

LCD Splicing Display Unit User Manual

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Manual Version: V1.01

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer

1 Trademark Acknowledgement

The trademarks, company names and product names contained in this manual are the property of their respective owners.

2 Disclaimer

- To the maximum extent permitted by applicable law, the product described, with its hardware, software, firmware and documents, is provided on an "as is" basis.
- Best effort has been made to verify the integrity and correctness of the contents in this manual, but no statement, information, or recommendation in this manual shall constitute formal guarantee of any kind, expressed or implied. We shall not be held responsible for any technical or typographical errors in this manual. The contents of this manual are subject to change without prior notice. Update will be added to the new version of this manual.
- Use of this manual and the product and the subsequent result shall be entirely on the user's own responsibility. In no event shall we be liable for any special, consequential, incidental, or indirect damages, including, among others, damages for loss of business profits, business interruption, or loss of data or documentation, or product malfunction .
- Video and audio surveillance can be regulated by laws that vary from country to country. Check the law in your local region before using this product for surveillance purposes. We shall not be held responsible for any consequences resulting from illegal operations of the device.
- The illustrations in this manual are for reference only and may vary depending on the version or model. The screenshots in this manual may have been customized to meet specific requirements and user preferences. As a result, some of the examples and functions featured may differ from those displayed on your monitor.
- This manual is a guide for multiple product models and so it is not intended for any specific product.
- Due to uncertainties such as physical environment, discrepancy may exist between the actual values and reference values provided in this manual. The ultimate right to interpretation resides in our company.

3 Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

4 Safety and Compliance Information

4.1 Safety Symbols

The symbols in the following table may be found on installation-related equipment. Be aware of the situations indicated and take necessary safety precautions during equipment installation and maintenance.

Symbol	Description
	Generic alarm symbol: To suggest a general safety concern.
	ESD protection symbol: To suggest electrostatic- sensitive equipment.
	Electric shock symbol: To suggest a danger of high voltage.

The symbols in the following table may be found in this manual. Carefully follow the instructions indicated by the symbols to avoid hazardous situations and use the product properly.

Symbol	Description
 WARNING!	Indicates a hazardous situation which, if not avoided, could result in bodily injury or death.
 CAUTION!	Indicates a situation which, if not avoided, could result in damage, data loss or malfunction to product.
 NOTE!	Indicates useful or supplemental information about the use of product.

4.2 Safety Information

Installation and removal of the unit and its accessories must be carried out by qualified personnel. Please read all of the safety instructions below before installation and operation.

- This device is a class A product and may cause radio interference. Take measures if necessary.
- While shipping, the device should be packed in its original packing. Verify that installation is correct. Incorrect cable connection may cause personal injury or device damage.
- The installation must be made by qualified personnel and should conform to all the local codes.
- If the product does not work properly, please contact your dealer. Never attempt to disassemble the device yourself. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- Ensure a proper operating environment, including temperature, humidity, ventilation and power supply. Make sure the device is properly grounded and the lightning protection meets requirements. Keep the device from moisture, dust, strong electromagnetic radiation and vibration.
- Power down the device before connecting and disconnecting accessories and peripherals.
- Protect the power cable from being stepped on or pressed, particularly at the plug, receptacle, and the part leading out of the device.
- Take necessary measures to ensure data security and protect the device from network attack and hacking (when connected to Internet). Possible risks and consequences are at user's sole discretion.

4.3 Regulatory Compliance

4.3.1 FCC statements

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

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

4.3.2 LVD/EMC Directive



This product complies with the European Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

4.3.3 WEEE Directive–2012/19/EU



The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner

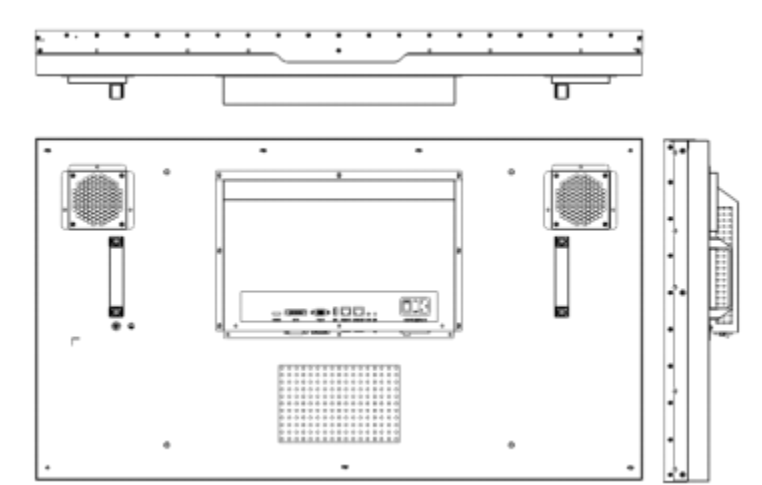
4.3.4 Battery Directive-2013/56/EC



Battery in the product complies with the European Battery Directive 2013/56/EC. For proper recycling, return the battery to your supplier or to a designated collection point.

5 Appearance

Unless otherwise specified, the device in the following sections is used as an example and the figures are for reference only. For appearance of a device, refer to the actual device.



5.1 Interface

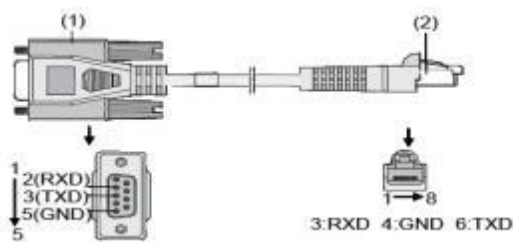


LCD Splicing Display Unit Interface

1. HDMI IN	2. DVI IN
3. VGA IN	4. USB
5. RS232 IN	6. RS232 OUT
7. IR IN	8. RUN LED
9. AC SWITCH	10. AC POWER INPUT

5.2 RS232 Serial Port

The RS232 I/O serial port is an RJ45 connector and must use a straight-through cable, not a cross-over cable.
If a codec is maintained through this RS232 serial port on a serial device such as a PC, the serial cable connection must meet the following requirements (for example, using the DB9 port on the PC).



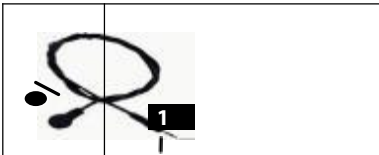
Serial port

(1) DB9 port	(2)) RJ45 connector
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Line Order and Connectors

DB9 Pin No.	DB9 Connector	RJ45 Line Order	RJ45 Connector	Description
2	RXD	3	RXD	Receive
3	TXD	6	TXD	Transmit
5	GND	4	GND	Ground

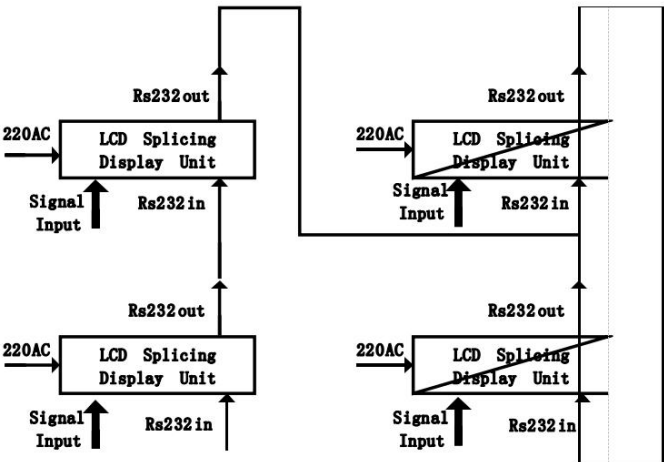
5.3 IR Connection

	1: IR connector
	2: IR receiver

6 Screen Splicing

6.1 Screen Connection

Display units are connected through RS232 connectors and connected to a network through an RJ45 connector. The following figure shows the connection of four display units through RS232 connectors in serial mode: Use serial cables to connect RS232 output port of display unit 1 to RS232 input port of display unit 2, RS232 output port of display unit 2 to RS232 input port of display unit 3, and RS232 output port of display unit 3 to RS232 input port of display unit 4. Then, the four display units are connected in serial mode. After they are connected, use a remote control to control all the display units. Insert the connection cable of the remote control to the RS232 input port of display unit 1, and control one or all the display units using the screen selection function on the remote control.



7 Functions

7.1 Remote Control

Name	Description
	Turn on/off a screen Note: After the screen is turned off with the remote control, the device remains in standby mode. Take necessary measures to prevent fire and electricity leakage
	Select an input signal source
	• Play/Pause a live view • Set a screen ID
	Stop the currently playing video
	N/A
CT	Adjust color temperature of the screen
Volume +/Volume -	N/A
Direction buttons	• Choose Up/Down/Left/Right • Adjust the value of a parameter using the Left/Right buttons
ENTER	Confirm a selection
MENU	Open the main menu
ESC	Quit a menu
FRZ	Freeze an image
INFO	Display the signal source and resolution information
Digit buttons	Select a screen ID
PLAN	Select a preset emergency plan
SEL	Select a screen to control

The preceding remote control figure is for reference only. Refer to an actual device. If clients are required, contact salespersons.

7.2 operation steps of the remote control

(1) before use, please confirm that the remote control has been correctly installed with a fully charged battery.

(2) when in use, please aim the infrared transmitter of the remote control at the infrared receiver of the device, and then operate the remote control.

7.3 Select LCD Splicing Display Unit

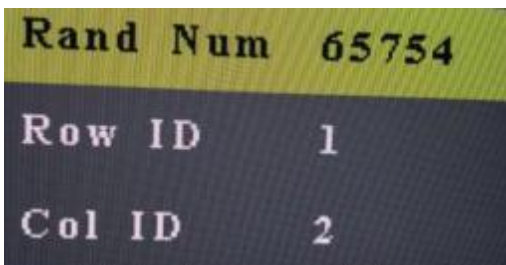
- (1) press <SEL> of the remote control to display the ID of each LCD splicing display unit on the screen
- (2) select the ID of the LCD Splicing Display Unit to be controlled through the numerical key of the remote control

**NOTE!**

Each LCD splicing display unit has a unique ID. Before performing business operations on the specified screen through the remote control, you need to select the ID of the LCD Splicing Display Unit to be controlled, otherwise all the ring screens will respond. The large screen that is not selected does not respond to the buttons except for the ID selection and ID setting keys.

7.4 Set The LCD Splicing Display Unit ID

When splicing for the first time, you need to set the "native ID" to ensure that the ID of each LCD Splicing Display Unit in the splicing screen is unique.



- (1) after selecting the LCD Splicing Display Unit to be controlled, press the <IDSET> of the remote control
- (2) input the Rand Num of the first line on the screen with the remote control. If the input is correct, it will automatically jump to the next line and continue the operation of the third step. If the input is wrong, the display information will disappear. At this point, go back to step (1)
- (3) select [Row ID] and [Col ID] through the up and down keys
- (4) use the left and right keys of the remote control to select [Row ID] and [Col ID] to adjust the value
- (5) after confirmation, please press <ENTER> on the remote control

**NOTE!**

The row and column Numbers are the first and second halves of the LCD splicing display unit ID, respectively.

7.5 Select Video Access Source

- (1) after selecting the LCD Splicing Display Unit to be controlled, press <  > of the remote control.
- (2) use the up and down keys to select the required video access source (the background is shown in green after being selected).
- (3) to confirm, press < ENTER > on the remote control.

7.6 Switch Tabs

- (1) after selecting the LCD Splicing Display Unit to be controlled, press the < MENU > of the remote control
- (2) use the left and right keys to switch tabs

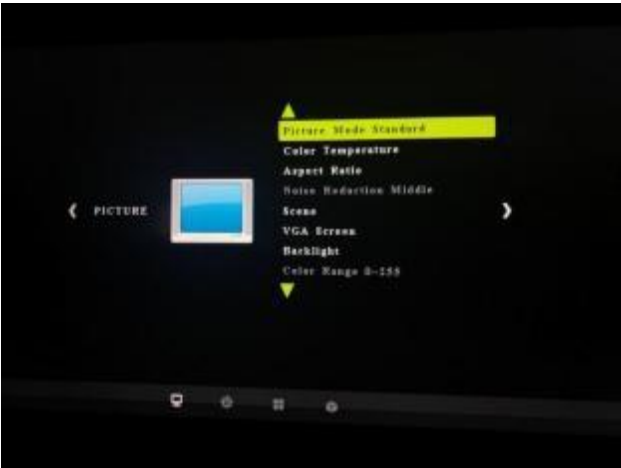


NOTE!

After a TAB completes the configuration of an option, press the < MENU> of the remote control to cancel the selection of the configuration item, and then use the left and right keys to switch tabs.

7.6.1 PICTURE

Enter the <PICTURE>, press the up and down keys of the remote control to select, and press the left and right keys of the remote control to adjust.

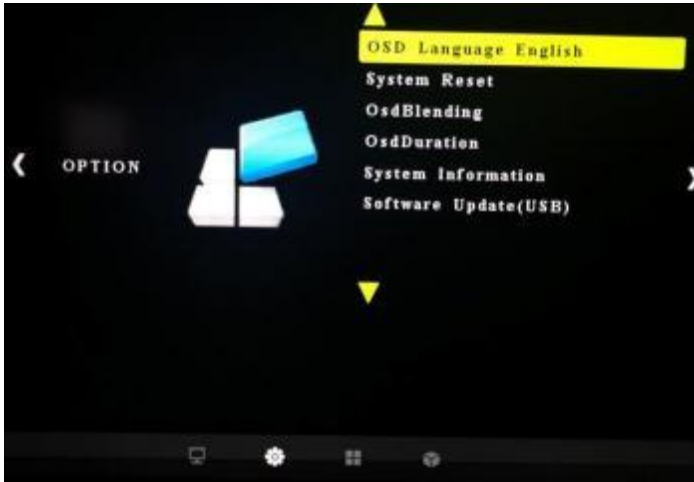


Options		Description			
Picture Mode		Standar	Soft	User	Dynamic
	Acaontrast	50	45	50	60
	Brightness	50	48	50	50
	Saturation	50	45	50	60
	Sharpness	50	50	50	60
	Tint	50	50	50	50

Standard	Note: Select the Picture Mode Standard , only mode User can be customized, parameter adjustment range 0~100, other modes for the standard preset values (HDMI channel contrast and brightness values in the vicinity of 50 May be fine-tuned), the default Standard .				
Color Temperature		Cool	Warm	User	Standard
	Red	50	60	50	50
	Green	50	50	50	50
	Blue	68	43	50	50
	Note: Select mode Color Temperature , only mode User can be customized, parameter adjustment range 0~100.				
Aspect Ratio	Auto,4:3,16:9,PointToPoint Note: Adjust the screen display ratio and display mode, which cannot be adjusted mode Splice is on.				
Noise Reduction Middle	Off,Low,Middle,High,Default Note: 3D noise level adjustment, default mode Middle .				
Scence	Normal,Eyesheld,Energy Conservation,meeting,Black and white display, Note: Adjust the display to fit the scene.				
VGA Screen	Auto Adjust Note: Automatic correction of display position and effect, (only VGA is available, ash off other signal sources is not optional).				
	Hor Position(Adjust the horizontal position of the image)				
Options	Description				
	Ver Position(Adjust the vertical position of the image)				
	Clock(Adjust the frequency)				
	Phase (Adjust the phase)				
Backlight	Adjust LCD backlight brightness, range 0-100, default 70				
Clor Range	Select Color Range : 0-255, 16-235, default 0-255, (only DVI and HDMI signals are available, ash off other signal sources is not optional)				

7.6.2 OPTION

Enter the <OPTION>, press the up and down keys of the remote control to select, and press the left and right keys of the remote control to adjust.



Options	Function	Description
OSD Language	Switch between Chinese and English	Select system display language, default Chinese
System Reset	reset	Reset user data, ID number, run time no longer bit
OsdBlending	Adjust menu transparency	Menu transparency level set or close, default low, (Low, Middle,

Options	Function	Description
		High, Off)
OsdDuration	Adjust menu disappearance time	Menu disappear time setting or off, default Off, (5Sec, 10Sec, 15Sec, Off)
System Information	Display system information	Display software version, hardware version ,Device Type, Serial Num, Monitor ID, Run Time
Software Update(USB)	upgrade	Upgrade by USB



NOTE!

There are two methods to upgrade software

Method 1:

- Load the "MERGE. Bin" upgrade package into the root directory of the USB and insert it into the LCD Splicing Display Unit USB interface
- Follow the above steps to enter the software upgrade menu and press < ENTER > to upgrade

Mode 2:

- Turn off the large screen power
- Load the "MERGE. Bin" upgrade package into the root directory of the USB and insert it into the LCD Splicing Display Unit USB interface
- Ensure that the second step is completed, turn on the large screen power switch, and then wait patiently for the automatic upgrade of the LCD Splicing Display Unit

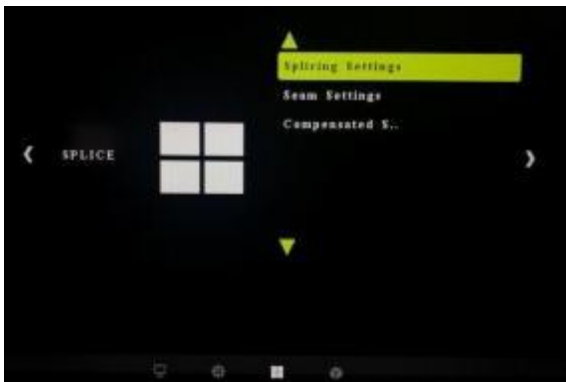


CAUTION!

During the upgrade process, please do not power off, otherwise it may cause the driver plate fault; If the upgrade fails, please check whether the USB is loaded correctly into the "MERGE. Bin" upgrade package. Check whether the USB is connected with the LCD Splicing Display Unit correctly.

7.6.3 SPLICE

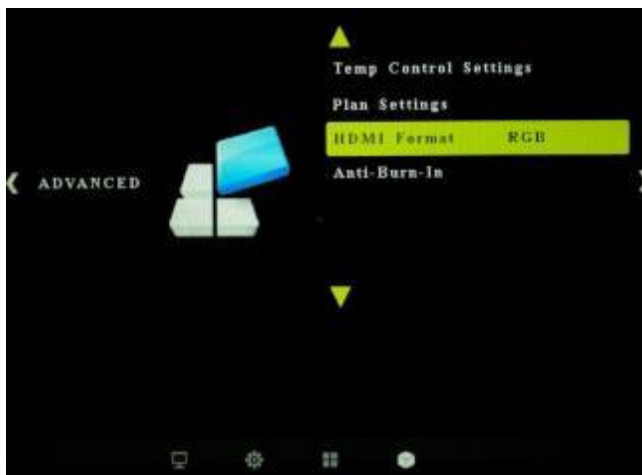
Enter the <SPLICE>, press the up and down keys of the remote control to select, and press the left and right keys of the remote control to adjust.



Options	Function	Description
Splicing Settings	Monitor ID	Displays the monitor ID
	Hor Position	Current row position
	Ver Position	Current column position
	Hor Size	The total number of rows, 1 minus 12
	Ver Size	The total number of columns, 1 minus 10
	Power On Delay	Set the Power On Delay to avoid the impact of too large startup current on the LCD Splicing Display Unit at the same time
Seam Settings	Power On Orderly	Set seam: on/off
	Hor Seam	Horizontal seam adjustment (parameter adjustment range 0~30)
	Ver Seam	Vertical seam adjustment (parameter adjustment range 0~30)
Compensated	Seam Switch	Set automatic stitch compensation: on and off

7.6.4 ADVANCED

Enter the <ADVANCED>, press the up and down keys of the remote control to select, and press the left and right keys of the remote control to adjust.



Options	Function	Description
	System Temp	Displays the current machine temperature
	Fan Set	Set fan on, off and auto

Tem Control Settings	Temp Alarm	Set alarm temperature
	Alarm Action	Set high Temp Alarm, display alarm information or standby
Plan Settings	Choose Plan	Select plan number, number 1-10
	Save Plan	Save current plan
	Load Plan	Load plan
HDMI Format	Displays HDMI video source format	Only works on HDMI channels
Anti-Burn-In	On/Off	Set the screen anti-burn On/Off