

# 23.8" Cinematic Monitor

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12G SDI | 8K | Multiple Display



## User Manual

## Foreword

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

## Cautions

1. Please avoid drop onto the ground and lead to the device broken when move the product.
2. The screen of this product is made of glass, please keep away from injury if the screen is broken.
3. Keep the product away from the heat source. Avoid the prolonged exposures to the sun as the LCD screen will be damaged.
4. To avoid damaging the product, please do not take apart or repair the unit by yourself without the adjustable components in the unit.

- To protect the screen or housing better, please follow these ways as below to avoid the damages:

Please refrain from using the hard objects to hit the screen

Please do not force to wipe the screen or housing

Please do not use the chemical solutions to clean the screen or housing

Please do not spray any detergent on the screen or housing

Please do not write on the screen directly

Please do not stick anything on the screen or housing

Please simply wipe with a clean soft cloth and make sure no water on the screen or housing

## Vorsichtsmaßnahmen

1. Bitte vermeiden Sie den Fall auf den Boden und führen Sie zum gebrochenen Gerät, wenn Sie das Produkt bewegen.
2. Der Bildschirm dieses Produkts besteht aus Glas, halten Sie sich bitte von Verletzungen

fern, wenn der Bildschirm gebrochen ist.

3. Halten Sie das Produkt von der Wärmequelle fern. Vermeiden Sie längere Sonneneinstrahlungen, da der LCD-Bildschirm beschädigt wird.
4. Um Beschädigungen des Produkts zu vermeiden, nehmen Sie bitte das Gerät nicht ohne die einstellbaren Komponenten im Gerät auseinander oder reparieren Sie es nicht selbst.

- Um den Bildschirm oder das Gehäuse besser zu schützen, folgen Sie bitte diesen Wegen wie unten, um die Schäden zu vermeiden:

Bitte unterlassen Sie die Verwendung der harten Objekte, um den Bildschirm zu treffen

Bitte zwingen Sie nicht, den Bildschirm oder das Gehäuse zu wischen

Bitte verwenden Sie die chemischen Lösungen nicht, um den Bildschirm oder das Gehäuse zu reinigen

Bitte sprühen Sie kein Reinigungsmittel auf den Bildschirm oder das Gehäuse

Bitte schreiben Sie nicht direkt auf den Bildschirm

Bitte kleben Sie nichts auf den Bildschirm oder das Gehäuse

Bitte wischen Sie einfach mit einem sauberen weichen Tuch ab und stellen Sie sicher, dass kein Wasser auf dem Bildschirm oder Gehäuse vorhanden ist.

## **Précautions**

1. Lorsque vous déplacez le produit, évitez de tomber sur le sol et de causer des dommages à l'équipement.
  2. L'écran de ce produit est en verre, s'il vous plaît rester loin de la foule si l'écran est cassé.
  3. Gardez le produit loin de la source de chaleur. Évitez l'exposition prolongée au soleil, car l'écran LCD peut être endommagé.
  4. Pour éviter d'endommager le produit, veuillez ne pas démonter ou réparer l'unité vous - même sans pièces réglables à l'intérieur de l'unité.
- Afin de mieux protéger l'écran ou le boîtier, veuillez suivre les méthodes ci - dessous

pour éviter les dommages:

S'il vous plaît ne pas frapper l'écran avec des objets durs

Veuillez ne pas forcer l'écran ou le boîtier

Veuillez ne pas utiliser de solutions chimiques pour nettoyer l'écran ou le boîtier

Veuillez ne pas pulvériser de nettoyant sur l'écran ou le boîtier

S'il vous plaît ne pas écrire directement sur l'écran

Veuillez ne rien coller à l'écran ou au boîtier

## **Precauzioni**

1. Please evitare di cadere a terra e portare al dispositivo rotto quando spostare il prodotto.
  2. Lo schermo di questo prodotto è fatto di vetro, si prega di tenere lontano da lesioni se lo schermo è rotto.
  3. Tenere il prodotto lontano dalla fonte di calore. Evitare l'esposizione prolungata al sole poiché lo schermo LCD sarà danneggiato.
  4. Per evitare di danneggiare il prodotto, non smontare o riparare l'unità da soli senza i componenti regolabili nell'unità.
- Per proteggere meglio lo schermo o l'alloggiamento, si prega di seguire questi modi come di seguito per evitare i danni:
    - Si prega di astenersi dall'utilizzare gli oggetti duri per colpire lo schermo
    - Si prega di non forzare a pulire lo schermo o l'alloggiamento
    - Si prega di non utilizzare le soluzioni chimiche per pulire lo schermo o l'alloggiamento
    - Si prega di non spruzzare alcun detergente sullo schermo o sull'alloggiamento
    - Si prega di non scrivere direttamente sullo schermo
    - Si prega di non attaccare nulla sullo schermo o sull'alloggiamento

## Precauciones

1. al mover el producto, evite caer al suelo, causando daños al equipo.
  2. la pantalla de este producto está hecha de vidrio, si la pantalla está rota, Manténgase alejada de la multitud.
  3. mantenga el producto alejado de la fuente de calor. Evite la exposición prolongada al sol, ya que la pantalla LCD puede dañarse.
  4. para evitar daños al producto, no desmontar o reparar la unidad por sí mismo sin componentes ajustables dentro de la unidad.
- Para proteger mejor la pantalla o la carcasa, siga los siguientes métodos para evitar daños:
    - Por favor, no golpee la pantalla con objetos duros
    - No limpie a la fuerza la pantalla o la carcasa
    - No use una solución química para limpiar la pantalla o la carcasa
    - No rocíe ningún detergente en la pantalla o en la carcasa
    - Por favor, no escriba directamente en la pantalla
    - Por favor, no pegue nada a la pantalla o a la carcasa
    - Limpie simplemente con un paño suave limpio y asegúrese de que no haya agua en la pantalla o en la carcasa.

## Key Features

- ◆ UHD Resolution 3840x2160IPS, view clearly for every pixel
- ◆ 1000nit high brightness, ideal for outdoor shooting
- ◆ Intuitive buttons operation
- ◆ 4x12G SDI, support up to 8K input
- ◆ Multiple display modes (Single, Full-Waves, PBP, PIP, QUAD, 8K)
- ◆ Support 3D LUT Log to REC.709 and user 3D LUT upload (up to 50)
- ◆ With Waveform, Vector scope, RGB Histogram, Focus Assist, Monochrome

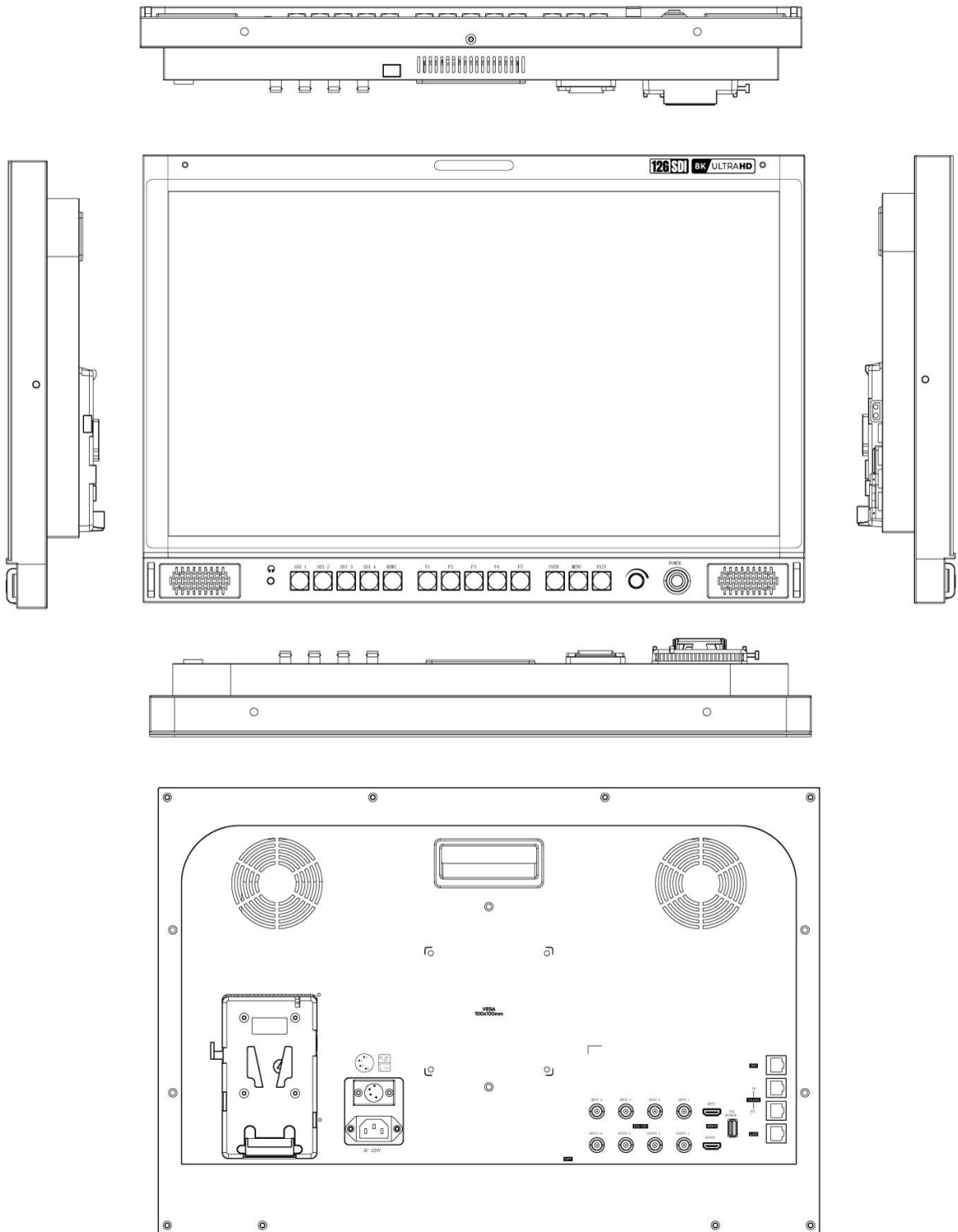
etc. functions, can help you accurately exposure and focus every shot.

- ◆ Supports GPI control, dynamic UMD (RS485 in &out)
- ◆ Remote control via connect network
- ◆ 12G SFP fiber port to insert the SFP modular, seamless, high-speed, reliable connection (fiber modular is optional)
- ◆ Multiple power supply ways( AC, XLR connector, V-mount battery plate)

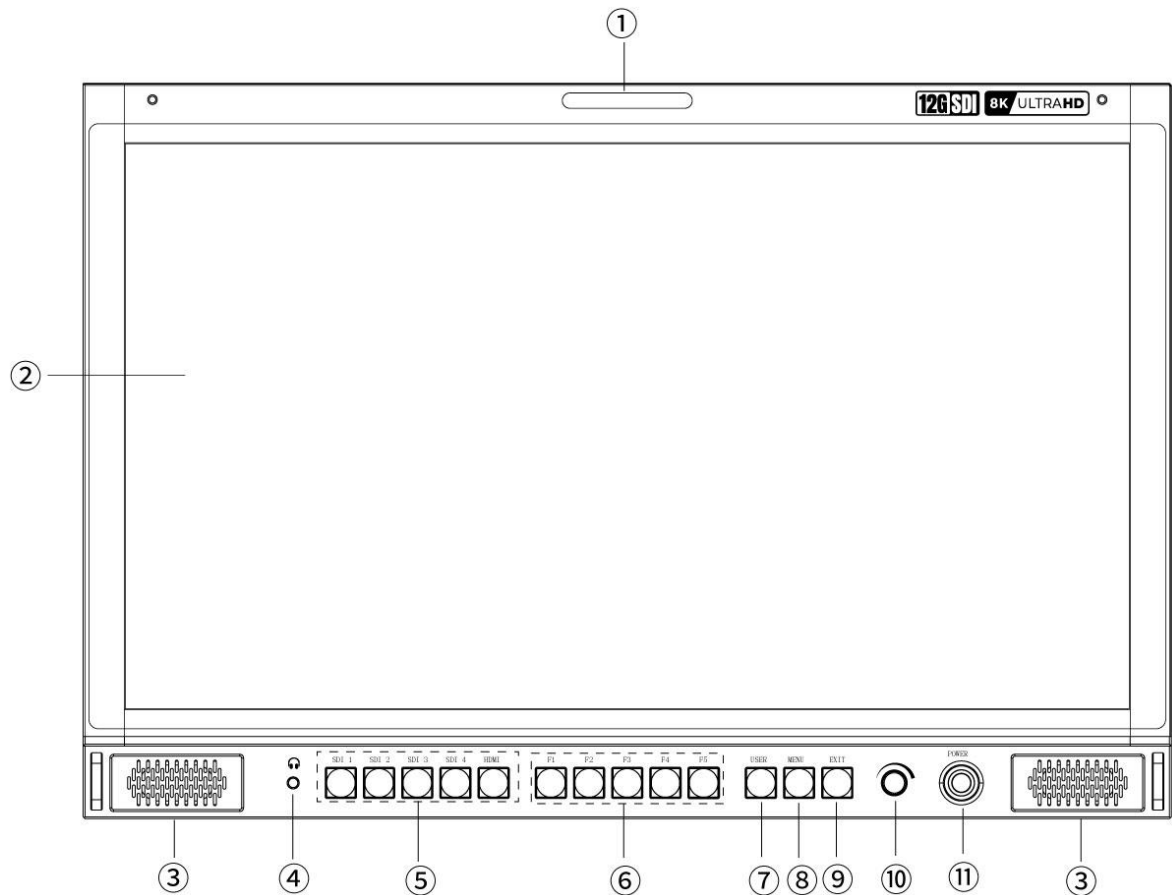
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## 1. Product Overview



## 1.1. Front Panel Instruction



①. Tally Indicator

②. Screen

③. Speakers

④.  : Earphone jack output port

⑤. **Input Signal Source (SDI1~SDI4, HDMI).** After switch, the signal source will show the top of the screen)

⑥. **F1~F5:** User custom shortcut button

Enter menu **User Option--Shortcut--F1/F2** to set the functions

⑦. **USER: USER 1~USER 5.** Select one of the groups and press it to call up the set function quickly

⑧. **MENU: main menu**

⑨. **EXIT: Menu return/exit**

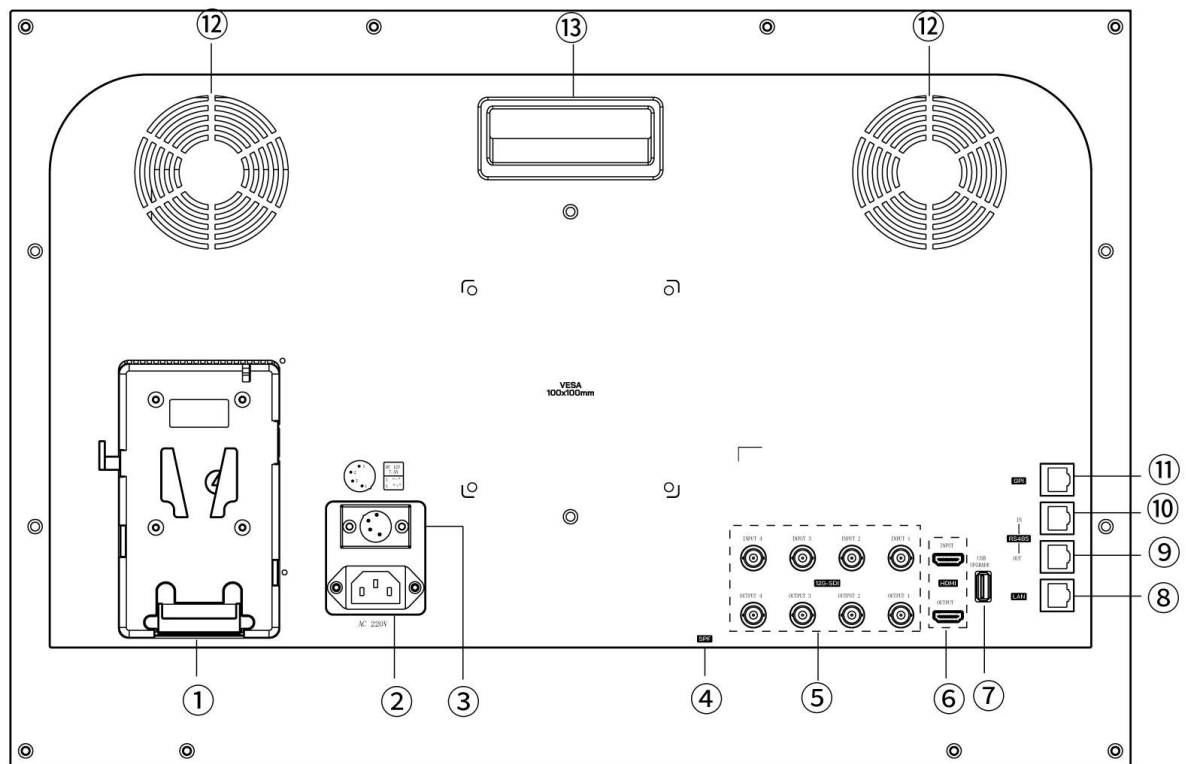


⑩. **Knob**: When OSD is not displayed, rotate to adjust the volume/backlight;  
When OSD is displayed, rotate to select menu item/function/parameters,  
press it to confirm.

⑪. **Power**: Power ON/OFF, Indicator

After power plug, the indicator light display red, press it to turn on the  
monitor and connect with the signal, the indicator light turns green.

## 1.2. Rear Panel Instruction



①. **V-mount Battery Plate** ( can mount V-mount battery )

②. **AC 220V Socket**

③. **XLR power connector**

④. **SFP**: 12G SFP fiber port ( the fiber module is optional)

⑤. **SDI1~SDI4**: 12G SDI signal inputs and outputs

⑥. **HDMI** signal input and output

⑦. **USB**: Firmware update/LUT file import

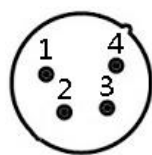
- ⑧. LAN: RJ45 network
- ⑨. RS485 Output
- ⑩. RS485 Input
- ⑪. GPI Control Interface
- ⑫. Fan
- ⑬. Handle

## 2. Power Input Way

There are three ways of power supply to our monitor:

- a. **Powered by AC power input port supply.** ( you can use the accompanied AC 220V/3A power cable)
- b. **Via 4 pin XLR interface power supply, to share power with the camera or via power adapter input.**

Polarity of the 4-pin XLR power input as below image, please note the polarity of the power input, otherwise it may damage monitor.



| Pin number | Signal        |
|------------|---------------|
| 1          | GND           |
| 2          | No connection |
| 3          | No connection |
| 4          | +12V          |

- c. **Add battery to the monitor of V-mount battery plate to supply the power.**



**Sony V-Mount Plate**

**Remark:** According to the different specification of the battery, the capability is different, and the working time for the monitor will be different. Higher capability (working time) will be longer.

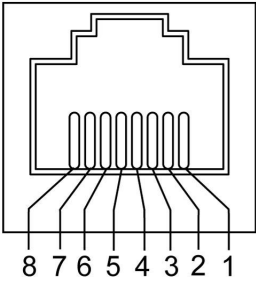
Without the charging circuit design for the monitor, please remove the battery to charge with the battery charger.

**Suggestion: Better to remove the battery if don't use this product in a long time.**

### 3. GPI & UMD Connection and Use

#### (1) GPI Interface

Please connect the devices according to the pin definition, and pay attention to the common ground problem between the connected devices. Follow the steps below to enable the GPI control function, and set each GPI function at the same time.

|  | Pin No. | Signal |
|-------------------------------------------------------------------------------------|---------|--------|
|                                                                                     | 1       | GPI1   |
|                                                                                     | 2       | GPI2   |
|                                                                                     | 3       | GPI3   |
|                                                                                     | 4       | GPI4   |
|                                                                                     | 5       | GPI5   |
|                                                                                     | 6       | GPI6   |
|                                                                                     | 7       | GPI7   |
|                                                                                     | 8       | GND    |

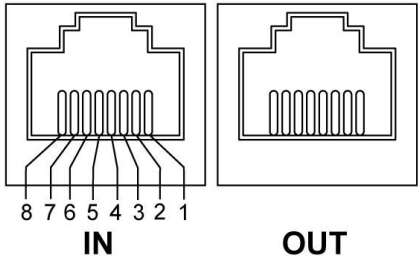
**GPI Setting**

**Options: Tally**

**R, Tally G, Nine Grid, Safety Marker,  
Center Marker, Video Aspect, Marker Mat, Anamorphic Mode,  
Focus Assist, Zebra, Monochrome**

#### (2) RS485 Interfaces

Monitor supports RS485 port to input UMD signal, the interface definition is as below:

|                                                                                   |           | Pin No. | IN    | OUT   |
|-----------------------------------------------------------------------------------|-----------|---------|-------|-------|
|  | <b>IN</b> | 1       | GND   | GND   |
|                                                                                   |           | 2       | GND   | GND   |
|                                                                                   |           | 3       | NC    | NC    |
|                                                                                   |           | 4       | RXD + | RXD + |
|                                                                                   |           | 5       | RXD - | RXD - |
|                                                                                   |           | 6       | NC    | NC    |
|                                                                                   |           | 7       | NC    | NC    |
|                                                                                   |           | 8       | GND   | GND   |

## 4. Menu Operation Instruction

After the monitor is properly connected to power and signals, press the Power switch to turn on the monitor.

### Steps:

- ①. Press MENU key to enter main menu, then rotate the knob to select the main menu item
- ②. After selected, press the knob to enter the secondary menu, rotate the knob to select the secondary menu item, press the knob after selected. Then rotate the knob to select the function or adjust the parameter value, press the knob after selected or adjusted.
- ③. Press EXIT to return or exit menu

## 5. Menu Function Instruction



**VIEW**

## Including Single, Full-Waves, PBP, PIP, QUAD, 8K display modes

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Single</b></p> | <p><b>CH Name: OFF, ON, 3s</b><br/>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Time Code:</b> OFF, ON (under HDMI, this function will not invalid)</p> <p><b>CH Select:</b> SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p><b>Audio Channel:</b> SD1~SDI4 and SFP can select CH1-2, CH3-4, CH5-6, CH7-8, CH9-10, CH11-12, CH13-14, CH15-16; HDMI can select CH1-2, CH3-4</p> <p><b>Video Aspect:</b> auto, 16:9, 15:9, 4:3, 15:10, 1.85:1, 2:1, 2.35:1, 2.39:1, 2.4:1, 5:4, 16:10, Custom (can be adjust the width and height 100~300)</p> <p><b>Freeze: OFF, ON</b></p> <p><b>Pixel to Pixel: OFF, ON</b><br/>Enable the filmmaker to check the image from the 1:1 signal source without scaling. This feature is essential for capturing optimum detail.</p> <p><b>Zoom: OFF, ON</b><br/>Type: 2X, 3X, 4X, 5X, Custom<br/>Under Custom can be adjusted from 100%~500%<br/>Horizontal: 0%~100%<br/>Vertical: 0%~100%</p> <p><b>Mirror: OFF, ON</b><br/>Type: Horizontal, Vertical, H&amp;V</p> <p><b>LUT: OFF, ON</b><br/>Select: can be select 4 built-in LUT and the imported custom LUT</p> |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Full-Waves</b> | <p><b>CH Name: OFF, ON,3s</b><br/>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Time Code: OFF, ON</b> (under HDMI, this function will not invalid)</p> <p><b>CH Select:</b> SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p><b>Audio Channel:</b> SD1~SDI4 and SFP can select CH1-2,CH3-4, CH5-6,CH7-8,CH9-10, CH11-12, CH13-14,CH15-16; HDMI can select CH1-2,CH3-4</p> <p><b>Video Aspect:</b> auto, 16:9,15:9, 4:3, 15:10, 1.85:1, 2:1, 2.35:1,2.39:1, 2.4:1, 5:4, 16:10, Custom (can be adjust the width and height 100~300)</p> <p><b>Freeze: OFF, ON</b></p> <p><b>Pixel to Pixel: OFF, ON</b><br/>Enable the filmmaker to check the image from the 1:1 signal source without scaling.This feature is essential for capturing optimum detail.</p> <p><b>Zoom:OFF, ON</b><br/>Type: 2X,3X,4X,5X,Custom<br/>Under Custom can be adjusted from 100%~500%<br/>Horizontal: 0%~100%<br/>Vertical:0%~100%</p> <p><b>Mirror: OFF, ON</b><br/>Type: Horizontal, Vertical, H&amp;V</p> <p><b>LUT: OFF, ON</b><br/>Select: can be select 4 built-in LUTs and the imported custom LUTs</p> |
| <b>PBP</b>        | <b>CH Name: OFF, ON,3s</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <p>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Audio Window:</b> WIN-LEFT, WIN-RIGHT</p> <p><b>WIN-LEFT&amp;WIN-RIGHT</b></p> <p>CH Select: SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p>Audio Channel: SD1~SDI4 and SFP can select CH1-2,CH3-4,<br/>CH5-6,CH7-8,CH9-10, CH11-12,<br/>CH13-14,CH15-16; HDMI can select<br/>CH1-2,CH3-4</p> <p><b>Video Aspect:</b> auto, 16:9,15:9, 4:3, 15:10, 1.85:1, 2:1,<br/>2.35:1,2.39:1, 2.4:1, 5:4, 16:10, Custom (can<br/>be adjust the width and height 100~300)</p> <p>Freeze: OFF, ON</p> <p>Mirror: OFF, ON</p> <p>Type: Horizontal, Vertical, H&amp;V</p> <p>LUT: OFF, ON</p> <p>Select: can be select 4 built-in LUTs and the imported custom<br/>LUTs</p> |
| <b>PIP</b> | <p><b>CH Name: OFF, ON,3s</b></p> <p>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Audio Window:</b> WIN-MAIN, WIN-SUB</p> <p><b>WIN-MAIN</b></p> <p>CH Select: SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p>Audio Channel: SD1~SDI4 and SFP can select CH1-2,CH3-4,<br/>CH5-6,CH7-8,CH9-10, CH11-12,<br/>CH13-14,CH15-16; HDMI can select<br/>CH1-2,CH3-4</p>                                                                                                                                                                                                                                                                                                                                              |

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p><b>Video Aspect:</b> auto, 16:9,15:9, 4:3, 15:10, 1.85:1, 2:1, 2.35:1,2.39:1, 2.4:1, 5:4, 16:10, Custom (can be adjust the width and height 100~300)</p> <p>Freeze: OFF, ON</p> <p>Mirror: OFF, ON</p> <p>Type: Horizontal, Vertical, H&amp;V</p> <p>LUT: OFF, ON</p> <p>Select: can be select 4 built-in LUTs and the imported custom LUTs</p> <p><b>WIN-SUB</b></p> <p>CH Select: SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p>Audio Channel: SD1~SDI4 and SFP can select CH1-2,CH3-4, CH5-6,CH7-8,CH9-10, CH11-12, CH13-14,CH15-16; HDMI can select CH1-2,CH3-4</p> <p>Freeze: OFF, ON</p> <p>Mirror: OFF, ON</p> <p>Type: Horizontal, Vertical, H&amp;V</p> <p>LUT: OFF, ON</p> <p>Select: can be select 4 built-in LUTs and the imported custom LUTs</p> <p>Win Size: 25%~50%</p> <p>H-Offset: 0%~100% (adjust the horizontal position of sub-window)</p> <p>V-Offset: 0%~100% (adjust the vertical position of sub-window)</p> |
| <b>QUAD</b> | <b>CH Name: OFF, ON,3s</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <p>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Audio Window:</b> WIN-LEFTTOP, WIN-RIGHTTOP,<br/>WIN-LEFTBOTTOM, WIN-RIGHTBOTTOM</p> <p><b>Setup for each window</b></p> <p>CH Select: SDI1, SDI2, SDI3, SDI4, HDMI, SFP</p> <p>Audio Channel: SD1~SDI4 and SFP can select CH1-2,CH3-4,<br/>CH5-6,CH7-8,CH9-10, CH11-12, CH13-14,CH15-16;<br/>HDMI can select CH1-2,CH3-4</p> <p><b>Video Aspect:</b> auto, 16:9,15:9, 4:3, 15:10, 1.85:1, 2:1,<br/>2.35:1,2.39:1, 2.4:1, 5:4, 16:10, Custom (can<br/>be adjust the width and height 100~300)</p> <p>Freeze: OFF, ON</p> <p>Mirror: OFF, ON</p> <p>Type: Horizontal, Vertical, H&amp;V</p> |
| <b>8K</b> | <p><b>CH Name: OFF, ON,3s</b></p> <p>(when select 3s, the CH Name will disappear after 3 seconds)</p> <p><b>Position:</b> top left, top center, top right</p> <p><b>Audio Channel:</b> CH1-2,CH3-4,CH5-6,CH7-8,CH9-10,CH11-12,<br/>CH13-14,CH15-16</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



## CH PRESET

|                 |                                                                             |
|-----------------|-----------------------------------------------------------------------------|
| <b>Channel</b>  | SDI1/SDI2/SDI3/SDI4/HDMI/SFP                                                |
| <b>CH Alias</b> | You can modify the channel name, maximum 15 characters can be entered       |
| <b>Contrast</b> | 0~255<br>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.                                                       |
| <b>Brightness</b>  | 0~255<br>Adjust the image brightness                                                                                                                                                                                                         |
| <b>Saturation</b>  | 0~255<br>Adjustment of color concentration                                                                                                                                                                                                   |
| <b>Gamma</b>       | <b>OFF, SDR, HLG</b>                                                                                                                                                                                                                         |
| <b>Color Range</b> | <b>FULL, LIMIT, 4-1019, 64-1019</b><br>This feature allows for the selection of a grayscale range. The FULL range is 0~1024, the limit range is 64~940<br><b>When the channel is HDMI, without this function</b>                             |
| <b>Anamorphic</b>  | <b>OFF, ON</b><br>Type: 1.33X, 1.6X, 2.0X, 2.0MG, Custom<br>For Custom, you can adjust from 1.2X to 2.0X<br>Allows you to use anamorphic lenses or adapters and see the image unsqueezed, even if your camera does not de-squeeze in camera. |



## MONITOR

|                    |                                                                                                                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FULL SCREEN</b> | <b>Parade: OFF, ON</b><br>Type: YUV, RGB, Y<br>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 chromakey or background.                                                                           |
|                   | <b>RGB Histogram: OFF, ON</b><br>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 |
|                   | <b>Y Histogram: OFF, ON</b><br>A quantitative tool to check the picture brightness, display different color for different brightness                                                                                  |
|                   | <b>Vector: OFF, ON</b><br>shows how saturated the image is and where the pixels in the image land on the color spectrum                                                                                               |
|                   | <b>Audio Meter: OFF, ON</b><br>The Audio Level Meters provide numerical indicators and headroom levels.                                                                                                               |
| <b>FULL-WAVES</b> | <b>Parade: YUV, RGB, Y</b><br>Under Full-Waves display mode, you can set the parade                                                                                                                                   |
| <b>PIP</b>        | <b>Audio Meter: OFF, ON</b><br>Under PIP display mode, you can turn on or turn off the audio meter                                                                                                                    |
| <b>QUAD</b>       | <b>Audio Meter: OFF, ON</b><br>Under QUAD display mode, you can turn on or turn off the audio meter                                                                                                                   |
| <b>8K</b>         | <b>Audio Meter: OFF, ON</b><br>Under 8K display mode, you can turn on or turn off the audio meter                                                                                                                     |

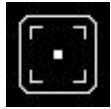


## AUXILIARY (SINGLE)

|                    |                                        |
|--------------------|----------------------------------------|
| <b>False Color</b> | OFF, ON<br>Type: Default, ARRI, ELZone |
|--------------------|----------------------------------------|

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <p>When select ELZone, there are below options:</p> <p>Rec709,Rec2100 HLG, SONY S-Log3, SONY S-Log2, SONY S-Log, ARRI LogC4, ARRI LogC (Sup 3.x&amp;4.x), ARRI LogC (Sup 2.x), Canon C-Log2, Canon C-Log3, Panasonic V-Log, Fujifilm F-Log2, Fujifilm F-log, RED LogFilm, RED Log3G10, BMD Film Gen5, BMD Pocket Film, BDM Film,BDM Film4k, BDM Film4.6k</p> <p>The EL Zone system which was designed by cinematographer Ed Lachman, ASC, is an innovative tool for displaying exposure values using stops. EL Zone is similar to false color, however, it allows for higher precision, greater consistency, and more intuitive on-set communication</p> |
| <b>Check Field</b>  | <p><b>OFF, ON</b></p> <p>Type: blue, green, red, gray</p> <p>When enabled, hue and saturation adjusted quickly and accurately</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Assist Focus</b> | <p><b>OFF, ON</b></p> <p>Type: Color, Mono</p> <p>Treshold: 1~10</p> <p>Color: white, red, green, blue, black, yellow, cyan, purple</p> <p>It highlights the areas that are in focus so you are able to quickly focus the camera and not miss crucial shots.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Zebra</b>        | <p><b>OFF, ON</b></p> <p>Value: 0IRE~100IRE</p> <p>Color: white, red, green, blue, black, yellow, cyan, purple</p> <p>Areas of the image over a certain threshold are filled with a striped pattern to dramatically highlight areas where too much light is falling</p>                                                                                                                                                                                                                                                                                                                                                                                  |

|  |                      |
|--|----------------------|
|  | on the image sensor. |
|--|----------------------|



### MARKER (SINGLE & FULL-WAVES)

|                      |                                                                                                                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Marker Mat</b>    | <b>OFF, ON</b><br>Type: 16:9, 16:10, 15:9, 14:9, 13:9, 4:3, 1.5:1, 1.85:1, 2:1, 2.35:1, 2.39:1, 2.4:1<br>Alpha: 0%~50%                                                                                       |
| <b>Safety Marker</b> | <b>OFF, ON</b><br>Type: 70%, 80%, 83%, 88%, 90%, 93%, 95%, 16:9, 16:10, 4:3, 5:4, 1.85:1, 2.35:1<br>Color: white, red, green, blue, black, yellow, cyan, purple<br>Thickness: thin, mid, thick               |
| <b>Center Marker</b> | <b>OFF, ON</b><br>Color: white, red, green, blue, black, yellow, cyan, purple<br>Thickness: thin, mid, thick                                                                                                 |
| <b>Grid Marker</b>   | <b>OFF, ON</b><br>Type: 3x3, 3x5, 5x3, 5x5<br>The area of the picture can be divided into 9/15/25 equal grids.<br>Color: white, red, green, blue, black, yellow, cyan, purple<br>Thickness: thin, mid, thick |



### FN

|              |                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------|
| <b>F1~F5</b> | Check Field, Safety Marker, Center Marker, Marker Mat, Grid Marker, Display Mode, Single, Full-Waves, PBP, PIP, |
|--------------|-----------------------------------------------------------------------------------------------------------------|

|             |                                                                                               |
|-------------|-----------------------------------------------------------------------------------------------|
|             | QUAD, Parade, Vector, RGB Histogram, Y Histogram, Audio Meter, Time Code, Assist Focus, Zebra |
| <b>Knob</b> | Backlight, Volume                                                                             |



## GPI

|                  |                                                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GPI1~GPI7</b> | Check Field, Safety Marker, Center Marker, Marker Mat, Grid Marker, Display Mode, Single, Full-Waves, PBP, PIP, QUAD, Parade, Vector, RGB Histogram, Y Histogram, Audio Meter, Time Code, Assist Focus, Zebra, TALLY R, TALLY G |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## UMD

|                |                                                                                                                                                             |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TSL UMD</b> | <p>OFF, ON</p> <p>Version: V3.1, V4.0 (supports V3.1, V4.0 for RS485)</p> <p>Baudrate: 115200,57600,38400,19200</p> <p>Address: 0~126</p> <p>Views: 1~4</p> |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|



## NETWORK

|             |                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DHCP</b> | <p><b>OFF, ON</b></p> <p>After enabled, it can automatically connect with the control software without setting up a network segment</p>         |
| <b>IP</b>   | <p>Press the knob to call out the setting interface of IP address, rotate the knob to select the segment which would like to set, press the</p> |

|  |                                                                                                        |
|--|--------------------------------------------------------------------------------------------------------|
|  | knob after selected and rotate the knob to adjust the value, press the knob to confirm after adjusted. |
|--|--------------------------------------------------------------------------------------------------------|



## SYSTEM

|                      |                                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------|
| <b>Language</b>      | <b>English, 中文</b>                                                                                    |
| <b>Backlight</b>     | <b>1~100</b><br>Adjust the screen brightness                                                          |
| <b>Color Space</b>   | <b>BT709, DCI-P3, BT2020</b>                                                                          |
| <b>Color Temp.</b>   | <b>5600K, 6500K, 9300K, Custom</b><br>Under Custom, you can adjust the red, green blue value<br>0~255 |
| <b>Mute</b>          | <b>OFF, ON</b>                                                                                        |
| <b>Volume</b>        | <b>0~100</b><br>Adjusting the speaker volume                                                          |
| <b>Fan</b>           | <b>0~10</b><br>Adjust the fan speed                                                                   |
| <b>OSD Time</b>      | <b>Always, 5s, 10s, 15s, 20s</b><br>Select the display time of the menu on the screen                 |
| <b>User Profile</b>  | Details see <b>7 “User Profile Instruction”</b>                                                       |
| <b>User Reset</b>    | <b>CANCEL, OK</b><br>After OK, the device will clear all user set data                                |
| <b>Factory Reset</b> | <b>CANCEL, OK</b><br>After OK, the device will be restored to factory settings                        |
| <b>System Update</b> | <b>CANCEL, Update</b>                                                                                 |

|     |                                                                         |
|-----|-------------------------------------------------------------------------|
| LUT | <b>Import, Remove</b><br>(details see 6 “Custom LUT Import and Remove”) |
|-----|-------------------------------------------------------------------------|



## INFORMATION

Display the information of all input signals

## 6. Custom LUT Import and Remove

### 6.1 LUT Import

#### 6.1.1. USB flash driver format

Supports FAT32

#### 6.1.2. Max Files Limit Maximum 32 Lut files

#### 6.1.3. 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**

#### 6.1.4. Steps for loading

- ①. Make sure the USB flash driver correctly insert to the USB port of the monitor
- ②. Enter main menu select **System -- LUT-- LUT Import** and enter the LUT import interface (see below picture)
- ③. Rotate the knob to select the file which need to import and press the knob to confirm, a  mark will appeared after confirmed.



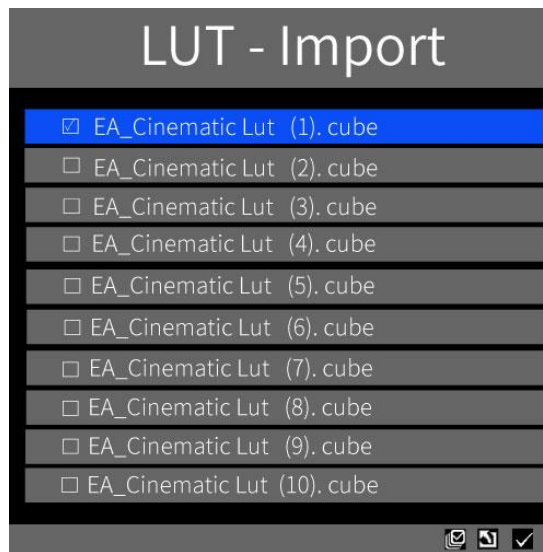
- ④. Press MENU key, the cursor will on the icon , then press the knob to confirm to import.

 : Batch selection

Press MENU key and rotate the knob select it and press the knob confirm.

 : Return

Press MENU key and rotate the knob select it and press the knob confirm.



## 6.2 LUT Remove

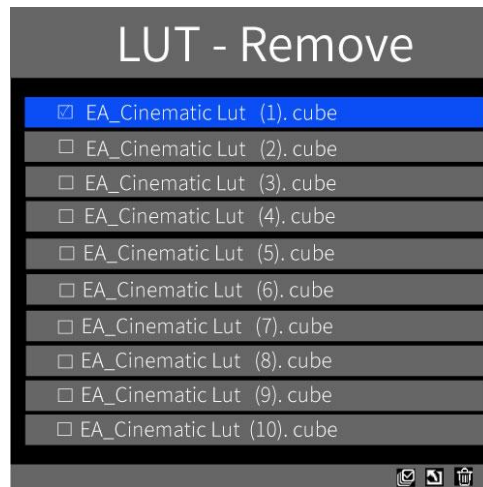
- ①. Enter main menu select **System -- LUT-- LUT Remove** and enter to LUT remove interface (see below picture)
- ②. Rotate the knob to select and press the knob confirm, a  mark will appeared after confirmed.
- ③. Press MENU key, the cursor will on the icon , then press the knob to confirm to remove.

 : Batch selection

Press MENU key and rotate the knob select it and press the knob confirm.

 : Return

Press MENU key and rotate the knob select it and press the knob confirm.



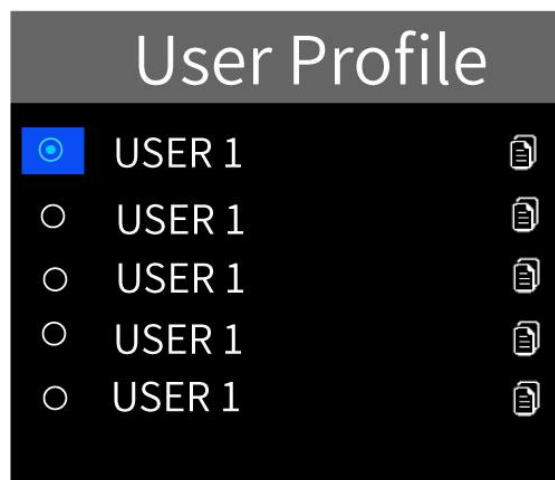
## 7. User Profile Instruction

(1) Enter menu **System--User Profile** and enter the setting interface, then select one of User group such as the left side button of USER 1  (will display blue after selected), then press the knob to confirm.

(2) Press MENU key enter to the main menu to set the function. For example, turn on the parade, vector, etc. , exit the menu after set. Then press USER key on the front panel and select USER 1, it will call out the parade, vector function which you set.

(3) The name of USER 1~ USER 5 can be modified. For example, select USER 1 (will display blue after selected), press the knob confirm and pop up the keyboard, rotate the knob to select the number or letter, press the knob to confirm after selected. Press EXIT key to exit finally.

(4) Select  and press the knob, the name will restore to USER 1



## 8. Software Control

The control software allows you control the monitor, you just need to connect the monitor and computer via the LAN port. (support Windows & MAC system)

### 8.1 Direct Link via a Network Cable

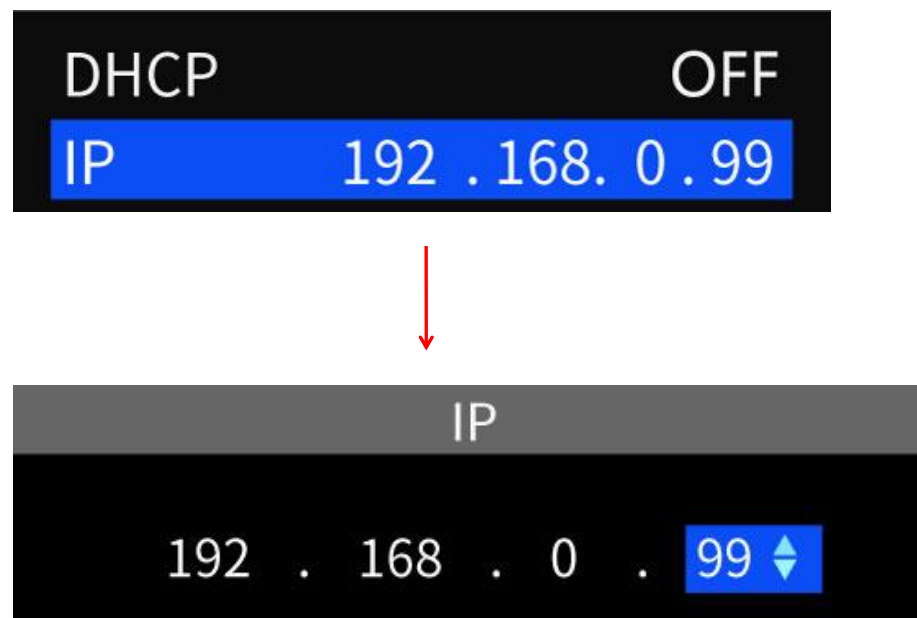
Connect the LAN port of the monitor and computer via a CAT6 network cable

#### (1) Modify monitor's IP Address

The monitor is connected to a computer via TCP/IP protocol for data transfer. Therefore, you need to keep the monitor on the same IP network segment as your PC.

**Steps to modify monitor's IP address:**

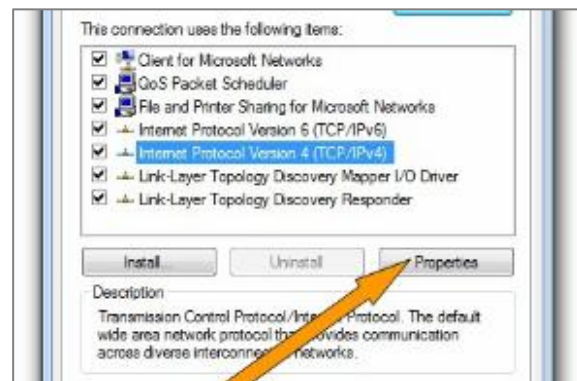
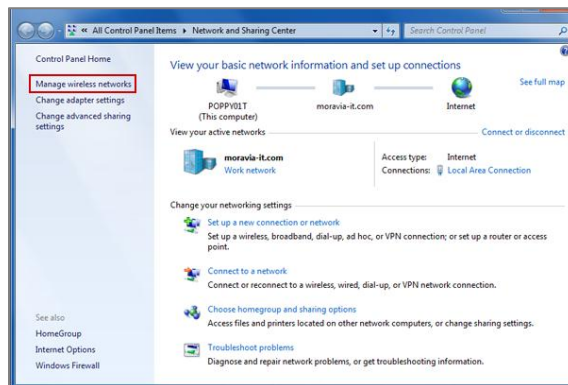
- ①. Enter to main menu, select **NETWORK---IP**
- ②. Press the knob to pop up the IP address setting interface
- ③. Rotate the knob to select the network segment which need to modify and press the knob, then rotate the knob to modify the value, press the knob after modified.



#### (2) Change the PC's IP Address

To ensure that the monitor and the PC can communicate smoothly, the IP address of the computer needs to be verified.

## Steps to modify the IP address of the Ethernet port (windows).



1. Open the Network Sharing Center;  
Click on "Ethernet";

2. Access to Properties may require administrator privileges;  
Under "This connection uses the following items",  
find "Internet Protocol version 4 (TCP/IPv4)";

|                 |                     |
|-----------------|---------------------|
| IP Address      | 192 . 168 . 0 . 101 |
| Subnet Mask     | 255 . 255 . 255 . 0 |
| Default Gateway | 192 . 168 . 0 . 1   |

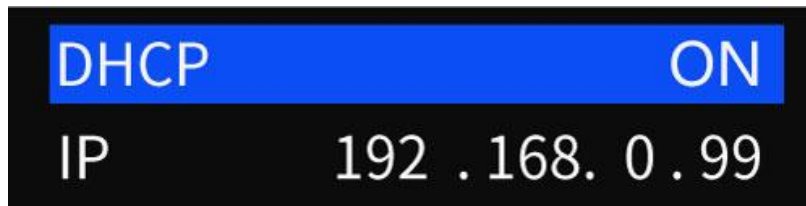
3. Select "Use the following IP address" and change the IP address to the same network segment as L4 eg: The monitor's IP address is 192.168.0.99, then the computer's IP address can be set to 192.168.0.1-255. Please make sure that the IP addresses do not conflict.

## 8.2 Connect Wirelessly with Your Router

The monitor provides wireless control, so you can control it from a greater distance when the monitor is not in your immediate vicinity. A wireless router is required to use this feature. The computer receives the WIFI signal from the wireless router you connect the monitor to.

### Steps of wireless connection:

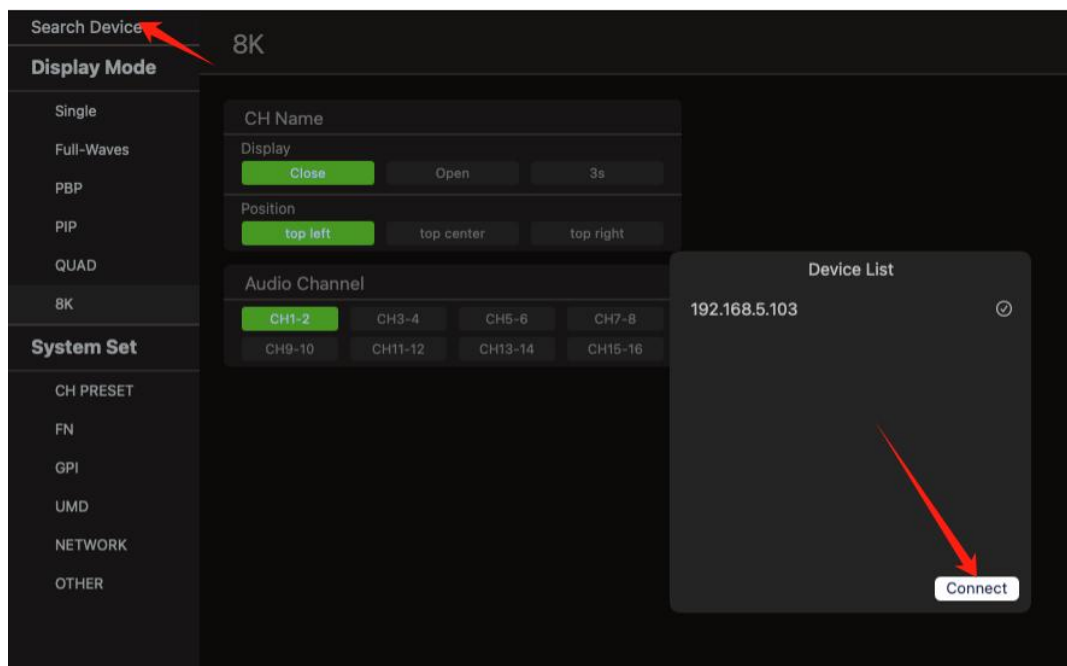
- ①. Connect the monitor to the router's LAN port
- ②. Enter main menu, select **NETWORK---DHCP**, press the knob and rotate the knob to select ON, press the knob to confirm finally.
- ③. Computer connects to Wi-Fi from the router
- ④. Open the software and click search device



### 8.3 Using the software

Double click the icon  to pop up the operation interface after installed the software.

Click **Search Device---Connect**, the up left side will display the IP address when connect successfully.



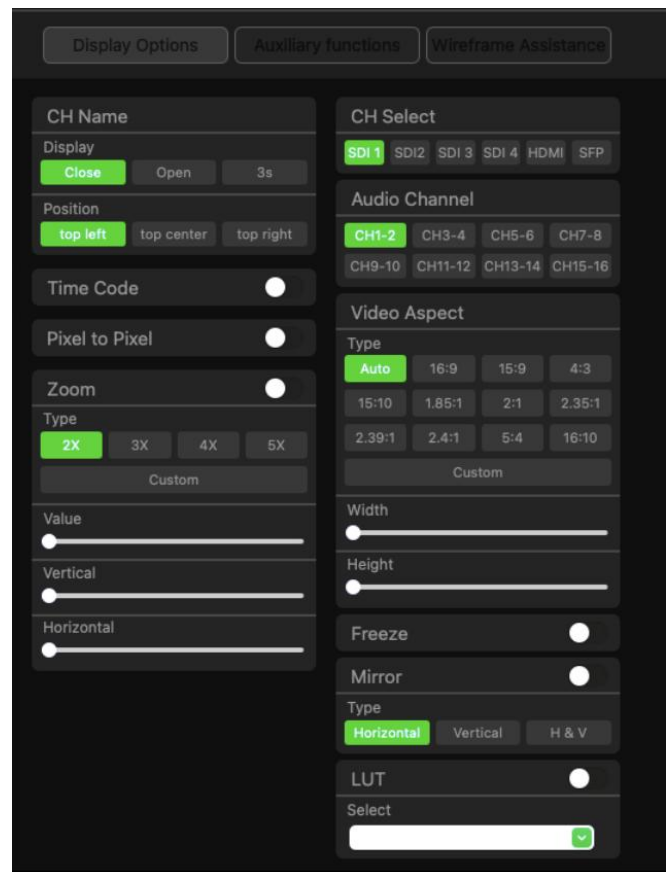
#### 8.3.1 Display Mode

(1) **Single** (Including Display Options, Auxiliary Functions, Wireframe)

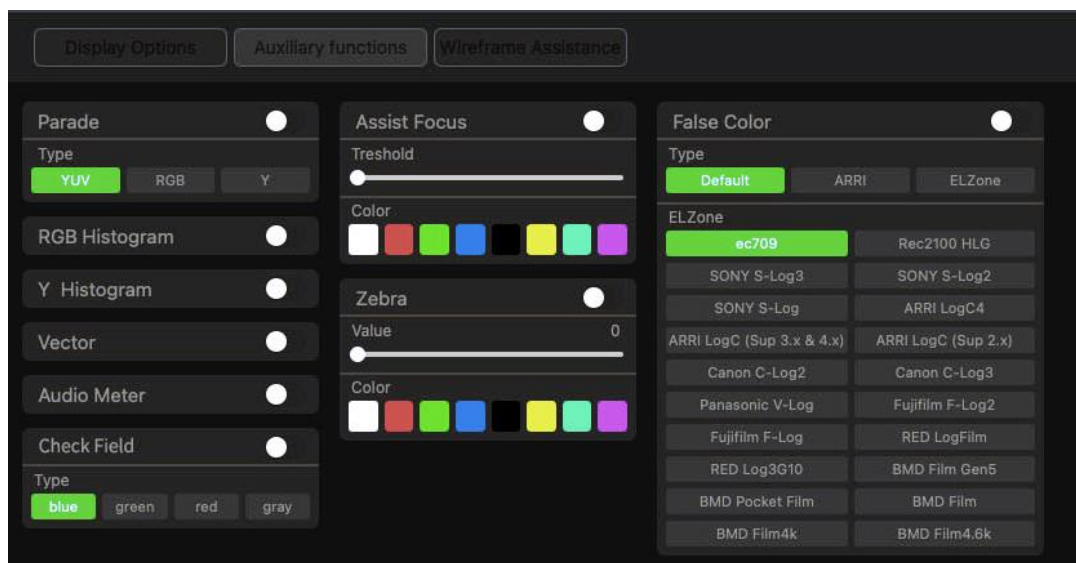
Assistance)

### Display Options:

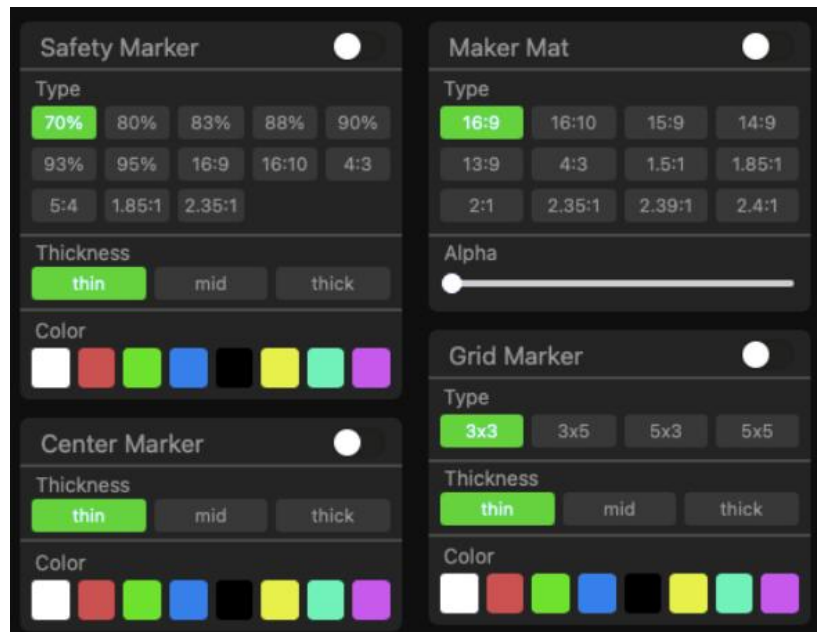
you can set CH Name's display and position, Time Code(HDMI not activated), Pixel to Pixel, Zoom, CH Select, Audio Channel, Video Aspect, Freeze, Mirror, LUT



**Auxiliary Functions:** you can set Parade, RGB Histogram, Y Histogram, Vector, Audio Meter, Check Field, Assist Focus, Zebra, False Color



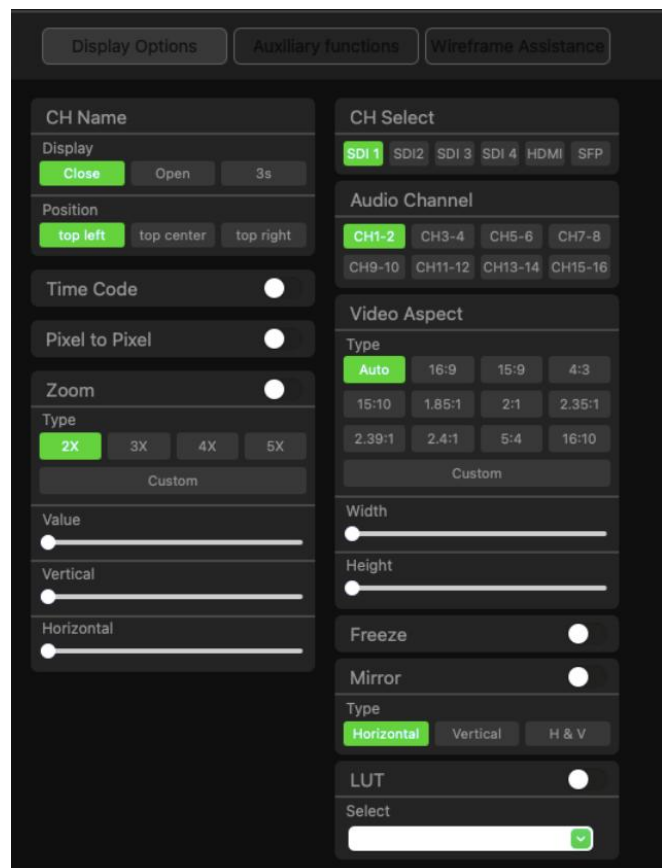
**Wireframe Assistance:** you can set Safety Marker, Center Marker, Marker Mat, Grid Marker



**(2) Full-Waves** (Including Display Options, Auxiliary Functions, Wireframe Assistance)

### Display Options:

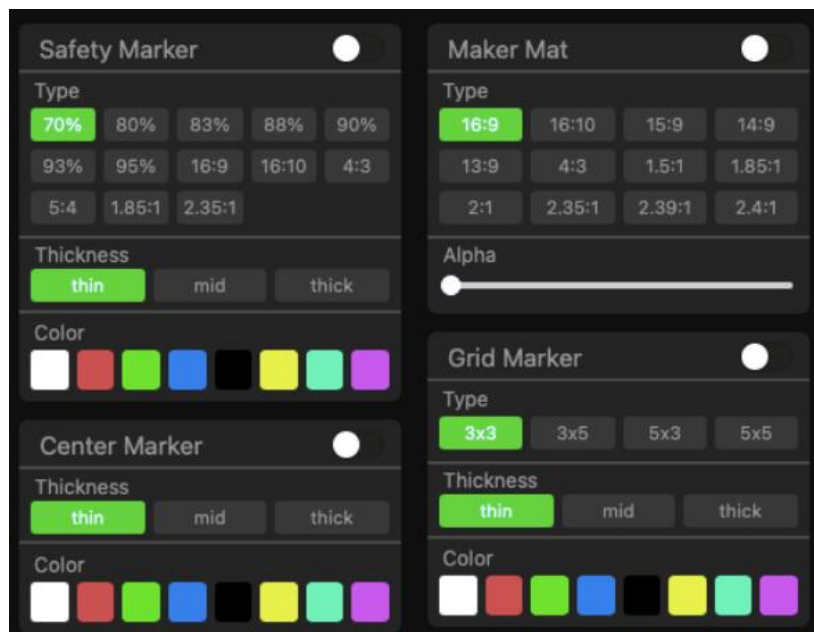
you can set CH Name's display and position, Time Code(HDMI not activated), Pixel to Pixel, Zoom, CH Select, Audio Channel, Video Aspect, Freeze, Mirror, LUT



**Auxiliary Functions:** you can set Parade

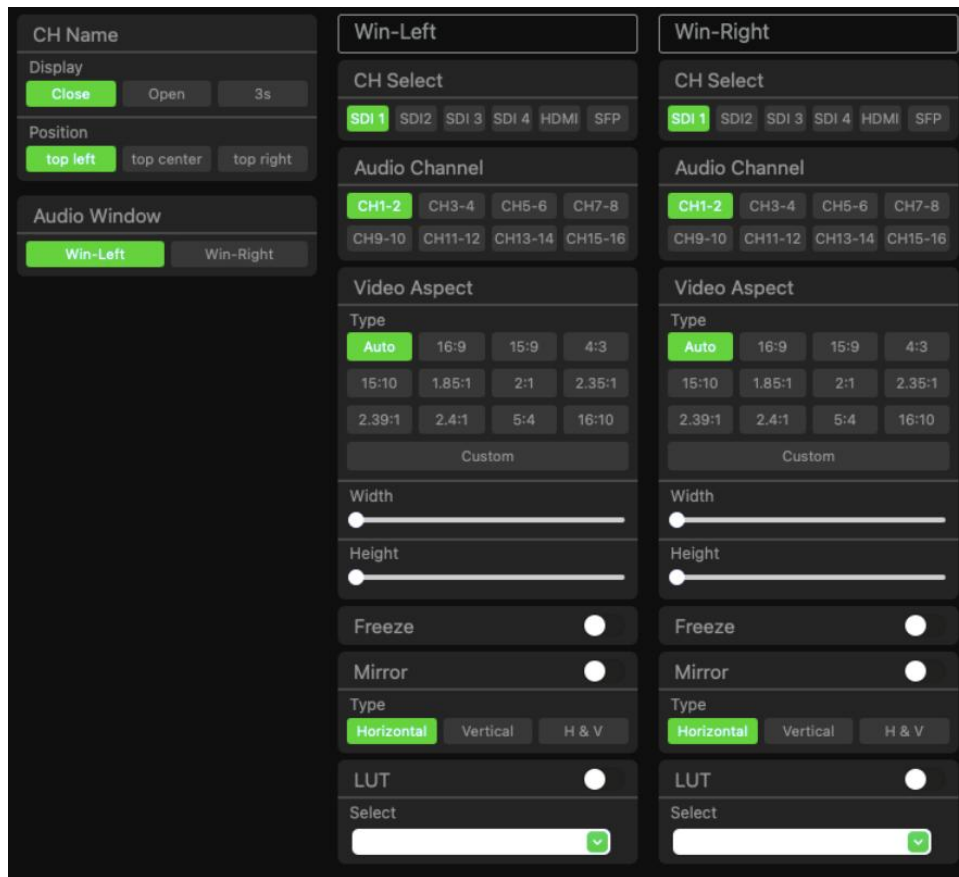


**Wireframe Assistance:** you can set Safety Marker, Center Marker, Marker Mat, Grid Marker

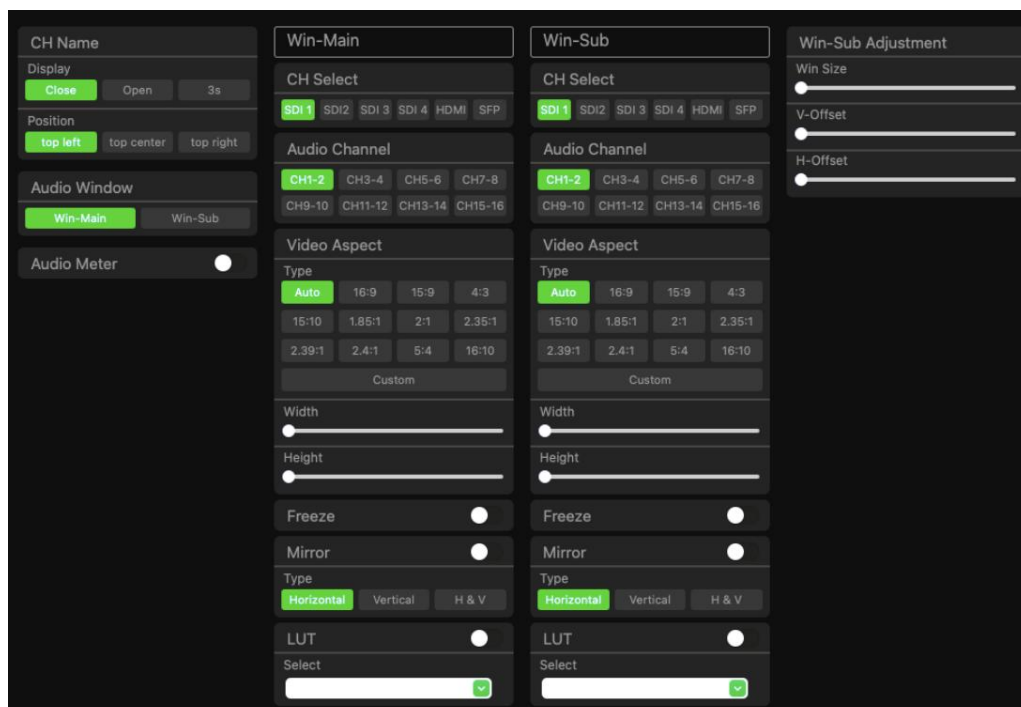


**(3) PBP** (including CH Name's display and position, Audio Window, Win-Left, Win-Right setting)

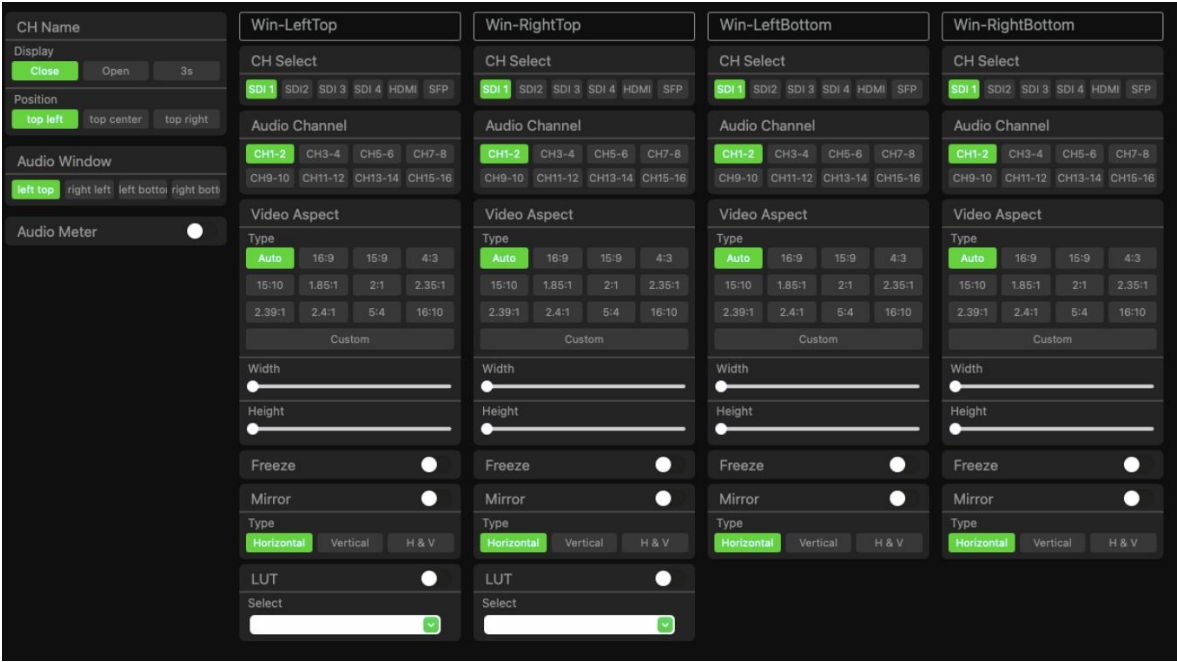




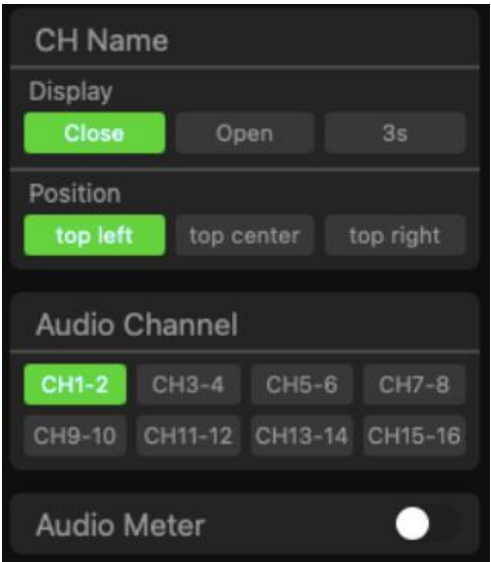
**(4) PIP** (including CH Name's display and position, Audio Window, Win-Main, Win-Sub setting)



(5) **QUAD** (including CH Name's display and position, Audio, Win-LeftTop, Win-RightTop, Win-LeftBottom, Win-RightBottom setting)



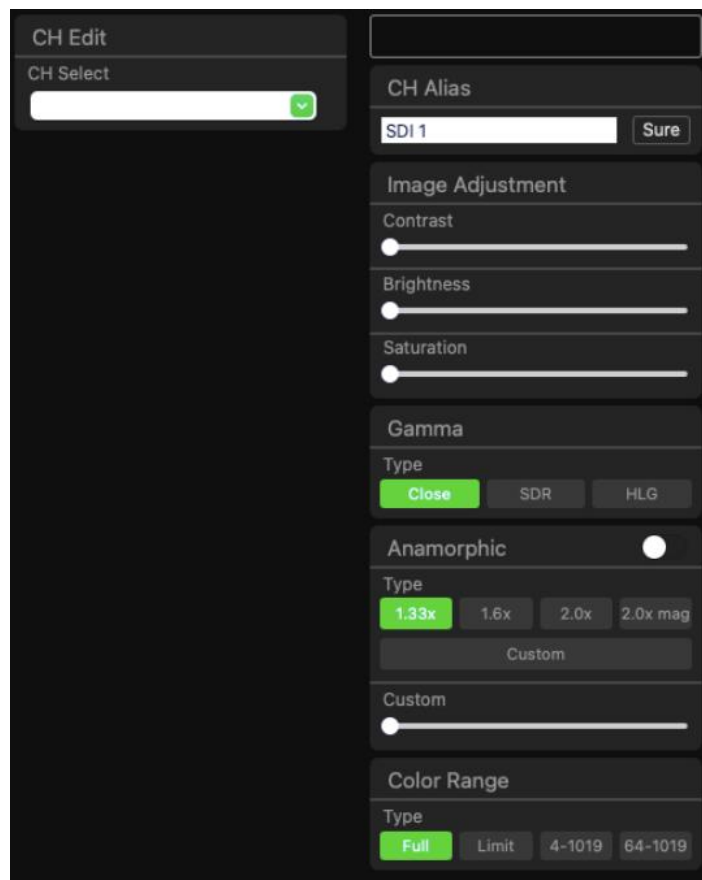
(6) **8K** (including CH Name's display and position, Audio Channel setting)



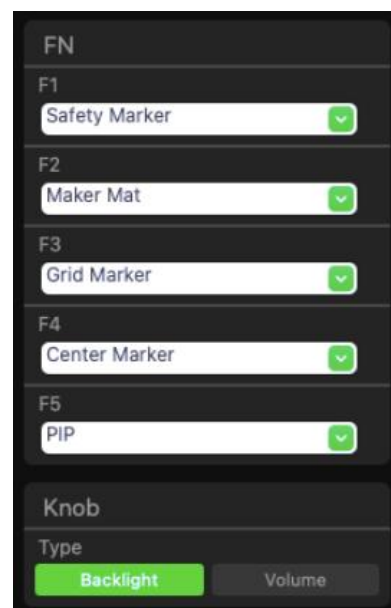
8.3.2 System Set

(1) **CH PRESET:** Including CH Edit, CH Alias, Image Adjustment, Gamma,

## Anamorphic and Color Range setting

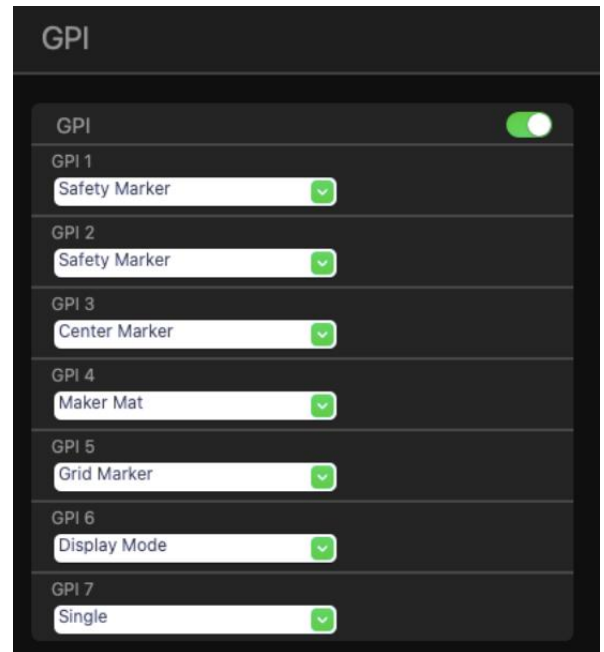


**(2) FN:** you can set for F1~F5,  
the functions same as the monitor  
Knob: can be set Backlight and Volume

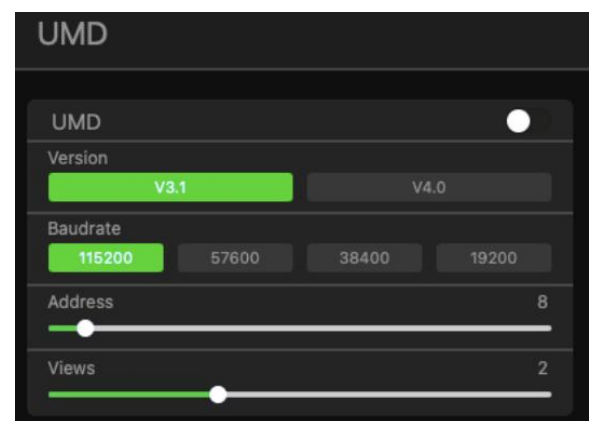


### (3) GPI:

you can set for GPI 1~GPI 7,  
the functions same as the monitor



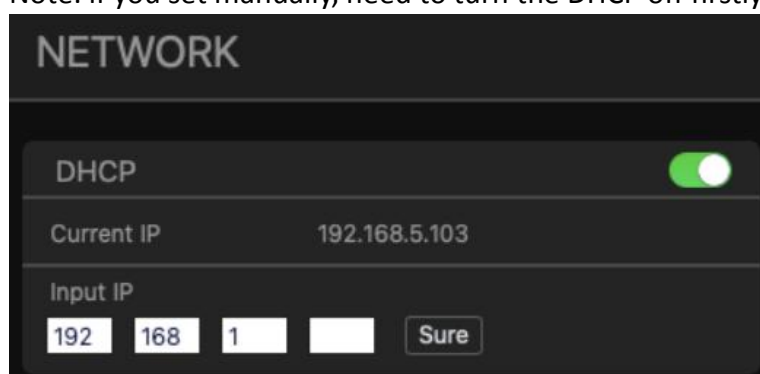
### (4) UMD: including Version, Baudrate, Address, Views



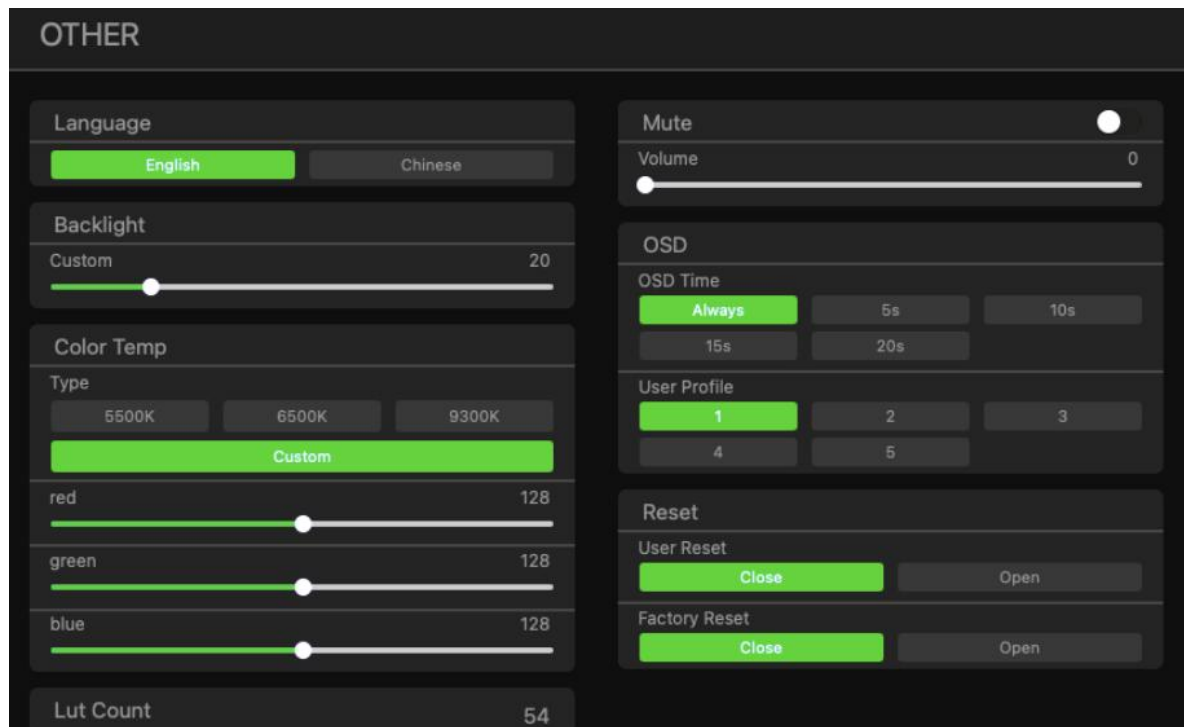
### (5) NETWORK:

Including DHCP ( automatically obtain IP address) and manually IP set.

Note: if you set manually, need to turn the DHCP off firstly



**(6) OTHER:** Including Language, Backlight, Color Temp., LUT Count, Mute, OSD Time, User Profile, Reset setting



## 9. Signal Support Formats

| Signals        | Signal Support Formats                                                                                                                                                                       |                       |                                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HDMI</b>    | 720p (60/59.94/50/30/29.97/25/24)<br>1080i (60/59.94/50)<br>1080p (60/59.94/50/30/29.97/25/24/23.98)<br>3840x2160p (60/50/30/29.97/25/24/23.98)<br>4096x2160p (60/50/30/29.97/25/24/23.98Hz) |                       |                                                                                                                                                                        |
| <b>SDI/SFP</b> | SMPTE 274                                                                                                                                                                                    | 4:2:2 Y'Cb'Cr' 10-bit | 1080p(23.98/24/25/29.97/30/50/59.94/ 60 )<br>1080i (50/59.94/60 )<br>1080PsF (23.98/24/25/ 29.97/30)<br>2048 x 1080p (23.98/ 24/<br>25/29.97/30/47.95/48/50/59.94/ 60) |

|  |               |                       |                                                              |
|--|---------------|-----------------------|--------------------------------------------------------------|
|  |               |                       | 2048 x 1080psf (23.98/24/25/29.97/ 30)                       |
|  | SMPTE 296     | 4:2:2 Y'Cb'Cr' 10-bit | 720p (50,59.94, 60 )                                         |
|  | SMPTE 260     | 4:2:2 Y'Cb'Cr' 10-bit | 1035i (59.94/60 )                                            |
|  | SMPTE 295     | 4:2:2 Y'Cb'Cr' 10-bit | 1080i (50 )                                                  |
|  | SMPTE 425-B   | 4:2:2 Y'Cb'Cr' 10-bit | 1080p (50/59.94/60)<br>2048 x 1080p ( 47.95/48/50/59.94/60 ) |
|  | SMPTE ST 2036 | 4:2:2 Y'Cb'Cr' 10-bit | 3840 x 2160p ( 23.98/24/ 25/ 29.97/ 30/<br>50/ 59.94/ 60)    |

## 10. Parameters

|                         |                                   |      |
|-------------------------|-----------------------------------|------|
| <b>Panel Size</b>       | 23.8"                             |      |
| <b>Resolution</b>       | 3840x2160 pixels                  |      |
| <b>Color Display</b>    | 1.07B                             |      |
| <b>Color Gamut</b>      | NTSC 105% (CIE1931)               |      |
| <b>Aspect Ratio</b>     | 16:9                              |      |
| <b>Pixel Pitch (mm)</b> | 0.13695(H) x RGB x 0.13695(V) mm  |      |
| <b>Brightness</b>       | 1000cd/m <sup>2</sup>             |      |
| <b>Contrast</b>         | 1300:1                            |      |
| <b>Viewing Angle</b>    | 178°(H) 178°(V)                   |      |
| <b>Audio</b>            | SD/SFP                            | 16CH |
|                         | HDMI                              | 4CH  |
|                         | 3.5mm Headphone Jack, Speaker     |      |
| <b>Backlight</b>        | LED                               |      |
| <b>Response Time</b>    | 10ms                              |      |
| <b>Input</b>            | 4*12G -SDI<br>1*HDMI,<br>1*RS485, |      |

|                            |                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------|
|                            | 1*GPI,<br>1*USB (upgrade and LUT import)<br>1*LAN,<br>1*SFP (Fiber module is optional) |
| <b>Output</b>              | 4*12G-SDI<br>1* HDMI<br>1*RS485                                                        |
| <b>Working Temperature</b> | 0°C~50°C                                                                               |
| <b>Storage Temperature</b> | -20°C~60°C                                                                             |
| <b>Input Voltage</b>       | AC 100V~240V                                                                           |
| <b>Power Consumption</b>   | Max.95W                                                                                |
| <b>Unit Size (mm)</b>      | 570x385x33.5 (mm)                                                                      |
| <b>Unit Weight</b>         | 7.42kg                                                                                 |

## 11. Trouble Shooting

If there is any problem when using the unit, please try following ways to inspect and solve. Please contact us if you still could not solve it or have other problems.

| Without image display                    | Trouble shooting                                                                     |
|------------------------------------------|--------------------------------------------------------------------------------------|
| ◆ Video cable off or connect incorrectly | Check the quality of the cable, make sure the correct input interface                |
| ◆ Without video signal input             | Check the signal source and output interface connect is correct or not               |
| ◆ Monitor is not be powered on           | Check whether the power is connected, put the power switch to “ <b>on</b> ” position |
| ◆ Supply voltage instability             | The power adapter or battery is poor connected with battery plate                    |

|                                                              |                                       |
|--------------------------------------------------------------|---------------------------------------|
| ◆ self-contained power supply,<br>polarity connect inversely | Reference "Power input way" reconnect |
|--------------------------------------------------------------|---------------------------------------|

### Image/color display abnormal

### Trouble shooting

|                                                   |                                                         |
|---------------------------------------------------|---------------------------------------------------------|
| ◆ Video cable poor contact                        | Change video cable, try again                           |
| ◆ Video signal interfered by external environment | Move to another environment to try again                |
| ◆ Menu color saturation adjustment closing        | Enter menu to check color, or reset to factory settings |
| ◆ Check Field set in mono or black & white        | Reset Check Field, back to the color                    |
| ◆ Image deformation                               | Reset the image aspect ratio                            |

### Speaker without sound

### Trouble shooting

|                                          |                                                            |
|------------------------------------------|------------------------------------------------------------|
| ◆ Audio cable off or connection properly | Confirm connected with the corresponding input port        |
| ◆ Volume adjustment was closed           | Reset the volume control and adjust to a proper position   |
| ◆ HDMI cable poor connected              | Check the quality of cable, or change cable and have a try |

### ■ Remark:

- ★ If there are still other problems, please contact with our related technical persons.
- ★ As we are improving our products features, so if there are changes without prior notice.