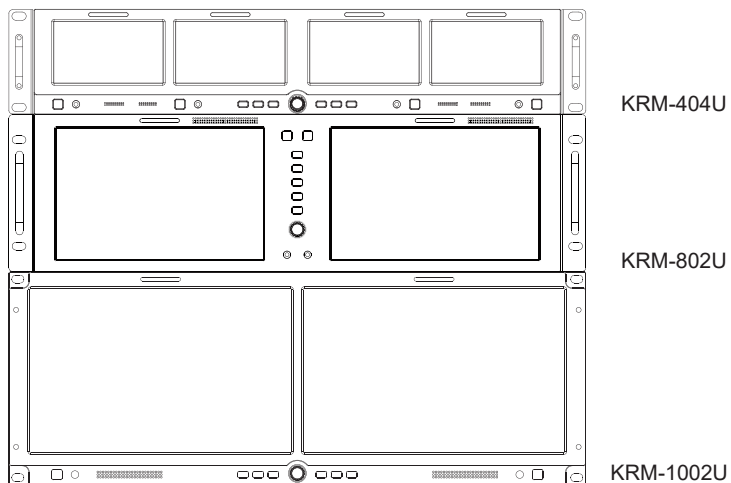


Konvision

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12G-SDI KRM 4K Series Rackmount
Konvision LCD Monitor

USER MANUAL

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About This Manual

The instructions in this manual are for KRM series Rackmount.

Please confirm the model number of the device before reading this manual.

Notes

Security

- For the safety use of products, please read the following instructions regarding the installation, use and maintenance carefully.
- Please read the product safety and operating instructions carefully 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.
1. Please use the power cord recommended by the manufacturer.
 2. Please do not place heavy objects on the power cord.
 3. Please do not expose the monitors to rain, humid, dusty places.
 4. Please do not place vessels with liquid (such as cups, beverage bottles) on the monitor.
 5. Please make sure the earth terminal is good in order to avoid electric shock.
 6. Please do not open the back cover to avoid electric shock. Please contact professionals for service needs.
 7. Do not place this product at unstable places such as cars, shelves or tables, as it is easy to make the product fall down, may cause severe hurt to children and adults and damage to the product.
 8. Please do not touch the power plug with wet hands, as it will cause electric shock.
 9. 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.
 10. If do not use the device for a long time, please unplug the power cord from the AC outlet.
 11. Please keep not less than 5cm space around the vents while using the monitor, in order to obtain a good heat dissipation effect.

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.

Screen Burning Notes

The monitor may appear unrecoverable residual images, when it switches to other signals after displaying the same images for a long time. To prevent the burning, please use the screen under the corresponding recommendation time duration and avoid displaying still logo or characters. If do not use the device for a long time, Please turnoff the power.

Daily recommendation time duration:
Under 12 hours.

IMPORTANT NOTICE

Please notice when display such following patterns on the screen for a long time may cause panel damage:

- The same image
- Testing signal, such as color bars.
- Safe areas, audio level, waveform, vectorscope, etc.
- Images with frames(including multiview mode).

The screen burning appears the same as other third-party OLED products, such damages will not be applied to our warranty policy.

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 the manufacturer.

Transportation

The monitor needs professional packing materials to transport. Keep the device away from fierce quaking or impact during the transportation, otherwise may cause the device inner or outer construction distortion, fatal failure, or screen damage.

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

1. This product smells of smoke and off-flavor.
2. When this product displays abnormal operating conditions, such as there is no picture or sound.
3. When any liquid is splashed into the product or product dropped.
4. When the product soaked or fell into the water.
5. When the product has been damaged or under other easy to get damaged circumstances.
6. When the power cord or plug is damaged.

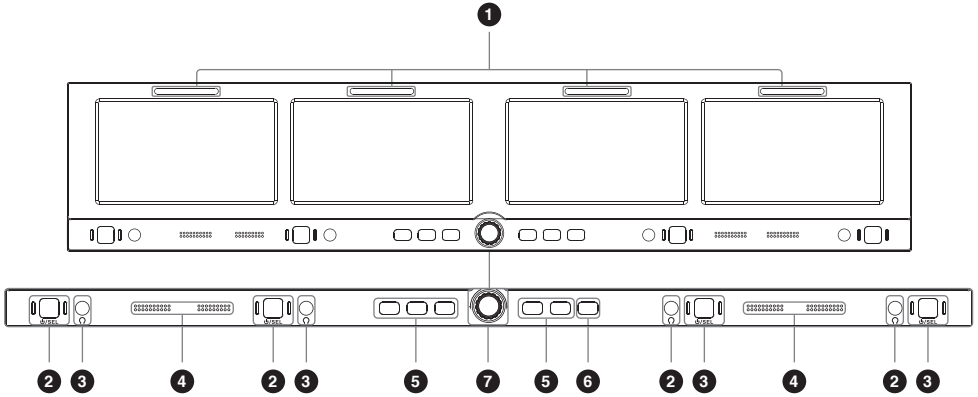
The following does not belong to failures:

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 is used in a cold environment, the screen may appear a burn-in 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.

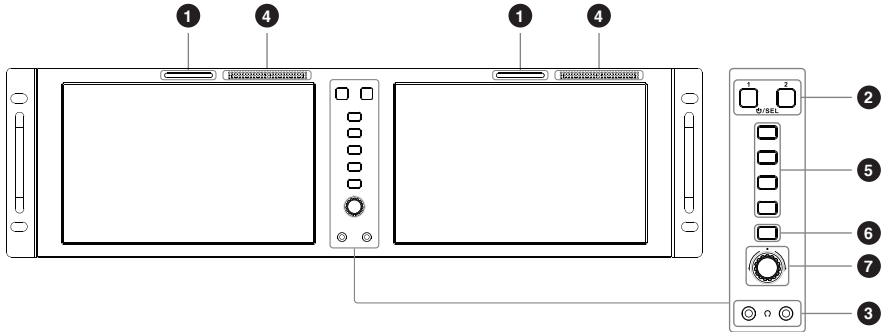
Parts and Functions

Front View

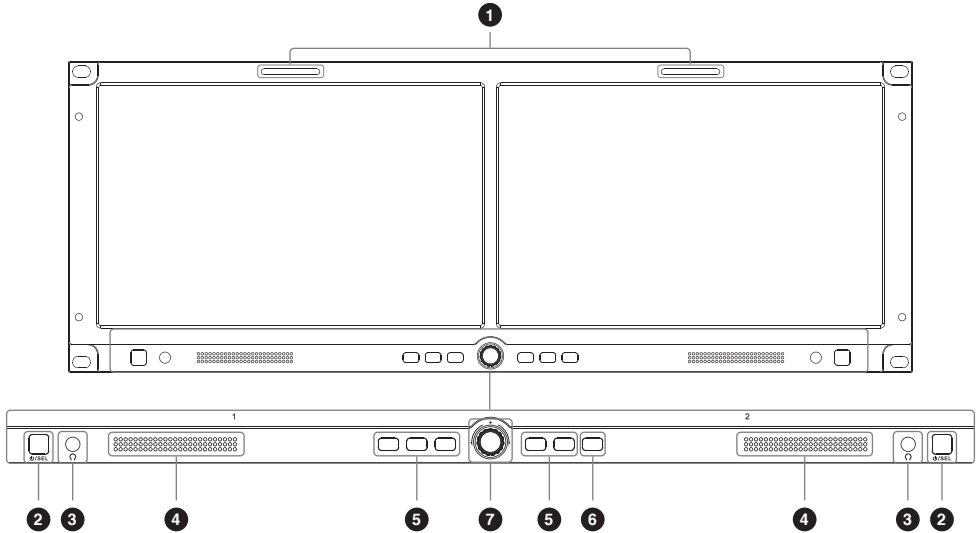
■ KRM-404U Front View: (Note: Screen operation through power/SEL key)



■ KRM-802U Front View: (Note: Screen operation through power/SEL key)



■ KRM-1002U Front View: (Note: Screen operation through power/SEL key)



Instruction of KRM-404U, KRM-802U, KRM-1002U front panel

① Tally

Red and Green Tally controlled by RS422 port and GPI protocol.

② Power button and screen select key

When connects to the power supply the device will automatically turn on, the indicator light is red, Konvision logo will appear and then the indicator light turns blue, when enter the home screen the indicator light turns off.

Short press the power/SEL key turns on/off the indicator light, when the indicator light turns blue can operate the menu and the function keys.

Long press the Power/SEL key for 3s to turn off the monitor, long press the key 3s again to turn it on.

③ AUDIO OUT

3.5mm earphone output.

④ Speaker

Audio output.

⑤ Function keys

Function keys can be used as shortcut buttons, KRM-404U and KRM-1002U have five function keys, F1~F5, KRM-802U has four function keys, F1~F4, corresponding functions can be setting in the menu.

⑥ MENU Button

Press the Menu button to turn on/off the OSD menu. Press the menu button to turn back to the parent menu during the menu operation.

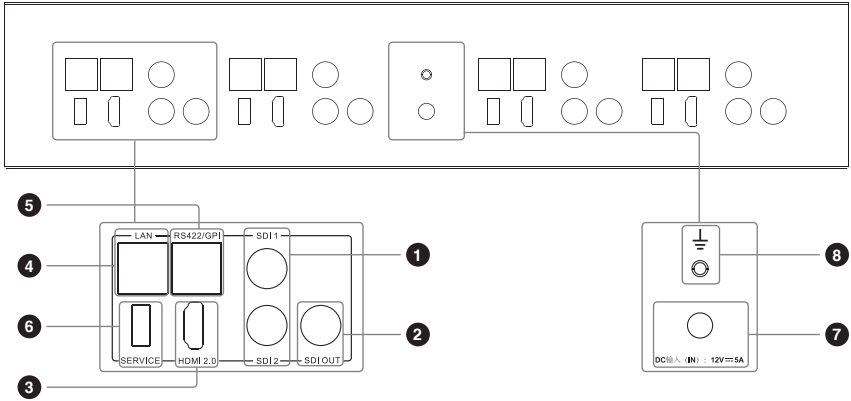
⑦ Rotary Knob

When in the home screen, rotate the knob to turn up/down the audio level, press the knob to mute the speaker.

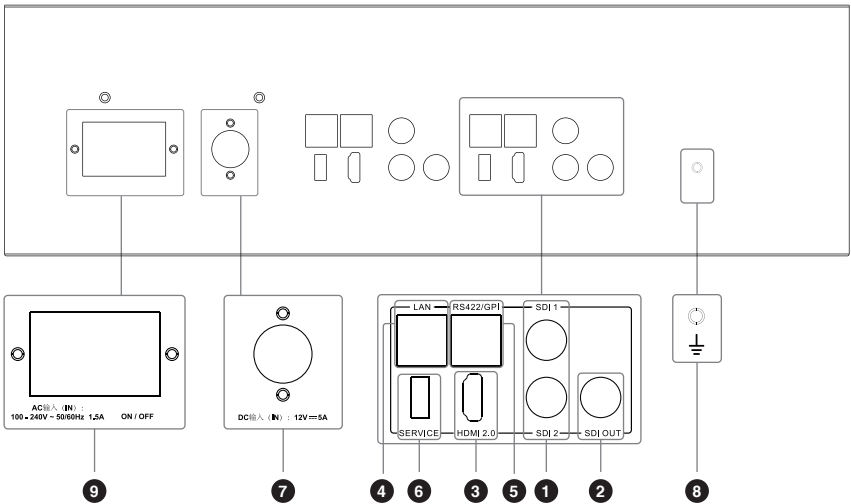
When in OSD main menu, rotate and press the knob to select different main menu items.

Rear View

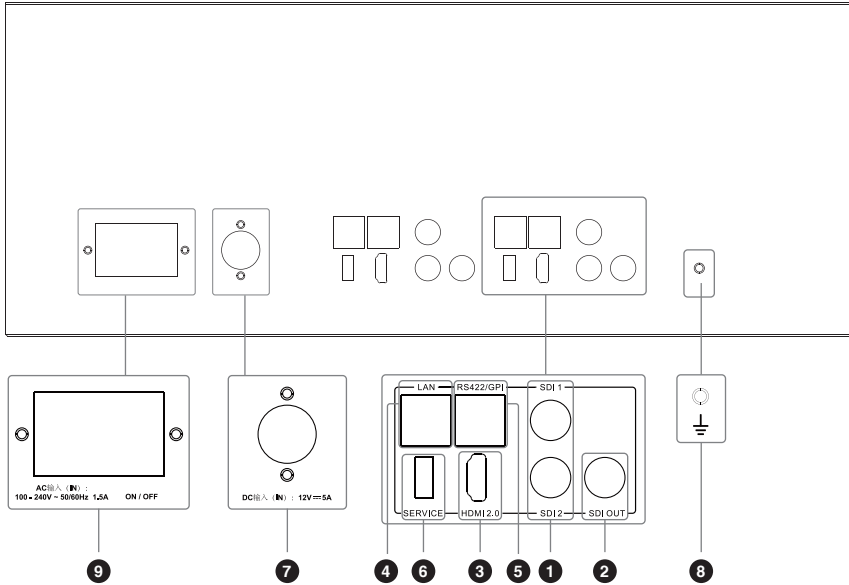
■ **KRM-404A Rear View:** (Note: Print **1 2 3 4** respectively indicate the first, second, third and fourth screens I/O areas.)



■ **KRM-802U Rear View:** (Note: Print **1 2** respectively indicate the first, second, third and fourth screens I/O areas.)



I KRM-1002U Rear View: (Note: Print 1 2 respectively indicate the first, second, third and fourth screens I/O areas.)



Rear View Instructions

1 SDI IN

For SDI signal input, SDI1&SDI2.

2 SDI OUT

For SDI signal output, SDI1&SDI2.

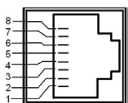
3 HDMI 2.0

For HDMI 2.0 signal input.

4 LAN

Ethernet interface for firmware updates of each screen.

5 RS422/GPI



Pin	RS422 IN Signal Name	Description
1	GPI1	Enable GPI1 when Pin1 connects to GND (or LOW), the GPI1 function can be set in the menu.
2	GPI2	Enable GPI2 when Pin2 connects to GND (or LOW), the GPI2 function can be set in the menu.
3	GPI3	Enable GPI3 when Pin3 connects to GND (or LOW), the GPI3 function can be set in the menu.
4	RX+	RS422_RX+,UMD&Tally control.
5	RX-	RX-RS422_RX-,UMD&Tally control.
6	GPI4	Enable GPI4 when Pin4 connects to GND (or LOW), the GPI4 function can be set in the menu.
7	Null	Null
8	GND	GND

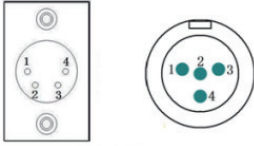
Notice: RX+&RX- Pin. Use for RS422 signal reception to control UMD with TSL3.1 or TSL4.0 protocol, it can realize UMD and Tally control.

6 SERVICE

For firmware updates of each screen.

7 DC 12V IN

DC power input interface, power input 12V.



Pin Description:

Pin 1: GND

Pin 2: Null

Pin 3: Null

Pin 4: 12V

8 Equilibrium Potential Interface

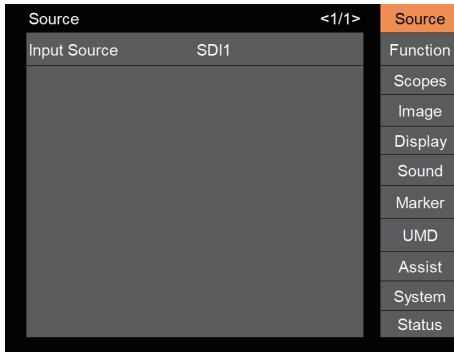
For cabinet grounding.

9 AC POWER IN&SWITCH

AC IN & Power Switch. AC power input. After connecting the AC power cable, switch to "I" monitor power on, switch to "O" monitor power off.

Menu Operation

Source:



Menu item	Description
Source	Select the source as HDMI, SDI1, SDI2 or scope mode. When source is selected as scope mode, the screen will only display scopes. <ul style="list-style-type: none"> · HDMI · SDI 1 · SDI 2 · Scope Mode Notice: Display of corresponding scopes need to be enabled in the Scopes menu.

Function:

Function	Source	Source
F1	Source	Function
F2	Color Space	Scopes
F3	EOTF	Image
F4	WaveForm	Display
F5	Marker Display	Sound
GPI1	Marker Display	Marker
GPI2	Red	UMD
GPI3	Green	Assist
GPI4	Yellow	System
		Status

Menu item	Description
F1	The Function keys can be set to the following functions: <ul style="list-style-type: none"> · Undefined · Source · Color Space · EOTF · Marker Display · UMD Display · WaveForm · MUTE
F2	Same as above.
F3	Same as above.
F4	Same as above.
F5	Same as above.(KRM-802U without F5)
GPI 1	The GPI can be set to the following functions: <ul style="list-style-type: none"> · Undefined · Marker Display · Red Tally · Green Tally · Yellow Tally · Blue Only · Mono Only · Red Only · Green Only
GPI 2	Same as above.
GPI 3	Same as above.
GPI 4	Same as above.

Scopes:

Scopes <1/2>		Source
Display Mode	Normal	Function
Scope channel 1	WaveForm	Scopes
Scope channel 2	Vector	Image
Scope channel 3	Histogram	Display
Scope channel 4	Audio Phase	Sound
WaveForm	Luma	Marker
WaveForm Scale	Digital	UMD
WaveForm Alarm	80	Assist
Vector	Off	System
		Status

Scopes <2/2>		Source
Histogram	Off	Function
Audio Phase	Off	Scopes
		Image
		Display
		Sound
		Marker
		UMD
		Assist
		System
		Status

Menu item	Description
Display Mode	[Normal] Enable scopes display on the left bottom. [Quad] Enable scopes display as a quarter size of the screen. [Full Screen] Display the full screen scope of scope channel 1. <ul style="list-style-type: none"> · Normal · Quad · Full Screen
Scope channel 1	Scope channel 1 can be set to: Waveform includes Luma, YCbCr, RGB, only one can be selected. <ul style="list-style-type: none"> · Off · Waveform · Vector · Histogram · Audio Phase
Scope channel 2	Same as above.
Scope channel 3	Same as above.
Scope channel 4	Same as above.

Menu item	Description
WaveForm	Select different waveforms to monitor the situation of luminance or chrominance in the video signal. When set to Off, the Waveform Scale and Waveform Alarm are invalid. <ul style="list-style-type: none"> · Off · Luma · YCbCr · RGB
WaveForm Scale	Set the scale of vector scope to monitor the chrominance and saturation of signal. Set the value of waveform alarm, when the luminance of the signal exceeds the value, alarm will indicate on the waveform. <ul style="list-style-type: none"> · 1-100,Default 80
Vector	Set the scale of vector scope to monitor the chrominance and saturation of signal. <ul style="list-style-type: none"> · off · 100% · 75%
Histogram	Histogram shows the overall brightness of the video signal to evaluate the exposure of the scene. The horizontal axis shows the luminance of the image from pure black on the left edge of the graph to pure white on the right edge, the growth on the vertical axis indicates the relative quantity of light for the given luminance. The histogram can indicate whether the scene is under exposure, over exposure or normal. <ul style="list-style-type: none"> · off · Luma · RGB
Audio Phase	Display the audio phase. <ul style="list-style-type: none"> · off · On

Image:

Image <1/2>		Source
Data Level	Full(0-1023)	Function
Color Space	Bypass	Scopes
EOTF	2.2	Image
TransferMatrix	Rec709	Display
DBrightness	256	Sound
Contrast	2000	Marker
Saturation	50	UMD
Hue	100	Assist
Sharpness	10	System
		Status

Image <2/2>		Source
Color Temp	User1	Function
R-GAIN	512	Scopes
G-GAIN	512	Image
B-GAIN	512	Display
R-OFFSET	512	Sound
G-OFFSET	512	Marker
B-OFFSET	512	UMD
		Assist
		System
		Status

Menu item	Description
Data Level	Set the legal range of the valid information of the signal, also as the valid luminance range. <ul style="list-style-type: none"> · Limit(64-940) · Extend(64-1019) · Full(0-1023) · SMPTE Full(4-1019)
Color Space	Color space is a specific organization of colors. In combination with color profiling supported by various physical devices, it supports reproducible representations of color – whether such representation entails an analog or a digital representation. <ul style="list-style-type: none"> · Bypass · BT 709 · EBU · DCI P3 D65 · DCI P3 · BT 2020 · USER1 · USER2

Menu item	Description
EOTF	The EOTF is the transfer function having the picture or video signal as input and converting it into the linear light output of the display, ensure the display device reduce the actual luminance and chrominance of the original scene. Set the different EOTFs to modify the luminance, contrast and saturation of the monitor that affect the image display. The monitor is calibrated to the standard EOTFs to unify the images display between different devices.Off <ul style="list-style-type: none"> · Off · 2.0 · 2.2 · 2.4 · 2.6 · 2.4(HDR) · Rec.2100 HLG 1.03 · Rec.2100 HLG 1.11 · Rec.2100 HLG 1.16 · Rec.2100 HLG 1.20 · Rec.2100 HLG 1.27 · Rec.2100 HLG 1.33 · ST2084 PQ · ST2084 PQ(softroll) · Slog · Slog2 · Slog3 · Clog · Clog2 · Clog3 · Vlog · Dlog · LogC
Transfer Matrix	[Rec601] The standard for SDTV for encoding and decoding of gamut transfer, definition and frame rate. [Rec709] the corresponding standard for high-definition television (HDTV) [Rec2020] ITU-R Recommendation for ultra-high-definition television (UHDTV). <ul style="list-style-type: none"> · Auto · Rec601 · Rec709 · Rec2020
DBrightness	Pixels brightness value of images display on the screen. <ul style="list-style-type: none"> · 0-512,default 256
Contrast	Set the contrast of the screen. <ul style="list-style-type: none"> · 0-4000,default 2000
Saturation	Set the intensity of the display chrominance, describing the colorfulness of the image display. <ul style="list-style-type: none"> · 0-200,default 50

Menu item	Description
Hue	Set the hue of the screen. · 0-200,default 100
Sharpness	Set the contrast of the edges in the image. · 0-100,default 10
Color Temp	Set the white point temperature of the screen. · 6500K · 9300K · 5500K · User1 · User2
R-GAIN	0-1023,default 512
G-GAIN	0-1023,default 512
B-GAIN	0-1023,default 512
R-OFFSET	0-1023,default 512
G-OFFSET	0-1023,default 512
B-OFFSET	0-1023,default 512

Display:

Display	<1/1>	Source
Backlight	32	Function
Aspect Ratio	Aspect Original	Scopes
Overscan	100%	Image
Mirror	Off	Display
Blue Mode/Mono	Off	Sound
		Marker
		UMD
		Assist
		System
		Status

Menu item	Description
Backlight	Set the LED backlight value of the screen. · 0-100,default 32
Aspect Ratio	Set the scale of image display. Image display will cover the whole screen in Full Screen mode, therefore the original signal may be scaled to adapt to the screen definition. · Full Screen · 1:1 · Aspect Original

Menu item	Description
Overscan	With overscan on a small percentage of the outermost active video will not be displayed. · 100% · 98% · 95% · 90% · 85% · 80%
Mirror	Display the mirror flip image. · Off · On
Blue Mode/Mono	Set the RGB only channel display or the mono display. · Off · Mono Only · Blue Only · Red Only · Green Only

Sound:

Sound	<1/1>	Source
Volume	32	Function
Sound Source	SD11	Scopes
Left Audio Channel	CH1	Image
Right Audio Channel	CH2	Display
Audio Output Mode	Normal	Sound
Audio Meter Level	Off	Marker
Meter Select	CH1-2	UMD
Meter Direction	Vertical	Assist
		System
		Status

Menu item	Description
Volume	· 0-100,default 32
Sound Source	Display the sound source status.
Left Audio Channel	Set the left audio channel. · CH1-CH16
Right Audio Channel	Set the right audio channel. · CH1-CH16
Audio Output Mode	Set the audio output mode. · Normal · Right Channel MUTE · Left Channel MUTE

Menu item	Description
Audio Meter Level	Set the audio meter display. · Off · Opaque · transparent
Meter Select	Set the amount of audio meter channels display. · CH1-2 · CH1-4 · CH1-8 · CH1-16 · CH5-6 · CH5-8 · CH9-10 · CH9-12 · CH9-16 · CH13-14 · CH13-16
Meter Direction	Set the audio meter display direction. · Vertical · Horizontal

Menu item	Description
Center Marker	Set the center marker display on the screen. · Off · On
Safety Area	Set the safety area of broadcast to adapt to the display devices. · Off · 80% · 85% · 88% · 90% · 93%
Fit Marker	Set the aspect ratio of safety area marker to fit the aspect marker. · Off · On
Marker Mat	Set the color of outside the aspect marker area. · Off · Black · Gray
Marker Line Color	Set the color of marker line. · White · Red · Green · Blue · Gray

Marker:

Marker		<1/1>	Source
Marker Display	On		Function
Aspect Marker	1.85:1		Scopes
Center Marker	On		Image
Safety Area	80%		Display
Fit Marker	Off		Sound
Marker Mat	Off		Marker
Marker Line Color	Green		UMD
			Assist
			System
			Status

UMD :

UMD		<1/2>	Source
UMD Display	On		Function
UMD Color	White		Scopes
UMD Protocol	Local		Image
UMD Character	CHANNEL 1		Display
UMD ID	0		Sound
UMD Screen ID	0		Marker
UMD Display ID	0		UMD
Baud Rate	38400bps		Assist
ParityBit	Even		System
UMD Tally Color	Off		Status

Menu item	Description
Marker Display	Set the overlay marker on the screen. · Off · On
Aspect Marker	Set the aspect ratio of marker display on the screen. · Off · 4:3 · 16:9 · 15:9 · 14:9 · 13:9 · 1.85:1 · 2.35:1

UMD <2/2>		Source
LED Tally	Off	Function
		Scopes
		Image
		Display
		Sound
		Marker
		UMD
		Assist
		System
		Status

Menu item	Description
UMD Display	Set the UMD display on/off. · Off · On
UMD Color	Set the UMD color. · White · Red · Green · Yellow
UMD protocol	Set the UMD protocol. · Local · TSL3.1 · TSL4.0 · TSL5.0
UMD Character	Set the UMD protocol to Local to set the name of UMD display. · CHANNEL1
UMD ID	Set the UMD protocol to TSL3.1 or TSL4.0 to set the UMD ID. · 0-254, default 0
UMD Screen ID	Set the UMD protocol to TSL5.0 to set the UMD Screen ID. · 0-255, default 0
UMD Display ID	Set the UMD protocol to TSL5.0 to set the UMD Display ID. · 0-255, default 0
Baud Rate	Set the UMD protocol to TSL3.1 or TSL4.0 to set the Baud rate. · 4800bps · 9600bps · 19200bps · 38400bps · 57600bps · 115200bps
Parity Bit	Set the UMD protocol to TSL3.1 or TSL4.0 to set the Parity Bit. · None · Even

Menu item	Description
UMD Tally Color	Set the UMD protocol to TSL3.1 to set the UMD Tally color. · Off · RG · GR · RGY
LED Tally	Set the Tally on/off. · Off · On

Assist:

Assist <1/1>		Source
False Color	Off	Function
HDR Area	Off	Scopes
Focus Peaking	Off	Image
Focus Peaking Scale	32	Display
Zebra	Off	Sound
Zebra Level	80	Marker
TimeCode	VITC1	UMD
TimeCode Position	Top	Assist
		System
		Status

Menu item	Description
False Color	This function paints different luminance values with specific colors in order to adjust the exposure of the signal and protect the highlight and shadow. · Off · Standard · HDR
HDR Area	Display the proportion of HDR area in the image with percentage. · Off · On
Focus Peaking	Paints a highlight around in-focus subjects edges to find the focus point. · Off · Red · Green · Blue
Focus Peaking Scale	Set the sensitivity of focus peaking . · 1-100, default 32
Zebra	Display a stripe pattern over a specific brightness range on the image . · Off · On

Menu item	Description
Zebra Level	Set the brightness range of Zebra. · 1-100, default 80
TimeCode	VITC: Vertical Interval Time code.LTC: Linear time code. · Off · VITC1 · VITC2 · LTC
TimeCode Positon	Set the position of timecode display. · Top · Bottom

System:

System	<1/1>	Source
Language	English	Function
OSD Duration	60	Scopes
USB Update	>>>	Image
Factory Reset	>>>	Display
IP Address	192.168.1.188	Sound
Mask	255.255.255.0	Marker
Gateway	192.168.1.188	UMD
MAC	00-29-AB-30-83-A0	Assist
		System
		Status

Menu item	Description
Language	Set the OSD language. · English · Chinese
OSD Duration	Set the OSD display time. · 10-60
USB Update	Choose the update methods. · Cancel · Mstar Update · FPGA Update · LUT3DL Update · LUTCUBE Update · LUTDAV Update
Factory Reset	Factory reset to default. · Cancel · Factory Reset
IP Address	Set the IP address. · 192.168.1.188
Mask	Set the mask. · 255.255.255.0

Menu item	Description
Gateway	Set the gateway. · 192.168.1.188
MAC	Display the physical address. · 00-29-AB-30-83-A0

Status:

Status	<1/1>	Source
Input Format	SDI1 2160p60HZ	Function
PayLoad ID	CE CB 00 01	Scopes
SMPTE	ST 2082-10	Image
Color Space	BT709	Display
Color Temp	6500K	Sound
EOTF	2.2	Marker
IP Address	192.168.1.188	UMD
MCU Version	Ver:Jul 8 2024	Assist
DSP Version	DSP-V77140711	System
DSP ID	F92A54003062292C	Status

Menu item	Description
Input Format	Display current source format.
PayLoad ID	Display current source PayLoad ID.
SMPTE	Display current source SMPTE protocol.
Color Space	Display current color space.
Color Temp	Display current color temperature.
EOTF	Display current EOTF.
IP Address	Display current monitor IP address.
MCU Version	Display current MCU version.
DSP Version	Display current DSP version.
DSP ID	Display current DSP ID.

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. Short press the Power/SEL button, press MENU button to enter main menu.
2. Rotate the knob to item System and select it.
3. Rotate the knob to item Factory Reset and select it.
4. Rotate the knob to item Factory Reset in the sub menu and select it
5. Press the button, select YES in the popup and the screen displays Restore is processing.
6. When Factory Reset is finished, the display will refresh.