Multi

User's Manual

Multi-Format LCD Monitors
LVM Series

- LVM-091W

TVLogic

Contents

LVM-091W

TVLogic

Warning

· Always use set voltage.
  - DC 12V/24V (MAX 2A)
· All operating instructions must be read and understood before the product is operated.
· These safety and operating instructions must be kept in safe place for future reference.
· All warnings on the product and in the instructions must be observed closely.
· All operating instructions must be followed.
· Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
· This product must be operated on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company. For units designed to operate on batteries or another power source, refer to the operating instructions.
· The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
· Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
· Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
· Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
· If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.

a. When the power cord or plug in damaged.
b. When a liquid was spilled on the product or when objects have fallen into the product.
c. When the product has been exposed to rain or water.

d. When the product does not operate properly as described in the operating instructions. Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.

e. When the product has been dropped or damaged.

f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.

· In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.

· Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.

· When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.

· Unplug the power cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.

· Unplug the power cord from the AC outlet if you do not use the product for considerably long time.

· Do not use the product near water, such as bathtub, washbasin, kitchen sink and laundry tub, swimming pool and in a wet basement.

· Keep the product away from direct rays of the Sun-light.

· Do not place the product on an unstable cart, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instruction. Use only the mounting hardware recommended by the manufacturer.

· When relocating the product placed on a cart, it must be moved with the utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.

· The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.

· The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.

· Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).

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 LVM-091W Series unit has the following features:

Compatible with varied SDI signals
The product is compatible with varied SDI Signals
- 480i,576i,720p,1035i,1080i,1080p,1080psf

Compatible with varied Analog signals
The product is compatible with varied analog signals
- Composite, S-Video, Component, RGB

Compatible with varied DVI Digital/Analog Signals
DVI input is standard equipment

Compatible with VGA Signals using DVI-I connection

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

Audio in & out
Built in Audio Disembedder and Internal Speakers
Stereo Audio out using phone jack
External Audio in for Mono Speaker out

Knob Control
Easy to adjust user configuration using the control knobs.

BLUE ONLY/MONO

H/V delay

Wide Variety 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.

Wide Screen/CCFL Backlight

8 bit LVDS 2Channel Interface Panel

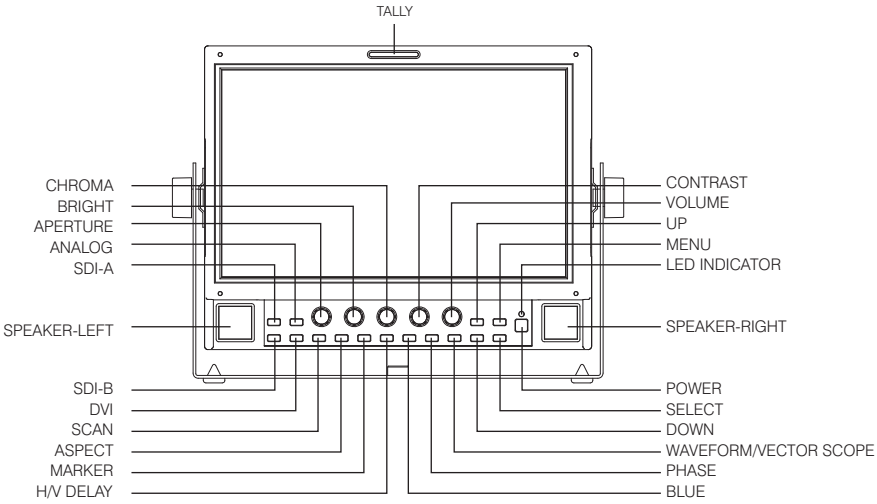
DC Compatible
The product is powered by normal 12V/24V source.

Remote control function
Simple remote controllability with single cable connection, no additional modules required

Additional Features
Active Loop Through/SDI, VESA Mounting Standard, 350:1 contrast ratio, 350 cd/m2 brightness, OSD user interface, Rack Mountable

Name & Function of Each Part

<FRONT>



· **[ANALOG] button/lamp**

Used to select desired Analog Input. (CVB1/2/3, S-Video, Component, RGB)

· **[DVI] button/lamp**

Used to select desired DVI Input. (DVI DIGITAL, DVI ANALOG)

· **[SDI-A/SDI-B] button/lamp**

Used to select SDI-A/SDI-B Input.

· **[UNDERSCAN] button/lamp**

Used to transfer from OVER SCAN mode to UNDER SCAN mode.

Mode changes in the order of UNDERSCAN -> OVERSCAN -> PIXEL TO PIXEL -> UNDERSCAN

#PIXEL TO PIXEL mode is not available in Graphic mode.

· **[ASPECT] button/lamp**
Used to toggle aspect ratio in SD from standard to anamorphic.

· **[MARKER] button/lamp**
Used to show MARKER on the screen. The type of marker at work may be selected on the main menu.

· **[BLUE ONLY]/[MONO] button/lamp**
You may remove R(red) and G(green) from the input signal and play the screen only with B(blue) signal. Button may be pressed twice to change the screen to MONO mode. (This mode uses only Luminance value.)

· **[H/VDELAY] button/lamp**
Used to show HV Delay mode on the screen.

· **[PHASE] button/lamp**
Used to change the Phase values.
#Phase is not available in DVI Analog and PAL mode.

· **[WAVEFORM]/[VECTOR SCOPE] button/lamp**
Used to activate the Waveform or Vector Scope. Pressing the button once will activate the Waveform, pressing the button twice activates the Vector Scope.

· **[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

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

· **TALLY(Front)**
LED indicating monitor's current status using optional Remote/RS-485.

· **[APERTURE] knob**
Used to adjust the picture sharpness between MAX(12) and MIN(-12).
#Aperture is not available in DVI Analog mode.

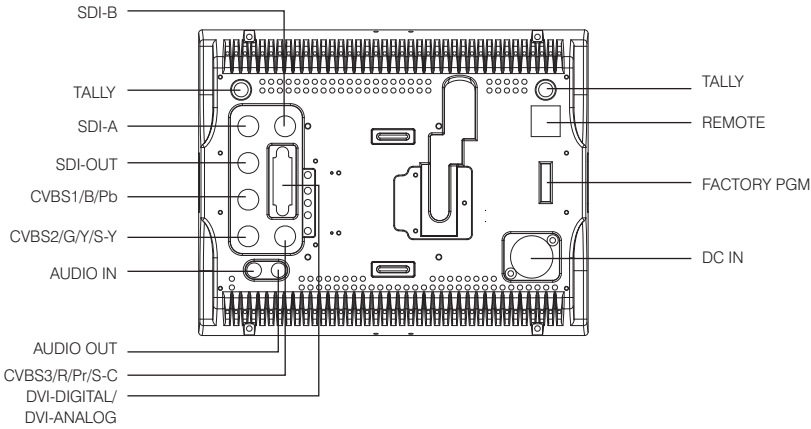
· **[BRIGHT] knob**
Used to adjust the degree of brightness between MAX(127) and MIN(-128).

· **[CHROMA] knob**
Used to adjust the saturation between MAX(127) and MIN(-128).
#Chroma is not available in DVI Analog mode.

· **[CONTRAST] knob**
Used to adjust the contrast ration between MAX(127) and MIN(-128).

· **[VOLUME] knob**
Used to adjust the volume between MAX(20) and MIN(0).

<REAR>



· REMOTE (RJ-45)

Connection for remote control of monitor.

· DVI DIGITAL/DVI ANALOG (DVI-I)

Input connection for DVI-I

· SDI-A/B (BNC)

SDI signal input terminal

· SDI-OUT (BNC)

SDI signal output terminal

· CVBS1/B/Pb (BNC)

Signal input terminal used for COMPOSITE1, RGB B, COMPONENT Pb signals.

· CVBS2/G/Y/S-Y (BNC)

Signal input terminal used for COMPOSITE2, RGB G, COMPONENT Y, SVIDEO signals.

· CVBS3/R/Pr/S-C (BNC)

Signal input terminal used for COMPOSITE3, RGB R, COMPONENT Pr, SVIDEO C signals.

Connector	Composite	Component		S-Video
1	CVBS1	Pb	B	No Con.
2	CVBS2	Y	G	Y
3	CVBS3	Pr	R	C

· AUDIO IN (phone jack)

Used to External audio input jack.

· AUDIO OUT (phone jack)

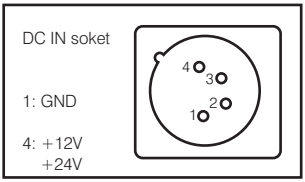
Used to audio output jack.

· FACTORY PGM (40 pins)

Input connector for FACTORY PGM allowing for firmware updates.

· DC IN (XLR, 4 pins)

Used to supply DC power; 12V/24V



Menu Organization & Adjustment

The product may be controlled and set system-wise through OSD displayed on the screen.

1) Menu Organization

Below is the organization of the product's menu.

2) Menu Control

You may control various functions using MENU, UP/DOWN and ENTER buttons on the bottom front of the monitor.

3) Menu Control Sequence

Menu control sequence follows the order below

1. Press MENU button to bring OSD menu on the screen.

2. Display the desired sub menu with the UP/DOWN button.

3. After select a sub menu, press ENTER to select an item with UP/DOWN button.

4. Press ENTER to select the desired item.

5. Press ENTER to save the new value.

6. Press MENU once to remove OSD menu from the screen.

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Menu Contents

Below is the description of each function of the menu.

[1] PICTURE

· Brightness

This Item controls the degree of brightness.

#Brightness can be adjusted by using the [BRIGHT] control knob on the front of the monitor.

· Contrast

This item controls the contrast ratio.

#Contrast can be adjusted by using the [CONTRAST] control knob on the front of the monitor.

· Chroma

This item controls saturation.

#Saturation can be adjusted by using the [CHROMA] control knob on the front of the monitor.

· Phase

This item controls Phase value (Hue).

#Phase value can be adjusted by press the [PHASE] button on the front of the monitor.

· **Aperture**

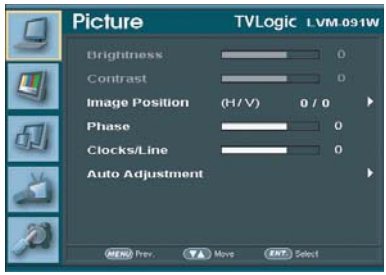
This item controls the picture sharpness.

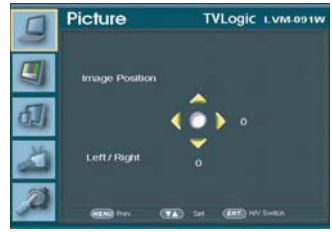
#Sharpness can be adjusted by using the [APERTURE] control knob on the front of the monitor.

· **NTSC Setup**

This item sets IRE value in NTSC mode between 0 IRE and 7.5 IRE.

[2] PICTURE(DVI/Analog Only)





· **Brightness**

This Item controls the degree of brightness.

#Brightness can be adjusted by using the [BRIGHT] control knob on the front of the monitor.

· **Contrast**

This item controls the contrast ratio.

#Contrast can be adjusted by using the [CONTRAST] control knob on the front of the monitor.

· **Image Position**

This item controls the position(H/V) of the image in DVI Analog mode.

· **Phase**

This item controls Phase value.

· **Clocks/Line**

This item is adjust timing for signal sync

· **Auto Adjustment**

This item adjusts the input signal automatically. Phase, Clocks/Line and Image Position are also adjusted.

[3] COLOR

· **Color Temp**

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

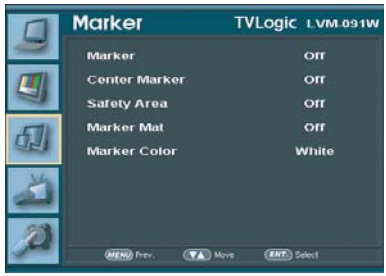
· **User**

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

· **Color Copy**

This item is used when the user want to adjust only some particular parameters in basic setting color temperature value.

[4] MARKER



· 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

MARKER may only be activated by pressing the MARKER button on the front of the monitor.

· Center Marker

This item displays the CENTER MARKER on the screen.
#This function operates only after activating the MARKER function by pressing the MARKER button on the front of the monitor.

· Safety Area

This item controls the size of the SAFETY AREA between 80%, 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 number the darker MARKER the matte becomes.

· Marker Color

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

[5] REMOTE

· Pin1 ~ Pin6

The user may connect RJ-45 jack to the remote terminal on the rear of the unit and designate a function for each pin.

The selectable functions are as follows:

Menu Classification	Settable Values
PIN 1~6	ANALOG CHANNEL DVI CHANNEL SDI-A/SDI-B TALLY RED TALLY GREEN BLUE ONLY UNDERSCAN ASPECT HVDELAY 16:9 MARKER, 15:9 MARKER, 14:9 MARKER, 13:9 MARKER, 4:3 MARKER, 4:3 ON AIR MARKER, 1.85:1 MARKER, 2.35:1 MARKER, 1.85:1 & 4:3 MARKER CENTER MARKER SAFETY AREA 80%, SAFETY AREA 88%, SAFETY AREA 90%, SAFETY AREA 93%, SAFETY AREA 100%

· Pin7

PIN7 is for POWER ON/OFF use only.

[6] SYSTEM(1/2)

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

· Audio Channel
This item set embedded audio channel selects CH1 ~ CH16, Off, and Ext. Audio.

· Audio Level Meter
This item set embedded audio group selects Off, G1+G2, G2+G3, G3+G4, G1+G3, G1+G4, G2+G4 to activate Audio Level Meter.

· Internal Pattern
This item generates internal pattern.

· Source ID
This item is display input source ID.(Off, Manual, ANC)

· Source ID Character
This item is set input source ID name. (Use Menu, Down, Up and Enter key.)

· Source ID Position
This item controls Source ID position. (Left-Top, Left-Bottom, Center-Top, Center-Bottom, Right-Top and Right-Bottom)

· Time Code Enable
This item displays the time code.(VITC, LTC)

[7] SYSTEM(2/2)

· Closed Caption

This item controls closed caption.(Off, CC608(ANC), CC608(Line21), CC708)
(Closed Caption may be used only SDI mode.)

· Back Light

This item can be adjusted by using the [CONTRAST] control knob on the front of the monitor

· Audio Volume

This item controls embedded audio volume between MIN(0) and MAX(20).

· H/V Flip

This item controls Screen Flip.(Off, H/V-Flip, H-Flip, V-Flip)

· Set ID

This item is set Monitor ID for RS485.

· Firmware Version

This item is the firmware version of the system.

· Serial Number

This item is the Serial Number of system.

[8] Analog Input Menu

· LVM-091W Series unit is capable of processing varied ANALOG Input signals.

· Press [ANALOG] button on the front of the monitor and activate the OSD menu as shown on the left. Select the input you desire by using the [UP]/[DOWN] button and press the [ENTER] button to confirm.

#If no image displays after selecting the desired input mode, check and make sure that your connection is not lose or disconnected.

#Input resolution displays on the bottom of the OSD screen.

[9] DVI Input Menu

· LVM-091W Series unit is capable of processing DVI Digital/Analog input signal.

· Press [DVI] button on the front of the monitor and activate the OSD menu as shown on the left. Select the input you desire by using the [UP]/[DOWN] Button and press the [ENTER] button to confirm.

#If no image displays after selecting the desired input mode, check and make sure that your connection is not lose or disconnected.

#Input resolution displays on the bottom of the OSD screen.

[10] SDI Input Menu

· LVM-091W Series unit is capable of processing Dual SDI Input signal.

· Press [SDI-A/SDI-B] button on the front of the monitor to select the SDI input. OSD menu displays as shown on the left.

#If no image displays after selecting the desired input mode, check and make sure that your connection is not lose or disconnected.

#Input resolution displays on the bottom of the OSD screen.

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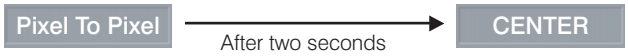
Other Functions

[1] PIXEL TO PIXEL



· LVM-091W monitor's Pixel to Pixel mode displays input signal without scaling.

· Press [UNDERSCAN] button on the front of the monitor to activate the [Pixel To Pixel] mode.

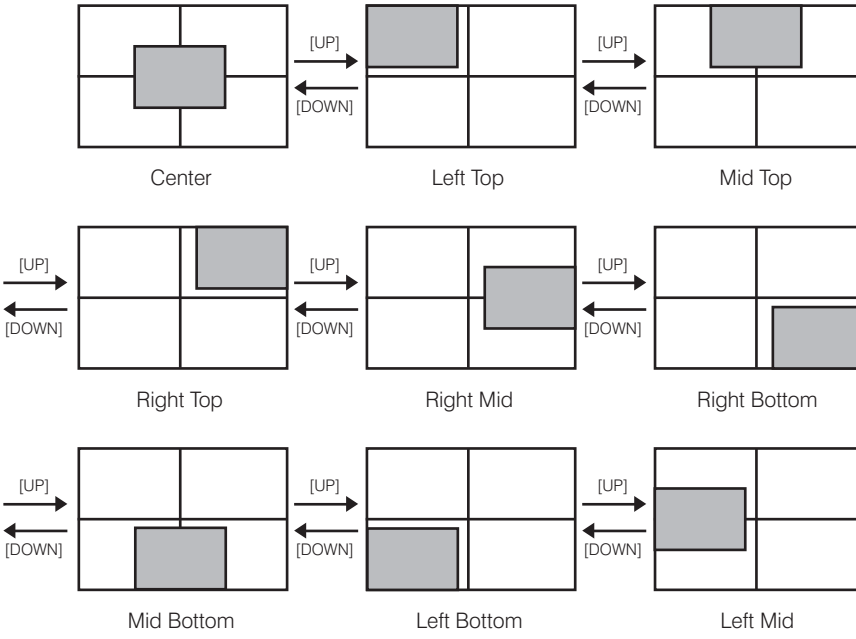
· In the [Pixel To Pixel] mode, use the [UP]/[DOWN] buttons to toggle between 1:1 scan sections

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 -> …
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 -> ….

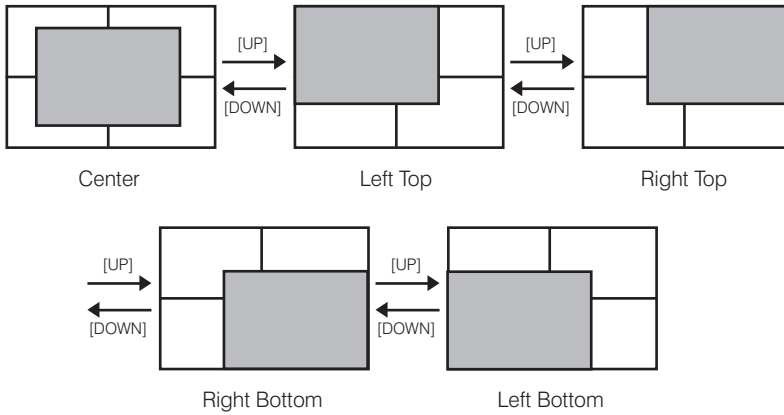
#Pixel To Pixel mode is not available in Graphic mode.

#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



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[2] WAVE FORM

· Waveform Position

Waveform OFF

Waveform ON

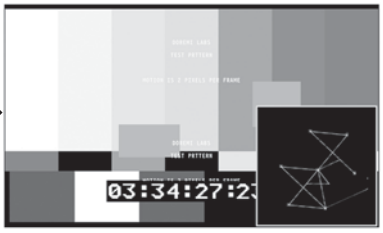
#This function is only available with SDI Input.

[3] VECTOR SCOPE

· Vector Scope Position

Vector Scope OFF

Vector Scope ON



#This function is only available with SDI Input.

DVI Digital/Analog Input Signal Format

[1] DVI Digital

Resolution (Source)	DotClock [MHz]	f H (kHz)	f V (Hz)	Sync (H/V)
640 x 350 70Hz (IBM)	25.175	31.469	70.086	P/N
640 x 480 60Hz (IBM)	25.175	31.469	59.940	N/P
720 x 400 70Hz (IBM)	28.322	31.469	70.087	N/P
640 x 480 67Hz (MAC)	30.240	35.000	66.667	N/N
832 x 624 75Hz (MAC)	57.284	49.726	74.551	N/N
1152 x 870 75Hz (MAC)	100.00	68.681	75.062	N/N
640 x 480 75Hz (VESA)	31.500	37.500	75.000	N/N
640 x 480 72Hz (VESA)	31.500	37.861	72.809	N/N
800 x 600 56Hz (VESA)	36.000	35.156	56.250	N/N
800 x 600 60Hz (VESA)	40.000	37.879	60.317	P/P
800 x 600 75Hz (VESA)	49.500	46.875	75.000	P/P
800 x 600 72Hz (VESA)	50.000	48.077	72.188	P/P
1024 x 768 60Hz (VESA)	65.000	48.363	60.004	N/N
1024 x 768 70Hz (VESA)	75.000	56.476	70.069	N/N
1024 x 768 75Hz (VESA)	78.750	60.023	75.029	P/P
1152 x 864 75Hz (VESA)	108.00	67.500	75.000	P/P
1280 x 1024 60Hz (VESA)	108.00	60.000	60.000	P/P
1280 x 1024 75Hz (VESA)	135.00	79.976	75.025	P/P

Supported Video Mode	480/60p, 576/50p , 720/50p, 720/60p, 1080/60p

[2] DVI Analog

Resolution (Source)	DotClock [MHz]	f H (kHz)	f V (Hz)	Sync (H/V)
640 x 350 70Hz (IBM)	25.175	31.469	70.086	P/N
640 x 480 60Hz (IBM)	25.175	31.469	59.940	N/P
720 x 400 70Hz (IBM)	28.322	31.469	70.087	N/P
640 x 480 67Hz (MAC)	30.240	35.000	66.667	N/N
832 x 624 75Hz (MAC)	57.284	49.726	74.551	N/N
1152 x 870 75Hz (MAC)	100.00	68.681	75.062	N/N
640 x 480 75Hz (VESA)	31.500	37.500	75.000	N/N
640 x 480 72Hz (VESA)	31.500	37.861	72.809	N/N
800 x 600 56Hz (VESA)	36.000	35.156	56.250	N/N
800 x 600 60Hz (VESA)	40.000	37.879	60.317	P/P
800 x 600 75Hz (VESA)	49.500	46.875	75.000	P/P
800 x 600 72Hz (VESA)	50.000	48.077	72.188	P/P
1024 x 768 60Hz (VESA)	65.000	48.363	60.004	N/N
1024 x 768 70Hz (VESA)	75.000	56.476	70.069	N/N
1024 x 768 75Hz (VESA)	78.750	60.023	75.029	P/P
1152 x 864 75Hz (VESA)	108.00	67.500	75.000	P/P
1280 x 1024 60Hz (VESA)	108.00	60.000	60.000	P/P
1280 x 1024 75Hz (VESA)	135.00	79.976	75.025	P/P

Supported Video Mode	480/60i, 480/60p, 576/50i, 576/50p , 720/50p 720/60p, 1080/50i, 1080/60i,1080/24p 1080/25p, 1080/30p, 1080/50p, 1080/60p

PRODUCT SPECIFICATIONS

Input	1 x DVI-I	DVI IN
	3 x BNC	Analog Input
	2 x BNC	SDI 2 Channel Input
Output	1 x BNC	SDI Channel (Active Through Out)
Input Signal	Analog	Composite / S-Video / Component / RGB
	HD-SDI	1.485Gbps
	SD-SDI	270Mbps
	DVI	640×480 / 800×600 / 1024×768 / 1280×768 / 1280x1024
Analog Input Spec	Composite	1.0Vpp (With Sync)
	S-Video	1.0Vpp (Y With Sync), 0.286 Vpp (C)
	Component	1.0Vpp (Y With Sync), 0.7 Vpp (Pb,Pr)
	RGB	1.0Vpp (G With Sync), 0.7 Vpp (B,R)
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 (60 / 59.94 / 50)
	SMPTE-260M	1035i (60 / 59.94)
	SMPTE-125M	480i (59.94)
	ITU-R BT.656	576i (50)
Audio IN		Embedded Audio
		Analog stereo (Phone Jack)
Audio OUT		Analog stereo (Phone Jack)
		Internal Speaker(Stereo)
LCD	Size	9"
	Resolution	800 x 480 (15:9)
	Dot Pitch	0.246 x 0.246 mm
	Color	16.7M(true), 24bit
	Viewing Angle	H : 170 degrees
	(Typical)	V : 170 degrees
	Luminance of White	350cd (center)
	Contrast	350:1
	Display Area	196 x 118 mm
Power		12V DC/24V DC
Power Consumption (Approx.)		24 Watts(DC)/Max 2A
Operating Temperature		-20°C to 40°C (-4°F to 104°F)
Storage Temperature		-30 °C to 50 °C (-22 °F to 122 °F)
Main Body Dimensions (mm/inch)		223 x 175 x 83 (8.78 x 6.89 x 3.26)
Main Body Dimensions (with stand)		260 x 194 x 90 (10.23 x 7.63 x 3.54)
Weight		2.5Kg/5.51lb
Accessory		DC Power Adapter / Camera Mount
Option		19" Rack Mountable Kit (3U) (Dual Monitor)

* Above specifications may be changed without notice

TVLogic

Multi

HDMI

TVLogic Product Line

LVM - 071W

LVM - 171W

LVM - 241W

LVM - 401W

LVM - 461W

LVM - 571W

LHM - 400W

LHM - 460W

LHM - 570W

Developed by TVLogic

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