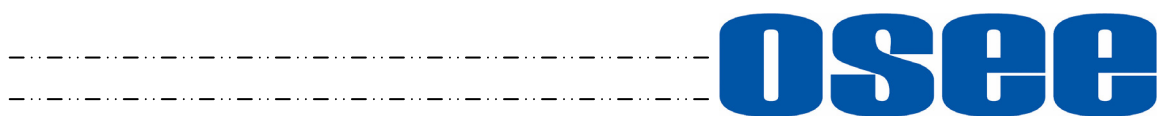


RMM1024 Monitor

User Manual





BEIJING OSEE DIGITAL TECHNOLOGY LTD.

MODEL: RMM1024 Monitor
VERSION: V010000
RELEASE DATE: 2013-12-20

Company

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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:

- ❖ **RMM1024-3HSV**
- ❖ **RMM1024-HSV**
- ❖ **RMM1024-SV**

The images of RMM1024-3HSV 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.

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Chapter 1 Overview

RMM1024 is a 10.1", 2-screen, 4RU high full HD LCD monitor. It offers a full resolution 1920X1200 LCD panel, with wide viewing angle and wide color gamut. It supports the video signal of analog composite/3G/HD/SD-SDI and HDMI. It supports analog audio input/output. It supports precise color correction, audio meter display, wave form, vector and so on. It is compatible with the monitors of RMS series, and adding the new Ethernet function.



Figure 1 A Diagram of RMM1024

Features

- Supports 3G/HD/SD-SDI, analog composite video signal and HDMI 1.3a
- Offers LCD panel with resolution of 1920 X1200, high-brightness, high-contrast and 178° wide viewing angle
- Supports color gamut modes that meet the criteria of SMPTE-C, EBU, ITU-709
- Supports various color temperature(D93, D65, D56, D50, D32) and user customized color temperature
- Aluminum-magnesium alloy frame(with hanging board), standard 4RU high, adjustable frame

Functionality

- Audio phase meter and phase alarm display
- 16 channels embedded audio level meter, the channel number and the dB value can be displayed
- Supports various markers: Center Marker, Area Marker and Safe Marker
- Supports TSL/IMAGE VIDEO dynamic TALLY protocol
- Supports TC code(VITC, LTC, D-VITC)
- Supports AFD prompts display
- Supports H/V Delay, NATIVE, BLUE ONLY, MONO
- Speaker and earphone output
- Supports Ethernet control
- 3G supports 1080P 50, 1080P 60

Chapter 2 Safety

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

Warning

Monitor

- 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.
 - Install in accordance with the manufacturer's instructions.
 - 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 RMM1024 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	Monitor	1
2	Power cord	1
3	adapter	1
4	User manual	1
5	warranty card	1

Installation:

1. Prepare for installation

Please follow the procedures below before installing RMM1024 monitor:

- 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 for future use.
2. Install RMM1024 in your desired location of a standard EIA equipment rack. Adequate ventilation is required when installed to prevent possible damage to the RMM1024 internal components.
 3. Connect required cables for signal input and output. For BNC connections use 75 Ω rated connectors.
 4. Connect AC power source using the included power cord.
 5. Connect the power cord to the rear panel.
 6. Fasten the power protect accessory.
 7. As a final step, turn on each screen of the RMM1024 by pressing the corresponding power switch located on the front panel.

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Chapter 4 RMM1024 Features

This chapter describes the features of RMM1024 monitor. The features of RMM1024 monitor are as shown in Figure 4-1 after installed and powered on:

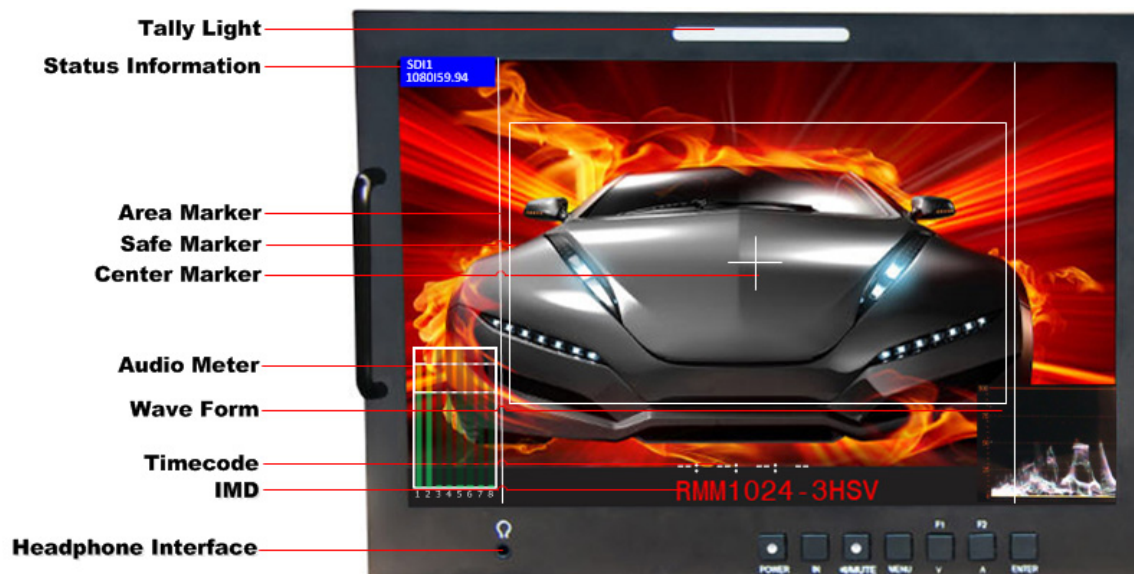


Figure 4-1 Features of RMM1024 Monitor

1. **Tally light:** this LED light is at the top center of the front panel, and you can judge the monitor status by the color of Tally light. This tri-color (red/green/amber) light is controlled through a RJ45 connector on the rear panel.
2. **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.

Source	→	SDI1
Signal Format	→	1080I59.94

3. **Waveform and Vector:** this is effective only for SDI signal. The waveform and vector of the input signal are configurable in the MAIN Menu.
4. **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.
5. **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

6. **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.
7. **Audio Meter:** it is displayed for audio monitoring. You can set its groups, direction, position and mode in **AUDIO** menu.
8. **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 --:--:--:--.
9. **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.
10. **Headphone Interface:** The Ω icon as shown in Screen No.1 is the headphone interface, it supports 3.5mm stereo, and the two screen share one headphone interface.

Tips

- The **Status Information** usually displays as the following situations:
 - ☐ "UNKNOWN" 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 each group of buttons control the corresponding screen.

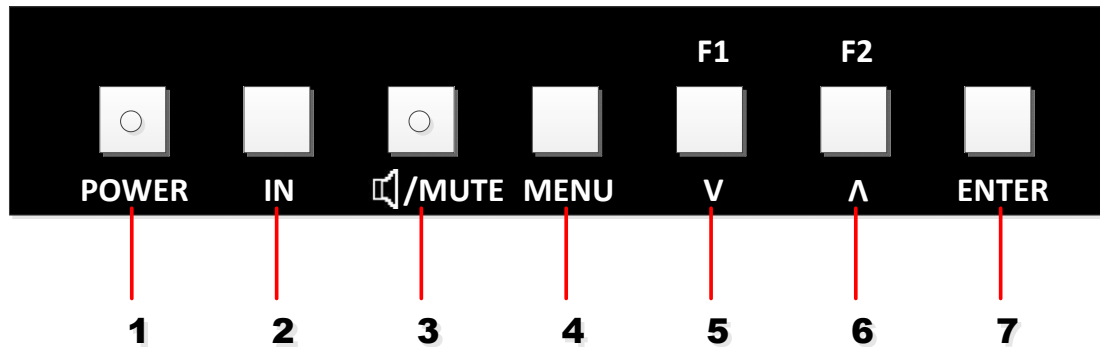



Figure 4.1-1 the Buttons in Front Panel

As shown in Figure 4.1-1, take the left screen of RMM1024 for example, these buttons are as follows:

1. **Power**
2. **IN**
3.  **/MUTE**
4. **MENU**
5. **F1/V**
6. **F2/^**
7. **ENTER**

Tips

- Stand directly in front of a RMM1024, usually, the left screen is called No.1 screen, and the right screen is called No.2 screen.
- The buttons of Screen No.2 act as the same as the buttons of Screen No.1, and just effect on the current screen. This is the same to the usage of the interfaces in the rear panel, and no more repeat in the following contents.
- 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. 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.
-

2. IN

Select the input signal. Press this button to display the 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.

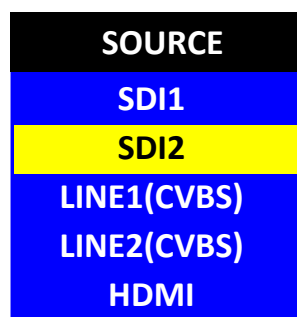


Figure 4.1-2 Source Menu

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:

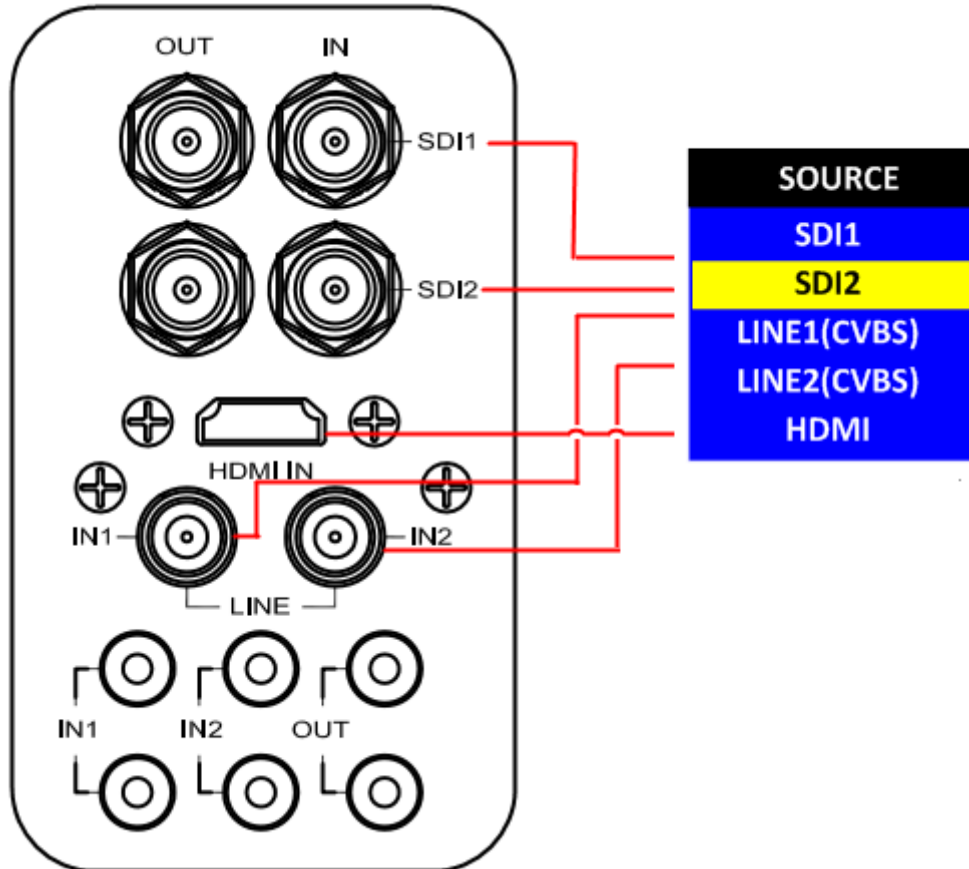


Figure 4.1-3 Correspondence between Source Menu and Interface

3. /MUTE

This button can achieve the following two functions:


- : Audio monitor button. Toggle this button to enable or disable the audio monitor, and the light in the button will indicate the status of audio monitoring. When the light is on, the audio is monitoring, and when the light is off, it is mute. The volume is adjusted in adjust menu.
- **MUTE**: Audio mute button. Toggle this button to enable or disable the audio monitor.



Figure 4.1-4 Audio Monitor Menu

Tips

- After you have loaded the Audio Monitor Menu, it will be closed automatically if you do nothing operation with it in 10s.

4. 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.

Tips

- Press and hold the **MUTE+ENTER** button for 3s can reset the menu settings to factory originals, as shown in Figure 4.1-5.



Figure 4.1-5 Reset Menu List

5. F1/∨

This button can achieve the following two functions:

- **F1**: F1 function button. Press **F1** to display the function menu list in the center of the screen, as shown in Figure 4.1-6. Toggle **F1** button to change the value related to this function.
- **∨**: it is **Down** button when working with **MENU**. Toggle this button to select the next item or decrease the number.

FUNCTION		
F1	MUTE	OFF
F2	NATIVE	OFF

Figure 4.1-6 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 and F2. You can assign F1/F2 the function from among: SCAN, NATIVE, ASPECT, BLUE ONLY, MONO, MARKER, H/V DELAY, AUDIO METER, TC, IMD, UNDEF. Refer to "5.1.9 FUNCTION KEY Menu" for the details.

6. F2/∧

This button can achieve the following two functions:

- **F2:** F2 function button. Press **F2** to display the function menu list in the center of the screen, toggle **F2** button to change the value related to this function.
- **∧:** it is **Up** button when working with **MENU**. Toggle this button to select the next item or increase the number.

FUNCTION		
F1	MUTE	OFF
F2	NATIVE	OFF

Figure 4.1-7 Function Menu List

7. 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 4.1-8, toggle among these menu items: VOLUME, BRIGHTNESS, CONTRAST, CHROMA.



Figure 4.1-8 Adjust Menu List

After displaying the Adjust menu, press **^ (Up)** or **v (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 value 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 selection list of a screen may not be shown all simultaneously.

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 RMM1024 monitor.

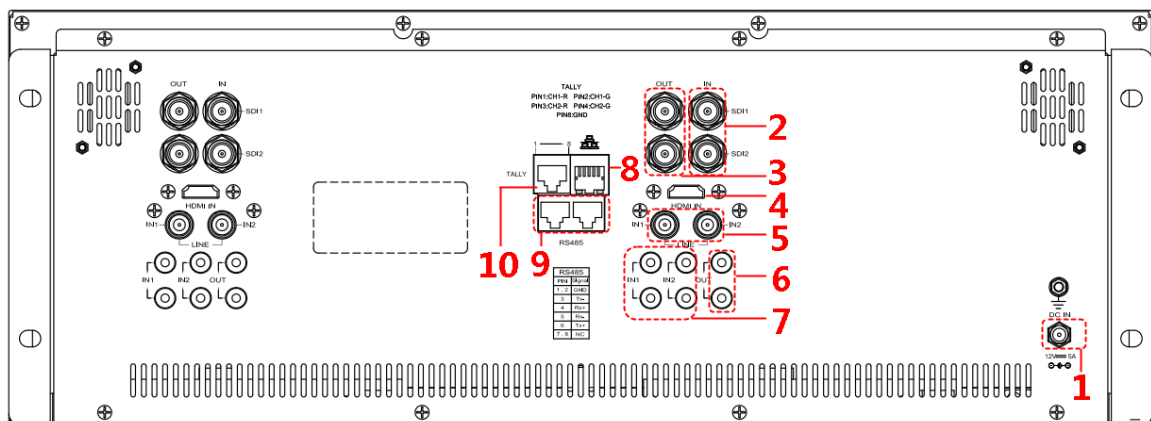


Figure 4.2-1 The Rear Panel of RMM1024 Monitor

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

1. Power Input
2. Video Input
3. Video Output
4. HDMI Input
5. Video Input
6. Audio Output
7. Audio Input

- 8. Ethernet
- 9. RS485 In/Out
- 10. Tally Input

4.2.2 Operations of Rear Panel

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

1. Power Input

It provides one power input interface, the specification is 5~12VDC. 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 !

2. Video Input Interface (BNC)

It provides two SDI input interfaces, one is labeled as SDI1 IN, and the other is SDI2 IN, 800mVp-p +/-10%.

3. Video Output Interface (BNC)

It provides two SDI output interfaces. One is labeled as SDI1 OUT, the other is SDI2 OUT, 800mVp-p +/-10%, active loop.

4. HDMI

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

5. Video Input Interface (BNC)

It provides two SDI input interfaces. One is labeled as LINE IN1, and the other is LINE IN2, 1Vp-p +/-3dB, sync negative.

6. Audio Output interface

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

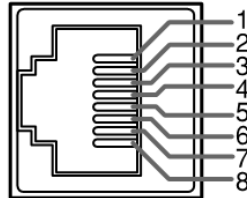
7. Audio Input interface

It provides four audio input interfaces, 5dBu, impedance $\geq 47K$, RCA connector.

8. Ethernet (RJ-45)

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

9. IN/ OUT RS485 Interface (RJ-45)



Support for dynamic UMD and updating the new firmware.

The Comparison of Pins and Input/output connectors for RS485 is shown as in Table 4.2-1:

Table 4.2-1 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

10. Tally(DB9)

It controls the LED tally light.

The relationship of the pins of Tally interface and its channel value is shown in Table 4.2-2.

Table 4.2-2 The Relationship of Tally Input Pins and Channel Values

Pin No.	Channel Value
Pin 1	CH1-R
Pin 2	CH1-G
Pin 3	CH2-R
Pin 4	CH2-G
Pin 8	GND

Thereinto, the tally light will display in different color according to its pin connection way, the relationship is shown in Table 4.2-2:

Table 4.2-3 The Relationship of Tally Light Color and Pins

Tally Light Color	Screen 1		Screen 2	
	PIN1	PIN2	PIN3	PIN4
Red	GND	Open	GND	Open
Green	Open	GND	Open	GND
Amber	GND	GND	GND	GND

Tips

- Tally light is in working status when grounding.

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
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	✓		✓

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

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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.

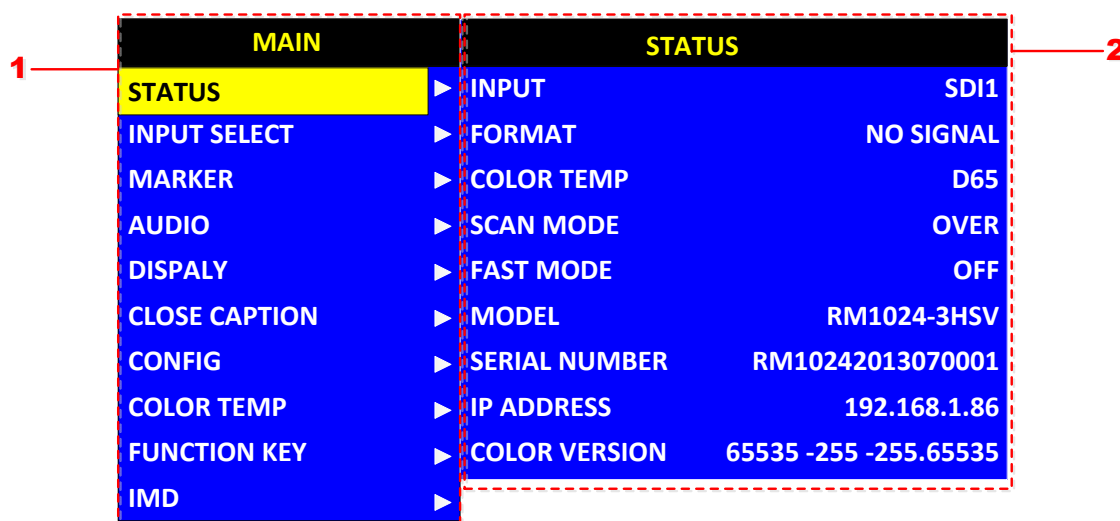
The main menu includes the following menu items, as shown in Figure5-1.

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 RM1024-3HSV
CONFIG	SERIAL NUMBER RM10242013070001
COLOR TEMP	IP ADDRESS 192.168.1.86
FUNCTION KEY	COLOR VERSION 65535 -255 -255.65535
IMD	

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:



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 RM1024-3HSV
CONFIG	SERIAL NUMBER RM10242013070001
COLOR TEMP	IP ADDRESS 192.168.1.86
FUNCTION KEY	COLOR VERSION 65535 -255 -255.65535
IMD	

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 several sub-menu items. The title of this list is **MAIN**. Press **Up**(\wedge) or **Down**(\vee) to access the corresponding menu item.
2. Sub-menu value list: as shown in Figure 5.1-2, it lists the control icon, sub-menu item and the value of the item. After pressing **Menu** button, press **Up**(\wedge), **Down**(\vee) button and **Enter** button to modify the value of the sub-menu. Refer to “5.2 Menu Settings” for details.

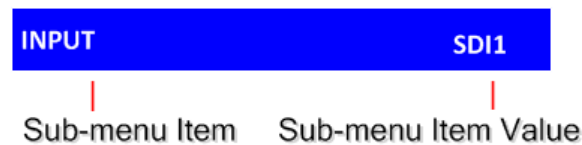


Figure 5.1-2 the Sub-menu Value List

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:

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

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:

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

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:

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

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 NORMAL
DISPALY ▶	FAST MODE OFF
CLOSE CAPTION ▶	MODEL RM1024-3HSV
CONFIG ▶	SERIAL NUMBER RM10242013070001
COLOR TEMP ▶	IP ADDRESS 192.168.1.86
FUNCTION KEY ▶	COLOR VERSION 2013-12-9.1
IMD ▶	

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	<ul style="list-style-type: none"> SDI1 SDI2 LINE1(CVBS) LINE2(CVBS) HDMI 	Show the Input format
FORMAT	NO SIGNAL	--	Show the format of the input signal
COLOR TEMP	D65	--	Show the color temperature.
SCAN MODE	NORMAL	<ul style="list-style-type: none"> NORMAL OVER UNDER 	Show the scan mode.
FAST MODE	OFF	OFF/ON	Show the fast mode.
SD ASPECT	16:9	16:9/4:3	Show the screen Aspect Ratio.
MODEL	RMM1024-3HSV	--	Show the production model.
SERIAL NUMBER	RMM10242013070001	--	Show the serial number.
IP ADDRESS	192.168.1.86	--	Show the IP address.
COLOR VERSION	2013-12-9.1	--	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	ON
DISPALY	▶	HDMI	ON
CLOSE CAPTION	▶	NTSC SETUP	7.5
CONFIG	▶	NTSC PHASE	0
COLOR TEMP	▶		
FUNCTION KEY	▶		
IMD	▶		

Figure 5.1-7 INPUT SELECT Menu

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	ON/OFF	Enable/Disable LINE2 input
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:

MAIN		MARKER	
STATUS	▶	MARKER	OFF
INPUT SELECT	▶	AREA MARKER	OFF
MARKER	▶	CENTER MARKER	OFF
AUDIO	▶	SAFETY MARKER	OFF
DISPALY	▶	MARKER LEVEL	1
CLOSE CAPTION	▶	MARKER MAT	OFF
CONFIG	▶	CROSS HATCH	OFF
COLOR TEMP	▶		
FUNCTION KEY	▶		
IMD	▶		

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	Select the area marker

Items	Default Value	Domain Range	Description
		aspect is 16:9, images show with the following scale: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • OFF: close area marker • 16:9 	aspect ratio according to the display aspect ratio.
CENTER MARKER	OFF	OFF/ON	Set whether to show the center marker
SAFETY MARKER	OFF	<ul style="list-style-type: none"> • OFF • 80% • 85% • 88% • 90% • 93% • 95% 	Set the safety area size according to the aspect ratio and scan mode.
MARKER LEVEL	1	<ul style="list-style-type: none"> • 1: 50% • 2: 75% • 3: 100% 	Set the luminance of marker line, including safety marker, center marker, area marker and cross hatch.
MARKER MAT	OFF	<ul style="list-style-type: none"> • 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.

i Tips

- 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
IMD	▶	OVER LEVEL	-10dB

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	EBD	<ul style="list-style-type: none"> • EDB: embedded signal • AUDIO1: external signal1 • AUDIO2: external 	Select the audio source. When there is no sync in and the input signal is not HDMI/SDI1/SDI2,

Items	Default Value	Domain Range	Description
		signal2 • UNDEF: no signal	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	EDB 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	<ul style="list-style-type: none"> • CH1-2 • G1 • G2 • G3 • G4 • G1+G2 • G1+G3 • G1+G4 • G2+G3 • G2+G4 • G3+G4 • G1-G4 	Select a meter display mode. Each G* contains four channels, and each CH* means a channel with number.
METER DIRECTION	VERTICAL	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • BOTTOM • TOP 	Select the displayed position of audio meter.

Items	Default Value	Domain Range	Description
METER DIS MODE	MODE1	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> -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 SIZE NORMAL
AUDIO	▶ WAVE FORM TYPE WAVE FORM
DISPALY	▶ LINE WAVE OFF
CLOSE CAPTION	▶ LINE WAVE NUMBER 261
CONFIG	▶ WAVE OVER LIMIT 50
COLOR TEMP	▶ WAVE UNDER LIMIT 0
FUNCTION KEY	▶ TIME CODE OFF
IMD	▶

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 SIZE	NORMAL	<ul style="list-style-type: none"> NORMAL: Normal size FULL: Full screen 	Set the display size of WFM/VT.
WFM FORM TYPE	NORMAL	<ul style="list-style-type: none"> VECT100 VECT75 WAVE FORM 	Switch the display mode among vector100, vector75 and wave form.
LINE WAVE	OFF	OFF/ON	Set whether to show line wave.
LINE WAVE NUMBER	260	As shown in Table 5.1-6.	Set the position of WFM.
WFM POS	BOT RIGHT	<ul style="list-style-type: none"> BOT RIGHT BOT LEFT TOP LEFT BOT RIGHT 	Select the displayed position for WFM.
WFM OVERLIMIT	50	50~100	Set the over limit of WFM
WFM UNDERLIMIT	0	0~50	Set the under limit of WFM
TIME CODE	OFF	<ul style="list-style-type: none"> 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
1080p	561	42~1121

Tips

- Only in PIP mode or PBP mode, you can call out the vectorscope or wave form, configure its size through **DISPLAY→WAVE FORM SIZE**, configure its display mode through **DISPLAY→WAVE FORM TYPE**, and configure its display position through **CONFIG→IMD 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	▶		
IMD	▶		

Figure 5.1-11 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	<ul style="list-style-type: none"> • 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 5.1-12:

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
IMD	▶	LOCK NUMBER	0
		LANGUAGE	ENGLISH

Figure 5.1-12 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	<ul style="list-style-type: none"> SDI1 SDI2 LINE1(CVBS) LINE2(CVBS) HDMI WAVE FORM 	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

Items	Default Value	Domain Range	Description
PIP POSITION	BOT LEFT	<ul style="list-style-type: none"> BOT LEFT: bottom left BOT RIGHT: bottom right TOP RIGHT TOP LEFT 	Set the position of PIP
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 5.1-13 :

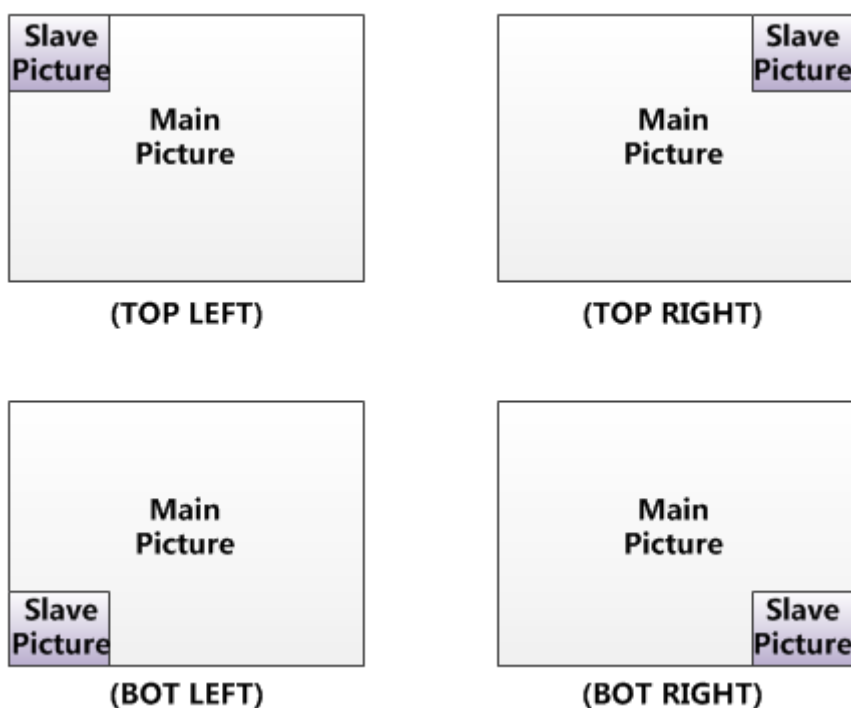


Figure 5.1-13 PIP Mode

- In PBP mode, the relationship of the main picture and the slave picture

is as shown Figure 5.1-14:

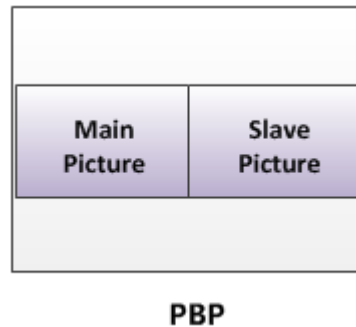


Figure 5.1-14 PBP Mode

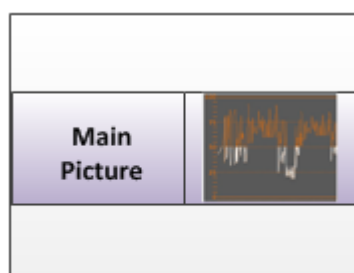
2. Scope for the slave picture

The selection scope of the signal source for the slave picture will be changing with the main picture's source, as shown in Table 5.1-9:

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)	HDMI	WFM
SDI1	×	✓	✓	✓	✓	✓
SDI2	✓	×	✓	✓	✓	✓
LINE1(CVBS)	✓	✓	×	×	✓	×
LINE2(CVBS)	✓	✓	×	×	✓	×
HDMI	✓	✓	✓	✓	×	×

In PIP mode, the WFM/Vector will be displayed as the slave picture; in PBP mode, the WFM/Vector will be displayed paralleled as the slave picture, as shown in Figure 5.1-15:



PBP

Figure 5.1-15 The Slave Picture Is Displayed as WFM

Tips

- 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, then use **^**(Up) and **v**(Down) to select characters, then 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	
IMD	▶	COLOR SPACE	AUTO

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	OFF
MARKER	▶		
AUDIO	▶		
DISPALY	▶		
CLOSE CAPTION	▶		
CONFIG	▶		
COLOR TEMP	▶		
FUNCTION KEY	▶		
IMD	▶		

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, TC, IMD, UNDEF	Set a function to F1 button
F2	SCAN	the same as F1	Set a function to F2 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 IMD Menu

The IMD menu items are used to adjust the parameters defined for IMD display, the menu items are as shown in Figure 5.1-18:

MAIN		IMD	
STATUS	▶	IMD DISPLAY	ON
INPUT SELECT	▶	IMD COLOR	RED
MARKER	▶	IMD CHARACTER	XXXXXXXX
AUDIO	▶	IMD PROTOCOL	LOCAL
DISPALY	▶	IMD ID	000
CLOSE CAPTION	▶	IMD NAME	XXX
CONFIG	▶	BAUD RATE	38400
COLOR TEMP	▶	LED TALLY	OFF
FUNCTION KEY	▶	OSD TALLY MODE	RG
IMD	▶	IMD TALLY MODE	T1
		TALLY SOURCE	STANDARD

Figure 5.1-18 IMD Menu

The relationship of Items, Default Value, Domain Range and Description of the sub-item is shown in Table 5.1-12:

Table 5.1-12 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	<ul style="list-style-type: none"> • 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 PROTOCOL	LOCAL	<ul style="list-style-type: none"> • LOCAL • TSL3.1 • TSL4.0 • TSL5.0 • IMAGE VIDEO • NETWORK 	Select an IMD protocol
IMD ID	000	0~255	Set the ID number for IMD
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	<ul style="list-style-type: none"> • 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

Items	Default Value	Domain Range	Description
			will determine the state which is selected.
TALLY SOURCE	STANDARD	STANDARD/IMAGE IDEO/TSL	Select the source for LED tally source

Tips

- 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)** and **^(Down)** to select characters, than press **ENTER** to go to next character, press **MENU** to exit editor.

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 RM1024-3HSV
CONFIG	SERIAL NUMBER RM10242013070001
COLOR TEMP	IP ADDRESS 192.168.1.86
FUNCTION KEY	COLOR VERSION 65535 -255 -255.65535
IMD	

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.

i 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 **v (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 **v (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:

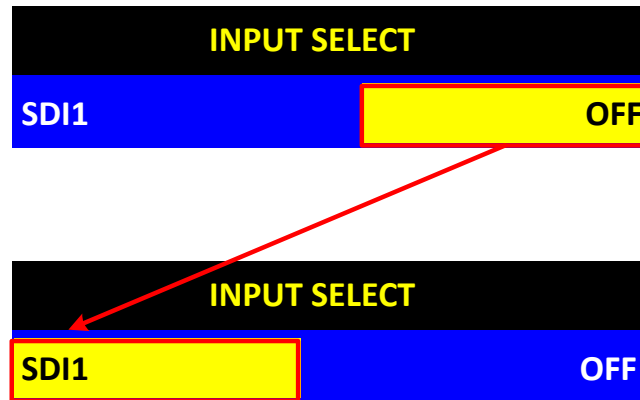


Figure 5.2-2 The Control Icon Moves from the Sub-menu Item Value to the Corresponding Sub-menu Item

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 **v (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
IMD	▶	LOCK NUMBER	0
		LANGUAGE	ENGLISH

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
IMD设置	▶	授权码	0
		语言	中文

Figure 5.2-4 Switching the Value of LANGUAGE

Step 4 Exit the main menu

Click MENU button to exit the main menu.

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Chapter 6 Network Control

RMM1024 supports network interface. Connect a computer with RMM1024 through this interface to achieve the network control to RMM1024.

Tips

- The network address of the computer which is connected with RMM1024 and the network address of RMM1024 must be in the same segment.

This chapter will introduce how to set and check the parameters of RMM1024 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 RMM1024 is shown as in Figure 6.1-1:

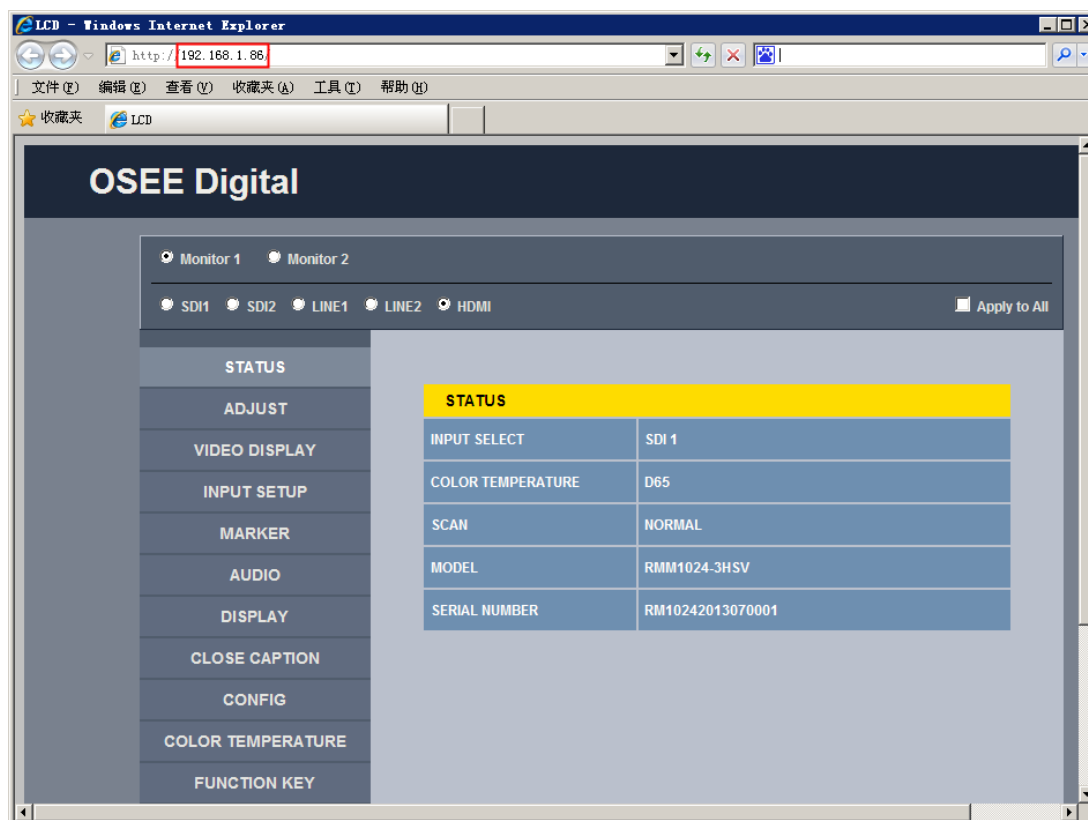


Figure 6.1-1 Network Control Page

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.

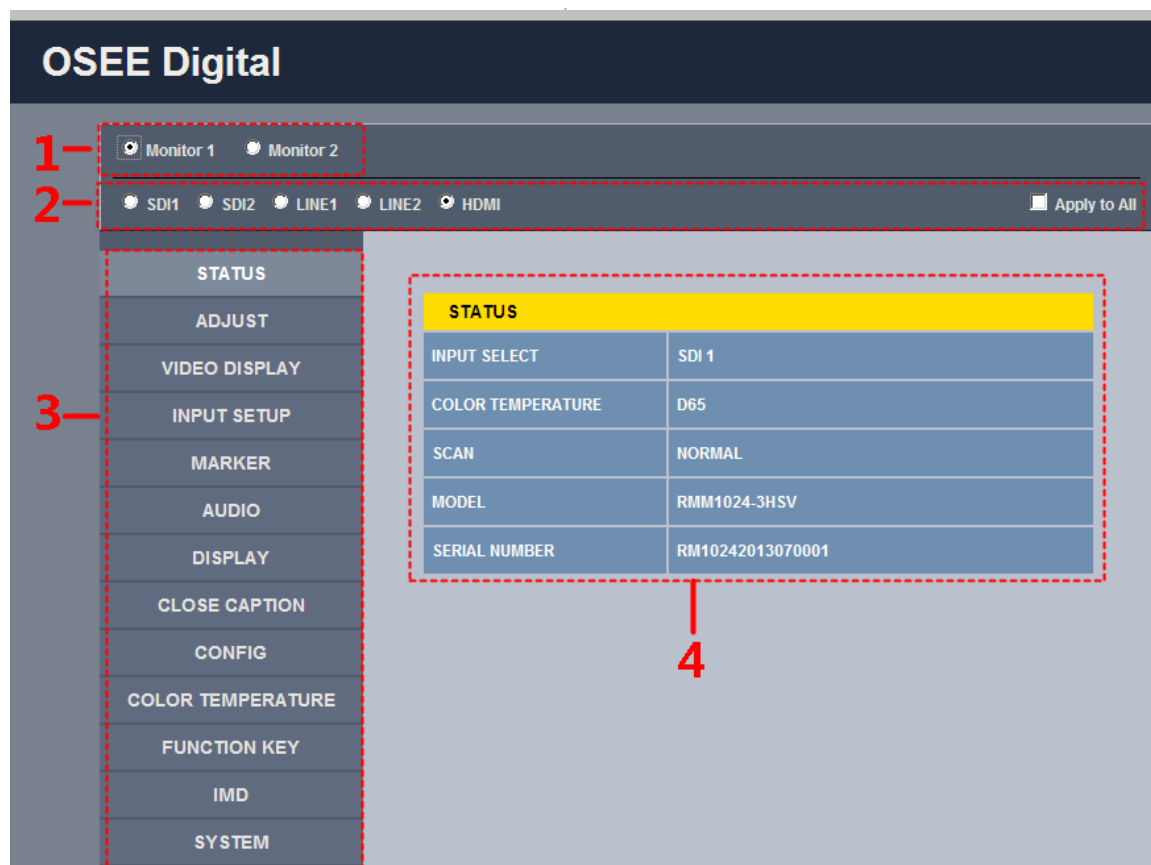


Figure 6.2-1 Management Interface

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

1. Screen selection button

It is used to switch between the two screens at the top of the working area. Click “Monitor 1” to show the parameter values set in screen No.1, and click “Monitor 2” to show the parameter values set in screen No. 2.

Tips

- For a RMM1024 device, “Monitor 1” is corresponding to screen No.1, and “Monitor 2” is corresponding to screen No.2. Select a monitor before you set or check the parameters for it.

2. Input Source Selection Button

It is used to selecting an input source as the input signal, such as: SDI1, SDI2, LINE1, LINE2, HDMI. The selecting box of "Apply to All" at the right side is used to synchronize the settings of a monitor to another monitor.

3. Navigation menu list

It shows the navigation menus: **STATUS**, **ADJUST**, **VIDEO DISPLAY**, **INPUT SETUP**, **MARKER**, **AUDIO**, **DISPLAY**, **CLOSE CAPTION**, **USER CONFIG**, **COLOR TEMPERATURE**, **FUNCTION KEY**, **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**.

4. 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.

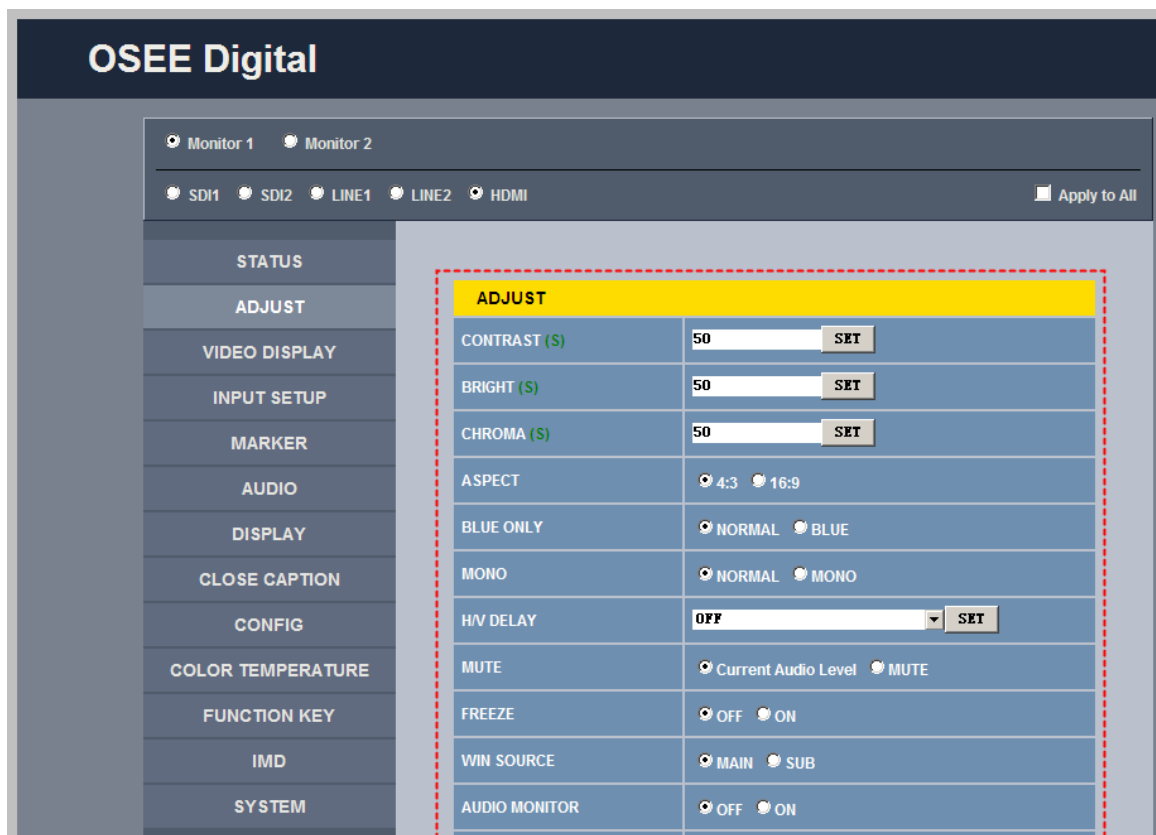


Figure 6.2-2 Parameter List

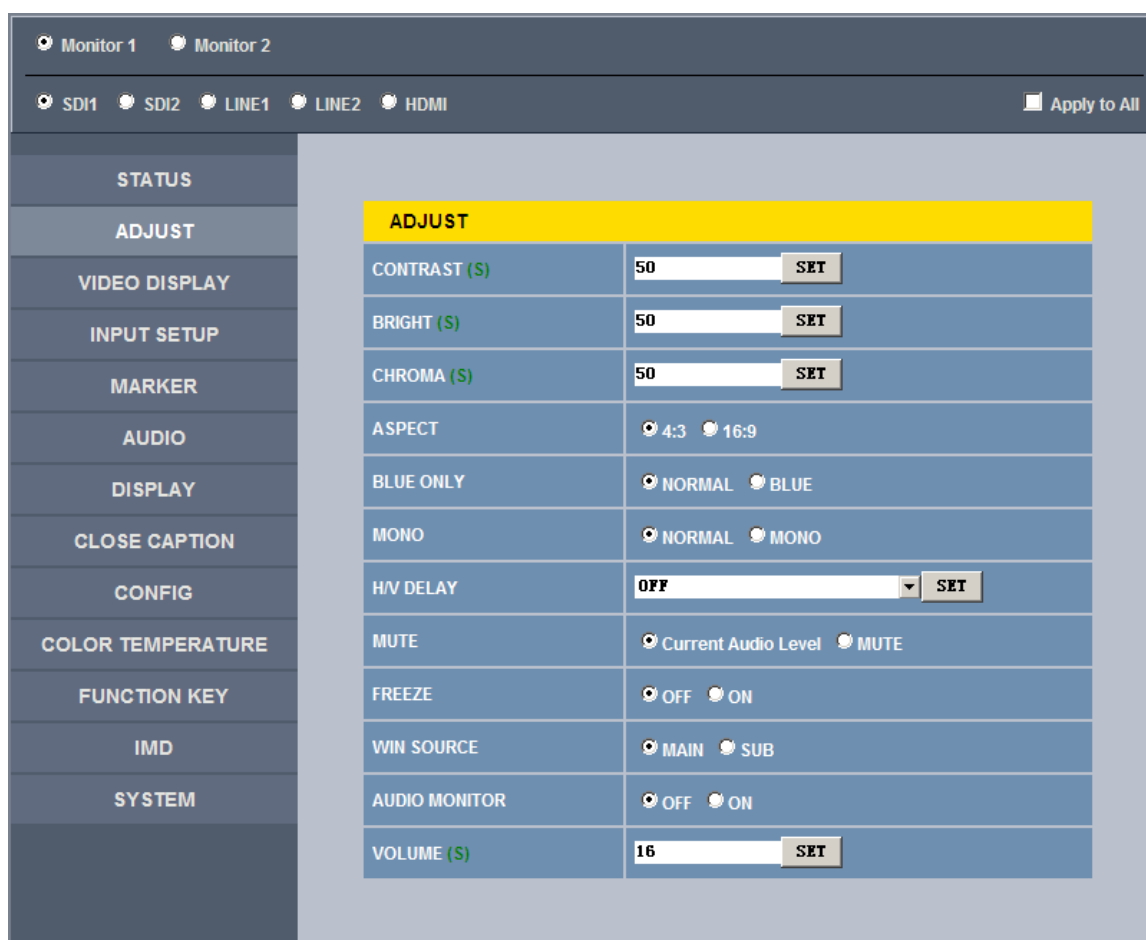
Tips

- 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 monitor, otherwise, the parameter is global and the modification is valid for both screens.
- 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:



ADJUST	
CONTRAST (S)	50 SET
BRIGHT (S)	50 SET
CHROMA (S)	50 SET
ASPECT	<input checked="" type="radio"/> 4:3 <input type="radio"/> 16:9
BLUE ONLY	<input checked="" type="radio"/> NORMAL <input type="radio"/> BLUE
MONO	<input checked="" type="radio"/> NORMAL <input type="radio"/> MONO
H/V DELAY	OFF SET
MUTE	<input checked="" type="radio"/> Current Audio Level <input type="radio"/> MUTE
FREEZE	<input checked="" type="radio"/> OFF <input type="radio"/> ON
WIN SOURCE	<input checked="" type="radio"/> MAIN <input type="radio"/> SUB
AUDIO MONITOR	<input checked="" type="radio"/> OFF <input type="radio"/> ON
VOLUME (S)	16 SET

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
ASPECT	16:9	4:3/16:9	Set the aspect ratio of the picture
BLUE ONLY	NORMAL	NORMAL/BLUE	Enable/disable Blue Only mode
MONO	NORMAL	NORMAL/MONO	Enable/disable Monochrome mode, normal mode is actually the color mode
H/V DELAY	OFF	<ul style="list-style-type: none"> • OFF • H DELAY • V DELAY • H/V DELAY 	Display synchronizing signals in horizontal or vertical mode
MUTE	Current Audio Level	<ul style="list-style-type: none"> • Current Audio Level • MUTE 	Enable/disable the audio monitor
FREEZE	OFF	OFF/ON	Enable/disable the current picture to be stopped or played.
WIN SOURCE	MAIN	MAIN/SUB	Set the picture displaying mode in full mode or in sub-picture mode
AUDIO MONITOR	OFF	OFF/ON	Set whether in audio monitoring.
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:

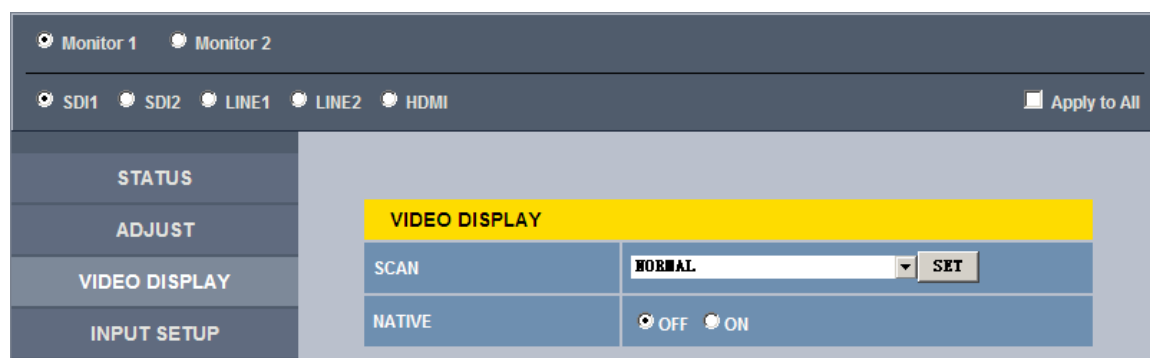


Figure 6.2-4 VIDEO DISPLAY Menu

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	<ul style="list-style-type: none"> 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	0001	-	Serial Number
32626 Version	3	-	Product information
FPGA Version	1	-	Product information
F107 Version	1	-	Product information

6.2.4 Other Menus

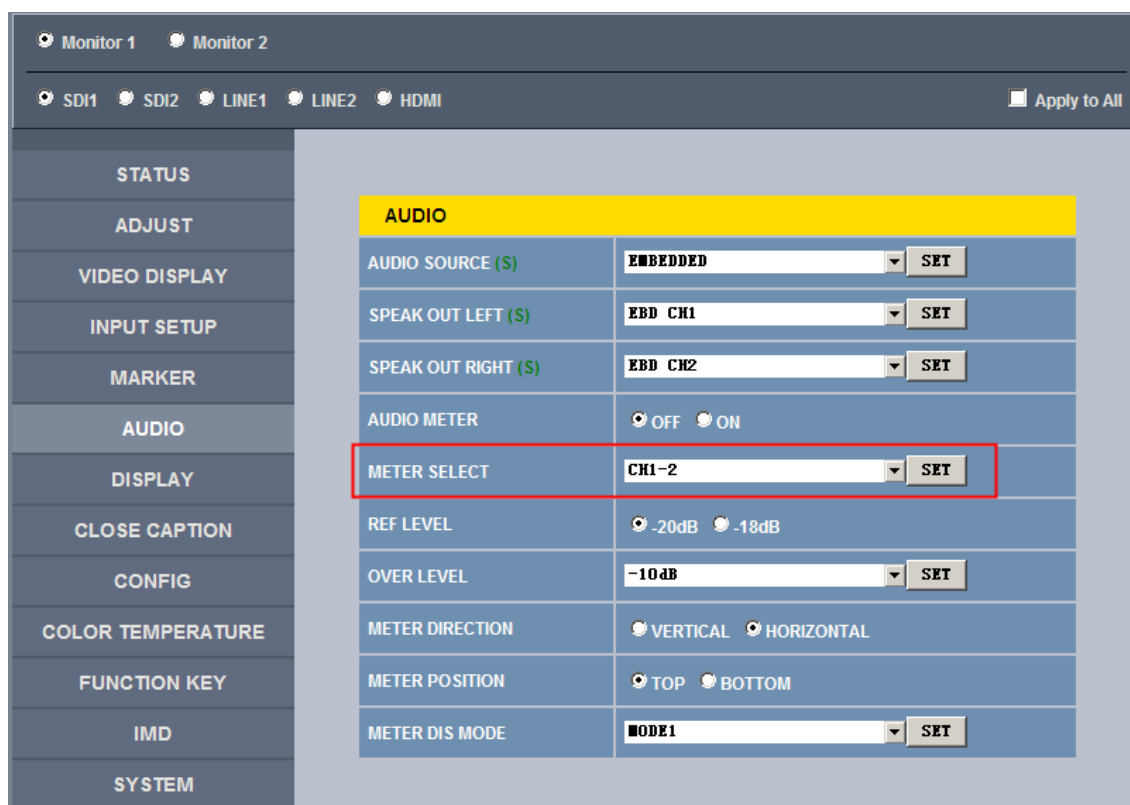
For the menu items in management interface are almost as the same as

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:



AUDIO	
AUDIO SOURCE (S)	EMBEDDED SET
SPEAK OUT LEFT (S)	EBD CH1 SET
SPEAK OUT RIGHT (S)	EBD CH2 SET
AUDIO METER	<input checked="" type="radio"/> OFF <input type="radio"/> ON
METER SELECT	CH1-2 SET
REF LEVEL	<input checked="" type="radio"/> -20dB <input type="radio"/> -18dB
OVER LEVEL	-10dB SET
METER DIRECTION	<input type="radio"/> VERTICAL <input checked="" type="radio"/> HORIZONTAL
METER POSITION	<input checked="" type="radio"/> TOP <input type="radio"/> BOTTOM
METER DIS MODE	MODE1 SET

Figure 6.3-1 Parameter List for AUDIO

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
IMD	▶	OVER LEVEL	-10dB

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”.

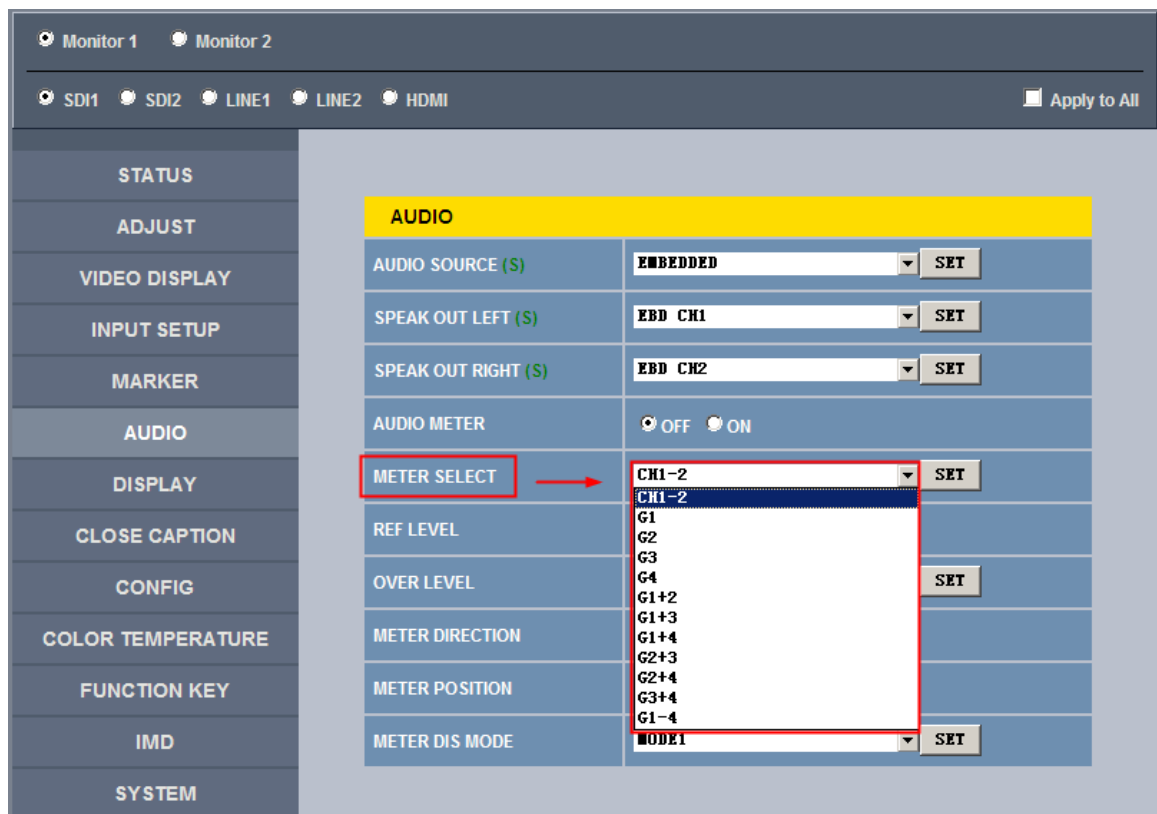



Figure 6.3-3 Display the Drop Down Value List of Meter Select(S)

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:



The screenshot shows the Osee Network Control interface. On the left is a vertical menu with options: STATUS, ADJUST, VIDEO DISPLAY, INPUT SETUP, MARKER, AUDIO (selected), DISPLAY, CLOSE CAPTION, CONFIG, COLOR TEMPERATURE, FUNCTION KEY, IMD, and SYSTEM. The main area displays the AUDIO settings. At the top, there are tabs for Monitor 1 and Monitor 2, and input options: SDI1, SDI2, LINE1, LINE2, and HDMI. An 'Apply to All' button is in the top right. The AUDIO settings table is as follows:

AUDIO	
AUDIO SOURCE (S)	EMBEDDED SET
SPEAK OUT LEFT (S)	EBD CH1 SET
SPEAK OUT RIGHT (S)	EBD CH2 SET
AUDIO METER	<input type="radio"/> OFF <input checked="" type="radio"/> ON
METER SELECT	G1 SET
REF LEVEL	<input checked="" type="radio"/> -20dB <input type="radio"/> -18dB
OVER LEVEL	-10dB SET
METER DIRECTION	<input type="radio"/> VERTICAL <input checked="" type="radio"/> HORIZONTAL
METER POSITION	<input checked="" type="radio"/> TOP <input type="radio"/> BOTTOM
METER DIS MODE	MODE1 SET

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
IMD	▶	OVER LEVEL	-10dB

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.

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Chapter 7 Specifications

1. Product detailed information

Specification	Values
Number of Screens	2
Aspect Ratio	16:10
Display Area(mm)	216.81(H)×135.50(V)
Viewing Angle	178° (H)×178° (V)
Color Depth	16.7M colors (RGB 8-bits)
Resolution	1920(H)×1200(V)
Dot Pitch(mm)	0.113(H)×0.113(V)
Contrast	800:1
Brightness(cd/m ²)	400 typ. (5 points average) 340 min. (5 points average)
Response Time (ms Typ.)	<25
Backlight	WhiteLED
Backlight Life(Hrs)	20000
Work Temperature	0° C~35° C
Signal Formats	SD: 480i/59.94, 576i/50
	HD: SMPTE-274M: 1080i 50/59.94, 1080p/PSF 23.98/24/25
	HD: SMPTE-296M: 720p 50/59.94
	3G: SMPTE-425 level A(mapping 1): 1080p 50/59.94
	HDMI 1.3a
	Compliant to EIA/CEA-861-D
Input	3G/HD/SD-SDI Input(75Ohm BNCx2)
	Analog Composite (75Ohm BNCx2)
	HDMI Input(HDMI Type A)
	Analog stereo input(RCAx4)
Output	3G/HD/SD-SDI Input(BNCx2)
	Analog stereo output (RCAx2)

Specification	Values
	Stereo HEADPHONE (3.5mm stereo Jack)

2. Dimensions

The description of the product dimensions of RMM1024 is shown as in the following figures:

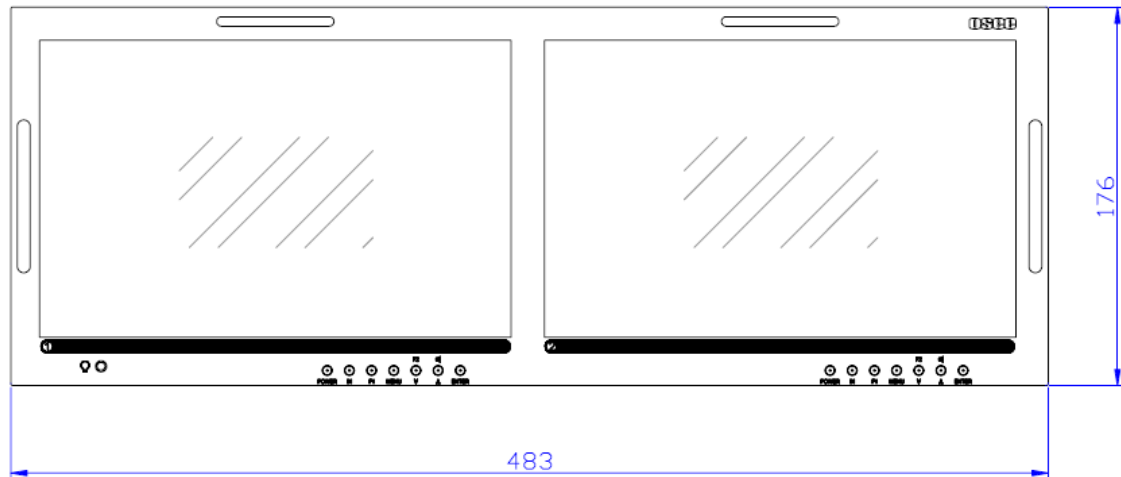


Figure 7-1 Front Panel(Unit: mm)

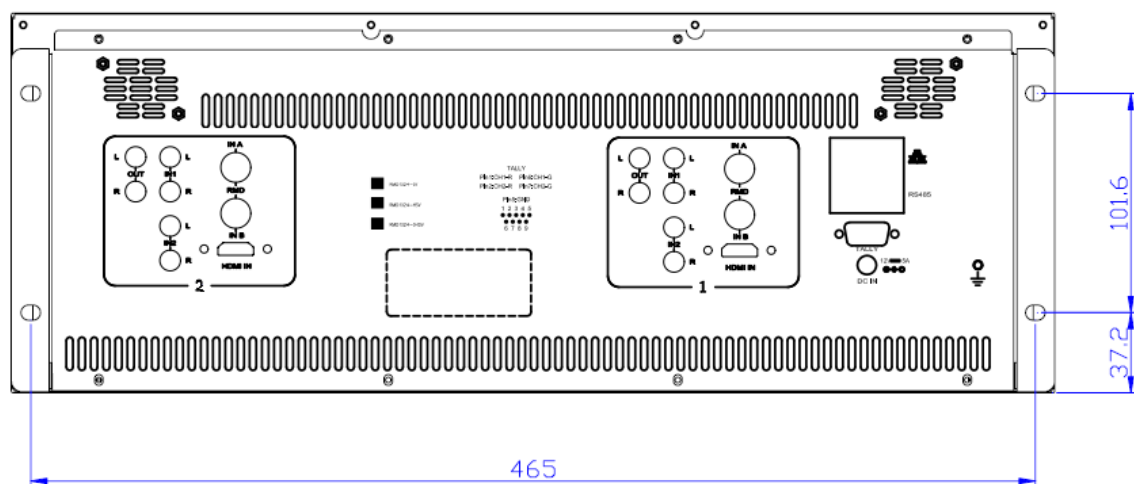


Figure 7-2 Rear Panel(Unit: mm)

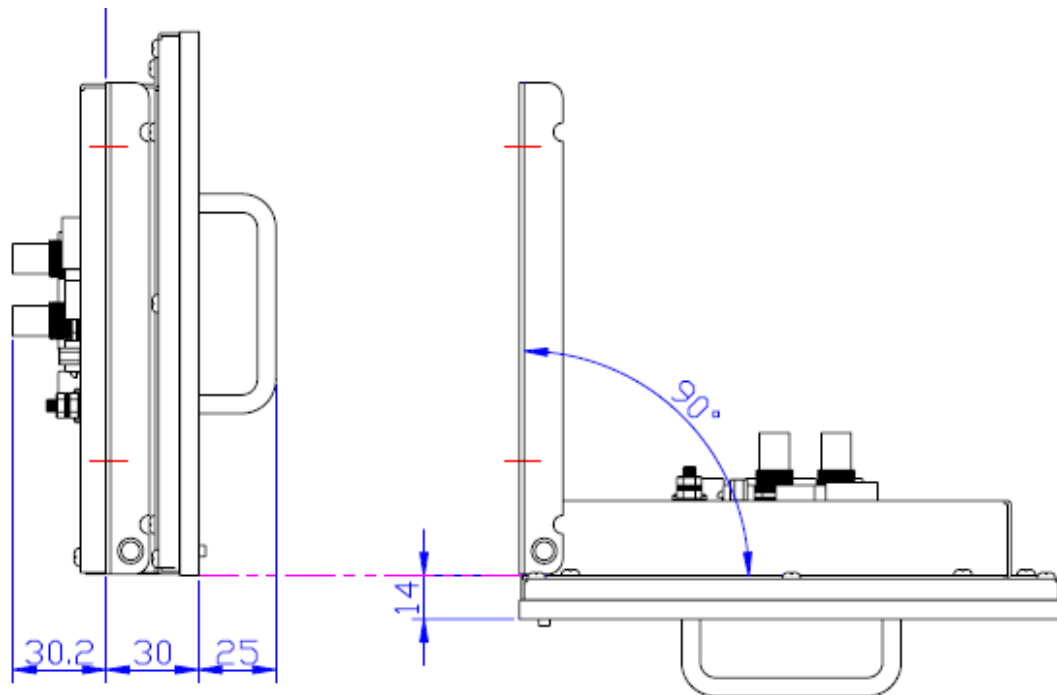


Figure 7-3 Side View(Unit: mm)

i Tips

- Specifications are subject to change without notice.

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