

# Leader

Ver. 1.1

## LV5600/LV7600 Quick Manual



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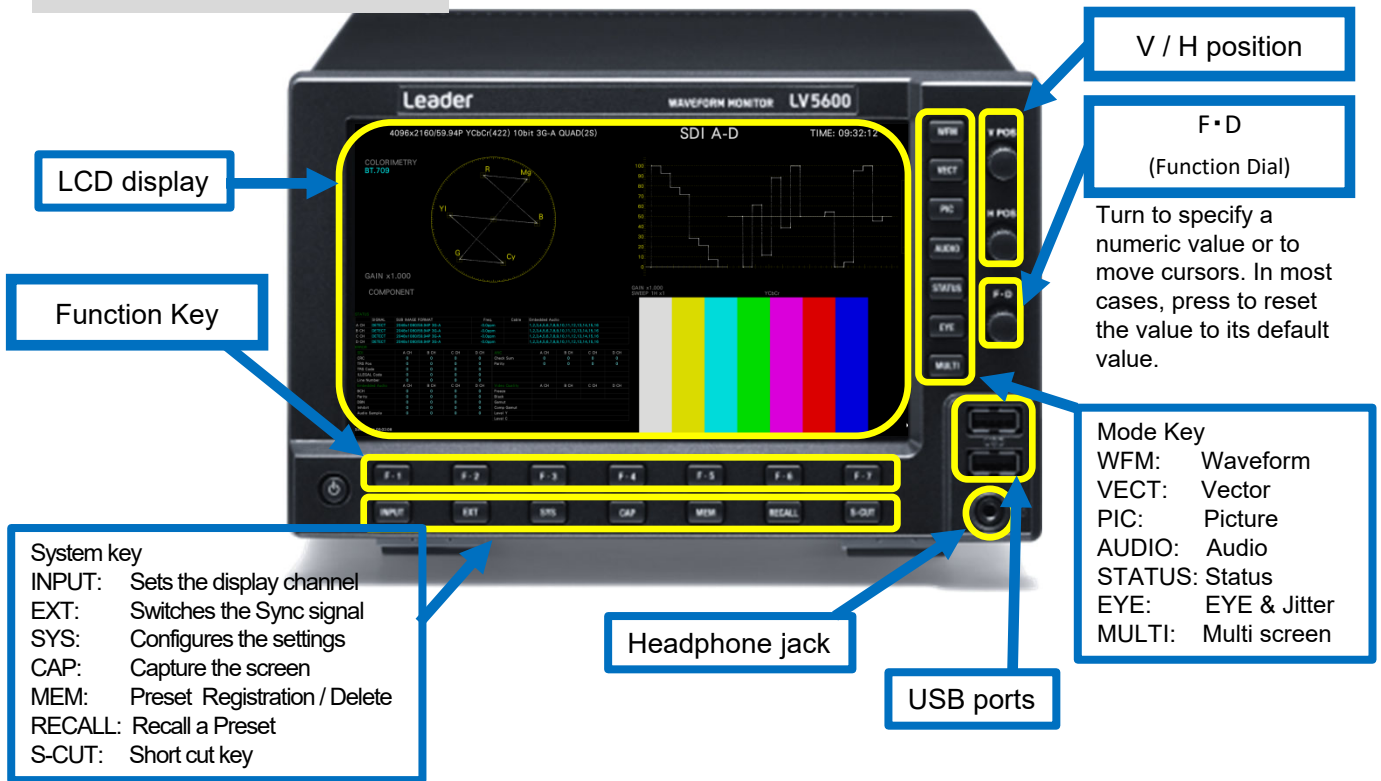
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This Quick Manual requires firmware version 4.0 or higher.  
 If you have a lower version, please download and install the latest firmware from the web download.

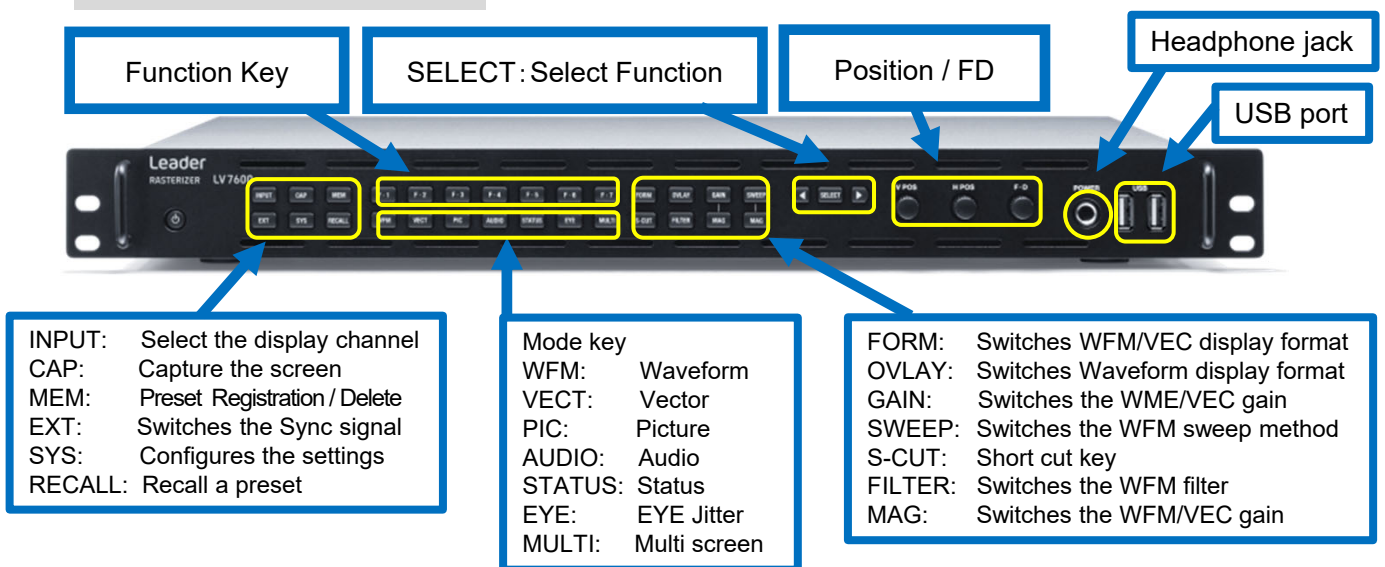
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## LV5600/LV7600 Quick Manual

### LV5600 Front Panel



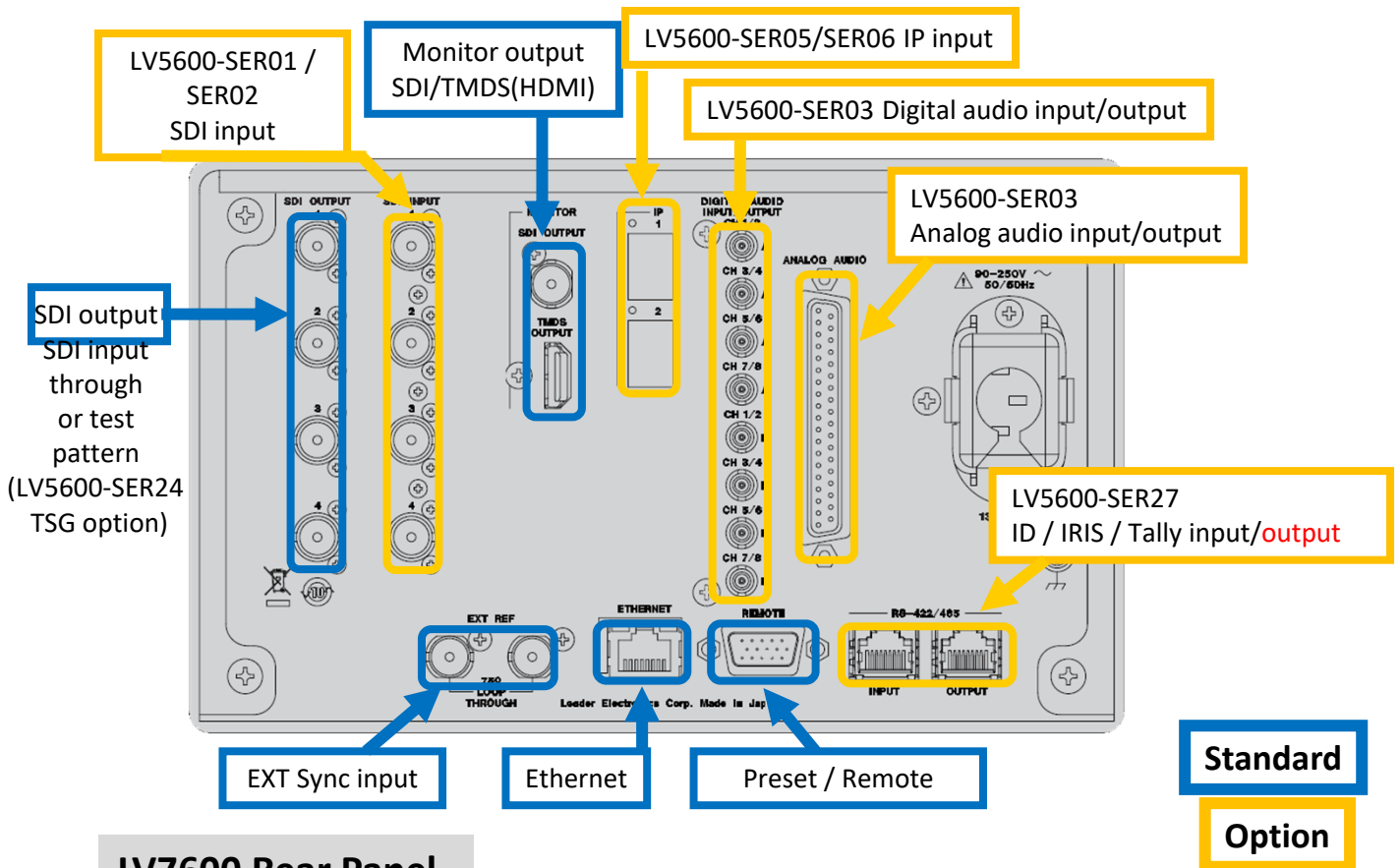
### LV7600 Front Panel



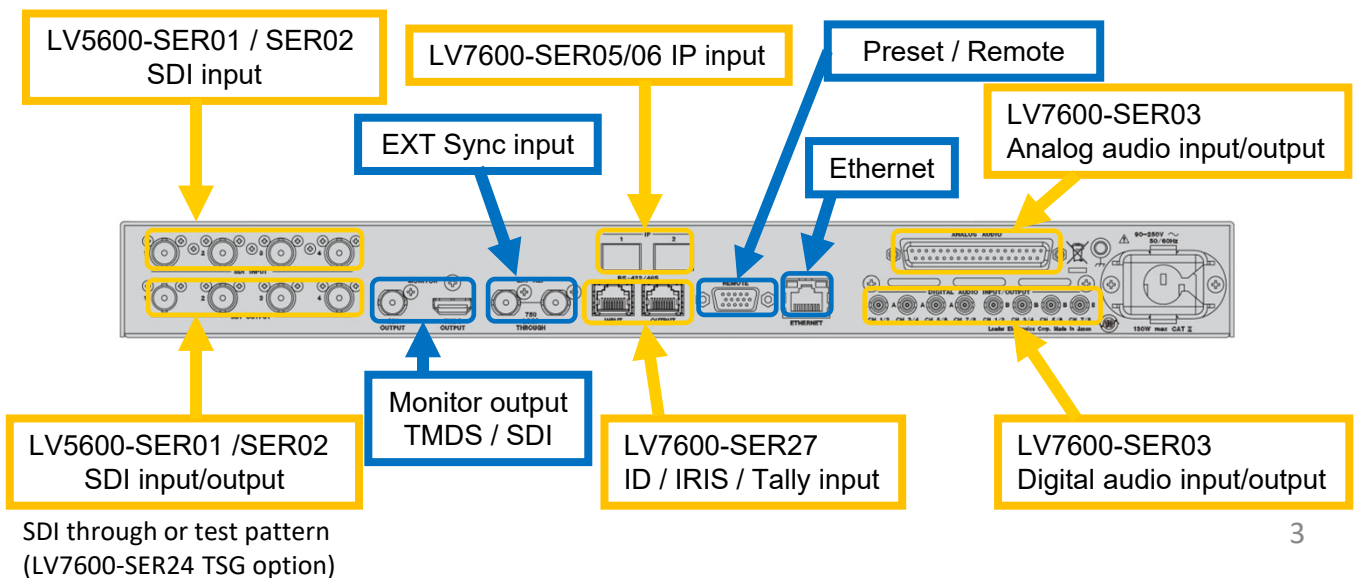
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### LV5600 Rear Panel



### LV7600 Rear Panel



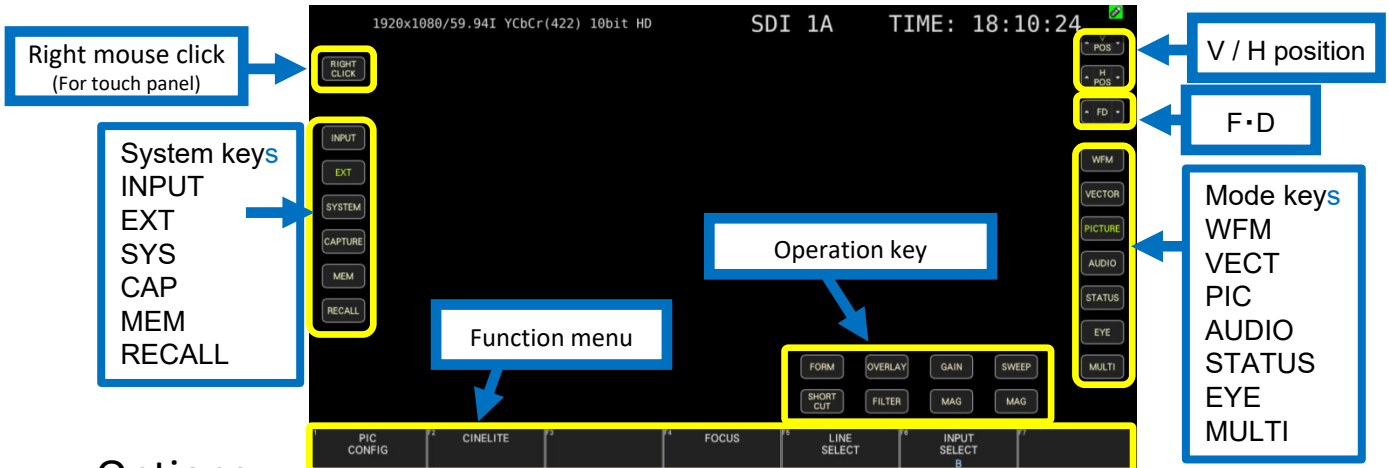
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## LV5600/LV7600 Quick Manual

The following Screen key operations can be performed with a mouse connection or touch panel. These Appear with left mouse click or panel touch.



### Screen Keys



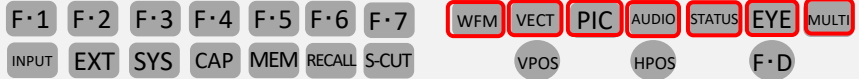
### Options

- **LV5600 factory hardware options unit (Sold separately)**
  - LV5600-SER01 SDI input
  - LV5600-SER02 SDI input with EYE & jitter measurements
  - LV5600-SER03 Digital/Analog audio input/output
  - LV5600-SER04 Dolby-E/D/D+ Decode
  - LV5600-SER05 10GbE IP input SMPTE ST 2022-6/SMPTE 2110-20
  - LV5600-SER06 25GbE IP input SMPTE ST 2022-6/SMPTE 2110-20
  - ※Option to select either LV5600-SER01 or LV5600-SER02.
  - ※Option to select either LV5600-SER05 or LV5600-SER06.
- **LV5600 License options (Sold separately)**
  - LV5600-SER24 SDI Test signal generator
  - LV5600-SER25 Focus assist function
  - LV5600-SER26 Custom Layout function
  - LV5600-SER27 ID/IRIS/Tally display function
  - LV5600-SER28 4K input
  - LV5600-SER29 12G-SDI input
- **LV7600 factory hardware options unit (Sold separately)**
  - LV5600-SER01 SDI input
  - LV5600-SER02 SDI input with EYE & jitter measurements
  - LV7600-SER03 Digital/ Analog audio input/output
  - LV7600-SER04 Dolby-E/D/D+ Decode
  - LV7600-SER05 10GbE IP input SMPTE ST 2022-6/SMPTE 2110-20
  - LV7600-SER06 25GbE IP input SMPTE ST 2022-6/SMPTE 2110-20
  - ※Option to select either LV5600-SER01 or LV5600-SER02.
  - ※Option to select either LV5600-SER05 or LV5600-SER06.
- **LV7600 License options (Sold separately)**
  - LV7600-SER24 SDI Test signal generator
  - LV7600-SER25 Focus assist function
  - LV7600-SER26 Custom Layout function
  - LV7600-SER27 ID/IRIS/Tally display function
  - LV7600-SER28 4K input
  - LV7600-SER29 12G-SDI input

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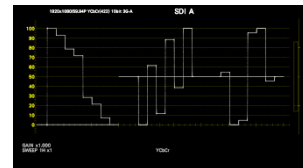
### Measurement screen



#### WFM VIDEO WAVEFORM

The display of video waveform.

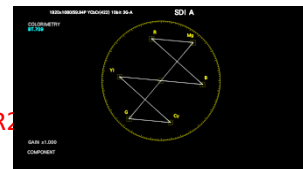
It displays the waveform of the selected line frame. Line select display, YCbCr display, RGB display, pseudo-composite display can be selected.



#### VECT VECTOR

The display of vector.

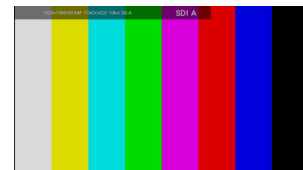
It can show Line select display, vector marker display, pseudo-composite, 5-bar display and CIE chromaticity diagram display (LV5600-SER23, LV7600-SER23).



#### PIC PICTURE

The display of picture.

It can show Monochrome display, marker display, line select display, CINE LITE II, and focus assist (LV5600-SER25, LV7600-SER25).

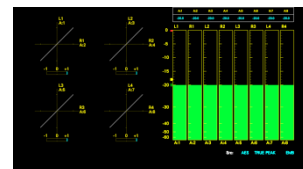


#### AUDIO AUDIO (LV5600-SER03, LV7600-SER03)

The display of audio.

It can show Lissajous, surround, meter, status and Loudness for the signal which is chosen.

(Without installing LV5600-SER03, only meter display available, the other functions are not available.)



#### STATUS STATUS

Please press the STATUS button to check the status.

It can show event log, data dump and phase difference.

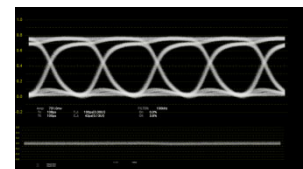


#### EYE EYE PATTERN (LV5600-SER02)

The display of eye pattern.

(Without installing LV5600-SER02, EYE key is not available non-functional)

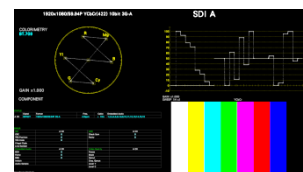
By mode switching, you can check the Jitter by this within this option.



#### MULTI MULTI

Multi screen that combines each measurement screen is displayed.

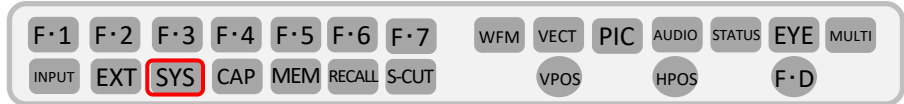
There are 6 types of model layouts which can be use chosen.



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## LV5600/LV7600 Quick Manual

### INPUT settings



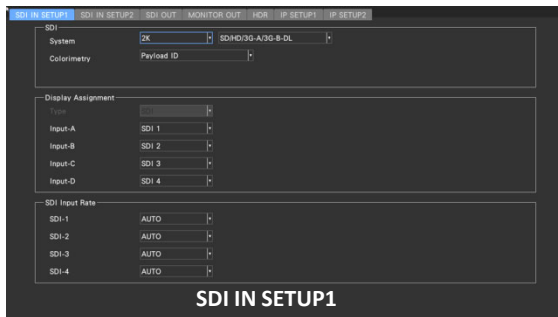
**SYS** (SYSTEM) > **F.1** (SIGNAL IN OUT)

Select **F.2** (PREV TAB) or **F.3** (NEXT TAB) tag, open the **SDI IN SETUP1** or **SDI IN SETUP2** screen.

Set each item according to the input signal. Press **F.D** to put a check mark or turn the dial to select an item of choice and press **F.D** to check mark the settings.

Press **F.1** (COMPLETE) at the end of the setting to confirm and save the system.

For the format selection of the SDI System, refer to 6.2 Setting of Measurement Signal in the manual.



### Input Format Alarm/Error

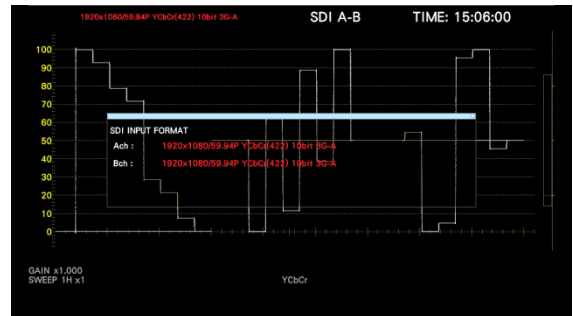
If the format of the received signal is not compliant as per the setting specified on the **SDI IN SETUP1** tab of the SYS menu, the instrument displays the format in red or an INPUT FORMAT window in the center of the screen. If this occurs, check the settings on the **SDI IN SETUP1** tab, the input signal, and payload ID.

Formats are displayed in red in the following cases.

- When the link order is incorrect in 2 sample interleave of 3G (DL) -4K or 3G (QL).
- When the payload ID is not appropriate.

The INPUT FORMAT window is displayed in the following cases.

- When the format of the signal set in "SDI IN SETUP1" is not matching the input settings in multilink signal.



### About Payload ID

In LV5600 / LV7600, format information is identified by analyzing the SYNC TRS etc. of the input signal, but the payload ID is used for items that cannot be identified by the input signal. For LV5600, either the payload ID of the input signal or the payload ID set on **SDI IN SETUP2** can be specified. (It can be set by USE / Not USE of Payload ID item of **SDI IN SETUP2** )

The payload ID that can be set on the LV5600 / LV7600 are as follows.

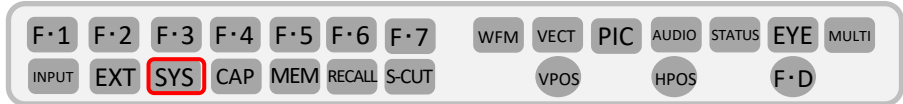
Division	: Square / 2 Sample Interleave
i/PsF Slect	: Interlace / Segmented Frame (PsF)
Color System	: YCbCr422 / YCbCr444 / RGB444 / XYZ444
Pixel Depth	: 10bit / 12bit

Note: Some items may not be able to be set depending on the SDI System settings.

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### Basic setting (No.1)



**SYS** > **F-2** (SYSTEM SETUP) > **GENERAL** ( **F-2** (PREV TAB) or **F-3** (NEXT TAB) can change the tab display)  
Rotating **F-D** > blue frame to match the item > press **F-D** and check marker or item can be chosen >  
After setting > **F-1** (COMPLETE)

### GENERAL

● **Presets Overwrite**  
When registering presets, select whether to enable overwriting or not. You can prevent presets from being overwritten by disabling [Presets Overwrite Disable / Enable](#).

● **Fan Speed**  
Fan speed can be chosen  
SER02 Installed: 4 / 5 / 6 / 7 / 8  
SER01 Installed: 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8

● **Screensaver**  
Select the time from the last key operation until the screen saver starts up.  
Off / 1 / 5 / 10 / 20 / 30 / 60 [min]

● **LCD Auto Off**  
Select the time from the last key operation to automatically turning off the backlight. Off / 5 / 30 / 60 [min]

● **Touch Panel**  
Touch panel use or not  
[Disable / Enable](#)

### Function Menu

● **Mode Key Direct**  
Multi display, mode key (WFM, VECT, PIC, AUDIO, STATUS, EYE) Select whether or not to change the measurement screen by operation. (This is effective when INPUT item or Input option is placed in the layout.)  
Single: With mode key, function menu and measure screen can be switch  
Multi/Single Common: With mode key, only function menu can switch. Measure screen is still multi display.  
To display the function menu with multi display, press and hold the MULTI key for about 2 seconds.

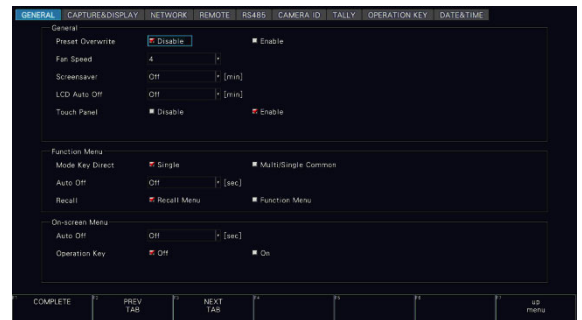
● **Auto Off**  
Set the time from the last key operation to the automatic disappearance of the function menu.  
[Off / 1 / 2 / 3 / 4 / 5 / 10 / 20 / 30 / 60 \[sec\]](#)

● **Recall**  
When you want to pick up the recall record  
Recall Menu: Recall menu display  
Function Menu: measurement menu display

### On-screen Menu

● **Auto Off**  
Set the time from the last key operation until the key display disappears automatically with the key display on the screen used by the touch panel or with mouse operation.  
[Off / 1 / 2 / 3 / 4 / 5 / 10 / 20 / 30 / 60 \[sec\]](#)

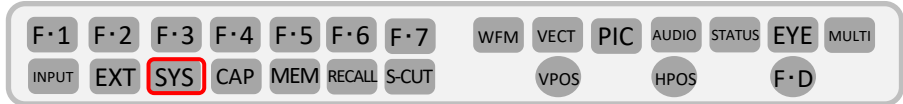
● **Operation Key**  
Set whether or not to display the operation key on the keys display on the screen used for mouse / touch panel operation.  
[OFF / ON](#)



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## LV5600/LV7600 Quick Manual

### Basic Setting (No.2)



**SYS** > **F-2** (SYSTEM SEUP) > Use **CAPTURE&DISPLAY** to set up > **F-2** (PREV TAB) or **F-3** (NEXT TAB) can change the tab

Rotating **F-D** > According to the item you want to set the blue frame > Press **F-D** > **F-1** (COMPLETE) > Finish

### CAPTURE

#### ● Mode

Press CAP key > Choose mode

Screen: Capture the display screen as a still image

Video Frame (SDI Code Value): Catch 1 frame data

Video Frame (Converted): When saving in DPX or TIFF format, offset the black level to 0 and take in one frame worth of data

#### ● FILE TYPE

Turn on the file format to save captured display screen or frame data to USB memory

Mode = Screen

BMP: Keep BMP type in USB memory. You can use computer to check the data.

BSG: Keep BSG type in USB memory. You can check the data by the machine.

Mode = Video Frame (SDI Code Value) or Video Frame (Converted)

DPX: Save only the picture part in 10 bit DPX format. Even if the input signal is 12 bit, it rounds it to 10 bit and saves it.

When Mode is video Frame (Converted), offset the black level to 0.

TIFF: Save only the picture part in TIFF format. This data is a conversion of DPX to TIFF format.

When Mode is video Frame (Converted), offset the black level to 0.

FRM: Keep 1 frame data.

### Information Display

#### ● Format

Format display (1920x1080/59.94i YCbCr(422) 10bit HD and so on) ON or OFF

Off / On

#### ● Input

Input signal display (SDI A and so on) ON or OFF

Off / On

#### ● Icon

Mouse icon, key lock icon, USB memory icon ON or OFF

Off / On

#### ● Temperature Warning

Alarm display (TEMPERATURE) when the internal temperature of the main unit rises ON or OFF

Off / On

#### ● Error

Measurement screen error display on upper right corner

Off / On

#### ● Date

Choose date display style

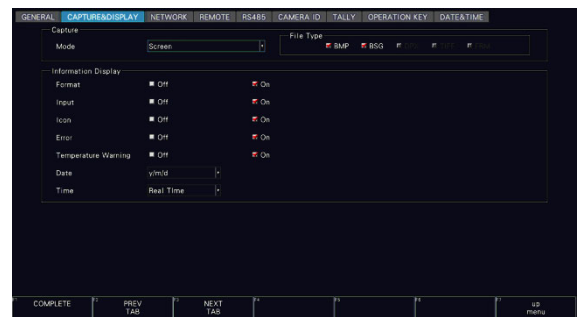
y is the Christian era, m is the month, d is the day.

Off / y/m/d / m/d/y / d/m/y

#### ● Time

Select the time display format

Off / Real Time / LTC / VITC / D-VITC

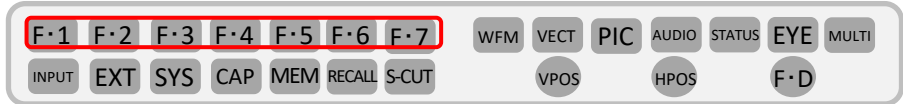




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### Function Operation



Normally, the function menu is displayed, but disappears when the key of the currently selected mode is pressed. In addition, it can be set to automatic OFF in the GENERAL tab of the SYS menu.

#### Selection function

If there are multiple items, press the function key while the pull-up menu is displayed to switch the items. It is also possible to select directly using a mouse or touch panel.

Example of changing the waveform color from WHITE to CYAN

- ① Press F.4.
- ② A pull-up menu appears.
- ③ Press F.4 while the pull-up menu is displayed.
- ④ It changes from WHITE to YELLOW.
- ⑤ Press F.4 while the pull-up menu is displayed.
- ⑥ It changes from YELLOW to CYAN.
- ⑦ If you do not press F.4, the pull-up menu disappears and is fixed to CYAN.



#### 2. Switching function

- In case of switching only 2 such as ON and OFF, press the function key to switch. The mouse and touch panel are switched by clicking or touching.

Example of changing the waveform Y display from ON to OFF and OFF to ON.

- ① Press F.2.
- ② Y changes from ON to OFF.
- ③ Press F.2.
- ④ Y changes from OFF to ON.

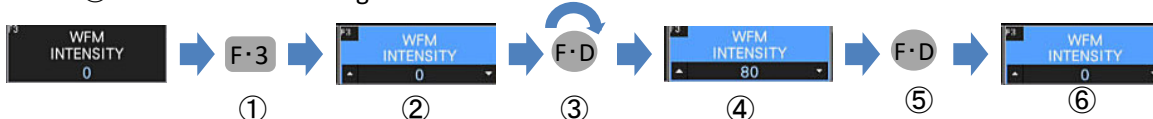


#### 3. Numeric value change function

- Press the function key and turn the FD to change the value. Press FD to return to the default value. The value can be changed by operating the mouse wheel or touching the ▲ or ▼ icon on the touch panel during the value change function.

Example of changing the waveform brightness.

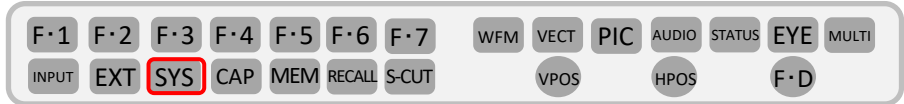
- ① Press F.3.
- ② WFM INTENSITY changes to a value change function.
- ③ Turn the F.D clockwise.
- ④ WFM INTENSITY gradually changes from 0 to 80.
- ⑤ Press F.D.
- ⑥ WFM INTENSITY changes from 80 to 0 at once.



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### Settings for Quick Manual



The explanations after this page follow the settings below.

Make the following settings in **GENERAL** of **SYS** < **F-2**.

#### Function Menu

● Mode Key Direct **Single** Multi/Single Common

● Auto Off

Set the time from the last key operation until the function menu disappears automatically.

**Off** / 1 / 2 / 3 / 4 / 5 / 10 / 20 / 30 / 60 [sec]

#### On-screen Menu

● Auto Off

Set the time from the last key operation until the menu display on the screen used for mouse / touch panel operation disappears automatically.

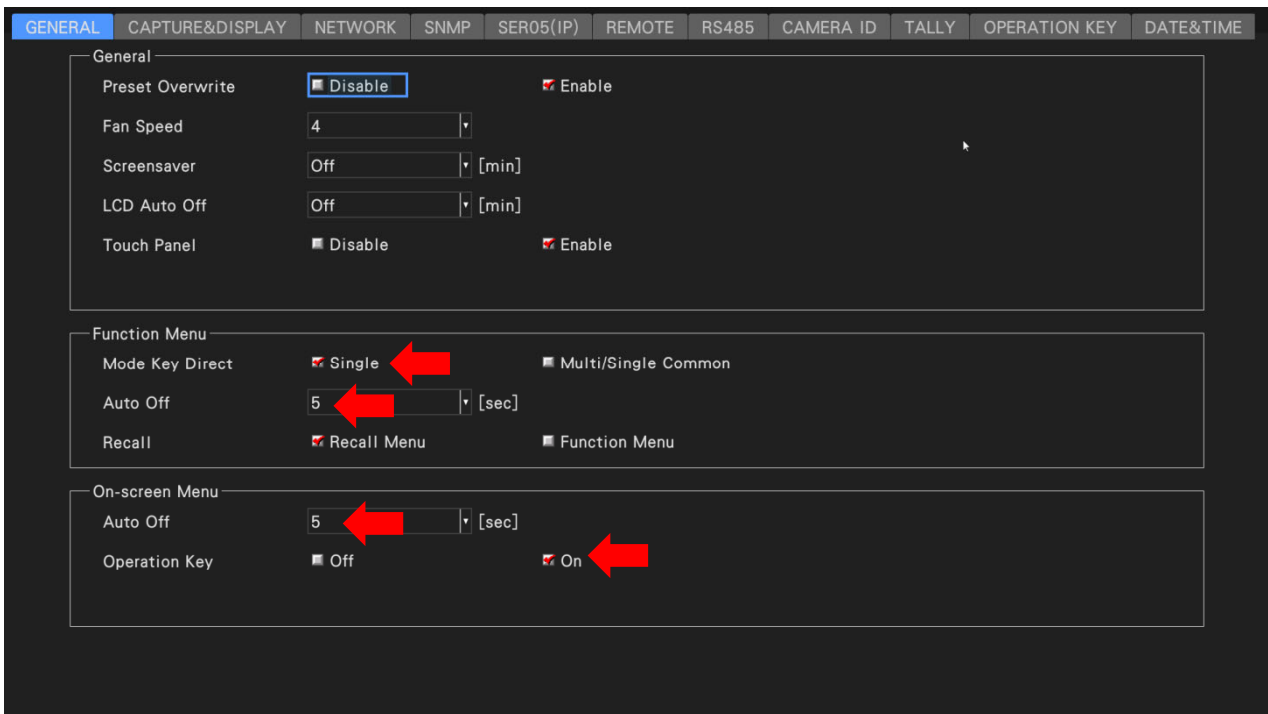
Off / 1 / 2 / 3 / 4 / **5** / 10 / 20 / 30 / 60 [sec]

● Operation Key

Set On / Off of the operation menu key used for mouse / touch panel operation displayed on the screen.

OFF / **ON**

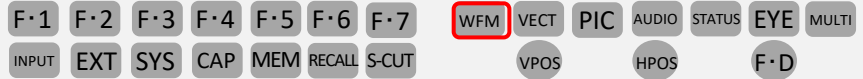
Confirm the settings with **F-1** (COMPLETE).



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### Waveform display(No.1)



#### Waveform display color setting (e.g. change to Multi-color)

- Press **WFM** (WAVEFORM) to display the waveform.

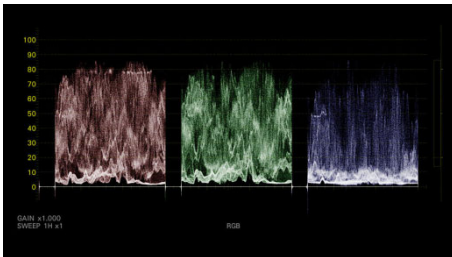
**F.1** (WFM INTEN/CONFIG)>**F.4** (WFM COLOR) - Select **MULTI**.

Note: If **F.1** is other than (WFM INTEN / CONFIG), press **WFM** (WAVEFORM) key twice

#### Waveform display matrix setting (e.g. Set waveform mode to RGB)

- **F.7** (up manu)>**F.7** (COLOR SYSTEM)>**F.1** (COLOR MATRIX )-Select **RGB**.

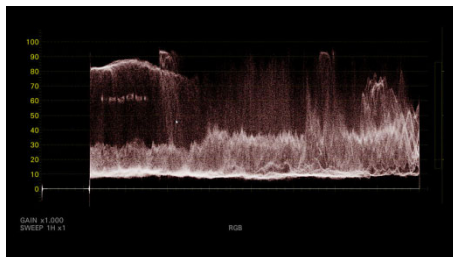
In COLOR MATRIX, you can select YCbCr / GBR / RGB / COMPOSITE.



RGB display

#### Waveform display ON-OFF setting (e.g. Change the waveform to R only)

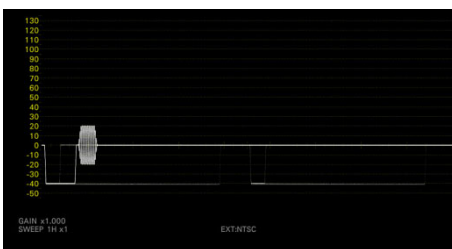
- **F.7** (up menu)> **F.1** (WFM INTEN / CONFIG)> **F.2** (WFM MODE) - Set G and B to OFF.



R waveform only

#### External sync signal waveform display

- **F.7** (up menu)>**F.1** (EXTERNAL SYNC) – Set ON.

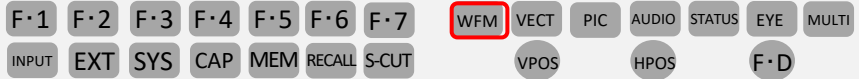


External sync signal waveform display

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### Waveform display(No.2)



#### Display size variable setting

• Press **WFM** (WAVEFORM) to display the video waveform.

Note: If the EXTERNAL SYNC waveform is displayed, press **F.1** (WFM INTEN / CONFIG)>**F.1** = OFF> **F.7** (up menu) to return to the normal video waveform display.

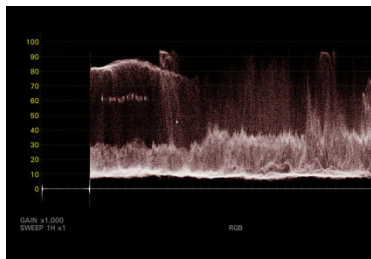
Set **F.2** (GAIN / FILTER)> **F.2** (GAIN MAG) to X1. Set **F.1** (GAIN VARIABLE) to VARIABLE.

Note: When **F.2** is other than (GAIN / FILTER), press **WFM** (WAVEFORM) twice.

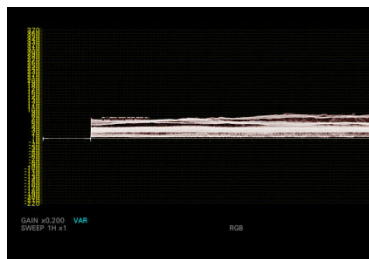
The waveform is scaled by turning **F.D** (FUNCTION DIAL) or the flywheel of the mouse.

Press **F.D** (FUNCTION DIAL) to return to X1.

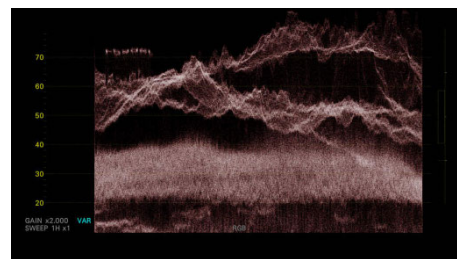
On the right side, the enlarged part for full scale is displayed as a square frame.



X1 display



Zoom Out



Zoom In

The display area for full scale is a square frame.

#### Scale jump display setting (e.g., changed to 80% of X5)

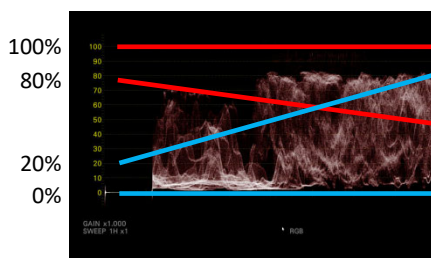
Set the base point for enlarged display.

• Set **F.2** (GAIN MAG) to X5. Change **F.5** (SCALE JUMP) to 80%.

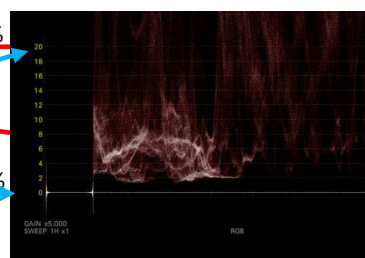
Normally, it is displayed from 0%, but in "scale jump" it is displayed from the set base point.

(SCALE JUMP can select 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100% when setting X5 or X10.

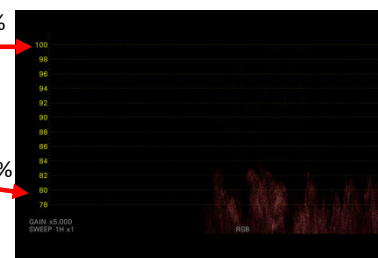
CURSOR is set based on the Y measurement cursor.)



X1 display



X5 display  
0% to 20%

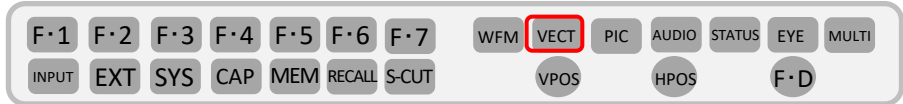


X5 display  
SCALE JUMP 80%  
80% to 100%

# Leader

## LV5600/LV7600 Quick Manual

### Vector Display(no.1)

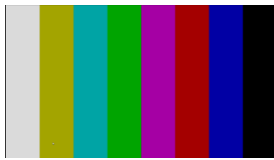


COLOR BAR 100% 75% setting

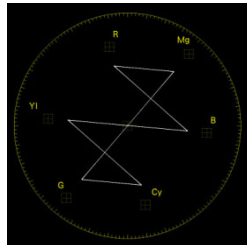
• Press **VECT** (VECTOR SCOPE) to display the vector scope.

Change **F-7** (COLOR SYSTEM)> **F-2** (COLOR BAR) to 100% or 75%

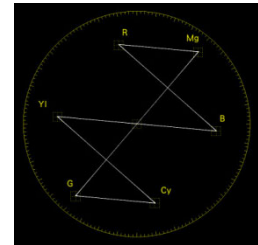
Note: If **F-7** is not (COLOR SYSTEM), press, **VECT** (VECTOR SCOPE) twice.



Input 75% COLOR BAR



Set COLOR BAR 100%  
(Off target)



Set COLOR BAR 75%

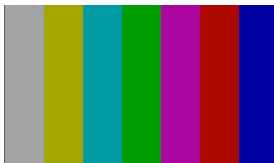
### VECTOR SCALE Setting

• Press **VECT** (VECTOR SCOPE) to display the vector scope.

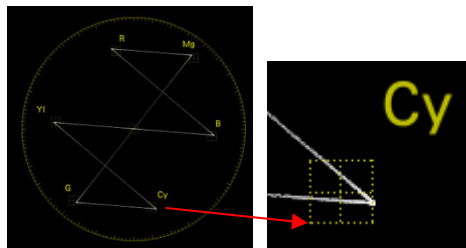
Change **F-2** (VECTOR SCALE)> **F-4** (VECTOR SCALE) to AUTO / BT.601 / BT.709 / DCI / BT.2020.

Note: If **F-2** is not (VECTOR SCALE), press **VECT** (VECTOR SCOPE) twice.

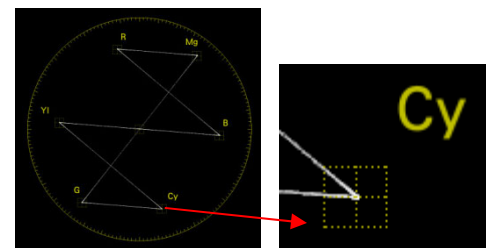
When AUTO is selected, the Colorimetry setting of SDI [setting signal](#) is used.



Input BT.2020 COLOR BAR



Set VECTOR SCALE BT.709  
(Off target)

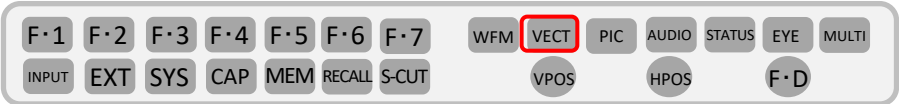


Set VECTOR SCALE BT.2020

# Leader

## LV5600/LV7600 Quick Manual

### Vector Display(no.2)



#### Variable scale display setting

Press **VECT** (VECTOR SCOPE) to display the vector scope.

Set **F.2** (VECTOR SCALE) > **F.5** (VARIABLE SCALE) to ON.

Note: If **F.2** is not (VECTOR SCALE), press **VECT** (VECTOR SCOPE) twice.

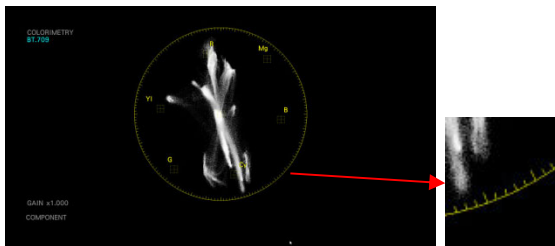
Set **F.7** (up menu) > **F.3** (VECTOR GAIN) > **F.1** (GAIN VARIABLE) to VARIABLE.

If you need more than 2 times magnification, change **F.2** (GAIN MAG) to X5 and **F.3** (GUIDE DISPLAY) to ON.

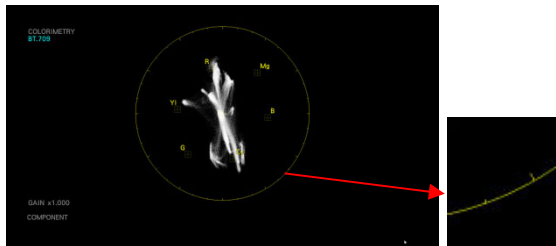
The center position can be moved with **VPOS**(VPOS) / **HPOS**(HPOS).

Use **F.D** (FUNCTION DIAL) or flywheel of mouse to enlarge / reduce the vector display.

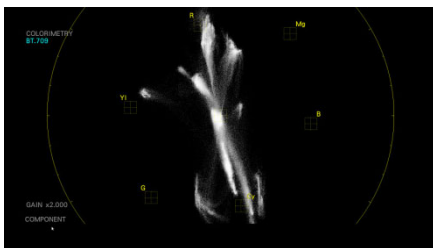
Press **F.D** (FUNCTION DIAL) to return to X1.



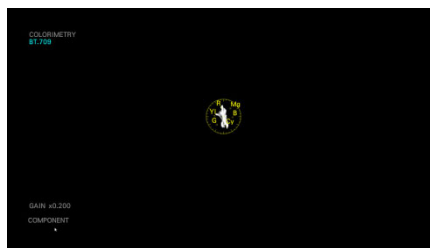
VARIABLE SCALE OFF



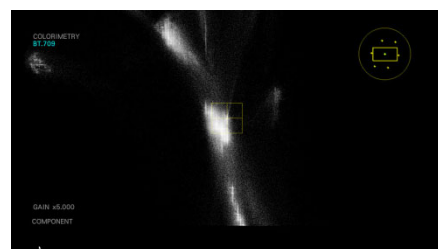
VARIABLE SCALE OFF



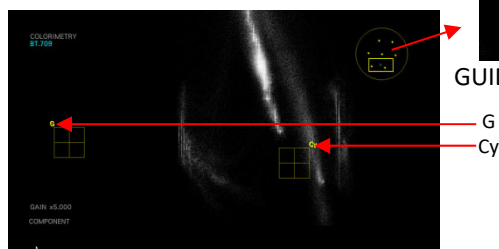
VARIABLE SCALE ON: x2 setting



VARIABLE SCALE ON: Zoom out



VARIABLE SCALE ON: x5 setting



VARIABLE SCALE ON: x5,  
Change V-POS / H-POS and  
Show G /Cy.

GUIDE DISPLAY表示

# Leader

## LV5600/LV7600 Quick Manual

Vector Display<sub>(no.3)</sub>  
For UHDTV / HLG color bar



### 1. Input the UHDTV color bar (ARIB STD-B66).

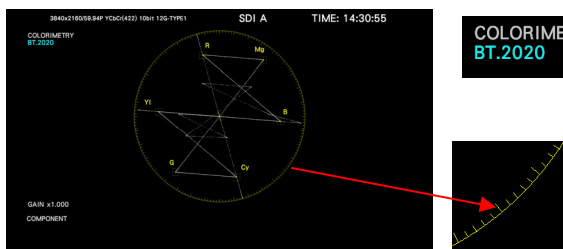
### 2. Set the vector scope to 75%.

- Press **VECT** (VECTOR SCOPE) to display the Vector scope.
- Switch **F.7** (COLOR SYSTEM) > **F.2** (BAR) to 75%.

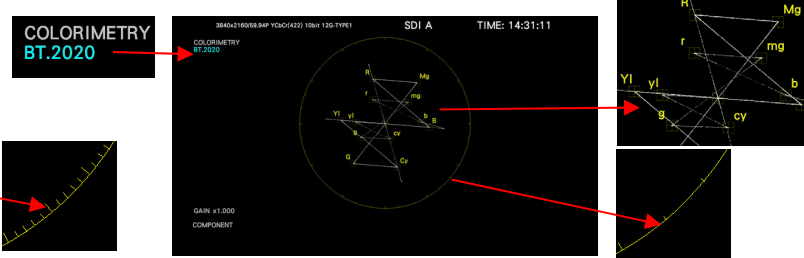
Note: If **F.2** is not (COLOR SYSTEM), press **VECT** (VECTOR SCOPE) twice.

### 3. Variable scale display ON and ARIB CHECK MARKER setting

- Press **F.7** (up menu).
- Set **F.2** (VECTOR SCALE) > **F.5** (VARIABLE SCALE) to ON.
- Set **F.3** (ARIB CHECK MARKER) to STD-B66. ※COLORIMTRY must be BT2020.



VARIABLE SCALE OFF

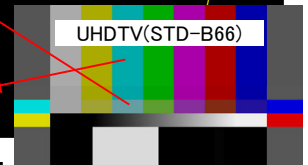
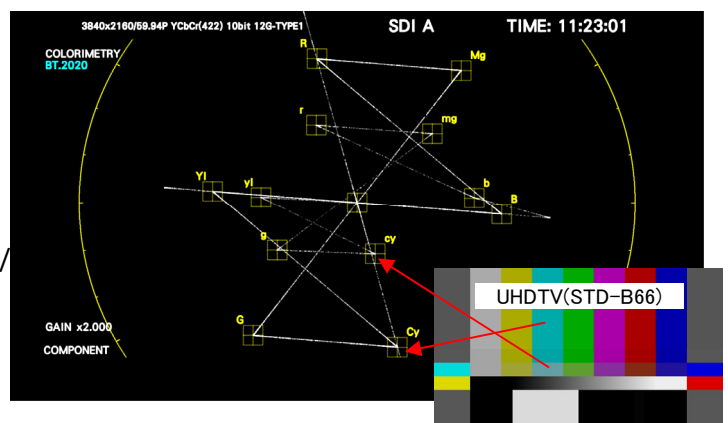


VARIABLE SCALE ON  
Set STD-B66

### 4. Variable scale display ON

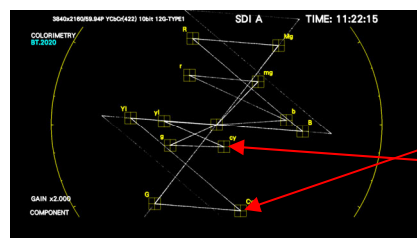
- Press **F.7** (up menu).
- Set **F.3** (VECTOR GAIN) > **F.1** (GAIN VARIABLE) to VARIABLE.
- Turning **F.D** (FUNCTION DIAL) scales the vector.
- Press **F.D** (FUNCTION DIAL) to return to X1.

The center position can be moved with **VPOS** (V POS) / **HPOS** (H POS).



### 5. For HLG color bar (ARIB STD-B72)

- Input ARIB STD-B72 pattern.
- Switch the **F.3** (ARIB CHECK MARKER) in step 3 above to STD-B72.



# Leader

## LV5600/LV7600 Quick Manual

### CIE DIAGRAM display



VECT > F.1 (VECT INTEN/CONFIG) > F.1 (VECTOR DISPLAY) > CIE DIAGRAM

#### Color triangle setting

F.2 (CIE DIAGRAM SCALE) > F.1 (TRIANGLE1), F.2 (TRIANGLE2) > Yellow standard scaler can be displayed

#### Triangle standard name display

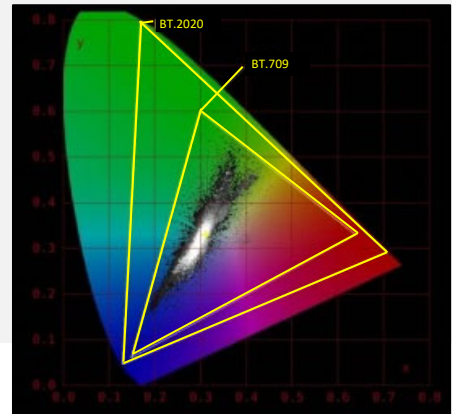
F.2 (CIE DIAGRAM SCALE) > F.5 (SUB SCALE) > F.4 (TRIANGLE CAPTION) > ON setting

The figure below shows the color triangle setting, F.1 (TRIANGLE1) BT.2020, F.2 (TRIANGLE2) BT.709 > Triangle standard name display > ON

#### Payload ID setting and colorimetric setting

SYS > F.1 (SIGNAL IN OUT) > SDI IN SETUP1

- COLORIMETRY items can choose from:  
Payload ID, BT-709, BT-2020, DCI



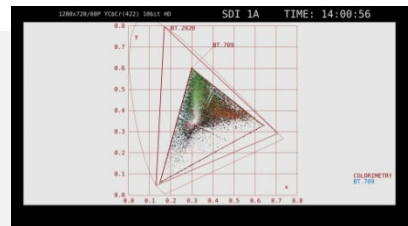
#### Color scale setting

F.2 (CIE DIAGRAM SCALE) > F.1 (COLOR)

B.G. COLOR: Displays the color scale. Background is black, the waveform is displayed according to the brightness

B.G. WHITE: Color scale is not displayed. Background is white, waveform is displayed according to the color of the picture.

B.G. BLACK: Color scale is not displayed. Background is black, waveform is displayed according to the color of the picture.



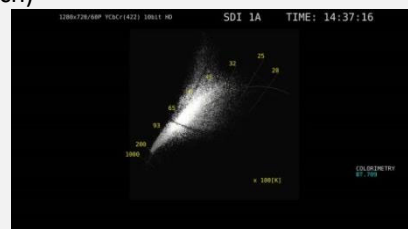
B.G. WHITE

#### Display mode setting (Chroma Diagram / Color Temperature Display Switch)

F.3 (CIE DIAGRAM SETTING) > F.1 (DISPLAY MODE)

DIAGRAM: Chroma Diagram Display

TEMP: Color Temperature Display



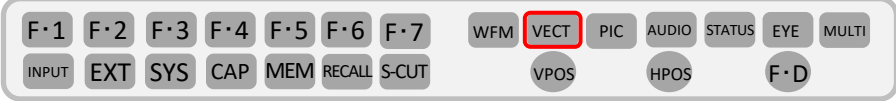
TEMP



# Leader

## LV5600/LV7600 Quick Manual

### 5BAR Gamut display

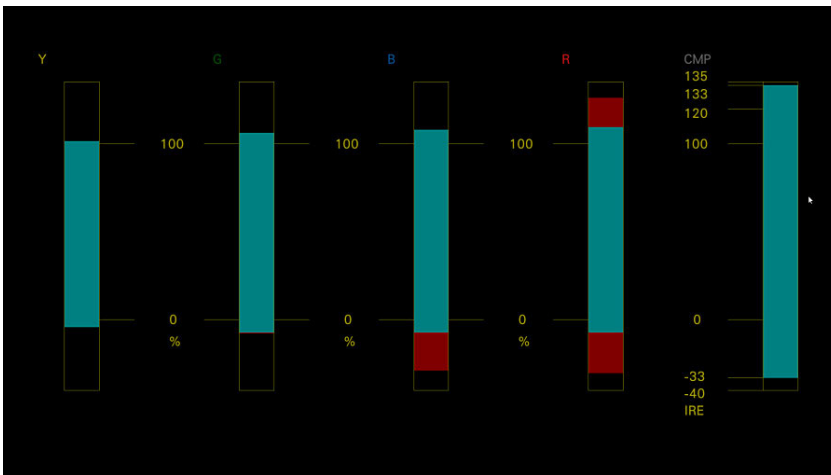


The 5BAR gamut display can display RGB and composite gamut errors separately.

#### 5BAR Display

Change **VECT** (VECTOR) > **F.1** (VECT INTEN / CONFIG) > **F.1** (VECTOR DISPLAY) to 5BAR.

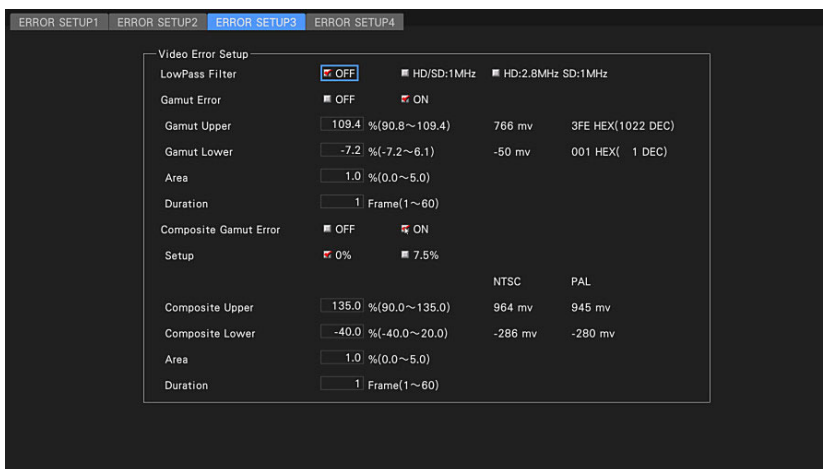
Note: If you press **VECT** (VECTOR) and **F.1** is not (VECT INTEN / CONFIG), press **VECT** (VECTOR) twice.



5BAR Display

#### 5BAR setting

In **STATUS** (STATUS) > **F.5** (STATUS SETUP), change the tab to **ERROR SETUP3** and set as below.

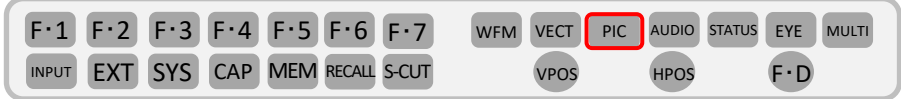


5BAR setting

# Leader

## LV5600 / LV7600 Quick Manual

### Picture display



### Japanese subtitle display function

Japanese subtitles can be simply displayed on the picture.

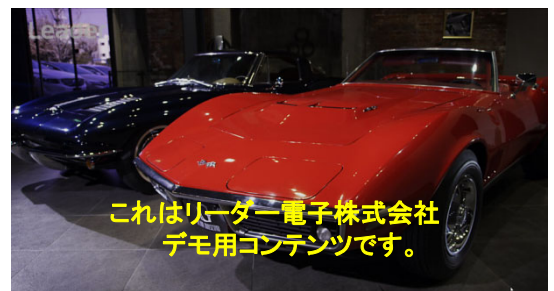
Set **PIC** (PICTURE) > **F-1** (PIC CONFIG) > **F-5** (SUPER IMPOSE) > **F-1** to ARIB.

Note: ● If you press **PIC** (PICTURE) and **F-1** is not (PIC CONFIG), press **PIC** (PICTURE) twice.

● When the input format is 3G-B, **F-5** (SUPER IMPOSE) is not displayed.

HD / SD / ANALOG / CELLULAR can be selected with **F-2** (FORMAT).

You can select 1/2 with **F-2** (LANGUAGE).



Japanese subtitle display

### Picture mode

The picture can be displayed in real size or doubled.

You can select FIT / REAL / X2 / FULL FRM in **PIC** (PICTURE) > **F-1** (PIC CONFIG) > **F-1** (PICTURE MODE).

Note: ● If you press **PIC** (PICTURE) and **F-1** is not (PIC CONFIG), press **PIC** (PICTURE) twice.

For HD, FIT / REAL / X2 / FULL FRM can be selected.

For 4K, FIT / REAL can be selected.

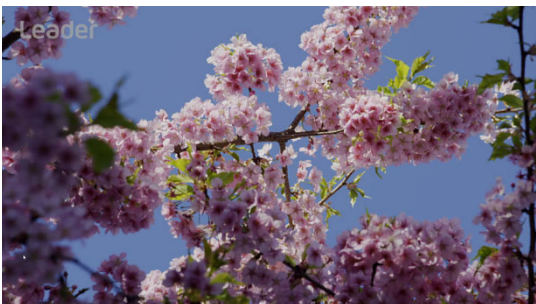
In HD X2 or 4K REAL, the display position can be changed by **VPOS** (V-POS) / **HPOS** (H-POS).



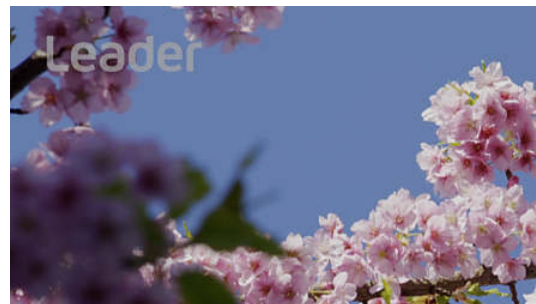
HD : FIT display



HD : x2 display



4K : FIT Display



4K : REAL display

# Leader

## LV5600/LV7600 Quick Manual

CINELITE (% display)

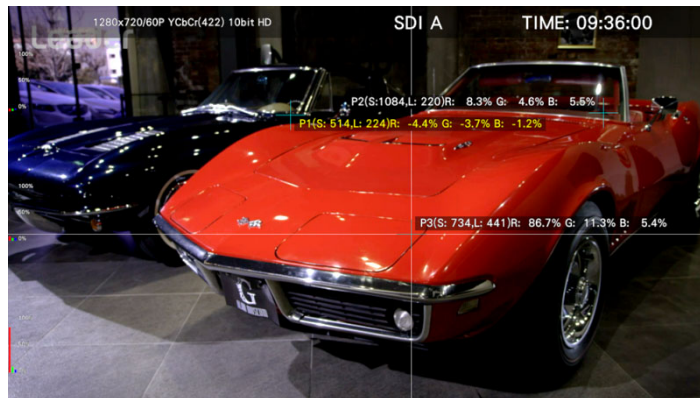


Max 3 points (P1~P3) level check is possible

PIC > F-2 (CINELITE or CINELITE/HDR) > F-1 (CINELITE DISPLAY) > % DISPLAY setting

PIC > F-2 (CINELITE or CINELITE/HDR) > F-2 (%DISPLAY SETUP)

- F-1 (MEASURE NUMBERS): Measurement point setting to display, P1, P1+P2, P1+P2+P3
- F-2 (MEASURE POSITION): Select the measurement point to move the cursor, use VPOS HPOS to move cursor
- F-3 (MEASURE SIZE): measurement size choose, 1x1(1 Pixel), 3x3 (3x3 Pixel averaging, 9x9 (9x9 Pixel averaging)
- F-4 (UNIT SELECT): Brightness level value display setting, Y%, RGB%, RGB255, CV, CV(DEC), HDR  
(\*HDR→With option for LV5600-SER23(HDR), HDR setting for ON is available.)
- F-6 (SELECT CH): display channel switch



### CINELITE ADVANCE FUNTION

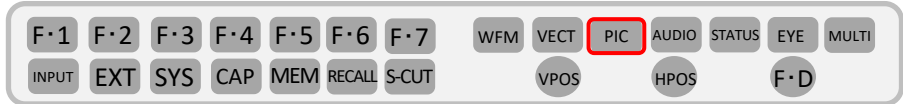
PIC > F-4 (CINELITE/HDR) > F-2 (CINELITE ADVANCE)  
> ON > Measurement points set on CineLite screen >  
P1 to P3 and REF as vector waveform screen and video  
signal markers can be displayed in conjunction with the  
waveform screen.



# Leader

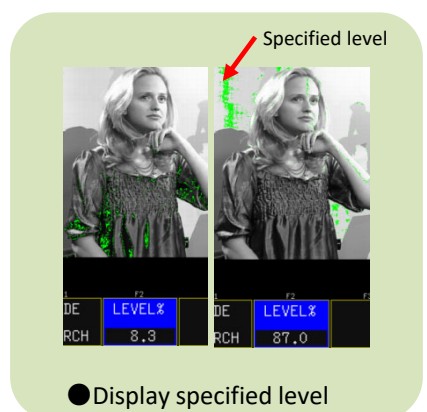
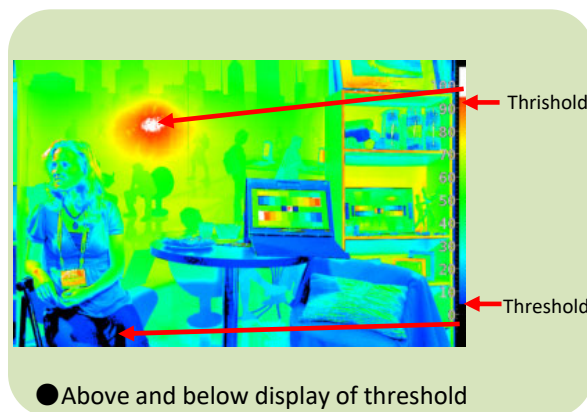
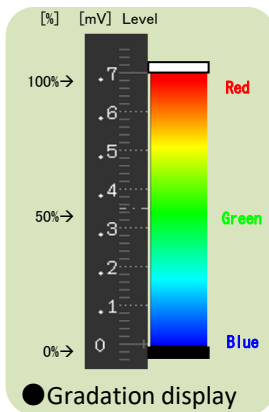
## LV5600/LV7600 Quick Manual

### Cine Zone



The cine zone has three functions.

1. The gradation display function, which replaces the brightness level of the picture with the color and displays. It shows the brightness distribution.
2. Saturation is understood by the function that sets a threshold for the brightness level and displays the part above or below it.
3. The search function displays the set brightness level in green and you can see the set brightness from the picture.



### 1. Gradation Display

Set **PIC** (PICTURE)> **F.2** (CINELITE or CINELITE / HDR)> **F.1** (CINELITE DISPLAY) to CINEZONE

Note: ● If you press **PIC** (PICTURE) and **F.2** is not (CINELITE or CINELITE / HDR), press **PIC** (PICTURE) twice.

### 2. Threshold setting

After setting the gradation display, press **F.2** (CINEZONE SETUP) and then **F.2** (UPPER) or **F.3** (LOWER) to set with **F.D** (FUNCTION DIAL).

**F.2** UPPER: It can be set in the range of -6.3 to -109.4.

**F.3** LOWER: It can be set in the range of -7.3 to -108.4.

### 3. Search level setting

After setting the threshold level, set **F.1** (CINEZONE FORM) to SEARCH.

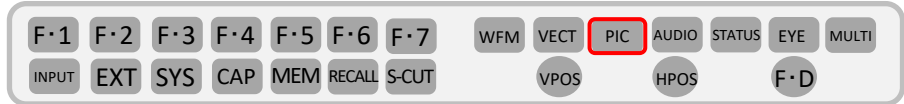
Press **F.4** (LEVEL%) and set with **F.D** (FUNCTION DIAL).

# Leader

## LV5600/LV7600 Quick Manual

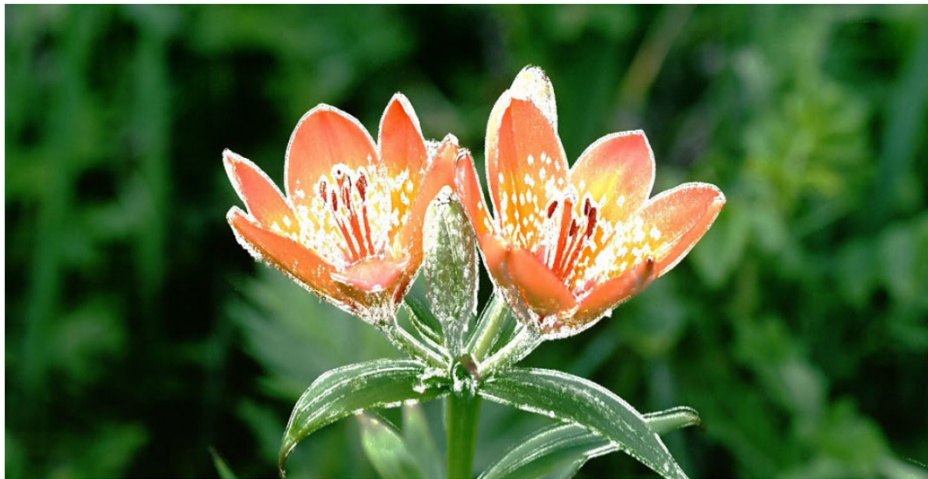
### Focus Assist

(LV5600-SER25, LV7600-SER25)



The focus assist display highlights the amount of detected edges to make it easier to check the focus.

(Note: This is not displayed when PICTURE MODE is FULL FRM.)



Focus assist display

### Focus assist setting

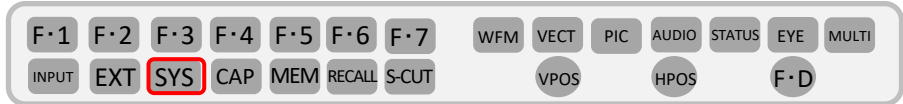
Press **PIC** (PICTURE) > **F-4** (FOCUS)

1. Display mode selection **F-1** (SIZE) (Display size is selected.)  
FIT/REAL/x2
2. Focus Assist ON / OFF **F-2** (FOCUS ASSIST) (Set the focus assist display on and off.)  
ON/OFF
3. Detection sensitivity selection **F-3** (SENSITIVE) (Sets the detection edge sensitivity.)  
LOW / MIDDLE / HIGH / V-HIGH / U-HIGH
4. Brightness level selection **F-4** (PICTURE LEVEL) (The brightness level of the picture display is adjusted.)  
(Select OFF to hide the picture. Select EMBOSS to emboss the edges.)
5. Highlight color selection **F-5** (EDGE COLOR) (Select the display color of the detection edge.)  
WHITE / RED / GREEN / BLUE

# Leader

## LV5600 / LV7600 Quick Manual

HDR display (no.1)  
(LV5600-SER23, LV7600-SER23)

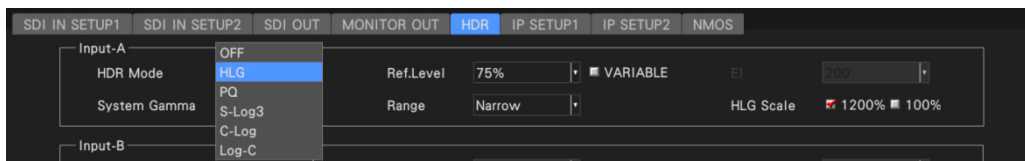


### HDR system setting

- Select **SYS** (SYSTEM) > **F-1** (SIGNAL IN OUT) > **HDR** and set HDR MODE to HLG, PQ, S-Log3, C-Log, or Log-C according to the input signal.
- Ref.Level is the level setting at the boundary between HDR and SDR. Select a fixed value or put a check mark in VARIABLE to enable variable [range](#).

(The variable value can be changed by **PIC** > **F-2** (CINELITE / HDR) > **F-2** (CINEZONE SETUP) > **F-4** (REF [%]).)

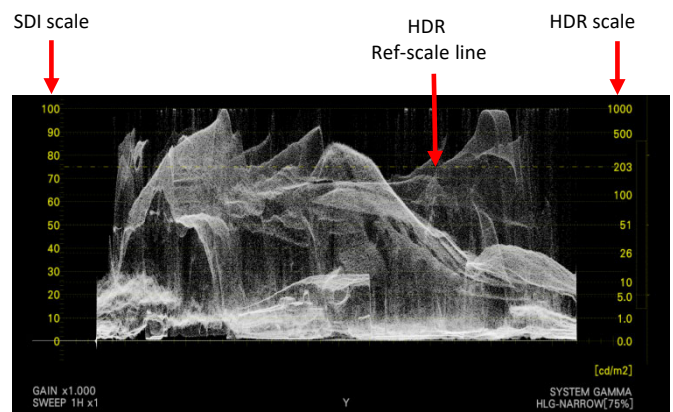
- Range can be selected from Narrow and Full.
- The system gamma can be turned off / on.
- HLG Scale can be selected from 1200% or 100%.
- Use **F-D** (FUNCTION DIAL) or mouse to select / change.
- At the end of setting, press **F-1** (COMPLETE) to confirm.



### HDR Waveform display

- When **WFM** (WAVEFORM) is pressed after setting the HDR system, the waveform is displayed and the HDR scale appears on the right side.
  - Press **F-1** (WFM INTEN / CONFIG).
- Note: If **F-1** is not (WFM INTEN / CONFIG), press **WFM** (WAVEFORM) twice.
- Press **F-5** (WFM SCALE).
  - The following scale lines can be selected with **F-3** (SCALE SETTING) > **F-3** (SCALE DISPLAY).

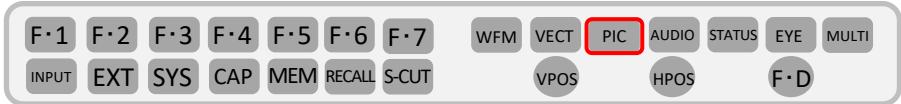
- MAIN: Display SDI scale lines and HDR reference scale lines
- HDR : Display HDR scale lines and HDR reference scale lines
- BOTH: Display SDI scale lines and HDR scale lines and HDR reference lines
- OFF : Only display HDR reference scale lines



# Leader

## LV5600/LV7600 Quick Manual

HDR display (no.2)  
(LV5600-SER23, LV7600-SER23)

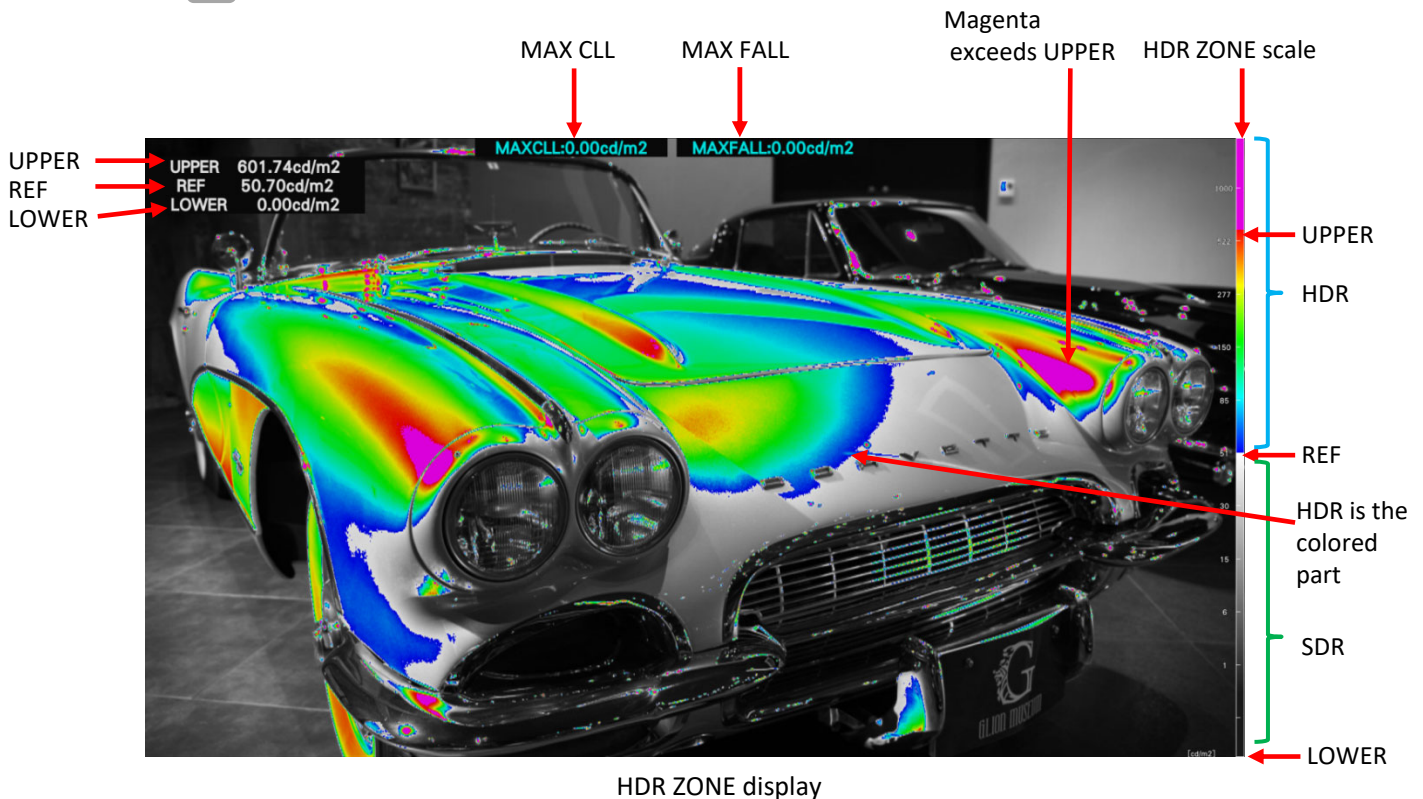


### HDR ZONE display

• After setting HDR System, set **PIC** (PICTURE) > **F-2** (CINELITE / HDR) > **F-1** (CINEZONE DISPLAY) to CINEZONE.

Note: If you press **PIC** (PICTURE) and **F-2** is not (CINELITE / HDR), press **PIC** (PICTURE) twice.

- Turn on **F-4** (HDR ZONE).
- When **F-2** (CINEZONE SETUP) is pressed, UPPER, REF, and LOWER values are displayed in the upper left.
- The threshold of UPPER can be changed by changing **F-2** (UPPER). Areas that exceed the threshold are displayed in magenta on the picture.
- If you put a check mark in VARIABLE of Ref.Level in the System setting of HDR, **F-4** (REF LEVEL [%]) can be set.
- **F-7** (up menu) > **F-3** (MAX FALL / CLL) > **F-1** (MAX FALL / CLL DISPLAY) can be set to ON / OFF of the display.
- START / STOP is possible with **F-2** (MEASURE).
- Press **F-3** (CLEAR) to clear the measured value.



HDR ZONE display

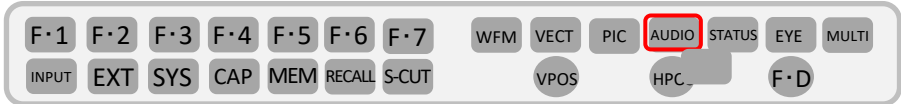
I can't distinguish between HDR and SDR even if I see the HDR content on the HDR monitor.  
HDR ZONE displays HDR area, SDR area and areas that exceed the threshold in different colors.

# Leader

## LV5600/LV7600 Quick Manual

### AUDIO

(LV5600-SER03, LV7600-SER03)



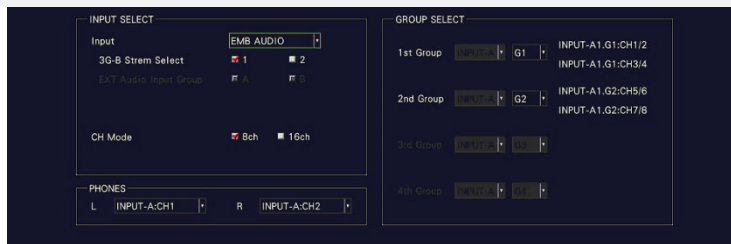
Press **AUDIO** (AUDIO)

AUDIO mapping setting

Note: If **F-7** is not (MAPPING), press **AUDIO** (AUDIO) twice.

Set **TARGET** in Au (AUDIO)> **F-7** (MAPPING).

- **INPUT:** EMB AUDIO: Measurement of embedded audio for SDI INPUT  
EXT AUDIO: Measurement of external audio for DIGITAL AUDIO INPUT  
ANALOG: Measurement of external audio for ANALOG AUDIO INPUT
- **CH Mode:** Setting the number of measurement channels (8ch/16ch)
- **GROUP SELECT:** Audio group settings (G1/G2/G3/G4)  
If the INPUT setting is SIMUL, you can also select the input channel.



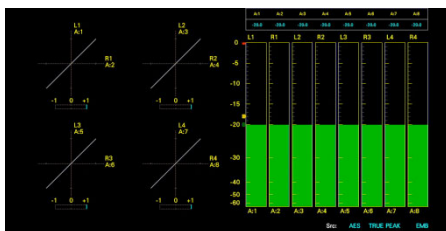
### AUDIO display mode setting

**F-7** (up menu) or **AUDIO** (AUDIO)> **F-1** (DISPLAY MODE)

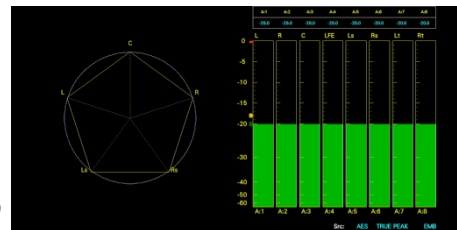
Note: If **F-1** is not (DISPLAY MODE), press **AUDIO** (AUDIO) twice.

- **LISSAJOU:** View the Lissajous. An audio meter is also displayed when measuring 8 channels.
- **METER:** Displays the audio meter. This cannot be selected when measuring 8 channels.
- **SURROUND:** Surround is displayed on the left half and an audio meter is displayed on the right half.  
This cannot be selected during embedded audio measurement or 16ch measurement in Simul mode.
- **STATUS:** Show status. An audio meter is also displayed when measuring 8 channels.
- **LOUDNESS:** Loudness can be measured. It cannot be selected at 16ch.

LISSAJOU



SURROUND

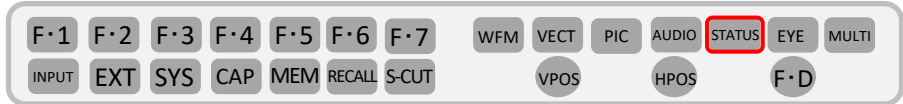




# Leader

## LV5600/LV7600 Quick Manual

### STATUS



Press **STATUS** (STATUS).

Note: • If the display is different from the below even if you press **STATUS** (STATUS), press **STATUS** (STATUS) twice.

• For 4 screens, change the DISPLAY setting. Set **INPUT** (INPUT) > **F-7** (DISPLAY) to SINGLE.

#### ● SIGNAL

Displays as "DETECT" or "NO SIGNAL" to check whether the SDI signal is **connected** or not  
In the case of "NO SIGNAL", the following items are not displayed.

#### ● FORMAT/SUB IMAGE FORMAT

It shows the signal format. Usually, it is the blue one. If you put the incorrect signal format, it will be **shown in red**. Also SDI input **cannot be processed**.

#### ● Freq (Frequency deviation)

Display **Interface** sampling frequency deviation

Normally it is displayed in light blue, but by turning on Frequency Error on the ERROR SETUP 1 tab, It turns red when it exceeds  $\pm 10$  ppm.

#### ● Cable (Cable length unit)

Converts the attenuation of the input signal into the length of the selected cable and displays it.

12 G: < 10m, 10~100m, > 100m (5m step)

3G: < 10m, 10~100m, > 100m (5m step)

HD: < 10m, 10~130m, > 130m (5m step)

SD: < 50m, 50~200m, > 200m (5m step)

#### ● Embedded Audio

Displays the embedded audio channel superimposed on the input signal. When the input signal is 3G - B - DL, only stream 1 is displayed. (Stream 2 is also displayed when measuring 3G- B-DS)

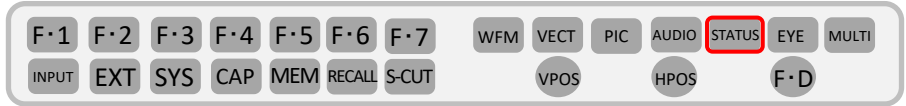
3840x2160/59.94P YCbCr(422) 10bit 12G-TYPE1		SDI A				TIME: 09:46:35				
<b>STATUS</b>										
Signal	Sub Image Format	Freq.		Cable	Embedded Audio					
SUB 1	DETECT	1920x1080/59.94P TYPE1		-2.2ppm	60m	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16				
SUB 2	DETECT	1920x1080/59.94P TYPE1				1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16				
SUB 3	DETECT	1920x1080/59.94P TYPE1				1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16				
SUB 4	DETECT	1920x1080/59.94P TYPE1				1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16				
<b>ERROR</b>										
SDI	SUB 1	SUB 2	SUB 3	SUB 4	ANC	SUB 1	SUB 2	SUB 3	SUB 4	
CRC	0	0	0	0	Check Sum	0	0	0	0	
TRS Position	0	0	0	0	Parity	0	0	0	0	
TRS Code	0	0	0	0						
Illegal Code	0	0	0	0						
Line Number	0	0	0	0						
Embedded Audio	SUB 1	SUB 2	SUB 3	SUB 4	Video Quality	SUB 1	SUB 2	SUB 3	SUB 4	
BCH	0	0	0	0	Freeze					
Parity	0	0	0	0	Black					
DBN	0	0	0	0	Gamut					
Inhibit	0	0	0	0	Cmp. Gamut					
Audio Sample	0	0	0	0	Level Y					
					Level C					
SinceReset 00:02:21										
1 EVENT LOG	2 SDI / IP ANALYSIS	3 ANC DATA VIEWER	4 ANC PACKET	5 STATUS SETUP	6 INPUT SELECT A	7 ERROR CLEAR				

ON / OFF of STATUS error **can be set by**  
by **F-5** (STATUS SETUP).

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## LV5600/LV7600 Quick Manual

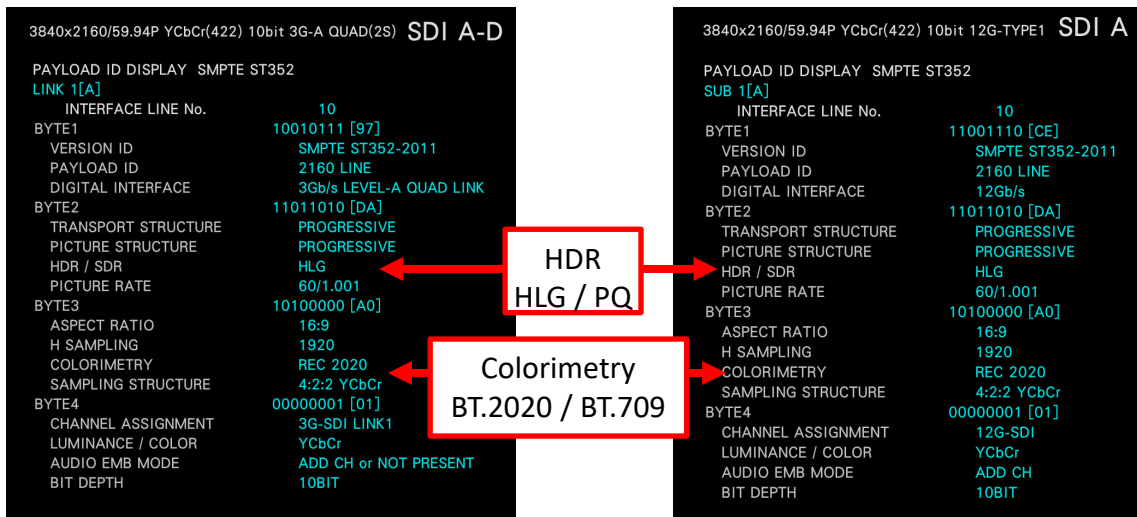
Payload ID display  
SR Live Metadata display



### PAYLOAD display setting

PAYLOAD can be displayed by pressing **STATUS** (STATUS)> **F-4** (ANC PACKET)> **F-1** (PACKET ANALYSYE)> **F-2** (PAYLOAD ID).

※Note: If you press **STATUS** (STATUS) and the STATUS screen is not displayed, or if (ANC PACKET) is not displayed on **F-4**, press **STATUS** (STATUS) twice.



3G-SDI Quad Link: Link 1

12G-SDI: Sub image 1

### SR Live Metadata display setting

SR Live Metadata can be displayed by **STATUS** (STATUS)> **F-4** (ANC PACKET)> **F-1** (PACKET ANALYSYE)> **F-4** (V-ANC)> **F-2** (SMPTE)> **F-6** (SR Live).

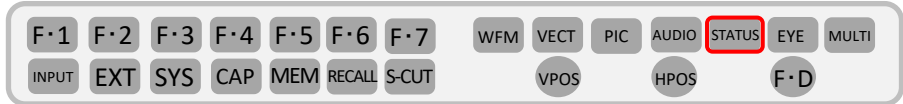
※Note: If you press **STATUS** (STATUS) and the STATUS screen is not displayed, or if (ANC PACKET) is not displayed on **F-4**, press **STATUS** (STATUS) twice.

SR Live Packet							
INTERFACE LINE No. 14							
No.	ITEM	VALUE	CTRL[Abs]	No.	ITEM	VALUE	CTRL[Abs]
1	Table Version	V 1.00	++	14	Knee	OFF	OFF
2	OETF	HLG	++	15	Knee Point	98%	[-15]
3	Transfer Matrix	BT.2020	++	16	Knee Slope	0.19	[+37]
4	Color Gamut	WIDE-BC	++	17	Knee Saturation	OFF	OFF
5	Conversion Mode	SR AIR ON	++	18	Knee Saturation Level	0.50	[+0]
6	HDR Look	Live	Live	19	Soft Knee	--	--
7	HDR Black Compression	ON	ON	20	Knee Radius	--	--
8	SDR Gain	-5.2dB	[-5.2dB]	21	SDR White Clip	ON	ON
9	Master Black	1.03%	[+4.7]	22	SDR White Clip Level	109%	[-94]
10	HDR Black Offset	Δ-0.99%	[-4.5]	23	HDR Knee	OFF	OFF
11	Gamma Table	STD 5	STD 5	24	HDR Knee Point	349%	[+0]
12	Gamma Step	0.45	0.45	25	HDR Knee Slope	0.65	[+0]
13	Gamma Level	0.95	[-12]				

# Leader

## LV5600/LV7600 Quick Manual

### EVENT LOG



This can be displayed by **STATUS** (STATUS)> **F-1** (EVENT LOG).

In the event log, the events that have occurred are displayed in a list.

Note: • If the STATUS screen is not displayed by pressing **STATUS** (STATUS), press **STATUS** twice and then **F-1** (EVENT LOG).

- The event detection target is **for** all the channels **of** **from** currently selected A to D.  
However, when measuring 3G-B-DS, 3G (DL) -4K, 12G, only events currently detected will be detected.
- **F-1** (LOG) Setting for START•STOP
- **F-2** (CLEAR) Delete the event log  
Events can **log and** display up to 1000 items.  
The operation when 1001 or more events occur is set in **F-3** (LOG MODE).  
OVER WR: Overwrite and record from the old event.  
STOP: After 1001 items, **no logging and display of events**.
- Turn the **F-D** to select the displayed event.

1920x1080/59.94P YCbCr(422) 10bit 3G-A SDI A TIME: 10:24:32

EVENT LOG LIST SAMPLE No.1000 << NOW LOGGING >>

CRC	EDH	TRS Position	TRS Code	Illegal Code	Line Number
Cable Error	Cable Warning	Check Sum	Parity	Gamut	
Cmp. Gamut		Freeze		Black	
Level Y		Level C			
Audio BCH	Audio Parity	Audio DBN	Audio Inhibit	Audio Sample	
Frequency	Format Alarm				
EYE Jitter	EYE T Jitter	EYE Tr_Tf	EYE Tf	EYE Tr	EYE Amp.
EYE Or	EYE Or				

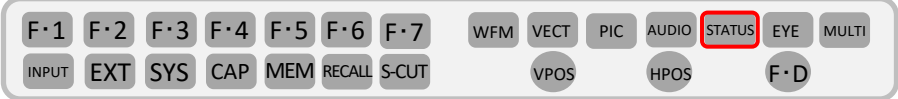
You can check all the Event log.  
Color-coded error "not detected (white) / detection (red) / return (green)"

Event log example

# Leader

## LV5600/LV7600 Quick Manual

### Phase difference measurement



Phase difference measurement Setting (Not including 12G-SDI)

STATUS > F.2 (SDI ANALYSIS) > F.2 (EXT REF PHASE)

As a **The** reference signal for phase difference measurement can be selected from F.1 (REF SELECT) EXT or SDI  
EXT REF is Black Burst or Tri-level Sync on EXT REF and SDI is SDI signal applied on SDI A input signal. F.7

When the System setting is SD / HD / 3G-A / 3G-B-DL, INPUT > F.6 (SELECT CH) > Choose  
(To use the EXT REF signal, when using EXT, press

F.1 (REF SELECT) -EXT > Press F.2 (REF SET USER) > Phase difference can be zero

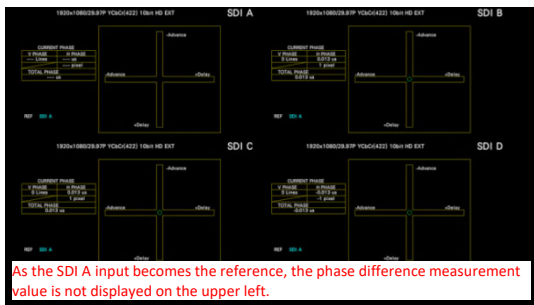
Return phase difference to initial setting, press F.3 (REF SET DEFAULT)

### F.4 (OH TIMING) Setting

**LEGACY** : When an external synchronization signal without timing offset and SDI signal output from our company's signal generator are received, set the phase difference to 0.

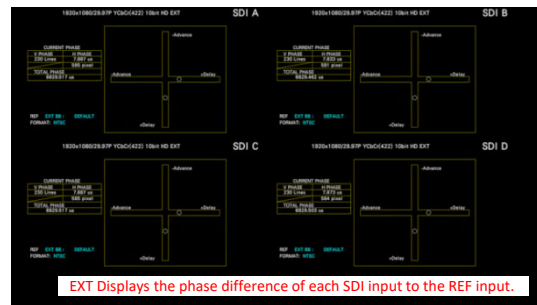
(This is the normal setting mode, such as in case of a third party product or a product that can not set SERIAL)

**SERIAL** : When the received external synchronization signal and the SDI signal have the timing defined by the signal standard, set the phase difference to 0.



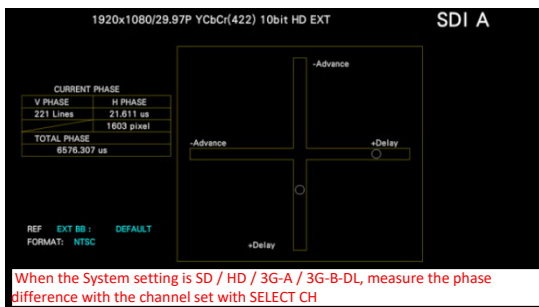
As the SDI A input becomes the reference, the phase difference measurement value is not displayed on the upper left.

4 input when REF SELECT:SDI



EXT Displays the phase difference of each SDI input to the REF input.

4 input when REF SELECT:EXT



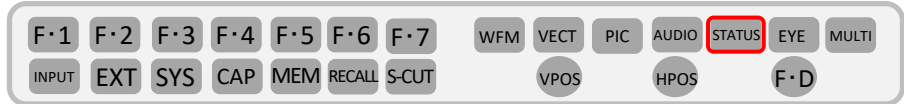
When the System setting is SD / HD / 3G-A / 3G-B-DL, measure the phase difference with the channel set with SELECT CH

HD input (SDI A input) when REF SELECT:EXT

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## LV5600/LV7600 Quick Manual

AV PHASE  
(Lip Sync)



### AV PHASE setting

AV PHASE (Lip Sync: Video and Audio delay) can be confirmed by inputting a lip sync pattern and measuring it.

The test pattern can be output from the LV5600-SER24, LV7600-SER24 TSG option or our sync generator LT4600A / LT4610 / LT4611 (with LT4611SER22).

A delay occurs when the test pattern is transmitted via a microwave or IP line.

AV phase measurement can be performed by **STATUS** (STATUS)> **F.2** (SDI ANALYSIS or SDI / IP ANALYSIS)> **F.3** (AV PHASE).

Note: If you press **STATUS** (STATUS) and the STATUS screen does not appear, press **STATUS** twice, then **F.2** (SDI ANALYSIS or SDI / IP ANALYSIS) and then **F.3** (AV PHASE).

You can change the scale max value setting with **F.1** (SCALE MAX).

Measurement can be performed in 3 to 4 cycles. It is refreshed by **F.2** (REFRESH).

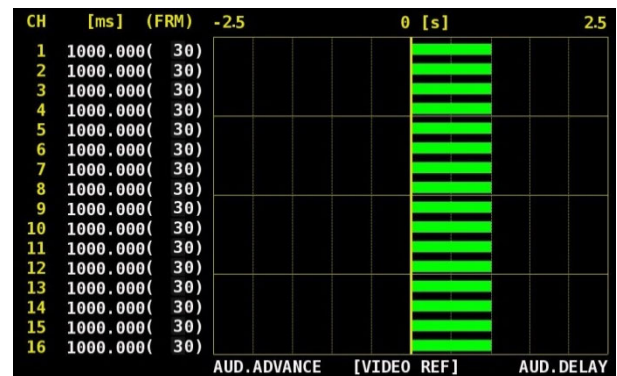
To use another lip sync pattern, set it with **F.3** (AV PHASE SETUP).

It can be set while checking the timing of the test pattern with **PIC** (PICTURE)> **F.5** (LINE SELECT)> **F.4** (AV PHASE).

This setting is not necessary when using our lip sync pattern.



Lip Sync test pattern

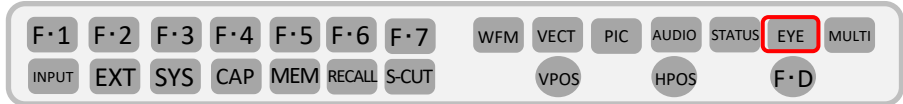


AV PHASE measurement screen

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## LV5600/LV7600 Quick Manual

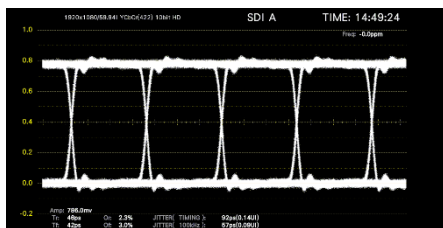
EYE  
(LV5600-SER02)



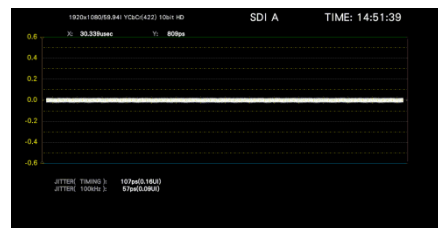
### Switching between EYE and JITTER

**EYE** > **F-1** (EYE/JITTER INTEN/CONFIG) > **F-1** (EYE/JITTER) select EYE or JITTER display

Note: If **F-1** is not (EYE / JITTER INTEN / CONFIG), press **EYE** (EYE) twice.



EYE display



JITTER display

(Note: The EYE function display of LV5600 and LV7600 is only compatible with SDI INPUT1. SDI INPUT2-4 are not supported.)

### Filter setting

**EYE** (EYE) > **F-2** (GAIN/FILTER/SWEEP) > **F-3** (FILTER)

Note: If **F-2** is not (GAIN / FILTER / SWEEP), press **EYE** (EYE) twice.

- 100kHz: Jitter at 100 kHz or higher is measured.
- 1kHz: Jitter at 1 kHz or higher is measured.
- 100Hz: Jitter at 100 Hz or higher is measured.
- 10Hz: Jitter at 10 Hz or higher is measured.
- TIMING: Timing jitter is measured. Jitter at 10 Hz or higher is measured.
- ALIGNMENT: Alignment jitter is measured. When the input signal is not SD, jitter at 100kHz and higher is measured. When the input signal is SD, jitter at 1 kHz and higher is measured.

The selected filter is applied to the upper value of the automatic jitter measurement and the EYE and JITTER display.  
(For the simultaneous display of EYE and JITTER, refer to "Change layout (general) — example2 —".)

### SINGLE display and DUAL display

**EYE** (EYE) > **F-7** (DISPLAY MODE) can switch the display between DUAL and SINGLE.

Note: If **F-7** is not (DISPLAY MODE), press **EYE** (EYE) twice



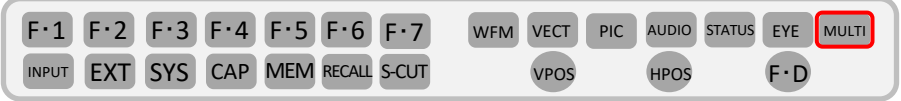
DUAL display

The upper part shows the applied filter, and the lower part shows the TIMING jitter.

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## LV5600/LV7600 Quick Manual

Layout Settings (single)



### Layout system settings

• DISPLAY setting: Set **INPUT** (INPUT) > **F.7** (DISPLAY) to SINGLE.

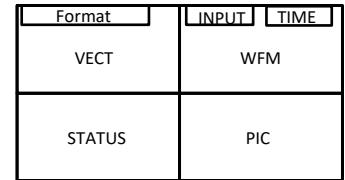
\* The user layout can be freely changed with the mouse by adding layout options (LV5600-SER26, LV7600-SER26). Please refer to P33 and after for layout changes.

Note: The layout called with this setting is the factory setting. If the layout settings have been changed individually, the corresponding layout will be called.

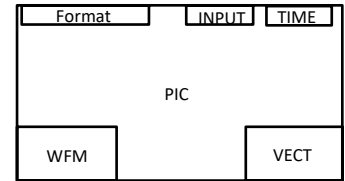
### How to use the registered layout settings

Press **MULTI** and **F.1** to select LAYOUT USER 1-6.

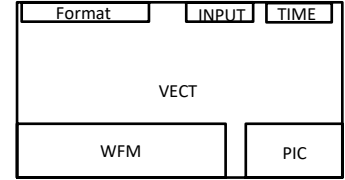
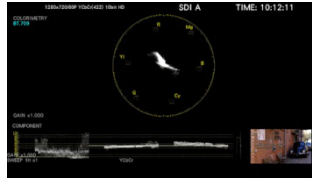
USER 1



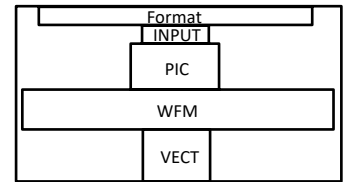
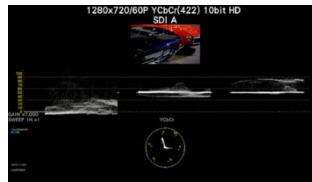
USER 2



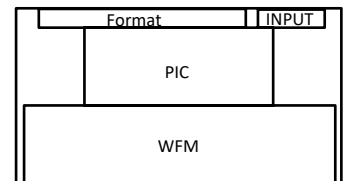
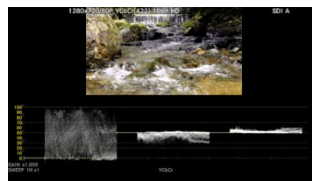
USER 3



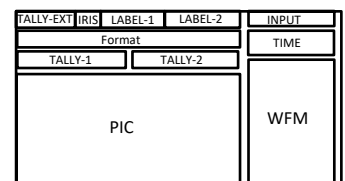
USER 4



USER 5



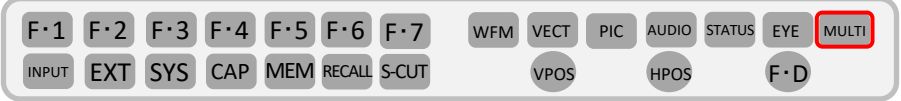
USER 6



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## LV5600/LV7600 Quick Manual

### Layout Settings (SIMUL)



#### Layout system settings

- DISPLAY setting: Set **INPUT** (INPUT)> **F.7** (DISPLAY) to SIMUL.
- When the System setting is SD / HD / 3G-A / 3G-B-DL and **INPUT** > **F.7** (DISPLAY) is SIMUL setting, The layout changes depending on ON / OFF of **INPUT** > **F.1** to **F.4** (A to D).

#### How to use the registered layout settings

Press **MULTI** and **F.1** to select LAYOUT USER 1-6.

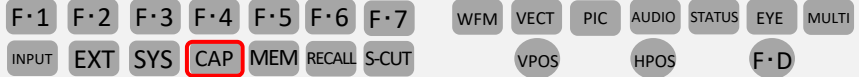
Example	1 INPUT(A)	2 INPUT(A,B)	3 INPUT(A,B,C)	4 INPUT(A,B,C,D)
USER 1				
USER 2				
USER 3				
USER 4				
USER 5				
USER 6				



# Leader

## LV5600/LV7600 Quick Manual

### Screen Capture



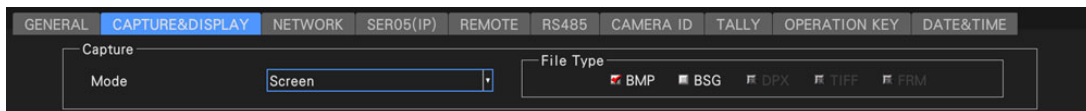
#### 1. Screen capture settings

Change the display tab to **CAPTURE&DISPLAY** with **SYS** (SYSTEM)> **F.2** (SYSTEM SETUP)> **F.3** (NEXT TAB).

Use **F.D** (FUNCTION DIAL) to set Capture Mode to "Screen" and select the file type to save to USB memory from FILE TYPE "BMP", "BSG". At the end of the setting, press **F.1** (COMPLETE) to confirm.

BMP : The saved data can be confirmed on the PC.

BSG : The saved data can be read and displayed on the LV5600 and LV7600 main units.




(PCAP is a mode to capture IP packet when LV5600SER05 is installed.)

#### 2. Perform screen capture

- Display the screen to be captured.
- Press **CAP** (CAPTURE). (When you press **CAP**, the display screen is captured in the internal memory.)
- Select the following with **F.3** (DISPLAY).
  - REAL: Displays the current input signal
  - HOLD: View the captured data. Video waveforms, vectors and eye patterns are displayed in cyan.
  - BOTH: The brightness of the current input signal and the capture data is halved, and they are displayed in layers.

#### 3. Save to USB memory

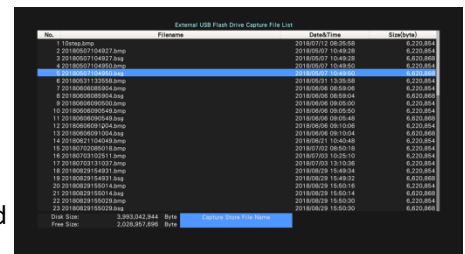
- Insert the USB memory. The USB memory is recognized and  is displayed in the upper right of the screen.
- Press **F.6** (USB MEMORY)> **F.3** (STORE) to save to a USB memory.

Screen capture data is saved to the following locations.

- ↳ USB memory device
  - ↳ LV5600\_USER or LV7600\_USER
    - ↳ BMP
      - ↳ yyyyymmddhhmmss.bmp
      - ↳ yyyyymmddhhmmss.bsg

#### 4. Capture data display of USB memory

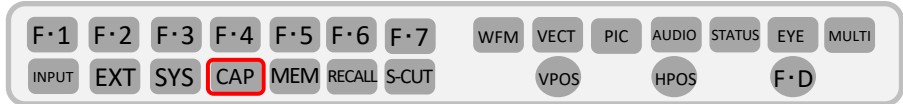
- Captured data saved in USB memory in BSG format can be returned to the main unit for display, and can be overlaid with the current input signal.
- Connect a USB memory to the main unit, and press **CAP** (CAPTURE) > **F.6** (USB MEMORY)> **F.5** (RECALL).
- Select a BSG format file with **F.D** (FUNCTION DIAL) from the displayed file list and press **F.1** (RECALL) to display the captured screen.



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## LV5600/LV7600 Quick Manual

### Frame Capture



#### 1 Frame capture settings

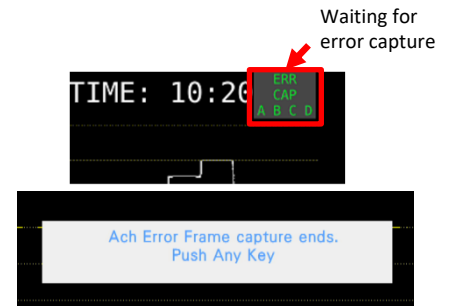
- Change the display tab to **CAPTURE&DISPLAY** with **SYS** (SYSTEM)> **F-2** (SYSTEM SETUP)> **F-3** (NEXT TAB).
- Use **F-D** (FUNCTION DIAL) to select Capture Mode as Video Frame (SDI Code Value) or Video Frame (Converted). Check the FILE TYPE (DPX, TIFF, FRM) and Transport Frame Number (1 Frame, 16 Frame) required to save to the USB memory and press **F-1** (COMPLETE) to confirm at the end of the setting.
  - Video Frame (SDI Code Value): Capture frame data.
  - Video Frame (Converted): Capture frame data. When saving in DPX or TIFF format, the black level is offset to 0.
  - DPX: Save only the picture part in 10-bit DPX format.
  - TIF: Save only the picture part in TIFF format.
  - FRM: Capture 1 frame data including blanking period.
  - 1 Frame: Saves one frame of data.
  - 16 Frames: Saves 16 consecutive frames of data.

#### 2. Perform frame captures manually

- **CAP** CAP (CAPTURE)> **F-2** (REFRESH) captures 1 frame or 16 frames of data into the main unit.

#### 3. Perform frame capture on error


- When performing error capture, set **CAP** (CAPTURE)> **F-1** (TRIGGER) to ERROR and start with **F-2** (REFRESH).
- The capture standby display appears on the upper right of the screen.
- When an error occurs and it is captured, the message "Xch Error Frame capture ends. Push Any Key" appears.



#### 4. Display frame capture

- Select the following in **CAP** (CAPTURE)> **F-3** (DISPLAY).
  - REAL : Displays the current input signal.
  - REPLAY : Display the capture data. It is displayed continuously at 16 frames.
  - HOLD : Display the capture data. Video signal waveform, vector, and eye pattern are displayed in cyan.
  - BOTH : The brightness of the current input signal and the capture data is halved, and they are displayed in layers.

#### 5. Save to USB memory

- Insert the USB memory. The USB memory is recognized and  is displayed in the upper right of the screen. Press **F-6** (USB MEMORY)> **F-3** (STORE) to save to a USB memory.

#### 6. Capture data display of USB memory

- The capture data saved in the FRM format on the USB memory can be re-displayed on the main unit and displayed over the current input signal.
  - Connect a USB memory to the main unit, and press **CAP** (CAPTURE)> **F-6** (USB MEMORY)> **F-5** (RECALL).
  - Select a BSG format file with **F-D** (FUNCTION DIAL) from the displayed file list and press **F-1** (RECALL) to display the captured screen.

#### 7. Capture file display

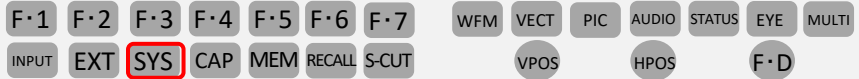
- FRM data can be displayed with the Windows PC software Frame Capture Viewer on the home page.
- It is also possible to identify the error location

# Leader

## LV5600/LV7600 Quick Manual

### Signal Out-put

(LV5600-SER24,LV7600-SER24)



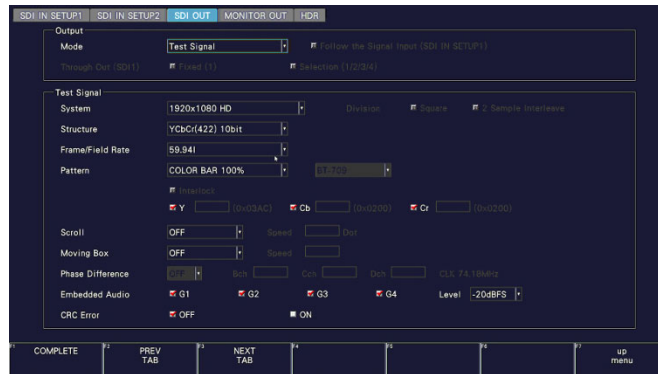
**SYS** > **F.1** (SIGNAL IN OUT)

**F.2** (PREV TAB), **F.3** (NEXT TAB) > Choose **SDI OUT**

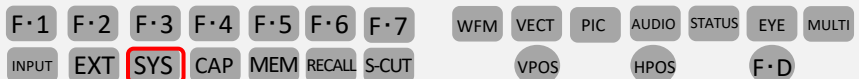
Use **F.D** > Output Mode > Mode: Test Signal

Set the Test Signal item using **F.D** according to the output signal.

At the end of the setting, press **F.1** (COMPLETE) to confirm.



### Initialize Setting



**SYS** > **F.7** (INITIALIZE)

- **F.1** (PARAM INIT YES): Other than the setting below are initialized
  - the setting of network (NETWORK type)
  - the setting of remote(REMOTE type)
  - the setting of RS-422/485(RS485 type)
  - the setting of camera ID (Local ID Setting is not including) (CAMERA ID type)
  - the setting of date & time (DATE&TIME type)
  - the content of pre-set
  - Layout setting of measurement screen
- **F.2** (LAYOUT INIT YES): Only the layout setting will be initialized
- **F.3** (OPERATE INIT YES): Only the operation key will be initialized
- **F.4** (ALL INIT YES): PARAM INIT and LAYOUT INIT will be initialized at the same time

Factory setting : Performs initialization including PARAM INIT (excluding date and time settings).

Turn on the power while pressing **VPOS** and **HPOS** , and execute with **F.3** (SRAM / FLASH INIT YES).

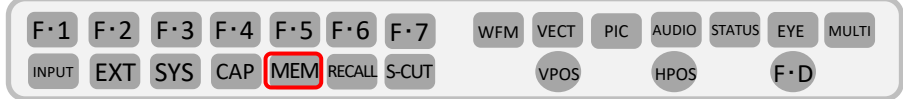
How to check the version?

**SYS** > **F.3** (SYSTEM INFO)

# Leader

## LV5600/LV7600 Quick Manual

### Preset Register / Delete



This is a function to register up to 60 panel settings.

All items except Ethernet, remote, RS-422/485, camera ID, date setting are registered.

To register / delete settings, press **MEM**. Use **F.D** to select the preset number to register / delete.

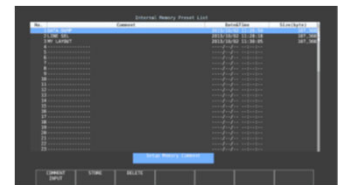
To register, press **F.2** (STORE) on the registration screen. (Delete with **F.3** (DELETE).)

Enter the registered file name by pressing **F.1** (COMMENT INPUT).

The input method is as follows, use function key **F.D** and or mouse to control.

- F.1** (CLEAR ALL) : Delete all the word
- F.2** (DELETE) : Delete the character on the cursor
- F.3** (INSERT) : Insert the selected character at the cursor position
- F.4** (<=) : Move the cursor to the left
- F.5** (=>) : Move the cursor to the right
- F.6** (CHAR SET) : Typing
- F.D** : Turn and select characters, press and enter letters.

In the case of the USB mouse, enter the pointer by left clicking in accordance with the character you want to input.



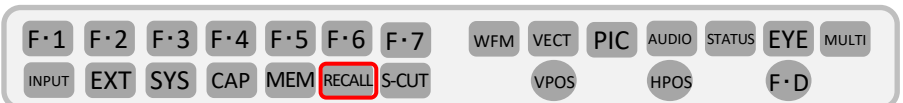
Pre-set registration screen



Pre-set comment input screen

Next, press **F.7** (up menu) > **F.D** to choose pre-set number > **F.2** (STORE) > finish

### Pre set recall



The preset call is called from the preset registered preset number.

Press **RECALL**, you can check the pre-set number from function menu.

Use **F.7** or **F.D** > check more pre set

No.1 DATA DUM P	No.2 LINE SEL	No.3 MY LAYOU T	No.4	No.5	No.6	more
<b>F.1</b>	<b>F.2</b>	<b>F.3</b>	<b>F.4</b>	<b>F.5</b>	<b>F.6</b>	<b>F.7</b>

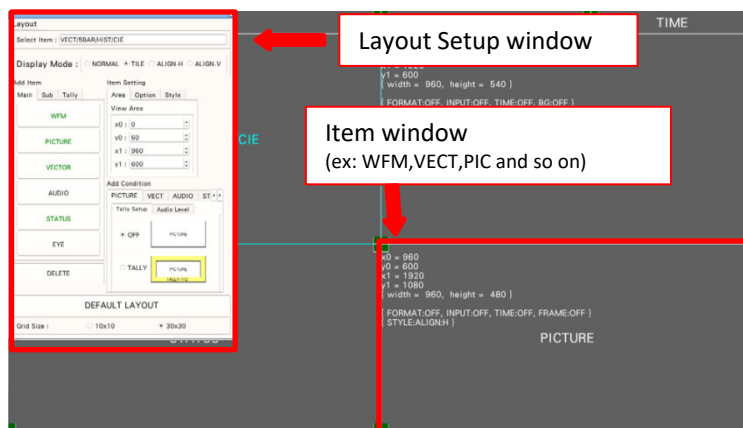
# Leader

## LV5600/LV7600 Quick Manual

### Change Layout – basic - (LV5600-SER26)

You can change the layout from each of the measurement screen (WFM, VECT, PIC, AUDIO, STATUS, EYE) (only one), and MULTI measurement screen (USER1~6)

Use mouse from the front panel to set up > Display the screen you want to change the layout. From WFM, VECT, PIC, MULTI (USER1) > Right-click the mouse on the screen > Layout



### Layout procedure

Here, three basic examples and application examples are introduced.

#### Basic example P.38

Procedure for changing the layout of MULTI (USER1) (adding audio items, etc.)

- ① Display of layout screen
- ② Item change from TIME to DATE in the upper right of the screen
- ③ Overlay the vector waveform on the picture
- ④ Add audio item
- ⑤ Add TIME to STATUS item
- ⑥ Confirm changes

#### Application example P.40

Procedure to change the layout of MULTI (USER1) (simultaneous display of VECT and CIE charts)

- ① Display of layout screen
- ② Delete all items on the screen
- ③ Add VECT item
- ④ Add CIE item
- ⑤ Confirm changes

#### Application example P.42

Procedure for changing the EYE layout (simultaneous display of EYE measurement and Jitter measurement)

- ① Display of layout screen
- ② Delete EYE / JITTER display
- ③ Select / add EYE and Jitter items
- ④ Format, Input, Time item display
- ⑤ Confirm changes

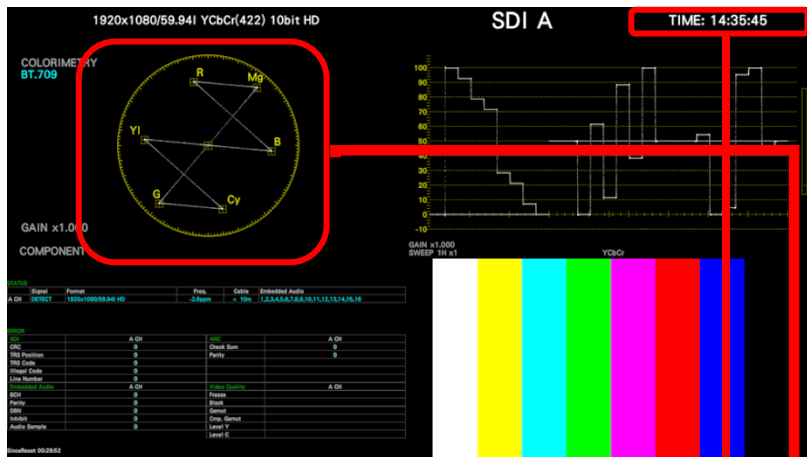
# Leader

## LV5600/LV7600 Quick Manual

### Change Layout (General) - example - (LV5600-SER26,LV7600-SER26)

(example) change the layout from MULTI (USER1) (add audio item)

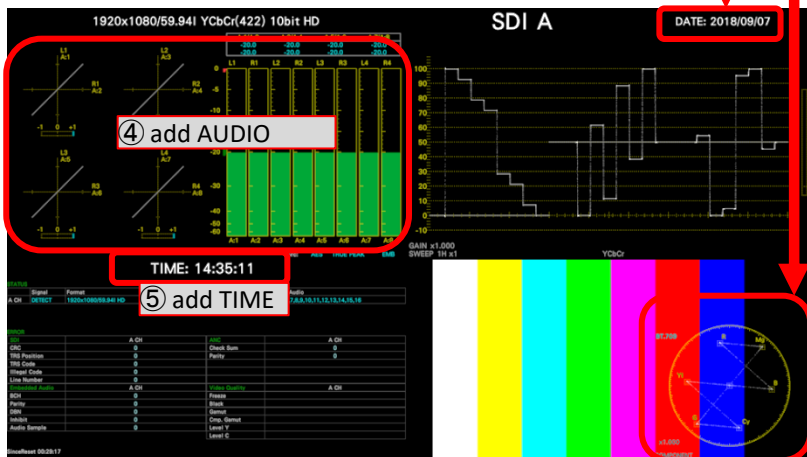
- ① Show the layout screen
- ② Item change from TIME to DATE in the upper right of the screen
- ③ Place vector display on picture display
- ④ Add audio measurements display
- ⑤ Add TIME to STATUS item display
- ⑥ Complete



Before

② TIME → DATE

③ move VECTOR



After

④ add AUDIO

⑤ add TIME

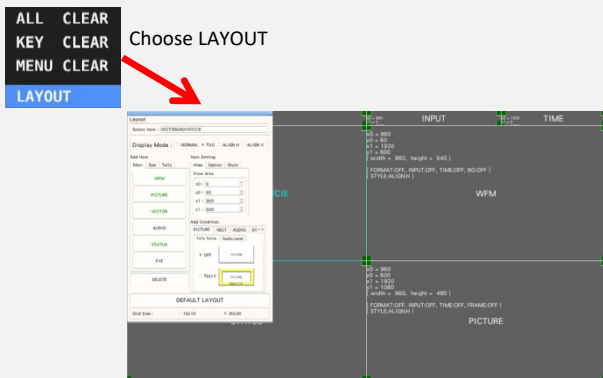
# Leader

## LV5600/LV7600 Quick Manual

Change Layout (process) - example - (LV5600-SER26,LV7600-SER26)

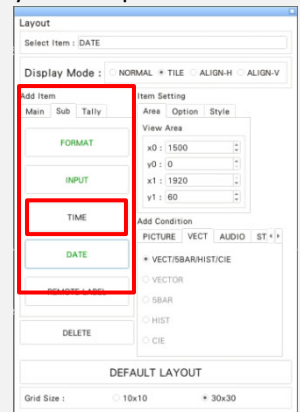
### ① Display of layout

- Long Press **MULTI** > Press **F-1** (LAYOUT user1)  
(There are six layouts of USER 1 to USER 6 for multi display)
- Select LAYOUT of the window displayed by right click on the measurement screen and display the layout screen



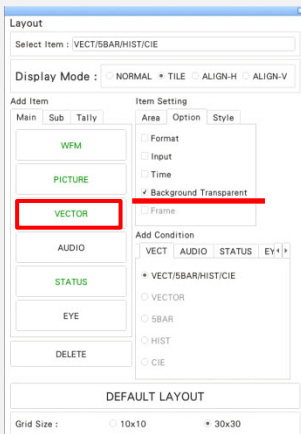
### ② Change TIME at the upper right of the screen to DATE

- Click the TIME item in the upper right of the screen and select it.  
(The color and letters of the TIME item frame change to light blue, Select item in Layout Setup window to TIME.)
- Layout Setup window > DELETE key > delete TIME
- Add Item > Click on the DATE item in the tab.
- Change the size of DATE > Use the mouse to decide the place.



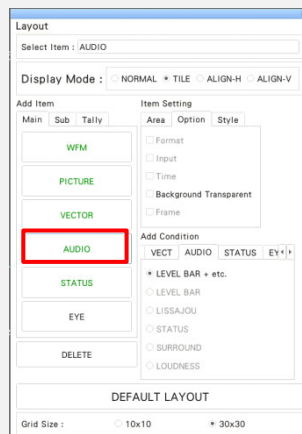
### ③ Place vector waveform on picture

- Select the VECT item in the Main Item tab of the Add Item and click the Click Background Transparent.
- Place the VECT item on the picture and resize it.



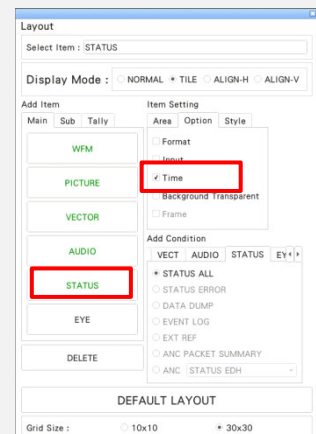
### ④ Add AUDIO

- Click the AUDIO from Main tab, change the place



### ⑤ Add TIME into status

- Click STATUS, click Time from Option (Option tab Time cannot change the display place, size)



### ⑥ Check

Right-click on the layout screen and click SAVE.

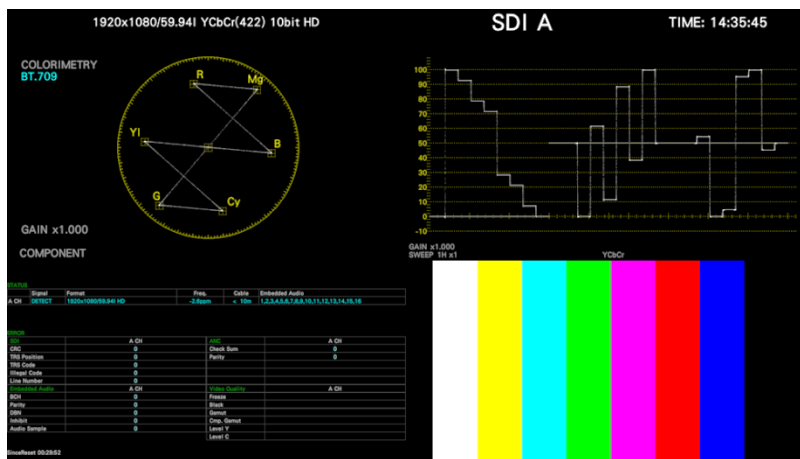
# Leader

## LV5600/LV7600 Quick Manual

### Change layout (general) - example1 - (LV5600-SER26,LV7600SER26)

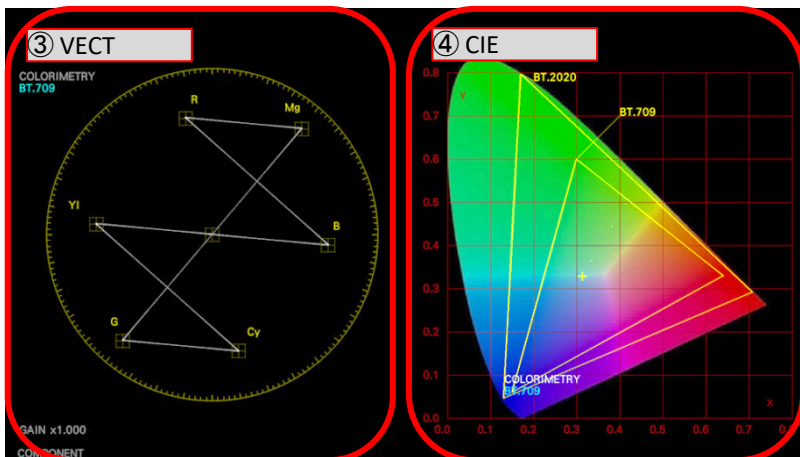
(example) MULTI(USER1) How to change the layout? (Show VECT and CIE chart at the same time)

- ① Show the display
- ② Delete all the items
- ③ Add VECT item
- ④ Add CIE item
- ⑤ Finish



Before

MULTI (USER1) Delete all the items, then add VECT and CIE Chart.



After



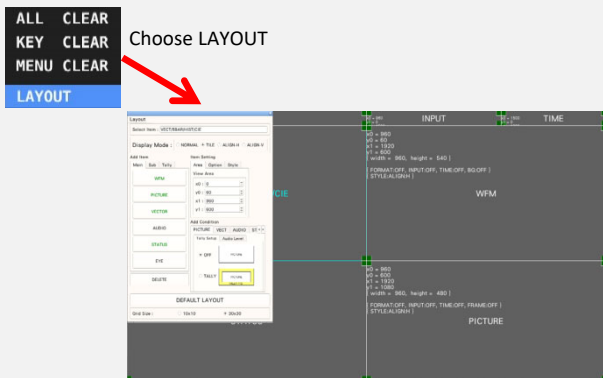
# Leader

## LV5600/LV7600 Quick Manual

Change layout (process) - example 1 - (LV5600-SER26, LV7600-SER26)

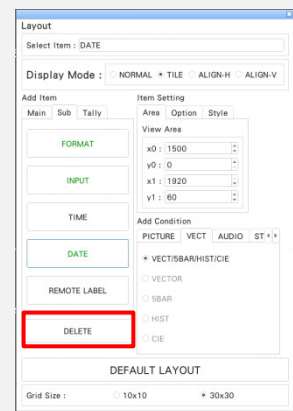
### ① Show the layout screen

- a. Press **MULTI** > Choose **USER 1 F·1** (LAYOUT SELECT)  
(There are six multi displays from USER 1~USER 6)
- B. Right click on the measurement screen to display the window, select **LAYOUT** and display the layout screen.



### ② Delete all items

- a. Click the **DELETE** item at the bottom left of the screen. The item displayed will disappear each time you click it. Click a few times to delete all displayed items.



### ③ Add VECT

- a. Add Condition > **VECT** tab > choose **VECT**
- b. Add Item > **Main** tab > click **VECT** item
- c. Move **VECT** item to picture > change size



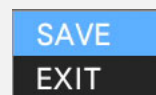
### ④ Add CIE chart

- a. Add Condition > **VECT** tab > choose **CIE**
- b. Add Item > **Main** tab > click **VECT** item
- c. Move **CIE** item to picture > change size



### ⑤ Finish

- a. Right-click on the layout screen > **SAVE**



#### PS: Color Triangle setting

- a. Press **VECT**
- b. Press **F1]VECT INTEN/CONFIG**
- c. "F1" **VECT DISPLAY** to **CIE DIAGRAM** to set up
- d. Press **F7]up** menu, then press **F2]CIE DIAGRAM SCALE**
- e. **F2 ]TRIANGLE1**·**F3]TRIANGLE2** to **OFF/ON**

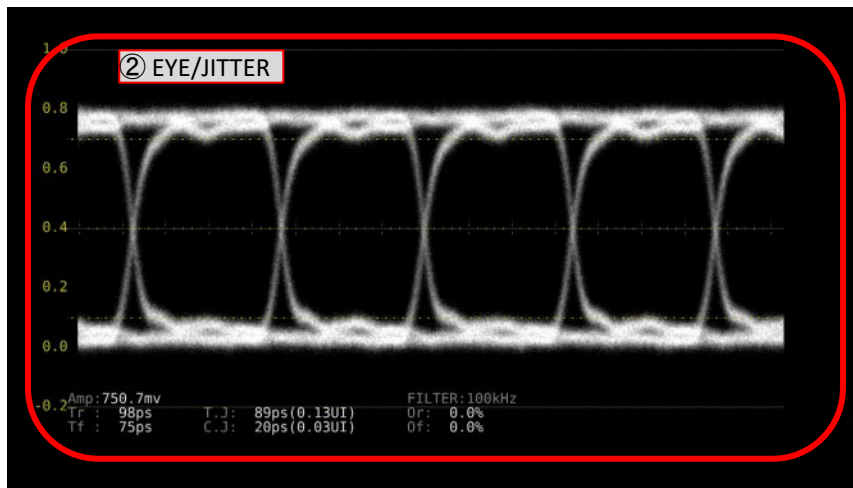
# Leader

## LV5600/LV7600 Quick Manual

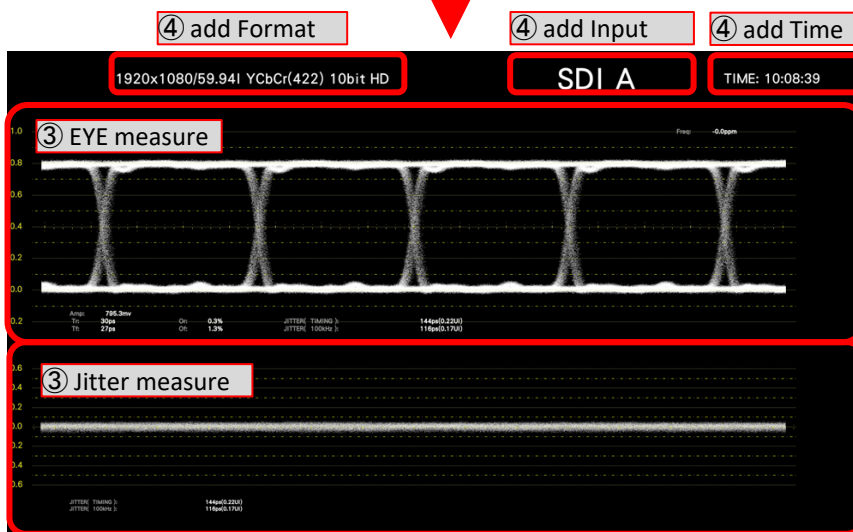
Change layout (general) - example2 - (LV5600-SER26,LV7600-SER26)

(example) How to change EYE layout display? (EYE display and Jitter at the same time)

- ① Layout screen display
- ② Delete EYE/JITTER
- ③ EYE or Jitter item choose / add
- ④ Show Format, Input, Time item
- ⑤ Finish



Before



After

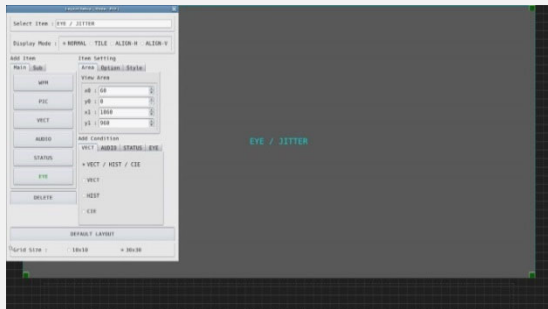
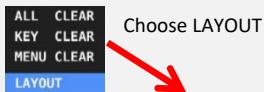
# Leader

## LV5600/LV7600 Quick Manual

Change layout (Process) - example 2- (LV5600-SER26, LV7600-SER26)

### ① Layout screen display

- Press **EYE** to show the screen
- Select **LAYOUT** of the window displayed by right click on the measurement screen and display the layout screen



### ② Delete EYE/JITTER item

- Click the **TIME** item in the upper right of the screen and select it. (The color and letters of the **TIME** item frame change to light blue, Select item in Layout Setup window to **TIME**.)
- Layout Setup window > Use **DELETE** key to delete **EYE/JITTER**



### ③ choose/add EYE and JITTER item

- Add Condition > **EYE** tab > **EYE** > Main > Press **EYE** > Add **EYE** item
- You can change item and size.



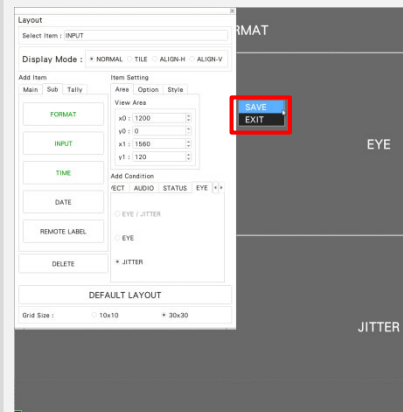
### ④ Format, Input, Time item display

- Add Item > Sub > add **FORMAT**, **INPUT**, **TIME**
- Every items can change the place.



### ⑤ Finish

- Right click on the layout screen, **SAVE**.



### PS: Default setting

By pressing **DEFAULT LAYOUT** at the bottom of the setting in the Layout Setup window, you will return to the default setting.

# Leader

## LV5600/LV7600 Quick Manual

### Change Enhanced layout - basic - (LV5600-SER26,LV7600-SER26)

Enhanced layout is an extended function that can simultaneously lay-out display measurement screens of up to 4 ch in one screen. You need mouse to use this function.

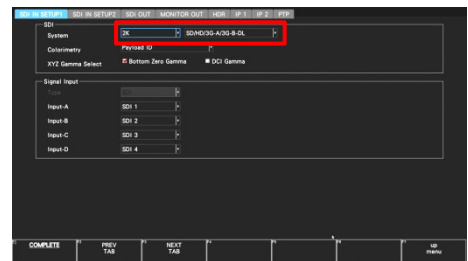
#### Basic settings

Enhanced layout display

1. **SYS** System setting

**F·1** (SIGNAL IN OUT) > **SDI IN SETUP1**

SDI SYSTEM: 2K Set up SD/HD/3G-A/3G-B-BL



SDI IN SETUP1 tab

2. **INPUT** INPUT Setting

**F·7** (DISPLAY): SIMUL

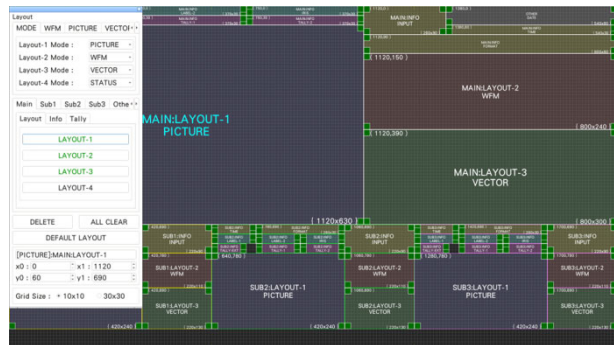
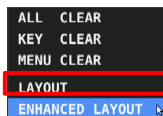
**F·1** **F·2** **F·3** **F·4** (A~D) : Turn on the channel you want to display.

3. **MULTI** Multi display

Press **MULTI**

4. Enhanced layout setting

Use **USB** Mouse and right click,  
Choose **ENHANCED LAYOUT**



Enhanced layout screen

Right click and select **SAVE**  
Enhanced layout of measurement screen  
It shows.



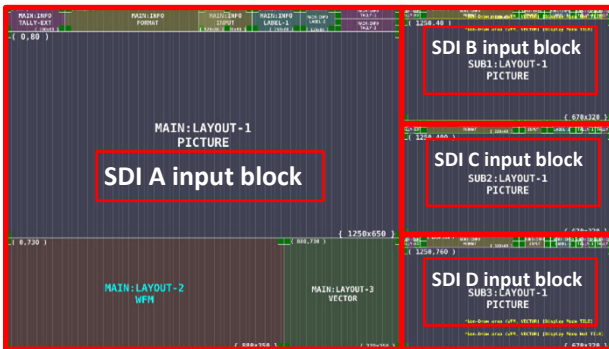
Enhanced layout measurement screen

# Leader

## LV5600/LV7600 Quick Manual

Enhanced layout - General - (LV5600-SER26, LV7600-SER26)

With Enhanced Layout display in Basic setting, Enhanced layout is cleared all at once  
An example procedure for setting the layout as below.



Enhanced layout screen



Enhanced layout measurement screen

Follow these steps as below

1. Clear all the screen of enhanced layout and all the settings
2. SDI A input block setting
  - ① SDI A input setting for PICTURE, WFM, VECTOR
  - ② SDI A input setting for FORMAT, INPUT, TALLY-1, TALLY-2, TALLY-EXT, LABEL-1, LABEL-2
3. SDI B~SDI D block setting
  - ① SDI A input for PICTURE
  - ② SDI A input for FORMAT, INPUT, TALLY-1, TALLY-2, TALLY-EXT, LABEL-1
4. Audio meter setting
5. Final Check→Finish

# Leader

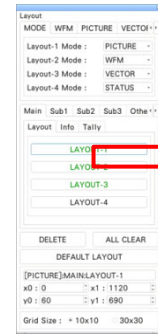
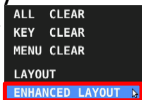
## LV5600/LV7600 Quick Manual

Change enhanced layout – process - (LV5600-SER26,LV7600-SER26)

1. Show the enhanced screen and clean all setting

Use mouse to right click > Layout screen > choose Enhanced layout screen

> Choose Enhanced layout >



Next, delete parameter on enhanced layout > ALL CLEAR

2. SDI A input block setting

SDI A input block setting is from Main item.

Each place of item and size as below.

① SDI A input for PICTURE, WFM, VECTOR item setting

**MODE** > Layout-1 Mode: PICTURE  
> Layout-2 Mode: WFM  
> Layout-3 Mode: VECTOR

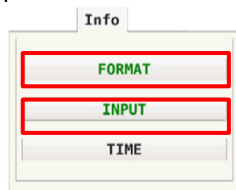
**Main** > **Layout** > click LAYOUT-1 > move the window to the PICTURE place  
LAYOUT-2 (WFM), LAYOUT-3(VECTOR) as well



② Item setting for FORMAT, INPUT, TALLY-1, TALLY-2, TALLY-EXT, LABEL-1, LABEL-2 On SDI A input

**Main** > **Info** > click FORMAT, INPUT

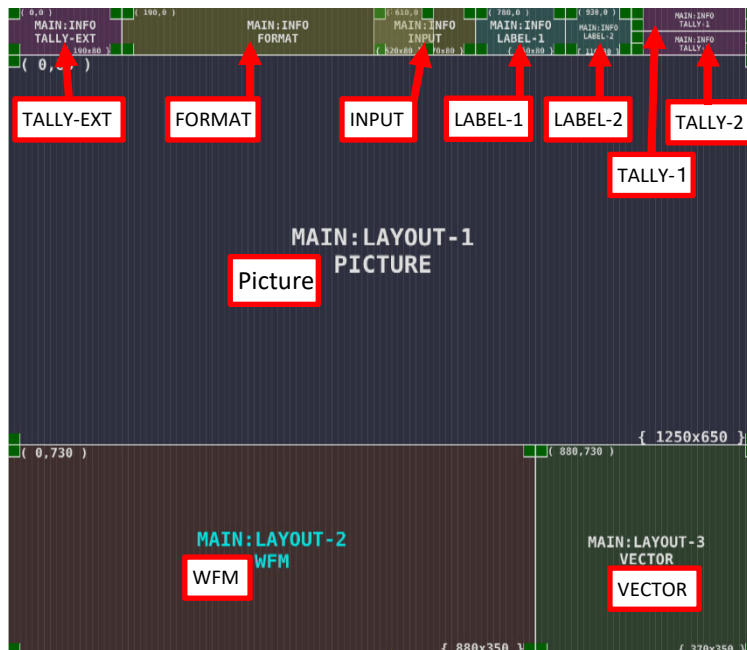
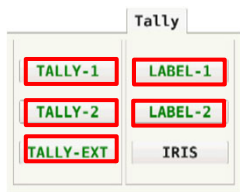
> Setting > Finish



**Main** > **Tally** > click TALLY-1, TALLY-2,

TALLY-EXT, LABEL-1, LABEL-2,

> Setting > Finish



SDI A Input Block

# Leader

## LV5600/LV7600 Quick Manual

### Change enhanced layout - process - (LV5600-SER26,LV7600-SER26)

#### 3. SDI B~SDI D Input Block Setting

SDI B~SDI D Input block setting > Sub item > Setting  
Each item and size are as follow.

##### ① SDI B~SDI input PICTURE item setting

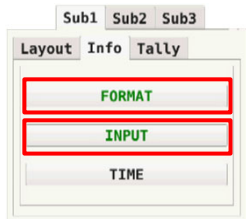
- Sub1 > Layout > LAYOUT-1 (SDI B Input PICTURE)
- Sub2 > Layout > LAYOUT-1 (SDI C Input PICTURE)
- Sub3 > Layout > LAYOUT-1 (SDI D Input PICTURE)

Click > SDI B~SDI D input > PICTURE > Setting

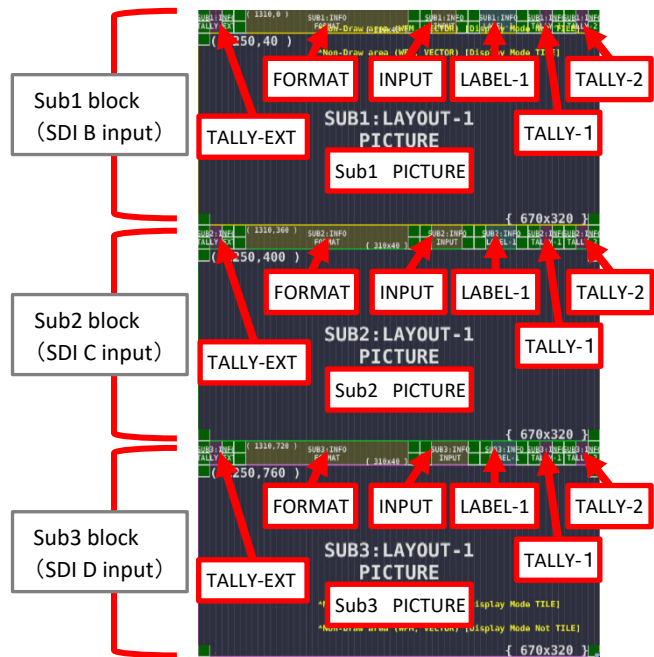


##### ② SDI B~SDI D input, TALLY-1, TALLY-2, TALLY-EXT, LABEL-1 item setting

Sub1 > Info  
FORMAT, INPUT > click > Setting



Sub1 > Tally  
> click TALLY-1, TALLY-2, TALLY-EXT, LABEL-1 > Setting

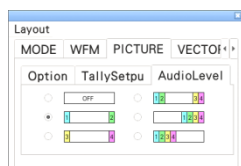


SDI B~SDI D Input block

#### 4. Audio level meter setting

Settings to display the audio level bars on both sides of the picture display

PICTURE > Audio Level  
> Choose the item which you want to check



#### 5. Check Enhanced Layout of setting

After setting > Save > Use mouse > Right Click  
> COMPLETE > Finish

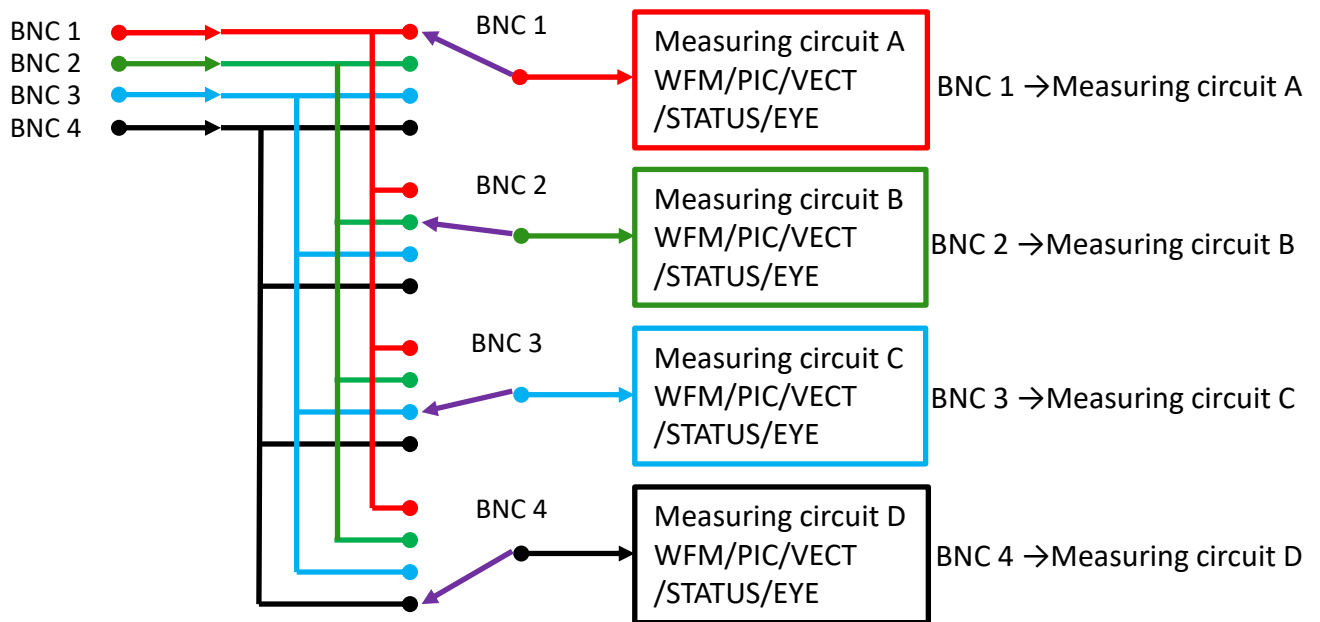


# Leader

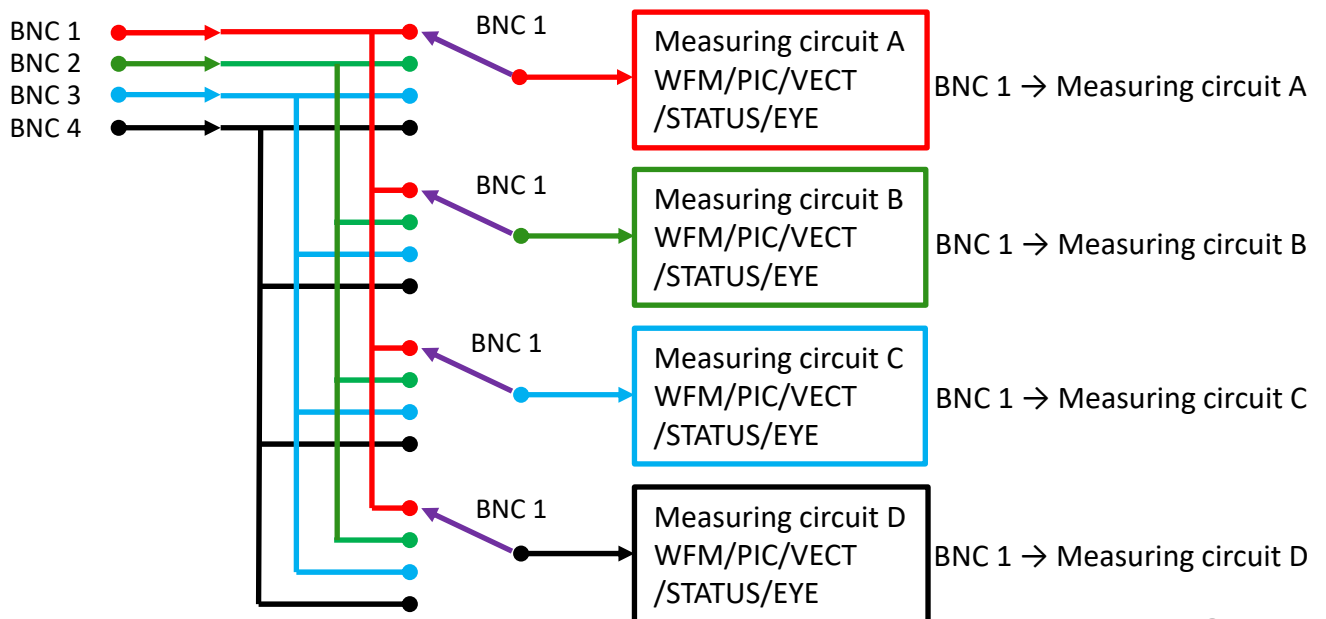
## LV5600/LV7600 Quick Manual

### Display Assignment (LV5600-SER26, LV7600-SER26)

For display assignment, inputs 1 to 4 (BNC) can be freely assigned to measurement circuits A to D.



Default setting: BNC1 to BNC4 are display assigned to circuits A to D.



Input BNC1 is display assigned to circuits A-D



# Leader

## LV5600/LV7600 Quick Manual

### Display Assignment – basic - (LV5600-SER26,LV7600-SER26)

In display assignment display, one input signal can be assigned to multiple display channels no matter SDI signal or IP signal.

Notice: LV5600-SER26 is required

SDI System must be SD/HD/3G-A/3G-B-DL

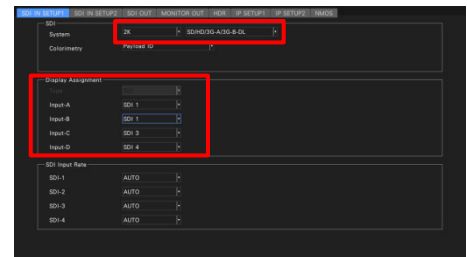
For IP Stream, SER05 10G IP INPUT is necessary

#### Basic setting

##### 1. **SYS** System setting

**F·1** (SIGNAL IN OUT) > **SDI IN SETUP1**

- SDI SYSTEM: Setting for 2K SD/HD/3G-A/3G-B-BL
- Display Assignment: Setting (SDI1~4, IP Stream1~4) for display channel (Input-A~D)



SDI IN SETUP1 tab

##### 2. **INPUT** INPUT setting

**F·7** (DISPLAY): SIMUL

**F·1** **F·2** **F·3** **F·4** (A~D): turn on the channel which you want to display

**F·6** (OPERATE CH MODE): COMMON      Test setting is for all channels  
INDIVIDUAL      Test setting is for independent channel

### How to set up display assignment?

There are 2 examples.

#### 1. WFM(P.34)

Show WFM 2 displays in INPUT1 (YCbCr display and composite display )at the same time

- ① System setting
- ② INPUT setting
- ③ WFM setting

#### 2. PIC(P.35)

Show PIC 2 displays in INPUT1 (Real display and HDR ZONE (HLG) display)at the same time

- ① System setting
- ② INPUT setting
- ③ PICTURE setting

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## LV5600/LV7600 Quick Manual

### Display Assignment - WFM - (LV5600-SER26,LV7600-SER26)

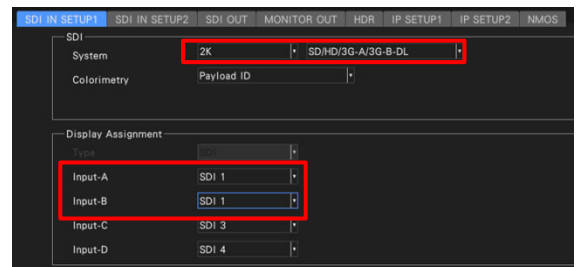
#### Setting overview

1. SYSTEM Setting > display channel Input-A, Input-B > INPUT1
2. INPUT Setting > display channel Input-A, Input-B > 2 display screen
3. WFM Setting > display channel Input-A > COLOR MATRIX > COMPOSITE

#### How to setting?

##### ① System Setting

- SYS** > **F·1** (SIGNAL IN OUT) > **SDI IN SETUP1**
- SDI System:2K SD/HD/3G-A/3G-B-DL
  - Display Assignment: Input-A (SDI 1), Input-B (SDI 2)
- Use **F·D** to setting > **F·1** (COMPLETE) > Finish



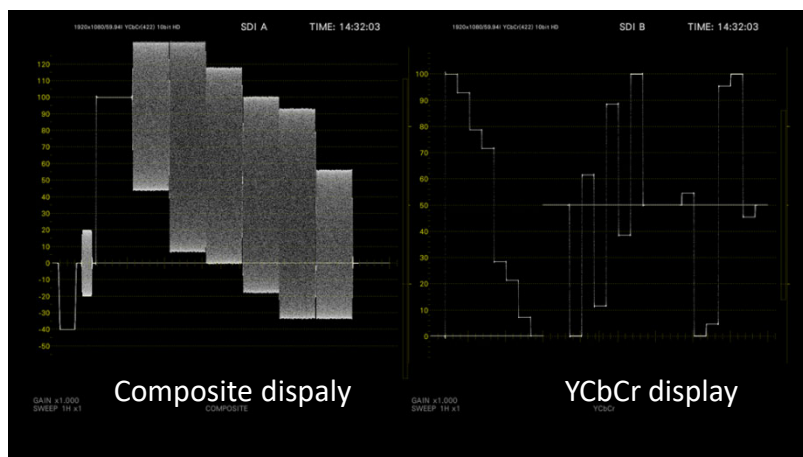
SDI IN SETUP1 tab

##### ② INPUT Setting

- INPUT** > **F·7** (DISPLAY): SIMUL
- F·1** (A): ON, **F·2** (B): ON, **F·3** (C) : OFF, **F·4** (D): OFF
- F·6** (OPERATE CH MODE): INDIVIDUAL (Setting it to INDIVIDUAL allows you to make settings for each channel. )

##### ③ WFM Setting

- WFM** > **F·7** (COLOR SYSTEM)
- F·6** (INPUT SELECT): A
- F·1** (COLOR MATRIX): COMPOSITE



The same signal of INPUT 1 is displayed on two screens of SDI A (Composite) and SDI B (YCbCr)

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## LV5600/LV7600 Quick Manual

### Display Assignment - PIC - (LV5600-SER23/26, LV7600-SER23/26)

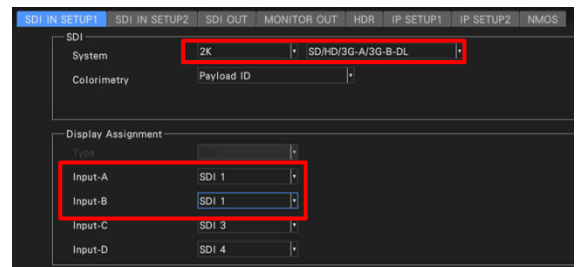
#### Setting overview

1. SYSTEM Setting > display channel Input-A, Input-B > INPUT1
2. SYSTEM Setting > display Input-A > HDR Mode > HLG setting
3. INPUT Setting > display channel Input-A, Input-B > 2 display screen
4. PIC Setting > display channel Input-A > HDR ZONE display > ON

#### How to setting?

##### ① System Setting

- SYS** > **F·1** (SIGNAL IN OUT) > **SDI IN SETUP1**
- SDI System: 2K SD/HD/3G-A/3G-B-DL
  - Display Assignment: Input-A (SDI 1), Input-B (SDI 2)
- SYS** > **F·1** (SIGNAL IN OUT) > **HDR**
- Input-A HDR Mode: HLG
- Use **F·D** to setting > **F·1** (COMPLETE) > Finish



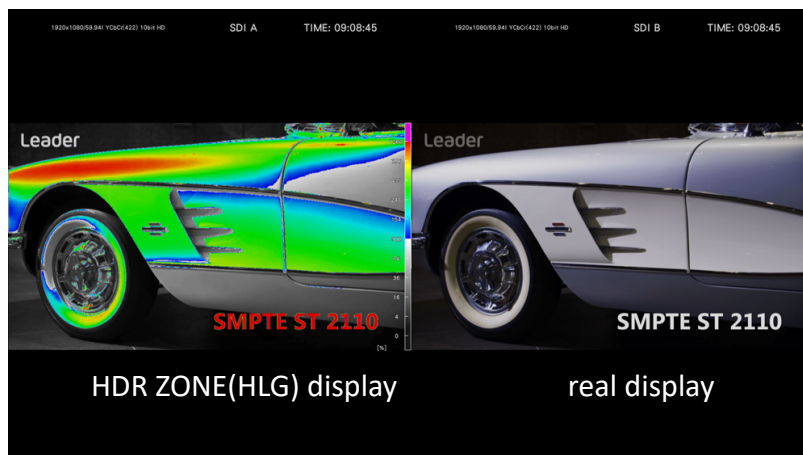
SDI IN SETUP1 Tab

##### ② INPUT Setting

- INPUT** > **F·7** (DISPLAY): SIMUL
- F·1** (A): ON, **F·2** (B): ON, **F·3** (C): OFF, **F·4** (D): OFF
- F·6** (OPERATE CH MODE) : INDIVIDUAL (Setting it to INDIVIDUAL allows you to make settings for each channel.)

#### Setting

- PIC** > **F·6** (INPUT SELECT): A
- F·2** (CINELITE/HDR)
  - F·1** (CINELITE DISPLAY): CINEZONE
  - F·5** (HDR ZONE): ON



The same signal of INPUT 1 is displayed on two screens of SDI A (HDR ZONE (HLG)) and SDI B (real)

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## LV5600/LV7600 Quick Manual

### Operation Key

With the operation keys, frequently used items (waveform format, gain and vector gain, etc.) can be easily changed with the soft keys (icons) using the mouse or touch panel.

#### • Operation key setting

- It is set on **GENERAL** of **SYS** > **F·2** (SYSTEM SETUP)
- Set the Auto Off function of the On-screen Menu to Off.
- Turn on the Operation Key.
- When using the touch panel, select Enable of Touch Panel.
- Confirm the setting with **F·1** (COMPLETE).

#### • Operation key operation

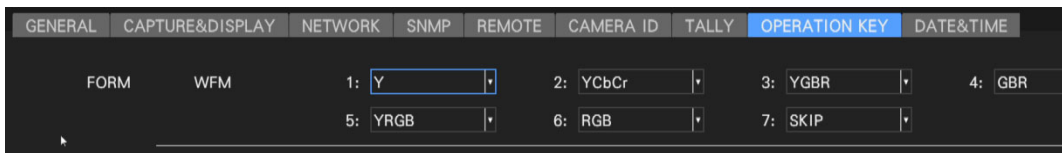
- Press **WFM** (WAVEFORM) to display the waveform.
- The operation key is displayed at the bottom right of the screen. Click it with the mouse or touch panel.



- FORM:** Waveform and vector format changes
- OVLAY:** Change waveform overlay settings
- FILTER:** Change waveform filter settings
- GAIN:** Waveform and vector gain change
- GAIN-MAG:** Waveform and vector scaling
- SWEEP:** Change waveform sweep
- SWEEP-MAG:** Set the horizontal magnification
- SHORT CUT:** Various function assignments such as cursor and capture.

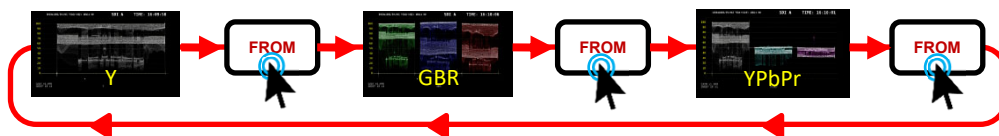
#### • Operation key setting

- Change the display tab to **OPERATION KEY** with **SYS** > **F·2** (SYSTEM SETUP) > **F·3** (NEXT TAB).
- Change each item and press **F·1** (COMPLETE).
- Select SKIP to skip an item.



#### Example of using operation keys

- Ex: FROM WFM
- No.1: Y
- No.2: GBR
- No.3: YPbPr
- No.4~7 setup: SKIP



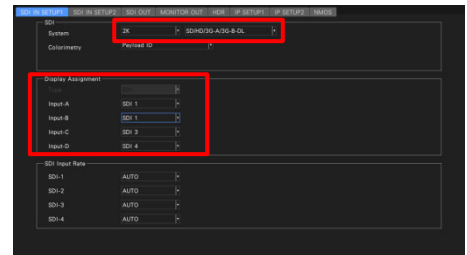
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## LV5600/LV7600 Quick Manual

IP No.1 (LV5600-SER05, LV7600-SER05)

### 1. Use display assignment to switch from SDI signal to IP signal.

- SYS** (SYSTEM) > **F·1** (SIGNAL IN OUT) > **SDI IN SETUP1**
- SDI SYSTEM: Set to 2K, SD / HD / 3G-A / 3G-B-BL.
  - Display Assignment : Set the signals to be measured (IP Stream1 to 4) to the display channels (Input-A to D).
  - When setting IP Stream 1 to Input A  
Set Input A of Display Assignment to IP Stram1.  
Press **F·1** COMPLETE.

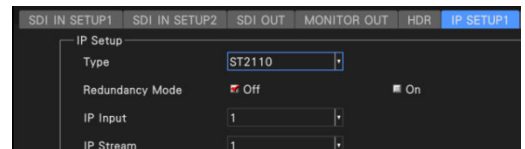


SDI IN SETUP1タブ

### 2. ST2110 settings when IGMP is not JOIN to PTP

#### (1) IP SETUP

- SYS** (SYSTEM) > **F·1** (SIGNAL IN OUT) > **IP SETUP1**
- Type :ST2110
  - Redundancy Mode : Off
  - Video, Audio, ANC: No check marks
  - Press **F·1** COMPLETE.

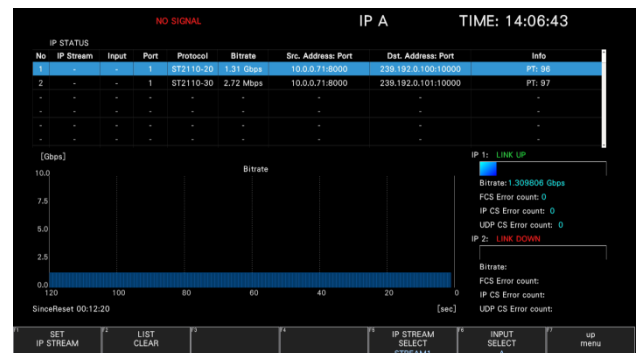


IP SETUP1 tab

#### (2) IP address setting in IP STATUS

- STATUS** (STATUS) > **F·2** SDI/IP ANALYSIS >  
**F·4** IP > **F·5** IP STREAM SETUP

- Select video stream  
Select ST2110-20 in the list with **F·D** F.D.  
and press **F·1** SET IP STREAM.
- Select audio stream  
Select ST2110-30 in the list with **F·D** F.D.  
and press **F·1** SET IP STREAM.



IP STATUS

With these settings you can see the decoded video and audio.

### IP measurement screen

View received signal details

Bit rate measurement value (IP1 input)

Checksum error measurement value (IP1 input)  
FCS: Frame checksum  
IP CS: IP checksum  
UDP CS: UDP checksum

Bit rate measurement value (IP2 input)

Checksum error measurement value (IP2 input)  
FCS: Frame checksum  
IP CS: IP checksum  
UDP CS: UDP checksum

Graphical display to check traffic over time.

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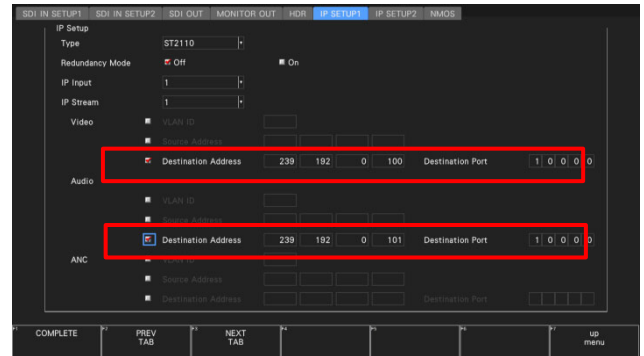
## LV5600/LV7600 Quick Manual

IP No.2 (LV5600-SER05, LV7600-SER05 )

### 2. ST2110 settings when IGMP is JOIN to PTP

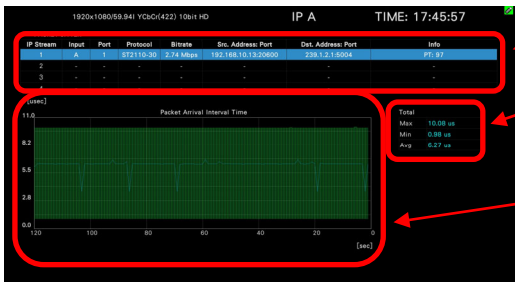
#### (1) IP SETUP

- SYS** (SYSTEM) > **F·1** (SIGNAL IN OUT) > **IP SETUP1**
- Type :ST2110
  - Redundancy Mode : Off
  - Set the Destination Address and Destination Port of video and audio respectively.
- Press **F·1** COMPLETE.
- With these settings you can see the decoded video and audio.
  - PTP status, a timing between PTP and video / PTP and audio can be measured.



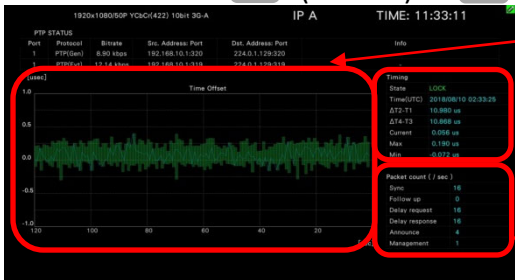
IP SETUP1 tab

#### ● Packet Jitter **STATUS** (STATUS) > **F·2** SDI/IP ANALYSIS > **F·4** IP > **F·2** Packet Jitter



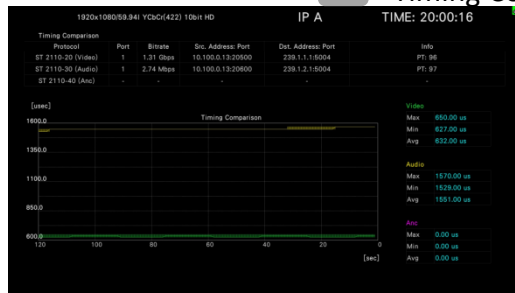
- Information about each stream being decoded
- Numerically displays maximum, minimum, and average of packet arrival intervals per second.
- Graphical display of maximum, minimum, and average packet arrival intervals per second.

#### ● PTP Status **STATUS** (STATUS) > **F·2** SDI/IP ANALYSIS > **F·4** IP > **F·3** PTP



- The time difference per second is displayed as a graph over time.
- Displays PTP lock status, time information (UTC), time difference maximum / minimum, and measured value per second.
- Displays the number of messages for each PTP per second.

#### ● Timing Comparison **STATUS** (STATUS) > **F·2** SDI/IP ANALYSIS > **F·4** IP > **F·3** PTP > **F·5** Timing Comparison



PTP, video, audio timing measurement

It measures the timing of video, audio and ancillary based on PTP.

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## LV5600／LV7600 Quick Manual

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※Product specifications are subject to change without notice.