



# INSTRUCTIONS

*X6/X7*

Controller

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USER MANUAL

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# Safety Information

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

- **Do not remove the cover**

To avoid personal injury, do not remove the top cover.

- **Only use the power supply and accessories specified by the manufacturer**

The operating voltage of this product is 100V-240V AC. Only use the power cord provided with the product or the power cord that meets the appropriate local rating standards.

- **Prevent function interfaces from contact with charged objects**

This is an electric product. The circuit elements may be damaged if the function interfaces contact charged objects.

- **Grounding**

To avoid electrical shock, ensure that the product is grounded.

- **Electromagnetic Interference**

This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

- **Environmental Condition**

Use only at altitudes not more than 5000m above sea level.

- **Avoid Moisture**

This product is not waterproof, so avoid contact with liquid or operating the product in a humid environment.

- **Keep the product away from flammable and explosive hazardous substances**

## Unpacking and Inspection

After unpacking, checking the items according to the packing list in the box. Please contact the salesman in time if you find the accessories are incomplete.

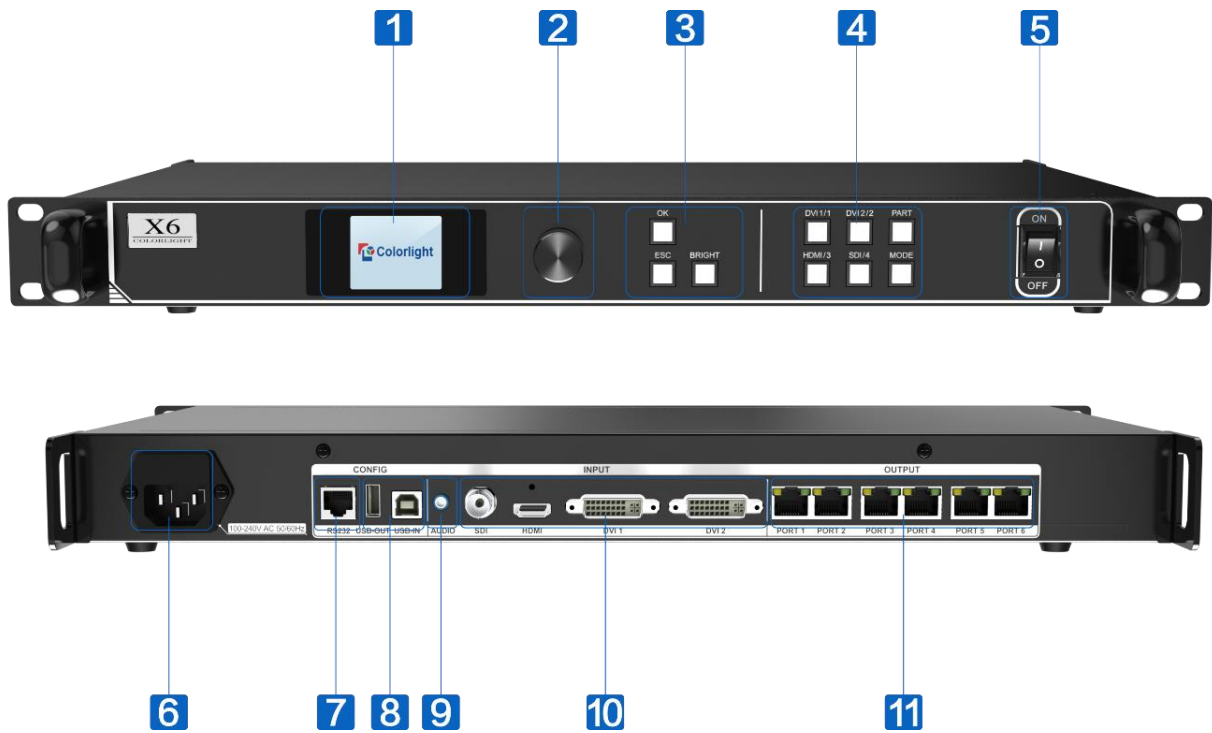
# 1. Introduction

## 1.1 Overview

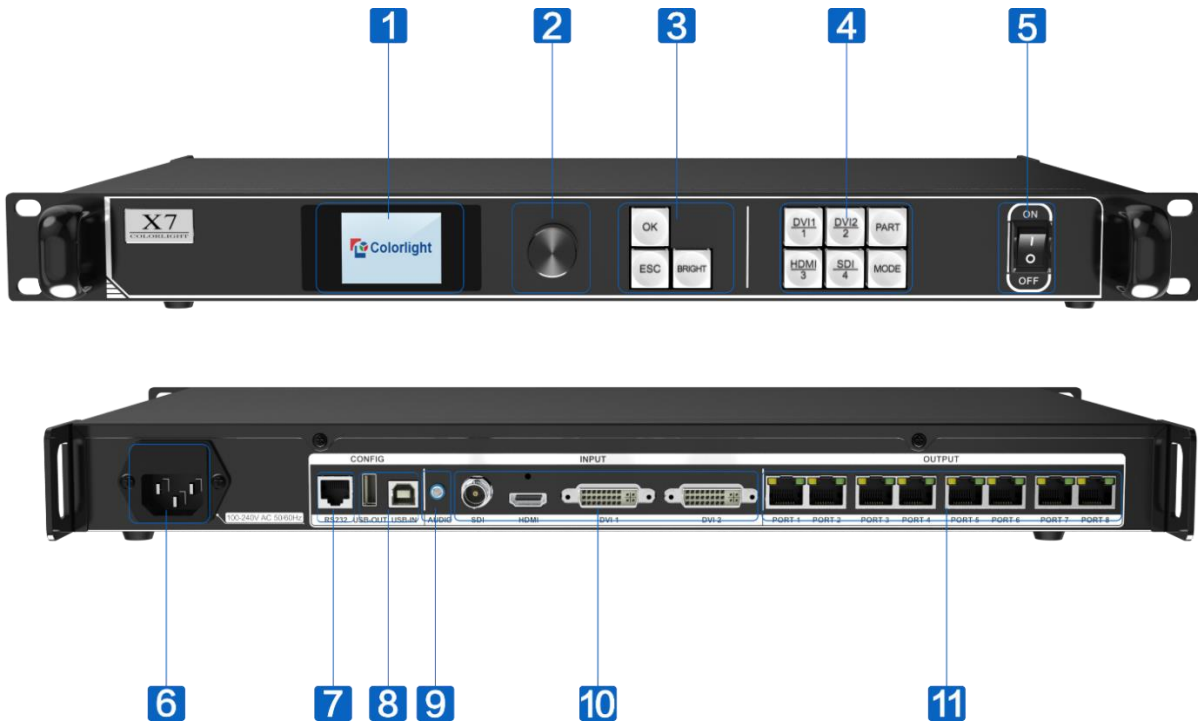
X6/X7 is a professional LED display controller possessing powerful video signal receiving and processing capacity. It supports multiple signal inputs, of which the resolution is up to 1920×1200 pixels. It allows seamless switching between video sources and arbitrary scaling and cropping of signal images.

## 1.2 Structural Features

- X6--Front Panel, Back Panel



- X7--Front Panel, Back Panel



1	<p><b><u>LCD</u></b> Display the operation menu</p>
2	<p><b><u>Knob</u></b> In the main interface, press the knob to enter the operation menu. In the menu, you can turn the knob to scroll to an item or adjust parameters, and press the knob to confirm your selection or adjustment.</p>
3	<p><b><u>Function Keys</u></b>  <b>OK:</b> Enter key  <b>ESC:</b> Exit the current menu or operation  <b>Bright:</b> Brightness adjustment. Press the key and rotate the knob to adjust screen brightness, and then press the knob/<b>OK</b> to confirm the current brightness.</p>
4	<p><b><u>Selection Keys</u></b>  <b>DVI1/DVI2/HDMI/SDI:</b> Video source selection  <b>Part:</b> Turn on the cropping function. Press the key and the image will be cropped according to the cropping setting in the software. You can cancel cropping by pressing the key for a second time.  <b>Mode:</b> Output mode selection</p>
5	<p><b><u>Power Switch</u></b> Switch on or off the power supply</p>
6	<p><b><u>Power Connector</u></b> AC 100-240V, 50/60Hz.</p>

<b>7</b>	<u><b>RS232</b></u> RJ11, connecting to PC for debugging
<b>8</b>	<u><b>USB IN/OUT</b></u> USB IN, connecting to PC for debugging USB OUT, for cascading with the next controller
<b>9</b>	<u><b>AUDIO</b></u> Audio input (optional)
<b>10</b>	<u><b>SDI/HDMI/DVI1/DVI2</b></u> Signal input
<b>11</b>	<u><b>Gigabit Ethernet Port</b></u> X6: 6×RJ45 Ethernet ports X7: 8×RJ45 Ethernet ports
<b>Others</b>	
<u><b>Operating environment temperature:</b> -20°C~60°C</u>	
<u><b>Anti-static design, low EMI radiation</b></u>	

## 2. Operation Instructions

Takes the X6 controller as an example for operation instructions.


### 2.1 Signal Connection

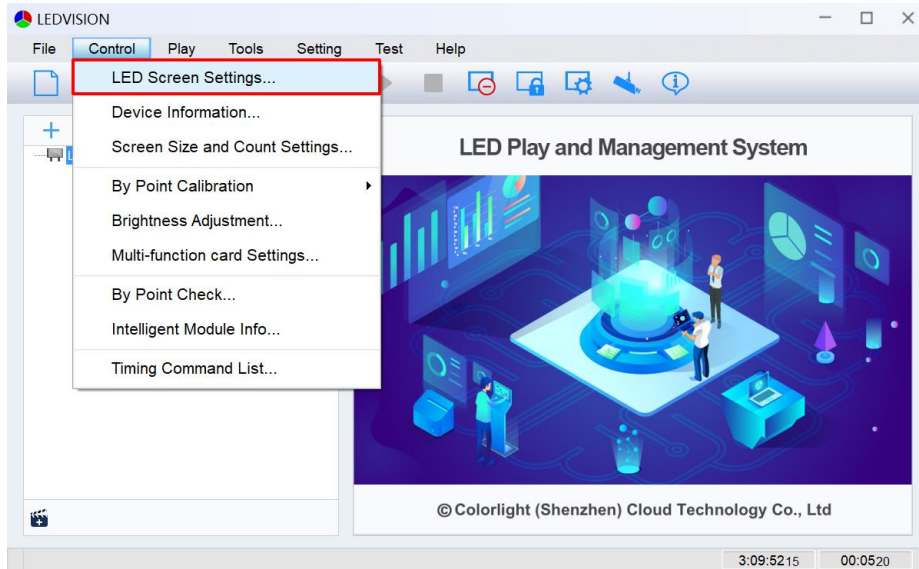


### 2.2 Power On

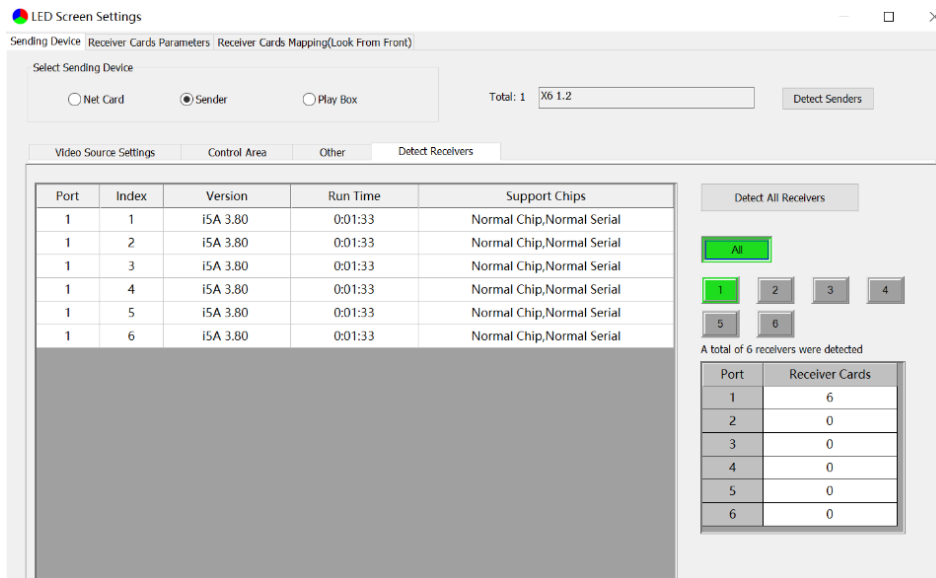
Press the power switch on the front panel, and the device will be turned on and enter the self-test status, and then all the button lights will light up in sequence until booting successfully. The device will display the last saved settings while the device never debugged will display the factory default settings.

## 2.3 Software Control

1. Open LEDVISION software, click **Control > LED Screen Settings**, or click  to enter the **LED Screen Settings** window. The authorized password is “168”.



2. Click **Sending Device > Sender > Detect Senders > Detect All Receivers**. Please check the corresponding cable if the number of receiver cards are inconsistent with actual status.





## 2.3.1 Sending Device Settings

The setting of sending device contains three aspects: **Video Source Settings**, **Control Area** and **Other**.

### 1.Video Source Settings

#### ① Signal Source Selection

When the input of signal source of the X6 controller is normal, the information of input signals obtained by the software can be displayed in the upper-right corner of the **Video Source Settings** page. You can select a specified signal source (DVI1/DVI2/HDMI/SDI) based on your own need in the upper-left corner of the page, and then the selected signal source will be displayed in the canvas area.

LED Screen Settings

Sending Device | Receiver Cards Parameters | Receiver Cards Mapping(Look From Front)

Select Sending Device

Net Card  Sender  Play Box

Total: 1 X6 1.2

Video Source Settings | Control Area | Other | Detect Receivers

Signal Select : **DVI1** DVI2 HDMI SDI Select the signal

0 500 1000 1500 2000

0 500 1000 1500

1920

DVI1

1080

Output signal and resolution

Input	Video Format	Crop	EDID
DVI1	1920x1080@60HzRGB	<input checked="" type="checkbox"/> Enable	•••
DVI2	No Signal	<input type="checkbox"/>	•••
HDMI	No Signal	<input type="checkbox"/>	•••
SDI	No Signal	<input type="checkbox"/>	

Lock to Input No Genlock

Output Mode

Picture Adjustment

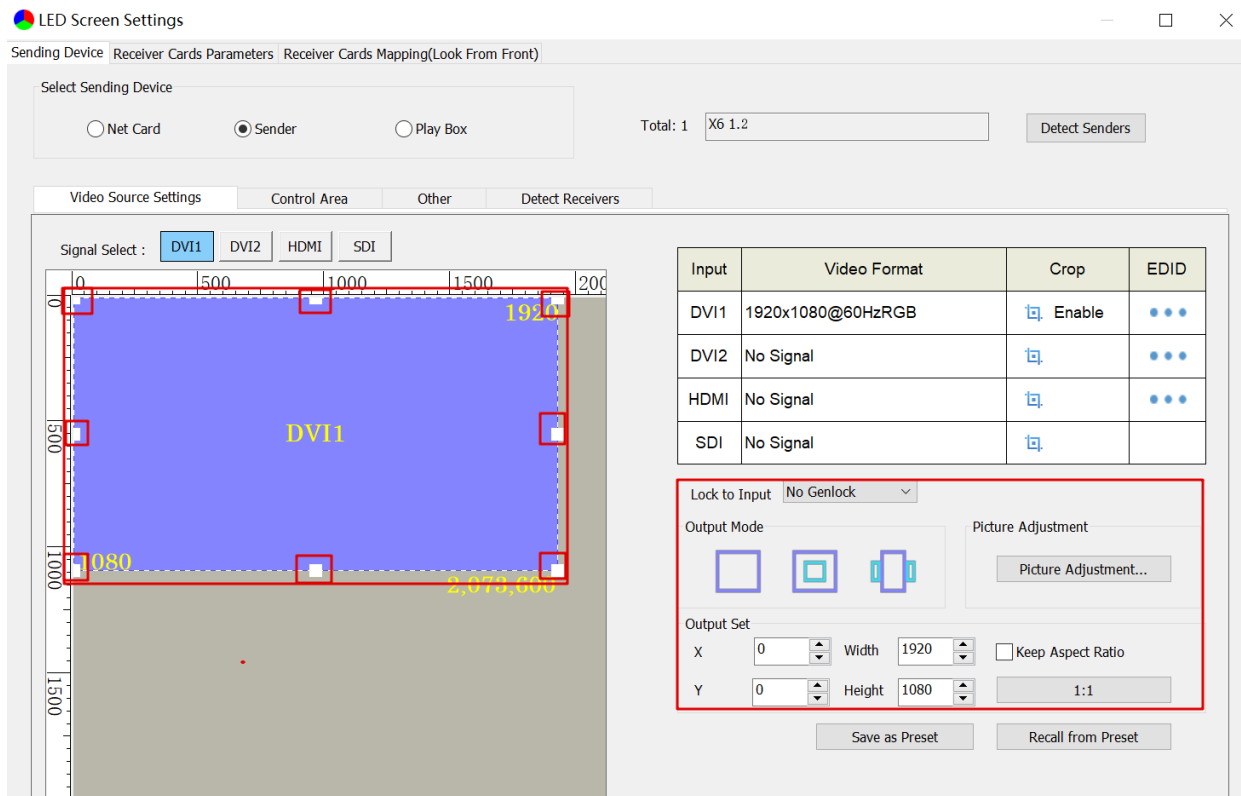
Output Set

X 0 Width 1920  Keep Aspect Ratio

Y 0 Height 1080 1:1

## ② Main Image Output

In the canvas area, select the image that you want to scale up or down, and set the row starting point (X), column starting point (Y), width and height at the bottom right of the page, or drag the small white square by long-pressing the left button on the mouse to scale up or down the image.




Note:

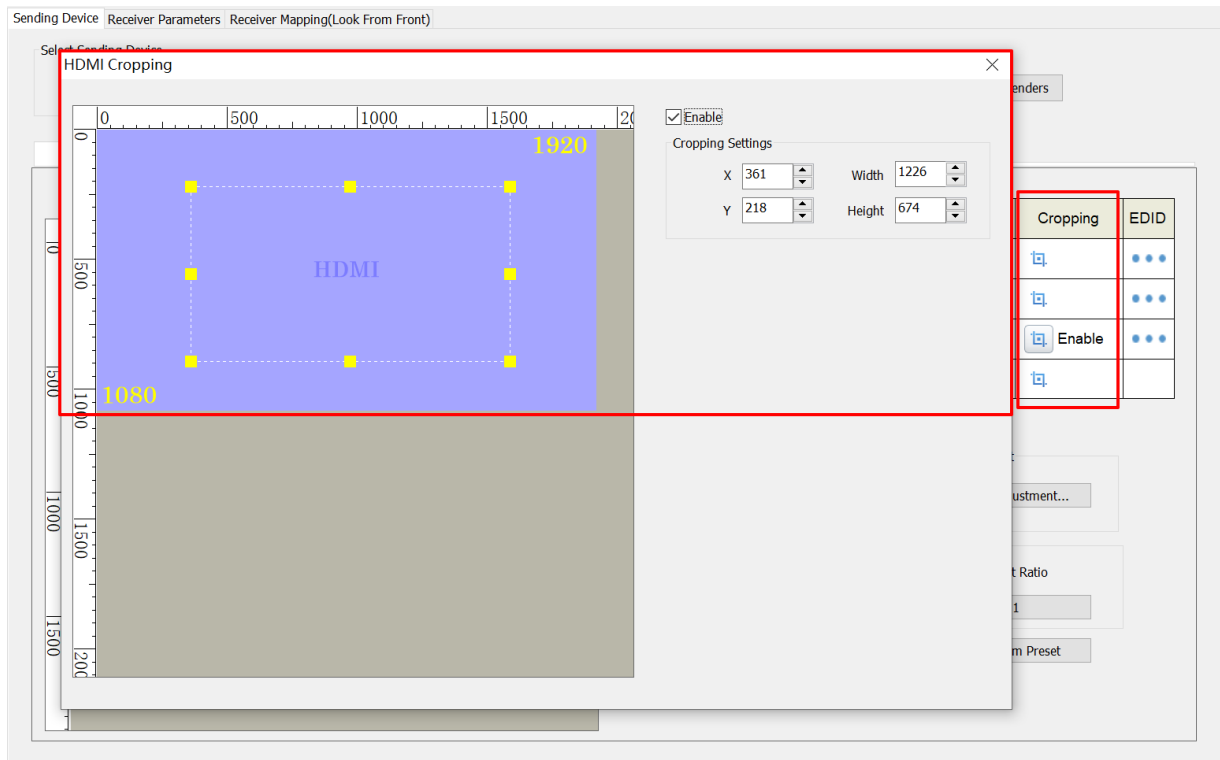
A. **1:1**: Pixel to pixel output, which means output resolution equates to input resolution.


B. **Keep Aspect Ratio**: Select the check box to keep the aspect ratio of output resolution the same as that of input resolution.

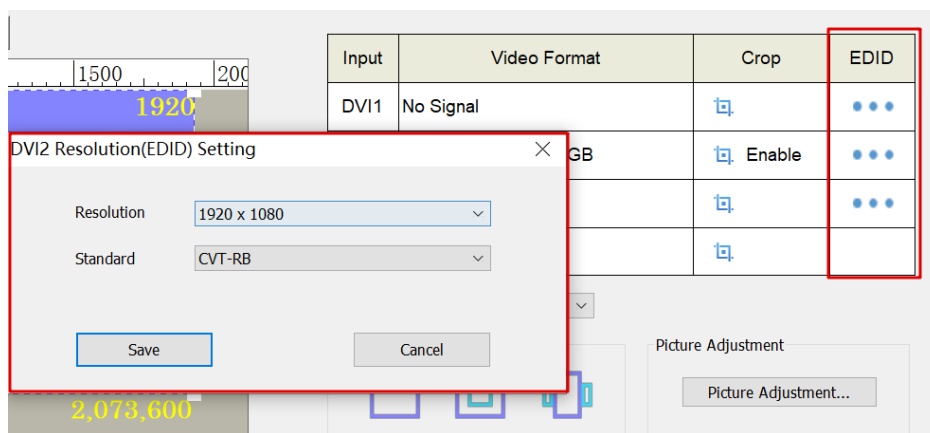
C. **Picture Adjustment**: Change the hue, saturation, brightness compensation and contrast to adjust the display effect.

### ③ Cropping and EDID

Select a signal source in the upper-left corner of the page, and then click the cropping icon  of the selected signal on the upper-right side of the page to enter the cropping setting window. In the cropping setting window, select the **Enable** box, and set the row starting point (X), column starting point (Y), width and height in the **Cropping Settings** area.

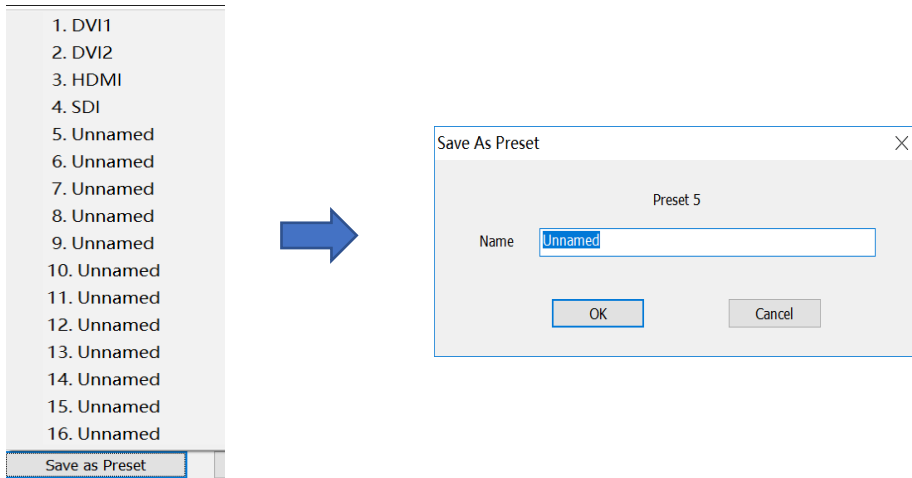


Click . In the pop-up resolution setting dialog box, click the dropdown icon to select resolution and standard.

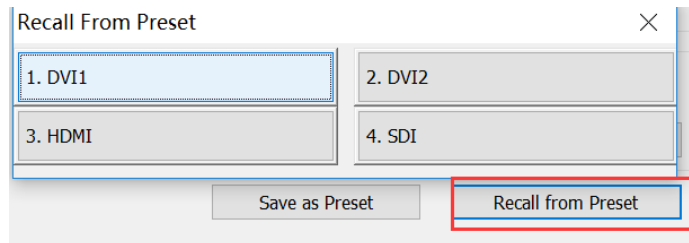


#### ④ Saving and Recalling Preset Parameters

Click **Save as Preset**, select an item, modify the name of the preset, and then click **OK**.

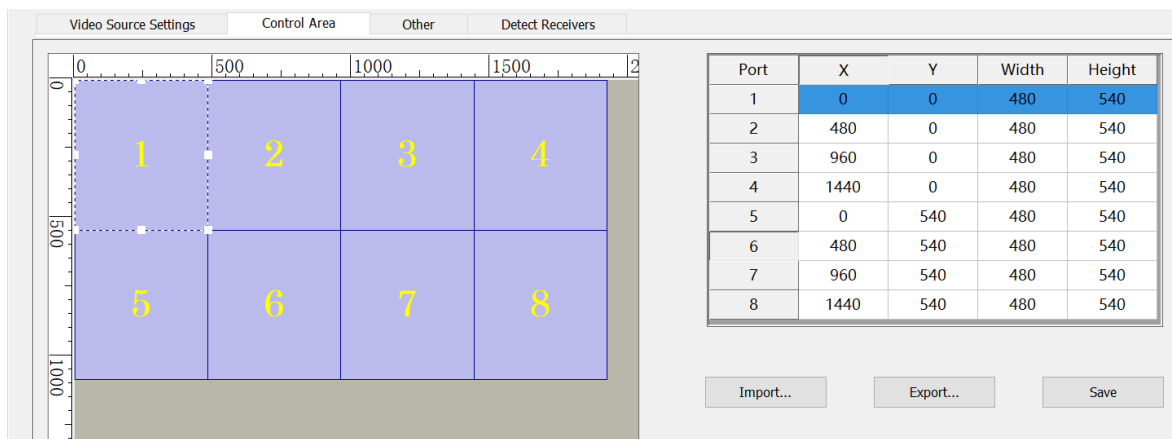


Click **Recall from Preset**, and select the preset that you want to load.



## 2. Control Area

On the **Control Area** page, you can manually adjust the control area of Ethernet ports.



### 3.Others

- A. **Better Graylevel on Low Brightness:** Improving the display effect at low brightness
- B. **Mapping from Sender:** Adopting the mapping saved in the sender
- C. **Device Name:** Entering the name of the sender
- D. **Screen Color and Brightness:** Accurately adjusting screen color temperature by entering the value of RGB coordinates and brightness of the screen
- E. **Test Mode:** Testing the display of the screen with the built-in test image in the sender
- F. **Sender Time:** Synchronizing the sender time with the Internet time
- G. **Import/Export Parameters:** Loading the configuration of the sender from a file or saving the current configuration to a file
- H. **Restore Factory Setting:** Resetting the sender

Video Source Settings    Control Area    Other    Detect Receivers

Advanced Parameters

Better Graylevel on Low Brightness

Mapping from Sender

Device Name

Screen Color and Brightness...

Test Mode

Test Mode

Sender Time

Set to Internet Time

Export Parameters to File...

Import Parameters from File...

Restore Factory Setting

## 3. LCD Operation Instructions

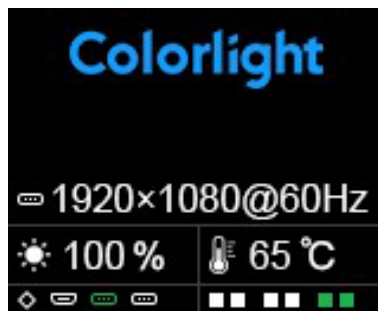
### 3.1 Operational Instruction

#### Knob/OK:

- In the main interface, press the knob/**OK** to enter the operation menu.
- On the operation menu, rotate the knob to scroll to a menu item, press the knob/**OK** to select the item or enter its submenu.
- Rotate the knob to adjust parameters after selecting the menu item with the parameter and press the knob/**OK** to save the parameter.

### 3.2 Main Interface

After starting up the X6 controller, the main interface of the LCD display is as follows:



First row: Company name

Second row: Self-defined name of the controller

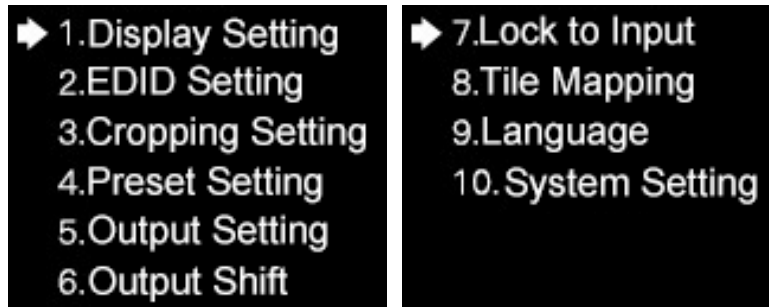
Third row: Image resolution

Fourth row: Brightnes, Temperature

Fifth row: Connection status of signal interfaces and Ethernet ports

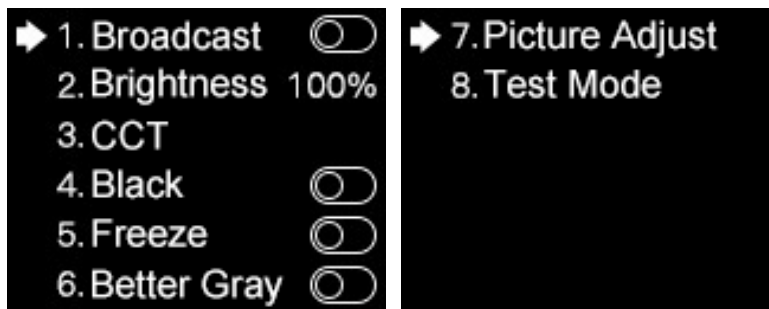
### 3.3 Menu Operation

Press the knob/**OK** to enter the main operation menu, which includes 10 operation items: **Display Setting**, **EDID Setting**, **Cropping Setting**, **Preset Setting**, **Output Setting**, **Output Shift**, **Lock to Input**, **Tile Mapping**, **Language** and **System Setting**.



#### 3.3.1 Display Setting

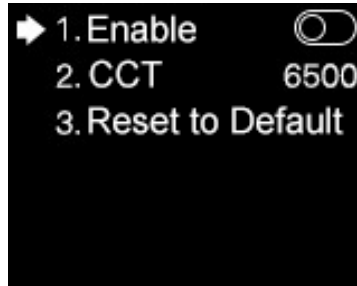
Rotate the knob and select **Display Setting** to enter the **Display Setting** submenu.



1. **Broadcast**: Press the knob/**OK** to turn on or off the **Broadcast** function. If the broadcast function is turned on, the setting of the menu items in this submenu (**Brightness**, **CCT**, **Black**, **Freeze**, **Better Gray**, **Picture Adjust**, **Test Mode**) will be synchronously sent to the devices cascaded with this controller.

2. **Brightness**: Rotate the knob to change brightness.

3. **CCT:** Press the knob/**OK** to turn on or off **Enable**. If **Enable** is turned on, you can rotate the knob to change the value of color temperature (range: 2000-10000) , or select **Reset to Default** to reset the value of color temperature as 6500.

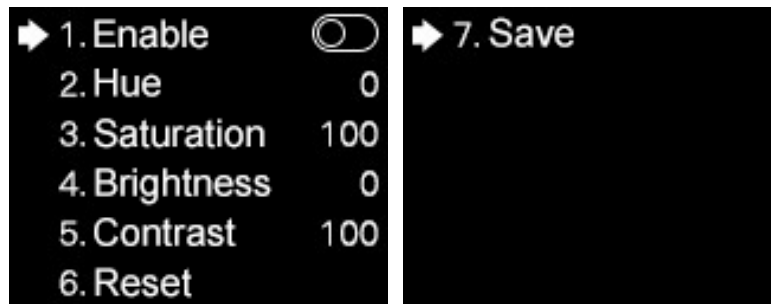


4. **Black:** Press the knob/**OK** to turn on or off the LED screen.

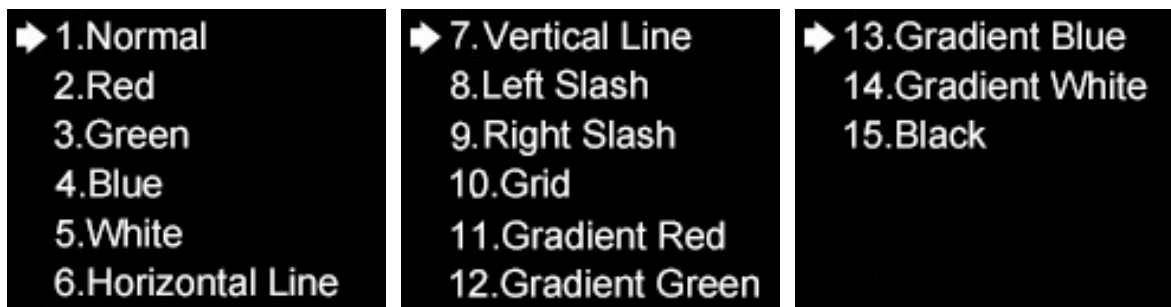
5. **Freeze:** Press the Knob/**OK** to freeze or unfreeze the image of the LED screen.

6. **Better Gray:** Press the knob/**OK** to turn on or off the **Better Gray** function.

7. **Picture Adjust:** In the **Picture Adjust** submenu, you can select **Hue**, **Saturation**, **Brightness**, or **Contrast** and rotate the knob to modify their values; or select **Reset** to reset the value of all parameters in this menu; or select **Save** to save all these parameters.



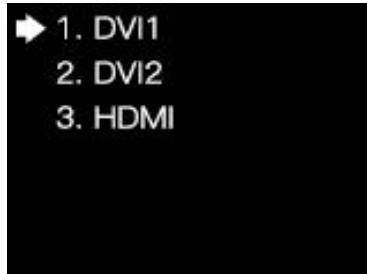
8. **Test Mode:** In the **Test Mode** menu, you can rotate the knob and select a test mode.



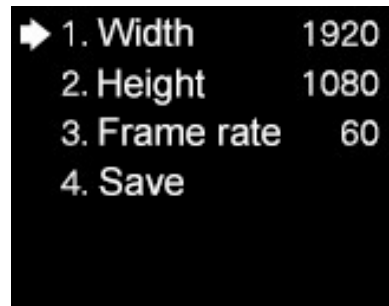
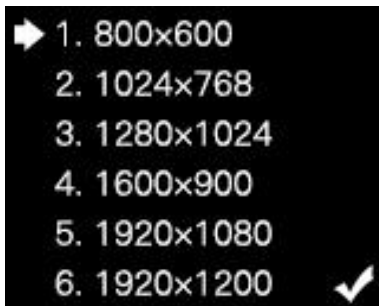


### 3.3.2 EDID Setting

Rotate the knob and select **EDID Setting** to enter the **EDID Setting** submenu.



In the EDID setting submenu of **HDMI** or **DVI**, you can rotate the knob and select a conventional resolution to save the selected resolution to the sender, or select **Custom** and set the width, height and frame rate, and then select **Save** to save the setting to the sender.



### 3.3.3 Cropping Setting

Rotate the knob and select **Cropping Setting** to enter the **Cropping Setting** submenu.



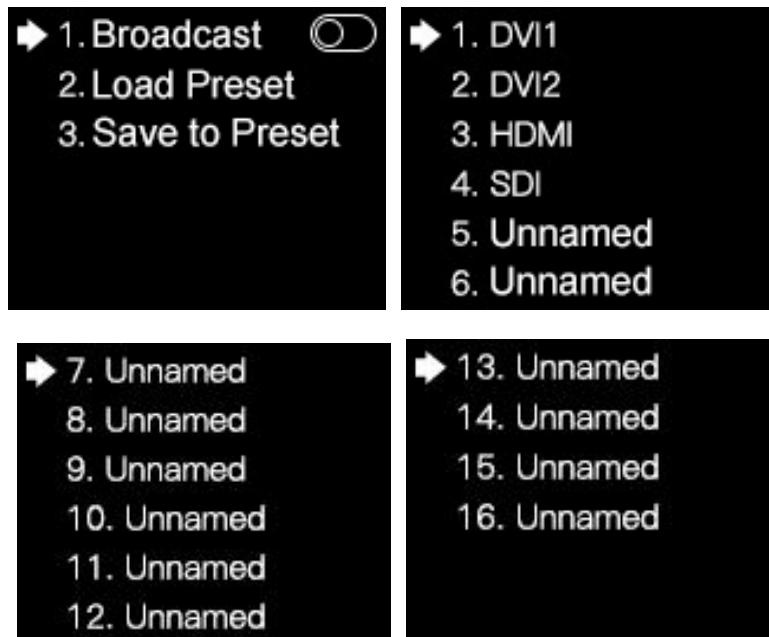
In the cropping setting submenu of **HDMI**, **DVI1**, **DVI2** or **SDI**, press the knob/**OK** to turn the cropping function on or off. If **Enable** has been switched on, you can rotate the knob to set the row starting point (**X**), column starting point (**Y**), and the width and height of the signal image, and then select **Save**.



### 3.3.4 Preset Setting

Rotate the knob and select **Preset Setting** to enter the **Preset Setting** submenu.

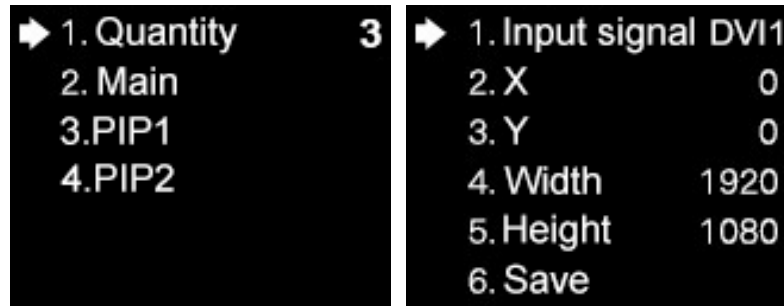
In the submenu, you can turn the **Broadcast** function on or off; or select **Load Preset** and choose an item to load preset parameters; or select **Save to Preset** to save the parameters of the current image.



### 3.3.5 Output Setting

Rotate the knob and select **Output Setting** to enter the **Output Setting** submenu.

In the submenu, select **Quantity** and rotate the knob to set the quantity of windows from 1 to 3; or select **Main**, **PIP1** or **PIP2**, and set the input signal, the row starting point (**X**), column starting point (**Y**), and the width and height of the output window.



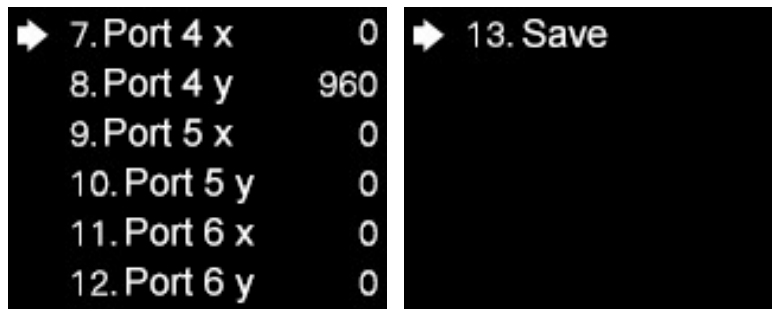
### 3.3.6 Output Shift

Rotate the knob and select **Output Shift** to enter the **Output Shift** submenu.



Output shift contains two selections: **Whole** and **By Port**. On the submenu of **Whole**, you can rotate the knob to set the row starting point (**X**) and the column starting point (**Y**) of the whole image and then save the setting; on the submenu of **By Port**, you can respectively set the row starting point (**X**) and the column starting point (**Y**) of the image of the 6 Ethernet ports, and then save the setting.





### 3.3.7 Lock to Input

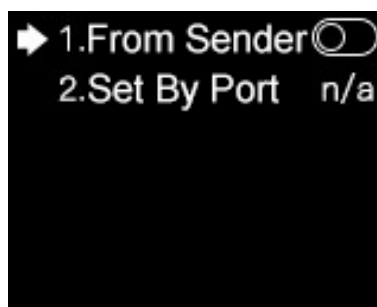
When several controllers are cascaded with each other, **Lock to Input** is necessary to ensure the synchronization of the video displays. Rotate the knob and select **Lock to Input** to enter the submenu. In the submenu, you can select a sync signal source.



### 3.3.8 Tile Mapping

Rotate the knob and select **Tile Mapping** to enter the **Tile Mapping** submenu.

In the submenu, press the knob/**OK** to set the sender as the connection source. Then select **Set by Port** to enter the submenu, in which you can choose the Ethernet port from 1 to 6 that needs setting mapping, and set the offset values of X and Y, and the width, height, row number, column number and link type of the corresponding cabinets. Finally select **Save** to save the mapping.



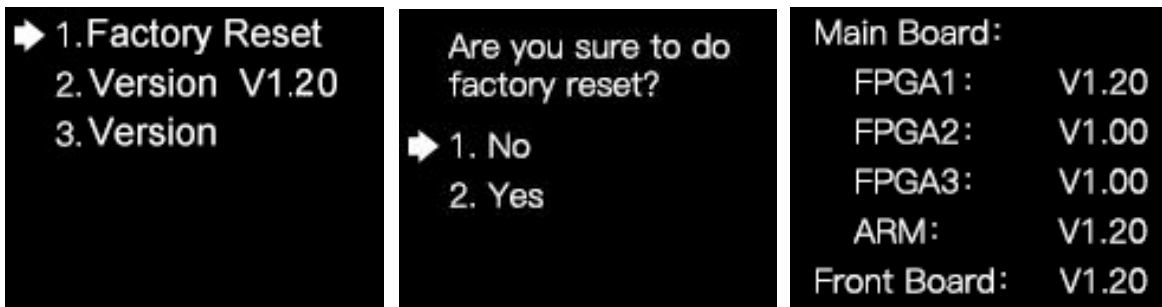
### 3.3.9 Language

In the **Language** menu, you can switch languages.



### 3.3.10 System Setting

In the **System Setting** menu, you can restore factory settings and view the detailed information of the current version.





Visual Future

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Colorlight (Shenzhen) Cloud Technology Co., Ltd.  
[www.colorlightinside.com](http://www.colorlightinside.com)