LCD Rack Monitor

PRM-434A

MULTI-FORMAT LCD MONITOR

User's Manual

postium

Contents

PRM-434A

Warning

· Always use set voltage.

- DC 12V

· If liquid is spilled on or impacts this product, please disconnect the product immediately and contact for professional help before continuing use.

· Keep unit disconnected during extended periods of disuse.

· Keep unit in a well-ventilated place to prevent overheating.

· Do not install the product near any heat-generating equipment.

· Keep the product out of direct sunlight or dusty areas.

· Only clean the product with a noncommercial, mild, and neutral detergent.

· When transporting the product, make use of its original packaging for safer transport.

FCC (Federal Communications Commission)

This equipment has been tested and found to comply with the limits for class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interface when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential to correct the interference at his own expense

⚠**Warning!!** : Change or modifications not expressly approved by the manufacturer responsible for compliance void the user's authority to operate the equipment.

Disposal of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packing indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequence for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources.

Features

Multi-Format PRM-434A Series Rack Monitor contains the following features:

· **Compatible with various SDI Signals**
The product is compatible with varied SDI Signals
- 480i, 576i, 720p, 1035i, 1080i, 1080p, 1080psf, 2K

· **Waveform/Vector Scope/Audio Level Meter**
Waveform & Vector Scope available for SDI Signals
Embedded Audio Metering

· **BLUE ONLY/ MONO**

· **H/V Delay**

· **Wide Varieties of Markers & Safety Areas**
Center Marker, Safety Area Marker, Aspect Marker, Display Size(Scan)

· **Pixel To Pixel**
Provides both full screen and unscaled native image.

· **AFD(Active Format Description)**
Aspect and Marker mode are available for SDI Signals which includes embedded AFD data.

· **Dynamic UMD(Under Monitor Display)**
Small, medium, and large size display.
Possible to control monitor to the maximum value of 100 by Set ID Menu.

· **Wide Screen(800X480)/LED Backlight**

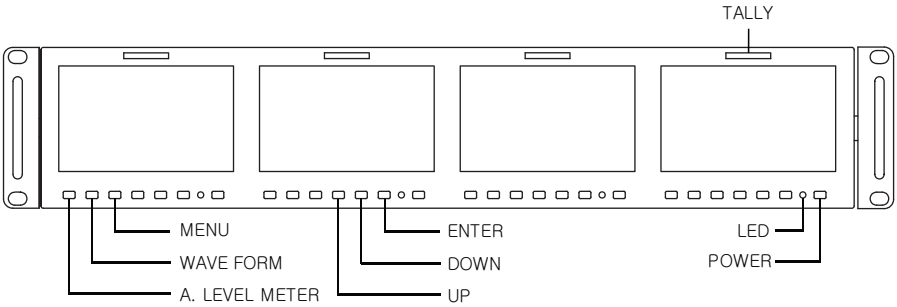
· **24Bit RGB CMOS Interface Panel**

· **DC Compatible**
The product is powered by normal 12V source.

· **Additional Features**
Active loop-thru/SDI, 300:1 Contrast Ratio, 200 cd/m2 Brightness,
OSD user interface, Rack Mountable

Feature Name & Functions

<FRONT>



· **[AUDIO LEVEL] button**
Used to activate the AUDIO LEVEL METER on the screen. The type of audio level meter being display may be selected in the Main Menu.

· **[WAVE/VECTOR] button**
Used to activate the Waveform or Vector Scope. Pressing the button once will activate the Waveform, pressing the button twice activates the Vector Scope.
The type of Waveform/Vector Scope shown on screen can be selected in the Main Menu.

· **[MENU] button**
Used to activate the OSD Menu.

· **[UP] button**
Used to navigate menu during OSD Menu activation. It may also be used to toggle clockwise through 1:1 quadrants in Native Scan Mode.

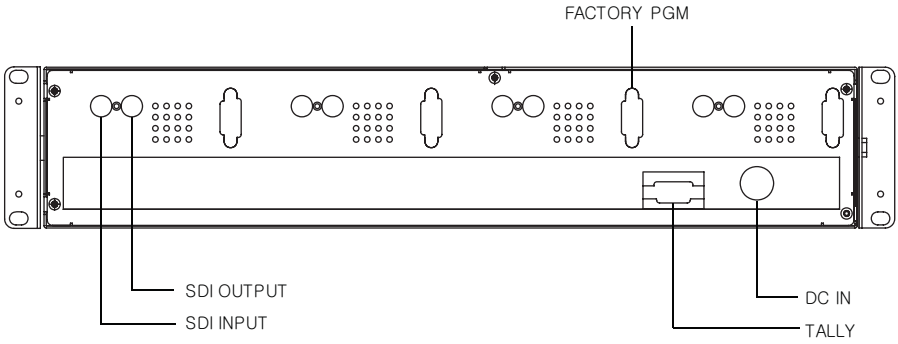
· **[DOWN] button**
Used to navigate menu during OSD Menu activation. It may also be used to toggle counterclockwise through 1:1 quadrants in Native Scan Mode.

· **[ENTER] button**
Used to confirm a chosen value (or mode) within the OSD Menu. This can be used to control the position of Waveform in small size.

· **[POWER] button**
Power On/Off button.
If the signal is normal, LED will lighted in Green. If the signal is unsupported or disconnected, LED will be lighted in Yellow.

· **TALLY**
LED indicating monitor's current status using the Tally connector.

<REAR>



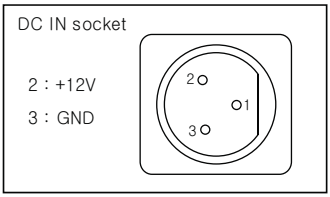
· **SDI A-IN (BNC)**
SDI Signal Input Terminal

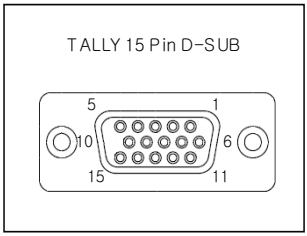
· **SDI-OUT (BNC)**
SDI Signal Output Terminal

· **FACTORY PGM (15 pins)**
Input connector for FACTORY PGM allowing for firmware updates.

· **TALLY (15 pins)**
Input connector for Tally control.

· **DC IN (3 pins)**
Used to supply DC power; 12V





Monitor	No. 1	No. 2	No. 3	No. 4
Tally Red	Pin 2	Pin 4	Pin 6	Pin 8
Tally Green	Pin 1	Pin 3	Pin 5	Pin 7
GND	Pin 11,12,13,14,15			

OSD Menu Organization & Adjustment

[1] MAIN - Picture

· **Brightness**
This Item controls the degree of brightness.

· **Contrast**
This item controls the contrast ratio.

· **Chroma**
This item controls saturation.

· **Aperture**
This item controls the picture sharpness.

[2] MAIN - Color

·**Color Temp**
This item controls Color Temperature with presets of 3200K, 5600K, 6500K, 9300K, and User1, User2, User3 mode.

·**User**
On User Mode, the user may select and control R, G, & B GAIN, BIAS values by using the [UP]/[DOWN]/[ENTER] buttons.

·**Color Copy**
In User mode, user can copy the presets of 3200K, 5600K, 6500K or 9300K to make the custom adjustment by using the [UP]/[DOWN]/[ENTER] buttons.

[3] MAIN - Marker

·Marker

Used to show MARKER on the screen. The type of marker at work may be selected on the other menu.

-This function is not available in Internal Pattern, Wave Form/Vector Scope full size, Pixel to Pixel, HV Delay, and AFD Modes.

· Line Marker

This selects the marker type when the MARKER is displayed on the screen.
Compatible MARKER types are as follows:

MODE	MARKER CLASS
HD / SD 16:9	16:9, 4:3, 4:3 ON AIR, 15:9, 14:9, 13:9, 1.85:1, 2.35:1, 1.85:1 & 4:3
SD 4:3	16:9

· Center Marker

This item displays the CENTER MARKER on the screen.

· Safety Area

This item controls the size of the SAFETY AREA between 80%, 85%, 88%, 90%, 93%, and 100%.

· Marker Mat

This item darkens the area outside of MARKER setting area. The degree of the matte is between OFF(0) and (7).
The higher the value, the darker MARKER the matte becomes.

· Marker Color

This item controls Marker color. Selectable colors are white, gray, black, red, green, and blue.

-Line Marker, Center Marker, and Safety Area functions operate only after activating the MARKER function to the 'On' position in the Marker Menu.

[4] MAIN - System[page1]

· System Default

User can use the System Default Menu to initialize the values of the monitor.

· WaveForm Size

This item controls the size of Waveform or Vector Scope.

· WaveForm Position

This item controls the position of Waveform or Vector Scope between Right, Center, and Left.

-In normal display, press Enter button to activate this feature in the WaveForm.

-This feature can be activated in small size mode only.

· WaveForm Blending

This item activates the blending of Waveform or Vector Scope.

-This feature activates automatically if the Waveform overlaps with OSD.

-This feature can be activated in small size mode only.

· Audio Level Meter

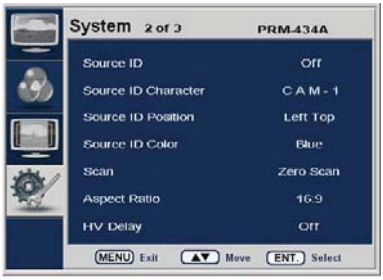
This item sets embedded audio group Select G1+G2, G2+G3, G3+G4, G1+G3, G1+G4, G2+G4 to activate the Audio Level Meter.

· Time Code

This item activates the Time Code. Select between VITC or LTC.

- WaveForm Size, WaveForm Position, and WaveForm Blending functions operate only after pressing the WAVE/VECTOR button on the front of the monitor.

[5] MAIN - System[page2]



· **Source ID**
This item is used to activate the Source ID display by selecting Manual(BG), Manual(Char), UMD(Small), UMD(Medium), or UMD(Large).
-This function is only available in same Set ID with UMD controller's.

· **Source ID Character**
This item is used to customize the Source ID display. (A~Z, a~z, 0~9, and special characters)
-This function is only available if the Source ID is selected on Manual.

· **Source ID Position**
This item controls the position of Source ID display. (Top-Left, Top-Center, Top-Right, Bottom-Right, Bottom-Center, Botttom-Left)
-This function is only available if the Source ID is selected on Manual.

· **Source ID Color**
This item is used to change the color of Source ID display by selecting blue, white, red, green, black, or yellow.

· **Scan**
This item controls to transition from OVER SCAN mode to ZERO SCAN mode.
Mode changes in the order of Zero Scan -> Over Scan -> Pixel To Pixel -> Zero Scan.
-In Pixel To Pixel mode, Marker Feature and Menu are disabled automatically.
-In Pixel To Pixel mode, pressing Enter button rotates the position of display.

· **Aspect Ratio**
This item toggles aspect ratio in SD from standard to anamorphic.
-SD Signal only (Disables automatically in any other signal including No signal)
-This function is not available in AFD mode.

· **HV Delay**
This item activates the HV Delay mode.
-In HV Delay mode, Marker feature, and Menu disabled automatically.

-Activating Internal Pattern disables Scan, Aspect Ratio, and HV Delay modes.

[6] MAIN - System[page3]

· **Blue & Mono**
You may remove R(red) and G(green) from the input signal and show the image only with B(blue) signal. Menu may be set to 'Mono' to change the screen to MONO mode. (This mode uses only the Luminance value)

· **Back Light**
This item controls the LED backlight setting. The value should be within ranges between MIN(0) and MAX(25).

· **Internal Pattern**
This item is used to activate the Internal Pattern of 100% White or 100% Color Bar.

· **AFD**
This item activates the AFD mode. Selectable modes are: Off, Aspect Mode, and Marker Mode.
-This feature is active in the SDI Signal that includes AFD Data.
-In Internal Pattern mode, this feature and menu are disabled automatically.

· **Set ID**
This item controls the Set ID setting for UMD. The value should be within range between 0 and 99.

· **Firmware Version**
This item is the firmware version of the system.

· **License**
Licensed by Postium Korea

Other Functions

[1] PIXEL TO PIXEL

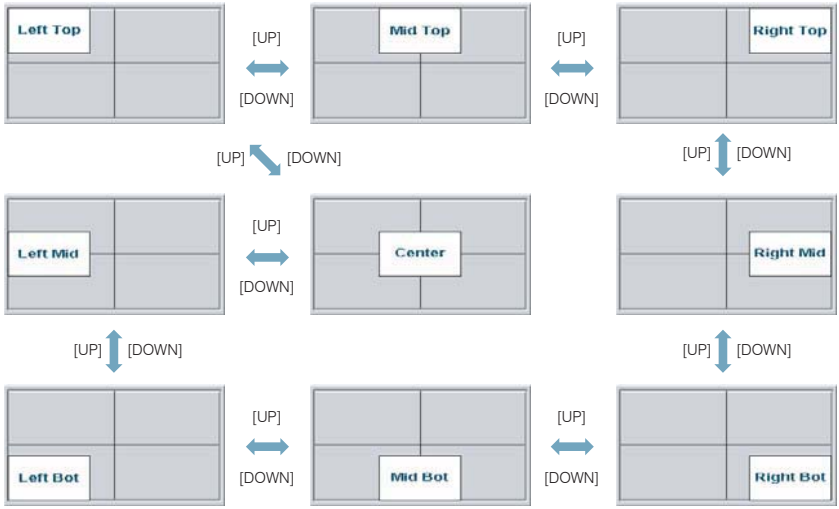
· PRM-434A monitor's Pixel to Pixel mode displays the input signal without scaling the image.

· To activate the [Pixel to Pixel] mode, access the Scan Menu in Syetem Menu and select [Pixel to Pixel].

· In the [Pixel To Pixel] mode, use the [UP]/[DOWN] buttons to toggle between 1:1 scan sections.

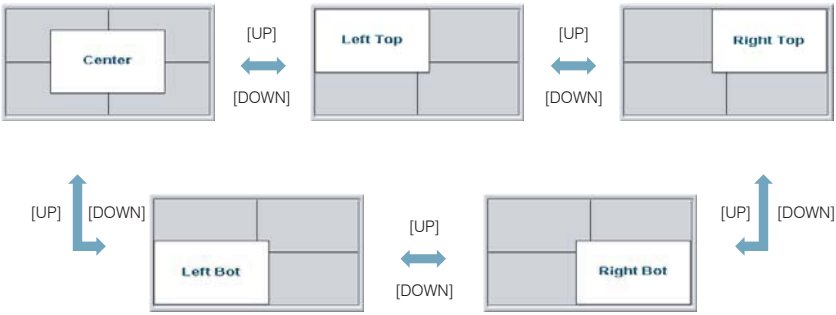
Input	Action Button	Available Modes
HD 1080i/1080p	[UP] (Clockwise)	Center -> Left Top ->Mid Top -> Right Top -> Right Mid -> Right Bottom -> Mid Bottom -> Left Bottom -> Left Mid -> Center -> ….
	[DOWN] (Opposite)	Center -> Left Mid -> Left Bottom -> Mid Bottom -> Right Bottom -> Right Mid -> Right Top -> Mid Top -> Left Top -> Center -> …

- OSD change



Input	Action Button	Available Modes
HD 720p	[UP] (Clockwise)	Center -> Left Top -> Right Top -> Right Bottom -> left Bottom -> Center -> …
	[DOWN] (Opposite)	Center -> Left Bottom -> Right Bottom -> Right Top -> Left Top -> Center -> ….

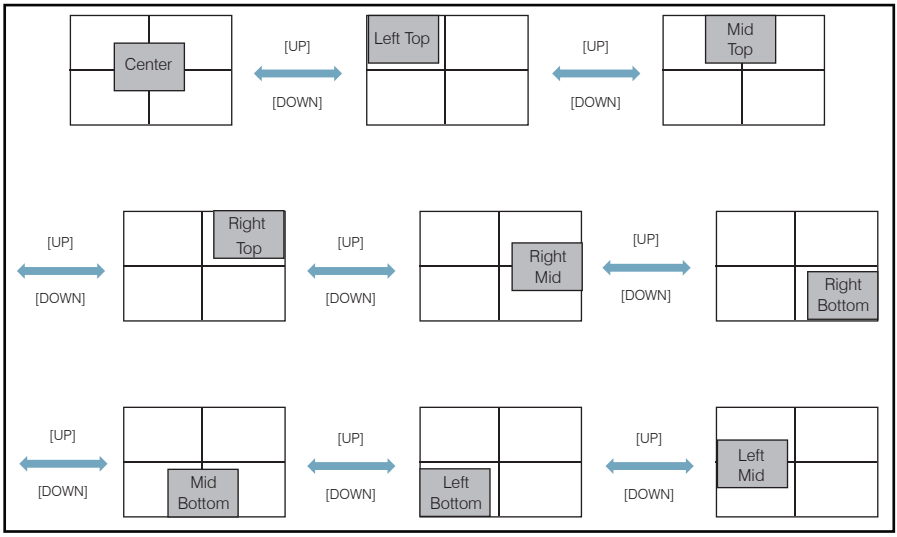
- OSD change



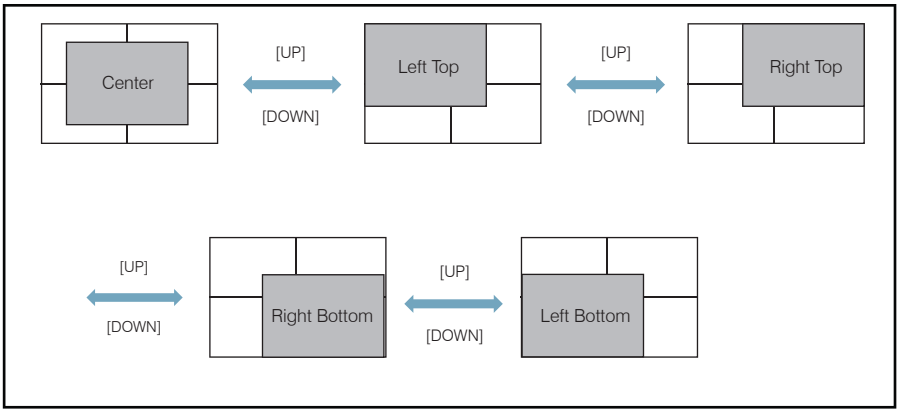
-Pixel To Pixel mode is not available in Graphic mode.

-Pixel To Pixel mode is available in SD mode, but 1:1 sections cannot be rotated through as with HD sources.

· Positions in HD Signal 1080i/1080p mode



· Position in HD Signal 720p mode

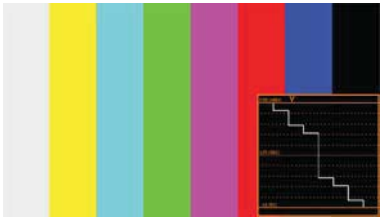


[2] Waveform

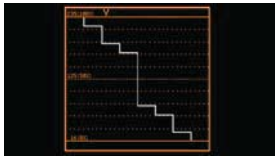
Small display : YCbCr → Y → Cb → Cr → Vector → off

Full display : Y → Cb → Cr → Vector → off

· Waveform

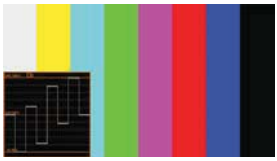
OFF	Waveform
	

· Waveform Size

Small (Y)	Small (Cb, Cr, Y)	Full (Y)
		

If push the Input button (SDI-A ,SDI-B and Analog), Waveform full mode is change to small mode automatically.

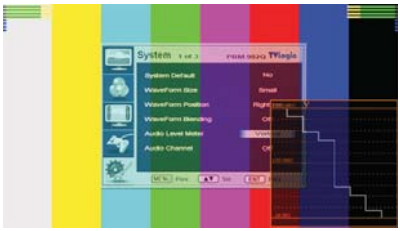
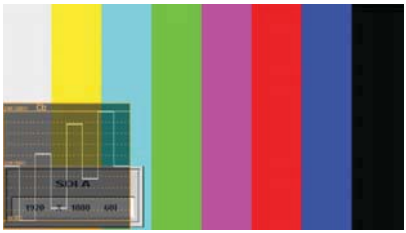
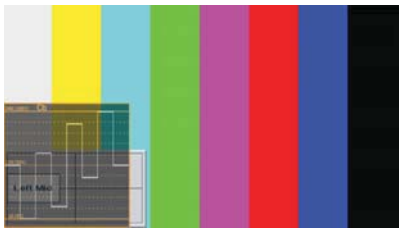
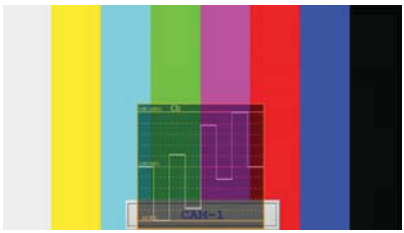
· Waveform Positions

Left	Center	Right
		

· Waveform Blending

OFF	ON
	

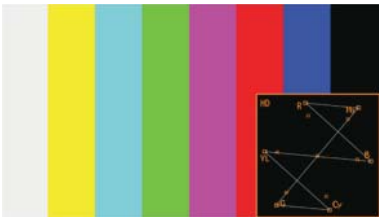
· Exception: If overlaps with OSD, blending activates automatically.

Main OSD	Info Window
	
Pixel To Pixel	**Source ID**
	

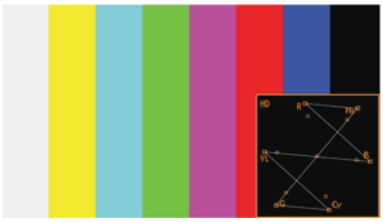
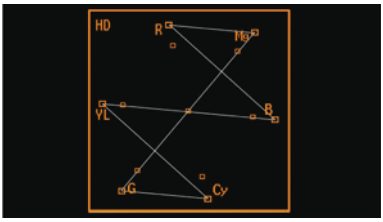
This function is only available with SDI Input.

[3] Vector Scope

·Vector Scope

Vector Scope OFF	Vector Scope ON
	

· Vector Scope Size

Small	Full
	

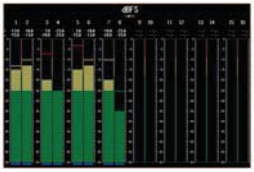
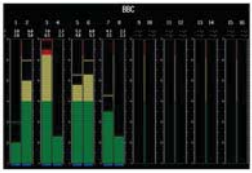
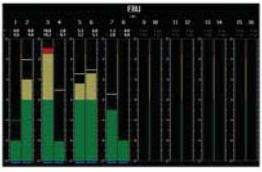
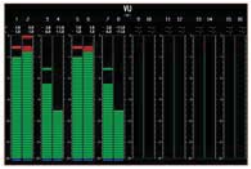
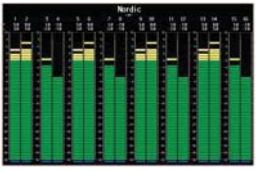
Vector Scope Position / Blending

: Refer to the Waveform position (P.18) and Waveform Blending (P.19)

This function is only available with SDI Input.

[4] Audio Level Meter

· Audio Level Meter

OFF	HORIZONTAL	VERTICAL
		
dBFS	BBC	EBU
		
VU	Nordic	
		

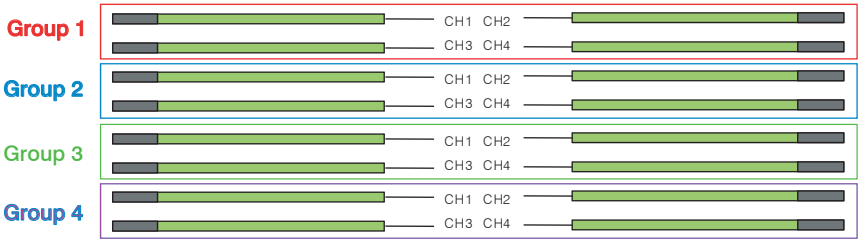
· Avoid Overlap

In full size WaveForm mode, WaveForm shifts down to avoid the overlap with Audio Level Meter.

Audio Level Meter OFF	Audio Level Meter ON
	

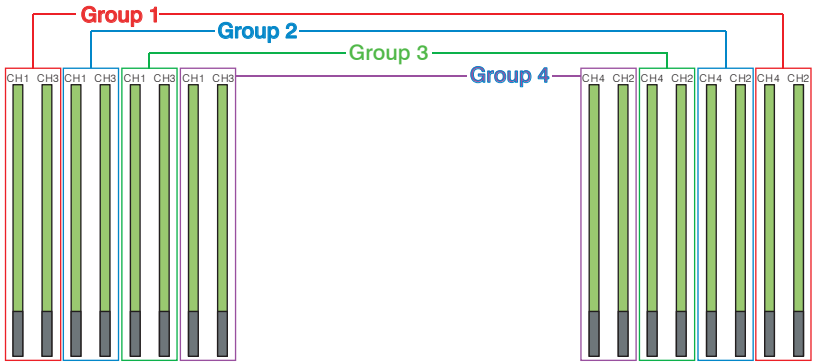
· Group & Channel

Group / Channel (Horizontal)

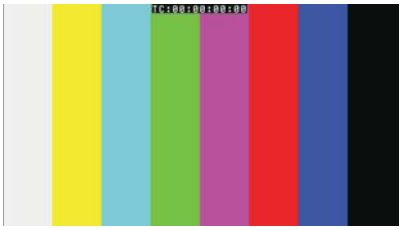
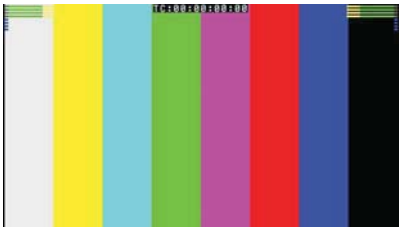


#This function is only available with SDI Input.

Group / Channel (Vertical)



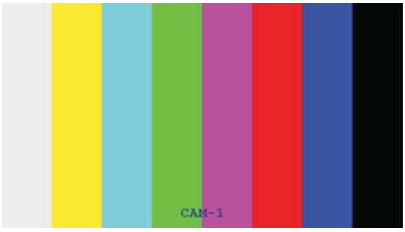
[5] Time Code

Time Code	Time Code + Audio Level Meter
	
Time Code + WaveForm Full Size	**Time Code + SourceID + WaveForm + Audio Level Meter**
	

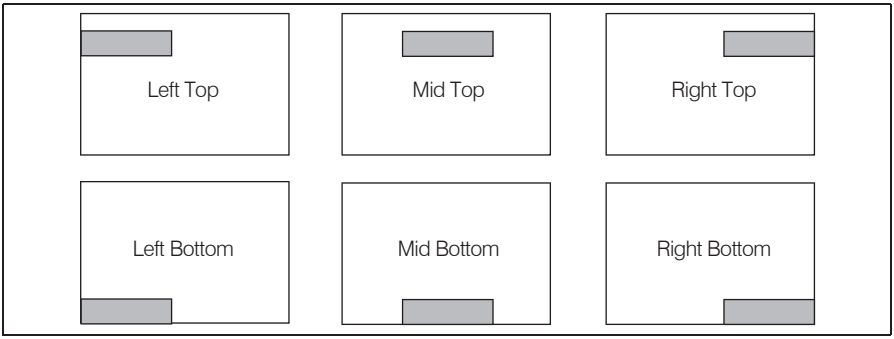
#This function is only available with SDI Input.

[6] Source ID

· Source ID

BG Type	Char Type
	

· Source ID Position



· Source ID Color

Black	White	Red	Green	Blue	Yellow
CAM-1	CAM-1	CAM-1	CAM-1	CAM-1	CAM-1

[7] MAIN - System [page3]

· **Back Light**
This item controls the LED backlight setting. The value should be within range between MIN(0) and MAX(50).

· **AFD**
This item activates the AFD mode. Selectable mode are Off, Aspect Mode and Marker mode.
This feature action in only SDI signal included AFD Data.
In Internal Pattern mode, this feature and menu disable automatically.

· **Set ID**
This item controls the Set ID setting for UMD. The value should be within range between 0 and 99.

· **Closed Caption**
This item controls closed caption ON/OFF.(708, 608(Line21), 608(ANC))

· **Firmware Version**
This item is the firmware version of the system.

· **License**

System Default Value

MEMU		Value
Picture	Brightness	0
	Contrast	0
	Chroma	0
	Aperture	0
Color	Color Temp	6500K
	Gain Red (1/2/3)	0
	Gain Green (1/2/3)	0
	Gain Blue (1/2/3)	0
	Bias Red (1/2/3)	0
	Bias Green (1/2/3)	0
	Bias Blue (1/2/3)	0
	Color Copy	6500K
Marker	Marker	Off
	Line Marker	Off
	Center Marker	Off
	Safety Area	Off
	Maker Mat	Off
	Marker Color	White
System [Page1]	System Default	No
	WaveForm	Off
	WaveForm Size	Small
	WaveForm Position	Right Bot
	WaveForm Blending	Off
	Audio Level Meter	Off
	Time Code	Off
System [Page2]	Source ID	Off
	Source ID Character	C A M – 1
	Source ID Position	Left Top
	Source ID Color	Blue
	Scan	Zero Scan
	Aspect Ratio	16:9
	HV Delay	Off
System [Page3]	Blue & Mono	Off
	Back Light	10
	Internal Pattern	Off
	AFD	Off
	Set ID	0

Product Specification

Input (1 Screen)	1 x BNC	SDI Input
Output (1 Screen)	1 x BNC	SDI Output (Active Through Out)
Input Signal	HD-SDI	1.458Gpbs
	SD-SDI	270Mpbs
SDI Input Signal Formats	SMPTE-274M	1080i (60/59.94/50)
		1080p (30/29.97/25/24/24sF/23.98/23.98sF)
	SMPTE-296M	720p (23.98/24/25/29.97/30/50/59.94/60)
	SMPTE-260M	1035i (60/59.94)
	SMPTE-125M	480i (59.94)
	ITU-R BT.656	576i (50)
	2K Format	2048 X 1080 (23.98psf/24psf/23.98psf/24p)
LCD	Size	4.3 inch
	Resolution	800 x 480 (15:9)
	Pixel Pitch	0.11625 (H) X 0.11625 (V) mm
	Color	16.7M(true), 24bit
	Viewing Angle	H : 130 degrees
		V : 110 degrees
	Luminance of white	200 cd/㎡ (Center)
	Contrast	300:1
	Display Area	93.0 x 55.8 mm
Power		12V DC
Power Consumption (Approx.)		27 Watts(DC)
Operating Temperature		0℃ to 40℃ (32°F to 104°F)
Storage Temperature		-30℃ to 50℃ (-22°F to 122°F)
Main Body Dimensions (mm/inch)		438 x 87 x 77 (17.24 x 3.42 x 3.03)
Main Body Dimensions (With Rack Bracket)		479 x 87 x 77 (18.85 x 3.42 x 3.03)
Weight		2.1Kg / 4.62 lb
Accessory		DC Power Adapter
Option		19" Rack Mountable Kit (2U) (Quad Monitor)

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