USER MANUAL

BRIDGE X NEO

NEO

Summary

NEO I is the portable monitoring equipment with which SDI(SD/HD/3G) and HDMI(SD/HD/Full HD) is supported

Input, output of SDI and HDMI channel consisted of 1 for each. And UP/DOWN/CROSS change is possible

An integrity check to a signal and an audio level checking function in at most 8 channels are offered to user

Cross Converter and the Test Pattern Generator function are supported

And The 1080p60 is even supported about setting of the output format(SD/HD/3G) to the signal

Feature

@   SDI to HDMI, HDMI to SDI cross converter

@   SDI in/out (SD/HD/3G all standard format)

@   HDMI in/out (SD/HD/Full HD all standard format)

@   Test Pattern Generator (Static screen and Moving Box screen)

@   SDI signal integrity check (Loss, TSR, CRC, Line number)

@   HDMI signal integrity check (Loss, Resolution, HDCP)

@   Audio level check (At most 8 channels are monitored.)

@   Audio monitoring earphone output

@   Touch Screen LCD Built in For Input signal monitoring (5 Inch 800x480)

@   External Battery(Option)
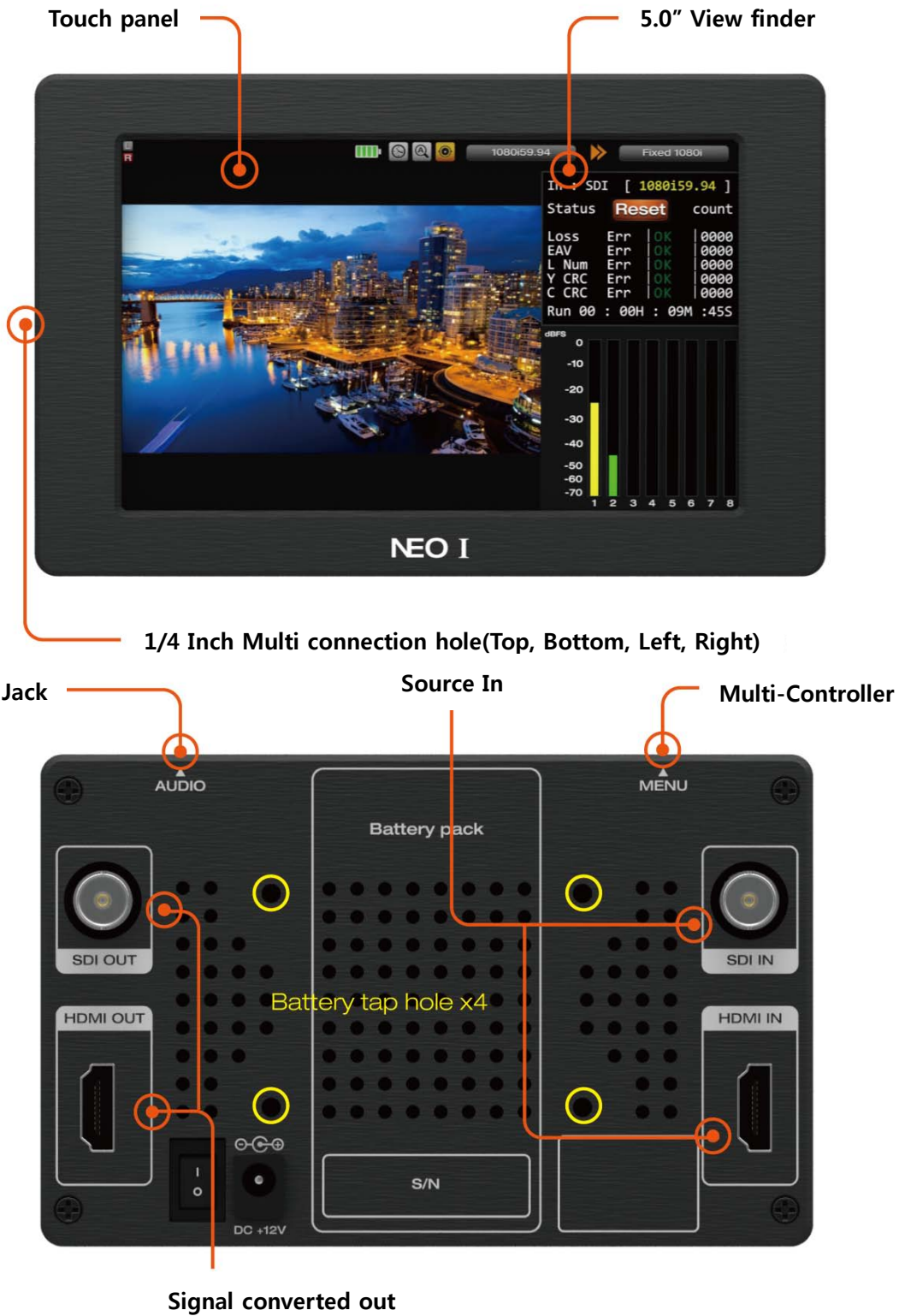
@   DC 7V ~ 17V Operation range

Product Composition

@   1 of NEO main body
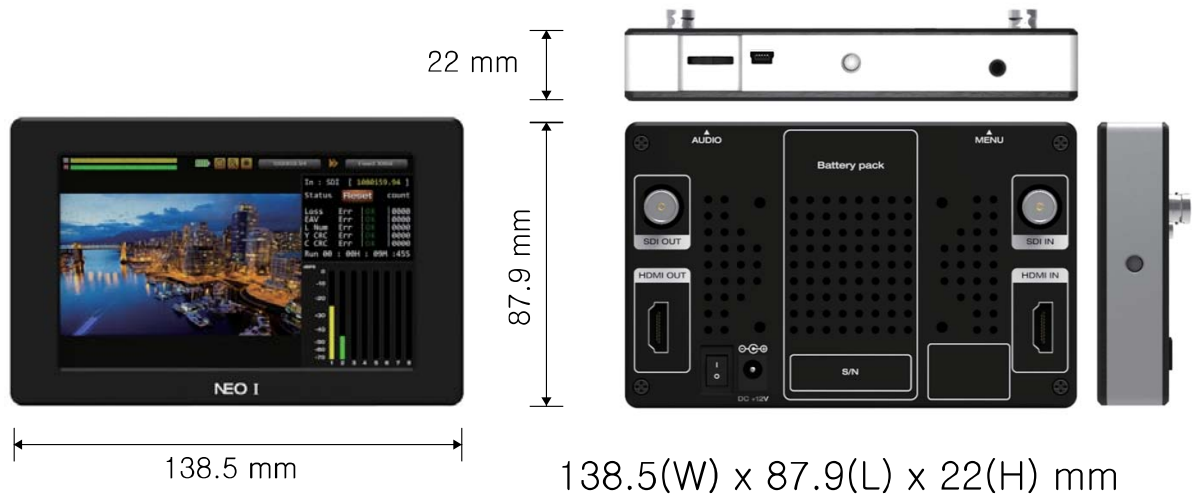@   1 of adaptor

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The name and the function of each product part

Touch panel   5.0" View finder

1/4 Inch Multi connection hole(Top, Bottom, Left, Right)

Audio Jack   Source In   Multi-Controller

Signal converted out

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The standard and the performance

Physical

22 mm

87.9 mm

138.5 mm

138.5(W) x 87.9(L) x 22(H) mm

Size (W x H x D)	138.5 x 87.9 x 22 (mm)
weight	325 g
Supply Power	+ 12 VDC
Power Consumption	9 Watts (Maximum: 10Watts)
Operation temperature	0℃ ~ 70℃
humidity	0% ~ 95% RH, Non-condensing

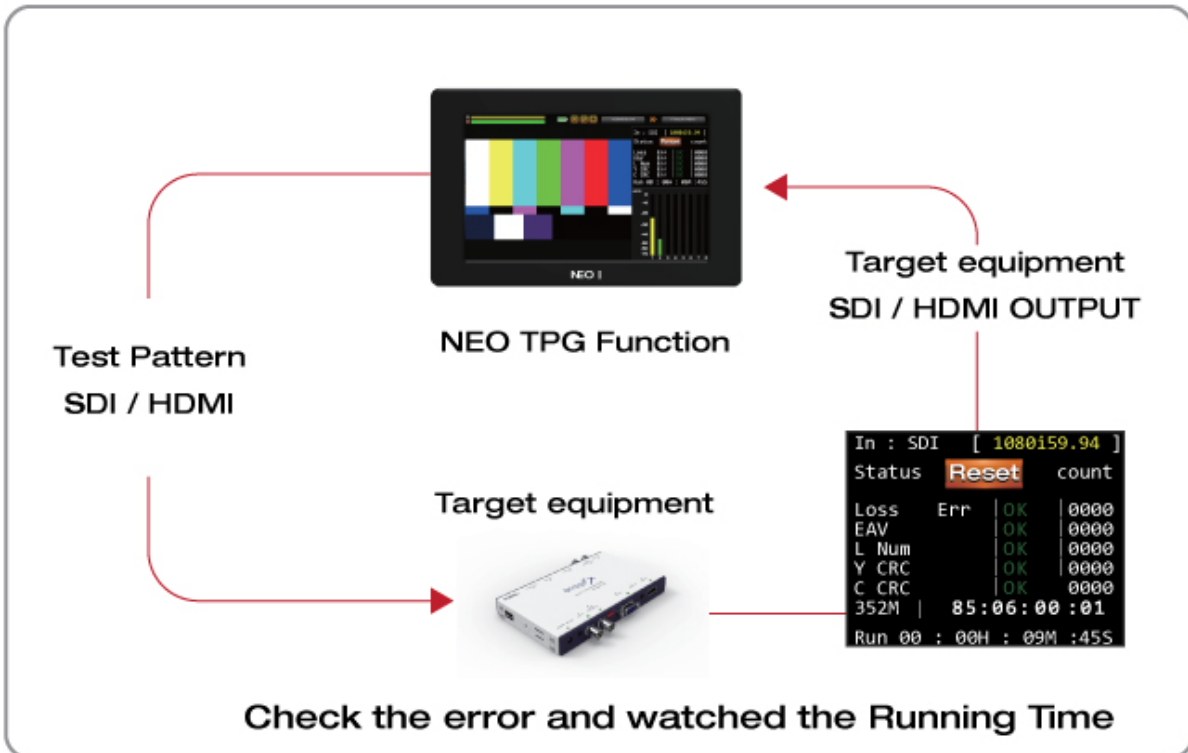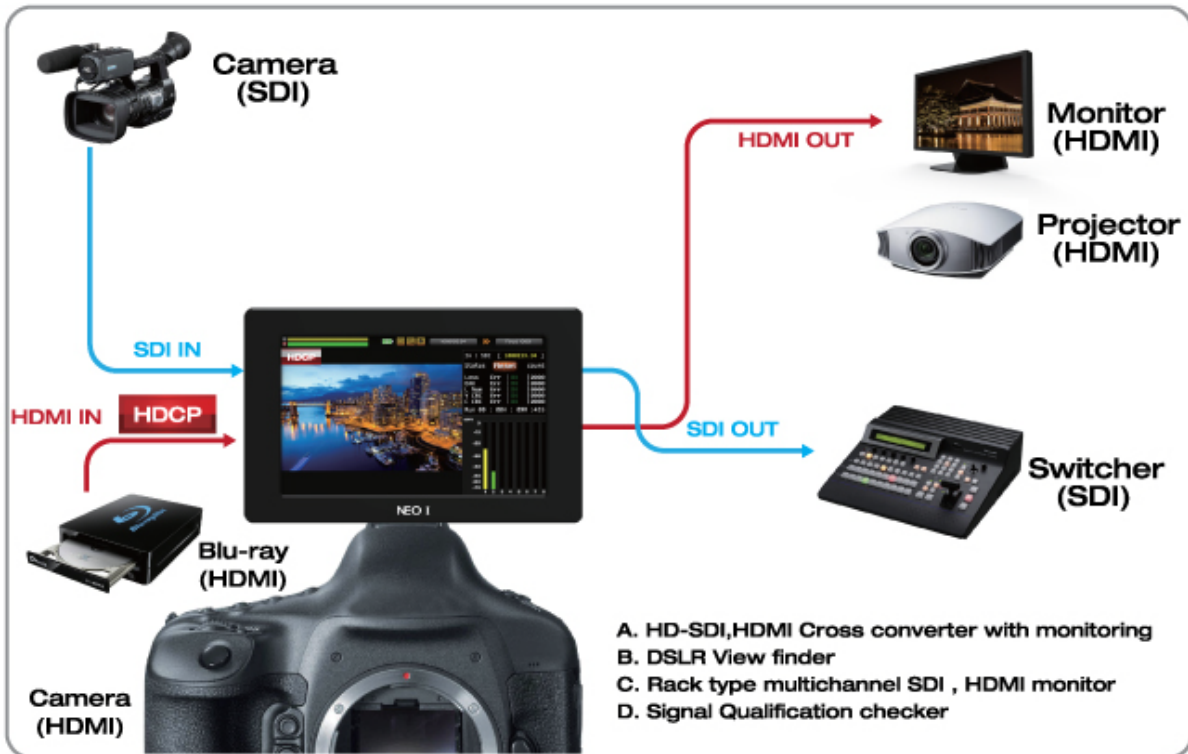## Digital Video Specs

@ HDMI v1.3 format Support

@ Multi-rate SDI format Support

@ SD format : 525/19.97(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)

LCD Display Specs

@ 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)

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Application

A. HD-SDI,HDMI Cross converter with monitoring
B. DSLR View finder
C. Rack type multichannel SDI , HDMI monitor
D. Signal Qualification checker

Test Pattern
SDI / HDMI

NEO TPG Function

Target equipment
SDI / HDMI OUTPUT

Target equipment

Check the error and watched the Running Time

Use method

1. Menu explanation

When a menu button is pressed for more than 2 seconds and a touch screen is pushed, the menu is indicated

1. IN/OUT : The kind of input signals and the resolution of the output signal and the pattern can be setup
2. Measure : It can be indicated to choose YCbCr, RGB waveform and Audio, Vector Scope
3. Config : It can be set as a screen that audio and automation go off, and version information is indicated
4. Exit : The menu screen is ended
5. Left : Zoom In
6. Right : Zoom Out
7. FULL/SPLIT : A display mode of a screen (the whole/division) can be chosen
8. STATUS : A state window of the screen upper row is indicated and isn't indicated
9. LCD IN/OUT : The image output by LCD can be chosen by an input signal and an output signal
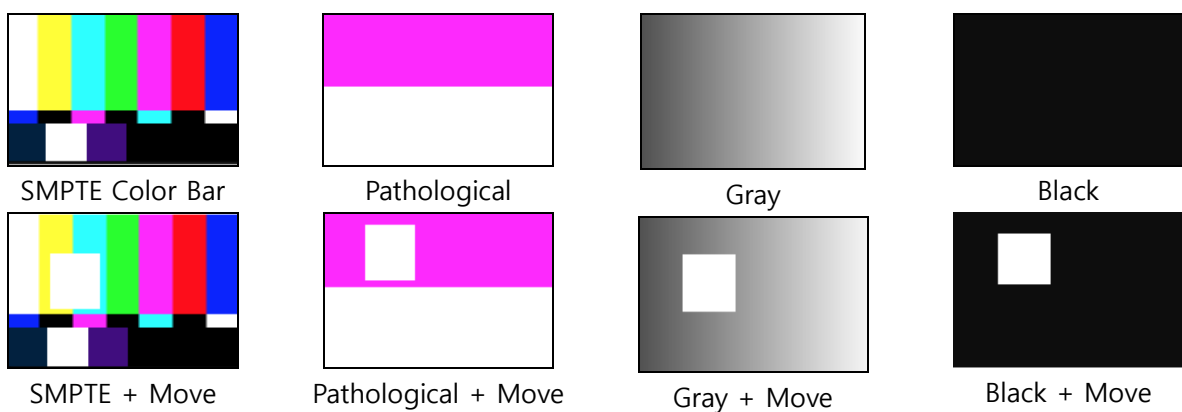10. HDCP : When HDCP is activated at HDMI signal input, it's indicated

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2. The addition menu explanation

2.1 IN/OUT
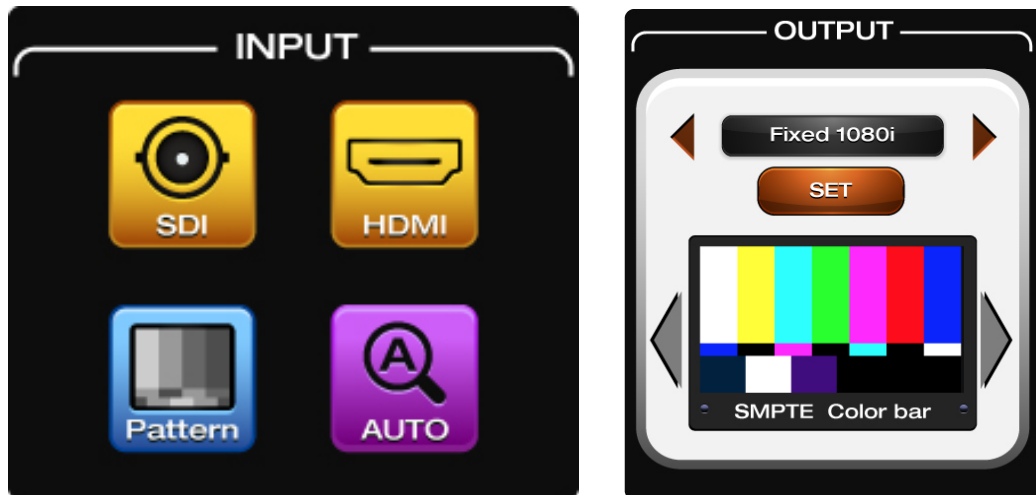
@   INPUT : The signal which consists of SDI, HDMI, Pattern, AUTO and inputs can be chosen
              The order of priority to AUTO is SDI > HDMI > Pattern
@   OUTPUT : It's possible to setting the output resolution
              and the kind of patterns can be chosen
              When pressing a SET button after choosing the output format, it's applied
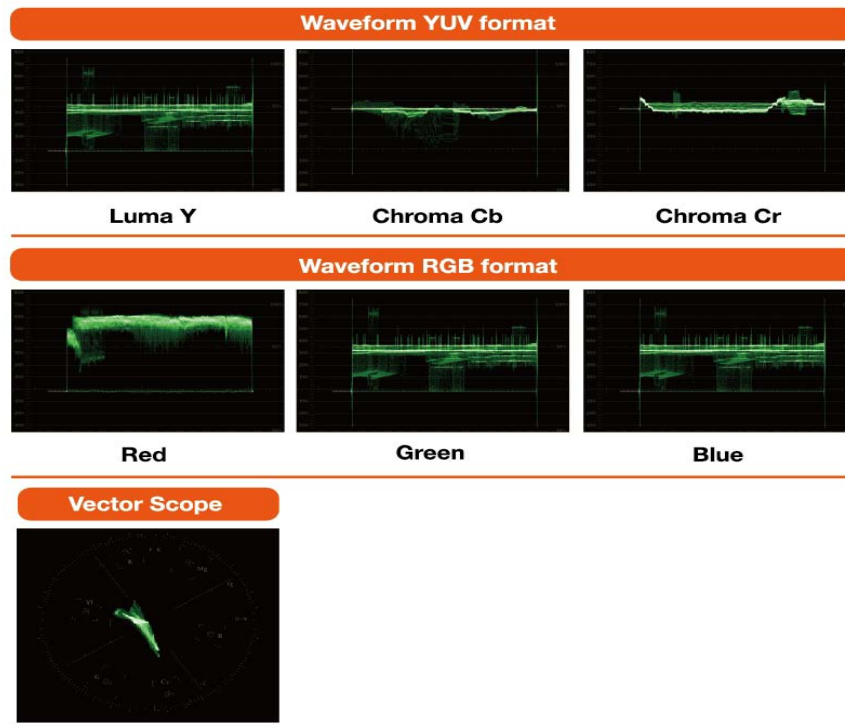
Test pattern

SMPTE Color Bar	Pathological	Gray	Black
SMPTE + Move	Pathological + Move	Gray + Move	Black + Move

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2.2 Measure

@   Waveform : It can be indicated to choose YCbCr or RGB waveform at the bottom left

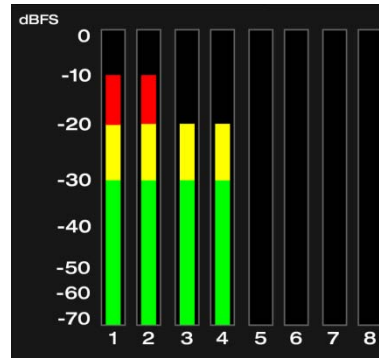@   Measure Window : It can be indicated to choose Audio, Vector scope, Cable length or Jitter on window in split mode

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1) Audio level display

@   It is indicated to at most 8 channels

@   Indication by a video input source

@   It is indicated as the dbFS reference

2) Vector Scope

@   It is indicated as the vector scope

3) Length (Option)

@   Indication a input SDI cable length
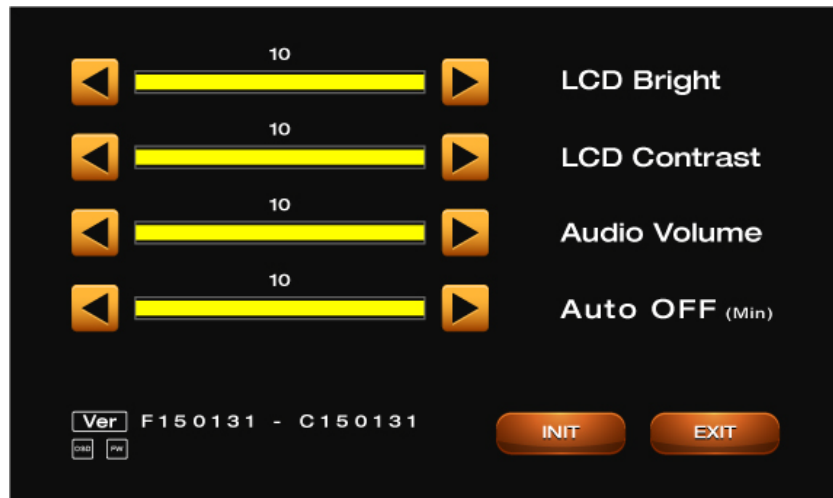
@   Indication by Good, Normal, Bad

4) Jitter (Option)

@   Indication a pseudo eye pattern with jitter

@   Peak to Peak Jitter :
    Simulated Physical Eye jitter

@   Max 1 UI Check

@   Indication by Good, Normal, Bad

< Pseudo EyE Picture >

2.3 Config

@ LCD Bright : The brightness of the LCD screen can be controlled

@ LCD Contrast : Contrast of a LCD screen can be controlled

@ Audio Volume : The volume of sound output by a terminal of earphones
can be controlled

@ Auto OFF(min) : The timer which to turn off a LCD screen can be setup

@ Ver : Version information on a system is indicated

2.4 FULL/SPLIT

@ FULL : A image is indicated on the whole screen

@ SPLIT : A image is indicated with three division screens, and monitoring information is
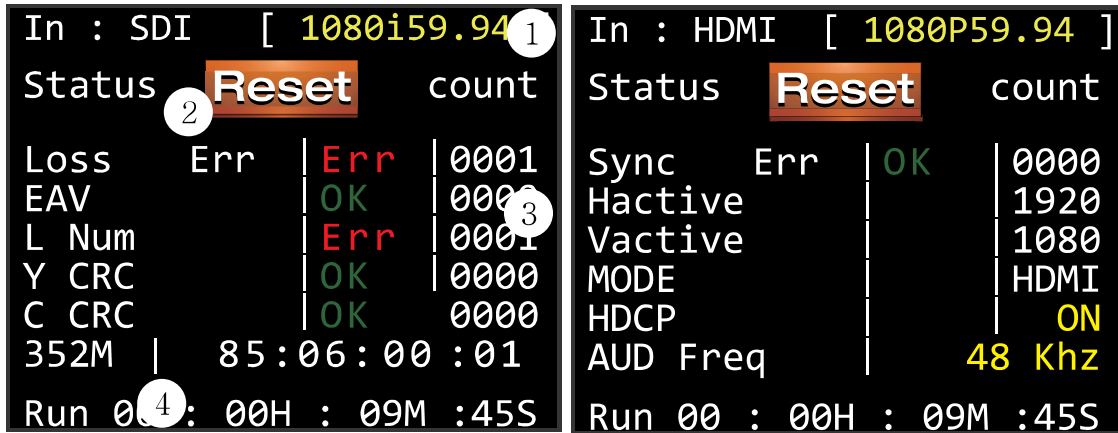shown to the right side

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2.5 STATUS

1. An audio signal (1 Group 1,2 Channel L/R Signal) is indicated
2. Audio L/R level bar Display (1 Group L/R Signal)
3. Input battery capacity indication (4 step)
4. Auto OFF Activating/deactivating Icon
5. Input selection AUTO function Activating/deactivating Icon
6. Input source kind(SDI, HDMI, Pattern) display icon
7. Input resolution indication
8. Direction of conversion indication
9. Resolution of output

2.6 LCD IN/OUT

@ INPUT : LCD image display is chosen in the SDI,HDMI input, and it's indicated
   (Caution) When it's LCD Input setting, video input is converted in AUTO,
   and a screen is indicated by the order of priority of SDI signal or HDMI signal
   When doing the measurement for which Test Pattern was used,
   it's possible to change it to LCD INPUT mode and measure to HDMI or SDI signal

@ OUTPUT : LCD image display is indicated as the Converter reference
   It's indicated by set type input (SDI/HDMI/TPG)

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3. Monitoring information display

```
In : SDI    [ 1080i59.94 ①     In : HDMI   [ 1080P59.94 ]
Status   ②  Reset   count      Status     Reset    count

Loss    Err  |Err  |0001       Sync    Err  |OK   |0000
EAV          |OK   |000③       Hactive      |     |1920
L Num        |Err  |0001       Vactive      |     |1080
Y CRC        |OK   |0000       MODE         |     |HDMI
C CRC        |OK    0000       HDCP         |     |  ON
352M  |   85:06:00 :01         AUD Freq     |   48 Khz
   ④
Run 00: 00H : 09M :45S         Run 00 : 00H : 09M :45S
```

1. An input source and input format information are indicated
2. When pressing a reset button, an error count and Run time are initialized
3. When an error occurs by item, it is count and displayed
4. Display sequence of an execution time is day, hour, minute, seconds

@ SDI information display	@ HDMI information display
- Loss Err : A signal Loss error is displayed	- Sync Err : A Sync error is displayed
- EAV Err : A EAV error of a TRS signal is displayed	- H active : Horizontal resolution is displayed
-L Num Err: Line number marking error is displayed	- V active : Vertical resolution is displayed
- Y CRC Err : A CRC error of Y signal is displayed	- MODE : HDMI and DVI mode are displayed
- C CRC Err:A CRC error of Cb,Cr signal is displayed	- HDCP : A check of HDCP support is displayed
- 352M : SMPTE352M Payload is displayed	- AUD Freq : Audio sampling frequency is displayed