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Ver. 1.1

LV5300/LV5350/LV7300 Quick Manual

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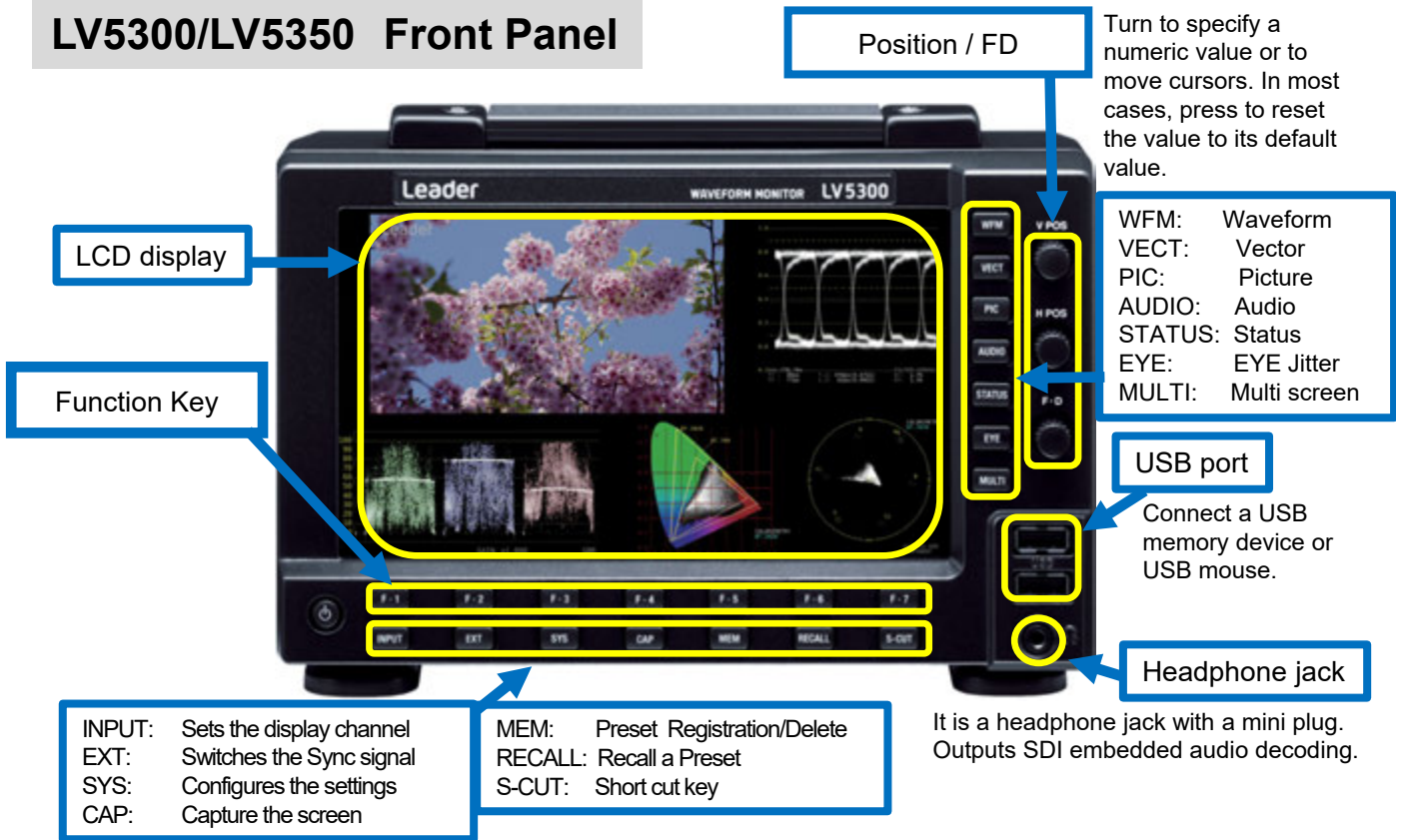
This Quick Manual requires firmware version 4.0 or higher.
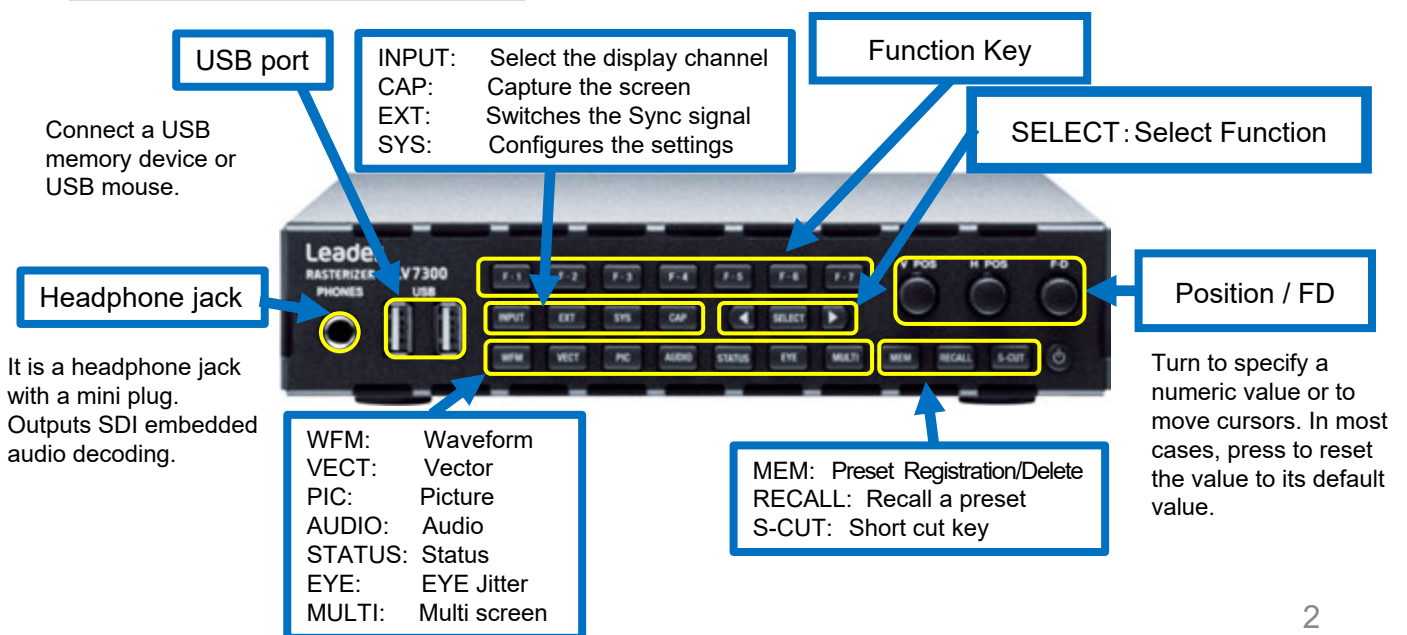If you have a lower version, please download and install the latest firmware from the web download.

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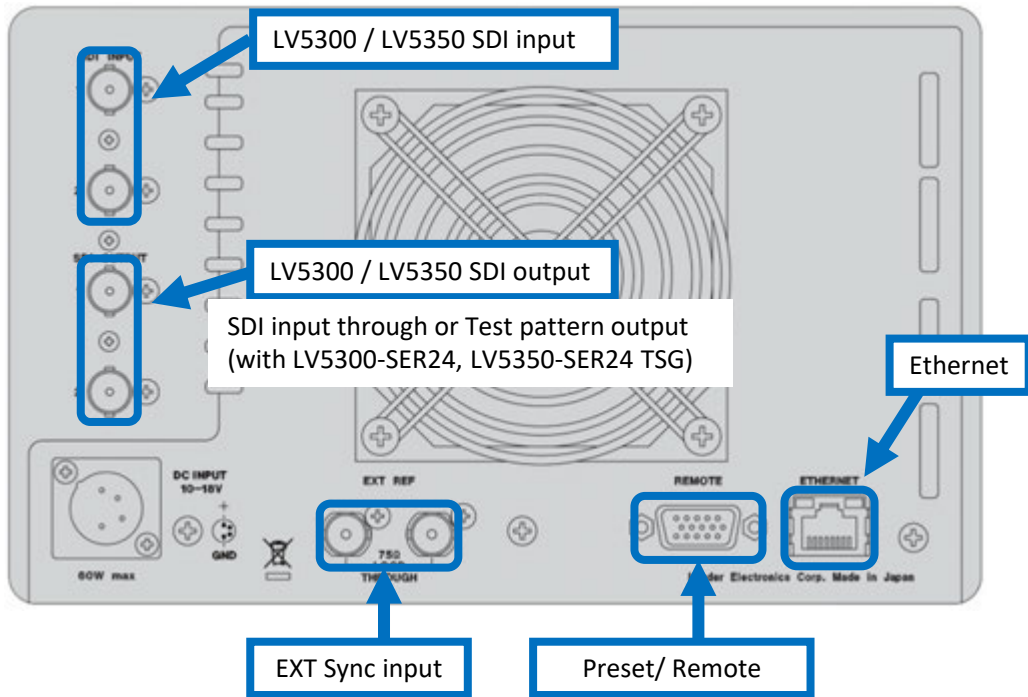
LV5300/LV5350　Front Panel

Position / FD

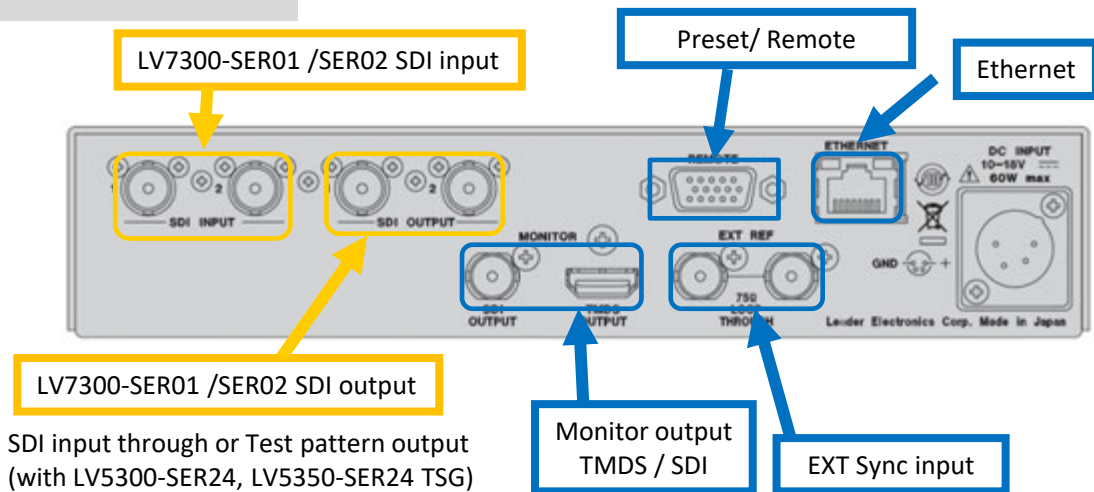Turn to specify a numeric value or to move cursors. In most cases, press to reset the value to its default value.

LCD display

WFM:	Waveform
VECT:	Vector
PIC:	Picture
AUDIO:	Audio
STATUS:	Status
EYE:	EYE Jitter
MULTI:	Multi screen

Function Key

USB port

Connect a USB memory device or USB mouse.

Headphone jack

INPUT:　Sets the display channel
EXT:　　Switches the Sync signal
SYS:　　Configures the settings
CAP:　　Capture the screen

MEM:　　Preset Registration/Delete
RECALL:　Recall a Preset
S-CUT:　　Short cut key

It is a headphone jack with a mini plug. Outputs SDI embedded audio decoding.

LV7300　Front Panel

USB port

Connect a USB memory device or USB mouse.

INPUT:　Select the display channel
CAP:　　Capture the screen
EXT:　　Switches the Sync signal
SYS:　　Configures the settings

Function Key

SELECT：Select Function

Headphone jack

It is a headphone jack with a mini plug. Outputs SDI embedded audio decoding.

Position / FD

Turn to specify a numeric value or to move cursors. In most cases, press to reset the value to its default value.

WFM:	Waveform
VECT:	Vector
PIC:	Picture
AUDIO:	Audio
STATUS:	Status
EYE:	EYE Jitter
MULTI:	Multi screen

MEM:　Preset Registration/Delete
RECALL:　Recall a preset
S-CUT:　Short cut key

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LV5300/LV5350 Rear Panel

LV5300 / LV5350 SDI input

LV5300 / LV5350 SDI output

SDI input through or Test pattern output
(with LV5300-SER24, LV5350-SER24 TSG)

Ethernet

EXT Sync input

Preset/ Remote

Standard

Option

LV7300 Rear Panel

LV7300-SER01 /SER02 SDI input

Preset/ Remote

Ethernet

LV7300-SER01 /SER02 SDI output

SDI input through or Test pattern output
(with LV5300-SER24, LV5350-SER24 TSG)
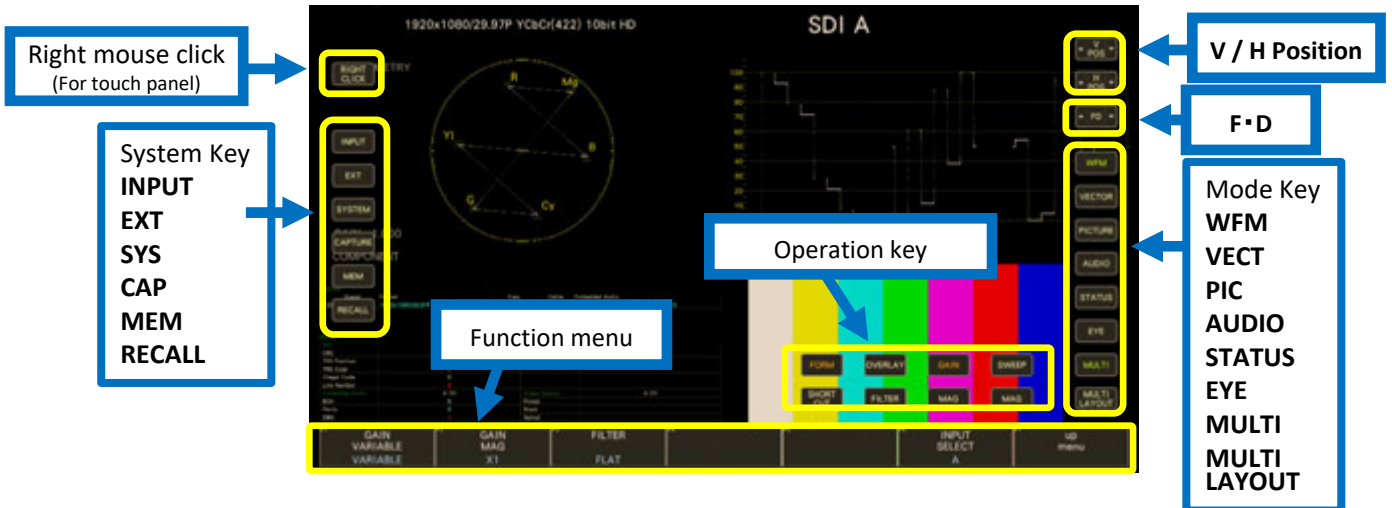
Monitor output
TMDS / SDI

EXT Sync input

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Screen Keys

The following Screen key operations can be performed with a mouse connection or touch panel. Appears with left mouse click or panel touch.
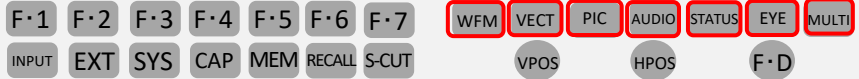
Right mouse click
(For touch panel)

V / H Position

F・D

System Key
INPUT
EXT
SYS
CAP
MEM
RECALL

Operation key

Mode Key
WFM
VECT
PIC
AUDIO
STATUS
EYE
MULTI
MULTI LAYOUT

Function menu

Options

● LV5300／LV5350 factory hardware option unit（Sold separately）
  ● **LV5300-SER11/LV5350-SER11 V mount type battery adapter**
  ● **LV5300-SER12/LV5350-SER12 QR gold type battery adapter**

● LV5300／LV5350 License option (Sold separately)
  ● **LV5300-SER20/LV5350-SER20 Embedded audio analysis**
  ● **LV5300-SER21/LV5350-SER21 Closed captioning EIA-608,708／TELETEXT**
  ● **LV5300-SER22/LV5350-SER22 CIE display**
  ● **LV5300-SER23/LV5350-SER23 HDR analysis**
  ● **LV5300-SER24/LV5350-SER24 SDI signal generation**
  ● **LV5300-SER25/LV5350-SER25 Focus assist**
  ● **LV5300-SER26/LV5350-SER26 User customizable layout**
  ● **LV5300-SER27/LV5350-SER27 Tally display**
  ● **LV5300-SER28/LV5350-SER28 4K format support (12G-SDI/6G-SDI/3G-SDI Dual)**

● LV7300   factory hardware option unit（Sold separately）
  ● **LV7300-SER01   SD, HD, 3G SDI Input**
  ● **LV7300-SER02   SDI input with EYE jitter measurement**
    ※**Each unit must be configured with at least one of SER01, SER02.**

● LV7300   License option (Sold separately)
  ● **LV7300-SER20 Embedded audio analysis**
  ● **LV7300-SER21 Closed captioning EIA-608,708／TELETEXT**
  ● **LV7300-SER22 CIE display**
  ● **LV7300-SER23 HDR analysis**
  ● **LV7300-SER24 SDI signal generation**
  ● **LV7300-SER25 Focus assist**
  ● **LV7300-SER26 User customizable layout**
  ● **LV7300-SER27 Tally display**
 ● **LV7300-SER28 4K format support(12G-SDI/6G-SDI/3G-SDI Dual)**

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Measurement screen	F·1 F·2 F·3 F·4 F·5 F·6 F·7	WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT	VPOS HPOS F·D

WFM VIDEO WAVEFORM
The display of video waveform. It displays the waveform of the selected line using Line select display, YCbCr display, RGB display, composite display.
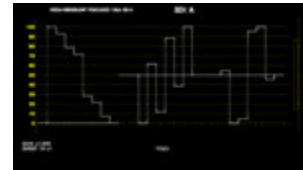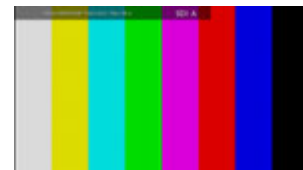

VECT VECTOR
The display of vector.
It can show Line select, vector maker display, composite and
CIE chromaticity diagram display (LV5300-SER22,LV5350-SER22,LV7300-SER22)

PIC PICTURE
The display of picture.
It can show Monochrome display, marker display, line select display,
CINE LITE Ⅱ , and focus assist (LV5300-SER25,LV5350-SER25,LV7300-SER25).


AUDIO Audio (LV5300-SER20,LV5350-SER20,LV7300-SER20)
The display of audio.
It can show Lissajous, Surround, meter and status for the signal which is chosen.
(When LV5300-SER20, LV5350-SER20, LV7300-SER20 is not installed,
only the meter display is enabled, and other functions are disabled.)
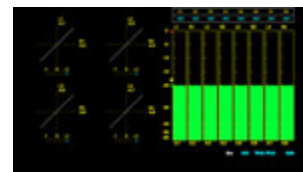
STATUS STATUS
The SDI status is displayed.
Event log display, data dump display,
phase difference display, etc. can be displayed
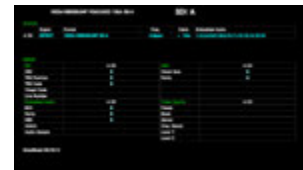
EYE EYE PATTERN (LV5300, LV7300-SER02)
The eye pattern is displayed.
(LV5350 and LV7300 without LV7300-SER02 doesn't support Eye Pattern)
Jitter can be displayed in addition to the eye pattern by mode switching.
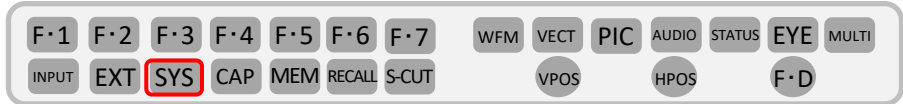

MULTI MULTI display
Multi screen that combines each measurement screen is displayed.
There are 6 types of model layouts which can be ~~use~~ chosen.

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INPUT setting

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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.
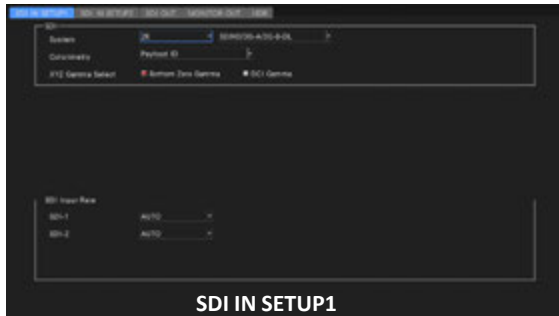
SDI IN SETUP1

SDI IN SETUP2

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.
・ SDI input: When 4K 12G setting and input signal is 3G, HD, SD format
・ When the payload ID is not appropriate.
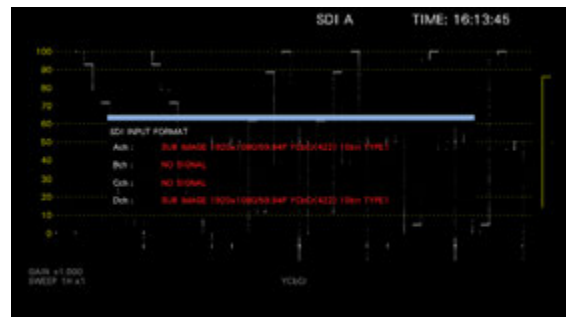
About Payload ID

The LV5300 / LV5350 / LV7300 analyzes the ~~SYNC etc.~~ TRS of the input signal to judge the format information

etc., but the items that cannot be judged by the input signal are judged by the payload ID.

It is possible to specify either the payload ID of the input signal or the payload ID set in SDI IN SETUP2 .

(Set by USE / Not USE in Payload ID item of SDI IN SETUP2

Payload ID that can be set in LV5300 / LV5350 / LV7300 is the following items.

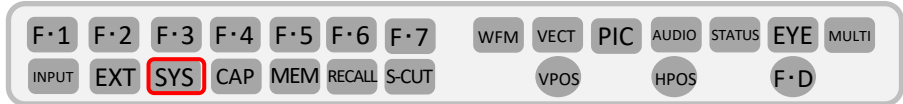|		
Division	:	Square ／ 2 Sample Interleave
i/PsF Slect	:	Interlace ／ Segmented Frame（PsF）
Color System	:	YCbCr422 ／ YCbCr444 ／ RGB444 ／ XYZ444
Pixel Depth	:	10bit ／ 12bit

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

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Basic setting (No.1)	

F·1　F·2　F·3　F·4　F·5　F·6　F·7　　WFM　VECT　PIC　AUDIO　STATUS　EYE　MULTI
INPUT　EXT　SYS　CAP　MEM　RECALL　S-CUT　　　VPOS　　　HPOS　　　F·D

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 maker or item can be chosen ＞
After setting ＞ F·1 (COMPLETE)

GENERAL
● Preset Overwrite
When registering presets, select whether to enable overwriting or not. You can prevent presets from being overwritten by disabling them.
　Overwrite Disable / Enable
● Fan Speed
Fan speed can be chosen
　When LV5300, LV7300-SER02 is installed ： 4 / 5 / 6 / 7 / 8
　When LV5300, LV7300-SER01 is 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
● Battery Indicator（LV5300-SER11/SER12、LV5350-SER11/SER12）
Displays the battery level when SER11 or SER12 is installed.
Off / On
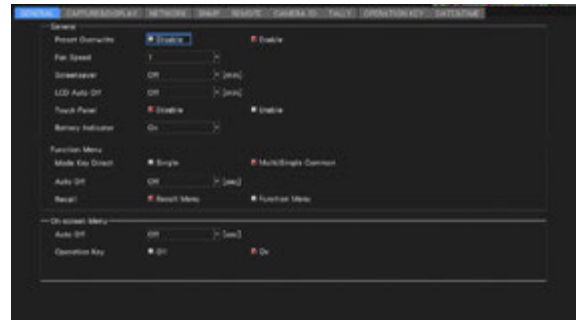
Function Menu
● Mode Key Direct
Multi display, mode key (WFM, VECT, PIC, AUDIO, STATUS, EYE) Select whether or not to change the measurement screen by operation.
(This is effective when INPUT item or Input option is placed in the layout.)
Single:　　　　　 With mode key, function menu and measure screen can 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
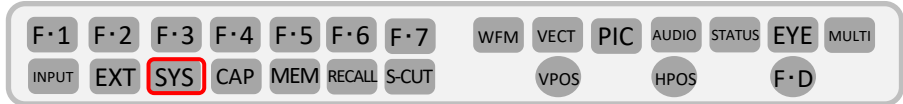Function Menu:　measurement menu display

On-screen Menu
● Auto Off
Mouse／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 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 key display on the screen used for mouse / touch panel operation.
　OFF / ON

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Basic setting (No.2)	F·1 F·2 F·3 F·4 F·5 F·6 F·7	WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT	VPOS HPOS F·D

The following settings can be made on the CAPTURE&DISPLAY of SYS (SYSTEM)> F·2 (SYSTEM SEUP).

(Display tab is changed by F·2 (PREV TAB) or F·3 (NEXT TAB))

Use F·D to set the blue frame to the item you want to set, then press F·D to add a check mark.

After completing the settings, press F·1 (COMPLETE) to confirm the settings.

CAPTURE

Screen capture: Capture the display screen as a still image

●Signal Color

Display color setting of captured waveform

White/Yellow/Cyan/Green/Magenta/Red/Blue

Information Display

●Format

ON / OFF of format display (1920x1080 / 59.94I YCbCr (422) 10bit HD etc.)

Off / On

●Input

Turn on / off the input signal display (SDI A, etc.)

Off / On

●Icon

Turning on / off the mouse icon, key lock icon, and USB memory icon

Off / On

●Error

Error display on / off (upper right of measurement screen)

Off / On

●Temperature Warning

Turns the alarm display (TEMPERATURE) on and off when the internal temperature of the main unit rises.

Off / On

●Date

Select date display format

Off / [y/m/d] / [m/d/y] / [d/m/y]

●Time

Select the time display format

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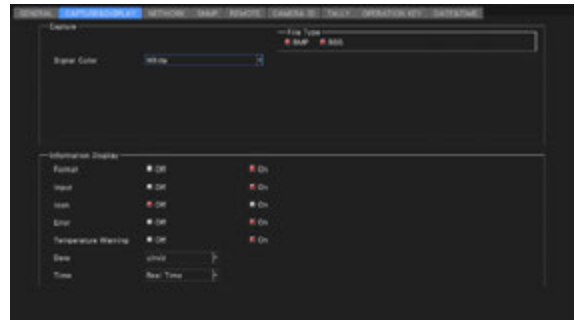
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Function Operation

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |

| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D |
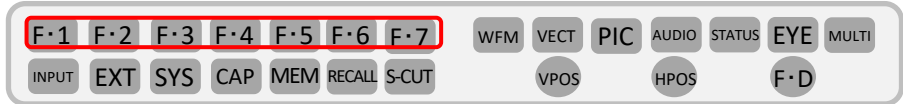
Normally, the function menu is displayed, but disappears when the key of the currently selected mode is pressed. In addition, it can be set to automatic OFF in the GENERAL tab of the SYS menu.

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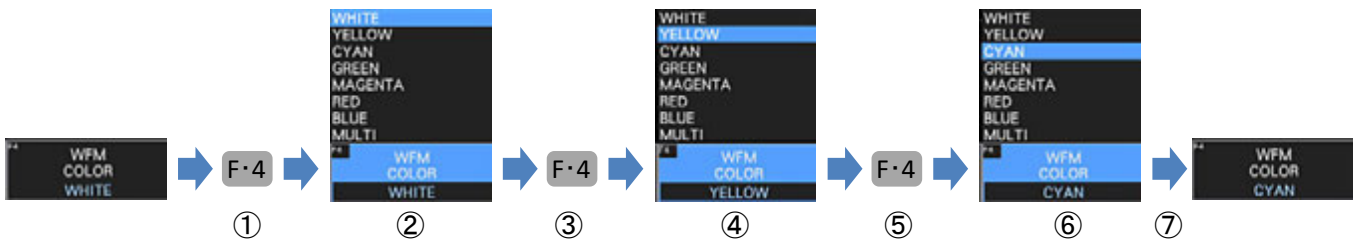
2．Switching function
・In case of switching only 2 such as ON and OFF, press the function key to switch.
The mouse and touch panel are switched by clicking or touching.

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

9
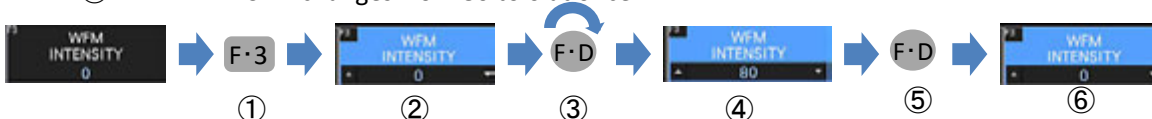
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Settings for Quick Manual	F·1 F·2 F·3 F·4 F·5 F·6 F·7	WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT	VPOS HPOS F·D
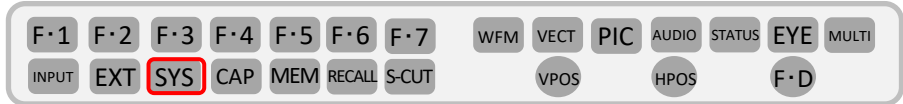
The explanations after this page follow the settings below.

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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F·1	F·2	F·3	F·4	F·5	F·6	F·7		WFM	VECT	PIC	AUDIO	STATUS	EYE	MULTI

Waveform display(No.1)

| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |
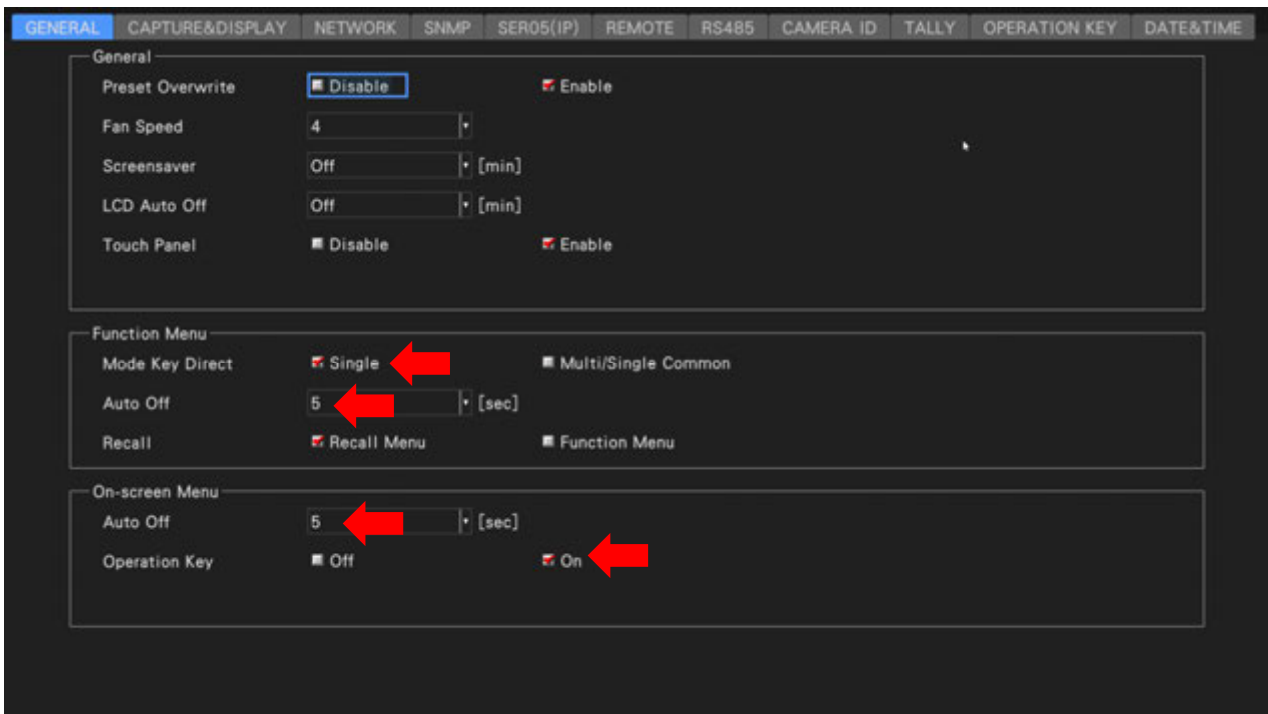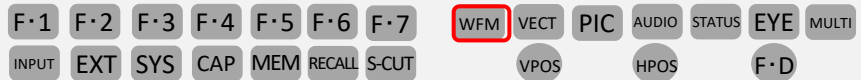
Waveform display color setting (e.g. change to **Multi**-color)

・ 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 menu)＞F·7 (COLOR SYSTEM)＞F·1 (COLOR MATRIX)-Select **RGB**.
 In COLOR MATRIX, you can select YCbCr / GBR / RGB / COMPOSITE.
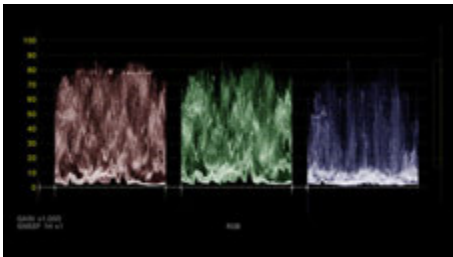
RGB display

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.
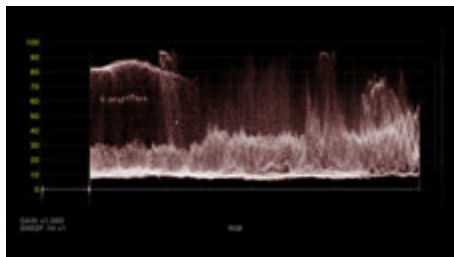
R waveform only

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F·1	F·2	F·3	F·4	F·5	F·6	F·7	WFM	VECT	PIC	AUDIO	STATUS	EYE	MULTI
INPUT	EXT	SYS	CAP	MEM	RECALL	S-CUT		VPOS			HPOS	F·D	

Waveform display(No.2)
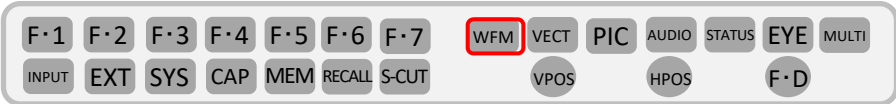
Display size variable setting

・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.
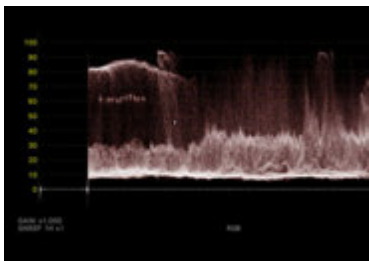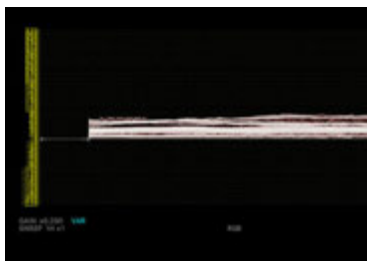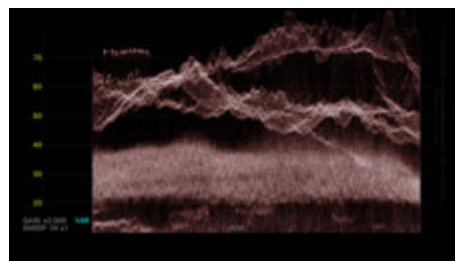
| X1 display | Zoom Out | Zoom In |

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.)
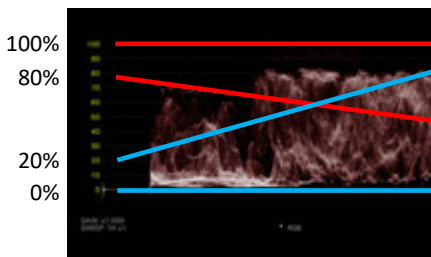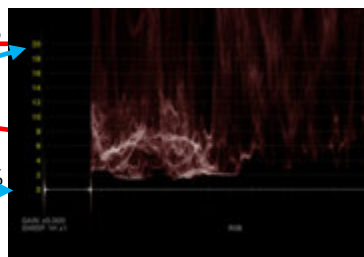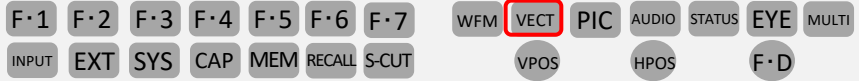

| X1 display | X5 display
0% to 20% | X5 display
SCALE JUMP 80%
80% to 100% |

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Vector Display(no.1)

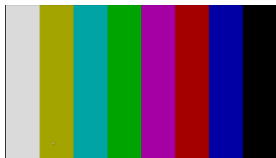| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

COLOR BAR 100% 75% setting

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

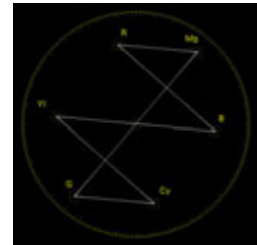   Change F·7 (COLOR SYSTEM)> F·2 (COLOR BAR) to 100% or 75%

   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·2 (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 Colorimety setting of SDI ~~setting~~ signal is used.

Input BT.2020 COLOR BAR
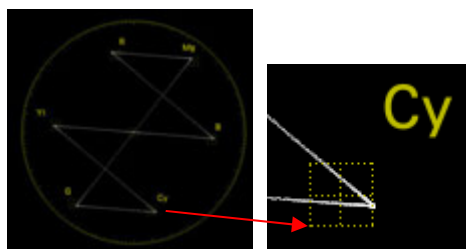
Set VECTOR SCALE BT.709
(Off target)
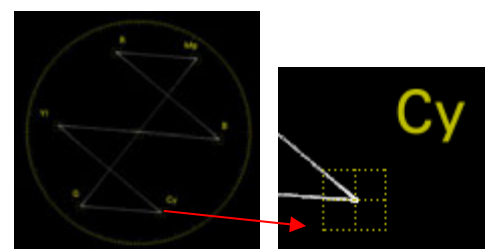
Set VECTOR SCALE BT.2020

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Vector Display(no.1)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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.

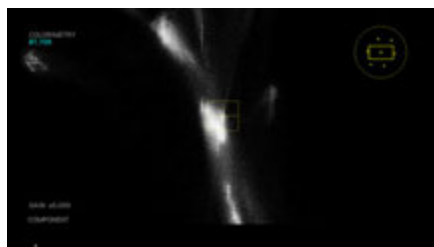 Press `F·D` (FUNCTION DIAL) to return to X1.
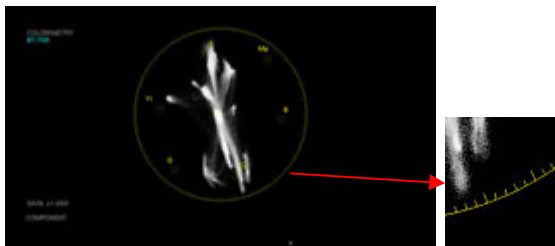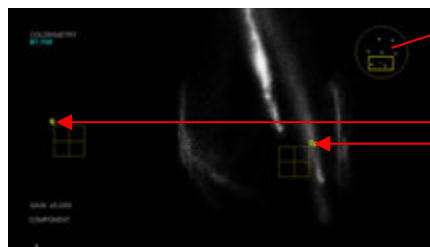
VARIABLE SCALE OFF
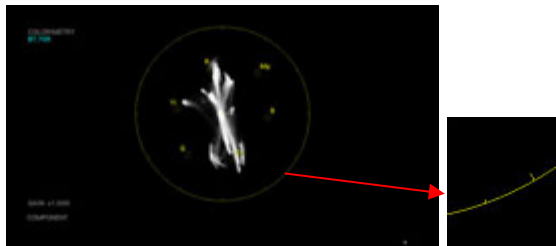
VARIABLE SCALE OFF
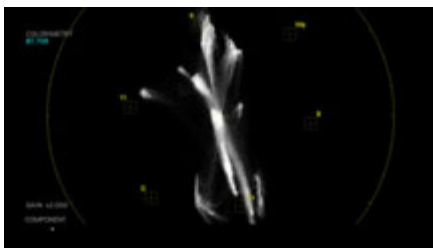
VARIABLE SCALE ON: x2 setting
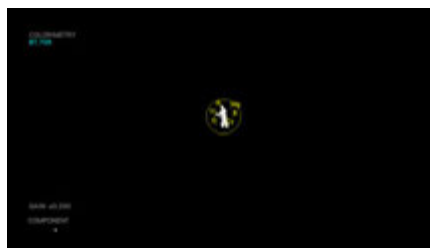
VARIABLE SCALE ON: Zoom out

GUIDE DISPLAY表示

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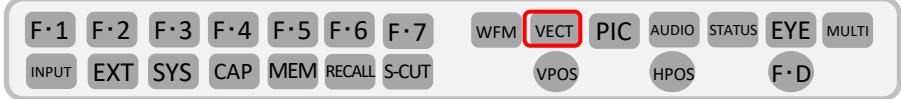
VARIABLE SCALE ON: x5,
Change V-POS / H-POS and
Show G /Cy.

G
Cy

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

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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.
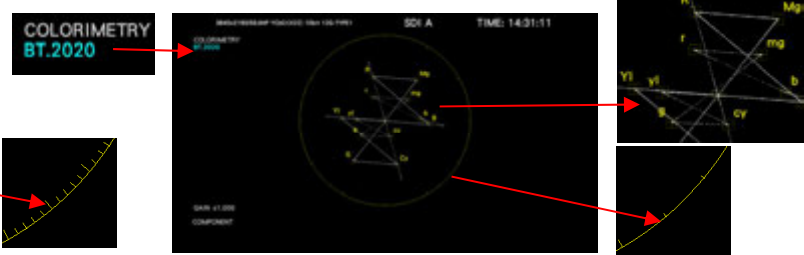
・Switch F F·7 OLOR SYSTEM)> F F·2 AR) to 75%.

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

3．Variable scale display ON and ARIB CHECK MARCKER setting

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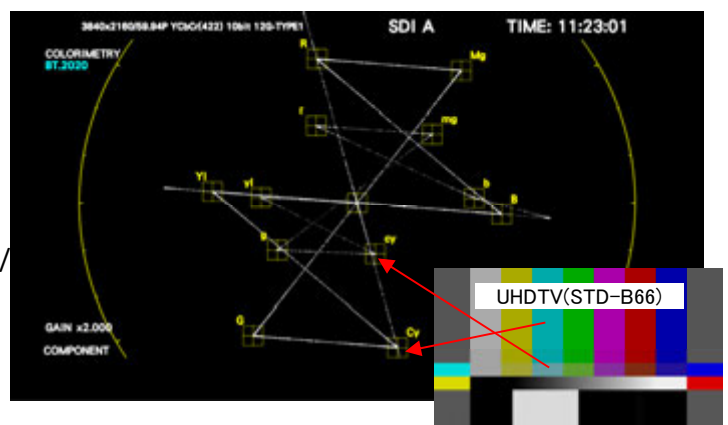・ Set F·3 (ARIB CHECK MARKER) to STD-B66. ※COLORIMTRY must be BT2020.
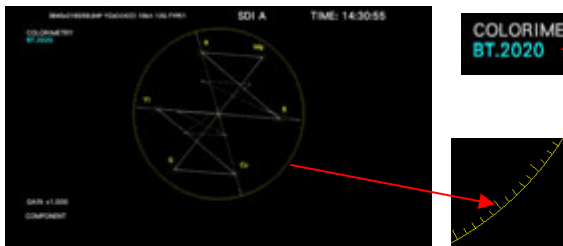
VARIABLE SCALE OFF

VARIABLE SCALE ON
Set STD-B66

4．Variable scale display ON
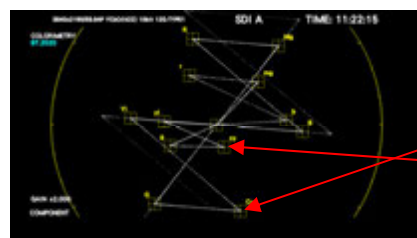
・Press F·7 (up menu).
・Set F·3 (VECTOR GAIN)> F·1 (GAIN VARIABLE) to VARIABLE.
・Turning F·D (FUNCTION DIAL) scales the vector.
・Press F·D (FUNCTION DIAL) to return to X1.
The center position can be moved with VPOS (V POS) / HPOS (H POS).

UHDTV(STD−B66)

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.

HLG(STD−B72)

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CIE DIAGRAM display

| F·1 F·2 F·3 F·4 F·5 F·6 F·7 | WFM VECT PIC AUDIO STATUS EYE MULTI |
| INPUT EXT SYS CAP MEM RECALL S-CUT | VPOS HPOS F·D |

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
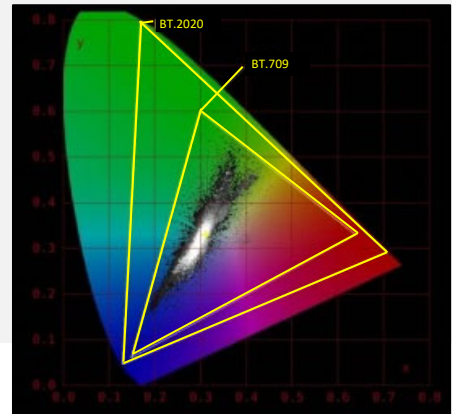
Color scale setting

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.
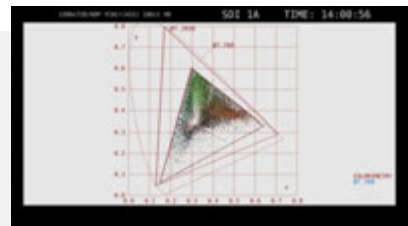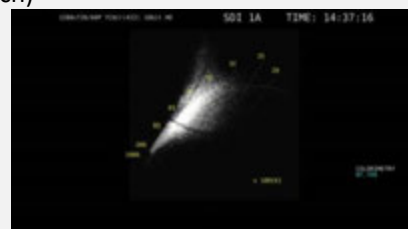

B.G. WHITE

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

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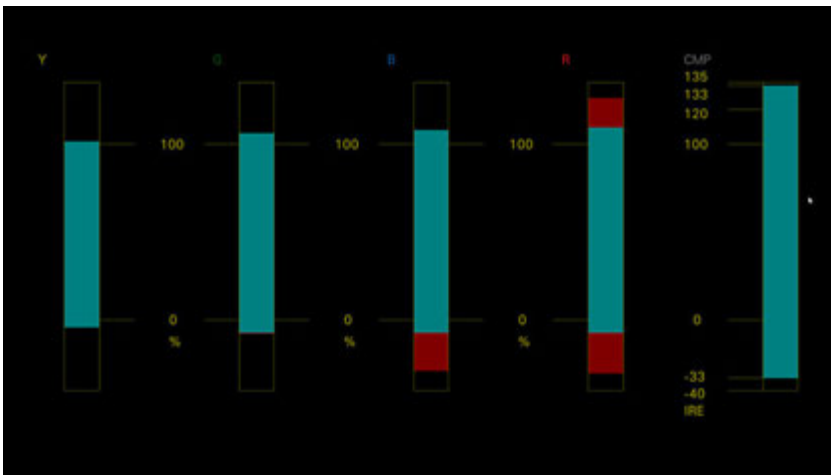| 5BAR Gamut display	F·1 F·2 F·3 F·4 F·5 F·6 F·7	WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT	VPOS HPOS F·D

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

5BAR Display

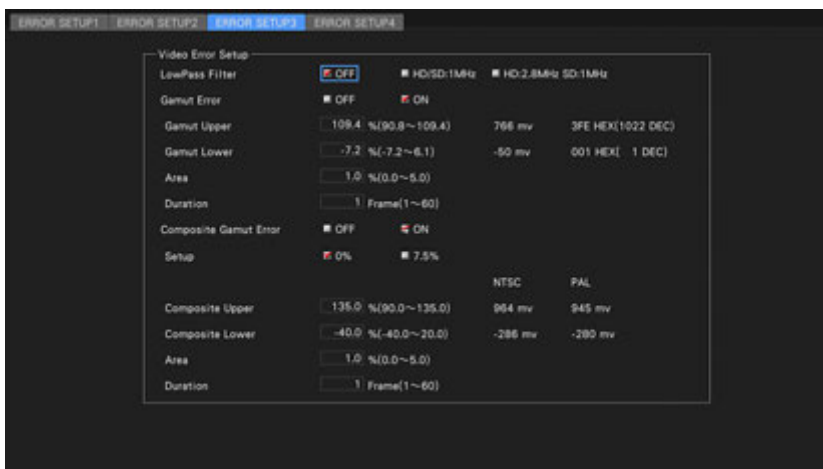Change VECT (VECTOR)> F·1 (VECT INTEN / CONFIG)> F·1 (VECTOR DISPLAY) to 5BAR.

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.

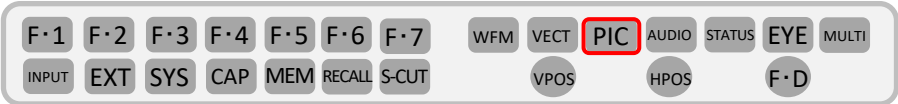5BAR setting

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Picture display

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | **PIC** | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

Japanese subtitle display function (LV5300/5350/7300-SER21)

Japanese subtitles can be simply displayed on the picture.

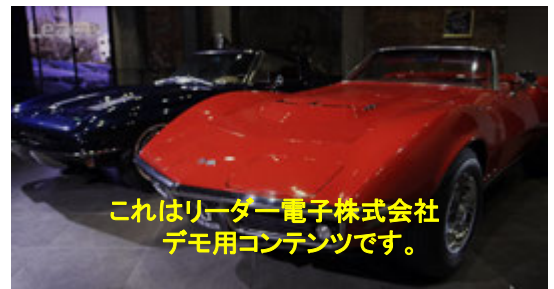Set PIC (PICTURE)> F·1 (PIC CONFIG)> F·5 (SUPER IMPOSE)> F·1 to ARIB.

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).

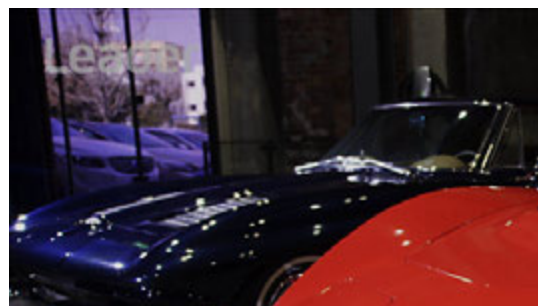Note: ● If you press PIC (PICTURE) and F·1 is not (PIC CONFIG), press PIC (PICTURE) twice.

For HD, FIT / REAL / X2 / FULL FRM can be selected.
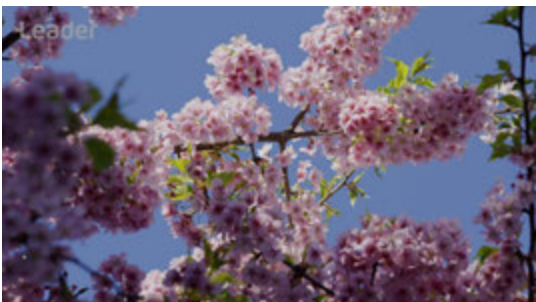
For 4K, FIT / REAL can be selected.

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

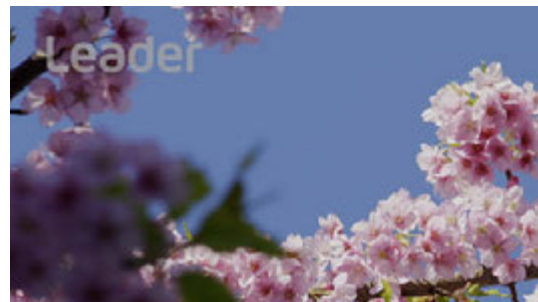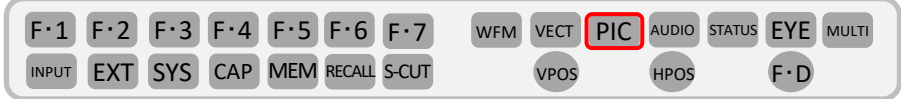HD : FIT display

HD : x2 display

4K : FIT Display

4K : REAL display

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CINELITE (% display)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | VPOS | | HPOS | | F·D | |

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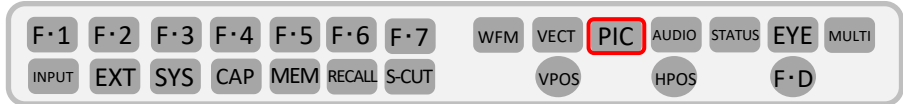
PIC ＞ F·4 (CINELITE/HDR) ＞ F·2 (CINELITE ADVANCE)
＞ ON ＞ Measurement points set on CineLite screen ＞
P1 to P3 and REF as vector waveform screen and video
signal markers can be displayed in conjunction with the
waveform screen.

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Cine Zone

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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.

●Gradation display   ●Above and below display of threshold   ●Display specified level
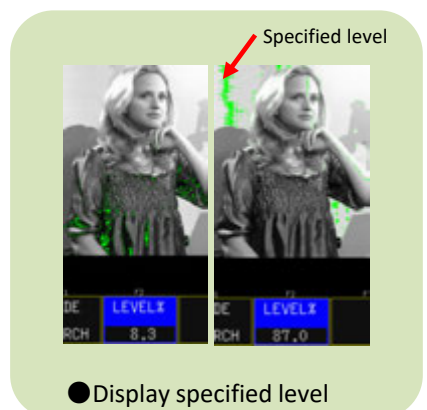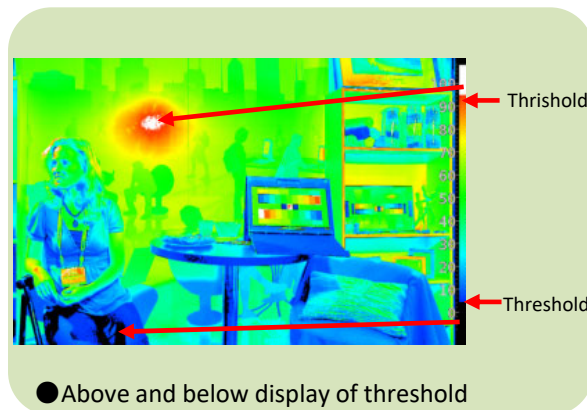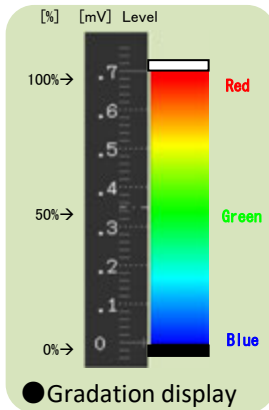
1．Gradation Display

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

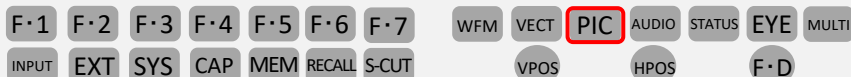After setting the threshold level, set F·1 (CINEZONE FORM) to SEARCH.

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

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Focus Assist
(LV5300-SER25, LV5350-SER25, LV7300-SER25)

F・1　F・2　F・3　F・4　F・5　F・6　F・7　　WFM　VECT　PIC　AUDIO　STATUS　EYE　MULTI

INPUT　EXT　SYS　CAP　MEM　RECALL　S-CUT　　VPOS　　　HPOS　　　F・D

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
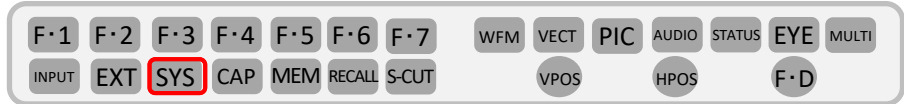
Focus assist setting

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

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HDR display（No.1）
(LV5300-SER23, LV5350-SER23, LV7300-SER23)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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 line and

HDR reference scale line

HDR : Display HDR scale line and

HDR reference scale line

BOTH: Displays SDI scale lines and HDR scale lines and

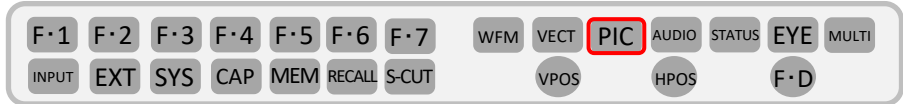HDR reference lines

OFF : Only display HDR reference scale line

SDI scale

HDR Ref-scale line

HDR scale
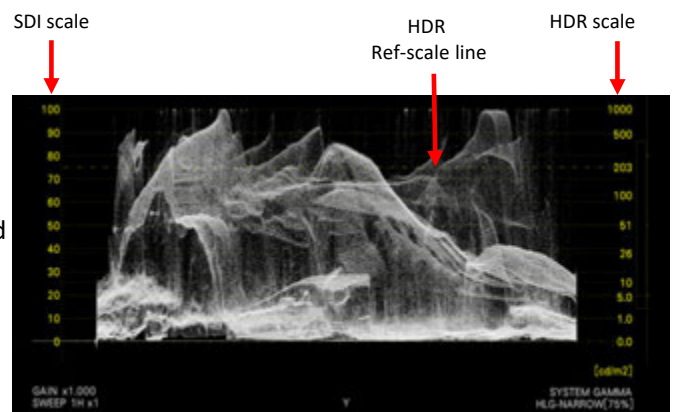
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HDR display（No.2）

(LV5300-SER23, LV5350-SER23, LV7300-SER23)

| F・1 | F・2 | F・3 | F・4 | F・5 | F・6 | F・7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F・D | |

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 / OF of the display.

・ START / STOP is possible with F・2 (MEASURE).

・   Press F・3 (CLEAR) to clear the measured value.
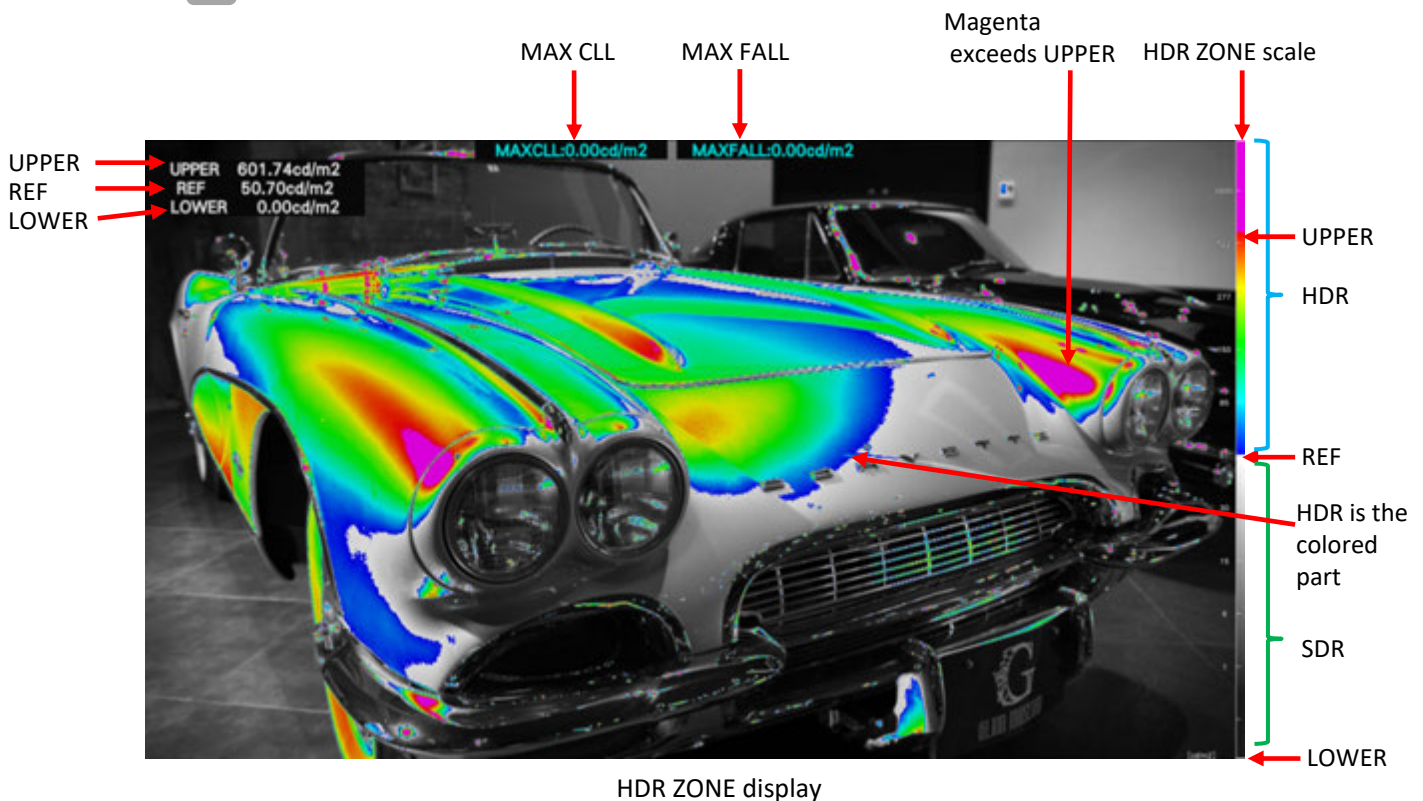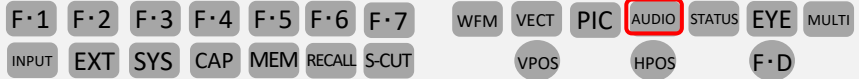

HDR ZONE display

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.

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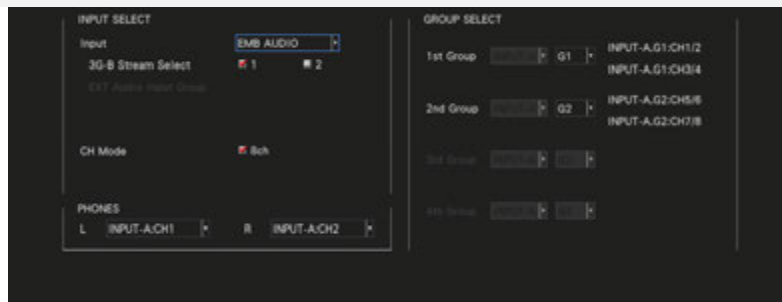
AUDIO
(LV5300-SER20, LV5350-SER20, LV7300-SER20)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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 input to SDI INPUT
- ・CH Mode： Setting the number of measurement channels（8ch）
- ・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)

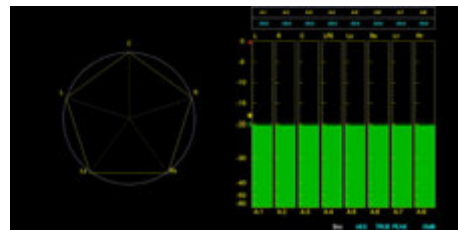Note: If F·1 is not (DISPLAY MODE), press AUDIO (AUDIO) twice.。

- ・LISSAJOU: View the Lissajous. An audio meter is also displayed.
- ・SURROUND: Surround is displayed on the left half and an audio meter is displayed on the right half.
  This cannot be selected during Simul mode.
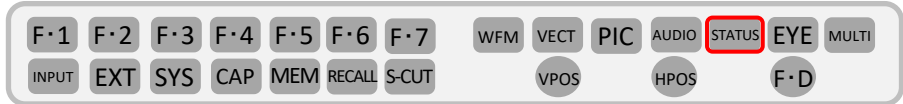- ・STATUS: Show status. An audio meter is also displayed.

LISSAJOU
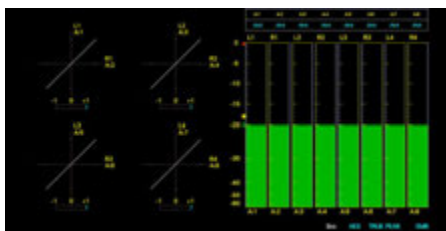
SURROUND

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STATUS

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

Press STATUS (STATUS).

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

・For 2 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 ~~input~~ 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 ± 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.
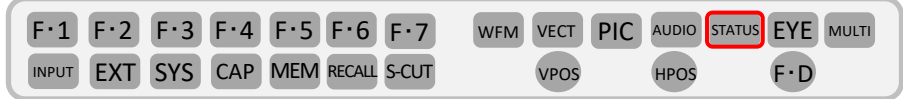 When the input signal is 3G-B-DL, only stream 1 is displayed.

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

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Payload ID display SRLive Metadata display

F·1 F·2 F·3 F·4 F·5 F·6 F·7   WFM VECT **PIC** AUDIO STATUS **EYE** MULTI
INPUT EXT SYS CAP MEM RECALL S-CUT   VPOS   HPOS   F·D

PAYLOAD display setting

PAYLOAD can be displayed by 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.
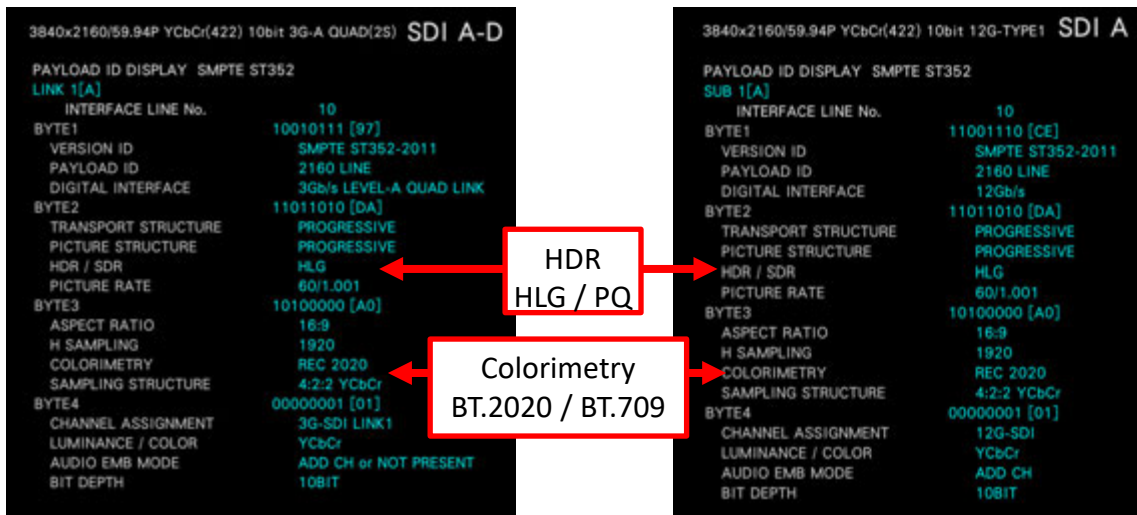
3G-SDI Quad Link: Link 1	12G-SDI: Sub image 1

HDR
HLG / PQ

Colorimetry
BT.2020 / BT.709

SRLive Metadata display setting

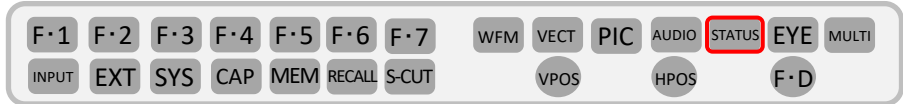SR Live Metadata can be displayed by STATUS (STATUS)> F·4 (ANC PACKET)> F·1 (PACKET ANALYSYE)> F·4 (V-ANC)> F·2 (SMPTE)> F·6 (SR Live).

※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.

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| EVENT LOG |

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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.

Event log example

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Phase difference measurement

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |
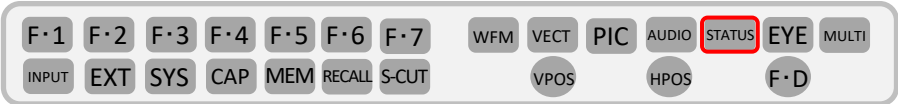
Phase difference measurement Setting (Not including 12G-SDI)

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

~~As a~~ The reference signal for phase difference measurement, fr F·1 (REF SELECT) to choose EXT, SDI or EXT,

EXT REF Input signal, SDI is SDI A input signal. When the System setting is SD / HD / 3G-A / 3G-B INPUT F·7

(DISPLAY) ＞ F·6 (SELECT CH) ＞Choose

(To use the EXT REF signal, when using EXT, press F·6)

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 (0H 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,
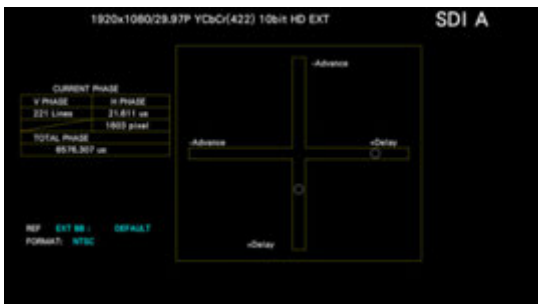set the phase difference to 0.

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

2 input when REF SELECT:SDI

EXT Displays the phase difference of each SDI input to the REF input.
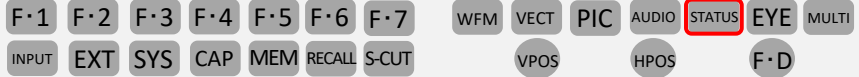
2 input when REF SELECT:EXT

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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AV PHASE(Lip Sync) (LV5300/5350/7300-SER20)	F·1 F·2 F·3 F·4 F·5 F·6 F·7 WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT VPOS HPOS F·D

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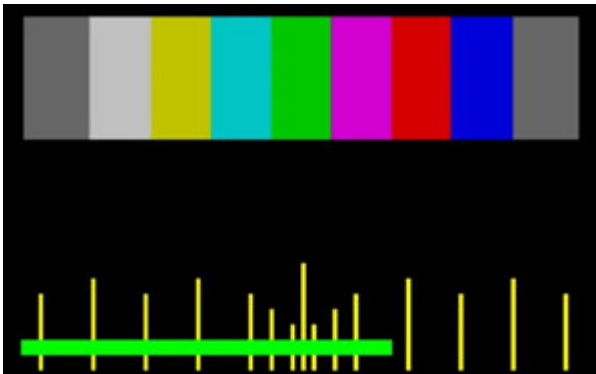
You can change the scale max value setting with F·1 (SCALE MAX).

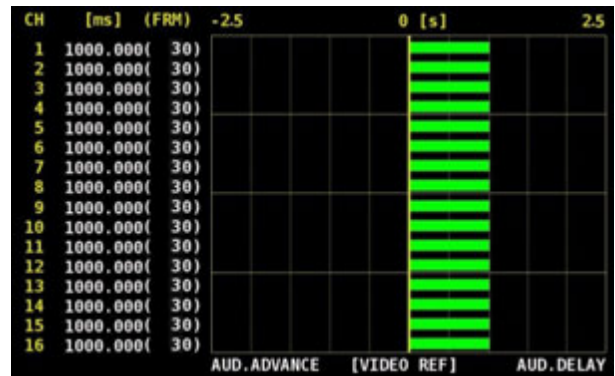Measurement can be performed in 3 to 4 cycles. It is refreshed by F·2 (REFRESH).

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.
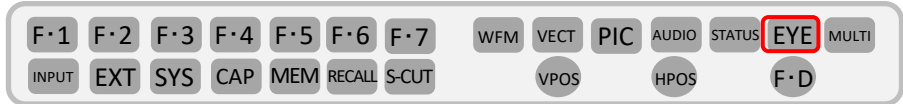
Lip Sync test pattern   AV PHASE measurement screen
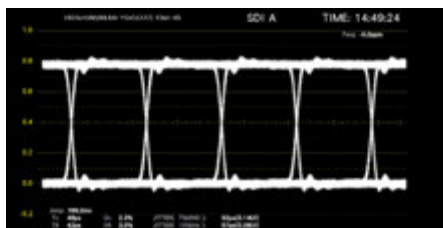
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EYE
（LV5300, LV7300-SER02）

F・1	F・2	F・3	F・4	F・5	F・6	F・7		WFM	VECT	PIC	AUDIO	STATUS	EYE	MULTI
INPUT	EXT	SYS	CAP	MEM	RECALL	S-CUT			VPOS			HPOS	F・D	

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 LV5300 and LV7300-SER02 is only compatible with SDI INPUT1. SDI INPUT2 is 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
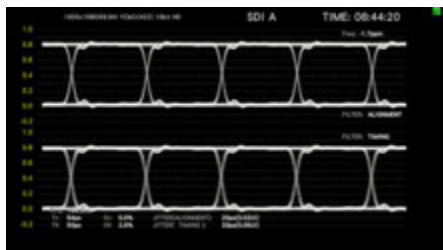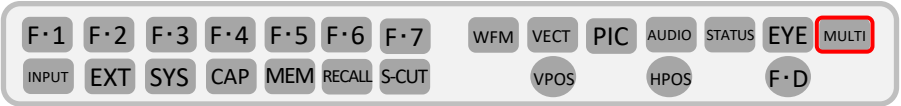
DUAL display

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

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Layout Settings (single)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | VPOS | | HPOS | | F·D | |

Layout system settings

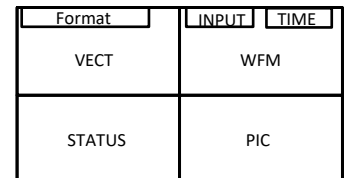・DISPLAY setting: Set INPUT (INPUT)> F·7 (DISPLAY) to SINGLE.

＊ The user layout can be freely changed with the mouse by adding layout options (LV5300/5350/6300-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.
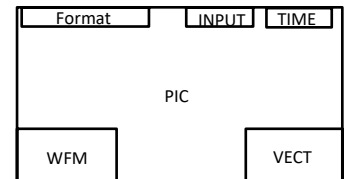
How to use the registered layout settings
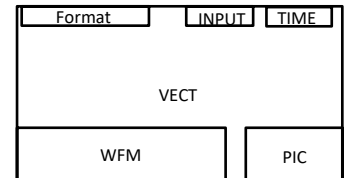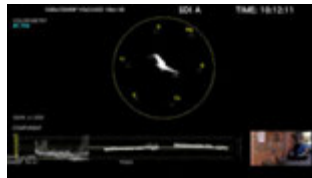
Press MULTI and F·1 to select LAYOUT USER 1-6.

USER 1

USER 2

USER 3
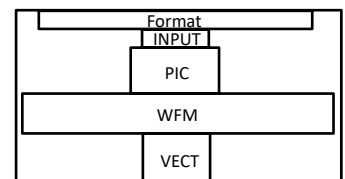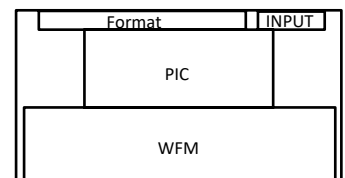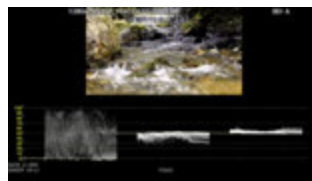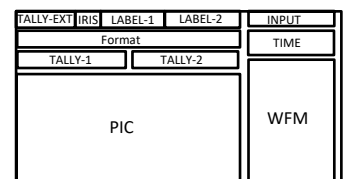
USER 4

USER 5

USER 6

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Layout Settings (SIMUL)	F·1 F·2 F·3 F·4 F·5 F·6 F·7	WFM VECT PIC AUDIO STATUS EYE MULTI
	INPUT EXT SYS CAP MEM RECALL S-CUT	VPOS HPOS F·D

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·2 (A , B).

How to use the registered layout settings

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

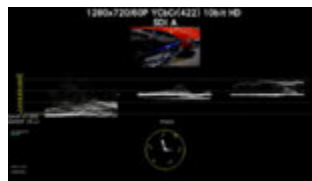| Example	1 INPUT（A）	2 INPUT（A,B）
USER 1		
USER 2		
USER 3		
USER 4		
USER 5		
USER 6		

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Screen Capture

F·1 F·2 F·3 F·4 F·5 F·6 F·7 | WFM VECT PIC AUDIO STATUS EYE MULTI
INPUT EXT SYS CAP MEM RECALL S-CUT | VPOS HPOS F·D

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~~
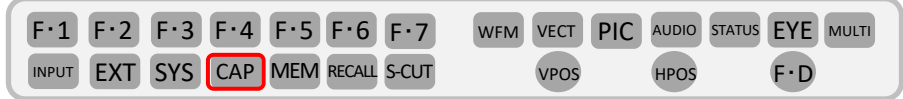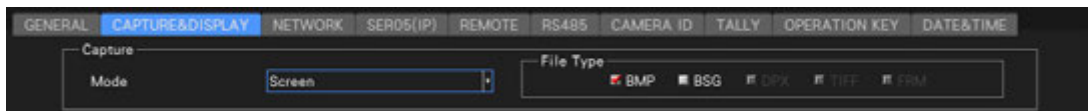
from FILE TYPE "BMP", "BSG" . At the end of the setting, press F·1 (COMPLETE) to confirm.

BMP : The saved data can be confirmed on the PC.
BSG : The saved data can be read and displayed on the LV5300/5350 and LV7300 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
  - LV5300_USER, LV5350_USER or LV7300_USER
    - BMP
      - yyyymmddhhmmss.bmp
      - yyyymmddhhmmss.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.
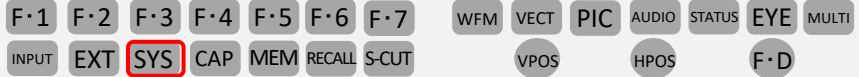
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Signal Out-put
(LV5600-SER24,LV7600-SER24)

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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 (OPETATE 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).
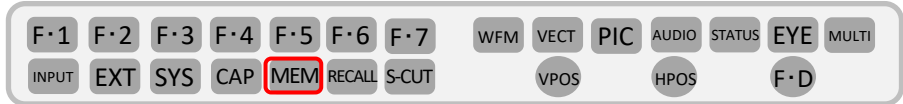
How to check the version?

SYS ＞ F·3 (SYSTEM INFO)

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Preset Register / Delete

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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 (COMENT 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

| F·1 | F·2 | F·3 | F·4 | F·5 | F·6 | F·7 | | WFM | VECT | PIC | AUDIO | STATUS | EYE | MULTI |
| INPUT | EXT | SYS | CAP | MEM | RECALL | S-CUT | | | VPOS | | HPOS | | F·D | |

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

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Change Layout－basic－ (LV5300/5350/7300-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 Setup window

Item window
(ex: WFM,VECT,PIC and so on)
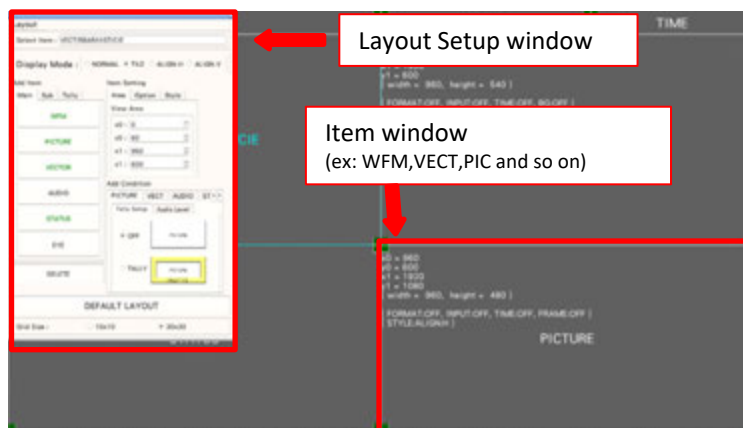
Layout procedure

Here, three basic examples and application examples are introduced.

Basic example P.37
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.39
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.41
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

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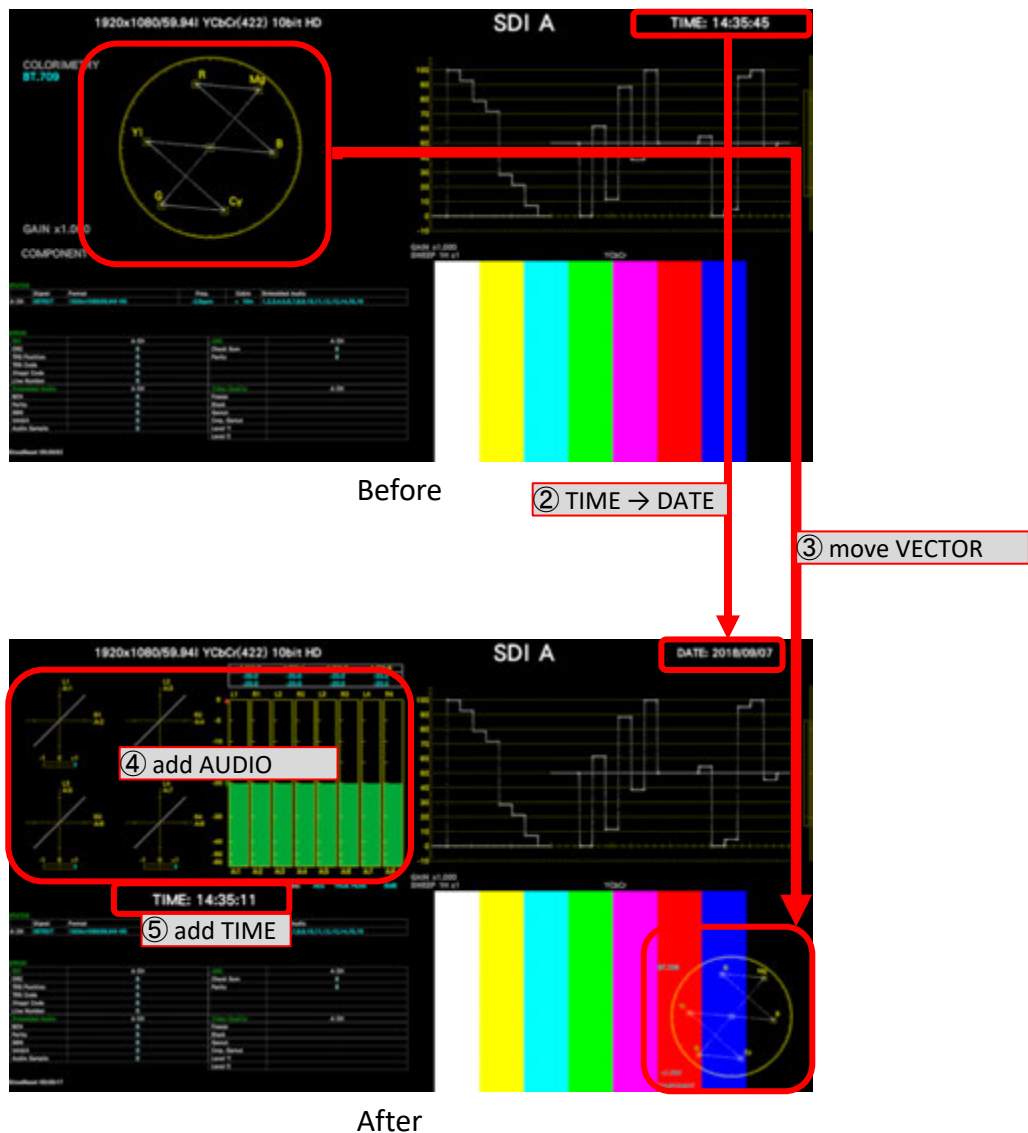# LV5300/LV5350/LV7300 Quick Manual

Change Layout（ General ）－example－ (LV5300/5350/7300-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

④ add AUDIO

⑤ add TIME

After

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Change Layout (process) ―example― (LV5300/5350/7300-SER26)

① Display of layout

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

Choose LAYOUT
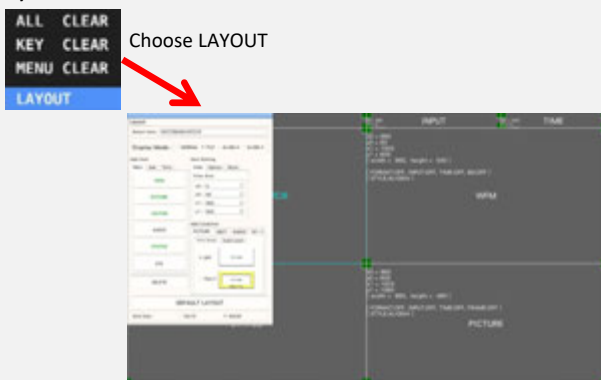
② Change TIME at the upper right of the screen to DATE

a. 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.)
b. Layout Setup window ＞ DELETE key ＞ delete TIME
c. Add Item ＞ Click on the DATE item in the tab.
d. Change the size of DATE ＞Use the mouse to decide the place.

③ Place vector waveform on picture

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

④ Add AUDIO

a. Click the AUDIO from Main tab, change the place

⑤ Add TIME into status

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

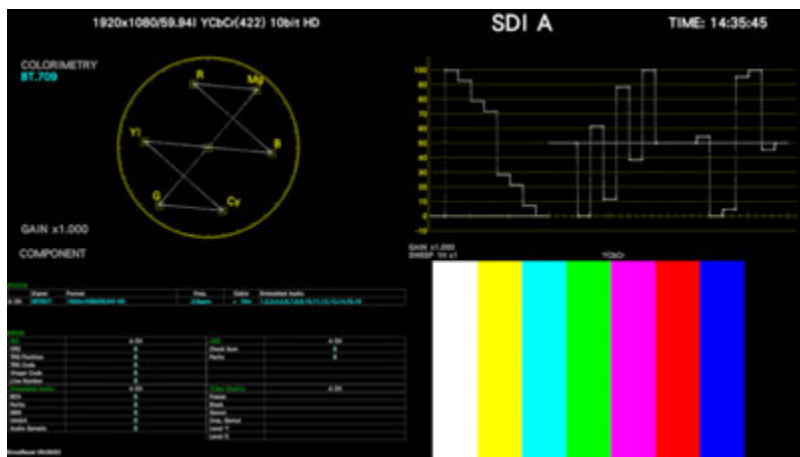## ⑥ Check   Right-click on the layout screen and click SAVE.

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LV5300/LV5350/LV7300 Quick Manual

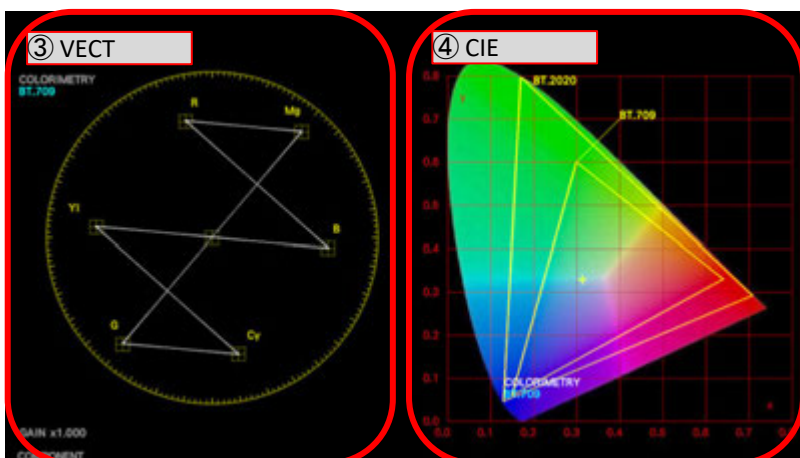## Change layout (general) －example1－ (LV5300/5350/7300-SER26,-SER22)

(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

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

After

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Change layout(process) －example 1－ (LV5300/5350/7300-SER26,-SER22)

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.

ALL   CLEAR
KEY   CLEAR
MENU CLEAR
LAYOUT

Choose LAYOUT
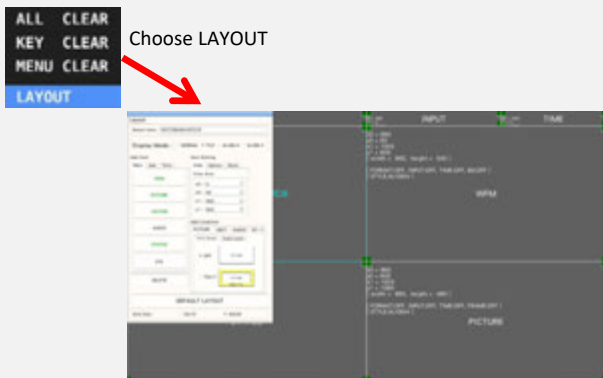
② Delete all items

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
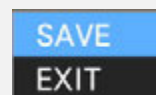b. Add Item ＞ Main tab ＞ click VECT item
c. Move VECT item to picture ＞change size

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

SAVE
EXIT

PS：Color Triangle setting
a.   Press VECT
b.   Press「F1」VECT INTEN/CONFIG

c.   "F1" VECTOR DISPLAY to CIE DIAGTRAM to set up

d.   Press「F7」up menu, then press「F2」CIE DIAGTRAM SCALE
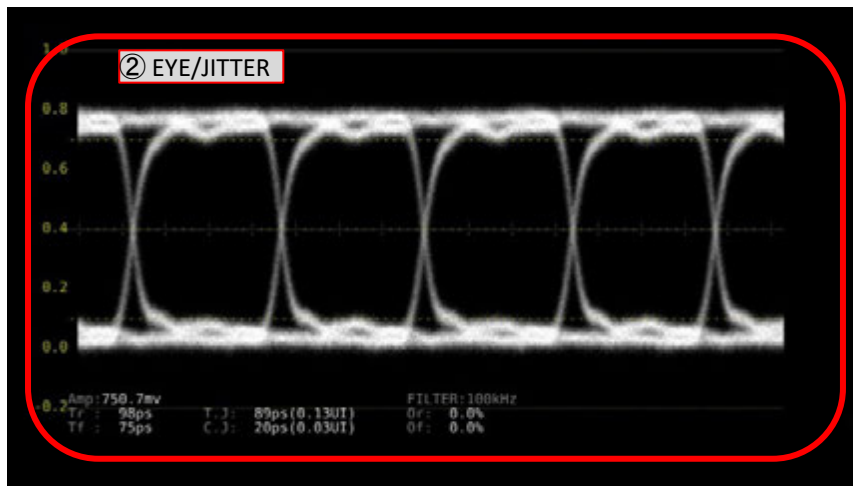
e. 「F2 」TRIANGLE1・「F3」TRIANGLE2 to OFF/ON

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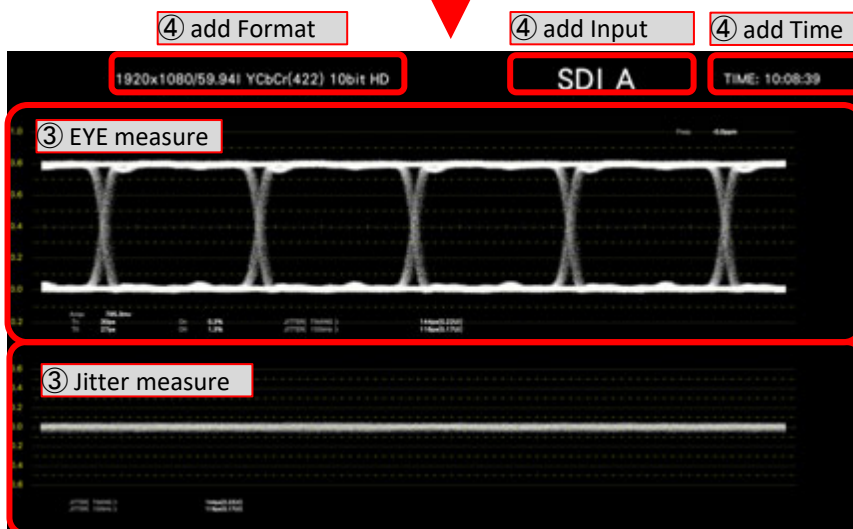# LV5300/LV5350/LV7300 Quick Manual

Change layout (general) －example2－ (LV5300-SER26,LV7300-SER02/26)

(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

② EYE/JITTER

Before

④ add Format

④ add Input

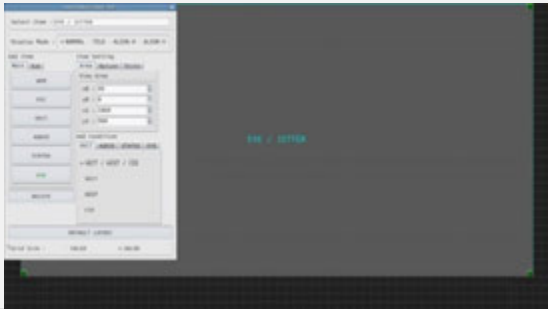④ add Time

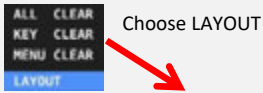③ EYE measure

③ Jitter measure

After

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Change layout(Process) 一example 2一 (LV5300-SER26, LV7300-SER02/26)

① Layout screen display

a. Press EYE to show the screen
b. Select LAYOUT of the window displayed by right click on the measurement screen and display the layout screen

Choose LAYOUT

② Delete EYE/JITTER item

a. 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.)
b. Layout Setup window ＞ Use DELETE key to delete EYE/JITTER

③ choose／add EYE and JITTER item

a. Add Condition ＞ EYE tab ＞ EYE ＞ Main ＞ Press EYE ＞Add EYE item
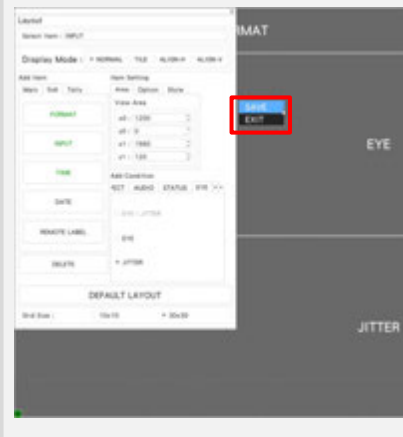
b. You can change item and size.

④ Format, Input, Time item display

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

⑤ Finish

a. 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 .

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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.
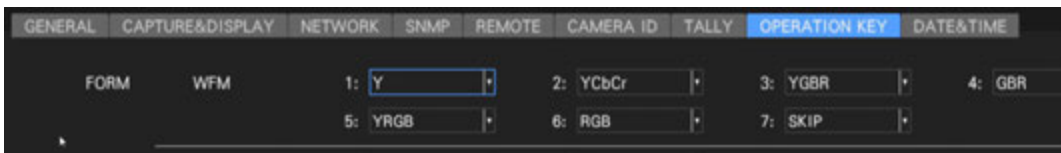
Example of using operation keys

Ex：FROM WFM
  No.1: Y   No.2: GBR   No.3: YPbPr
  No.4〜7 setup: SKIP
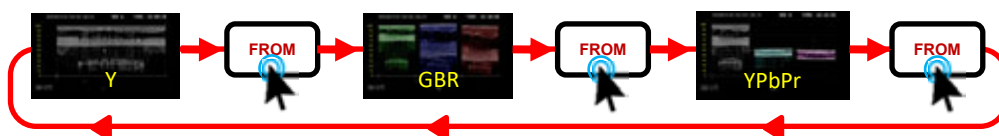
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※Product specifications are subject to change without notice.