onbon 仰邦科技
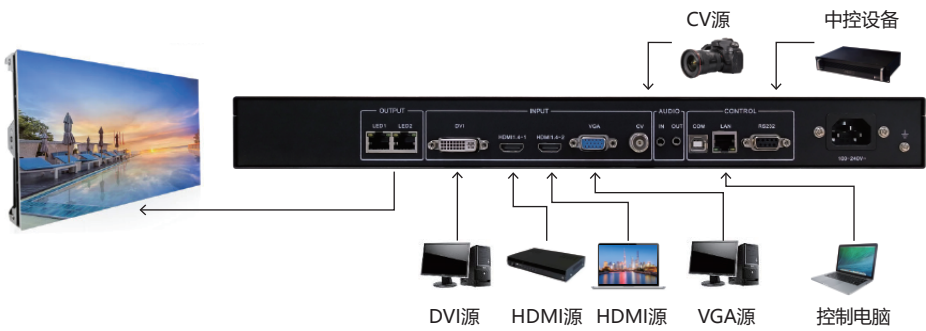
OVP-K 视频控制器
OVP-K2 /K4 /K6 /K10 /K16

快速指南

1. 简介

    OVP-K2 /K4 /K6 /K10 /K16是由仰邦科技最新推出的5款操作简便、功能丰富的LED视频控制器。集专业的LED显示屏控制技术与强大的视频处理能力于一体，分别集成2/4/6/10/16千兆网口输出，最大带载131/262/393/655/960万像素。设备采用1U标准工业机箱设计，适应各种复杂应用环境。广泛应用于商场、酒店、展览展示、会议室、电视演播中心等多种场合的LED显示屏。

特性

- 标配320×240彩色液晶屏
- 支持多语言菜单界面（中文、英文、俄文、越南语）
- 前置USB2.0接口，支持视频播放、图片播放、视频和图片混合播放三种模式
- 标配RS232控制接口，可接入中控设备
- OVP-K2标配6路视频输入接口：HDMI1.4*2、DVI*1、VGA*1、CV*1、USB*1
  OVP-K4标配5路视频输入接口：HDMI1.4*1、DVI*1、VGA*1、CV*1、USB*1
  OVP-K6/K10/K16标配6路视频输入接口：HDMI2.0*2、DVI*1、VGA*1、CV*1、USB*1
  OVP-K2/K4支持1920*1080@60Hz、4K*2K@30Hz。宽度≤3840，高度≤2500
  OVP-K6/K10/K16支持2路4K*2K@60Hz。宽度≤8000，高度≤3840
- 支持外置独立音频输入/输出
- 支持窗口位置、大小调整和窗口截取功能
- 支持输入分辨率预设及自定义调节
- 支持输入自适应信号源分辨率
- 支持输出自适应显示屏参数配置
- 支持全屏缩放、点对点显示、画面截取三种模式
- 支持快捷点屏，简单操作即可完成屏体配置
- 支持输入源一键切换
- 支持输入源定时自动切换
- 可预存8种用户模式供用户快速调用
- 可通过液晶菜单、面板按键及USB端口控制设备

2. 应用场景

DVI源	HDMI源	HDMI源	VGA源		控制电脑

3. 外观

‣ **前面板**

按键说明	
1	**开关键**：设备电源开关。
2	**320×240彩色液晶屏**：用于显示操作菜单和设备工作状态。
3	**旋钮[OK]键：** 按下旋钮，表示确认或者进入下级菜单。选择旋钮表示选择菜单或调节参数。
4	**[ESC]键**：返回键，退出当前菜单或操作。
5	**输入源按键说明** HDMI1：按下选择HDMI1输入信号源。 HDMI2：按下选择HDMI1输入信号源。 USB：按下USB键，启动U盘播放。 DVI：按下选择DVI输入信号源。 VGA：按下选择VGA输入信号源。 CV：按下选择CV输入信号源。
6	**[BRIGHT]键**：按下进入亮度调节菜单。 **[PART]键**：局部显示与全屏显示切换按键。
7	**USB2.0接口**：插入U盘，作为U盘播放的输入信号源。 处于U盘播放状态时，用户可向左或向右旋动旋钮，来选择上一个或下一个节目文件。

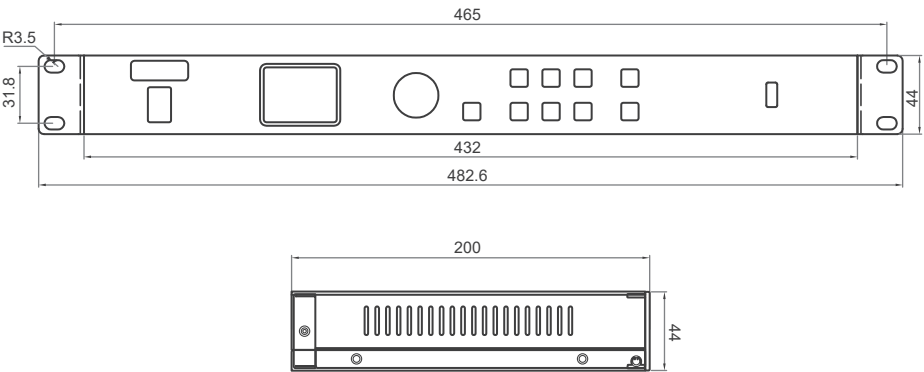备注：OVP-K2 /K6 /K10 /K16前面板2路HDMI按键，OVP-K4前面板仅1路HDMI按键。

▸ **后面板**
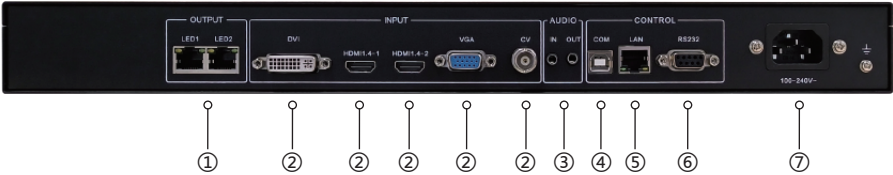
	接口说明
1	**千兆网口：** 2/4/6/10/16路千兆网口输出接口，连接至接收卡。
2	**HDMI1.4 /DVI /VGA /CV：** 视频输入接口(OVP-K2/K4) **HDMI2.0 /DVI /VGA /CV：** 视频输入接口(OVP-K6/K10/K16)
3	**AUDIO IN /OUT：** 音频输入输出接口
4	**COM：** USB控制接口
5	**LAN：** 网络控制接口
6	**RS232：** 中控接口
7	**电源：** 100-240V~50/60Hz

4. 设备尺寸(mm)

5. 产品使用

5.1 快捷点屏

旋钮选择【OK】键进入主菜单，然后选择"智能调屏"下的"快捷点屏"。

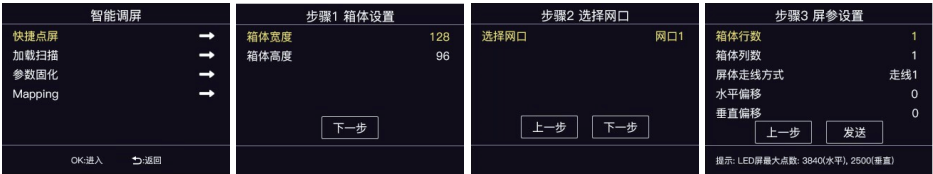| 智能调屏	
快捷点屏	→
加载扫描	→
参数固化	→
Mapping	→

OK:进入　↩:返回

前提条件：

- 显示屏为规则的显示屏，非异形屏。
- 显示屏箱体为规则箱体，且各箱体分辨率大小一致。
- 显示屏箱体之间的连线为以下几种方式，每个网口的走线能顺着同一个方向向下连接，不能随意走线。

操作步骤：

步骤 1：对 OVP 设备和 LED 显示屏进行上电操作；

步骤 2：在主界面按下旋钮进入菜单界面；

步骤 3：旋转旋钮选择"智能调屏 ⟶ 快捷点屏"，进入"快捷点屏"界面；

步骤 4：根据界面引导分三步进行"箱体设置"、"选择网口"、"屏参设置"；

步骤 5：点击"发送"按钮后完成操作。

智能调屏	
快捷点屏	→
加载扫描	→
参数固化	→
Mapping	→

OK:进入　↩:返回

步骤1 箱体设置	
箱体宽度	128
箱体高度	96

下一步

步骤2 选择网口	
选择网口	网口1

上一步　下一步

步骤3 屏参设置	
箱体行数	1
箱体列数	1
屏体走线方式	走线1
水平偏移	0
垂直偏移	0

上一步　发送

提示: LED屏最大点数: 3840(水平), 2500(垂直)

5.2 输入信号源切换

用户根据实际情况自行设置具体的输入信号源，直接点击前面板对应的输入信号源按键即可。

输入分辨率设置

步骤1：旋钮选择【OK】键进入主菜单，然后选择"高级选项"，进入菜单；

步骤2：在"高级选项"里选择输入分辨率，进入输入分辨率菜单；

步骤3：旋钮选择参数后，再旋钮选中"应用"后短按【OK】键进行设置。

输入分辨率	
水平宽度	1920
垂直高度	1080
刷新率	60Hz
应用	取消

提示: 当前被截取信源: HDMI 无信号

5.3 画面设置

显示窗口调整

步骤1：旋钮选择【OK】键进入主菜单，然后选择"输出设置"；

步骤2：选择"显示窗口调整"，进入设置菜单；

步骤3：旋钮选择参数值后，短按【OK】键进行设置。

显示窗口调整	
水平宽度	1920
垂直高度	1080
水平起始	0
垂直起始	0

点对点输出

无缩放，用户可设置水平偏移和垂直偏移来显示想要观看的区域。

步骤1：旋钮选择【OK】键进入主菜单，然后选择"输出设置"；

步骤2：选择"点对点输出"，进入点对点输出设置：开启或关闭。

图像截取

旋钮选择【OK】键进入主菜单，然后选择"图像截取"，进入图像截取菜单：

● 截取开关：输入图像截取功能开启或关闭，默认为关闭。

● 截取宽度：设置截取的画面的整体宽度。

● 截取高度：设置截取的画面的整体高度。

● 水平起始：截取画面的横向的起始位置，以画面的左上角为参考点。

● 垂直起始：截取画面的纵向的起始位置，以画面的左上角为参考点。

图像截取	
截取开关	关闭
截取宽度	5
截取高度	53
水平起始	0
垂直起始	0

提示: 当前被截取信源: HDMI　1920×1080@60Hz

5.4 U盘播放

支持视频播放、图片播放、视频和图片混合播放三种模式。

步骤 1：将带有播放内容(视频或图片)的 U 盘插入前面板 USB 接口。

步骤 2：按前面板 USB 键会弹出"播放文件类型选择"弹窗,用户可选择"视频"、"图片"、"混播"来进行文件播放。

步骤 3：旋钮选择播放类型后,短按【OK】键,进入播放列表旋钮选择播放文件,再短按【OK】键播放文件。

处于U盘播放状态时，用户可向左或向右旋动旋钮，来选择上一个或下一个节目文件。

5.5 图像效果

步骤1：旋钮选择【OK】键进入主菜单，然后选择 "图像效果" 进入图像效果菜单。

步骤2：旋钮选择参数值后，短按【OK】键进行设置。

图像效果	
亮度	1
锐度	5
对比度	53
饱和度	50
动态对比度	1
色温	➡
OK:进入　↩返回	

5.6 用户模式保存与调用

模式保存

步骤1：旋钮选择【OK】键进入主菜单，选择 "模式设置" 进入模式保存菜单。

步骤2：旋钮选择需要保存的模式后，短按【OK】键进行设置。

模式保存		
● 模式1	输入源	DVI
○ 模式2	画面大小	1024x1024
○ 模式3	画面起始	0, 0
○ 模式4	亮度	53
○ 模式5	对比度	53
○ 模式6	动态对比度	12
○ 模式7		

模式调用

步骤1：旋钮选择【OK】键进入主菜单，选择 "模式设置" 进入模式调用菜单。

步骤2：旋转【旋钮】选择1个模式后，短按【OK】键调用该模式。

模式调用		
○ 模式1	输入源	DVI
○ 模式2	画面大小	1024x1024
● 模式3	画面起始	0, 0
○ 模式4	亮度	53
○ 模式5	对比度	53
○ 模式6	动态对比度	1
○ 模式7		

常见问题

问题现象	检查、调校项目明细
液晶屏幕无显示，无图像输出。	● 检查电源线是否接触不良。 ● 检查电源开关是否为打开。
液晶屏有信息显示，但没有图像输出。	● 检查是否正确连接输入信号，并且已经切换到对应的信号源。 ● 检查显示终端是否支持本设备输出分辨率及刷新率。 ● 检查亮度和对比度是否设置得太低。
LED 屏上图像不能全屏显示。	● 检查"LED 屏宽度、LED 屏高度"是否与 LED 屏分辨率一致。进入"图像输出"菜单设置参数。
LED 屏图像居中显示，四周有黑边。	● 使用电脑显卡作为 VGA/DVI/HDMI 输入源，偶尔会出现这个异常现象。如果是 VGA 信号源，在 BXsetpro 调试软件中打开"VGA 校正"进行调整。如果是 DVI/HDMI 信号源，在显卡控制面板点击"调整桌面尺寸和设置"，选择"全屏"。
面板按键功能操作无响应。	● 查看液晶屏提示信息按键锁是否处于锁定状态（ 🔒 ）。此时，进入主菜单，在"高级"菜单里设置按键锁为解锁状态即可（ 🔓 ）。

⚠ 安全须知

本产品内有高压，非专业维修人员不得打开机箱或者自行对本设备进行维修，以免发生危险。

本产品交流电源的输入电压范围是100~240VAC 50/60Hz，请您使用正确的电源。

本产品通过电源线接地。为了避免电流冲击，在连接产品输入或输出端口前请将电源线插入接有地线的插座。电源线中接地导体的保护性接地在安全操作中是必不可少的。

当您要连接或者拔除任何信号线或者控制线时，请先关闭LED视频控制器电源。

请在干净、干燥、通风的环境中使用，不要将本产品放入高温、潮湿等环境中使用。

本产品为电子类产品，请远离火源、水源以及易燃、易爆的危险品。

如发现有怪异噪音、冒烟或异味等异常情况，应立即拔掉电源插头。

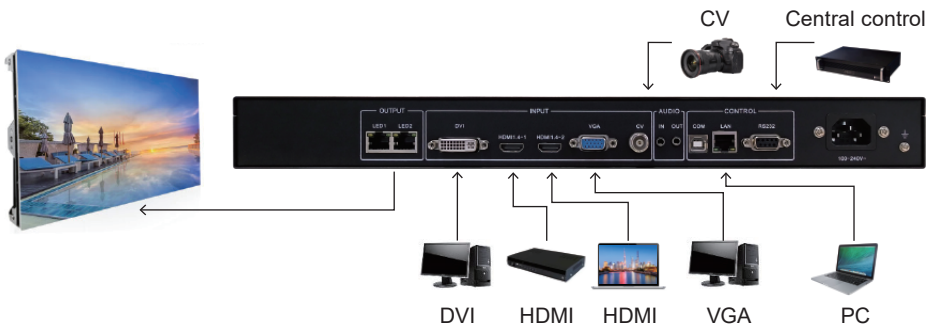# OVP-K video controller
OVP-K2 /K4 /K6 /K10 /K16

Quick guide

1. Description

OVP-K2 /K4 /K6 /K10 /K16 are the latest easy-to-use and feature-rich LED video controllers from shanghai ONBON Technology.Set professional LED display control technology and powerful video processing capabilities in one, respectively integrated 2/4/6/10/16 Gigabit network port output, the maximum load 1.31/2.62/3.93/6.55/9.6 million pixels.The equipment adopts 1U standard industrial chassis design to adapt to various complex application environments.Widely used in shopping malls, hotels, exhibitions, conference rooms, TV studios and other occasions of LED screen.

Features

- 320×240 LCD panel
- Support multiple language (Chinese,English,Russia,Vietnam,other language updating)
- USB2.0 in front panel, support video playback, picture playback, video and picture mixed playback modes.
- Standard RS232 control interface to access the central control equipment
- OVP-K2 support 6 channels of video input interfaces: HDMI1.4*2, DVI*1, VGA*1, CV*1, USB*1
  OVP-K4 support 5 channels of video input interfaces: HDMI1.4*1, DVI*1, VGA*1, CV*1, USB*1
  OVP-K6/K10/K16 support 6 channels of video input ports: HDMI2.0*2, DVI*1, VGA*1, CV*1, USB*1
  OVP-K2/K4 support 1920*1080@60Hz, 4K*2K@30Hz.Width ≤3840, height ≤2500
  OVP-K6/K10/K16 support 2 channels of 4K*2K@60Hz,Width ≤8000, height ≤3840
- Support external independent audio input/output
- Support window position, size adjustment and window interception functions
- Support input resolution preset and custom adjustment
- Support input adaptive signal source resolution
- Support output adaptive display parameter configuration
- Support full screen scaling, point-to-point display, screen capture modes
- Support quick start screen, simple operation can set the screen configuration
- Support one-click switching of input sources
- Support input source timing automatic switching
- 8 user modes can be pre-stored for users to call quickly
- The device can be controlled through the LCD menu, panel keys and USB port

2. Application

CV   Central control

DVI   HDMI   HDMI   VGA   PC

3. Appearance

▸ Front panel

① ② ③ ④ ⑤ ⑥ ⑦

| Key instruction	
1	**On/off:** Device switch
2	**320×240 LCD:** Display the operation menu and device status.
3	**Knob[OK]:** Press the knob to confirm or enter the subordinate menu.Select the knob to select a menu or adjust parameters.
4	**[ESC] key:** Back key to exit the current menu or operation.
5	**Enter the input source key** HDMI1: Press to select the HDMI1 input signal source. HDMI2: Press to select HDMI1 input signal source. USB: Press the USB key to start the USB flash drive. DVI: Press to select a DVI input signal source. VGA: Press to select a VGA input signal source. CV: Press to select the CV input signal source.
6	**[BRIGHT] key:** Press to enter the brightness adjustment menu. **[PART] key:** Switch between partial display and full-screen display.
7	**USB2.0 interface:** Insert U disk as input signal source for U disk playback.When the USB flash drive is playing, the user can turn the knob left or right to select the last or next program file.

Note: OVP-K2 /K6 /K10 /K16 has two HDMI buttons on the front panel, OVP-K4 has only one HDMI button on the front panel.

▸ Back panel
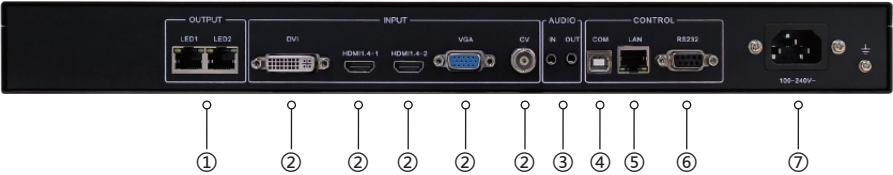
| Interface	
1	**Gigabit network port:** 2/4/6/10/16 channels of Gigabit network port output, connect with receiving card
2	**Video input interface** OVP-K2/K4:HDMI1.4 /DVI /VGA /CV OVP-K6/K10/K16:HDMI2.0 /DVI /VGA /CV
3	**AUDIO IN /OUT:** Audio input/output interface
4	**COM:** USB control
5	**LAN:** LAN control
6	**RS232:** Central control
7	**Power:** 100-240V~50/60Hz

4. Dimension(mm)
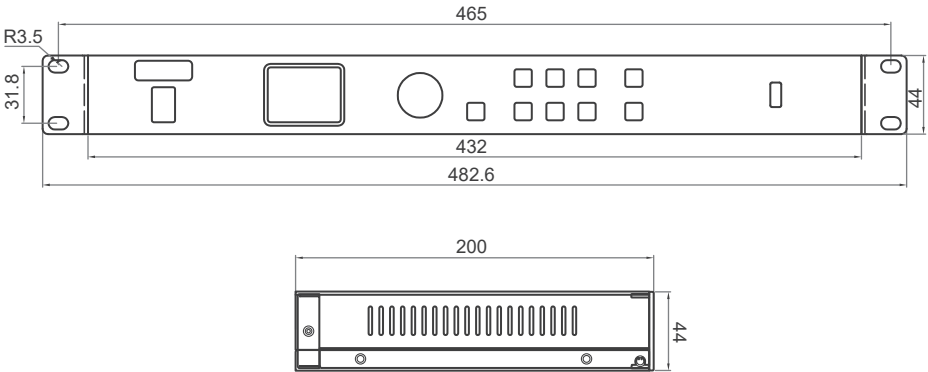
5. User manual

5.1 Quick debugging screen

Knob select [OK] to enter the main menu, and then select "Quick debugging screen" under "smart debugging screen"menu.
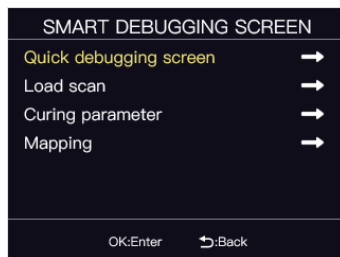
Prerequisites:

● The display screen is regular design, not a special-shaped screen.

● The cabinet is regular, and the resolution of each cabinet is the same.

● The cables between the cabinets are connected in the following ways. The cables of each network port can be connected downward in the same direction.
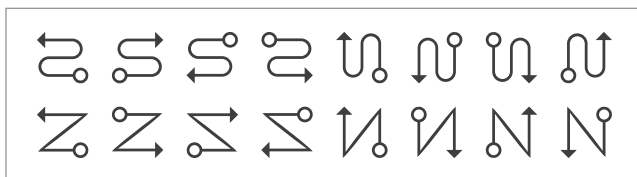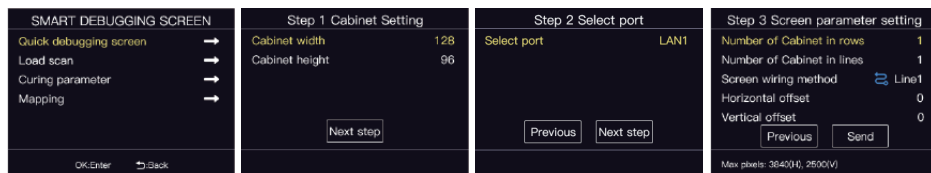

Operation：

Step 1: Power on OVP devices and LED screen.

Step 2: Press the knob on the main screen to enter the menu.

Step 3 :Rotate the knob and choose smart debugging screen ⟶ quick debugging screen.

Step 4: Cabinet settings, select port and screen parameters.

Step 5: Click the "send" to finish the operation.

5.2 Switch the input signal source

The user can set the specific input signal source according to the actual situation, and directly click the input signal source button corresponding to the front panel.

Input EDID

Step 1: Knob select 【OK】 to enter the main menu, and then select "Advanced " to enter the advanced menu.

Step 2: Select the input EDID in "Advanced " to enter the input EDID menu.

Step 3: After selecting parameters on the knob, select and press the [OK] to set the parameters.

INPUT EDID	
Width	1920
Height	1080
Refresh rate	60Hz
OK	Cancel

Current signal: HDMI no signal

5.3 Image setup

Image size

Step 1: Knob select [OK] to enter the main menu, then select "output setting".

Step 2: Select "Image size" to set the image size.

Step 3: After selecting the parameter value, press the [OK] to set it.

IMAGE SIZE	
Width	1920
Height	1080
X	0
Y	0

Point-point output

No zoom, users can set horizontal and vertical offsets to display the area they want to view.

Step 1: Knob select 【OK】 to enter the main menu, and then select "Output settings".

Step 2: Select"point-to-point output" to set on or off.

Image crop

Knob select [OK] to enter the main menu, and then select "Crop" to enter the image crop menu:

- Switch: Set image crop function on or off, the default is off.
- Crop width: Set the overall width of the cropped image.
- Crop height: Set the overall height of the cropped image.
- Crop X: Crop the horizontal starting position of the image, the top left corner of the image as the reference point.
- Crop Y: Crop the vertical starting position of the image, the top left corner of the image as the reference point.

CROP	
Switch	关闭
Crop width	5
Crop height	53
Crop x	0
Crop y	0

Current crop signal: HDMI   1920×1080@60Hz

5.4 USB display

Supports three modes: video playback, picture playback, video and picture mixed playback.

Step 1: Insert the USB flash drive with playback content (video or picture) into the USB port on the front panel.

Step 2: Press the USB key on the front panel to pop up the "Select file type to play" window. The user can select "Video", "Picture", "mix" to play the file.

Step 3: After selecting the play mode, press the [OK] to enter the playlist knob and select the file to play, then press【OK】to play the file.

When the USB flash drive is playing, the user can turn the knob left or right to select the last or next program file.

5.5 Image quality

Step 1: Knob select [OK] to enter the main menu, and then select "Image quality" to enter the image quality menu.

Step 2: After selecting the parameter value, press [OK] to set it.

IMAGE QUALITY	
Brightness	1
Sharpness	5
Contrast	53
Saturation	50
Dynamic contrast	1
Color temperature	➡
OK:Enter ↩:Back	

5.6 User mode save and switch

Mode save

Step 1: Knob select [OK] to enter the main menu, select "Mode" to enter the mode save menu.

Step 2: Select the mode you want to save and press the [OK] to set it.

MODE SAVE		
●MODE1	Source:	DVI
○MODE2	Size:	1024x1024
○MODE3	Coordinate:	0, 0
○MODE4	Brightness:	53
○MODE5	Contrast:	53
○MODE6	Saturation:	12
○MODE7		

User mode switch

Step 1: Knob select [OK] to enter the main menu, select "Mode " to enter the menu.

Step 2: Turn [knob] to select the user mode and press【OK】to set.

USER MODE SWITCH		
○MODE1	Source:	DVI
○MODE2	Size:	1024x1024
●MODE3	Coordinate:	0, 0
○MODE4	Brightness:	53
○MODE5	Contrast:	53
○MODE6	Saturation:	1
○MODE7		

FAQ

Problem	Check and adjust project details
No display or image output on the LCD screen	• Check whether the power cable is in poor connection. • Check whether the power switch is on.
Info display but no image output on the LCD screen	• Check whether the input signal is correctly connected and switched to the corresponding signal source. • Check whether the display terminal supports the output resolution and refresh rate of the device. • Check whether the brightness and contrast are set too low.
The image on the LED screen cannot be displayed in full screen	• Check whether "LED screen width, LED screen height" is consistent with the LED screen resolution.Set parameters in the"Image Output" menu.
The LED screen image is displayed in the center with black edges around it	• Using a computer graphics card as a VGA/DVI/HDMI input source, this anomaly occasionally occurs.If it is a VGA signal source, open "VGA correction" in the BXsetpro debugging software to adjust it.For a DVI/HDMI signal source, click " adjust desktop size and settings "on the graphics card control panel and select "full screen".
Panel buttons do not respond to operation	• Check whether the key lock is locked (🔒) on the LCD. At this time, enter the main menu, set the key lock to unlock in the "Advanced" menu (🔓).

⚠ Safety notice

This product has high pressure, non-professional maintenance personnel are not allowed to open the chassis or maintain the equipment by themselves, so as to avoid danger.

The input voltage range of AC power supply of this product is 100~240VAC 50/60Hz, please use the correct power supply.

This product is grounded through the power cable.To avoid current shocks, insert the power cable into a ground socket before connecting the input or output ports of the product.The protective grounding of the ground conductor in the power cable is essential for safe operation.

When you want to connect or unplug any signal or control cable, please turn off the LED video controller power first.

Please use in a clean, dry and ventilated environment. Do not put this product into a high temperature, humid environment.

This product is an electronic product. Please keep away from fire, water and inflammable and explosive dangerous goods.

If you find strange noise, smoke or odor and other abnormal conditions, should immediately unplug the power plug.