DID LCD Video Wall Unit

User Manual

Thank you for purchasing our products. Please read this user manual carefully before using the products. To ensure the correct installation and operation, please keep the user manual in a safe place for future reference.

Important Safety Precautions

1. Power

   Please use single-phase and three wire 220V power supply with grounding. Do not use the power supply without grounding, and grounding pin can not be destroyed.

2. Power off

   Please power off the device and pull the plug when you need to move the device or do other operation that requires power outage, to ensure the safety of you and the device.

3. Ventilation

   The vents in the device are designed for ventilation.   Do not cover or block these vents since insufficient ventilation can cause overheating and/or shorten the life of the product.

4. Condition

Device working condition should pay attention to dust and moisture, in particular, to prevent the liquid soaking and splashing into the device.

5. Repair

   All repair works should performed by a qualified service person. Do not try to repair yourself without any training. To prevent electric shock, do not open the case without permission.

6. Safety Precautions

   6.1 Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.

   6.2 Do not put the device where water may drip or splash onto it. Do not put any containers with liquid on the device.

   6.3 For fire preventing, keep the device away from hear sources;

   6.4 For sufficient ventilation, device front and back panel should keep 20CM inter-space at least;

   6.5 If device occurs strange noise, smoke or smell, unplug the power cord from AC outlet, and request a qualified serviceman to perform repair;

   6.6 Please unplug the power cord if there's thunder or not use it for long time;

   6.7 Do not insert any object from device vents, as it will cause device damage or electric shock;

   6.8 Do not use the device near water or any other moist place;

   6.9 Do not use the device near heat source or any other place with high temperature;

   6.10 The power cords must be routed properly to prevent people from stepping on them or objects from resting on them;

   6.11 If any of the following conditions occurs, unplug the power cord and request a qualified serviceman to handle.

      a. When the power cord or plug is damaged.

      b. When a liquid was spilled on the device.

      c. When the product has been dropped or damaged.

      d. When the product displays an abnormal condition.

   ★ Please read the user manual carefully before using the product and keep it in a safe place for future reference.

Catalogue

Content

1. Introduction

Congratulations on your purchase of our product. Please read carefully and follow all instructions in the manual before first use.

The product should not be exposed to liquids dripping or splashing and no objects filled with liquids, such as vases, should be placed on the product.

For user convenience, a number of operations can be performed through the remote control.
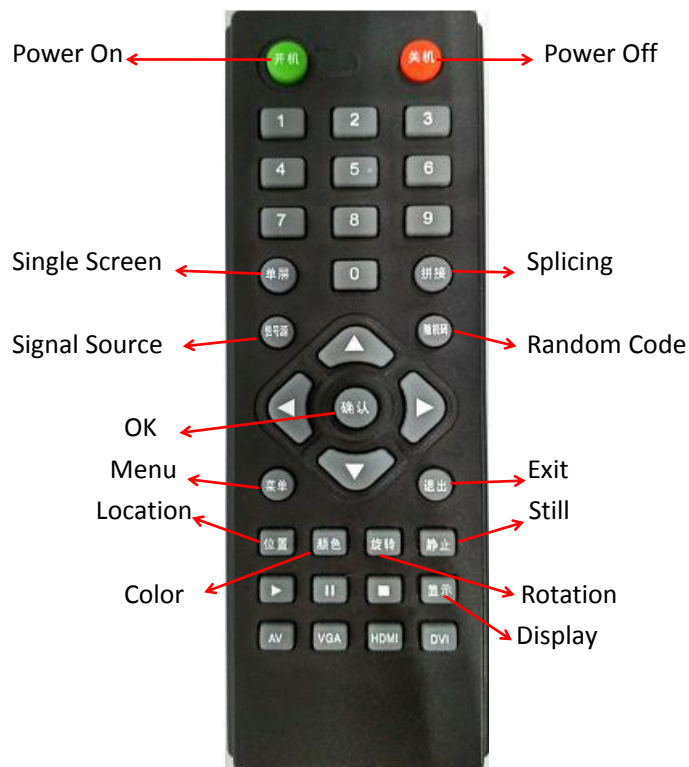
Attention:

1. Do not change any default setting when it is unnecessary.

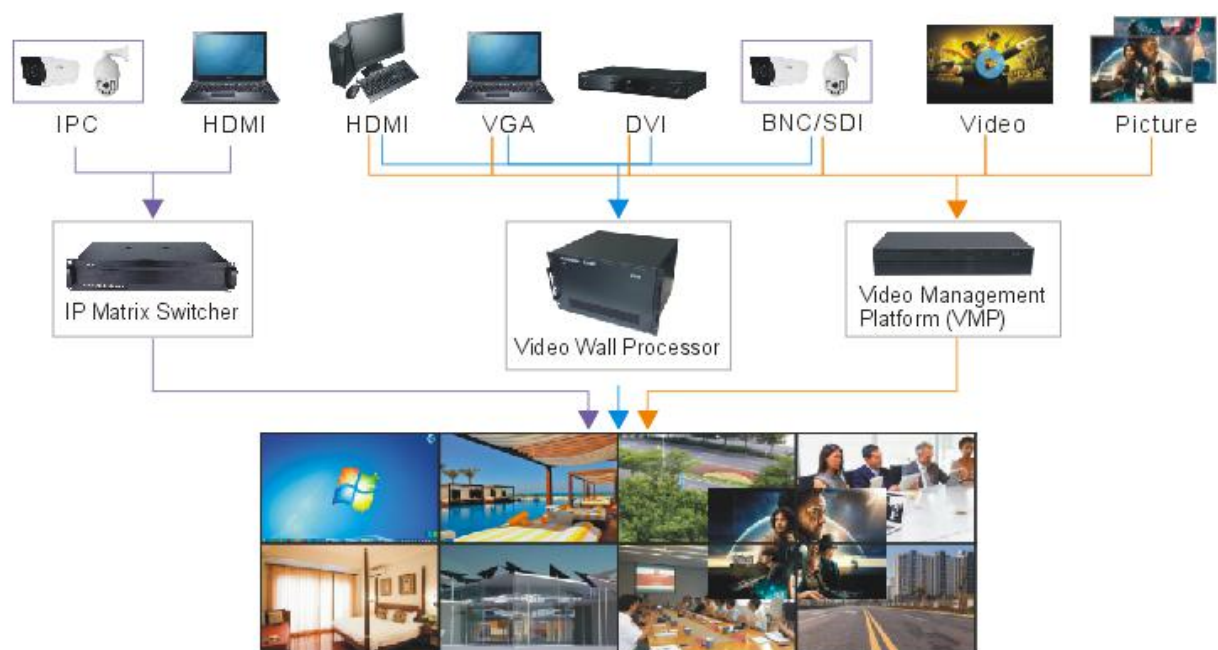2. Keep the product far away from water during installation and use.

1.1 Box Contents

1 x Video Wall Display.

1 x Power Cable.

2 x RS232 Cable.

1 x Cat 5 Cable.

1 x CD (User Manual).

1 x Remote Control.

1 x RJ45 to RS232 convertor.
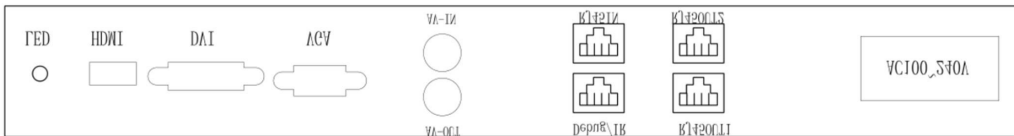
8 x fix screws.

1.2 Introduction for remote controller

①**Single screen** 单屏: after setting ID and video wall qty, press single screen, it will switch from splicing mode to single screen mode.

②**Splicing** 拼接: after setting ID and video wall qty, press single screen, it will switch from single screen mode to splicing mode.

③**Signal source** 信号源: pressing it and come out the signal channel list, you can choose the channel needed to switch;

④**Random code** 随机码: pressing this button for setting ID and choose the current screen, see the following reference.

⑤**Rotation** 旋转: Not effective

⑥**Display** 显示：Pressing this button, it will show present unit's address, resolution and version information;

⑦**Location** 位置: Under VGA signal, image will automatically adjust if pressing this button.

⑧ AV/VGA/HDMI/DVI: Signal source shortcut button. Pressing these buttons, it can switch to corresponding signal input channel.

⑨ ▶: Play button under USB multimedia mode;

   Ⅱ: Pause button under USB multimedia mode;

   ■:Stop button under USB multimedia mode.

1.3 LCD Video Wall System Topology Graph

1.4 Ports of Video Wall Display

					AV OUT		COM IN	COM OUT
DP IN	HDMI1 IN	DVI IN	HDMI2 IN	VGA IN	AV IN	IR	USB IN	COM OUT

4K 8mm bezel panel ports

FHD narrow bezel panel ports

2. Row & columns address sets in Video Wall Display

Row & columns address sets in Video Wall Display

As shown in the figure above, address code set method is as follows.

Row address switch: 1-4, column address switch: 5-8. Their address set method is according to BCD code (Binary-Coded Decimal). Each switch set is valid if dial on, value is 1, it is invalid if dial off, value is 0. Like photo below.

Corresponding video wall processor address switch for screen 1 should set as follows.

Row address=(value 1)*8+(value 2)*4+(value 3)*2+(value 4)*1

        =0*8+0*4+0*2+0*1=1

Column address=(value 5)*8+(value 6)*4+(value 7)*2+(value 8)*1

        =1*8+0*4+0*2+0*1=1

Corresponding video wall processor address switch for screen 1 should set as follows.

Row address=(value 1)*8+(value 2)*4+(value 3)*2+(value 4)*1

        =0*8+0*4+1*2+1*1=3

Column address=(value 5)*8+(value 6)*4+(value 7)*2+(value 8)*1

        =0*8+0*4+1*2+0*1=2

3. Introduction for Video Wall Software

3.1 Software for 4K 8mm panels

Installation and application for PC client software Multi-Screen Display System.

System running environment

  Operating system: Windows 7/8/XP   CPU Minimum configuration: Pentium 133Mhz

  RAM: 128MB

  Video card: standard VGA, 256 colors display mode and above

  HDD: typical installation 10M

  COM port: standard RS232 communication port or other compatible ports

  Other device: mouse

Start-up System

  Please make sure below connection normal before running the system.

  1. PC's RS232 cable for running the system already correctly connected to the controller.

  2. The related controller's signal cables, power cables are correctly connected.

  System running steps:

    1. Power on controller, the power indication led will be on. Greens means the device are in running status, orange means the device is in standby status.

2. Running the software

Find out folder for the control software, click Multi-ScreenDisplaySystem.exe to run. It will come out the interface as below.

(with the different software version, below operating interface and its content will exist some difference. Please contact the sales for details)

3.1.1 Method of setting soft address.

After all video wall displays are finished mounting, the first step is to set each unit's soft address. It will create random code when first starting the device. (the default random code is 00000, it needs to reset the random code). According to the random code, it can set video wall unit's corresponding correct address.
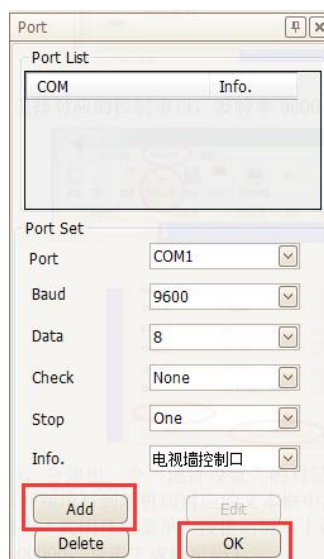
Method 1: Set via control software

A: open control software "wall system", and click upper left icon, choose login, and input user and password.

User: admin   Password: welcome

B: Click Setting -- Port, to choose corresponding control port. Baud rate is 9600, and click Add -- OK. Like picture below.

C: Click ID Set (figure 1), it will pop up a message box for address set (figure 2). Meanwhile, the video wall will display a random code, please fill 5 random code numbers in the corresponding text box, and then write the display's level address and vertical address, and click Apply. Click close button, random code menu on displays will disappear. And then correct address setting finished. (Default Random code is 00000, it needs to click generate random to get random code).
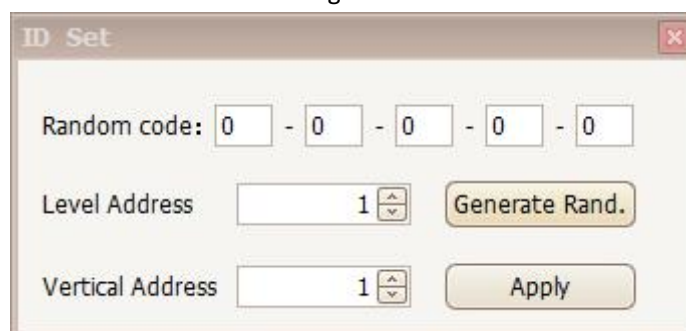

Figure 1

Figure 2

Method 2: Set address via remote controller

A: Press Random Code (随机码) button, it will come out the image below(figure 3), and choose "IDSET"

Figure 3

B: After clicking OK, it will go to the interface as figure 4. Please input corresponding random code and click Enter.
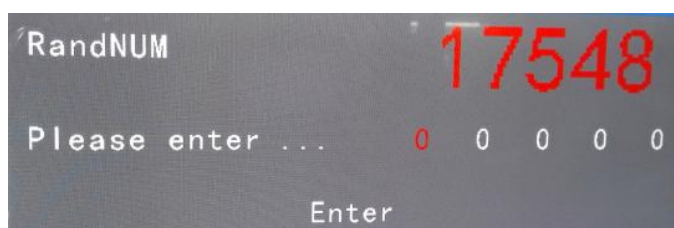

Figure 4

C: After above steps, it goes to the interface as figure 5, input corresponding wall's address and splicing qty, then it finishes address setting. (system default random code is 00000, please click and reset it)
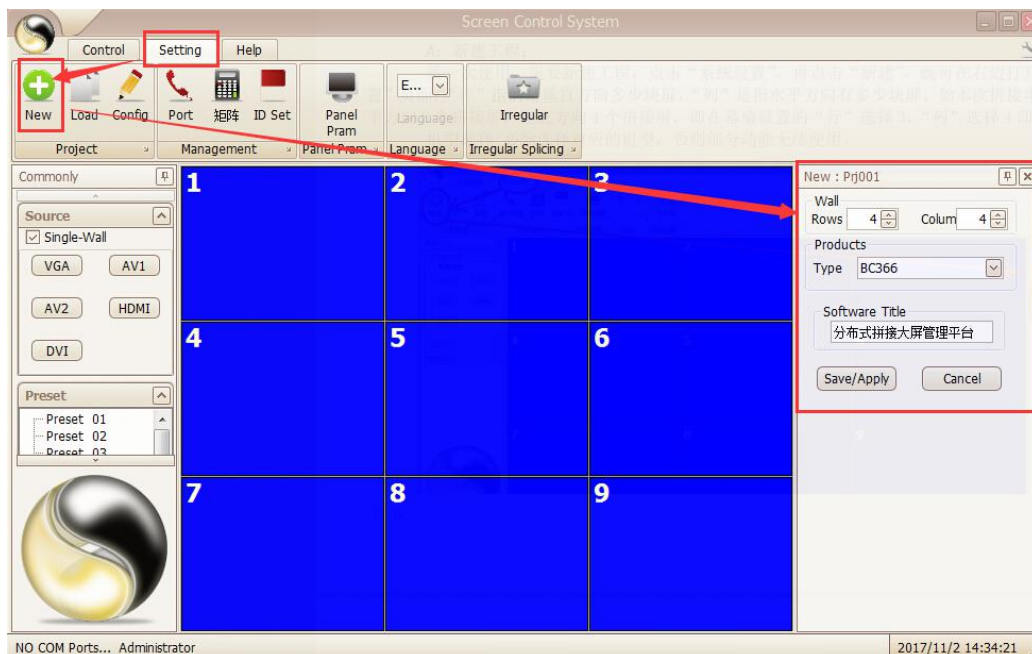

Figure 5

### 3.1.2 Video wall Setting

A: New project

For first use, it needs to add new project. Click Setting -- New, then it will come out new video wall page on right. Rows for how many screens in vertical line, Column for how many screens in horizontal line. For example, if the installed video wall horizontal lines have 3 screens, and vertical line have 4 screens, then wall set should be Row 3, Column 4.

Type: must be corresponding drive board type, otherwise some function can not use.


B: Wall solution

Click to choose the unit that needs splicing(as figure below), and choose the signal source from left message box, then it will finish video wall combination. If choose single-wall, it will show in single screen.
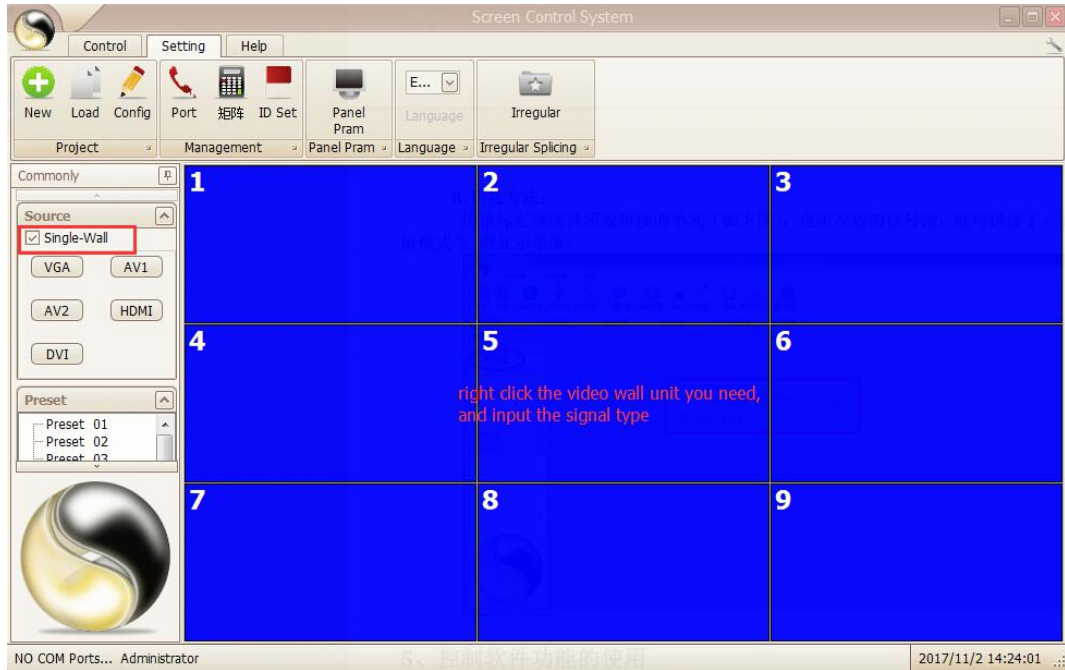
3.1.3 Function use for control software

After video wall combined, if you need to obtain some screen unit's specification, then just choose its screen coordinate on software, and click FUN, it will come out the detailed operation items as below.

For example, if you choose screen 5 and adjust its OSD transparency, the operation will be:

Click screen 5 -- click FUN, the right box will show the detailed items. You just adjust OSD transparency.
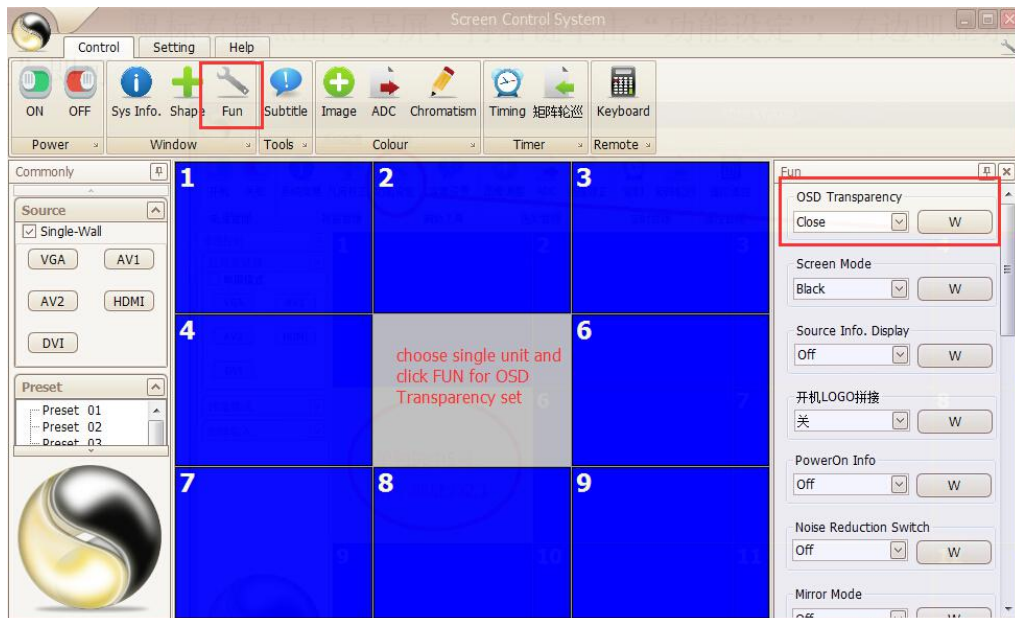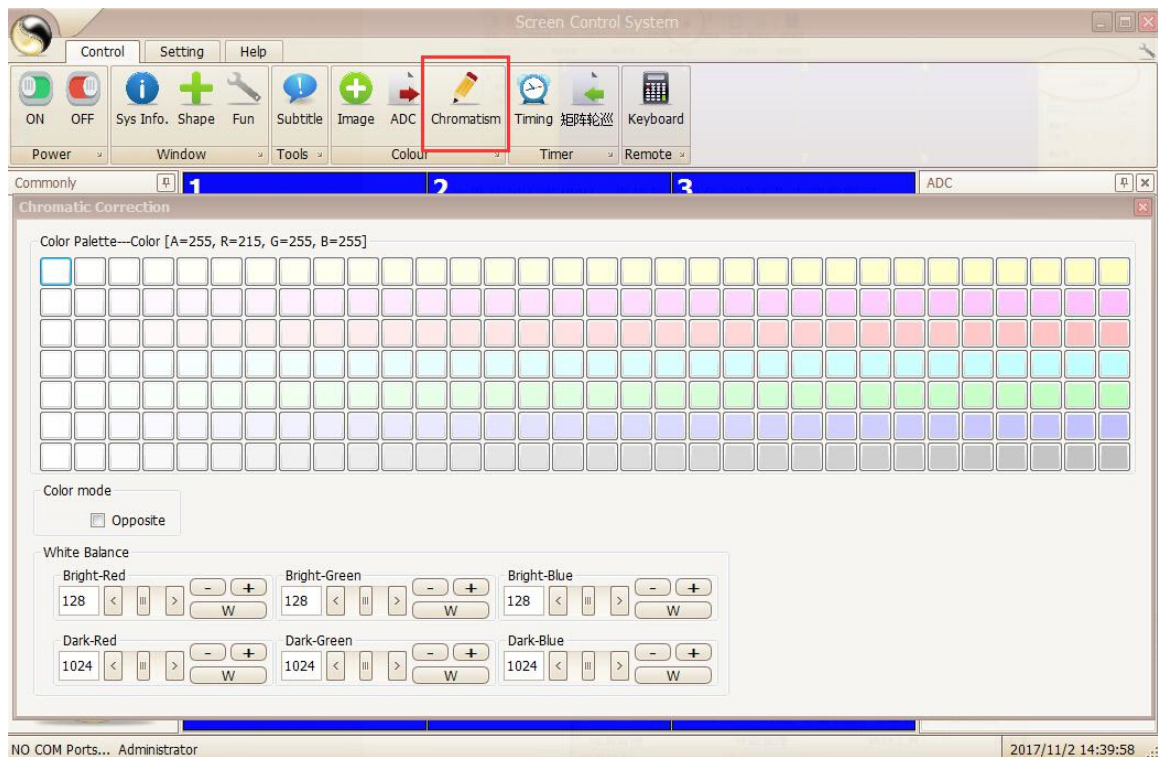
3.1.4 Adjustment for color difference on screens

If the signal is VGA, please set the video wall display to gridiron pattern, and then find ADC function in control software, and click auto color adj. for adjustment.
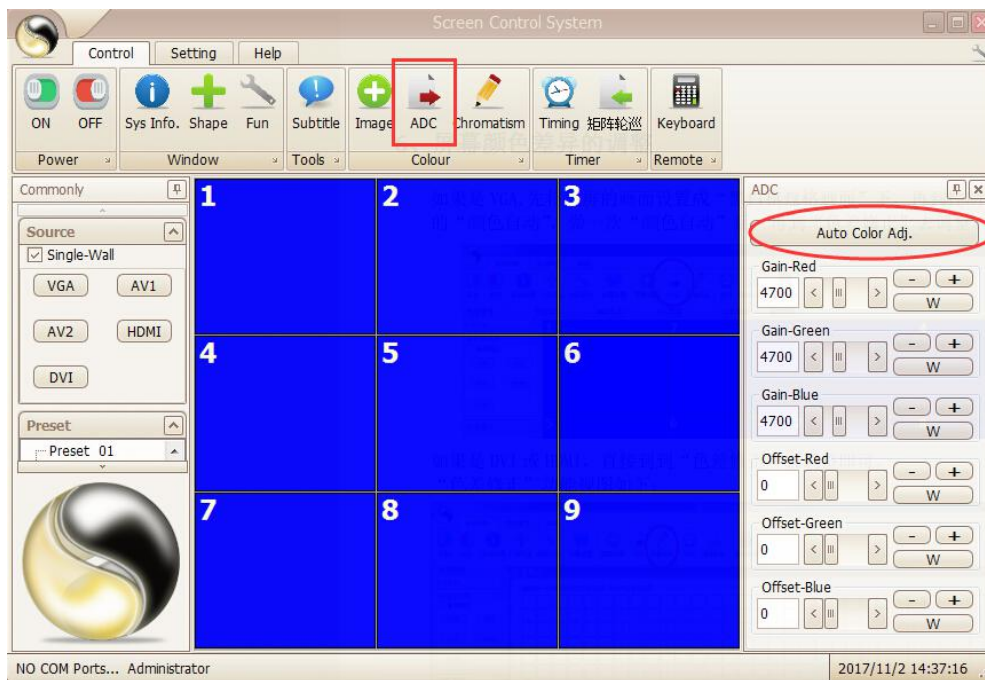

If it is DVI or HDMI signal, just go to Chromatism in control software for adjustment. (as figure below)

According to the colors in color palette, you can set any color as you want.

3.1.5 Save preset and call

Choose certain preset in Preset mode, and right click the mouse to choose save preset, it will save the current specification to the chose preset. It also can rename the preset with clicking Rename. Double clicking the preset can call the chose preset's specification.
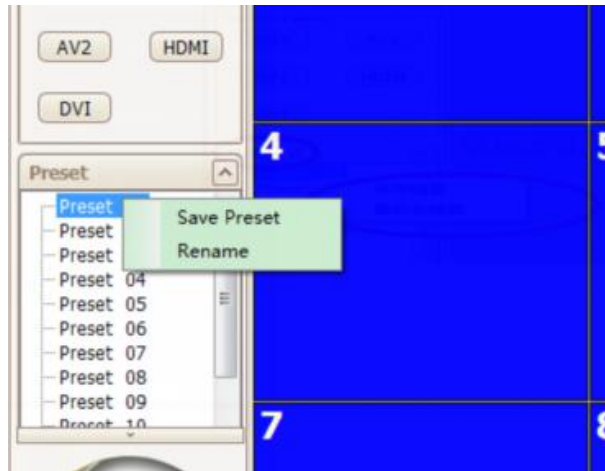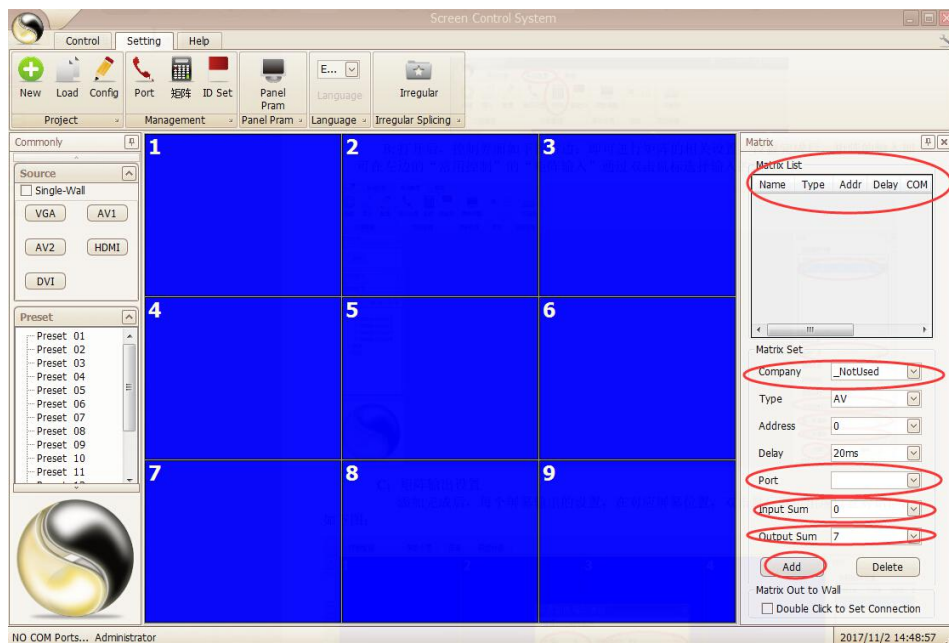

3.1.6 Matrix input

A: Choose setting--矩阵(matrix), and click, as figure below.

B: After that, control interface will come out as right part of the figure below. Then you can do the settings for matrix. After setting, you can set matrix input at Commonly--Matrix input to choose input port with double clicking.

3.1.7 ISP(Firmware update)

Copy the "BC3XX. bin" to the U-disk , U disk inserted into the board on the USB port, and then power on (by Alternating Current), the mainboard would automatically into upgrade mode, the corresponding power light yellow green flashing hint upgrade, with light green light is normally on the upgrade is complete.

3.2 Software for FHD narrow bezel panels

3.2.1 Software upgrade

3.2.1.1 Instruction of software upgrade

The upgrade methods of multi-display screen splice box / M59W included two ways: 1, USB upgrade 2, ISP upgrades

3.2.1.2 USB upgrade steps

(1)First, you need to copy the update software to the U disk, name the software to:
FLW_V59.bin

(2) USB connected to M59W board through the USB port RJ45 line, shown as following
pictures：

※It will automatically upgrade after switching on the power supply, the power light blinks during upgrade process, when the light not blink it means the upgrade is complete, the large-screen box will automatically start after complete update.
You can also control the upgrade through RS232 control software.

3.2.1.3 ISP upgrade

First the computer install ISP tool drive →connect ISP tool to M59W board CN3 port, plug in M59W. → Open ISP_Tool and click [Connect] it will pop up the chip after the connection is successful, shown as follows.
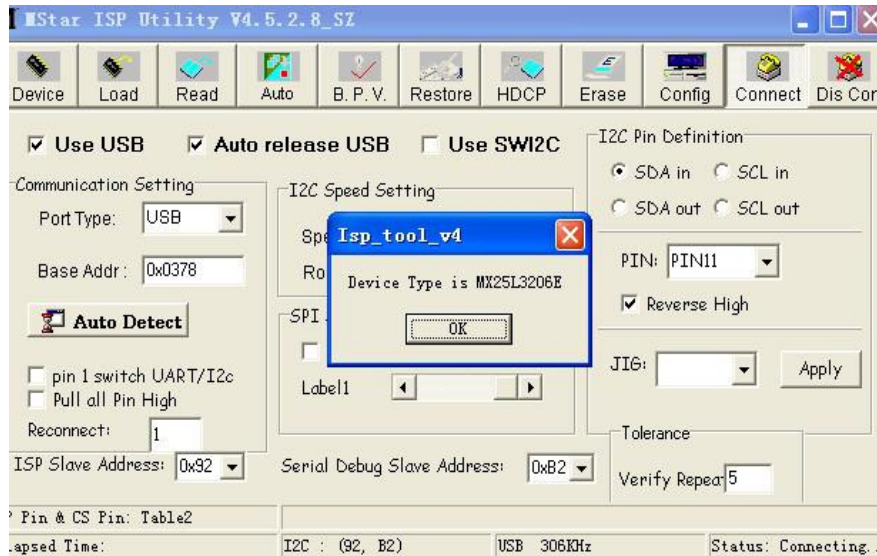
Click main page the "read" button [Read] choose the software route which need to upgrade. Click the main page "auto" [Auto] then choose "run" to enter the upgrade.

Upgrade successful shown as following picture:
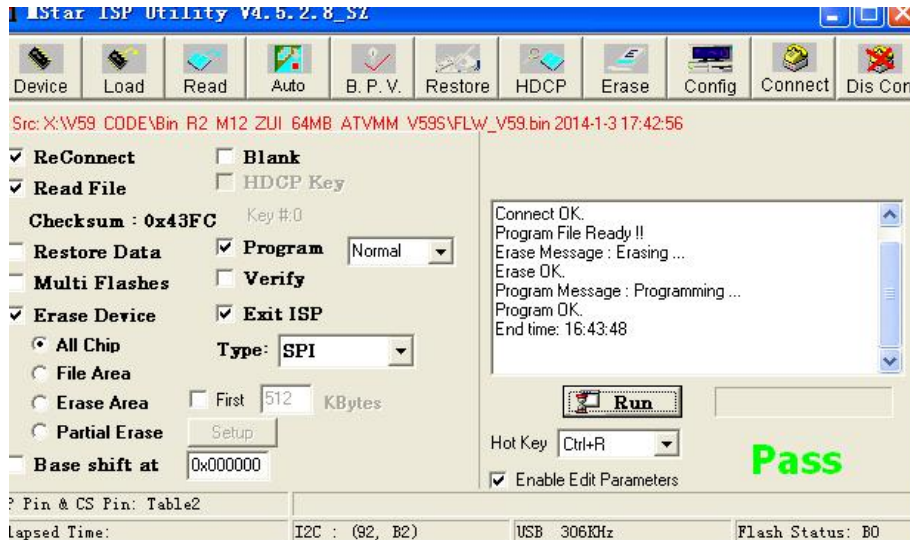
3.2.1.4 Analysis of common problems:

Click "Connect" but can't connect to M59W boards, Please check the following points:

1. The motherboard is already energized;

2. Check ISP driver works well or not.

Click ISP main page

Usually the normal situation as below:

If the 2 items above are gray, it means the computer does not recognize the ISP tool.

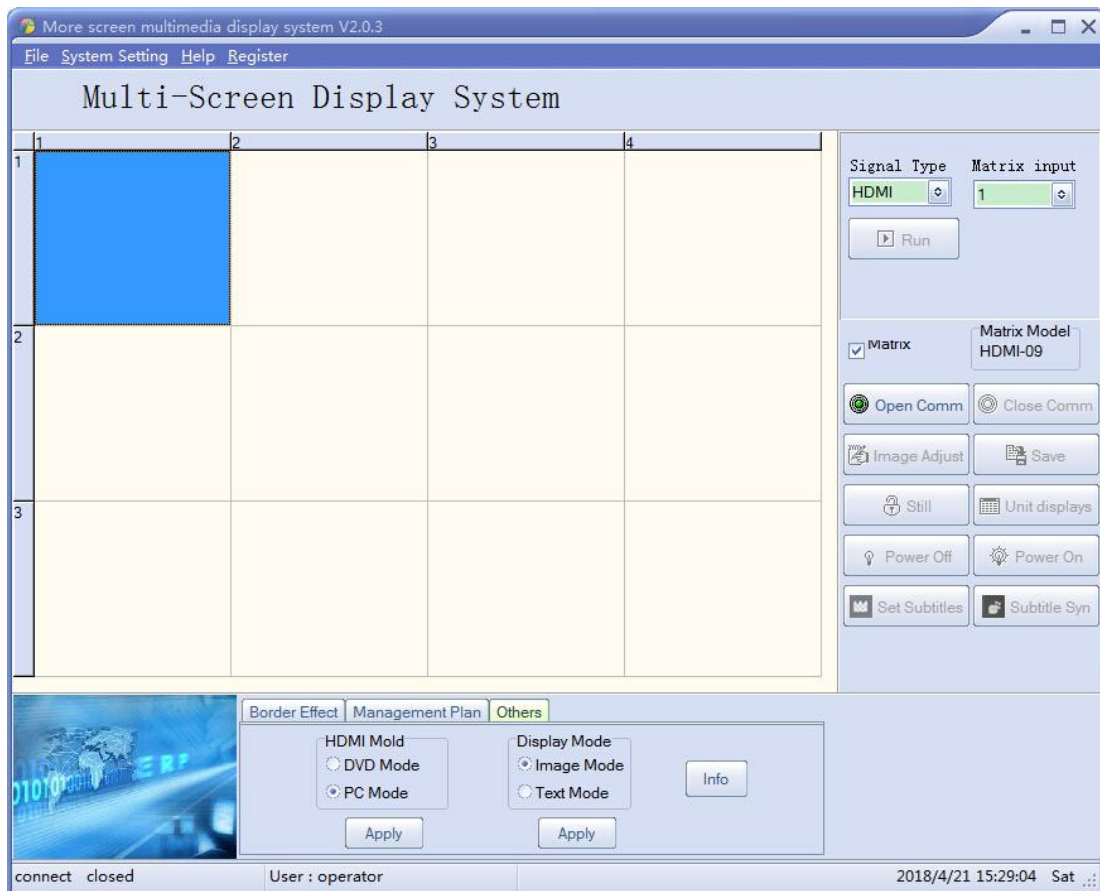3. See ISP tools wire and M59W board is connecting correctly or not.

3.2.2 Software Instruction

3.2.2.1 Running steps

1) Turn on the controller power supply,the indicator will be on.

   Green for running status; Orange for standby status.

(2) Run the softare: Locate the control software folder, click and run FWM.exe. The program user interface is as follows.
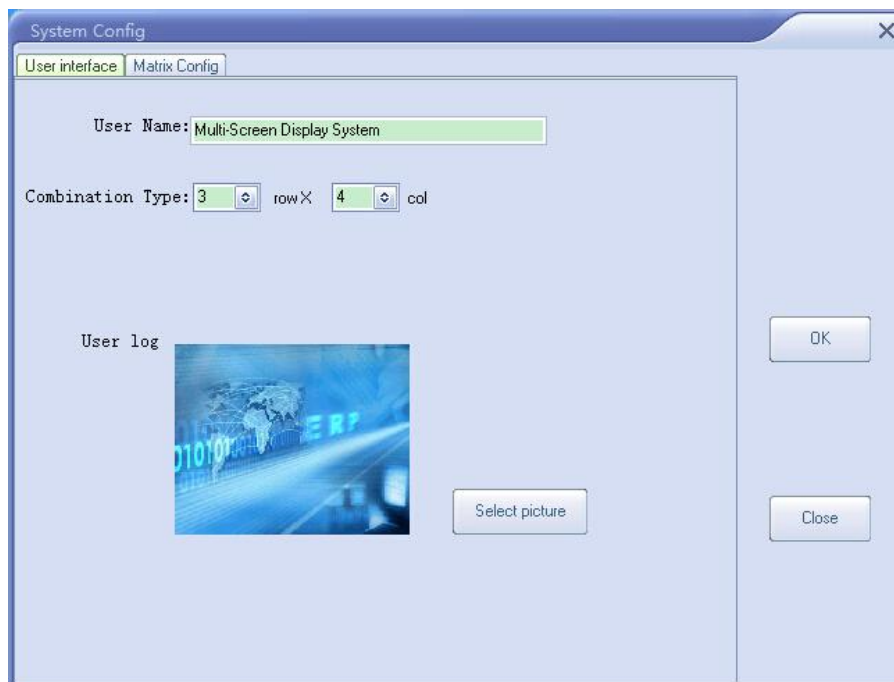
3.2.2.1 COM Configuration

Single click "System Setting"--"COM Setting", and choose the correct COM port number, then the system can work normally. Users can set auto open the COM port when running the program.

3.2.2.2 System Configuration

Click the main menu "System Setting" — " System Config", it will show the interface as follows.
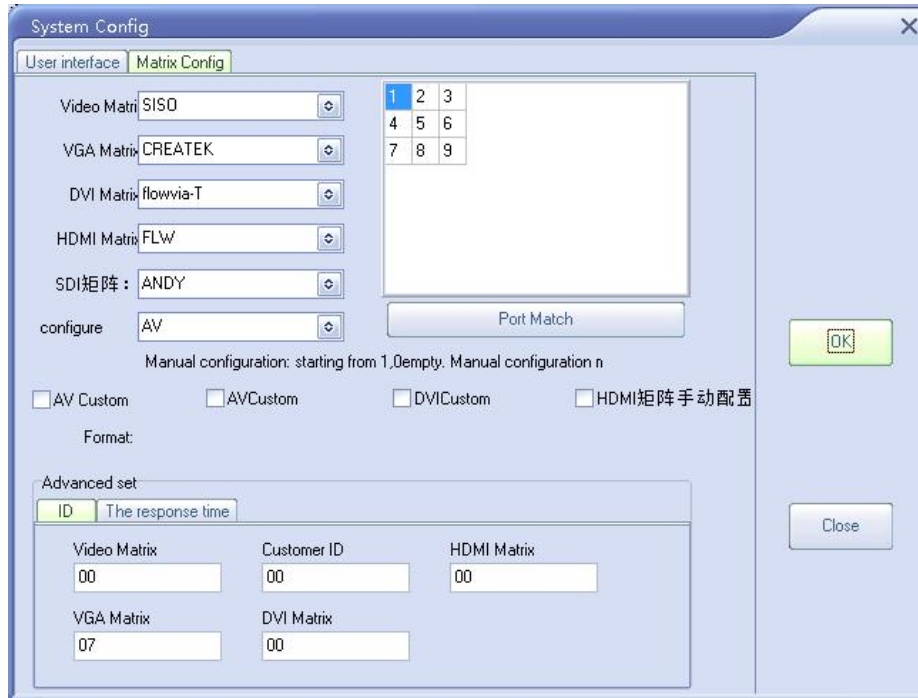

User Name: the title of the defined user interface display, which can be freely set.
Combination Type: choose the same combination type as your installed video wall, such as 3X3, 4X6, etc.
User logo: choosing the logo for the software user interface. It can be freely changed and saved.

3.2.2.3 Matrix Configuration

Click System--System Setting--Matrix Config

Select matrix model and set the address.

Port Match: This is corresponding matrix output channel to the video wall. E.g: the first screen on video wall corresponds to matrix's first output channel, and so on.

ID: it's for matrix address setting. If the address is unknow, please contact matrix manufacture.

The response time: the time between matrix and video wall controller's command.
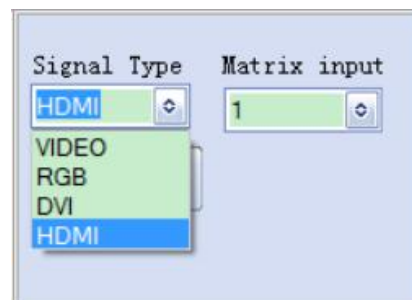
Time interval: time between matrix's command.

3.2.2.4 Splicing Operation

1) If serial port is not in open status, please click "open comm", then it can do splicing operations.

2) Please select the signal type according to your system: VIDEO, RGB, DVI, HDMI

3) If there's matrix, please click √ on matrix linkage. It can choose matrix ouput channel which needs to be displayed.

4) Combination area. Take the below picture as example, the system is 6x6 layout, and it needs to make coord (2,2)~(4.4) area as a 3x3 video wall display. The signal type is VIDEO, and matrix input channel is 1. the steps will be:

   a. Keep left clicking and moving the mouse from grid (2,2) to (4,4), and then realease the mouse, the blue area is selected as combination area.

   b. Select signal type "VIDEO", and Matrix input "1", and click "Run"(it can be clicked when COM is open) . And the system will response and do the combination operation.
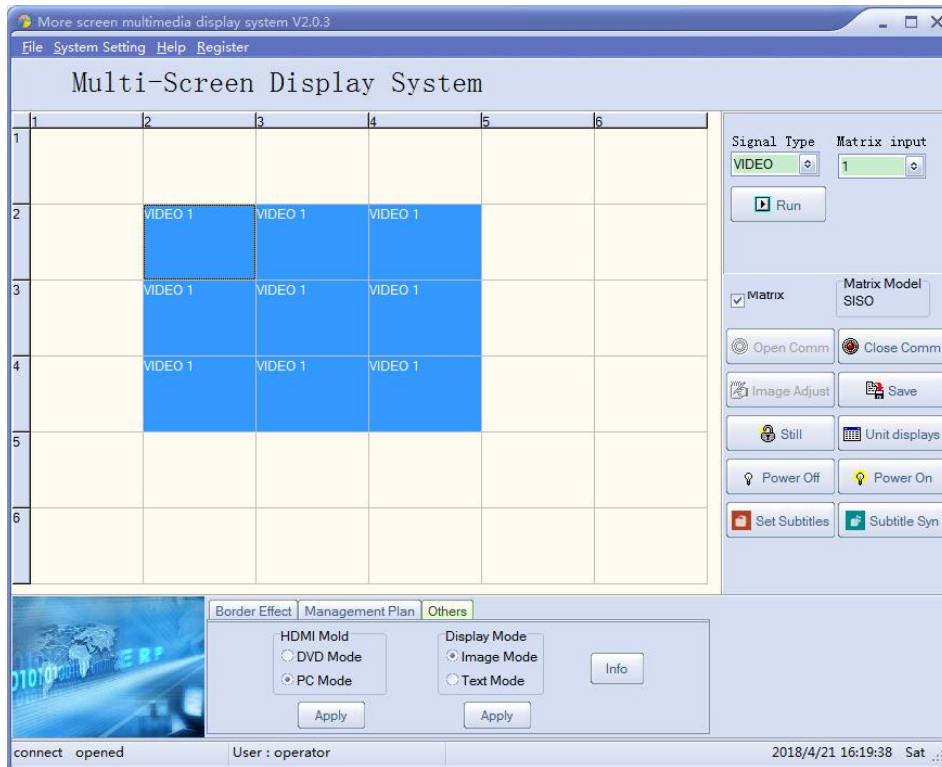
Note: If the current combination status needs to be saved, please click "Save" in function area. Then the currenty combination type will be saved in controller's memory. It will restore the previous status after power off and restart.

"Save" will need 2~3 seconds. Please do not do other operation of power off after clicking this button.

3.2.3 Soft ID setting

a. First connect RJ45 cable to the video wall display's COM port, and open the control software. Login "Administrator" and input "3366", and then choose "ID Setting"--"Produce UDID"
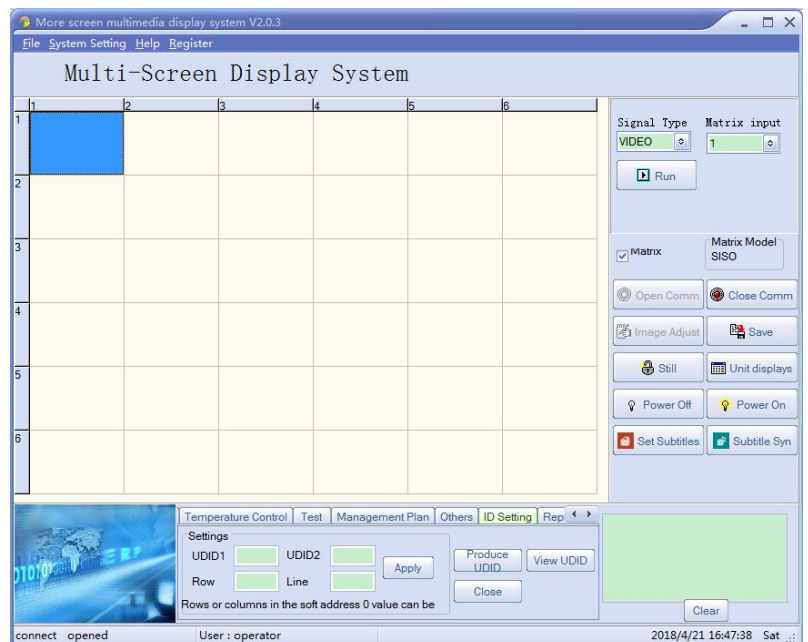
b. Then the video wall display will show different random code. According the random code, select the screen which needs to set soft ID. The display will show as follows.
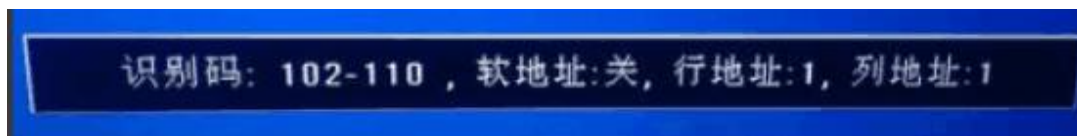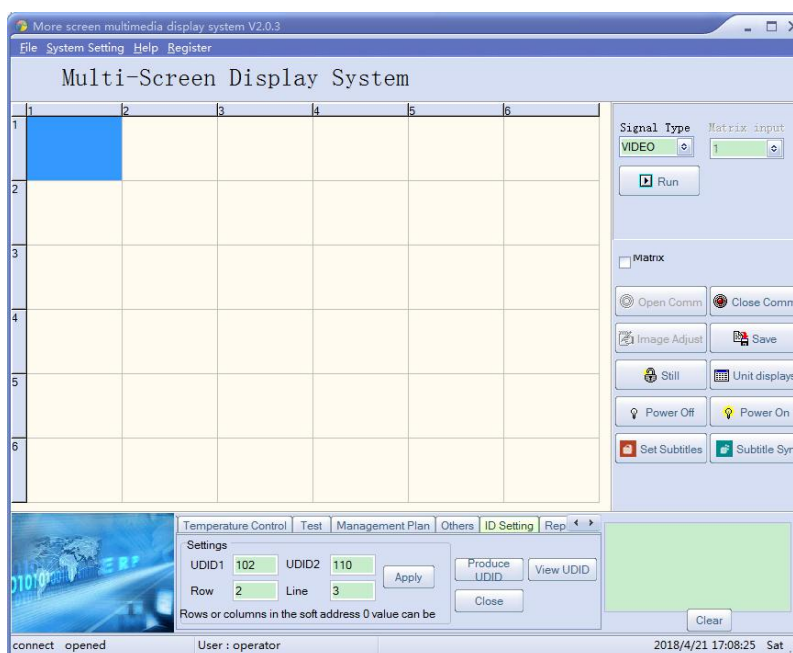

ID code: 102-110, Soft ID: OFF, Row ID: 1, Column ID: 1

c. For example, we want to set the screen which shows ID code 102-110 as row 2 and column 3, then just input 102, 110 on UDID, and input 2, 3 on row and column and click "Apply".

d. After click "Apply", the screen will show as follows.
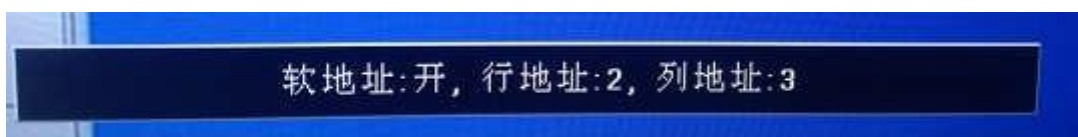
Soft ID: ON, Row ID: 2, Column ID: 3

e. Then the screen is set to the row 2 and column 3, and other screens set as same instruction. After setting, click "Close (menu)" , it will close screen displays.

Note:
  1. If the video wall is first used, please click"Produce UDID" first.
  2. If the screen does not show menu, please check whether the serial control cable between PC and video wall connects well.

4. Troubleshooting

When the display has problem, do not try to take it apart for repair, it may cause the products worse defect. You can clear the problems with following steps. If problems are still not solved, please contact local distributor or professional serviceman. It will not be in warranty range if the products are repaired by user himself.

1. The product can not start. (Power indication LED is not on)

    a. Check whether the power cables are damaged;

    b. Whether the monitor are connected with power supply;

    c. Whether the power supply is ON;

    d. Whether power switch is damaged;

    e. whether fuse is fusing.

2. It prompts PORT ERROR when Running control software

    a. COM port for control software is not open or is damaged, please check COM port connection status or change COM cable or main control PC;

    b. COM port with USB to RS232 is not correctly installed. Please correctly install USB to RS232 device.

3. All video wall unit can not controlled

    a. Check the port set for video wall software is correct;

    b. Check whether COM cable is damaged, whether the video wall unit has good connection to
     PC port;

    c. Check if PC COM port has problem, or you can change another PC for test;

    d. Whether video wall unit's address set is correct, see ADDRESS SET for reference.

4. Individual video wall unit can not controlled

    a. Check whether this unit's address set is correct;

    b.Check whether it can be successful to control this unit separately;

5. Single or multiple device signal can not input

    a. Check whether the video wall has good connection to signal source port;

    b. Test with another signal cable;

    c. whether the device is set to corresponding input status;

    d. Whether the input signal is beyond the video wall input ability range.

6. Image can not display

    Possible reason: No input signal; Signal channel is not switched well (i.g: input VGA signal, the channel choose on VIDEO, video input and output inversely connected); output signal cable damaged

    Solution: Check input signal, adjust the status for the input device that needs to display;

             Confirm the input channel and make channel switch with control software;

             User good quality signal cable, to ensure the image's stability and high quality.

7. Images has color cast problem

    Possible reason: Signal port does connect well, loosen makes poor connection;

             Signal cable damaged;

             Color adjustment for display device is incorrect;

             Over color adjustment through control software.

Solution: After signal port connected, fasten the fix screws, to prevent the looseness from pulling;

Change another better quality signal cable;

Refer the user manual, to adjust display device's color balance;

Re-adjust color through control software.

8. Incomplete display, black edge occurs

Possible reason: Adjust too much on image's position through control software

Solution: Re-adjust the image's position through control software, to get the effect you need

9. Some video wall unit has splash, flutter or sports.

Troubleshooting: Signal cable too long cause sever signal damage;

Input signal device unstable or cable damaged.