



**All In One  
- Feikong LED Display  
Control Solution**

# **User Manual Of FK Show Tool --LED Picture & Text Edit Software**



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Version history:

Version	Date	Author	Description
1.0	2014.10	Zhong	1. First revision translated by Cai Xiao Liang



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## LED Picture & Text Edit Software

### 1. Brief

#### 1.1 FK Show Brief

*Thank you to choose Feikong LED control card product, as well as to have your precious time to know this FK Show software tool, it's our great honor to serve you or your customer through our products.*

*FK Show Software tool is professional picture & text editing tool for Feikong Tech's LED control boards' products, with variant of contents and functions, stability, easy operation, is receiving wide appraisal from our clients and final users.*

*Since 1<sup>st</sup> version of FK show (picture & Text Edit software tool) was released in 2009, the software's tool's function has been extending more and more with much stable performance, inherent with the company's product strategy "All in One", which means this one SW tool to provide service to all Feikong Tech's products and external device, bring convenience and save program design time and cost to customers.*

*Special appreciations are given to those friends and customers who have ever given generous support and suggestion during last several years to promote this SW tool's development!*

*Please forgive there are some material in this user manual, we cannot find English version, and we have to add some text interpretation.*

*Any questions and suggestion about our products are welcomed, our contacting method is:*

***Cai.xiao.liang@QQ.com***

***Service1@FeikongTech.com***

#### 1.2 FK Show Main characteristics

SW Brief introduction

- ◆ This SW tool support 3<sup>rd</sup> generation Feikong Tech's LED control boards or later version

Supporting control boards including

- ◆ The 4<sup>th</sup> generation
  - Q Series: FK-QU4,FK-QU4+
  - S Series: FK-SU4



M Series: FK-MU4

A Series: FK-A4,FK-AU4,FK-AU4+,FK-AX4

B Series: FK-B4,FK-BU4,FK-BU4+,FK-BX4,FK-BW4

C Series: FK-CU4+,FK-CX4

D Series: FK-DU4+,FK-DX4,FK-DT4

E Series: FK-EU4+,FK-EX4

The 3<sup>rd</sup> generation:

S Series: FK-SU3

M Series: FK-MU3

A Series: FK-A3,FK-AU3,FK-AU3+,FK-AN3

B Series: FK-B3,FK-BU3,FK-BU3+,FK-BN3

C Series: FK-CU3+,FK-CN3+

D Series: FK-DU3+,FK-DN3+

E Series: FK-EU3+,FK-EN3+

### 1.2.1 FK Show Main Characteristics

The outstanding dominance of FK SHOW LED tool includes high efficiency, stability and accessibility, with main aspects below:

- 1) Abundant program division and animation material
- 2) Friendly & simple operation
- 3) Cool animation support
- 4) Varian program type(Typical, antithetical couplet and cross types)
- 5) No limited division

### 1.2.2 FK Show main functions

FK Show is one of the most powerful LED picture & Text editing tool in the industry with fundamental functions :

#### 1) Group Management mode

- ◆ Display management: Support 256 display screen.
- ◆ Program management: Support 256 program for each display screen.
- ◆ Division management: Support 256 division for each program.
- ◆ Group Transmission: Support transmission to more display screen one time.

#### 2) Vivid program types



- ◆ Typical program: Row display screen, widely applied type in the market.
- ◆ Antithetical couplet type: Support to define upper, left and right couplet based on user demand.
- ◆ Cross type: Support to display the program at cross type.

### 3) Rich text division

- ◆ Character's division: the characters' gap in one row can be adjusted; Support Multilanguage edit; Support 7 color characters and background; support extending, compressing, up move, down move, row reading, column reading; support different kinds of alignment.
- ◆ Text division: the characters' gap, rows' gap can be adjusted; Support Multilanguage editing, support 7 color characters and background; support extending, compressing, up move, down move, row reading, column reading; support different kinds of alignment.
- ◆ Cool Text division: Support text effects including dynamic left-right swing, horizontally rolling over, support 7 color text and background.
- ◆ Table division: support 7 color characters and background; support Multilanguage editing; support cell emerge, divide; support Excel and WPS file download, no format change when repetitive download.
- ◆ Picture division: Support jpg, bmp etc. format picture; support rolling, turning effect, part view and reediting.
- ◆ Animation division: Support AVI, Flash animation, ; support rolling , turning effect, part view and reediting.
- ◆ Date division: support variant format and font's date's display.
- ◆ Clock division: support to define own style clock display
- ◆ Time counting division: support to define own style time counting.
- ◆ Lunar calendar division: support to define own style lunar calendar.
- ◆ Weather forecast division: support automatic reading and updating of weather forecast in most cities.
- ◆ Temperature & humidity division: Support temperature and humidity display.
- ◆ Text picture division: Support to display text, picture and animation in same area.

### 4) Colorful frame and background effect

Support plentiful colorful and vivid frame and background effect for program and division.

### 5) Visible editing environment



The contents division can be dragged, expanded, compressed and aligned freely according to user's demand, support program preview in tool, to check the performance no need upload to display screen, simplify the program make process and save time.

The editing environment support copy, cut, paste function between display screen, program and division. And support Ctrl+C, Ctrl+V, Ctrl+T, Delete etc. Shortcut for better operation experience.

6) Network communication

- ◆ MAC bonding mechanism, no need IP set, automatic detection, identification and connection.
- ◆ Support point to point connection, Ethernet connection and internet connection.

7) Upload function

Support all control cards' program and screen parameter upload to computer, no need worry the lost of the program on site.

8) Online upgrade function

- ◆ Support automatic upgrade of FK Show online.
- ◆ Support one lie upgrade of all kinds of FK control boards' firmware.

9) Language function

- ◆ Support many countries' language around the world

10) FK Unique functions

- ◆ Free division function
- ◆ Automatic weather forecast function
- ◆ Antithetical couplet type display function
- ◆ Table format keep and save function
- ◆ Program upload function
- ◆ Online upgrade function
- ◆ Text, subtitle vertical reading function
- ◆ Free switch of typical screen and stage screen

More functions and features will come soon, please keep your attention to our website!



## 2. Software modification and update



### 3. FK Show Picture & Text editing tool's interface introduction

FK Show Picture & Text Editing tool is Ideal environment for LED display program design, edit, preview and downloading.

#### 3.1 Install FK Show

The procedure of FK Show installation:

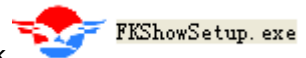
1) Find the official website of Feikong Technology and find the FK Show :

<http://www.fk189.com/a/download/> as below:

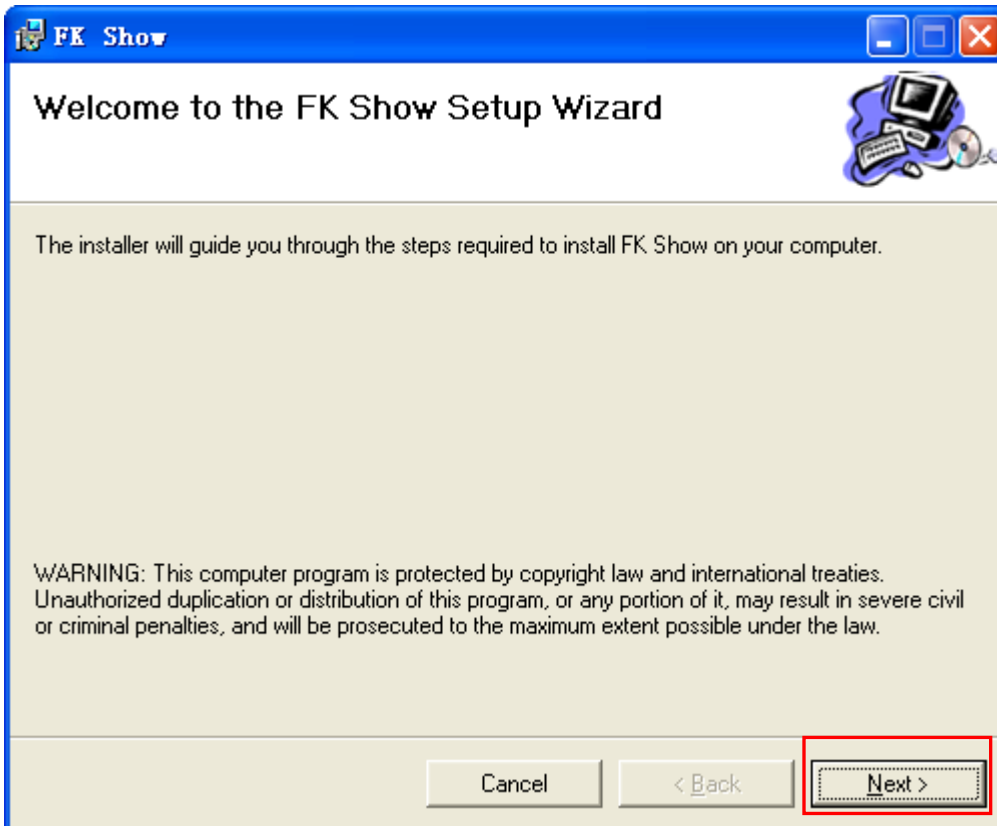


Pic.3-1

2) Download the file to local disk, decompress it and click

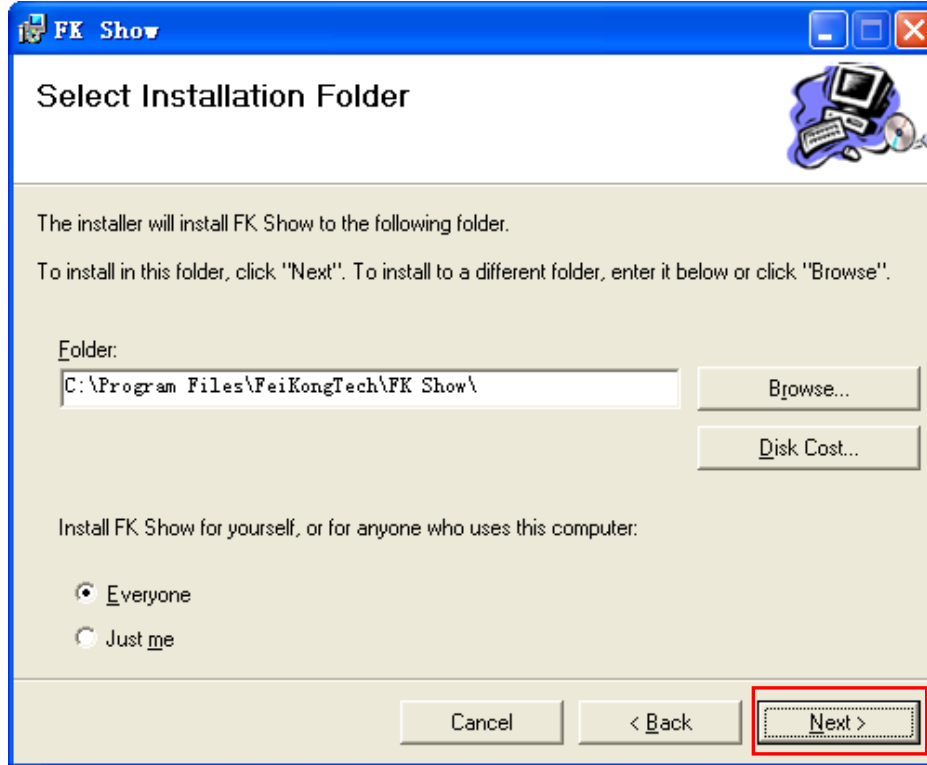


3) Screen show installation page as pic3-2, click “next”



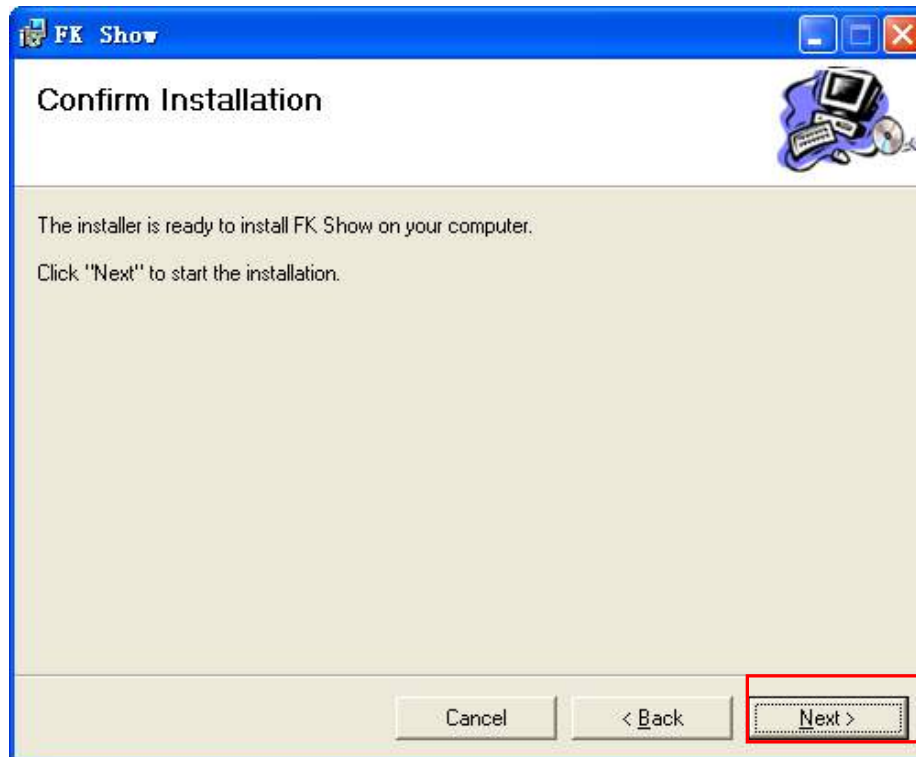
Pic.3-2

4) Then click “next” in the showing picture 3-3 below



Pic.3-3

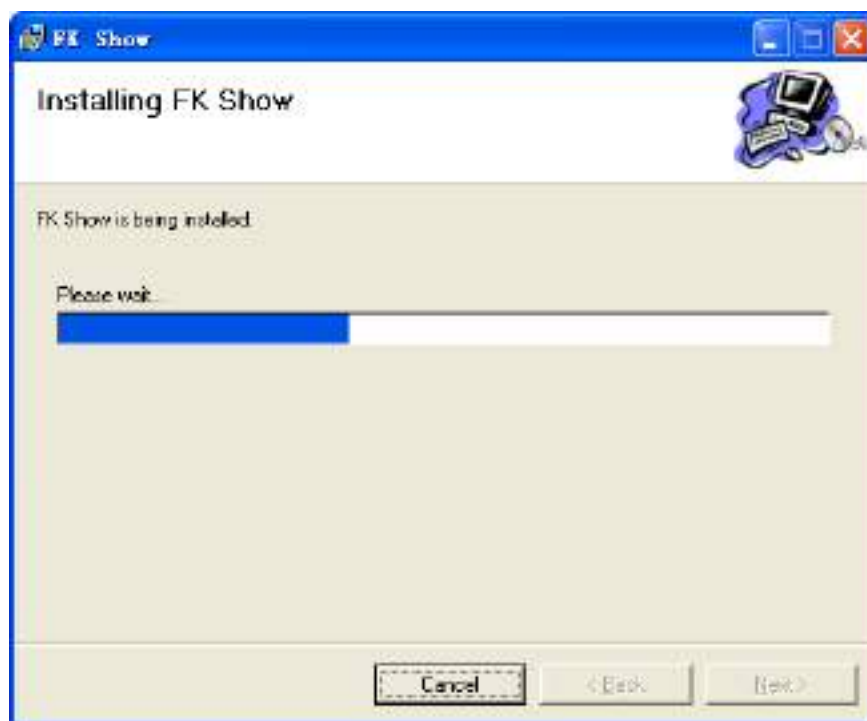
5) Then click “next” in the showing Pic. 3-4 below:



Pic.3-4

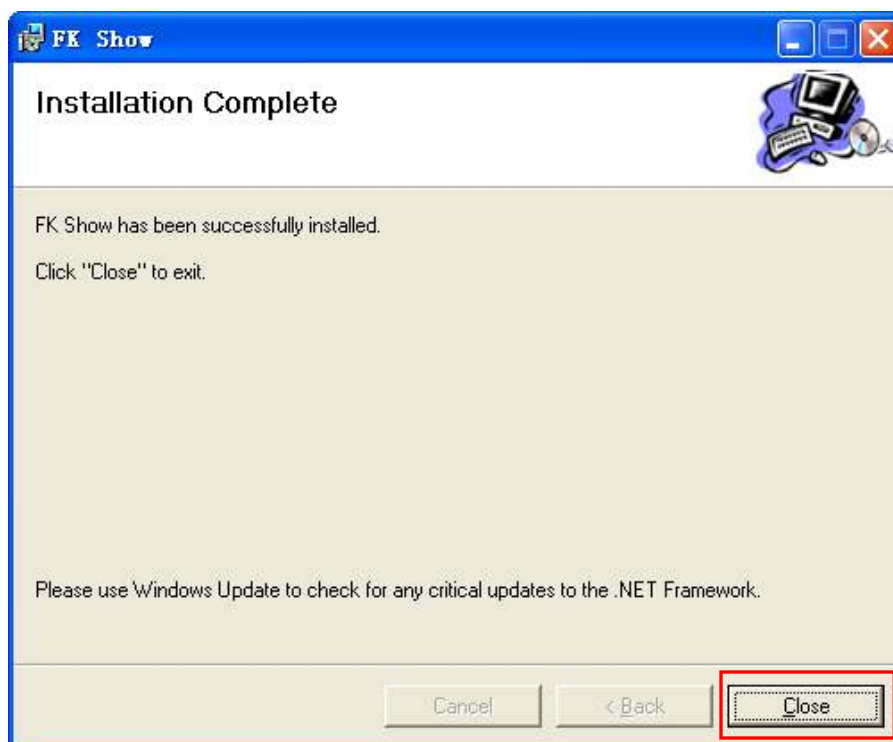


6) Wait for the finish of the installation. See Pic. 3-5



Pic.3-5

7) Click close when installation is finished. Pic.3-6



Pic.3-6

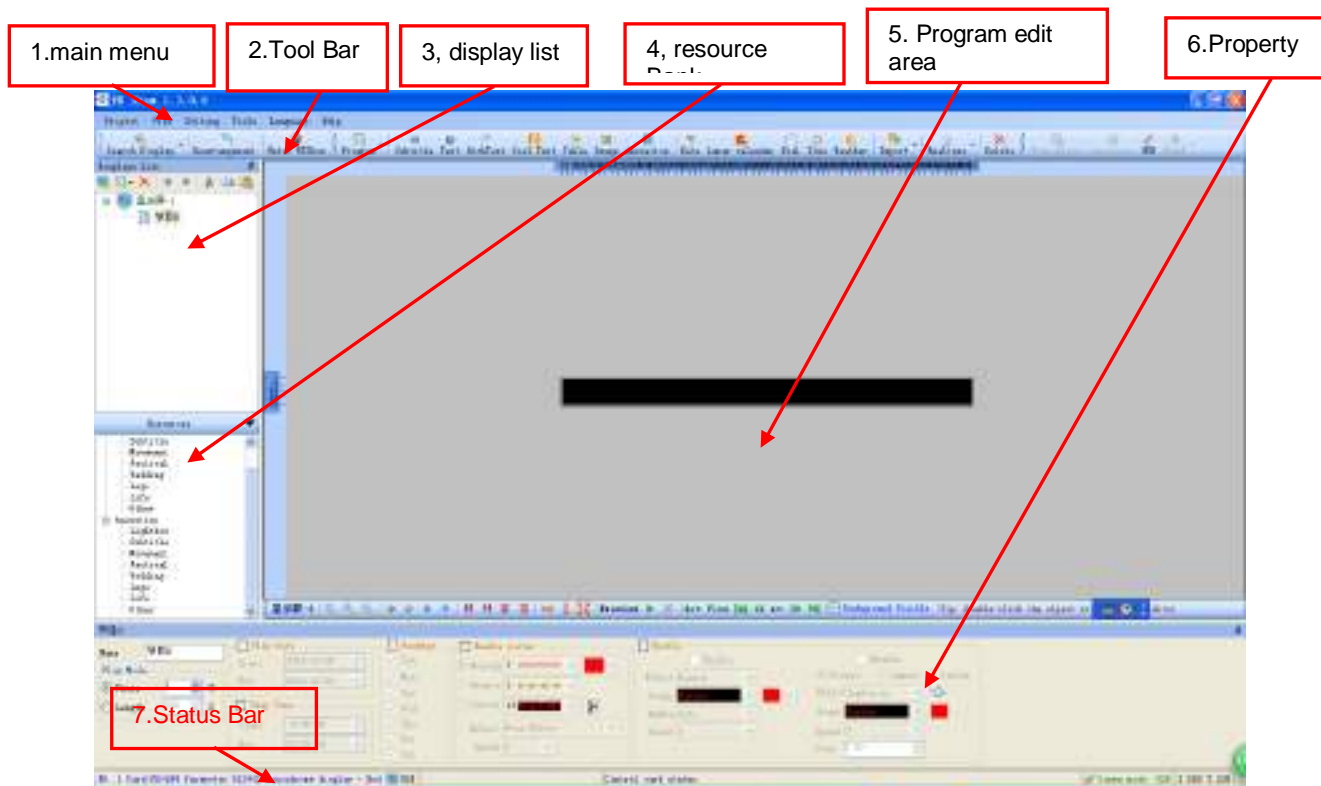


### 3.2 Start FK Show

FK Show starting procedure:

- 1) Click “start” manual at left bottom side of Windows task panel.
- 2) Select all program, find “FK Show” under FeikongTech.
- 3) Double click “FK Show”

The FK show windows will appear like Pic. 3-7



Pic.3-7

- 1) Main Menu: Provide all kinds of commands of FK Show
- 2) Tool Bar: Popular tools and shortcut of commands.
- 3) Display list: List all display screen, the contents for screens and contents division list.

Click the item to open it and have it ready for edit in program editing area.

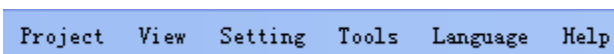
- 4) Resource bank: Picture and animation resource bank, ready for injected in current selected program.



- 5) Program editing area: the area for program edit, display, support to expand, compress all division, when draft is ready, click “preview” at bottom side to check the effect, no wait until download to the real LED display screen.
- 6) Property area: To display and adjust the property of current selected object.
- 7) Status Bar: Display the control cards type, parameter, connection status, transmission status.

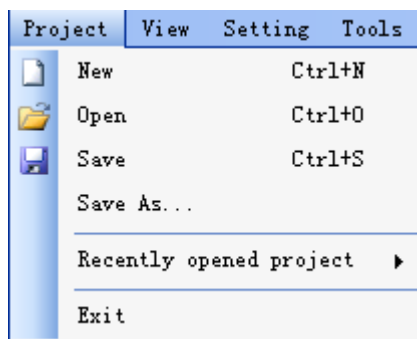
### 3.3 Main Menu

Show in Pic. 3-8 , FK Show Main Menu includes “Project”, “View”, “setting”, “Tools”, “language”, “Help” six draw menu, Move the mouse to related item to open the sub menu, and click the item need to open.



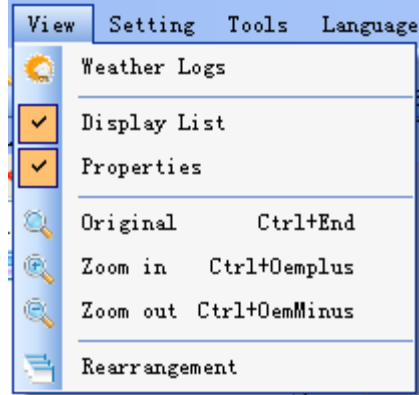
Pic.3-8

- 1) Project menu: As show in Pic.3-9, **Project** menu includes “New”, “Open”, “Save”, “save as”, “recently opened Project” and “Exit” commands. Check the detail in chart 5 “FK Show Project” for application.



Pic.3-9

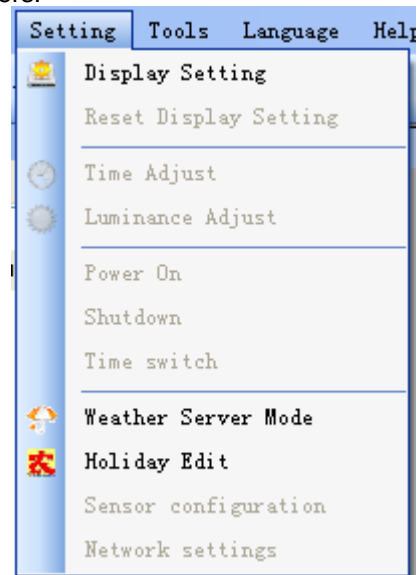
- 2) View Menu: Includes Weather forecast, display list, properties, original, zoom in, zoom (windows). This menu is used to open and view windows of the editing tool.



Pic.3-10

- ( 1 ) Weather logs: Show “Weather forecast logs” windows, check details in chapter 10.2.12.
- ( 2 ) Display list: Show the “display list” windows.
- ( 3 ) Properties: Show “Properties set” windows.
- ( 4 ) Original: Show the program content with real size in the editing area.
- ( 5 ) Zoom in: to zoom in the contents in the editing area.
- ( 6 ) Zoom out: Zoom out the contents in the editing area.
- ( 7 ) Rearrangement: Rearrange all the windows.

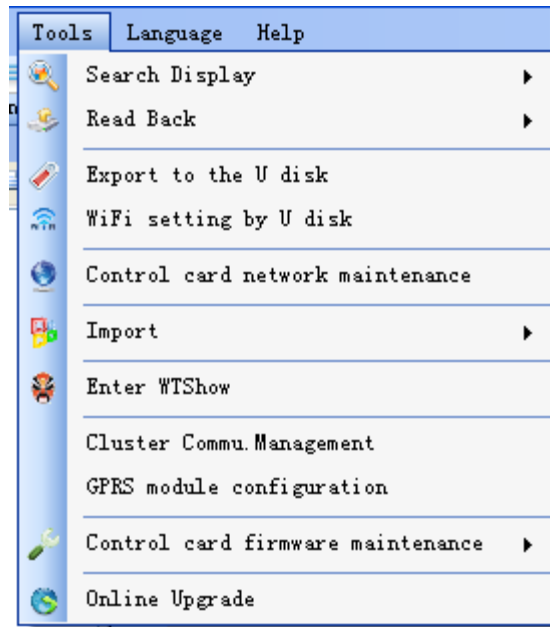
3) Setting menu: Shown in Pic. 3-11 【Setting】 menu includes all communication and Display setting, reset display setting, time adjust, luminance adjust, power on, shutdown, time switch, weather Sever Mode, holiday edit, sensor-configuration, network setting . The details will be described in following charters.



Pic.3-11

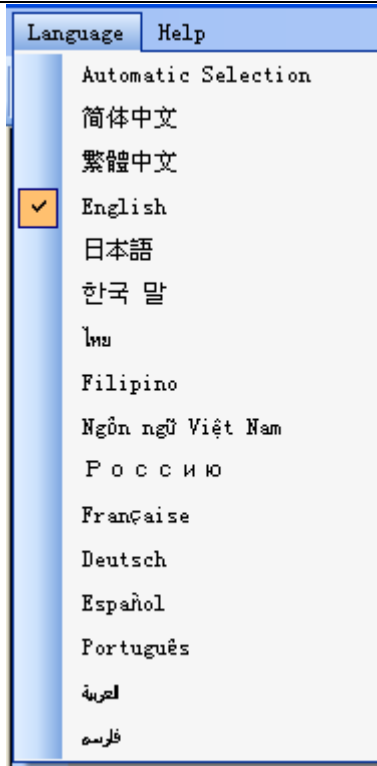


4) Tools menu: As shown in 3-6, the tools menu provides these items related to tools function listed.



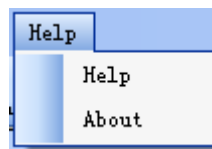
Pic.3-12

5) Language menu: As show in Pic. 3-13, select the language needed. FK Show support 16different languages, the default is Chinese simplified. Once the language is changed, then the tool will change the environment language automatically.



Pic.3-13

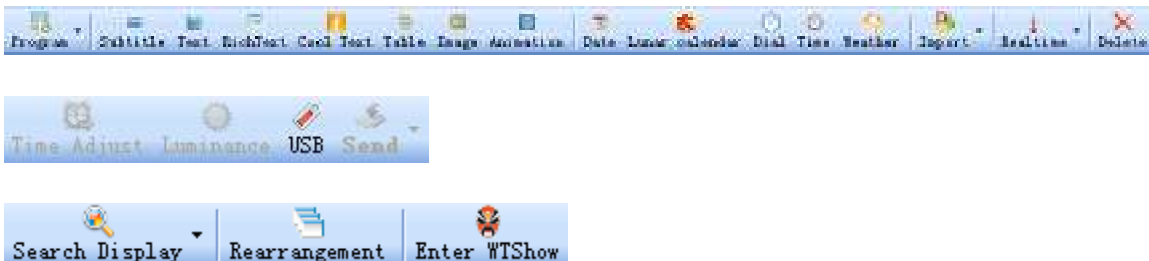
6) Help Menu: click the help menu, select “about”, to see version and related information as shown in Pic. 3-14.



Pic.3-14

### 3.4 Tool bar

The buttons in tool bars are shortcut of the menu functions; the captions show the function invisible, as shown in Pic. 3-15.



Pic.3-15

Inside, the 1st row tools are for adding and deleting program and division when make program( from program to delete).



The 2<sup>nd</sup> row tools are for order or data transmission from or to display screen.

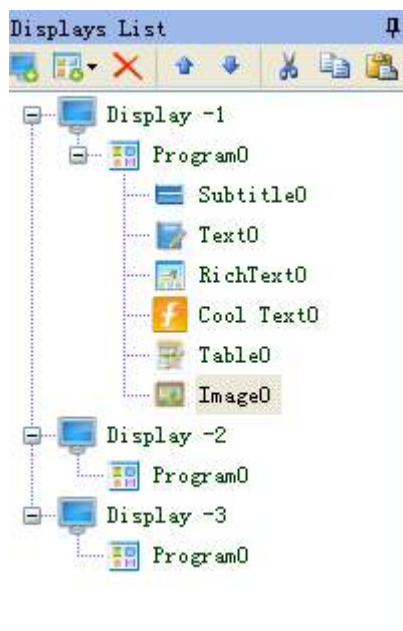
【Search display】 Search the display screen connected currently.

【Rearrangement】 Rearrange the windows in the tool to the original default position and status.

【Enter WTshow】 Enter into stage display mode operation interface.

### 3.5 *Displays list*

This area indicates display, programs and contents division in a logic tree structure. As shown in Pic.3-16.



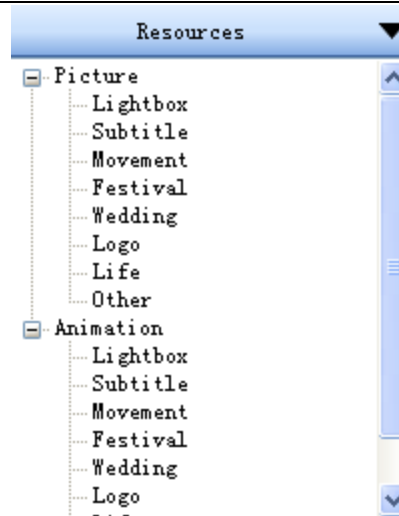
Pic.3-16

The upper part of the area is the tool bar for display, program and content division, easier to add, delete, copy and paste related objects.

This display list is live with program editing and preview area, properties area, when one of the three areas changes, the other two will be updated automatically.

### 3.6 *Resources banks*

Resource bank provides variant typical pictures and animation resource for LED display.



Pic.3-17

Click the related sub items to open the preview windows of this subtitle,as shown in pic.3-18.



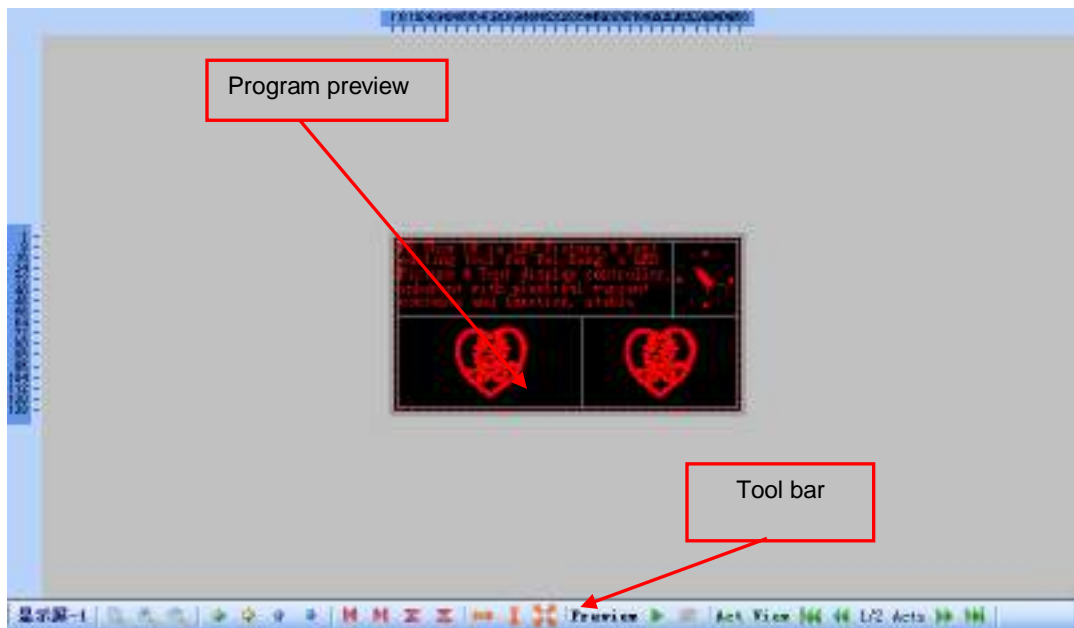
Pic.3-18

Inside the browse interface above, select the suitable resource, and it can be directly added to current program. You can also enrich the resource bank if need, just click import button, and upload your own picture and animation resource in the software for future program edit.



### 3.7 Program editing preview area






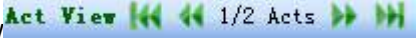

In this area, the display can be edit and adjusted by the user's preference, to review the draft program, see Pic.3-19.



Pic. 3-19

1) Program edit area. The editing area show all the program contents and division, double click the selected division, the editing windows of this division will popping up for contents and properties modification. (Also it is possible to change the contents and properties in the properties area.

2) Tool bar.:

- (1) Zoom in or Zoom out : to zoom in or zoom out the whole program.
- (2) Move: : Move the selected division point by point in 4 direction.
- (3) Alignment: : Align the selected division.
- (4) Filling : Fill the selected contents in the division horizontal, vertical or whole area.
- (5) Preview : Preview the current program.
- (6) Act View : Once the contents are more to shown in on the defined display screen, it will be automatically split into more pages, click "Act view" to check the contents page by page.
- (7) Background visible  : Click this button to have the defined background visible or not visible.



### 3.8 Properties area

Properties area is more active one when editing the visible picture& text program. The user sets both programs and contents divisions' properties here. Once switch the different display screen in the display list, then the properties area will be switch to the responding one automatically. See Pic. 3-20 , the detail information will be introduced in the later chapters.



Pic.3-20



#### 4. Quick start

From now on, it starts introduce the user how to edit and design the program , and send it to the LED display screen through FK show tool in detail. The basic steps are:

1) Create project: FK Show's project file is the carrier for all objects(display, program, content division), all the objects are created in the project. When FK show starts, the system will create one default project, the user can use this default project unless you have special need. About the project concept, more can be found in chapter 5 FK Show's projects.

2) Add display screen: Create the needed display screen in the project, maximum 256 display screen can be added in one project. There will be one display screen created once FK show starts. Please refer to chapter 6 Add display screen to learn how to add display screens.

3) Connecting control card: According to different types cards selected, the connection to FK SHOW is different accordingly. The connection is critical otherwise the screen parameter set and program transmission cannot be achieved. Please refer to chapter 7 connecting control cards for more details.

4) Screen parameter set: Once display is created, screen parameter set has to be done in order to realize the transmission between the real display screen and the software tool. The main parameter includes control cards' type, communication methods, display screen unit boards' information, the height of the display screen. More detail information are described in chapter 8.

5) Add program: There is nothing shown unless program are added for, maximum 256 programs can be added. There will be one default program added automatically once FK SHOW is started. Please refer to chapter 9 Add Program for more indication.

6) Design program: the core of this chapter, also the core part of FK SHOW software, induce to user how to apply this SW tool to design one preferred program with the existing resource. This will be described in chapter 10 Design program.

7) Send Program: When the program is ready, send it to the LED display screen. It can achieve through different communication methods. More in details are described in chapter 11 Send Program.

8) Send command: The display contents has been realized through the step 1 to 6 above, when we need control the display screen like increase or decrease the luminance of the screen, power on, power off etc. This need send related command to the control cards, this is described in chapter 12Send command.

Besides all the main functions and features above, there are other more helpful functions available to support the program design, which are described in the rest of the chapters.



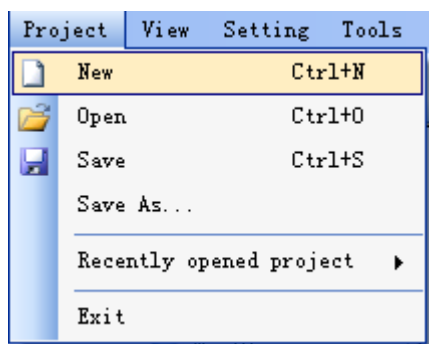
## 5. FK Show Project

Project is like on container to include display, program and contents division into it , project exists in the SW as a file with suffix name .fspj, User can apply the default created project for program creation unless special need.

### 5.1 Project Creation

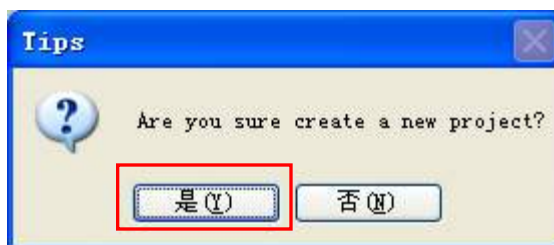
When FK Show start, the system will create one blank project automatically, as well as one blank program under it. Once the user want to create one new project, can follow below step:

- 1) In the main menu of **【Project】** -> **【New】** , or use the shortcut Ctrl+N. See Pic. 5-1



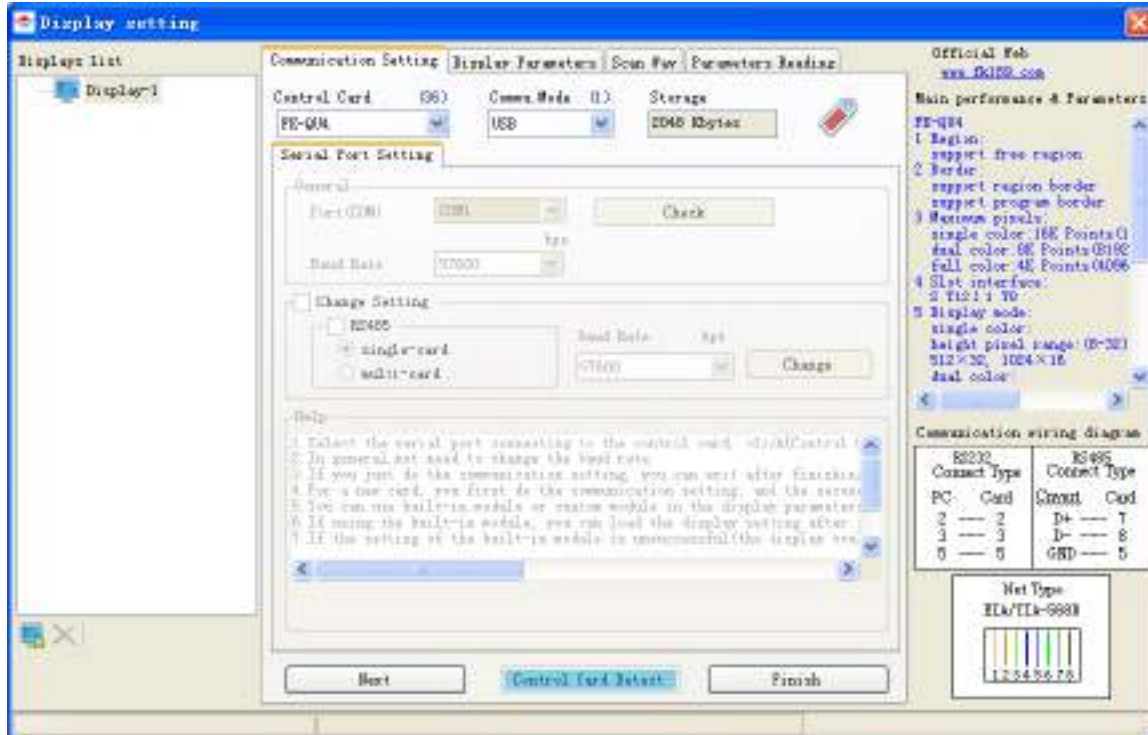
Pic.5-1

- 2) Click “Yes”, when one dialogue box “Are sure create a new project?” is popping up, one project named “FKLed. Fspj” will be created in the folder name UserPrj of the same address of FK SHOW installed( Typically C:\Program Files\FeiKongTech\FK Show\UserPrj. different if the user install FKShow tool in different address.), the former created project file will be backup with new name FKLedBK.fspj, suggest to save the former file to other predefined folders.



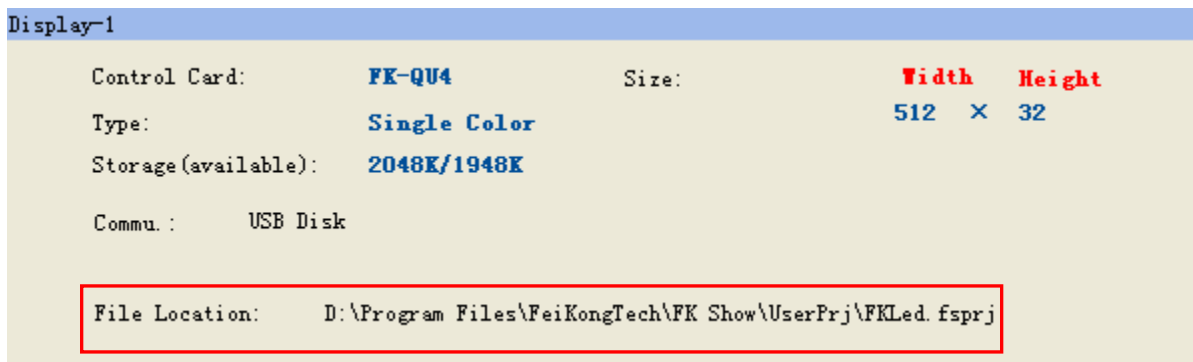
Pic.5-2

- 3) Set the display parameter of the default display 1 in the interface of **【communication and display parameter set】** see in Pic. 5-3, when finish the set. Click Finish. More details are indicated in 8, screen parameter set.



Pic.5-3

4) Click **【Project】** -> **【Save】** , or apply the shortcut **Ctrl+S** directly to save the new project. One new project is created now. Click the default **【display-1】** In the interface **【display list】** then the saving address of the project is indicated in the properties area. See Pic. 5-4



Pic.5-4

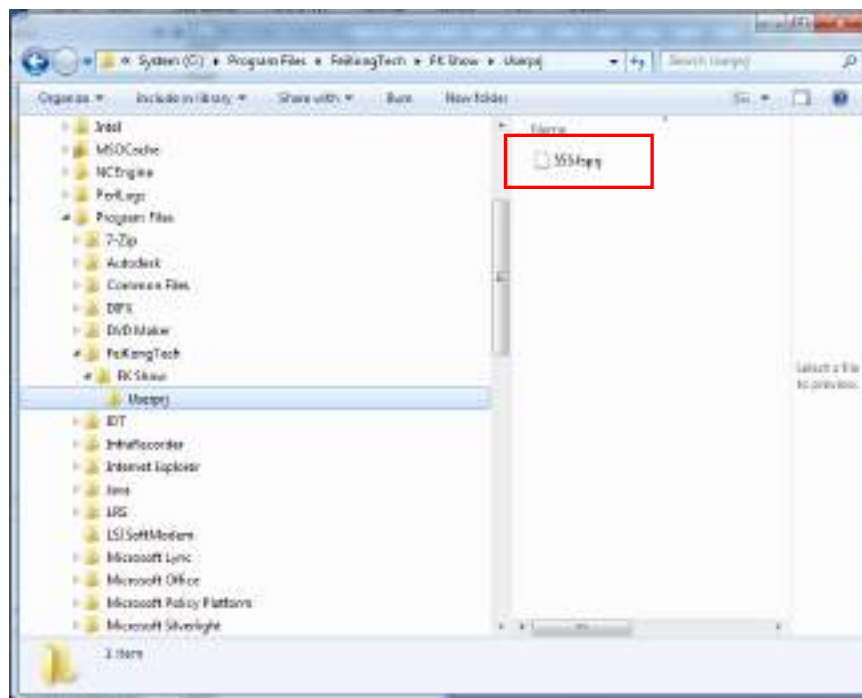
## 5.2 Project Open

When FK Show starts, the latest project file will be opened automatically, once the latest file is lost or deleted, FKLed.fsprj file under installing path is open, or a new blank project file will be created.

There are two ways to open the other project files:

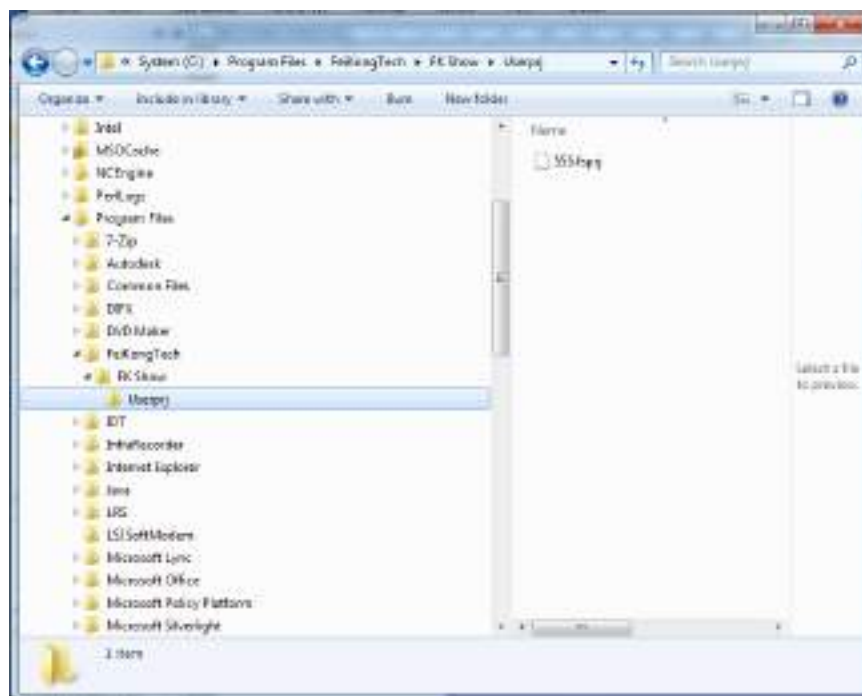


1) Click **【Project】** -> **【Open】** , or directly use the shortcut **Ctrl+O** , then the dialog box like Pic. 5-5 will pop up, to browse and open the prefer project file as needed.



Pic.5-5

2) Browse the folder and directly open the file through double click. See Pic. 5-6.



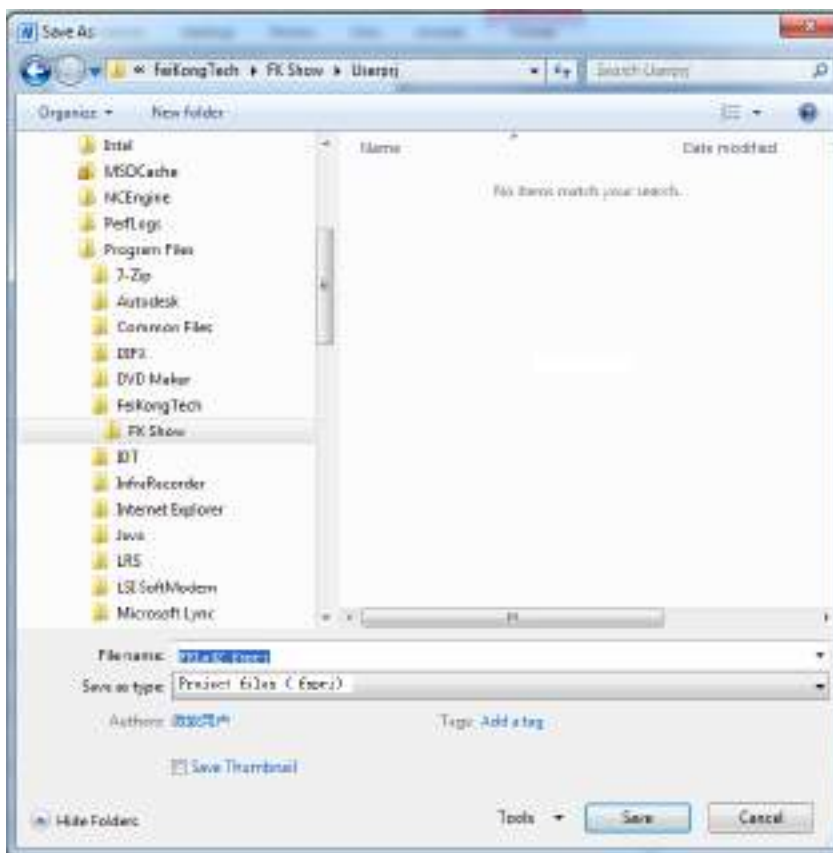
Pic.5-6



### 5.3 Project save

FK Show will save the current project file when exit. User can save the file regularly through click **【Project】** -> **【Save】** or use the shortcut Ctrl+S to save the project.

User can also click **【Project】** -> **【save as】**, to save the project file to other predefined path. See Pic.5-7. Save the file to one fixed path is highly recommended to prevent file lost or missing.



Pic.5-7

## 6. Add display screen

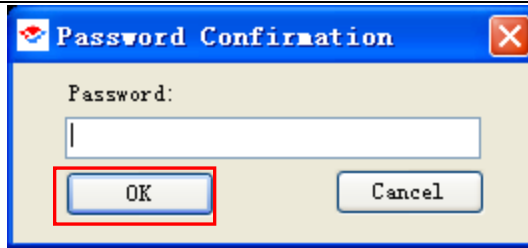
User can add new display through the methods below; FK SHOW can support 256 different display.

- 1) Click new display icon  in **【Display list】** Like pic.6-1.




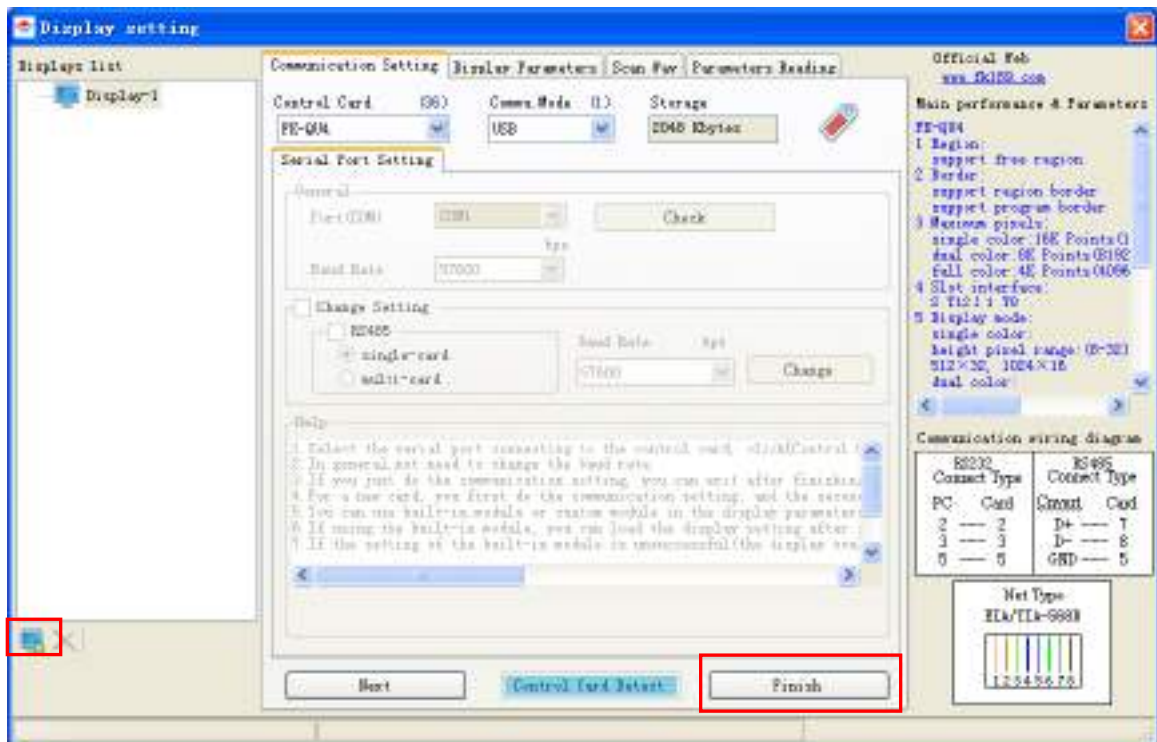
Pic.6-1

- 2) Key in the LED industry's popular password "168" in the popping up dialog box "password confirm" and then click "OK".



Pic.6-2

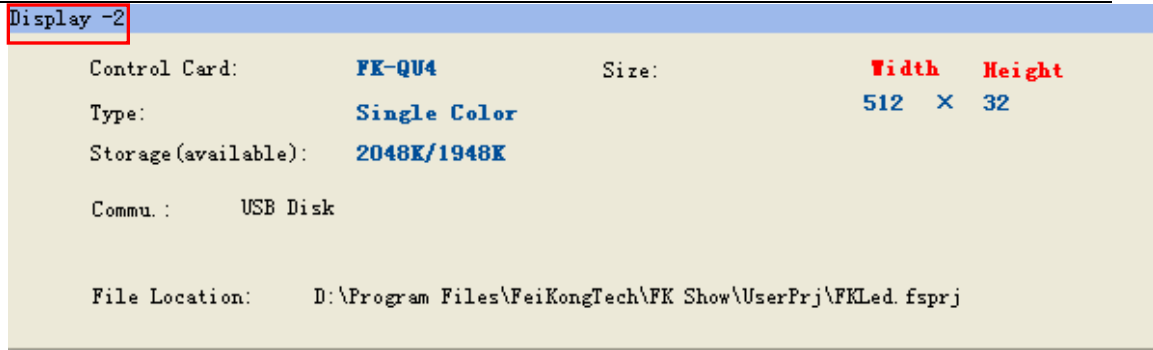
- 4 ) Then click new display  in the display set dialogue box shown in pic.6-3. And set parameter for the new created display 2. Then click finish, please refer to chapter 8 for detail of display set.



Pic.6-3

- 5 ) The new created display will appear in the display list, click the button Finish shown the the pic. 6-3.

Now, a new display 2 is created in **【display list】** , click display 2, then the properties of display 2 can be checked in the area of **【Properties area】** Shown in Pic.6-4.



Pic.6-4

Beside the method of new display creation above, user can copy one existing display. Two ways are prepared to copy one display.

One, select the existing display, and click the button copy in 【display list】 shown in Pic.6-1, and then click the button paste beside to create one new display in 【display list】

Two, select the existing display, use the shortcut Ctrl+C and Ctrl+V to create a new display.

## 7. Connecting control cards

When the project creation finish, the control card need connected with FK SHOW Software in first, then the display set can follow, as well as send program to card. Depends on user's requirement of communication mode, the connecting method from computer to cards are different.

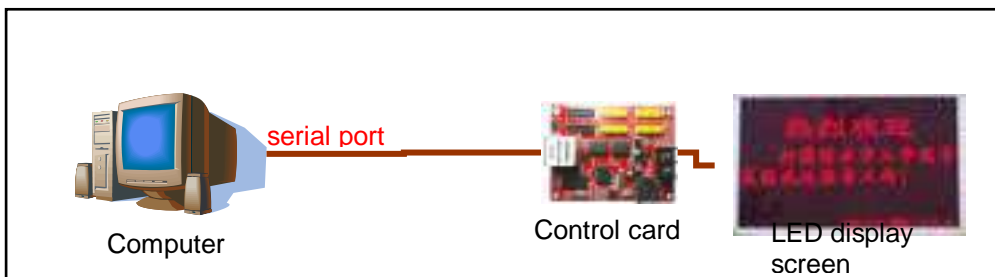
Communication mode is the communication method type between the computer and control card.

To know the communication modes of FeiKong control cards, please refer to 【Appendix 1.Main Characters of FeiKong Control Cards】.

The connection types of different communication mode are introduced in following chapter.

### 7.1 Serial communication

Choose one control cards supporting serial communication for connection between software and control cards. Please refer to Pic.7-1 for hardware connection.

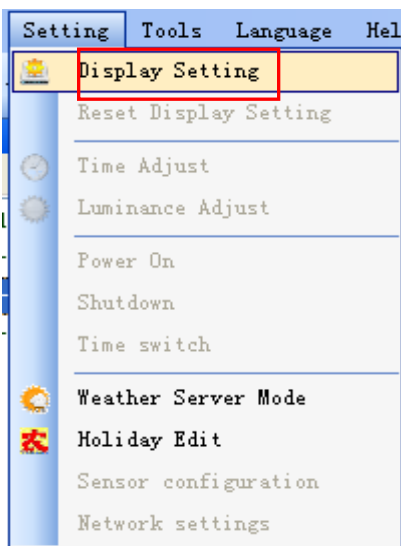


Pic.7-1



The set of software is:

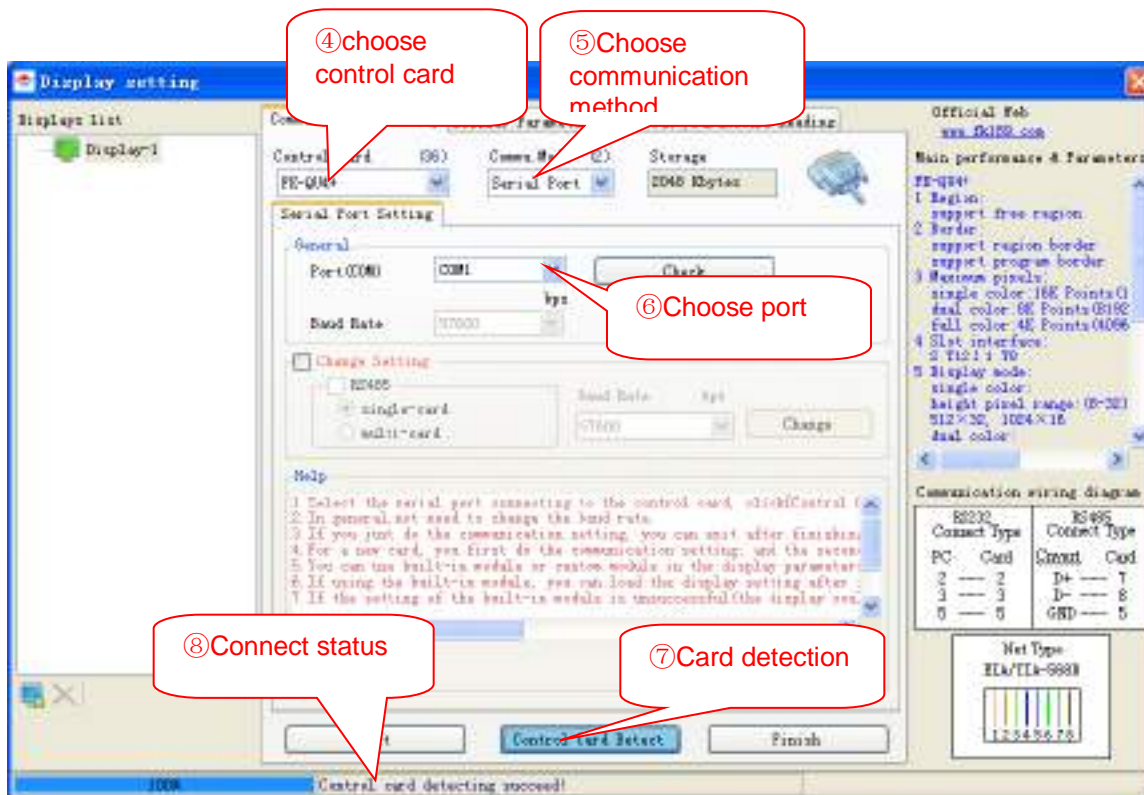
1) Click FK Show menu **【Setting】** -> **【Display Setting】** , Shown in Pic. 7-2



Pic.7-2

2) In the popping up dialogue box “Password confirmation”, Key in the password “168” and click Ok, Now the window **【Display setting】** is shown.

3) **【Display setting】** window is shown as Pic.7-3.



Pic.7-3



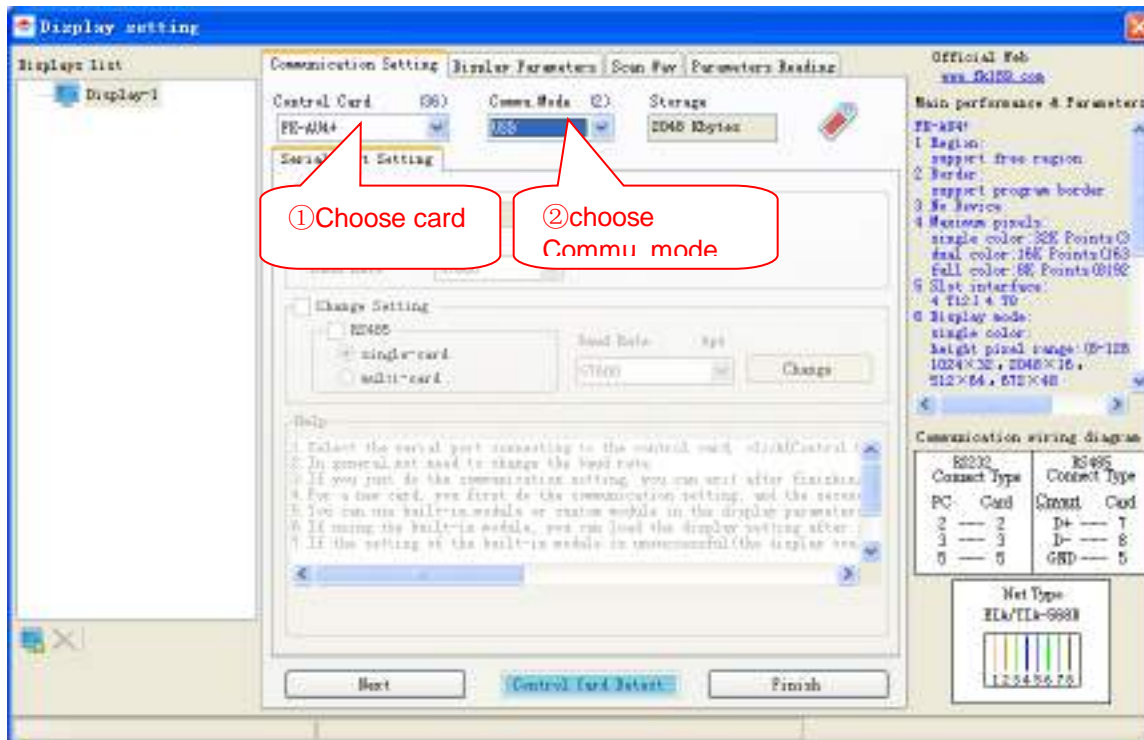
- 4) Choose the display in the display list , select control card type.
- 5) Choose the communication mode as serial port.
- 6) Choose the serial port. Select the practical com port for computer and control card.
- 7) Set Baud rate. Currently it supports 9600bps、 57600bps、 115200bps, the default baud rate is 57600bps. If need change the baud rate, tick off the box “change setting”, and select the new baud rate, and click button “change”.
- 8) Click the button “control card detect”, system will start search the control card, when succeed, one message “ control card detecting succeed” will be shown in the status bar. User need check the hardware connection once the hardware connection fails.
- 9) Once connection succeed, then display set and program download can be done later.

## 7.2 USB communication

One FeiKong control card with USB port is needed for USB connection between Feikong control card and computer.

To apply USB communication, user need download the prepared program by FK SHOW into one U disk, and then insert the U disk to USB port on the control card.

When the communication mode is USB, user need change the SW set 's communication mode to USB, see Pic.7-4.



Pic.7-4



### 7.3 Network (Ethernet) communication

One FeiKong control card supporting network port is needed for network connection between Feikong control card and computer.

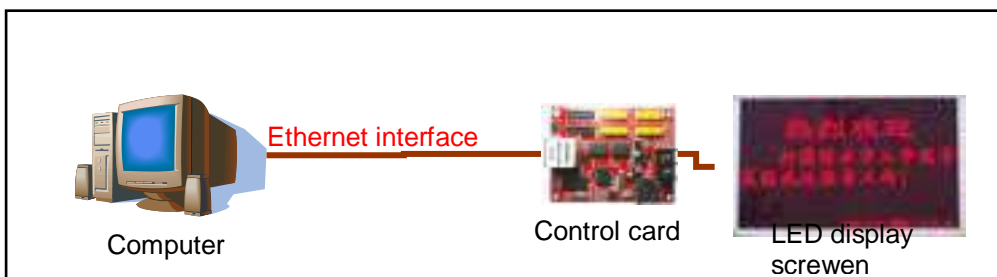
The set of network communication (Ethernet) is more complex, with different working mode aligned with different set. Mainly there are 3 working mode for network connection.

- 1) Direct connection between computer and control card
- 2) Intranet connection
- 3) Internet connection

注：网络通信需要通过网络线连接，一般使用直通线或交叉线，关于直通线和交叉线的使用场合以及制作方法，请参考[附录 2 网线制作](#)。

#### 7.3.1 Direct connection between computer and control card

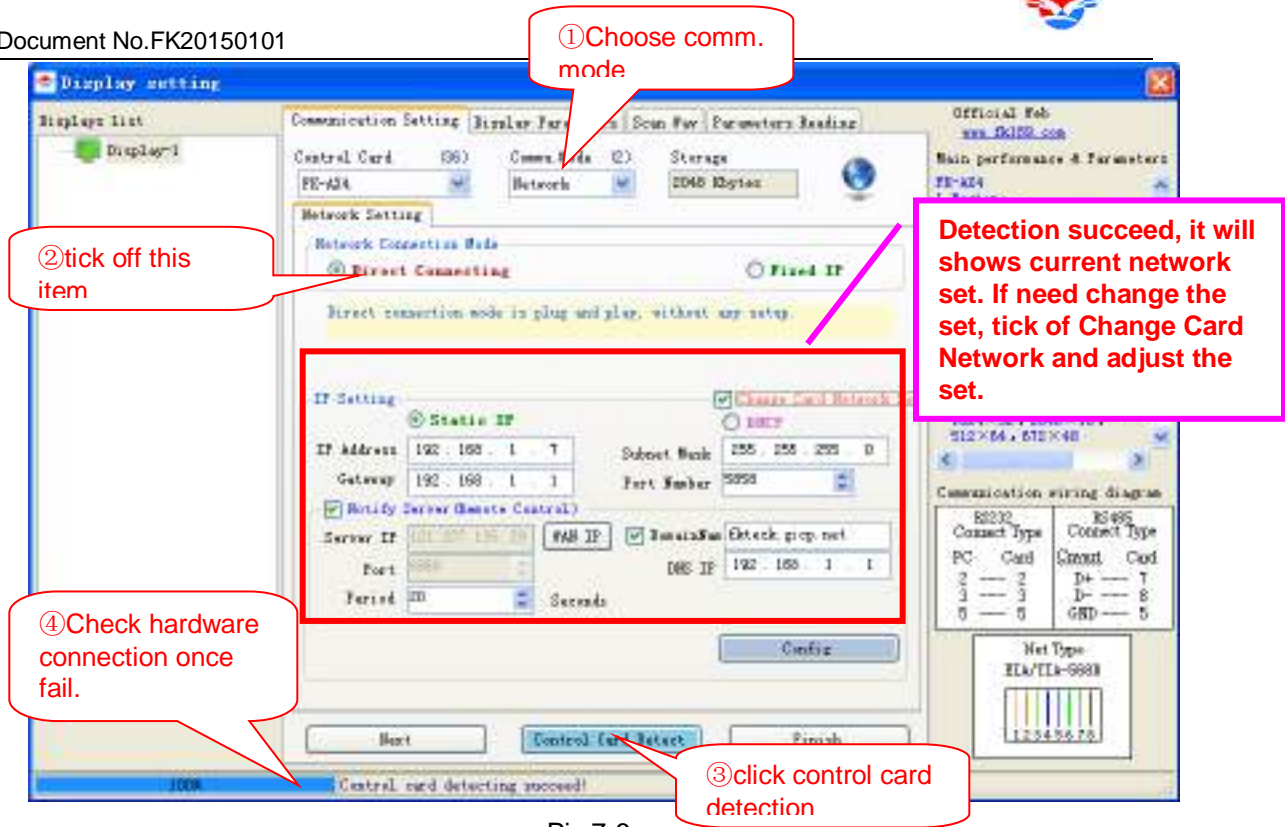
Direct connection between computer and control card does not require complex network environment, just point to point connection from computer and control card. See Pic.7-5.



Pic.7-5

Follow the procedure below for SW set:

- 1) Set communication mode to network in the window **【Display setting】**, and then tick off the network communication mode as direct connecting. See Pic. 7-6.

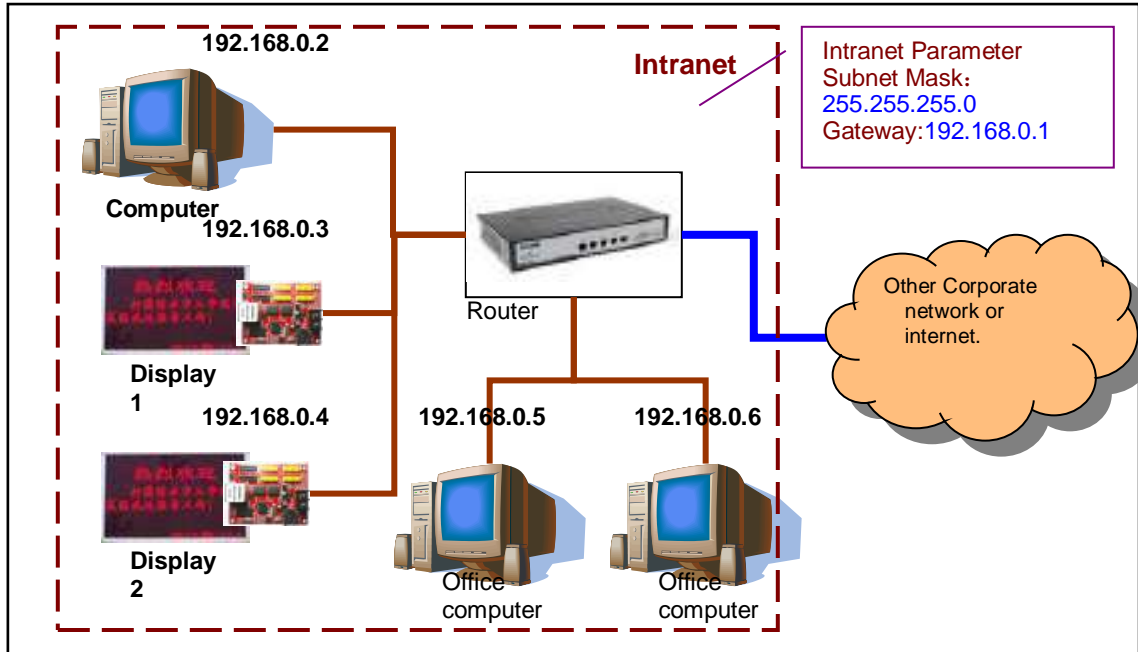


Pic.7-6

- 2) Click the box Control Card Detect, the system will automatically detect the connected control card through the network port. Once detection succeeds, there will be message “Control card detecting succeed” shown in the status bar below. If the detection fails, please check the hardware connection.
- 3) When the connection succeed, the user can go to the next step of display parameter set and download program to control card.

### 7.3.2 Intranet (LAN) connection

Intranet connection is usually applied for the application more than one display in local area. The hardware connection is indicated in Pic.7-7.



Pic.7-7

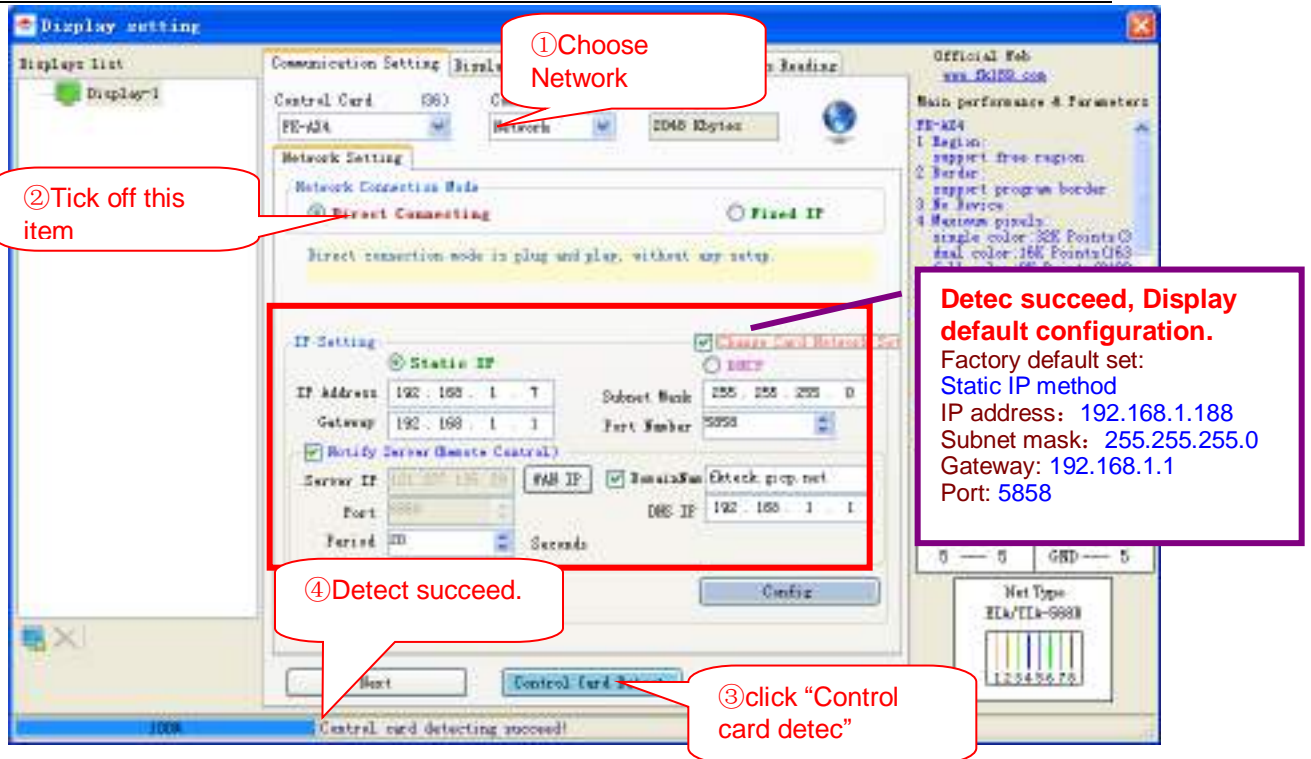
The default network configuration does not fit the intranet environment usually, so in first need configure the network.

The configuration is different once there is only one display in the intranet, or more than one display connected in the intranet. Below both configurations will be introduced.

#### 7.3.2.1 Only one display in the intranet

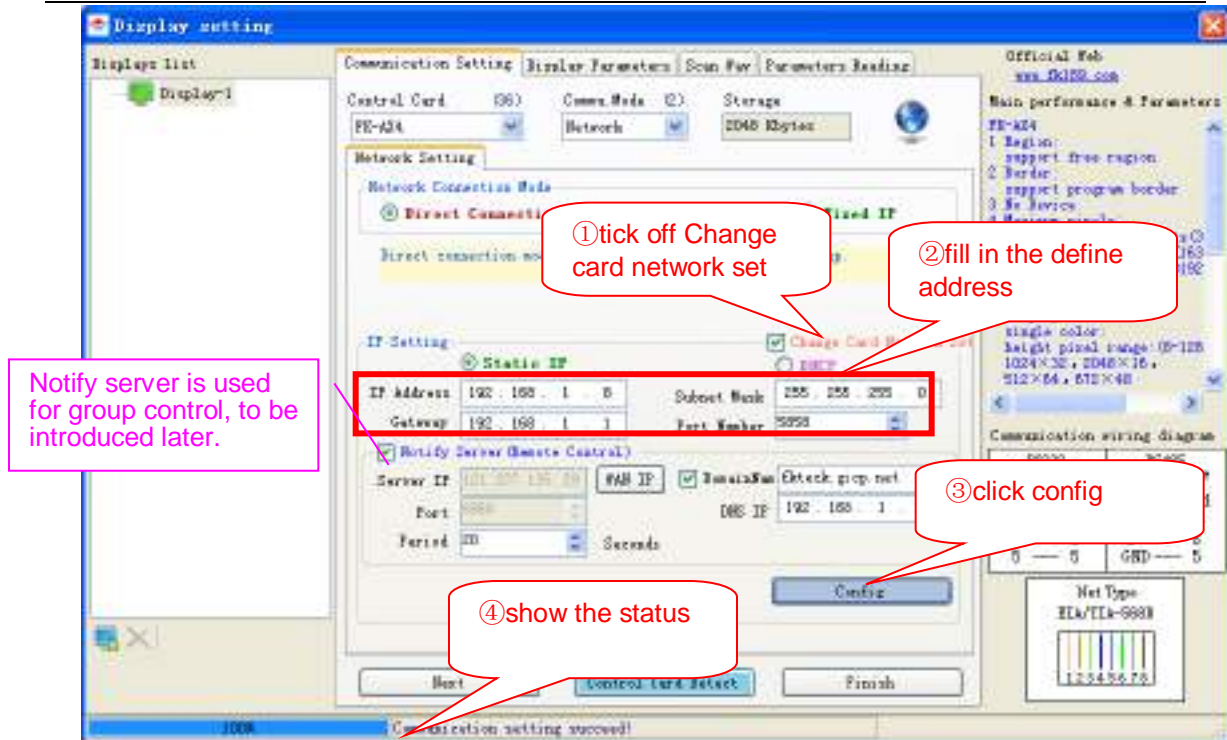
Once there is only one display like in Pic. 7-7, only display 1 is available, then two ways to set.

Way 1: Apply direct connection between computer and the control card.



Pic.7-8

- 1) Change network set to direct connecting. Connect the computer and the control card, then open 【Display setting】 window and set the communication mode to network, and tick off network communicate mode as direct connecting. See Pic.7-8.
- 2) Click the button 'Control Card detect', to check if the connection is OK. Please check the hardware connection once the connection fails. Once the connection succeed, tick off “change card network set”, enter the dialogue window for network configuration. See Pic. 7-9



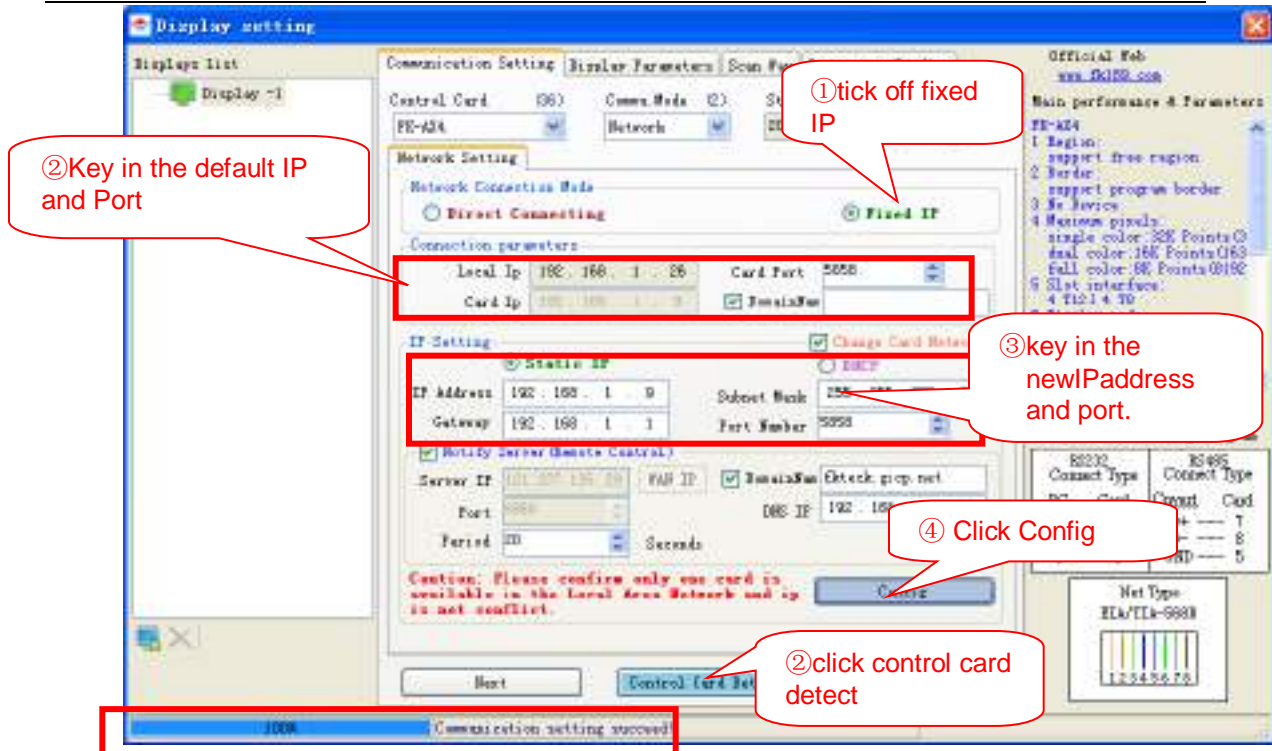
Pic.7-9

3) Tick off “Change Card Network set”, Key in the new configuration information, then click config button below, then it will show “ communication setting succeed!” In the status bar once the connection and configuration is working.

4) Once the control cards’ network set is finish, then display set and program download can be followed.

Way 2:

1) Choose the “network connection mode” as “fixed IP”, see Pic.7-10.



Pic.7-10

2) Fill the control card's IP and port, click the button "control card detect" to find the control card. Once it does not succeed, check if the correct IP address is filled and it failed even the IP is correctly set, and please use method 1 direct connection to computer.

3) Tick off "Change Card network set", Two IP setting method are provided, static IP or DHCP, click static IP in this case, and key in the predefined IP address, then click the button "config" to send the new configuration information to control card, "communication setting succeed!" will be shown in status bar once succeed.

**Remark: Not recommended to use DHCP which will allocate IP address randomly.**

4) Once the control cards' network set is finish, then display set and program download can be followed.

### 7.3.2.2 More than 1 LED display screen in Intranet

If there are more than 1 display installed in the intranet, then there are two method to configure the connection.

Method 1: Configure the display control card one by one, and then connect them to intranet as all.

For example there are two displays (control cards) need connect to intranet, the IP address of the displays can be defined as:



Display 1(control card 1): IP address:192.168.1.187 Mask:255.255.255.0

Gateway:192.168.1.1

Display 2(control card 2: IPAddress-192.168.1.114 Mask:255.255.255.0

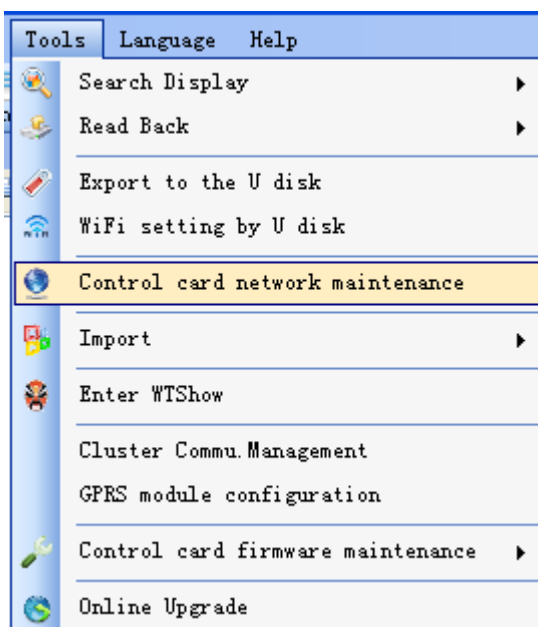
Gateway:192.168.1.1

However, we need configure each display in first, then connect them all in intranet when finish.

1) Apply direct connection method or only one display in the network method mentioned before to set the address the display 1 as above and configure it. Please check [7.3.1 Direct connection between computer and control card](#) or [7.3.2.1 Only one display in the intranet](#).

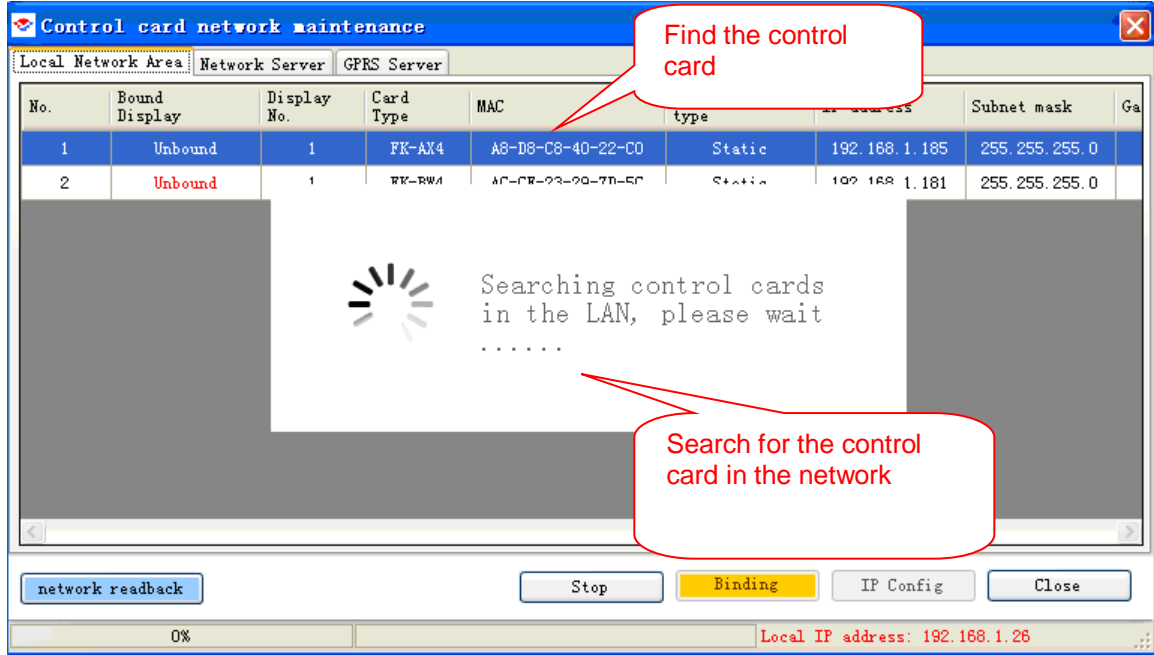
2) Disconnect the link to display 1 control card, connect the display2 and configure the address as above as the same method. Follow the same step for more displays(control cards.)

3) Connect both displays( control cards) configured ready into intranet, and then click **【Tool】** → **【Control card network maintenance】** , To check if the whole connection is OK or not, See Pic.7-11.



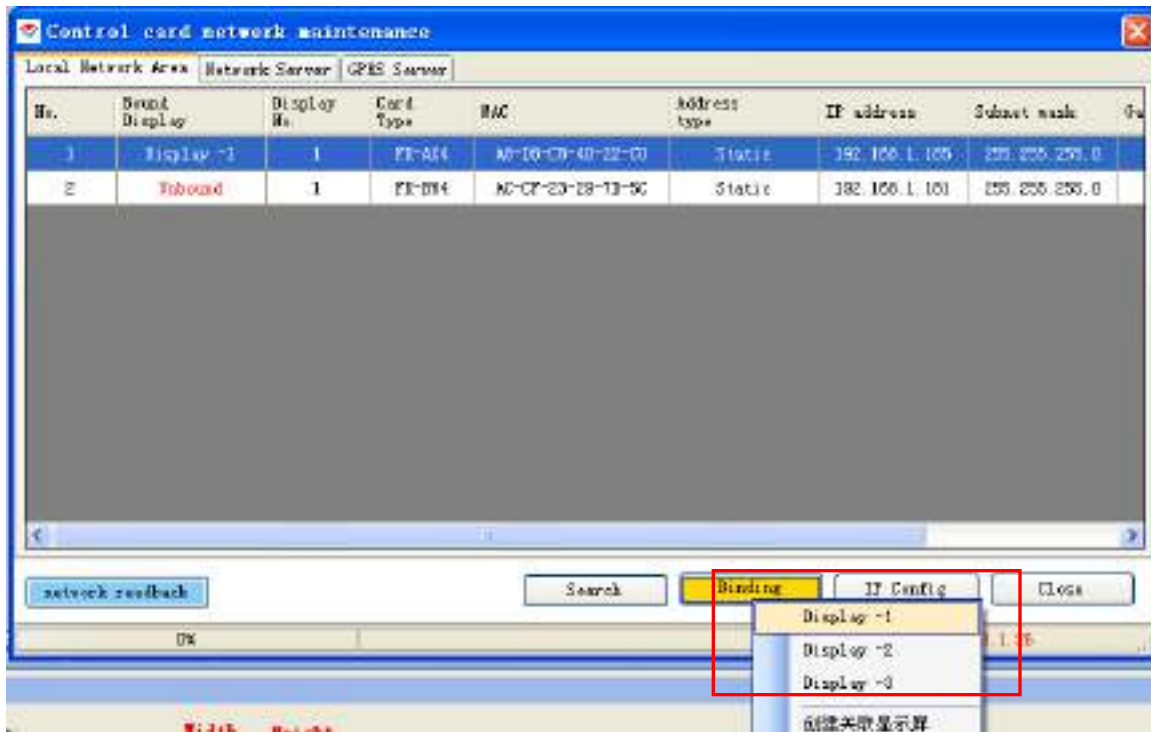
Pic.7-11

4) The system will detect the control cards in the intranet, and the found control cards will be shown in the display list like Pic.7-12.



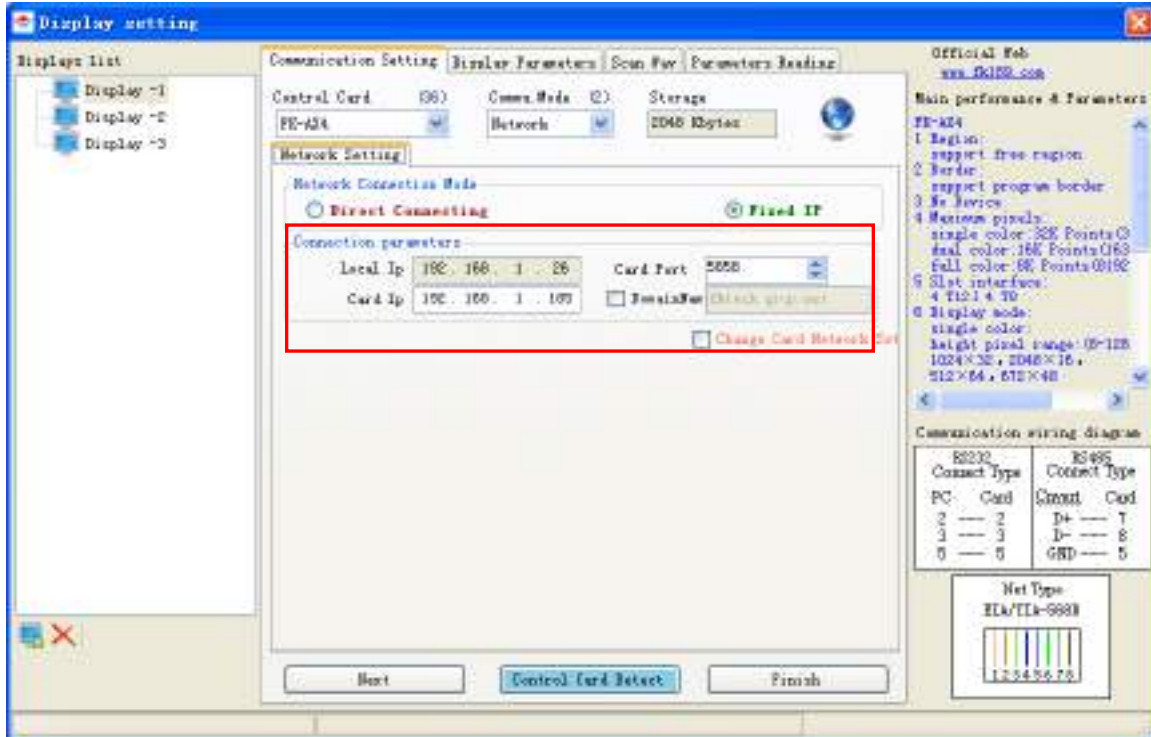
Pic.7-12

5) Click the button" Map to display", Map the control card to one existing display or a new display, see Pic.7-13.



Pic.7-13

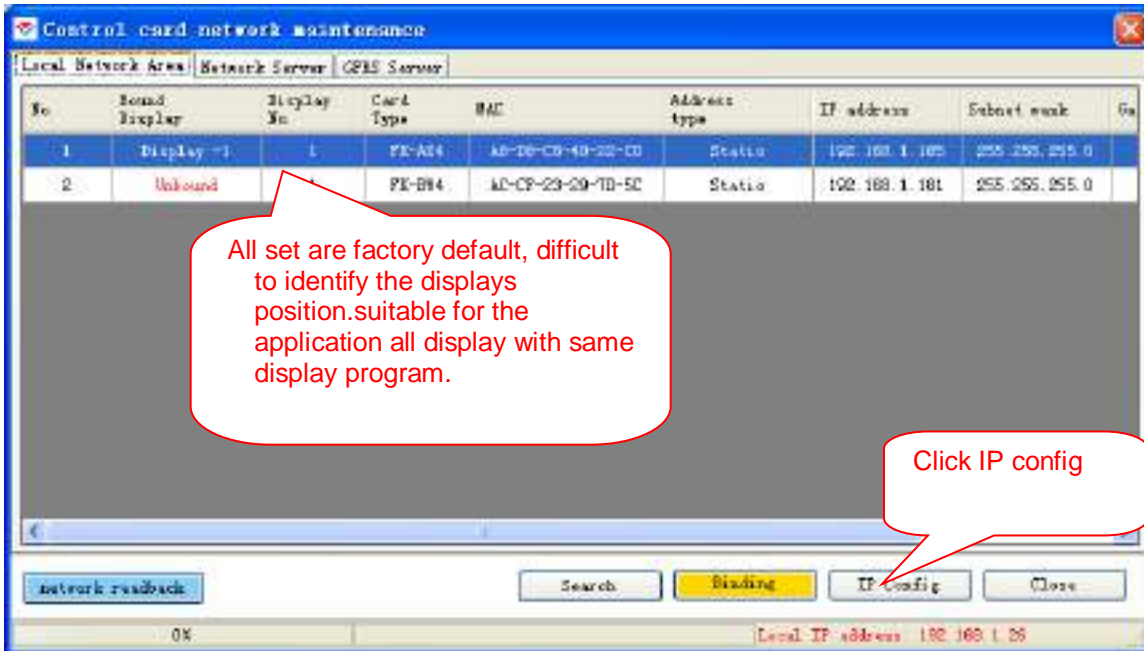
6) open "display setting" window, click the mapped display1, tick off "fixed IP", then the ready IP address set will fill in the blanket automatically. See Pic.7-14.



Pic.7-14

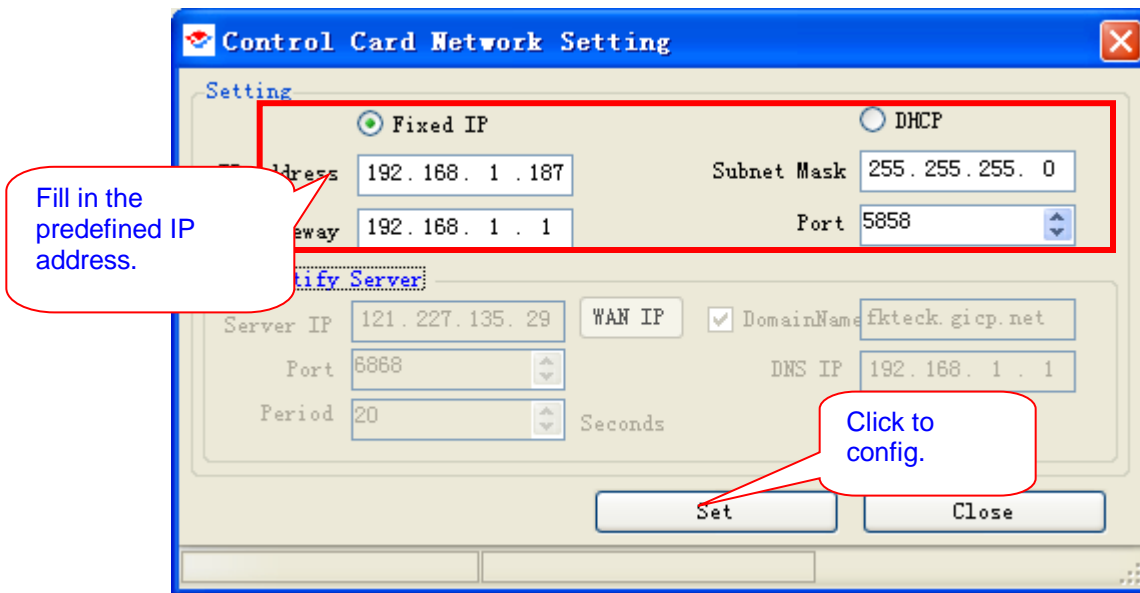
Method 2: Different than method 1, this requires connect all display( control cards) into intranet, then start all control cards network configuration.

- 1) When all are connected in the intranet, click main menu **【tool】** → **【Control card Network maintenance】** , if all cards are new ones, all the network parameter are same default ones, then start network configuration. The shortcoming of this method is difficult to know the exact position of one display. See Pic.7-15.



Pic.7-15

2) Click the button “IP config”, then in the popping up dialogue box” control card network set”, key in the predefined network parameter, and click the button “config”, as in Pic.7-16



Pic.7-16

3) When configuration succeed, “communication configuration succeed” will show in the status bar.

4) Apply the same method to configure all the control cards within the intranet, update the network information.



5) When all the control cards' configuration finish, connected to intranet and ready for next step loading display set, send program etc.

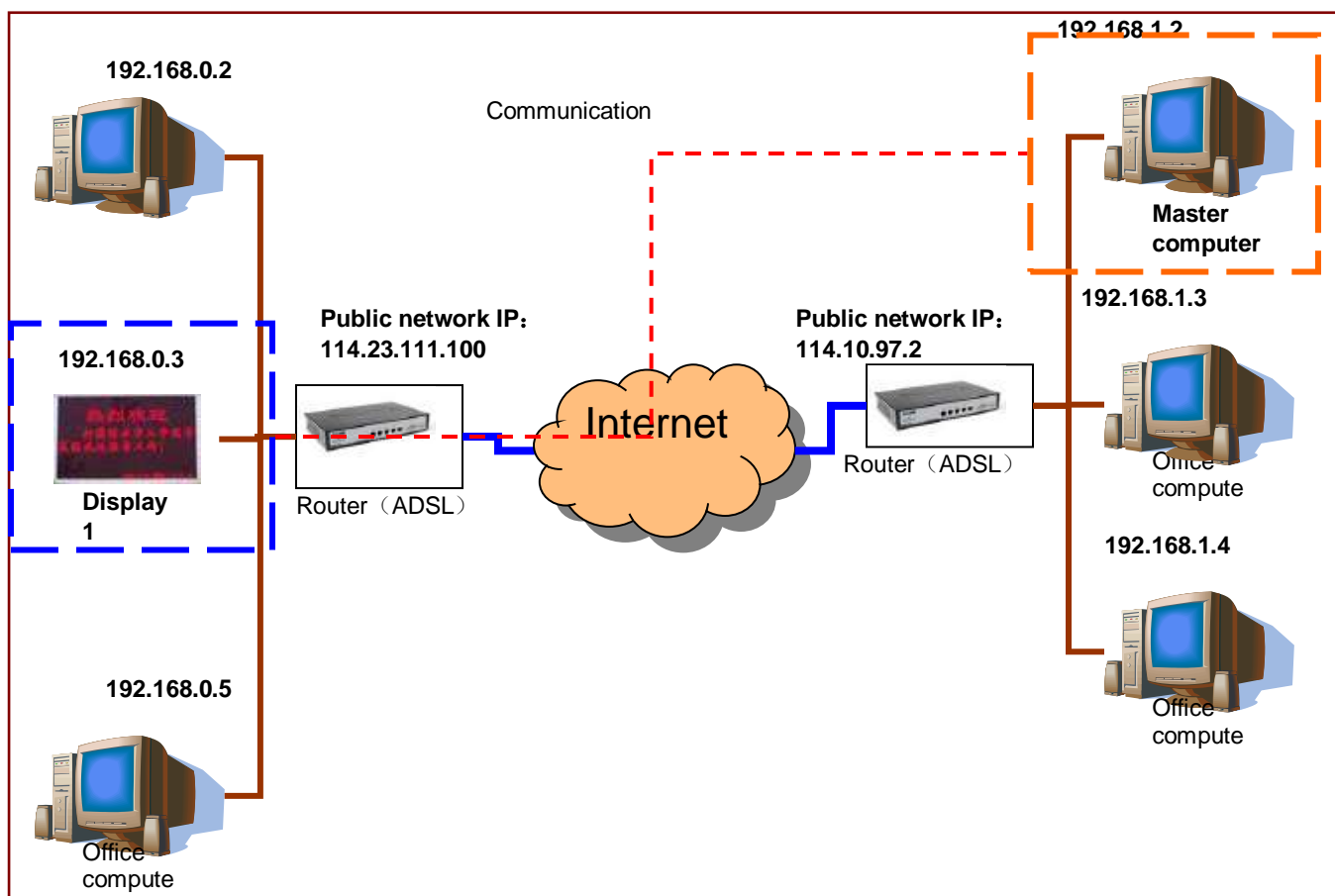
Attention: If need change the network configuration after, user can opent the window

【Communication and display set】 and apply “fixed IP” to change the configuration, or open the window 【control card network maintenance】 and click button “IP configuration” to modify the network configuration. Recommended to apply 【control card network maintenance】 .

### 7.3.3 Internet connection

#### 7.3.3.1 Only one display in internet

Once there is only one display in connection, the hardware wiring is like in Pic.7-17 below.



Pic.7-17

Attention: The displays' ports router must have port transferring function once internet remote communication is required for application. The configuration of routers will be described in detail in following pages.



Software configuration method is introduced as below:

Step1, network configuration at display end

- 1) Control card network configuration: the control card network configuration is same as intranet configuration, please check chapter [7.3.2 Intranet connection](#).
- 2) Router (ADSL)configuration: Need configure in the router of the display end, the router's configuration set as virtual server, and allocate the control card's IP address in the router as indicated in Pic.7-18.

**Forwarding**

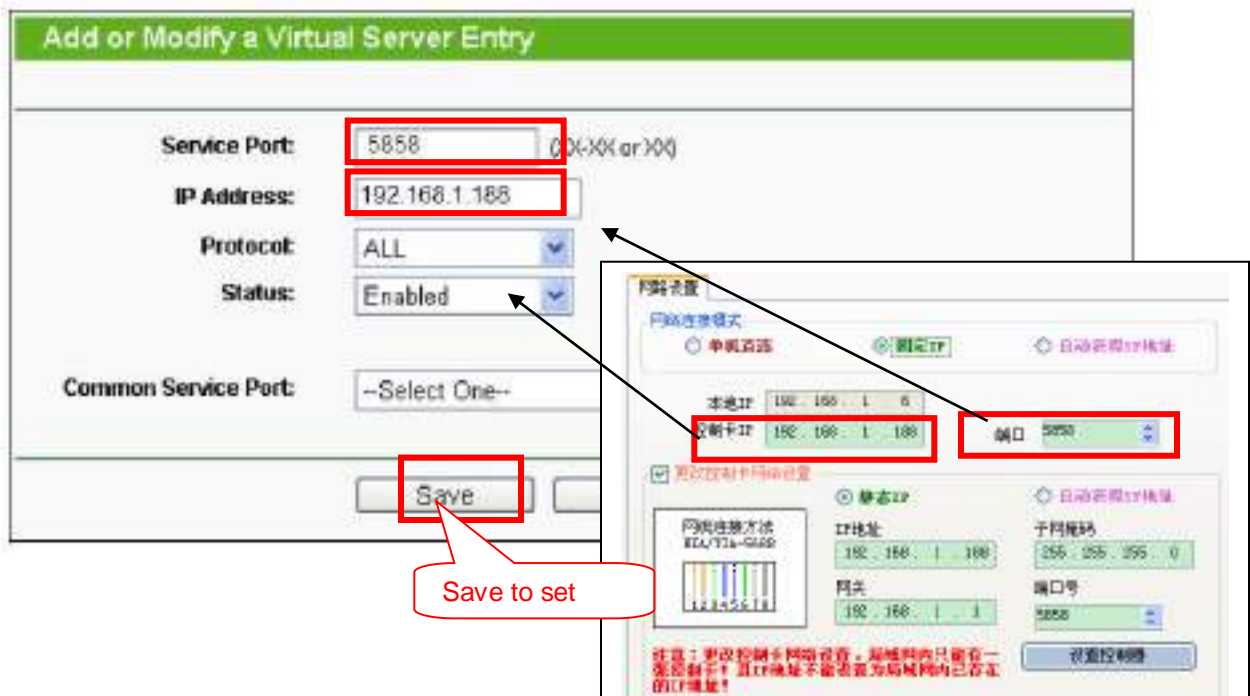
- Forwarding
- Virtual Servers
- Port Triggering
- DMZ
- UPnP

ID	Service Port	Internal Port	IP Address	Protocol	Status	Modify
1	11130	11120	192.168.0.198	ALL	Enabled	<a href="#">Modify</a> <a href="#">Delete</a>

Buttons: Add New, Enable All, Disable All, Delete All, Next

Text: Add new

Callouts: Add new, Control card IP, Valid item

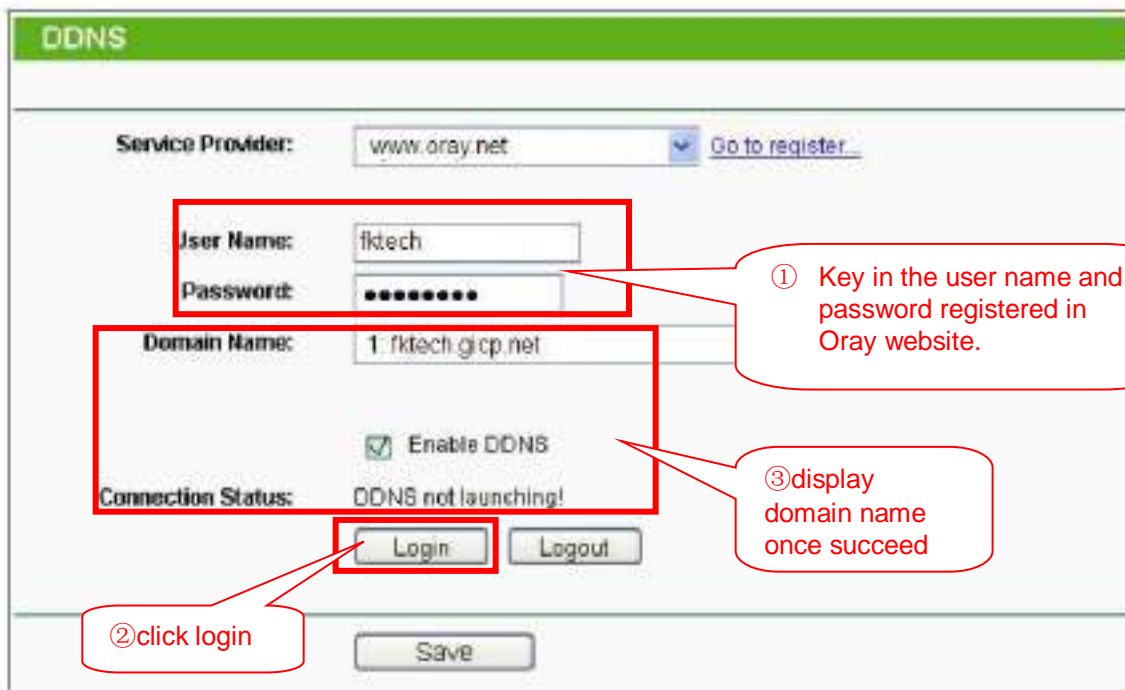
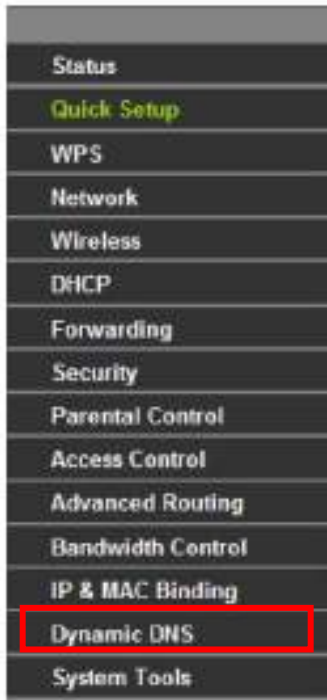


Pic.7-18

3) Connect the control card: The connection to control card can be achieved through domain name or public IP method, two methods are introduced below.

**Domain Method to connect control card:** ADSL routers IP are mostly dynamic, router will get new public IP once it is power off and power on again, as well as the new IP for the control cards below the router. To communicate with control cards through internet remotely, the control computer side need always get the new IP, it is difficult to handle it manually. Bond one domain name to the control card, no matter how the public IP changes, it will automatically find the control card with domain name without any manual operation.

- Register Oray PeanutHu to get one free domain name through website <http://www.oray.com/>
- Apply Dynamic DNS in router, map this router's public IP(this card's public IP.H



Pic.7-19

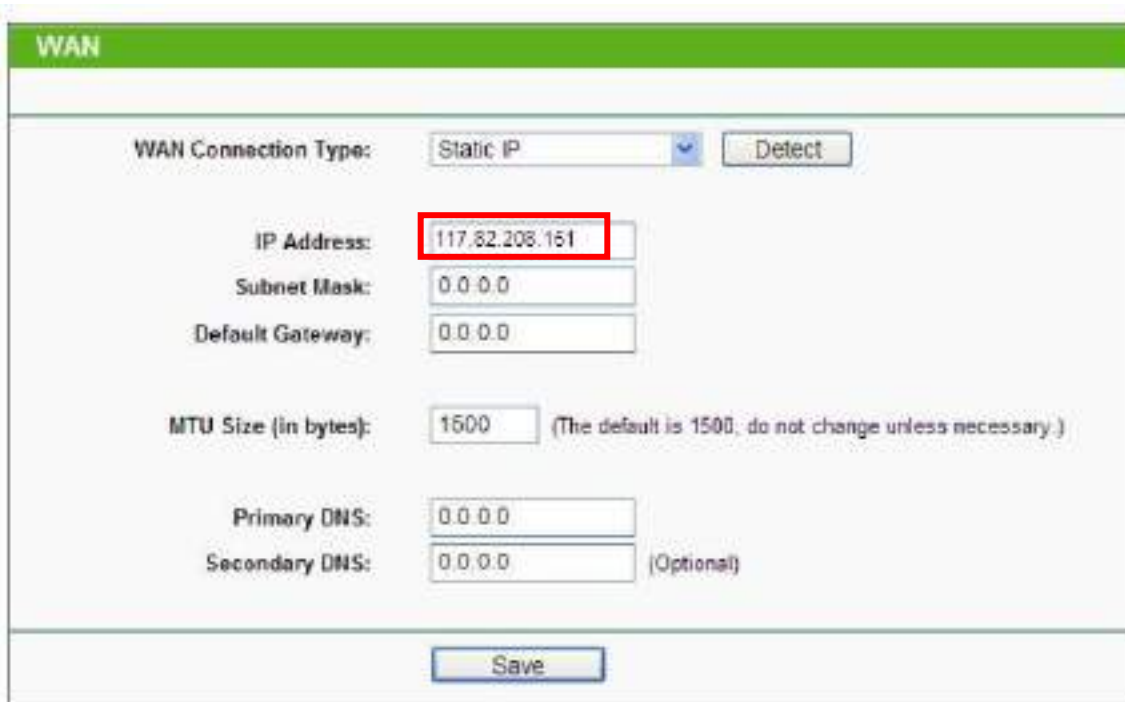
- When succeed, key in the domain name in the remote control side, then the connection between the computer and remote control cards are configured referring step 2.

**Public IP for Control card:** Once apply public IP to connect control card through below method to acquire public IP for the control card. When gain the public IP for the control card, inform the remote control computer side, and then connect it.



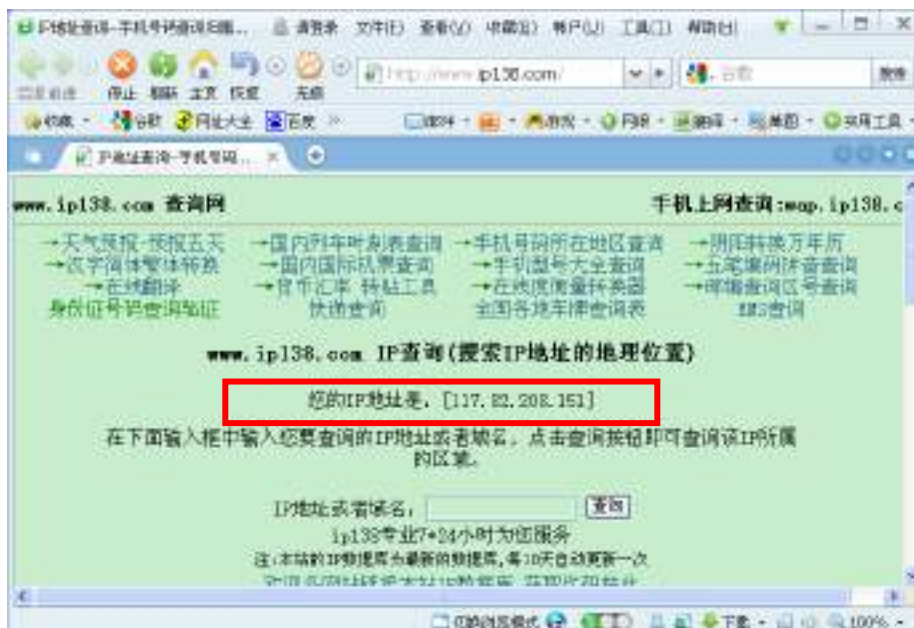
The method to acquire public IP is as below:

- At the display side to check through router's managing interface



Pic.7-20

- Key in and enter <http://www.ip138.com> at display side computer



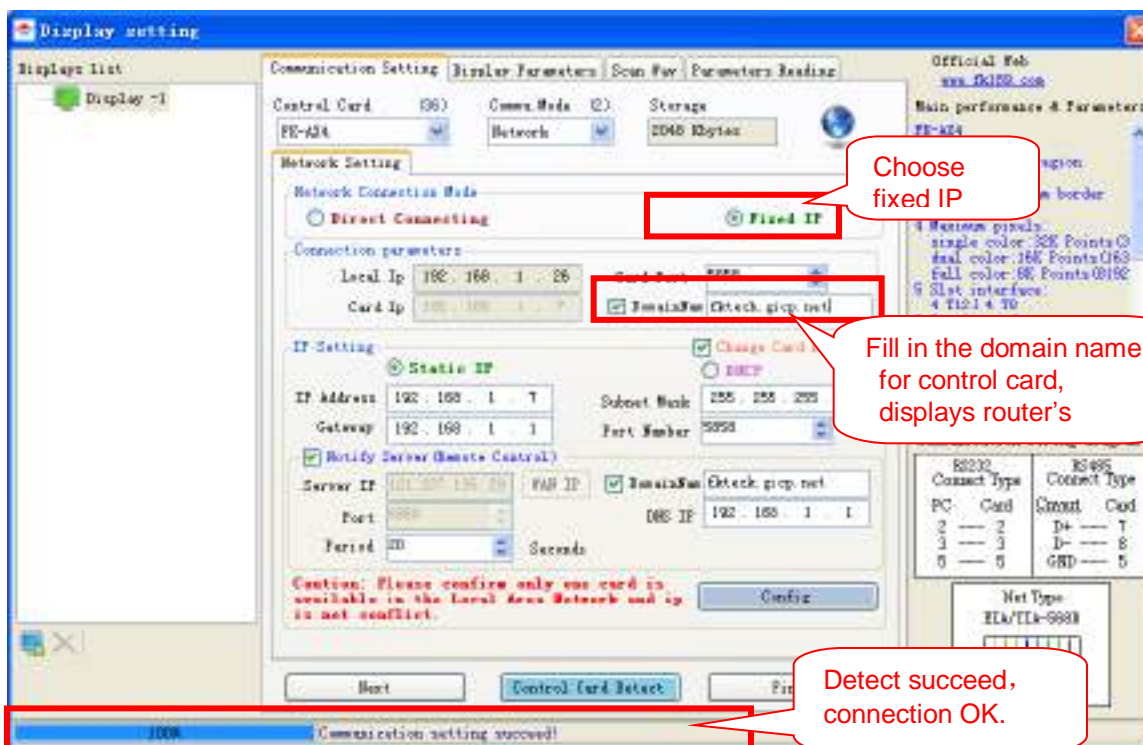
Pic.7-21

Step 2: The control computer end configuration connection.



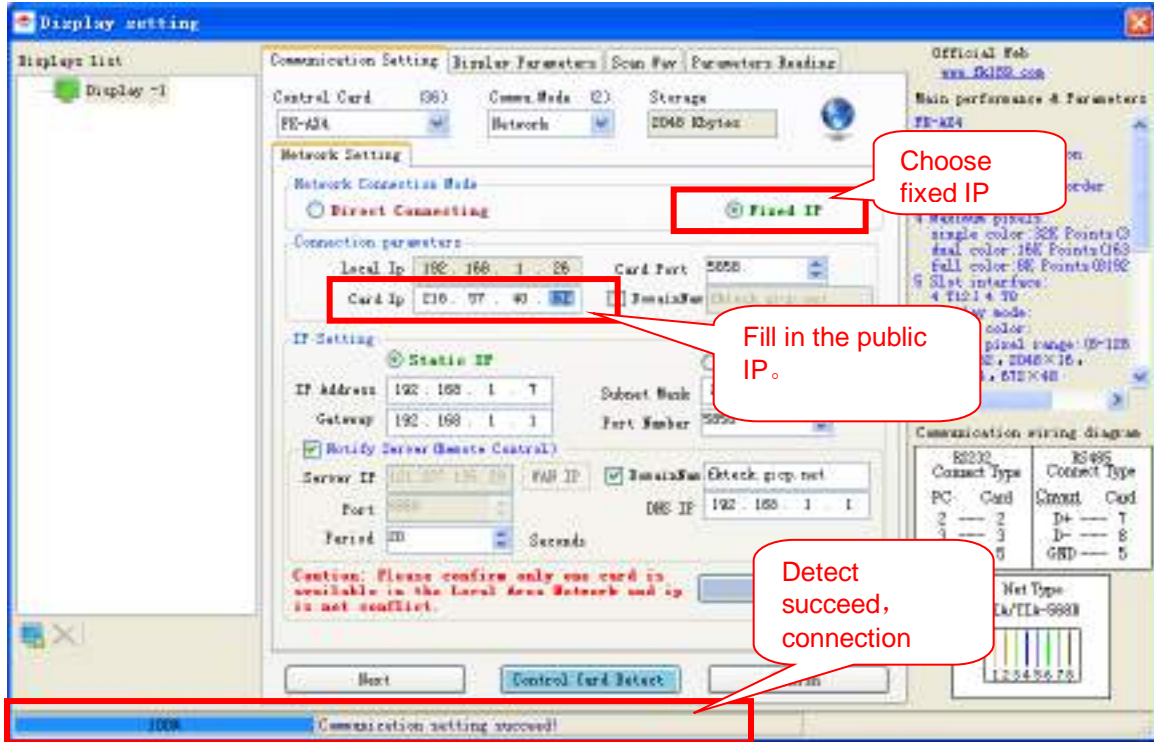
In the window **【communication& display setting】** , tick off “fixed IP” mode, and then to control the control card through domain name or public IP.

To apply domain name to connect the control card, the configuration method is like Pic.7-22.



Pic.7-22

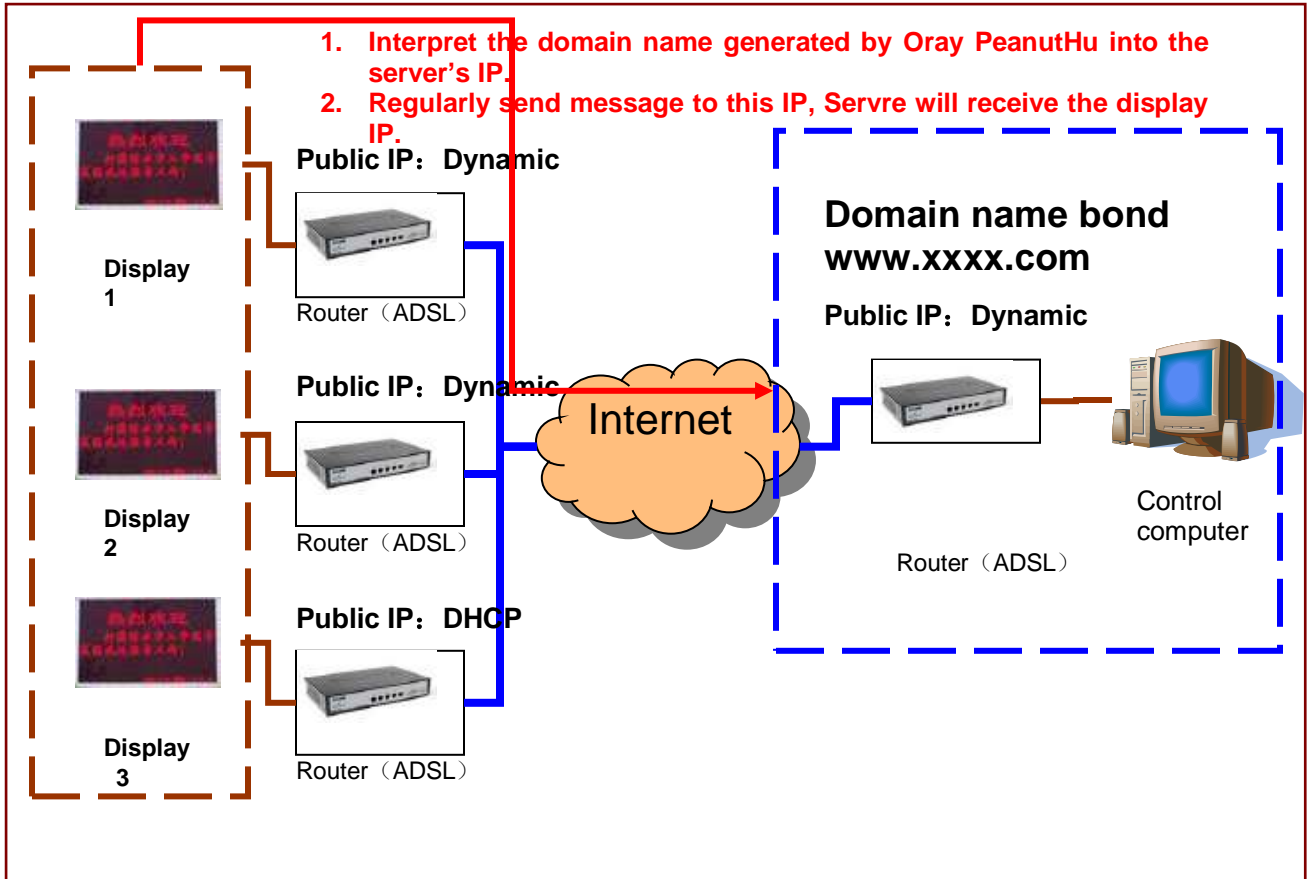
When apply public IP to connect control card, the configuration method is shown in Pic.7-23



Pic.7-23

### 7.3.3.2 More than one display in internet

When more than one display is need in the internet connection, the hardware connection shall be like Pic.7-24.



Pic.7-24

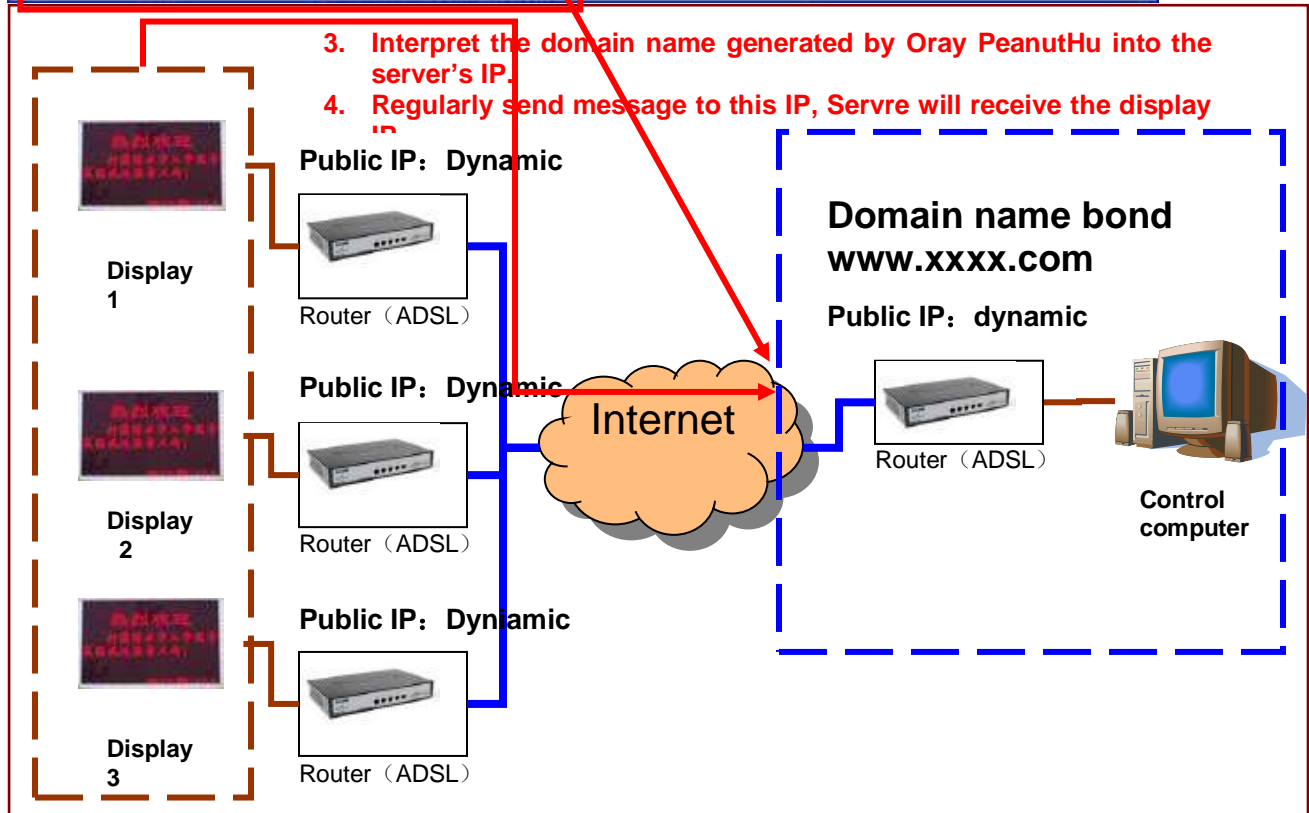
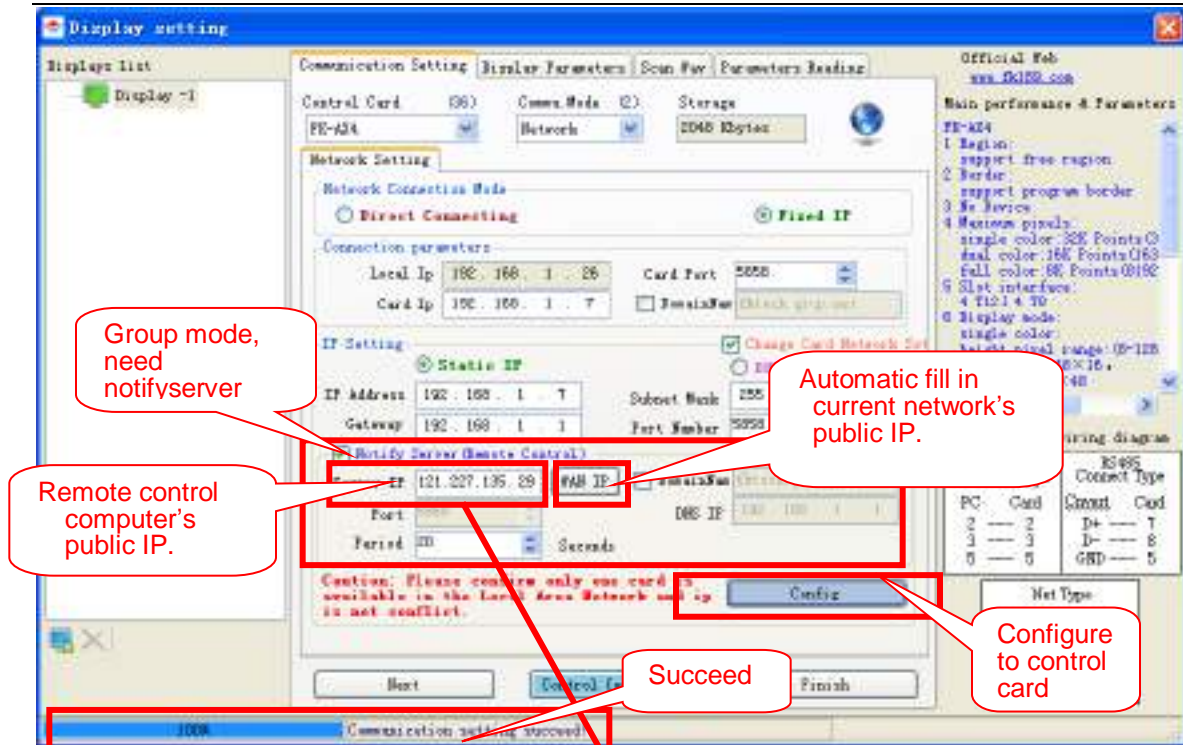
Attention: The displays' ports router must have port transferring function once internet remote communication is required for application. The configuration of routers will be described in detail in following pages.

The software configuration method is like below:

Step 1: display end network configuration

- 1) Control card network configuration: need apply **【Notify server】** mode to configure the control cards at the display end intranet. Remote server can use the fixed IP or domain name.

The method of fixed IP is shown in Pic.7-25.

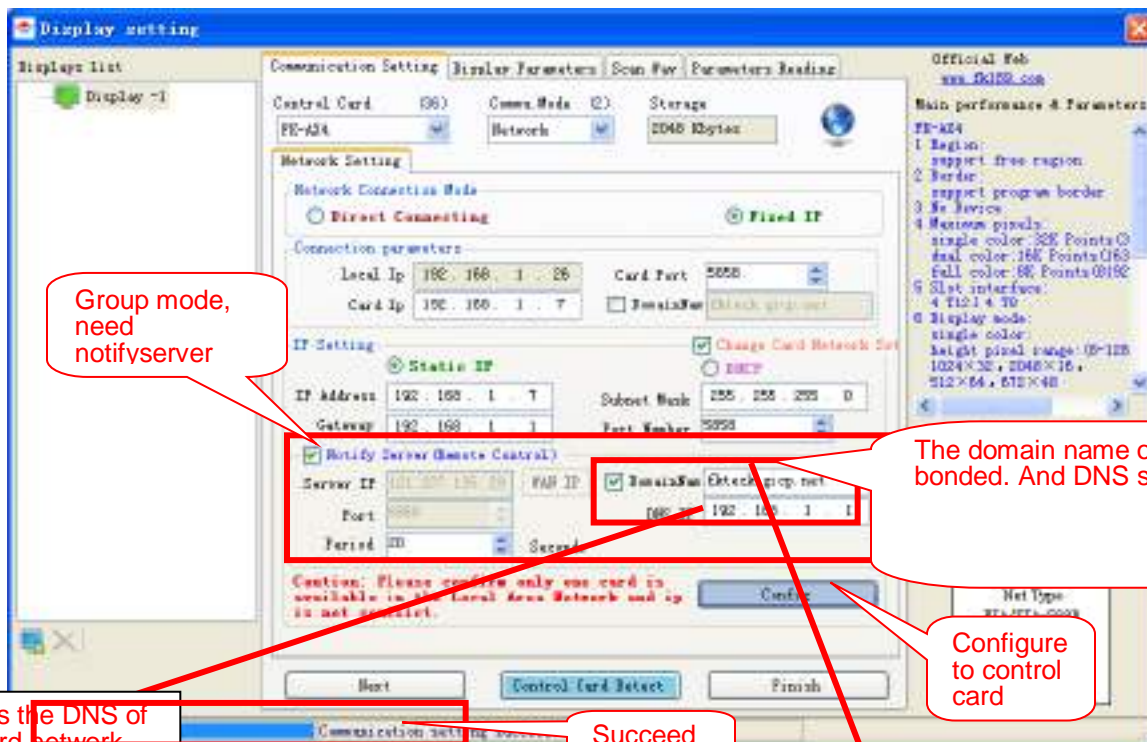


Pic.7-25

If control computer's public IP is dynamic type, notify server apply IP method, then when IP changes, the control card will not be found and the connection fails. For this instance, better to

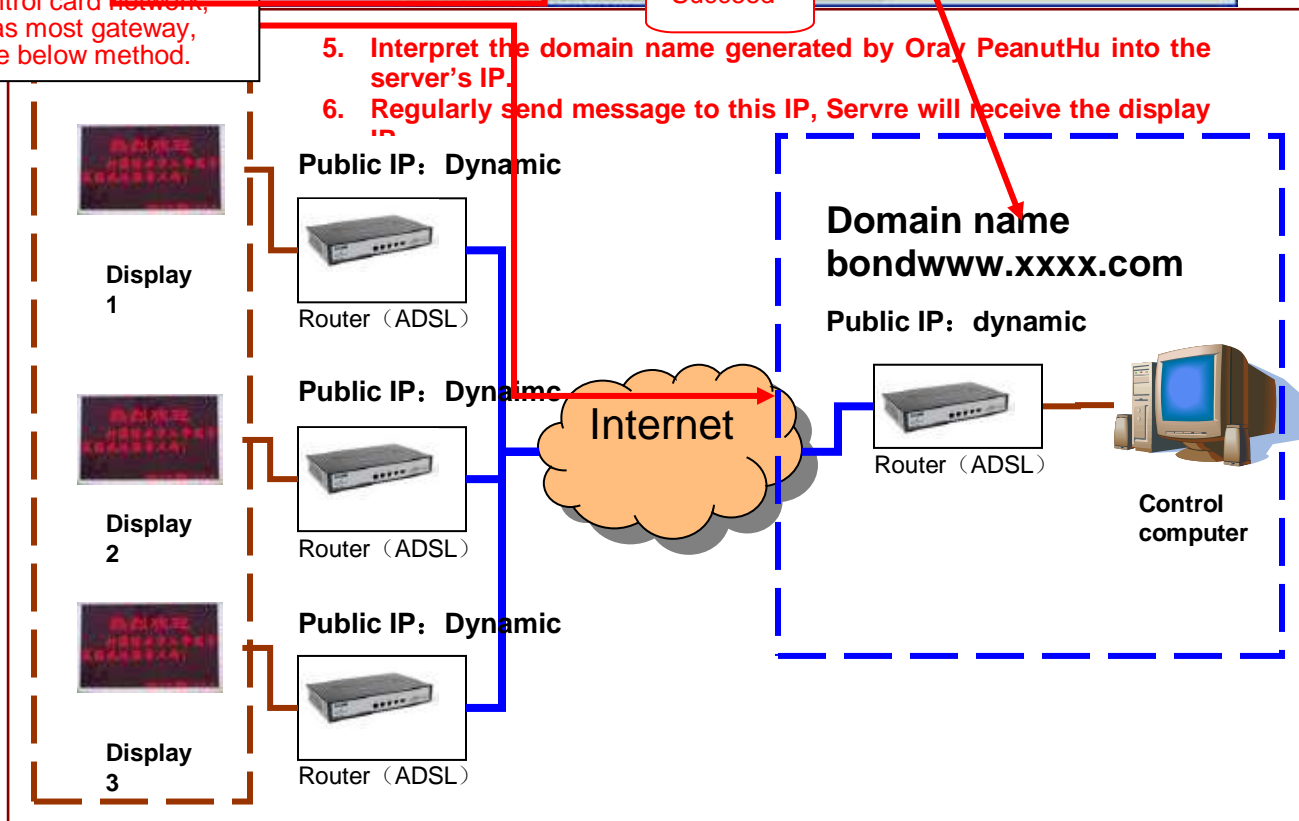


apply domain name, then the correct IP will always found no matter how it changes dynamically. The domain name configuration method is shown as Pic.7-26 below:



DNS Server Ip is the DNS of the control card network, same as most gateway, can use below method.

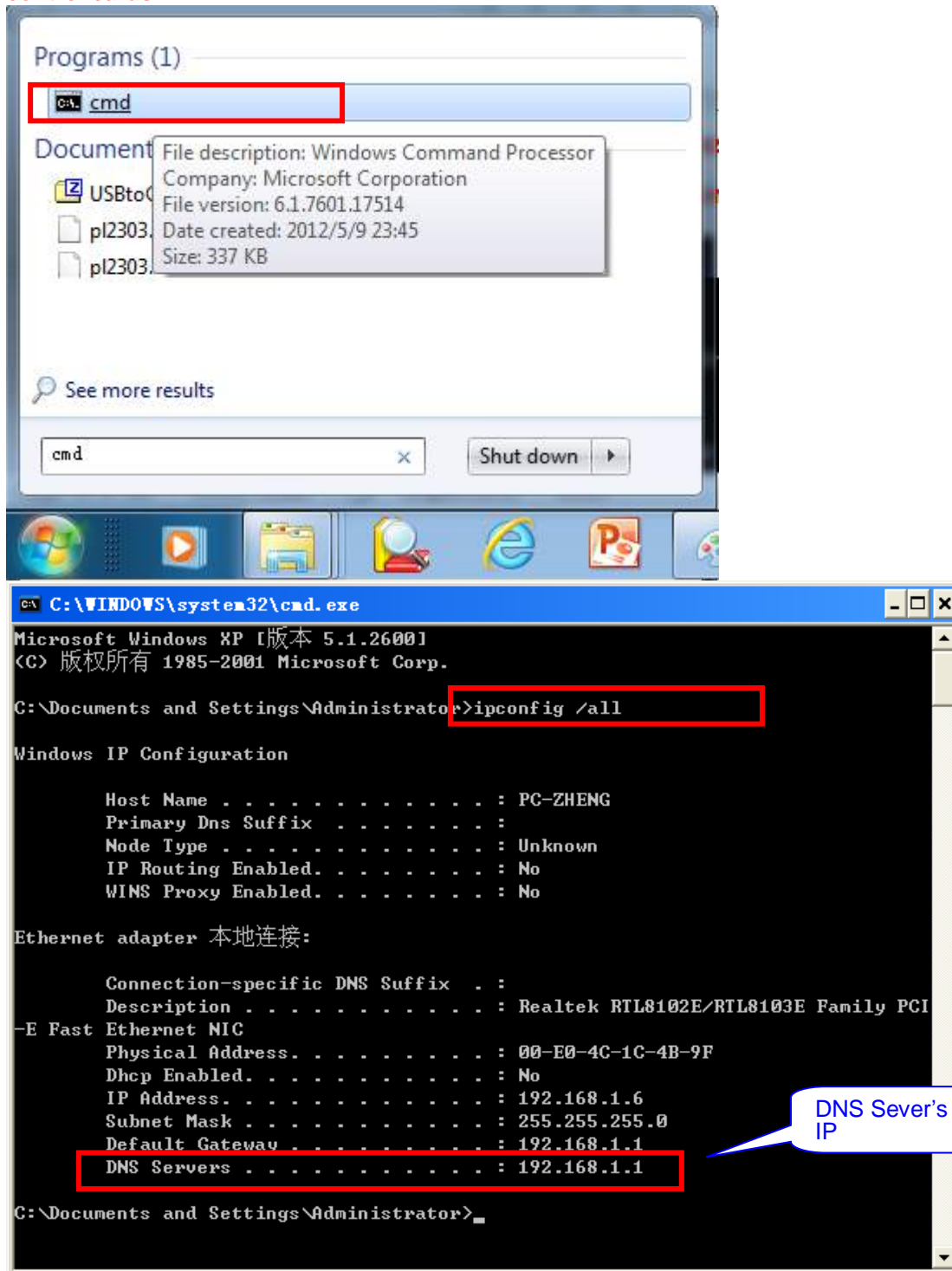
- 5. Interpret the domain name generated by Oray PeanutHu into the server's IP.
- 6. Regularly send message to this IP, Servre will receive the display



Pic.7-26



DNS server IP acquire, need check through one computer connected in the intranet of control cards.



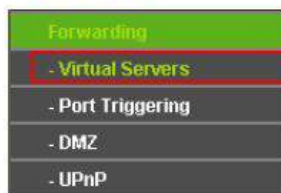
Pic.7-27



2) Router's (ADSL) configuration: Need configure the display end's routers, set it as virtual server, and transfer the control cards' IP defined port to the control card's IP which is needed for communication. See Pic.7-28.



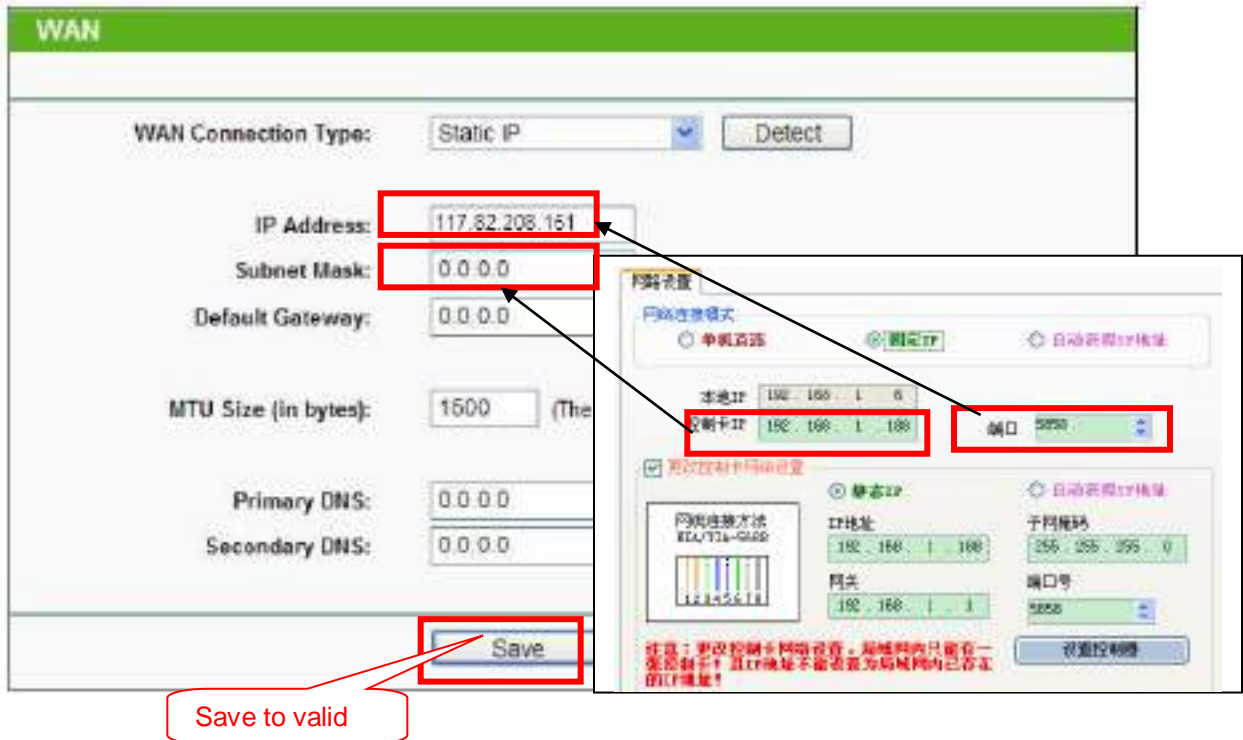
### Forwarding



### Virtual Servers

ID	Service Port	Internal Port	IP Address	Protocol	Status	Modify
1	11130	11120	192.168.0.198	ALL	Enabled	<a href="#">Modify</a> <a href="#">Delete</a>

Annotations:  
- "Valid item" points to the Status column.  
- "Control card IP" points to the IP Address column.  
- "Add new" points to the Add New... button.

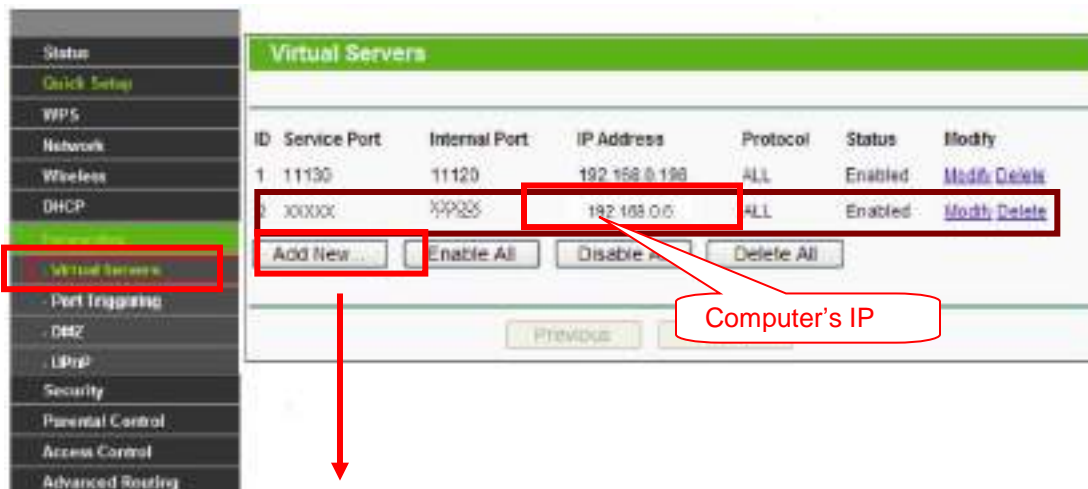


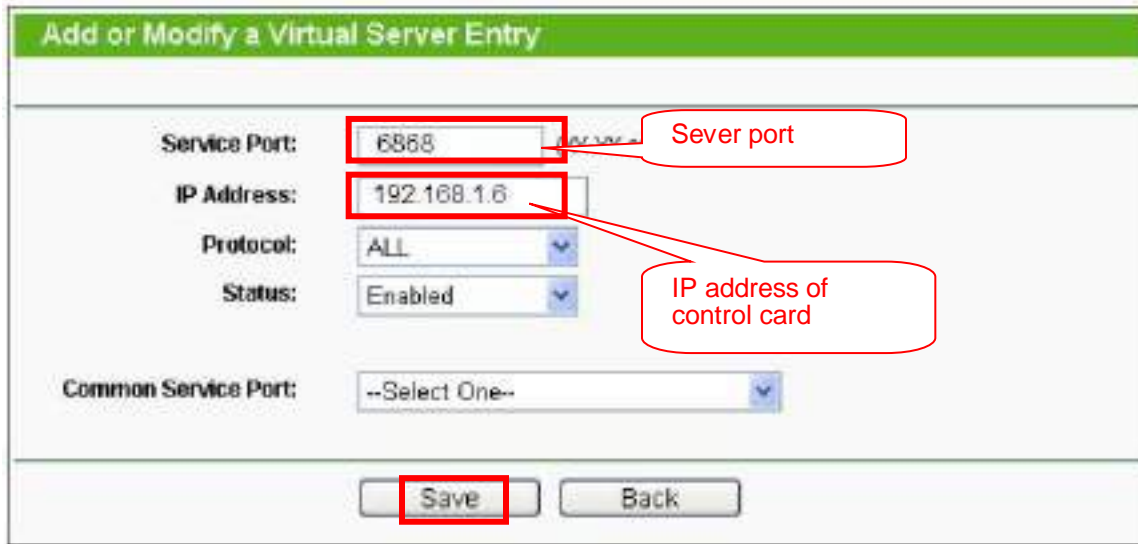
Pic.7-28

Above all, the display end configuration is ready.

Step 2: Control computer end connection configuration:

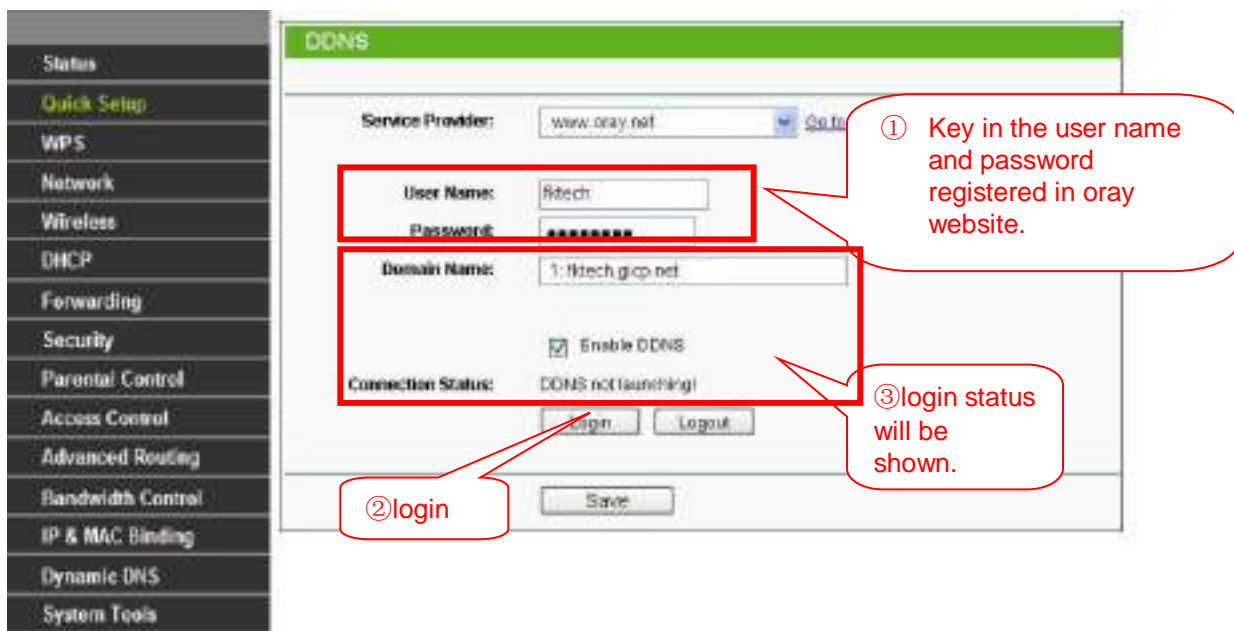
1) Router(ADSL) configuration: the router's configuration is shown in Pic.7-29.





Pic.7-29

When the notify server apply domain name, the router's configuration is shown as Pic.7-30.

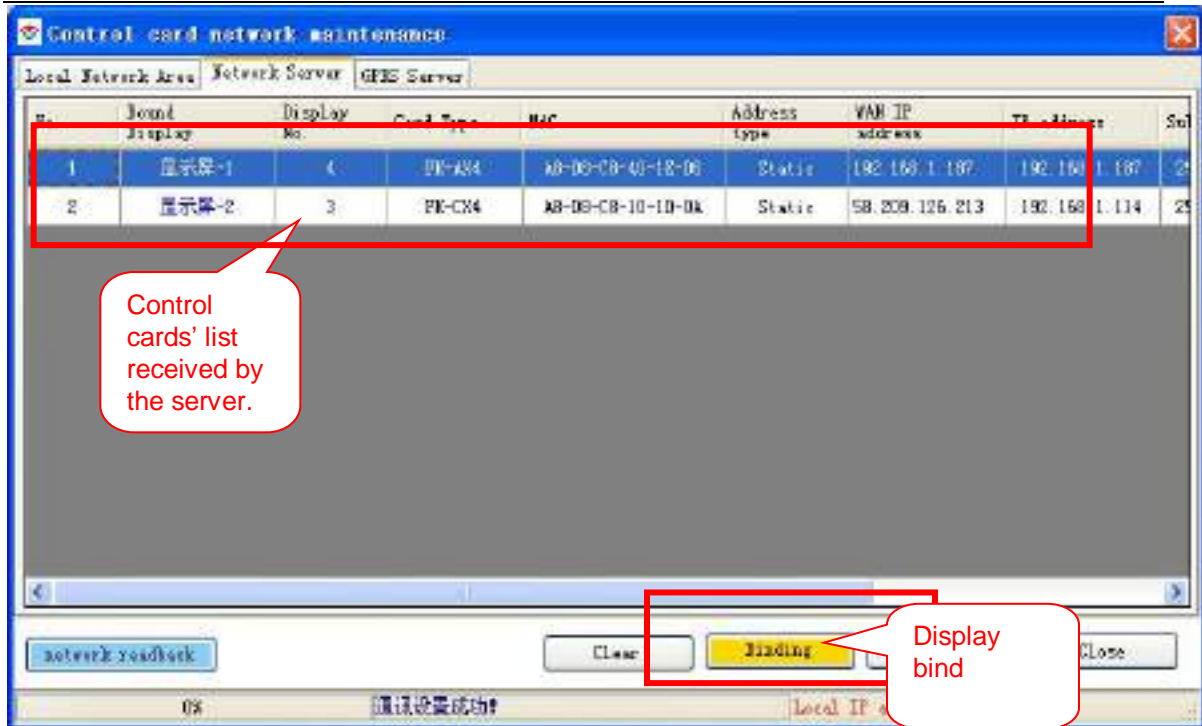


Pic.7-30

When succeed, the control card will regularly notify the dynamic domain's IP to the sever for the remote control computer.

2) Control card network configuration:

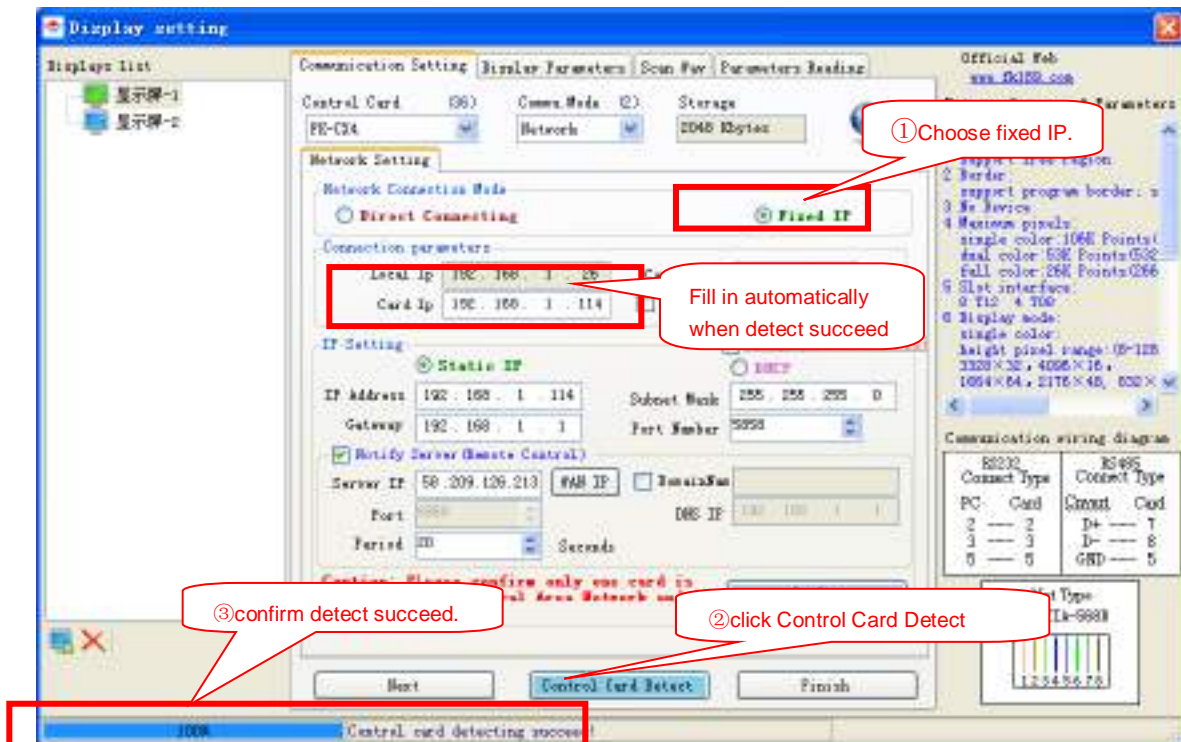
- **Open dialog box 【Control card network maintenance】 , and enter 【Network server】 Option page, see Pic.7-31.**



Pic.7-31

**Attention:** There will be network bonding menu appear only when it has the control card with network port available. Otherwise, User need set up a new display with network connected control card.

➤ Open window “Display setting”, tick off fixed IP, click control card detec. See Pic.7-32.



Pic.7-32



When the connection of control card succeeds, user can start the display parameter set, program downloads etc.

#### 7.4 WiFi communication

WiFi communication operation is basically same as network communication, only WiFi connection and the responding network's parameter are different. Mainly there are 3 different working methods:

- 1) WiFi direct connection
- 2) Intranet connection
- 3) Internet connection(Remote control)

The three methods will be introduced in following pages.

##### 7.4.1 WiFi direct connection

WiFi direct connection means connect the computer and display control card through the WiFi directly, it needs WiFi functions for both computer and control card. The hardware connection is indicated in Pic.7-33.

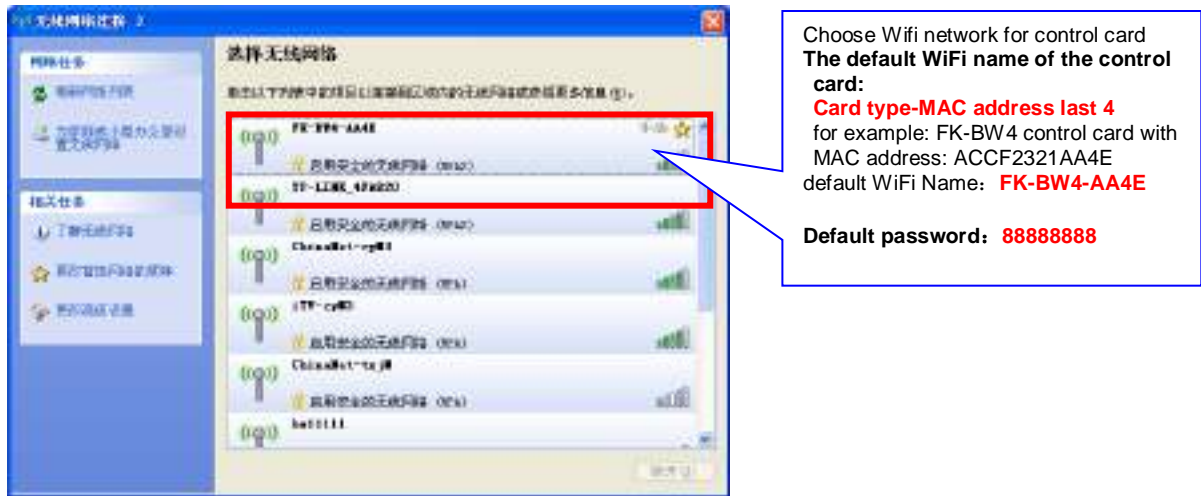


Pic.7-33

WiFi direct connection's software set is as below:

##### 7.4.1.1 WiFi connection

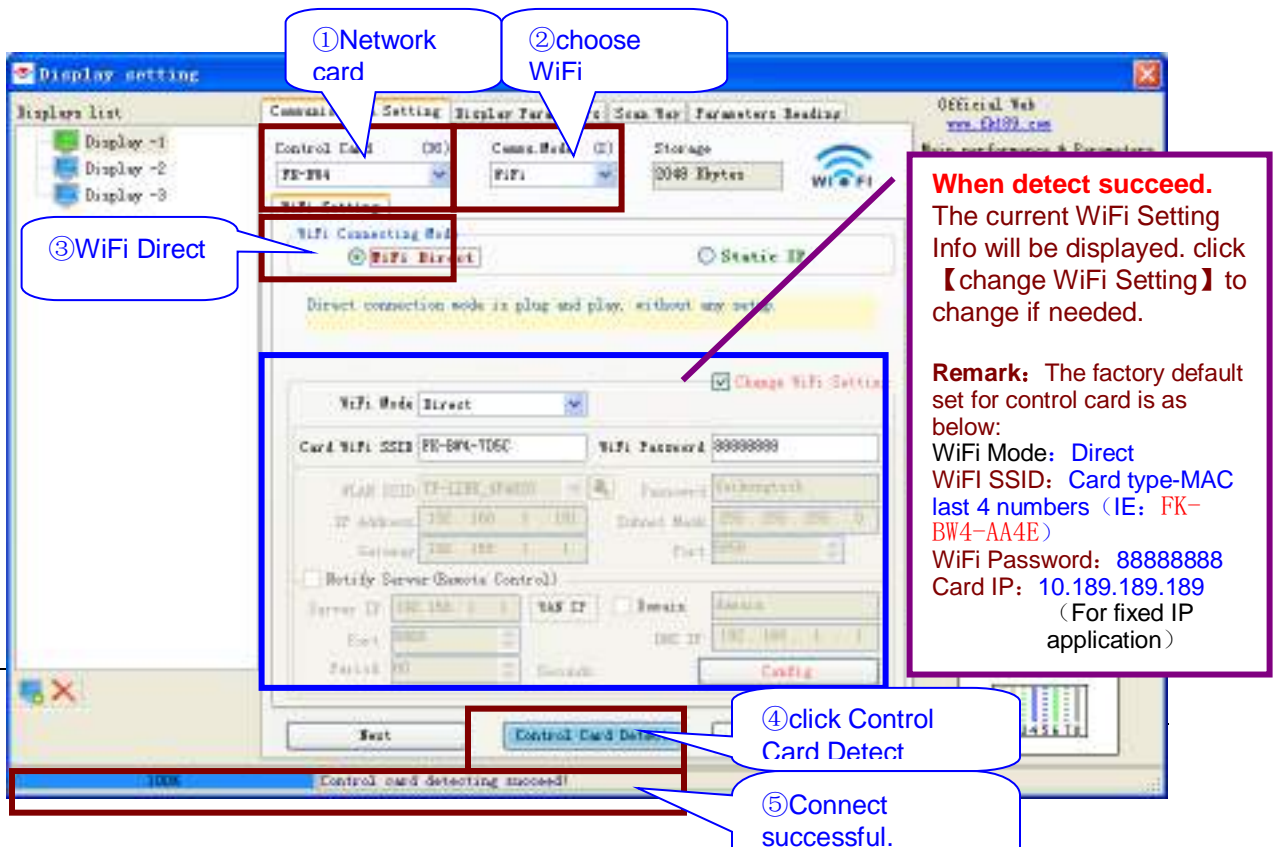
In the wireless network, search the WiFi signal, and connect it. To apply IP automatically for the computer, like in Pic.7-34.



Pic.7-34

7.4.1.2 Control card connection

Click to open the window 【Display setting】 , User can detect the control card through WiFi direct connection, or key in the control card's IP address through Fixed WiFi . The WiFi direct connecting procedure is shown in Pic.7-35.

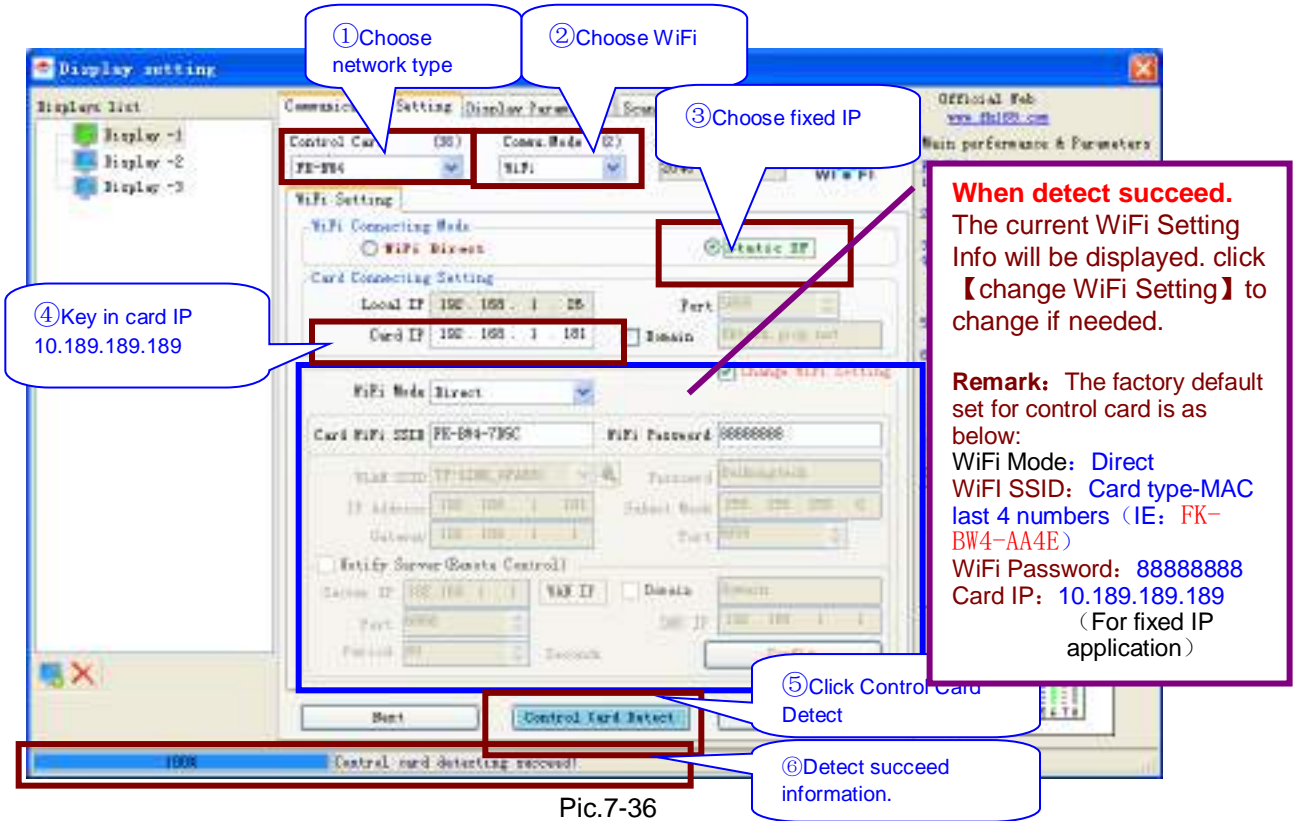




注：直连一般不需要更改 WiFi 配置，如想更改详细请参见 [3.2.3 WiFi 配置](#)。

Pic.7-35

Detect through Fixed IP procedure is shown in Pic.7-36.



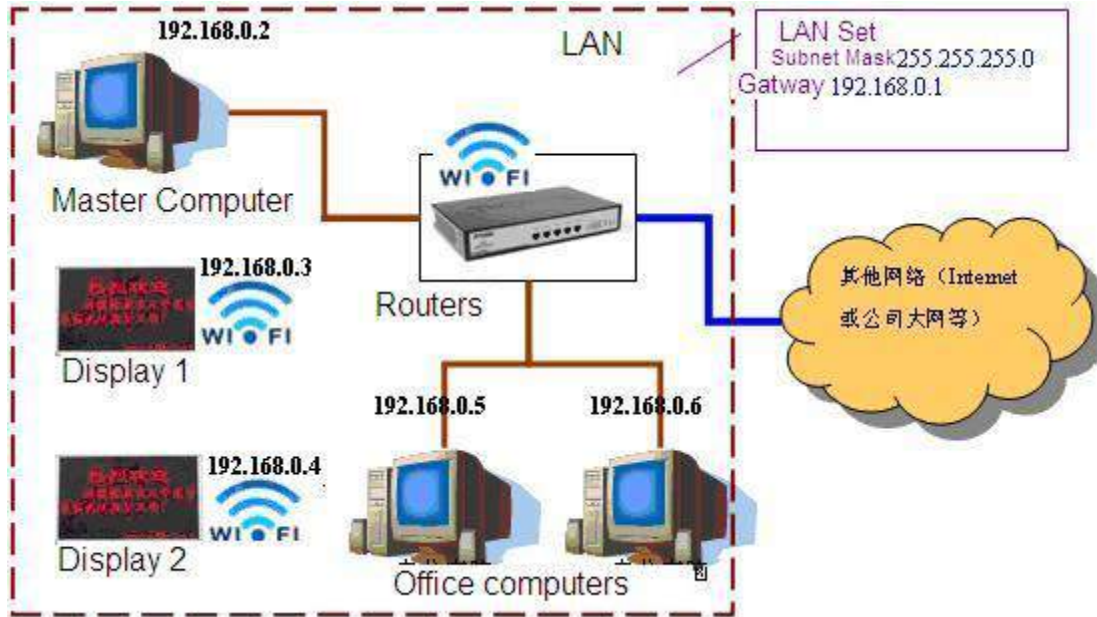
Pic.7-36

Remark: Normally no WiFi configuration change is needed for WiFi direct connection. More detail about WiFi configuration is described in chapter [7.4.2.2 WiFi Configuration](#).

Then the communication between the control card and the software through WiFi shall be setup ready for next steps of uploading display set and sending program to the control card.

### 7.4.2 LAN (Local Area Network) connection

Intranet connection need connect the control card with WiFi to the wireless router, and then communicate and operate to the control cards through the computer within the intranet. The hardware connection is shown Pic.7-36.



Pic.7-37

The software configuration procedure is as following:

- 1) Connect the control card. Please ignore this step once USB disk:  
Please apply the computer with WiFi to connect the control card. (Refer to [7.4.1.1 WiFi Connection](#)).
- Connect mobile to the control card (Refer to [7.4.2.1 Mobile and control card connection](#))
- 2) Change the control card WiFi configuration (Refer to [7.4.2.2 WiFi Configuration](#)).
- 3) Connect the control card through intranet.
- 4) Configure the display setting, edit and send the program. (The operation is same as serial port and network connection control card.)

#### 7.4.2.1 Mobile and control card connection

To connect the mobile and control card through WiFi, user can use webpage to modify WiFi configuration of the control card. The connecting procedure is shown in Pic.7-38.



Pic.7-38

#### 7.4.2.2 WiFi configuration

WiFi set can be achieved through 3 methods below: download directly through USB; Change through web page; direct configuration through software.

The direct configuration through FK Show is shown in Pic.7-39.



The screenshot shows the 'USB for WiFi Setting' web interface. It includes a menu at the top with options like 'Tools', 'Language', and 'Help'. The main configuration area is titled 'WiFi Setting' and contains several input fields and dropdown menus. Callouts provide the following instructions:

- ① Choose WiFi Mode: WiFi direct connect choose **[Direct]**; Network LAN or WAN choose **[Routers]**.
- ② WiFi Name and password when direct.
- ③ Key in Routers name
- ④ Select Auth and encryption algorithm of the router, which can be found the router's wireless safety set.
- ⑤ Key in the connect password
- ⑥ Key in the IP address of the control card.
- ⑦ Export to USB disk
- ⑧ Insert the USB disk to the control card and check the indication information in the display screen When "connection succeed!" is shown, then user can find the display in the intranet.



Pic.7-39

The procedure of WiFi configuration through webpage is as following:

1) Key in the webpage address as below:

When connect though notebook or mobile, key in the address: <http://10.189.189.189/>



If Visit through intranet, key in the IP address of the control card located in the intranet, for example: http://192.168.1.188/

Login user name: fkuser

Password: 168

- ① **Mode selection:** for direct WiFi connection then please choose【direct connect】; for Network LAN or WAN connection, please choose【Routers】.

If 360 web browsers cannot be open, please choose the fast speed mode at right up corner, as shown in Pic.7-40:



Pic.7-40

2) To have set in the web page as shown in Pic.7-41::

The screenshot shows the '模式选择 (Select Mode)' configuration page. The left sidebar contains '系统信息', '设置', and '重启'. The main content area is titled '模式选择 (Select Mode)' and includes the following fields:

- 模式选择 (Select Mode): 直连 (AP)+路由 (STA) [Callout 1: Choose WiFi AP +STA mode]
- 路由 (STA) section:
  - 网络名称 (Network Name (SSID)): TP-LINK\_4FA8 [Callout 2: Search the wireless network, and choose the one to connect.]
  - 加密方式 (Encryption Method): WPA2PSK [Callout 3: Choose Encryption Method and Encryption Algorithm.]
  - 加密算法 (Encryption Algorithm): AES [Callout 3: Choose Encryption Method and Encryption Algorithm.]
  - 密码 (Password): [Callout 4: Key In the password]
- 自动获得IP地址 (Obtain an IP address automatically): Disable
- IP地址 (IP Address): 192.168.1.85 [Callout 5: Set the network configuration of the control card]
- 子网掩码 (Subnet Mask): 255.255.255.0 [Callout 5: Set the network configuration of the control card]
- 网关地址 (Gateway Address): 192.168.1.1 [Callout 5: Set the network configuration of the control card]
- DNS服务器地址 (Server Address): 192.168.1.1



### 直连(AP)

#### 无线接入点参数设置(Wireless AP Setting)

网络模式(Network Mode) 11bgn

网络名称(Network Name)(SSID) FK-BW4-AA4E ⑥The name of the control card

模块MAC地址(Module MAC Address) ACCF2321AA4F

无线信道选择(Select Channel) 2412MHz(信道 1)

#### 无线接入点安全设置(Wireless AP Security Setting)

加密模式(Encryption Mode) WPA2-PSK ⑦Select Encryption Mode

密码>Password) ⑧Key in password

显示密码(Show Passwords)

⑨save the set

### 保存成功!

### Saved Successfully!

重启设备后配置才能生效。  
Configurations will take effect after restart.  
重启之后，您需要重新登录配置界面进行其他配置，建议在完成所有设置后再重启。  
请点击[重启]按键立即重启；或点击[返回]按键继续配置。  
您可以在完成所有设置后选择菜单栏中的重启功能进行重启。  
After restart, you will need to re-login the configuration interface for other settings, so it is recommended to restart after completing all settings.  
Please click [Restart] to restart now, or click [Back] to continue setting.  
You can re...

⑩Reset WiFi to have Set valid.

Pic.7-41

The procedure to update the WiFi configuration through software is as following:

The user can change the configuration through the window 【display set】 和 【Card network maintenance】 .



**Mode selection:** for direct WiFi connection then please choose【direct connect】; for Network LAN or WAN connection, please choose【Routers】.

The updating procedure through the window【Display setting】 is indicated in Pic.7-42.

**① Card type**  
**② Choose WiFi**  
**③ wifi direct**  
**④ Click to detect the control card**  
**⑤ Feedback information once detect succeed.**  
**⑥ Tick off this**  
**⑦ Select direct mode**  
**⑧ Set the direct connect parameter**  
**⑨ Set the router's network parameter**  
**⑩ Click "config" to export the set to control card**

**When detect succeed.** The current WiFi Setting Info will be displayed. click 【change WiFi Setting】 to change if needed.

**Remark:** The factory default set for control card is as below:  
 WiFi Mode: Direct  
 WiFi SSID: Card type-MAC last 4 numbers (IE: FK-BW4-AA4E)  
 WiFi Password: 88888888  
 Card IP: 10.189.189.189  
 (For fixed IP application)

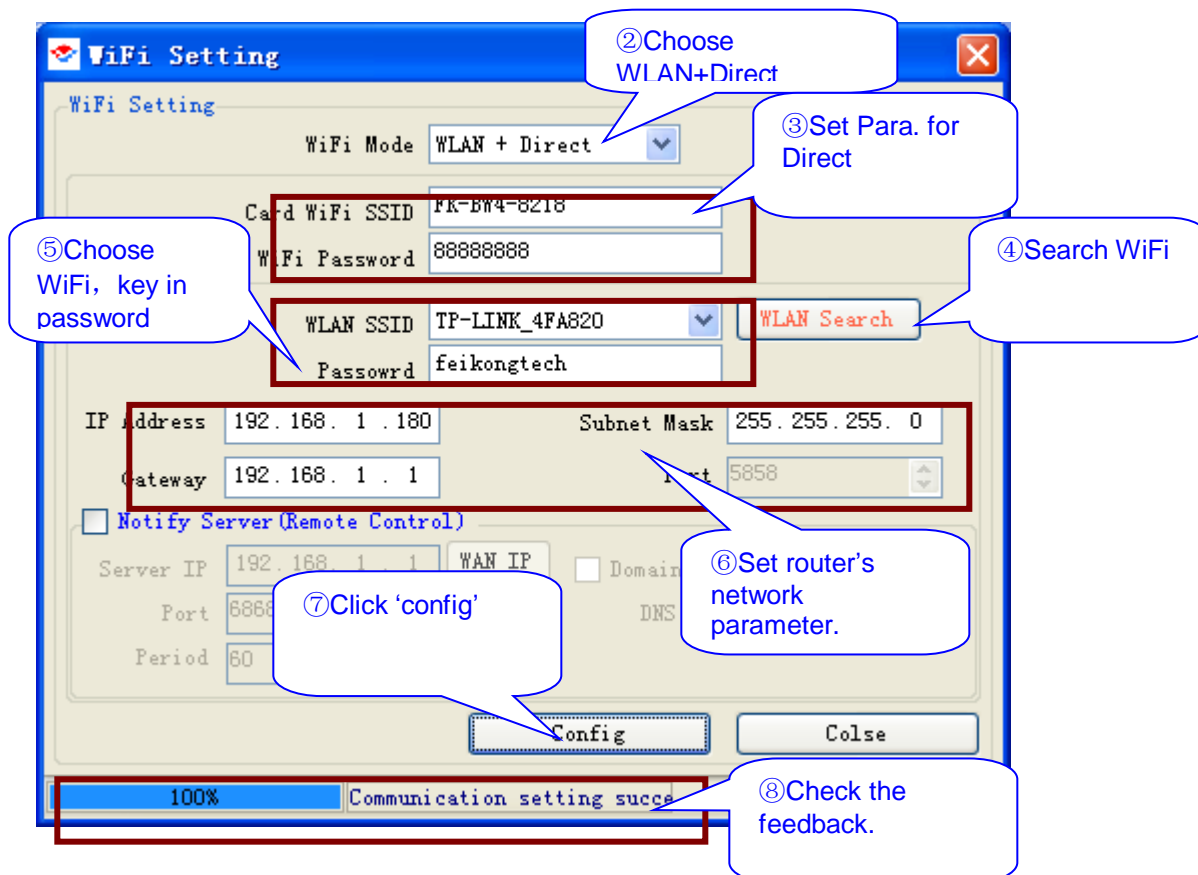
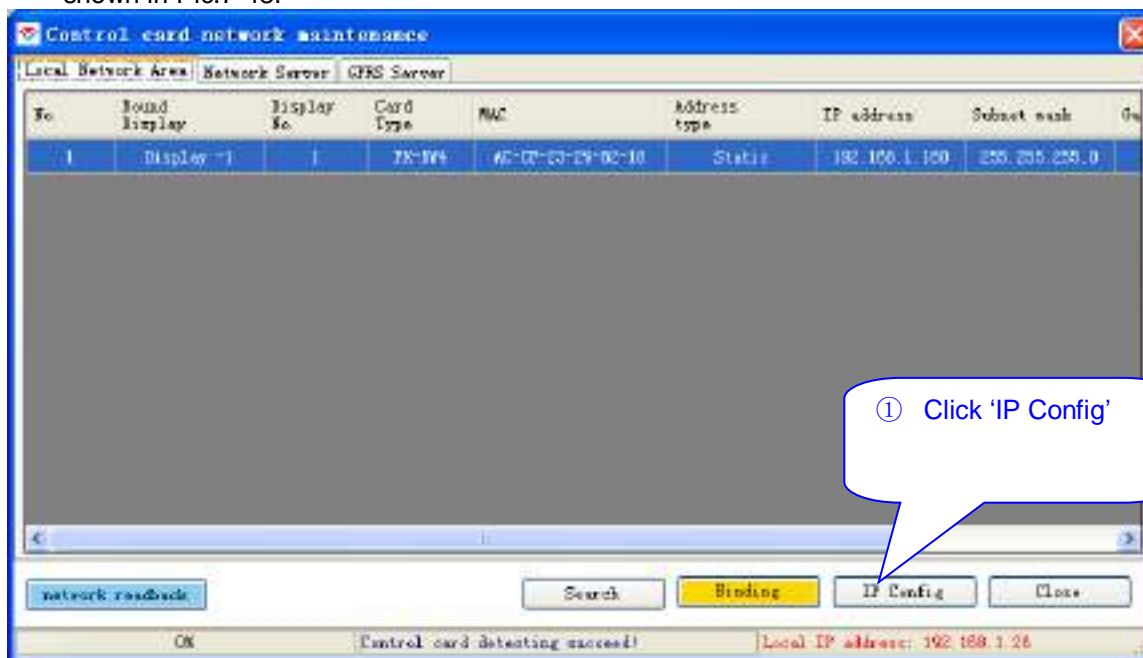
Pic.7-42

**Remind:** Once WiFi set succeed and the control card and the computer connection is working, there will be “connection succeed!” information indicated in the right top corner of the display screen, and then the user can find the card in FK Show, the local area network.





- The updating procedure through the window **【Control card network maintenance】** , as shown in Pic.7-43.





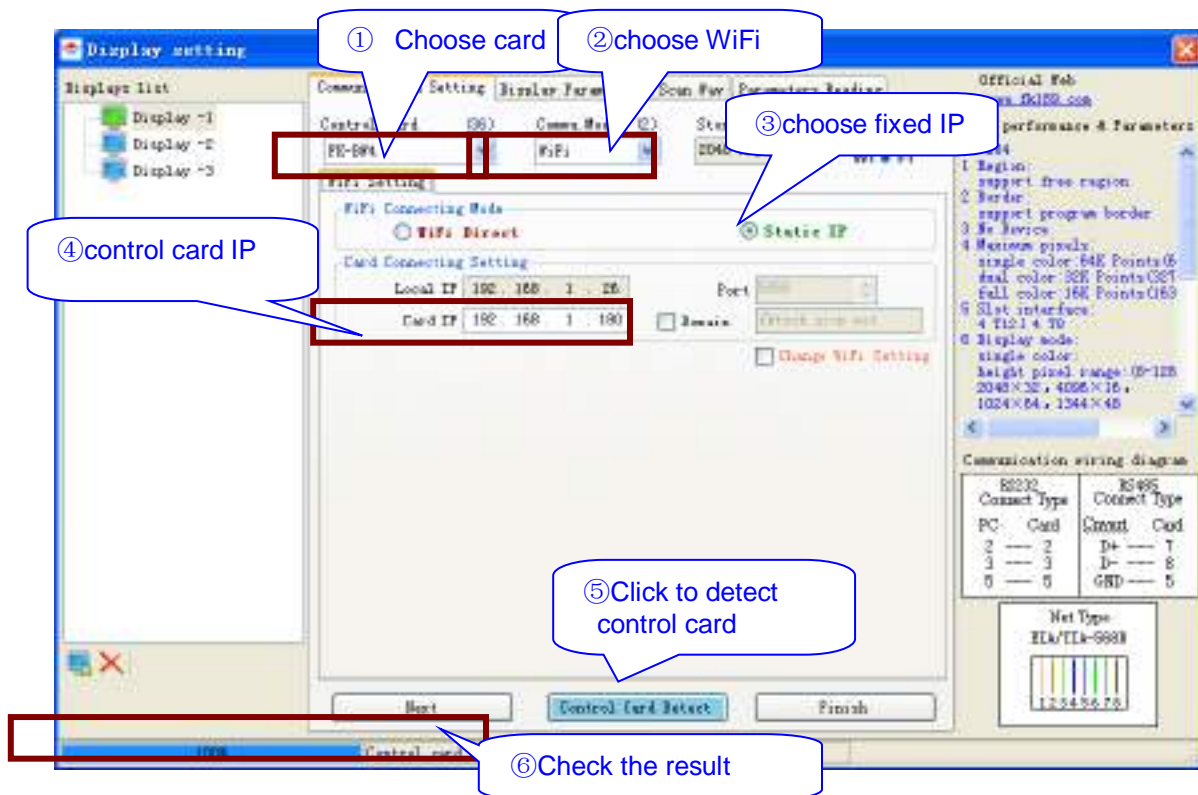
Pic.7-43

**Remind: Once WiFi set succeed and the control card and the computer connection is working, there will be “connection succeed!” information indicated in the right top corner of the display screen, and then the user can find the card in FK Show, the local area network.**



#### 7.4.2.3 Control cards connection in intranet

When the network parameter set finish, then the user can start connect the control card in local area network window. The connecting method is shown as Pic.7-44.



Pic.7-44

The failure causes analysis:

1. Check the IP address in the step ④ is the right IP address of the control card.
2. The IP of the master computer is not in the same band of the whole network.
3. No 【Router】 or 【WLAN+Direct】 is selected when WiFi configuration.
4. Wrong router is selected when WiFi configuration.
5. Wrong router's password is key in when WiFi configuration.



## 6. Wrong IP set when WiFi configuration

When control card connection is working, then the user can start the display setting and upload program to the control card.

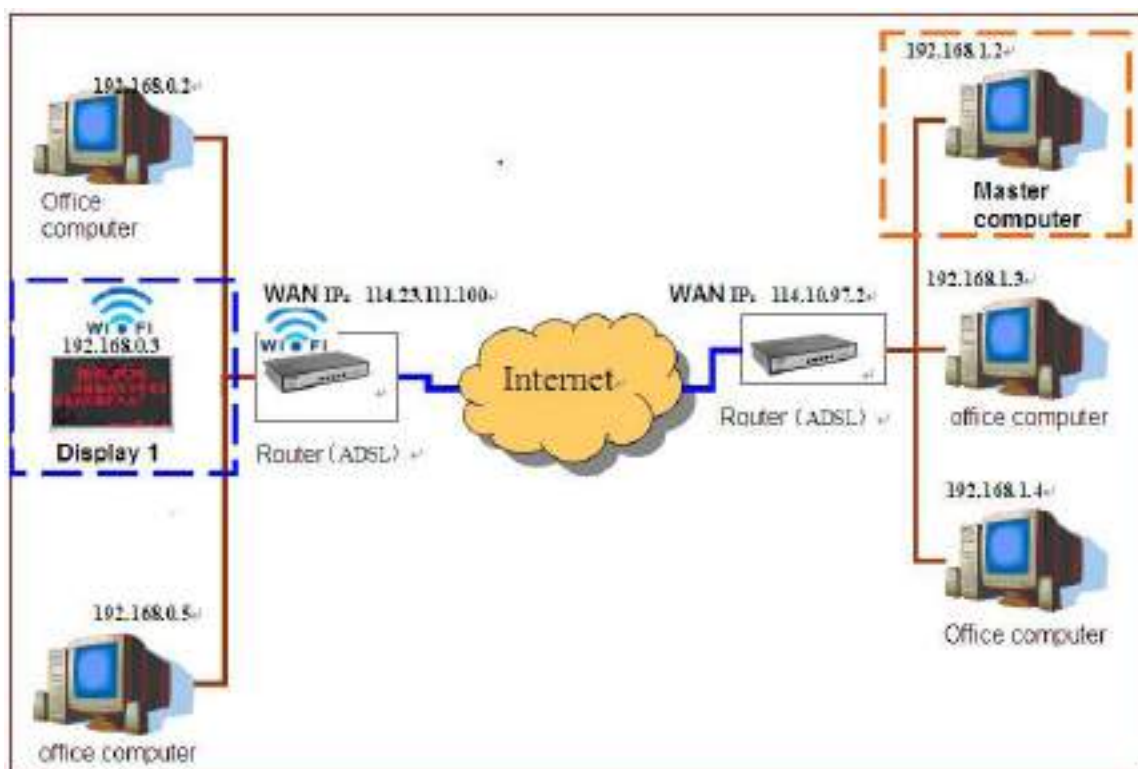
### 7.4.3 Internet connection (Remote control)

Internet connection need connect WiFi control card to wireless routers, then realize the remote control through computer.

Remark: To apply remote communication through internet, the router at the displays terminal must have the terminal transferring function.

#### 7.4.3.1 Only one display in the internet

When there is only one display in the internet, the hardware connection is shown in Pic.7-45.



Pic.7-45

The software configuration procedure is as following:

- 1) Set the control card WiFi (Refer to LAB WiFi setting [7.4.2.2 WiFi Setting](#)).
- 2) Set the control card's end router.
- 3) Set the master computer, and connect.



4) Configure the display setting, edit and send the program. (The procedure is same as serial port and network connection.)

#### 7.4.3.1.1 WiFi configuration

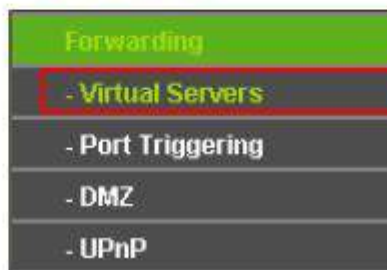
The WiFi configuration of single control card is same as LAN network, please choose the WiFi connecting mode “router”, and please refer to [7.4.2.2 WiFi configuration](#) for configuration procedure.

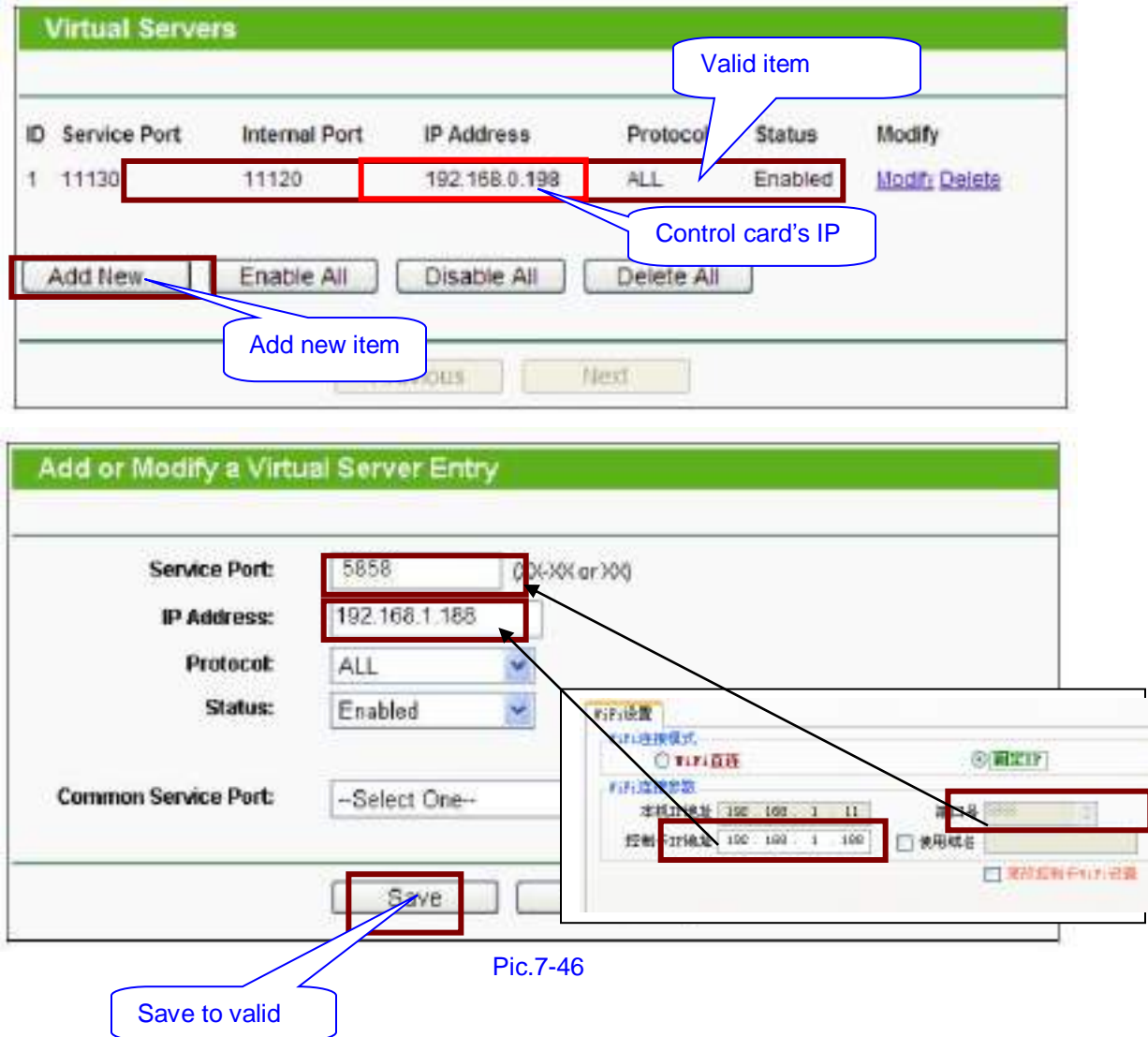
#### 7.4.3.1.2 Control cards router configuration

- **User need to configure the control card’s side router, set it as virtual server, transfer the control card’s port to the control card’s IP which need communication, as shown in Pic.7-46.**



### Forwarding



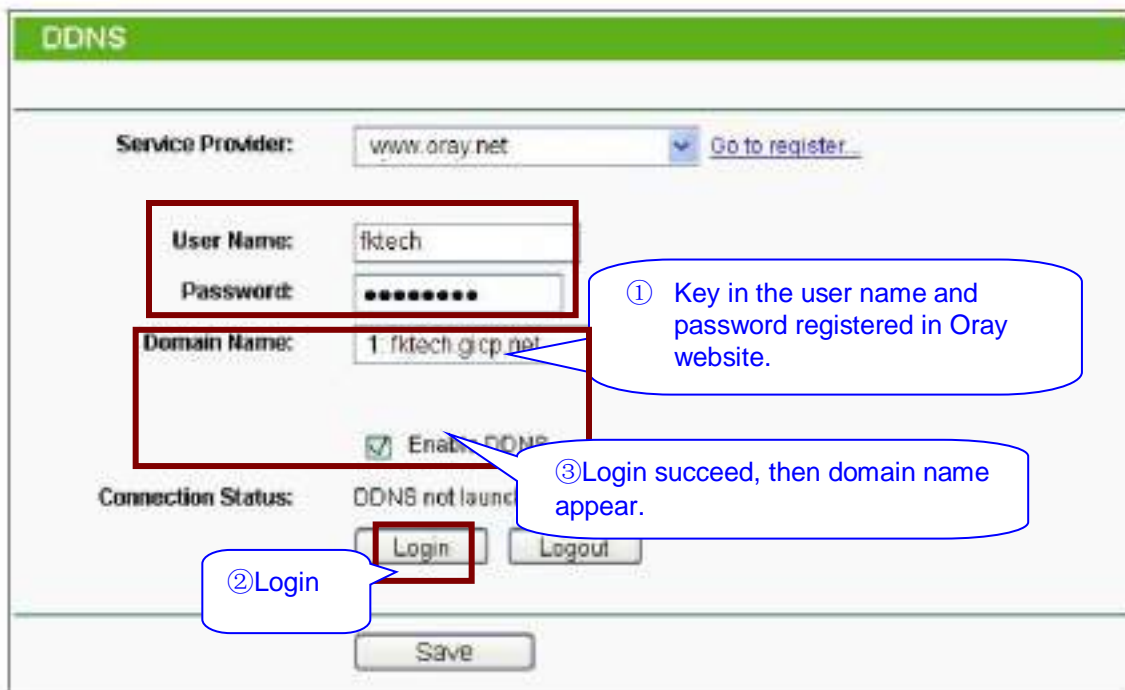


Pic.7-46

➤ **Peanut Domain Set**

ADSL routers IP are mostly dynamic, router will get new public IP once it is power off and power on again, as well as the new IP for the control cards below the router. To communicate with control cards through internet remotely, the control computer side need always get the new IP, it is difficult to handle it manually. Bond one domain name to the control card, no matter how the public IP changes, it will automatically find the control card with domain name without any manual operation.

- Register Oray PeanutHu to get one free domain name through website <http://www.oray.com/>
- Apply Dynamic DNS in router, map this router's public IP(this card's public IP.H



Pic.7-47

When succeed, Just type in the domain name in the remote terminal, and then can realize the remote control and visit , for the detail please refer to [7.4.3.1.4 Master computer's configuration connection.](#)

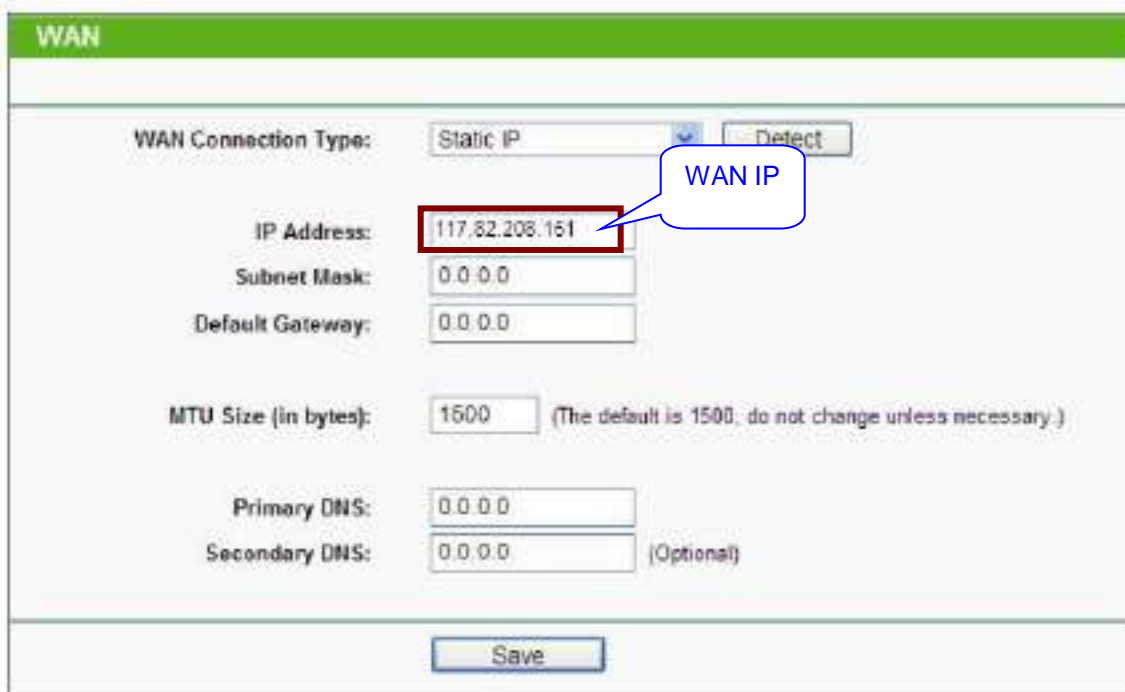
#### 7.4.3.1.3 Get the control card WAN IP



Once the user cannot connect the control card though domain name, then need to learn the control card's WAN IP. When the control card's WLAN IP is available, then the remote master computer can visit this control card through WAN IP.

The procedure to get WAN IP is as following:

- Review WAN interface of the display side, as shown in Pic.7-48.



Pic.7-48

- Key in <http://www.ip138.com> at the display side computer, as shown in Pic.7-49.

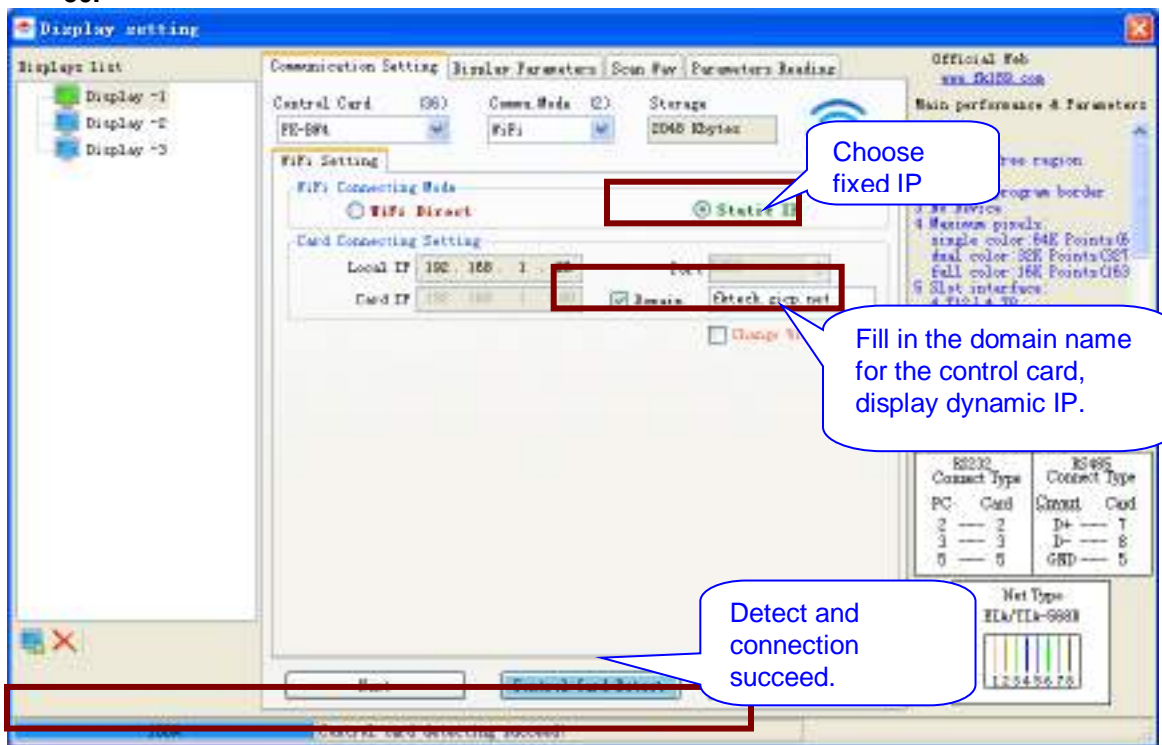




Pic.7-49

7.4.3.1.4 Master computer configuration connection

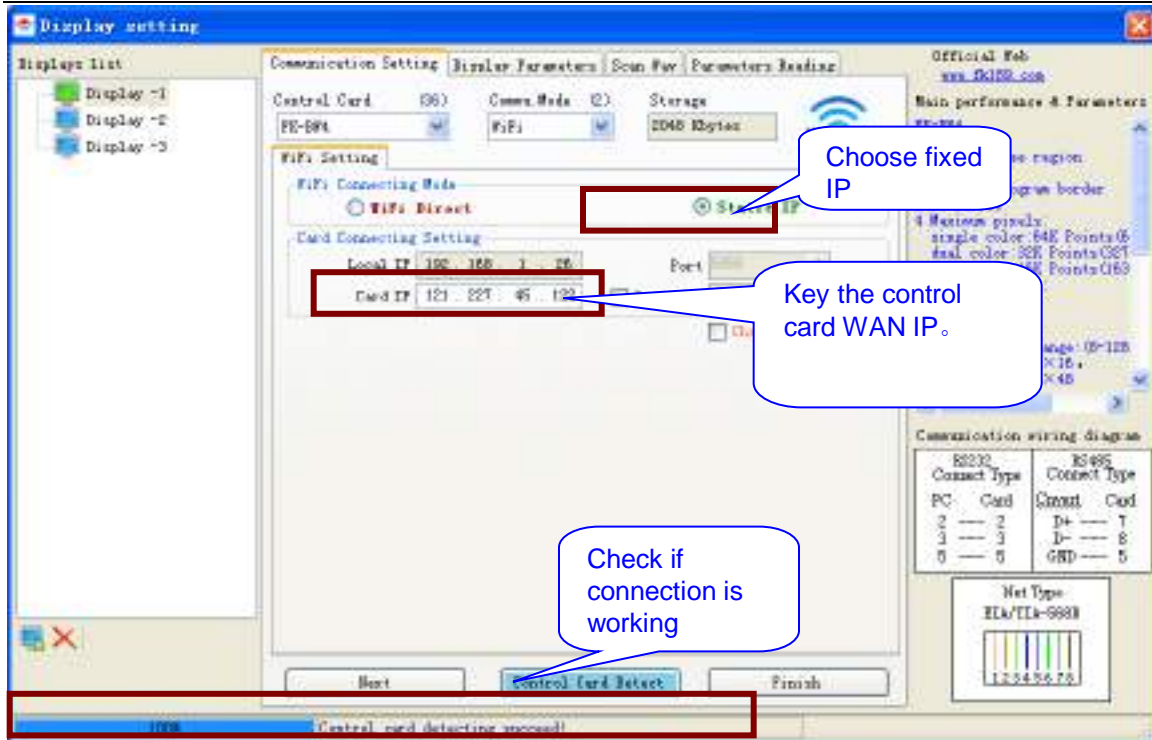
- **Apply the domain name to connect the control card, the procedure is shown in Pic.7-50.**



Pic.7-50

- **Apply the WAN IP to connect the control card**

The procedure to get WAN IP is indicated in Paragraph [7.4.3.1.3 Getting the control card WAN IP.](#)



Pic.7-51

When connection of computer and the control card is finished, then the user can start display setting and uploading the program etc. operation.

#### 7.4.3.2 More than one displays in Internet

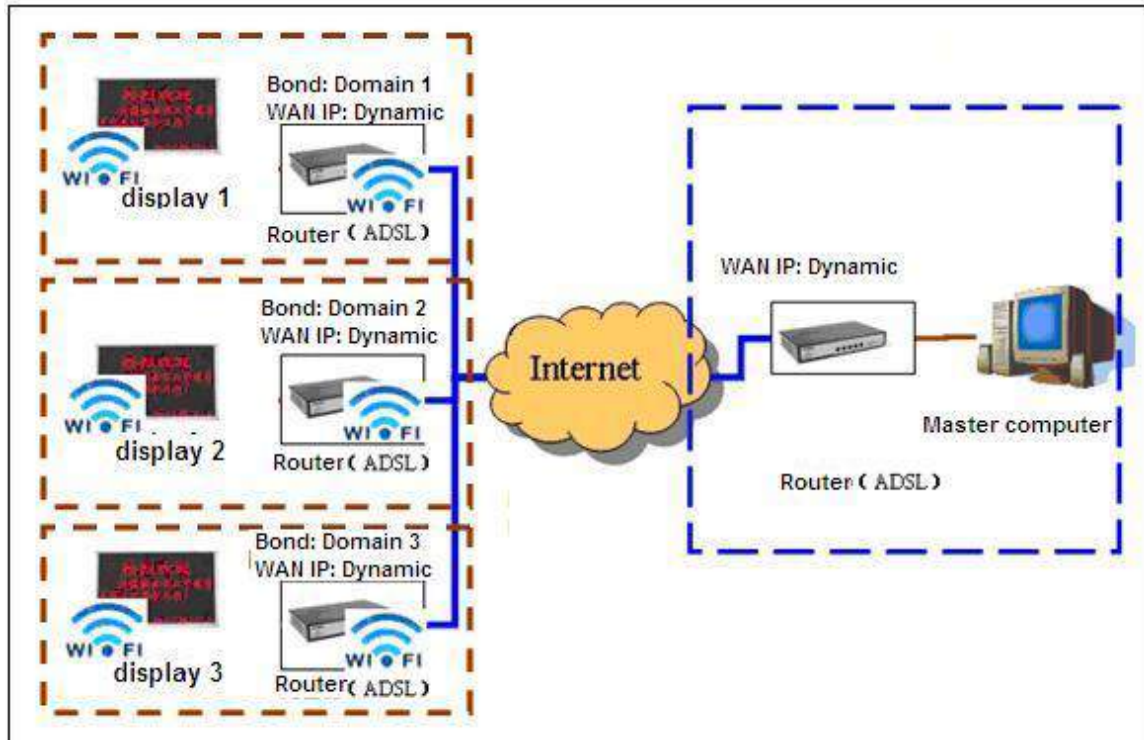
Remark: To apply remote communication through internet, the router at the displays terminal must have the terminal transferring function.

There are two ways for more than one display network:

- 1) Apply fixed WAN IP or bonded domain name for control card (recommended).
- 2) Apply fixed WAN IP or bonded domain name for master computer with notifying server connection.

##### 7.4.3.2.1 Apply fixed WAN IP or bonded domain name for control card (Recommended)

This method need apply peanut domain name (www.oray.com) for each control card, and control the displays through the master computer. The hardware connection is as shown in Pic.7-52.



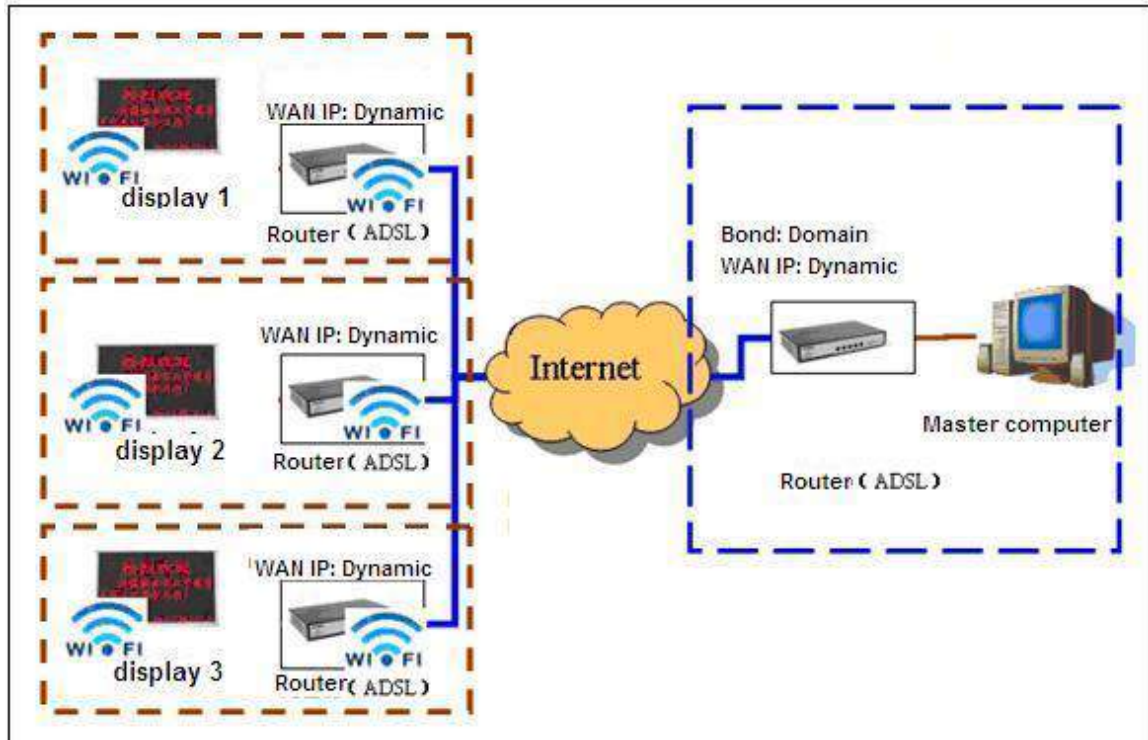
Pic.7-52

Attention: Domain is bonded to display terminal, one domain name for each display.

The software configuration method is same as the single card operation, please refer to [7.4.3.1 Only one display in the internet](#) for the network configuration method.

#### 7. 4. 3. 2. 2 Notifying Server Method

The hardware connection of Notifying Server method is shown in the Pic.7-53.



Pic.7-53

Attention: the domain name is bonded to the master computer.

The software configuration procedure is as following:

- 1) Control card WiFi configuration.
- 2) Configure the control card end router.
- 3) Configure the master computer set, connect.
- 4) Set display setting, edit and send the program. (The operation is same as serial and network)

#### 7.4.3.2.2.1 WiFi configuration

WiFi connection mode shall be set as "Router" .

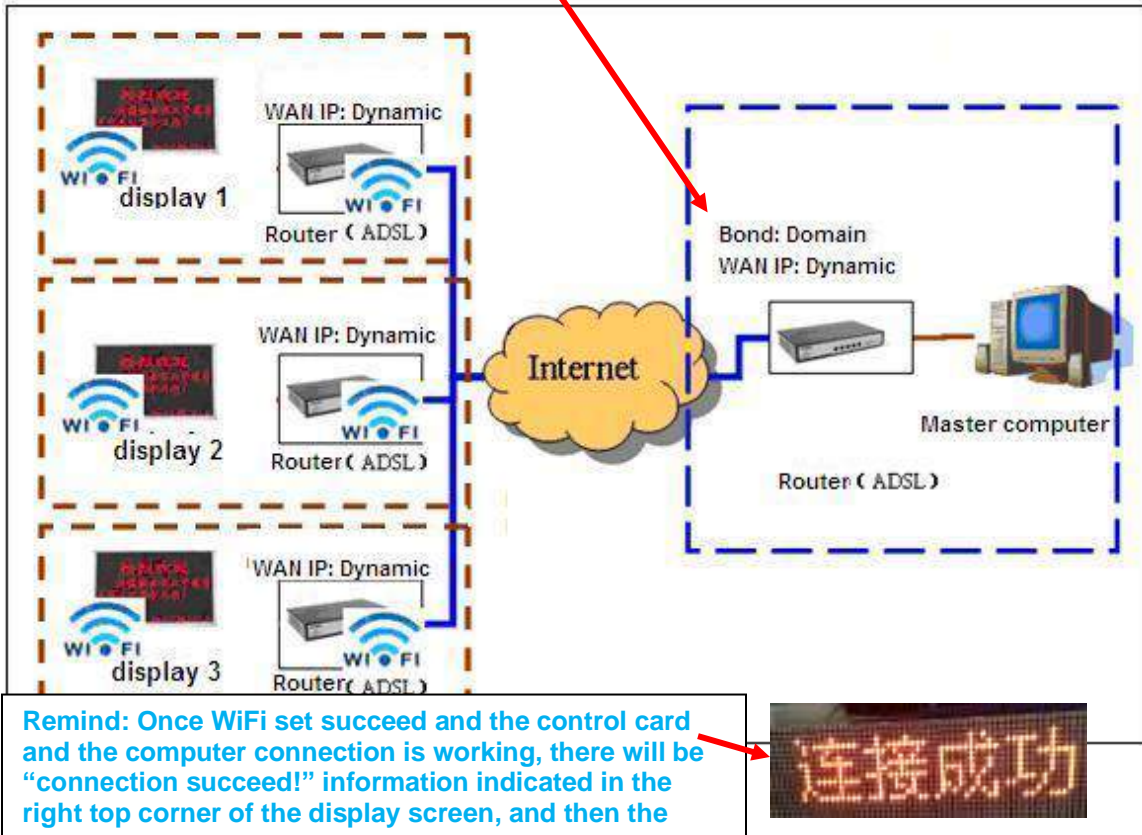
Notifying server only can realize through USB disk or software connection set.

- When the remote control sides apply the fixed IP and direct connection, the configuration method is shown in Pic.7-54.



The screenshot shows the 'Display setting' window with several callouts:

- Group mode, need notify server:** Points to the 'WiFi Setting' section.
- Auto fill in the current network WAN IP:** Points to the 'WAN IP' field.
- Mater computer WAN IP:** Points to the 'WAN IP' field.
- Confit to card:** Points to the 'WiFi Mode' dropdown menu.
- Check if connection succeed.:** Points to the 'Control Card Detect' button.





Pic.7-54

- Remote control end apply the fixed IP—U disk set, the set is shown as Pic.7-55.

The screenshot shows the 'USB for WiFi Setting' window. It includes sections for 'WiFi Setting' (WLAN Mode, SSID, Password, Auth, Encryption), 'Activity Server (Remote Control)' (Server IP, WAN IP, Port, Period, DNS IP), and 'Select USB Disk' (Disk selection, Detect USB, Read, Export buttons). A red box highlights the 'Activity Server' section. Callouts point to 'Group mode, need notify server', 'Mater computer WAN IP', 'Auto fill in the current network WAN', and 'Export to U disk'. A red text box at the bottom provides instructions on what to do after a successful export.

**Group mode, need notify server**

**Mater computer WAN IP**

**Auto fill in the current network WAN**

**Export to U disk**

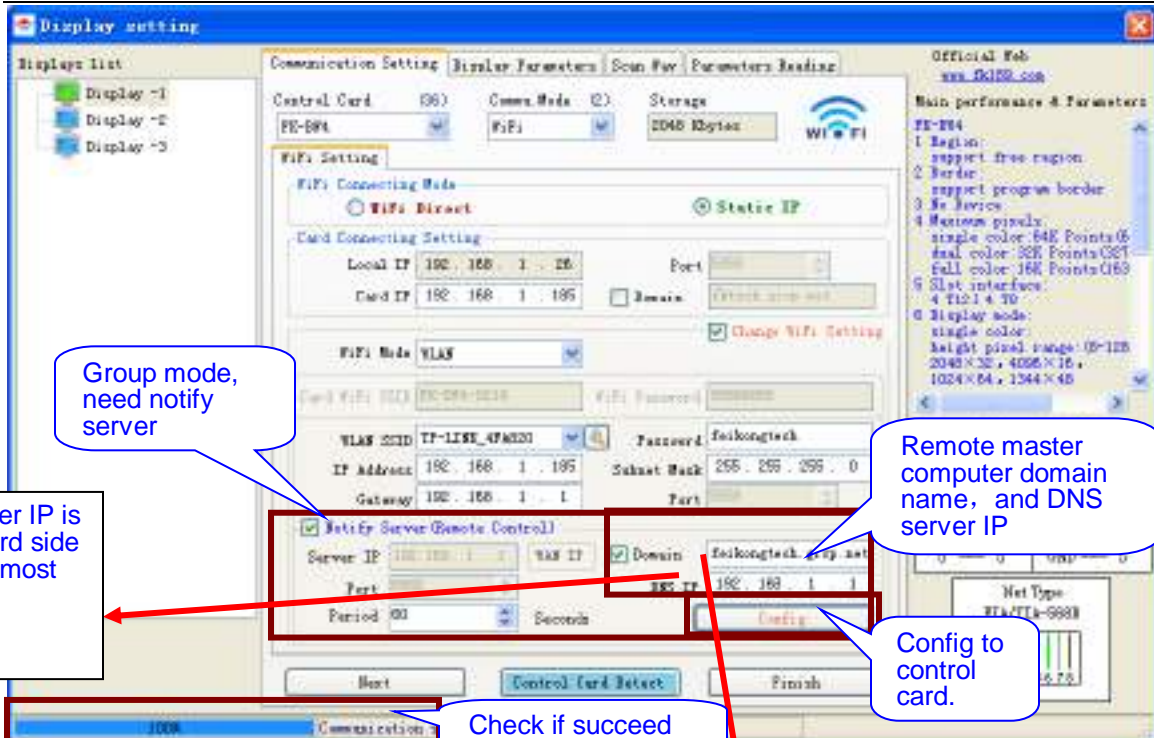
**USB disk format: FAT32**

**When the export succeeds, insert the USB disk to control card, and check the right top corner of the display screen. When "connect succeed" displayed, the user can find the control card in FK Show' s network list.**

Pic.7-55



- Remote control end domain name bonded—Direct connection software set
- If the WAN IP of the control computer is dynamic one, and the method of notifying server is IP, then card connection will fail if the IP changes. At this situation, better to use domain name, no matter how the WAN IP changes, it will be identified through the domain name. The procedure is as Pic.7-56.



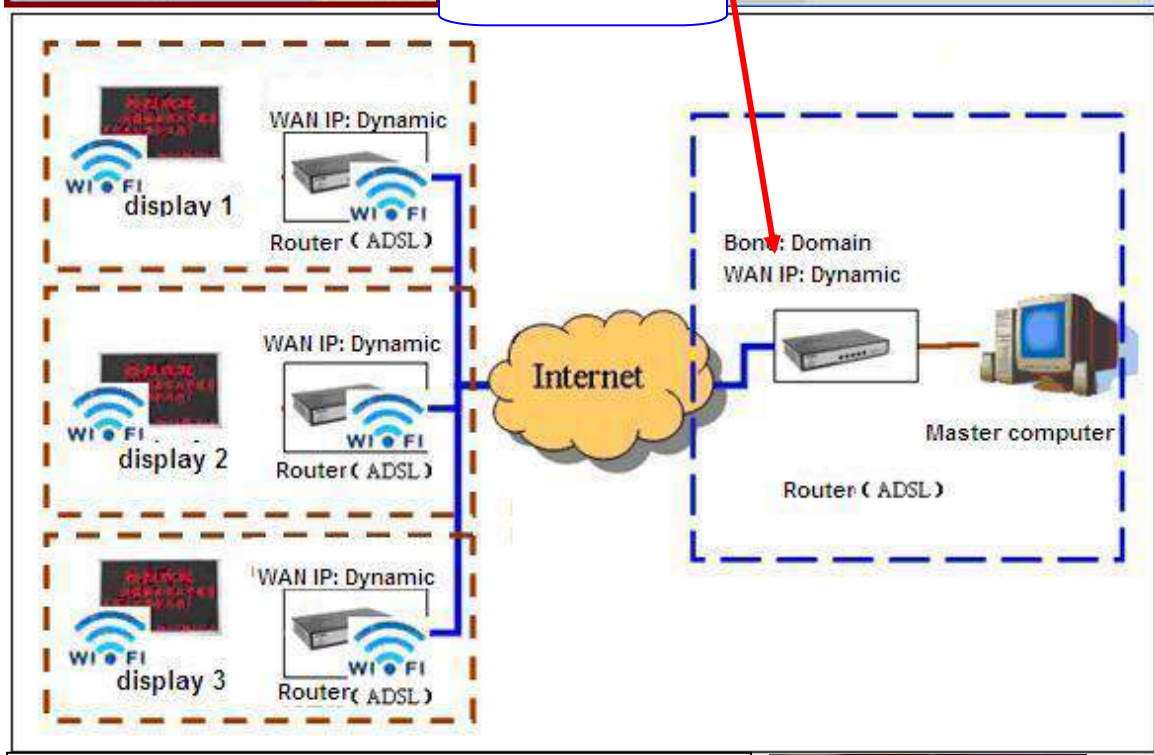
DNS server IP is control card side DNS IP, most same as gateway.

Group mode, need notify server

Remote master computer domain name, and DNS server IP

Config to control card.

Check if succeed



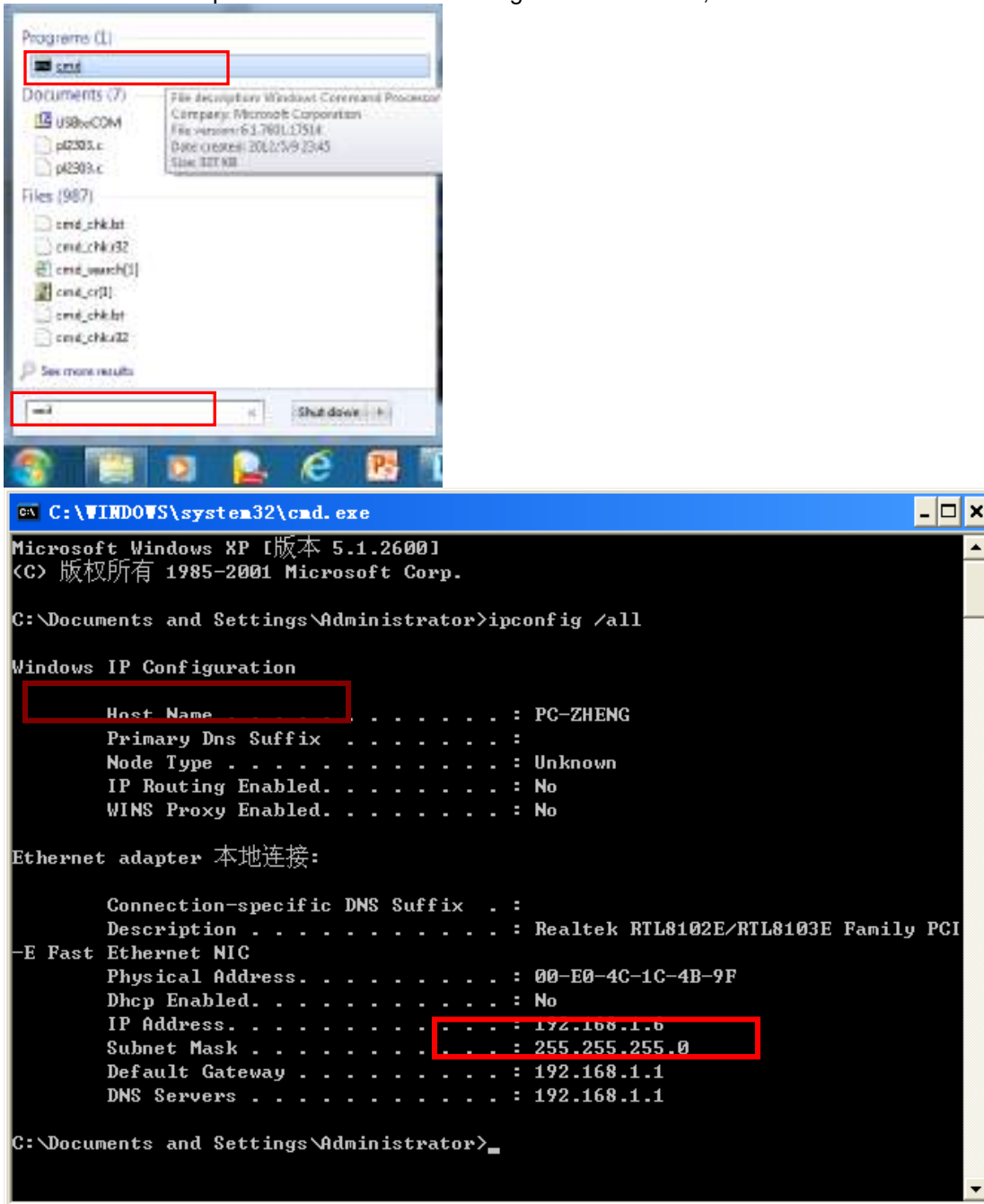
Remind: Once WiFi set succeed and the control card and the computer connection is working, there will be "connection succeed!" information indicated in the right top corner of the display screen, and then the user can find the card in FK Show, the local area network.



Pic.7-56



User need one computer in the LAN network to get DNS server IP, as shown in Pic.7-57.



Pic.7-57



➤ Remote Master end domain name bonded—U disk set, is shown in Pic.7-58.

When the export succeeds, insert the USB disk to control card, and check the right top corner of the display screen. When “connect succeed” displayed, the user can find the control card in FK Show’ s network list.

图 7-58





### 7.4.3.2.2 The router set of control card end

Same as the single card configuration, please refer to [7.4.3.1.2 Control card router Setting](#).

### 7.4.3.2.3 Master computer router's setting

➤ Port transfer set, is as shown in Pic.7-59.

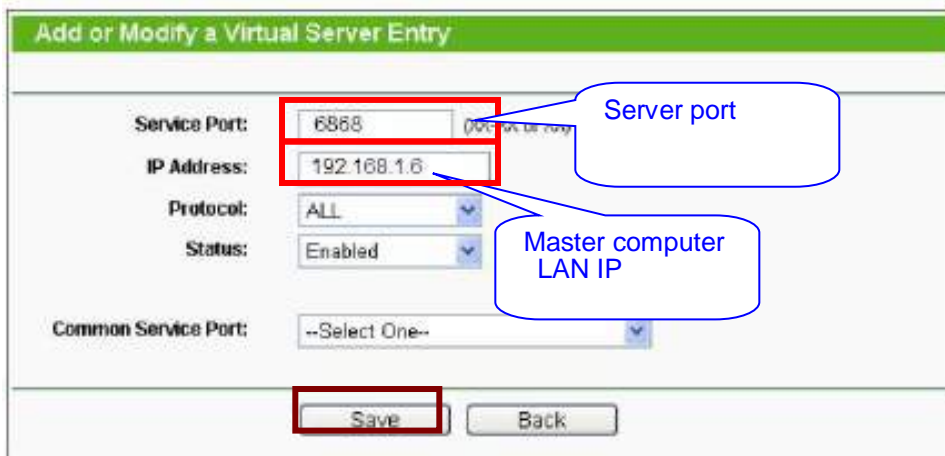
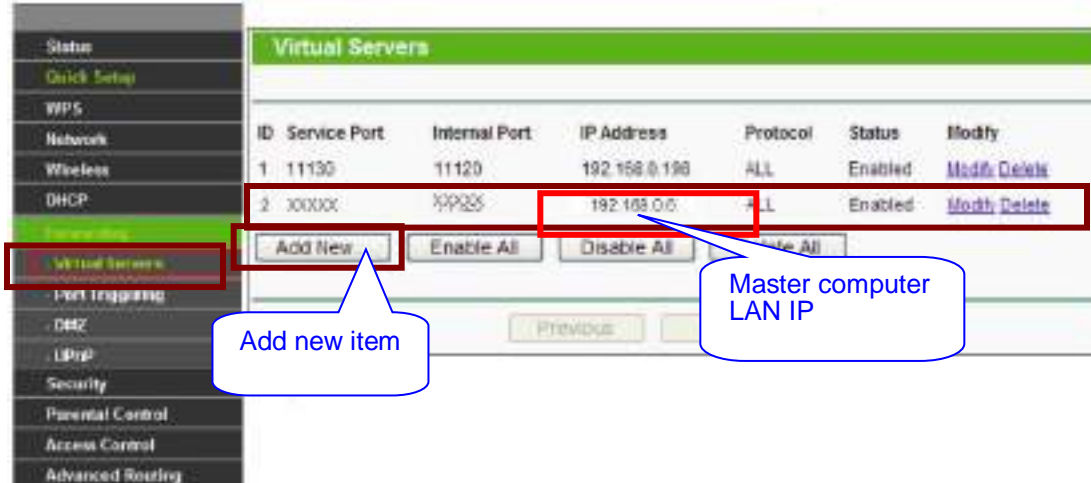
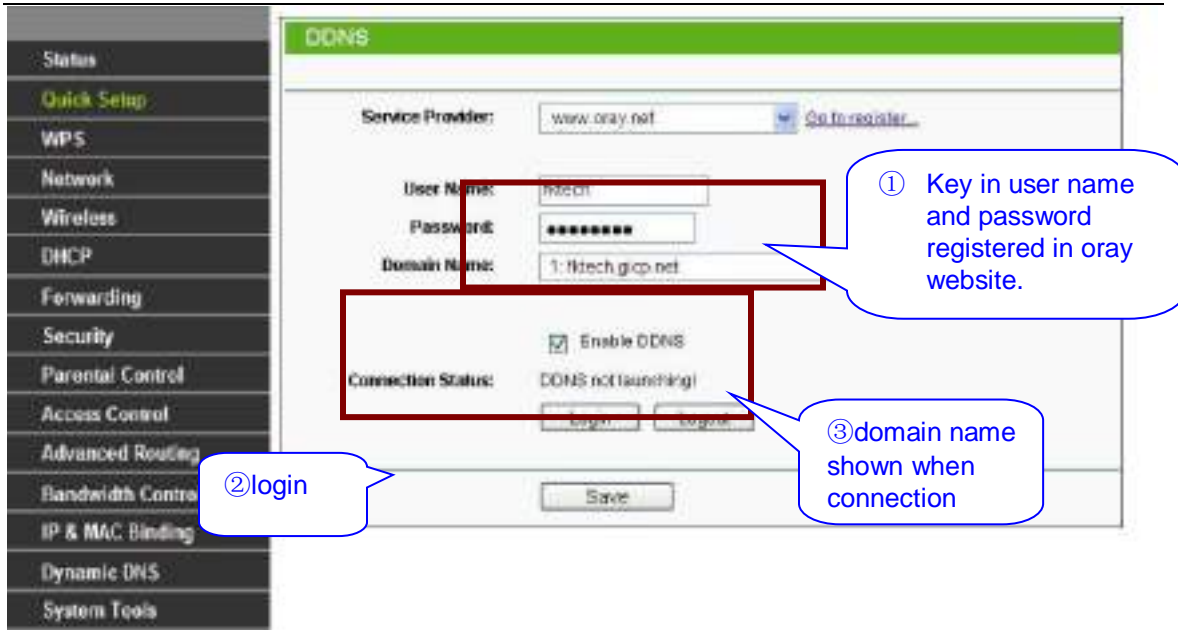


图 7-59

➤ Peanut shell domain name setting

Once master computer has fixed WAN IP, then the user don't need set Peanut shell domain name, skip this step. The set procedure is shown in Pic.7-59.

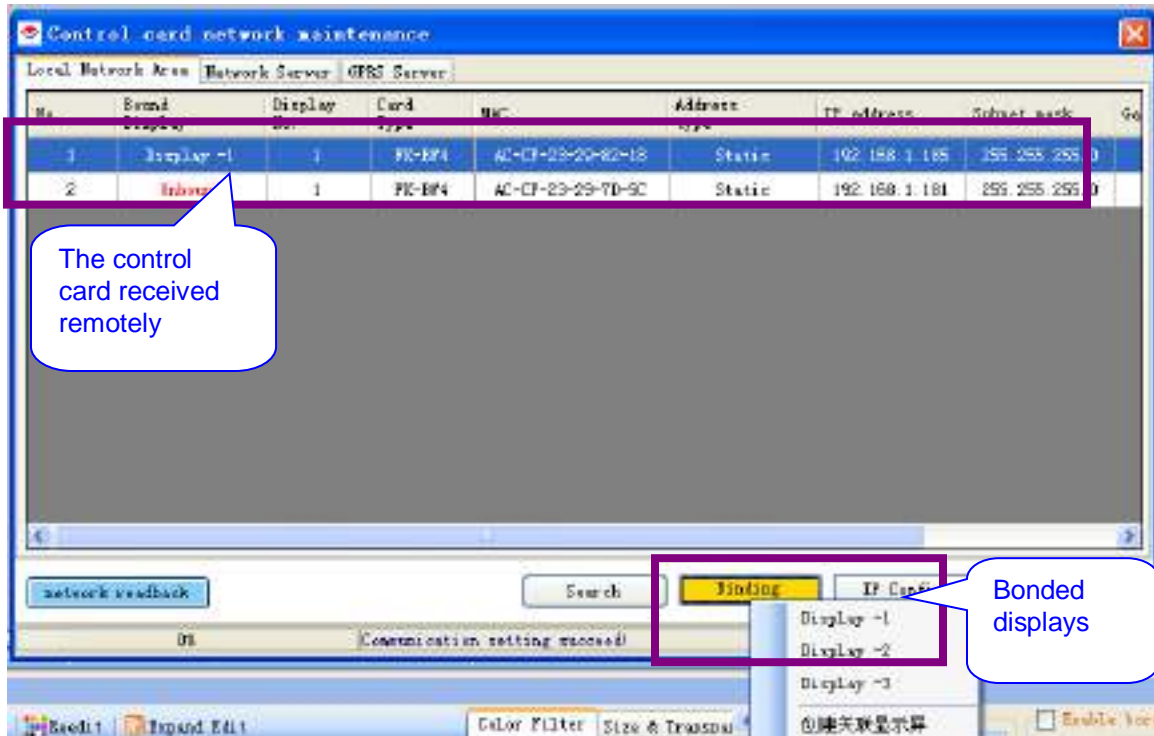


Pic.7-60

When succeed, the control card will notify the IP relating the domain name, then transfer to the server of the master computer.

7.4.3.2.4 Software operation

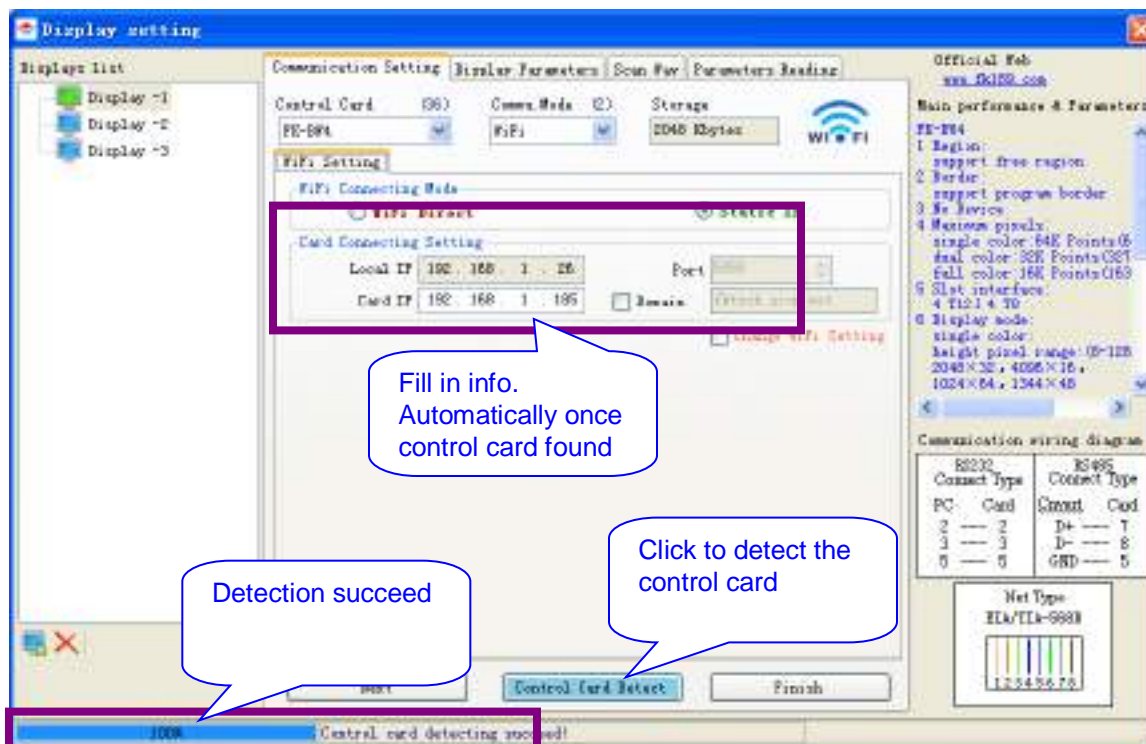
1) In the window 【Control card network maintenance】 , bond the control card, as shown in Pic.7-61.



Pic.7-61



2) Open window 【Display setting】 ,detect the control card, as shown in Pic.7-62.



Pic.7-62

When the control card detection succeeds, then the user can start display set and program edit and uploading etc. operation.



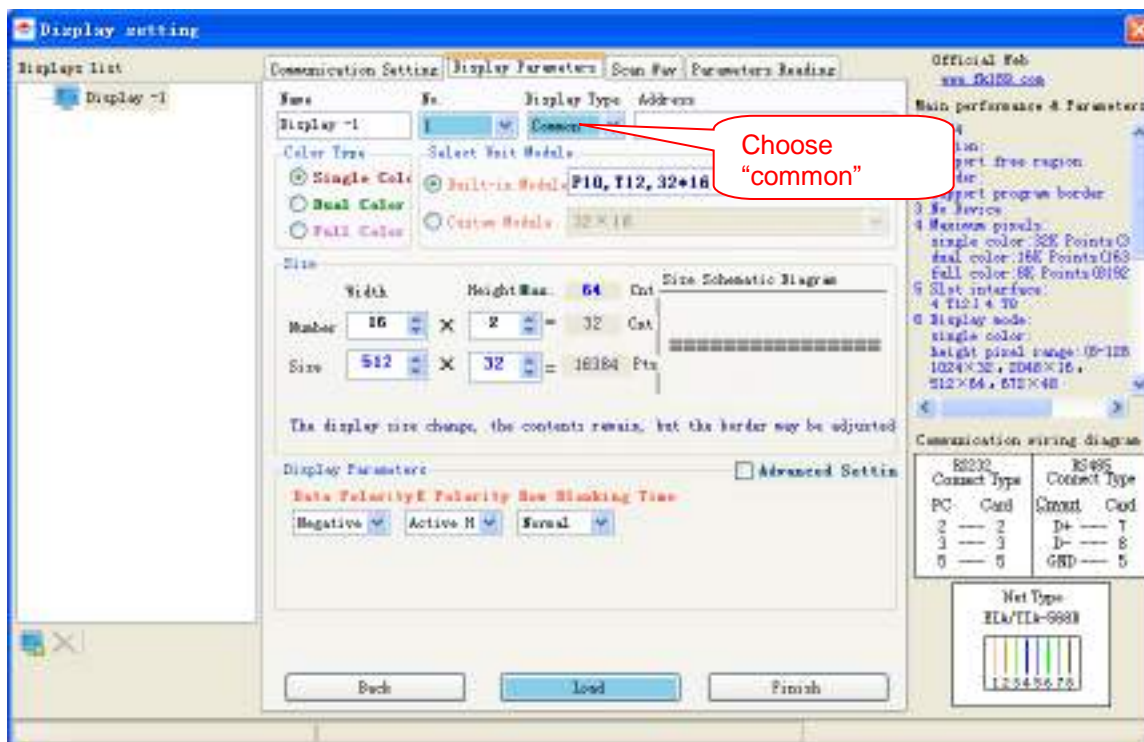
## 8. Display set

This chapter introduces the parameter related to the display, Feikong control card as the provider for all in one solution, supporting 3 different types display:

- 1) Typical Common Display: one rectangle shape display with variant length and height, most popular display type in the market. Please refer to [8.1 Typical display parameter set](#).
- 2) Antithetical couplet (Vertical)Display: Three displays as a group of antithetical couplet, capable for free adjustment for the three part, detail please check chapter [8.2 Antithetical couplet Display Parameter Set](#).
- 3) Cross type display” the display screen with the shape of cross, mainly used in hospital or church. Please check chapter [8.3 Cross Display Parameter set](#).

### 8.1 Typical display parameter set

Click **【Setting】** → **【Display setting】** in main menu, choose **【Display Parameter】** Option sheet, define the display type as “Common”, like in Pic.8-1.



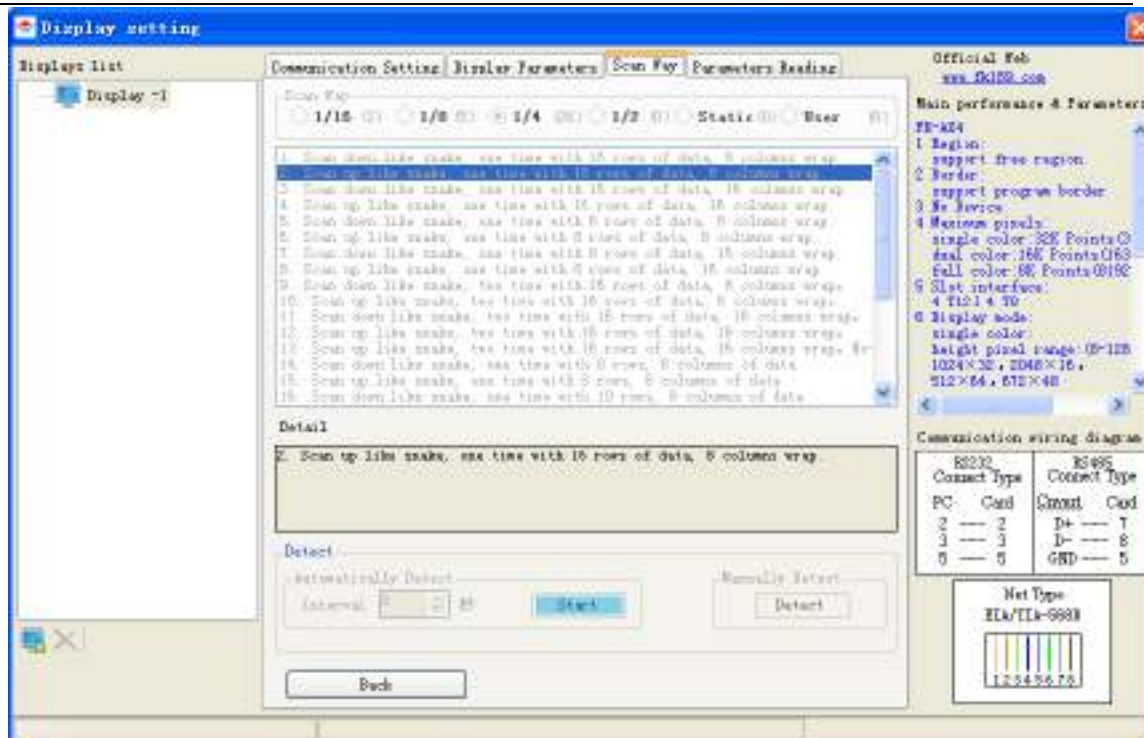
Pic.8-1

- 1) Display name: Name the display based on user's need.



- 2) Display No.: The display's serial number, to identify different displays, the display No. shall not be copied.
- 3) Display type: Common, Antithetical couplet (Vertical) or Cross.
- 4) Installation address: Key in the installation address of the display, for identification of more displays in network.
- 5) Color type: Single color, double color or 7 full colors.
- 6) Set unit module: there are two method to set the unit module
  - (1) Built in (Regular) unit module: Please select corresponding type in the drawdown list. Then all the parameter like data polarity, OE polarity and scanning method will automatically be configured by the system.
  - (2) Custom module: some special type unit module which is not within the list of built-in unit module, this need user to set by himself. Select the dimension in the drawdown list.
- 7) Display Size: to define the display's width and height, User can key in pieces or dots for width and height, and then the other will be calculated automatically. Key in the pieces for width and height, then the dots for width and height will be calculated and filled in automatically, vise versa.
- 8) Data Polarity: Data polarity has option of positive or negative, defines if the LED on or off as default, once the display text is shadow, change this parameter.
- 9) OE Polarity: OE Polarity has two option statuses, Active high or Active low, related to the brightness adjustment. To change this parameter once the brightness is abnormal.
- 10) Row blanking time: it has three options, normal, extended or long.
- 11) Dot frequency: from slow to fast with 15 steps.
- 12) Scan frequency: from 60Hz~200Hz, 15 steps with 10HZ per step gap.
- 13) Dot matrix: with options of: normal, red and green switch, blue and green switch, red and blue switch, blue & red & green, green & blue & red.
- 14) Lock register port: with two status, high valid or low valid.
- 15) Row port: with two status, high valid or low valid.
- 16) CR port: with two status, high valid or low valid.

Choose option sheet **【Scan Way】** ,see Pic. 8-2 below:



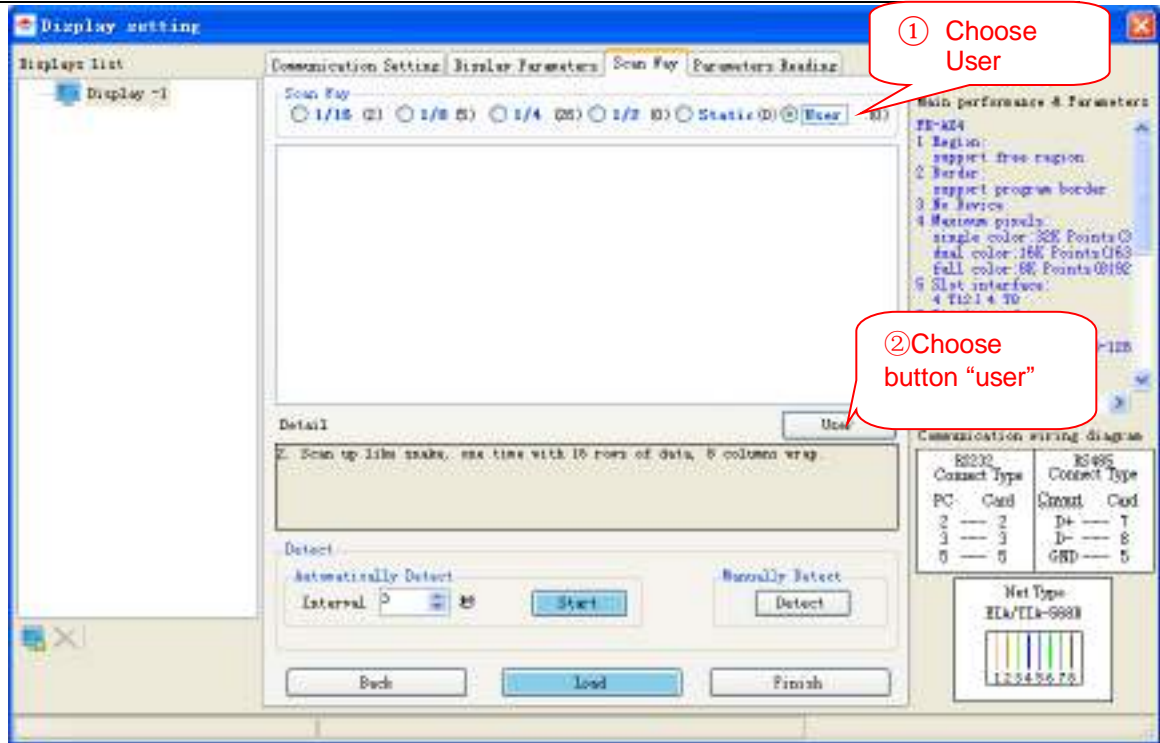
Pic.8-2

Once the display type is common, then this page “scan way” does not need any manual set , for the system will apply the default scanning method its own.

The support scanning methods (way) has 1/16, 1/8, 1/4, 1/2, Static.

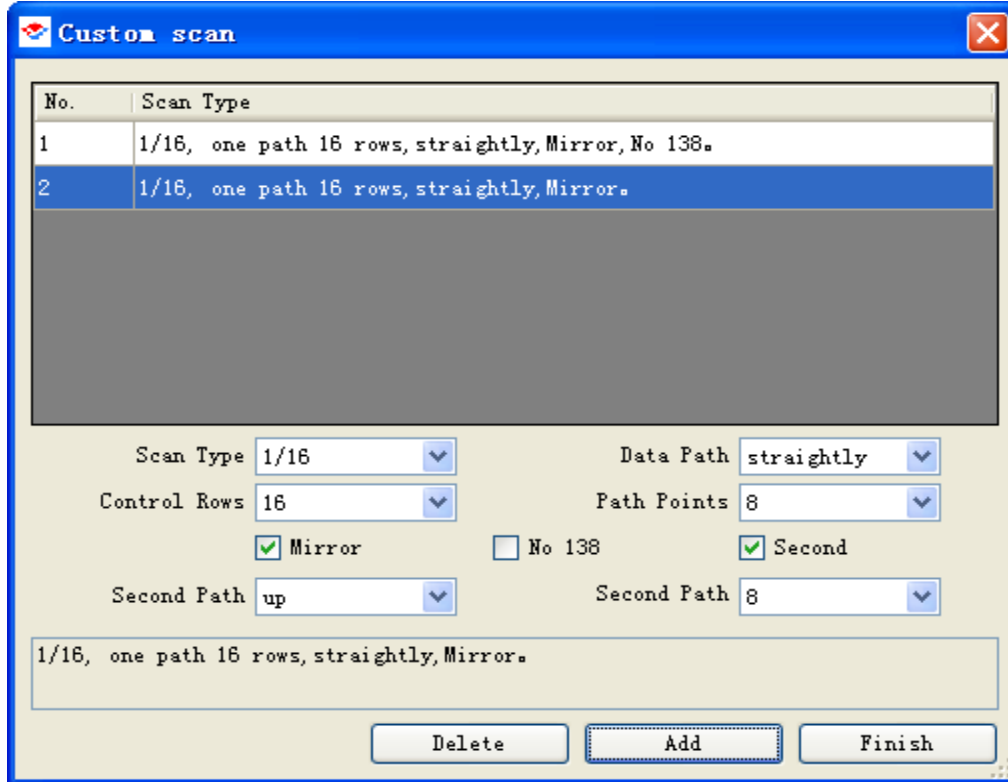
Once the scan method (way) does not fit the requirement, then the user can define the scan method (way) by him. The way is:

(1) Tick off User in Scan way blanket shown in the Pic.8-3, and click the button “user” below.



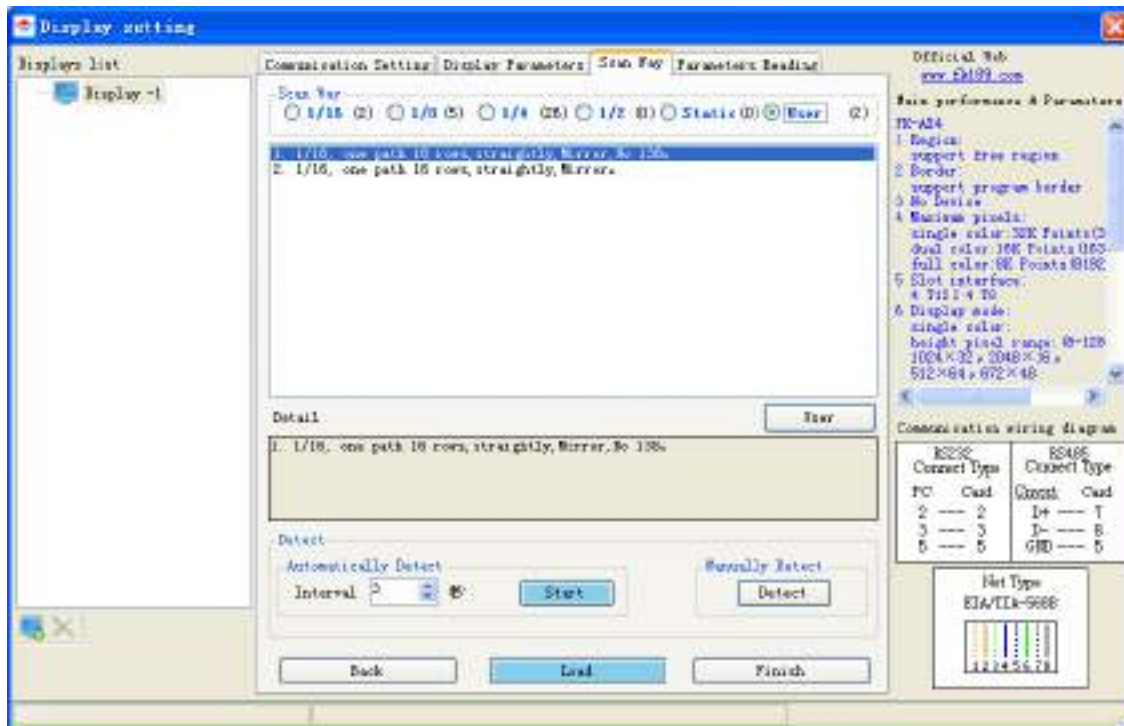
Pic.8-3

(2) In the popping up window 【Custom Scan】 show in Pic.8-4, define the scan type, data path, control rows, paths points, mirror, No. 138, second path etc. parameters one by one, and then click button “add”, to have this custom scan way listed in the sheet of the window.



Pic.8-4

(3) Click the button **【Finish】** in the Pic.8-4, this new scan method(way) will be added in the blank blow the option “Scan way” of the window **【display set】** Shown in Pic.8-5.



Pic.8-5



Scan way set is the final configuration step. When it is finished, and the control computer and control card are connected, click “load” at the bottom of the page, then the configuration in the sheet of communication setting, display parameter and scan way will be transfer to control card. If it is USB communication, then no load is needed for these information will be packed as part of program and download to control card when USB disk is connected to the control card, about the program download through USB, please refer to chapter [11.2 USB Send](#).

Besides, the experienced users can also use the method of automatic detection and manual detection.

The detection function of the scan way is to check the display performance when the display is trail running, the experience user can judge if it is scan way set problem and how to adjust once there is such issue like abnormal display, abnormal texts etc. there are two detecting method provided:

(1) Manually Detect: Choose one scan way above, and then click the button “detect” in the box of Manually Detect, the control card will switch to the scan way just selected, and the user can check the display performance on screen if it is correct.

(2) Automatically Detect: Set the interval time and click the button “start” in the box of Automatically Detect, the system will send all the scan methods(way) to the control cards one by one with interval time, then the user can check the display performance on screen, once it is found that the display performance is correct, user click the button “stop”, to stop the automatic switch, and pick up the current scan way for set.

## 8.2 *Antithetical Couplet Display Parameter Set*

If user select the option sheet of the display type as “vertical”(Antithetical couplet), in the window of **【Display setting】**, please follow up this chapter for the parameter configuration.

User can check [Appendix 1: Technical specification of FeiKong 4<sup>th</sup> generation control card](#).

User can realize the control of left side, right side and Top row screen through one Feikong control card. The hardware connection is as below:

1) The hardware connection of the typical antithetical couplet display screen is indicated in Pic.8-6.



Pic.8-6

2) The hardware connection of left column and right column (without Top row) screen is indicated in Pic.8-7.



Pic.8-7

3) The hardware connection of only one vertical column screen is indicated in Pic.8-8.



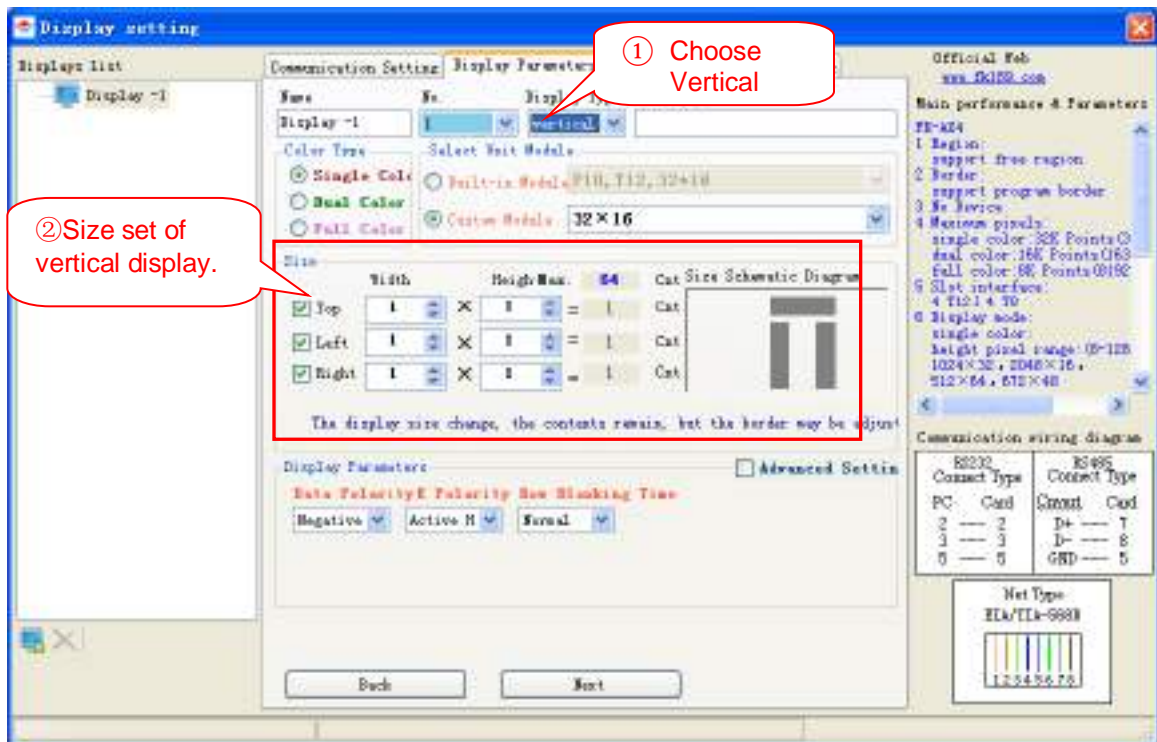
or

Pic.8-8

The display set of the software is as below:

Compare to the common type display before, there is only display size set different.

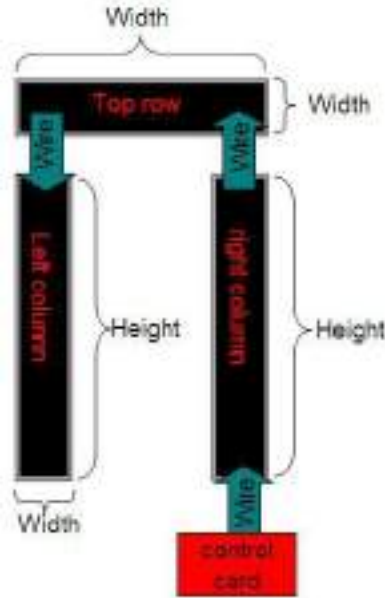
Show in Pic. 8-9.



Pic.8-9

User need define the width and height respectively for Top row, left column and right column. The width of the left column and right column shall be always same as the height of the Top row.

Please set the size as indicated in Pic.8-10.



Pic.8-10

According to the hardware connection situation, user need click and select the existing screens. There are four different combination for hardware: standard(Top, left,right); Only left and right; Only left column; Only right column; the user can click the buttons at left side to choose the one needed.  Top top row,  Left left column,  Right right column.

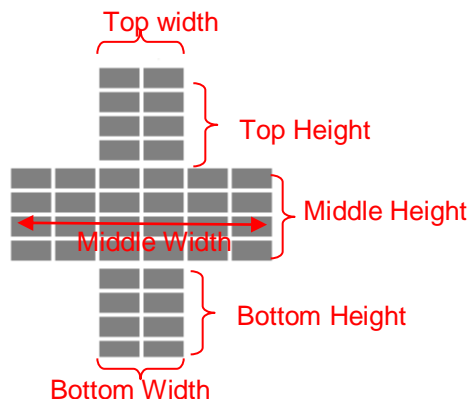
**Attention:** Other display set is same as common type.

### 8.3 Cross Display Parameter Set

If you select the option sheet of the display type as “cross”, in the window of **【Display setting】**, please follow up this chapter for the parameter configuration.

User can check [Appendix 1: Technical specification of FeiKong 4<sup>th</sup> generation control card](#) to learn that what types control cards supporting cross type display

The cross display is divided into three parts, top, middle and bottom. Pic.8-11:



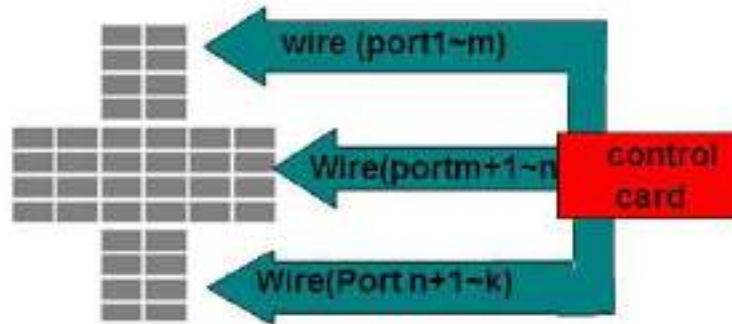
Pic.8-11



The difference of the cross type and common type is that the common type is only one rectangle size, but the Cross type display is consisted of three parts, and the width and height of Top , middle and bottom part need to be set respectively, and they can be set different dimension.

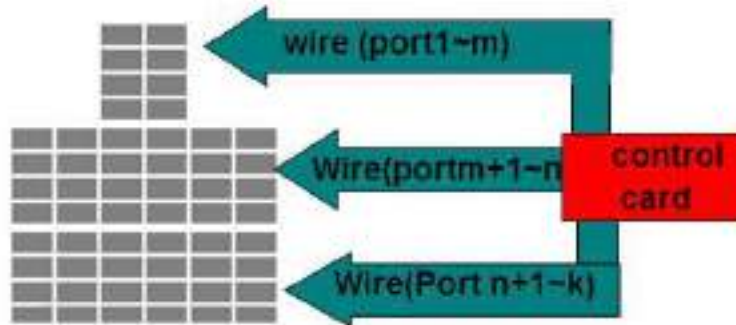
The hardware connection of the cross display has several different types.

- 1) Standard Cross Display, As shown in Pic.8-12.



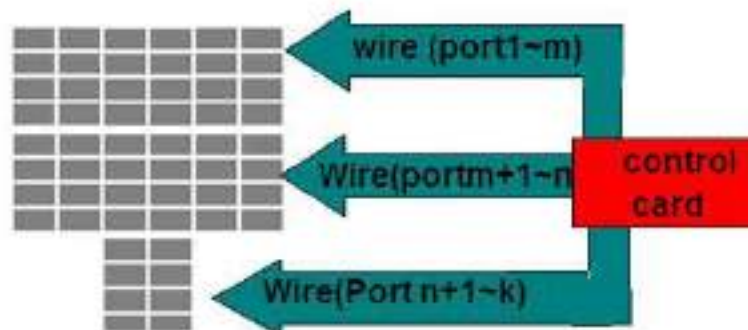
Pic.8-12

- 2) Same width for middle and bottom, See in Pic.8-13.



Pic.8-13

- 3) Same width for Top and middle

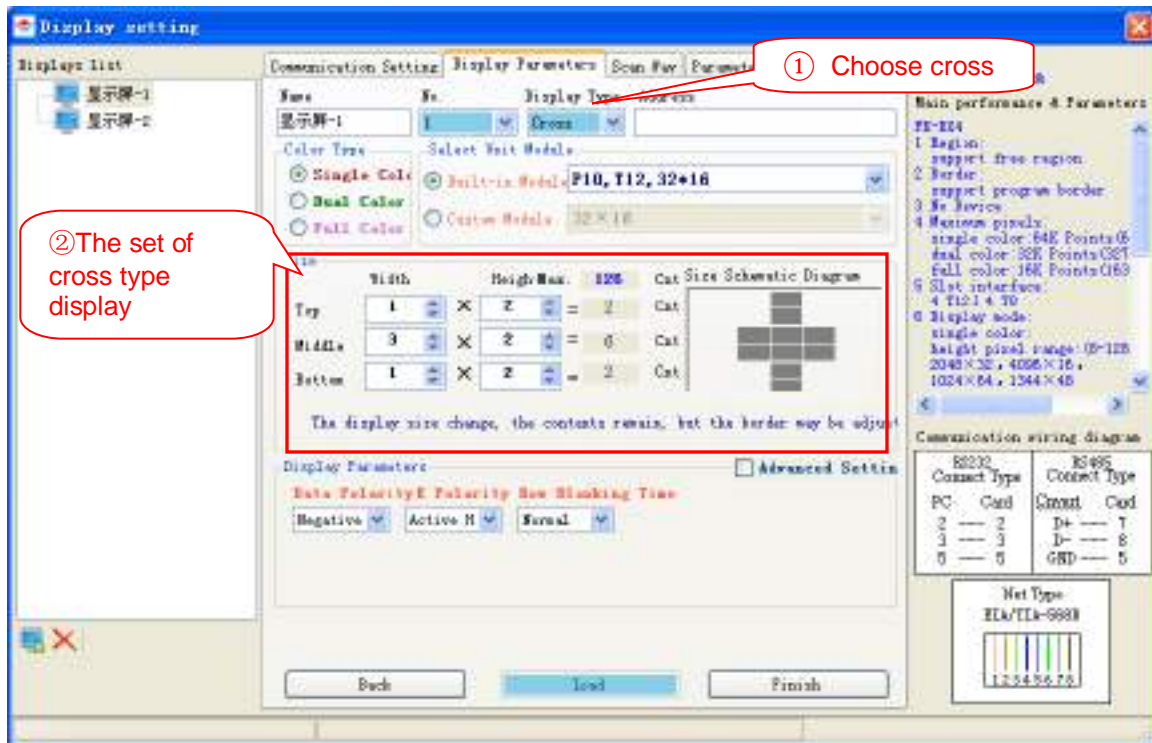


Pic.8-14

The display set of the software is as below:

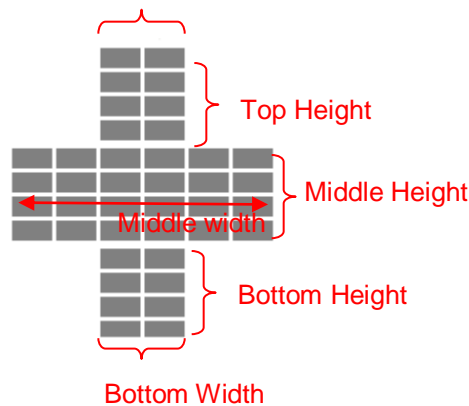


Comparing to common type display, the cross type display has different set shown in Pic.8-15.



Pic.8-15

The user need set the width and height of the Top, middle and bottom part respectively. Please set the width and height as indicated in Pic.8-16. (The unit is the quantity of the unit display).



Pic. 8-16

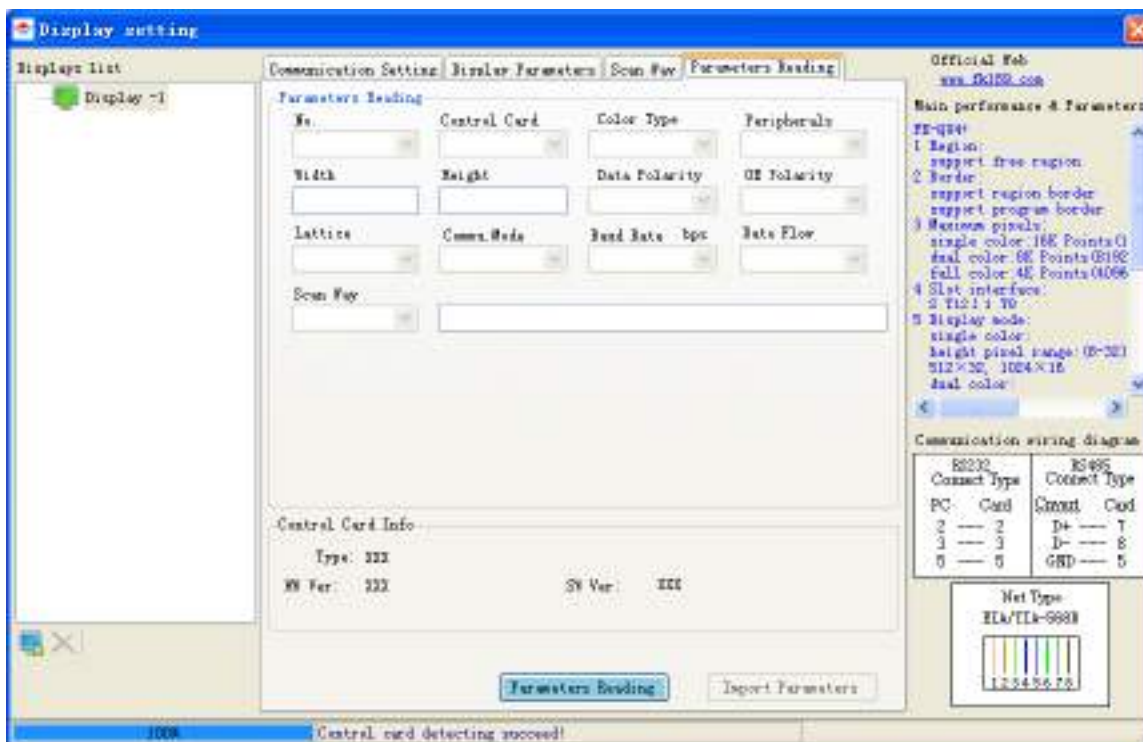
Remark: Follow the procedure of common type mentioned before for the other parameter configuration.



## 8.4 Upload(read back) Parameter

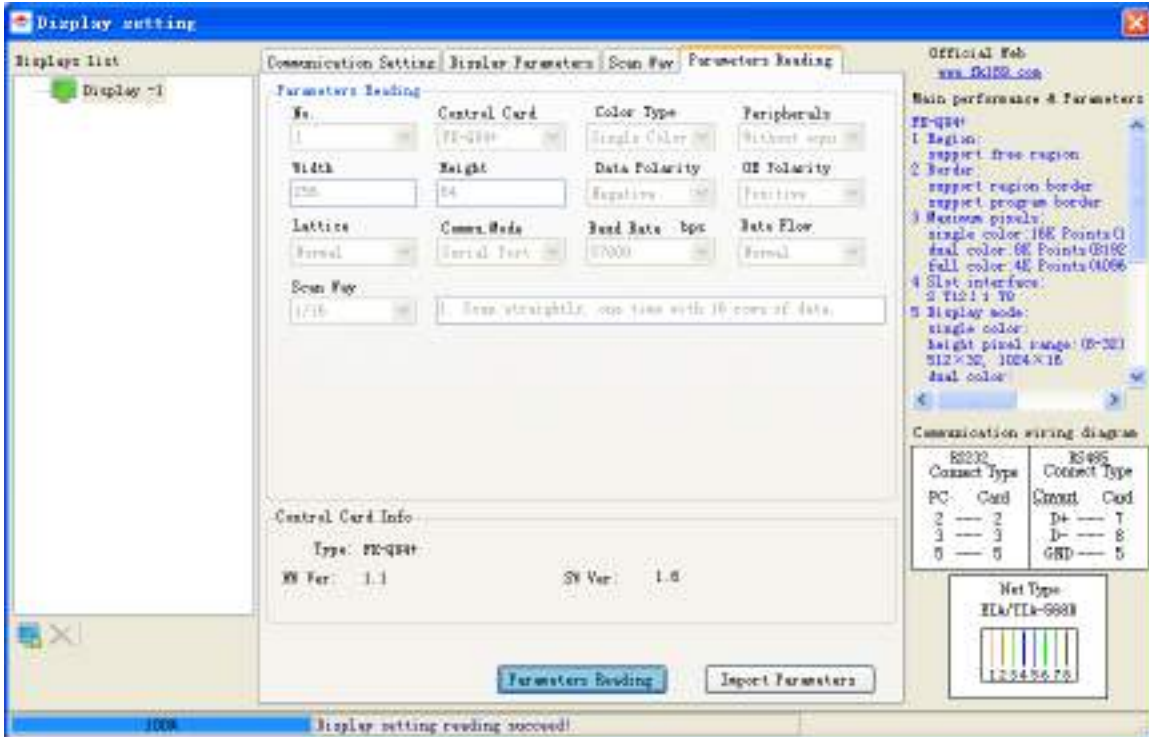
The display set in the control card can be upload to computer through FK Show , this unique function help to reduce the time when the user want to replace the control cards for one existing display. The method is as below:

- 1) Click the option sheet of **【Parameter Reading】** , appears dialogue box shown in Pic.8-17.



Pic.8-17

- 2) Click the button “Parameter Reading” when the display control board is connected to the computer, as shown in Pic.8-18.



Pic.8-18

3) The uploaded display set information from the control card is shown in the program, with the indication “Display setting reading Succeed!” in the status bar.

4) Click the button “Import Parameter”, then the display set in the software can be covered by the ones uploaded(read back) from the control card.

Remind: USB communication does not support this function, but it can be uploaded through the program. Please refer to Chapter [12.2 USB Upload\(read back\)](#).


## 9. Add Program

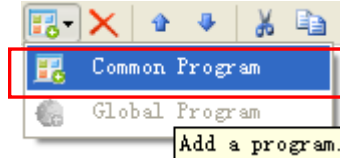
The display set is finished, then the user can add new program in the display.

The user can add one or more program through the method below. FK Show can support maximum 256 programs.

### 9.1 Add Program

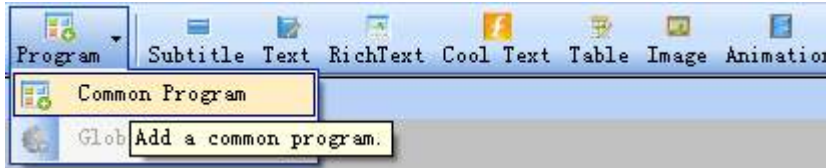
The program adding process is as below:

1) Click the icon of new program  in 【 display list 】 area’s tool bar to add one new program. As shown in Pic.9-1.



Pic.9-1

Either click new program box in the tool bar to add a new program. See Pic.9-2.

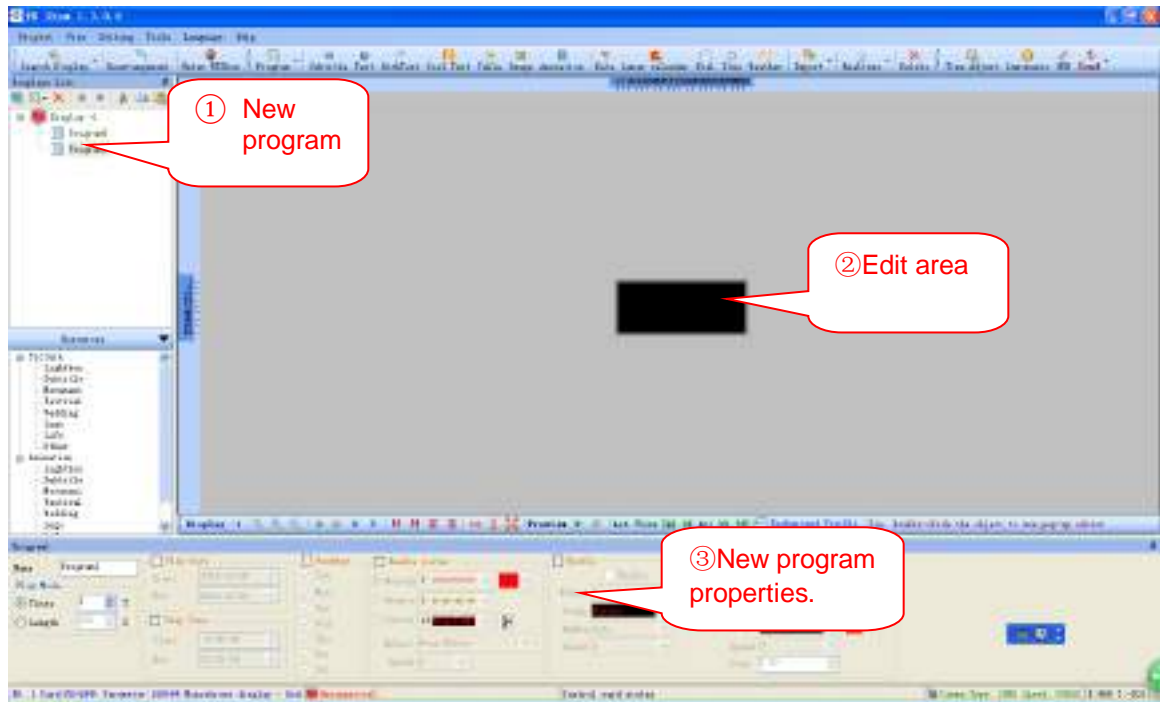


Pic.9-2

Remark: the common and vertical type display only can support common program, not support global program. The cross type display support common and global programs. The procedure for adding global program is same as common program, the only difference is to choose “Global program” in the draw list shown in the picture 4-30.

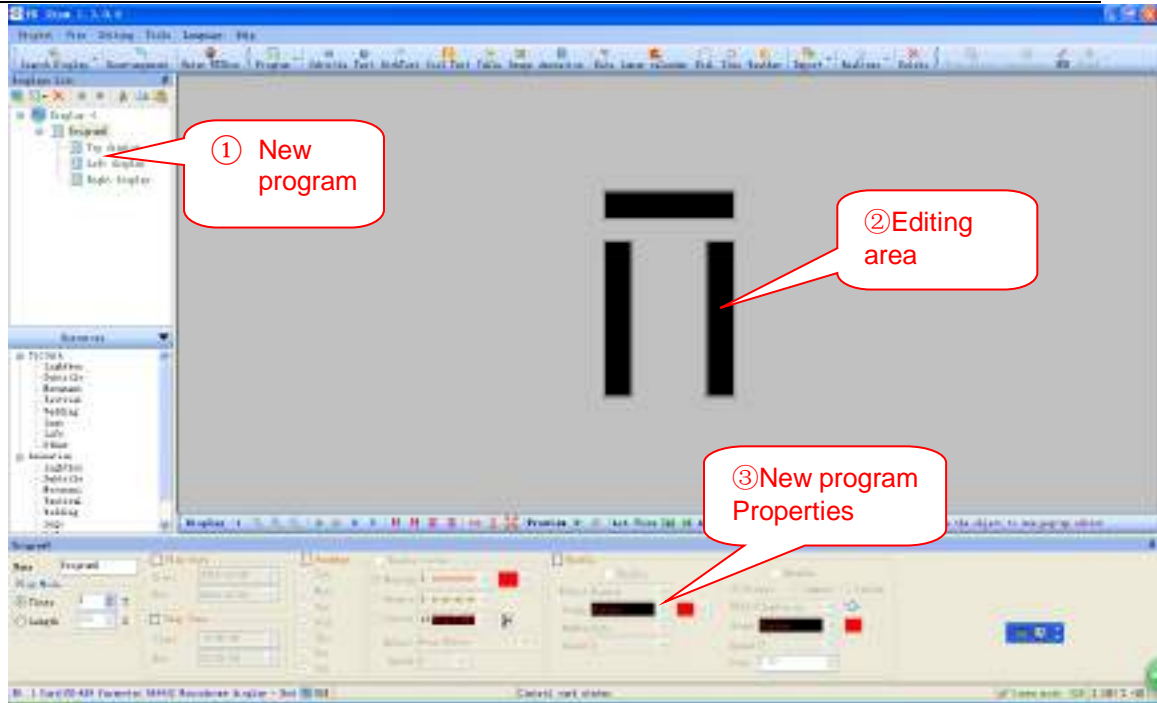
2) when the program add is finished, the main window of the FK SHOW will be different.

The window of common type program is shown in Pic.9-3 below.



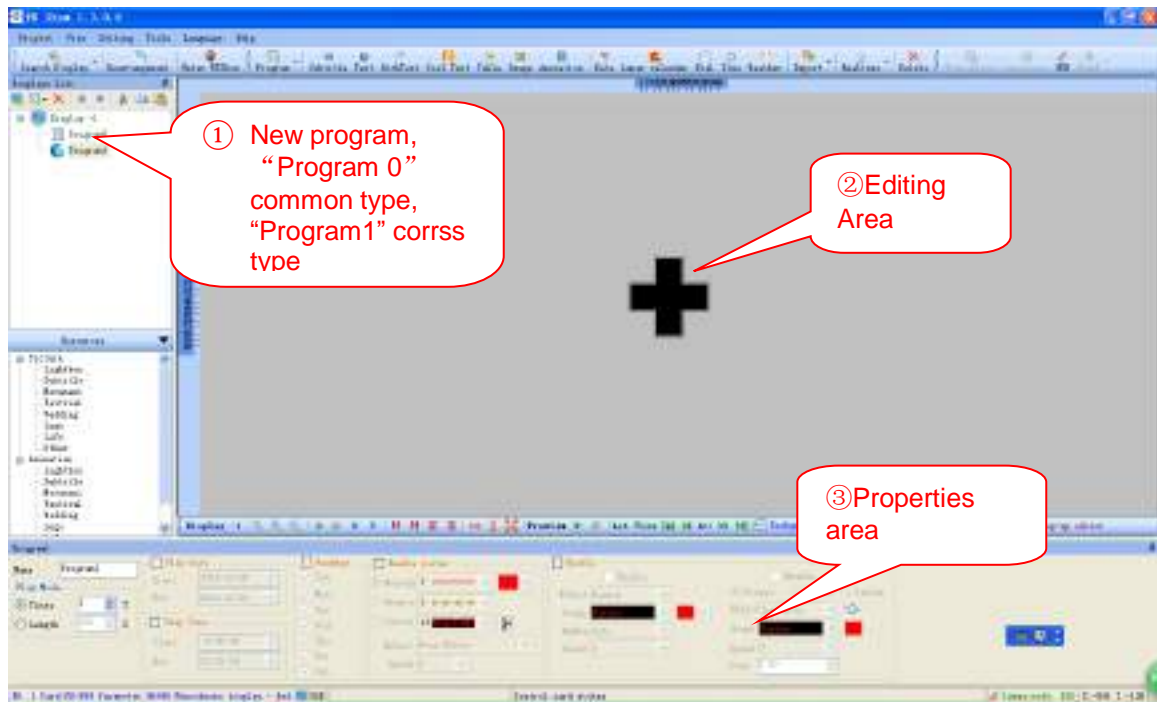
Pic.9-3

The window of vertical(antithetical couplet) type display of FK SHOW is like in Pic.9-4. In the 【Display list】 , new created vertical program will have three sub programs, Top row, left column and right column.



Pic.9-4

The window of cross type display is indicated in Pic.9-5:



Pic.9-5

- ( 1 ) In the tree list of **【Display list】** , one new program is added. The default selected program is this new one.
- ( 2 ) In the editing area of the program, it is a blank program.



- ( 3 ) In the program's **【Properties Area】** , User can have variant program display with different properties , for details, please check the chapter [9.2 Program Properties set.](#)

Besides the methods of new program creation above, user can also create new one through "Copy" one existing one. There are several way to copy program.

Way 1: choose the existing one to be copied, click the button "copy" in the tool bar of **【Display list】** shown in the Pic.9-1, and then click paste. Then one new copied program will appear in the blank box of **【Display list】** .

Way 2: Choose the program to be copied, and then use the shortcut Ctrl+C, Ctrl+V to replicate one new program.

## 9.2 Program Properties Set

No mater common program, vertical (Couplet) program, or cross program, the properties configuration is same, with the properties' configuration window shown in Pic.9-6



Pic.9-6

- 1) Name: the name of the current program, the caption name will be updated automatically once changed.
  - 2) Play mode: To decide if the program is shown by times(cycles) or by time length.  
Times: Once played, switch to other program display. If there is only one program, then repeat this program always.  
Length: Play the program as the time length set, once time is up, switch to other programs.
  - 3) Play date: tick off the box of Play date, and set the start date and end date, then the program will be played only within the dates. The date cannot overcome the year end.
  - 4) Play time: tick off the box of play time, and set the start time and end time, then the program will be played only within the start time and end time.
  - 5) Weekday: tick off the box of weekday, and choose the week days want to play.
- Remark: Please guarantee the date, time set in the control card is correct once to apply the function of playing date, time and weekday function, best to adjust the time set for control card before download program to it. Please refer to Chapter [13.1 time set.](#)
- 6) Enable border: to configure the border frame effect. Please refer to chapter [10.4 border effect set.](#)



7) Background effect set: To configure the background effect, please refer to chapter [10.5 background effect set](#).

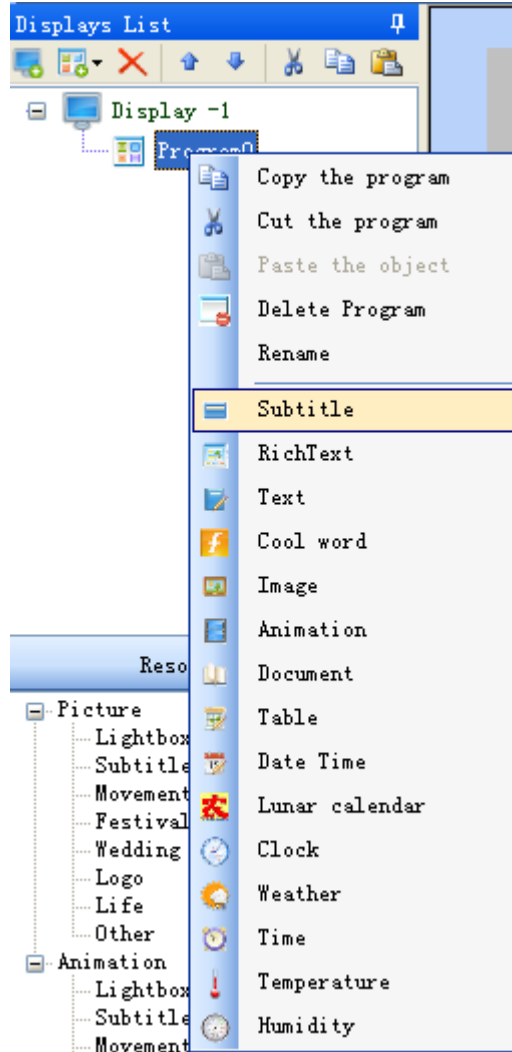
## 10. Design Program

After add one new program, the user can design the program need in the FK SHOW software. Firstly, user can apply the visible windows supplied by FK SHOW to create needed objects generally called division, there are different type objects supported by FK Show including subtitle, rich text, cool word, image, animation, document, Date time, lunar calendar, clock, weather, temperature, humidity etc. To be simple, we call the objects created for content division as Division, as well as call the process of division creation as “Division Operation”, which includes adding, expanding, compressing, moving, copying and deleting division.

### 10.1 Add Division

The process of adding division is:

1) Right click the program in the **【Display list】**, Popping up all the division of the program, click the division icon need adding division, to add one division for the current program. See below sample how to have one subtitle in Pic.10-1.



Pic.10-1

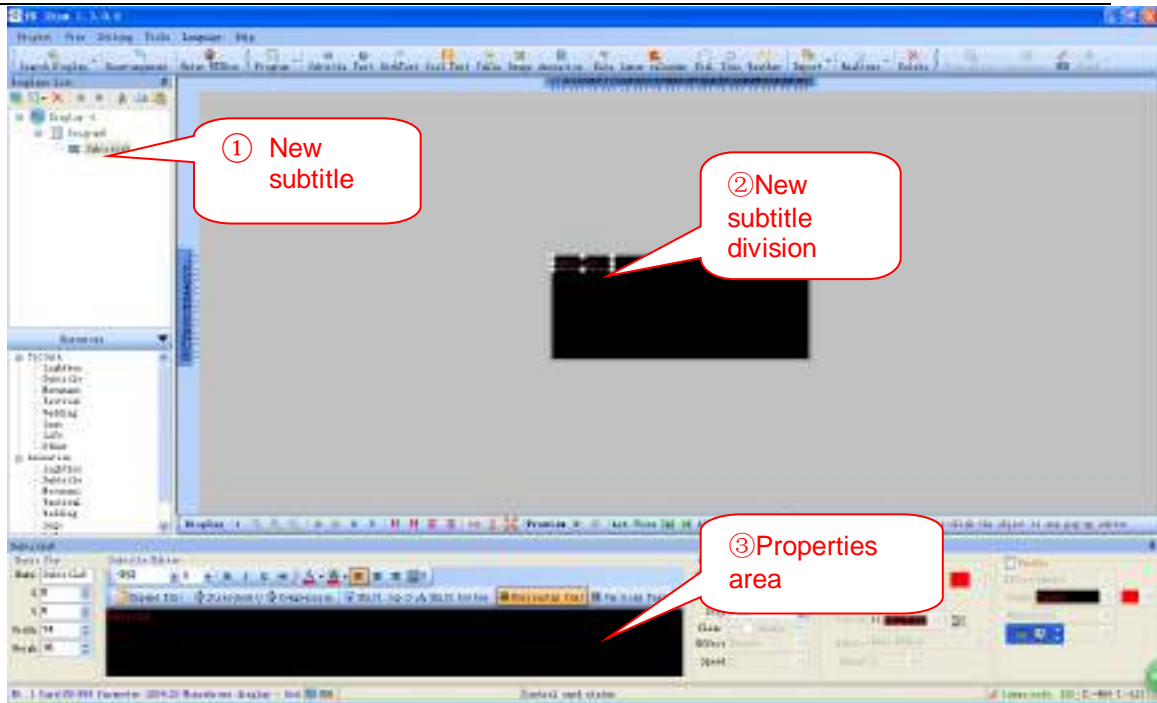
And user can also click the subtitle icon in the tool bar to add one subtitle. See Pic. 10-2



Pic.10-2

All the division's adding method is same, so here just take adding "subtitle" as one example.

2) When adding division is complete, the main window of the FK SHOW is changed like in Pic.10-3.




Pic.10-3

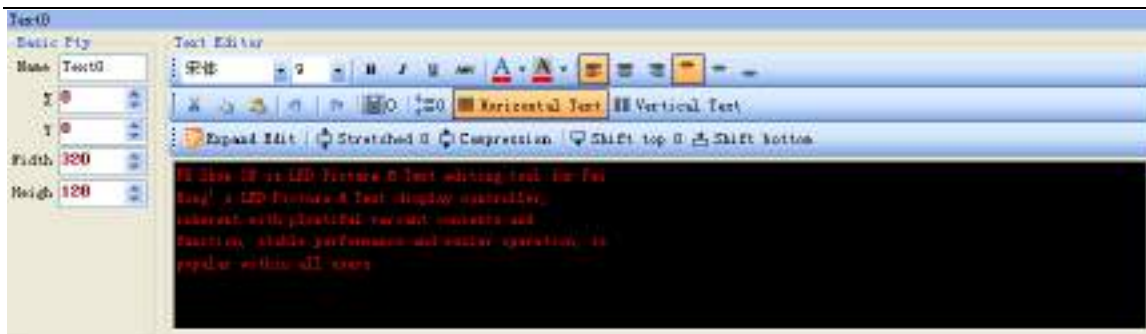
- ( 4 ) In the tree list of **【Display list】** , there is one new subtitle added in current program, and with default selected status.
- ( 5 ) In the **【Editing area】** of the subtitle, new subtitle division is added, it is positioned at top left corner as default, with default selected status.
- ( 6 ) In the **【Properties area】** of the subtitle, user can adjust the properties to have different display effect. The different types division property will be introduced in chapter [10.2 Content division introduction](#).

## 10.2 Contents Division introduction

FK Show provides plentiful types' contents division to fulfill different user's demand for LED display. We will introduce all these types one to one in following chapters.

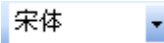
















### 10.2.1 Text

Text means multi-row text. Click the button  in tool bar to add one text, then the user can start edit. User can edit the text in **【Properties area】** , and also can double click the editing area to edit in the popping up dialogue windows of **【Text Editing】** . Please refer to Pic.10-4.








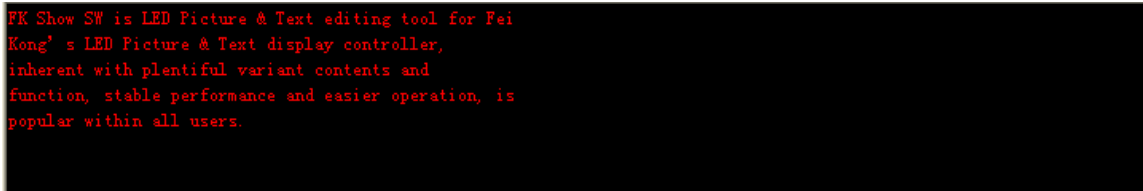
Pic.10-4

User can key in text in the black editing area, and can also change the font, size, bold, italic, underline, color, paragraph, left alignment, middle alignment, right alignment, word space, row space, index etc.

- 1) Font : Click the draw list to select proper font.
- 2) Word size : to set the size of selected word. The scope is from 5~200, can also choose from the draw list, or key in the number directly.
- 3) Bold : click to add bold for selected texts.
- 4) Italic : Click to have italic effect for selected text.
- 5) Underline : Click the underline to underline the selected text.
- 6) Delete line : Click to have the selected text with delete line.
- 7) Font color : Click to change the text color.
- 8) Background color : click to change the background color.
- 9) Left alignment : click to align the text at left side.
- 10) Middle alignment : Click to align the text in middle.
- 11) Right alignment : Click to align the text at right side.
- 12) Top alignment :
- 13) Vertical middle alignment :
- 14) Bottom alignment :
- 15) Cutting :
- 16) Copy :
- 17) Paste :




- 18) Back  :
- 19) Forward  :
- 20) Word space  : click to change the space
- 21) Row space 
- 22) Horizontal text  **Horizontal Text** : click the button, the text will be shown on screen from top to bottom, from left to right. As display in Pic.10-5.



FK Show SW is LED Picture & Text editing tool for Fei  
Kong' s LED Picture & Text display controller,  
inherent with plentiful variant contents and  
function, stable performance and easier operation, is  
popular within all users.






Pic.10-5

- 23) Vertical text  **Vertical Text** : Click this button, to let the text shown from right to left ,and from bottom to top, like in picture10-6.




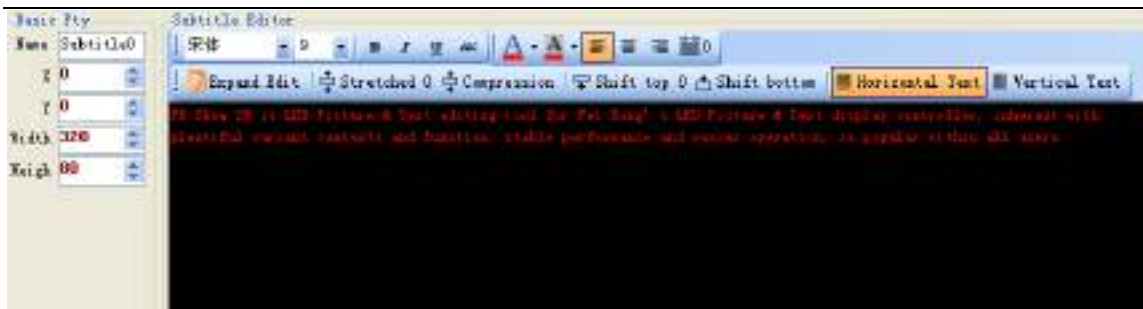
FK Show SW is LED  
Picture & Text  
editing tool for Fei  
Kong' s LED Picture &  
Text display  
controller. inherent  
with plentiful

Pic.10-6

- 24) Expand Edit  **Expand Edit** : Popping up **Text edit** window
- 25) Stretched  **Stretched** : to stretch the text longer at vertical direction.
- 26) Compression  **Compression** : Compress the text in vertical direction.
- 27) Up move  **Shift top** : Move the text upward one dot by dot.
- 28) Down move  **Shift bottom** : Move the text downward dot by dot.


## 10.2.2 Subtitle

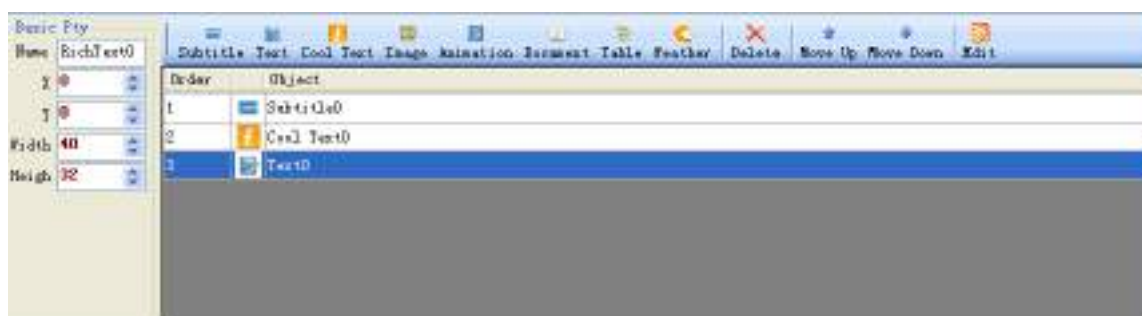
Subtitle is single line text, not supporting paragraph. Click the button  **Subtitle** to add one subtitle division as shown in Picture 10-7, the operation is same as text, please refer to chapter [10.2.1 Text](#).



Pic.10-7

### 10.2.3 RichText


RichText supports to add subtitle, text and animation etc. into one division, which means to display more objects in one specific area. Click the button  RichText to add one rich text division, as shown in Pic.10-8.



Pic.10-8

User can pick up the different types objects in the tool bar shown in Pic.10-8 ,bond them into one area, and then the objects will be displayed one by one circularly, user can adjust the display sequence of the objects through up or down moving buttons.

### 10.2.4 Cool Text

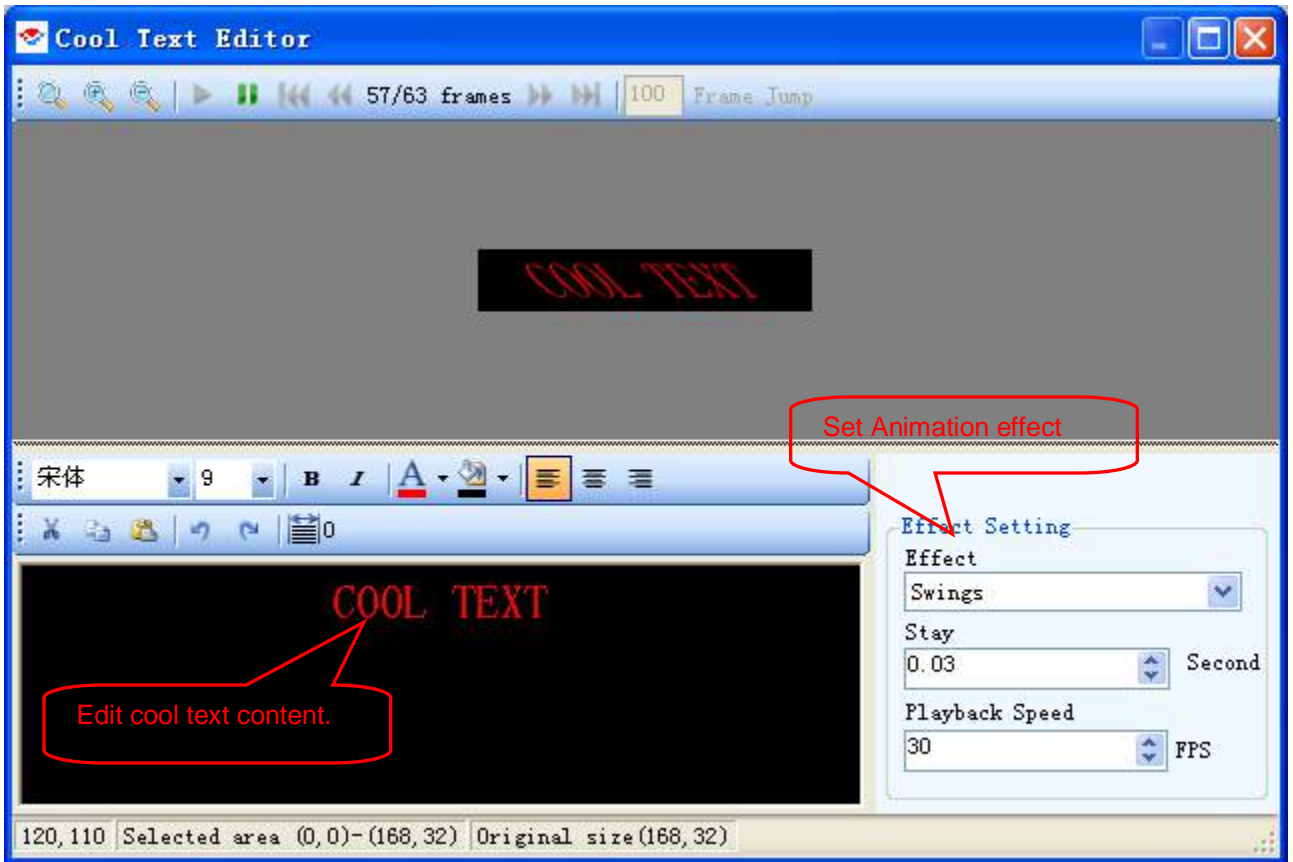
Cool text is kind of text with special gorgeous effect. Click the button  酷字 in tool bar to add one cool text division. The operation interface is shown in Pic.10-9.






Pic.10-9

In the windows shown in 10-9, click the button “animation effect”, then new effect editing window shown in Pic.10-10 is shown, where the user can modify the contents of the cool text division, and set the animation effect.



Pic.10-10


### 10.2.5 Table


Click the button  in tool bar to add a table division, user can edit one table directly in FK SHOW, or loaded Excel and WPS files from outside. The operation window is shown in picture10-11.




Pic.10-11

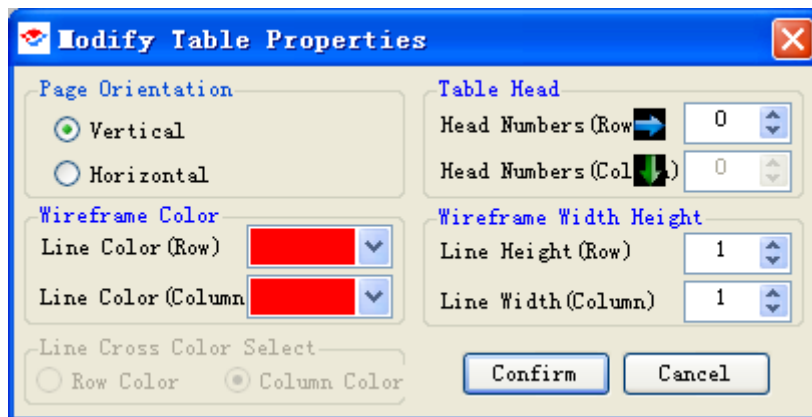


1) New : Set a new table, the former operation and set will not be reserved. When click it, set the table properties and format as well, then click the button “confirm”, a new table will be created in the editing area.

2) Import : Import one prepared excel or WPS file.

3) Export : Export one table edited to the allocated position.

4) Table properties : Open to adjust the table’s properties like in Pic.10-12.




Pic.10-12


Page Orientation: to define vertical or horizontal page break.

Table head: Set the head numbers for row and column.


Wireframe Color: Set the line color of row and column.


Wireframe width height: set line height between rows and line width between columns.


5) : Insert column at left side

6) : Insert column at right side.


7) : Insert row at above side.

8) : Insert row at below side.

9) : Delete the rows highlighted.

10) : Delete the column highlighted.

11) : Merge selected table cells into one.

12) : Separate the selected cell to more cells.


13) Text set 

The second text tool bard is same as text division one, please refer to chapter [10.2.1 text](#).



### 10.2.6 Picture

Plentiful pictures are provided here, and user can also import pictures from outside. And support picture modification.

Click the button , the window "Picture Animation Resources" is popping up, shown in Pic.10-13.



Pic.10-13

User can find the suitable picture here, if need his own, the user can import picture prepared by himself, choose the picture and click the button "select", load the picture in current program, like shown in Pic.10-14.





Pic.10-14

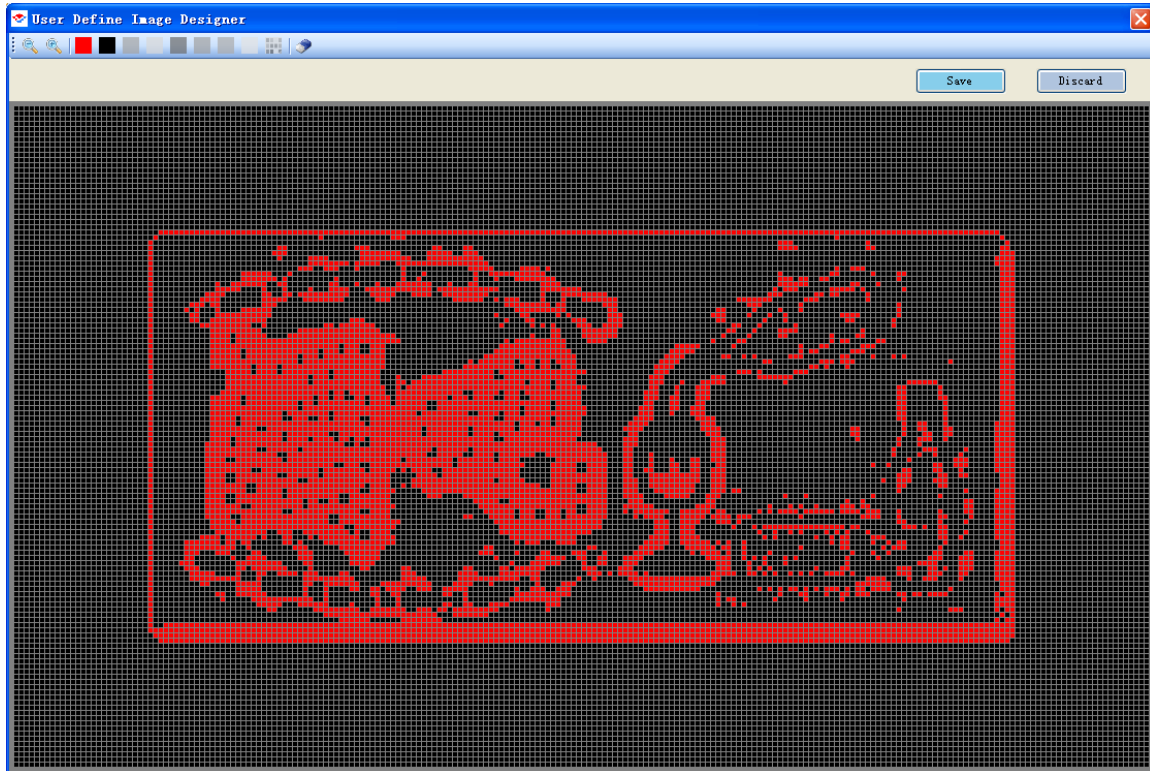
- 1) Rotation: Rotate the picture in certain angles.




2) Overturn: Overturn the picture vertically or horizontally.


3) : Zoom in or zoom out pictures.


4) : User can reedit the dots of the picture when load. Like shown in Pic.10-15.



Pic.10-15

: Zoom in or zoom out picture.

: Choose the brush color, click in the picture area, then the part will change the color wanted.

: Delete the color of selected part.

When the picture edit is finished, click the button “Confirm”, load the picture to the program. If user click button “close”, the modification is cancelled.

5) Color filter: Filter the color red, green, blue respectively. Shown in Pic.10-16.



Pic.10-16

Drag the sliding block left and right to check the effects.

6) Size and Transparence, like in Pic.10-17.



Pic.10-17

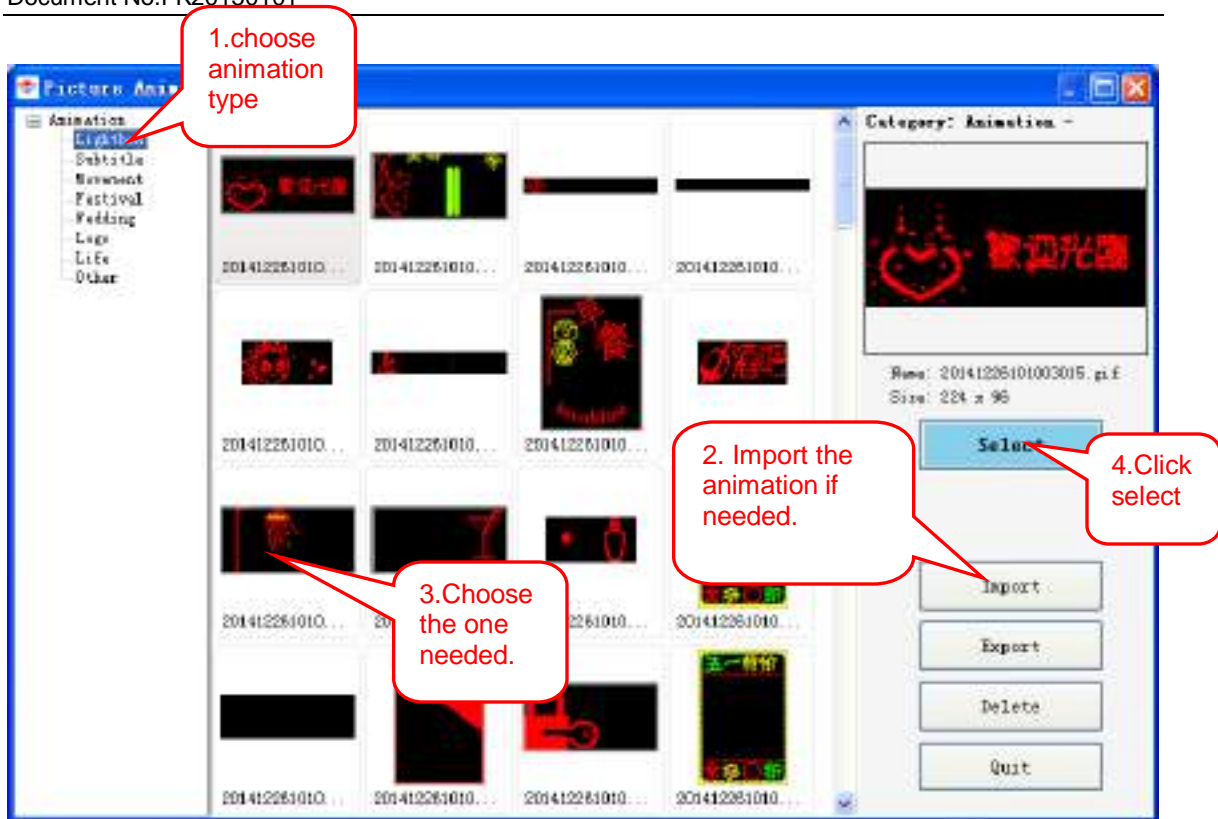
**Fixed Area Size** : If User choose fixed area size, then user can display the picture in the predefined area as whole. Once the picture size is different than the display screen , FK SHOW will expand or compress the picture automatically to fit the display screen size. If “fixed area size” is not chosen, user can select part of the picture to be displayed through change the select frame in the picture editing area.

### 10.2.7 Animation

Plentiful animation resources are provided by the tool, and user can also import his own resources, or change the animation in the tool.



Click the button **Animation** in tool bar, the window of “Picture Animation Resource” will be popping up, like shown in Pic.10-18.




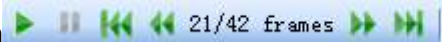

Pic.10-18


User can choose the animation in the resources bank, or import the animation by himself. Click confirm to load the animation into the current program, like shown in Pic.10-19.

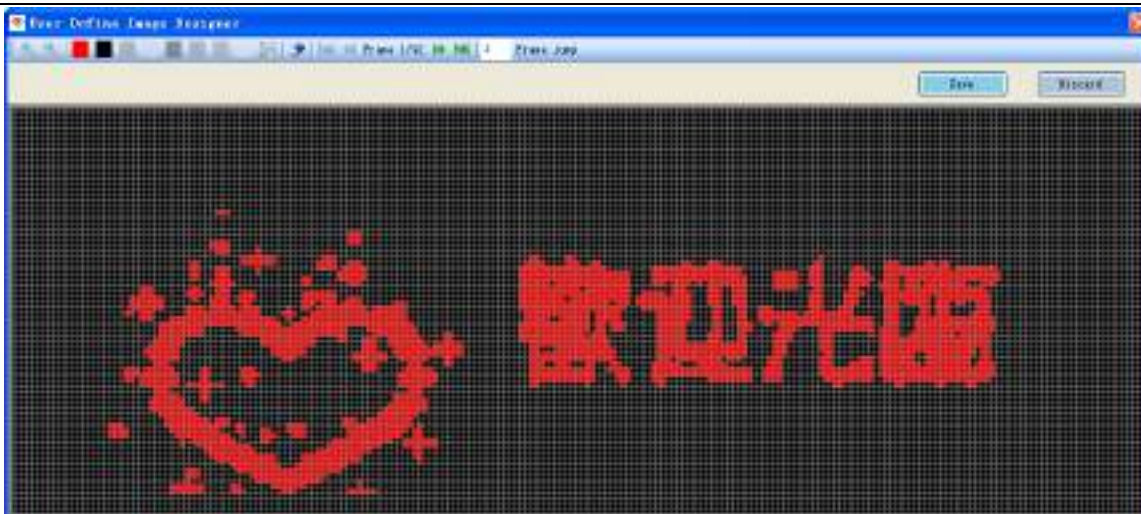


Pic.10-19

- 1) Rotation: Rotate the animation in certain angles.
- 2) Overturn: Overturn the animation vertically or horizontally.
- 3) : Zoom in or zoom out animation.

4) Frame operation  21/42 frames  100 Frame Jump: to play the animation, stop, jump to next or previous, the first or the last frame.

- 5)  Reedit: When the animation need modification, user can reedit the object in dots frame by frame, as shown in Pic.10-20.



Pic.10-20



: Zoom in or zoom out the display.



: Switch to current frame need to be modified.



: Choose the color of the brush, and click part in the picture editing area to change the color wanted.



: Delete the color of selected dot.

When the animation frame edit is finished, click the button “Confirm”, load the animation to the program. If user clicks button “close”, the modification is cancelled.

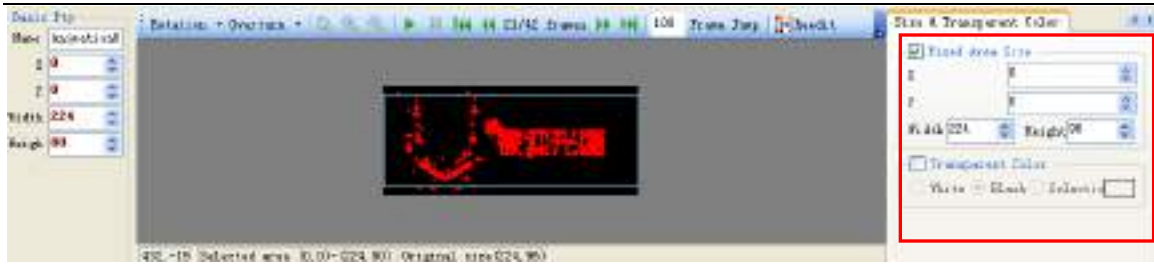
5) Color filter: Filter the color red, green, blue respectively. As shown in Pic.10-21.



Pic.10-21

Drag the sliding block left and right to check the effects.


6) Size and transparency: As shown in Pic.10-22.

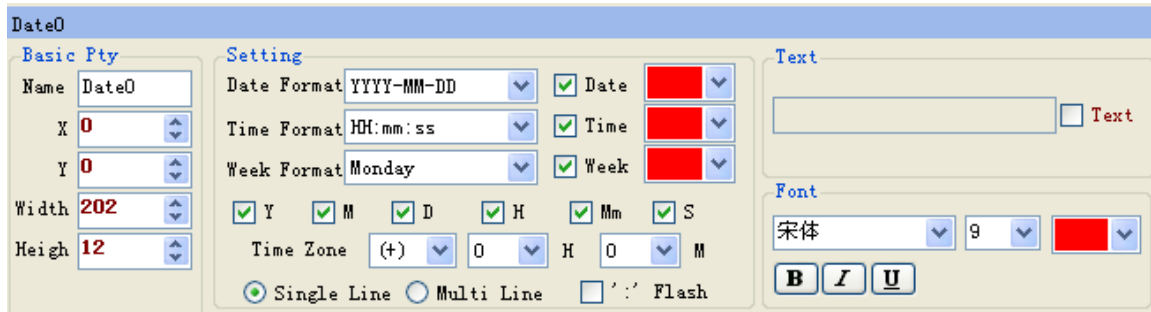


Pic.10-22

**Fixed Area Size** : If User choose fixed area size, then user can display the picture in the predefined area as whole. Once the picture size is different than the display screen , FK SHOW will expand or compress the picture automatically to fit the display screen size. If “fixed area size” is not chosen, user can select part of the picture to be displayed through change the select frame in the picture editing area.

### 10.2.8 Date

Click the button  in tool bar to add a date division, the operation window is shown in Pic.10-23.




Pic.10-23

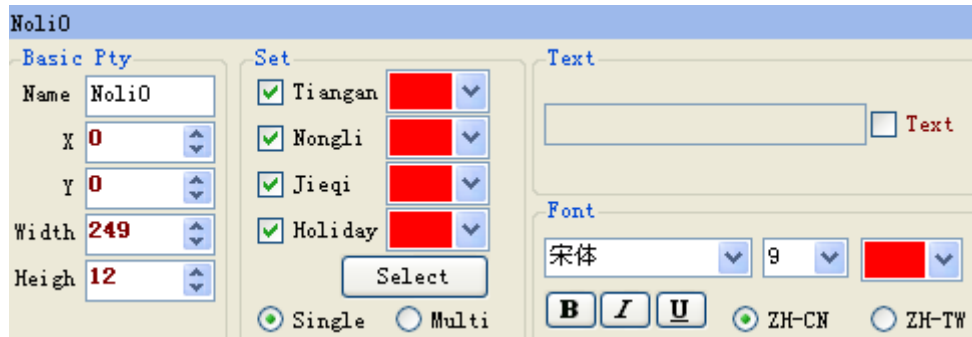
- 1) Date format: Pick if to show the date and set the format.
- 2) Time format: Pick if to show the time and set the format.
- 3) Week format: Pick if to show the week and set the format.
- 4)  Y  M  D  H  Mm  S : To choose what to be shown, year, month, date, hour, minute and second.
- 5) Time Zone (+) 0 H 0 M : Can set the time zone.
- 6)  Single Line  Multi Line : to show the division in single line or multi line.
- 7) Text: Add text before the date according to user's need.







8) Font: To set the font, size and color etc. properties.

### 10.2.9 Lunar Calendar

Click the button  in the tool bar to add one Lunar calendar, as shown in Pic.10-24.



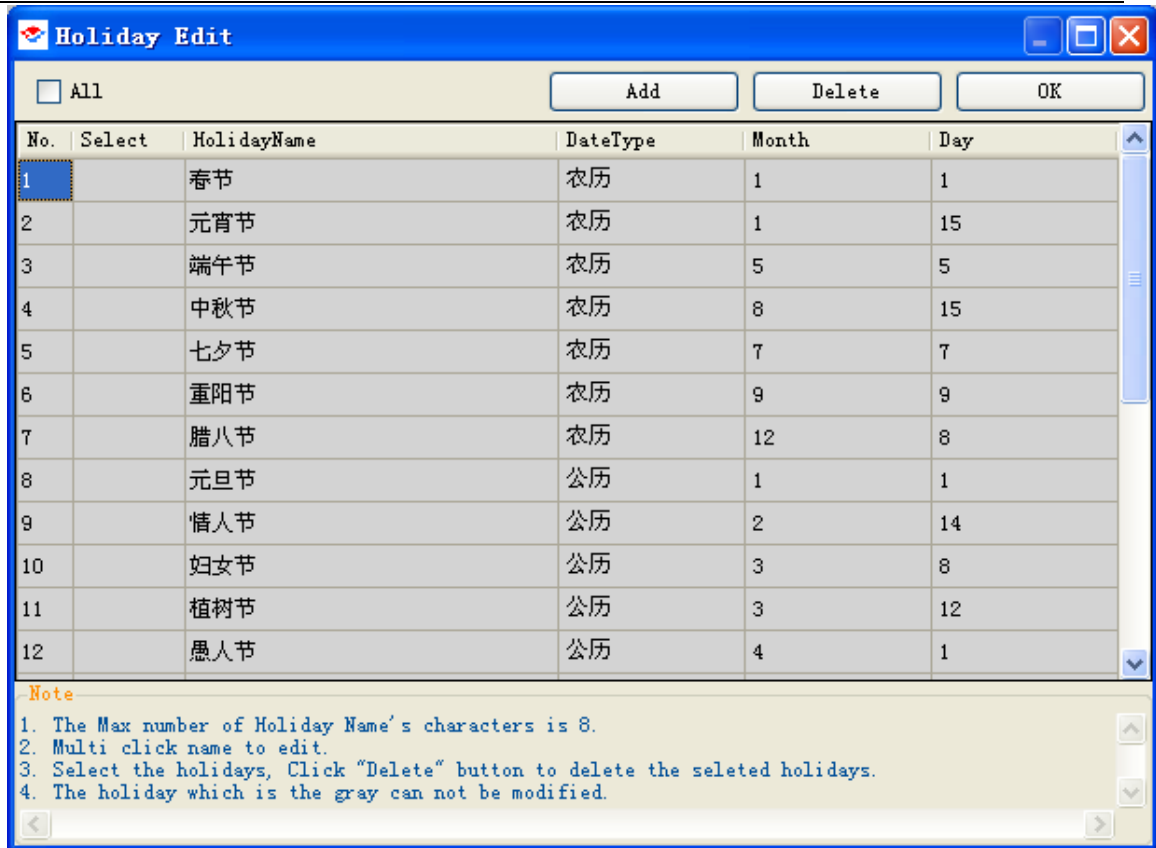
Pic.10-24

- 1)  : Pick to show Tiangan, and set the color.
- 2)  : Pick to show Nongli(Lunar calendar), and set the color
- 3)  : Pick to show Jieqi, and set the color.
- 4)  : Pick to show holiday, and set the color. When the holiday is picked, the user can click the button “select” and pick up the holidays want to display in the popping up window, even more the user can add his own holiday in it, as shown in Pic.10-25.



Pic.10-25

Click the button "holiday edit" in the window shown in Pic.10-25, new window of holiday editing will be shown as Pic.10-26.



Pic.10-26

In the Pic.10-26, click the button “add” or delete to choose the holiday, and also can create new by click the button “add”.

- 5) Fixed text: User can add and edit fixed text before the lunar calendar.
- 6) Font: set the text font, size, color etc. properties.

10.2.10 Clock


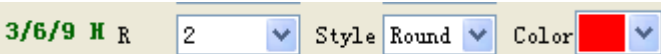
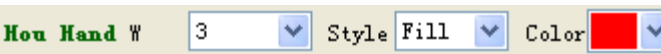
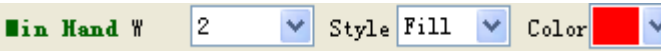



Click the button **Dial** in tool bar to add one clock disk, the operation window is shown in Pic.10-27.




Pic.10-27

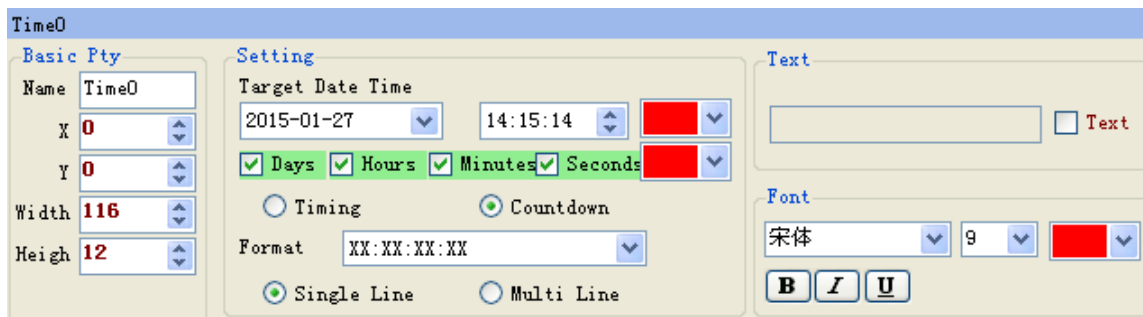


- 1)  : Set the hour display style, diameter and color.
- 2)  : Set the display style of 3/6/9 hour, the diameter and the color.
- 3)  : Set the hour needle's display style, width and color.
- 4)  : Set the minute needle's display style, width and color.
- 5)  : Set the second needle's color.
- 6)  **Minute calibration** : Set if display minute calibration or not.
- 7) Time different: Adjust time
- 8) Fixed text: To display text defined by user in the clock disk, and user can set the text font, size and color according to his own need. When the fixed text is finish, the text position can also be moved according to need by moving arrow.

### 10.2.11 Time counting



Click the button  in toolbar to add one time counting division, and the operation window is shown as Pic.10-28.



Pic.10-28

- 1) Target date time: Set the target date and time
- 2)  **Days** : Click if days is shown
- 3)  **Hours** : Click if hours is shown.
- 4)  **Minutes** : Click if minutes is shown.




- 5)  **Seconds**: Click if seconds is shown.
- 6)  **Timing**  **Countdown**: Set if time adding, or counting down.
- 7) **Format** : Set display format
- 8)  **Single Line**  **Multi Line**: Set if single line or multi line display.
- 9) **Fixed text**: To add text edited by the user before the time counting area.

## 10.2.12 Weather


Once the internet is connected, 3<sup>rd</sup> generation above FK control card have the unique function of live weather forecast. The supporting area includes:

- 1) China mainland.
- 2) Hongkong
- 3) Taiwan

Add the button  in the tool bar to add one weather division, once added, user can configure the division, operation window is shown in Pic.10-29.



Pic.10-29

- 1) Click the button  in tool bar as shown in Pic.10-29, popping up the new window like shown in picture 10-30 below, user can configure the weather forecast division



here.d

Pic.10-30


- (1) Country/region: Select the country and area in the drawdown list.
- (2) Provinces/municipalities. DC: Select the province or State in the drawdown list.
- (3) City: Select the city in the drawdown list. If the wanted city is not inside, user can choose the close one.
- (4) Display : Single line or multiline.
- (5) Weather element selection: The user can select area, longitude, latitude, and date to be displayed together.
- (6) Today: Choose the items of current day to be shown.
- (7) Tomorrow: Set the items of tomorrow to be shown.
- (8) Acquired: Set the items of the day after tomorrow to be shown.
- (9) Day (4): Set the items of the 4<sup>th</sup> day to be shown.
- (10) Day (5): Set the items of 5<sup>th</sup> day to be shown.

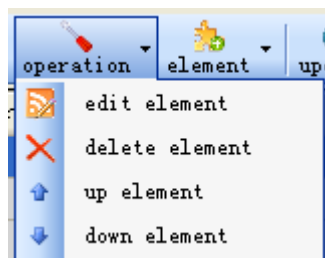


2) When the contents above finished, click the button “update”, and click the button ‘finish’, the system will automatically downloading the weather information from online server and display in the program, as shown in Pic.10-31.



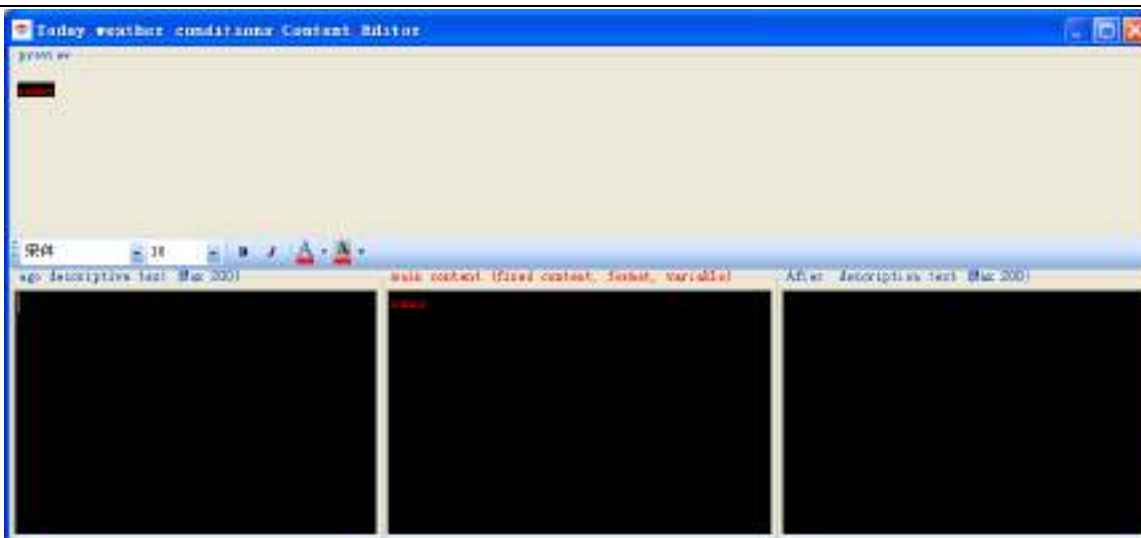
Pic.10-31

3) When the weather forecast information is downloaded, the user can click the button  operation top side of the window shown in Pic.10-31. Then move the position of the element, edit and delete the element. As shown in Pic.10-32.




Pic.10-32

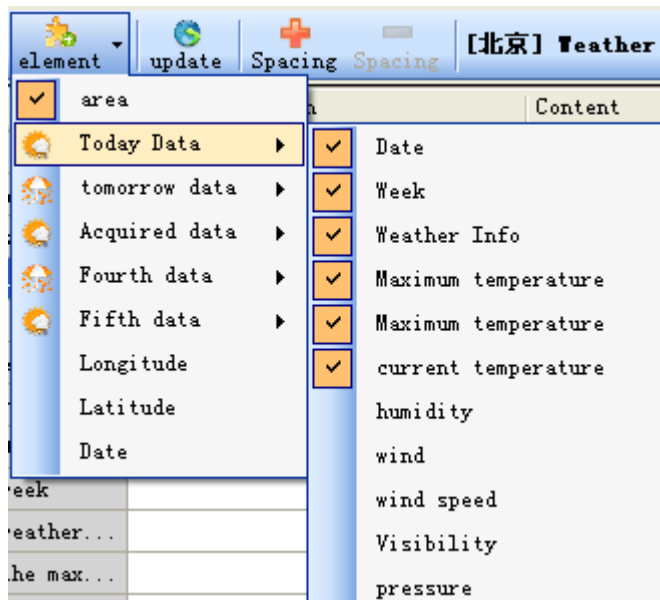
- (1) Delete element: Delete the selected element.
- (2) up element: Move the selected element one line up.
- (3) down element: Move the selected element one line down.
- (4) Edit element: Edit the selected element contents, As shown in Pic.10-33.



Pic.10-33

User can edit “ago descriptive text” and “After Description text” area to modify the display contents. The main content cannot be changed, except the text format, font, size. Besides, the calendar can be lunar calendar format.


4) Click the button , user can add and delete the element in the weather forecast like shown in Pic.10-34, the tick off one will be displayed.



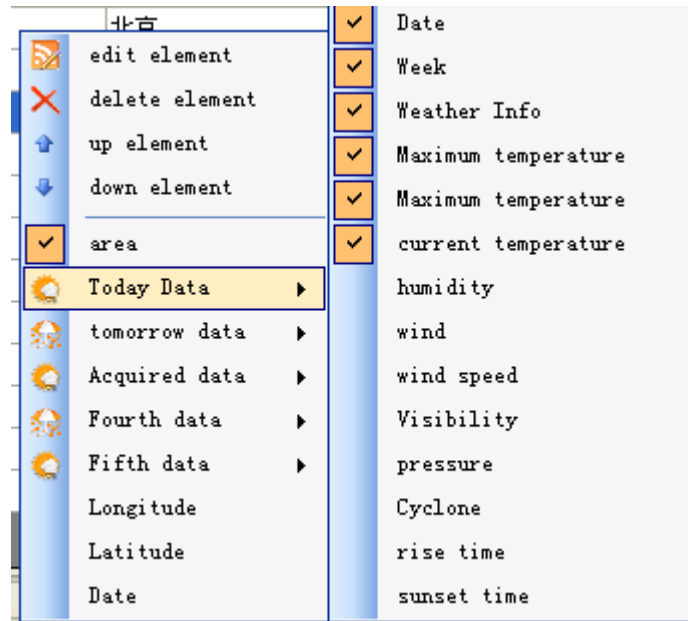
Pic.10-34

5) Click the button , update and download the latest weather forecast information from web.



6) When the text is set as multiline display. Click the button  to adjust the word space.

7) Right click shortcut: in the element list, right click the mouse, then dialogue box shown in Pic.10-35 will be shown. 。



Pic.10-35

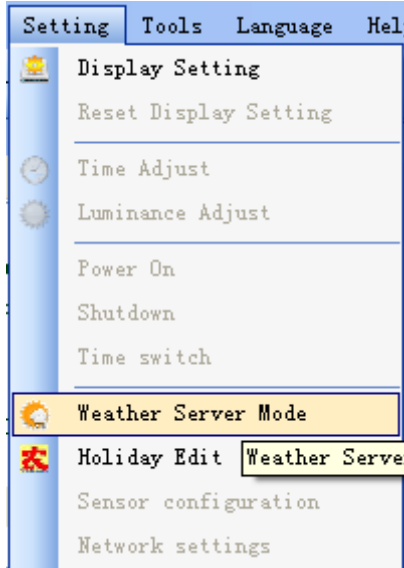
When the weather forecast set if finish, user can transfer the information to the display through two methods introduced below:

(1) Manually transmission: download the data into U disk or download to control card through serial port or network port. Manual transmission does not support automatic update. So at least the weather information need be updated in every 5days.

(2) Automatic transmission: With support of FK control cards with serial port, Wifi or network port connection, the weather forecast information can be updated automatically from internet.

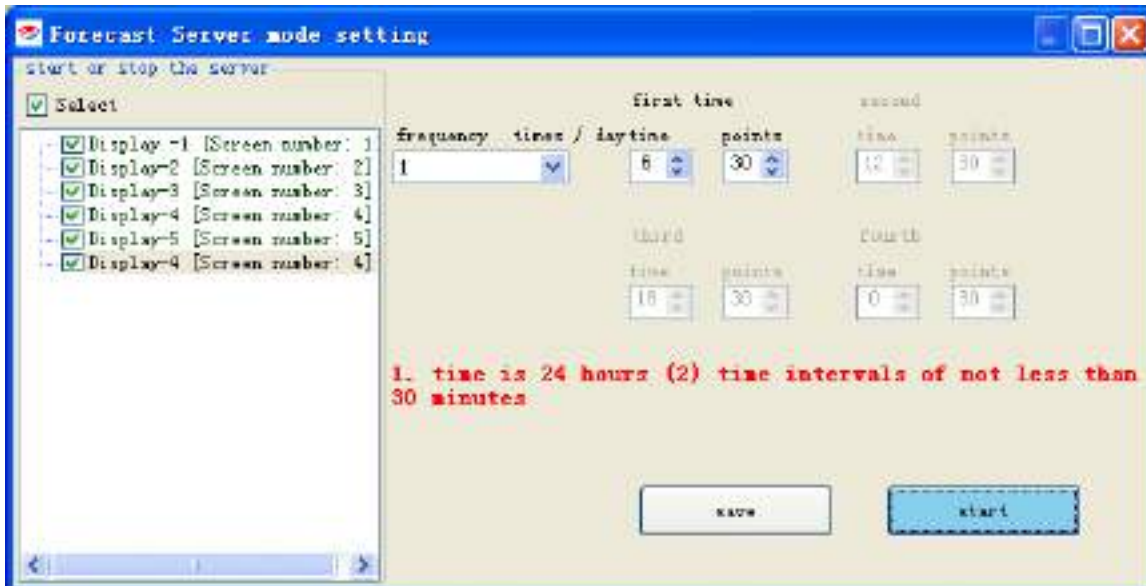
This function need server configuration, the method is as below:

(1) In the Menu **【Setting】** , click **【Weather Server Mode】** , like shown in Pic.10-36.



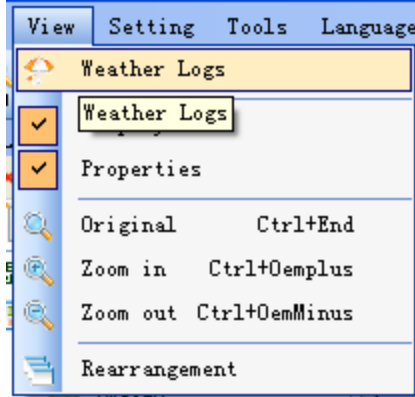
Pic.10-36

(2) In the popping up window, choose the displays want to show weather , FeiKong support cluster transmission of the weather forecast. Then user need set the update frequency and time, then click start button. As shown in Picture.10-37.



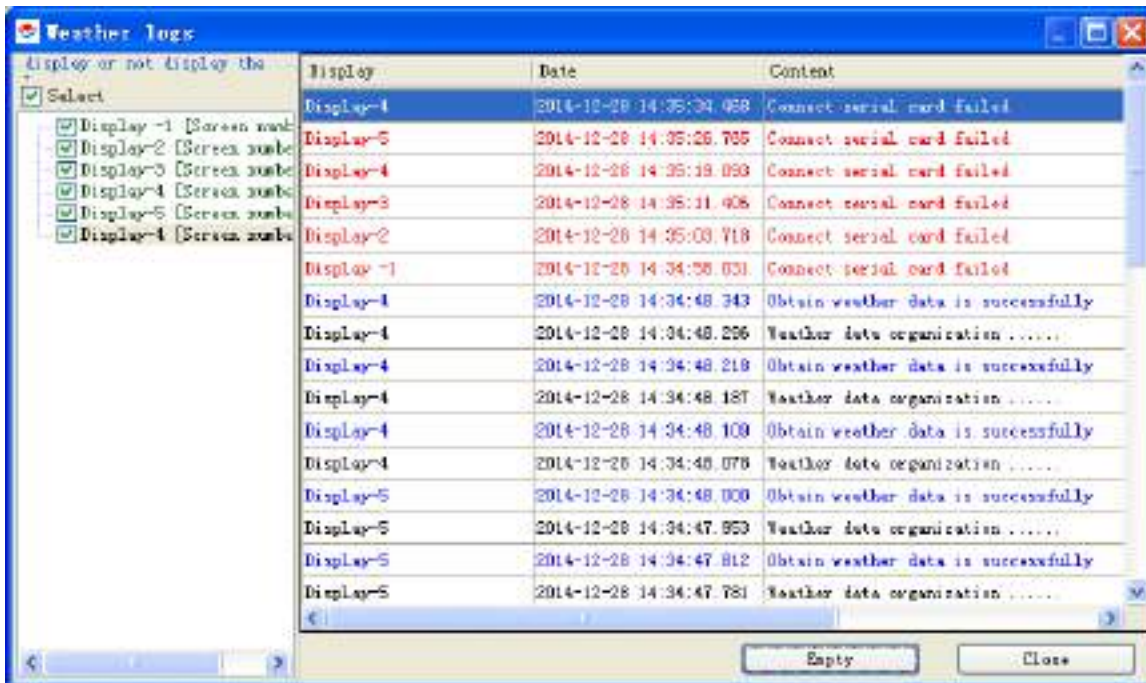
Pic.10-37

(3) After the configuration of the automatic transmission, click **【Weather logs】** page of the menu **【View】** . As shown in Pic.10-38.



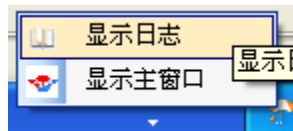
Pic.10-38

(4) In the popping up 【Weather logs】 window, user can check the weather forecast information transmission records. As shown in Pic.10-39.



Pic.10-39

Right click mouse to check weather logs or main window, then main window is open, the server mode will be closed. As shown in Pic.10-40.



Pic.10-40

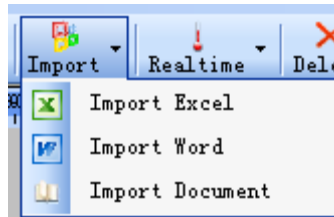
When server mode is selected, the right corner of the connected computer will have server icon blinking. As shown in Pic. 10-41.




Pic.10-41


### 10.2.13 Import


Click the button “Import” in the tool bar, user can import files including .txt, .xls, .doc, .wps etc. format. As shown in Pic.10-42.



Pic.10-42

 **Import Excel** : Import excel file into program and create table division automatically. For detail, operation, please refer to chapter [10.2.5 Table](#).

 **Import Word** : Import word file into program and create table division automatically. For detail, operation, please refer to chapter [10.2.1 text](#).

 **Import Document** : Import document file into program and create table division automatically. For detail, operation, please refer to chapter [10.2.1 Text](#).

### 10.2.14 Temperature

To support temperature division, the user need connect one extra temperature sensor to control card. The 3<sup>rd</sup> generation or later Feikong control cards support temperature sensor. Two types of temperature sensors below fit the application:

- (1) A type—Temperature + Humidity Sensor: AM2301, As shown in Picture10-43 below:



Pic.10-43

The connection of A type sensor to control card is shown in the picture 10-44.



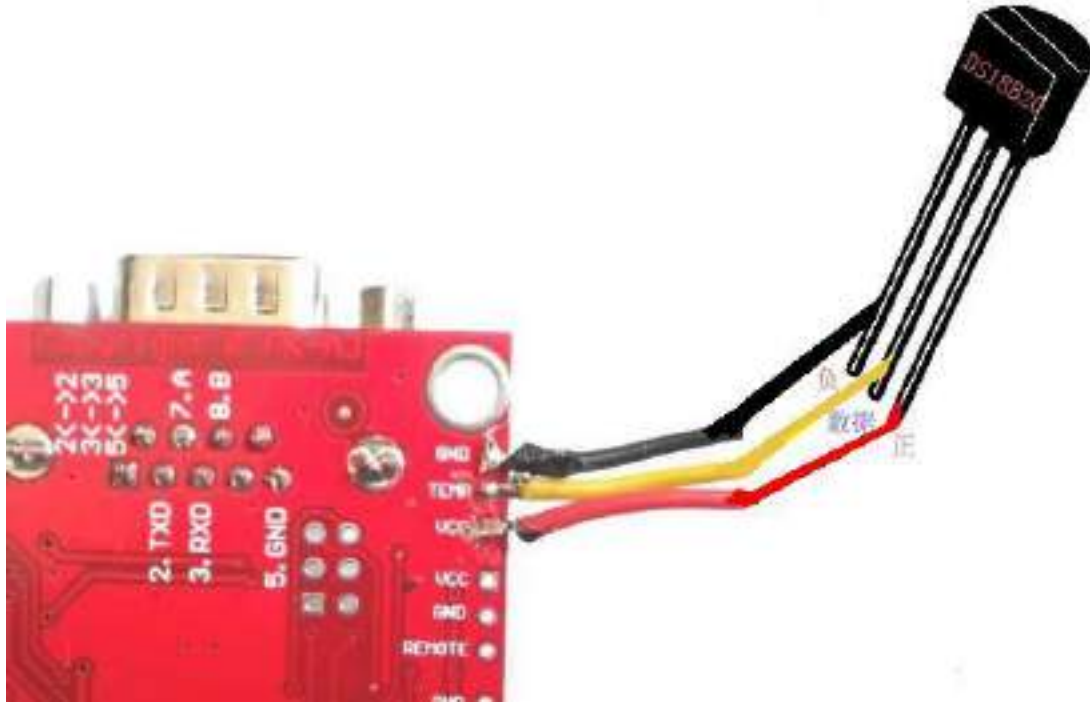
Pic.10-44

(2) B type – Temperature sensor:DS18B20, as shown in Pic.10-45.



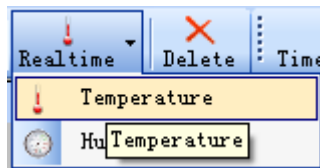
Pic.10-45

The connection of B type sensor to the control card is shown in Pic.10-46.



Pic.10-46

When the hardware connection is welded, click the button “Real-time “ in the tool bar, and click the button “Temperature”, then one temperature division will be added, as shown in Pic.10-47.



Pic.10-47

When the real-time temperature division is added, then the user can set the properties of the division. The operation window is shown in Pic.10-48.



Pic.10-48

- 1) Sensor type: Select the sensor types connected to the control cards.
- 2) Temperature Font: Set the font, size, color etc.
- 3) Unit setting; Set the temperature unit, font, size and color etc.

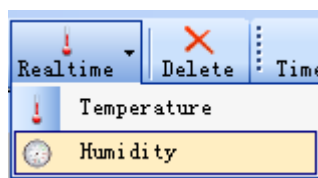


- 4) Format set: Set the temperature display format.
- 5)  Single Line  Multi Line : Set single line or multi line.
- 6) Text: User can add needed text before the real-time temperature.

### 10.2.15 Humidity

Humidity division requires to connect one extra humidity sensor to the control card, 3<sup>rd</sup> generation or later Feikong Control cards support this function, the suitable sensor and connecting method is described in the chapter [10.2.14 Temperature](#), “A Type -- Temperature+ Humidity Sensor: AM2301”.

When the hardware connection is finished, click the button “real-time” and then “humidity” button in the tool bar to add one humidity division, like shown in Pic.10-49.



Pic.10-49

After the division is added, the user can start the set of the properties. The operation window is shown in Pic.10-50.



Pic.10-50

- 1) Humidity Font: Set the font, size, color etc.
- 2) Unit setting; Set the humidity unit, font, size and color etc.
- 3) Format set: Set the humidity display format.
- 4)  Single Line  Multi Line : Set single line or multi line.
- 5) Text: User can add needed text before the real-time humidity.



### 10.3 Set animation effect

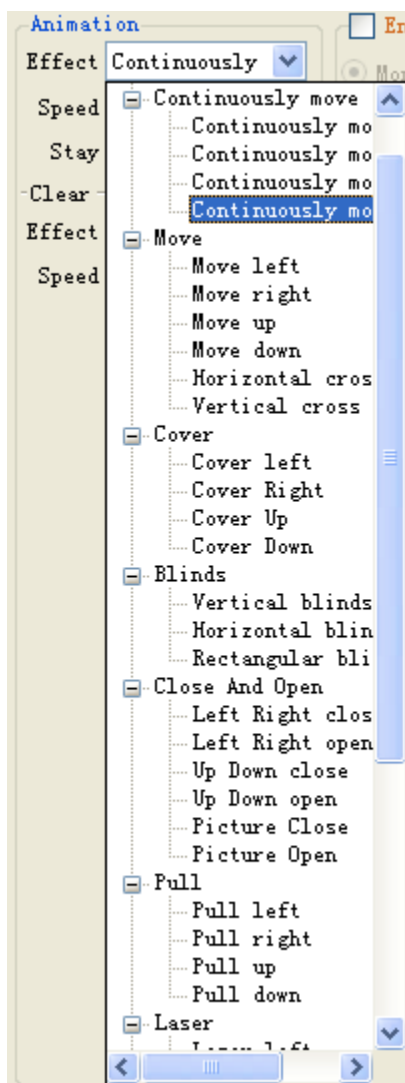
When text, subtitle division is added in the program, user can set the animation effect for the division. The method of animation effect is described as below:

Select the division need have animation effect, and when the set window like in Pic.10-51 is shown, then the user can start set the animation effect inside.



Pic.10-51

1Effect: User can choose different kind of effect in the drawdown list here. As shown in Pic.10-52.





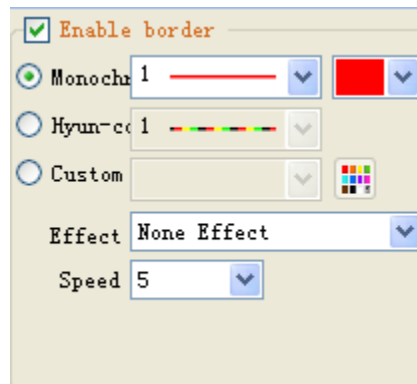
Pic.10-52

- 2) Speed: To see the speed in the draw list, smaller numbers means faster.
- 3) Stay: The staying time when the effect cycle is finish.
- 4) Clear effect: the method how the text is cleared for next display. Same as above.

#### 10.4 Set Border effect

User can set Border effect to program and division, the method for them is same. The method is described as below:


Select the program or division want to have borders, and click the button "enable border" in the properties' area, and the a new window shown in Pic.10-53 will pop up.

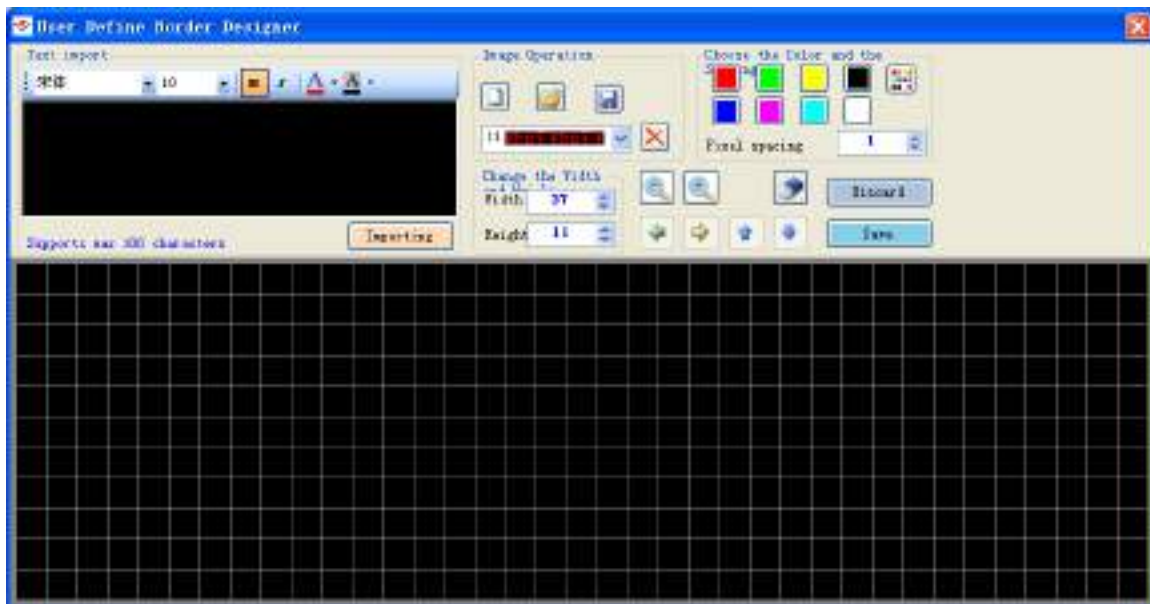


Pic.10-53

- 1) Monochromic: Different types single color border effects.
- 2) Hyun\_color: Set variant changing color border effect.



3) Custom: User can design the border effect by himself, through click the button , popping up a design widow shown in Pic.10-54.




Pic.10-54

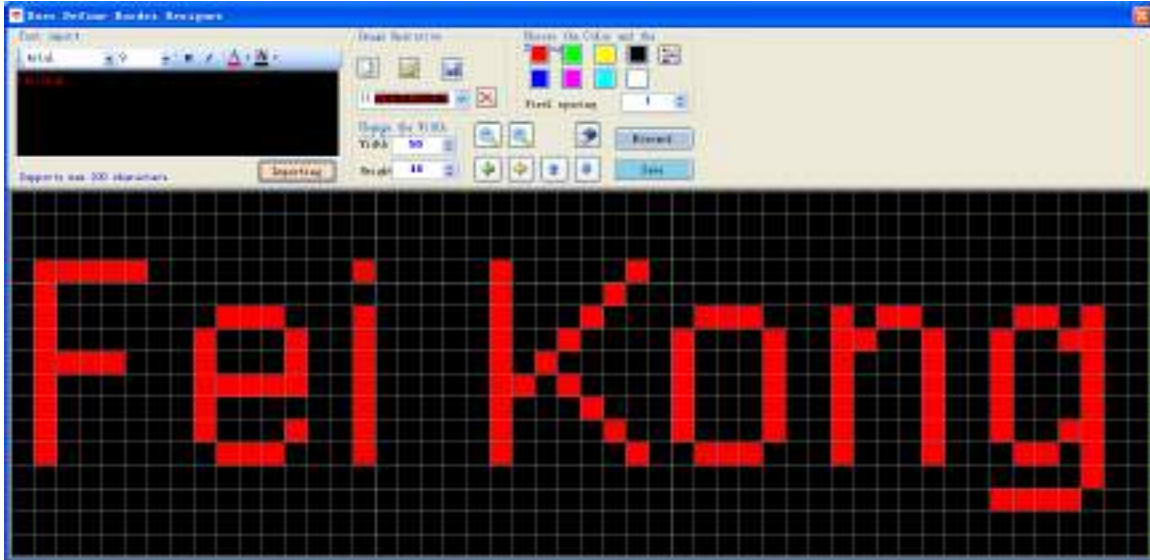
The custom type border design way is as following:

(1) Import one picture or text.

Text import: Show the text border in the text editing area, click import to load the text into the picture & text editing area at the bottom side.

Picture import: Click the button , user can import one picture from outside to the picture & Text editing area at the bottom side.

Take the text as example, type in "FeiKong" inside the text editing area, and then click the button "import", a new window shown in Pic.10-55 will appear.

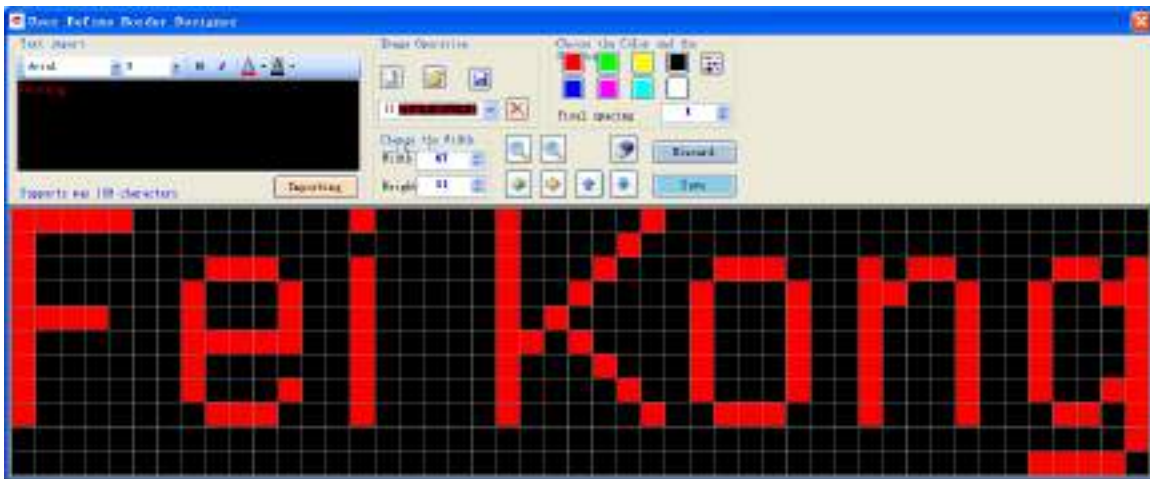


Pic.10-55

(2) In the area “Change the width and Height”, click the arrow buttons

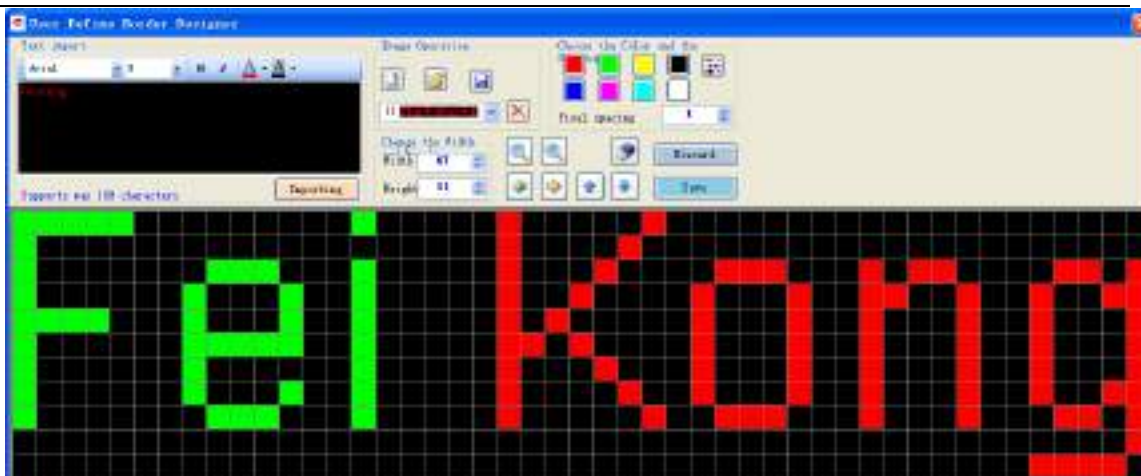


to adjust the pictures position, when finished, as shown in Pic.10-56.



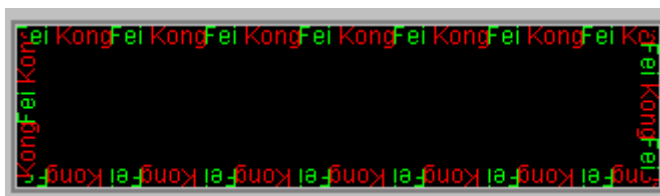
Pic.10-56

(3) In the area “ change the color and space” , choose the brush, and click the dots of the word “Fei” to change the color from red to green through this way, As shown in Pic.10-57.



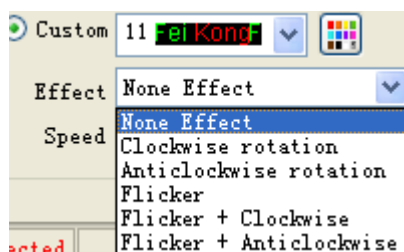
Pic.10-57

(4) When the picture edit is finished, click the button “save”, the program’s border will set asPic.it is shown in Pic.10-58.



Pic.10-58

After the edit of the picture, the user can set the effect like shown in Pic.10-59.

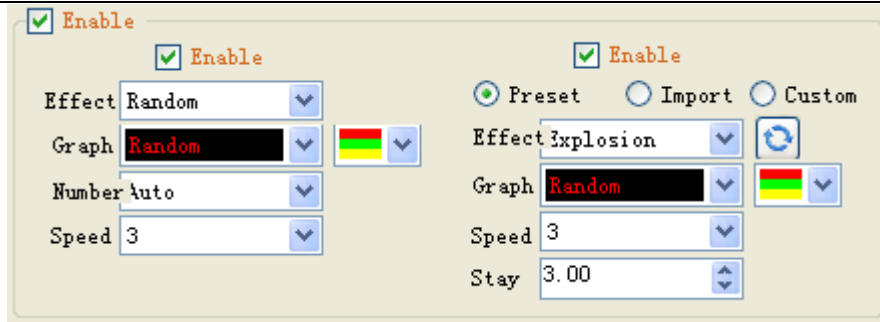


Pic.10-59

### 10.5 Set background effect

FK SHOW also provides background effect for program and division, the method is as below:

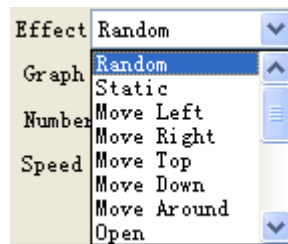
Choose the program need to set background, click “enable background” button in the properties area, then the window of background set will appear as shown in Pic.10-60.



Pic.10-60

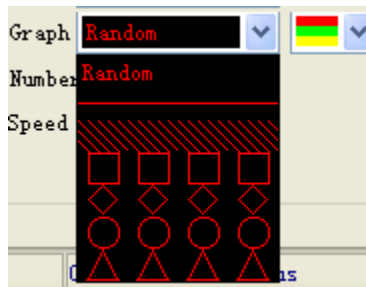
Click “enable simple background effect”, the way for simple background is as following:

- 1) Effect: Select effect type, the supporting effect type is as shown in Pic.10-61.



Pic.10-61

- 2) Graph: Select the background graph and color, the provided background graph is as shown in Pic.10-62.



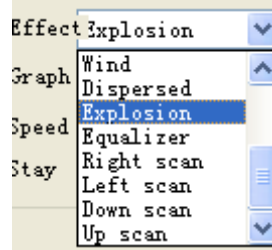
Pic.10-62

- 3) Number: choose the numbers of the graphs.
- 4) Speed: set the background effect speed.

Click the item “Enable cool background Effect”, the selection of cool background has three methods below:

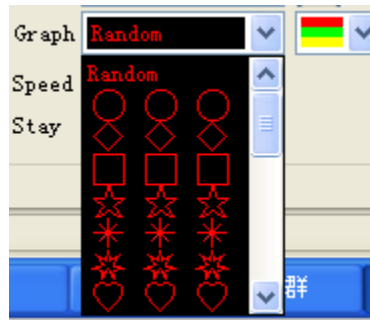
- 1) System default graph, choose  酷背景。

Effect: The supported effect is shown in Pic.10-63.



Pic.10-63

Graph: the provided background graphs are shown in Pic.10-64.



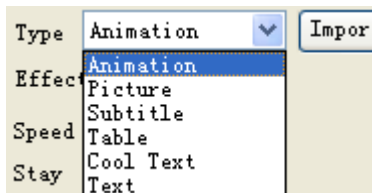
Pic.10-64

Speed: the speed of background effect speed.

Stay: The staying time before the next cycles animation effect.

2) Import the animation file, click  Import .

Type: choose the file type, and click "import", import one file to the program. The supporting file types are shown in Pic.10-65.



Pic.10-65

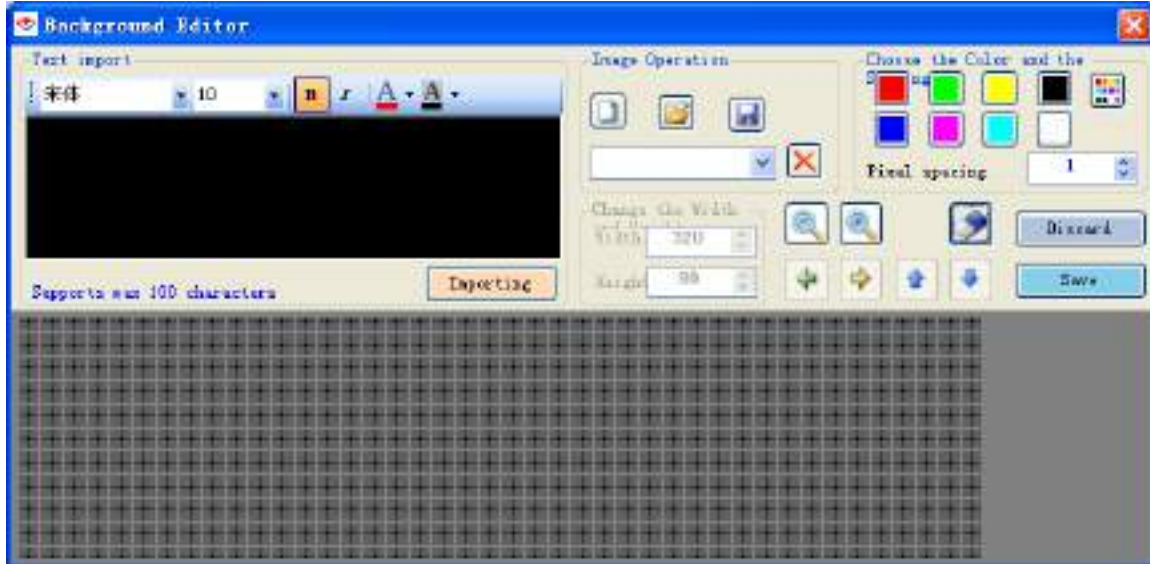
Effect: Set the animation effect of the contents, not applicable if the file type is already animation.

Speed: select the background animation speed.

Stay: select the staying time before the next cycle animation effect.

3) Custom background picture, Pick up  Custom .

Click the button "edit" , open the window of background set, as shown in Pic.10-66.



Pic.10-66

Custom background picture design method is same as the custom border effect design method, please refer to the chapter [10.4 Set border effect](#) for detail introduction.

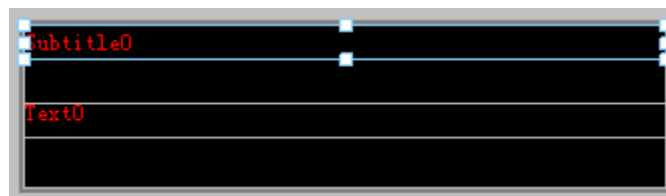
Besides, the division's background effect set is same as the program background effect set, except not supporting the cool background.

### 10.6 Division operation and type

When divisions are added in the program, user need type, design the positions of the divisions in order to have satisfied effect to final customers. The following sections will introduce the operation method one by one:

- 1) The division selection: To choose the division for next step operation. User can click to pick the divisions or click the division in the editing area directly. The chosen active division will have 8 small white block, this active division is also called current division, as shown in Pic.10-68, "Subtitle 0" is the active division or current division.

Only one active division is available in the editing area always, all the operation will be on the active division. Click to activate the division once the user want to operate on it. Click the other area to deactivate the division.



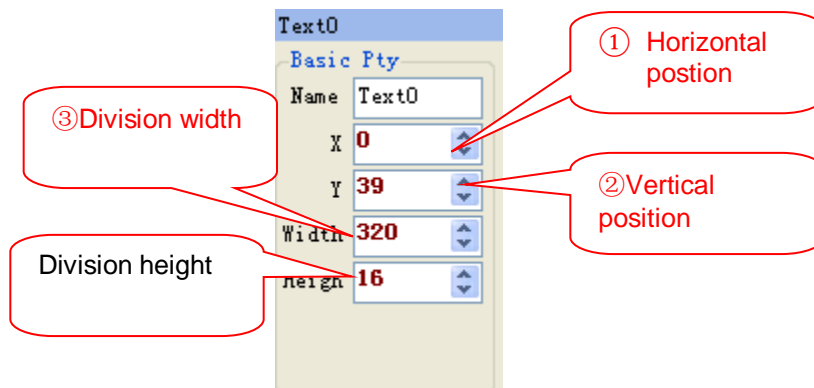
Pic.10-68

- 2) Move Division: There are different way to move the division to one specified position.



Way 1: click and hold the left button of mouse inside the division and drag the mouse and move the division to other position.

Way 2: In the left part of **【Properties area】** , there is basic properties, change the coordinate of the division, X means horizontal position, Y means vertical position. As shown in Pic.10-69



Pic.10-69

The basic properties adjustment is preferred for minor position adjustment, user can change the X and Y value through the mouse's roller, and also possible to change through the arrow besides the value.

Way 3: apply the buttons under the **【Editing area】** , change the position of the division. As shown in Pic.10-70, the buttons in Part ①. Move the division up, down, left and right dot by dot.



Pic.10-70

3) Division expand or compress: There are several method to zoom in and zoom out the active division.

Method one: click and drag the tiny white block in the corner of the active division outward or inward to expand or compress. Outward to expand, inward to compress.

Method two: Change the height and width in the basic properties area in **【Properties Area】** . As shown in Pic.10-69. User can use mouse's roller to change the value of width and height, and also can use the arrow besides the value to change them.

4) Division alignment: In FK Show, the division alignment means to have the division position adjusted close to the editing area border, or close to the division besides. When two divisions are positioned next to each other, and they are overlapping or there is no



expected gap in middle, then the alignment function can solve these problems. The alignment buttons is shown in Picture10-70, 2<sup>nd</sup> part. Left alignment button can have the active division to be aligned at left side, the display border, or the right side border of the division at left side. Similar functions are defined for right alignment, up alignment and down alignment buttons.

- 5) Division Fill Division fill function helps the user to expand or fill the active division in the maximum size. The commands are shown in Pic.10-70, Part 3. Three buttons are provided to help expand or fill the division: 1 left to right direction, 2, up and down direction, 3, both directions.
- 6) Program or division display expand: Click the buttons part ④ in Pic.10-70, to realize the expansion or compression of the program or division. There are 5 grades for expansion or compression, the user can keep click to change the size continuously. Click the recovery button, it can recovery to the original display size.
- 7) Division copy and delete: 2 methods are provided to copy and delete active division.  
Method 1: select the division need to be copied to have it in active status, and apply the shortcut Ctrl+C to have it in the clipboard, then use the shortcut Ctrl+V to have the copy in the editing area. Use delete key in key board to delete the active division.  
Method 2: Click the button Cut, copy, paste in the 【Display list】 to realize the copy and delete of division. As shown in Pic.10-71.



Pic.10-71

### 10.7 Program Preview

Before export the program to the display control cards, user can preview the program playing in effect through FK Show tool, this avoid the former back and forth design work to check the real effect and update program, help to increase the work efficiency.

Preview function is as below:

Click the preview button under the program editing area, then the program enters the preview mode and start play. As show in Pic.10-72.



Pic.10-72

When the preview is finished, click stop button as shown in Pic.10-73 to stop the preview, and back to editing mode.



Pic.10-73



Remark: When there are more than one program in one display screen, user can only preview the program one by one manually.

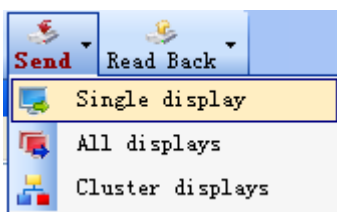
## 11. Send Program (Program transmission)

When the program is designed ready, User need send the program to display screen to show. Different communication mode requires different sending methods, the following paragraph will introduce these methods.

### 11.1 Send through serial port

The procedure of sending program through serial port is as following:

- 1) Choose one display in the display list, after confirmation that the serial communication is connected to the display and working well, Please refer to paragraph [7.1 Serial communication](#).
- 2) Click **【Send】** → **【Single display】** button in the tool bar, as shown in Pic.11-1.



Pic.11-1

- 2) If the information box of “Program failed to be sent” appears with the indication of display parameter do not match as shown in Pic.11-2, the user need download the display set to control cards again, refer to [4.3.2 Display set](#) about display set.



Pic.11-2

- 3) When the sending is succeed, there will be confirming information shown at bottom bar as shown in Pic.11-3.




Pic.11-3

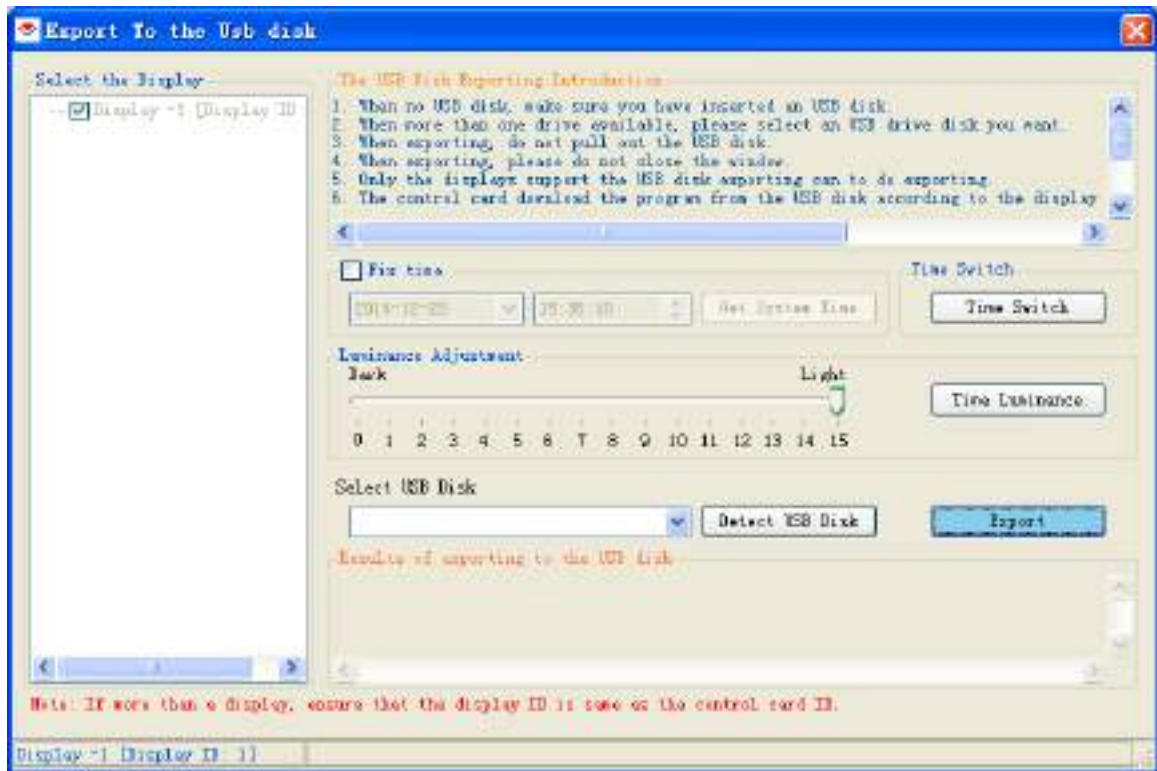
### 11.2 USB transmission

USB Transmission procedure is as following:

- 1) Insert the U disk into the computer USB port.



2) click the button  in the tool bar, popping up the window “Export to Usb disk”, as shown in Pic.11-4.



Pic.11-4

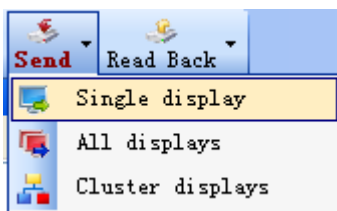
- 3) Select the display want to send the program.
- 4) No time adjustment is required when it is export to USB as default, and the brightness is maximum. About time and brightness adjustment for USB, please refer to paragraph [13 Typical common](#)
- 5) Choose USB disk, if there is no information about USB disk, click the button “Detect USB disk”, to search for the disk.
- 6) Click the button “Export” to load the program to USB disk.
- 7) When the load is finish, plug out the USB disk, and insert it to the control card. When the loading process is finish, start to play the program.

### 11.3 Network (Ethernet) transmission

The procedure of transmission through network (Ethernet) is as following:



- 1) Keep the communication between the computer and control card is working well. Please refer to paragraph [7.3 Network communication](#) if need support.
- 2) Click the button **【send】** → **【Single display】** in the tool bar, as shown in Pic.11-5.



Pic.11-5

- 3) If the information box of “Program failed to be sent” appears with the indication of display parameter do not match as shown in Pic.11-6, the user need download the display set to control cards again, refer to [4.3.2 Display set](#) about display set.



Pic.11-6

- 4) When the sending is succeed, there will be confirming information shown at bottom bar as shown in Pic.11-7.



Pic.11-7

#### 11.4 Wifi transmission

Keep the communication of the control card is working well; the set method is introduced in paragraph [7.4 WiFi communication](#).

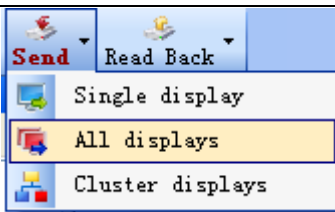
The transmission procedure through Wifi is same as through network, please refer to paragraph [11.3 Network \(Ethernet\) Transmission](#).

#### 11.5 All display transmission

The paragraph 11.1~11.4 introduce the procedure to send programs to one display. If there is many displays with different programs, it will need much more time to send the programs to displays one by one manually. FK Show has provide all display transmission function, which will send the required programs to the corresponding displays automatically with one button click.

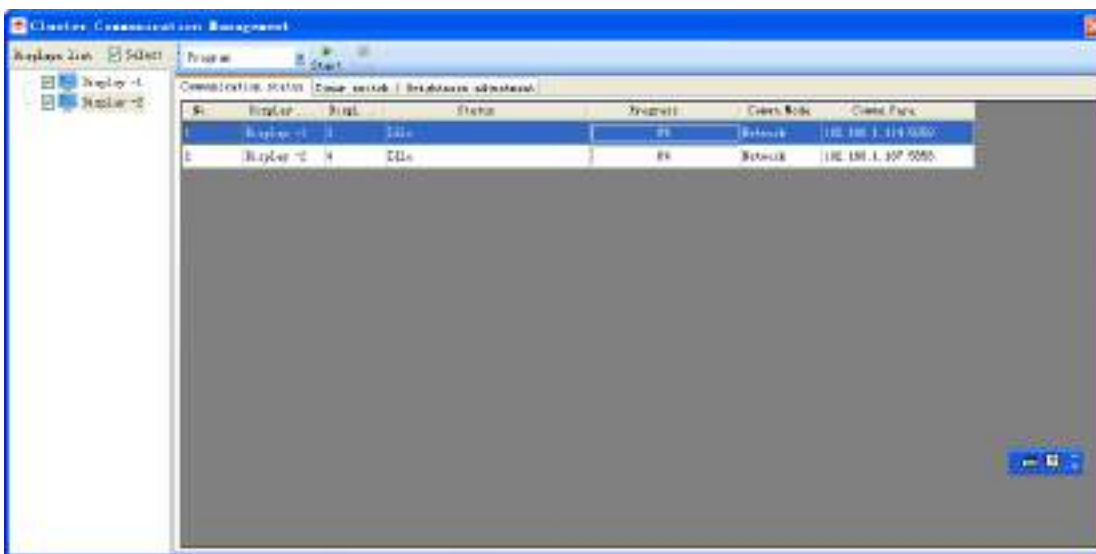
The simple procedure is as following:

- 1) Click the button **【Send】** → **【All displays】** , As shown in Pic.11-8.



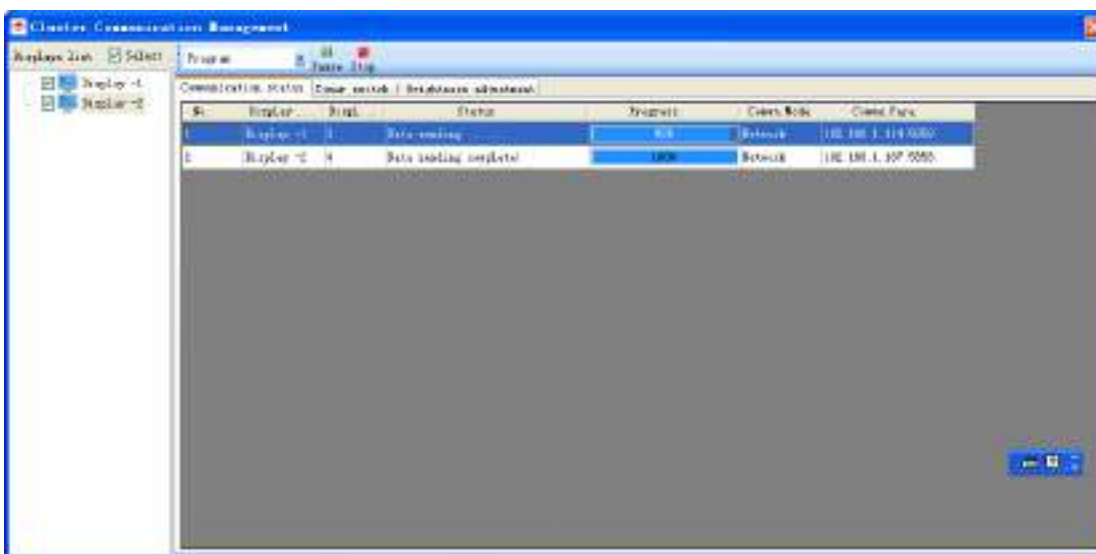
Pic.11-8

2) Then a new window **【Cluster Communication management】** appears, select all the displays, then click the button start, then the system will send the designed programs to the corresponding displays one by one automatically as shown in Pic.11-9.



Pic.11-9

3) The transmission progress for each display will be indicated in the window, as shown in Pic.11-10.



Pic.11-10

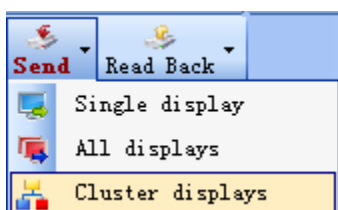


Remind: During the transmission period, user need guarantee all the displays are connected in good condition, otherwise fault message will be given and display set need reset.

### 11.6 Cluster display transmission

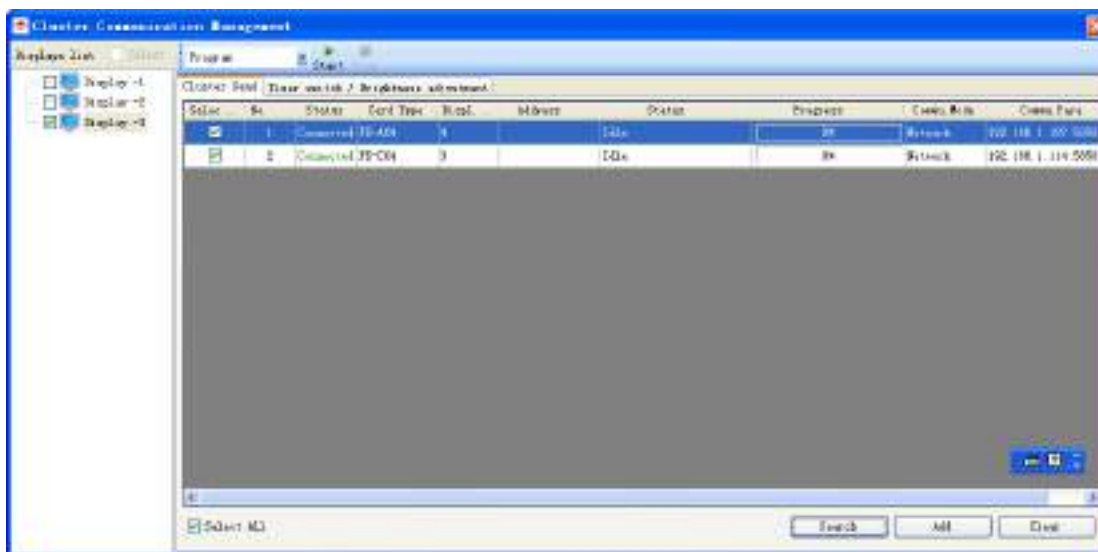
Cluster display transmission is different function than all displays introduced in chapter 11.5, Cluster display transmission function is to send one program to all display, this function are used for the application that all the displays plays the same program contents. The sending procedure is as following:

- 1) Click the button **【Send】** → **【Cluster displays】** , As shown Pic.11-11.



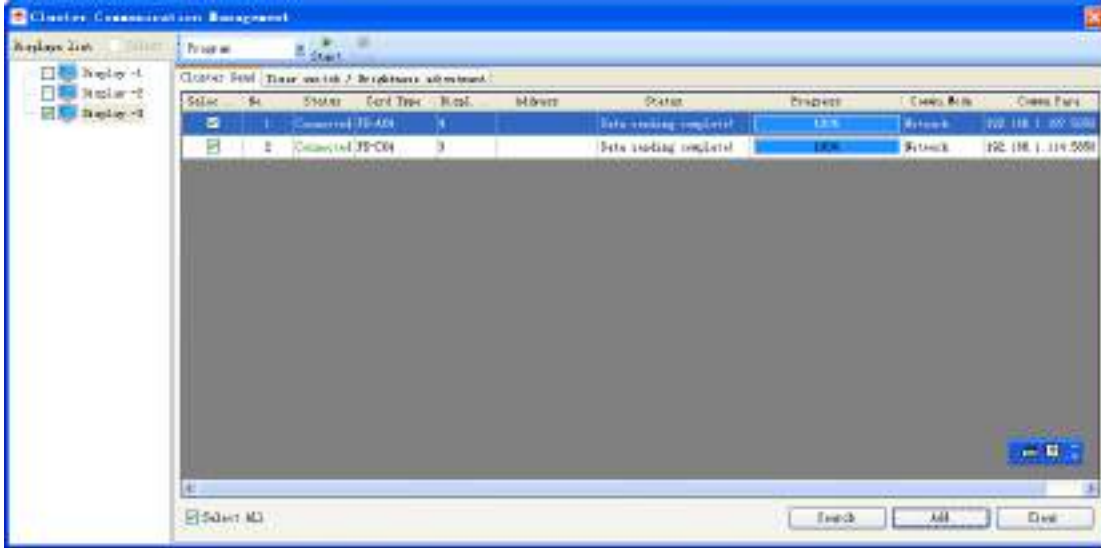
Pic.11-11

- 2) In the popping up new window **【Cluster Communication Management】** , select the display program want to send in the left side, and choose the displays want to send the program to at right side. For only one display program can be transferred to all displays, so only one display in left side can be choose. As shown in Pic.11-12.



Pic.11-12

- 3) Click the button “start” in the window, start to transfer the display 3 ‘s program to the selected displays one by one until finish, as shown in Pic.11-13.



Pic.11-13

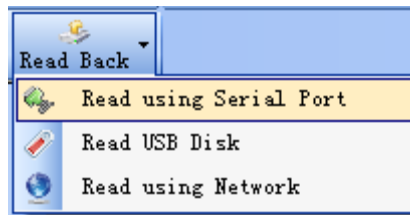
## 12. Upload (read back) program

Through FK SHOW, the user can upload the program from the control card to the computer, different communication method has different procedures.

### 12.1 Upload from serial port

When the communication method is serial port, the procedure is as following:

- 1) Guarantee the connection to control card is working well. Click the button “Read Back” → “Read using Serial port”, as shown in Pic.12-1.



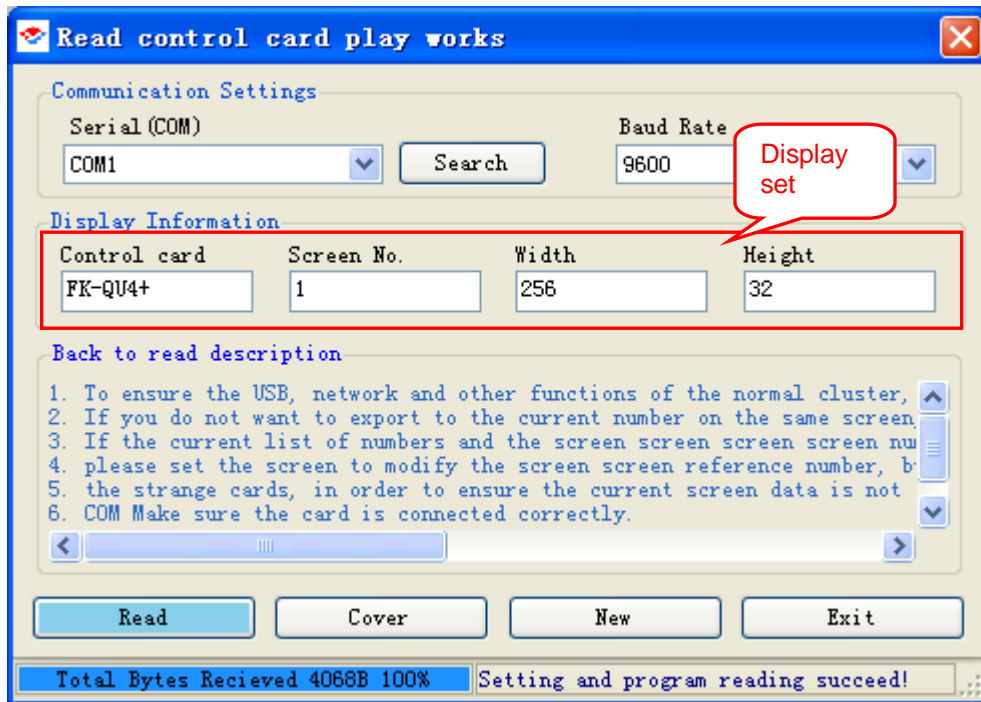
Pic.12-1

- 2) In the popping up password dialogue window, type in password “168”, then click confirm, new window “Read control card play works” will appear as shown in Pic.12-2.



Pic.12-2

- 1) Select the com number, and click the button “read” , then the program in the control card will be uploaded to computer, and shown the display set in the windows as shown in Pic.12-3.



Pic.12-3

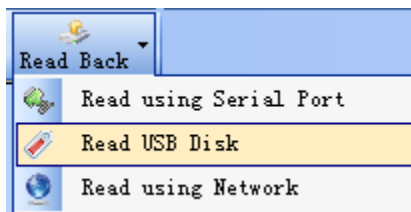


3) Click the button “new” , then one new display and the program uploaded from the control card will be created in the display list. If the user clicks the button “cover”, then the selected active displays contents will be covered.

## 12.2 USB upload (read back)

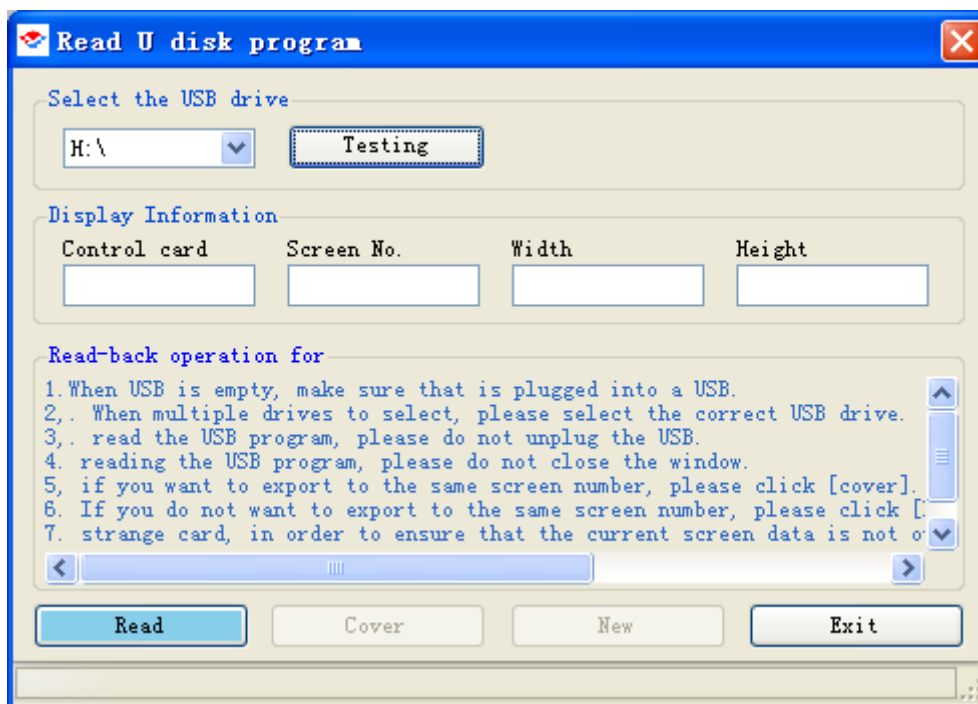
When apply USB connection, the user can upload the program from the control card to computer.

1) Insert the USB disk with the program to the computer, click the button “Read back”, and then “Read USB Disk”, as shown in Pic.12-4.



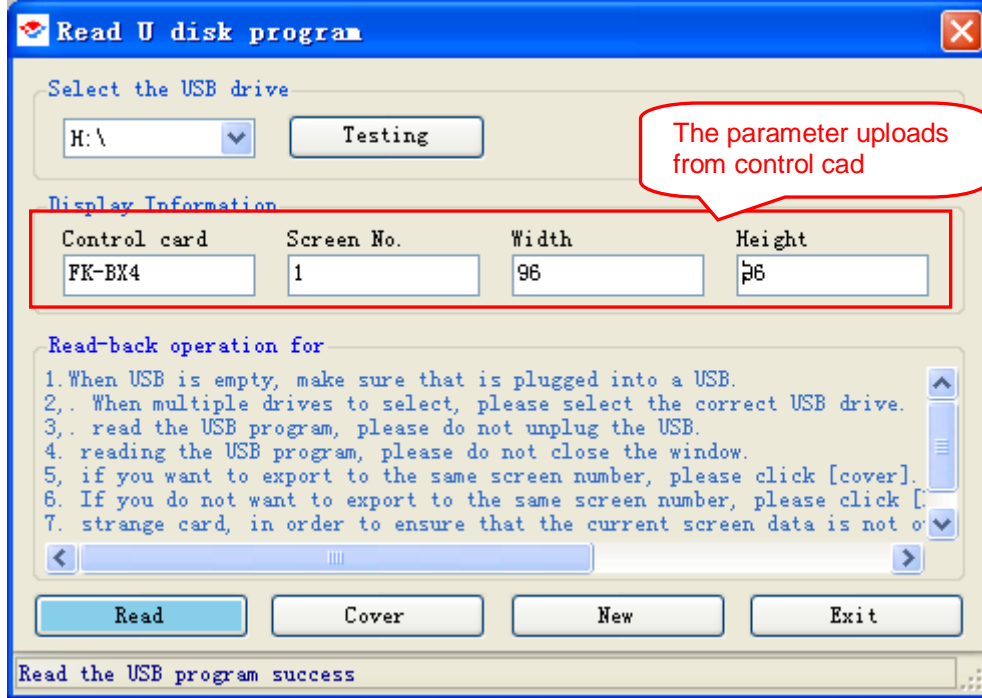
Pic.12-4

2) In the popping up window “ password confirmation” , key in the password “168”, then click the button confirm, then a new window “ Upload USB Disk Program” shown in Pic.12-5 will appear .



Pic.12-5

3) Choose the exact USB disk and then click the button “read back”, then the program in the USB disk can be uploaded to computer with the indication of the display set, as shown in Pic.12-6.



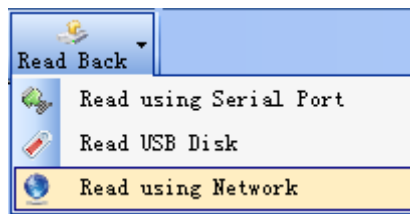
Pic.12-6

- 3) Click the button “New”, then a new display with program uploaded from the USB disk will be created in computer shown in FK Show display list.

### 12.3 Network (Ethernet) upload (read back)

When communication method is through Ethernet port, then user can upload(read back) the program from the control cards following the procedure below:

- 1) Click the button “ Read back” → “Read Using Network”, as shown in Pic.12-7.

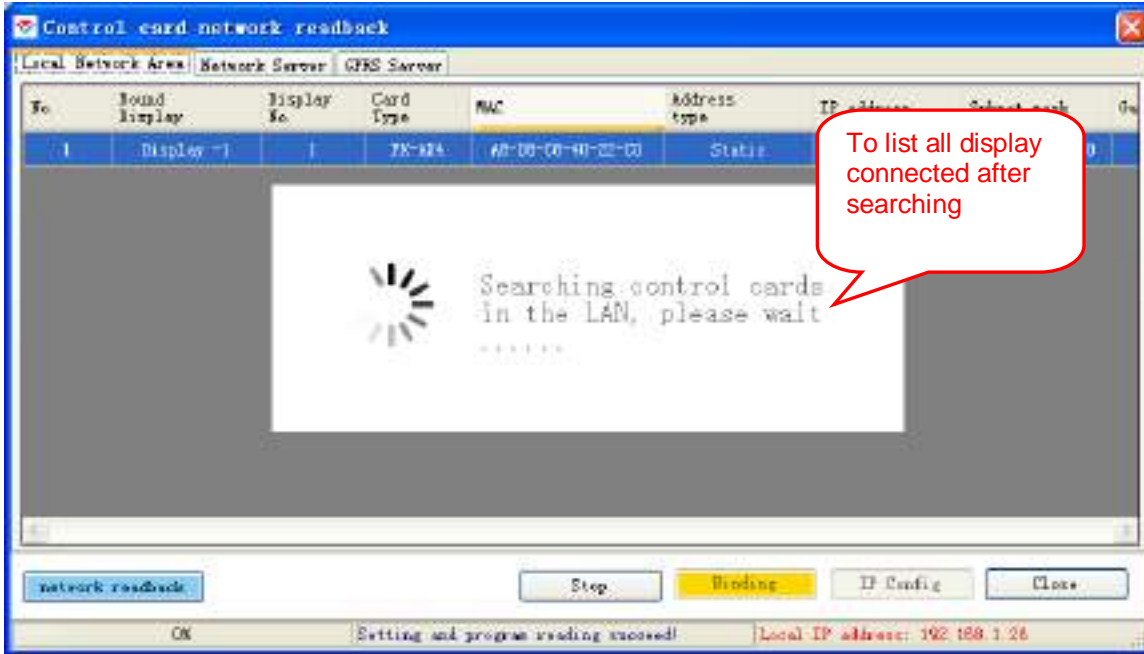


Pic.12-7

- 2) In the popping up dialog box of password, key in “168”, then click the button to confirm it. A new dialog box “Control Card Network Read Back” will appear, as shown in Pic.12-

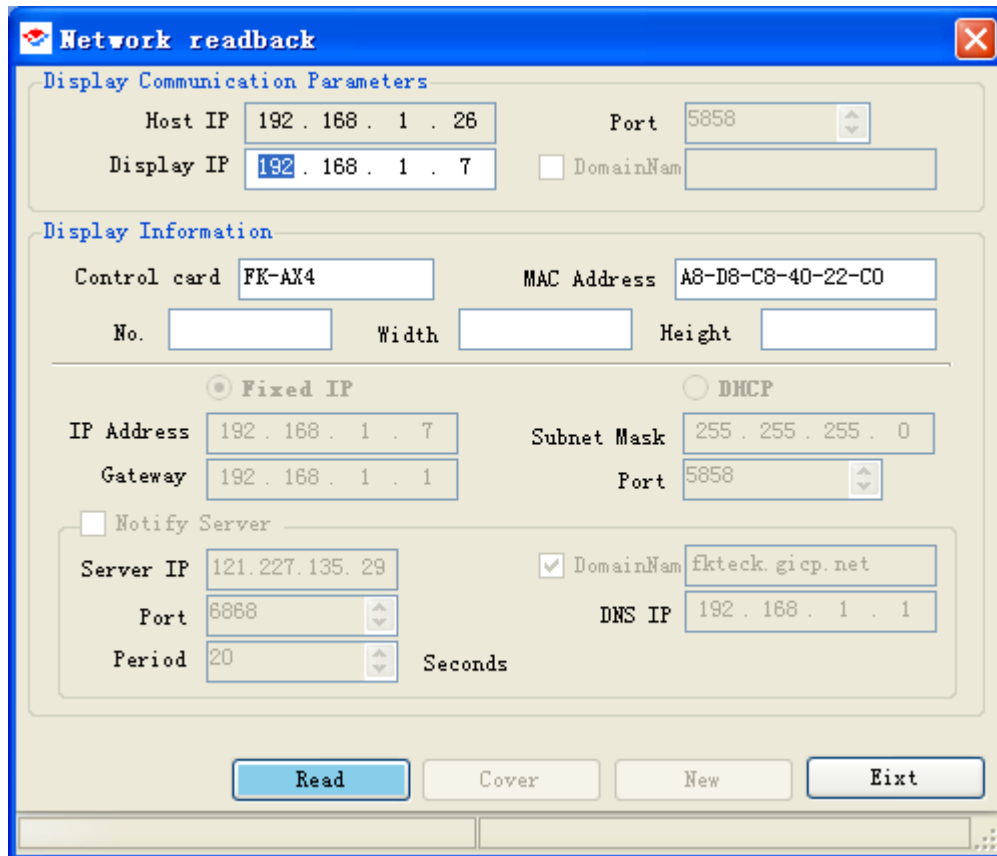


8.



Pic.12-8

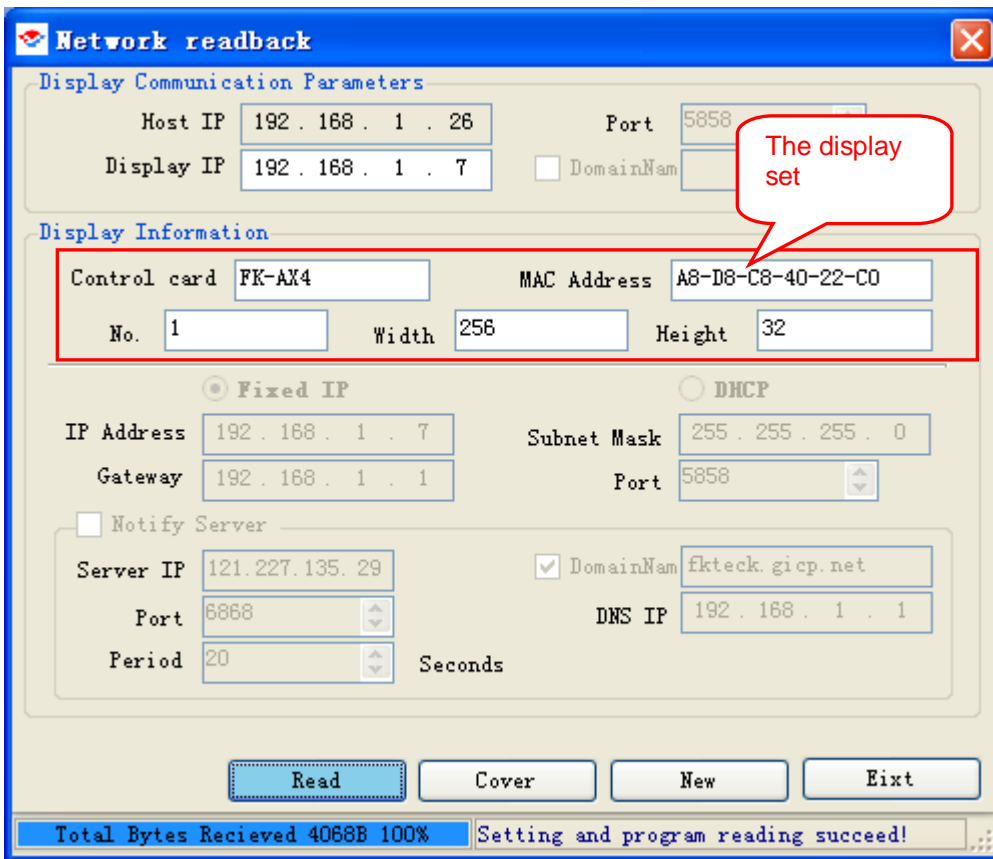
3) Click the button “Network readback” to have new dialog box appear as shown in Pic.12-9.



Pic.12-9



4) Click the button “Read”, the system will upload(read back) the program from the selected display, and will indicate in the status bar when the upload is succeed, as shown in Pic.12-10.



Pic.12-10

3) Click the button “new”, then one new display and the program uploaded from the control card will be created in the display list. If the user clicks the button “cover”, then the selected active displays contents will be covered.


### 13. Typical commands

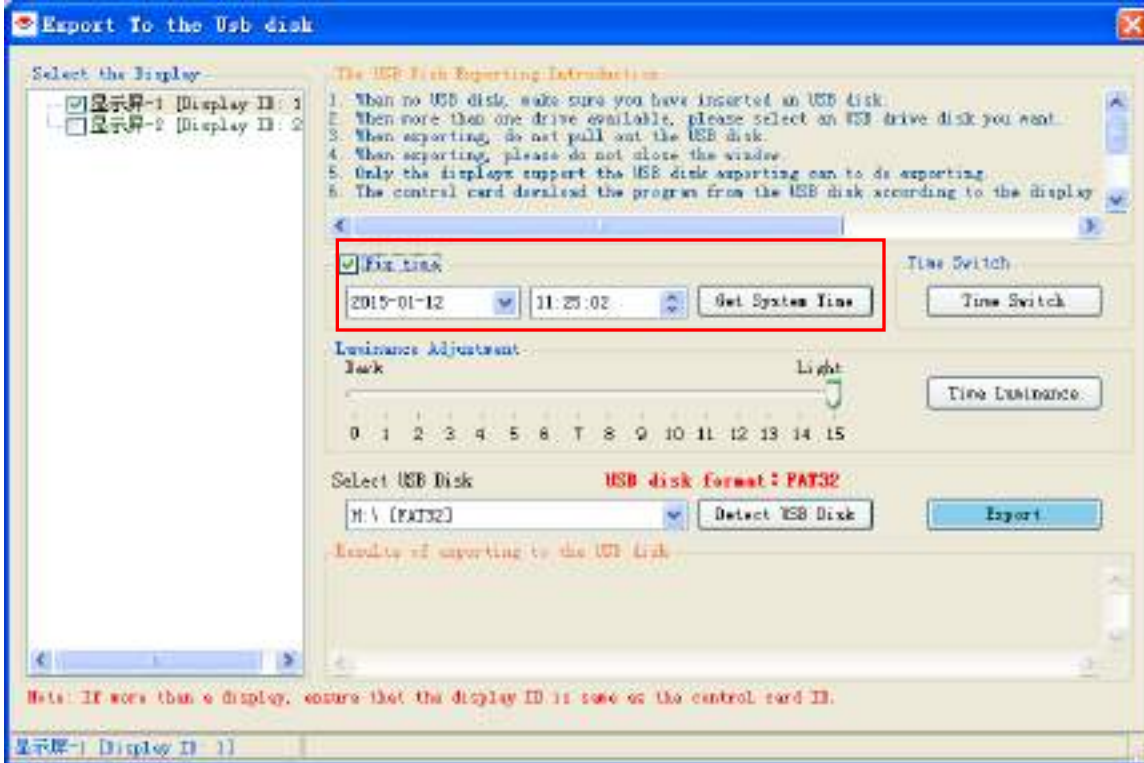
#### 13.1 Time adjustment

Different communication method has different time adjustment procedure.

##### 13.1.1 Time adjustment for USB disk card U



1) Click the button  in the tool bar, and click time adjustment in the popping up window “export to USB”, as shown in Pic.13-1.




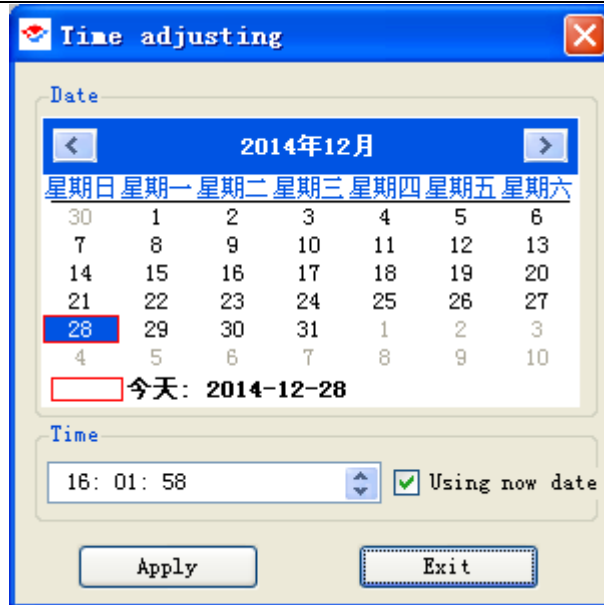
Pic.13-1

- 2) Set the time to the estimated time when the USB disk is insert to control card, normally minutes late than the live time for the time is freezing when user plug out USB disk until it is inserted to control cards.[For example 10:15]
- 3) Click the button “export to USB disk”, plug out when finish.
- 4) Prepare and wait until the time is close to 10:15, insert the USB Disk into the control card.
- 5) Check the time uploaded is same or not as system time.
- 6) Repeat the procedure above once you want change time.

### 13.1.2 Time adjustment of other communication methods

- 1) Select the displays in the display list to have time adjustment.
- 2) Guarantee the connection between the display control cards and the computer is working well,

click the button  in the tool bar, then the dialog box “Time adjustment” will appear as shown in Pic.13-2.



Pic.13-2


- 3) If the user want to apply the current live time, just tick off “ Using now date”, otherwise user can set anytime he want manually and cancel the tick off of “Using now date”.
- 4) Time is confirmed, then click the button “Apply” to download the time information to the display control cards to finish the time adjustment.

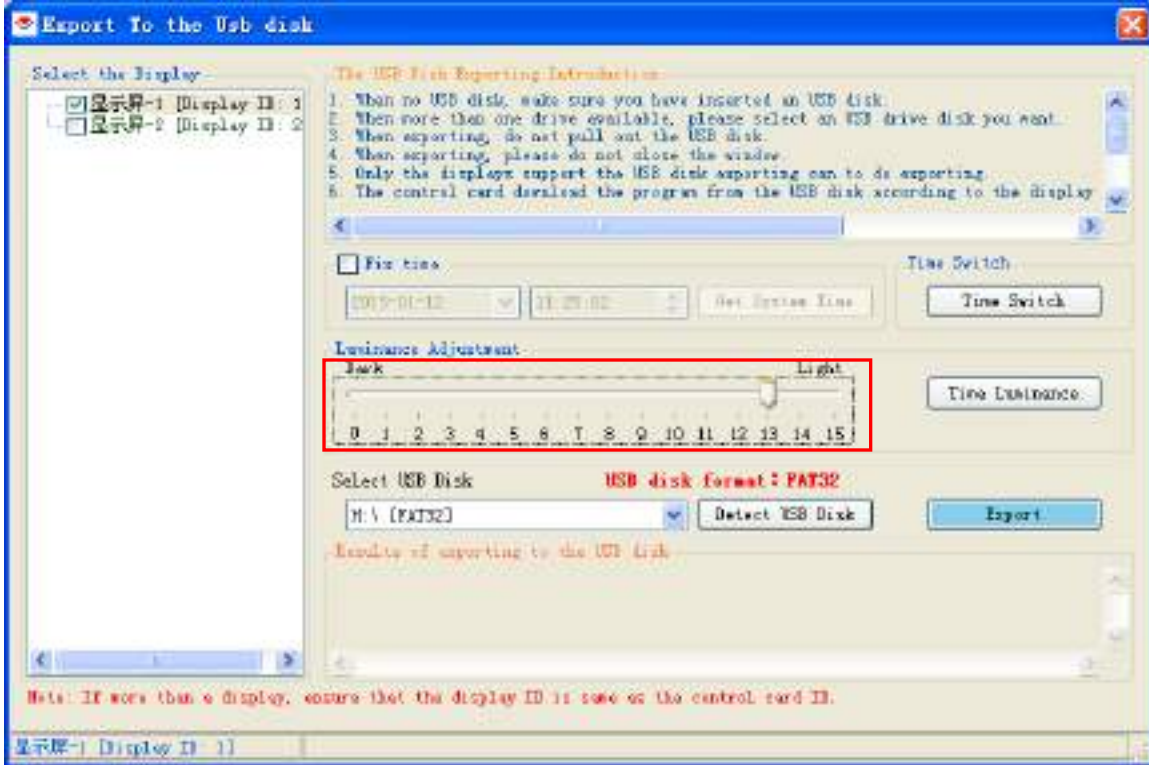
### 13.2 Luminance (Brightness) adjustment

The display updated program with USB has different procedure of luminance adjustment than the other communication methods.

To serve the user better, FK show provides different luminance set for one display according to time, then it can automatically adjust the luminance in day and night to fulfill the different requirement of brightness in day and night.

#### 13.2.1 Luminance adjustment for USB disk

- 1) Click the button  in tool bar, in the popping up new window “Export to USB”, drag the slider in the luminance adjustment left and right to change the luminance set, as shown in Pic.13-3.

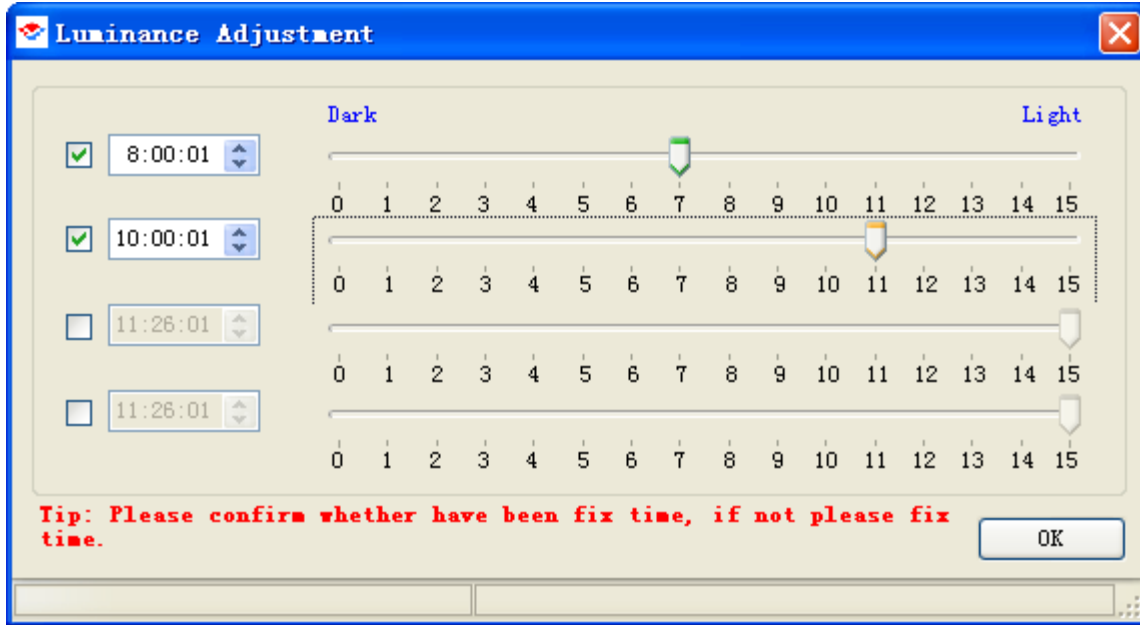


Pic.13-3

- 2) When luminance grade is confirmed, click the button “export to USB”, plug out USB disk when the download is finished.
- 3) Insert the USB disk into the control card, upload the program to the control card again, when it is finish, then the luminance is also changed .

### 13.2.2 Luminance adjustment according to time set for U disk connection

- 1) In the dialog box shown in Pic.13.3, click the button Time division, then a new window “Time division luminance” will appear, and we provide 4 time zones per day for different set of luminance, as shown in Pic.13-4.



Pic.13-4


- 2) In the Pic.13-4, the luminance is changed to 10 grade at 8 o'clock, and then change to 12 grade when 10 o'clock.
- 3) When the luminance adjustment is finished, click "Finish" and back to window "export to USB", and export the program to USB disk.
- 4) Insert the USB into the control card, and it will realize the time division luminance automatic adjustment when program is downloaded to control card.

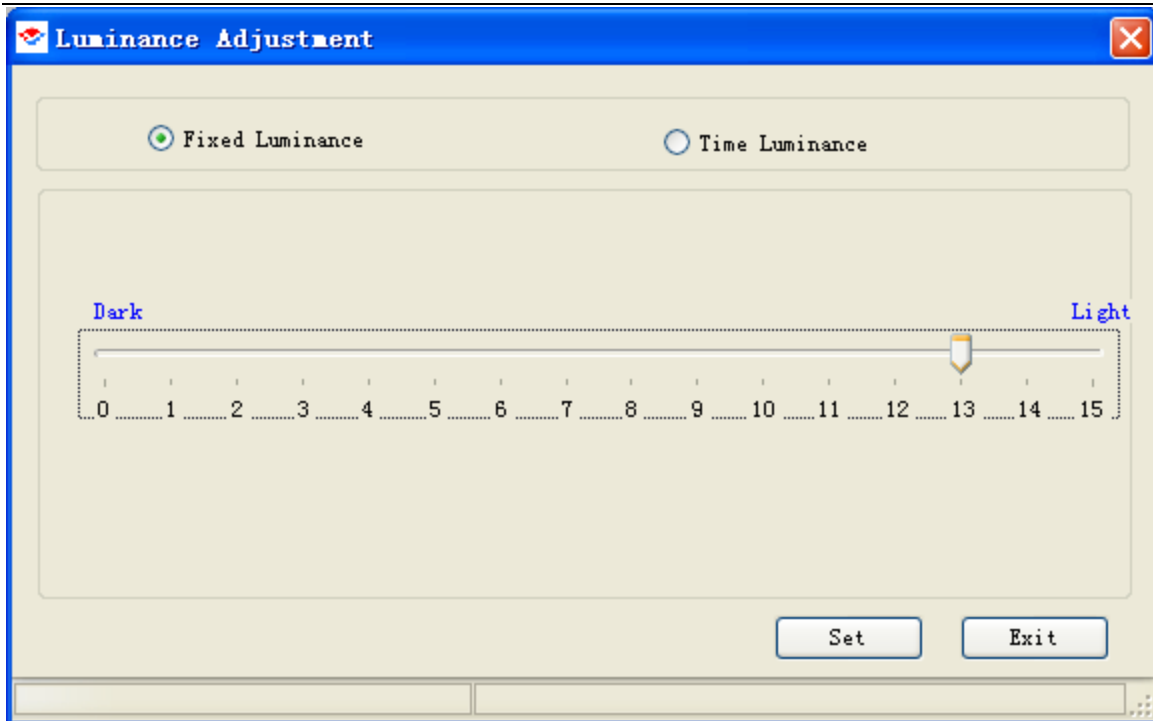
**Remind :** 1) Time division luminance adjustment is only available in 24 hours cycles.

2) Please make sure the time set is correct once user want to apply the time division luminance set especially for USB connecting card, for the time is not online updating. Please refer to [13.1 Time adjutment](#) for the time adjustment.

### 13.2.3 Luminance adjustment for other communication methods

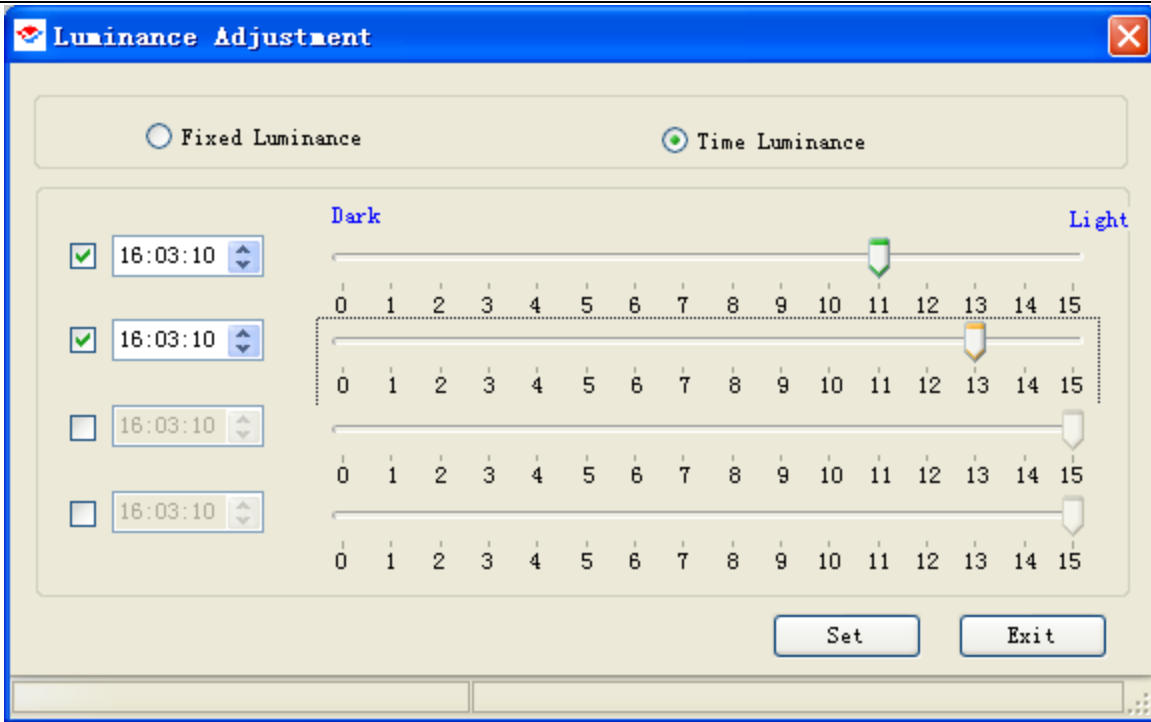
- 1) Select the display in the display list want to adjust luminance.

- 2) When the connection between the displays and computer is OK, click the button , then the window "Luminance Adjustment" will appear, as shown in Pic.13-5.



Pic.13-5

- 3) System default is “fixed luminance “ means the luminance (brightness) is constant always when plays, the user can drag the slider left or right direction to change the constant value according to need.
- 4) When the user want to realize time division luminance set, click “ Time luminance” in the window shown in Pic.13-5, then new window appears as shown in Pic.13-6.



Pic.13-6


5) In the Pic.13-6, the luminance is changed to 10 grade at 8 o'clock, and then change to 12 grade when 10 o'clock.

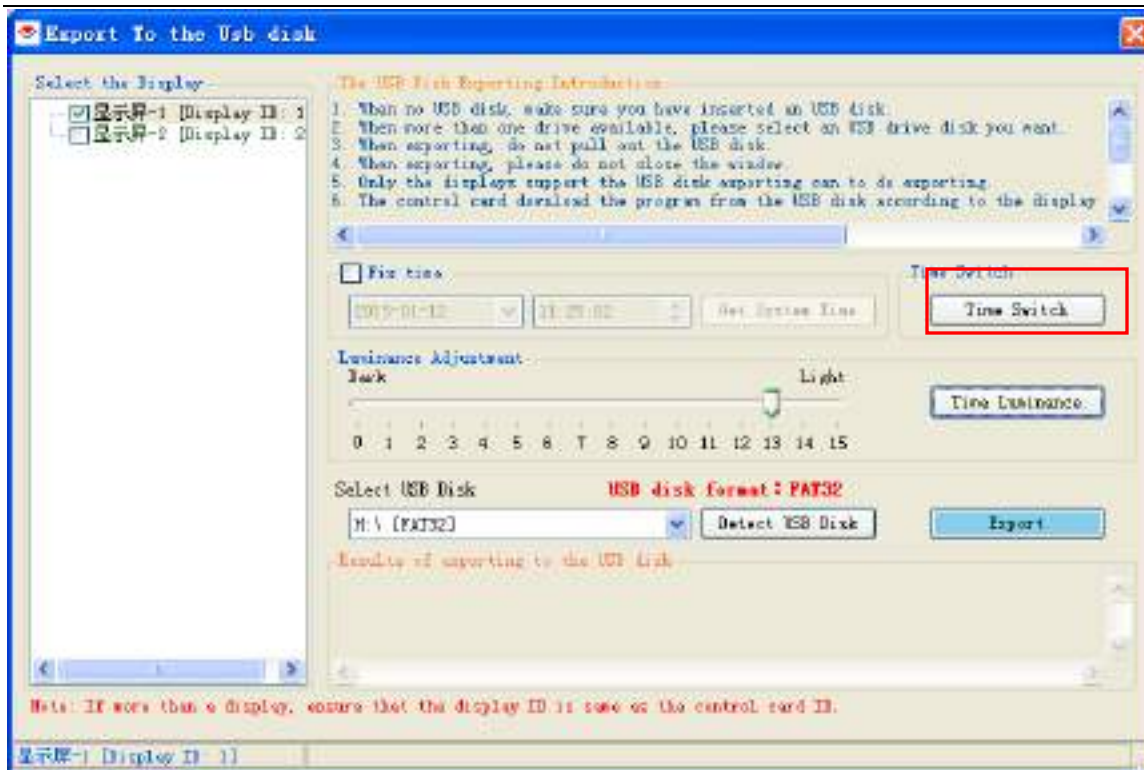
6) When the luminance adjustment is finished, click “Set”, download the luminance set to the control card to realize the time division luminance set.

### 13.3 Time Switch Off And On

The display updated program with USB has different procedure of time switch off and on than the other communication methods.

#### 13.3.1 Time Switch Off and On for USB connection

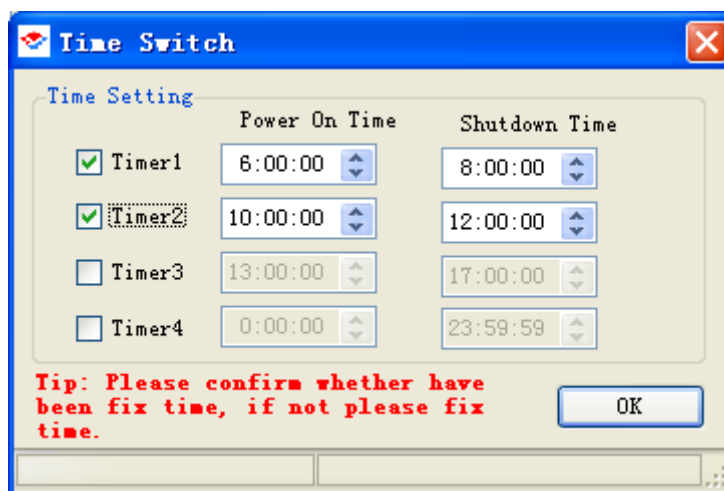
1) Click the button  in tool bar, new window “Export to USB” will appear as shown in Pic.13-7.



Pic.13-7

2) Click the button “Time Switch Off On”, then new dialog box will appear, as shown in Pic.13-

8.FK Show provide four time zone for switch on and switch off per daytime .



Pic.13-8

3) In the Pic.13-8, the time set 1 means the display will switch on at 6:00 and switch off when 8:00, then the time set 2 means the display will be switch on at 10:00, and switch off at 12:00.

4) When time set are finished, click the button “finish”, back to the dialog box “export to USB”, download the program to USB.



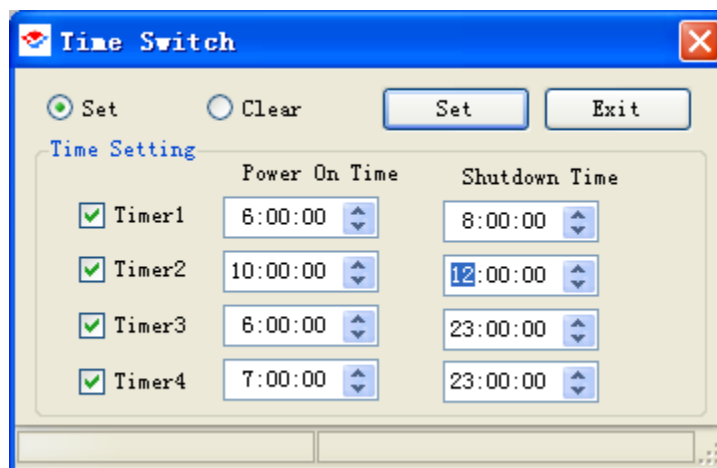
- 5) When the program in the USB disk is updated, insert it to the control card, when the download to the control card is succeed, then the time switch on and off will be realized.
- 6) User can cancel the automatic time switch on and off through cancel the tick off of the button in the 3<sup>rd</sup> step above.

Remind : 1) Time switch on and off is only available in 24 hours cycles.

2) Please make sure the time set is correct once user want to apply the time division luminance set especially for USB connecting card, for the time is not online updating. Please refer to [13.1 Time adjustment](#) for the time adjustment.

### 13.3.2 Time switch on and off through live communication

- 1) Click the displays want to have automatic time switch on and off in the display list.
- 2) Guarantee the connection between the display control card and the computer is OK, click the main menu button “set”, and “Time Switch” , and the dialog box “ Time Switch” will appear, as shown in Pic.13-9.



Pic.13-9

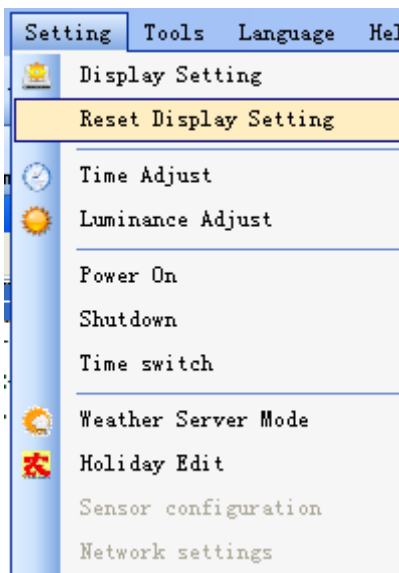
- 3) Tick off “set” at left top side, and tick off the timers need below and have the time adjusted as, need.
- 4) The click the button “set” on right top side to send the time switch requirement to the control card to realize the automatic switch on and off according to time set.

### 13.4 Rest display setting

Sometimes user want to delete the program including the time switch information in the control card, then it can be realized through the function” Rest Display Setting”.

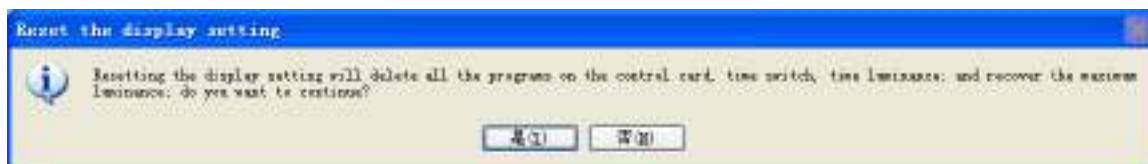


- 1) Guarantee the connection of the display control card and computer is OK, click the button “setting” in the main menu, and then the button “Rest Display Setting”, as shown in Pic.13-10.



Pic.13-10

- 2) In the popping up password dialog box, key in “168”, and click confirm.
- 3) A dialog box as shown in Pic.13-11 will appear as below:




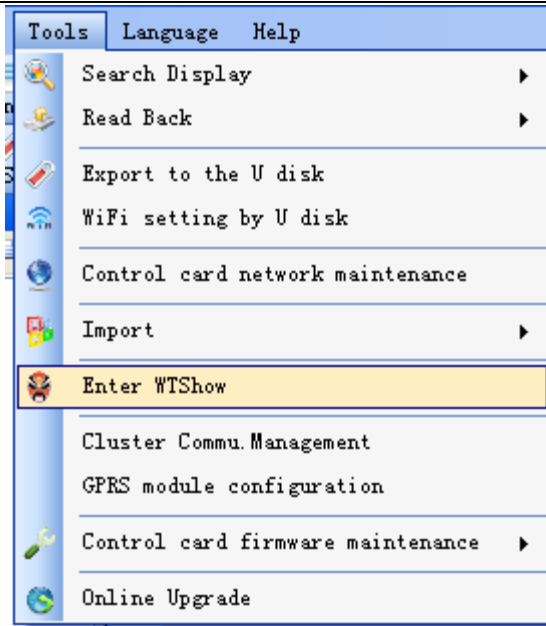
Pic.13-11

- 4) Click Yes to reset the display setting.

## 14. Stage Display Setting

FK Show has developed Stage Display function recently for customer based on the product principle “All in One” to support the users who want to display content on stage LED screen.

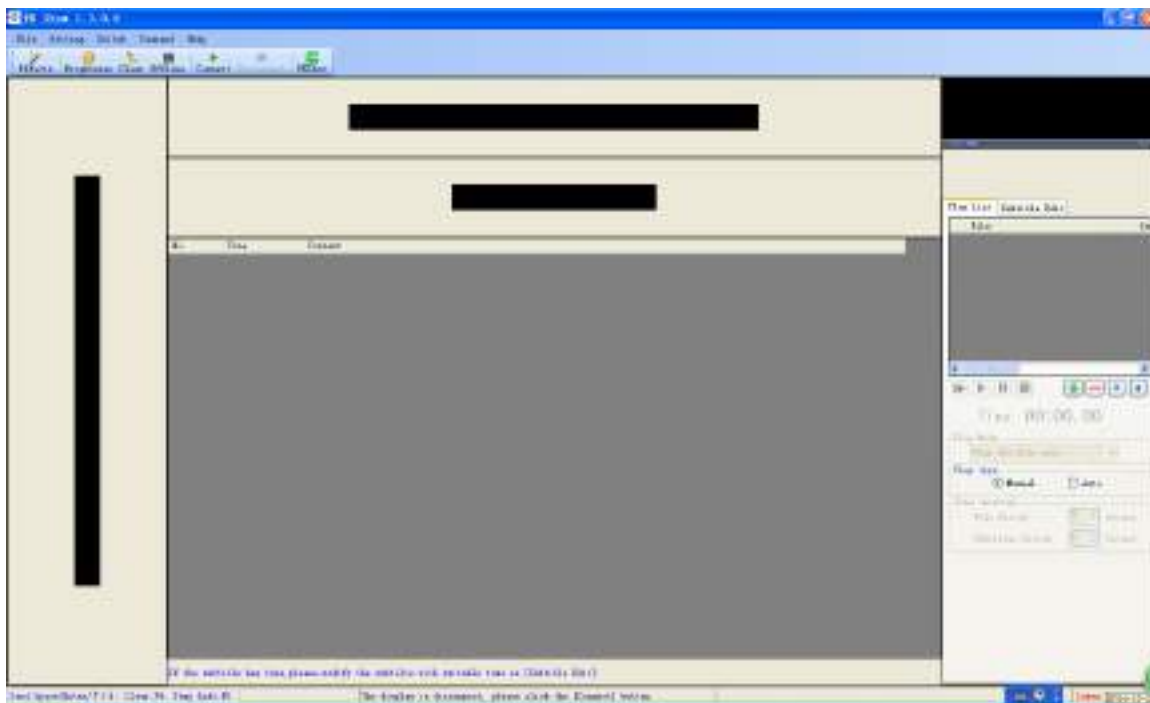
Click the button **[Tool]→[Enter WTShow]** in the main menu, or click the button  **Enter WTShow** in toolbar, then the widow of stage display set will appear, as shown in Pic.14-1.



Pic.14-1

The key in 168 in the password dialog box, then the main window of stage display set will appear, as shown in Pic.14-

2



Pic.14-2

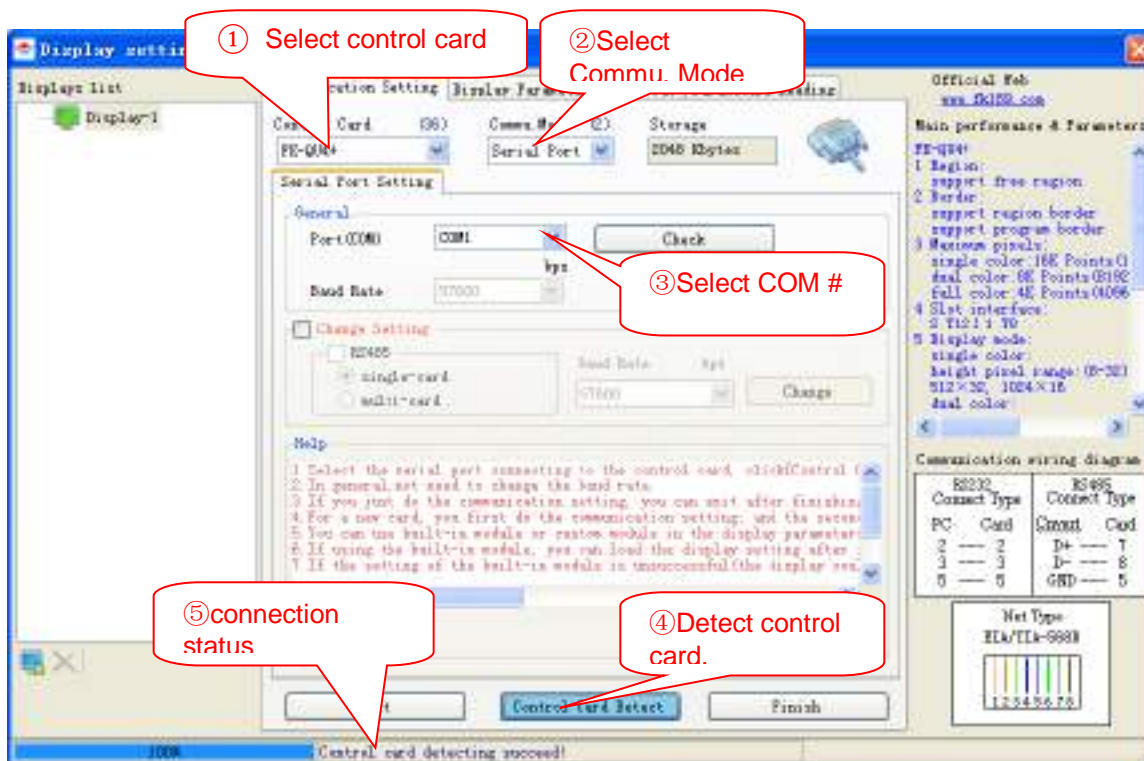
About the stage display set, please contact us for <Stage display user manual>through email if needed.



## 15. Operation Examples

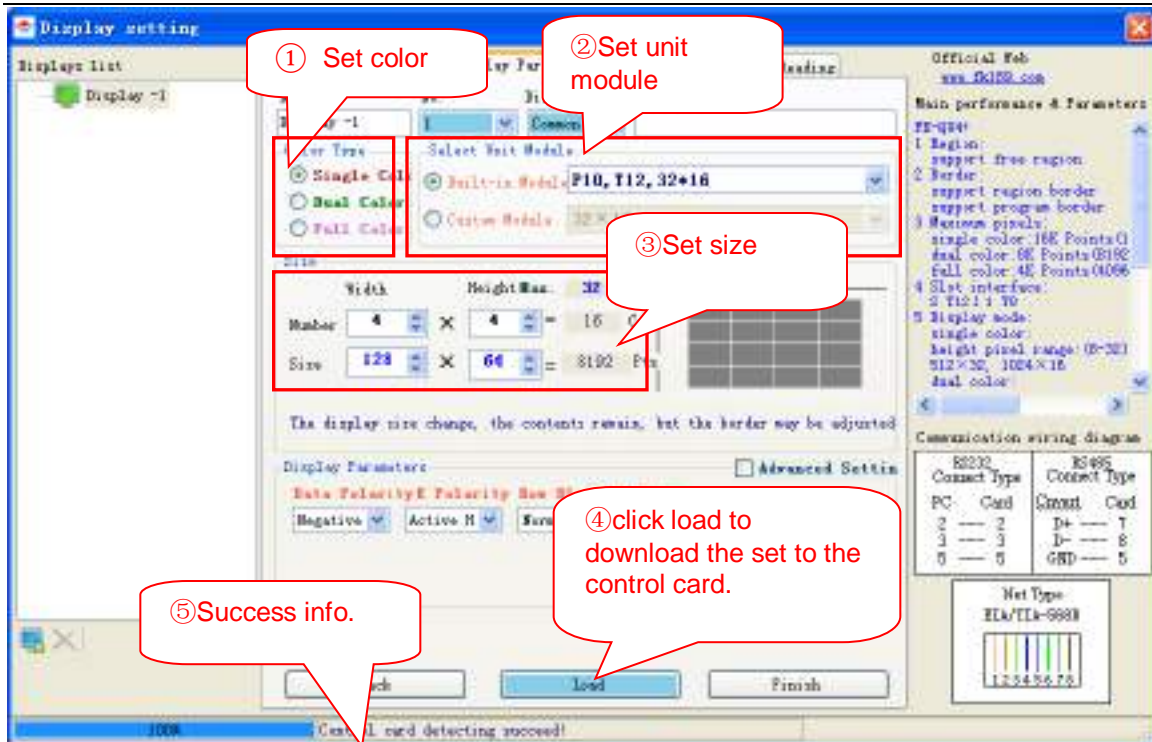
### 15.1 Serial communication Example: QU4+ control card

- 1) Select the control cards with serial communication interface, here take QU4+ as example to introduce how to set up one display set from beginning to end.
- 2) Connect the display control card and LED display screen. The connection about them are not described here, please ask the screen provider if support is needed.
- 3) Connect the control card with computer through serial communication which has FK Show Software installed.
- 4) Add display 1, and search the display control card in the main menu【Tool】→【Display set】, as shown in Pic.15-1. Refer to chapter [7 Connect control card](#) -->[7.1 Serial communication](#) for detail operation instruction.



Pic.15-1

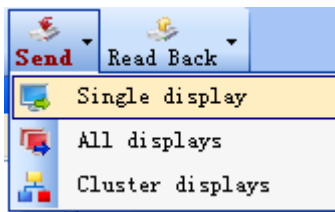
- 4) In the main menu, 【Tool】→【Display setting】window, set and add display setting to display 1, as shown as Pic.14-2. For detail, please refer to chapter [8 Display Set](#).



Pic.15-2

Attention: the items above are mandatory to be configured, if the unit module is custom type, then the user have to set the scanning type.

- 5) Design a program to be played, for detail operation, refer to Chapter [9 Add Program](#) and [10 Design program](#).
- 6) Choose “display-1”, click **【send】** → **【Single display】** in the tool bar, send the program to the targeted control card, as shown in Pic.15-3. Detail is introduced in paragraph [11.1 Send through Serial communication](#).



Pic.15-3

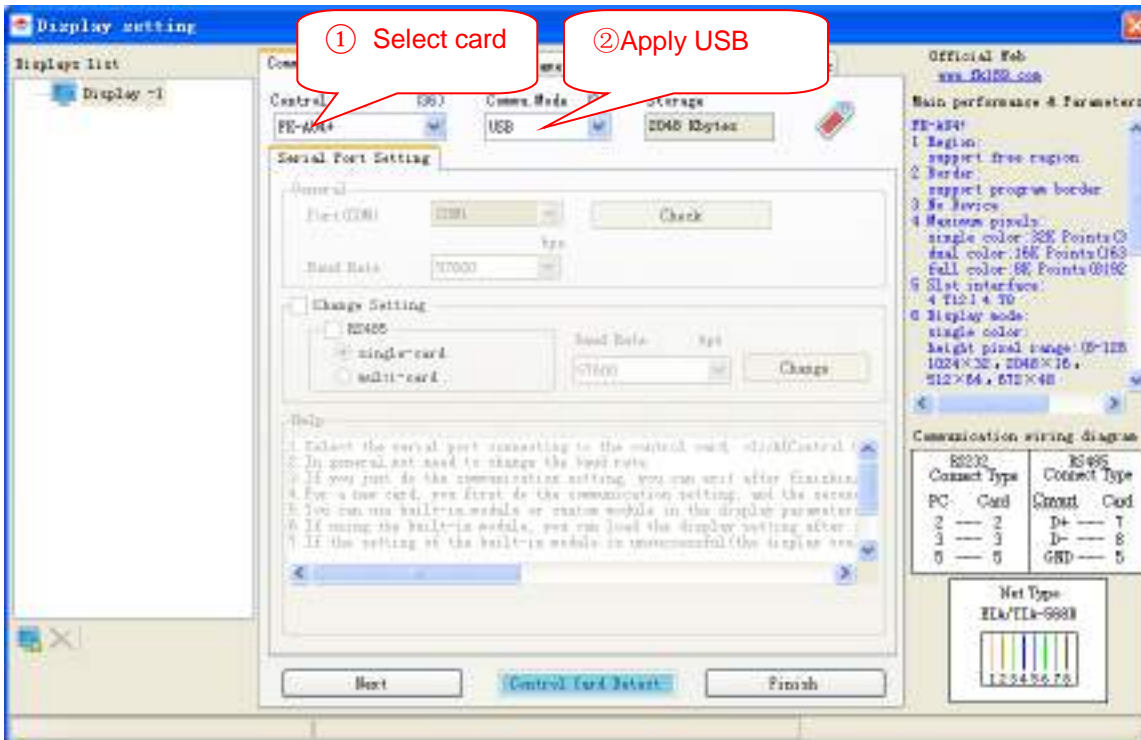
Remark: Example above just list the general steps, for more accurate set, please user to read the related contents above carefully.

### 15.2 USB operation example: AU4+

- 1) Choose Fei Kong designed U disk control card AU4+, for the other products supporting U disk, please refer to [Appendix 1: Technical specification of Feikong 4<sup>th</sup> generation control cards](#)

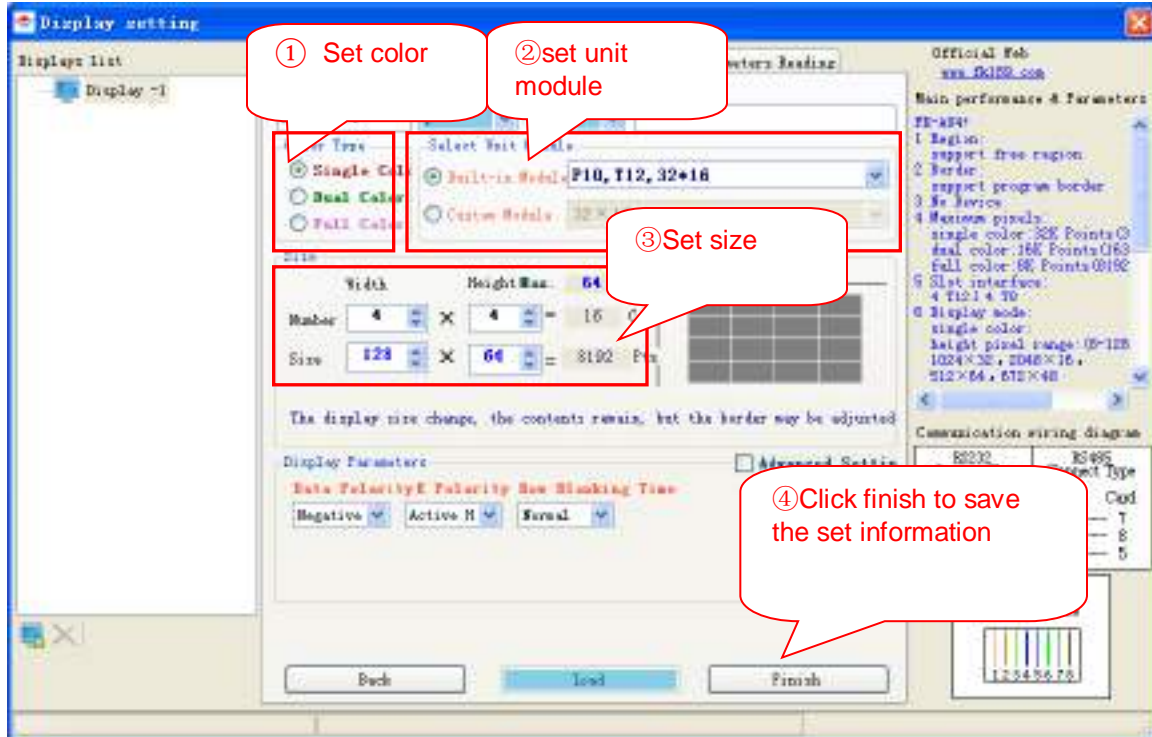


- 2) Connect the display control card and the display screen. The way of the connection is not within this manual , please contact the screen supplier once support is needed.
- 3) Add “Display-1” , And change the communication mode to USB in the main menu 【tool】 → 【Display Setting】 , as shown in Pic.15-4.




Pic.15-4

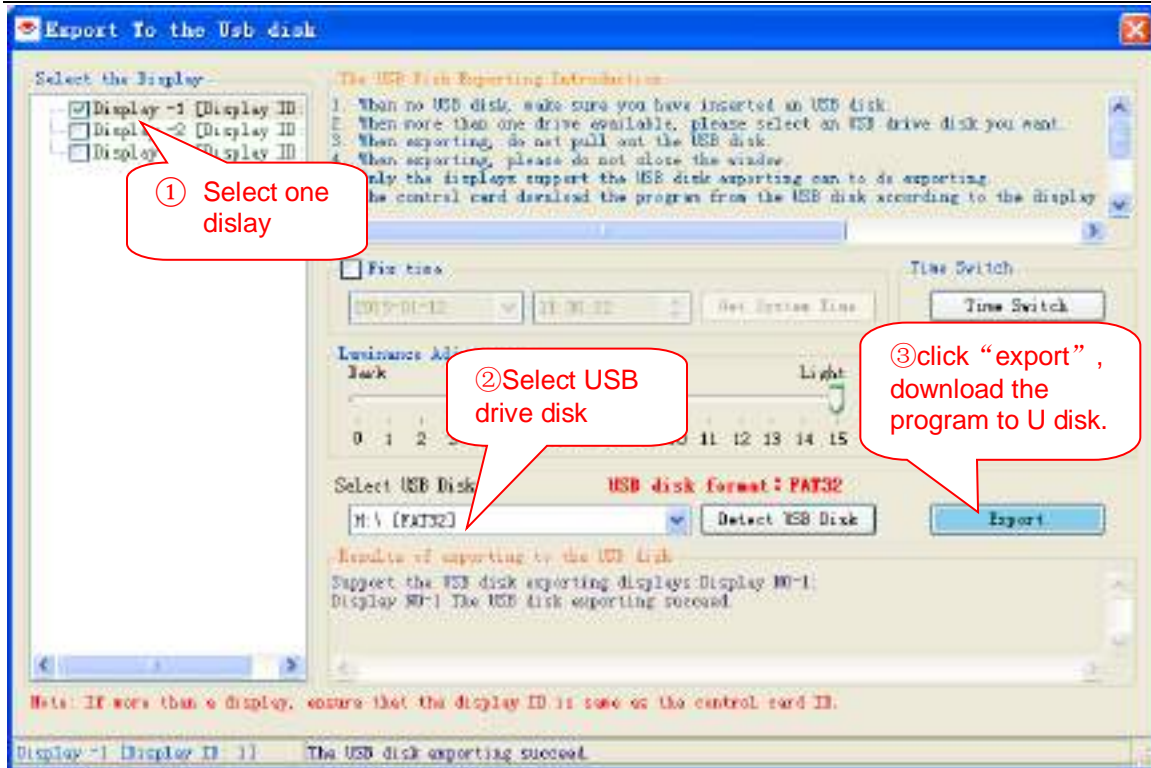
- 4) In the main menu 【Tool】 → 【Display setting】 window, to set the display parameter for “display-1”, as shown in Pic.15-5. Detail information are provided in chapter [8 display setting](#).



Pic.15-5

**Attention:**

1. The items above are mandatory to be configured, if the unit module is custom type, then the user have to set the scanning type.
- 2.USB communication mode does not require load the display setting, for the display set will be part of the program and updated to control card with program downloading.
- 5) Design one program following the introduction of [9 Adding program](#) 和 [10 Design program](#).
- 6) Insert the U disk in the computer.
- 7) Click the icon  in tool bar, download the program to the U disk, as shown in Pic.15-6.



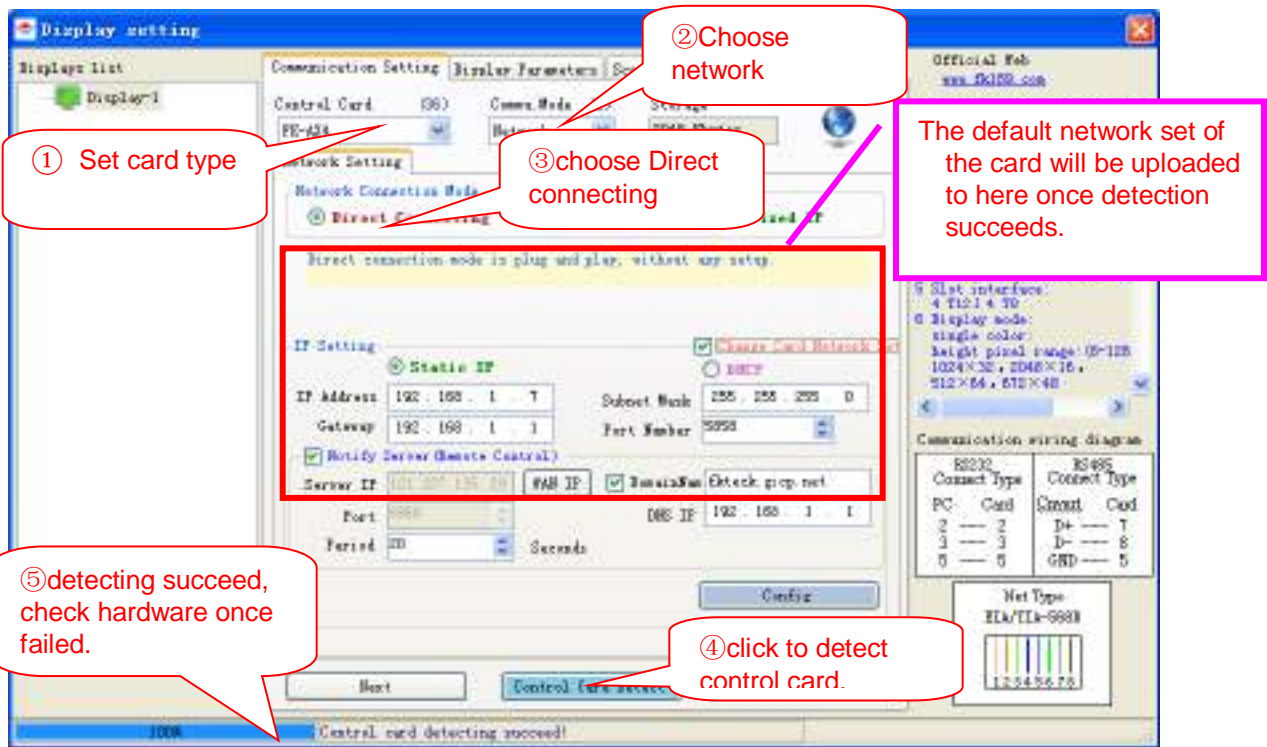
Pic.15-6

8) Plug out U disk, and insert the U disk into the control card, the control card will upload the program automatically when detecting the U disk connection.

**Remark:** Example above just list the general steps, for more accurate set, please user to read the related contents above carefully.

### 15.3 Network (Ethernet) operation example: AX4 control card

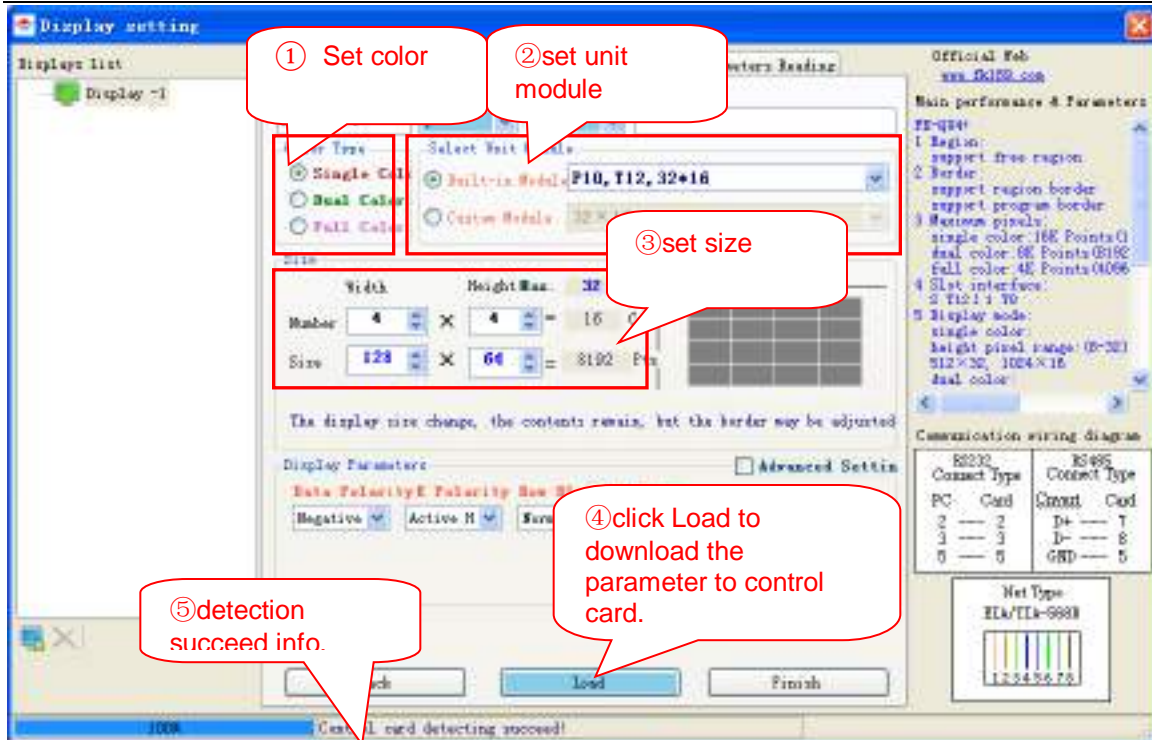
- 1) Choose Fei Kong designed control card with network(Ethernet) interface like AX4+, for the other products supporting Ethernet interface, please refer to [Appendix 1: Technical specification of Feikong 4<sup>th</sup> generation control cards](#)
- 2) Connect the display control card and the display screen. The way of the connection is not within this manual, please contact the screen supplier once support is needed.
- 3) Connect the control card and computer with Ethernet cables.
- 4) Add “Display-1” , And change the communication mode to network in the main menu **【tool】** → **【Display Setting】** , as shown in Pic.15-4. And then search for the display control card. Detail instruction is in [7 connect control card](#) and [7.3 Network communication](#).



Pic.15-7

Remark: Only the network connection of single display is indicated here as example, for the intranet and internet connection, the related instruction is described in [7 connecting control card](#) then [7.3 Network communication](#).

5) In the main menu, Set the parameter and upload the display setting in **【Tool】** → **【Display setting】**, as shown in Pic.15-8. Detail please refer to [8 Display setting](#).

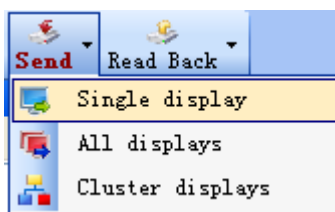


Pic.15-8

**Attention:**

The items above are mandatory to be configured, if the unit module is custom type, then the user have to set the scanning type.

- 6) Design one program following the introduction of [9 Adding program](#) 和 [10 Design program](#).
- 7) Choose “display-1”, click **【send】** → **【Single display】** in the tool bar, send the program to the targeted control card, as shown in Pic.15-9. Detail is introduced in paragraph [11.3 Send through network](#).



Pic.15-9

Remark: Example above just list the general steps, for more accurate set, please user to read the related contents above carefully.

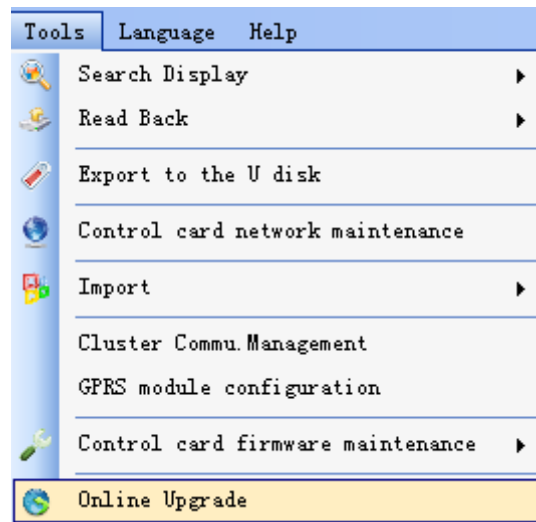


## 16. Online Upgrade

### 16.1 FK Show Software Upgrade

FeiKong Technology is keeping update FK Show software to add more functions and reduce bugs to serve our user more, and also we provide free online upgrade for our users. When the new software is released and the user's computer is connected to internet, one online upgrade remind will pop up, and then just follow up the indication to upgrade FK Show software installed in the user's computer to latest version. And the user can also upgrade the software manually once needed.

1) Click **【Tools】** → **【Online upgrade】** button, as shown in Pic.16-1.



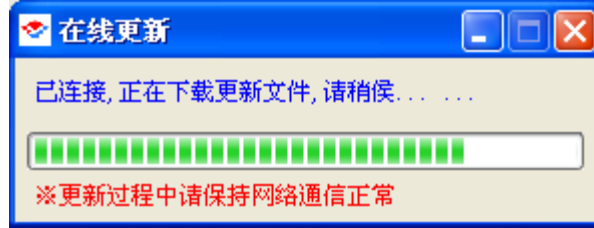
Pic.16-1

2) The a dialog box "Online Upgrade" will appear in screen as shown in Pic.16-2 if there is latest version available, then click **【确定】**.



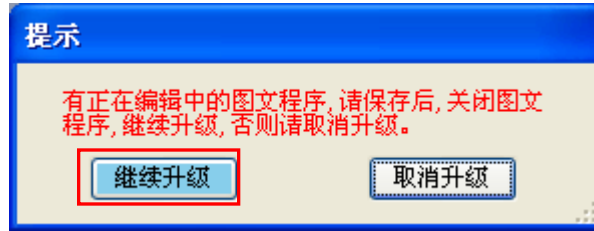
Pic.16-2

3) Start online upgrade, keep the internet connection, as shown in Pic.14-3.



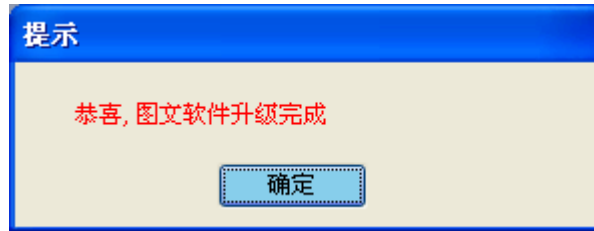
Pic.16-3

4) The system will remind to switch off operating FK Show software, click to confirm and continue to upgrade, as shown in Pic.16-4.



Pic.16-4

5) When the upgrade is finish, then one information box as shown in Pic.16-5 appears.



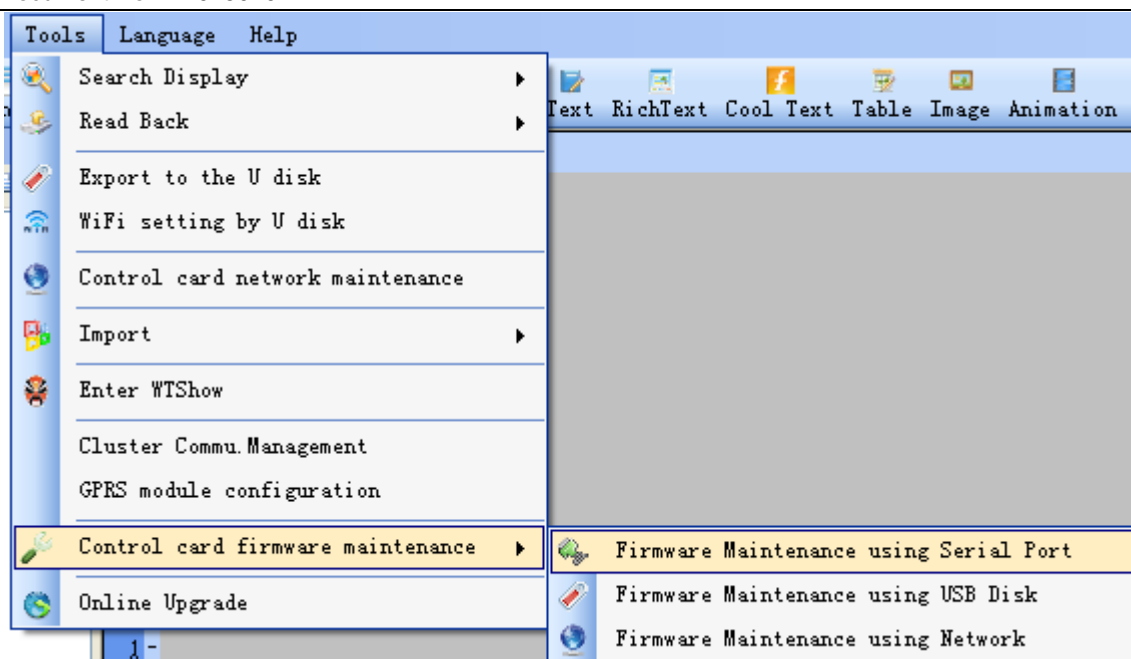
Pic.16-5

## 16.2 Control Card Firmware Upgrade

Different communication method has different upgrade procedure for Firmware.

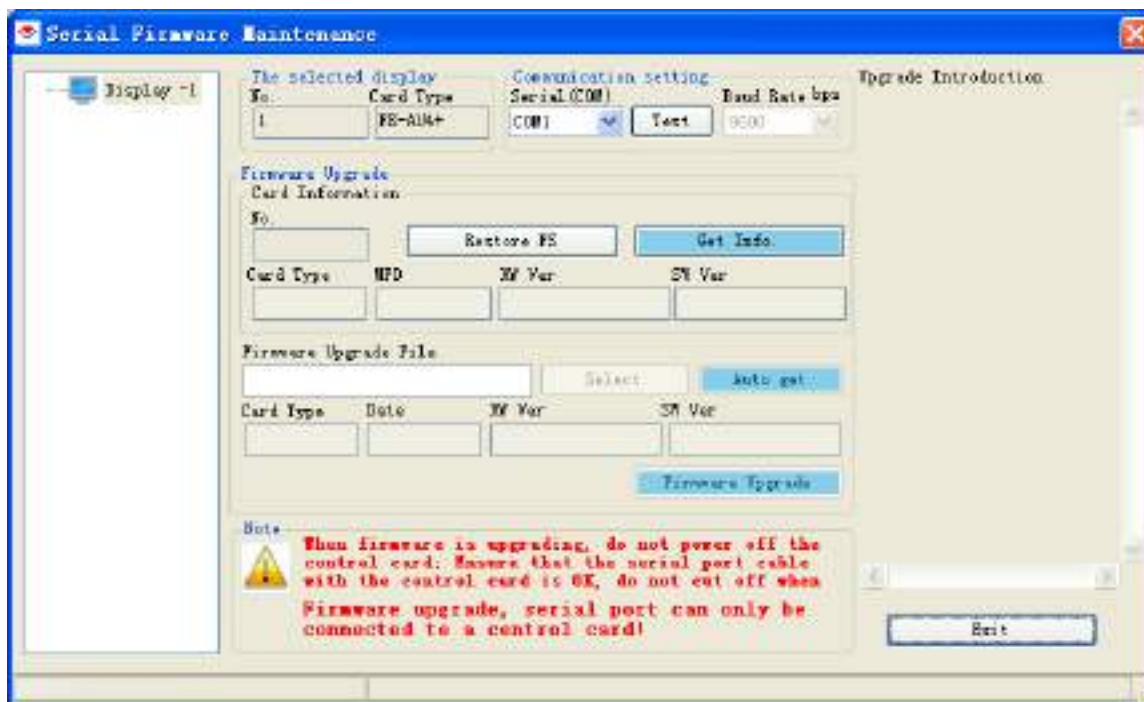
### 16.2.1 Firmware upgrade for serial port

1) Click main menu **【tool】** → **【control card firmware maintenance】** → **【Firmware maintenance using serial port】**, As shown in 16-6.



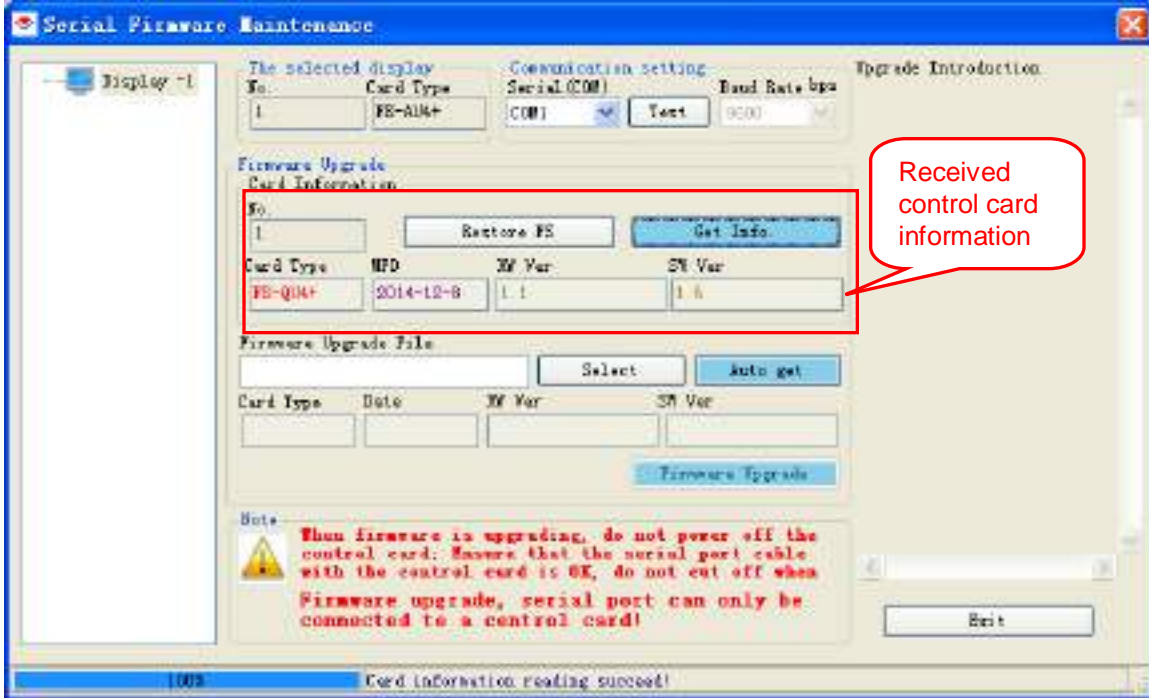
Pic.16-6

2) Key in “168” in the popping up password dialog box, and click to confirm, then a new window appears as shown in Pic.16-7.



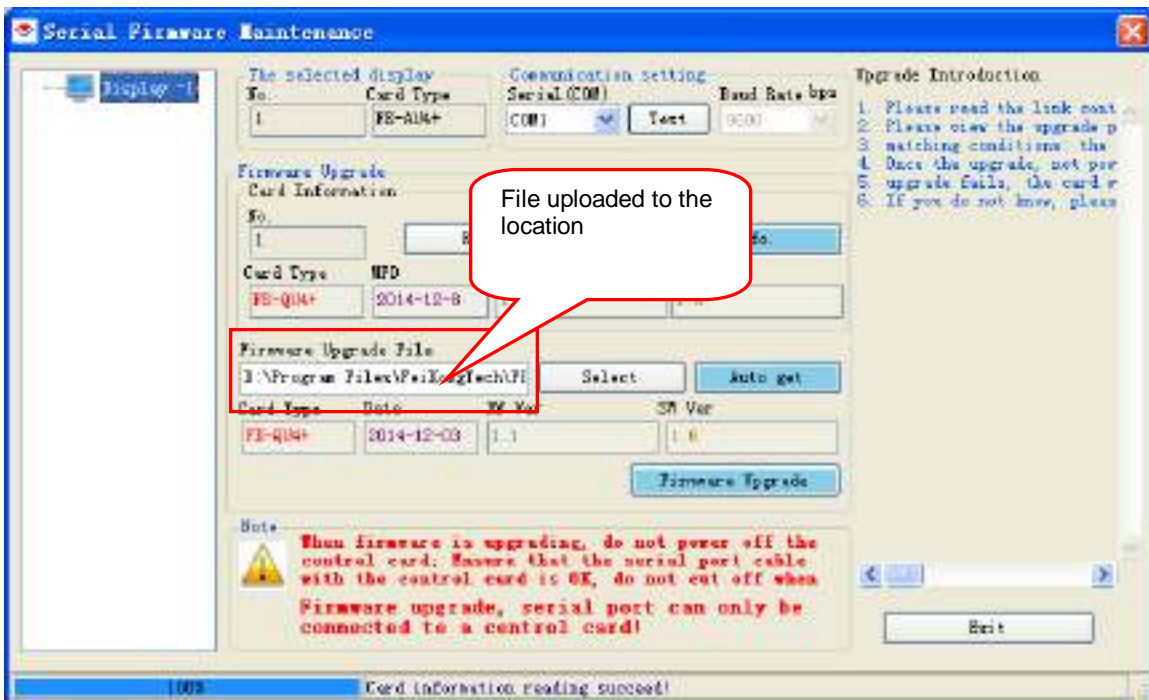
Pic.16-7

3) Guarantee the connection between the computer and control card, click the button “get Info.” To upload the information of the control card to the computer, as shown in Pic.16-8.



Pic.16-8

4) Click the button **【Auto Get】**, the system will start download the firmware from online server automatically, as shown in Pic.16-9.



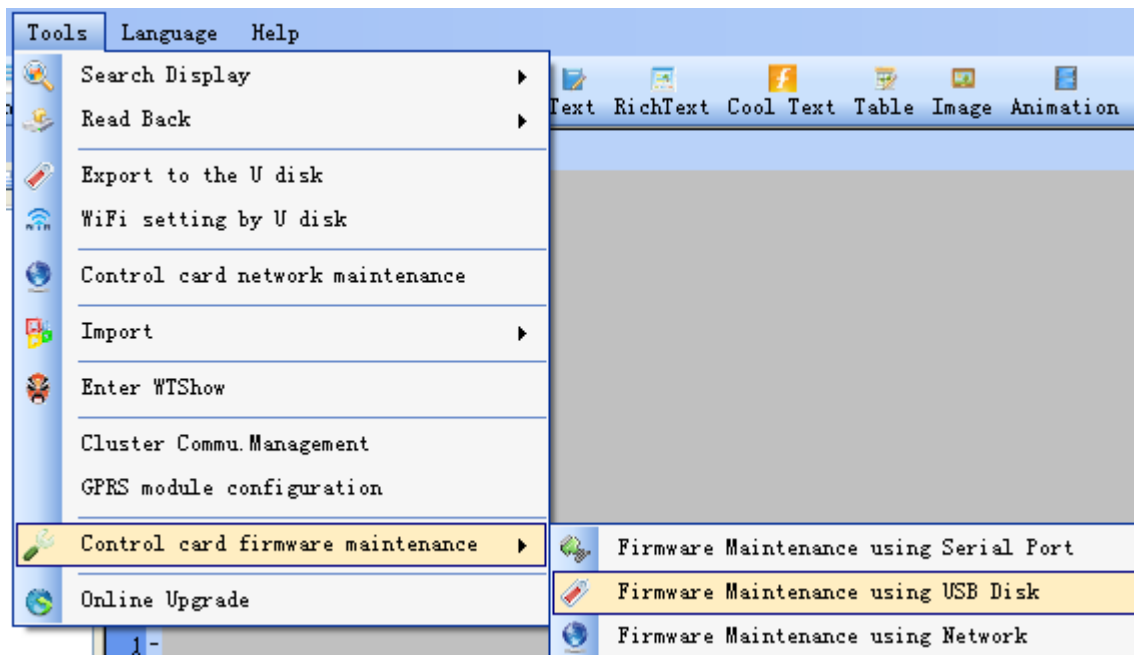
Pic.16-9

5) Click the button **【Firmware Upgrade】**, the system will upgrade the firmware automatically, and one information will be shown in the status bar when succeed.



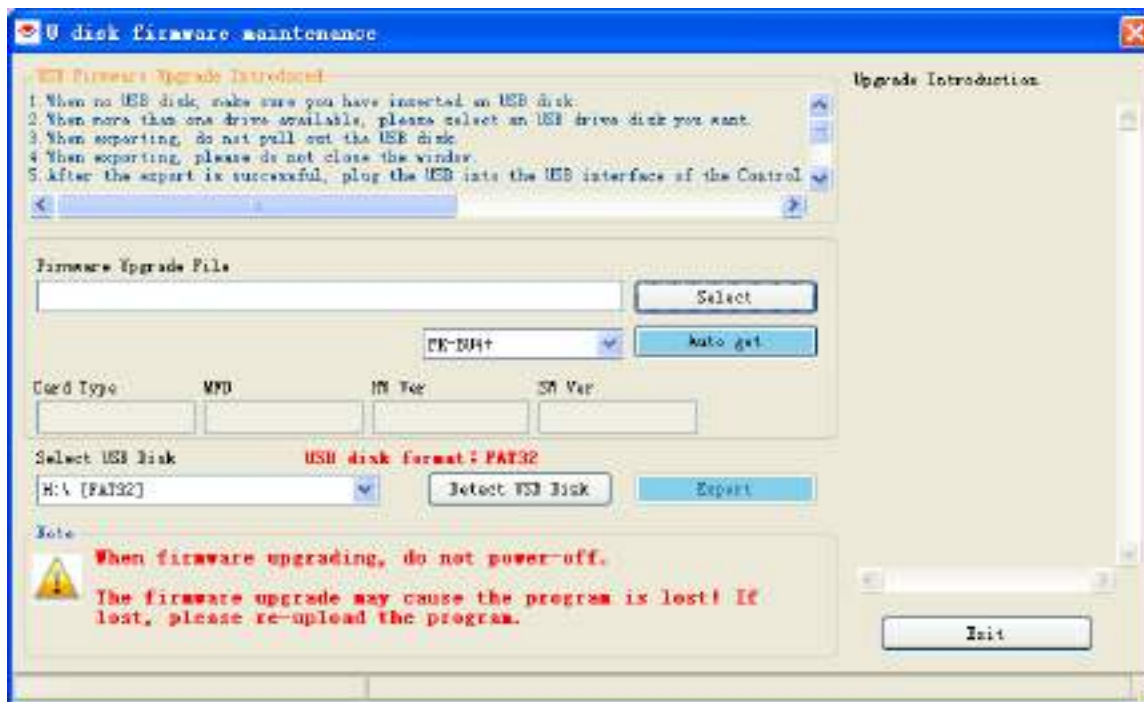
## 16.2.2 U disk firmware upgrade

1) Click main menu, **【tool】** → **【Control card firmware maintenance】** → **【Firmware Maintenance using USB Disk】**, as shown in Pic.16-10.



Pic.16-10

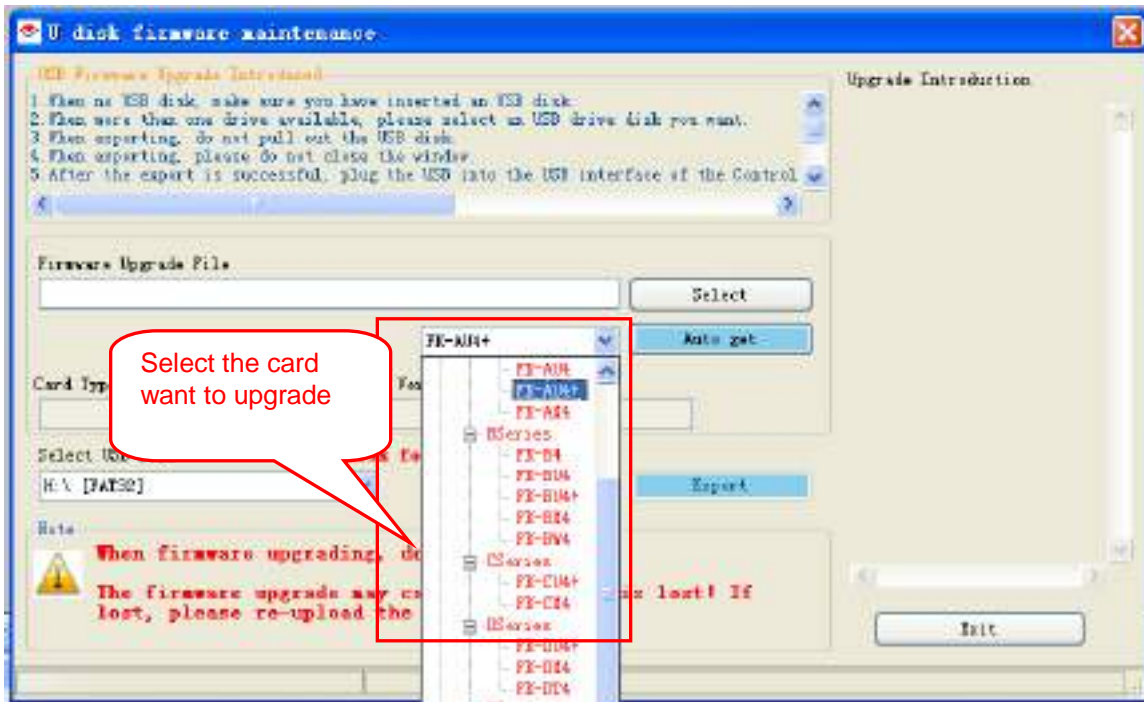
2) Key in “168” in the popping up password dialog box, click to confirm, and the a window **【U disk Firmware maintenance】** appear, as shown in Pic.16-11.





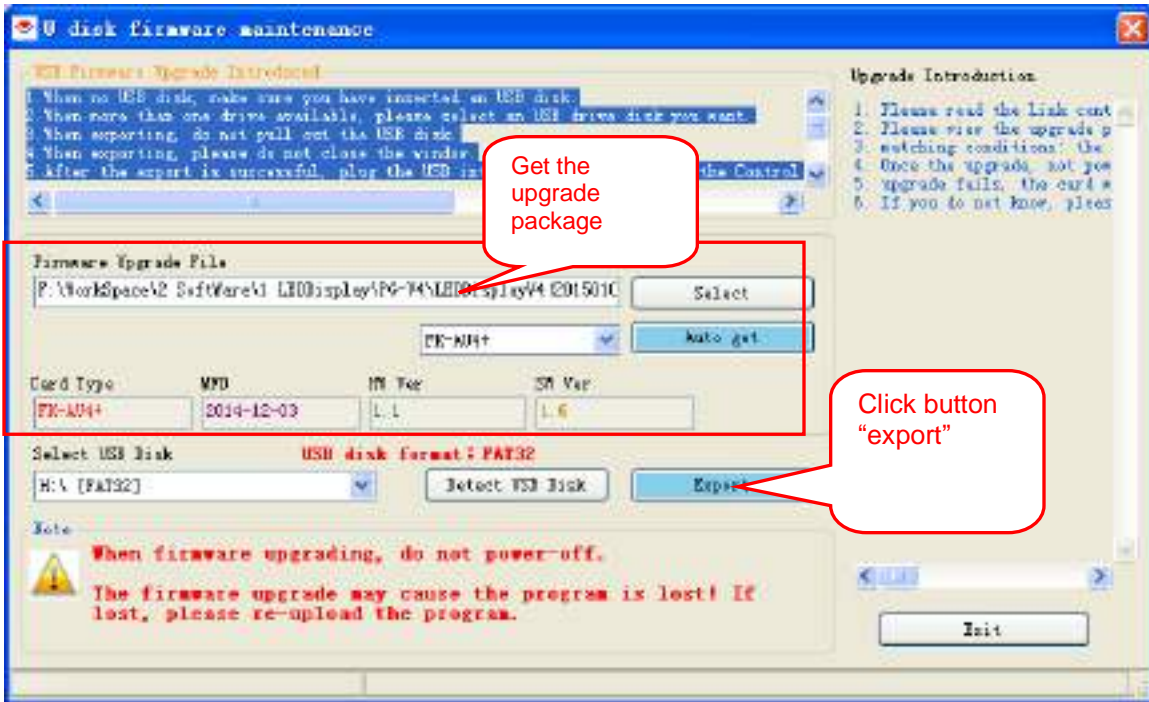
Pic.16-11

3) Select the control cards type want to upgraded, click the button **【Auto get】** , the system will download the firmware package from the server automatically, as shown in Pic.16-12.



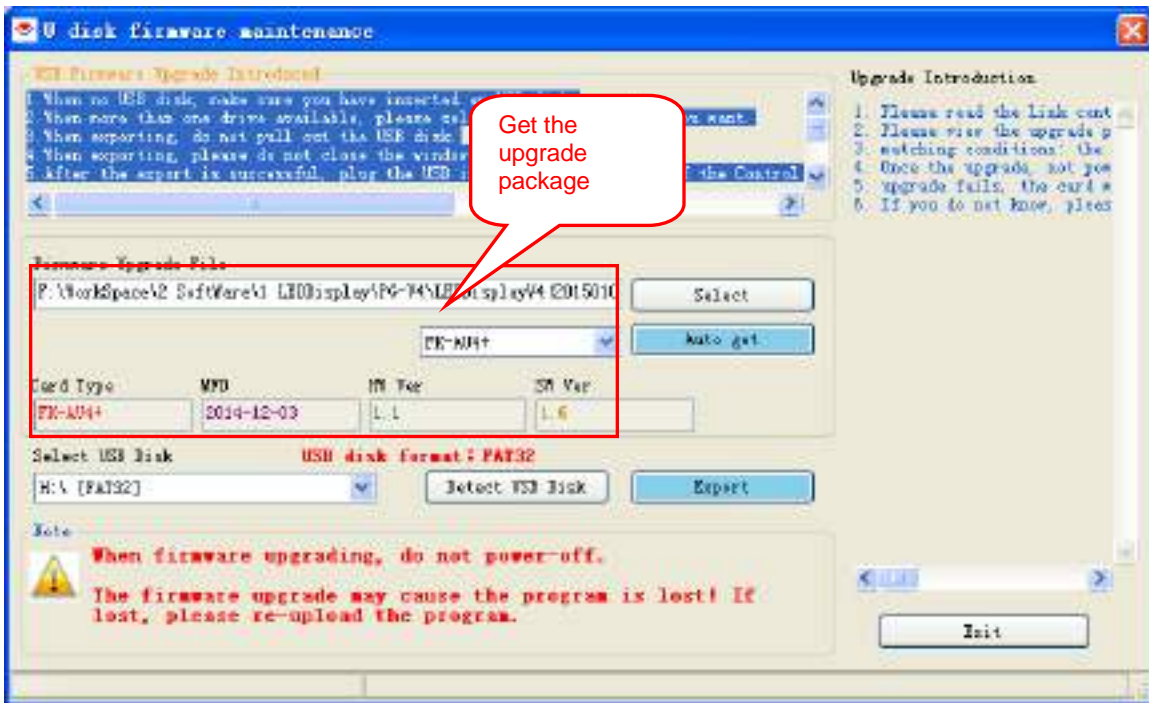
Pic.16-12

4) When the firmware is downloaded, select USB drive, click the button **【Export】** , as shown in Pic.16-13.



Pic.16-13

5) When USB firmware is loaded ready, as shown in Pic.16-14. Insert the USB disk to the control card, the control card will upgrade the firmware automatically, when the upgrade is complete, then user can use the latest version control cards.



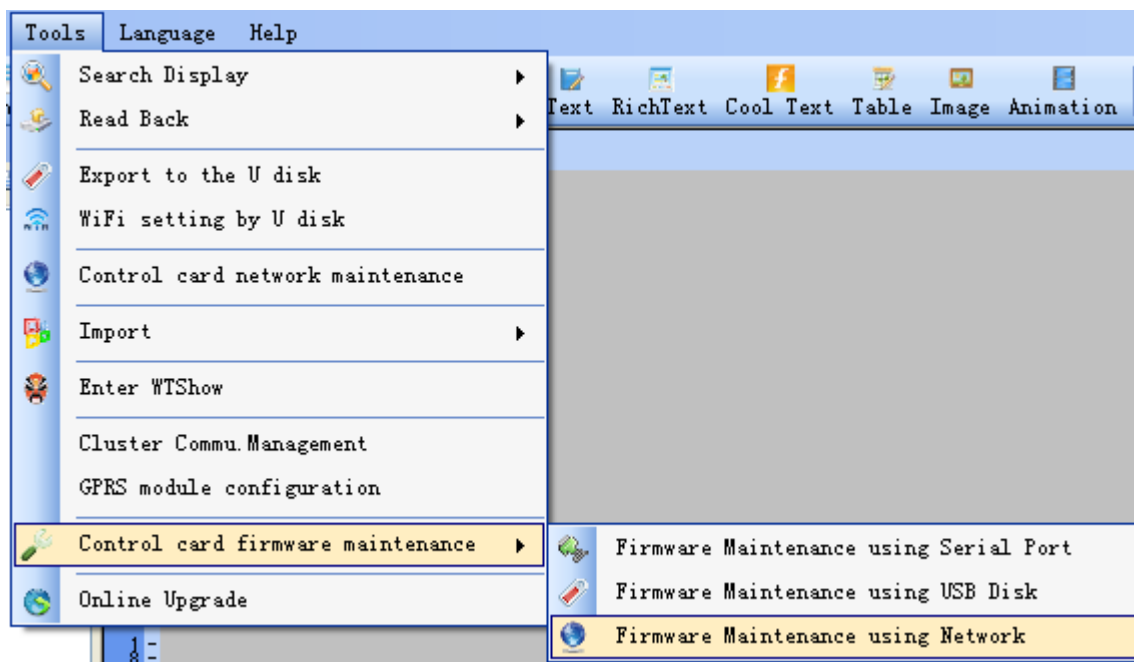
Pic.16-14



### 16.2.3 Network Firmware upgrade

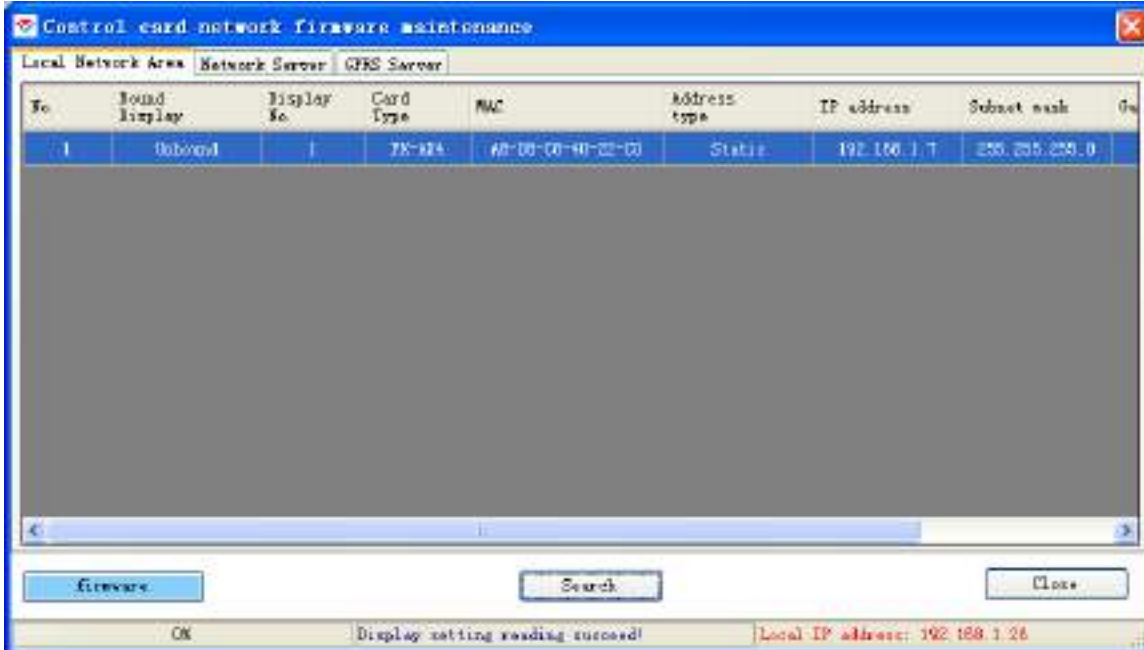
The upgrade of network firmware is as following:

- 1) Click main menu, **【Tool】** → **【Control card firmware maintenance】** → **【Firmware Maintenance using network】**, as shown in Pic.16-15.



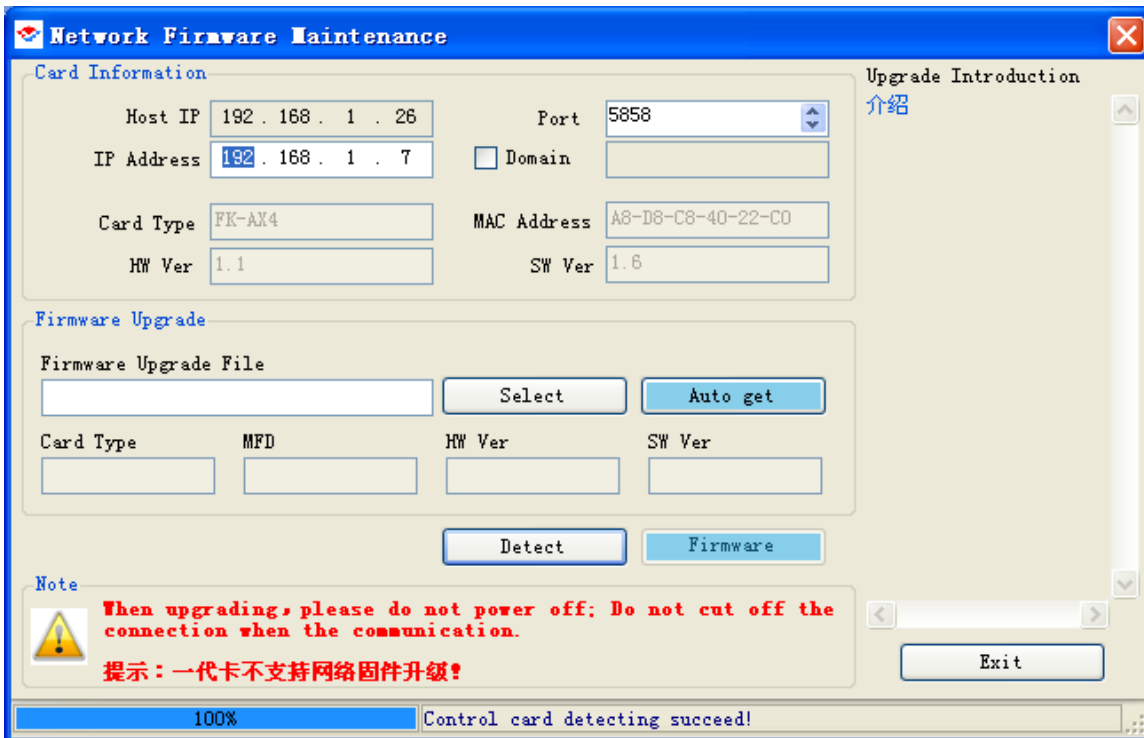
Pic.16-15

- 2) In the popping up window **【Control card network firmware maintenance】**, system will detect the control card in the network automatically, and have them all in the display list, as shown in Pic.16-16.



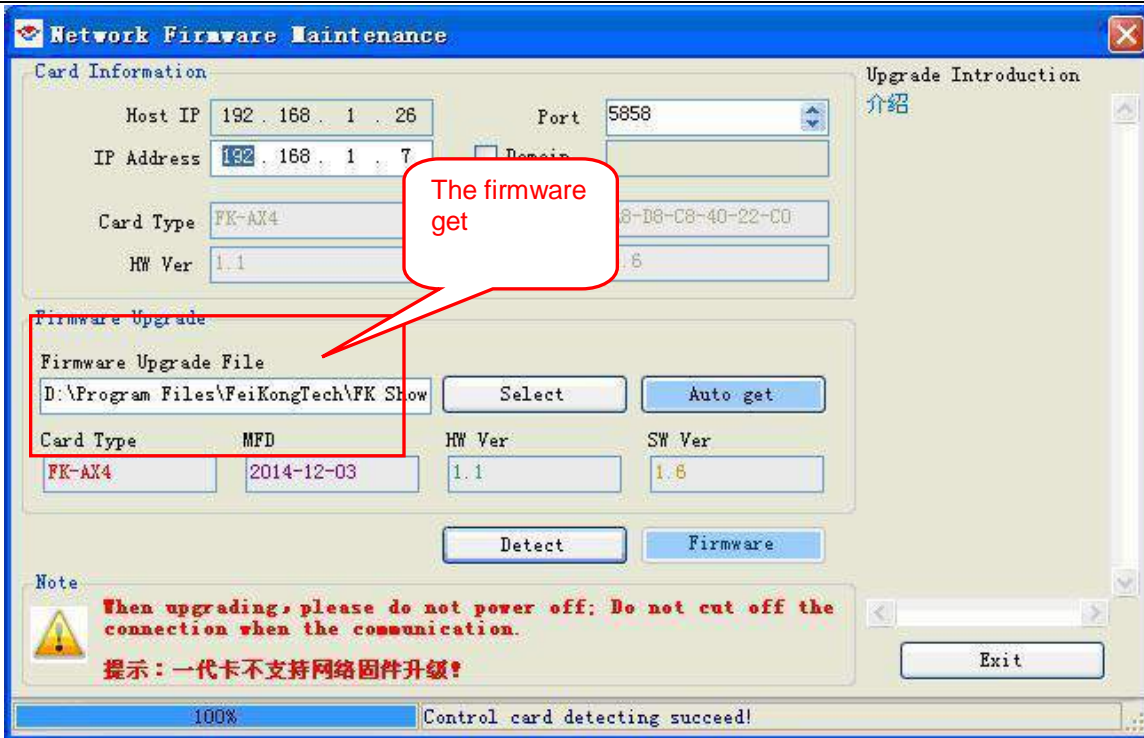
Pic.16-16

3) Select the control card need firmware upgrade, click the button 【firmware】 , 【Network Firmware Maintenance】 window appears, as shown in Pic.16-17.



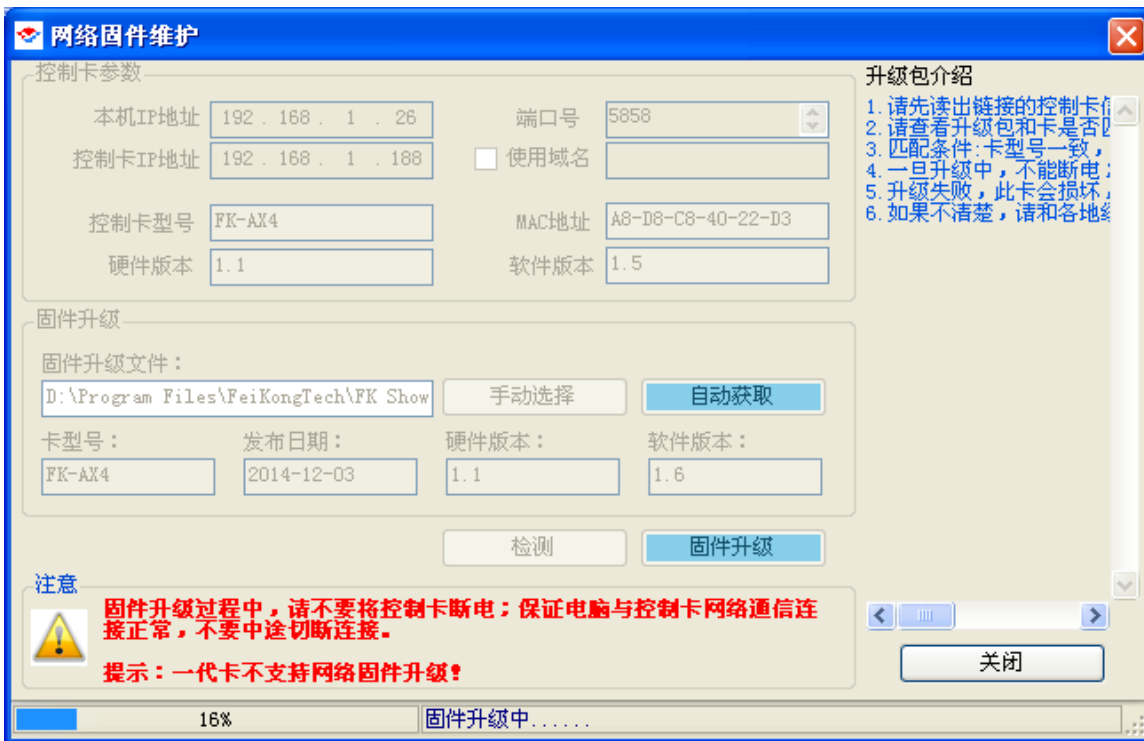
Pic.16-17

4) Click the button “auto get”, then the system will download the upgrade package automatically from the server, as shown in Pic.16-18.



Pic.16-18

5) Click the button 【Firmware upgrade】, start the upgrade . As shown in Pic.16-19.



Pic.16-9

6) The firmware upgrade is finish, then user can start to use the latest version control card.



## 17. Infrared remote control application

### 17.1 *Infrared remote controller and receiver types*

#### Infrared remote controller



Pic.17-1

Taobao Link: <http://item.taobao.com/item.htm?spm=a230r.1.10.28.Xswllg&id=10019470885>

#### Infrared receiver:



Pic.17-2

#### Taobao Link:

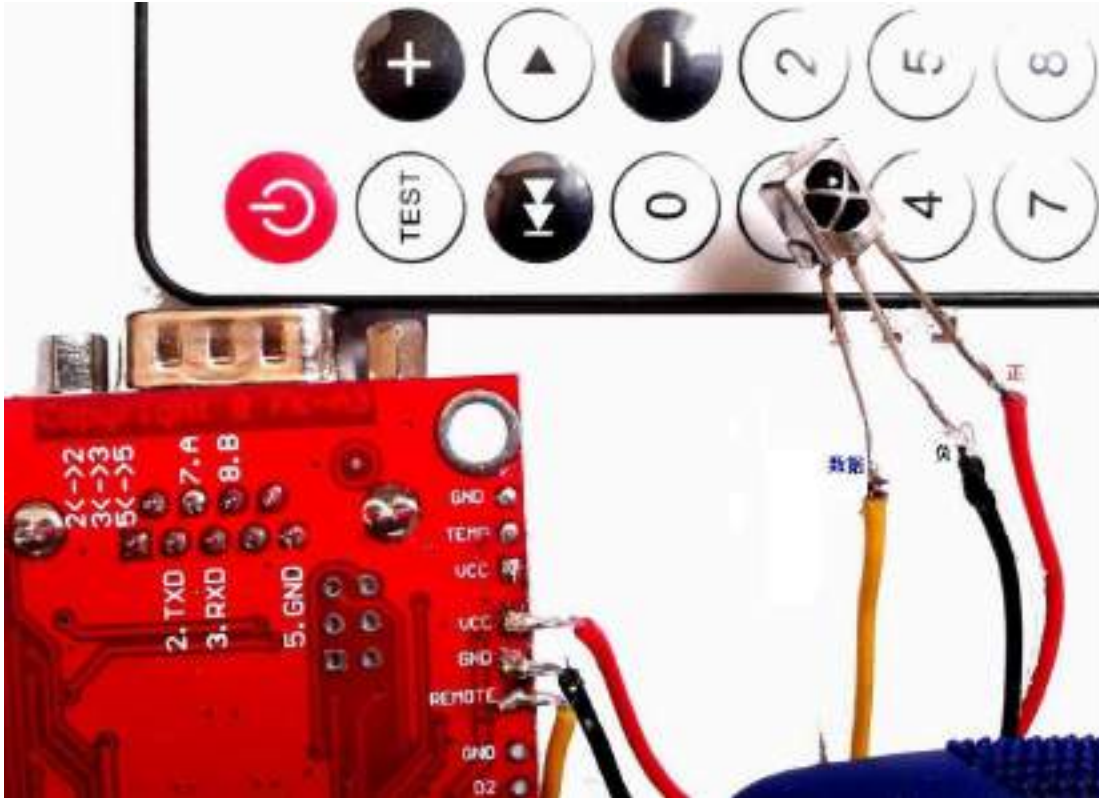
<http://item.taobao.com/item.htm?spm=2013.1.1000774.53.yElo24&id=12432333651>

### 17.2 *The control cards supporting infrared*

All 3<sup>rd</sup> and 4<sup>th</sup> generation control cards except SU3 have infrared interface.

### 17.3 *Hardware connection of infrared receiver*

The hardware connection of infrared receiver is shown in Pic.17-3.



Pic.17-3

### 1. Welding connection for 3<sup>rd</sup> generation card

Control card interface ---- Infrared receiver

VCC ----- Positive  
 GND ----- GND  
 REMOTE ----- Data

### 2. B2, C2

Control card interface --- Infrared receiver

VCC ----- Positive  
 GND ----- GND  
 D6 ----- Data

### 3. DU2+, DN2+

Control card interface --- Infrared receiver

VCC ----- Positive  
 GND ----- GND  
 D3 ----- Data

## 17.4 Application instruction

### 1) Function description



User can realize the function below through the remote controller:

Switch program, luminance(brightness) adjustment, display test, switch on and switch off, date and time set etc.

The buttons' function on the remote controller:



Switch off/ON

**MENU** Control mode switch: Regular mode → Two digit program number selection mode  
→ Set date → Set time → Regular mode

**TEST** Test mode: all light on(or all light off) → light every 2 rows gap → light every row  
gap → Normal display



Increase luminance (brightness)



Decrease luminance (brightness)



Cancel the luminance set, back to regular mode



Play the previous program



Play the next program

**C**

Cancel the program fixed.

**0 – 9**

designate the program, time set




Confirm the set.

## 2) Program switch

### a) Regular mode

When the control card is under the default regular mode, push the button 1 to 9 to switch the program respectively.

### b) Two digit program number selection mode




Push the MENU button, enter the double number program mode with display “—” in the right top corner of the display screen. Then user can play the program numbered from 00 to 99. Key the first digit and then the 2<sup>nd</sup> to choose the program to display. When the program played, it will go back to regular mode automatically. For example, if the user want to display and check the program 25, click 2 with display “2-”, and then click 5, to have the display “25”, and then the program 25 will be displayed. Push the button  back to regular mode.

**Remind: when the program is selected, then the program will be repeat playing, if the user want to return to program playing one by one, please click the button C.**

## 3) Luminance adjustment

Luminance can be adjusted under the regular mode, there are totally 16 grades provided, the operation will be ignored once the luminance is already reach the minimum or the maximum limit.

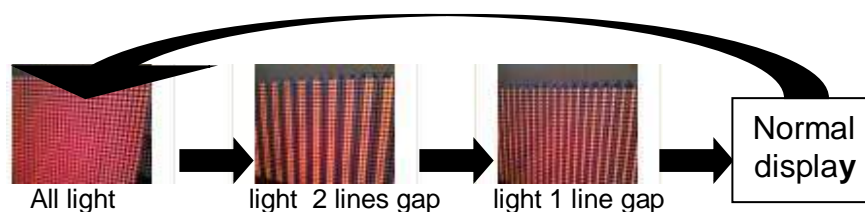


-  Increase luminance
-  Decrease luminance
-  Cancel the luminance adjustment by the infrared controller , back to original luminance.

#### 4) Display test

Display test can be performed under regular mode.


Push the test key one after one, then LED display will be shown as Pic.15-4:



Pic.17-4

#### 5) Switch on/off

Available in regular mode

-  Switch off or switch on the display.

#### 6) Set date and time

To support this function, the display needs minimum 80 pixels.


##### A. Set date

Click the MENU key twice to end the date set mode, the display will show the current date set (year-month-date) , the flashing cursor position is the number can be edit.

Click the number0-9 key, to key in the date number,

Click the key  or , to move the cursor.

Click the key , to confirm the date and enter the time set.

Click the key , cancel the time set and back to regular mode.


##### B. Set time

Click the key MENU three times to enter the mode Time set, or automatically into time set mode after date set. The display will display the current time set “Hour: Minute: Second”, the flashing Cursor position is the number can be edited now.

Click the number key 0 to 9 to set the time.

Click the key  or , to move the cursor.

Click the key , to confirm the time and back to the regular mode.

Click the key , cancel the time set and back to regular mode.



## 18. Recover the factory default set

Once the user send the latest new function to the control card, whose old version firmware does not support the function, then it will cause the malfunction of the display, then user can use the function “recover the factory default set” to recover the control card, then upgrade the firmware to support the new function needed.

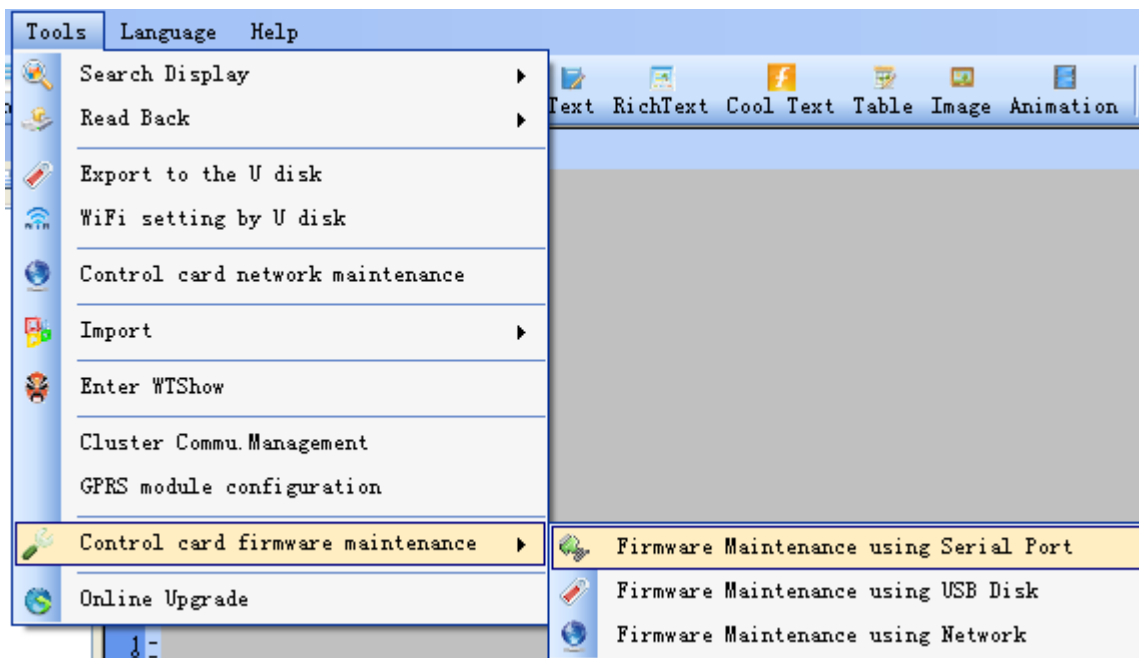
Serial communication control cards can recover the factory set through software operation.

U disk and network control card can recover the factory set through hardware.

### 18.1 Recover the factory default set through Software

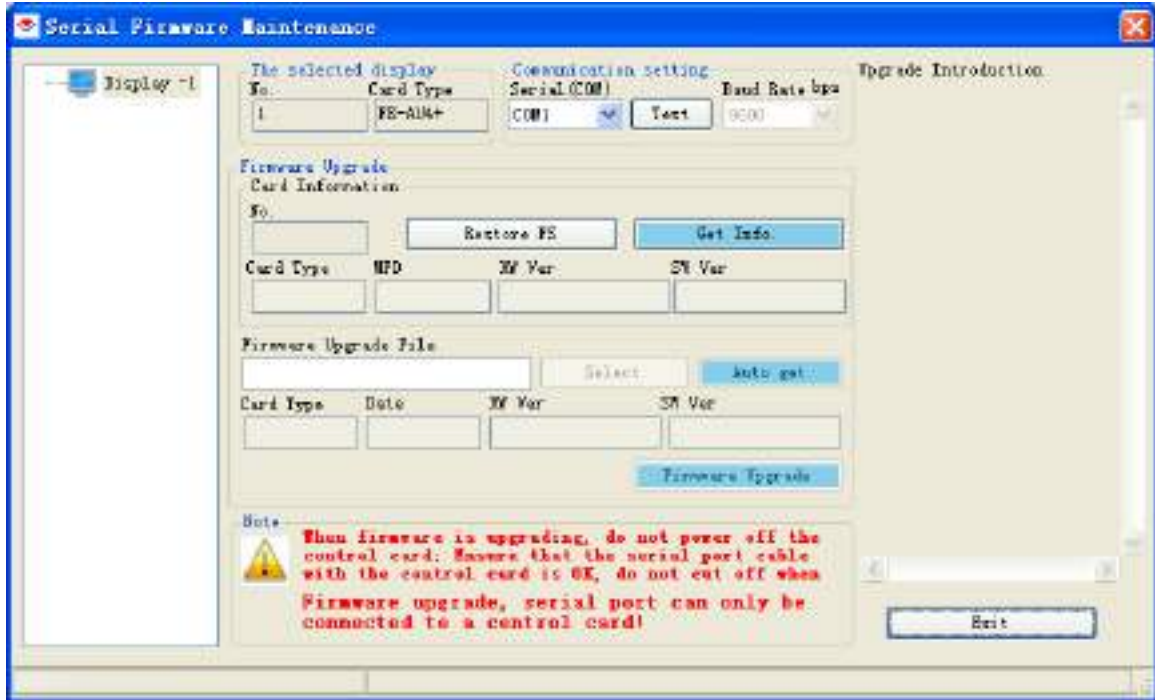
The serial communication control cards can recover the factory set through the procedure below:

1) click the main menu **【tool】** → **【control card firmware maintenance】** → **【Firmware maintenance using serial port】**, as shown in Pic.18-1.



Pic.18-1

2) Key in 168 in the popping up password dialog box, and click to confirm, then the new window “Serial Firmware Maintenance” will appear, as shown in the Pic.18-2.



Pic.18-2

- 3) Click the button "Restore FS" to recover the factory set.

## 18.2 Recover factory set through hardware

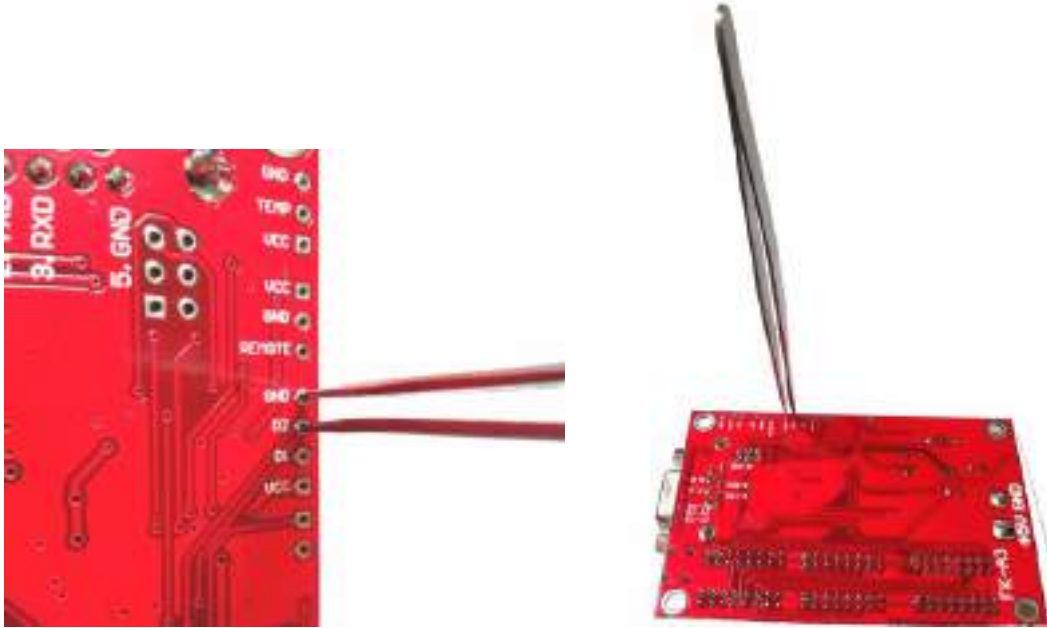
USB disk and network control card need this procedure to recover the factory set.

- 1) Needed material

Short connecting conducting tool like tweezers.

- 2) Hardware short connection

Use the tool to connect GND and D2, as shown in Pic.18-3.



Pic.18-3

- 3) Connect power to the control card for about 10 seconds.
- 4) Click the button test on the control card to check if the function is working.

## 19. FAQ

### 19.1 No light of whole display (Dark display)

- 1) Check if the power supply is working.
- 2) Check if the voltage of the power supply to control card is +5V.
- 3) Check the green light of the control card is blinking or not.
- 4) Click the test button in three times, to check if the display light as the picture as below one after one, shown in Pic.19-1. Once they are not in line with these , please check the parallel wiring connection of the display.



Pic.19-1

- 1) Check the parallel wiring of the display unit module from 1 to N is corrected inserted to the corresponding ports of the control card.
- 2) Check if the control card has time division switch on/off function in working.



### 19.2 Part of unit module not light or controlled

#### 1) Unit modules in serial dark

- a. Check the wiring connection between the working unit module and not working ones.
- b. Check if the first unit module not working is broken or not.
- c. Check the output port of the unit module before the not working one.

#### 2) Unit module in column dark. Check the power supply for this column is Ok or not( the normal working power voltage is +5V).

### 19.3 Font edge has color or part missing when double color or full color

XP Operation system: Right click the desktop blank area of XP,

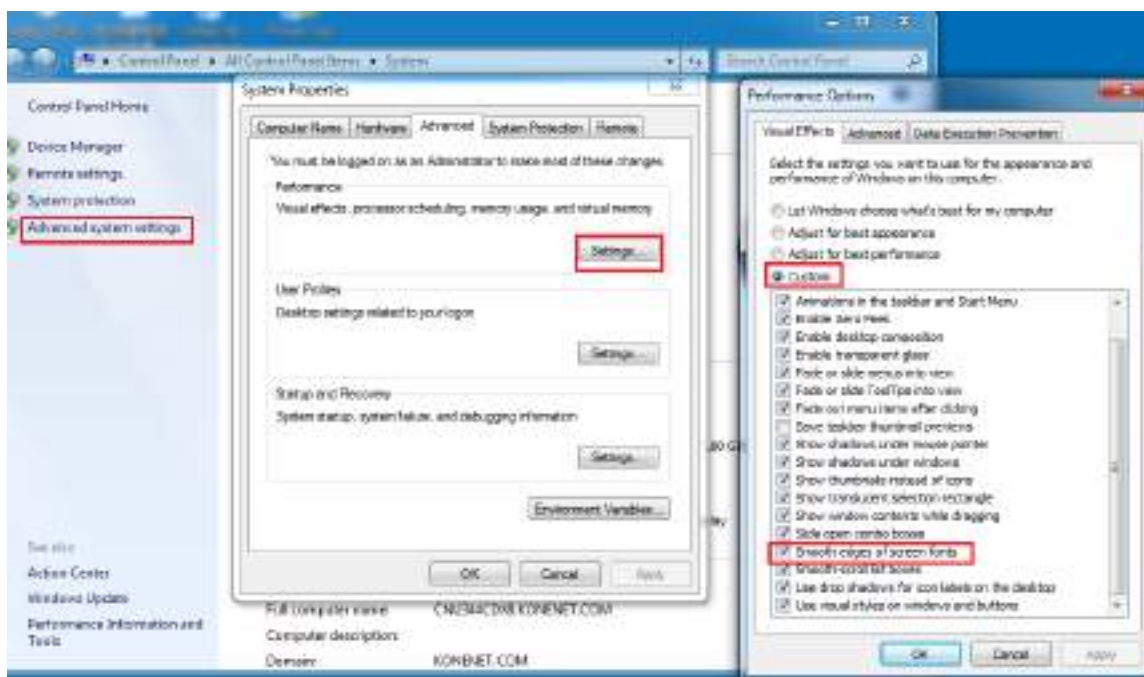
→properties→Surface→Effect→cancel the application “Apply the method below to smooth the font’s edges” and then reedit the information send to control card.



Pic.19-2



WIN7: Right click Computer on desktop→Properties→Advanced system settings→Advanced→Settings→Custom→Cancel “Smooth edges of screen fonts” selection, and reedit the information and send to control card.



Pic.19-3

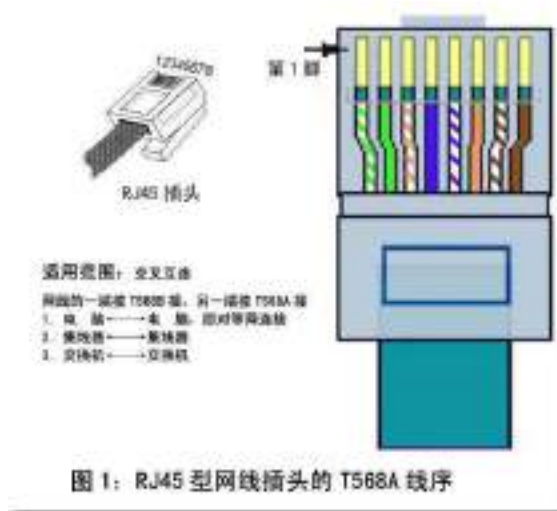
#### 19.4 Cannot connect the computer and the control card

- 1) Check the communication cable from the computer and control card.
- 2) Check the Com port set is corresponding to the connection.
- 3) Check the jumper on the control card is as the communication mode required.
- 4) Check if the communication method is same as the software set, for example if it is 232/485, Network (Ethernet), or GPRS communication method.
- 5) Connect the control card in short cable to the computer, or change the brad rate lower for communication.
- 6) Serial port pins definition:

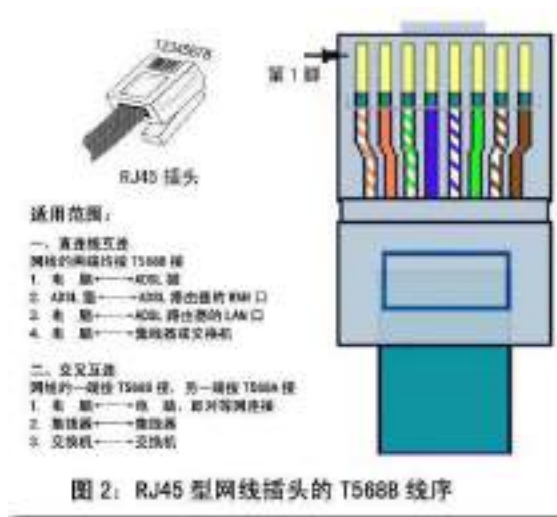
通讯接线示意图			
RS232 连接方法		RS485 连接方法	
计算机	控制器	转换器	控制器
2	---	2	D+ --- 7
3	---	3	D- --- 8
5	---	5	GND --- 5

Pic.19-4

- 7) Network(Ethernet) port pins definition:



Pic.19-4



Pic.19-5

19.5 Random broken of the communication

- 1) Check the control card and unit module are connected to the same power terminals.
- 2) Check the power supply for the control card is overloaded with too many display units.
- 3) Check if the control card power is +5V.
- 4) Check if the communication cable has connecting weakness.
- 5) Check if the communication cable is too long, longer cable need lower baud rate, the Ethernet connection need router or switcher to repeat.
- 6) Serial port card, to check if the drive program is installed well.
- 7) Network card need check IP address conflict.



- 8) Check if any disturbance closes to the communication cable.

#### 19.6 *Display division blinking and not stable*

Check all the division in the program, if there is overlapping, then the overlapping area will have blinking effect.

#### 19.7 *Fade out too slow and interfere the next display contents.*

Check the scanning dot frequency and the scan frequency, and change the value smaller, then the signal can be transferred to longer distance.

#### 19.8 *Display dark for text or picture instead*

Change the display set **【Data Polarity】** .

#### 19.9 *Brightness (Luminance) is abnormal*

Change the display set **【OE Polarity】** .

#### 19.10 *Each row module has a dark shadow line*

- 1) Adjust the luminance set, then watch the display luminance change if it is normal or not, then change **【OE Polarity】** if it is not normal.
  - 2) If the abnormal situation still exist when OE polarity is correct, then change the set **【Latch Port】** .

#### 19.11 *Whole display is lighting, text is brighter*

- 1) 1) Adjust the luminance set, then watch the display luminance change if it is normal or not, then change **【OE Polarity】** if it is not normal.
  - 2) If the abnormal situation still exist when OE polarity is correct, then change the set **【Latch Port】** .

#### 19.12 *Display in mess*

- 1) Check if the power supply is working proper and not overloaded.
- 2) Check if GND of the control card is connected with GND of other power supply. (Don't connect the GND of 5V to the N of AC Grid power supply) .
- 3) Check the wiring connection between the control cards, switching card and the display is correct.



### 19.13 Attention

- 1) During the operation, please take care of anti-static measures, as well as the neutral line and GND connection of the display and computer, please do not plug out and insert the control card when power is on, what will damage the serial ports of the card or the computer. If the ports are easily damaged, then user need check the communication circuit.
- 2) Please do not fix or change the control cards hardware by yourself. Under some severe application condition, please take water-proof, dust-proof and anti-rust measures as well. Otherwise the control card cannot be fixed anymore.

### 19.14 Frequent problem of USB disk

#### 1) Identification fault appears when insert control card

There are several situations below alone or together causing the fault.

Situation A:

Cause: Incompatible USB disk.

Solution: Please try the USB disk produced by other manufacturer. And then use this USB disk to upgrade the firmware, then possibly to be compatible to the USB disk not before. If the user's USB disk is still compatible, please inform us, we will update the compatibility for your USB disk.

Situation B:

Cause: Power supply problem.

- a、 Power supply voltage is lower than 5V, the standard USB power voltage;
- b、 Not enough power. The power supply for control card has connected too many LED modules as well.
- c、 Wiring problem, causing the unstable voltage. Suggest using independent wires for control card power supply. The display contents change will impact the power voltage to the control card and leads to unstable once the control cards and LED module are connected to same power terminal.

Solution: check the possible cause above, correct one by one.

Situation C:

Identification fault when apply extending length USB cable, but not without the cable.

Cause: USB extending cable's conductive performance or EMB performance is poor.

Solution: Change to shielding and good quality USB extending cable if needed.

#### 2) Fault information "Card type fault" when USB disk is inserted



When the fault happens, it will show the correct card type. Please select the correct control card type in the display set in the software, and download the program again to USB disk and then uploaded to the control card.

3) Fault information “No program in USB disk”

Situation A: Not download the program to USB disk through the USB function of the FK Show tool.

Please download the program to USB disk through SW, it is not supported to directly copy the program to USB disk.

Situation B: USB disk has broken sections, please replace the USB disk.

Situation C: The extending length cable is too long, for example from 5 to 10 meter. The standard length limit of USB cable is 5 meter. Then it need extra conductive and anti-disturbance capability for the cable, at least shielding bronze cable as well as extra stability of the power supply.

4) Fault information “ Upload failure”

Situation A: Plug out the USB disk before the uploading procedure is finish. Please wait enough time before plug out the USB disk.

Situation B: The connection of USB disk is poor, or the USB cable conductive is not good.

5) Always dark on display without any indication for minutes.

Mostly the USB disk is not compatible, please refer to 1) Identification fault

6) No reaction once insert USB disk

Please click the test button on the control card. The right reaction shall be: Click once, all light or all dark, and 2<sup>nd</sup> click on the test button, display will have 2 column gap lighting, and the 3<sup>rd</sup> click to have 1 column gap lighting, 4<sup>th</sup> click on test button to have normal display.

If the reaction does not follow the step above, please check the wiring of the LED module, check if the plug is in reverse direction. Recover the factory set if the wiring connection is checked without problem.

3<sup>rd</sup> generation control card has green blinking operating light on card to indicate the working situation. If the operating light is not blinking, Please recover the factory set referring to [16 Recover factory set](#).

7) Display upload succeed, but dark display after.

Possibly the program has time division switch on or switch off function enabled. Check the function if it is working at right time and adjust the time if needed.



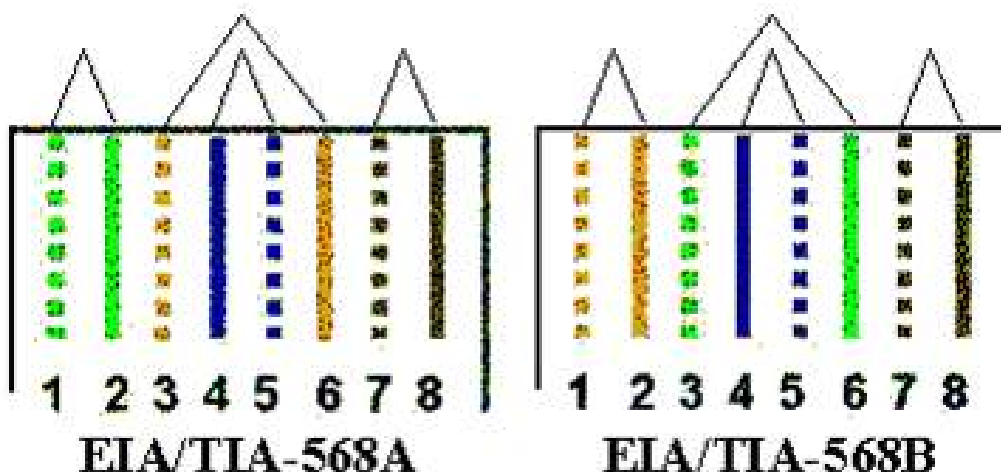
Appendix 1: Technical specification of Feikong 4<sup>th</sup> generation control cards

Code	Type	State Ports	Control SC DPs	Support display boards	Display mode	Stage display	Graphic display	Display characteristics and others
Q	FK-QM1 LED control							Free display-Free program program up load to computer via USB, Temperature & humidity, interface remote control, Background animation
	FK-QM1+ Serial port/USB							Free display-Free program program up load to computer via USB, Temperature & humidity, interface remote
S	FK-SM1 LED control							Free display-Free program program up load to computer via USB, Temperature & humidity, interface remote
M	FK-MM1 LED control							Free display-Free program program up load to computer via USB, Temperature & humidity, interface remote
A	FK-A1 Serial port/USB							Free display-Free program Serial port/USB control program back display, check Temperature & Humidity, interface remote control Background, Free display-Free program program up load to computer via USB, Temperature & humidity, interface remote
	FK-A1+ Serial port/USB card							control, Background animation, Wide range voltage
	FK-A1+ Serial port/USB card							Free display-Free program Serial port/USB control program back display, check Temperature & Humidity, interface remote control Background
	FK-A1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & humidity, interface remote
B	FK-B1 Serial port/USB							control, Background animation, Wide range voltage
	FK-B1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
	FK-B1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & humidity, interface remote
	FK-B1+ Serial port/USB card							control, Background animation, Wide range voltage
C	FK-C1 Serial port/USB							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
	FK-C1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & humidity, interface remote
	FK-C1+ Serial port/USB card							control, Background animation, Wide range voltage
	FK-C1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
D	FK-D1 Serial port/USB							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
	FK-D1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & humidity, interface remote
	FK-D1+ Serial port/USB card							control, Background animation, Wide range voltage
	FK-D1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
E	FK-E1+ Serial port/USB							Free display-Free program network up load program back display, check Temperature & Humidity, interface remote control Background
	FK-E1+ Serial port/USB card							Free display-Free program network up load program back display, check Temperature & humidity, interface remote



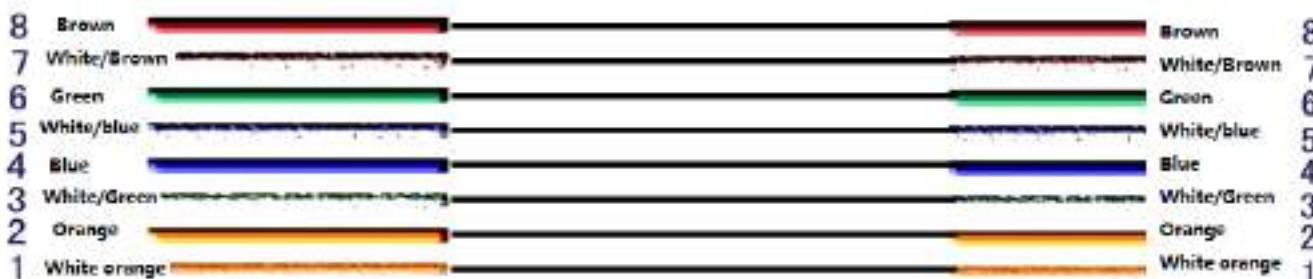
## Appendix 2: Network wire plug process

When communication method of the control card is selected as “network communication”, then the user need apply the network wire for connection. The standard and types are as following:



- Direct connecting wire: both ends need connection as T568B standard serial.
- Twister wire: one end shall be connected as T568B, the other end shall be connected as T568A.

**Usually Direct connecting wire are applied, and the wire end and plug connecting serial is indicated as the picture below:**



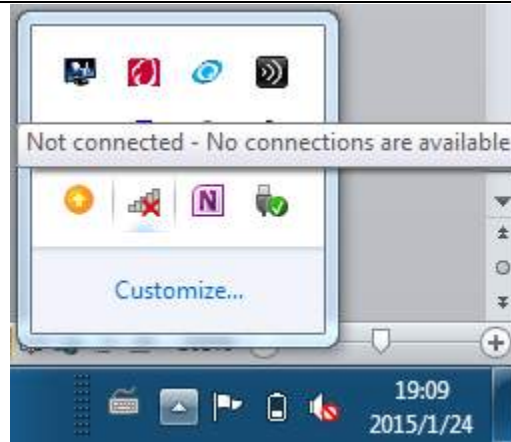
**The connection of the direct twisting wire: (Same for both ends)**

**Standard 568B: White orange—1, orange—2, White/Green—3, Blue—4, White/blue—5, Green—6, White/Brown—7, Brown—8**

**The application of direct twisting wire: different network devices:(Example: Computer---Switcher, Switcher----Router)**

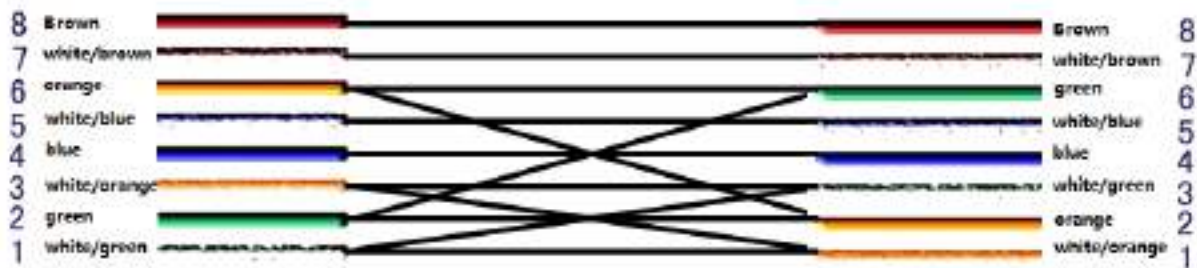
**When the application is as following, then the user need use the twisting wire.**

Once the user apply direct connection to one control card through network, the computer always display “Local network not available”, as shown in the picture blow:



Once the wire is certain to be connected, then the user need process the twisting wire to build up the connection properly.

The crossing over twisting wire shall be done as following:



The connecting sequence is: (different at two ends)

One end:

(586B) white/O—1, orange—2, white/green—3, blue—4, white/blue—5, green—6, white/brown—7, brown—8

The other end:

(568A) White/green—1, green—2, white/orange—3, Blue—4, white/blue—5, orange—6, white/brown—7, brown—8

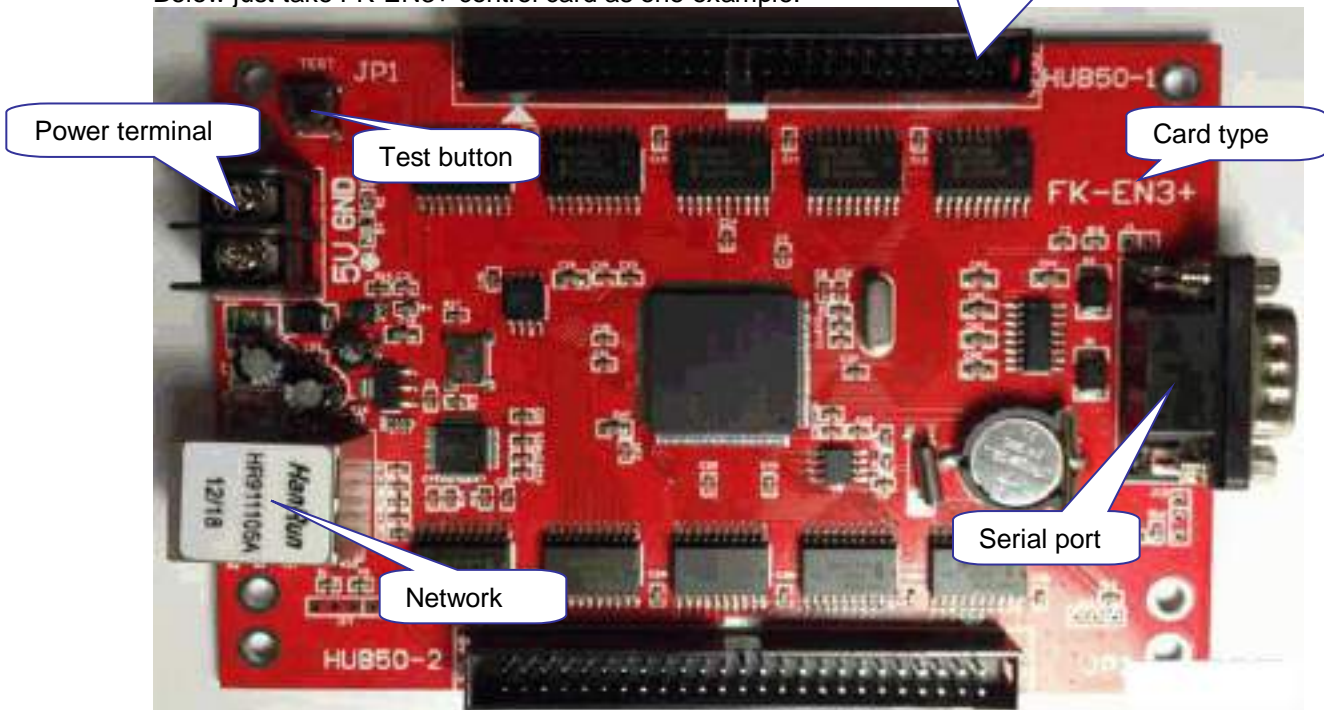
The application situation of crossing twisting wire: same network device connection

(example: Computer----Computer、router----router)



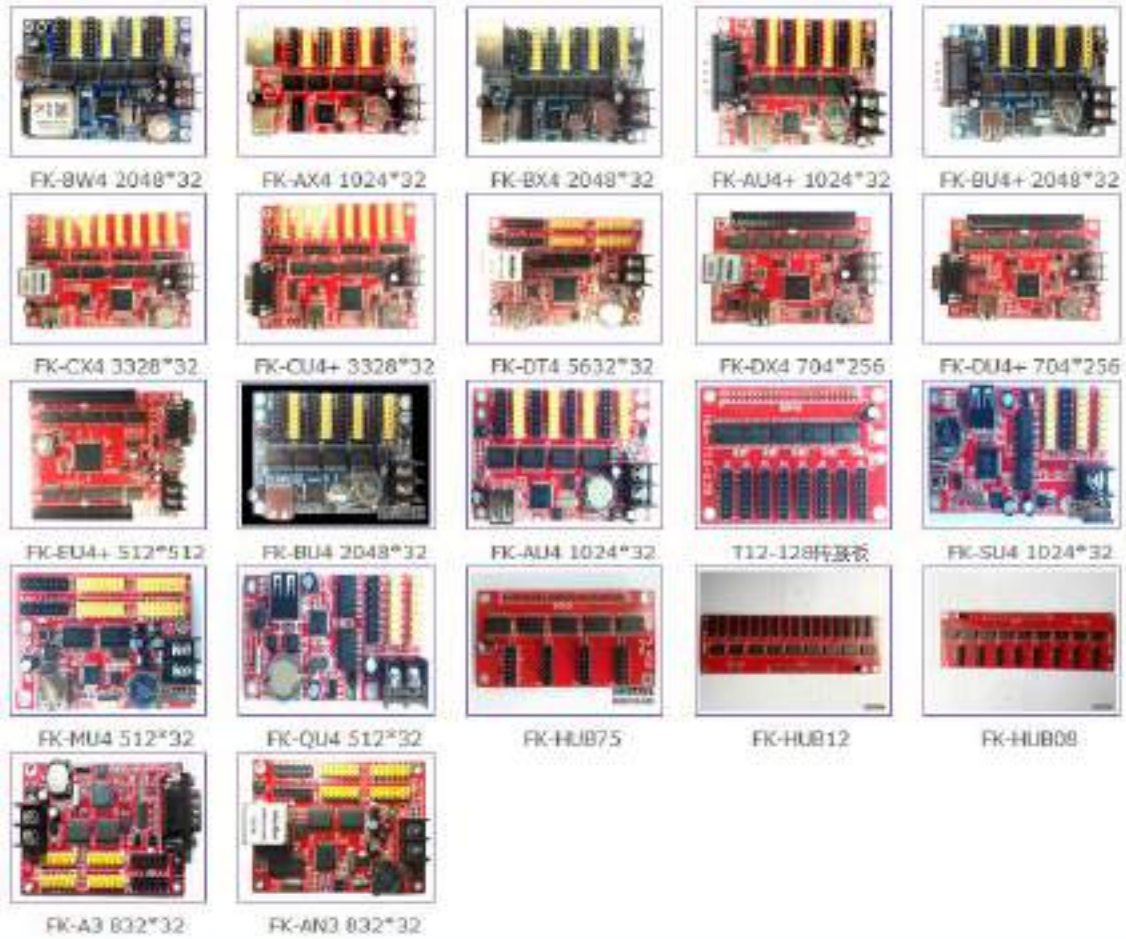
Appendix 3: FeiKong LED control card interface view

Below just take FK-EN3+ control card as one example.





Overview of part of our products:



More information about our products, please check in our website.