** **Mode: HLG1, HLG2, HLG3** HDR can provide more dynamic range and the details of image, it is better to reflect the visual effects in the real environment.
Display Adjustment	**Backlight: 0~100** Adjust the screen brightness **Brightness: 0~100** Adjust the image brightness **Contrast: 0~100** Adjustment of the ratio between the brightest and darkest parts of the image . When adjusting, pay attention to the sense of hierarchy in the image. If the proportion is too large or too small, it can cause the image to lose its colorful appearance. **Saturation: 0~100** Adjustment of color concentration **Tint: 0~100** It is the most accurate standard for distinguishing various different colors. Determine what a certain color is actually color via the color appearance.

Menu Function Instruction

 **Color Adjustment**	**Color Gamut: DCI-P3, REC709** **Display Range: Auto, Limit, Full** This feature allows for the selection of a grayscale range. The Limited grayscale range is 16-235, and the Full grayscale range is 0-255. (Grayscale represents changes in image brightness, using varying gray levels to depict brightness in different image areas. In grayscale, brightness increases from black to white, typically denoted by a numerical range from 0 to 255, where 0 signifies black and 255 indicates white, and intermediate numbers indicate varying grayscale levels.) 1. If the dark part of the picture lost, the details cannot be seen clearly. For example, the input signal is in the range of 0-255, but the monitor is set Auto or Limit, the brightness of 0-15 and 236-255 is removed, resulting the dark part details unclear. You can set to Full. 2. If the picture is gray, the black part turned gray. For example, the input signal is in the range of 16-235, but the monitor is set Full , resulting the black part turn gray. At this time,you can set to Auto or Limit. **Color Temp.: 5600K, 6500K, 9300K, User** Under the “**user**”, the **red**, **green**, and **blue** values of the image can be adjusted (0~255)

Menu Function Instruction

Shortcut Key	**F1~F3** Shortcut List: All Waves, Waveform Vector, Histogram, Embedded Audio, Center Marker, Safe Frames,Grids, Focus Assist, False Colors , Over Exposure, Anamorphic, Image Freeze, Check Field, Zoom Mode, Image Flip, Aspect Ratio, Touch Switch **Set the shortcut function** **e.g.:** Tap the **Shortcut Key** in **User Option,** and select **F1 Function**, then select one of function on Shortcut List, such as “Analysis”. So when you exit menu, you could press F1 directly on the front of panel to turn on “Analysis” function. Same setting for F2~F4
Left Right Key Set	**Backlight, Volume**

System

Language	English, 简体中文, Español, Português, Français, Nederlands, Deutsch,日本語, **繁體中文, 한국어로, русский язык**
OSD Option	**OSD Time: off, 15s, 30s, 45s** Select the display time of the menu on the screen **OSD Trans: OFF, 25%, 50%, 75%** Adjust the transparency of the menu picture background on the screen. No Signal: Red, Green, Blue, Black, White, Gray

Menu Function Instruction

 **Volume**	**Mute: ON, OFF** Volume: 0~100 Adjusting the speaker volume
 **Cooling Fan**	**ON, OFF** **Mode:1~5** **Note: the fan default to ON and with 3 mode**
 **Source**	**Input Source: HDMI, SDI**
 **Reset**	After confirmed, the system back to original setting.
 **Firmware Update**	**Firmware Version** (display the current firmware version) **FTY CAL: On, Reset** **Reset:** If you import your own LUT calibration but encounter abnormalities or poor result, you can clear the calibration LUT by clicking "Reset" in FTY CAL and return to the factory calibration. **Confirm** Each monitor has color calibration before ex-factory, the factory calibration button turn on by default. After turning off, the monitor will without has color calibration, suggest don't turn it off. How to upgrade? 1. USB flash driver format Support FAT32 2. After copying the update file to USB flash driver insert to Type-C to USB adapter and connect with the TYPE-C interface of monitor , press MENU key **Confirm** to update. 3. The monitor will turn off automatically after finishing, please turn on manually 4. Check the firmware version whether the latest one

Custom LUT Load Instruction

1. USB flash driver format FAT32

2. Max Files Limit Maximum 32 Lut files

3. File requirements

- The LUT file format suffix should be .cube
- Single file not exceeded to 7.9Mb
- Support LUT-3D-Size 16,17,32,33,64,65

Remark: LUT file name must be English or Arabic numerals

4. Steps for loading

4.1 Make sure USB flash driver insert to Type-C to USB adapter and connect with the TYPE-C interface of monitor

4.2 Enter main menu  --LUT--**Lut Import -- Confirm** to load

the monitor will auto detect the USB flash driver

If there is valid lut file in USB flash driver, the monitor will load lut files and show “[n] name. The [n] shows the quantity number. The “name” should in lut files’ name. If load successful, the screen will show “complete[n]”. [n] Stands for the quantity number for lut files should under 32.

PS: How to clear up the imported LUTs?

Insert a empty USB flash driver to the monitor, enter main menu  --**LUT**--**Lut Import -- Confirm,** the imported LUTs will be clear up.

Custom LUT Calibration Instruction

If you have professional equipment and instrument and want to calibrate the monitor by self. Please take note the following points:

USB flash driver format FAT32

2. Max Files Limit Maximum 32 Lut files

3. File requirements

- The LUT file format suffix should be .cube
- Single file not exceeded to 7.9Mb
- Support LUT-3D-Size 16,17,32,33,64,65

- For P3 color calibration, file name should be @User_P3xxxx.cube, the red font can't be changed, the xxxx can be custom. For example, @User_P3_123456789.cube

- For 709 color calibration, file name should be @User_709xxxx. cube, the red font can't be changed,the xxxx can be custom. For example, @User_709_abcdefg.cube.

4. Steps for loading

4.1 Make sure USB flash driver insert to Type-C to USB adapter and connect with the TYPE-C interface of monitor

4.2 Enter main menu **"User Option"**--**LUT--Lut Import -- Confirm** to load

4.3 After loading, the file will show like below

Custom LUT Calibration Instruction

4.4 If you import your own LUT calibration but encounter abnormalities or poor result, you can clear the calibration LUT by clicking "Reset" in FTY CAL and return to the factory calibration.

Support Formats

12G-SDI Input & Output Support Format	1080i (60/59.94/50) 720p (60/59.94/50/30/29.97/25/24/23.98) 1080p(60/59.94/50/30/29.97/25/24/24sF/23.98/23.98sF) 2048×1080(30p/30PsF/29.97p/29.97PsF/25p/25PsF/24p/24PsF/23.98p/23.98PsF) 4K 3840×2160p (60/59.94/50/48/47.95/30/29.97/25/24/23.98) 4K 4096×2160p (60/59.94/50/48/47.95/30/29.97/25/24/23.98)
HDMI Input & Output Support Format	1080i (60/59.94/50) 720p (60/59.94/50/30/29.97/25/24/23.98) 1080p(60/59.94/50/30/29.97/25/24/24sF/23.98/23.98sF) 4K 3840×2160p (60/50/30/29.97/25/24/23.98) 4K 4096×2160p (60/50/30/29.97/25/24/23.98)

Technical Parameters

Panel Size	5.5” touch screen
Resolution	1920 × 1080 pixels
Dot Pitch	0.063(H) x 0.063 (V) mm
Color Display	1.07B
Color Depth	10bit (8+2bit)
Color Gamut	88% DCI-P3, 100% REC709
Aspect Ratio	16:9
Brightness	1200cd/m^2
Contrast	1000:1
Response Time	25ms
Viewing Angle	80°/80°(L/R) 80°/80°(U/D)
Backlight	LED
Backlight Adjustment Mode	Manual
Input	12G-SDI, HDMI 2.0
Output	12G-SDI, HDMI 2.0
Audio	3.5mm Stereo Headphone
Power Input Voltage	7～24V
Power In	DC IN 12V, Barrel (5.5mm outer, 2.1mm inner); Type-C 5V Note: please use 5V/3A or above Type-C power supply
Power Consumption	≦12W
Unit Size	145.25x90.3x30.85(mm)
Unit Weight	306g
Mount Points	(3) ¼-20 thread points (right, left, bottom)
Working Temperature	-20℃～70℃
Storage Temperature	-30℃～80℃

Trouble Shooting

1. Only black and white or monochrome picture:

① please check saturation, brightness & contrast adjustment.

② Please check "Monochrome" is in black, white or monochrome image or other condition.

2. NO Image after put on the power

① Check if signal cable connecting is in good condition.

② Check signal cable connecting, and make sure to use the standard adapter to connect the monitor. If power is supplied by battery, please check if the battery is fully charged.

3. Earphone No sound

① Check if Volume control do not open, press the volume button, and try to increase the volume.

■ If there are still other problems, please contact with our related technologists.

★ As we are improving product features and product performance, so if there is any change on the specification without prior notice.