

Bridge"X TS

USER MANUAL

Trouble Shooter series : Conversion and Measurement at Once

Bridge X_TS for All Format Conversion with Measurement

Bridge X_TS mini for SDI & HDMI with Enhanced Measurement



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HDLive™ Kalypso Bridge" Bridge"X TS

Bridge X_TS mini

SDI / HDMI Cross Conversion with Measurement

ENGLISH

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OVERVIEW

Chapter 1

SUMMARY

Bridge X_TS mini is the Portable Cross-Converting & Measuring Equipment fully supporting up to 1080p60 for SDI(SD/HD/3G) and HDMI(SD/HD/Full HD).

Bridge X_TS mini provides each one of SDI and HDMI In/Output ports (Total 4 ports : 2 x SDI In/output ports & 2 x HDMI In/output ports), and perfectly performs UP/DOWN/CROSS conversion between SDI and HDMI.

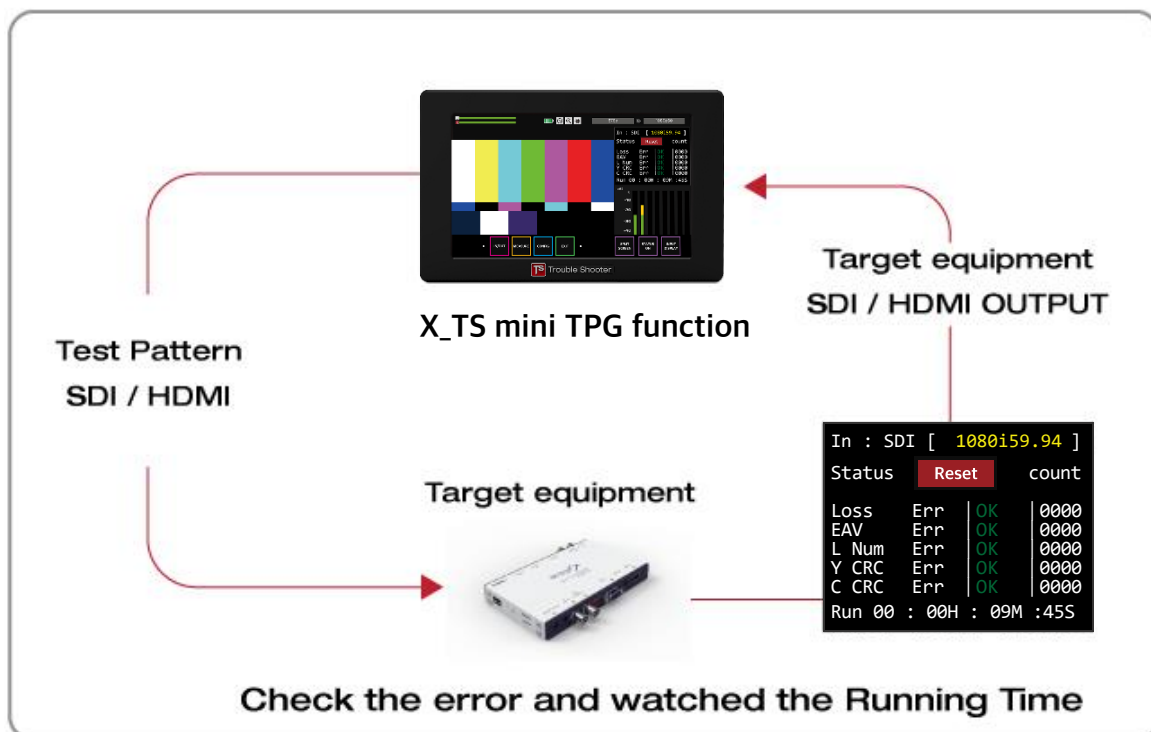
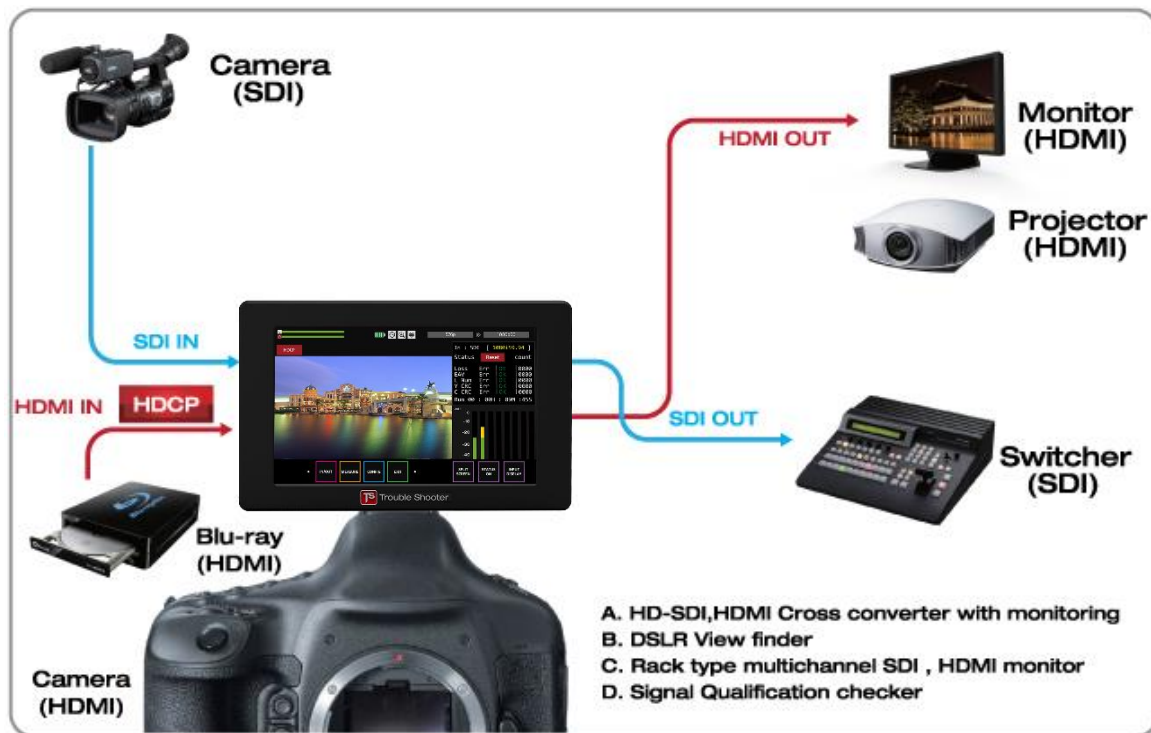
Bridge X_TS mini provides the powerful measurement functions for Signal Integrity Checks, Audio Level Monitoring(max 8 channels) as well as Test Pattern Generator.



FEATURE

- SDI to HDMI, HDMI to SDI cross conversion
- SDI In/Output : SD/HD/3G - all standard format supported
- HDMI In/Output : SD/HD/Full HD - all standard format supported
- Test Pattern Generator : 8 types provided - Static/ Pathological/ Moving Box, etc.
- Test pattern generation and measurement at the same time.
- Eye pattern diagram of the SDI input.
- SDI signal integrity check (Loss, TSR, CRC, Line number)
- HDMI signal integrity check (Loss, Resolution, HDCP)
- Audio level monitoring (up to 8 channels)
- Audio monitoring earphone output
- 5" Touch Screen LCD (800 x 480)
- (option) Battery Plate provided : compatible with Sony NP-F / Canon LP-E6
- DC 7V ~ 17V Operation range

APPLICATION



Bridge X_TS mini

SDI / HDMI Cross Conversion with Measurement

UNPACKING

The following accessories are included with Bridge X_TS mini :

1pc x Bridge X_TS mini



1set x Universal Power Supply



SPECIFICATION

Chapter 2

INTERFACE / CONNECTION

5" LCD Touch Panel



1/4" Multi Connection

Earphone Audio Port

Multi-Control Jog Switch

OUTPUT Port
: Converted Output

INPUT Port
: Source Connection



Cooling Fan

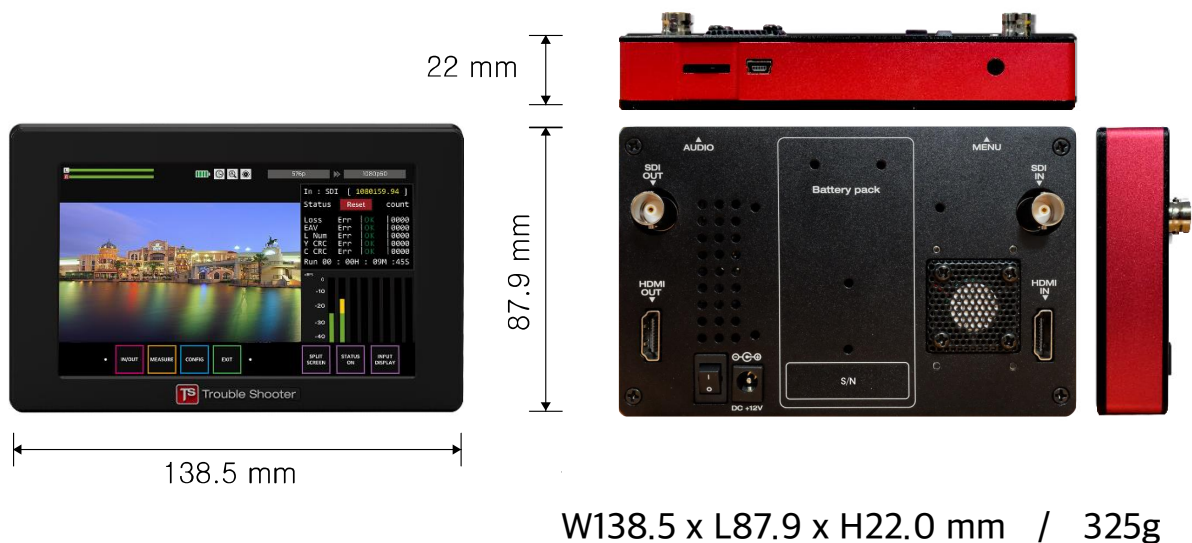
LCD SPECIFICATION

- Size: 5.0 Inch
- Resolution : 800 x 480
- Pixel area : 0.135mm(W) x 0.135mm(H)
- Display Area : 108mm(W) x 64.8(H)

VIDEO STANDARDS

- HDMI v1.3 format Support
- Multi-rate SDI format Support
- SD format : 525/29.97(NTSC), 625/25(PAL), 480P, 576P
- HD format : 720P(24/25/30/50/59.94/60)
1080i(50/59.94/60)
1080p(24/25/30/sf24/50/59.94/60)

DIMENSION / WEIGHT



OPERATING ENVIRONMENT

Supply Power	+ 12 VDC
Power Consumption	9 Watts (Maximum: 10Watts)
Operation temperature	0°C ~ 70°C
humidity	0% ~ 95% RH, Non-condensing

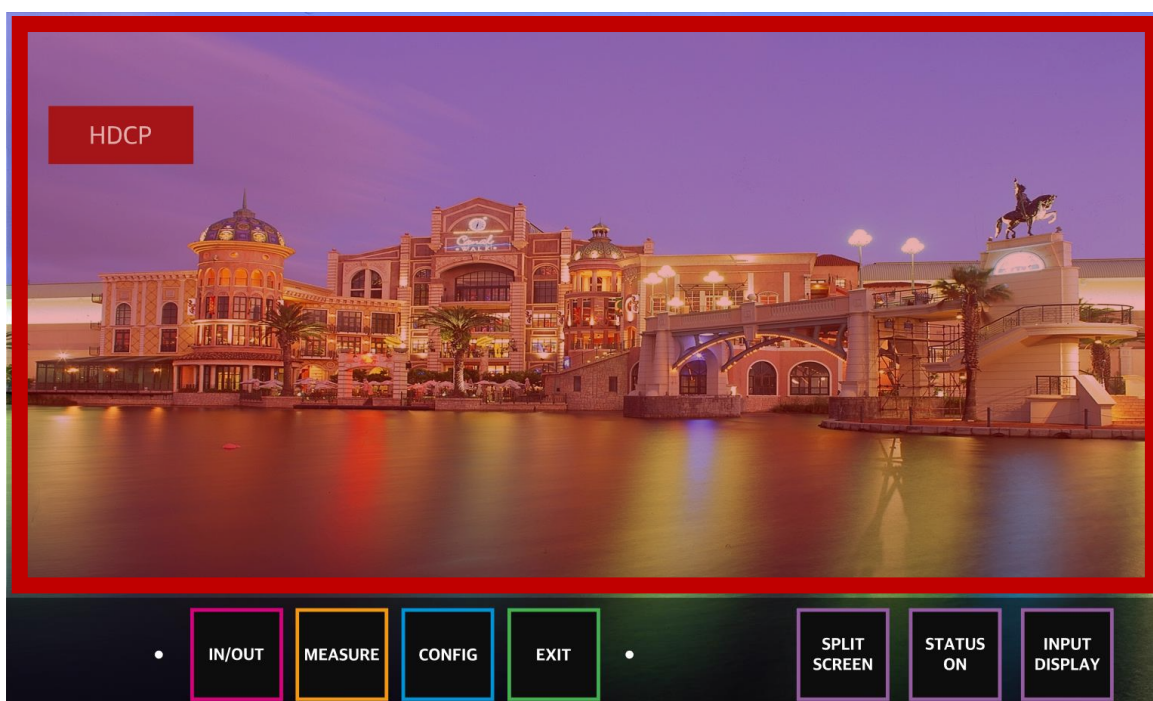
OPERATION 1

: MAIN MENU

Chapter 3

MAIN MENU

- 1 Press any RED-marked area of LCD Touch Screen for 1-2 seconds.
- 2 Then, Main Menu appears as follows.



FUNCTION MENU

	Selects the Input signal type, Output Resolution/Frame Rate, and Test Pattern Generator.
	Selects the monitoring of Waveform, Audio Level, Vector Scope, Jitter with Error Count.
	Adjusts the LCD Brightness, LCD Contrast, Audio Volume, Auto Sleep.

	Saves the setting, and goes out of Main Menu.
SCREEN MODES	
	Selects whether to display as Full Screen Mode (Video) or Split Screen Mode (Video/Measurements)
	Selects whether to display Status Icons on the top row.
	Selects whether to display the video of Input Signal or Output Signal on the screen.
	Indicates whether HDCP is activated.

OPERATION 2

: MAIN MENU - SCREEN MODES

Chapter 4

FULL/SPLIT SCREEN



1 Press **FULL SCREEN** button of Main Menu.

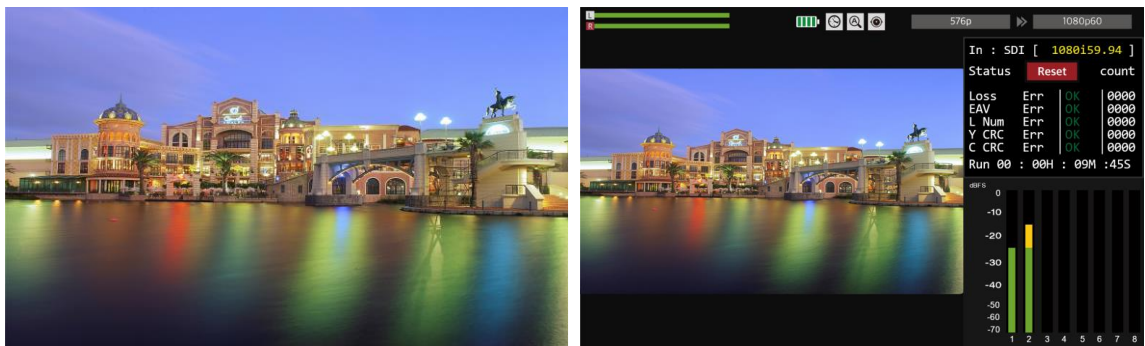
2 Then, **FULL SCREEN** button changes to **SPLIT SCREEN**.

It displays Measurement Windows and Information Panel on the left area of the screen.

3 Press **SPLIT SCREEN** button of Main Menu.

4 Then, **SPLIT SCREEN** button changes to **FULL SCREEN**.

It displays the video on the whole screen.



FULL SCREEN MODE	Displays the video on the whole screen. 
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SPLIT SCREEN
MODE

Displays the video on the left area while the measuring elements are shown on the right area.



STATUS ON/OFF



- 1 Press **STATUS ON** button of Main Menu.
- 2 Then, STATUS ON button changes to **STATUS OFF**.
LCD Screen disables the Status Icons on the top row.
- 3 Press **STATUS OFF** button of Main Menu.
- 4 Then, STATUS OFF button changes to **STATUS ON**.
LCD Screen enables the Status Icons on the top row.

①

②③④⑤

⑥

⑦

⑧

L
R

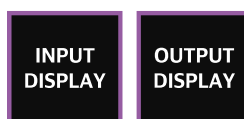
576p

1080p60

STATUS ICONS	
① Audio Level Bar	Shows the Audio Signal Level Bar of Group 1 : Channel 1, 2 - L/R signal.

② Battery Status	Indicates the residual battery capacity.
③ Auto Sleep Mode	Indicates the activation/deactivation of Auto Sleep Mode.
④ Auto Input Mode	Indicates the activation/deactivation of Auto Input Detection Mode.
⑤ Input Source Type	Indicates the type of Input Signal : SDI, HDMI, Pattern
⑥ Input Resolution /Frame Rate	Indicates the Resolution/Frame Rate of Input Signal
⑦ Conversion Indication	Indicates the direction of Conversion : from a Conversion Source to the Converted Output.
⑧ Output Resolution /Frame Rate	Indicates the Resolution/Frame Rate of Output Signal

INPUT/OUTPUT DISPLAY



1 Press **INPUT DISPLAY** button of Main Menu.

2 Then, **INPUT DISPLAY** button changes to **OUTPUT DISPLAY**.

LCD Screen displays the Video of Output Signal on the screen.

3 Press **OUTPUT DISPLAY** button of Main Menu.

4 Then, **OUTPUT DISPLAY** button changes to **INPUT DISPLAY**.

LCD Screen displays the Video of Input Signal on the screen.

INPUT DISPLAY MODE	Displays the video of a selected input signal between SDI and HDMI.
OUTPUT DISPLAY MODE	Displays the video of a selected output signal among SDI, HDMI and Test Pattern(TPG).

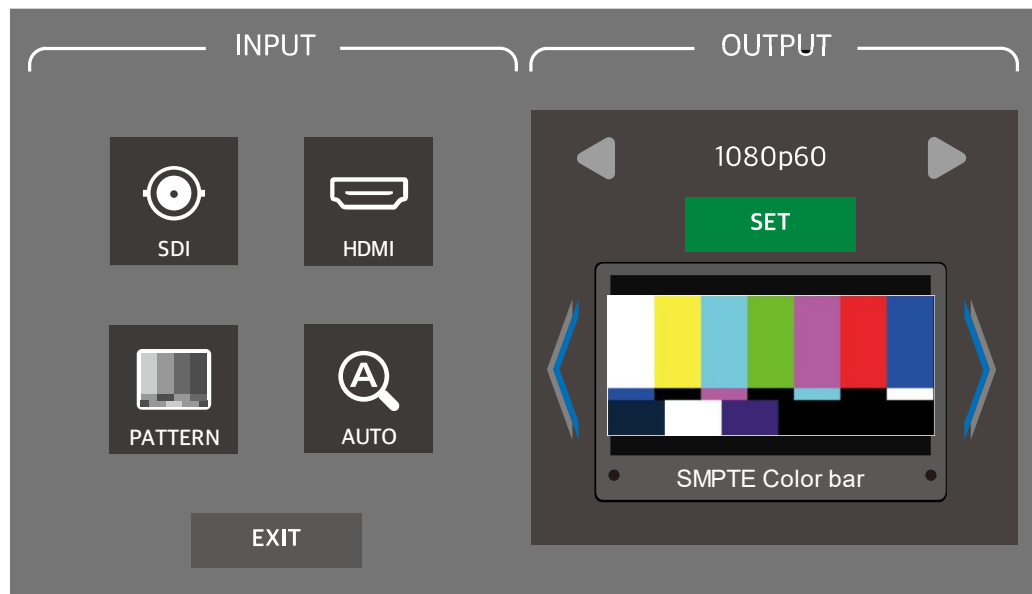
OPERATION 3

: SUB MENU

Chapter 5

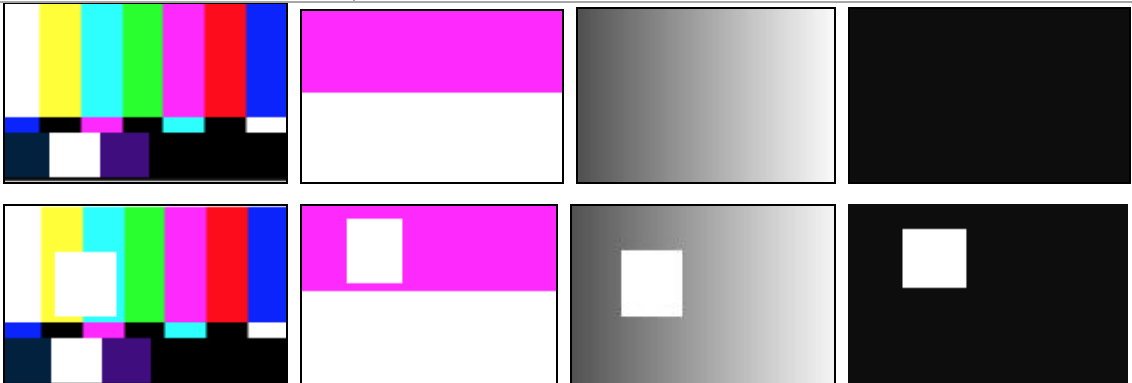


- 1 Press IN/OUT button of Main Menu.
- 2 Then, the following Sub Menu appears.



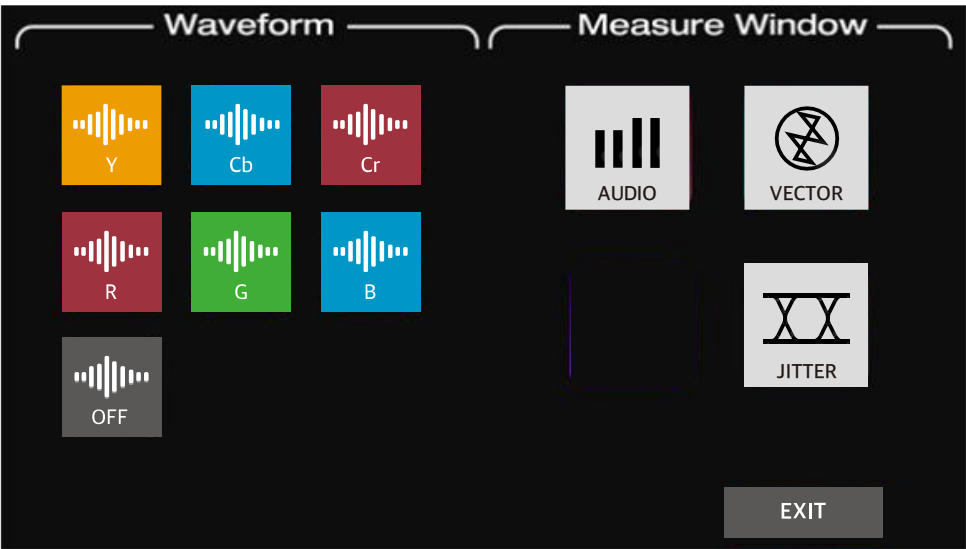
INPUT MODES	
	Selects the SDI signal for Input
	Selects the HDMI signal for Input
	Sets the Auto Detection of Input Signal (Priority : SDI > HDMI > Pattern**) **The detection of Input signal is made pursuant to the order of the priority. Ex) when applying SDI EVEN AFTER HDMI already connected, Input changes to SDI preferentially.

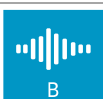
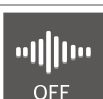
	Sets the Test Patter Generator for Output
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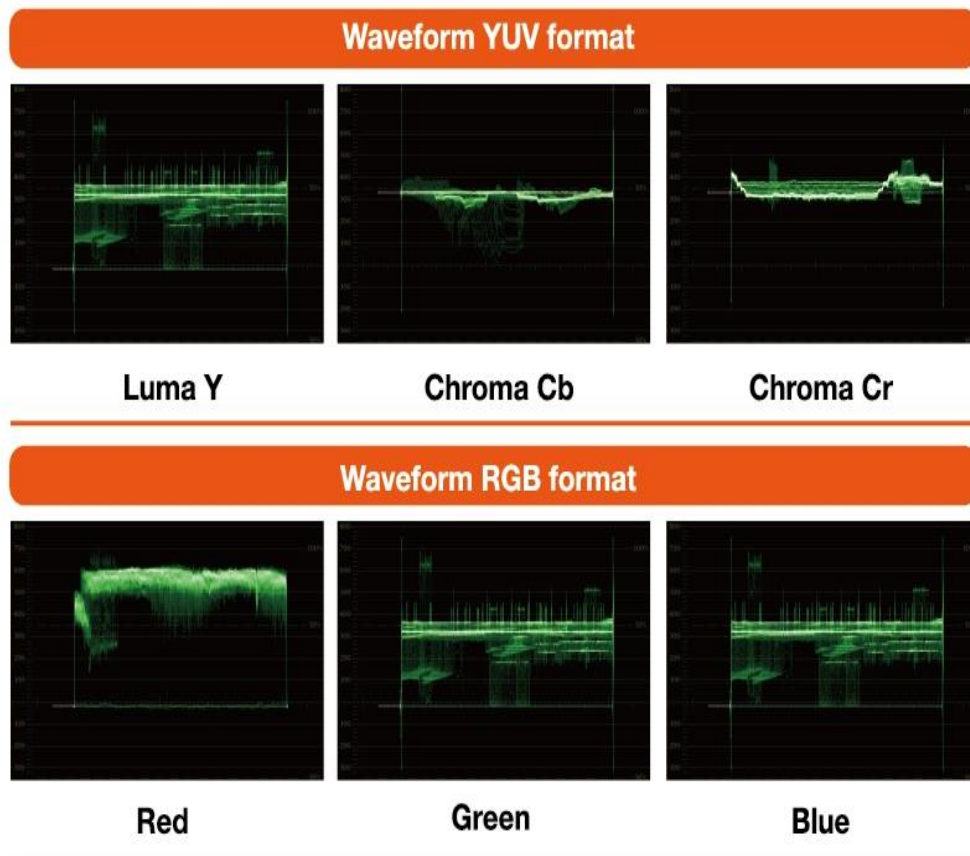
OUTPUT MODES	
(Resolution /Frame rate)	Selects the Output Resolution/Frame Rate up to 1080p60
(Test Patter Type)	Selects the type of Test Patterns (shown below)
	

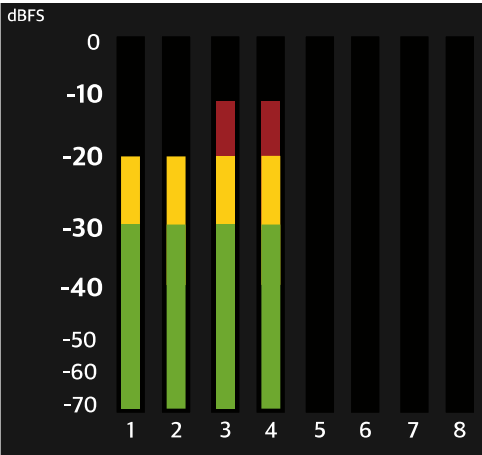
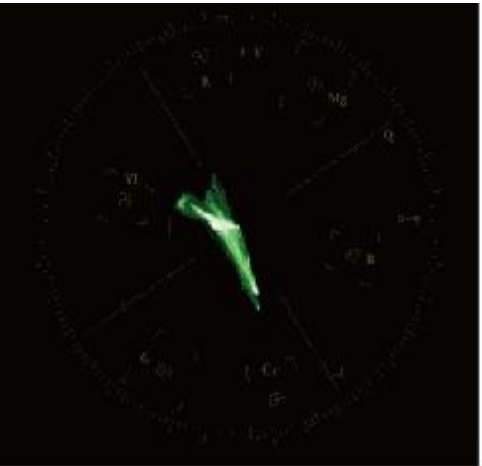
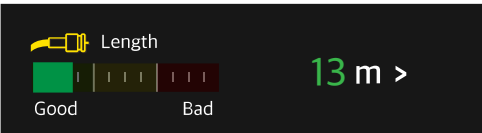


- 1 Press **MEASURE** button of Main Menu
- 2 Then, the following Sub Menu appears.



WAVEFORM ICONS	
	Displays the waveform of Y : Luminance at the bottom left.
	Displays the waveform of Cb : Blue-difference at the bottom left.
	Displays the waveform of Cr : Red-difference at the bottom left.
	Displays the waveform of R : Red at the bottom left.
	Displays the waveform of G : Green at the bottom left.
	Displays the waveform of B : Blue at the bottom left.
	Turns off the waveform display.



MEASUREMENT WINDOWS	
 AUDIO	Displays the Audio Level in the Split Mode.  - Up to 8 channel monitoring of Input source. - Indicated as dBFS reference
 VECTOR	Displays the Vector Scope in the Split Mode. 
 JITTER	Displays the SDI jitter : EYE PATTERN/ UI value.  - Eye pattern diagram of the SDI input. - Peak to Peak Jitter : Simulated Physical Eye jitter Max 1 UI Check
(Length)	Displays the Cable Length and Condition up to 100m in the Split Mode.  - Indicated on Input SDI cable length - The Condition indicated as Good to Bad through Color Gauge Bar

INFORMATION PANEL	
In : SDI [1080i59.94] Status Reset count Loss Err Err 0001 EAV OK 0000 L Num Err 0001 Y CRC OK 0000 C CRC OK 0000 352M 85:06:00 :01 Run 00:00H : 09M :45S In : HDMI [1080P59.94] Status Reset count Sync Err OK 0000 Hactive 1920 Vactive 1080 MODE HDMI HDCP ON AUD Freq 48 Khz Run 00 : 00H : 09M :45S	
① Input Information	Indicates Input source signal type and Resolution/Frame Rate.
② Reset	Initializes the Error Count and Runtime when pressing the button.
③ Error Count	Indicates the count of the relevant error occurrence.
④ Run Time	Indicates the total elapsed operating time as dd/HH/mm/ss.

SDI : ERROR COUNT ITEMS

In : SDI [1080i59.94]

Status

Reset

count

Loss	Err	Err	0001
EAV	Err	OK	0000
L Num	Err	Err	0001
Y CRC	Err	OK	0000
C CRC	Err	OK	0000

Run 00 : 00H : 09M :45S

Loss Err : Counts the Signal Loss error

EAV Err : Counts the EAV error of TRS signal

L Num Err : Counts the Line number marking error

Y CRC : Counts the CRC error of Y signal

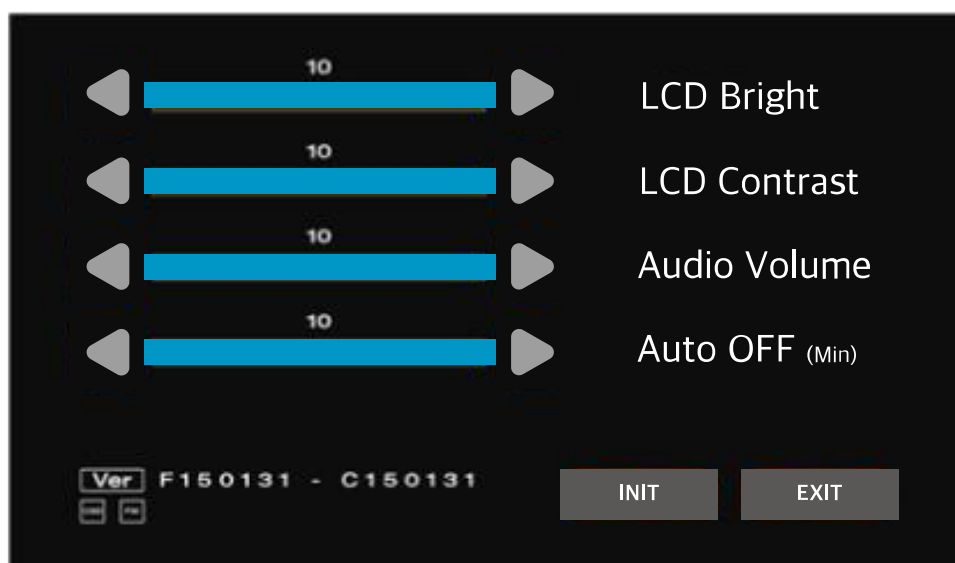
C CRC Err : Counts the CRC error of Cb,Cr signal

352M : Shows the SMPTE352M Payload

HDMI : ERROR COUNT ITEMS	
<pre> In : HDMI [1080P59.94] Status Reset count Sync Err OK 0000 Hactive 1920 Vactive 1080 MODE HDMI HDCP ON AUD Freq 48 Khz Run 00 : 00H : 09M :45S </pre>	
Sync	: Counts the Sync error
H active	: Counts the Horizontal resolution
V active	: Counts the Vertical resolution
MODE	: Shows the status of HDMI or DVI mode
HDCP	: Shows the status of HDCP
AUD Freq	: Shows the Audio sampling frequency



- 1 Press **CONFIG** button of Main Menu.
- 2 Then, the following Sub Menu appears.



LCD Bright	Adjusts the brightness of LCD Touch Screen
LCD Contrast	Adjusts the Contrast of LCD Touch Screen
Audio Volume	Adjusts the Volume of Output Audio on Earphone port
Auto Sleep (Auto OFF)	Sets the time(minute) for the Sleep Mode of LCD Touch Screen. : After the set time, the LCD is automatically turned off for energy saving.
Ver	Indicates the System Version.
(Bottom left)	Indicates FPGA version
(Bottom Right)	Indicates CPU version
INIT	Initiates all the settings in Config menu
EXIT	Goes out of Menu