4K/UHD High Luminance HDR LCD Monitor

Operation manual_V1.3

LUM-181H
LUM-181G
LUM-242H
LUM-242G
LUM-328G
LUM-550H

TVLogic Always ON-AIR

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

CAUTION: Change or modifications not expressly approved by the manufacturer responsible for compliance could 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.

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01 CAUTION

- **Always use set voltage.**

  LUM-181H
  - AC 100 ~ 240V (50~60Hz)
  - DC 12V/8A ~ 24V/4A

  LUM-242H
  - AC 100 ~ 240V (50~60Hz)
  - DC 24V/6.5A

- 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.

- The power cord plug shall be connected to a main socket outlet with a protective earthing connection.

- Unplug the power cord from the AC outlet when happening any problem in the product.

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

01 CAUTION

- 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.

- Infrared devices can cause noise or malfunction under condition as below.
  - Parts of the body come into contact with the infrared transmiter or acoustic device.
  - Obstacles can cause electrical changes if there is a partition in the middle or in the wall.
  - Exposure to radio interference from medical equipment, microwave ovens, wireless LAN devices, etc. with the same frequency band.

- 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).

- If the still image is displayed on the screen in the same position for a long period of time, the permanent burn-in on the LCD panel may occur. So, do not display characters or markers continuously.
  If the video signals or image patterns are continuously displayed at the maximum or high level of luminance, the image smearing or flicker may occur on the screen because of the LCD panel's structure and characteristics of materials used.
  When the permanent burn-in, image smearing, or other damages happen on the LCD panel due to the improper use by the end user, the warranty service is not applied.

WARNING

<Main Switch>

I means Power on when pressing

O means Power off when pressing

<Beside critical components in circuit diagram>

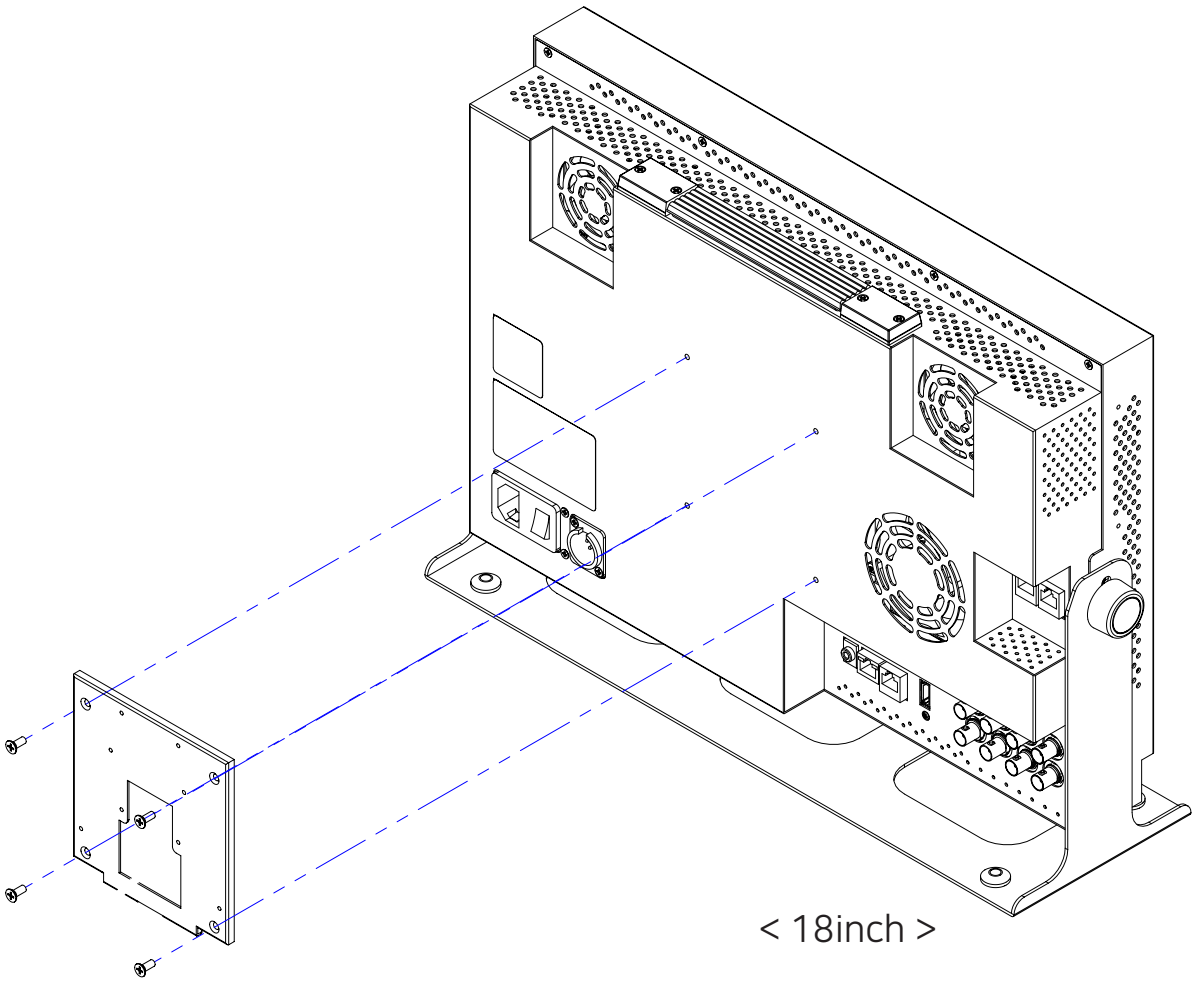
To identify any terminal which is intended for connection to an external conductor for protection against electric shock in case of a fault, or the terminal of a protective earth (ground) electrode.

<Near the main terminal block>

This mark indicates the possibility of injury or damage to property.

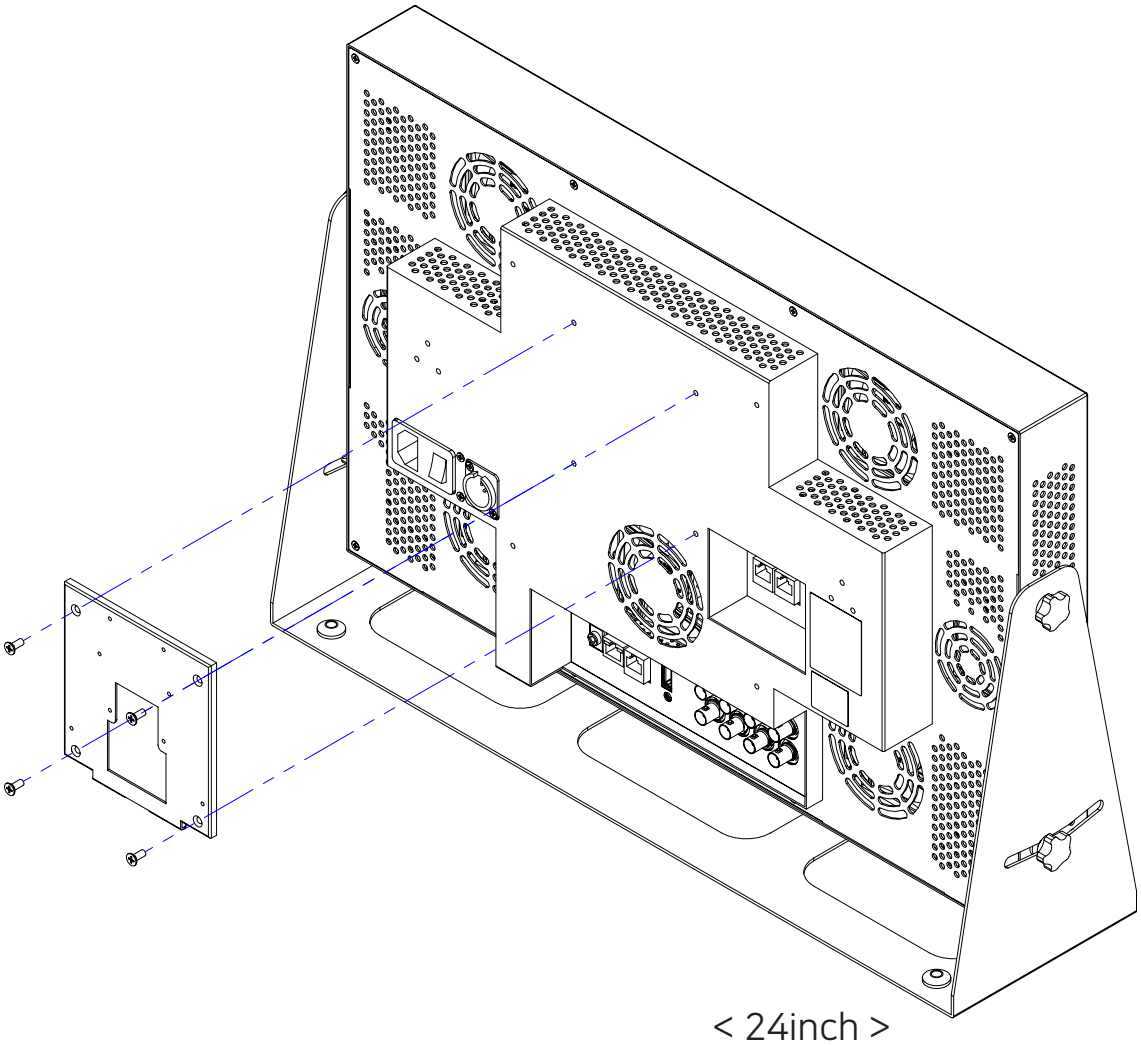
01 CAUTION

VESA WALL MOUNTING



01 CAUTION

VESA WALL MOUNTING



< 24inch >

01 CAUTION

VESA WALL MOUNTING

- When mounting on the wall bracket, fix the monitor using 4 pieces of M4 x 10mm screws.
- Use the 100mm x 100mm VESA MOUNTING holes on the rear housing.
- Do not install on a place other than a vertical wall.
- Do not use screws longer then the standard dimension, as they may cause damage to the inside to the monitor.
- Do not tighten the screws too much. It may damage the monitor or make the monitor fall and cause personal injury. Vidente(TVLogic) is not liable for these kinds of accidents.
- Remove the stand before installing the monitor on the wall using the wall mount kit.
- Do not install your wall mount kit while the monitor is plugged in.
  It may result in personal injury due to electric shock.

02 MAIN FEATURES

LUM-181H / 181G / 242H / 242G / 328G / 550H Monitor contains the following features:

- **Compatible with various SDI signal formats**
  - This product is compatible with various SDI signals. - 720P, 1080p, 2160p

- **Compatible with various Digital signal formats**
  - This product is compatible with various HDMI Digital signals- 50p, 59.94p, 60p.

- **4K(SMPTE ST 428-1-2006 : 4096 x2160 @24p /SMPTE ST 2036-1:2009 : 3840x2160 @23.98p ~ 60p) Support**
  - 6G/ 12G is supported only in SDI A, SDI B modes.

- **Advanced Cooling System by adopting the Premium Quality Quite Fan**
  - The fans inside the monitor are designed to rotate at the maximum speed in order to lower the internal tmeperature of the monitor displaying the high-luminance content.
  - With the adoption of the premium quality fans featuring sophisticated aerodynamic design, advanced acoustic optimisation, anti-vibration pads, both the improved cooling performance and the quite monitoring environment are achieved.

- **Remote control function**
  - This product can simply be remote controlled by using parallel switch.

- **RS422 protocol support**
  - This product supports protocols provided by TVLogic.

- **Ethernet & USB support**
  - Supports the Ethernet connection for monitor control and the USB connection for firmware update and color calibration.

- **HDMI(2.0) support**
  - 1 x HDMI(2.0) input is available without additional equipment.

- **SDI 3G support**
  - Supports 3G-SDI YCbCr/RGB 4:4:4 and YCbCr 4:2:2 formats.

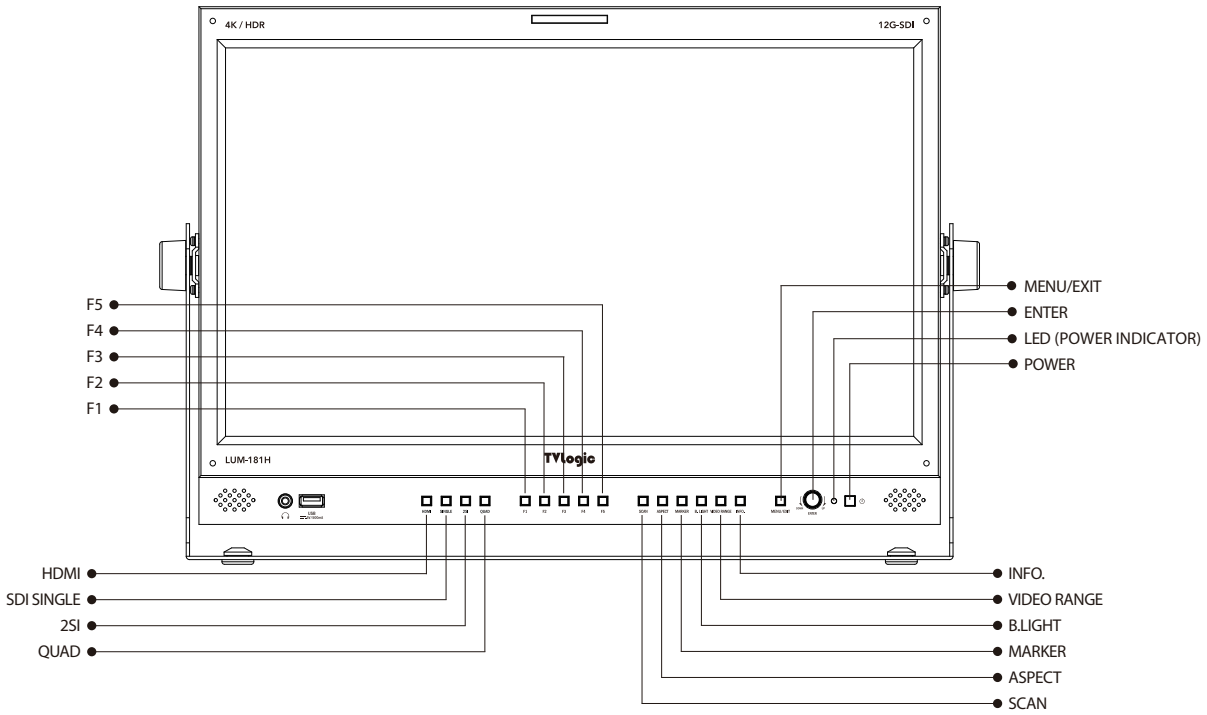
- **Additional features**
  - Wide Viewing Angle, Active Loop Through(SDI), VESA Mounting Standard and OSD user interface.

  * Max. Brightness 1000cd/m^2

- **Various Color Gamut support**
  - ITU-R BT.709, BT.2020, DCI-P3(color standard of digital cinema), SGamut3, Panel Native.

03 CONTROLS & FUNCTIONS

LUM-181H: FRONT



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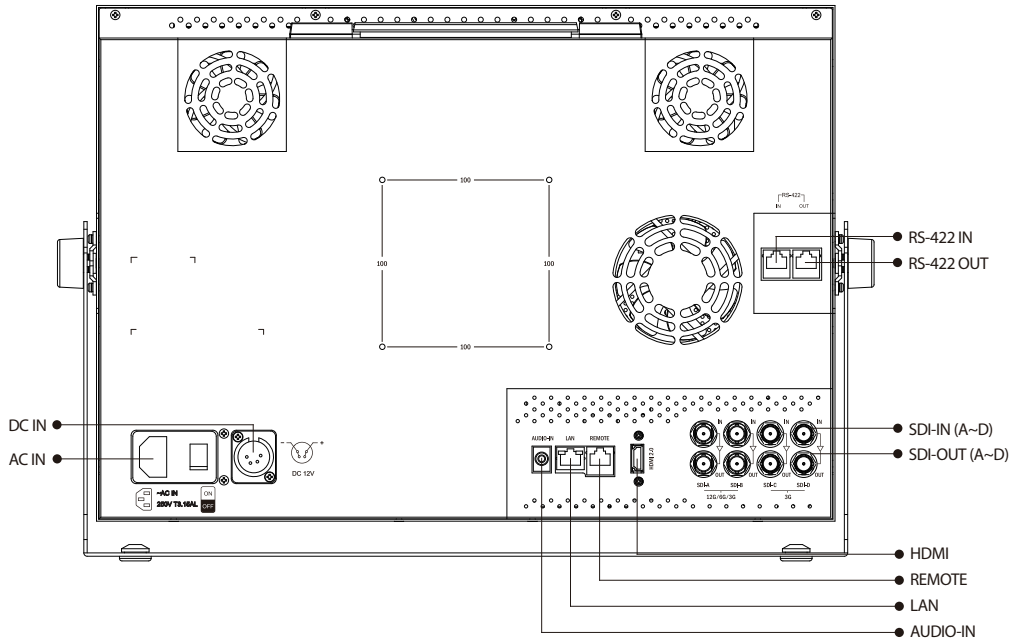
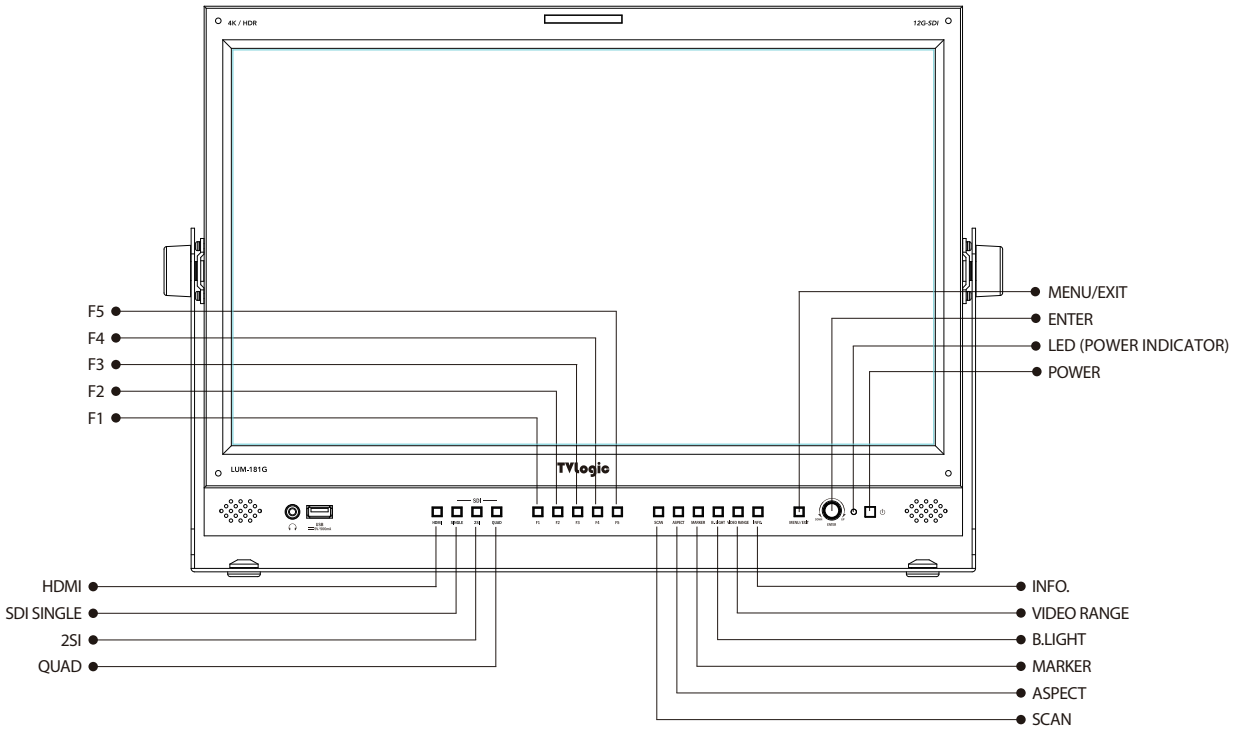


03 CONTROLS & FUNCTIONS

LUM-181G: FRONT



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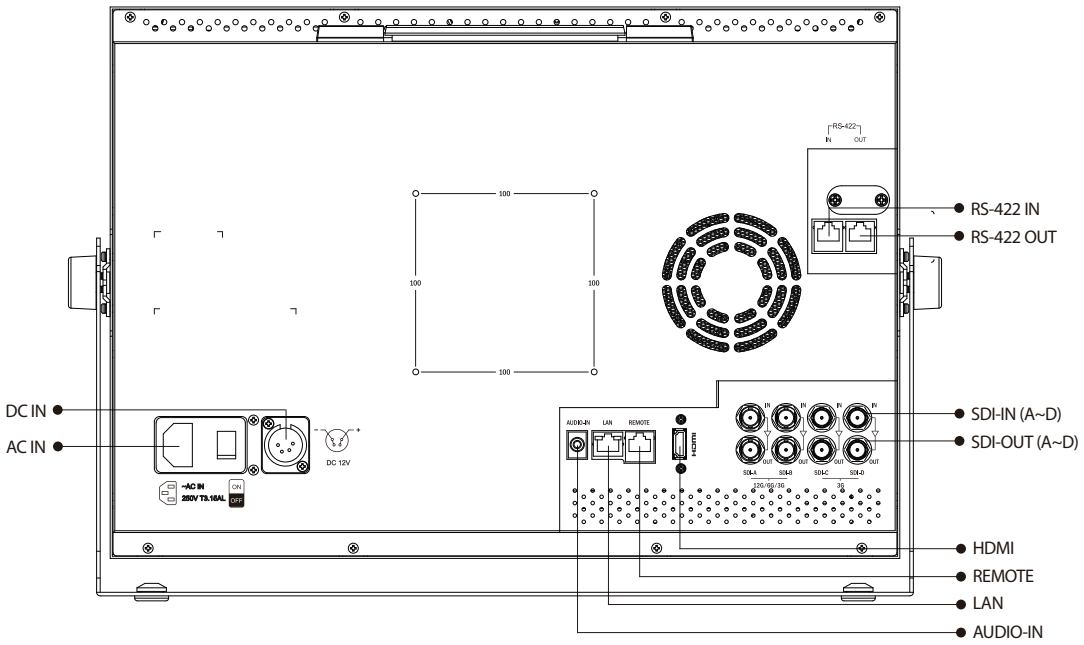

03 CONTROLS & FUNCTIONS

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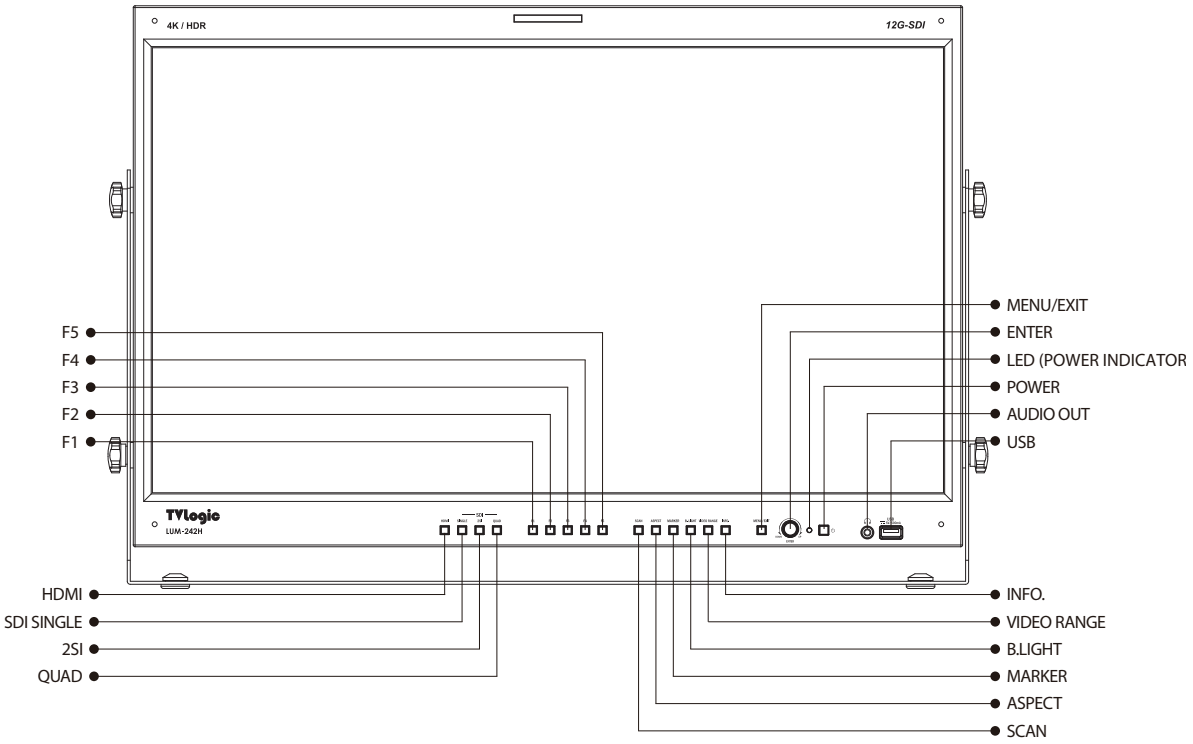

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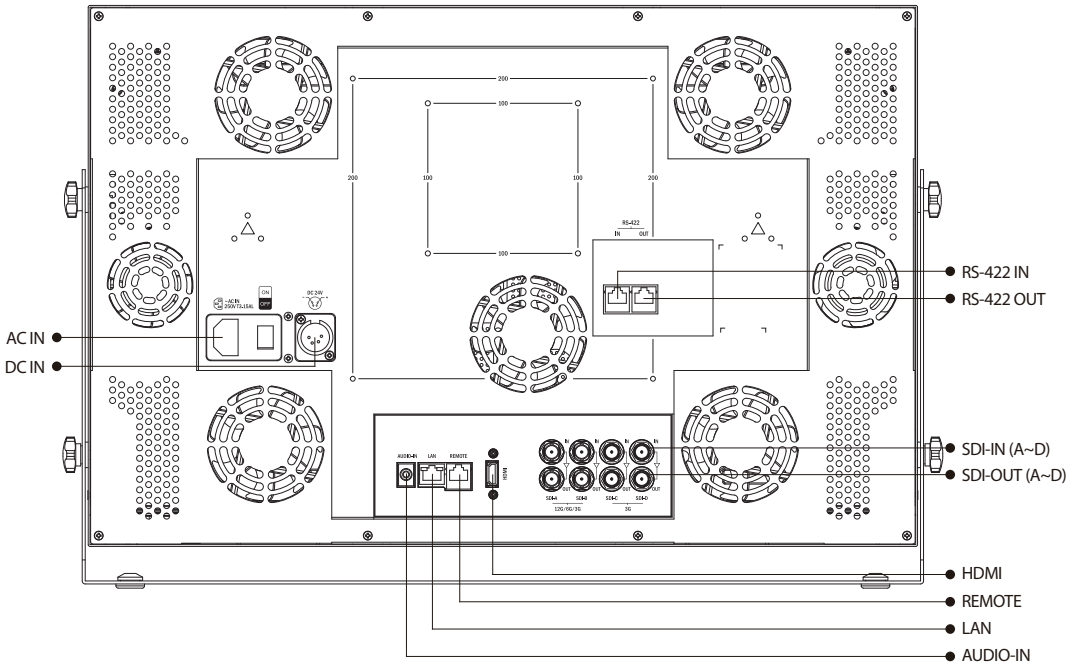
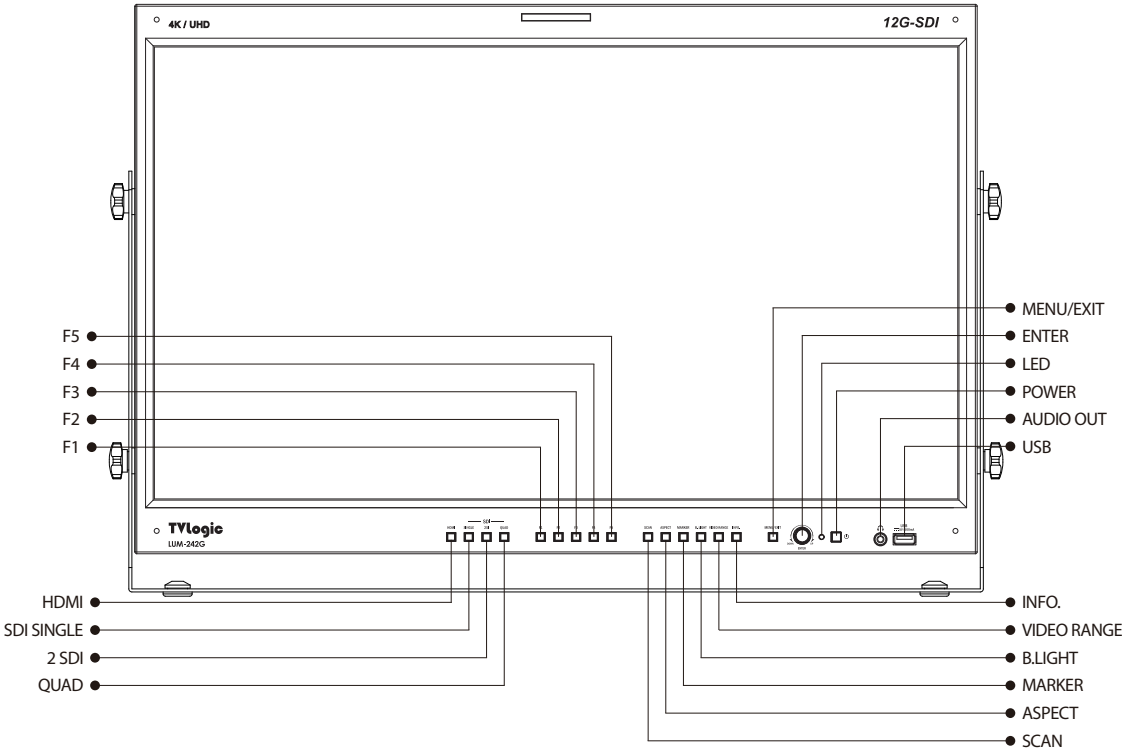


03 CONTROLS & FUNCTIONS

LUM-242G: FRONT



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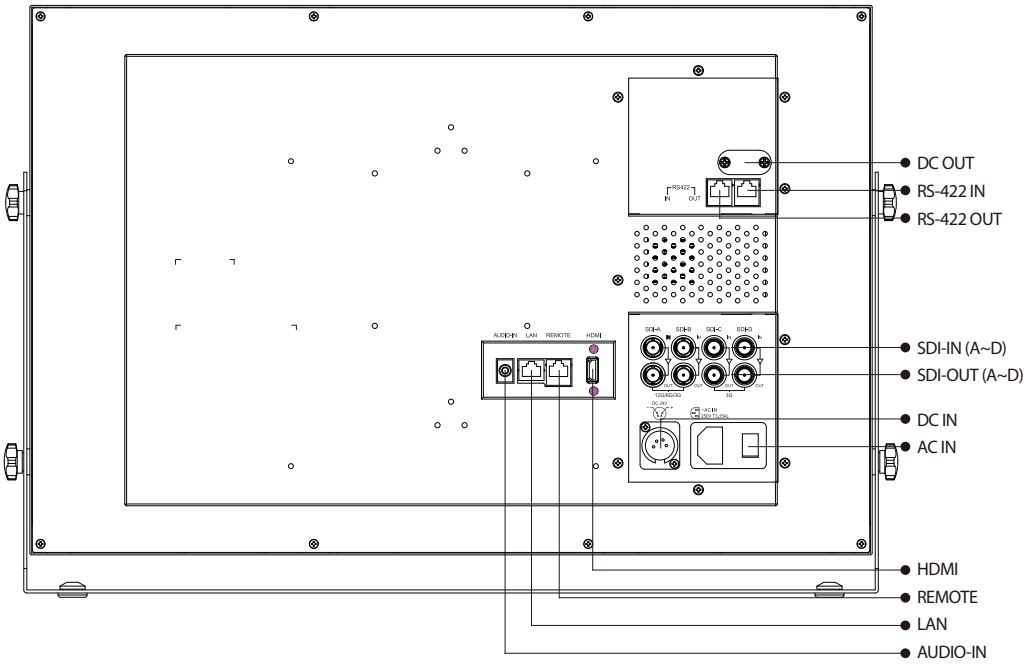
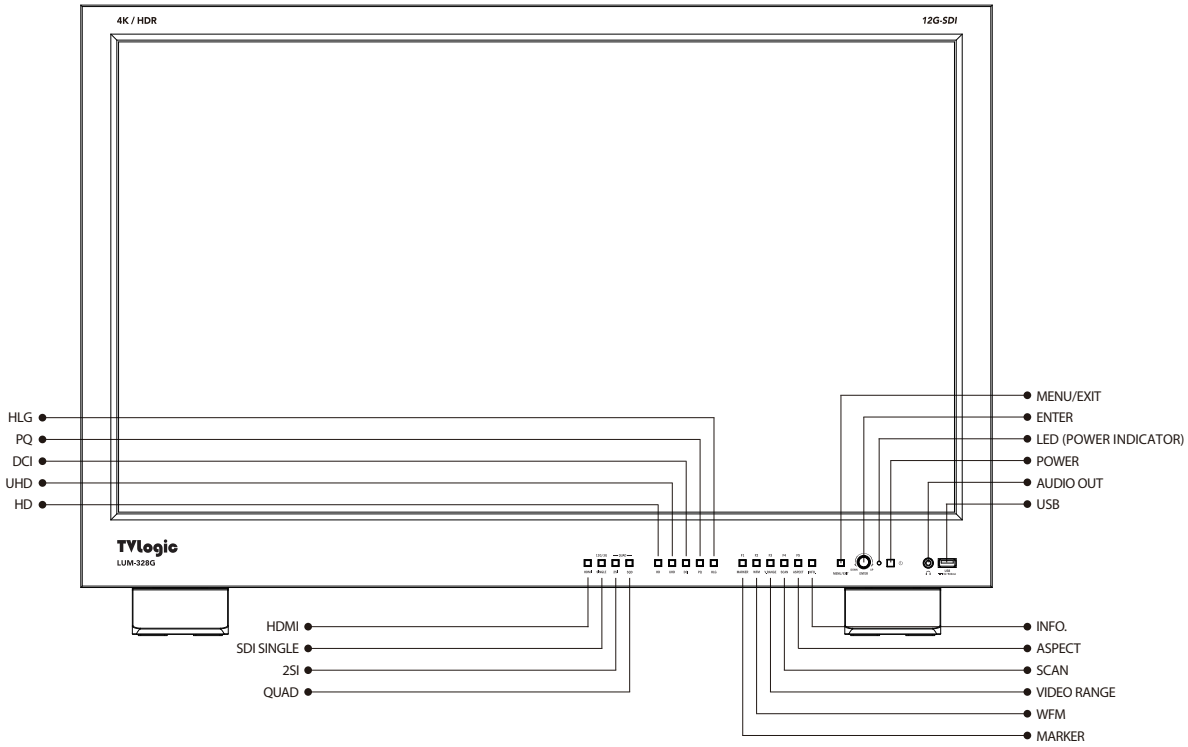


03 CONTROLS & FUNCTIONS

LUM-328G: FRONT



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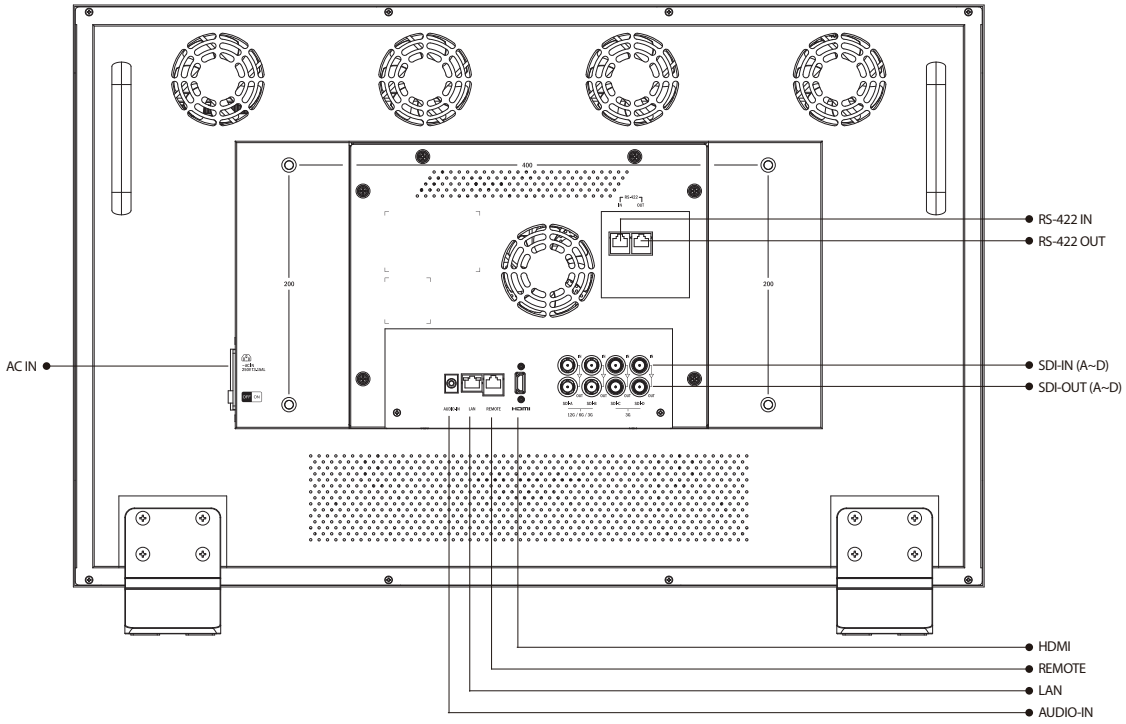
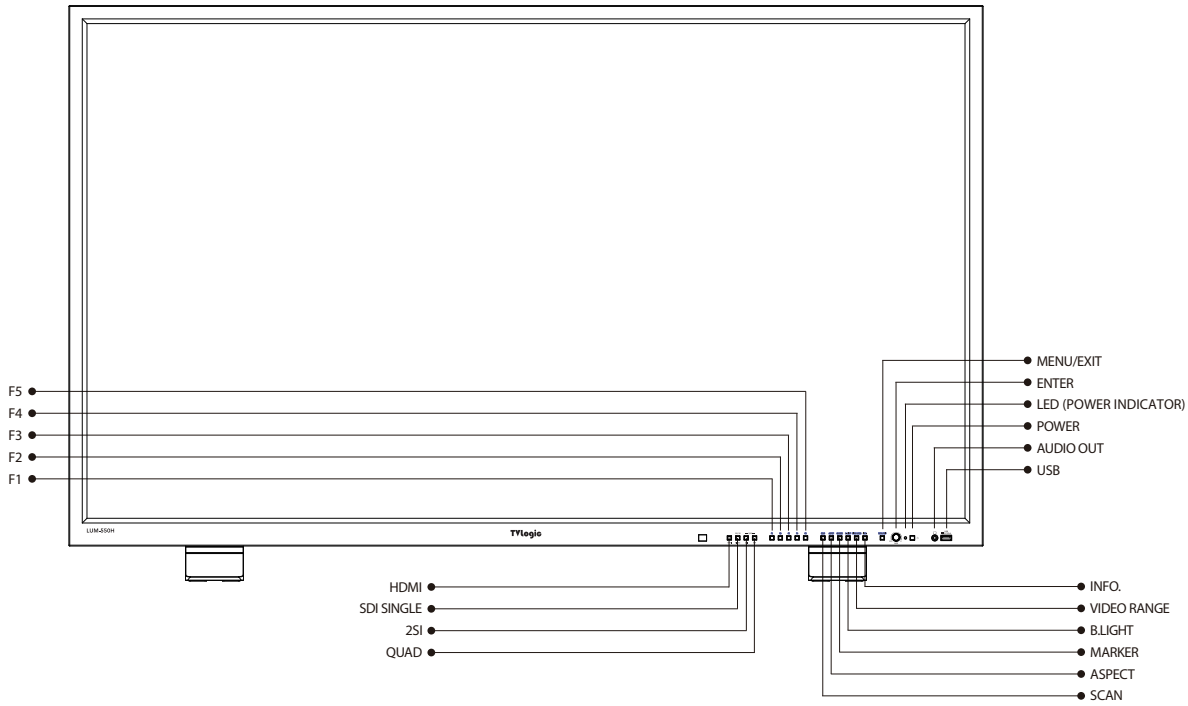


03 CONTROLS & FUNCTIONS

LUM-55OH: FRONT



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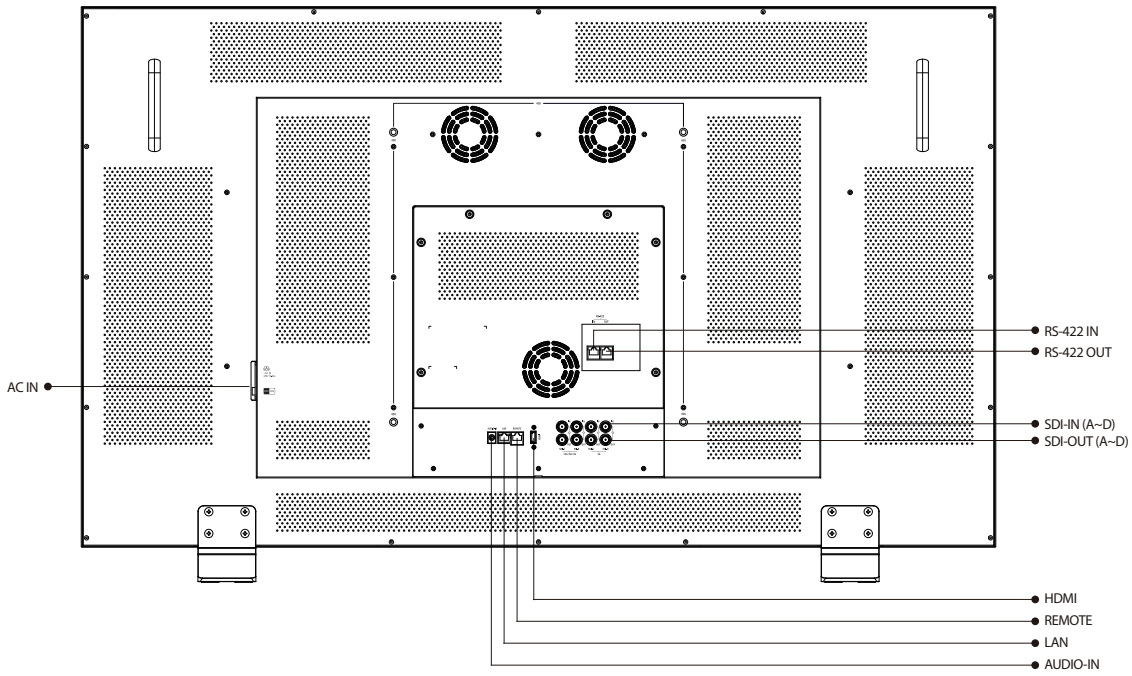


03 CONTROLS & FUNCTIONS

LUM-181H / 181G / 242H / 242G / 328G / 550H : FRONT

- **[HDMI] Button/Lamp**
  - Used to select HDMI input.
- **[SINGLE] Button/Lamp**
  - Used to select SDI input for one channel. Previously selected SDI input selection displays.
  - Press the button to move through the modes: SDI-A → SDI-B → SDI-C → SDI-D
- **[2SI] Button/Lamp**
  - Used to select the SDI 2-Sample Interleave input signal(quad link or dual link).
  - Press the button to move through the modes : 2SI(4CH) → 2SI(2CH)
- **[QUAD] Button/Lamp**
  - Used to select the SDI Quad link square division input signal.
- **[F1 ~ F5] Button/Lamp**
  - Shortcut key for KEY MAPPING feature in the OSD MENU.
  - Selectable function are as follows :

1) Blue Only
- Activates in the order of [Blue Only] → [Mono] → [Off].
- Blue Only: Used to remove red and green from the input signal and display the screen only under a blue signal.
- Mono: Used to remove all colors from the input signal and display the screen only under white and black signal.

2) H/V Delay
- Used to check horizontal and vertical sync simultaneously by moving the screen up/ down/left/right.

3) White Point
- This function activates when [Standard] - [User1/2/3/4/5/6] is selected.
- Refer to the page 16.

4) Audio Level Meter
- Refer to the page 26.

5) Time Code
- Refer to the page 27.

6) Luma(Y') Zone
- Refer to the page 24.

7) Focus Assist
- Refer to the page 25.

8) Marker
- Refer to the page 21.

9) DR Mode
- Used to select the dynamic range mode in the order of SDR → HDR → User.
- SDR : Standard Dynamic Range Mode
- HDR : High Dynamic Range Mode
- User : Custom Dynamic Range Mode

10) Standard
- Refer to the page 16.

11) Disp Luminance
- Refer to the page 16.

12) EOTF
- Refer to the page 16.

13) Video Range
- Refer to the page 16.

14) Waveform
- Refer to the page 23.

15) Scan
- Refer to the page 10.

16) Aspect
- Refer to the page 10.

17) Native Mode
- Used to display the original colors of the LCD panel.

18) Gumat Warning
- Refer to the page 17.

19) Shadow Mode
- To be supported.

20) 4K Align
- Refer to the page 15.

03 CONTROLS & FUNCTIONS

LUM-181H / 181G / 242H / 242G / 328G / 550H : FRONT

- **[SCAN] Button**
  - Used to select [Zero Scan] and [Over Scan].

- **[ASPECT] Button**
  - Used to select ASPECT mode.
  - Available aspect modes are [FULL], [4:3], [2.35:1], [1.85:1], [15:9], [16:9], [16:10], [AUTO].

- **[MARKER] Button**
  - Used to activate/deactivate the Marker.

- **[B. LIGHT] Button**
  - Used to adjust the backlight level.
  - Turn the ENTER knob left or right to adjust the value.

- **[VIDEO RANGE] Button**
  - Used to select the video range.
  - Available modes are [Narrow 100%], [Narrow 109%], [SDI Full].
  - This function activates when [Standard] - [User1/2/3/4/5/6] is selected.

- **[INFO.] Button**
  - Used to activate the information window.
  - Refer to the page 29 for the details.

- **[MENU/EXIT] Button**
  - Used to activate/deactivate the OSD menu.
  - Press the MENU button again to deactivate the OSD menu.

- **[UP/DOWN/ENTER] Knob**
  - Used to move up/down through the menus during the OSD menu activation and also to increase/decrease the value of the selected feature.
  - Press the Knob to confirm a chosen value (or mode).
  - May also be used to control the [Backlight] - [Brightness] - [Contrast] - [Volume] value during the OSD menu inactivation. Turn the Knob to the left/right to adjust the value.

- **[POWER INDICATOR] Lamp**
  - Indicates condition and power status of unit.
  - Light turns off when the power is disconnected.
  - Standby mode is indicated by a red LED light.
  - Normal (active) mode is indicated by a Green LED light.
  - The Green light turns off when the monitor is Normal(active) mode without input signal.

- **[POWER] Button**
  - Used to turn the power on and off.

  - Hold the Power button for 3 seconds to turn off the unit. This is to prevent the unit from being turned off by touching the Power button by accident.

- **[Audio out] (PHONE JACK)**
  - Selects the left/right Audio embedded signal output.

- **[USB]**
  - Used to update the new firmware.
  - Used to calibrate the monitor's color temperature using color calibration tool.

03 CONTROLS & FUNCTIONS

LUM-181H / 181G / 242H / 242G / 328G / 550H : REAR

- **[REMOTE] (RJ-45)**
  - Provides connection to control equipment(parallel switch) for external monitor control.
  - Features can be changed in the GPI section of the OSD menu.

- **[RS422 IN/OUT] (RJ-45)**
  - Used to control the monitor with a protocol provided by TVLogic.

- **[HDMI]**
  - Signal input terminal for HDMI signal.

- **[SDI-A/B/C/D] (BNC)**
  - SDI signal input terminal.
  - SDI-A/B support 12G/6G/3G/HD-SDI input.
  - SDI-C/D support 3G/HD-SDI input.

- **[SDI-A/B/C/D Output] (BNC)**
  - SDI signal loop-out terminal.
  - SDI-A/B support 12G/6G/3G/HD-SDI output.
  - SDI-C/D support 3G/HD-SDI output.

* SDI Output is not activated when the unit is turned off or in Standby mode.

- **[AUDIO IN]**
  - Used to connect the audio input signal.

- **[LAN]**
  - Used to control the monitor with a protocol provided by TVLogic.

- **[AC IN]**
  - LUM-181H: 100~240V (50/60Hz)
  - LUM-242H: 100~240V (50/60Hz)

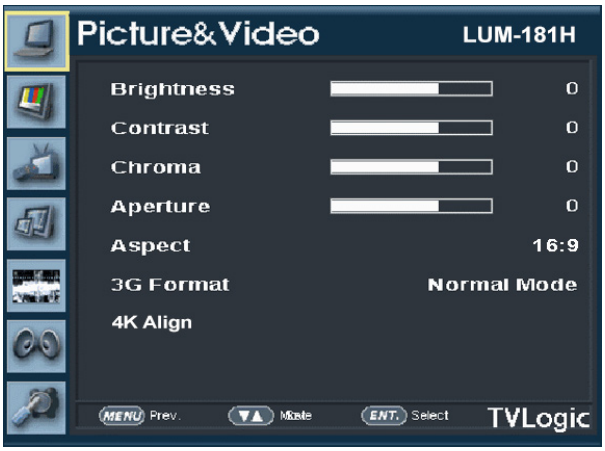
- **[DC IN]**
  - LUM-181H: DC 12V/8A ~ 24V/4A
  - LUM-242H: DC 24V/6.5A

<WARNING!!>
When using the product make sure to ground, whenever possible, before connecting the input signal cable in order to prevent any possible damage to the product or connected devices. The damage may include signal noise, malfunction of main board or display panel. And the connected devices such as camera or video source player may also be influenced through signal cable. Please check if the AC power source and the power extender or power distributor is grounded.

04 MENU ORGANIZATION & ADJUSTMENT

[1] Menu Organization

- **The product may be controlled and set by OSD display on the screen.**



[2] Menu Adjustment

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

[3] Menu Adjustment Procedure

- **Menu control sequence follows the order below:**

1. Press the MENU button to activate the OSD menu.
2. Move to a desired menu by turning the KNOB to the left/right.
3. Press the KNOB button to select a menu and move to a sub-menu by turning the KNOB to the left/right.
4. Press the KNOB button to select the desired sub-menu. (The selected sub-menu's font color will be highlighted.)
5. Press the KNOB or MENU button to save the new value after adjusting the value with the KNOB button. (The changed font color will be returned to default.)
6. Press the MENU button to return to the previous menu and if there is no previous menu, the OSD menu will be removed from the screen.

04 MENU ORGANIZATION & ADJUSTMENT

[4] Menu Tree

PICTURE & VIDEO	Brightness
	Contrast
	Chroma
	Aperture
	Aspect
	3G Format
	4K Align
COLOR	Standard
	Video Range
	Disp Luminance
	Black Level
	EOTF
	White Point
	HLG SG
	Color Gamut
	Gamut Warning
	EETF
	Gain / Offset
	Reset
	Gain / Offset
	Gain Red
	Gain Green
	Gain Blue
	Bias Red
	Bias Green
	Bias Blue
	Color Copy

GPI	PIN1~PIN8
	Monitor ID
	DHCP
	IP Address
	Subnet Mask
	Gateway
	Port NO.
	Network settings apply
	UMD Display
	UMD Character
	UMD character color
	UMD B.G. trans. (*Deactivated)
	UMD size
MARKER	Marker
	Center Marker
	Safety Area
	Fit Marker
	Marker Mat
	Marker Color
	Thickness
	User Marker H1
	User Marker H2
	User Marker V1
	User Marker V2

04 MENU ORGANIZATION & ADJUSTMENT

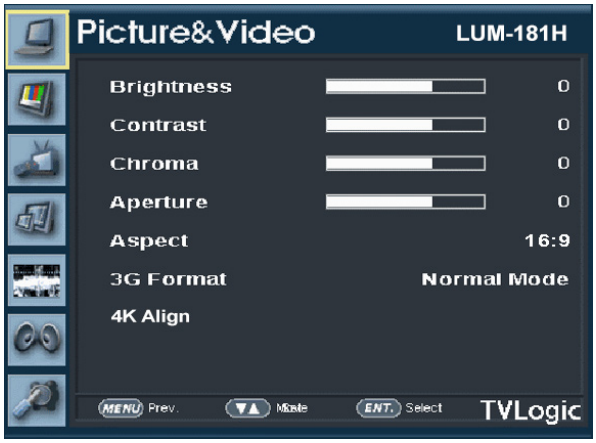
[4] Menu Tree

WAVEFORM & FOCUS	Waveform Display
	Waveform Intensity
	Waveform Trans. (*Deactivated)
	Waveform Color
	Line Waveform
	Line Select Position
	Luma(Y') Zone Check
	Luma(Y') Zone Adjust
	Focus Assist
	Focus Assist Color
	Focus Assist Level
	Range Error
	Y Max
	Y Min
AUDIO	Level Meter Select
	Level Meter Display
	Level Meter Reference
	Peak Decay Time
	Level Meter Size
	Volume
	Em. Audio Left
	Em. Audio Right

DISPLAY & SET	User Config Set
	Internal Pattern
	System Default
	S/W Upgrade
	S/W Upgrade Start
	Time Code
	Key Lock
	Key LED
	Closed Caption
	Decode Channel(608)
	Caption Service(708)
	OSD Position
	Transfer Matrix
	Gamut Control
	[F1] Key Mapping
	[F2] Key Mapping
	[F3] Key Mapping
	[F4] Key Mapping
	[F5] Key Mapping

05 MENU OPERATIONS

[1] Picture & Video



- **Brightness**
  - Used to adjust the overall brightness (= Offset) level, which mainly affects the black level. The adjustment range is -100(MIN) to 100(MAX).

- **Contrast**
  - Used to set the contrast(Gain) level from [-100] to [100].

- **Chroma**
  - Used to set the saturation level from [-50] to [50].

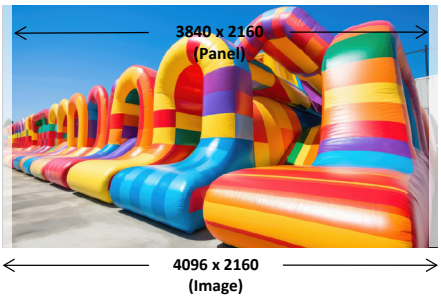
- **Aperture**
  - Used to set the sharpness level from [0] to [24].

- **Aspect**
  - Used to change the various display ratio.
  - Available aspect modes are [FULL], [4:3], [2.35:1], [1.85:1], [15:9], [16:9], [16:10], [AUTO].
  - Activated only in Single 3G Mode.

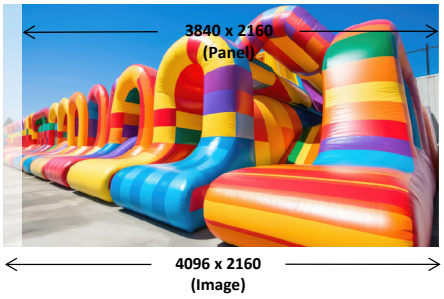
- **3G Format**
  - Automatically detects when Payload signal appears in Normal Mode.
  - Selects input format for SDI 3G A/B support
    [NORMAL MODE]
    [A 444 10BIT_YCbCr]
    [A 444 10BIT_RGB]
    [A 444 12BIT_YCbCr]
    [A 444 12BIT_RGB]
    [A 422 12BIT_YCbCr]
    [B 444 10/12BIT_YCbCr]
    [B 444 10/12BIT_RGB]
    [B 422 12BIT_YCbCr]
    [B 422 10BIT_YCbCr, 60P]

- **4K Align**
  - When the 4K 4096 x 2160(17:9) signal is input to the LUM-181H or LUM-242H whose resolution of the LCD panel is 3840 x 2160(16:0), the following four modes can be selected.

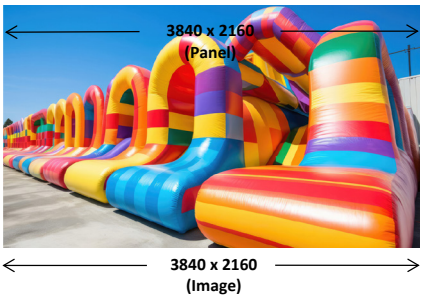
[Center]: The input image is displayed as pixel to pixel, and the vertical 128 lines on the left end and right end are hidden.



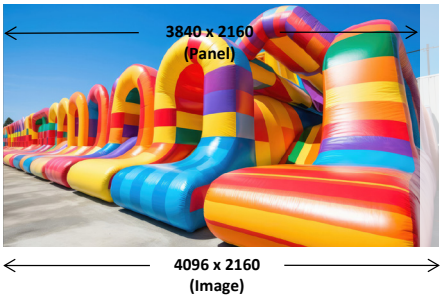
[Right]: The input image is displayed as pixel to pixel. The right end of the input image is displayed in full, and the vertical 256 lines on the left are hidden.



[Scale]: The input video is scaled to the 16:9 ratio and displayed in full on the screen.



[Left]: The input image is displayed as pixel to pixel. The left end of the input image is displayed in full, and the vertical 256 lines on the right are hidden.



05 MENU OPERATIONS

[2] Color

- **Standard**
  - Used to select the color and dynamic range of the screen.
  - Available options are [HD], [UHD], [DCI-P3], [PQ], [Dolby PQ], [HLG], [User1/2/3/4/5/6].

- **Video Range**
  - Used to select the range of digital video signal.
  - * [SDI Full] : Input signal 1~254 (8bit), 4~1019 (10bit)
  - * [Narrow 109%] : Input signal Y': 16~254, CbCr: 16~240(8bit) / Y': 64~1019, CbCr: 64-1019 (10bit)
  - * [Narrow 100%] : Input signal Y': 16~235, CbCr: 16~240(8bit) / Y': 64~940, CbCr: 64-960 (10bit)

- **Disp Luminance**
  - Used to select the Peak Luminance of the monitor.
  - Selectable levels are [48], [60] ~ [200] with 10 increment, [200] ~ [1000] with 100 increment.
  - When [Standard] or [EOTF] is set to [PQ], [Dolby PQ] or [HLG], it is displayed as Void and it cannot be adjusted.

- **Black Level (Not supported)**
  - The minimum black level of the video signal can be set differently depending on the performance of the monitor or the lighting environment.
  - * Lite : Black level similar to Global Dimming
  - * Deep : Lowest Black level of the Panel
  - Activates only in the Color Standard User mode.

- **EOTF (Electro-Optical Transfer Function)**
  - Electrophotic conversion Functions(ex: Gamma or HDR curve).
  - Available options are [2.2], [2.4], [2.6], [2.8], [BT.1886], [PQ], [HLG], [Native].
  - Activates only in [Standard]-[User] mode.

- **White Point**
  - Used to select the White Point.
  - Available options are [D60], [DCI-White], [D65], [9300K].

- **HLG SG (HLG System Gamma)**
  - Used to set the System Gamma of the HLG mode.
  - Available options are [0.78 (100nit)], [0.91(200nit)], [0.98 (300nit)], [1.03 (400nit)], [1.07 (500nit)], [1.11 (600nit)], [1.13 (700nit)], [1.16 (800nit)], [1.18 (900nit)], [1.2 (1000nit)] and [1.33 (2000nit)] .
  - Activates only when [Standard] or [EOTF] is set to [HLG].

- **Color Gamut**
  - Used to select the standard color gamut.
  - Available options are [BT.709], [BT.2020], [DCI-P3], [SGamut3], [Native].
  - Activates only when [Standard] is set to [User] mode.

05 MENU OPERATIONS

[2] Color

- **Gamut Warning**
  - Used to display warning when the input colors exceeds the permissible range of the panel color gamut.
  - Available modes are [OFF] and [ON].

- **EETF (Electrical-Electrical Transfer Function)**
  - It is a conversion function that expresses (without clipping) the HDR image within the actual luminance range (black level & peak luminance) that the monitor can express.
    In case of [ON] mode, the HDR image is converted within the range of set peak luminance and black level.
    If it is [OFF], the video signals outside the set range will be clipped.
  - Available options are [OFF] and [ON].
  - Activates only when [Standard] or [EOTF] is set to [PQ] or [Dolby PQ].

- **Gain/Offset**
  - Used to select the Color Temperature that manually changed by the user.
  - Available options are [Default] and [User1/2/3].

- **Reset**
  - Used to restore the settings that manually changed by the user to the preset values.
  - Only the current selected Color Standard is applied.

05 MENU OPERATIONS

[2] Color

- **Gain/Offset**
  - Used to manually adjust the color and brightness of the monitor.
  - Available options are [Default] and [User1/2/3].

- **Gain Red**
  - Used to set Red Gain level from [-256] to [255].
  - Adjusts the red color of bright section.

- **Gain Green**
  - Used to set Green Gain level from [-256] to [255].
  - Adjusts the green color of bright section.

- **Gain Blue**
  - Used to set Blue Gain level from [-256] to [255].
  - Adjusts the blue color of bright section.

- **Bias Red**
  - Used to set Red Bias from [-256] to [255].
  - Adjusts the red color of dark section.

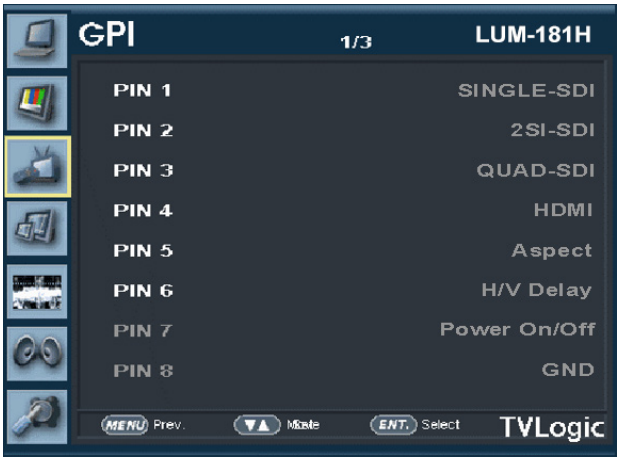
- **Bias Green**
  - Used to set Green Bias from [-256] to [255].
  - Adjusts the green color of dark section.

- **Bias Blue**
  - Used to set Blue Bias from [-256] to [255].
  - Adjusts the blue color of dark section.

- **Color Copy**
  - Used to copy the R/G/B Gain value of pre-stored color temperature settings.
  - Turn the KNOB left / right and press the ENTER button to copy and apply the selected color temperature value.

05 MENU OPERATIONS

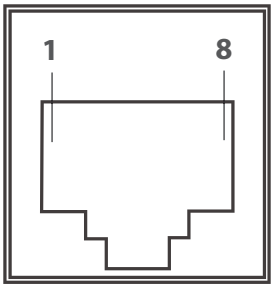
[3] GPI



- **This item activates/ inactivates the REMOTE function.**
- **The user may designate a function for each pin and each pin's default setting is as follows.**
- **The default settings are as follows:**
  PIN 1 : SINGLE-SDI
  PIN 2 : 2SI-SDI
  PIN 3 : QUAD-SDI
  PIN 4 : HDMI
  PIN 5 : ASPECT
  PIN 6 : H/V Delay
  PIN 7 : Power On/Off use only
  PIN 8 : GND only

REMOTE (RJ-45)

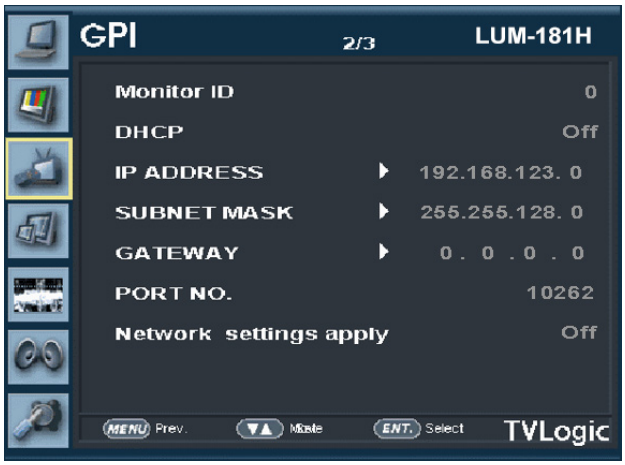
1: Pin1
2: Pin2
3: Pin3
4: Pin4
5: Pin5
6: Pin6
7: Pin7
8: GND

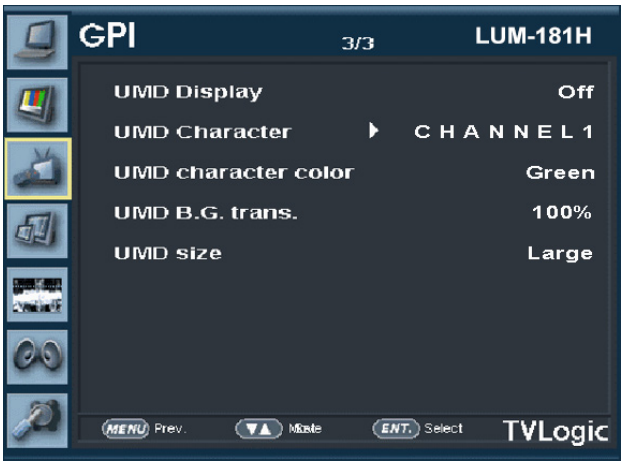


PIN No.	Settable Values
PIN 1 ~ 6	NONE SINGLE-SDI 2SI-SDI QUAD-SDI HDMI ASPECT H/V DELAY BLUE ONLY MONO 16:9 MARKER 4:3 MARKER 4:3 ON AIR MARKER 15:9 MARKER 14:9 MARKER 13:9 MARKER 1.85:1 MARKER 2.35:1 MARKER 1.85:1&4:3 MARKER CENTER MARKER SAFETY AREA 80% SAFETY AREA 85% SAFETY AREA 88% SAFETY AREA 90% SAFETY AERA 90% SAFETY AERA 93% SAFETY AERA 100%

05 MENU OPERATIONS

[3] GPI





- **Monitor ID**
  - This item sets the ID of each monitor for the TVLogic control protocol using RS-422/485 communication.
  - Available values are [0~127].

- **DHCP**
  - Used to activate/deactivate the DHCP function.

- **IP Address**
  - Used to set the IP Address connected to a Monitor.

- **Subnet Mask**
  - Used to set the Subnet Mask connected to a Monitor.

- **Gateway**
  - Used to set the Gateway number connected to a Monitor.

- **Port NO.**
  - Used to set the port number of the monitor.

- **Network Settings apply**
  - Use to apply changed value of IP Address, Subnet mask, Gateway and Port no.

- **UMD Display**
  - Used to set UMD and ANC.
  - Available modes are [OFF], [UMD] and [ANC].
  - * [UMD] : Displays user customized 8 characters on screen.
  - * [ANC] : Displays characters embedded in SDI signal.

- **UMD Character**
  - Used to customize the characters for Under Monitor Display.
  - Alphabets, numbers and special symbols are available.
  - Maximum of 8 characters are available.

- **UMD character color**
  - Used to set the character color of UMD.
  - Available options are [Red], [Green], [Blue], [Yellow], [Cyan], [Magenta], [White].
  - Activates only when the [D-UMD tally type] is set to [Default], [User color], [BG. Color], [User tally] or [User BG.].

- **UMD B.G. trans.** (Not supported)
  - This function sets the transparency of the UMD character's background box.
  - Available modes are OPAQUE, 50%, 85% and 100%.

- **UMD size**
  - This function adjusts the size of UMD FONT.
  - Available modes are Small and Large.

05 MENU OPERATIONS

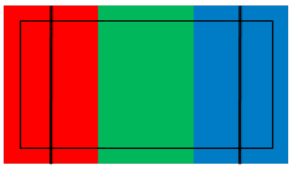
[4] Marker

- **Marker**
  - Used to select the marker type when the MARKER is displayed on the screen.
  - MARKER may only be activated by pressing the MARKER button on the bottom front of the monitor.
  - Available marker types are [Off], [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], [4:3 ALT 14:9], [16:9 ALT 14:9], [16:9 ALT 4:3] and [USER].

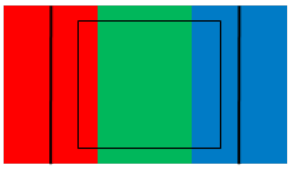
- **Center Marker**
  - Used to select the availability of the CENTER MARKER on the screen.
  - This function operates only after activating the MARKER function by pressing the MARKER button on the bottom front of the monitor.

- **Safety Area**
  - Used to select and control the size and availability of the SAFETY AREA.
  - Available types are [80%], [85%], [88%], [90%], [93%], [100%], [EBU ACTION 16:9], [EBU GRAPHIC 16:9], [EBU Action 14:9], [EBU Graphic 14:9], [EBU Action 4:3] and [EBU GRAPHIC 4:3].
  - This function operates only after activating the MARKER function and by pressing the MARKER button on the bottom front of the monitor.

- **Fit Marker**
  - Used to activate or inactivate the FIT MARKER function.
  - When the Marker type is selected in the Marker menu, a border line of the Safety Area will be displayed inside the Marker.
    Images below show the difference between Fit Marker [ON] and [OFF].
  - FIT MARKER ON / OFF displays as shown below.



- MARKER : 4:3
- SAFETY AREA : 90%
- FIT MARKER : OFF



- MARKER : 4:3
- SAFETY AREA : 90%
- FIT MARKER : ON

- **Marker Mat**
  - Used to set the darkness level outside of the MARKER area from [OFF](transparent) to [7](Black).
  - The higher the level is, the darker the outside of the MARKER area.

- **Marker Color**
  - Used to control the color of MARKER lines.
  - Available colors are [White], [Gray], [Black], [Red], [Green], [Blue], [Dynamic].

- **Thickness**
  - The item controls the thickness of the MARKER lines.
  - The degrees of thickness are between [1] ~ [7].

05 MENU OPERATIONS

[4] Marker

- **USER Marker H1**
  - Used to set the position of the first horizontal marker line.
  - Displayed when MARKER menu is set to USER.

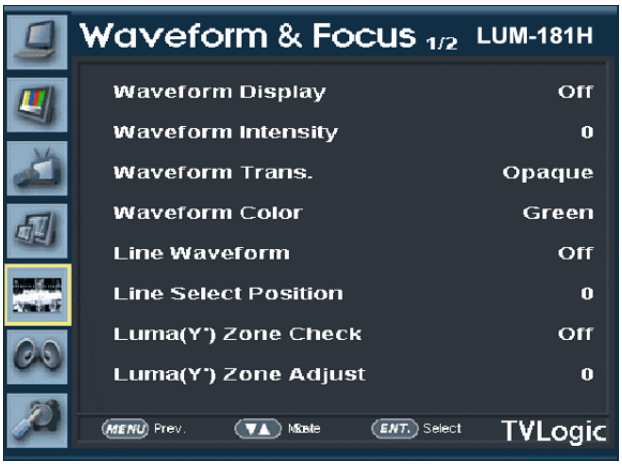
- **USER Marker H2**
  - Used to set the position of the second horizontal marker line.
  - Displayed when MARKER menu is set to USER.

- **USER Marker V1**
  - The item controls the position of the first user defined vertical marker line.
  - Marker option USER needs to be selected.

- **USER Marker V2**
  - The item controls the position of the second user defined vertical marker line.
  - Marker option USER needs to be selected.

05 MENU OPERATIONS

[5] Waveform & Focus



- **Waveform Display**
  - This function sets the Waveform and Vectorscope.
  - Activates in the order : [Off], [Waveform], [Vectorscope].
  * [Waveform] Displays the shape and form of luminance level of a signal.
  * [Vectorscope] : Displays the color components 'B-Y' and 'R-Y'of the input signals onto the X-Y axis. Two different types of Vetorscopes are displayed according to SD, HD or UHD/4K input signals. 100% and 75% scales are indicated on the Vetorscope

- **Waveform Intensity**
  - Controls the brightness of the Waveform/ Vectorscope display.
  - Available values are between [1] ~ [63]. The higher the number the brighter the waveform will be.

- **Waveform Trans. (Not Supported)**
  - Controls the transparency level of the Waveform/Vectorscope.
  - Available values are OPAQUE and TRANS.
  * If the option is set to OPAQUE, the main OSD will overlap with the waveform/vector. However, it will automatically display it as transparent and goes back to opaque if the main OSD disappears.

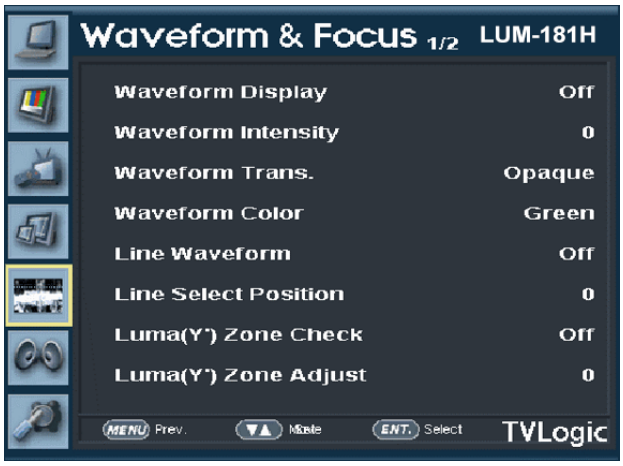
- **Waveform Color**
  - Used to select a color of Waveform/ Vectorscope
  - Available modes are [Green] and [White].

- **Line Waveform**
  - This item is utilized to display the entire data or one line data on the Waveform.

- **Line Select Position (*Will be Supported)**
  - Used to select specific Horizontal Line for Waveform/Vectorscope.
  - It is available when Line Waveform is activated.

05 MENU OPERATIONS

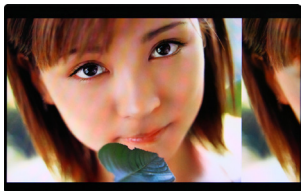
[5] Waveform & Focus



- **Luma(Y') Zone Check**
  - Analyzes the Luma(Y') level of the input image and displays the selected zone on the screen.
  - Available modes are [(Color Patt.) On] and [(Zebra Patt.) On].
  - After each pixel's Y' level is analyzed, it is displayed as a certain color or zebra pattern according to the Index on the right side of the screen.
  - When a pixel's Y' level is under 0%(16), the pixel is displayed as green color or green diagonal lines, and over 100%(235) as red color or red diagonal lines.
  - When the Y' level of a pixel is between 0~100%, the pixel is displayed as Gray level, except for selected Luma Zone.
  - In the [(Color Patt.) On] mode, the zone the user adjusted is displayed as Yellow (10% lower zone), Pink (±2.5%), Cyan (10% upper zone).
  - In the [(Zebra Patt.) On] mode, ±5% of the selected Y' Level will be displayed as diagonal lines.
  - This function is convenient to set the exposure or the lighting so that the skin tone or the specific color tone is correctly shot.

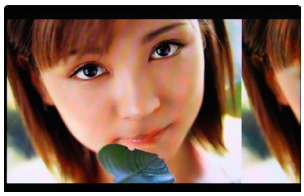
- **Luma(Y') Zone Adjust**
  - Used to set the Y' level to be colored Yellow, Pink and Cyan in [Color Pattern] mode, or to set Y' level zone to be displayed with diagonal lines in [Zebra Pattern] mode simply byscrolling with the Knob.
  - Available values are [0] ~ [100%].

- **[(Color Patt.) On] mode**
  - Pixels with Y' levels which are designated by the user are displayed in following colors - yellow, pink, cyan.
  - Factory Default Y' (Border line between pink and yellow) level is [0]%.
  - The upper 2.5% and lower 2.5% zone from the Y' level set in [Luma(Y') Zone Adjust] menu is displayed in Pink.
    The upper 10% zone from the Pink zone is displayed in Yellow, and the lower 10% zone from the Pink zone is displayed in Cyan.
    So, 25% zone is displayed in colors and the other 75% zone is displayed mono and white.


<Luma Zone Check OFF>

<Luma Zone Check ON_Color Pattern Type>

- **[(Zebra Patt.) On] mode**
  - Pixels with Y' levels which are designated by the user are displayed as black diagonal stripes.
  - Factory Default Y' level is [0]%.
  - The upper 5% and lower 5% zone from the Y' level set in [Luma(Y') Zone Adjust] menu is displayed as black zebra pattern. So, totally 10% zone is displayed as black diagonal stripes.


<Luma Zone Check OFF>

<Luma Zone Check ON_Zebra Pattern Type>

05 MENU OPERATIONS

[5] Waveform & Focus

- **Focus Assist**
  - Focus Assist function assigns a color on the pixels of the shape or boundary of the image, which helps the user easily see which part of the image is in focus or out of focus.
  - With this function, the user can easily differentiate the focused area from the out-focused area especially when shooting with a shallow depth of field.
  - Available types are [Color On] and [Mono On].
  * [Color On]: Background image is original color type.
  * [Mono On]: Background image is mono type.

Focus Assist - [Color On]
Focus Assist Color - [Green]

Focus Assist - [Mono On]
Focus Assist Color - [Red]

- **Focus Assist Color**
  - Used to select a color for Focus Assist among [Red], [Green], [Blue], [White].
  - This feature is available only when the Focus Assist mode is activated.

- **Focus Assist Level**
  - Used to set the edge difference value between the edges in an image.
  - Available values are from [0] to [100]. Larger value means more sophisticated detail detection.
  - Designated color is displayed when the difference of the edges exceeds the previously set value.
  - This feature is available only when the Focus Assist mode is activated.

- **Range Error**
  - Used to set whether or not to activate [Y Max] and [Y Min] functions.
  - The values of [Y Max] and [Y Min] are indicated in Waveform.

  • **Y Max**
  - Used to set the maximum luma(Y') level.
  - Available range is [1] to [126].

  • **Y Min**
  - Used to set the minimum luma(Y') level.
  - Available range is [1] to [126].

05 MENU OPERATIONS

[6] Audio

- **Level Meter Select**
  - Used to control the Embedded Audio Level Meters.
  - Available modes are [Off], [G1+G2], [G2+G3], [G3+G4], [G1+G3], [G1+G4], [G2+G4] and [16CH].

- **Level Meter Display**
  - Used to set the display method for Audio Level Meter.
  - Available modes are Group and Pair.

- **Level Meter Reference**
  - Display the default Audio Level Meter value.
  - Available options are -18dB and -20dB.
  - Audio Level Meter within selected value turns to green and exceeded audio level is displayed in yellow.
    Audio level exceeding - 4dB is displayed in red.

- **Peak Decay Time**
  - Sets the reduction time for the max value indication of audio signals.
  - Control range is from [0] to [30]. Larger number means a longer display time for max. value.

- **Level Meter Size**
  - Used to control the size of the Audio Level Meter.
  - Available modes are [Small], [Small Trans.], [Normal], [Normal Trans.], [Large], [Large Trans.].
  - In Small, Normal and Large modes, the level meter appears opaque.
  - In [Small Trans.], [Normal Trans.], [Large Trans.] modes, the level meter appears semitransparent.

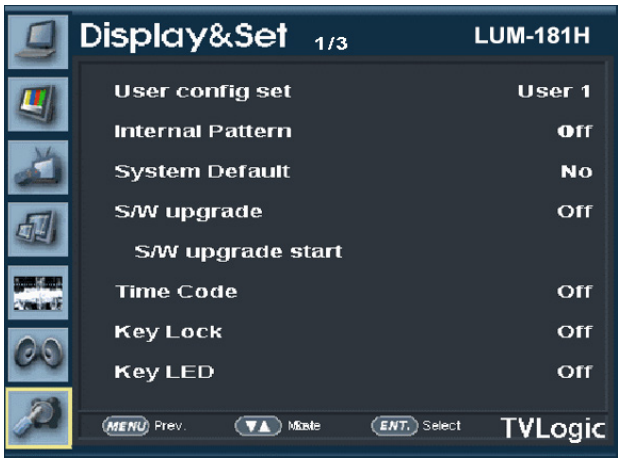
- **Volume**
  - Used to control the output volume of the [AUDIO OUT] terminal on the back of the monitor.
  - Control range is from 0 to 30.

- **Em. Audio Left**
  - Used to set embedded audio channel for left audio out of [AUDIO OUT] terminal on the back of the monitor.
  - Available modes are [CH1], [CH2], ..., [CH16], [Ext. Audio], [Off].

- **Em. Audio Right**
  - Used to set embedded audio channel for right audio out of [AUDIO OUT] terminal on the back of the monitor.
  - Available modes are [CH1], [CH2], ..., [CH16], [Ext. Audio], [Off].

05 MENU OPERATIONS

[7] Display & Set



- **User config set**
  - Used to save and apply in three kinds of user configurations.
  - Available modes are [USER1], [USER2] and [USER3].

- **Internal Pattern**
  - Generates White Pattern internally.
  - Selectable range is from [0%] to [100%] with 5% increment.

- **System Default**
  - Used to initialize OSD values to factory default.

- **S/W Upgrade**
  - Used to upgrade the firmware using the USB memory (Thumb drive).
  - Select the S/W Upgrade Start menu to start the USB memory search.
  - When the USB memory is detected, the S/W Upgrade Start menu becomes activated.

- **S/W Upgrade Start**
  - Select the S/W Upgrade Start menu to start the firmware upgrade.
  - Do not turn off the monitor while the upgrade is conducting.

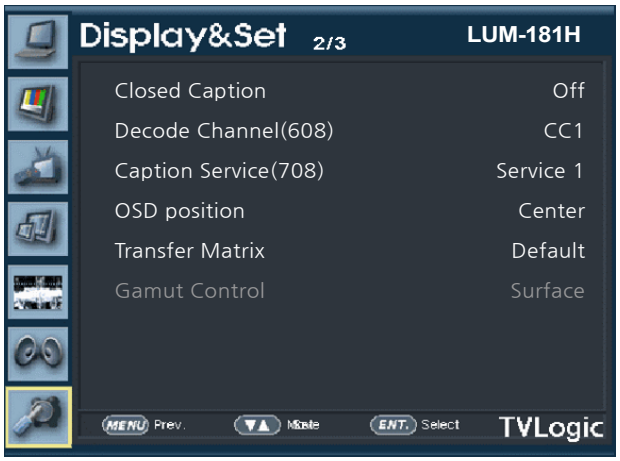
- **Time Code**
  - Used to set the Time Code.
  - Available modes are [OFF], [VITC] and [LTC].

- **Key Lock**
  - Used to lock all buttons except Power, Input select and Menu buttons.

- **Key LED**
  - Used to control the Key Lamp on the front of the monitor.
  - If the button with LED is pressed with the KEY LED Off, LED comes on but turns off after 5 seconds later.

05 MENU OPERATIONS

[7] Display & Set



- **Closed Caption**
  - This item controls the Closed Caption.
  - Available modes are [OFF], [708], [608(LINE21)] and [608(ANC)].

- **Decode Channel(608)**
  - Sets the Channel of Closed Caption 608
  - Available modes are [CC1] ~ [CC4].

- **Caption Service(708)**
  - Sets the service of Closed Caption 708.
  - Available modes are [Service 1] ~ [Service 6].

- **OSD Position**
  - This item controls the OSD position.
  - Available values are [Center], [Top-Right], [Bottom-Right], [Bottom-Left] and [Top-Left].

- **Transfer Matrix**
  - Used to select the Signal Transmission Matrix.
  - Available options are [Default], [Rec709] and [Rec2020].

  * Default : If the Color Gamut is selected as BT.2020, it is applied as Rec2020 Matrix. If the Color Gamut is selected other than BT.2020, it is applied as Rec709 Matrix.

  * Rec709 and Rec2020 are applied to the corresponding Matrix regardless of the color gamut.

- **Gamut Control (*Will be supported)**
  - Used to efficiently map the difference between the Panel and the Standard color gamut.

  *Surface : Used to map the colors outside of the panel's color gamut onto the internal color.

- **[F1] Key Mapping**
  - User can select the function for the F1 button.

- **[F2] Key Mapping**
  - User can select the function for the F2 button.

- **[F3] Key Mapping**
  - User can select the function for the F3 button.

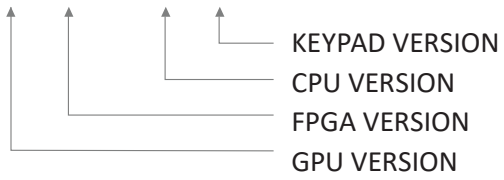
- **[F4] Key Mapping**
  - User can select the function for the F4 button.

- **[F5] Key Mapping**
  - User can select the function for the F5 button. The following functions can be assigned. [Blue Only], [H/V Delay], [White Point], [Audio Level Meter], [Time Code], [Luma(Y') Zone], [Focus Assist], [Marker], [DR Mode], [Standard], [Disp Luminance], [EOTF], [Video Range], [Waveform], [Scan], [Aspect], [Native Mode], [Gumar Warning], [Shadow Mode], [4K Align].

- **Serial Number**
  - Used to display serial number of the monitor.

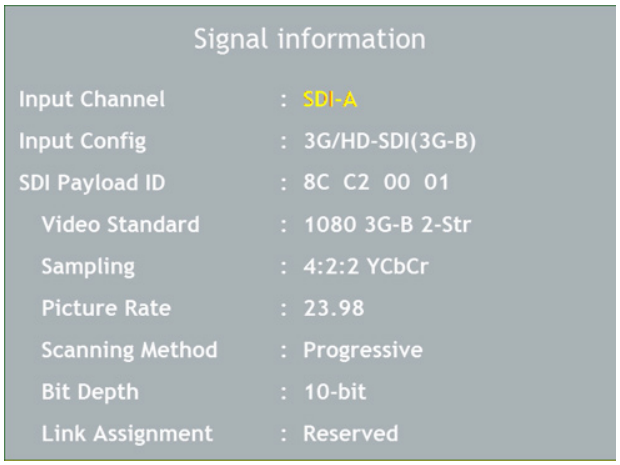
- **Board Version**
  - Displays the current Program Version of the monitor.

  2003 0077 03 2.04 9



05 MENU OPERATIONS

[8] Inform. (INFO. KEY)



- **Input Channel**
  - Indicates the channel of the input signal.
  - In the 2SI, QUAD MODE, use the KNOB button to change the input signal and the information of the signal will be displayed.
  - In the SINGLE MODE, the signal information of the channel will be displayed.

- **Input Config**
  - Displays the current input signal.

- **SDI Payload ID**
  - Displays the values of the Byte 1,2,3,4.

- **Video Standard**
  - Displays the standard of the Payload ID Byte 1.

- **Sampling**
  - Displays the Sampling Structure information of the Payload ID Byte 3.

- **Picture Rate**
  - Displays the Picture Rate of the Payload ID Byte 2.

- **Scanning Method**
  - Displays the Interlace/Progressive of the Payload ID Byte 2.

- **Bit Depth**
  - Displays the Bit Depth information of the Payload ID Byte 4.

- **Link Assignment**
  - Displays the Channel Assignment information of the Payload ID Byte 4.

06 VIDEO SUPPORT RESOLUTION

Input Signal Interfaces	Signal Format (HD-SDI / 3G SDI)	
HD-SDI Quad link (4K)	3840x2160 (23.98/24/25/29.97/30p/Psf)	YCbCr 4:2:2 10bit
	4096x2160 (23.98/24/25/29.97/30p/Psf)	

Input Signal Interfaces	Signal Format (HD-SDI / 3G SDI)	
3G-SDI Quad link(4K)	3840x2160(50/59.94/60p)	YCbCr 4:2:2 10bit
	3840x2160 (23.98/24/25/29.97/30/p/Psf)	YCbCr 4:4:4 10/12bit RGB 4:4:4 10/12bit
	4096x2160 (47.95/48/50/59.94/60p)	YCbCr 4:2:2 10bit
	4096x2160 (23.98/24/25/29.97/30p/Psf)	YCbCr 4:4:4 10/12bit RGB 4:4:4 10/12bit
3G-SDI 2-Sample Interleave Dual link(4K)	3840x2160 (23.98/24/25/29.97/30/p)	YCbCr 4:2:2 10bit
	4096x2160 (23.98/24/25/29.97/30p)	YCbCr 4:2:2 10bit
3G-SDI 2-Sample Interleave /Square Quad link(4k)	3840x2160(50/59.94/60p)	YCbCr 4:2:2 10bit
	3840x2160 (23.98/24/25/29.97/30/p)	YCbCr 4:4:4 10/12bit RGB 4:4:4 10/12bit
	4096x2160 (23.98/24/25/29.97/30p)	YCbCr 4:4:4 10/12bit RGB 4:4:4 10/12bit
	4096x2160 (47.95/48/50/59.94/60p)	YCbCr 4:2:2 10bit
6G-SDI Single link(4K)	3840x2160(23.98/24/25/29.97/30/p)	YCbCr 4:2:2 10bit
	4096x2160(23.98/24/25/29.97/30p)	
12G-SDI Single link(4K)	3840x2160(50/59.94/60p)	YCbCr 4:2:2 10bit
	4096x2160 (47.95/48/50/59.94/60p)	

06 VIDEO SUPPORT RESOLUTION

Input Signal Interfaces	Signal Format (HDMI)	
HDMI Single link(4K)	720x480(60i) 720x576(50i)	RGB 4:4:4 8/10/12bit YCbCr 4:4:4 8/10/12bit
	720x480(60p) 720x576(50p) 1280x720(60p) 1920x1080(50/59.94/60i) 1920x1080(50/59.94/60p)	RGB 4:4:4 8/10/12bit YCbCr 4:4:4 8/10/12bit YCbCr 4:2:2 12bit
	800x600@60Hz 1024x768@60Hz 1280x1024@60Hz 1600x1200@60Hz	VESA
	3840x2160 (23.98/24/25/29.97/30) 4096x2160 (23.98/24/25/29.97/30)	RGB 4:4:4 8bit YCbCr 4:4:4 8bit
	3840x2160 (50/60p) 4096x2160 (50/60p)	RGB 4:4:4 8bit YCbCr 4:4:4 8bit

07 PRODUCT SPECIFICATIONS

Specifications		LUM-181H
LCD	Size	18.4"
	Resolution	3840 x 2160 (16:9)
	Pixel Pitch	0.03555(H) x 0.1065(V) mm
	Color Depth	1.07B Colors (10 bit)
	Viewing Angle	170°(H) / 170°(V)
	Luminance of white	1000nits
	Contrast Ratio	1000 : 1
	Display Area	408.96(H) x 230.04(V) mm
Input	1 x HDMI	HDMI Input
	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel Input
Output	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel (Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i(60/59.94/50)
	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)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
Remote Control & Update	1 x LAN	RJ-45 Input, Control by TVLogic Protocol
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Control by TVLogic Protocol
	1 x USB	USB A type, Firmware Upgrade
Audio In		Embedded Audio / Analog Stereo (Phone Jack)
Audio Out		Internal Speaker (Stereo) / Analog Stereo (Phone Jack)
Power		DC 12V, AC100~240V(50~60Hz)
Power Consumption (Approx.)		85 Watts
Operating Temperature		0°C to 35°C (32°F to 95°F)
Storage Temperature		-20°C to 60°C (-4°F to 140°F)
Dimensions	Main Body	442.5 x 309.0 x 91.8 mm / 17.42 x 12.16 x 3.61 inch
	With Stand	489.3 x 332.8 x 137.5 mm / 19.26 x 13.10 x 5.41 inch
	Shipping Box	555 x 450 x 280 mm / 21.85 x 17.71 x 11.02 inch
Weight (with stand)		7.9kg / 17.41lbs
Basic Accessories		AC Power Cord, Stand, Control Knob Cap, Handle
Optional Accessories		Acrylic Filter, V-mount, G-mount, Carrying Case, Rack Mount Kit, Sun Hood

07 PRODUCT SPECIFICATIONS

Specifications		LUM-181G
LCD	Size	18.5"
	Resolution	1920 x 1080 (16:9)
	Pixel Pitch	0.213(H) x 0.213(V) mm
	Color Depth	16.7M Colors (True 8 bit)
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	500cd/m2
	Contrast Ratio	1000 : 1
	Display Area	408.96(H) x 230.04(V) mm
Input	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel Input
	1 x HDMI	HDMI Input
Output	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel (Active Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i(60/59.94/50)
	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)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
Remote Control & Update	1 x LAN	RJ-45 Input, Control by TVLogic Protocol
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Control by TVLogic Protocol
	1 x USB	USB A type, Firmware Upgrade
Audio In		Embedded Audio / Analog Stereo (Phone Jack)
Audio Out		Internal Speaker (Stereo) / Analog Stereo (Phone Jack)
Power		DC 12V, AC 100~240V(50~60Hz)
Power Consumption (Approx.)		TBD
Operating Temperature		0℃ to 35℃ (32℉ to 95℉)
Storage Temperature		-20℃ to 60℃ (-4℉ to 140℉)
Dimensions	Main Body	442.5 x 309.0 x 84.0mm / 17.42 x 12.16 x 3.30 inch
	With Stand	489.3 x 332.8 x 137.5 mm / 19.26 x 13.10 x 5.41 inch
	Shipping Box	555 x 450 x 280 mm / 21.85 x 17.71 x 11.02 inch
Weight (with stand)		6.52kg / 14.37lbs
Basic Accessories		AC Power Cord, Stand, Control Knob Cap, Handle
Optional Accessories		Acrylic Filter, V-Mount, G-Mount, Carrying Case, Rack Mount Kit, Sun Hood

07 PRODUCT SPECIFICATIONS

Specifications		LUM-242H
LCD	Size	23.8"
	Resolution	3840 x 2160 (16:9)
	Pixel Pitch	0.137(H) x 0.137(V) mm
	Color Depth	1.07B Colors (10 bit)
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	1000nits
	Contrast Ratio	1000 : 1
	Display Area	527(H) x 296(V) mm
Input	1 x HDMI	HDMI Input
	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel Input
Output	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel (Active Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i(60/59.94/50)
	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)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
Remote Control & Update	1 x LAN	RJ-45 Input, Control by TVLogic Protocol
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Control by TVLogic Protocol
	1 x USB	USB A type, Firmware Upgrade
Audio In		Embedded Audio / Analog Stereo (Phone Jack)
Audio Out		Internal Speaker (Stereo) / Analog Stereo (Phone Jack)
Power		DC 24V, AC100~240V(50~60Hz)
Power Consumption (Approx.)		150 Watts
Operating Temperature		0℃ to 35℃ (32℉ to 95℉)
Storage Temperature		-20℃ to 60℃ (-4℉ to 140℉)
Dimensions	Main Body	552.48 x 360.4 x 95.9 mm / 21.75 x 14.18 x 3.77 inch
	With Stand	586.13 x 388.2 x 150.0 mm / 23.07 x 15.28 x 5.90 inch
	Shipping Box	675 x 535 x 280 mm / 26.57 X 21.06 X 11.02 inch
Weight (with stand)		11.4kg / 25.13lbs
Basic Accessories		AC Power Cord, Stand
Optional Accessories		Acrylic Filter, ND Filter, V-mount, G-mount, Carrying Case, Rack Mount Kit

07 PRODUCT SPECIFICATIONS

Specifications		LUM-242G
LCD	Size	23.8"
	Resolution	3840 X 2160 (16:9)
	Pixel Pitch	0.137(H) X 0.137(V) mm
	Color Depth	1.07B
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	540 cd/ m^2 (Center)
	Contrast Ratio	1200 : 1
	Display Area	526(H) X 296(V) mm
Input Connector	1 X HDMI	HDMI Input
	4 X BNC	12G-SDI A/B, 3G-SDI C/D Channel Input
Output	4 X BNC	12G-SDI A/B, 3G-SDI C/D Channel (Active Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gbps
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF) 1080i(60/59.94/50)
	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)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
Audio In		Embedded Audio / Analog Stereo (Phone Jack)
Audio Out		Internal Speaker (Stereo) / Analog Stereo (Phone Jack)
Power		DC 24V / AC100~240V(50~60Hz)
Power Consumption (Approx.)		85Watts
Operating Temperature		0℃ to 35℃ (32℉ to 95℉)
Storage Temperature		-20℃ to 60℃ (-4℉ to 140℉)
Main Body Dimensions (mm/inch)		552.48 x 360.4 x 95.9 (21.75 x 14.18 x 3.77)
Main Body Dimensions with stand (mm/inch)		586.13 x 388.2 x 150 (23.07 x 15.28 x 5.90)
Box Dimensions (mm/inch)		555 X 450 X 280 (21.85 X 17.72 X 11.02)
Weight		10.5kg / 23.14lbs
Basic Accessories		AC Power Cord, Stand
Optional Accessories		Acrylic Filter, ND Filter, V-mount, G-mount, Carrying Case, Rack Mountable Kit

07 PRODUCT SPECIFICATIONS

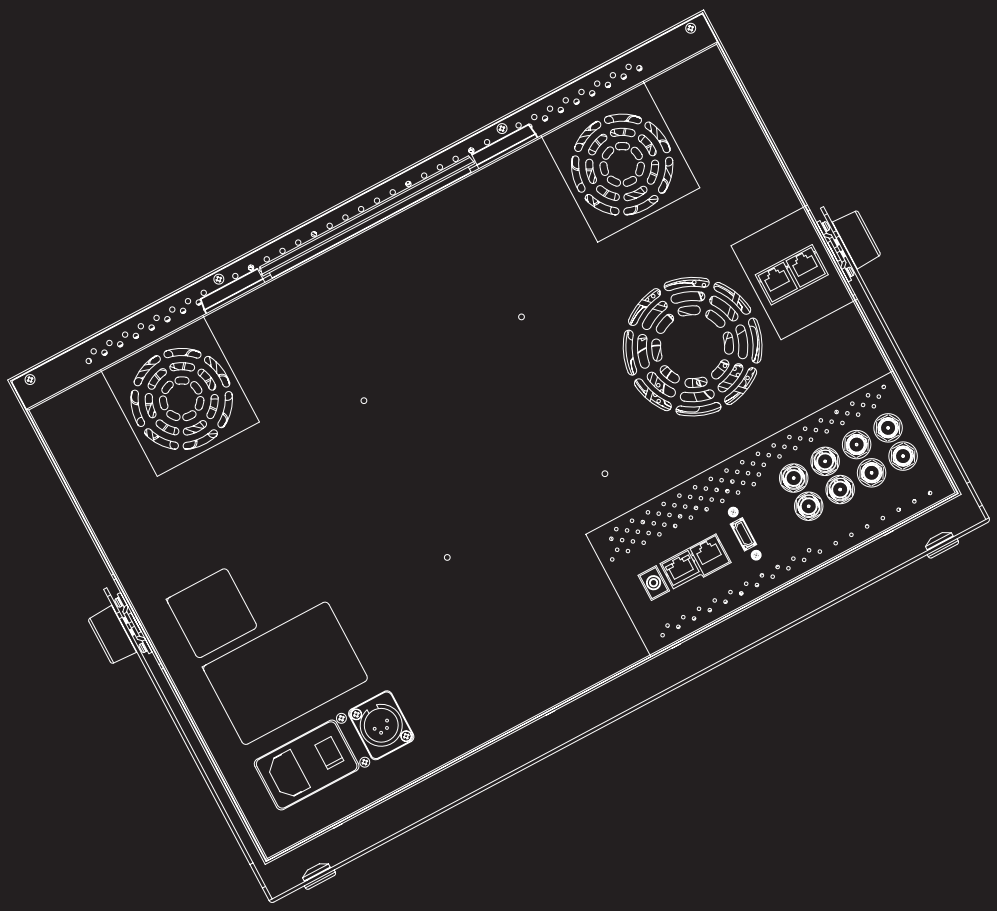
Specifications		LUM-328G
LCD	Size	31.5"
	Resolution	3840 x 2160 (16:9)
	Pixel Pitch	0.18159(H) x 0.18159(V) mm
	Color Depth	1.07B Colors (10 bit)
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	1000cd/m2
	Contrast Ratio	1000 : 1
	Display Area	697.31(H) x 392.23(V) mm
Input	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel Input
	1 x HDMI	HDMI Input
Output	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel (Active Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i(60/59.94/50)
	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)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
Remote Control & Update	1 x LAN	RJ-45 Input, Control by TVLogic Protocol
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Control by TVLogic Protocol
	1 x USB	USB A type, Firmware Upgrade
Audio In		Embedded Audio / Analog Stereo (Phone Jack)
Audio Out		Analog Stereo (Phone Jack)
Power		AC100~240V(50~60Hz)
Power Consumption (Approx.)		162 Watts (Max.)
Operating Temperature		0℃ to 45℃ (32℉ to 113℉)
Storage Temperature		-20℃ to 60℃ (-4℉ to 140℉)
Dimensions	Main Body	760.3 x 485.3 x 107.1 mm / 29.93 x 19.1 x 4.21 inch
	With Stand	760.3 x 525.9 x 245.0 mm / 29.93 x 20.7 x 9.64 inch
	Shipping Box	920 x 360 x 790 mm / 36.22 x 14.17 x 31.10 inch
Weight (with stand)		18.7kg / 41.22lbs
Basic Accessories		AC Power Cord, Stand,

***The specifications above may be changed without notice.**

07 PRODUCT SPECIFICATIONS

Specifications		LUM-550H
LCD	Size	54.6"
	Resolution	3840 x 2160 (16:9)
	Pixel Pitch	0.315(H) x 0.315(V) mm
	Color Depth	1.07B Colors (10 bit)
	Viewing Angle	178°(H) / 178°(V)
	Luminance of white	700cd/m2
	Contrast Ratio	1100 : 1
	Display Area	1209.6(H) x 680.4(V) mm
Input	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel Input
	1 x HDMI	HDMI Input
Output	4 x BNC	12G/6G/3G/HD-SDI A/B, 3G/HD-SDI C/D Channel (Active Through Out)
Input Signal	12G-SDI	12Gb/s
	6G-SDI	6Gb/s
	3G-SDI	2.970Gb/s
	HD-SDI	1.485Gb/s
	HDMI	480p/720p/1080p/2160p
SDI Input Signal Formats	SMPTE ST 2082	3840x2160 (60/50/30/25/24p)
	SMPTE ST 2081	3840x2160 (30/25/24p)
	SMPTE ST 2036-1:2009	3840×2160(23.98/24/25/29.97/30/50/59.94/60p)
	SMPTE-425M-A/B	1080p(60/59.94/50/30/29.97/25/24/23.98/30sF/29.97sF/25sF/24sF/23.98sF)
		1080i(60/59.94/50)
	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)
	SMPTE ST 2048-2:2011	2048x1080(23,98/24/25/29.97/30p/psf, 47.95/48/50/59.94/60p)
Remote Control & Update	1 x LAN	RJ-45 Input, Control by TVLogic Protocol
	1 x REMOTE	RJ-45 Input, GPI Control
	2 x RS-422	RJ-45 Input & Output, Control by TVLogic Protocol
	1 x USB	USB A type, Firmware Upgrade
Audio In		SDI Embedded Audio (Group, Channel Selectable)
Audio Out		Analog Stereo (3.5mm Phone Jack)
Power		AC100~240V(50~60Hz)
Power Consumption (Approx.)		TBD
Operating Temperature		0℃ to 35℃ (32°F to 95°F)
Storage Temperature		-20℃ to 60℃ (-4°F to 140°F)
Dimensions	Main Body	1262.0 x 746.0 x 81.4 mm / 49.69 x 29.37 x 3.20 inch
	With Stand	1262.0 x 794.5 x 245.0 mm / 49.69 x 31.28 x 9.65 inch
	Shipping Box	1420 x 385 x 940 mm / 55.90 x 15.16 x 37.01 inch
Weight (with stand)		35.8kg / 78.92lbs
Basic Accessories		AC Power Cord, Stand

***The specifications above may be changed without notice.**



TVLogic Always ON-AIR

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