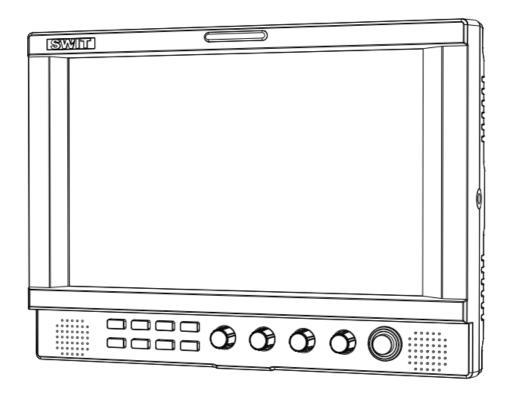


SWIT Electronics Co., Ltd.

Model: S-1093F

9" Full HD Broadcast LCD Monitor



User Manual

Ver: A.2

Please read this User Manual throughout before using.

Preface

- 1. All internal technologies of this product are protected, including device, software and trademark.

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- 2. All brands and trademarks of SWIT Electronics Co., Ltd. are protected and other relative trademarks in this user manual are the property of their respective owners.
- 3. Due to constant effort of product development, SWIT reserves the right to make changes and improvements to the product described in this manual without prior notice.
- 4. The warranty period of this product is 2 years, and does not cover the following:
 - (1) Physical damage to the surface of the products, including scratches, cracks or other damage to the LCD screen or other externally exposed parts;
 - (2) The LCD dot defects are not over three;
 - (3) Any damage caused by using third-party power adaptors;
 - (4) Any damage or breakdown caused by use, maintenance or storage not according to the user manual.
 - (5) The product is disassembled by anyone other than an authorized service center.
 - (6) Any damage or breakdown not caused by the product design, workmanship, or manufacturing quality, etc.
 - * Any sales personnel have no rights to provide additional warranty.
- 5. For any suggestions and requirements on this product, please contact us through phone, fax, Email, etc.

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Website: http://www.swit.cc

Maintenance

Warning

- 1. In order to reduce the risk of fire and electrical shock, do not lay this product in rain or damp places.
- 2. Please keep away from the strong magnetic field; it may cause the noise of the video and audio signals.

The power

- 1. Please use the power adapter provided or recommended by the manufacturer in order to avoid damage.
- 2. For a third party power adapter, please make sure the voltage range, supplied power, and polarity of power lead are fit.
- 3. Please disconnect the power cable under the following situations:
- (A). If you do not operate this monitor for a period of time;
- (B). If the power cable or power adaptor is damaged;
- (C). If the monitor housing is broken.

The monitor

- 1. Please don't touch the screen with your fingers, which would probably deface the screen.
- 2. Please don't press the screen; the LCD is extremely exquisite and flimsy.
- 3. Please don't lay this product on unstable place.

Cleaning

- 1. Please clean the screen with dry and downy cloth or special LCD cleanser.
- 2. Please do not press hard when cleaning the screen.
- 3. Please do not use water or other chemical cleanser to clean the screen.

The chemical may damage the LCD.

Contents

Preface	2
Maintenance	3
Contents	4
Installation Dimension	
Operation Instructions	6
·Front Panel	6
·OSD	7
·Back Panel	9
Main Menu	10
Optional Battery Plate	16
Specification	18
Trouble-shooting	19

Packing list

Standard Package:

- 1. Sun hood
- 2. Cold shoe / Screw arm trestle
- 3. Power adaptor
- 4. Battery plate (V-mount, Gold mount or DV battery plate for option)

Optional Purchase:

- 1. U shape desktop stand
- 2. D-tap to 4-pin XLR cable
- 3. Carrying case

Introduction

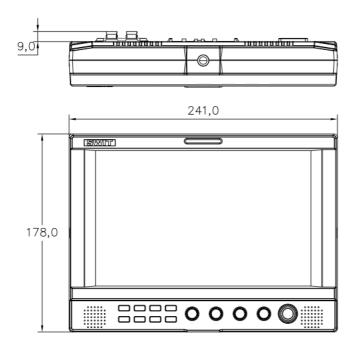
S-1093F adopts IPS LCD panel, with resolution 1920×1200 and wide viewing angle H170 $^{\circ}$ V170 $^{\circ}$. It supports 2 x 3GSDI(Level A/B), 1 x HDMI, 1 x CVBS and 1 x analog audio input. It also supports 2 x 3GSDI, 1 x HDMI, 1 x CVBS and 1 x analog audio loop through output.

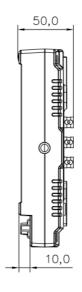
Features:

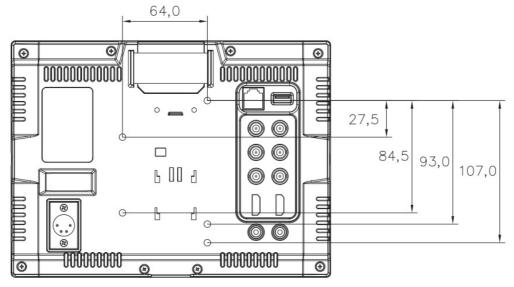
- Support multiple Aspect Ratio and scan modes
- Support multiple Marker selection (Marker, Safety Area)
- Powerful audio and video analysis functions
- Support multiple functions user-defined (Source ID, function keys, GPI)
- Multiple power supply methods to meet different requirements
- TSL UMD (RS485) Tally, GPI control
- USB firmware upgrade
- Supports 2K display

Installation Dimension

The main body (in mm)

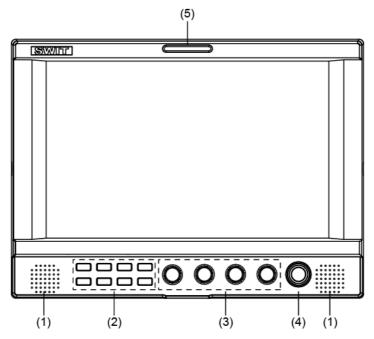




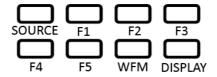


Operation Instructions

·Front Panel



- (1) Speaker: For SDI/HDMI embedded audio and analog audio monitoring. (Will not work if earphone is plugged in)
- (2) Button



SOURCE: Press "SOURCE" to select SDI1, SDI2, HDMI, and CVBS signal input

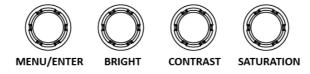
F1~F5: User definable function keys. Please see details in "4. Function key" under "Main Menu".

WFM: Waveform shortcut key, press "WFM" to quickly turn on or turn off the waveform. Please setup parameters of waveform under "WFM" submenu.

For example: Set F1 as "Histogram", press F1 to open Histogram function and press again to close this function.

DISPLAY: Press "DISPLAY" to turn on or turn off relevant status information, audio and video waveform.

(3) Rotary Knob

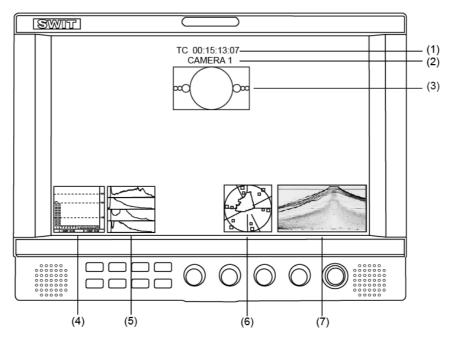


MENU/ENTER: When the menu is inactivated, presses "MENU/ENTE" to turn on the main menu; Revolve "MENU/ENTER" to adjust settings or parameters, and press to apply; When the menu is inactivated, revolve "MENU/ENTER" to adjust sound volume.

BRIGHT: 0-100 value adjustment and the default value is 50

CONTRAST: 0-100 value adjustment and the default value is 50 SATURATION: 0-100 value adjustment and the default value is 50

- (4) POWER: Power on/off
- (5) TALLY Light: Red, Green and Yellow 3-color TALLY indicator



(1) Time code (SDI)

Under SDI input, it can display Time code. If no Time code information is detected, it will be displayed as "TC: UNLOCKED".

User can set function keys F1∼F5 or GPI pins as "Time code" to turn on or off this function.

(2) **UMD**

Set up the UMD under 'UMD" submenu.

(3) AFD (SDI)

User can set function keys F1∼F5 or GPI pins as "AFD" to turn on or off this function. If no relevant information is detected, it will be displayed as "AFD: UNLOCKED".

(4) Audio

Monitor the audio information. The relevant parameters like position, audio channels and blending, etc can be changed under "Audio" submenu.

User can set function Keys F1∼F5 or GPI pins as "Audio" to turn on or off this function.

(5) Histogram

User can set function Keys F1∼F5 or GPI pins as "Histogram" to turn on or off this function.

(6) Vector

The relevant parameters like Vector position, Vector color and Vector blending, etc. can be changed under "Vector" submenu.

User can set function Keys F1∼F5 or GPI pins as "Vector" to turn on or off this function.

(7) Waveform

Press "WFM" on the front panel to turn on/of this function. The relevant parameters like WFM position, WFM color and WFM blending, etc can be changed under "Waveform" submenu.

Introduction of audio and video functions

♦ 16-ch embedded audio meters

Under 3G/HD/SD SDI, it displays 16 channels embedded audio meters. Under HDMI, it displays 8 channels embedded audio meters. Under CVBS, it displays 2 channels embedded audio meters. The audio meter is green, and will turn yellow when audio exceeds -20dB, and turn red when audio exceeds -9dB.

Audio alarm

If the embedded audio value is too low or no embedded audio, it will display "MUTE" or "UNLOCKED" in the audio bar.

◆ Timecode (SDI)

Under SDI input, it can display the SMPTE timecode (VITC1, VITC2 or LTC) on the top of the screen, which is used extensively for synchronization, and for logging and identifying material in recorded media. If no Timecode information is detected, it will be displayed as "UNLOCKED".

♦ Waveform (Y, Cb, Cr, R, G, B)

Under SDI and HDMI input, totally 6 kinds of waveforms which are Y, Cb, Cr, R, G and B can be selected so as to check the brightness and chroma distribution.

♦ Vector

The displayed vector scope pattern is available under both SDI and HDMI, represents saturation as distance from the center of the circle, and hue as the angle, in standard position, around it.

♦ Histogram (R, G, B)

The histogram is a bar graph that shows the distribution of luminance values in the picture. There're R, G, B histograms that individually displayed simultaneously, available under both SDI and HDMI.

♦ Internal Color Bar

Under SDI and HDMI input, it has 100% internal color bar which helps to analyze the monitor color and adjust the display parameter.

User can set function Keys F1∼F5 or GPI pins as "color bar" to turn on or off this function.

Peaking focus assist (red/blue switch)

The Peaking focus assist function is to mark the sharpest edges of the image with red or blue color under SDI and HDMI input, for users to check if the subjects are focused.

User can set function Keys F1∼F5 or GPI pins as "Focus Assist" to turn on or off this function.

♦ Zebra stripes

Zebra Stripes are used to check if the image is over exposed or not by showing black and white lines on the monitor. It is considered over exposed when luminance value exceeds 90%.

User can set function Keys F1∼F5 or GPI pins as "Zebra" to turn on or off this function.

♦ Freeze Frame

The freeze frame is to capture and display the current broadcast frame.

User can set function Keys F1∼F5 or GPI pins as "Freeze Frame" to turn on or off this function.

♦ R/G/B/Mono

R/G/B/Mono is to display only the blue/red/green primary signal or the luminance signal only so as to monitor the image noise.

User can set function Keys F1∼F5 or GPI pins as "R/G/B/Mono" to turn on or off this function.

◆ False Color

The false color is used to aid in the setting of camera exposure. Under false color mode, there's a color chart on the bottom of screen for reference. The color from the dark to the bright will be displayed as blue, cyan, green, yellow, orange and red in a consecutive way. User can set function Keys F1~F5 or GPI pins as "False color" to turn on or off this function.

◆ AFD (SDI)

It is the abbreviation of active format description. AFD is to display the SDI embedded AFD information graphically on the screen.

♦ H/V Delay (SDI)

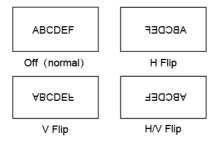
Under SDI input, H/V Delay can be used to display line/field blanking signal, and to observe the horizontal and vertical synchronous signal.

◆ UMD

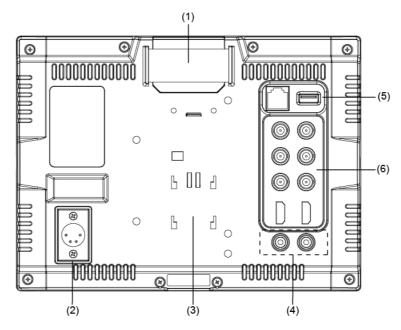
When using external control unit, it can display the video source ID and tally information on the screen.

Image Flip

Horizontal, vertical, horizontal and vertical two-way image flip function.



Back Panel



- (1) TALLY Light: Red, Green and Yellow 3-color TALLY indicator.
- (2) DC 12V IN: Connect with DC12V 4-pin XLR power adapter, support 6.5V-24V voltage input (Pin 1: Negative, Pin 4: Positive)
- (3) Battery mount connector

Connect with SWIT S-7004 series quick release battery plate, and then mount corresponding V-mount or DV batteries. See details in "Optional Battery Plate".

(4) Audio Socket

AUDIO IN: 3.5mm analog audio input (CVBS)

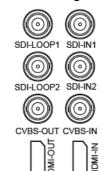
AUDIO OUT: 3.5mm audio output, to monitor SDI embedded audio, HDMI and analog audio output

(5) Multi-function Socket

GPI: TSL UMD&GPI control socket

USB Socket

(6) Video Signal Interface



SDI-IN1: SDI input (BNC connector)

SDI-LOOP1: SDI loop through output from SDI-IN1 (BNC connector)

SDI-IN2: SDI input (BNC connector)

SDI-LOOP2: SDI loop through output from SDI-IN2 (BNC connector)

CVBS-IN: CVBS input (BNC connector)

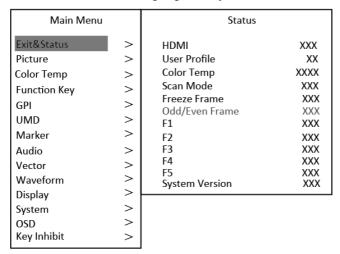
CVBS-OUT: CVBS output (BNC connector)

HDMI-IN: HDMI input (HDMI-A connector)

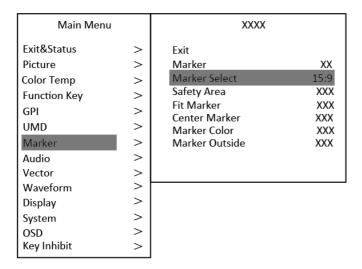
HDMI-OUT: HDMI loop through output from HDMI-IN (HDMI-A connector)

Main Menu

- S-1093F has OSD to adjust the parameters and settings, for example: Picture, color temp., function keys, etc.
- 1. Press "MENU/ENTER" button, the main menu will popup from the left top of the screen. The selected main menu highlights in yellow.



- 2. Revolve "MENU/ENTER" to select submenu, the selected submenu highlights in yellow, press "MENU/ENTER" to apply and enter into the selected submenu's items.
- 3. Revolve "MENU/ENTER" to select the item which needed to adjust, press "MENU/ENTER", the selected item and its parameters will be highlighted in yellow.



- 4. Revolve "MENU/ENTER" to change the selected item's parameter, press "MENU/ENTER" to apply and save the settings.
- 5. Revolve "MENU/ENTER" to select "Exit", press "MENU/ENTER" to quit submenu. Select "Exit & Status" under the Main Menu and press to quit Main Menu.

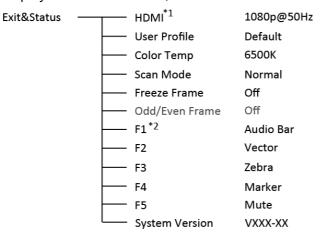
Notice:

- * The items in gray can not be set up.
- * If there is no operation under the setted time, the menu will automatically save settings and quit.
- * If the key inhabit function is turned on, except key inhibit function, all other items are in grey. Please turn off the key inhibit function to adjust the items.

Submenu introduction (the default values are marked with underline)

1. Exit & Status

Displays the current status, the details are as down below:



- *1 Display the current video signal and format
- *2 Display the current function keys setup

2. Picture

To adjust picture parameters



3. Color Temp

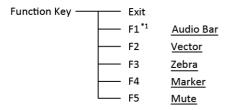
To select different color temperature or setup user-defined color parameters.



* Only "Color Temp" is set to "User", the Red/Blue/Green Gain or Red/Blue/Green Bias can be adjusted.

4. Function key

To define the F1 \sim F5 function keys.



*1 Function keys F1-F5 can be setted as the down below functions:

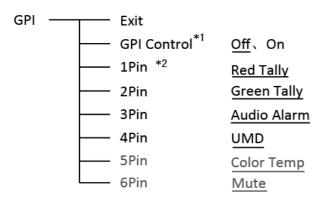
Audio Bar, Histogram, False Color, AFD, H/V Delay, R/G/B/Mono, Marker, Color Bar, UMD, Audio Alarm, Focus Assist, Aspect Ratio, Scan Mode, Zoom Mode, Mute, Freeze Frame, ,Flip Mode, CVBS,

HDMI, SDI1, SDI2, Color Temp, Time Code, Zebra, Vector.

For example: Set F3 to "R/G/B/Mono" under "Function key" submenu. User can press F3 on the front panel to adjust the parameters of "R/G/B/Mono", and the "R/G/B/Mono" will change and follow the sequence: Blue Only \rightarrow Red Only \rightarrow Green Only \rightarrow Mono \rightarrow Off.

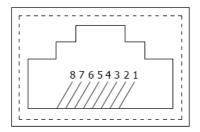
5. GPI

User can set GPI pins to relevant functions to turn on or off this function.



^{*1} When "GPI control" is set to "On", the monitor can be operated through external GPI control unit.

Red Tally, Green Tally, Yellow Tally, Aspect Ratio, Scan Mode, Zoom Mode, Mute, Freeze Frame, Flip Mode, Color Temp, Time Code, Zebra, Vector, Audio Bar, Histogram, False Color, AFD, H/V Delay, R/G/B/Mono, Marker, Color Bar, UMD, Audio Alarm, Focus Assist.



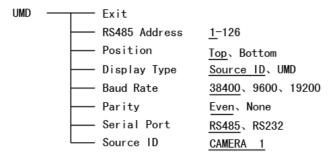
Pin	1	2	3	4
GPI	GPI_1	GPI_2	RXD+	GPI_3
Pin	5	6	7	8
GPI	GPI_4	RXD-	NC	GND

When connecting the GPI pin with ground, the setted function will be turned on, and goes out when disconnecting.

Example 1: Under "GPI" submenu, set "GPI control" to "On", set "2 Pin" to "Red Tally", when the pin 2 of the extenal GPI control unit is connected with ground, the Tally light on the front panel will turn red. When disconnected, the tally light will turn off.

Example 2: Under "GPI" submenu, set "GPI control" to "On", set "4 Pin" to "Scan Mode", when the pin 4 of the extenal GPI control unit is connected with ground, the Scan mode will change and follow the sequence: "Normal" →"Overscan"→"Native".

6. UMD



Support "TSL UMD Protocol-V4.0" provided by Television System LTD Setup Source ID:

^{*2} The GPI pins can be setted to the down below functions:

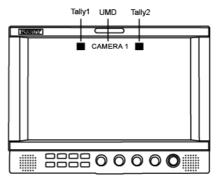
Select "Source ID", revolve "MENU/ENTER" to select the letters and press "MENU/ENTER" to

input. Max 8 letters are supported. Select "Exit" to quit and save settings, the source ID will be displayed on top or bottom of the screen.

UMD setup:

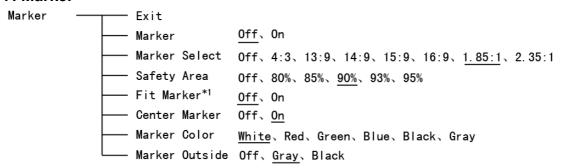
- (1) Connect the external control equipment with S-1093F;
- (2) Set "Display Type" to "UMD" under UMD submenu;
- (3)Make sure the "address", "Baud Rate", "Parity" the same;

(4)Adjust the external control equipment and send UMD command, the UMD information will be display as the right photo.



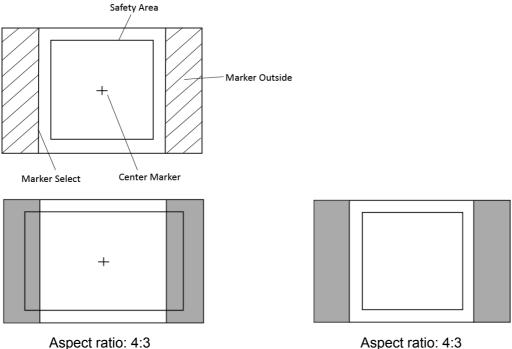
User can set the character and color of the UMD and the color of Tally1 and Tally2. Please see "5. GPI" to check the "RS485 pin sequence and definition:

7. Marker



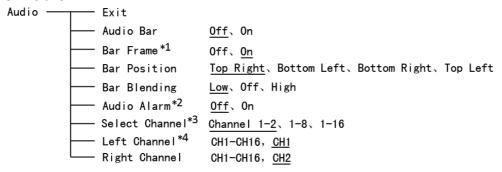
*1 When "Fit Marker" is "Off", the size of safety area is benchmarked against the actual display screen, accounting for $80\% \sim 95\%$ of actual display screen. When "Fit Marker" is "On", the size of safety area is benchmarked against the area inside the scales marker, accounting for $80\% \sim 95\%$ of the area inside the scales marker.

Example:



Safety Area: 85% Center Marker: On Fit Marker: Off Aspect ratio: 4:3
Safety Area: 85%
Center Marker: Off
Fit Marker: On

8. Audio



*1 When "Bar Frame" is set to "Off", only the audio meter will be displayed.

When "Bar Frame" is set to "On", frame and real-time audio value will be displayed.

- *2 When "Audio Alarm" is set to "On", if no embedded audio is detected, the audio bar will display "UNLOCKED". If the audio value is too low, the audio bar will display "MUTE".
- *3 Select Channel

Under analog signal, only channel 1-2 can be displayed.

Under HDMI signal, channel1-2 and 1-8 can be selected.

Under SDI signal, channel 1-2, 1-8 and 1-16 can be selected.

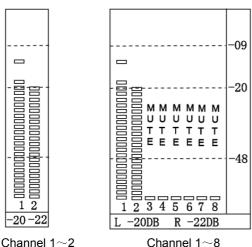
*4 Audio channels can be selected to output according to the requirements.

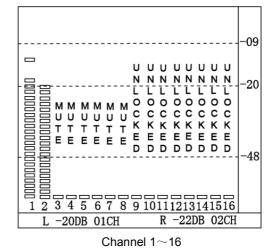
When the current "Select Channel" is set to "Channel1-2", the left channel and right channel output can be selected from Channel1 or channel2.

When the current "Select Channel" is set to "Channel1-8", the left channel and right channel output can be selected from Channel1 to channel8.

When the current "Select Channel" is set to "Channel1-16", the left channel and right channel output can be selected from Channel 1 to channel 16.

In audio bar, the left channel information will be in green, and the right channel information will be in red.



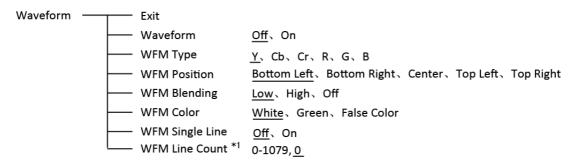


Channel 1~8

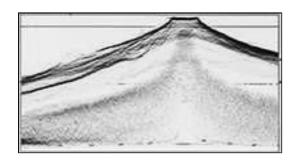
9. Vector

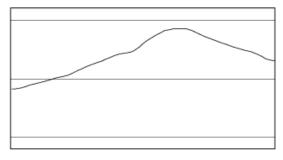


10. Waveform



*1: Only the "WFM Single Line" is set to "ON", the "WFM Line Count" can be adjusted. "WFM Single Line" is to display the selected line waveform of "WFM Line Count"





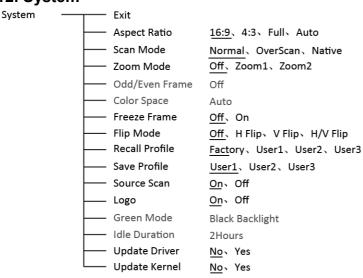
WFM Single Line: Off

WFM Single Line: On

11. Display



12. System



*1 Source Scan

When set to "Yes", after turn on the monitor, the signal will be inspected and follow the sequence of "SDI1→SDI2→HDMI→CVBS".

For example: if channel is selected to SDI2, SDI-IN2 has no input, and CVBS has input. When turn on the monitor, after automatic inspection, SDI2 has no recognized signal, and CVBS has recognized signal, then the input signal will be CVBS.

When set to "No", update model will not be supported.

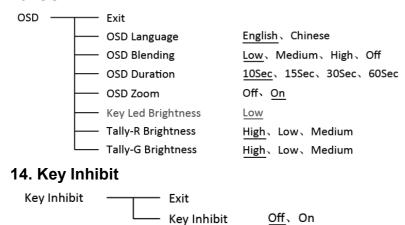
*2 Logo

When powered on, the screen will display SWIT logo.

*3、*4 Update Driver/ Kernel

S-1093F supports USB software upgrade. Insert the USB equipment with update software into the back panel USB socket. Set "Update Driver" and "Update Kernel" to "Yes" under "System" Submenu, press "MENU/ENTER" to apply. During the update procedure, please do not power off to make sure the software writing has been successfully completed.

13. OSD



If the "Key Inhibit" is "On", there is no response when all the buttons expert " MENU/ENTER" are pressed, the sreen will be displayed as " Key Inhibit".

User can set "Key Inhibit" under "key Inhibit" submenu to "Off" to recover the functions of all buttons.

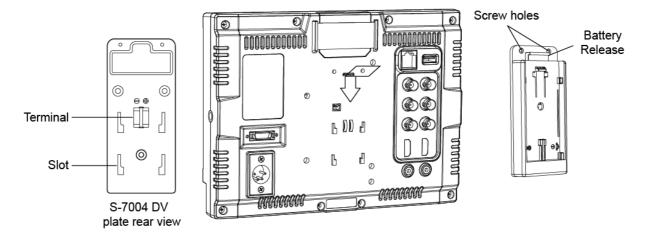
Optional Battery Plate

1. Battery Mount choice

S-1093F monitor can use V-mount, Gold mount and various DV batteries by connecting with SWIT S-7004 series battery plates. There're following types of S-7004 for choice:

Model	Compatible battery type	Recommended SWIT battery
S-7004F	SONY L series NP-F770/970	S-8972, S-8970, S-8770
S-7004U	SONY BP-U series U60/30	S-8U63
S-7004D	Panasonic CGA-D54/D28 and	S-8D62, S-8D58
	VW-VBD58	
S-7004B	Panasonic VW-VBG6	S-8BG6
S-7004J	JVC BN-V428U	S-8428
S-7004V	JVC BN-VF823	S-8823
S-7004I	JVC SSL-JVC50	S-8I50
S-7004C	Canon BP series BP-930/945/970G	S-8945, S-8845
S-7004E	Canon DSLR, LP-E6	S-8PE6
S-7004S	SONY V-mount batteries	S-8080S, S-8110S, S-8160S.etc
S-7004A	Anton Bauer Gold mount batteries	S-8080A, S-8110A, S-8160A.etc

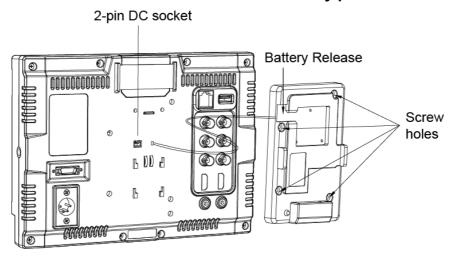
2. Installation of S-7004F/D/J/C/U/E/B/V/I snap-on type DV battery plate:



S-7004F/D/J/C/U/E/B/V/I DV plate is snap-on type, quick release and interchangeable. Please follow the instructions to install:

- (1) Please make sure the power terminals are clean and in well condition before use.
- (2) Align the S-7004 DV plates slots to the bolts of the monitor rear panel, and press tightly in.
- (3) Fix the S-7004 DV plates by provided screws on the top side.
- (4) Mount the corresponding battery to S-7004 DV plate to power the monitor.
- (5) To release the battery, press the battery release button to take out the battery

·Installation of S-7004A/S Gold mount / V-mount battery plate



To use Gold mount or V-mount battery, please install the S-7004A/S plate as following instructions:

- (1) Please make sure the power terminals are clean and in well condition before use.
- (2) Connect the wire of S-7004A/S to the 2-pin DC socket.
- (3) Align the S-7004A/S screw holes to the bolts of the monitor rear panel. (S-7004A Gold mount plate need a spare bedding between the monitor and plate)
- (4) Fix the S-7004A/S mount by provided screws.
- (5) Mount Gold mount / V-mount battery to S-7004A/S to power the monitor.
- (6) Press the battery release to take down the battery

Specification

LCD Performance			
Size		9 inches	
Display	area	191.5×119.7 mm	
Resoluti	on	1920×RGB×1200	
Color		8 bit	
Aspect r	atio	16:9⁄4:3	
Brightne	ess	450 cd/m²	
Contrast	t	1000:1	
Viewing	Angle	Horizontal: 170°Vertical: 170°	
Input/ou	utput		
	BNC×2	3G/HD/SD-SDI ×2	
	BNC×1	CVBS input	
	HDMI×1	HDMI input	
Input	GPI×1	UMD, GPI×1	
	USB×1		
	3.5mm×1	analog audio input	
	BNC×2	3G/HD/SD-SDI loop through output	
O44	BNC×1	CVBS loop through output	
Output	HDMI×1	HDMI loop through output	
	3.5mm×1	SDI/HDMI/analog audio output	
Video F	ormat		
CVBS		NTSC / PAL	
		480i / 576i / 480p / 576p	
		1080i (60 / 59.94 / 50)	
HDMI		720p (60 / 59.94 / 50)	
		1080p (60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98)	
		1080psf (30 / 29.97 / 25 / 24 / 23.98)	
	SMPTE-425M-A/B	1080p (60 / 59.94 / 50)	
	OMPTE OZAM	1080i (60 / 59.94 / 50)	
	SMPTE-274M	1080p (30 / 29.97 / 25 / 24 / 23.98)	
	SMPTE-RP211	1080psf (30 / 29.97 / 25 / 24 / 23.98)	
SDI	SMPTE-296M	720p (60 / 59.94 / 50)	
	SMPTE-125M	480i (59.94)	
	ITU-R BT.656	576i (50)	
	SMPTE-2048-2	2048×1080p (23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60) 2048×1080i (50 / 59.94 / 60)	
General			
Input vo	Itage	DC 6.5V-24V	
Power consumption		18W	
Working temperature		0°C∼+40°C	
Working humidity		10%~90%	
	temperature	- 15℃ ~ + 60℃	
•	humidity	10%~90%	
Dimensi	•	241×178×50mm	
Net weight (main body)		960g	

Trouble-shooting

Symptom	Possible Causes	Solution
	The power is not turned on	Please check if the power is connected, and then press "POWER" button to turn on the monitor
	Unstable power voltage	Reconnect to power supply
No display	BNC or HDMI cable loose contact or not correctly connected	Check and correctly connect the BNC or HDMI cable
	The attached battery is no power	Change battery
	Using DIY power supply but the polarity is reversed	Refer to the provided power supply, reconnect the power.
	Bad contact of BNC or HDMI cable	Change cable
	Video signal has Interference	Remove the interference source(s)
	Improper adjustment of the color parameters	Adjust the "Recall profile" to "Default" under "System" submenu
Image or color	Distortion of the image	Reset the Aspect ratio
abnormal	Set to Red/Green/Blue only or Mono	Turn the Blue only/ Red Only/ Green Only/Mono off under R/G/B/Mono submenu
	Turn on the "Focus Assist" function	Turn off the "Focus Assist" function
	Turn on the "False Color" function	Turn off the "False Color" function
	Set to Mute	Turn off MUTE or revolve "MENU/ENTER" to adjust the volume
No audio output	Bad contact of signal cable	Change signal cable
	Wrong connection or bad contact of Audio cable	Connect to the correct input socket.

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