XCM-240
LCD Monitor

User Manual

OSEE TECHNOLOGY CO.,LTD.
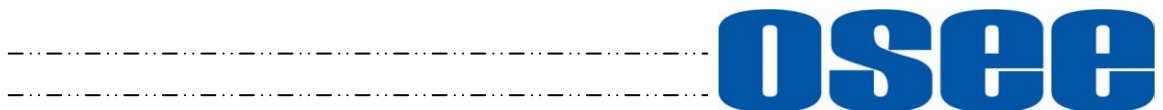
Product Information

Model: XCM-240 LCD Monitor
Version: V010000
Release Date: November 10th, 2014

Company

OSEE TECHNOLOGY CO., LTD.

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About this manual

Important

The following symbols are used in this manual:

Tips

- The further information or know-how for described subjects above which helps user to understand them better.

Warning

- The safety matters or operations that user must pay attention to when using this product.

Contents

The user manual applies to the following device types:
- ❖ **XCM-240-3HSV**

The images of XCM-240 are adopted in the following descriptions.
Any of the different specifications between the device types are elaborated.
Before reading the manual, please confirm the device type.

Contents

Chapter 1 Overview

The XCM-240 series LCD Monitor are high performance broadcast monitor tailoring most applications from program production, intensive upload/download, playout to studio and intensive monitoring all sorts of business in TV Stations.

The front frame of the unit comes in a slim bezel design made from rubber mold. The professional TFT glass at full resolution of 1920 x 1080 with LED backlight makes the XCM-240 series LCD monitor capable of reproducing a natural color at quickest response time. In addition, the unit boasts a full wide viewing angle as well as excellent brightness and contrast ratio.

By adopting the advanced 10-bit digital signal processing technology plus 3D comb filter, de-interlacing capability and accurate scaling ensures the XCM-240 series LCD Monitor to achieve a better effect of smoother and more natural image.

The XCM-240 series LCD Monitor supports up to 2Ch 3G/HD/SD-SDI/analog input/output, 2Ch CVBS(LINE1, LINE2) input/output, IGRP Y/C input/output, IGRP YPbPr input/output, and 1Ch HDMI input. Featuring PBP/PIP and showing two signals simultaneously on the same screen makes the XCM-240 with added value.

The XCM-240 series LCD Monitor delivers much capable display functionality like waveform/vector scope, audio de-embedding, audio monitoring, audio metering bar, TC, CC, AFD, IMD and all kinds of markers.

Figure 1   A Diagram of XCM-240

Features

- Prevailing slim bezel design
- Having multi format input including 3G-SDI
- Adopting full HD, wide viewing angle IPS glass

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- Using 10-bit signal processing technology plus advanced conversion technology between the interlacing and the progressive

- Featuring PBP and PIP, dual 3G-SDI capable under PBP mode

- Supporting waveform/vector scope, audio metering bar, TC, IMD and CC

- Supporting varied color temperature, varied scan modes, flexibility in marker setting, Blue Only/Monochrome mode

Functionality

- Supports MARKER, Time Code, MET display

- Supports presetting the color temperature using customized values

Chapter 2 Safety

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guaran-tee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

Warnings:

Read, keep and follow all of these instructions for your safety. Heed all warnings.

⚠️ **Warning** _____

Device

- Install in accordance with the manufacturer's instructions.

- Do not beat with a hard object or scratch the LCD display.

- Do not make the freeze picture displaying on the screen time too long, otherwise, it will leave the afterimage on the screen.

- If the brightness is adjusted to the minimum, then it might be hard to see the display screen.

- Refer all servicing to qualified service personnel. Servicing will be required under all of the following conditions:

  ☐ The unit has been exposed to rain or moisture.

  ☐ Liquid had been spilled or objects have fallen onto the unit.

  ☐ The unit has been damaged in any way, such as when the power-supply cord or plug is damaged.

  ☐ The unit does not operate normally.

- Clean only with dry cloth.

- Specifications are subject to change without notice.

_____

⚠️ **Warning** _____

Position

- Do not block any ventilation openings.

- Do not use this unit near water.

- Do not expose the unit to rain or moisture.

- Do not use this unit near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product

heat.

- A nameplate indicating operating voltage, etc., is located on the rear panel.

- The socket-outlet shall be installed near the equipment and shall be easily accessible.

⚠Warning

Power Supply Cord

- Do not defeat the safety purpose of the polarized or grounding-type plug.

- Do not damage the power cord, place the heavy objects on the power cord, stretch the power cord, or bend the power cord.

- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the unit.

- If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord. It may cause fire or electric shock.

- Unplug this unit during lighting storms or when unused for long periods of time.

- Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.

- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

Chapter 3 Unpack and Installation

Unpack:

When unpacking the components of XCM-240 monitor, please verify that none of the components listed in Table 3.1 are damaged or lack. If there is any missing, contact your distributors or Beijing Osee Digital Technology Ltd. for it.

Table 3-1   Packing List

No.	Item	Quantity
1	Device	1
2	Pedestal with screws	1
3	Power cord	1
4	adapter	1
5	User manual	1
6	warranty card	1

Installation:

1. Prepare for installation

 Please follow the procedures below before installing XCM-240:

- Check the equipment for any invisible damage that may have occurred during transit.

- Confirm all the items listed on the packing list have been received.

- Remove all the packing material including electrostatic-resistant packing.

- Retain these packing materials for future use.

2. Mount a XCM-240 in your desired location of a standard rack. Adequate ventilation is required when installed to prevent possible damage to the XCM-240.

3. Connect required cables for signal input and output. For BNC connections use 75Ω rated connectors.

4. Connect 4.74A19V DC power source using the included power cord.

5. Connect the power cord to the power interface.

6. Fasten the power protect accessory.

7. **As a final step, turn on each screen of the device by pressing the corresponding power switch located on the front panel.**

Tips

- The pedestal and the monitor are packaged separately.

- Connect a standard signal lines to the corresponding input port. All BNC connector impedance must be 75Ω.

- Please use the power adapter supplied to avoid unnecessary trouble.

- Use the power adapter and cord to connect single-phase three-wire AC power or following the local power supply conditions. Make sure the power cord grounding well.

- The factory default value for IP address is 192.168.1.86.

Chapter 4 XCM-240 Features

This chapter describes the features of XCM-240 monitor. The features of XCM-240monitor are as shown in Figure 4-1 after installed and powered on:
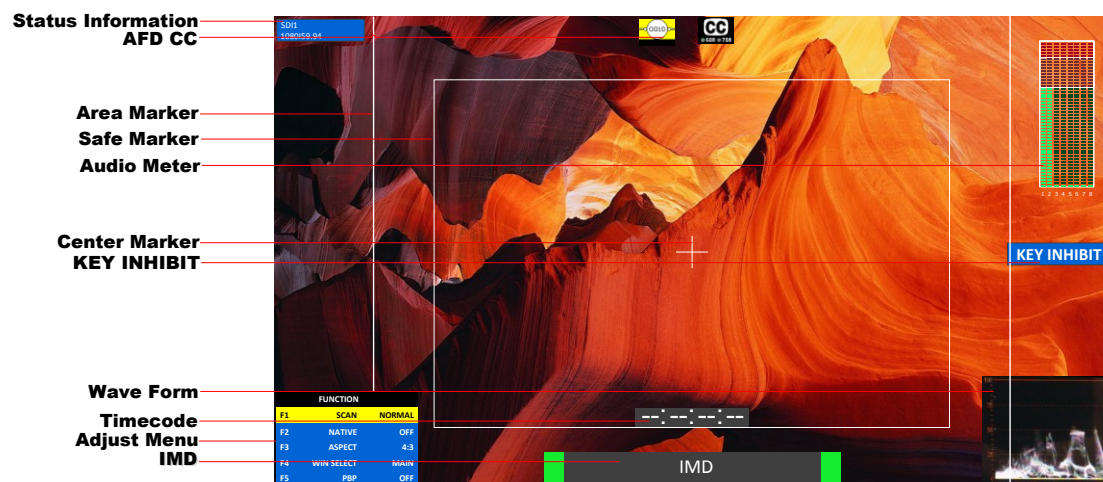
Figure 4-1   Features of XCM-240 Monitor

1. Status Information

It is displayed in the top left corner of the screen, and includes the input channel and signal format. You can define it in DISPLAY menu.
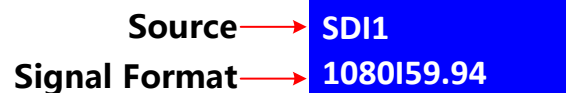
2. Waveform and Vector

This is effective only for SDI signal. The waveform and vector of the input signal are configurable in the MAIN Menu.

3. Area Marker

It is used to mark different area of the image. You can set whether to display it or not and their displaying mode in **MARKER** menu.

4. Safe Marker

It is used to mark different area of the image. You can set whether to display it or not and their displaying mode in **MARKER** menu

5. Center Marker

It is displayed in the center of the screen, and marks the center of the

image. You can set whether to display it or not in **MARKER** menu.

6. Audio Meter

It is displayed for audio monitoring. You can set its groups, direction, position and mode in **AUDIO** menu.

7. Timecode

It is displayed at the bottom of the image, the format is HH:MM:SS:FF, if there is no timecode available, the monitor will display --:--:--:--.

8. IMD

The IMD text displays at the bottom of the screen, the length can't exceed 16 characters, and you can choose letter, number or other character for it.

9. AFD/CC

AFD and CC information will display at the top center of the screen as an icon.

10. MUTE

The icon for MUTE is . When it is mute, this icon displays at the bottom right position of the screen. You can set this function in function key.

Tips

- The **Status Information** usually displays as the following situations:

  ☐ "UNKNOW" appears if an unsupported signal is input.

  ☐ "NO SIGNAL" appears if no signal is input.

  ☐ The signal is normal, for example: 1080i59.94, NTSC, 1280X1024, etc.

- The **Status Information** for the main picture displays at the top left corner of the screen, and the **Status Information** for the slave picture displays at the top right corner of the screen.

- The AFD information displays at the top center of the screen.

4.1 Front Panel Features

It will introduce the arrangement and the operations of the buttons in front of the panel in the following.

4.1.1 Arrangement of Front Panel

There are a series of buttons at the bottom of the screen, and these buttons are used to control the screen menu items.
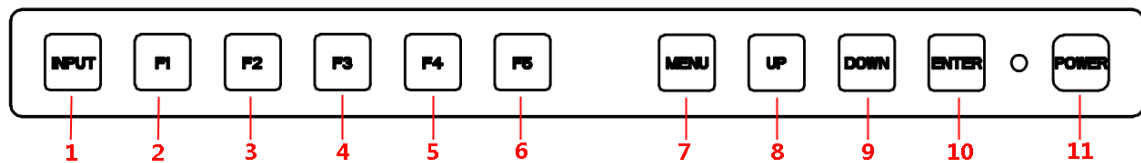
Figure 4.1-1   the Buttons in Front Panel

As shown in Figure 4.1-1, take the left screen of XCM-240 for example, these buttons are as follows:

1. **INPUT**

2. **F1**

3. **F2**

4. **F3**

5. **F4**

6. **F5**

7. **MENU**

8. **UP**

9. **DOWN**

10. **ENTER**

11. **POWER**

Tips

• Only the POWER button and the AUDIO button have a light indicator.

4.1.2 **Operation of Front Panel**

The functionality and usage of the buttons at the front panel are as follows:

1. INPUT

Select the input signal. Press this button to display the input source menu at the right top corner of the screen, as shown in Figure 4.1-2. Use it to select an input signal source, press it again to toggle among these input signal items.
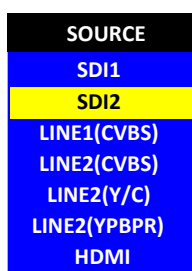
Figure 4.1-2   Source Menu

The one-to-one correspondence between the signals in the source menu list and the interfaces in the back panel are shown in Figure 4.1-3:
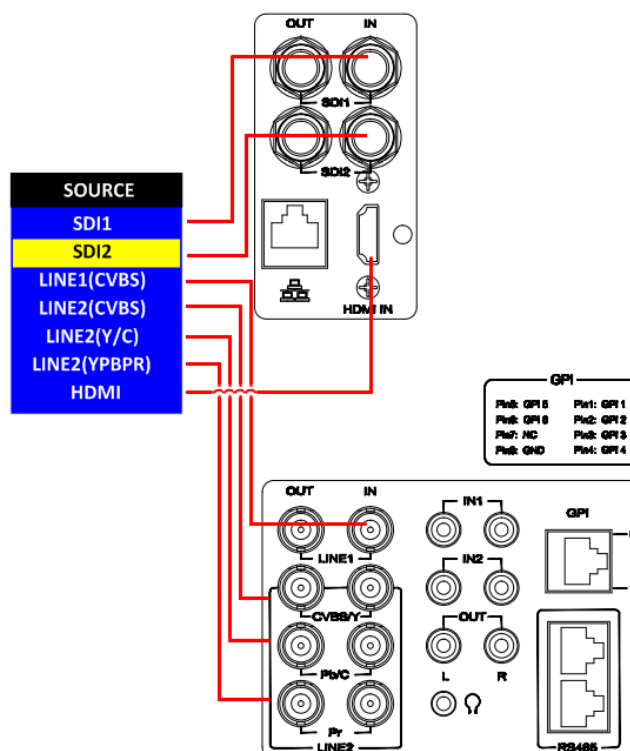
Figure 4.1-3   Correspondence between Source Menu and Interface

2. F1

This button is a FUNCTION button. The function can be set via the FUNCTION menu. Open the FUNCTION menu after the first time, the selected function will remain.

■ **OPERATION:** Press **F1** to display the function menu list in the center of the screen, as shown in Figure 4.1-4. Toggle **F1** button to change the value related to this function.

| FUNCTION		
F1	SCAN	NORMAL
F2	NATIVE	OFF
F3	ASPECT	4:3
F4	WIN SELECT	MAIN
F5	PBP	OFF

Figure 4.1-4   Function Menu List

Tips

• After you have loaded the function menu list, it will be closed automatically if you do nothing operation with it in 10s.

• If the value related to the function button can't be modified, the value shows in blue.

• Use **FUNCTION KEY** menu to assign F1~F5. You can assign the function from among: SCAN, NATIVE, ASPECT, BLUE ONLY, MONO, MARKER, H/V DELAY, AUDIO METER, FAST MODE, TC, IMD, MUTE, PBP, CC, FREEZE, WIN SELECT, UNDEF. Refer to "5.1.9 FUNCTION KEY Menu" for the details.

3. F2

It is used to activate to F2 function button. The operation is as the same as F1's.

Tips

• Press and hold the **INPUT+F2** button for 3s can reset the menu settings to

factory originals, as shown in Figure 4.1-5.

FACTORY RESET

Factory Reset Now?

No   Yes

Figure 4.1-5   Reset Menu List

4. F3

It is used to activate to F3 function button. The operation is as the same as F1's.

5. F4

It is used to activate to F4 function button. The operation is as the same as F1's.

6. F5

It is used to activate to F5 function button. The operation is as the same as F1's.

7. MENU

It is used to activate the Main menu. Press this button to do some operations with the Main menu, it includes the following operations:

■   Display the Main menu

■   Back to the higher level menu

■   Quit the Main menu

Refer to "5.2 Menu Settings" for detail about the main menu operations.

8. UP

It is **UP** button when working with **MENU**. Toggle this button to select the next item or increase the number.

9. DOWN

It is **DOWN** button when working with **MENU**. Toggle this button to select the next item or decrease the number.

10. ENTER

This button can achieve the following two situations:

■   **Work with the Main MENU**: when working with the Main menu, ENTER button achieve the following functions:

☐ Enter into the next level menu: press **ENTER** button, you will enter into the menu item as this relationship: the Main menu list→ sub-menu list→ sub-menu value list, the current editable object is in yellow control icon;

☐ Confirm the value selection: press **ENTER** button to confirm the value selection.

■ **Adjust Menu:** when not displaying the Main menu, press **ENTER** button to display the adjust menu list, as shown in Figure 4.1-6, toggle among these menu items: VOLUME, BRIGHTNESS, CONTRAST, CHROMA.

BRIGHTNESS 50

Figure 4.1-6   Adjust Menu List

After displaying the Adjust menu, press **UP** or **DOWN** button to adjust the menu value, and then press **ENTER** button to confirm the value selection.

The relationship of the menu items and their range is shown in Table 4.1-1:

Table 4.1-1   The Description of Adjust Menu Items

Adjust Menu	Description	Range	Default
VOLUME	Adjust the volume	0~31dB	16
BRIGHTNESS	Adjust the image brightness	0~100	50
CONTRAST	Adjust the image contrast	0~100	50
CHROMA	Adjust the image monochroma	0~100	50

Tips

• Set these parameter values in the following position: BRIGHTNESS, CONTRAST, CHROMA.

☐ In Adjust Menu List on screen when pressing Enter key.

☐ In Adjust menu of network control page.

• After you have loaded the adjust menu list, it will be closed automatically if you do nothing operation with it in 10s.

• The main menu, the adjust menu, the function menu and the input signal

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selection list of a screen may not be shown all simultaneously.

11. Power

Used to power on or standby, and the light in the button will indicate the status of the power. If the light is green, the monitor is powered on, if the light is flashing, the monitor is standby.

Tips

- When the device is standby, cut off the power and restart the device, the status of the device will be normal but not standby.

4.2 Rear Panel Features

It will introduce the arrangement and the operations of the interfaces in rear of the panel in the following.

4.2.1 Arrangement of Rear Panel

As shown in Figure 4.2-1, there are various input and output interfaces at the rear panel of XCM-240 monitor.
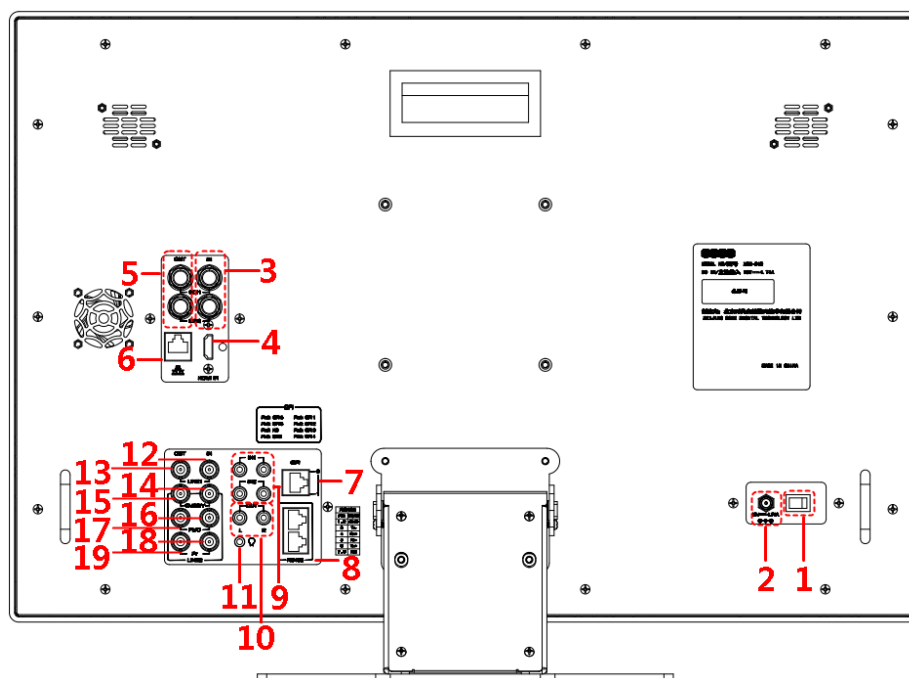
Figure 4.2-1   The Rear Panel of XCM-240 Monitor

The interfaces numbered from 1 to 8 in red dotted rectangle are described as follows:

1. **Power Switch**

2. **Power Input**

1. **Video Input: SDI1 IN, SDI2 IN**

2. **HDMI Input**

3. **Video Output: SDI1 OUT, SDI2 OUT**

4. **Ethernet**

5. **GPI interface**

6. **RS485 In/Out**

7. **Audio Input**

8. **Audio Output**

9. **Headphone Output Connector (3.5mm stereo Jack)**

10. **Video Input: LINE1 IN**

11. **Video Output: LINE1 OUT**

12. **Video Input: LINE2(CVBS/Y) IN, feed the composited LINE2, and component Y signals.**

13. **Video Output: LINE2(CVBS/Y) OUT, output the composited LINE2, and component Y signals.**

14. **Video Input: LINE2(Pb/C) IN, feed the component Pb, and component C signals.**

15. **Video Output: LINE2(Pb/C) OUT, output the component Pb, and component C signals.**

16. **Video Input: LINE2(Pr) IN, feed the component Pr signal.**

17. **Video Output: LINE2(Pr) OUT, output the component Pr signal.**

4.2.2 Operations of Rear Panel

The details of these interfaces at the rear panel are described as follows:

1. **Power Switch**

It provides one power switch to switch on or switch off. As shown in Figure 4.2-2, push the button to the direction "-" to switch on the power, or push the button to the direction "O" to switch off the power.
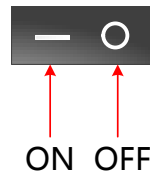
Figure 4.2-2   Power Switch

2. Power Input

It provides one power input interface, the specification is 19V4.74ADC. The corresponding indicator is at the front panel. If the light is green, the monitor is powered on, if the light is flashing, the monitor is standby, and if the light is off, the monitor is powered off.

⚠**Warning** _____

• Only use the adapter and the power cord specified by the manufacture for your safety！

_____

3. Video Input Interface **(BNC)**

It provides two SDI input interfaces, one is labeled as SDI1 IN, and the other is SDI2 IN.

4. HDMI

It provides one HDMI input interface, HDMI Type-A connector with a fastener.

5. Video Output Interface **(BNC)**

It provides two SDI output interfaces. One is labeled as SDI1 OUT, the other is SDI2 OUT, active loop.

6. Ethernet **(RJ-45)**

It provides one 10/100M Ethernet connector. It is used to connect with a computer to modify the network settings.

7. GPI**(DB9)**

It assigns a function to each pin of the GPI interface to realize a remote control mode. Define a function to the GPI pin. Refer to "5.1.10 GPI Menu" for the definition of the pins and the functions.
The relationship of the pins of GPI interface and its channel value is shown in Table 4.2-1.

Table 4.2-1   The Relationship of GPI Pins and Channel Values

Pin No.	Channel Value
Pin 1	GPI1
Pin 2	GPI2
Pin 3	GPI3
Pin 4	GPI4
Pin 5	GPI5
Pin 6	GPI6
Pin 7	NC
Pin 8	GND

8. IN/ OUT RS485 Interface (RJ-45)
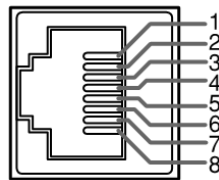
Support for dynamic IMD and updating the new firmware.

The Comparison of Pins and Input/output connectors for RS485 is shown as in Table 4.2-2:

Table 4.2-2   The Comparison of Pins and Input/output connectors for RS485

PIN No.	RS485 IN Terminal Signal	RS485 OUT Terminal Signal
1,2	GND	GND
3	Tx-	Tx-
4	Rx+	Rx+
5	Rx-	Rx-
6	Tx+	Tx+
7,8	NC	NC

9. Audio Input interface

It provides four audio(2 pairs) input interfaces, 5dBu, impedance$\geqslant$47K, RCA connector.

10. Audio Output interface

It provides two audio output interfaces, 5dBu, impedance$\leqslant$500Ω, RCA connector.

11. Video Input/Output Interface **(BNC)**

It provides two pairs of Composited Video input/output interfaces, and a group of component signals. It will transmit the corresponding component signal according to the selection of the signal source.

As shown in Figure 4.2-3, the relationship of the signal sources and the interfaces are shown as in Table 4.2-3:

Table 4.2-3   The Relationship of the Signal Sources and Input/output Interfaces

Signal Source	Video Input	Video Output
LINE1	LINE1 IN	LINE1 OUT
LINE2(CVBS)	LINE2(CVBS/Y) IN	LINE2(CVBS/Y) OUT
LINE2(Y/C)	LINE2(CVBS/Y) IN LINE2(Pb/C) IN	LINE2(CVBS/Y) OUT LINE2(Pb/C) OUT
LINE2(YPBPR)	LINE2(CVBS/Y) IN LINE2(Pb/C) IN LINE2(Pr) IN	LINE2(CVBS/Y) OUT LINE2(Pb/C) OUT LINE2(Pr) OUT
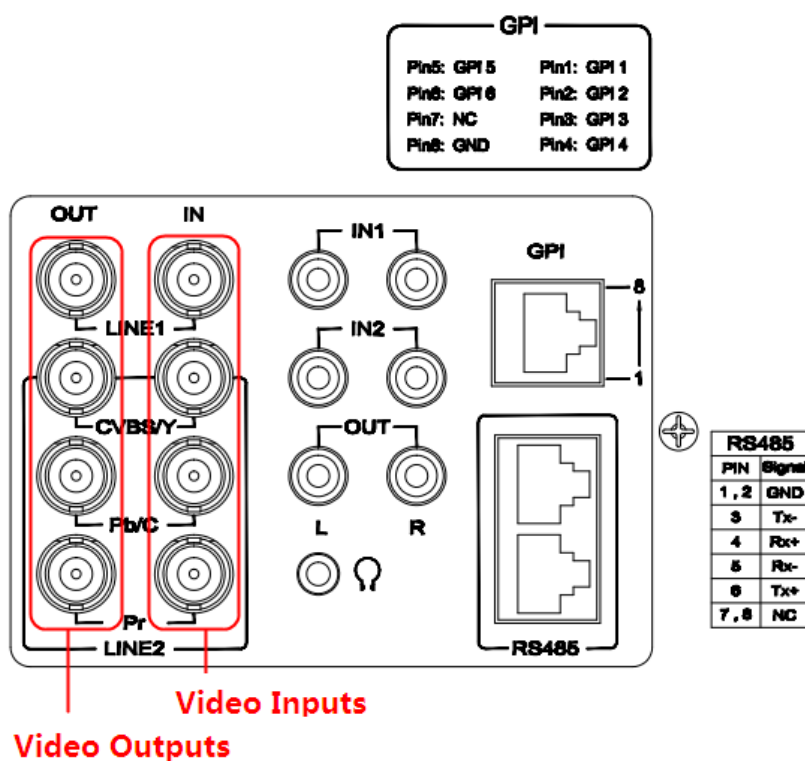
Figure 4.2-3   Video Input/Output Interfaces

4.3 Supported Signal Format

The supported signal format for this device is as shown in Table 4.3-1:

Table 4.3-1   Supported Signal Format

	SDI	VIDEO	HDMI	YC	YPBPR
PAL		✓		✓	
NTSC		✓		✓	
480I60/59.94	✓		✓		✓
576I50	✓		✓		✓
480P60/59.94			✓		✓
576P50			✓		✓
720P24/23.97	✓				✓
720P25	✓		✓		✓
720P30/29.97	✓		✓		✓
720P50	✓		✓		✓
720P60/59.94	✓		✓		✓
1080SF24/23.97	✓		✓		✓
1035I60/59.94	✓		✓		✓
1080I50	✓		✓		✓
1080I60/59.94	✓		✓		✓
1080P24/23.97	✓		✓		✓
1080P25	✓		✓		✓
1080P30/29.97	✓		✓		✓
1080P50	✓		✓		✓
1080P60/59.94	✓		✓		✓
VGA(640X480)			✓		
SVGA(800X600)			✓		
XGA(1024X768)			✓		
SXGA(1280X1024)			✓		
WXGA(1360X768)			✓		
WXGA+(1440X900)			✓		
WXGA+(1400X1050)			✓		

XCM-240 Features

	SDI	VIDEO	HDMI	YC	YPBPR
UXGA(1600X1200)			✓		
UXGA+(1680X1050)			✓		
WUXGA(1920X1080)			✓		
WUXGA(1920X1200)			✓		

Chapter 5 Functionality of the Main Menu

This chapter describes the structure and functionality of the main menu, and introduces how to modify and customize the menu settings.

The main menu includes the following menu items, as shown in Figure5-1.

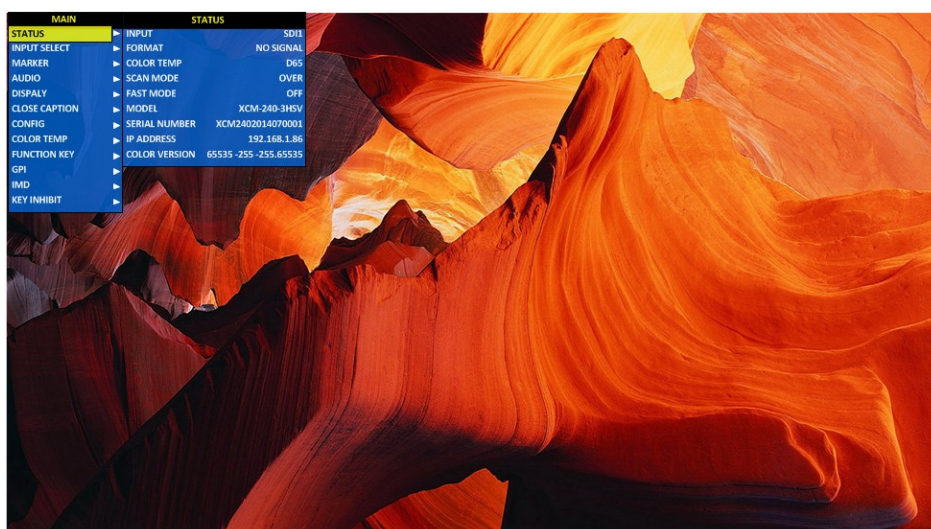*Figure 5-1   Main Menu*

5.1 Main Menu

Press the **MENU** button at the bottom of the front panel, the main menu is displayed at the top left corner of the screen, as shown in Figure 5.1-1:
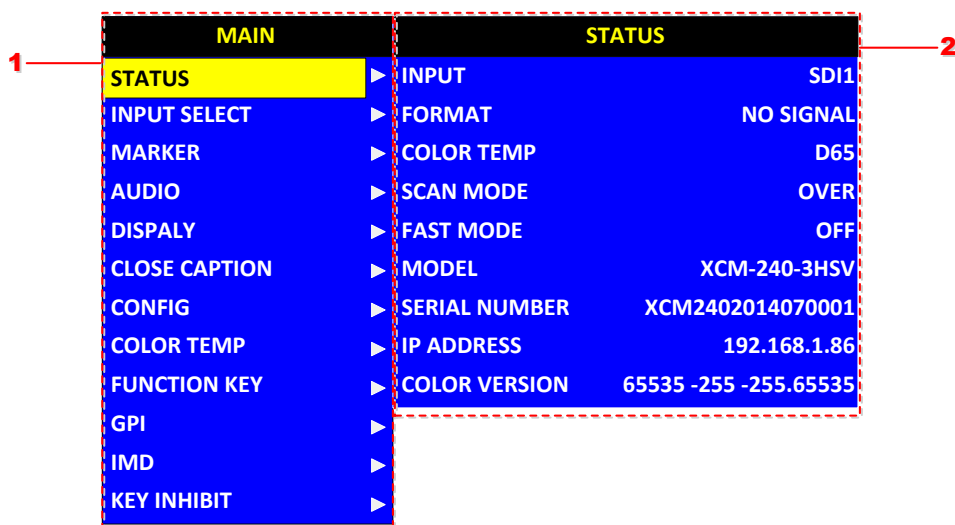
Figure 5.1-1   the Structure of the Main Menu

The menu interface is divided into three parts:

1. Main Menu List

It contains the title of the Main menu and several sub-menu items. The title of this list is **MAIN**. Press **UP** or **DOWN** to access the corresponding menu item.

2. Sub-menu list

As shown in Figure 5.1-2, it lists the title of the **Sub-menu**, the sub-menu item and the value of the item. After pressing **Menu** button, press **UP**, **DOWN** button and **Enter** button to modify the value of the sub-menu. Refer to "5.2 Menu Settings" for details.
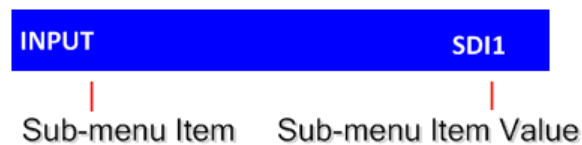
Figure 5.1-2   the Sub-menu Value List

There is a yellow control icon when you select the menu or its value.

Tips

- The sub-menu item is selected when the control icon which is in yellow highlight is at the back of the item name.

- The sub-menu item value is editable when the control icon which is in yellow highlight is at the back of the item value.

The control icon of the main menu has the following status when in different positions, as shown in the red rectangle of the following figures:

■ when in the main menu, it shows that this menu item is selected, as shown in Figure 5.1-3:

Figure 5.1-3   A Main Menu Item Is Selected

■ when in the sub-menu item, it shows that this sub-menu item is selected, and the control icon is displayed as a yellow rectangle in front of it, as shown in Figure 5.1-4:

Figure 5.1-4   A Sub-menu Item Is Selected

■ when in the sub-menu item value, it shows that this sub-menu item value is selected, and the value is displayed in yellow, as shown in Figure 5.1-5:

Figure 5.1-5   A Sub-menu Item Value Is Selected

The following will introduce the contents and functionality of these sub-menu items in sorts.

5.1.1 STATUS Menu

The STATUS menu items are used to describe the current status information of the monitor, the menu items are as shown in Figure 5.1-6:

MAIN		STATUS	
STATUS	►	INPUT	SDI1
INPUT SELECT	►	FORMAT	NO SIGNAL
MARKER	►	COLOR TEMP	D65
AUDIO	►	SCAN MODE	OVER
DISPALY	►	FAST MODE	OFF
CLOSE CAPTION	►	MODEL	XCM-240-3HSV
CONFIG	►	SERIAL NUMBER	XCM2402014070001
COLOR TEMP	►	IP ADDRESS	192.168.1.86
FUNCTION KEY	►	COLOR VERSION	65535 -255 -255.65535
GPI	►		
IMD	►		
KEY INHIBIT	►		

Figure 5.1-6   STATUS Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-1:

Table 5.1-1   The Description of STATUS Menu Items

Items	Default Value	Domain Range	Description
INPUT	SDI1	• SDI1 • SDI2 • LINE1(CVBS) • LINE2(CVBS) • HDMI	Show the Input format
FORMAT	NO SGINAL	--	Show the format of the input signal
COLOR TEMP	D65	--	Show the color temperature.
SCAN MODE	NORMAL	• NORMAL • OVER • UNDER	Show the scan mode.

Items	Default Value	Domain Range	Description
FAST MODE	OFF	OFF/ON	Show the fast mode.
SD ASPECT	16:9	16:9/4:3	Show the screen Aspect Ratio.
MODEL	XCM-240-3HSV	--	Show the production model.
SERIAL NUMBER	XCM2402013070001	--	Show the serial number.
IP ADDRESS	192.168.1.86	--	Show the IP address.
COLOR VERSION	65535-255-255.65535	--	Show the color version according to its adjusted date.

Tips

• The sub-menu values in **STATUS** menu can't be modified, they are displayed the actual status of the monitor.

5.1.2 INPUT SELECT Menu

The INPUT SELECT menu items are used to set the source of the input signals, the menu items are as shown in Figure 5.1-7:

MAIN		INPUT SELECT	
STATUS	▶	SDI1	ON
INPUT SELECT	▶	SDI2	ON
MARKER	▶	LINE1	ON
AUDIO	▶	LINE2	CVBS
DISPALY	▶	HDMI	ON
CLOSE CAPTION	▶	NTSC SETUP	7.5
CONFIG	▶	NTSC PHASE	0
COLOR TEMP	▶		
FUNCTION KEY	▶		
GPI	▶		
IMD	▶		
KEY INHIBIT	▶		

Figure 5.1-7   INPUT SELECT Menu

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The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-2:

Table 5.1-2   The Description of INPUT SELECT Menu Items

Items	Default Value	Domain Range	Description
SDI1	ON	ON/OFF	Enable/Disable SDI1 input
SDI2	ON	ON/OFF	Enable/Disable SDI2 input
LINE1	ON	ON/OFF	Enable/Disable LINE1 input
LINE2	ON	• CVBS • LINE2(Y/C) • LINE2(YPBPR) • OFF	Enable/Disable LINE2 input, and select the input source
HDMI	ON	ON/OFF	Enable/Disable HDMI input
NTSC SETUP	7.5	0/7.5	Select the NTSC mode
NTSC PHASE	0	-50~50	Set the NTSC phase

5.1.3 MARKER Menu

The MARKER menu items are used to adjust the marker parameters, the menu items are as shown in Figure 5.1-8:

Figure 5.1-8   MARKER Menu

The relationship of Items, Default Value, Domain Range and Description

of the sub-item is shown in Table 5.1-3:

Table 5.1-3   The Description of MARKER Menu Items

Items	Default Value	Domain Range	Description
MARKER	OFF	OFF/ON	Set whether to show all of the markers. It is the main switch for area marker, center marker and safety marker.
AREA MARKER	OFF	when the display aspect is 16:9, images show with the following scale: • OFF: close area marker • 4:3 • 15:9 • 14:9 • 13:9 • 1.85:1 • 2.35:1 when the display aspect is 4:3, images show with the following scale: • OFF: close area marker • 16:9	Select the area marker aspect ratio according to the display aspect ratio.
CENTER MARKER	OFF	OFF/ON	Set whether to show the center marker
SAFETY MARKER	OFF	• OFF • 80% • 85% • 88% • 90% • 93% • 95%	Set the safety area size according to the aspect ratio and scan mode.
MARKER LEVEL	1	• 1: 50% • 2: 75% • 3: 100%	Set the luminance of marker line, including safety marker, center marker, area marker and

Items	Default Value	Domain Range	Description
			cross hatch.
MARKER MAT	OFF	• OFF: Normal background, use line for area marker edge only • HALF: 50% Background brightness • BLACK: all black	Set the transparency of area marker mat.
CROSS HATCH	OFF	OFF/ON	Set whether to show the cross hatch.

Tips

- When NATIVE is ON, all of the markers will be disabled and hidden.

- The AREA MARKER, CENTER MARKER and SAFETY MARKER feature are available only when the MARKER item is set to ON.

- The marker will not display in PBP mode even if you have opened the marker switch.

5.1.4 AUDIO Menu

The AUDIO menu items are used to adjust the audio parameters, the menu items are as shown in Figure 5.1-9:

MAIN		AUDIO	
STATUS	►	AUDIO SOURCE	AUDIO1
INPUT SELECT	►	SPEAK OUT L	EBD CH1
MARKER	►	SPEAK OUT R	EBD CH1
AUDIO	►	AUDIO METER	OFF
DISPALY	►	METER SELECT	CH1-2
CLOSE CAPTION	►	METER DIRECTION	HORIZONTAL
CONFIG	►	METER POSITION	TOP
COLOR TEMP	►	METER DIS MODE	MODE1
FUNCTION KEY	►	REF LEVEL	-20dB
GPI	►	OVER LEVEL	-10dB
IMD	►		
KEY INHIBIT	►		

Figure 5.1-9   AUDIO Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-4:

Table 5.1-4   The Description of AUDIO Menu Items

Items	Default Value	Domain Range	Description
AUDIO SOURCE	EDB	• EDB: embedded signal • AUDIO1: external signal1 • AUDIO2: external signal2 • UNDEF: no signal	Select the audio source. When there is no sync in and the input signal is not HDMI/SDI1/SDI2, you can select only UNDEF, AUDIO1 or AUDIO2.
SPEAK OUT L	EBD CH1	When the audio source is EBD, the range of this item is EDB CH1~ EDB CH16.	Left speaker, select a channel according to the type of audio source.
SPEAK OUT R	EBD CH2	When the audio source is EBD, the range of this item is EDB CH1~ EDB CH16.	Right speaker, select a channel according to the type of audio source.
AUDIO METER	OFF	OFF/ON	Set whether to display the audio meter.
METER SELECT	CH1-2	• CH1-2 • G1 • G2 • G3 • G4	Select a meter display mode. Each G* contains four channels, and each CH* means a channel with number.

Items	Default Value	Domain Range	Description
		• G1+G2 • G1+G3 • G1+G4 • G2+G3 • G2+G4 • G3+G4 • G1-G4	
METER DIRECTION	VERTICAL	• VERTICAL • HORIZONTAL	Select the displayed direction of audio meter.
METER POSITION	BOT LEFT/ BOTTOM	When the value of METER DIRECTION is VERTICAL , you can choose the followings for Meter Position: • BOT LEFT: bottom left • BOT RIGHT: bottom right • TOP RIGHT: top right • TOP LEFT: top left When the value of METER DIRECTION is HORIZONTAL, you can choose the followings for Meter Position: • BOTTOM • TOP	Select the displayed position of audio meter.
METER DIS MODE	MODE1	• MODE1: simple audio meter • MODE2: audio meter with channel number • MODE3: audio meter with channel number and dB value	Select the displayed mode for audio meter.
REF LEVEL	-20dB	-20dB/-18dB	Select the reference level
OVER LEVEL	-10dB	• -10dB • -8dB • -6dB • -4dB • -2dB	Select the overload level

5.1.5 DISPLAY Menu

The DISPLAY menu items are used to adjust the parameters displayed on the screen, the menu items are as shown in Figure 5.1-10:

MAIN		DISPLAY	
STATUS	▶	STATUS DISPLAY	AUTO
INPUT SELECT	▶	AFD DISPLAY	OFF
MARKER	▶	WAVE FORM TYPE	WAVE FORM
AUDIO	▶	LINE WAVE	OFF
DISPALY	▶	LINE WAVE NUMBER	---
CLOSE CAPTION	▶	WAVE OVER LIMIT	50
CONFIG	▶	WAVE UNDER LIMIT	0
COLOR TEMP	▶	WFM TRANS	OPAQUE
FUNCTION KEY	▶	WFM POSITION	LEFT
GPI	▶	TIME CODE	OFF
IMD	▶		
KEY INHIBIT	▶		

Figure 5.1-10   DISPLAY SETUP Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-5:

Table 5.1-5   The Description of DISPLAY SETUP Menu Items

Items	Default Value	Domain Range	Description
STATUS DISPLAY	AUTO	OFF/ON/AUTO	Set whether to display STD information. If the signal input is not equal to "No signal" and this item is auto, the status information will show 15 seconds when the status changed, and then closed automatically.
AFD DISPLAY	OFF	OFF/ON	Set whether to display AFD information. ON is an effective value to AFD DISPLAY item only if the value of STATUS DISPLAY is AUTO or ON.
WFM FORM	NORMAL	• MODE1	Switch the display mode among

Items	Default Value	Domain Range	Description
TYPE		• MODE2 • VECT100 • VECT75 • WAVE FORM • OFF	mode1, mode2, vector100, vector75 and wave form.
LINE WAVE	OFF	OFF/ON	Set whether to show line wave, as shown in Figure 5.1-11.
LINE WAVE NUMBER	260	As shown in Table 5.1-6.	Set the position of line WFM.
WFM OVERLIMIT	50	50~100	Set the over limit of WFM
WFM UNDERLIMIT	0	0~50	Set the under limit of WFM
WFM TRANS	OPAQUE	• OPAQUE • TRANS1 • TRANS2 • TRANS3	Set the transparency of the WFM
WFM POSITION	LEFT	• LEFT: LEFT BOT • RIGHT: BOT RIGHT	Select the displayed position for WFM.
TIME CODE	OFF	• OFF • D-VITC • LTC • VITC	Set whether to display TC, and select a mode for TC display.

Thereinto, the value of LINE WFM is different according to the type of input signal, as shown in Table 5.1-6.

Table 5.1-6   The Description for LINE WFM Item

Input Signal	Default	Domain Range
576i50	310	23~623
480i60	261	22~524
720p	386	26~745
1080i50	560	21~1123
1080i60/59.94		
1080sf23/23.97		
1035i60	557	41~1120

Input Signal	Default	Domain Range
1080p	561	42~1121

The comparison of a normal WFM/Vector and a Line WFM is as shown in Figure 5.1-11:

LINE WFM

WFM
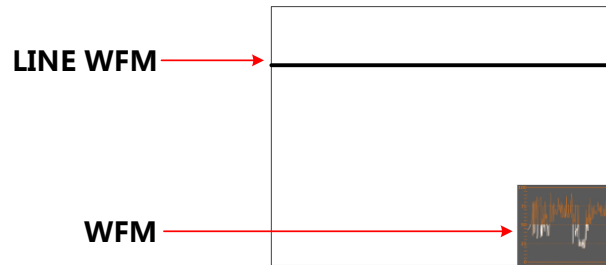
Figure 5.1-11   The LINE WFM and the WFM

Tips

- You can call out the vectorscope or wave form and configure its display mode through **DISPLAY→WAVE FORM TYPE**, and configure its display position through **DISPLAY →WFM POSITION**. Use **CONFIG→SUB IN TYPE** to switch to PIP mode or PBP mode. Refer to "5.1.7 CONFIG Menu" for details.

- Please refer to the international standard SMPTE2016-1-2007 for the details about AFD display.

5.1.6 CLOSE CAPTION Menu

The CLOSE CAPTION menu items are used to adjust the parameters displayed on the screen, the menu items are as shown in Figure 5.1-10:

MAIN		CLOSE CAPTION	
STATUS	►	CLOSED CAPTION	CC1
INPUT SELECT	►	SDI CC LOG	OFF
MARKER	►		
AUDIO	►		
DISPALY	►		
CLOSE CAPTION	►		
CONFIG	►		
COLOR TEMP	►		
FUNCTION KEY	►		
GPI	►		
IMD	►		
KEY INHIBIT	►		

Figure 5.1-12   CLOSE CAPTION Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-7:

Table 5.1-7   The Description of CLOSE CAPTION Menu Items

Items	Default Value	Domain Range	Description
CLOSE CAPTION	OFF	• CC1 • CC2 • CC3 • CC4 • TEXT1 • TEXT2 • TEXT3 • TEXT4 • OFF	Set whether to display caption information, and select its display mode.
SDI CC LOG	OFF	OFF/ON	Set whether to display CC information.

5.1.7 CONFIG Menu

The CONFIG menu items are used to adjust the parameters defined by customers, the menu items are as shown in Figure 5.1-13:

MAIN		CONFIG	
STATUS	►	FAST MODE	OFF
INPUT SELECT	►	FILM MODE DETECT	OFF
MARKER	►	SUB IN TYPE	PBP
AUDIO	►	SUB IN SELECT	SDI1
DISPALY	►	PIP SIZE	LARGE
CLOSE CAPTION	►	PIP POSITION	HORIZONTAL
CONFIG	►	BACKLIGHT	15
COLOR TEMP	►	AUTO STANDBY	OFF
FUNCTION KEY	►	APPEATURE	0
GPI	►	LOCK NUMBER	0
IMD	►	LANGUAGE	ENGLISH
KEY INHIBIT	►		

Figure 5.1-13   CONFIG Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-8:

Table 5.1-8   The Description of CONFIG Menu Items

Items	Default Value	Domain Range	Description
FAST MODE	OFF	OFF/ON	Set whether in fast mode.
FILM MODE DETECT	OFF	OFF/ON	Set whether to detect film mode.
SUB IN TYPE	PBP	PBP/PIP/OFF	Set the arrangement mode of screen picture
SUB IN SELECT	SDI1	• SDI1 • SDI2 • LINE1(CVBS) • LINE2(CVBS) • LINE2(Y/C) • LINE2(YPBPR) • HDMI	Set the source of slave picture, refer to Table 5.1-10 for the details.
PIP SIZE	LARGE	SMALL/LARGE	Set the size of PIP
PIP POSITION	BOT LEFT	• BOT LEFT: bottom left • BOT RIGHT: bottom right	Set the position of PIP

Items	Default Value	Domain Range	Description
		• TOP RIGHT • TOP LEFT	
BACK LIGHT	15	0~30	Adjust the back light
AUTO STANDBY	OFF	OFF/ON	Set whether open the standby mode.
APPERTURE	0	0~24	Set the picture sharpness
LOCK NUMBER	XXXXXXXX	--	Set the lock number
LANGUAGE	ENGLISH	ENGLISH/CHINESE	Select a language mode

1. **PIP and PBP**

■ In PIP mode, the relationship of the main picture and the slave picture is as shown in Figure 5.1-14 :
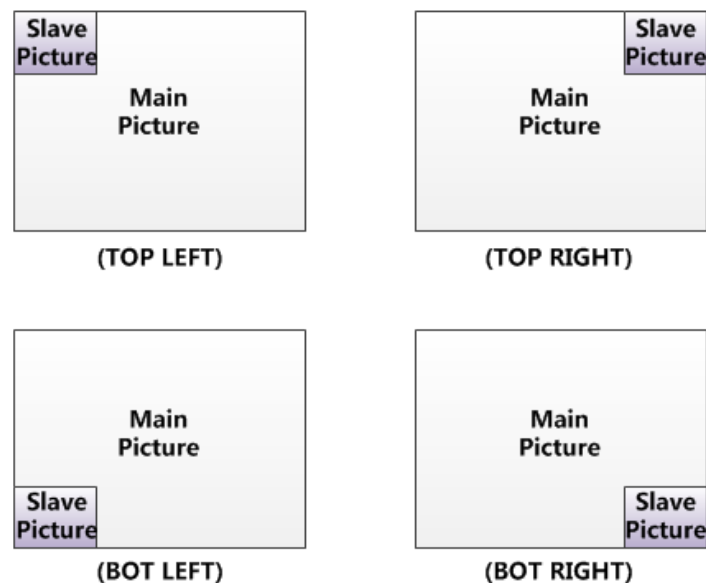

Figure 5.1-14   PIP Mode

In PIP mode, it displays the WFM or Audio Meter only for the signal of the main picture.

■ In PBP mode, the relationship of the main picture and the slave picture is as shown Figure 5.1-15:
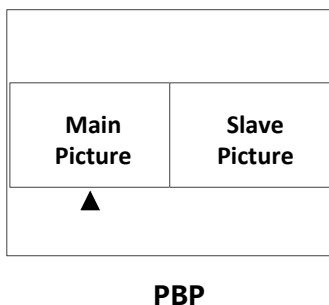
PBP

Figure 5.1-15   PBP Mode

In PBP mode, it displays the WFM or Audio Meter only for the signal of the current picture.

The current picture is labeled by a triangle, as shown in Figure 5.1-15, at the bottom center of the picture. You can select the current picture by the **WIN SELECT** command assigned to a function key. The WFM frame of the main picture displays at the left bottom corner of the screen, and the WFM frame of the slave picture displays at the bottom right corner of the screen. Meantime, if Audio Meter was shown up, it could display at the top position of the screen, just at the top left corner or at the top right corner, thus to avoid colliding with the WFM.

2. Scope for the slave picture

The selection scope of the signal source for the slave picture will be changing with the main picture's source, as shown in Table 5.1-10:

Table 5.1-9   The Relationship of the Signal Source for Slave Picture and Main Picture

Signal Source for Main Picture \ Signal Source for Slave Picture	SDI1	SDI2	LINE1 (CVBS)	LINE2 (CVBS)	LINE2 (Y/C)	LINE2 (YPSPR)	HDMI
SDI1	✗	✓	✓	✓	✓	✓	✓
SDI2	✓	✗	✓	✓	✓	✓	✓
LINE1(CVBS)	✓	✓	✗	✗	✗	✗	✓
LINE2(CVBS)	✓	✓	✗	✗	✗	✗	✓
LINE2(Y/C)	✓	✓	✗	✗	✗	✗	✓
LINE2(YPBPR)	✓	✓	✓	✓	✗	✗	✓
HDMI	✓	✓	✓	✓	✓	✓	✗

The input signal information of the main picture displays at the top left corner of the screen, and the one of the slave picture displays at the top

right corner of the screen.

Tips

- When the AUTO STANDBY is set to ON, the device will be standby when the signal is disappeared for 60s.

- The length of LOCK NUMBER is up to 8 characters, you can use the combination of these characters: number (0 to 9) and letter (A to Z). Press **ENTER** to edit the LOCK NUMBER, than use **UP** or **DOWN** to select characters, than press **ENTER** to go to next character, press **MENU** to exit editor.

5.1.8 COLOR TEMP Menu

The COLOR TEMP menu items are used to adjust the color temperature parameters and the color balance, the menu items are as shown in Figure 5.1-16:

MAIN		COLOR TEMP	
STATUS	▶	COLOR TEMP	D93
INPUT SELECT	▶	RED GAIN	128
MARKER	▶	GREEN GAIN	128
AUDIO	▶	BLUE GAIN	128
DISPALY	▶	RED BIAS	0
CLOSE CAPTION	▶	GREEN BIAS	0
CONFIG	▶	BLUE BIAS	0
COLOR TEMP	▶	COPY FROM	D93
FUNCTION KEY	▶	RESET	
GPI	▶	COLOR SPACE	AUTO
IMD	▶		
KEY INHIBIT	▶		

Figure 5.1-16   COLOR TEMP Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-10:

Table 5.1-10   The Description of COLOR TEMP Menu Items

Items	Default Value	Domain Range	Description
COLOR TEMP	EDB	• USER1: Customized by user • USER2: Customized by user • D32: 3200K • D50: 5000K • D56: 5600K • D65: 6500K • D93: 9300K	Set color temperature
RED GAIN	128	0~256	Adjust the Red Gain
GREEN GAIN	128	0~256	Adjust the Green Gain
BLUE GAIN	128	0~256	Adjust the Blue Gain
RED BIAS	0	-50~50	Adjust the Red Offset
GREEN BIAS	0	-50~50	Adjust the Green Offset
BLUE BIAS	0	-50~50	Adjust the Blue Offset
COPY FROM	D65	• D32: 3200K • D50: 5000K • D56: 5600K • D65: 6500K • D93: 9300K	Copy this parameter value to USER
RESET	--	--	Reset the Gain and Offset values to the product originals
COLOR SPACE	EBU	OFF/EBU/SMPTE-C/ITU-709/AUTO	Select the color matrix

Tips

• The items about RED/GREEN/BLUE GAIN and BIAS are available only in USER1 and USER2 mode.

5.1.9 FUNCTION KEY Menu

The FUNCTION KEY menu items are used to define parameters to F1 and F2, the menu items are as shown in Figure 5.1-17:

MAIN		FUNCTION KEY	
STATUS	▶	F1	SCAN
INPUT SELECT	▶	F2	NATIVE
MARKER	▶	F3	ASPECT
AUDIO	▶	F4	OFF
DISPALY	▶	F5	OFF
CLOSE CAPTION	▶		
CONFIG	▶		
COLOR TEMP	▶		
FUNCTION KEY	▶		
GPI	▶		
IMD	▶		
KEY INHIBIT	▶		

Figure 5.1-17   FUNCTION KEY Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-11:

Table 5.1-11   The Description of FUNCTION KEY Menu Items

Items	Default Value	Domain Range	Description
F1	SCAN	SCAN, NATIVE, ASPECT, BLUE ONLY, MONO, MARKER, H/V DELAY, AUDIO METER, FAST MODE, TC, IMD, MUTE, PBP, CC, FREEZE, WIN SELECT, UNDEF	Set a function to F1 button
F2	NATIVE	the same as F1	Set a function to F2 button
F3	ASPECT	the same as F1	Set a function to F3 button
F4	UNDEF	the same as F1	Set a function to F4 button
F5	UNDEF	the same as F1	Set a function to F5 button

■   SCAN

This product supports the following scan modes:

NORMAL→ OVER→ UNDER

Set the function button as [SCAN], press the button continuously to activate various scan modes.

□ OVER: Zooms in/out of the image to 96% of its original size without changing the aspect ratio.

□ NORMAL: Zooms in/out of the image without changing the aspect ratio.

□ UNDER: Zooms in/out of the image without changing the aspect ratio. Also, displays the data at the top of the horizontal blanking block.

■ ASPECT: Set the aspect ratio of the screen as 4:3 or 16:9.

5.1.10 GPI Menu

The GPI menu items are used to define functions to GPI1~GPI6, the menu items are as shown in Figure 5.1-17:

MAIN		GPI	
STATUS	►	GPI1	TALLY GREEN
INPUT SELECT	►	GPI2	TALLY RED
MARKER	►	GPI3	NATIVE
AUDIO	►	GPI4	BLUE ONLY
DISPALY	►	GPI5	MONO
CLOSE CAPTION	►	GPI6	H/V DELAY
CONFIG	►		
COLOR TEMP	►		
FUNCTION KEY	►		
GPI	►		
IMD	►		
KEY INHIBIT	►		

Figure 5.1-18   GPI Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-11:

Table 5.1-12   The Description of GPI Menu Items

Items	Default Value	Domain Range	Description
GPI1	TALLY GREEN	UNDEF, AREA MARKER, CENTER MARKER, SAFETY MARKER, ASPECT, NATIVE, OVER SCAN, UNDER SCAN,	Set a function to GPI1

Items	Default Value	Domain Range	Description
		BLUE ONLY, MONO, H DELAY, V DELAY, H/V DELAY, SDI1, SDI2, LINE1, LINE2, HDMI, TALLY GREEN, TALLY RED	
GPI2	TALLY RED	the same as GPI1	Set a function to GPI2
GPI3	UNDEF	the same as GPI1	Set a function to GPI3
GPI4	UNDEF	the same as GPI1	Set a function to GPI4
GPI5	UNDEF	the same as GPI1	Set a function to GPI5
GPI6	UNDEF	the same as GPI1	Set a function to GPI6

Tips

- Assign functions to GPI1~GPI6, some is level triggered, and some is edge triggered, refer to Table 5.1-13 for the details.

- GPI control: when it changes it would be as a control value of response control. If the level does not change, but there are other control caused by changes in the control value, perform this change. When boot, detect the GPI input status after initialization. If a GPI value is low, the monitor will control the corresponding operation. The TALLY is directly control by the level.

Table 5.1-13   The Description for GPI Items and Their Trigger

Items	Function	Trigger
AREA MARKER	Enable/Disable the display of area marker.	Low: Enabled; High: Disabled
CENTER MARKER	Enable/Disable the display of center marker.	Low: Enabled; High: Disabled
SAFETY MARKER	Enable/Disable the display of safety marker.	Low: Enabled; High: Disabled
ASPECT	Set the aspect ratio.	Low: 16:9; High: 4:3
MONO	Switch between the monochrome and color.	Low: MONO; High: NORMAL
OVER SCAN	Switch scan mode between over and normal.	Low: OVER; High: NORMAL

Items	Function	Trigger
UNDER SCAN	Switch scan mode between under and normal.	Low: UNDER; High: NORMAL
BLUE ONLY	Switch between blue only and normal.	Low: BLUE ONLY; High: NORMAL
NATIVE	Switch between native and normal.	Low: NATIVE(In center); High: NORMAL
H DELAY	Switch between H delay and normal.	Low: H DELAY; High: NORMAL
V DELAY	Switch between V delay and normal.	Low: V DELAY; High: NORMAL
H/V DELAY	Switch between H/V delay and normal.	Low: H/V DELAY; High: NORMAL
SDI1	Switch the input source to SDI1.	Switch at the falling edge, when switching to the other input, exit.
SDI2	Switch the input source to SDI2.	Switch at the falling edge, when switching to the other input, exit.
LINE1	Switch the input source to LINE1.	Switch at the falling edge, when switching to the other input, exit.
LINE2	Switch the input source to LINE2.	Switch at the falling edge, when switching to the other input, exit.
HDMI	Switch the input source to HDMI.	Switch at the falling edge, when switching to the other input, exit.
TALLY GREEN	Light the green tally.	Low: ON; High: OFF
TALLY RED	Light the red tally.	Low: ON; High: OFF

5.1.11 IMD Menu

The IMD menu items are used to adjust the parameters defined for IMD display, the menu items are as shown in Figure 5.1-19:

MAIN		IMD	
STATUS	▶	IMD DISPLAY	ON
INPUT SELECT	▶	IMD COLOR	RED
MARKER	▶	IMD CHARACTER	XXXXXXXXXXXXXX
AUDIO	▶	IMD PROTOCAL	LOCAL
DISPALY	▶	IMD ID	0
CLOSE CAPTION	▶	IMD NAME	XXXXXXXXXXXXXX
CONFIG	▶	BAUD RATE	38400
COLOR TEMP	▶	LED TALLY	OFF
FUNCTION KEY	▶	OSD TALLY MODE	RG
GPI	▶	IMD TALLY MODE	T1
IMD	▶	TALLY SOURCE	STANDARD
KEY INHIBIT	▶		

Figure 5.1-19   IMD Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-14:

Table 5.1-14   The Description of IMD Menu Items

Items	Default Value	Domain Range	Description
IMD DISPLAY	ON	OFF/ON	Set whether to display IMD CHARACTER on screen.
IMD COLOR	RED	• RED • GREEN • YELLOW • WHITE	Set the color for IMD CHARACTER.
IMD CHARACTER	XXXXXXXX	--	Set the IMD string displayed on the screen. After entering this item, press Up or Down to choose your character for this IMD string.
IMD PROTOCAL	LOCAL	• LOCAL • TSL3.1 • TSL4.0 • TSL5.0 • IMAGE VIDEO • NETWORK	Select an IMD protocol

Items	Default Value	Domain Range	Description
IMD ID	0	0~255	Set the ID number for each monitor
IMD NAME	XXXXXXXX		Set an IMD name for each screen.
BAUD RATE	38400	2400/4800/9600/19200/38400/57600/115200	Select a baud rate for communication.
LED TALLY	ON	OFF/ON	Set whether to switch on tally light.
OSD TALLY MODE	RG	• RG: Red/Green • GR: Green only • RGY: Red/Green/Yellow • OFF: No tally light	Select the OSD Tally mode. Only the TALLY SOURCE is STANDARD or STANDARD + IV422, the setting is available.
IMD TALLY MODE	T1	T1/T2/T1T2/T2T1/T1-/T2-/T1T2-/T2T1-	Select the IMD Tally mode. Use this setting when using the Image Video tally control, this setting will determine the state which is selected.
TALLY SOURCE	STANDARD	STANDARD/IMAGE IDEO/TSL	Select the source for LED tally source

Tips

- If IMD DISPLAY item is ON, the IMD CHARACTER in the black bar will display on the bottom of the screen.

- The length of IMD NAME and IMD CHARACTER is up to 16 characters. The character range is from 0x00 to 0x7F of ASCII. Press **ENTER** to edit the IMD characters, than use **UP** or **DOWN** to select characters, than press **ENTER** to go to next character, press **MENU** to exit editor. The KEY INHIBIT is ON, KEY INHIBIT is enabled and press the POWER key, the device would turn on or off.   MENU, UP, DOWN, ENTER key can be enable but only to   set the KEY INHIBIT item, or there is a "KEY INHIBIT" prompt displayed on the screen when using other keys.

5.1.12 KEY INHIBIT Menu

The KEY INHIBIT menu items are used to adjust the parameters displayed on the screen, the menu items are as shown in Figure 5.1-10:
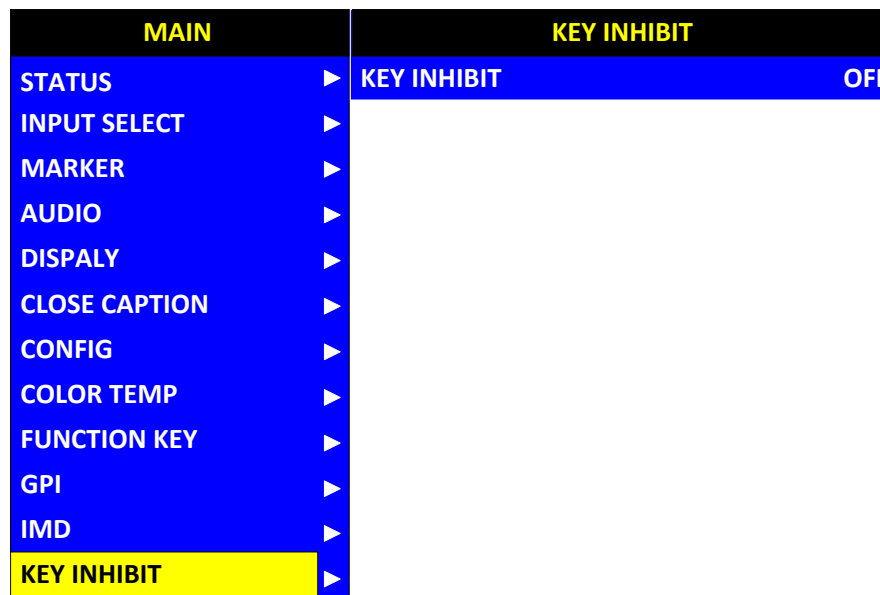
MAIN		KEY INHIBIT	
STATUS	►	KEY INHIBIT	OFF
INPUT SELECT	►		
MARKER	►		
AUDIO	►		
DISPALY	►		
CLOSE CAPTION	►		
CONFIG	►		
COLOR TEMP	►		
FUNCTION KEY	►		
GPI	►		
IMD	►		
KEY INHIBIT	►		

Figure 5.1-20   KEY INHIBIT Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-7:

Table 5.1-15   The Description of KEY INHIBIT Menu Items

Items	Default Value	Domain Range	Description
KEY INHIBIT	OFF	OFF/ON	Enable/Disable the key.

ℹ Tips

• When the KEY INHIBIT is ON, KEY INHIBIT is enabled and press the POWER key, the device would turn on or off. MENU, UP, DOWN, ENTER key can be enable but only to set the KEY INHIBIT item, or there is a "KEY INHIBIT" prompt displayed on the screen when using other keys.

5.2 Menu Settings

When checking or modifying the value of the menu item, cooperating with the

following buttons: MENU, **UP**, **DOWN**, ENTER.

1. Operations to the Main menu

■ **Display the Main Menu**

Press **MENU** button to enter into the main menu, it displays at the top left corner of the screen.

■ **Switch menu items**

After displaying the main menu, press **UP** or **DOWN** button to choose a menu item, the menu item selected is in yellow. For example, you have selected **Status** menu, as shown in Figure 5.2-1.

MAIN		STATUS	
STATUS	▶	INPUT	SDI1
INPUT SELECT	▶	FORMAT	NO SIGNAL
MARKER	▶	COLOR TEMP	D65
AUDIO	▶	SCAN MODE	OVER
DISPALY	▶	FAST MODE	OFF
CLOSE CAPTION	▶	MODEL	XCM-240-3HSV
CONFIG	▶	SERIAL NUMBER	XCM2402014070001
COLOR TEMP	▶	IP ADDRESS	192.168.1.86
FUNCTION KEY	▶	COLOR VERSION	65535 -255 -255.65535
GPI	▶		
IMD	▶		
KEY INHIBIT	▶		

Figure 5.2-1   Selecting STATUS Menu

■ **Back to the Main menu**

After entering to a sub-menu item or a sub-menu item value, press **MENU** button to back to the upper level menu area.

■ **Close the Main menu**

Press **MENU** button to close the Main menu when the control icon is in the Main menu item.

Tips

• After you have loaded the Main menu, it will be closed automatically if you do nothing operation with it in 60s.

2. Operations to sub-menu item

■   **Display the sub-menu item**

After display the Main menu, press **UP** or **DOWN** button to select a menu item, and the right part displays its sub-menu items according to the current selected menu item.

■   **Switch sub-menu items**

After displaying the sub-menu items list, press **ENTER** button to enter into the sub-menu items list, press **UP** or **DOWN** button to choose a sub-menu item, a yellow rectangle is in front of the selected sub-menu item.

■   **Back to menu item**

After entering to the sub-menu item value, press **MENU** button to back to menu items, or after setting the sub-menu item value and press **Enter** button to firm the modification, the control icon is back to the corresponding sub-menu item, as shown in Figure 5.2-2:
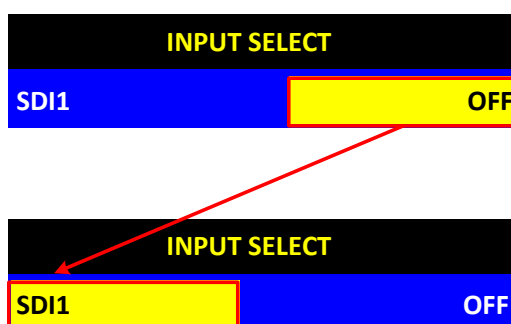

Figure 5.2-2   The Control Icon Moves from the Sub-menu Item Value to the Corresponding Sub-menu Item

3. **Operations to sub-menu item value**

■   **Switch sub-menu item value**

When the control icon is in sub-menu item value, press **UP** or **DOWN** button to switch among its value list.

■   **Confirm the modification to sub-menu item value**

Press **ENTER** button to confirm the selection of a value, and the control icon is back to the corresponding sub-menu item.

■   **Abandon the modification to sub-menu item value**

Press **MENU** button to give up the modification to sub-menu item value, and the control icon is back to the corresponding sub-menu item.

Tips

• The value in white color is modifiable, and the value in blue color is unmodifiable.

4. **Selecting the Menu Language**

You can select one of languages (English or Chinese) for displaying the menu. The default language for the menu is ENGLISH. The following will teach you how to switch to Chinese.

■ Operation:

Step 1 Select CONFIG menu

Press **MENU** button to display the OSD menu, click **DOWN** button to select **CONFIG** menu.

Step 2 Select the value of the Language item

Press **ENTER** button to get into the **CONFIG** menu items, and click **DOWN** button to select the sub-item **LANGUAGE**, then, click **ENTER** button to get into the sub-value list, as shown in Figure 5.2-3, the current control icon is in **ENGLISH**.

MAIN		CONFIG	
STATUS	►	FAST MODE	OFF
INPUT SELECT	►	FILM MODE DETECT	OFF
MARKER	►	SUB IN TYPE	PBP
AUDIO	►	SUB IN SELECT	SDI1
DISPALY	►	PIP SIZE	LARGE
CLOSE CAPTION	►	PIP POSITION	HORIZONTAL
CONFIG	►	BACKLIGHT	15
COLOR TEMP	►	AUTO STANDBY	OFF
FUNCTION KEY	►	APPEATURE	0
GPI	►	LOCK NUMBER	0
IMD	►	LANGUAGE	ENGLISH
KEY INHIBIT	►		

Figure 5.2-3   Select the Value of Language

Step 3 Confirm the modification of the value of sub-item

Click **DOWN** button to select the sub-item **LANGUAGE** to **Chinese**, as

shown in Figure 5.2-4, press **ENTER** button to confirm the modification.

主菜单		系统配置	
状态显示	▶	快速模式	关闭
输入设置	▶	电影模式检测	关闭
标记设置	▶	子画面类型	PBP
音频设置	▶	子画面输入源	SDI1
显示设置	▶	PIP大小	小
隐藏字幕	▶	PIP位置	右下
系统配置	▶	背光	15
色彩配置	▶	自动关机	关闭
功能键设置	▶	清晰度	0
GPI设置	▶	授权码	0
IMD设置	▶	语言	中文
按键锁定	▶		

Figure 5.2-4   Switching the Value of LANGUAGE

Step 4 Exit the main menu

Click MENU button to exit the main menu.

Chapter 6 Network Control

XCM-240 supports network interface. Connect a computer with XCM-240 through this interface to achieve the network control to XCM-240.

Tips

- The network address of the computer which is connected with XCM-240 and the network address of XCM-240 must be in the same segment.

This chapter will introduce how to set and check the parameters of XCM-240 in Internet Explorer.

6.1 Access the settings

Use Internet Explorer to enter into a web control page. For example, input http://192.168.1.86 in address bar, it will display the then, press Enter key, the management interface of XCM-240 is shown as in Figure 6.1-1:

Figure 6.1-1   Network Control Page

6.2 Menu Control

Open the management interface as shown in Figure 6.2-1, the menu items listed in the left part are almost as the same as the main menu items.
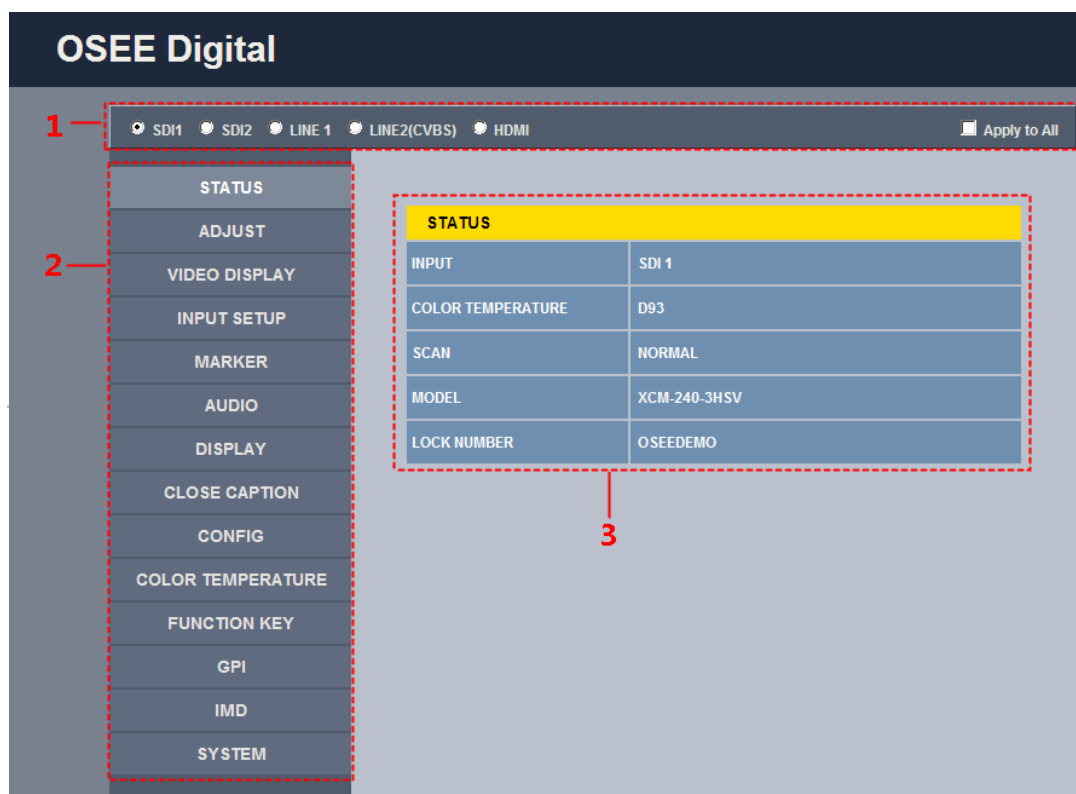

Figure 6.2-1   Management Interface

As shown in Figure 6.2-1, the management interface is divided into the following parts:

1. **Input Source Selection Button**

   It is used to selecting an input source as the input signal, such as: SDI1, SDI2, LINE1, LINE2(CVBS), HDMI. The selecting box of "Apply to All" at the right side is used to synchronize the settings for all the other kinds of input sources.

2. **Navigation menu list**

   It shows the navigation menus: **STATUS**, **ADJUST**, **VIDEO DISPLAY**, **INPUT SETUP**, **MARKER**, **AUDIO, DISPLAY**, **CLOSE CAPTION**, **CONFIG**, **COLOR TEMPERATURE**, **FUNCTION KEY**, **GPI**, **IMD** and **SYSTEM**. Click the navigation menu, it will show the corresponding settings on the right side. The menu items in main menu on screen display are mostly as the same as the menu items listed in navigation menus except **SYSTEM**, **ADJUST** and **VIDEO DISPLAY**.

3. Parameter list

It shows the parameter names, values and operation buttons of the selected navigation menu, as shown in the red rectangle in Figure 6.2-2. The title in the yellow rectangle of the parameter list and the parameter list will change with the navigation menu when switched.

Figure 6.2-2   Parameter List

Tips

- There may be a "(S)" icon followed by some parameter name in the parameter list, it is mean that this parameter is only a local parameter for the current selected signal source, otherwise, the parameter is global and the modification is valid for all signal sources.

- The **SET** button is used to confirm the modification of the parameter value.

6.2.1 ADJUST Menu

It will introduce **ADJUST** menu.

Click **ADJUST** button at the left navigation menu list, it will display the adjust parameters, as shown in Figure 6.2-5:
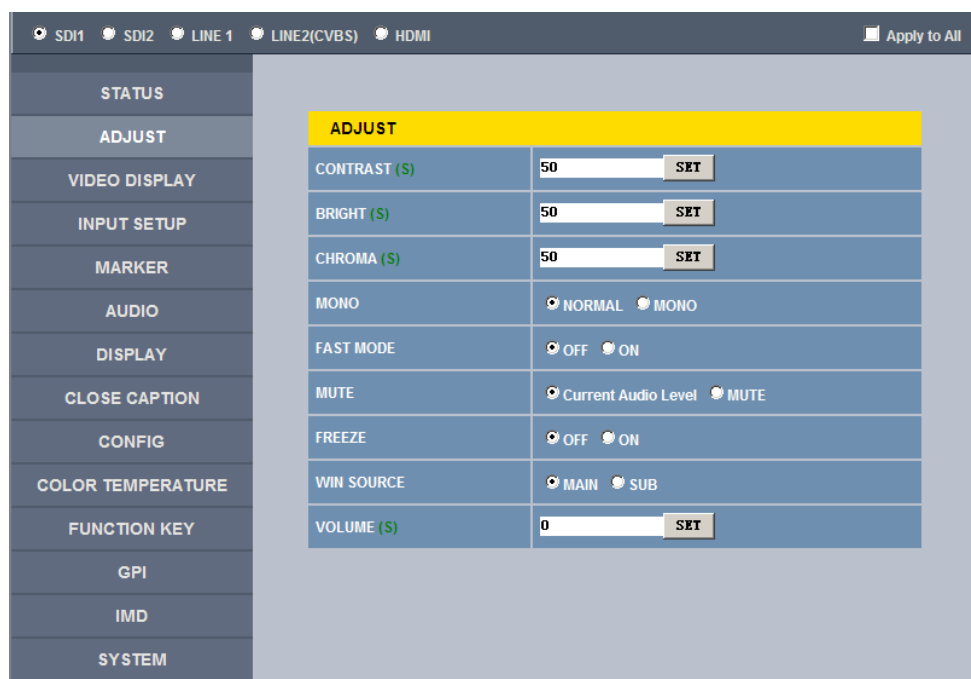
Figure 6.2-3   ADJUST Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 6.2-3:

Table 6.2-1   The Description of ADJUST Menu Items

Items	Default Value	Domain Range	Description
CONTRAST	50	0~100	Adjust the picture contrast
BRIGHTNESS	50	0~100	Adjust the picture brightness
CHROMA	50	0~100	Adjust the picture monochroma
MONO	NORMAL	NORMAL/MONO	Enable/disable Monochrome mode, normal mode is actually the color mode
FASE MODE	OFF	OFF/ON	Enable/disable FAST MODE
MUTE	Current Audio Level	Current Audio Level /MUTE	Enable/disable the audio monitor
FREEZE	OFF	OFF/ON	Enable/disable the current picture to be stopped or played.

Items	Default Value	Domain Range	Description
WIN SOURCE	MAIN	MAIN/SUB	Set the picture displaying mode in full mode or in sub-picture mode
VOLUME	15	0~31	Adjust the volume

6.2.2 VIDEO DISPLAY Menu

It will introduce **VIDEO DISPLAY** menu.

Click **VIDEO DISPLAY** button at the left navigation menu list, it will display the video display parameters, as shown in Figure 6.2-5:
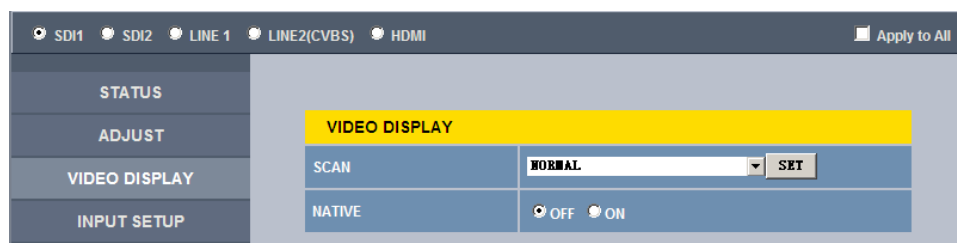

Figure 6.2-4   VIDEO DISPLAY Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 6.2-3:

Table 6.2-2   The Description of VIDEO DISPLAY Menu Items

Items	Default Value	Domain Range	Description
SCAN	NORMAL	• NORMAL • OVERSCAN • UNDERSCAN	Set the scan mode
NATIVE	OFF	OFF/ON	Whether to display the picture dot by dot

6.2.3 SYSTEM Menu

It will introduce **SYSTEM** menu.

Click **SYSTEM** button at the left navigation menu list, it will display the system parameters, as shown in Figure 6.2-5:

Figure 6.2-5   System Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 6.2-3:

Table 6.2-3   The Description of System Menu Items

Items	Default Value	Domain Range	Description
IP	192.168.1.86	-	IP address
MASK	255.255.255.0	-	Subnet mask
Gateway	192.168.1.1	-	Gateway address
LOCK NUMBER	XXXXXX	-	Show the Serial Number
LOCK NUMBER	XXXXXX	-	Set the Serial Number
MPU Version	12	-	Product information
FPGA Version	4	-	Product information
NCU Version	101	-	Product information

6.2.4 Other Menus

For the menu items in management interface are almost as the same as the menu items in the Main menu on screen, there will be no further description about their meanings and value range in this chapter, refer to

"Chapter 5 Functionality of the Main Menu" for the details about **STATUS**, **VIDEO CONFIG**, **AUDIO CONFIG**, **MARKER**, **DISPLAY**, **USER CONFIG**, and **COLOR TEMPERATURE**.

6.3 Parameter Settings

It will introduce how to modify parameter values in management interface in the followings.

For example: modify **Meter Select** in **AUDIO** menu. Click **AUDIO** button to display its parameter list, as shown in Figure 6.3-1, the corresponding screen main menu is shown as in Figure 6.3-2:

Figure 6.3-1   Parameter List for AUDIO

Figure 6.3-2   Screen Main Menu for AUDIO

Click ▼ button to display the drop-down value list for the parameter, as shown in Figure 6.3-3, for example, modify "CH1-2" to "G1".
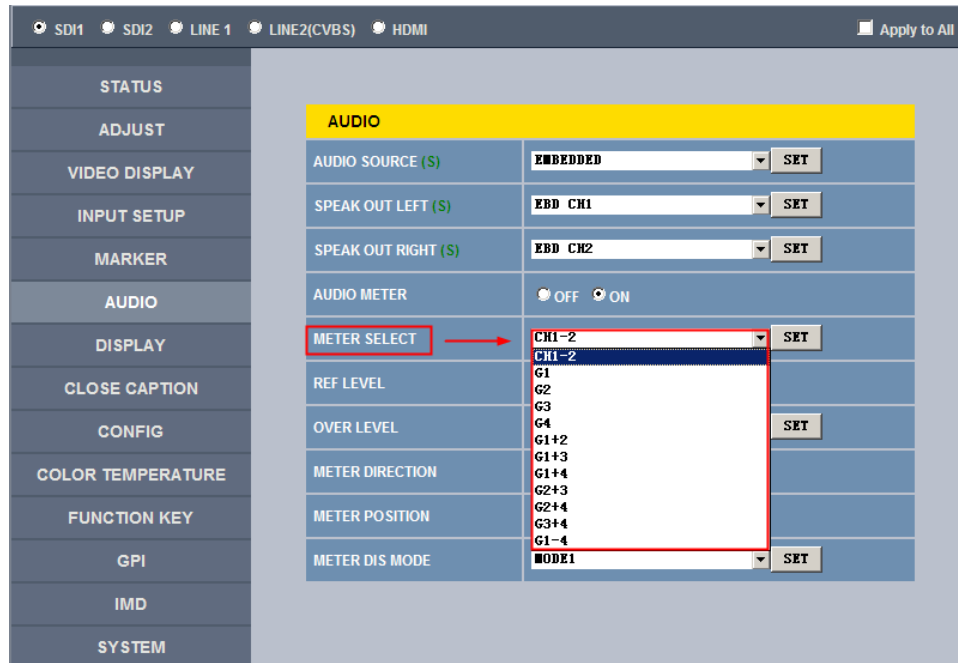

Figure 6.3-3   Display the Drop Down Value List of Meter Select(S)

Click SET button to confirm the selection and the page is refreshed. You can check the modification on the screen menu, the results are the same as shown in Figure 6.3-4 and Figure 6.3-5:
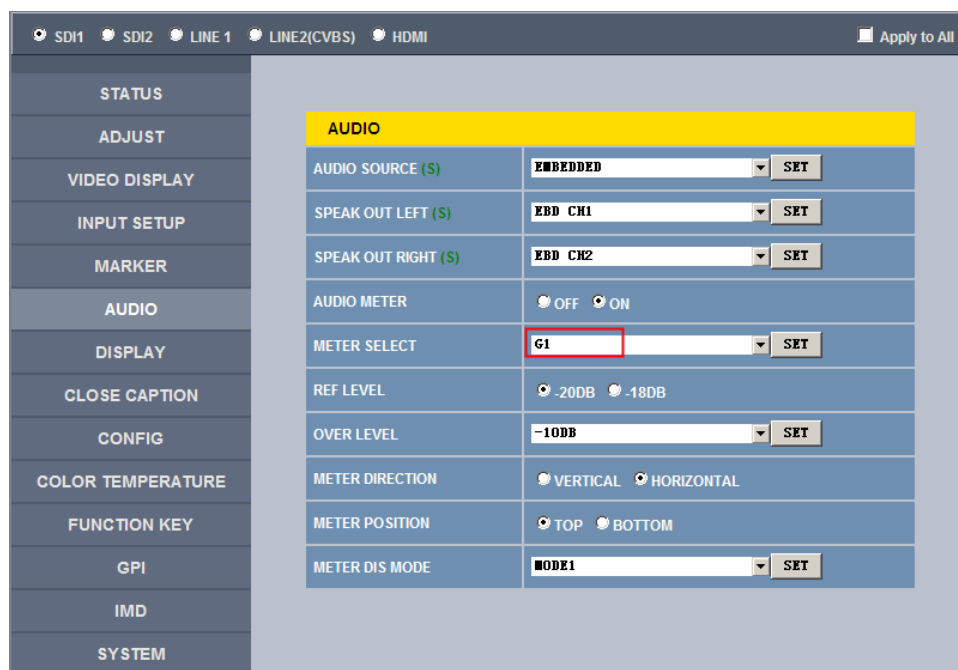

Figure 6.3-4   Modify the Value of a Parameter

Tips

- The volume can be checked and modified in adjust menu on screen adjustment, or in **Volume** item of **ADJUST** menu in management interface.

MAIN		AUDIO	
STATUS	▶	AUDIO SOURCE	AUDIO1
INPUT SELECT	▶	SPEAK OUT L	EBD CH1
MARKER	▶	SPEAK OUT R	EBD CH1
AUDIO	▶	AUDIO METER	OFF
DISPALY	▶	METER SELECT	G1
CLOSE CAPTION	▶	METER DIRECTION	HORIZONTAL
CONFIG	▶	METER POSITION	TOP
COLOR TEMP	▶	METER DIS MODE	MODE1
FUNCTION KEY	▶	REF LEVEL	-20dB
GPI	▶	OVER LEVEL	-10dB
IMD	▶		
KEY INHIBIT	▶		

Figure 6.3-5   The Value is Modified Simultaneously on Screen Menu

Likewise, if you modify the value of a parameter on screen menu first, you may check the same changing result in management interface through network connection.

Chapter 7 Specifications

1. Product detailed information

Specification	Values
LCD Dimension	24", 569.9(H) x 380.7(V) x 97.4(D)
Aspect Ratio	16:10
Display Area(mm)	518.4(H)×324.0(V)
Viewing Angle	178°(H)x178°(V)
Color Depth	1.073G colors (RGB 10-bits)
Resolution	1920(H)×1200(V)
Pixel Pitch(mm)	0.270(H)×0.270(V)
Contrast	1000:1(Typ.)
Luminance (cd/㎡)	250 (Typ.)
Response Time (ms Typ.)	<6
Backlight	WhiteLED
Backlight Life(Hrs)	50000
Work Temperature	0°C~35°C
Signal Formats	CVBS: PAL, NTSC
	SD: 480ip60, 576i50
	HD: 1080i50, 1080i59.94, 1080i60, 720p50, 720p59.94, 720p 60, 1035i59.94, 1035i 60
	3G: 1080p50, 1080p60
CVBS Input/Output	
Signal Type	NTSC, PAL
Signal Amplitude	1Vp-p+/-3dB
Impedance	75Ω
Return Loss	>40 dB to 5 MHz
DC Offset	0V±0.05 V
Frequency Response	±0.2 dB to 5 MHz
Differential Gain	<1%
Differential Phase	<1.5°

Specification	Values
3G-SDI /HD-SDI /SDI-SDI Input/Output	
Signal Type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 297M
Connector	BNC per IEC 169-8
Impedance	75Ω
Return Loss	>18 dB 5 to 270 MHz >15 dB 270 MHz to 1.5 GHz >10 dB up to 3 GHz
Maximum Signal Level	800 mV pk-pk 10%
Signal Amplitude	800 mV pk-pk 10%
DC Offset	0 V ±0.5 V
Overshoot	<10%
Jitter	<0.2 UI
Rise/Fall Time	<700 ps for SD <270 ps for 1.5 Gb/s HD <135 ps for 3 Gb/s HD
Extinction Ratio	>8
Back Reflection	<-14 dB
Power Supply	5A12V DC

2. Input/Output Resolution, Frame Refresh Rate and Color Matrix

	OVERSCAN		NATIVE		FULL/NORMAL		Refresh Rate	Color Matrix
	Input	Output	Input	Output	INPUT ALL	OUTPUT NORMAL		
NTSC	684X462	1366X768 1024X768	720X487	720X487	720X487	1366X768 1024X768	60	601
PAL	684X548	1366X768 1024X768	720X576	720X576	720X576	1366X768 1024X768	50	601
SECAM	684X548	1366X768 1024X768	720X576	720X576	720X576	1366X768 1024X768	50	601
NTCS-4.43	684X462	1366X768 1024X768	720X487	720X487	720X487	1366X768 1024X768	60	601
PAL-M	684X462	1366X768 1024X768	720X487	720X487	720X487	1366X768 1024X768	60	601
480I60	684X462	1366X768 1024X768	720X487	720X487	720X487	1366X768 1024X768	60	601/709
576I50	684X548	1366X768 1024X768	720X576	720X576	720X576	1366X768 1024X768	50	601
480P60	684X462	1366X768 1024X768	720X487	720X487	720X487	1366X768 1024X768	60	601/709
576P50	684X548	1366X768	720X576	720X576	720X576	1366X768	50	601

	OVERSCAN		NATIVE		FULL/NORMAL		Refresh Rate	Color Matrix
	Input	Output	Input	Output	INPUT ALL	OUTPUT NORMAL		
		1024X768				1024X768		
720P24	1216X684	1366X768	1280x720	1280x720	1280x720	1366X768	48	709
720P25	1216X684	1366X768	1280x720	1280x720	1280x720	1366X768	50	709
720P30	1216X684	1366X768	1280x720	1280x720	1280x720	1366X768	30	709
720P50	1216X684	1366X768	1280x720	1280x720	1280x720	1366X768	50	709
720P60	1216X684	1366X768	1280x720	1280x720	1280x720	1366X768	60	709
1035I60	1824X984	1366X768	1920X1035	1920X1035	1920X1035	1366X768	60	709
1080I60	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	60	709
1080I50	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	50	709
1080P24	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	48	709
1080P25	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	50	709
1080P30	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	60	709
1080P50	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	50	709
1080P60	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	60	709
1080SF24	1824X1026	1366X768	1920X1080	1920X1080	1920X1080	1366X768	48	709
VGA					640X480	1366X768	60-75	
SVGA					800X600	1366X768	60-75	
XGA					1024x768	1366X768	60-75	
SXGA					1280x1024	1366X768	60-75	
UXGA					1600x1200	1366X768	60	
WXGA					1360X768	1360X768	60	
WUXGA					1920x1200	1366X768	60	

*Don't display all OSD when SCAN is NATIVE.

*Don't display MARKER when SCAN is NATIVE.

3. Dimensions

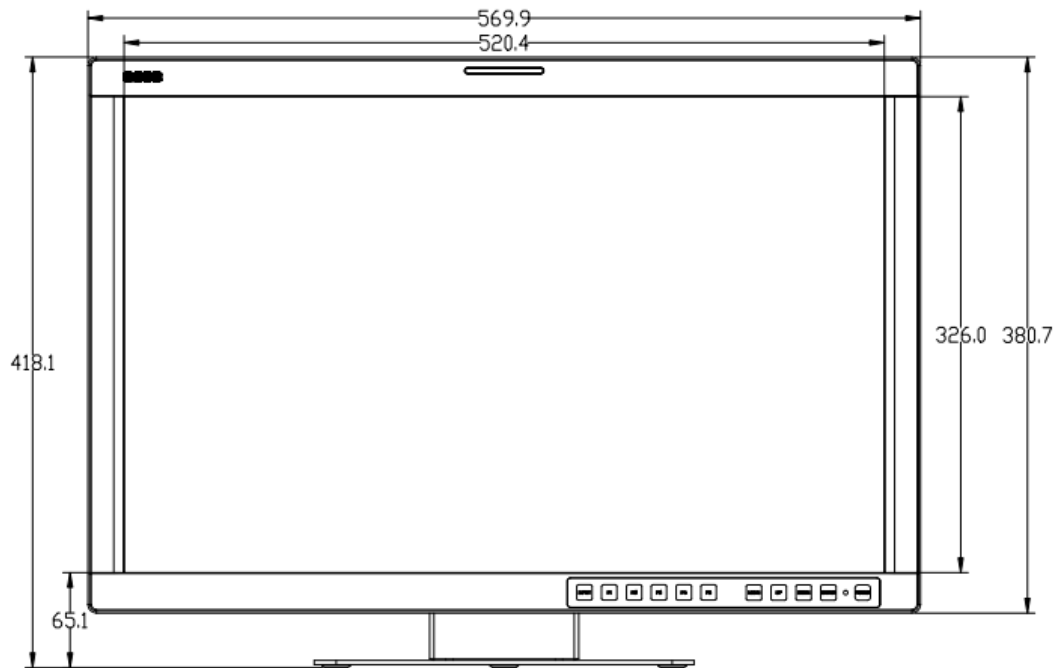The description of the product dimensions is shown as in the following figures:
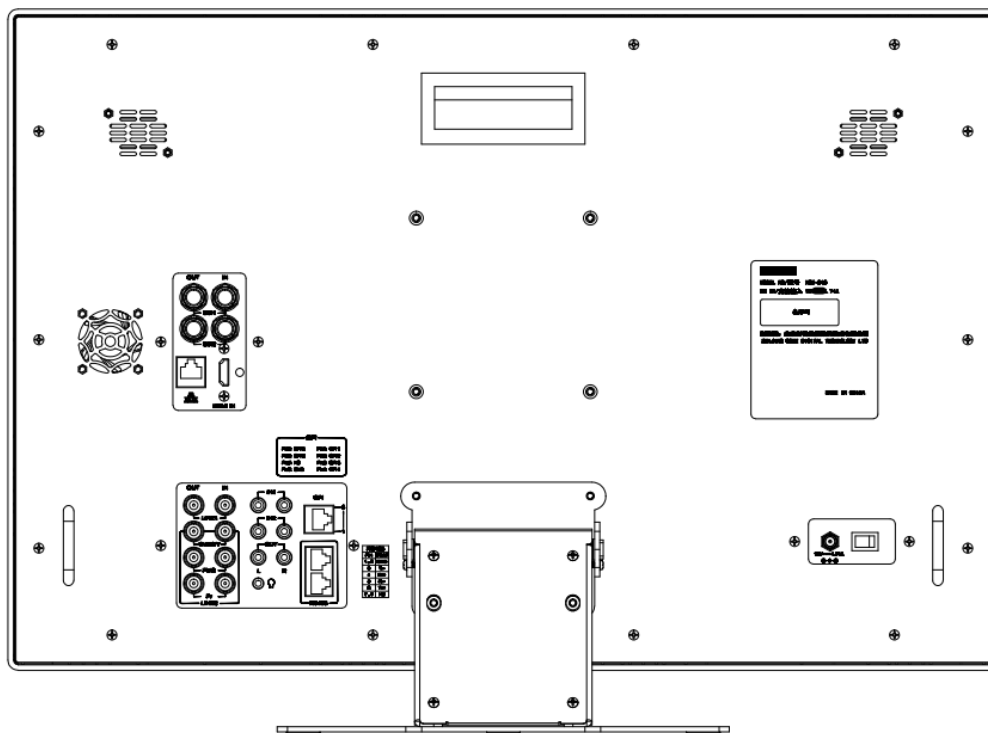
Figure 7-1   Front Panel(Unit: mm)

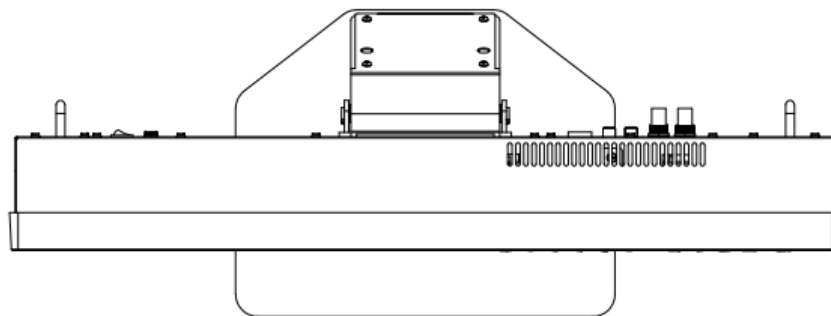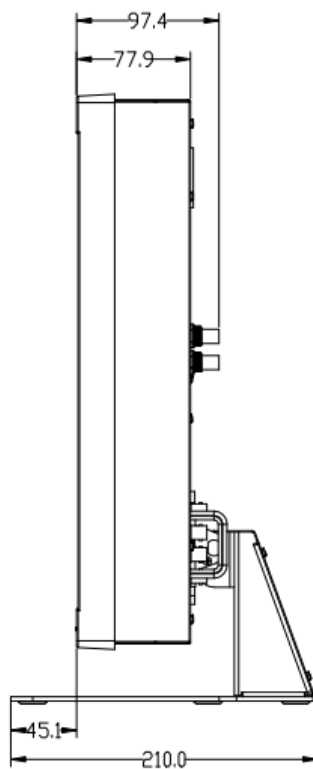*Figure 7-2   Rear Panel(Unit: mm)*

Figure 7-3 Top View(Unit: mm)

Figure 7-4 Side View(Unit: mm)

i Tips

• Specifications are subject to change without notice.

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