

The 4K HDMI Ultra HD matrix manual of operation



catalogue

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1 matters need attention

kindly reminder:

For the safety of your and the equipment, you must read the safety instructions carefully before using the device. If you encounter questions during the use process, please read this instruction manual first. There is a detailed description of the equipment operation in the text. If you still have questions, please contact us, and we will give you a satisfactory reply as soon as possible.

This specification is subject to version change without notice, please understand.

The company reserves all the rights of the product!

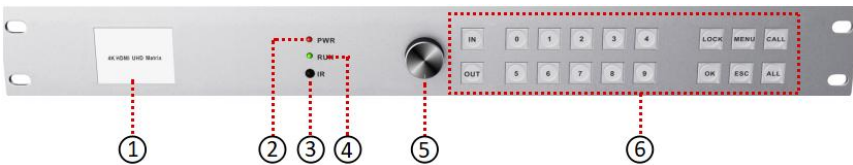
2 container loading list

project	name	quantity	unit
1	HDMI Matrix Host	1	short for Taizhou
2	The 220V power cord	1	root
3	Quick entry	1	stem or root of plants
4	DB9 pin to RJ45 conversion head (mother-mother)	1	individual
5	parvicostellae	1	twig

3 Product profile

4K HDMI ultra HD matrix is a professional device specially designed for ultra-high resolution HDMI digital signal switching, which can arbitrarily assign multi-channel input HDMI signals to multiple display terminals. Support for HDMI1.4a standard, support for EDID management; resolution up to 4K@30HZ, 1080@120HZ. The whole machine adopts an integrated structure, supporting the computer, mobile phone, tablet, button, serial port, WEB and other control methods, widely used in high-definition visual conference, radio and television engineering, multimedia conference hall, large screen display engineering, TV teaching, command and control center and other places.

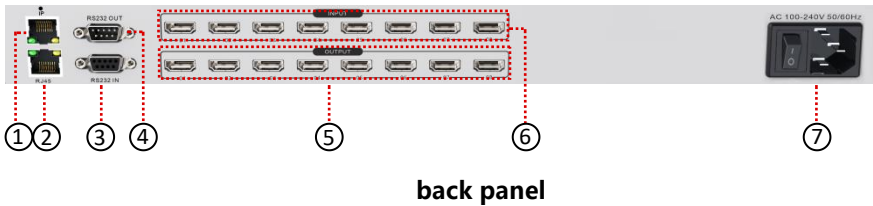
3.1 front panel



front panel

1	liquid crystal display.
2	power light.
3	The IR IR reception window.
4	working station indicator.
5	Choose knob.
6	Front panel button.

3.2 Interface



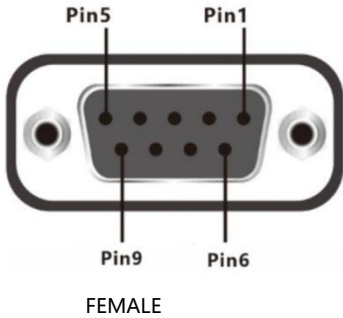
1	LAN interface.
2	RJ45 serial port control input port.
3	RS-232 serial port control input port, DB9 pin master connector
4	RS-232 serial port control output port, DB9 pin male connector
5	HDMI output interface.
6	The HDMI input interface.
7	AC 110-220V 50 / 60Hz power interface.

3.3 Control interface description

- The RS232 control interface description

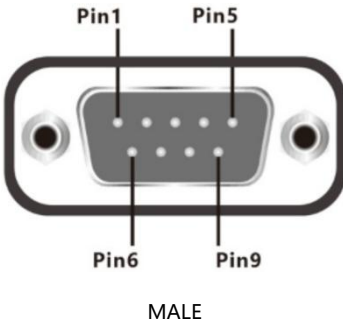
The matrix switch provides a 2-way RS-232 serial interface (one DB9 master connector, one DB9 male connector), through which the matrix can be controlled.

- **Pin description for the RS-232 IN port DB9 master connector:**



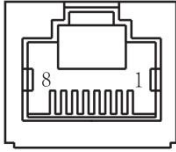
foot position	definition	explain
1	-	-
2	TX	RS-232 protocol with, sending data
3	RX	RS-232 protocol with, received data
5	GND	Signal ground
other	-	-

- **Pin description for the RS-232 OUT port DB9 male connector:**



foot position	definition	explain
1	-	-
2	TX	RS-232 protocol with, sending data
3	RX	RS-232 protocol with, received data
5	GND	Signal ground
other	-	-

- **RJ45 serial port input pin description:**



foot position	definition	explain
1	TX	RS-232 protocol with, sending data
2	RX	RS-232 protocol with, received data
5	GND	Signal ground
other	-	-

- IP is the network port

3.4 Case appearance

1U
front panel



1U
Interface



2U
front panel



2U
Interface



Note: The quantity of equipment interfaces shall be subject to the physical objects

3.5 Case size

Matrix Dimensions:

type	Front Panel length A (mm)	Chassis height: B (mm)	Chassis depth: C (mm)	Back side width D (mm)
1U	483	47	192	440
2U	483	89	265	440

4 equipment installation

- **Installation environment**

When installing the equipment, try to avoid strong smooth light and backlight scenes. Please keep the ambient light well lit.

- **Signal connection**

The interface of HD matrix series is divided into signal input and output interface, INPUT part is signal input end, and OUTPUT part is signal output end. Please use the corresponding cable to connect the input and output equipment, connect the output end of the signal source (such as DVD machine, computer, etc.) equipment to the matrix input end (INPUT), and connect the matrix output (OUTPUT) to the input interface of the signal use equipment (such as LCD screen, projector, TV, etc.).

- **RS232 communication interface connection**

The rear panel of uHD matrix series provides two standard RS232 communication interfaces, one RS232 IN, connected to the computer or another matrix RS232 OUT. The RS232 interface of multiple matrix can be controlled and set by using the RS232 interface of only one computer; connect the RS-232 serial communication port to the RS-232 communication port of the HDMI matrix host, and use the computer to control the matrix. Users can use the software included with the matrix as the computer control software or write the own control software for detailed instructions of the user manual control commands.

Special attention: When the matrix RS-232 port is connected to the computer or the central control, pay attention to the line order of TXD and RXD, in detail, considering the pin definition of the other device.

- **Power connection**

A standard 220V power supply cord is standard in the matrix package. The female end of the power cord connection matrix is marked with a AC220V50 / 60HZ power port on the back, and the male end is connected to the 220V 50 / 60HZ AC power supply. To ensure the safety and normal operation of the equipment, please note that the single-phase three-line AC power supply with protected ground must be used.

5 Keypress operation description

5.1 Description of the front panel keys

- **Standby screen**

Press "ESC" in the front panel in any state to return to the upper level interface (exception in the standby interface).

- **MENU menu key**

In the standby state, press the front panel button "MENU" to enter the main menu page, which can select signal switching, plan calling, common functions, and system setting.

- **CALL function key**

In the standby state, press the "CALL" key in the front panel to enter the plan management menu, in which you can save and call scenarios.

- **OK function key**

The most commonly used buttons, selection functions and determining changes are determined by pressing "OK".

- **ALL function key**

Used to select all output channels during signal switching.

- **LOCK function key**

In any interface, press the "LOCK", the panel button is disabled, the second press "unlock", "lock" state when the button produces green light.

- **The IN / OUT function key**

For "signal switching", enter the signal switching interface by clicking the IN / OUT button at any interface, or make input and output channel selection after selecting the signal switch in the main menu.(Press 0 " before entering single digits)

- **Knob function**

For switching between the left and right direction of the option selection interface, clockwise rotation is equivalent to " ➡ ", counterclockwise rotation is equivalent to " ⬅ ", the knob has the "ok" key function, and the vertical panel presses the knob.

5.2 How to switch channels

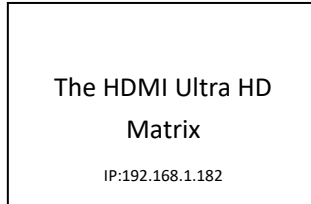
For "signal switching", enter the signal switching interface by clicking the IN / OUT button at any interface, or make input and output channel selection after selecting the signal switch in the main menu.(Press 0 " before entering single digits)

6 WEB Web page operation instructions

6.1 How to log on the WEB page

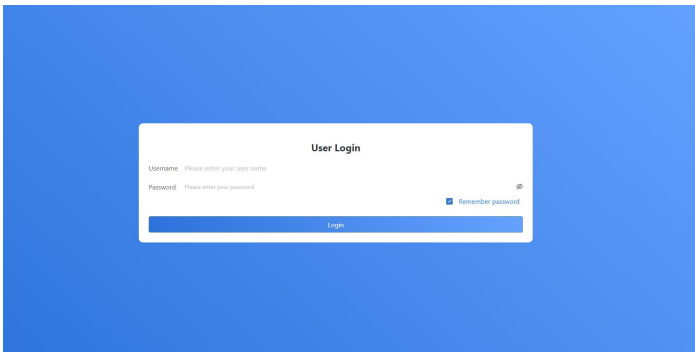
- **View the WEB Card IP**

The device can see the IP address of the WEB access through the screen. The default address is 192.168.1.182



- **Access and Login**

Access the device after the connection.



parameter	explain
IP address	The default ip is: 192.168.1.182 (Wait about 30 seconds after start, accompanied by two buzzer sound, matrix LCD displays the ip address).
user name	The default user name is: admin.
password	The default password is: admin.
entry	Click the login button or press the keyboard "Enter" key to log in.
visit	Connect the access server (mobile phone, computer, or tablet) and the device to an offline LAN, open the browser, and access the ip.

6.2 Matrix configuration

The number of input and output paths of the configuration matrix

MatrixControlSystem Splice Switch Patrol Control Settings

Matrix Settings

Input: 16 Output: 16 Ok

Scene: 32 Ok

Buzzer: ON OFF

Lock: ON OFF

Infrared cmd: FLOWVIA Custom

OFF: D5 11 FF 10 00 AA ON: D5 11 FF 10 01 AA Ok

Software settings

Language: English Ok

Theme: Blue Ok

Nav: Left Ok

Software bgColor: Ok

Function: Splice Switch Protocol window Fast switching Read cmd Close out Patrol

Name: MatrixControlSystem Ok

Logo: Browse Ok

Select the matrix settings:

parameter	explain
Matrix Settings	Pull-down selects the number of input-output channels with a maximum value of 32.
buzzer	Turn the device buzzer on or off.
locking press button	Lock / Unlock the device keys.
language	Chinese / English switch.
software function	Turn on or off the appropriate feature options.(Top right corner)
dynacomm	The Web name change.(Top left corner)
Note: After changing the unified configuration, click the corresponding setting button to save the changes.	

6.3 Split setting

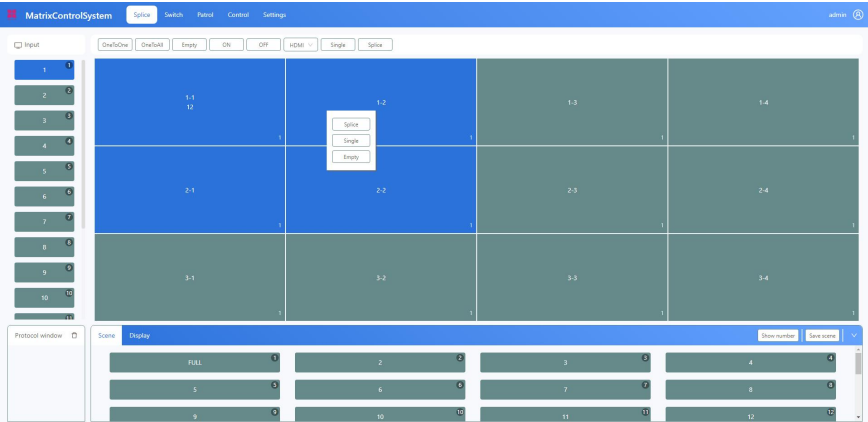
Select the splicing settings:

parameter	explain
Splicing specifications	Set up the display wall splicing specifications. The maximum value can be set to 10
Screen protocol	A variety of splicing screen protocols are available for users to choose from
Independent display	Set the number of devices displayed independently, with a maximum value of 12
Independent display switch	Open / close the independent display settings, and then configure the independent display mapping.(Default is off)

Output mapping switch	Turn the output mapping settings on / off and then turn them on.(Default is off)
Output mapping	Change the display device and the output interface mapping relationship, and the maximum value is related to the number of output channels set by the matrix
Reset the button	Reset the output mapping relationship, and set it to the default one-to-one mapping relationship
Note: After changing the unified configuration, click the corresponding setting button to save the changes.	

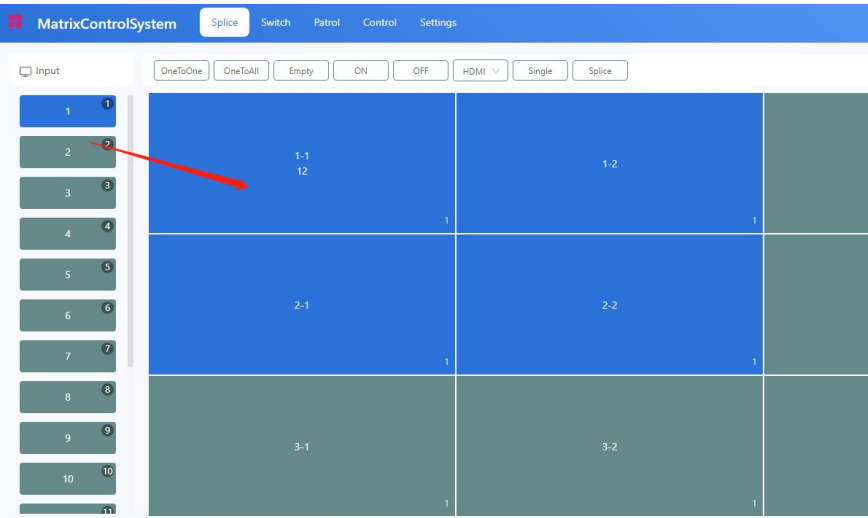
Note The Output Mapping Settings section is hidden when the Independent Display and Output Mapping switches are set to off.

6.4 Splicing control surface



How to control the big screen

- Splice / single screen screen: Select the input channel, select the screen, and click Splice / single screen
- Switch signal: The selected screen drags the signal to the screen or the selected screen to double-click the input channel

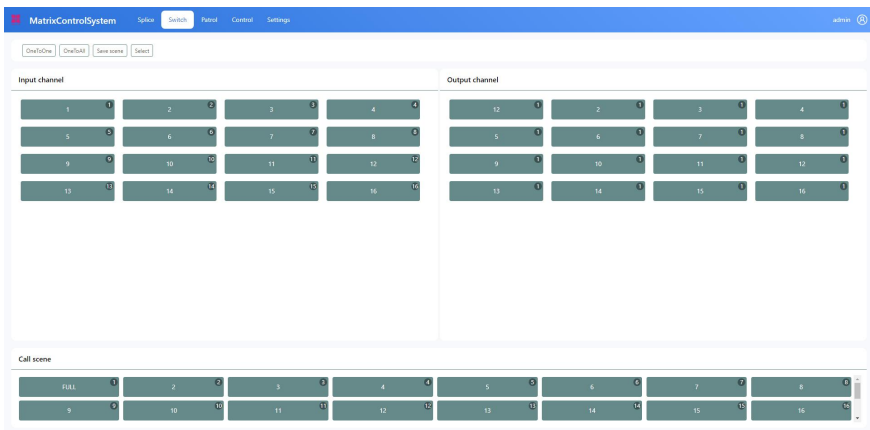


Control instructions:

parameter	explain
one-for-one	Switch the input channel signal "one to one" to the output channel.
A pair of all	Select the input source and click "pair All" to switch the selected input source to all output channels.
empty	Empty the signal and clear the display wall.
Open / turn off the screen	Control the splicing screen to open / off the screen.
Output signal type	Change the output signal type with three types: HDMI, VGA and DVI.
Single screen montage	Select the display wall area to be changed and click the button to make the splicing screen switch between "splicing" and "single screen".
Displays the wall area	Click the right mouse button in the display wall area selected in the box to perform the function of "splicing, single screen, empty".
input source	<p>Four ways to switch the signal:</p> <p>one. Click the corresponding input source and then the mouse box to select the desired display wall area, and then click the single screen or splicing.</p> <p>two. Left mouse button to drag the input source to a single display.</p> <p>three. Select the desired display wall area, left mouse button and drag the input source to the display wall.</p> <p>four. After selecting the input source, click "one to one" or "one to all".(Mobile terminal control steps are consistent).</p>
Protocol window	Real-time display of the splicing control interface to achieve various functions required by the splicing screen / matrix instructions.
Independent output	Select the input channel, and then click Independent Input to make a signal switch.(Independent display is required in the software settings).

Plan mode	Click the corresponding plan to call, provided the plan is not empty; the number of available plans is 32.
Save the plan	Click Save as No. Several Plan to store the current input and output correspondence and splicing mode; the number of plans can be set as 32.
Show / hide the number	Show or hide the number of the splicing screen by clicking.
Pull down the arrow	Show or hide the lower window by clicking.

6.5 Channel switching



Switching introduction:

parameter	explain
one-for-one	Switch the input channel signal "one to one" to the output channel.
A pair of all	Select the input channel and click "pair All" to switch the input channel signal to all output channels.
Save the plan	Store the current input and output correspondence and splicing mode, storing up to 32 plans.

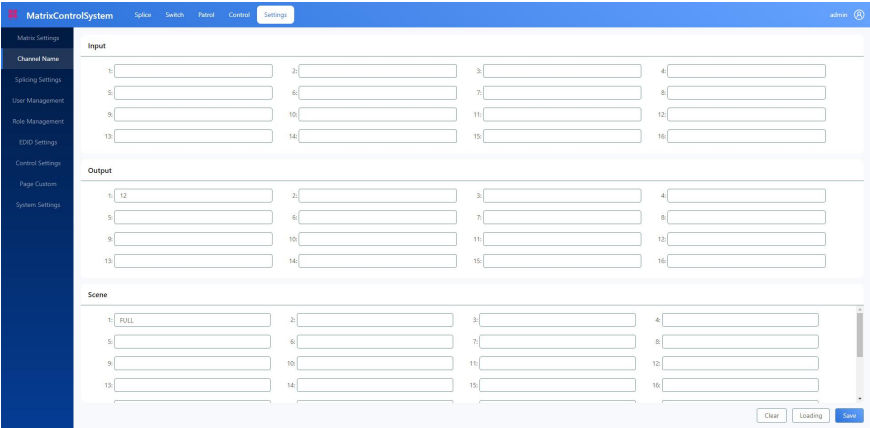
incoming channel	With the output use, click the input channel first, and then click the output channel one by one.
outgoing channel	With input, click the input channel, and then click the output channel.
Close all	Clear all the output channel signals.
query	Read the input channels corresponding to all the output channels, such as the number displayed in the upper right corner of each output channel, which is the serial number of the input channel corresponding to the output channel.

Call the scene:

parameter	explain
Save the situation	Store the current input / output channel correspondence; up to 32 stores.
Call the situation	Call the saved situation.

Note: After opening the patrol state, you need to stay at this interface; refresh the web page or switch the interface to stop the patrol.

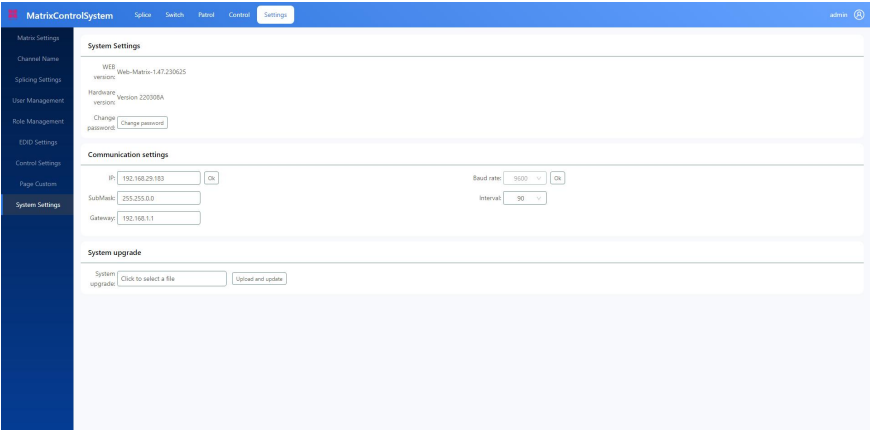
6.6 Channel rename



parameter	explain
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Input / output name	Customize the input / output channel name.
Scene plan	Customize the preplan name.
Clean the button	Clear all of the contents of the input boxes.
load button	Load the names of manually changed input, output channels, and plans.
Save the button	Save changes.

6.7 system maintenance



parameter	explain
Version information	WEB version: WEB-GO-1.3.1. (Subject to the actual conditions) Firmware version: Version 210924A.(Subject to the actual conditions)
line configuration	You need to pay attention to the relationship between the subnet mask and the ip address, and the port rate is consistent with the device, providing a "30,60,90,120" milliseconds protocol interval selection.

7 technical parameter

7.1 Host model and technical parameters

model	0404	0808	0816	1616	1632
Input	4	8	8	16	16
Output	4	8	16	16	32
Serial	RS-232,9-pin-master D-type interface and 9-pin-male D-type interface; RJ45 interface				
Bps	Porter rate: 9600, data bit: 8 bits, stop bit: 1, no parity bit				
DB9	9 Head D interface: 2=TX, 3=RX, 5=GND 9 Male D interface: 2=TX, 3=RX, 5=GND				
Power	100VAC~240VAC, 50 / 60 Hz, International adaptive power supply				
Storage temperature	-20°C ~ +60°C, 0°C-50°C				
Case size	1U	1U	2U	2U	2U
Weight	2.55kg		4.35kg		
Chassis size L * W * H	440x 192x 47mm		440x 265x 89mm		
Outsourcing dimensions L * W * H	525x 270x 135mm		515x 335x 150mm		
Quality Assurance	Free 1-year warranty, lifetime maintenance				

8 Serial communication protocol

8.1 controlling parameter

When using serial port control, please set the port rate to 9600,8-bit data bit, 1-bit stop bit, no check bit.

8.2 Communication Control Protocol

The following protocols support all models including 04,08, and 16:

function	ASCII instruct	explain
import [in] Switch to all outputs	[in]All.	"Enter the channel number," "A "." For example: switch the Route 2 input to all outputs Code: 2All.
import [in] Switch to the [out] output	[in]V[out].	The first [x1] road input to the [x1] road output. For example: switch the second input to the third output Code: 2V3.
Input in switch to output out1, out2, out3...	[in]V[out1,out2,...].	[in] Road input to [out1, out2, out3...] road output. For example: switch the number 2 input to 5,6,7 road output Code: 2V5,6,7.
Close the [out] road output	[out]\$.	Close the [out] road output, out: All, and close all the output For example: Close the output channel # 2 Code: 2\$.
IO Channel one to one	All#.	Set to all channels for the one-to-one corresponding output.
Save the situation	Save[x].	Save the current channel state to the [x] data group.[x]=1-32.

		For example, save the current status as situation # 1, Code is "Save1."
Call the situation	Recall[x].	Restore the [x] data group channel status to the current state. For example, switch the current state to a context-saved state. The Code is: Recall1.
The buzzer responds when the operation is turned off	/:BellOff;	The buzzer responds when the operation is turned off
The buzzer responds with the operation turned on	/:BellOn;	The buzzer responds with the operation turned on

9 Common faults and maintenance

- When the image of the peripheral display device connected to the matrix has heavy shadow, if the projector has heavy shadow, the projector may not be properly adjusted or the wire quality is not up to standard, the corresponding button of the projector should be adjusted or the wire is replaced.
- When the color is lost or no video signal output, it may be poor audio and video interface contact.
- When the serial port cannot control the matrix, check whether the communication port set by the control software corresponds to the serial port of the connected equipment; check whether the communication port of the computer is good.
- No corresponding image output during matrix switching:
 - (1) Check whether the corresponding input terminal has a signal.(Oscilloscope or multimeter is available for detection.) If there is no signal input, the input line may be broken or the loose joint, and replace the wiring;
 - (2) Check whether the corresponding output terminal has a signal.(Oscilloscope or multimeter is available for detection.) If there is no signal output, it may be that the output line is broken or the connector is loose, and then replace the wiring;
 - (3) Check whether the output port number is consistent with the controlled port number.

Do not belong to the above three situations, may host internal failure, please send a professional for maintenance.

- If the POWER light is not on and the LCD is not displayed and the operation is not responsive, please check whether the equipment power input is in good contact.
- The output image is disturbed, and it is possible that the input and output equipment is not well grounded.
- When you unplug and plug the audio and video interface, if there is obvious static electricity, the ground wire of the equipment is not well

grounded, please follow the correct method, otherwise it is easy to damage the host and shorten the life of the host.

- The LCD display is normal, and the communication port has a return code, but no image output or no audio output:

(1) The audio and video interface may be loose, and it can be replaced;

(2) May be wiring short circuit, can be replaced;

(3) The wiring may be disconnected, and it can be replaced;

(4) If the matrix panel keys and communication port cannot be controlled, the main engine may be damaged, please send it to the professional for maintenance.

Note: The equipment is not suitable for non-professionals, and shall receive professional training or guidance.

Please read this manual carefully before using the equipment. It should be properly kept for later use.