HD Video Multiplexers

User manul

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Installation Instructions

For the safety of you and the equipment, please read the safety instructions carefully before using the equipment.

If you have any questions in use, please read this manual first. The text contains a detailed description of the equipment operation. If you still have any questions, please contact us and we will give you a satisfactory reply as soon as possible.

This manual is subject to change without notice. Please understand.

Please pay attention to the following items when installing the equipment:

1. Power supply:

This equipment uses 12V/3A external power supply, which supports 100-240V AC voltage input. In order to make the equipment work normally, please do not easily replace the power supply of other brands and specifications.

2. Power off:

When the equipment needs to be moved or other work needs to be powered off, turn off all power supplies, including the power switch, unplug the power plug, etc., to ensure the safety of you and the equipment.

3. Cable:

It is not allowed to place objects on power lines, signal lines, communication lines and other cables. It is necessary to avoid the cables from being trampled or squeezed to prevent leakage or short circuit.

4. Signal line connection:

When plugging or unplugging the signal line from the equipment, the equipment needs to be powered off to avoid damage to the equipment. Damage caused by hot plug is not covered by the warranty.

5. Heat sink:

There may be openings for heat dissipation on the external surface of the equipment. Do not block these openings to avoid heat accumulation, damage to the equipment or fire hazards.

6. Equipment placement:

The equipment shall be reasonably placed, such as installed in standard racks, cases, cabinets, or placed on a stable and flat workbench to prevent the equipment from falling.

7. Environment:

The working environment of the equipment shall be dust-proof and moisture-proof, especially the liquid immersion and splashing inside the equipment.

8. Maintenance:

All maintenance work should be completed by professional maintenance personnel. Do not attempt to repair the equipment without training.

Product introduction

Function Overview:

- 2-way composite video, 2-way VGA, 2-way HDMI (DVI compatible), 6 signal inputs in total;
- Support 1 channel VGA, 1 channel HDMI signal synchronous output, compatible with DVI signal;
- Support up to 1920 * 1080 ultra-high resolution input and output, and downward compatible with various resolutions;
- Support a single screen to display two high-definition digital or analog signals at the same time;
- Support any signal switching to full screen display;
- Support the functions of picture in picture, picture out of picture, windowing, overlapping and roaming;
- Support the screen capture function, so that the image will not stretch and deform under the two split display mode;
- Support chassis button, remote control and RS-232 serial port control;

Machine installation

1、 Unpack

Check the host and accessories. Including host, CD, power cord, remote control, warranty card and manual.

2、 Installing the machine

- Display unit setting: The HD two picture splitter supports 1 channel VGA and 1 channel HDMI synchronous output. If the user uses HDMI input, please set the input signal of the display unit to HDMI; If the user uses VGA port for input, please set the TV to VGA.

- Output and display unit connection: After the image splitter is placed, the signal output is connected to the display unit through HDMI line or VGA line.

- Input signal connection: Please connect the computer or other signal source output device to the input port of the splitter through HDMI cable, VGA cable or video cable.

3、 Power on

After the above cables are connected, insert 12V DC power supply, the power indicator is red, and the equipment is in working state;

Remote control description

After the above hardware connection is completed and the power switch is turned on, the display unit may not have image display. At this time, we can debug and set it through the control software or infrared remote control. If the user does not need many display modes, we can completely set the machine through the remote control. In this chapter, we will first introduce our remote control functions.

Remote control settings:

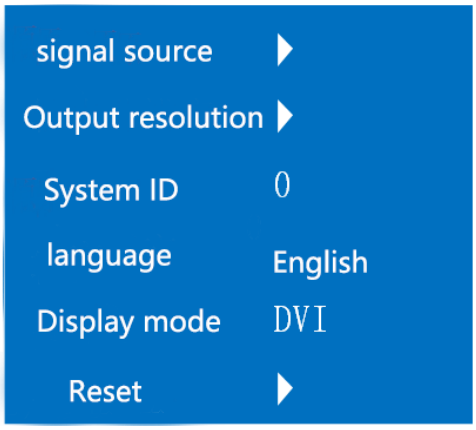
1. First, correctly install the battery into the remote controller delivered with the machine, so that the remote controller can work normally;

2. Press 2 at the front of the remote control to the IR port of the machine.

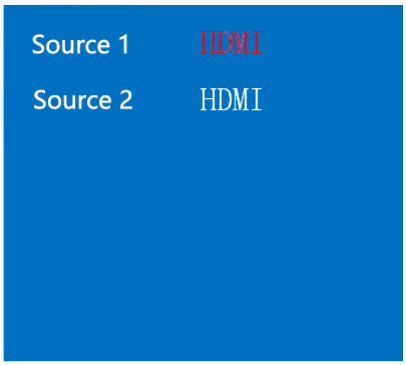
3. Signal source setting:

Press the MENU key to display the main menu as shown in Figure 1, and then press the right navigation key to pop up the submenu as shown in Figure 2. Select the input signal through the left and right navigation keys. The input signal is HDMI, VGA, VIDEO selectable. Select the type of signal source to access each channel. Press the MENU key to save and exit. After the setting is completed, the screen can display two images in the 2-split mode. The input signal is VGA, and the screen may display deviation, color deviation and incomplete display content when the first access is made, which can be corrected through the remote control AUTO key.

Note: The operation mode of other menu settings is the same as that of the signal source, which will not be described in detail!



Picture1



Picture2

4. Output resolution:

The factory setting output resolution of the device is 1920 * 1080. If the display unit fails to reach 1920 * 1080 resolution and cannot display normally, the resolution

can be reduced through the output resolution menu to enable the display unit to display normally. The device output resolution is 1920 * 1080, 1024 * 768, 1280 * 1024, 1280 * 720.

5. System ID:

Reserved function, no need to set;

6. System language:

Chinese or English can be set;

7. Display mode:

The system is set to DVI mode by default. If some display units are HDMI interfaces that do not support DVI signals, you can change the DVI mode to HDMI mode;

8. Factory reset:

Incorrect operation mode may cause the equipment to fail to work normally in some cases. Factory reset can be used to restore factory settings to make the equipment operate normally;

Remote control shortcut key description

1 key: full screen display of the first screen;

2 key: full screen display of the second screen;

3: Left and right screen split display mode;

4 key: upper and lower screen split display mode;

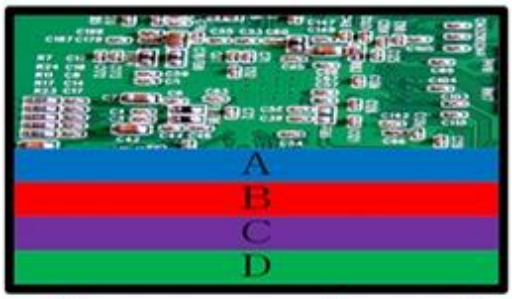
5-9 key: user defined mode, personalized display mode can be made according to their own needs and saved to 5-9 key, which can be called quickly through 5-9 key；

Screenshot mode switch

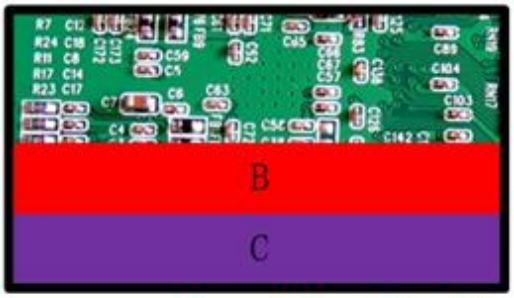
The display of left and right segmented or upper and lower segmented full screen images is different, resulting in horizontal or vertical compression of images and image deformation. Use the screenshot mode to make the image not deformed and stretched during the second division. Use the SWITCH key of the remote controller or the 0 key of the chassis key to switch the cutout mode to make the image not deformed and displayed. Comparison before and after image upper and lower segmentation and left and right segmentation matting:

Ordinary left and right dichotomy

Left and right halves of matting



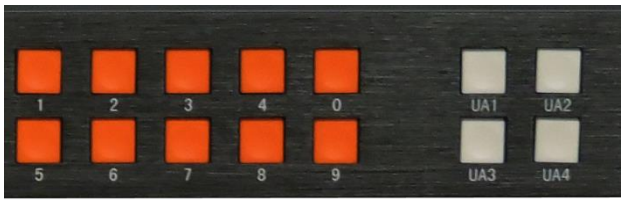
Common upper and lower split



The upper and lower halves of matting

Key operation instructions

The shortcut mode can be conveniently called through the chassis keys. The calling method is corresponding to the remote control. The chassis key pictures and the calling functions of each key are as follows:：



1 key: full screen display of the first screen;

2 key: full screen display of the second screen;

3: Left and right screen split display mode;

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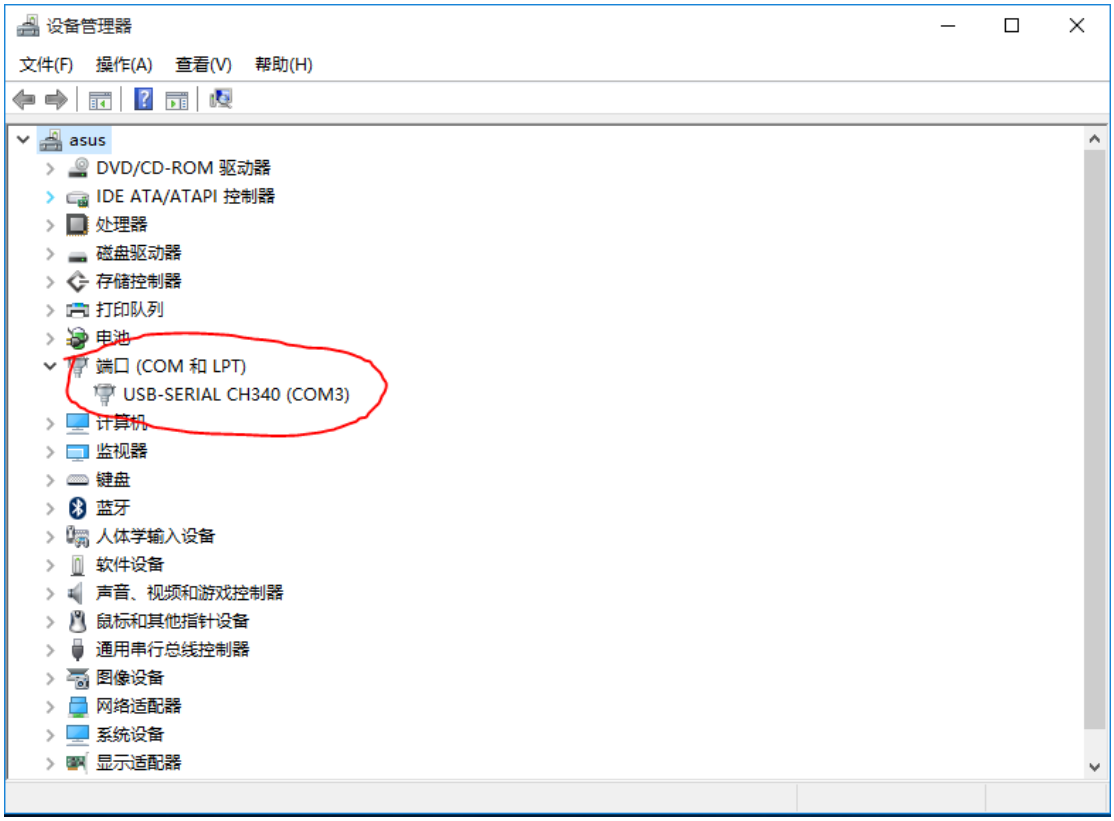
software control

Most users' needs can be met by setting and operating the remote controller and keypad. If the user needs to use the window opening, overlapping, roaming functions or store some special image segmentation modes, it needs to be operated by the control software. The following are some steps and methods controlled by the software.

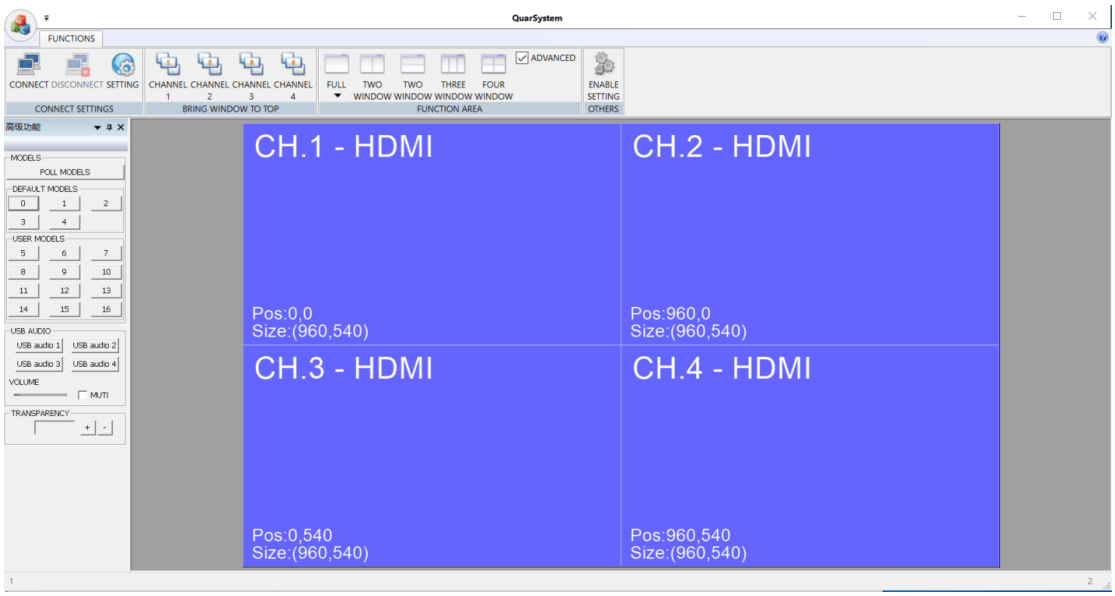
1. **Connecting RS-232 serial port cable**
   First, connect the serial port of the control computer and the high-definition screen splitter through the RS-232 cable. If the computer does not have an RS-232 serial port, prepare a USB to RS-232 adapter cable and install the relevant driver.
2. **Check PC settings**

Check whether the COM port of the computer device is normal. Steps: Right click My Computer - Properties - Device Manager on the desktop. The following figure shows the COM port number:



3. Running software

Copy the attached CD control software folder to the control computer and open the QuarSystem file, as shown in the following interface:



4. Communication settings

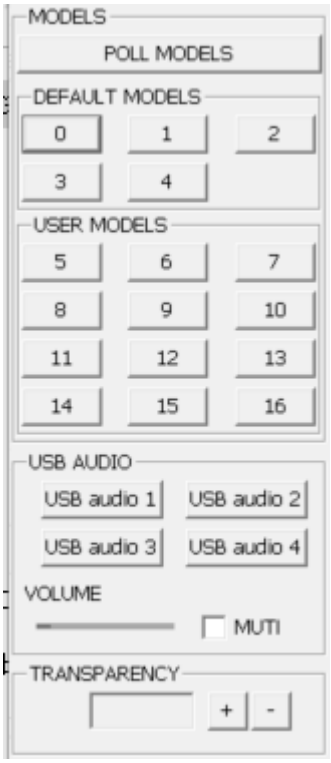
Open the "Settings" at the upper left corner of the software, check whether the port number is consistent with the port number of the control computer device manager, and click OK after confirmation, as shown in the following setting interface:

5. Communication connection

After clicking "Connect" at the upper left corner of the control software, the computer can communicate with the high-definition screen splitter and perform multi-function control on the splitter;

6. Profiles

Profiles are divided into default scenarios and custom scenarios.



Default scene: It is the factory default setting and cannot be changed;

User defined scenarios: users can customize personalized scenarios according to their own needs;

USB audio: this device is unavailable;

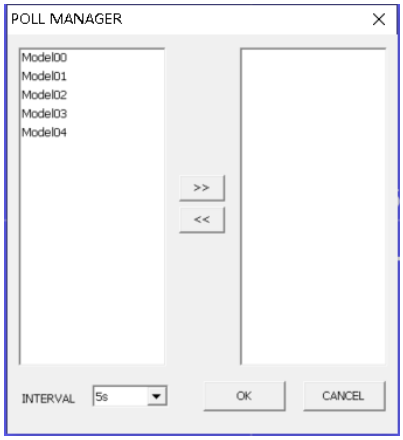
6.1 Default Scenario：

As with the keys and remote control, pressing 0 is the standard two division, pressing 1, 2, 3, 4 is the full screen display of 1, 2, 3, 4 windows respectively, and the USB mouse and keyboard switch synchronously;

6.2 Custom Scenarios:

After the user has defined the screen arrangement mode, it can be saved in any number key from 5 to 16, and then called quickly by clicking the corresponding key with the mouse. If it is saved in 5, press the CTRL key after setting the picture arrangement, click 5 with the mouse, and the mode will be saved in 5 mode, which can be called by clicking 5 directly through remote control, key and software in the future;

6.3 Transparency adjustment: through transparency adjustment, you can see the underlying picture through the superimposed picture;



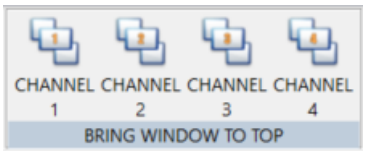
7、Cyclic circulation

After the user sets a number of screen segmentation modes, the multiple screen display modes can be automatically switched at a certain interval through the round robin setting. Click "Round robin" in the software interface to enter the round robin management, select the preselected saved profile mode, then select the round robin interval time, and click OK to make the screen segmentation mode in the round robin state. When using the round robin function, the computer operation software interface cannot be closed. The rotation management interface is shown in the following figure:

8、Window elevation

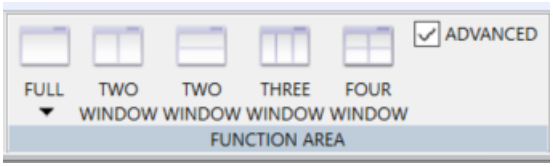
Raise through the window to enable key operations

Make the channel window top Software control is more convenient;



9、Ribbon

Quick setting of single screen display, left and right split display, upper and lower split display;

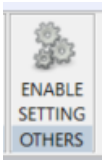


10、Enable Settings

Set splitter by enabling

Output resolution and selection

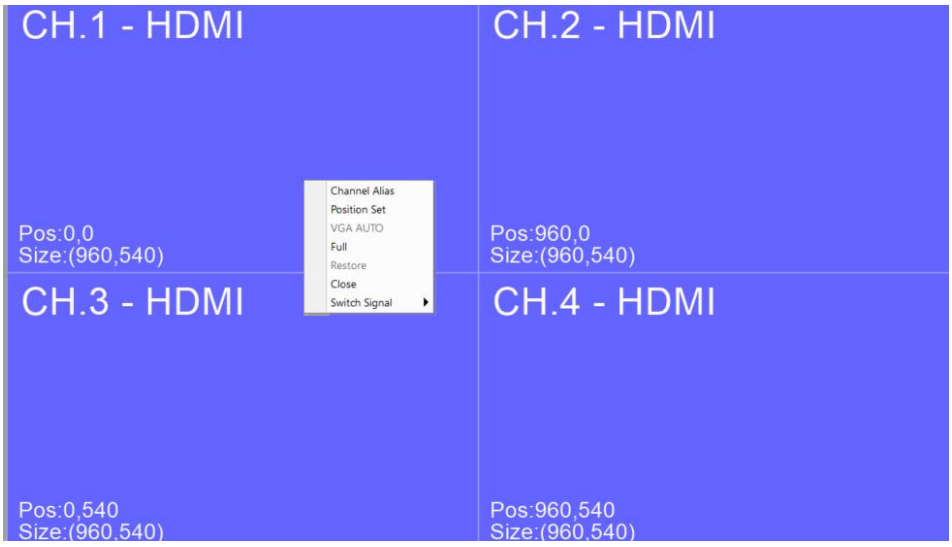
DVI or HDMI mode;



11、Customize split mode settings

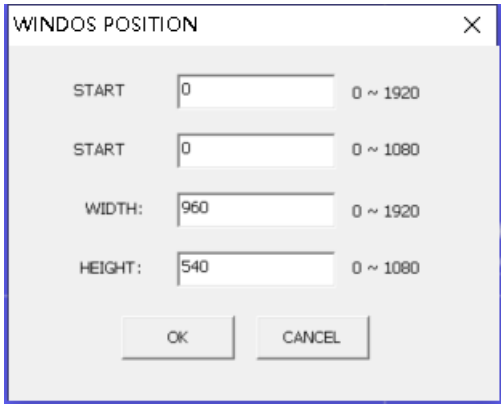
11.1 Drag the window position and adjust the window size through the mouse; Click the right mouse button to close or create a new window, signal switching, channel alias and other settings;

11.2 A variety of display modes can be set freely and saved through CTRL and numeric keys. The saved modes can be quickly called through remote control, chassis keys and central control;



11.3 Precise adjustment of position and window size

Right click the corresponding window to pop up the setting menu, and then you can see the position adjustment submenu. With the position adjustment option, you can accurately locate the window screen position and precisely adjust the screen size by entering numbers, as shown in the figure:



Central control code

The following is the central control code：
HDMI/DVI MODE : FF D0 00 01(00) 34 45 FF

4 Split display:
[00015572] IRP_MJ_WRITE Length: 0007, Data: FF 91 00 00 23 25 FF

Channel 1, 2, 3, 4 full screen:
[00001136] IRP_MJ_WRITE Length: 0007, Data: FF 92 00 00 23 25 FF
[00008776] IRP_MJ_WRITE Length: 0007, Data: FF 93 00 00 23 25 FF
[00001136] IRP_MJ_WRITE Length: 0007, Data: FF 94 00 00 23 25 FF
[00008776] IRP_MJ_WRITE Length: 0007, Data: FF 95 00 00 23 25 FF

2 Split mode 1 (left and right split)
Length: 0007, Data: FF C5 00 00 23 25 FF

2 Split mode 2 (upper and lower split)
Length: 0007, Data: FF C6 00 00 23 25 FF

3 Split mode
Length: 0007, Data: FF C7 00 00 23 25 FF

Save Custom Mode 5（6，7，8，9，10，11，12，13，14，15，16）
Length: 0007, Data: FF B8（B9,BA,BB,BC,BD,BE,BF,C0,C1,C2,C3） 00 00 23 25 FF

Load Custom Mode 5（6，7，8，9，10，11，12，13，14，15，16）
Length: 0007, Data: FF 96（97,98,99,B0,B1,B2,B3,B4,B5,B6,B7） 00 00 23 25 FF

Transparency adjustment window 1，2，3，4
Length: 0008, Data: FF AC（AD,AE,AF） 00 00 01(00--15) 78 79 FF

Resolution adjustment 1024*768 1280*1024 1280*720 1080P
Length: 0008, Data: FF 0C 00 00 00（00-03） 78 79 FF