MULTI SDI RASTERIZER

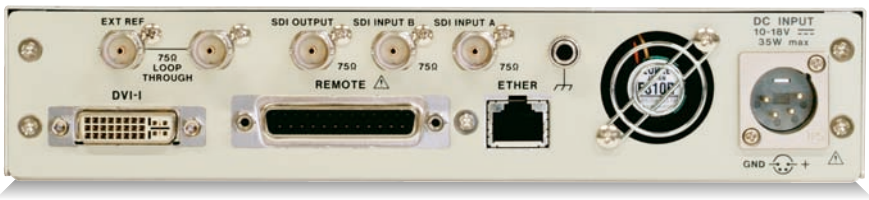
LV 7700 (HD/SD-SDI)
LV 7720 (SD-SDI)

LEADER

HD-SDI

SD-SDI

1U Half Rack Size



CE Upon request

RoHS

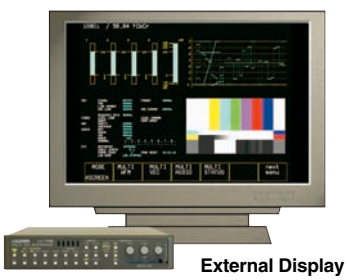
Compact, Low-Cost Multi SDI Rasterizer

The LV 7700 is capable of displaying the monitor waveform, image, and other data of HD-SDI and SD-SDI signals on an external display (SD-SDI signals only on the LV 7720). Display items include waveform monitor, vectorscope, audio monitor, simple picture display, as well as multi display on which these items can be arranged on a single screen. Its 1U half rack size reduces space consumption in broadcasting installations, etc. In addition, complete digital processing of SDI signals enables highly accurate measurements. It is also suitable as a monitoring device that monitors signals and detect errors via the network through the support of SNMP.

FEATURES

- **Two Serial Digital Inputs**
  The SDI input connectors on the LV 7700 can receive HD-SDI and SD-SDI signals. You can select auto or manual setting for the input signal format.
- **SDI Output**
  Equipped with an active output that reclocks the input signal.
- **Display**
  Equipped with a DVI-I connector of XGA resolution (1,024 x 768). Waveform, vectorscope, picture, audio, and status can be shown on an external LCD, etc. Multi display that displays these items on a single screen is also possible.
  - Waveform Display Function
  - Vectorscope Function
  - Picture Display Function
  - Line Selector Function
  - Embedded Audio Signal Display Function
  - Screen Capture Function
- **Extensive Analysis Functions**
  - Various Error Detection Functions
  - Event Log Function of SDI Signals
  - Digital Data Dump Function
  - Analysis Display Function
- **SDI-EXT REF Phase Difference Display Function**
  The SDI-EXT REF phase difference display function shows the phase difference between the SDI signal and the external sync signal (EXT REF).
- **5 BAR DISPLAY**
  Easy to read monitoring function that depicts both component RGB and composite Gumut Errors.
- **Preset Function**
  Up to 30 sets of panel control settings can be stored. Stored data can be recalled easily from the panel, Ethernet connector, or remote connector.
- **SNMP Support**
  In addition to controlling the LV 7700 from the panel, remote control is possible through Ethernet connection.
- **Web Server**
  The Web server function is used to remotely control the LV 7700/7720 and show the display using Internet Explorer on Windows via an Ethernet network.
- **External Synchronization**
  Accepts tri-level sync signals or black burst signals (NTSC and PAL).
- **All Panel LED Lighting**
  All panel LEDs can be turned on which makes it convenient for operations in extremely dark places.
- **Power Supply**
  DC operation is possible by connecting a 12 V external DC power supply with a current capacity of at least 3 A to the DC input connector.
  AC power operation (100 to 240 VAC) is also possible through the supplied AC adapter.
- **LV 7720 is upgradable to LV 7700 at our factory**
- **Closed Captioning monitoring is available**
- **Dedicated Rack Mount Adapter (Sold Separately)**
  By using the dedicated rack mount adapter that is sold separately, the LV 7700 can be rack mounted.
  - 2 units of LV 7700 fit in LR 2477
  - One unit of LV 7700 fit in LR 2480 (Not for 2 units)

LR 2480 Rackmount Adapter



External Display

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Sales@LeaderUSA.com

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Video Formats and Corresponding Standards

Video Signal Standards

	Format Name	Standard Supported
1	1080i/60	SMPTE 274M, 292M (LV 7700 only)
2	1080i/59.94	
3	1080i/50	
4	1080p/30	
5	1080p/29.97	
6	1080p/25	
7	1080p/24	
8	1080p/23.98	
9	1080PsF/30	SMPTE RP211, 292M (LV 7700 only)
10	1080PsF/29.97	
11	1080PsF/25	
12	1080PsF/24	
13	1080PsF/23.98	
14	720p/60	SMPTE 296M, 292M (LV 7700 only)
15	720p/59.94	
16	720p/50	
17	720p/30	
18	720p/29.97	
19	720p/25	
20	720p/24	
21	720p/23.98	
22	525i/59.94	SMPTE 259M
23	625i/50	

Other Standards

Ancillary Data Standard SMPTE 291M

Embedded Audio Standard SMPTE 299M (LV 7700 only)/ SD-SDI SMPTE 272M

Format Setting

Format Setting Auto setting or manual setting for the supported formats

Sampling Frequency 74.25 MHz (HDTV LV 7700 only), 74.25/1.001 MHz (HDTV LV 7700 only), 13.5 MHz (SDTV)

External Synchronization Auto setting for the supported formats

Input/Output Connector

SDI Input

Input Connector BNC connector 2 systems (A/B switching type)

External Synchronization Input

Input Signal Tri-level sync signal or NTSC/PAL black burst signal

Input Connector BNC connector 1 system 2 connectors

SDI Output

Output Connector BNC connector 1 connector

Compact Flash Memory Card

Function Saves screen captures, error logs, preset data, and data dumps. Also used for firmware updates.

Remote Connector

Function Recalls presets and outputs errors

Control Connector D-sub 25 pin 1 connector (female) TTL level (low active)

Ethernet Connector

Function Remote control from an external computer and data output

Type 10BASE-T or 100BASE-TX auto switching

DVI-I Connector

Signal Format Single Link T.M.D.S, Analog R, G, B

Display Format XGA

Output Connector DVI-I 1 system

Display Format

Display Format XGA Effective area 1024 x 768 dots

Display

1 Screen Display Waveform display, vectorscope display, picture display, audio display, or status display

2 Screen Display Waveform display and vectorscope display
Waveform display and picture display
Waveform display and audio level display

4 Screen Display Select audio display or status display in addition to waveform display, vectorscope display, and picture display(5 Bar can be shown instead of Vectorscope.)

Waveform Display

Waveform Operation

Display Mode Overlay display: Displays component signals overlaid
Parade display: Displays component signals side by side
Timing Display: Displays by calculating Y-C_B and Y-C_R
Uses bowtie signals (authorized by Tektronix, Inc.)

EAV-SAV Period Select show or hide

G, B, R Conversion Converts Y, C_B, C_R signals into G, B, R and displays the result

Pseudo-Composite Display Digitally converts component signals into composite signals and displays the result

Channel Assignment Select G, B, R order or R, G, B order during G, B, R conversion display

Line Select Displays the selected line

Vertical Axis

Gain Select × 1, × 5, or variable

Gain Variable × 0.2 to × 10.0

Horizontal Axis

Line Display Display Format Overlay: 1H, 2H
Parade: 1H, 2H, 3H
Timing: 2H

Field Display Magnification: Select × 1 or × 10
Display Format Overlay: 1 V, 2 V
(2V display not allowed for progressive)
Parade: 1 V, 2 V, 3 V
Magnification: Select × 1, × 20 or × 40

Time Base Accuracy ≤ ± 0.5 %

Cursor Measurement

Configuration Horizontal Cursors: 2 cursors (REF and DELTA)
Vertical Cursors: 2 cursors (REF and DELTA)

Vectorscope Display

Gain Select × 1, × 5, IQ-MAG, or variable

Gain Variable × 0.2 to × 10.0

Amplitude Accuracy ≤ ± 0.5 %

IQ Axis Select show/hide

Simple Picture Display

HDTV Display Displayed by sampling the pixels (LV 7700 only)

SDTV Display Displayed by interpolating pixels

Frame Rate Converts the frame rate using the internal synchronization signal and displays the result

Embedded Audio Display

Quantization HDTV 24 bits (LV 7700 only)/SDTV 20 bits

Lissajous Display

Display Channel Select 2-ch or 8-ch display

Display Mode Select X-Y or L-R

Sound Image Display

Display Channel Select 3-1 ch, 3-2 ch, or 3-2-2 ch.

Level Meter Display

Display Channel Simultaneous 8 ch display

Meter Select 60 dB peak level, 90 dB peak level, or average response meter

Status Display

SDI Signal Status Display

Signal Detection Detects the presence or absence of SDI signals

CRC Error Detects transmission errors of HD-SDI signals (LV 7700 only)

EDH Error Detects transmission errors of SD-SDI signals

BCH Error Detects transmission errors of embedded audio signals in the HD-SDI signal (LV 7700 only)

Checksum Error Detects transmission errors of ancillary data

Parity Error Detects parity errors in the ancillary data header

Gamut Error Detects gamut errors

Detection Range Upper limit: 90.0 % to 109.4 %, Lower limit -7.2 % to + 6.0 %
0.1 % steps

Composite Gamut Error Monitors the level error when the component signal is converted into composite signal

Detection Range Upper limit: 90.0 % to 135.0 %,
Lower limit -40 % to -20 %
0.1 % steps

Audio Information Detection Detects the presence or absence of audio on each channel

Equivalent Cable Length Measurement Displays the signal attenuation of the SDI signal by converting to cable length
Supported Cables HD-SDI Select LS-5CFB, 1694A, or L-7CHD (LV 7700 only)
SD-SDI Select L-5C2V, 8281, or 1505A

Error Count Up to 100,000 errors
Counts only the specified errors (1 count even if multiple errors occur within 1 second)

Data Dump Display

Display Format Displayed separately by serial data sequence or channel

Event Log

Number of Logs Up to 1,000 events

Audio Status

Voice Control Packets Analyzes and displays the voice control packets of the SDI signal

EDH Display (only for SD-SDI input)

EDH Displays the status of the EDH packets

Screen Capture

Capture Captures the display screen

Media Internal memory (RAM) or compact flash card

Presets

Number of Presets 30

Environmental Conditions

Operating Temperature 0 to 40 ˚C

Operating Humidity ≤ 85 % RH (without condensation)

Operating Environment Indoor use

Operating Altitude Up to 2,000 m

Pollution Degree 2

Power Requirements 12 VDC (10 to 18 V), 35 W max.

Dimensions and Weight 215(W) × 44(H) × 400(D) mm, 2.3 kg
8 1/2(W) x 1 3/4(H) x 15 4/5(D) in, 5 lbs

Accessories AC adapter ·····1
Instruction manual ·····1

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