MULTI SDI MONITOR

LV 5381

LEADER

New

HD-SDI

SD-SDI

Dual Link 2K option

3D option

CINELITE II INSIDE

Multi SDI Monitor

The LV 5381 is a waveform monitor that can monitor up to four SDI signals simultaneously. It is optimized for the level adjustment of the outputs of multiple installed cameras. In the video signal waveform display, vector display, and picture display, multiple input signals can be displayed on top of each other or lined up next to each other. It is also full of useful features such as a level meter display for embedded audio, an error display that indicates transmission errors, and a 5-bar display that shows video signal peak levels using five bars. Furthermore, the LV 5381 can show different combinations of these displays in its multi-screen display.

FEATURES

- **Simultaneous Monitoring of Four Inputs**
  The LV 5381 is a waveform monitor with a built-in 8.4-inch TFT-LCD. It can display up to four SDI input signals of the same format simultaneously. The LCD is an XGA display (1024 x 768 pixels) that boasts high color reproducibility. This makes the LV 5381 useful for picture monitoring as well.
- **Rich Assortment of Display Features**
  Not only does the LV 5381 have essential displays for video signal quality monitoring, such as a video signal waveform display and a vector display, it also has a rich assortment of other display features such as a picture display, audio level meter display, 5-bar display, transmission error detection, and gamut error detection.
- **Wide Variety of Display Formats**
  In the video signal waveform display, vector display, and picture display, the LV 5381 can display up to four input SDI signals on top of each other or side by side. This makes it suitable for adjusting the gain and black balance values of multiple cameras. In the video signal waveform and vector displays, the LV 5381 can make different waveforms easier to see by using a different waveform color for each input channel.
- **Extremely Flexible Display Layouts**
  Each of the different displays can be shown on a single screen, or the multi-screen display feature can be used to divide the screen into four areas with a different display shown in each area. The video signal waveform display, picture display, and audio level meter display can be shown as a thumbnail display on the one-screen display.
- **Video Signal Waveform Display**
  The input Y C_B C_R signal can be converted to an RGB or pseudo-composite signal and shown on the video signal waveform display. The video signal waveform display has a rich assortment of features such as waveform magnification and line selection.
- **Picture Display**
  The picture display has a wide variety of picture monitoring features, such as color temperature specification; brightness, contrast, and aperture adjustment; and the display of gamut error locations.
- **Standard-Equipped CINELITE II**
  The CINELITE feature makes it easy to manage the levels of specific points on the picture display. This is useful for adjusting the gain of multiple cameras through the use of the same reference point. The CINEZONE feature makes it possible to check the luminance distribution of the whole picture display at a glance.
- **Screen Capture Feature**
  The display can be captured and stored as image data. The captured data can be displayed on the LV 5381. Additionally, it can be saved as bitmap files to USB memory, which makes it possible to view the data on a PC.
- **External Sync Signal Input**
  The LV 5381 can receive a tri-level sync signal or an NTSC or PAL black burst signal as its external sync signal and then display video signal waveforms with this sync signal as its reference.
- **Presets**
  Stores up to 30 front panel presets.
- **Key LEDs**
  All the panel keys have LEDs. This makes it easy to find the keys even in dark environments.
- **Last Memory**
- **ID Display**
  IDs can be assigned to input channels. IDs are entered from the LV 5381 panel.
- **Stereo Headphone Output**

Remote and Tally Option (OP70, factory option)

The addition of the external remote option enables the LV 5381 to load presets and display tallies according to the signals that it receives through the rear-panel remote control connector. This makes it possible to link the LV 5381 to a switcher or other device.

Dual Link Option (LV 5381SER01)

The addition of the dual link option enables the LV 5381 to monitor a pair of dual link signals simultaneously.

Audio Lissajous Option (LV 5381SER02)

The addition of the audio lissajous option enables the LV 5381 to display the lissajous curves and the numeric values of levels of the audio that is embedded in an SDI signal.

Status Option (LV 5381SER03)

The addition of the status option enables the LV 5381 to show analysis displays such as the data dump, phase difference, and event log displays.

3D Assist Option (LV 5381SER04)

3D video signals can be evaluated by applying the video signal for the left eye to channel A and the video signal for the right eye to channel B. The available picture display formats are anaglyph, convergence, overlay, and wipe.

LV 5381 SPECIFICATIONS

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Video Signal Formats and Standards

Single Link System Video

Format	Quantization	Scanning	Frame (Field) Rates	Compliant Standard
Y,C_B,C_R 4:2:2	10 bit	1080i	60/59.94/50	SMPTE 274M SMPTE 292M
		1080p	30/29.97/25/24/23.98	
		1080PsF	30/29.97/25/24/23.98	SMPTE RP 211 SMPTE 292M
		720p	60/59.94/50/ 30/29.97/25/24/23.98	SMPTE 296M SMPTE 292M
		525i	59.94	SMPTE 259M
		625i	50	

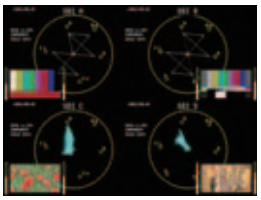
Audio Playback	
Compliant Standards	SMPTE-299M (HD-SDI) SMPTE-272M (SD-SDI)
Quantization	24 bits
Clock Generation	Generated from the video clock
Synchronization	All audio channels must be synchronized to the video clock.
Input/Output Connectors	
SDI Input	
Input Connectors	4 BNC connectors (channels A, B, C, and D)
SDI Output	
Output Connectors	2 BNC connectors
Output Signal	SDI signal selected from channel A or B is reclocked and generated SDI signal selected from channel C or D is reclocked and generated
Output Impedance	75 Ω
Output Voltage	800 mVp-p ± 10 %
Output Return Loss	≥ 15 dB for 5 MHz to the serial clock frequency
External Sync Input(*1)	
Input Signal	Tri-level sync or NTSC/PAL black burst signal
Input Connectors	2 BNC connectors
Input Impedance	15 kΩ passive loop-through
Input Return Loss	≥ 30 dB for 50 kHz to 30 MHz into 75 Ω
Maximum Input Voltage	±5 V (DC + peak AC)
Headphone Output	
Output Signal	Extracts and transmits the audio signal embedded in an SDI signal.
Output Channel	Specified AES/EBU pair
Sampling Frequency	Only 48 kHz is supported.
Output Connector	1 stereo miniature jack
Volume Adjustment	Configured from the menu
Power Output	50 mW max. (with 16 Ω load resistance)
	*1 If the video signal waveform is displayed using an external sync signal as the reference, inserting or removing an SDI signal or restarting the device may cause the waveform phase to be off by one clock. This feature does not function when the video format is 1080p/60, 59.94, or 50.
Control Connectors	
USB Port	
Specification	USB 2.0
Media	Only supports USB memory devices.
LCD	
LCD Type	8.4-inch color TFT
Display Format	XGA. The effective resolution is 1024 x 768.
Backlight Brightness	32 levels
Auto Shutoff	Time to turn off the LCD can be set.
Screen Capture	
Screen Capture	Captures the screen to an image file (only one screen capture is stored in internal memory)
Media	Internal memory (RAM) and USB memory
Data Output	Screen captures can be saved as bitmap files to USB memory.
Data Input	Data saved to USB memory can be loaded and displayed on the LV 5381.
Preset Settings	
Preset Mode	Comprehensive preset, display mode preset
Waveform Display	
Simultaneous Input Mode Display Format	Mixed, tiled, aligned
Waveform Operation	
Display Mode	Overlay, parade
Overlay	Overlays component signals
Parade	Displays component signals side by side
Blanking Period	H and V blanking periods can be displayed or hidden.
RGB Conversion	Converts a Y,C_B,C_R signal into an RGB signal and displays the result
Pseudo-Composite Display	Artificially converts a component signal into a composite signal
Channel Assignment	Displayed in GBR or RGB order (selectable when RGB conversion is enabled)
Line Select	Displays the selected line
Gain	x1, x5
Variable Gain	x0.2 to x2.0
Filter	Flat, low pass
Waveform Display Accuracy	
Amplitude Accuracy	±0.5 %
HD-SDI	
Y Signal	±0.5 % for 1 to 30 MHz
C_BC_R Signal	±0.5 % for 0.5 to 15 MHz
Low-Pass Attenuation	≥ 20 dB (at 20 MHz)
SD-SDI	
Y Signal	±0.5 % for 1 to 5.75 MHz
C_BC_R Signal	±0.5 % for 0.5 to 2.75 MHz
Low-Pass Attenuation	≥ 20 dB (at 3.8 MHz)
Scale	
Type	% scale, V scale, decimal scale, hexadecimal scale
Display Color	7 colors
Thumbnail Display	Picture, audio level meter
Vectorscope Display	
Simultaneous Input Mode Display Format	Mixed, tiled
Blanking Interval	Masked
Pseudo-Composite Display	Artificially converts a component signal into a composite signal
Line Select	Displays the selected line
Gain	x1, x5, IQ-MAG
Variable Gain	x0.2 to x2.0
Amplitude Accuracy	±0.5 %
Scal	
Type	ITU-R BT.601, ITU-R BT.709, AUTO
Setting the Color Bar Saturation	75 %, 100 %
IQ Axis	Show, hide
Display Color	7 colors
Thumbnail Display	Picture, audio level meter
5 Bar Display	
Simultaneous Input Mode Display Format	Tiled only
Bar Display	Displays the peak levels of Y, R, G, B and composite
Channel Assignment	RGB, GBR
Scale	mV, %
Error Level	Based on the gamut error, composite gamut error, and luminance error thresholds
Picture Display	
Simultaneous Input Mode Display Format	Mixed, tiled
Quantization	8 bits
Color Temperature	6500 K, 9300 K
Image Quality Adjustment	Brightness, contrast, chroma gain, RGB gain, RGB bias, aperture
Display Sizes	Fit, full frame, real, 4:3 full screen
Color	R, G, B can be turned off separately. Chroma off
Frame Rate	The frame rate is converted and displayed using the internal sync signal.
Aspect Display Marker	
HD-SDI	4:3, 13:9, 14:9, 2.39:1
SD-SDI	13:9, 14:9, 16:9
Line Select	Marks the selected line
Gamut Error Display	Displays gamut error locations over the picture
Thumbnail Display	Video signal waveform, audio level meter
Error Count Display	
Function	Used to count the video, audio, and gamut errors
Video Error Display	Counts CRC (HD-SDI) and EDH (SD-SDI) errors
Audio Error Display	Counts embedded audio BCH (HD-SDI) and channel status bit CRC errors
Gamut Error Display	Counts gamut, composite gamut, and luminance errors
Upper Limit	90.8 to 109.4 %
Lower Limit	-7.2 to 6.1 %
Composite Gamut Error	
Upper Limit	90.0 to 135.0 %
Lower Limit	-40.0 to 20.0 %
Error Count	Up to 999,999 errors can be counted separately for video, audio, and gamut.
Count Period	One count per field
Current Time Display	The time based on the internal clock
Elapsed Time Display	The elapsed time since the error count was cleared
Other Display Settings	
Input Information Display	Input channel, ID, OFF
Time Code	LTC, VITC, OFF
Format Display	The format can be displayed when an SDI signal is detected.
Front Panel	
Key LEDs	All the keys are dimly back-lit, and the selected key is lit more brightly
Environmental Conditions	
Operating Temperature Range	0 to 40 °C
Operating Humidity Range	≤ 85 %RH (without condensation)
Power Requirements	10 to 18 VDC, 46 W max.
Dimensions	215 (W) x 176 (H) x 111 (D) mm (excluding projections) 8 1/2(w) x 6 7/8(H) x 3 3/8(D) inch
Weight	2.2 kg 4.85 lbs
Accessories	AC adapter (SPU63-105).....1 Instruction manual 1
Optional Accessories	Rack mount adapter, Handle

■Rear Panel

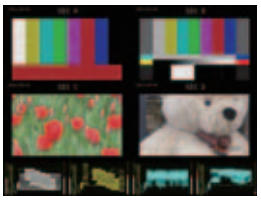
Shown with OP70

■Display Examples

Multi-Screen Display



4ch Vector / Picture

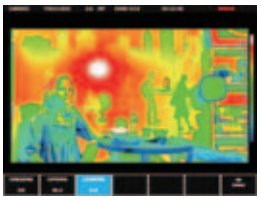


4ch Picture / Waveform

4ch Statue

Cinelite

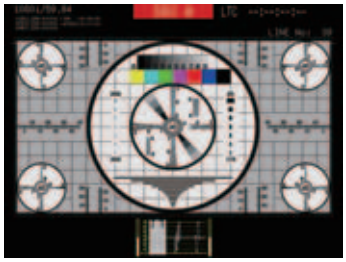
Cinezone



5 Bar

■Option

● Remote and Tally Option (OP70, factory option)



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● Dual Link Option (LV 5381SER01)

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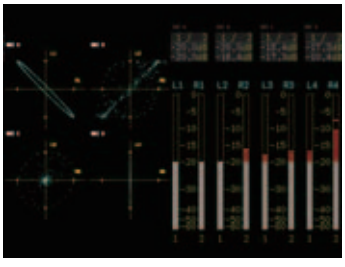
● Audio Lissajous Option (LV 5381SER02)



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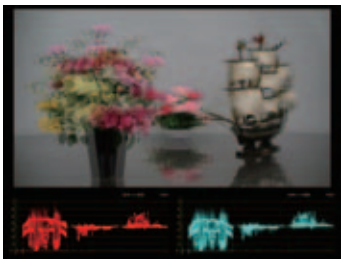
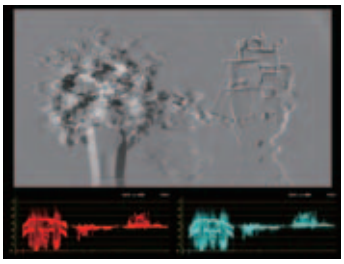
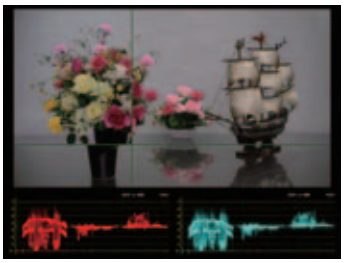
● 3D Assist (LV 5381SER04)



Anaglyph



Convergence

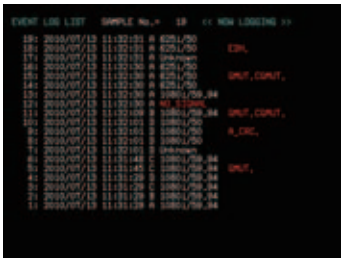


Wipe

Overlay & Histogram

3D video signals can be evaluated by applying the video signal for the left eye to channel A and the video signal for the right eye to channel B. The available picture display formats are anaglyph, convergence, overlay, and wipe.

● Status Option (LV 5381SER03)



The addition of the status option enables the LV 5381 to show analysis displays such as the data dump, phase difference, and event log displays.

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