

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 clean soft cloth to maintain the brightness of the surface.
- Please do not block any vent hole.
- 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.

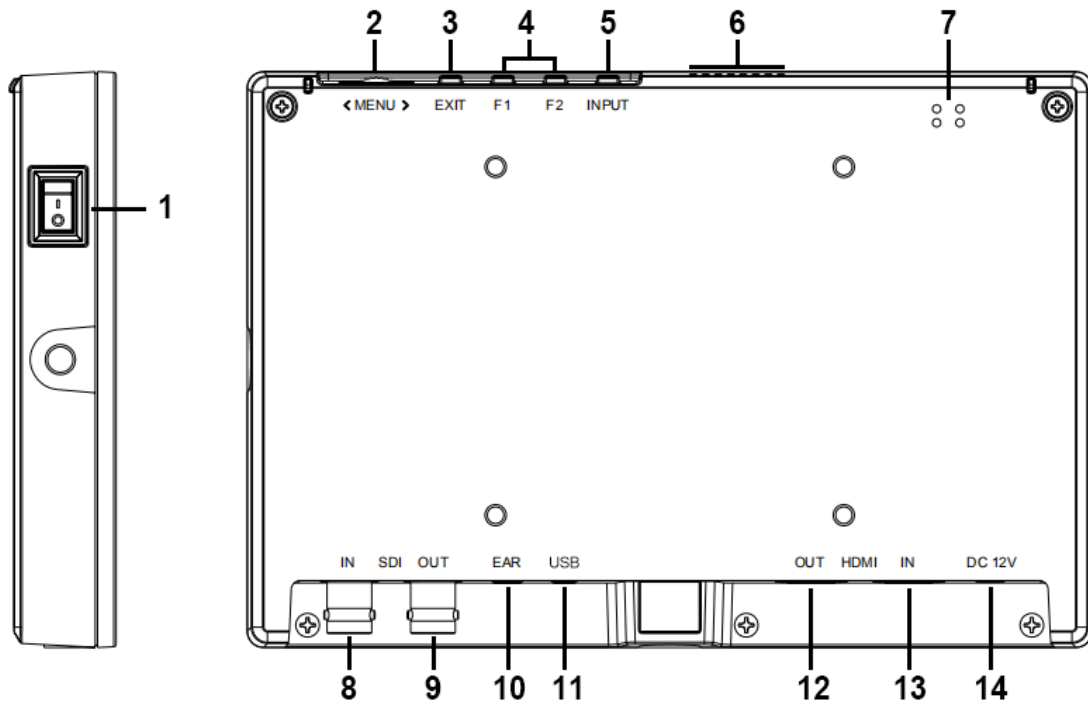
MAIN FEATURES:

- 3D LUT for Accurate Color Reproduction.
- Gamma Selection
- With HDR;
- Compare Color Space & Gamma (Side by Side)
- SDI and HDMI cross conversion;
- Integrated recording info. display;
- Various Markers
- Various camera assist function : Scan, Aspect, H/V Delay, Check field, Zoom, Freeze, Waveform, Vector Scope, Time Code, etc.
- High resolution: 1920×1200;
- Wide voltage: DC 7-24V;
- High brightness: 500cd/m²;
- High contrast: 1000:1;

CONTENTS

1. PRODUCT DESCRIPTION.....	4
2. DV BATTERY MOUNT PLATE	5
3. MENU SETTING.....	7
4. ACCESSORIES	21
5. PARAMETERS	22
6. TROUBLE SHOOTING.....	22

1. PRODUCT DESCRIPTION



1. Power ON/OFF: “○” is power OFF; “|” is power ON.
2. MENU Dial: Turn the dial to adjust volume;
Menu function: press to activate menu displayed on screen when power on.
Option function: select option via dialing to the left or right.
Confirm function: press to confirm after option selected.
3. EXIT: return/exit; Volume off/on.
4. F1、 F2、 User-definable buttons.

Default functions: (function customized to meet your needs)

F1 Waveform F2 Scan

5. INPUT: Circularly switch among of SDI and HDMI.
6. Fan cooling holes.
7. Speaker.
8. SDI input interface.
9. SDI output interface.
10. Earphone jack.
11. USB (3D-LUT load).
12. HDMI output interface.
13. HDMI input interface.
14. DC 12V power input.

2. DV BATTERY MOUNT PLATE

Standard mounts process



Following three types of battery plates are suitable for this device, model F970 & LP-E6.



MODEL: F-970



MODEL: LP-E6

DV Battery Mount Plate Specification:

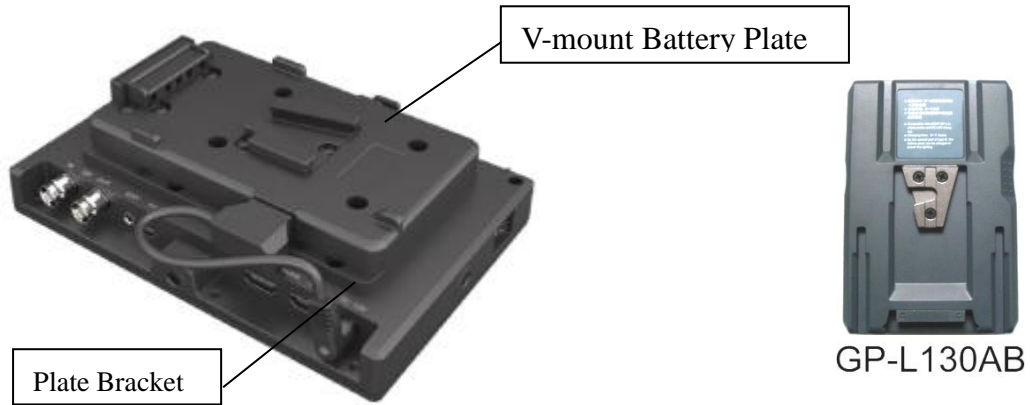
Model F970 for battery of SONY DV:

DCR-TRV series, DCR-TRV E series, VX2100E PD P series, GV-A700, GV-D800 FD/CCD-SC/TR3/FX1E/HVR-AIC, HDR-FX1000E, HVR-Z1C, HVR-V1C, FX7E F330.

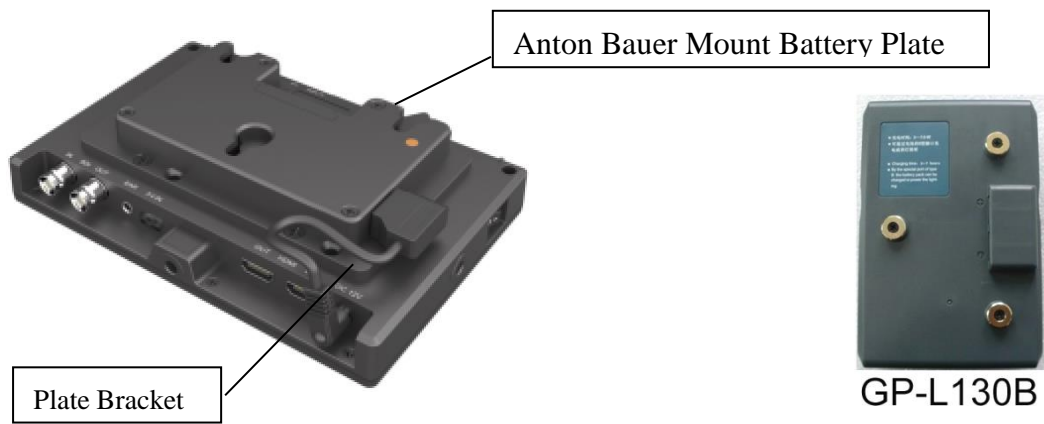
Model LP-E6 for battery of Canon DSLR:

5D Mark II/5D Mark III/EOS7D/EOS60D;

V-mount battery plate (optional): Please refer to GP-L130AB type battery specifications.



Anton Bauer mount battery plate (optional):
Please refer to GP-L130B type battery specifications.



3. MENU SETTING

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

3-1. Shortcut keys:

3-1-1. the image menu

Dialing to the left or right when power on, brightness will appear at the bottom of the screen, then press the dial to switch among of brightness, sharpness, contrast, saturation, volume, tint, MENU and Exit. User can adjust the value of the selected option via the dial.

3-1-2. F1-F2 2 user-definable function buttons:

Long press any F1-F2 key for 3-5 seconds to pop-up shortcut menu directly. As shown in Figure (default menu button in white font).

Select option via dialing to the left or right.

Press to confirm option as default, then press EXIT to exit.

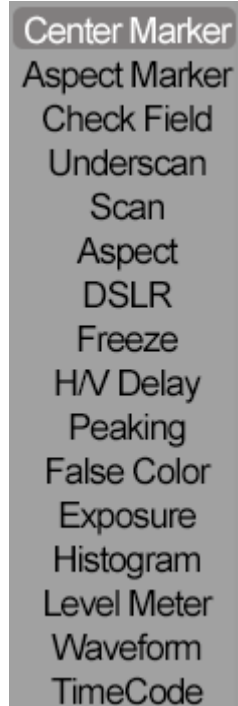
Functions of F1-F2 buttons can also be customized: Center Marker, Aspect Marker, Check Field, Underscan, Scan, Aspect, DSLR, Freeze, H/V delay, Peaking, False Color, Exposure, Histogram, Level Meter, Waveform and Time Code.

Note: Time code is only available under SDI mode.

F1-F2: 2 user-definable function buttons

Default function:

F1 Waveform F2 Scan



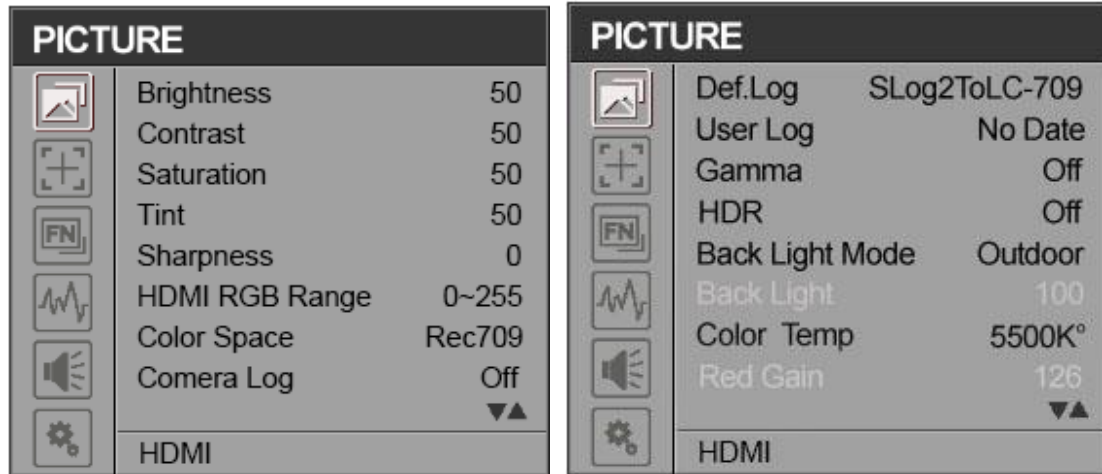
Center Marker
Aspect Marker
Check Field
Underscan
Scan
Aspect
DSLR
Freeze
H/V Delay
Peaking
False Color
Exposure
Histogram
Level Meter
Waveform
TimeCode

3-2. MENU Operation

When power on, press “**MENU**” on the device. The menu of function setting will display on the screen.

Dialing left or right to choose menu, and press to confirm, and then press EXIT to return.

3-2-1. Picture



ITEMS	OPTIONS	
Brightness	0 – 100	
Contrast	0 – 100	
Saturation	0 – 100	
Tint	0 – 100	
Sharpness	0 – 100	
HDMI RGB Range	0~255, 16~235	
Color Space	Rec709, EBU, Native, SMPTE-C	
Camera Log	OFF, Default, User	
Def. Log	SLog2ToLC-709; SLog2ToLC-709TA SLog2ToSLog2-709; SLog2ToCine+709 SLog3ToLC-709; SLog3ToLC-709TA SLog3ToSLog2-709; SLog3ToCine+709	
User Log	No Data	
Gamma	OFF, 1.8, 2.0, 2.2, 2.35, 2.4, 2.6, 2.8	
HDR	OFF, ST 2084 300, ST 2084 1000, ST 2084 10000, HLG	
Back Light Mode	Outdoor, Custom, Standard	
Back Light	0-100	Only available under User Mode
Color Temp	5500°K, 5600°K, 6500°K, 7500 °K, 9300 °K, User	
	Red Gain	0 – 255
	Green Gain	0 – 255
	Blue Gain	0 – 255
	Red Offset	0 – 511
	Green Offset	0 – 511
	Blue Offset	0 – 511

3-2-1-1. Brightness

Adjusts the general brightness of the LCD. For example, if you are outside in bright conditions, increase the LCD brightness to make it easier to view.

3-2-1-2. Contrast

Increases or decreases the range between the bright and dark areas of the image. High contrast can reveal detail and depth in the image, and low contrast can make the image appear soft and flat.

3-2-1-3. **Saturation**

Increase or decreases the amount of color in the displayed image.

3-2-1-4. **Tint**

Use this setting to choose the tint from 0 to 100.

3-2-1-5. **Sharpness**

Increase or decrease the sharpness of the image. When the image sharpness is insufficient, increase the sharpness to make the image clearer.

3-2-1-6. **HDMI RGB Range**

Use this setting to choose one of the HDMI RGB Range presets:

[0~255], [16~235].

3-2-1-7. **Color Space**

Use this setting to choose one of the color space presets: Rec709, EBU, Native, SMPTE-C.

3-2-1-8. **Camera Log**

Use this setting to choose one of the camera Log modes:

-[Off]: Sets off Camera Log.

-[Def. Log]

Use this setting to choose one of the Camera Log modes:

SLog2ToLC-709, SLog2ToLC-709TA, SLog2ToSLog2-709,

SLog2ToCine+709, SLog3ToLC-709, SLog3ToLC-709TA,

SLog3ToSLog2-709, SLog3ToCine+709.



-[User Log]

Use this setting to choose one of the User Log modes (1-6).

Please install the User Log as following steps:

The User Log must be named with .cube in the suffix.

Please note: the device only support the format of User Log:

17x17x17 , Data order is BGR, Table order is BGR.

If the format does not meet the requirement, please use tool “Lut Tool.exe” to transform it. Naming the User Log as User1~User6.cube, then copy the user Log into USB flash disk (Only support USD2.0 versions). Insert the USB flash disk to the device, the User Log is saved to the device automatically at the first time. If the User Log is not loaded for the first time, the device will pop up a prompt message, please choose whether to update or not.

3-2-1-9. Gamma

Use this setting to choose one of the Gamma tables:

[Off], [1.8], [2.0], [2.2], [2.35], [2.4], [2.6], [2.8].

Gamma correction represents the relationship between the pixel levels from the incoming video and the luminance of the monitor. The Lowest gamma level available is 1.8, will cause the image to appear brighter. The highest gamma level available is 2.8, will cause the image to appear darker.

Note: Gamma mode can be only activated while HDR function closed.



Gamma1.8



Gamma2.8

3-2-1-10. HDR

Use this setting to choose one of the HDR presets:

[Off], [ST 2084 300], [ST 2084 1000], [ST 2084 10000], [HLG].



3-2-1-11. Back Light Mode

Adjusts the back light strength of the panel. If the back light value is increased, the screen becomes brighter.

-[Standard]:The default brightness is 100 cd/m².

-[Outdoor]: The default brightness is 500 cd/m².

-[Custom]: Adjusts the level of the back light from 0 to 100.

Note: Only available under [Custom] mode to adjust the level of the back light.

3-2-1-12. Color Temp

Adjust the color temperature to make the image warmer (Yellow) or colder (Blue). Increase the value to make the image be warmer, decrease the value to make the image be colder. User can use this function to strengthen, weaken or balance the image color according requirements. The standard white light color temperature is 6500K.

Note:Only available under “User” mode to adjust Color Bias and Gain.

Select “User” to set color Bias and Gain. This should only be done by someone experienced with video engineering, as this will alter the overall color shading of the screen. The purpose is to allow color matching to other types of monitors and/or displays.

3-2-2. Marker



ITEMS	OPTIONS	
Center Marker	OFF, ON	
Aspect Marker	OFF, 16:9, 1.85:1, 2.35:1, 4:3, 3:2, 1.3X, 2.0X, 2.0X MAG	
Safety Marker	OFF, 95%, 93%, 90%, 88%, 85%, 80%	
Marker Color	Red, Green, Blue, White, Black	
Marker Mat	OFF, 1– 7	(step value is 1)
Thickness	1– 7	(step value is 1)

3-2-2-1. Center Marker

Select On, it will appear “+” marker on center of screen.



3-2-2-2. Aspect Marker

Display the different aspect of the displayed image .

[OFF], [16:9], [1.85:1], [2.35:1], [4:3], [3:2], [1.3X], [2.0X], [2.0X MAG].



3-2-2-3. Safety Marker

Use this setting to set off the safety marker or choose the one of the safety markers:

[95%], [93%], [90%], [88%], [85%], [80%].

3-2-2-4. Marker Color&Marker Mat&Thickness

The transparency of aspect mat can be adjusted from 0 to 7. Meanwhile, there are five alternative marker colors. The marker thickness can be set as 2,4,6. Users can choose abundant ratios or colors according to different background colors when shooting.



3-2-3、Function

SDI Mode

HDMI Mode

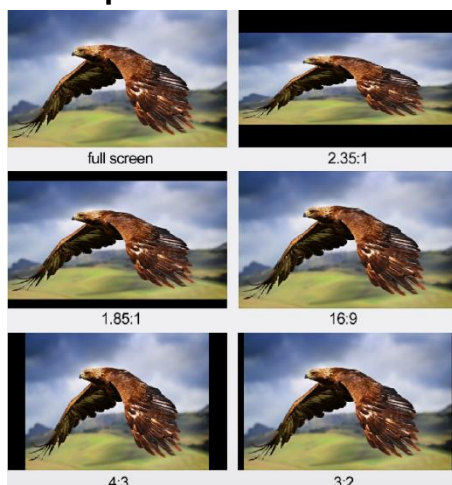
FUNCTION			FUNCTION		
	Scan	Aspect		Scan	Aspect
	Aspect	Full		Aspect	Full
	Underscan	Off		Underscan	Off
	H/V Delay	Off		H/V Delay	Off
	Check Field	Off		Check Field	Off
	Zoom	50%		Zoom	50%
	Freeze	Off		Freeze	Off
	3G Format	Normal		DSLRL	Off
	SDI			HDMI	

ITEMS	OPTIONS	
Scan	Zoom, Aspect, Pixel TO Pixel (Options can be adjusted only under scan mode.)	
Aspect	Full, 16:9, 1.85:1, 2.35:1, 4:3, 3:2, 1.3X, 2.0X, 2.0X MAG	
Underscan	OFF, ON	
H/V Delay	OFF, H, V, H/V	
Check Field	OFF, Red, Green, Blue	
Zoom	10%~90% (step value is 10%)	
Freeze	OFF, ON	
DSLRL	OFF, 5D2, 5D3	Only available under HDMI Mode.
3G Format	Normal,GBRA444 10Bit, YCbCrA444 10Bit	Only available under SDI Mode.

3-2-3-1. Scan

Use this menu option to choose Scan mode. There are three modes preset:

- **Aspect:**



Select Aspect under Scan option, then use Aspect option to switch between several aspect ratio setting. Users can select related aspect ratio according to different signal input to meet the best viewing experience.

For example:

In 4:3 mode, images are scaled up or down to fill the maximum 4:3 portion of the screen. In 16:9 mode, images are scaled to fill the entire screen.

- **Pixel to Pixel**

The pixel to pixel is a monitor set to 1:1 pixel mapping with native fixed pixels,

which avoids loss of sharpness due to scaling artifacts and normally avoids incorrect aspect ratio due to stretching.

- **Zoom**

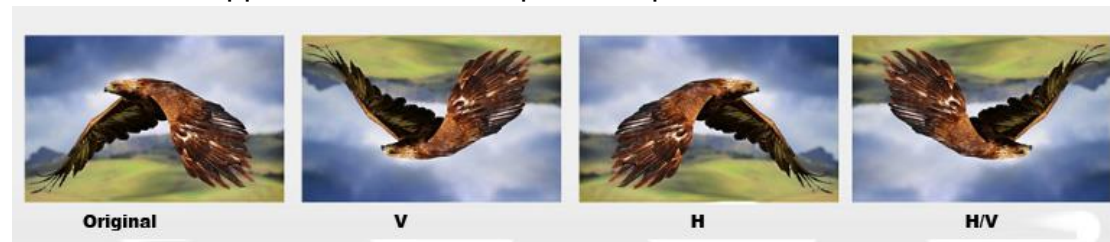
Can see the enlarged image by 10%~90% ratios. To select the “zoom” under Scan, choose the times under Zoom option which underneath the Check Field option.

3-2-3-2. Underscan

If the image shows size error, use this setting to zoom in/out pictures automatically when receiving HDMI signals.

3-2-3-3. H/V Delay

The monitor support H,V, H/V three preset Flip modes.



3-2-3-4. 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 Blue, Green, and Red check field modes, only the selected color will be shown.

3-2-3-6. Freeze

Choose [Off] or [On] to freeze or unfreeze the current image on the screen

3-2-3-7. 3G Format

Use this setting to choose one of the 3G Format modes: [Normal], [GBRA444 10Bit], [YCbCrA444 10Bit],

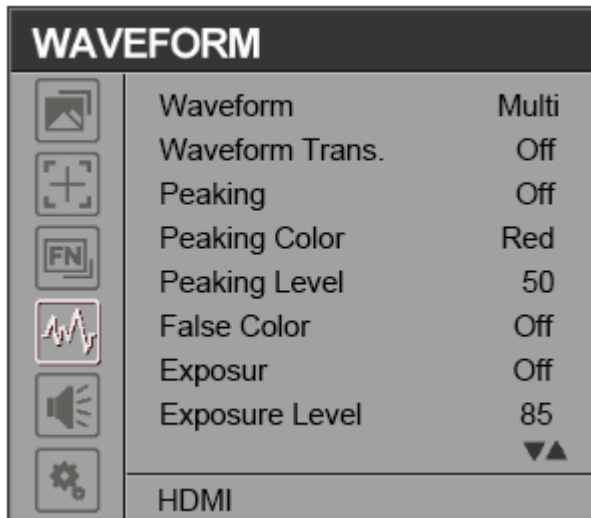
[YCbCrA422 12Bit], [GBR444 12Bit], [YCbCr444 12Bit].

3-2-3-8. DSLR

Use the DSLR Preset option to reduce the visibility of on screen indicators shown with popular DSLR cameras. The available options are:

5D2, 5D3

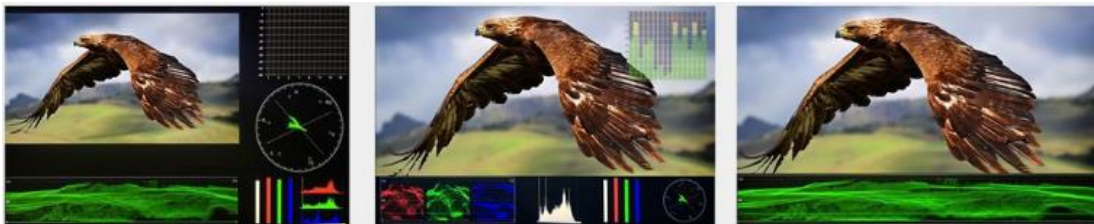
3-2-4. Waveform



ITEMS	OPTIONS
Waveform	OFF, Multi, Y, YCbCr, RGB, RGB Full
Waveform Trans.	OFF, 25%, 50%
Peaking	OFF, ON
Peaking Color	Red, Green, Blue, White
Peaking Level	0 – 100
False Color	OFF, ON
Exposure	OFF, ON
Exposure Level	0 – 100
Histogram	Y, RGB, Color

3-2-4-1. Waveform

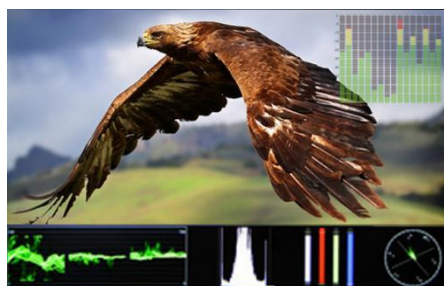
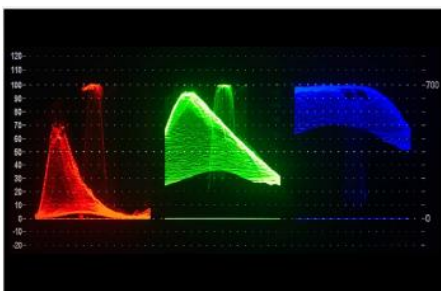
Use this setting to activate or deactivate Waveform. It also can be choose one of the waveform modes: [Multi], [Y], [YCbCr], [RGB], [RGB Full].



Multi

RGB

Y



3-2-4-2. **Waveform Trans**

Use this setting to choose the intensity of the Waveform Trans:

-[Off] : The background of waveform is shown at black.

-[25%]:The background of waveform is shown at 25% intensity.

-[50%]:The background of waveform is shown at 50% intensity.

3-2-4-3. **Peaking**

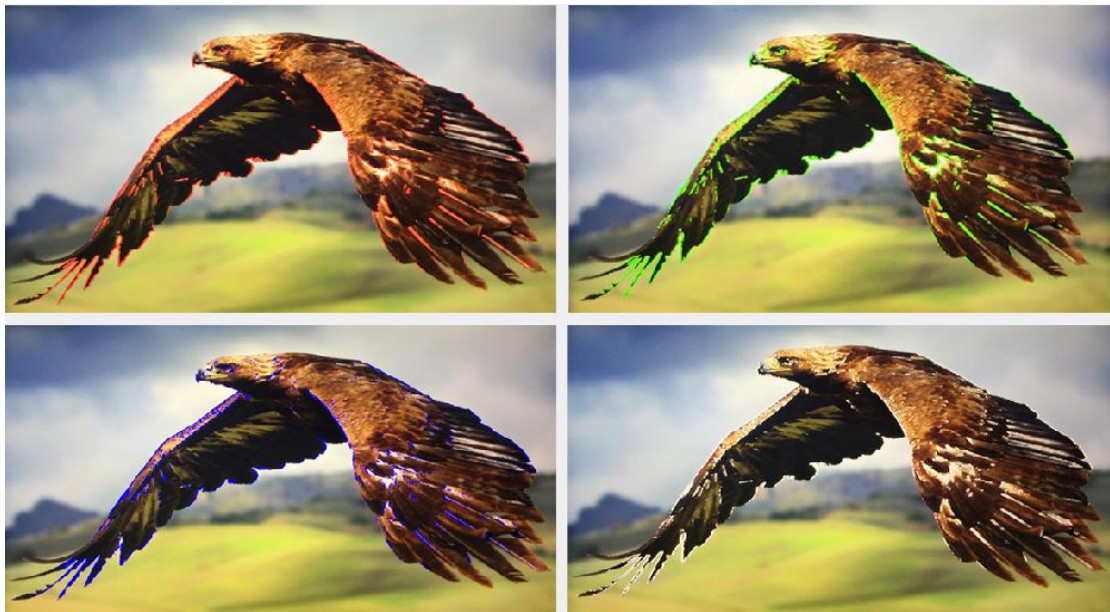
The peaking is used to aid the camera operator in obtaining the sharpest possible picture. Select “On” to display colored outlines around sharp areas of the image.

3-2-4-4. **Peaking Color**

Use this setting to change the color of focus assist lines to Red, Green, Blue, White, Black. Changing the color of the lines can help make them easier to see against similar colors in displayed image.

3-2-4-5. **Peaking Level**

Use this setting to adjust the level of focus sensitivity. If there are plenty of details of image with high contrast, it will display lots of focus assist lines that may cause visual interference. So, decrease the value of peaking lever to reduce the focus lines to see clearly. Conversely, if the image has less details with low contrast, it should be increase the value of peaking lever to see the focus lines clearly.



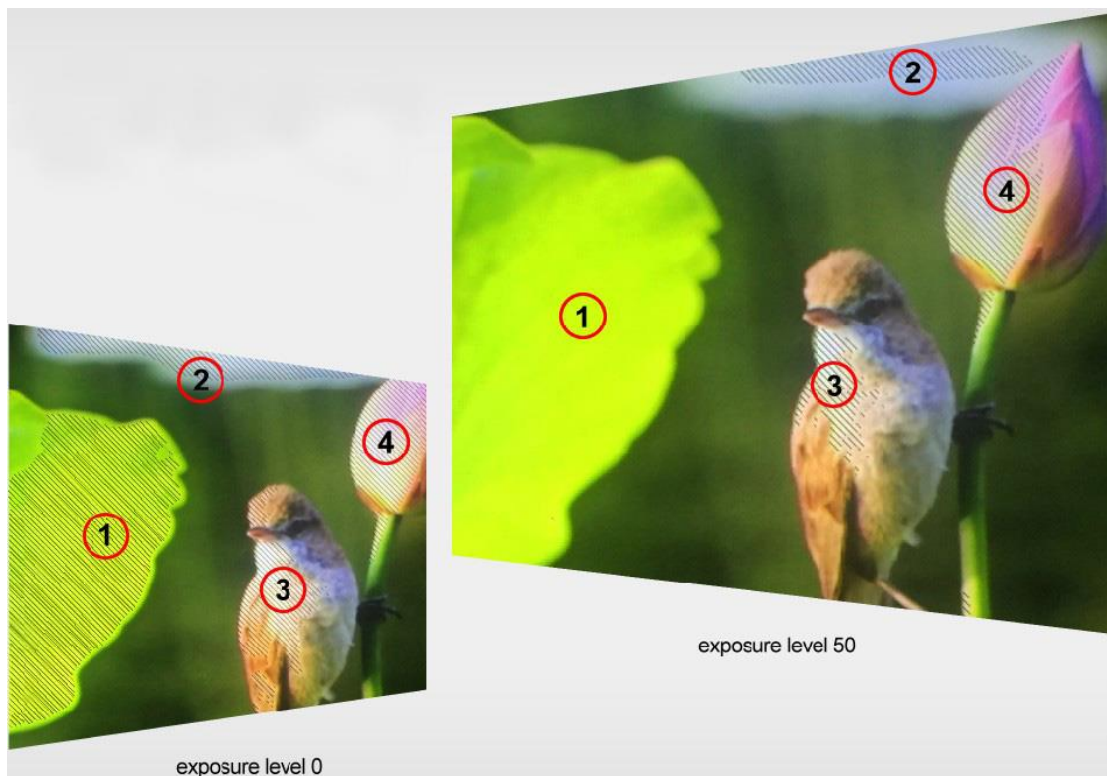
3-2-4-6. **False Color**

This monitor has a false color filter to aid in the setting of camera exposure. As the camera Iris is adjusted, elements of the image will change color based on the luminance or brightness values. This enables proper exposure to be achieved without the use of costly, complicated external equipment.



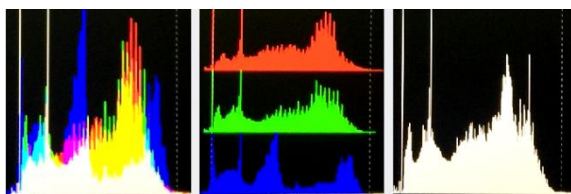
3-2-4-7. Exposure&Exposure Level

The exposure feature helps the user achieve optimum exposure by displaying diagonal lines over areas of the image that exceed the setting exposure level. The exposure lever can be set to 0~100.



3-2-4-9. Histogram

The histogram makes users view visually the exposure of whole and each RGM channels. It has the full contrast rang of video for easy color correction during post production. This devise can be set the histogram modes among:[Y], RGB), [Color]. Select [Off] under Waveform option can deactivate it.



3-2-4-10. Time Code

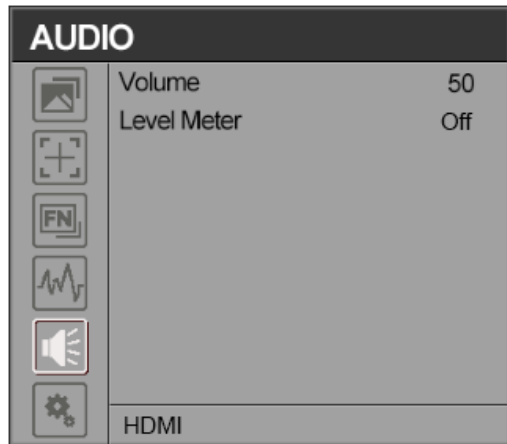
The Time Code supports Longitudinal time code (LTC) and Vertical interval time code (VITC). The time code display on the monitor is synchronizing with that of Full HD camcorder's. It displays the duration of the clips in

hours:minutes:seconds:frames. It's very useful for identifying specific frame in film and video production.

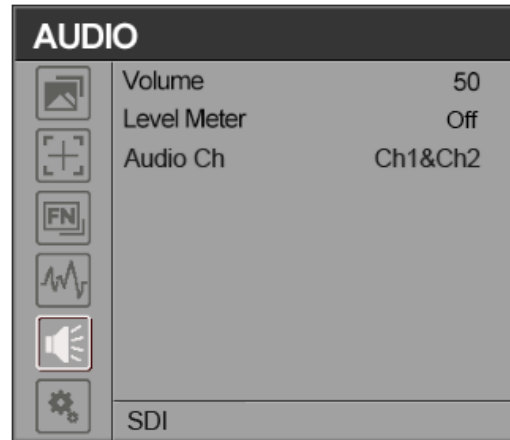
Note: Time code is only available under SDI mode.

3-2-5. AUDIO

HDMI Mode



SDI Mode

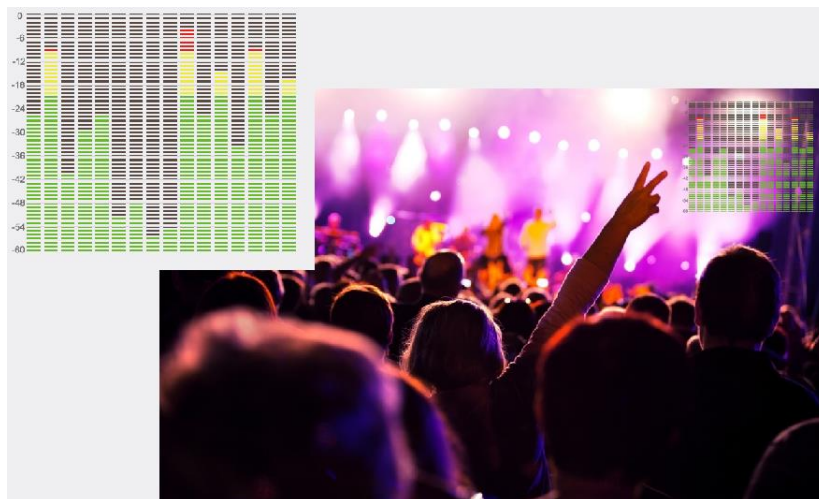


3-2-5-1. Volume

To adjust the volume for the built in speaker and earphone jack audio signal.

3-2-5-2. Level Meter

The right side of the on screen meters displays level meters showing audio levels for the input source. It features peak hold indicators which stay visible for a short time so the user can clearly see the maximum levels reached. To achieve optimum audio quality, ensure your audio levels do not reach 0. This is the maximum level, meaning that any audio that exceeds this level will be clipped, resulting in distortion. Ideally peak audio levels should fall in the upper end of the green zone. If the peaks enter into the yellow or red zones, the audio is in danger of clipping.



Note: Default as on under waveform [Multi] function.

3-2-5-3. Audio Ch

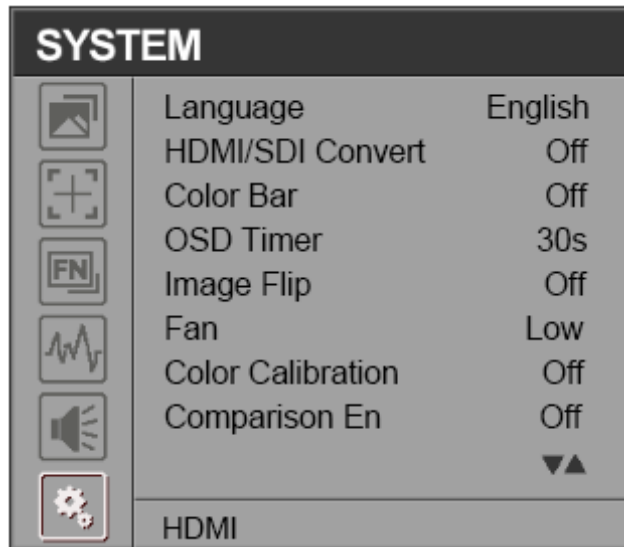
Use this setting to choose the embedded audio channel for the audio out of

the earphone:

[Ch1&Ch2], [Ch3&Ch4], [Ch5&Ch6], [Ch7&Ch8], [Ch9&Ch10],[Ch11&Ch12], [Ch13&Ch14], [Ch15&Ch16].

Note: Only available under SDI mode.

3-2-6. SYSTEM



3-2-6-1. Language

Switch between English, Chinese.

3-2-6-2. HDMI/SDI Convert

HDMI/SDI cross conversion function can realize signal transmits from SDI input to HDMI output and from HDMI input to SDI output.

Use this setting to activate or deactivate the convert function.



3-2-6-3. Color Bar

Color Bar can exactly reflect the brightness and saturation of colors, which is convenient to check the transmission quality of video channels. Use this setting to activate or deactivate the Color Bar function. It has two modes to be chose when activated: [100%], [75%].

3-2-6-4. OSD Timer

Select the display time of OSD among: [10s], [20s], [30s].

3-2-6-5. Image Flip

Use this setting to activate or deactivate the Image Flip function. It has three modes to be chose: [H], [V], [H/V].



3-2-6-6. Fan

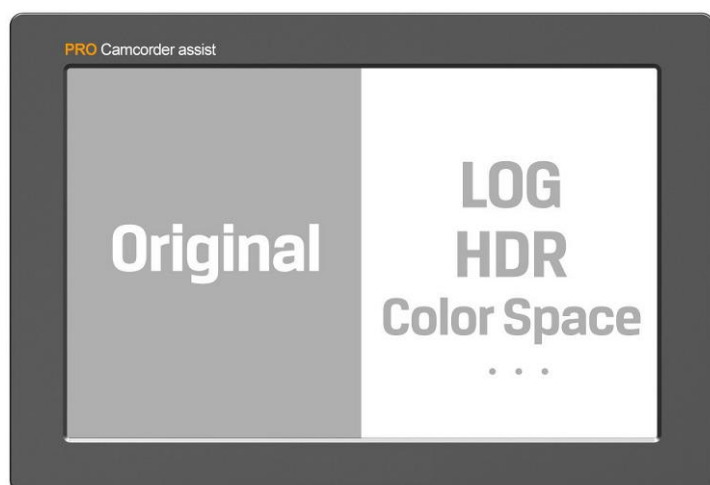
Use this setting to choose the strength of fan: [Low], [High].

3-2-6-7. Color Calibration

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 “lcd.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 “lcd.cube” will be found under Color Space Option.

3-2-6-8. Comparison En



Use this setting to activate or deactivate the Comparison En function.

Activate this function, the screen displays the comparison of Original image and customized image, as shown.

3-2-6-9. Reset

Select the Reset option, dialing the “Menu” knob to reset automatically.

4. ACCESSORIES

Standard:



- | | | |
|----|-----------------------------|---------|
| 1. | Folding sun shade cover | 1 piece |
| 2. | HDMI A/C cable | 1 piece |
| 3. | Shoe mount | 1 piece |
| 4. | VESA battery plate | 1 piece |
| 5. | Battery plate(F970, LP-E6) | 2 piece |
| 6. | Battery Plate bracket | 1 piece |
| 7. | 12V DC adapter | 1 piece |
| 8. | Manual | 1 copy |

Optional:



- | | | |
|----|-------------------|---------|
| 1. | Anton Bauer mount | 1 piece |
| 2. | V-mount | 1 piece |
| 3. | Battery | 1 piece |

5. PARAMETERS

Panel	7"
Aspect Ratio	16:10
Physical Resolution	1920×1200 (324ppi)
Brightness	500 cd/m ²
Contrast	1000: 1
Viewing Angle	170°/ 170°(H/V)
Input Voltage	DC 7-24V
Input Signal	3G-SDI, HDMI, USB (3D-LUT load)
Power Consumption	≤12W
Operating Temperature	-20°C~60°C
Storage Temperature	-30°C~70°C
Dimension (LWD)	182×124×22mm
Weight	405g

6. 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 cables of 3G-SDI and HDMI are correctly connected or not. Please use the standard power adapter coming with the product package. Improper power input may cause damage.

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 → FUNCTION → Underscan" to zoom in/out pictures automatically when receiving HDMI signals

5. 5. Other problems:

Please press "MENU" button and choose "MENU→SYSTEM→ Reset →ON"

6. Note: Due to constant effort to improve products and product

features, specifications may change without notice.