

Konvision

KVM-7050W, KVM-9050W, KVM-7050W-2, KVM-9050W-2 LCD Monitors

USER MANUAL

Shenzhen Konvision Technology Co., Ltd
<http://www.konvision.com>

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• Notes

For the safety use of products, please read carefully the following instructions regarding the installation, use and maintenance.

- . Please read carefully the product safety and operating instructions before the product is operated.
 - . Please keep the safety and operating instructions for future reference.
 - . Please pay strict attention to the warnings and implement the products according to the operating instructions closely.
 - . All operating instructions should be strictly enforced.
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1. Please use the power cord recommended by manufacturer.
 2. Please do not place heavy objects on the power cord.
 3. Please do not expose this product to rain, humid, dusty places.
 4. Please do not place vessels with liquid (such as cups, beverage bottles) on the monitor.
 5. Please do not place this product in high heat places.
 6. Please make sure the earth terminal is good in order to avoid electric shock.
 7. Please do not open the back cover to avoid electric shock. Please contact professionals for service need.
 8. If there is no image or sound, please unplug the power cord from the AC outlet immediately. Please consult professionals if there still have problems after examining carefully.
 9. Do not place this product at unstable places such as cars, shelves or tables, as it is easy to make the product falling down, may cause severely hurt to children and adults and also damage to the product.
 10. Please do not touch the power plug with wet hands, as it will cause electric shock.
 11. Please do not expose the LCD panel in direct sunlight for a long time, it will result in damage or aging of the LCD panel.

12. Please display this product at a suitable temperature and humidity place.
13. Please do not spray any liquid things and/or add any objects into the monitor, it might cause voltage instability and short-circuit, also can easily cause fires and blackouts.
14. If do not use the device for a long time, please unplug the power cord from the AC outlet.
15. Please keep not less than 5cm space around the vents while using the monitor, in order to obtain good heat dissipation effect.

•Security

Screen maintenance:

Please follow the below guidelines carefully to prevent discoloration, stains and scratches on the screen:

- Avoid striking the screen with any object.
- Do not wipe the screen hard.
- Do not wipe the screen with solvents such as alcohol, thinner or gasoline.
- Do not spray detergent or other cleaners on the monitor or LCD panel, as it may cause fault because of water droplets into the monitor.
- Do not write on the screen.
- Do not paste or stick any viscous markers on the screen.

Screen may be cleaned by gently wiping with lint free cloth to remove dust. For the more difficult cleaning, use lint free cloth that has been very lightly dampened with detergent, then dry any excess moisture from the monitor or LCD panel immediately to prevent damage.

Cabinet maintenance:

Please follow the guidelines below to prevent potential damage.

- Do not wipe the cabinet with solvents such as alcohol, thinner or gasoline.
- Do not use any pesticides and/or other volatile substances.
- Do not allow prolonged contact with rubber or plastic.
- Do not wipe the cabinet hard. Use a soft, lint free cloth to clean. If the cabinet cleaning is

more difficult, use lint free cloth that has been very lightly dampened with detergent and then dry it to wipe.

Installation:

- Keep adequate air circulation to prevent device internal overheating. Please do not place the product on the surface of some certain objects (such as blankets, carpets, etc.), as these objects may block the vents.
- Please keep the device away from heat generating sources, such as radiator, heaters and air duct, also keep it away from much dust or mechanical vibration place.

Rack mount Installation:

- For rack mount installation, please keep 1U space from both top and bottom to make sure adequate air circulation, or install an external electric fan. Please follow the instructions and install with the rack mounts provided by manufacturer.

Transportation:

- This monitor is precise equipment and need professional packing materials to transport. So do not to use packing materials provided by suppliers except KONVISION or its authorized packing material suppliers.

When the following situations occur, please turn off the power, do not insert the plug and contact a professional service staff to deal with timely.

- A. This product smells smoke and off-flavor.
- B. When this product displays abnormal operating conditions, such as there is no picture or sound.
- C. When any liquid is splashed into the product or product dropped.
- D. When the product soaked or fall into the water.
- E. When the product has been damaged or other damage circumstances.
- F. When the power cord or plug is damaged.

The following does not belong to failures:

1. If the static image displayed too long, it will have residual image, which should be attributed to the characteristics of LCD display but not a failure. Residual image will disappear automatically after a period of time.
2. If this device used in a cold environment, the screen may appear residual image. This is not a product failure, when the monitor temperature changes, screen will return to normal conditions.
3. LCD screen may appear tiny spots (red, blue or green), this is not a fault, LCD screens are manufactured with high precision technology, and a small number of pixels may not be able to show intermittent.
4. Screen and cabinet will become warm gradually during operating.

• Features**High resolution LCD panel**

- LED backlight and high resolution. High contrast, high-speed response and wide viewing angle technology make the monitor can be used under variety of lighting conditions.

Support full screen for Canon 5D II

- Full screen switch for Canon 5D II, and 1:1 mapping

Support user replaceable battery plates

- Support V-mount, Anton Bauer, and different brands 7.2V DV battery plates.

Durable and lightweight design

- Full metal and lightweight design provides cameraman easily and safely to field shooting, and save space for OB vans/studio rooms equipment.

Two Colors Tally Indicator

- Two colors Tally indicator as red and green, to monitor each input signal and check ON-AIR mode.

Auto-detection of all color system (PAL, NTSC, SECAM)

- This unit detects the color system automatically.

3D video decoder

- Process 3D decoding on VIDEO signals, to realize better reduce cross color.

Motion-Adaptive Interlace to Progressive

- It converts interlaced video to progressive video by motion detection, reduce the serrated image.

10BIT Signal Processing

- Signal input, signal processing and image output are 10bit data processing, to ensure the details display of the image.

Y/C Input

- Decomposition for the luminance signal (Y) and chrominance signals (C) of the video signal can be input through this connector.

SDI Input

- 3G/HD/SD-SDI video signal can be input through this connector.

YPbPr Input

- YPbPr video signal (Compatible YCbCr) can be input through this connector.

HDMI Input

- HDMI signal can be input through this connector.

Signal Source Loop through

- Signal that linked to the input connector will be enlarged and linked to output connector. SDI reclock loop out ensure the signal without enervation.

Audio level meter (UV+PPM)

- Show the audio level meter (UV+PPM) for SDI embedded audio.

Waveform

- Display input signal waveform and color scope for SDI signal input monitoring. It includes luminance waveform, YCbCr waveform and full screen luminance waveform. Luminance waveform will mark with red if over the value specified by user.

Focus Assist

- Focus assist is to aid the cameraman focus on the main body by marking the sharpest edge of the image with red.

False Color

False color can intuitively observe and calculate illumination level in the image, luminance and illumination values display mapping as luminance level, from darkest to brightest, display blue, cyan, green, yellow, orange and red in turn.

Histogram

- YRGB histogram displays the hue distribution of the entire image under SDI input condition, can intuitively display exposure of the image, display R, G, B 3 channels independently.

Zebra

- Use zebra stripes to mark the parts which luminance is over the reference scope specified by user (default 95%), aid the cameraman to control the illumination, to avoid overexposure.

Vector scope

- Vector UV analysis for color bar signal input

Pixel Measure

- User can measure any pixel's specific position and RGB value; also can compare the YRGB value between any 2 pixels.

PIP/PBP

- SDI input signal can be displayed with another signal of VIDEO, S-VIDEO, COMPONENT, HDMI simultaneously, and showing two pictures on the screen.

SWAP Function

- In PIP/PBP mode, two pictures can be swapped between each other.

Color Temperature

- Different color temperatures can be selected freely.

Image Size Setting

- The display mode is switchable among 16:9, 4:3, full screen, 1:1, and the original image proportion.

Marker Setting

- Show frame borders, center marker, and safety area, etc.

HV Delay

- Display horizontal and vertical blanking area of SDI1 input signal.

Scan mode

- Scan mode includes Full Scan, Over Scan, Under Scan.

Part Zoom In

- Zoom in any part of the picture, to watch picture details more clearly, and assist for focus.

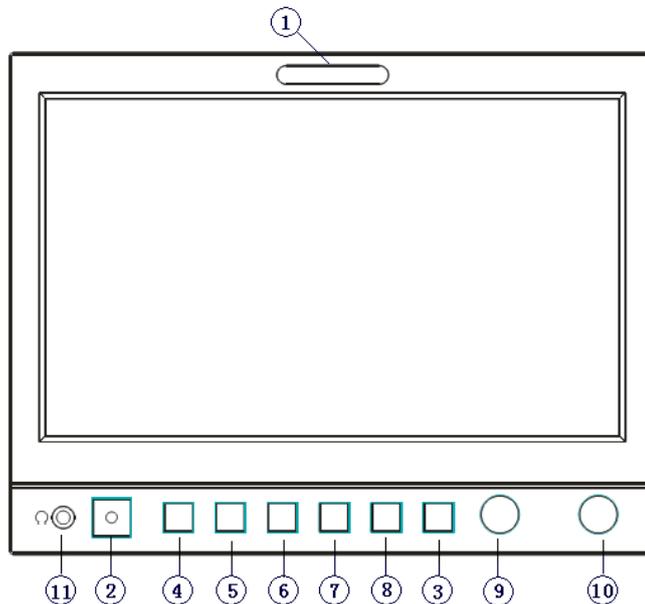
Remote Control Function

- Available to connect to the remote terminal to operate the equipment directly, select the input signal, longitudinal mode settings and tally indicator, etc.

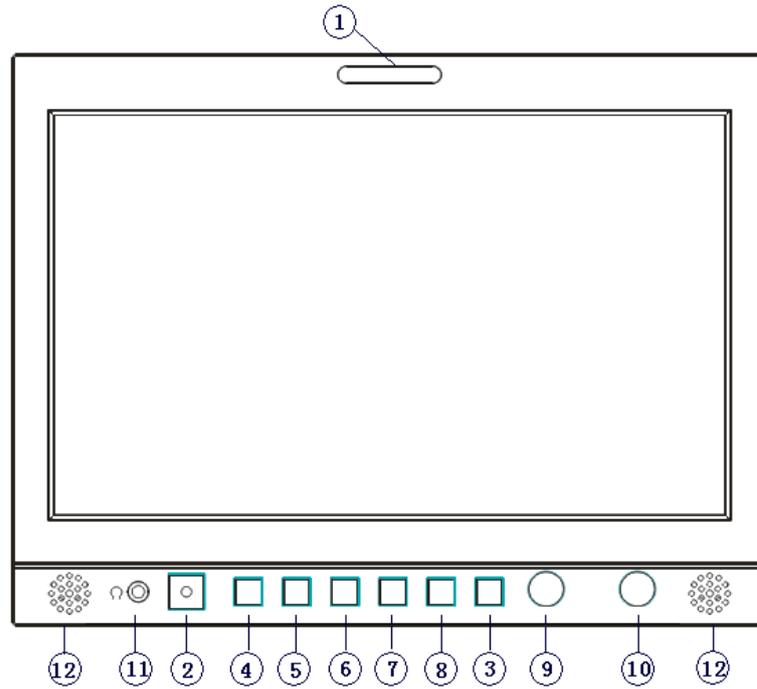
• Parts and Their Functions

A: Front View

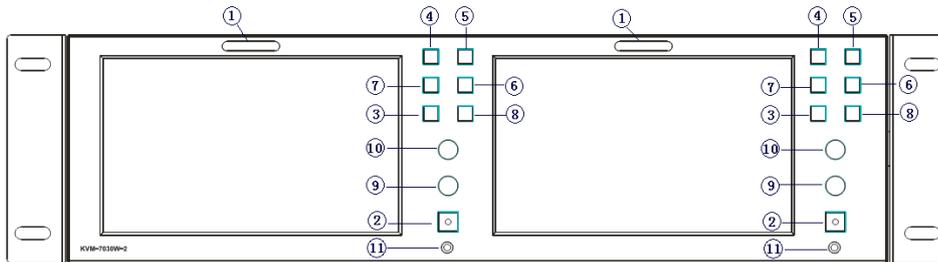
KVM-7050W front view:



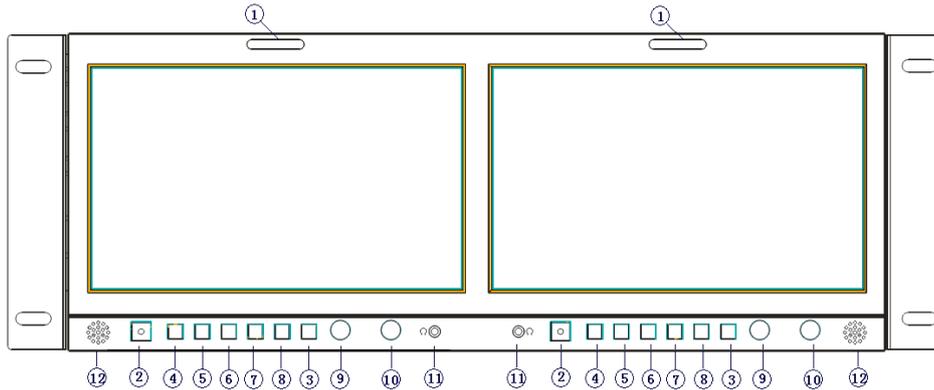
KVM-9050W front view:



KVM-7050W-2 front view:



KVM-9050W-2 front view:



(1)Tally Indicator

This tally indicator is controlled by RS232 port, with two colors, red and green.

(2) Power Button and Indicator

When the external DC power supply with electricity, the indicator light is red. Press this POWER button to power on the monitor, and the indicator light turns blue. Press this button again to turn off the monitor.

(3)MENU Button

Press this button to display the OSD menu, and press it again to exit the menu.

Clear the markers.

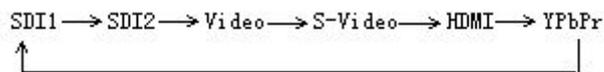
Clear display mode.

Turn off the shortcut menu.

(4)SOURCE Button

Press this button to select the input signal sources.

Selection list as below:



(5)MARKER Button

When the screen showing single picture, press this button for shortcut function: safety area.

(6)WFM/VCTR Button

Only for SDI signal input, continuously press this button for shortcut functions: Y waveform, CbCr waveform, Vector, Histogram, RGB Histogram, full screen waveform. (There is no histogram and RGB histogram when under 480I, 576I signal status)

(7)EXPOSE Button

Only for SDI signal input, continuously press this button for shortcut functions: false color, zebra.

(8) FOCUS

Continuously press this button for shortcut functions: Focus assist and Part Zoom In.

When it is SDI signal input, press FOCUS, active focus assist function, meanwhile, the sharpest edge of image will mark in red. If press it again, it will appear a green box under this status, rotate the VOLUME knob and/or IMAGEADJ knob can adjust the position of the green box, after you select the position you want to zoom in, press VOLUME knob or IMAGEADJ knob, it will zoom in and display full screen. If under Part Zoom In status, press VOLUME knob or IMAGEADJ knob, it will return to green box status. If under focus assist and Part Zoom In status, press FOCUS, it will cancel the focus assist function, and remain part Zoom In function, press FOCUS again, it will exit Part Zoom In function.

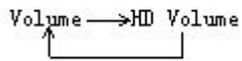
When it is HDMI, YPbPr, Video signal input, Press FOCUS, it will appear a green box directly, rotate the VOLUME knob and/or IMAGEADJ knob can adjust the position of the green box, after you select the position you want to zoom in, press VOLUME knob or IMAGEADJ knob, it will zoom in and display full screen. Press the VOLUME knob or IMAGEADJ knob again, it will return to green box status. If under green box status, press FOCUS, the green box will disappear. If under Part Zoom In function, press FOCUS, it will exit this function. (There is no focus assist function if signal input is HDMI, YPbPr, and Video)

(9)VOLUME Knob

This knob is encoder with key switch functions.

Turn this knob for Left and Right operation.

Press this knob for two shortcut functions: speaker volume and Headphone volume.



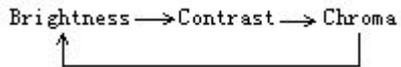
Volume: turn the knob to adjust speaker volume.

HD Volume: turn the knob to adjust headphone volume.

(10)IMAGE ADJ Knob

In OSD menu, turn this knob for Up and Down operation.

Press this knob for shortcut functions: Brightness, Contrast and Chroma.



Turn the knob adjust the value of Brightness, Contrast and Chroma respectively.

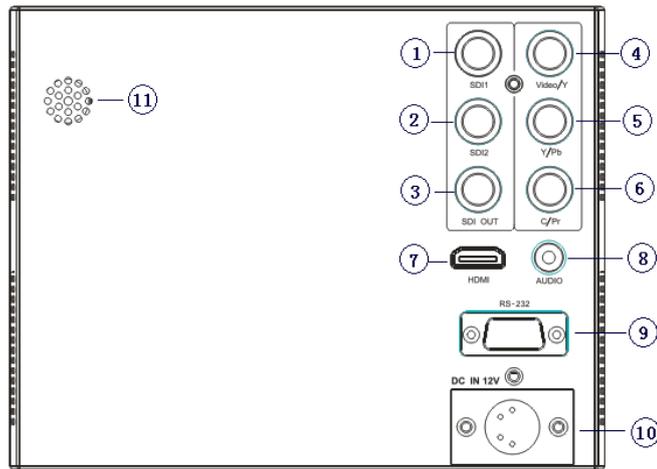
(11) Headphone

Headphone 3.5mm output.

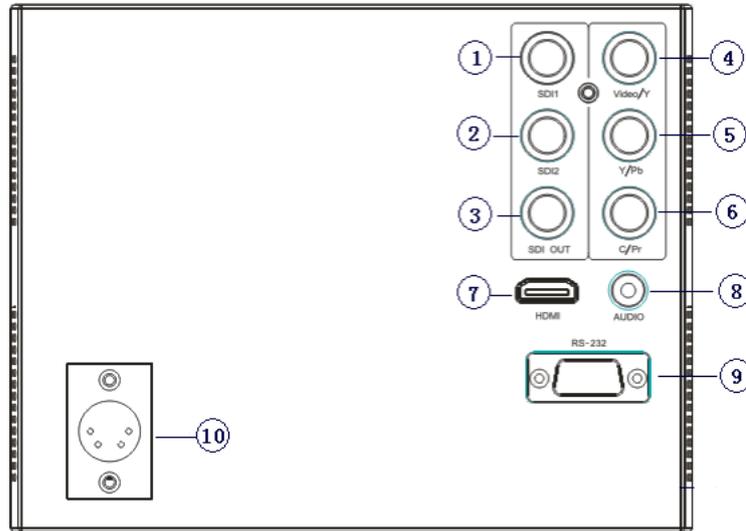
(12)Speaker: Built-in Stereo speaker.

B: Rear View

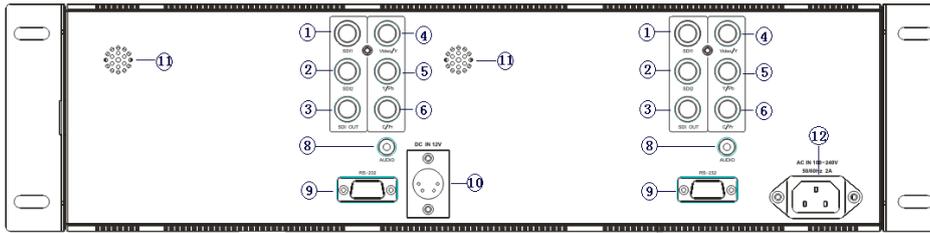
KVM-7050W rear view:



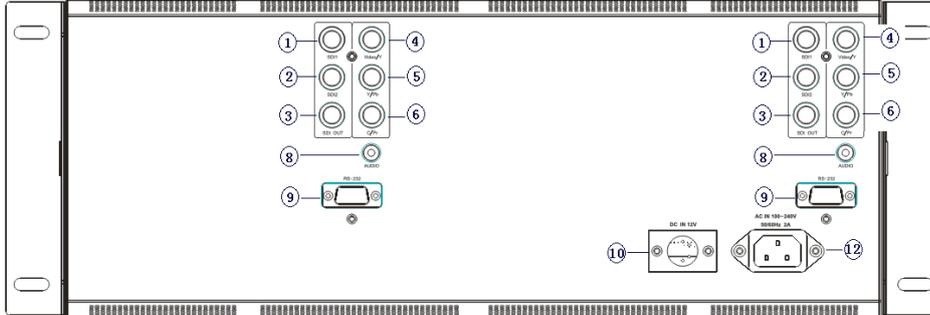
KVM-9050W rear view:



KVM-7050W-2 rear view:



KVM-9050W-2 rear view:



- (1) **SDI1 input:** 3G/HD/SD-SDI auto detect.
- (2) **SDI2 input:** 3G/HD/SD-SDI auto detect.
- (3) **SDI Loop through:** SDI Re-clock loop through, without enervation.
- (4) **Video/YPbPr-Y input:** Composite video in and Y input of YPbPr component signal.
- (5) **YC-Y/Pb input:** Y input of YC signal and Pb input of YPbPr signal.
- (6) **YC-C/Pr input:** C input of YC signal and Pr signal of YPbPr signal.
- (7) **HDMI input.**
- (8) **AUDIO in:** Analogue audio in.
- (9) **RS-232:** For remote control/GPI, Tally indicator control and Marker On/off, etc.
For software upgrade.
- (10) **DC 12V IN:** wide range DC input voltage 7-20V.
- (11) **Speaker:** Stereo audio output
- (12) **AC-IN 100-240V Power supply**

• OSD Menu**1 Menu structure:****Picture**

- Picture Mode
- Brightness
- Contrast
- Sharpness
- Colour
- Hue
- Colour Temp

Img. Adj

- Image Size
- Scan Mode
- DVI YUV Color Space (only for HDMI signal)
- CTI (Color Transient Improvement)
- Ntsc 7.5IRE (only for video signal)
- Gray Mode
- Blue Mode
- Fast Mode
- H/V Delay (only for SDI1 signal)

Setup

- OSD Settings
 - Transparency
 - OSD Timeout
- Marker Setting
 - Marker Enable
 - Marker Select
 - Center Marker

Safety Area

Marker Level

Marker Mat

Part Zoom in

Format Display

Power Saving

Screen Saver

Factory Reset

Audio

Volume

Headphone Volume

Audio Level Meter (only for SDI signal)

Audio Out Channel (only for SDI signal)

Audio Display Mode (only for SDI signal)

PIP/PBP

Layout

Main Window Source

Second Window Source (for PIP/PBP)

PIP Size (only for PIP)

PIP Position (only PIP)

Alpha Blend (only for PIP)

Swap (for PIP, PBP)

UMD Display

UMD ID

UMD Main Window Char

UMD Second Window Char (for PIP, PBP)

Scope (only for SDI signal)

Waveform Mode

Waveform Alarm

Waveform Scale

Histogram Mode

Vector

Vector Scale

Zebra

Zebra Level

Pixel Measure

False Color

Focus Assist

H Flip

Status

Source & Format

Fh

Fv

Color Temp

Image Size

Scan Mode

CTI

Screen Saver

Power Saving

2 Menu Operation

1. Press the POWER button to switch on the monitor; Press the Menu button, the main menu will be displayed on the screen, and press the MENU button again to exit the menu.
2. In the main menu, turn the VOLUME knob to select different items: Picture, Img.Adj, Setup, PIP/PBP, (Scope) and Status.
3. Turn the IMAGEADJ knob, to enter or exit sub-menu. If sub-menu items are marked by the drop-down sub-menu group with icon ; turn it to open or close the drop-down sub-menu group.
4. In sub-menu, turn the VOLUME knob to select the sub-menu item operation.

5. When the menu window is not enough to show all the sub menu items, it will show up/down arrow  for the rest items.

3 Menu Item Description

A. Picture

Menu item	Setting	Description
Picture mode	DYNAMIC STANDARD SOFT Custom	The parameters of brightness, contrast, sharpness, color, hue in three modes: dynamic, standard, soft. Custom is for user definition
Brightness	0—100	Brightness Adjustment
Contrast	0—100	Contrast Adjustment
Sharpness	0—15	Sharpness Adjustment
Colour	0—100	Saturation Adjustment
Hue	0—100	Color Adjustment
Colour Temp	3200K 5600K 6500K 9300K Custom: Red Gain 0-255 Green Gain 0-255 Blue Gain 0-255 Red offset 0-255 Green offset 0-255 Blue offset 0-255	Four modes of the fixed color temperatures selection (3200K, 5600K, 6500K, 9300K) and a custom selection. "Custom" is for user definition, to adjust the gain value and offset value of Red, Green and Blue. It will save the color temperature setting automatically.

B. Img. Adj

Menu Item	Setting	Description
Image Size	FILL ASPECT	Original ratio of the signal source
	Full Screen	Full screen image
	1:1	At 1:1 pixel-to-pixel display. It is invalid in PIP, sub-screen and PBP mode
	16:9	16:9 aspect ratio
	4:3	4:3 aspect ratio
	DSLR	Full screen for Canon 5D II via HDMI input
Scan Mode	100% Scan Over Scan 5% Under Scan 5%	100% Image display 95% Image display 105% image display
DVI/ YUV Color Space	ON OFF	DVI input signal color space change to YUV. DVI input signal color space is RGB (For HDMI signal only)
CTI	ON OFF	Color Transient Improvement, for better color transition CTI off
Ntsc 7.5IRE	ON OFF	(For video signal only)
Gray mode	ON OFF	Monochrome mode with black and white image
Blue Mode	ON OFF	Display in Blue only

Fast Mode	ON OFF	Interlaced scan without converting into progressive scan
H/V Delay	ON OFF	Display horizontal and vertical blanking area of SDI1 input signal

C. Setup

Menu Item		Setting	Description
OSD Settings:			
Transparency		0—100	Menu background from opaque to completely transparent selection
OSD Timeout		1—30	Menu disappear time when no button operation
Marker setting	Marker Enable	ON OFF	All markers on All markers off
	Marker Select	OFF 4:3 16:9 15:9 14:9 13:9 1.85:1 2.35:1	NO marker display Marker display 4:3 Marker display 16:9 Marker display 15:9 Marker display 14:9 Marker display 13:9 Marker display 1.85:1 Marker display 2.35:1
	Center Marker	ON OFF	Display center mark No display center mark
	Safety Area	OFF 80% 85%	No Safety Area display 80% Safety Area display 85% Safety Area display

		88% 90% 93%	88% Safety Area display 90% Safety Area display 93% Safety Area display
	Marker Level	OFF Translucency Half High Middle Low	No marker line Marker line is grey Marker line is white Marker line is black Marker line is grey Marker line is white
	Marker Mat	OFF Half Black Transparency	Turn off Fill up the background beyond marker Background beyond marker filled up with grey, Fill up with black Background beyond marker transparent
Part Zoom in		<Right>Enter, <PIP>Part Zoom in	Zoom in any part of the picture, to watch picture details more clearly, and assist for focus.
Format Display		OFF ON Auto	Turn off the display info of signal format. Turn on the display info of signal format. Automatically display info of signal format when signal changes, disappear after 4s.
Power Saving		ON OFF	Enter power-saving mode, the system will switch off some functions when the main input is

		without signal more than 10 minutes. This feature is invalid in PIP/PBP status.
Screen Saver	ON OFF	The system will enter screen saver mode when the main input is without signal. This feature is invalid in PIP/PBP status.
Factory Reset	<Right> to Factory Reset	Turn right the VOLUME knob, the system restore to factory setting

D. Audio

Menu item	Setting	Description
Volume	0—100	Speaker volume adjustment
Headphone Volume	0—100	Headphone volume adjustment
Audio Level Meter (only for SDI signal)	ON OFF	Turn on/off audio level meter display
Audio Out Channel (only for SDI signal)	CH1&CH2 CH3&CH4 CH5&CH6 CH7&CH8	SDI embedded audio CH1 &CH2 SDI embedded audio CH3 &CH4 SDI embedded audio CH5 & CH6 SDI embedded audio CH7 & CH8
Audio Display Mode (only for SDI signal)	Horizontal Vertical	Audio level meter display horizontal/vertical

E. PIP/PBP

Menu item	Setting	Description
Layout	Single	Display only one signal picture on screen

	<p>PIP</p> <p>Side by Side</p>	<p>Display two signals pictures simultaneously on screen, the sub picture overlay on the main picture.</p> <p>Display two signals pictures side-by-side simultaneously on screen, the sub picture at the right side of the main picture.</p> <p>Note: In PIP/PBP mode, one signal is SDI, the other signal is any other input signals (except SDI). The two pictures should be different signal formats.</p>
Main Window Source	<p>Video</p> <p>S-Video</p> <p>YPbPr</p> <p>SDI1</p> <p>SDI2</p> <p>HDMI</p> <p>VGA</p>	<p>Main Window select signal input among Video/ S-Video/ YPbPr/ SDI1/SDI2/ HDMI</p> <p>(Note: YPbPr is compatible with RGB, YCbCr, YPbPr)</p>
Second Window Source (this item shows in PIP/PBP)	<p>Video</p> <p>S-Video</p> <p>YPbPr</p> <p>SDI1</p> <p>SDI2</p> <p>HDMI</p> <p>VGA</p>	<p>Second Window select signal input among Video/ S-Video/ YPbPr/ SDI1/SDI2/ HDMI</p> <p>(Note: YPrPr is compatible with RGB, YCbCr, YPbPr)</p>
PIP Size (this item shows in PIP mode)	<p>Large</p> <p>Middle</p>	<p>The second window is Large size</p> <p>The second window is medium size</p>

	Small	The second window is small size
PIP position (this item shows in PIP mode)	Left Top	The second window in the left-top corner of screen.
	Right Top	The second window in the right-top corner.
	Center	The second window in the center.
	Right Bottom	The second window in the right-bottom corner.
	Left Bottom	The second window in the left-bottom corner.
	Custom	The second window is adjustable by user When the user select this option, it will automatically pop up at the following "H position" and "V position" menu items
H Position (this item shows when PIP position select "Custom")	0—100	Horizontal position adjustment of picture-in-picture's second window.
V Position (this item shows when PIP position select "Custom")	0—100	Vertical position adjustment of picture-in-picture's second window.
Alpha Blend (this item shows in PIP mode)	0—100	Adjustment of PIP's second window and the main window alpha blend degree. When the value is 0, the second window is translucent blend with the main window; when the value is 100,

		the second window blend directly to the main screen.
Swap (this item shows in PIP/PBP mode)	<Right> to swap two windows	In PIP and PBP, turn right the VOLUME knob to swap the signal pictures between two windows (main window and second window).
UMD Display	ON OFF	Turn on/off the UMD display
UMD ID	000-127	UMD ID can be set any value from 000-127. It can be used for multidevice cascading, set different UMD ID for different devices. In remote control situation, this function can be used for distinguishing different devices so as to remote control different devices.
UMD Main Window Char	xxxxxxx	It can be set at any character in "xxxxxxx". Setup process: Select the UMD Main Window item, press VOLUME knob, it shows "xxxxxxx ok", meanwhile, the first character becomes red, user can select the character you need by turning the VOLUME knob (Left/Right), press the VOLUME knob after finishing first character, it will turn

		to the second character, select the character you need same as first character, it's also applied to other characters. After finishing selecting the 8 th character, press the VOLUME knob, the "ok" will turn red, rotate the VOLUME knob to make the "ok" turn yellow, press MENU to save and exit. Only the "ok" turn yellow, it will save successfully when press MENU, otherwise, it will not save.
UMD Second Window Char(this item shows in PIP/PBP mode)	xxxxxxx	Setting is same as UMD Main Window Char.

F. Scope (only for SDI signal)

Waveform Mode	OFF LUMA CbCr Full LUMA	Turn off the waveform mode Display Y(luminance) waveform Display CbCr waveform Display Y(luminance) waveform in full horizontal
Waveform Alarm	84%-100%	Waveform alarm can be set at any percentage between 84%-100%, it'll alarm when measured waveform reach or exceed the value you set and mark them with red
Waveform Scale	Digital	Display in digital

	IRE	Display in percentage of luminance
Histogram Mode	OFF LUMA RGB	Turn off the histogram mode Display luminance histogram Display R G B histogram
Vector	ON OFF	Turn on/off vector
Vector Scale	100% 75%	Vector 100% display Vector zoom out to 75% display
Zebra	ON OFF	Turn on/off zebra
Zebra Level	84%-100%	Zebra level can be set at any percentage between 84%-100%, it will alarm when measured luminance reach or exceed the value you set and overlay display with red zebra stripes
Pixel Measure	ON OFF	Turn on/off pixel measure
False Color	ON OFF	Turn on/off false color
Focus Assist	ON OFF	Turn on/off focus assist
H Flip	ON OFF	Turn on/off H flip

G. Status

Menu item	Description
Source & Format	The current window's input signal source and resolution
Fh	H frequency of the current window's input signal
Fv	V frequency of the current window's input signal
Color Temp	Current Color Temperature
Image Size	Current selected image size
Scan Mode	Current scan mode
CTI	Color Transient Improvement mode status
Screen Saver	System screen saver mode status
Power Saving	System power saving mode status

Pixel Measure operating instructions:

Press MENU button, enter into menu items, rotate VOLUME knob to Scope item, and then rotate IMAGEADJ knob to select Pixel Measure, active the pixel measure function, rotating VOLUME knob (left/right) and/or IMAGEADJ knob(up/down) can move the large cross, to measure any pixel position and RGB value.

This function can be used for comparison of any two pixels: enter into Pixel Measure function. Rotating VOLUME knob (left/right) and/or IMAGEADJ knob (up/down) can move the large cross to the first pixel, press VOLUME knob or IMAGEADJ knob to mark first pixel with a small cross, and then rotate VOLUME knob (left/right) and/or IMAGEADJ knob (up/down), it will appear a large cross, move it to the second pixel you want to compare, it will display difference between the current pixel and the former marked pixel.

Measure	Line	Sample	Y	%	R256	G256	B256	R%	G%	B%
Current	0540	0960	0512	050	158	126	103	061	049	040
Ref_pos	0540	0960	0512	051	158	126	103	061	049	040
Diff			0000	001	000	000	000	000	000	000

Measure: measurement

Current: current pixel

Ref-pos: former marked pixel

Diff: difference between the current pixel and former marked pixel

Line: pixel vertical position

Sample: pixel horizontal position

Y: luminance as an absolute value (0-1023)

%: luminance level expressed as percentage (Y value/256) *100%

R%: red level expressed as percentage (red value/256) *100%

G%: green level expressed as percentage (green value/256) *100%

B%: blue level expressed as percentage (blue value/256) *100%

R256: red level as an absolute value (0-255)

G256: green level as an absolute value (0-255)

B256: blue level as an absolute value (0-255)

● Factory Reset

This function is to reset the monitor to factory preset.

Please try to reset the monitor, when the following situations occur:

1. The monitor parameters are adjusted incorrect by user.
2. The monitor picture or sound is abnormal, and not due to hardware problem.

To do factory reset, please follow the below five steps:

1. Press MENU button to enter main menu.
2. Turn VOLUME knob to item Setup and select it.
3. Turn IMAGE ADJ knob to Factory Reset and select it.
4. The screen will refresh after following the instruction of turning the VOLUME knob.
5. Power off the monitor, and must wait for at least 5 seconds, then restart the monitor.

The monitor resets to factory preset.

● Remote Control

1. Hardware connection

Connect the monitor's RS-232 serial port to the computer to remote control the monitor by universal serial communication software.

2. Software Configuration

Start communication software, configure the serial communication parameters, sending communications test command, if the return value is correct, you can send control command.

Serial port settings:

- . Baud Rate: 19200
- . Parity: None
- . Data bits: 8
- . Stop bit: 1
- . Flow Control: None

Communications test:

Communications test command	Return value	Description
BE EF 01 05 00 D1 FA 01 02 00 00 00	1E BE EF 01 04 00 37 3D 01 02 00 01	Return value is correct, the communication setup is normal

Two methods of controlling tally indicator.

- (1) Connect the monitor's RS-232 serial port to the computer to remote control tally indicator by sending commands via universal serial communication software.
- (2) When Pin9 connects to GND directly
 - A. tally indicator will turn green while input voltage of Pin7 is between 3.3V-5V,
 - B. tally indicator will turn red while input voltage of Pin 8 is between 3.3V-5V.Note: Max input voltage of Pin7 / Pin8 is 5V, otherwise it will cause damage.

Warranty Card

User		Tel		Postal Code	
Address					
Product Model		Serial Number			
Dealer		Purchase Date			

Maintenance Record

Date	Contents of Reparation	Replacement parts		Repairer	User Signature
		Name	Qty		

This warranty card should be filled in immediately when purchasing

Please keep a proper record of this warranty card.

As the continuous improvement of the products, this will subject to change without notice

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