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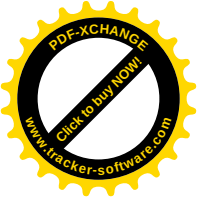
File	Operation Manual of the HD2014 LED Control System
Version	English
Page	1-35

HD2014
Operation Manual



Contents

Contents 2

Appendix 1 Types of Control Card **4**

Appendix 1.1 Types of control card 4

Chapter 1 Overview **6**

1.1 Features 6

1.2 Operating environment 7

Chapter 2 Installation and Uninstallation **7**

2.2 Uninstallation 8

Chapter 3 Tools Help **9**

3.2 Title bar 9

3.3 Menu bar 9

3.3.4 Tool 15

3.3.5 View 15

3.3.6 Language menu 15

3.3.7 Help menu 16

3.4 Toolbar 16

3.5 Analog display 16

3.6 Display attribute column 17

3.7 The use of remote control 18

Chapter 4 Creation Process of Screen Program **18**

4.1 Create new screen (the first-level content) 18

4.2 Create new program (the second level content, a screen can create 200 programs.) 20

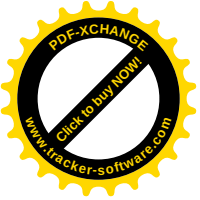
4.3 Create new area (the third-level content, each program can be set to 8 areas.) 20

4.4 Finished programs 21

Chapter 5 Display Different Content **21**

5.1 Single-line text display 21

5.2 Multiline text display 23



5.3 Hypertext display *23*

5.4 SWF *24*

5.5 Time display (calendar time) *24*

5.6 Clock display (analog clock) *25*

5.6 Clockwise /counter-clockwise count display *26*

5.7 Temperature display (Sensor is required to buy.) *26*

5.8 Animated character display *27*

Chapter 6 Communication Settings 28

6.1 Production of Serial line *28*

6.2 Communication settings (serial port) *28*

6.3 Production of network line *29*

6.4 Communication settings (network interface) *30*

6.5 Communication settings（WIFI） *31*

Appendix 2 Common Settings during Use 31

Appendix 2.1 How to remotely upgrade the control card? *31*

Appendix 2.2 How to restore the controller card to factory settings? *32*

Appendix 2.3 How to test screen with the control card? *32*

Appendix 2.4 Time switch for screen *33*

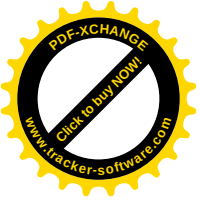
Appendix 2.5 Play screen at a specified time *33*

Appendix 2.6 How to set subtitles to be stationary? *33*

Appendix 2.7 Export to U disk *34*

Appendix 2.8 Common solutions to uneven luminance on the screen *34*

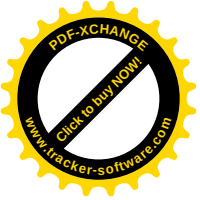
Appendix 2.9 Operation of buttons on the control board *35*



Appendix 1 Types of Control Card

Appendix 1.1 Types of control card

Serial port Controller	HD-S3	Single color: 1024*32 Dual color : 512*32 1024*16	2 of HUB12 1 of HUB08
	HD-M3	Single color: 768*64 1024*48 1536*32 Dual color : 384*64 512*48 768*32 1536*16	4 of HUB12 2 of HUB08
USB port Controller	HD-A40	Single color: 768*32 1024*16 Dual color : 384*32 768*16	2 of HUB12 1 of HUB08
	HD-Q40	Single color: 512*64 1024*32 1536*16 Dual color : 256*64 512*32 768*16 Tri color : 128*64 256*32	4 of HUB12 2 of HUB08
USB+Serial port Controller	HD-U40	Single color: 640*128 1280*64 2048*32 Dual color : 320*128 640*64 1280*32 Tri color : 416*64 832*32	8 of HUB12 4 of HUB08
	HD-A41	Single color:1024*32 Dual color : 512*32 1024*16	2 of HUB12 1 of HUB08
	HD-Q41	Single color:768*64 1024*48 1536*32 Dual color : 384*64 512*48 768*32 Tri color : 512*32 512*16	4 of HUB12 2 of HUB08
	HD-U41	Single color:1280*128 1696*96 2048*64	8 of HUB12



		Dual color : 640*128 848*96 1280*64 Tri color : 800*64 1600*32	4 of HUB08
	HD-X40	Single color:640*256 1280*128 Dual color : 320*256 640*128 Tri color : 416*128 832*64	1 of 50PIN
	HD-X41	Single color:1024*256 2048*128 Dual color : 512*256 1024*128 Tri color : 672*128 1344*64	1 of 50PIN
	HD-G3	Single color:1024*512 2048*256 4096*128 Dual color : 512*512 1024*256 2048*128 Tri color : 680*256 1360*128	2 of 50PIN
USB+Ethernet port Controller	HD-E40	Single color:2048*64 2048*32 Dual color : 1024*64 640*32 Tri color : 1360*32	4 of HUB12 2 of HUB08
	HD-E41	Single color:2048*128 2048*64 Dual color : 1024*128 1024*64 Tri color : 1360*64	8 of HUB12 4 of HUB08
	HD-E42	Single color:1024*256 3072*128 Dual color : 512*256 1536*128 Tri color : 672*128	1 of 50PIN
	HD-E43	Single color:1024*512 2048*256 4096*128 Dual color : 512*512 1024*256 2048*128	2 of 50PIN

		Tri color : 672*256 1344*128	
	HD-E53	Single color:2048*512 4096*256 8192*128 Dual color : 1024*512 4096*128 8192*64 Tri color : 1344*256 2720*128	2 of 50PIN
WIFI Controller	HD-W40	Single color: 640*64 832*48 1280*32 Dual color : 320*64 416*48 640*32 Tri color : 416*64 848*32	4 of HUB12 2 of HUB08
	HD-W42	Single color:416*256 832*128 2048 *48 Dual color : 208*256 128*416 832*64 Tri color : 272*128 544*64	1 of 50PIN

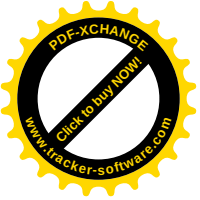
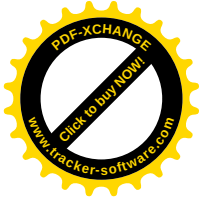
HD2014 add new functions:

1.The controller recognized serial port automatically
2.Support animation font,hollow font,describe font border(stroke)
3.District boarder and background
4.Time,Clock,Count,Temperature font of free size
5.Add Time zone,show different country time
6.Abundant Clock functions and back ground
7.Add Remote control funtions of the controller
8.The controller itself have single dual color and tricolor firmware
9.Add larger Ethernet port controller and WIFi Controller and USB port

Chapter 1 Overview

1.1 Features

"HD2014" Control System is a larger adjustment made by Huidu Company to strip screen market in 2014. For the convenience of customers' choices, some of the repetitive controllers are integrated, and the control ranges are updated more flexibly besides, prices are more reasonable. So it is enough to meet the trend of higher and longer strip screen.

The overall software interface is simple, powerful, easy to learn and use.

it Support Single color and dual color led modules, also full color modules (showing 7 color effects)

Support functions as single-line text, multi-line text, Excel.hypertext (JPG /JPEG/BMP/GIF/PNG etc.),swf, time、clock、count (count down / count up), temperature, temperature and humidity, animated characters,Excel.

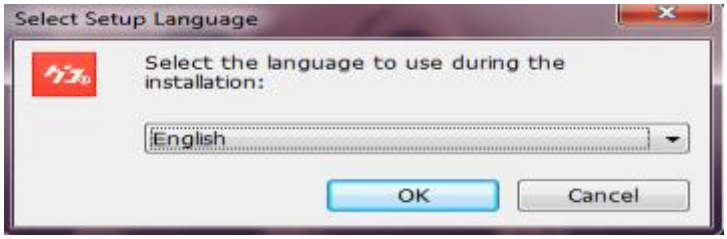
1.2 Operating environment

HD2014 software support all language showing
Operating system:
Chinese/English (multi-lingual) Windows2000/XP/Win7/Vista/WIN8, etc.;
Hardware configuration: no special requirements.

Chapter 2 Installation and Uninstallation

2.1 Installation

Software Name HD2014 (HD2014_V1.01.891.zip). Double click the softw are and install as below steps:



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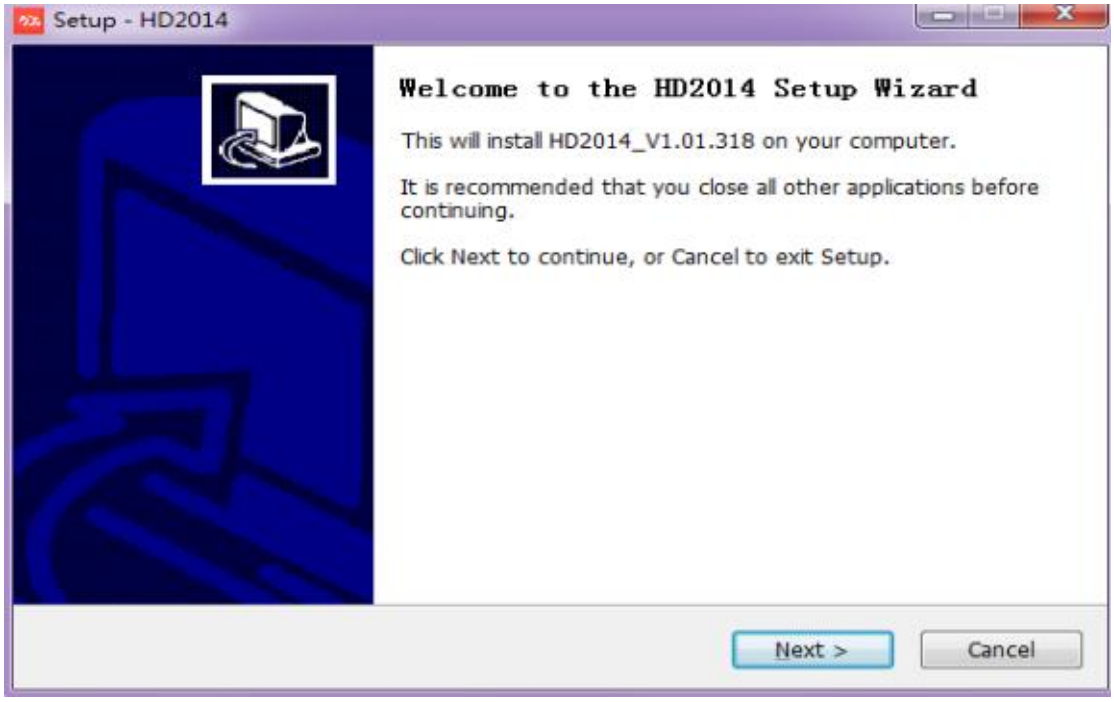
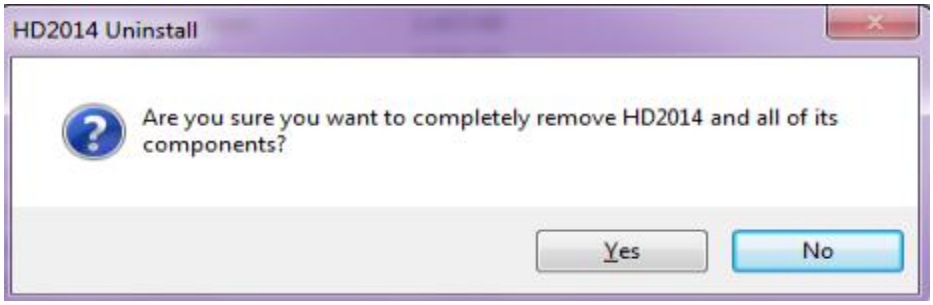


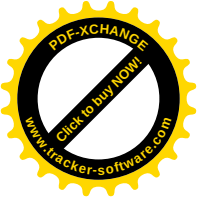
Click the prompt (Next) on the screen to complete the installation.

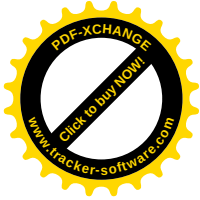
After the "HD2014" software is successfully installed, the "HD2014" program group will be shown in the [Start] / [Programs], then click “HD2014” to run it, you can also click the HD2014.exe shortcut on the desktop to enter the operating interface.

2.2 Uninstallation

"HD2014" software package provides a complete uninstallation function, so that users can easily delete all documents, program groups and shortcuts in the "HD2014". Users can select “Uninstall HD2014” in the [Start] / [Programs] / HD2014 program groups to completely remove HD2014 and all of its components.



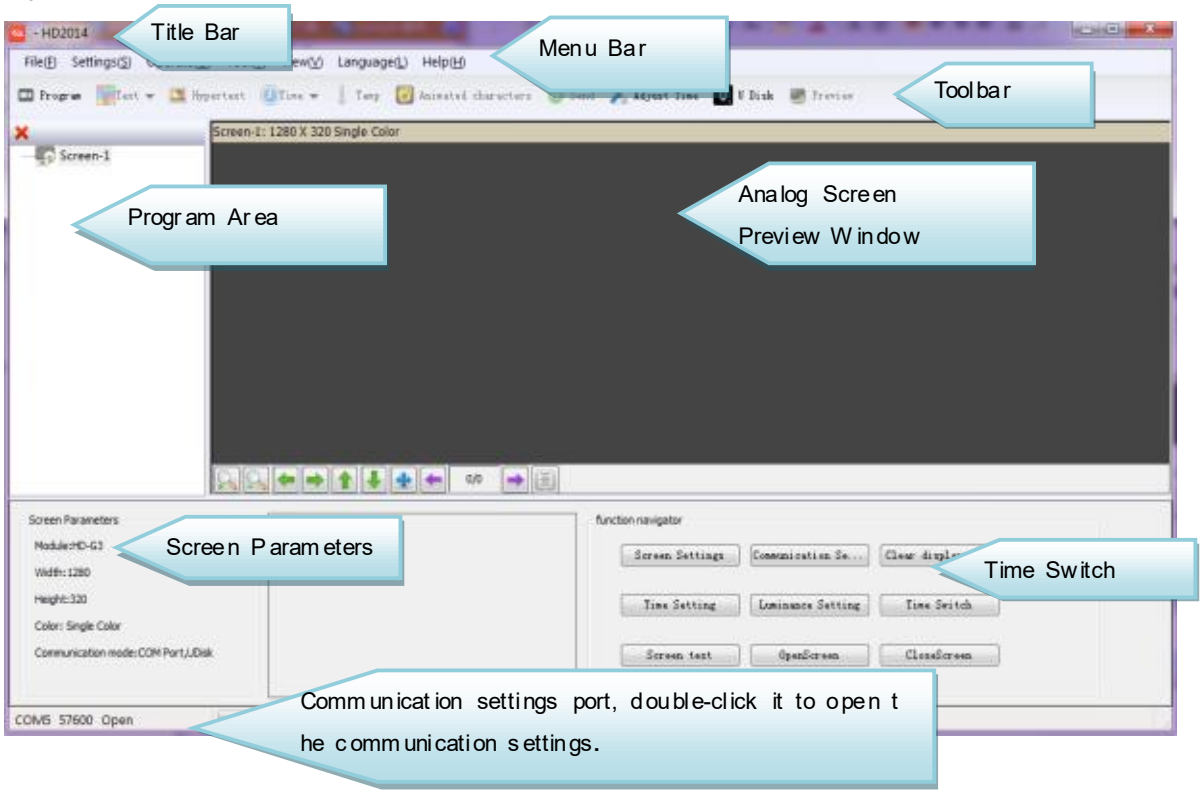




Chapter 3 Tools Help

3.1 The main interface of software

Open the main interface of the "HD2014" software, see below:



3.2 Title bar

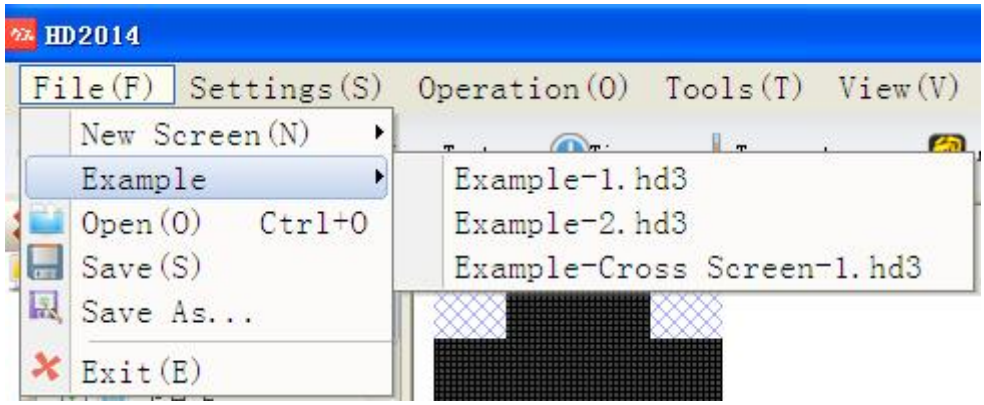
It is used to display the name of the software.

3.3 Menu bar

It includes these options: File, Settings, Operation, Tools, View,, Langu age and Help.

3.3.1 File menu

The file menu consists of five options: New Screen, Open, Save, Save As, Exit, as follows:



New Screen (Ctrl + N): It is used to create a new screen, HD2014 soft ware could set up more screens and do not permit the quantity.
Example: You can set up as examples.
Open (Ctrl + O): It is used to open the recently used documents;
Save (Ctrl + S): It is used to save the current file and save it in the Pr oject file under the installation path by default;
Save As ...: The current file can be saved in another specified position;
Exit (E): Close HD2014.

3.3.2 Settings menu

This menu includes Screen Settings, Communication Settings, System Settings, Readback, local IP Settings, as follows:

Screen Settings: It used to set the basic parameters of the control card and Select the led control card types, Date and OE Polarity、Scan、Wi dth and Heig ht of led display, importing and exporting parameters 、Adva nced setting etc) see below photo:

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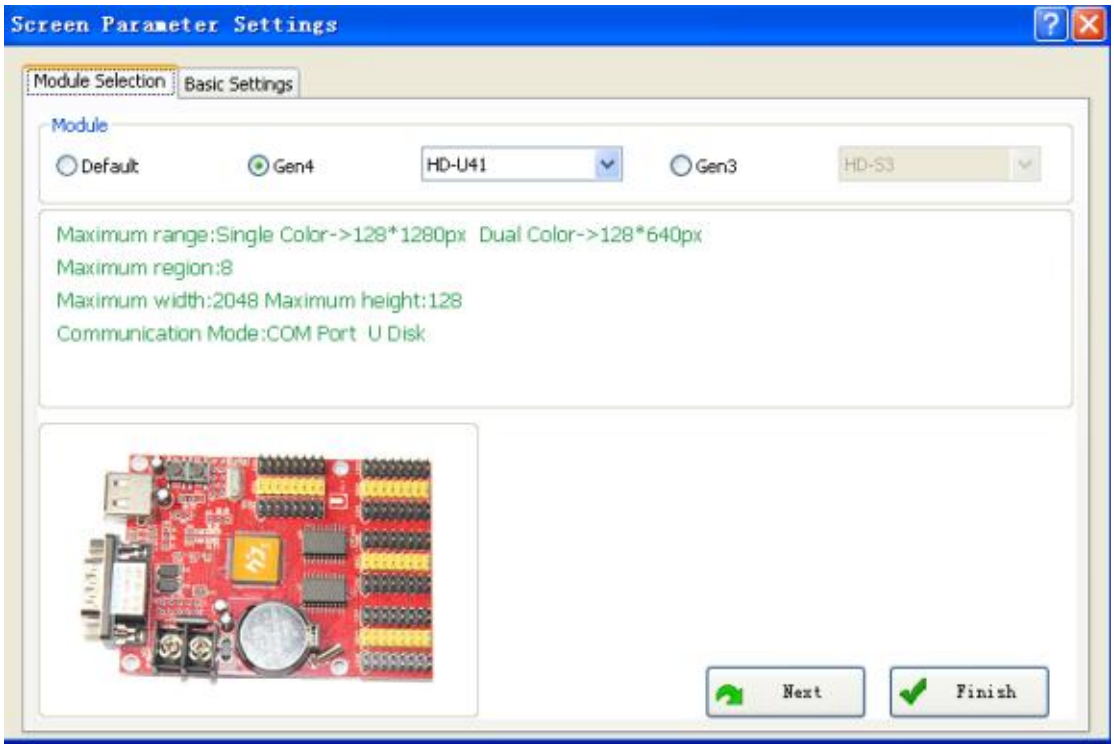

Note: If user do not know the led control card types, just select HD-E43 it is ok(our software default types HD-E43,do not need select types)

First, select the module type, which one you used ;

The second step, the basic settings, select the parameters for the LED screen, color screen, data polarity, OE polarity, screen size, scan mode;

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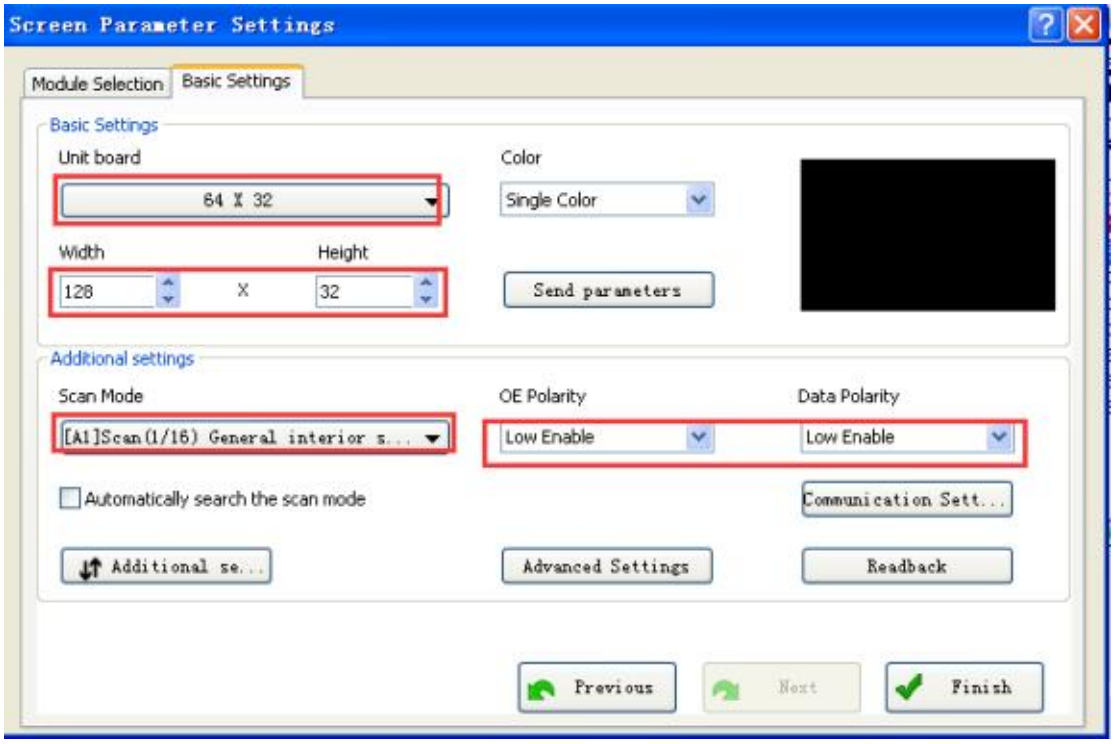
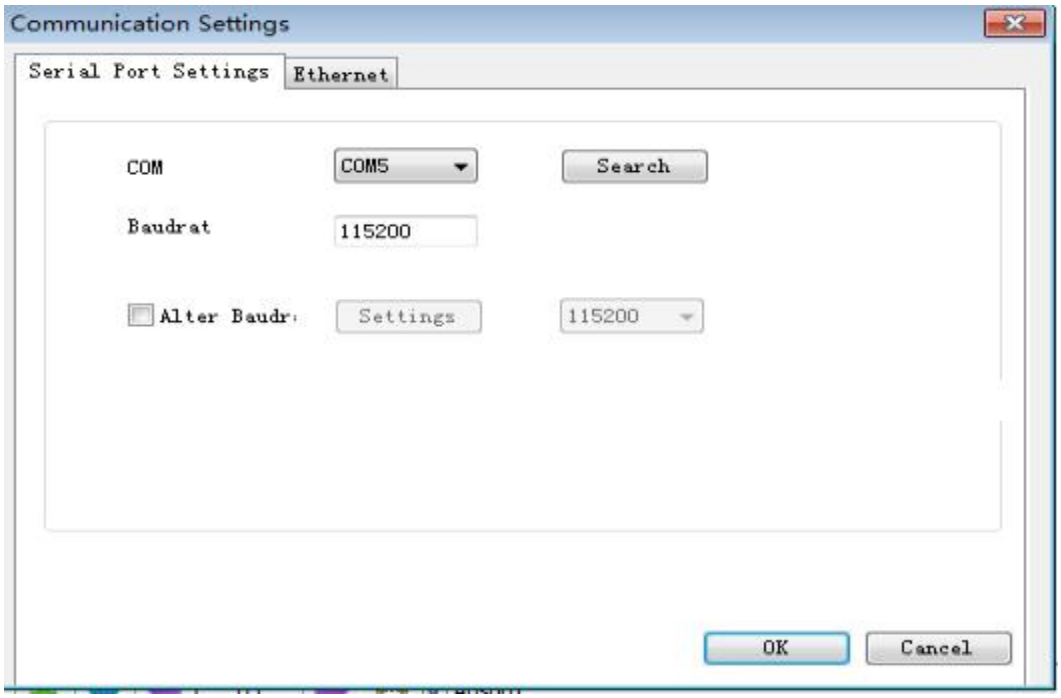


Communication Settings: he below used Serial port of RS232 communi cation . The communication distance it is 70meters.

After connected the serial lines ,the software itself recognized the port a utomatically, no need by hand

:



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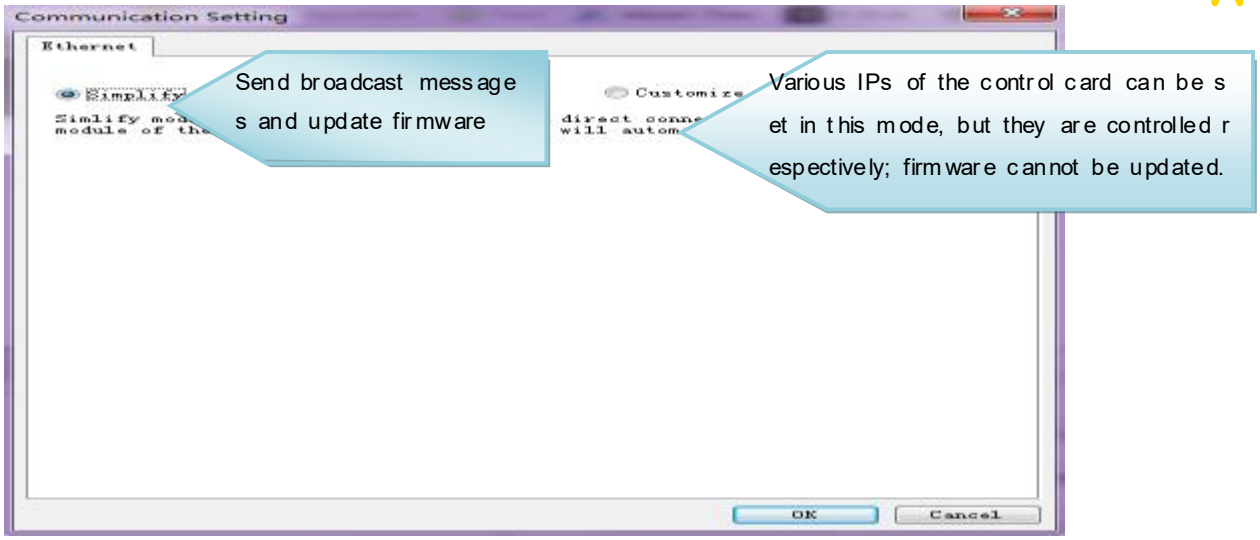
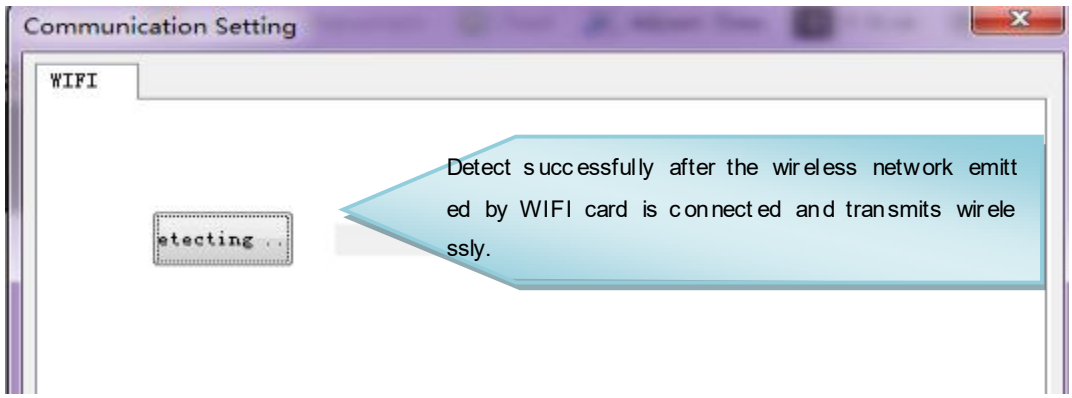
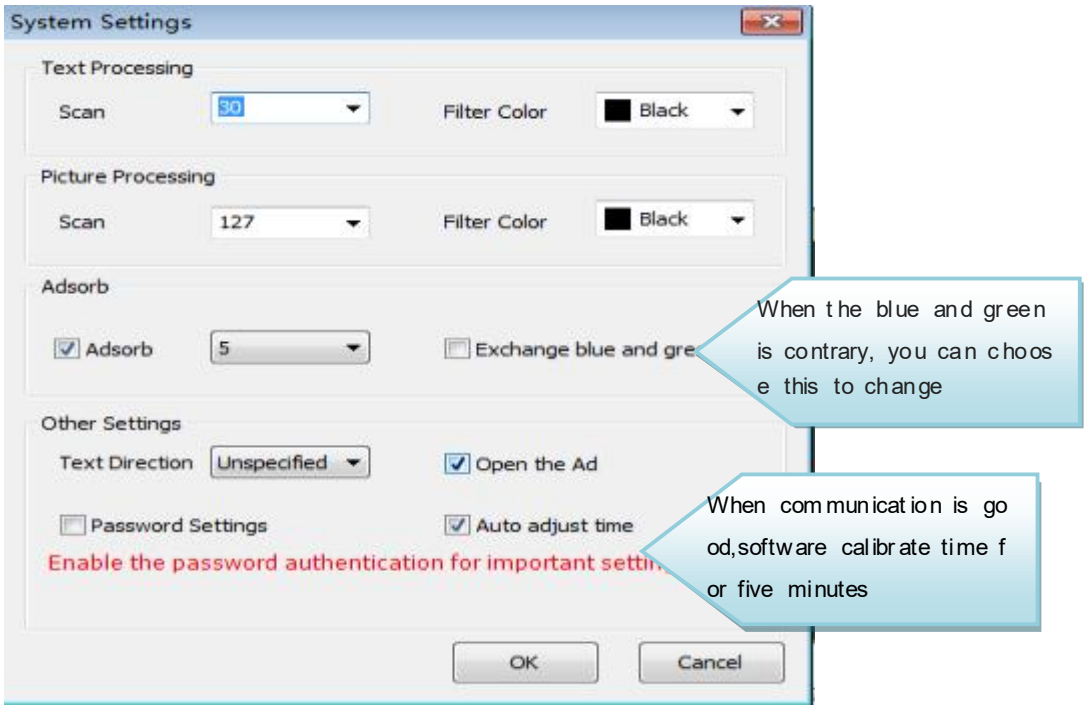
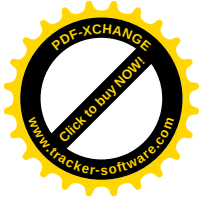




System Settings: They are used to set the system parameters (not recommended to change).



Readback: If you need to alter the parameters to those of the control card, these parameters can be directly read back, so convenient and dire

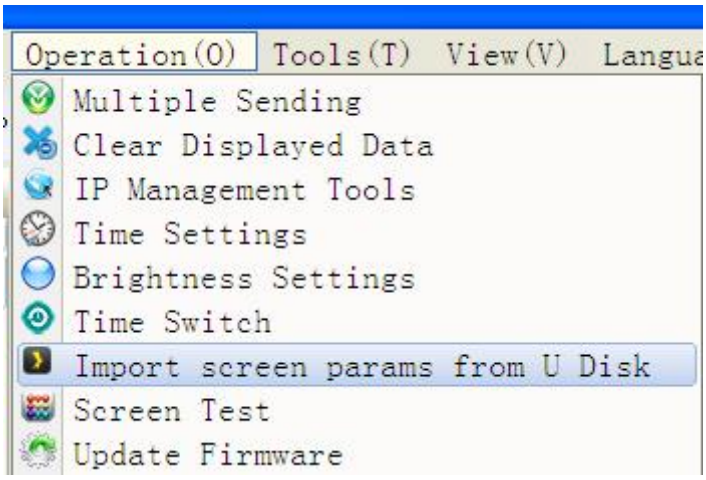


ct.

Local IP Settings: Users can alter the system's local IP.

3.3.3 Operation menu

It contains Send Project, Multiple Send, Clear display data, Export to U disk, IP Management tools, Time Setting, Luminance Setting, Time Switch, Screen Test, Firmware Update, See below:

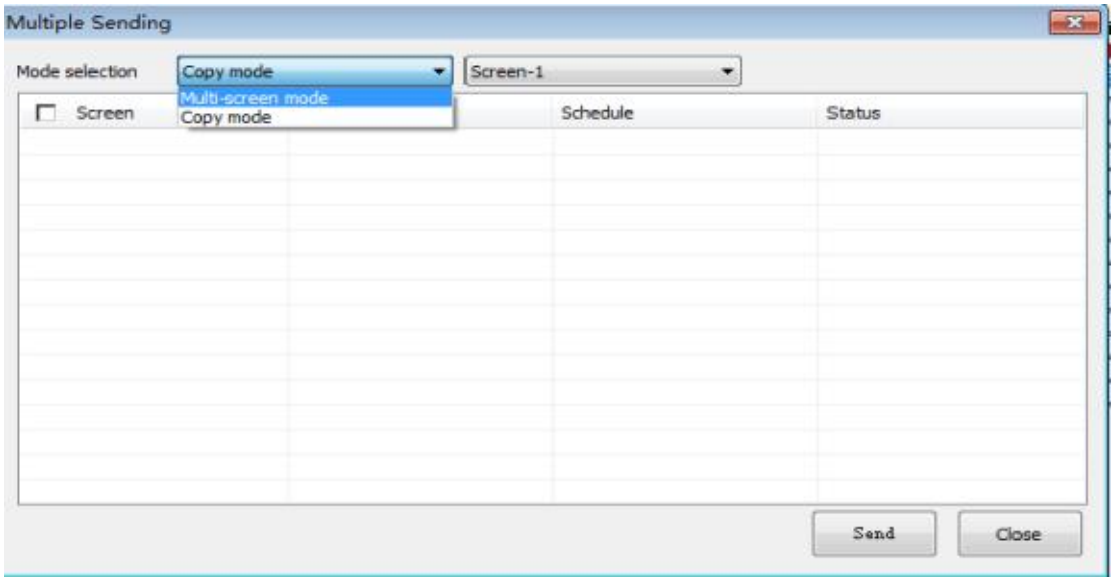


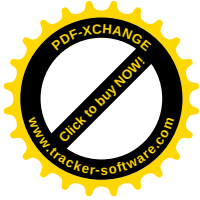
Multiple Send: It's for network card's exclusive use, and used for sending multiple screen files. X Firstly, set the parameters of each screen to custom IP, then associate with the corresponding screen. Please refer to the operation of IP management tools:

After finishing the association, users can send the content of multiple screens to control card through multiple send, see below:

Multi-screen mode: communication must use a custom setting mode, and associated with each IP address on a display screen;

Copy mode: Select to send the display, the display is sent to all the control card, requires current IP address PING is good.





Clear display data: Clear the programs inside the control card (restore to factory settings);

IP Management tools: They are for network card's exclusive use, and used for distributing the IP addresses of different network cards and associating with the related screens:

Import screen params from U disk:

First, U disk on a good LED display

Second, U disk on the computer

Finally, the operation "Import screen parameters from the U disk."

Time Setting: You can set the time of control card according to your requirement or, to the system time by default.

Luminance Setting: You can set the luminance of screen through serial port or network port, Luminance can also be updated by U disk;

Time Switch: Set the time to power on and power off the screen;

Screen Test: Testing screen by software;

Firmware Update: (First need got the firmware information, if need updated new version, it could be, we suggest do not updated

3.3.4 Tool

It includes notepad, calculator, drawing tools, which are used to open the practical tools on the system. The newly added drawing tool can save the data by printscreen more conveniently.

3.3.5 View

It contains analog screen's Zoom out, Zoom in, Center, Output and Apply the program's appearance.

Output Window: When opening the output window, you can view the type of the current connected control card and the screen size, color parameters of the program in the control card; during sending, you can view the process and know whether the sending is success. It cannot operate normally until you update the firmware that is required to be updated; when you are indicated that the sending is overtime, please check whether the line is normal.

3.3.6 Language menu

This menu includes ten languages: Simplified Chinese, Traditional Chinese, English, Russian, Turkish, Iranian, Polish, Spanish, Japanese, Mongolian, etc.. It is used for switching among different languages.

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3.3.7 Help menu

It is used for viewing the version number of HD2014 software;

3.4 Toolbar

Toolbar includes Programs, Text, Hypertext, Time, Temperature, Animated characters, Send, Adjust Time, U disk and Preview tools, as follows:

Program: It is used to create a new program (This program is the subdirectory of the screen.);
Text: It is used to create a single-line area or a multi-line text area; only pure texts can be edited in the single-line text area, while in the multi-line text area both texts and tables can be edited;
Hypertext: It is used to create an image-text area (Pictures and hypertexts can be inserted.)or swf area;
Time: Create a new time area or clock area, count area. Time area is used to display the system time (calendar mode); clock area is also used to display the system time (multiple round clock forms); count area is used to display the clockwise/ counter-clockwise count**;**
Temperature: Create a temperature area or temperature and humidity area, and use it to display the current environment temperature (Temperature sensor module is needed.);
Animation characters: Create an animated character area, where you can build hollow characters, stroke font, and set various special effects, such as waves, swing, vertical/horizontal rotation, zooming, character rotation, scrolling, flying to left/right, flash, output character by character, swing from one side to the other, elastic characters.
Send: It is used to send the current screen file;
Export: It's for U disk card's exclusive use, save the currently displayed file and time into U disk (U disk is updated.);
Adjust Time: Adjust the system time (adjust the time of control card to be synchronized with that of computer);
Preview: Preview the current program (Note: You can preview only when one program is selected.).

3.5 Analog display

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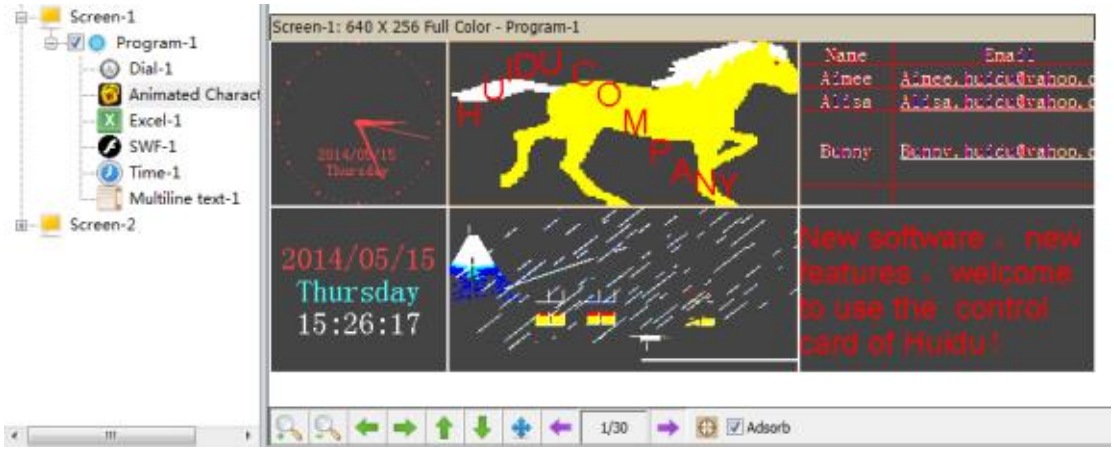
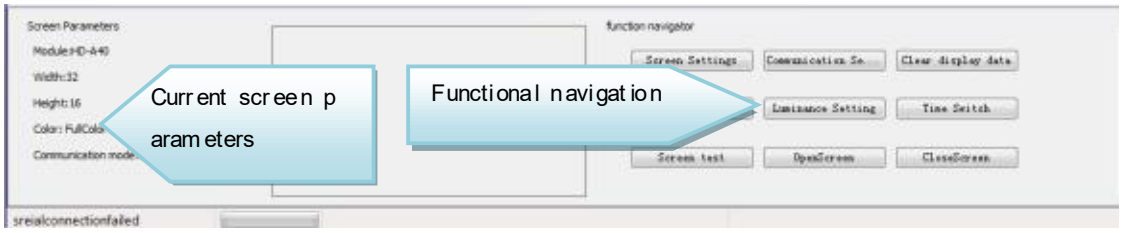


Note: the rational use of analog tools can help you edit screen file more conveniently, including zoom in/out the analog window, move around the current area, turn page of the screen content, etc..

3.6 Display attribute column

In this column, you can set the screen parameters, communication, time, luminance, time switch and clear display data, , test screen, turn on/off the screen and so on.



Current screen parameters: They are changed according to screen parameter settings;

Functional navigation: It includes screen parameter settings, communication settings, clear display data, time settings, luminance settings, time switch, screen test, turning on/off the screen, etc..

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3.7 The use of remote control

An infrared probe needs to be welded, please operate the remote control as follows:

Power: Switch display
UP: Previous program
Down:next program
Left: Decrease brightness
Right: Increase brightness
Play:Screen test
1-99: Choose program

Chapter 4 Creation Process of Screen Program

4.1 Create new screen (the first-level content)

Methods: Click File - New screen (The password is 168 or 188.), the pop-up settings page is as below:

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Module Selection: Select the type of your control card, and click “Next”;

Basic Settings: They are mainly used to set data polarity, color, OE polarity, screen width, screen height, scan mode and whether to use the 138 decoder;

Before setting, you need to know the correct attributes of each parameter, or the error will cause wrong display;

Troubleshooting:

Incorrect setting of data polarity will lead to black characters on a red background;

Incorrect setting of the 138 decoder will cause non-display or wrong display.

Incorrect setting of color may cause the value of screen height or screen width return to the previous one;

Incorrect setting of OE polarity will lead to uneven luminance, namely, some lines are bright, while some lines are dark;

Incorrect setting of scan mode will cause messy codes;

Advanced Settings: They are used to fine-tune parameters, but no change is recommended under normal conditions;

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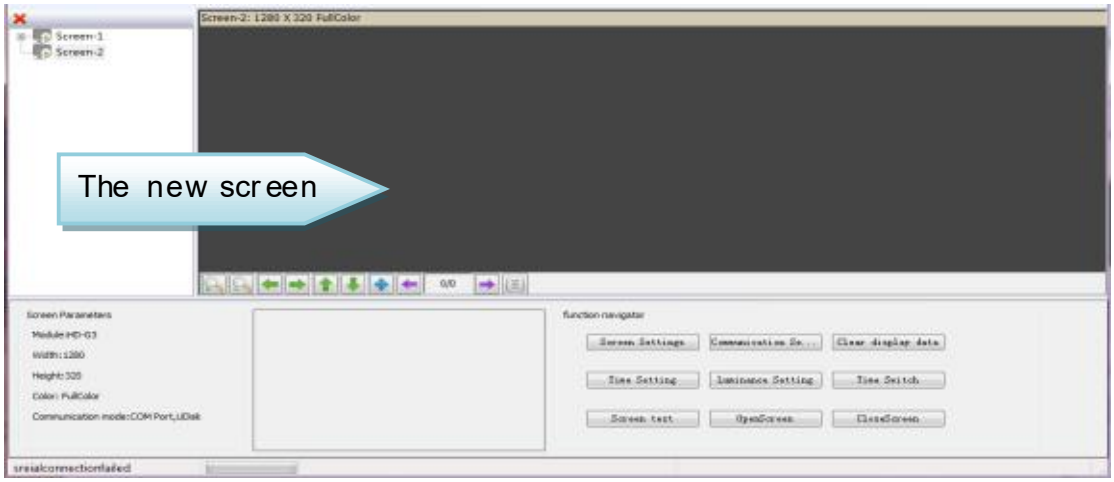
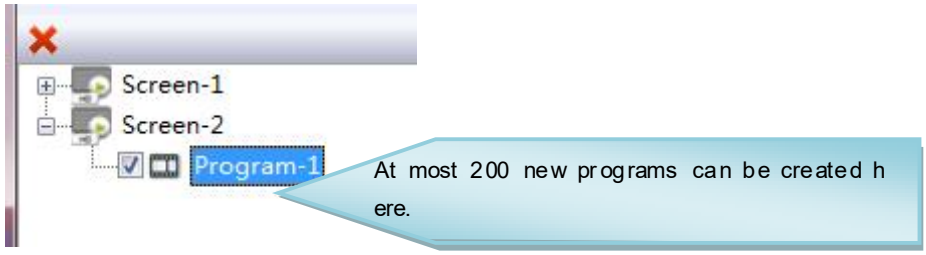
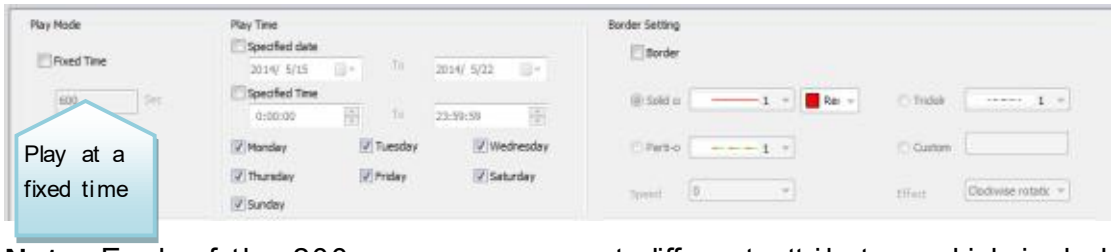


4.2 Create new program (the second level content, a screen can create 200 programs.)

Methods: Click the “program” on the shortcut bar (Premise: select a screen first), as below:

New program is as below, including the border - sub-period settings.





Note: Each of the 200 programs can set different attributes, which include play mode, border settings (over 200 kinds) and play time (specified time period).

4.3 Create new area (the third-level content, each program can be set to 8 areas.)

Methods: First, select the program, click text, hypertext, time, clock, co

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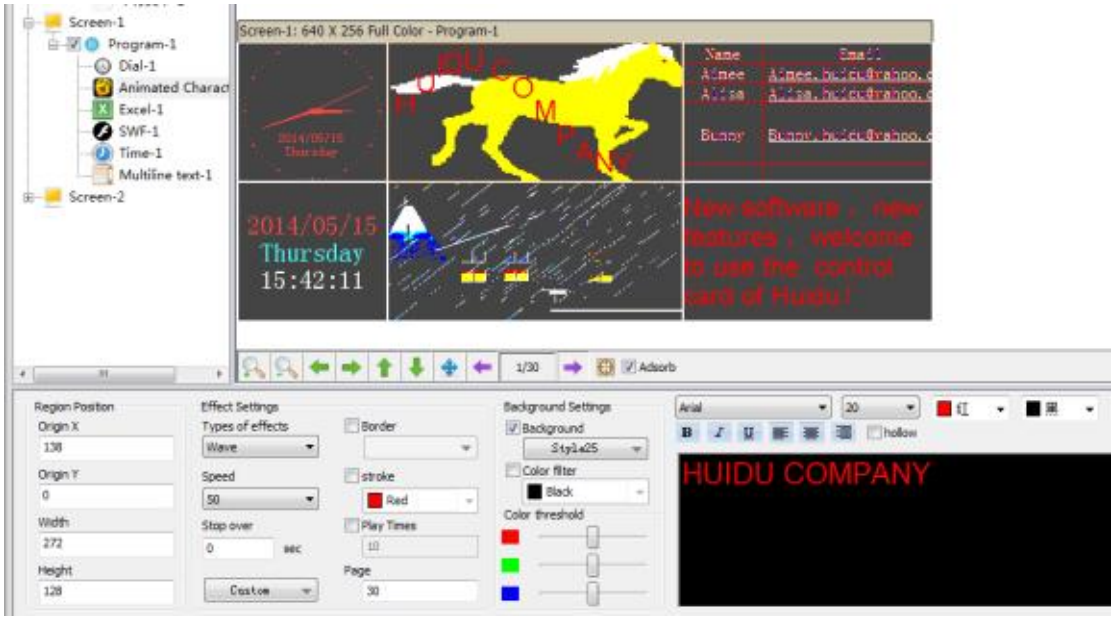
unt, temperature, etc., then create different types of areas, see below:



4.4 Finished programs

After the three steps above, we've created a screen file, if we need to create more programs, just repeat the second and third steps above (several programs can be played on a same screen); If you need a software to control multiple screens, you will have to create more screen files, then just repeat these three steps;

Save the programs into disk after completing them (They are stored in the Project file under the installation path by default, or in the specified directory through the file menu.). By previewing, you can view the dynamic image of each program at real-time and set the display mode; if satisfied, you can send it to screen through the "Send" button.

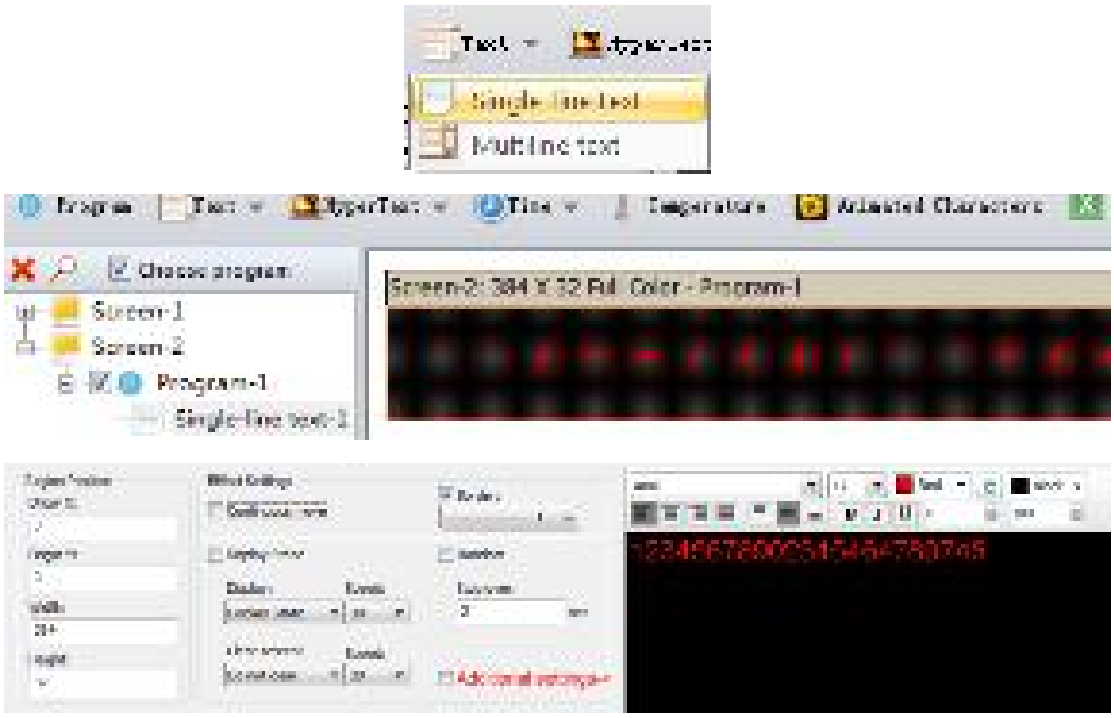
Chapter 5 Display Different Content

5.1 Single-line text display

For pure text display, we can simply use the single-line text areas, but this area does not support the Enter key.

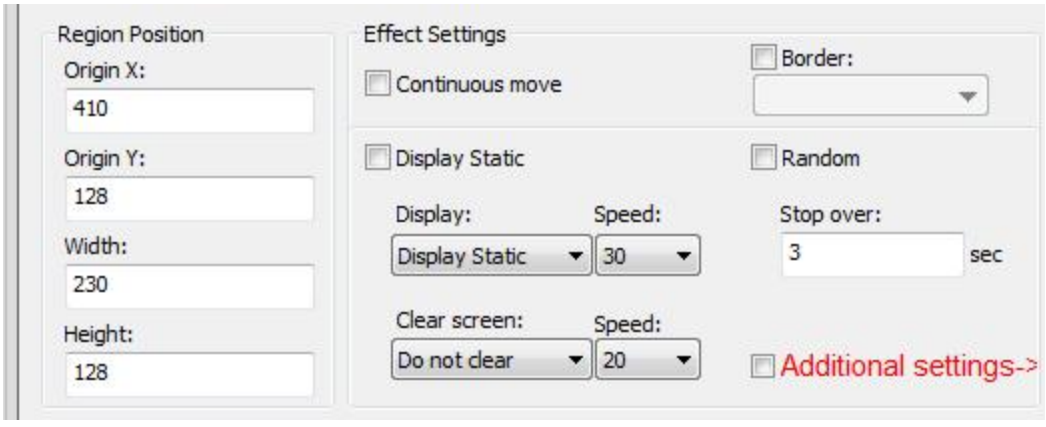
Steps: Please refer to 4.1 and 4.2 to create screen program;

Click "Text", then select "single-line text", a single-line text area will appear (The coordinates, length and width can be set freely.)



Note: For pure text, we suggest editing it in the single-line text area (This is is the simplest setting.). HD2014's software editor is so powerful that you can alter single text and adjust it to center, and edit the character spacing as well as line spacing.

If the display mode is "Continuous move to left", and the option "End to end" is selected , the content displayed on the screen will be kept moving to left; if you don't select "End to end", the content will be output; it will display continuously if there is a blank key.



The following shortcuts are added in the text edit box, all of single-line texts, multiline texts and animated characters are supported:

Ctrl + A: Select All

Ctrl + Z: Cancel the current operation

Ctrl + C: Copy

Ctrl + V: Paste

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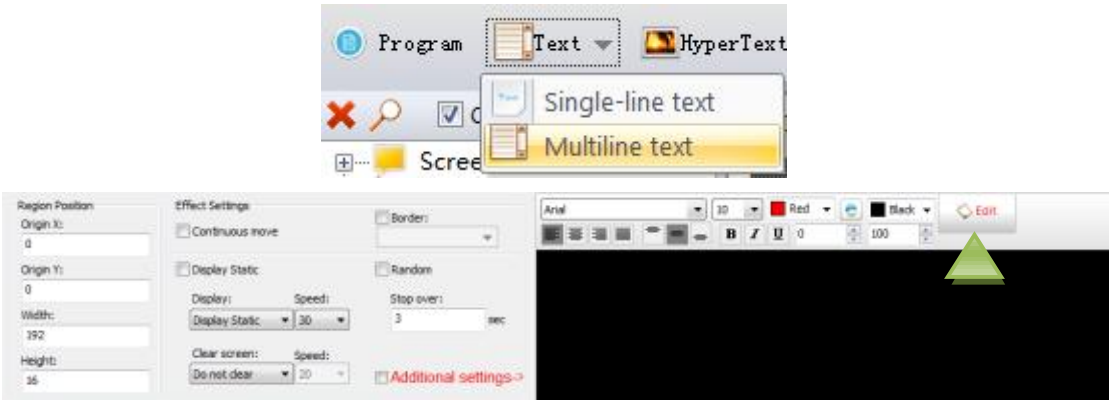
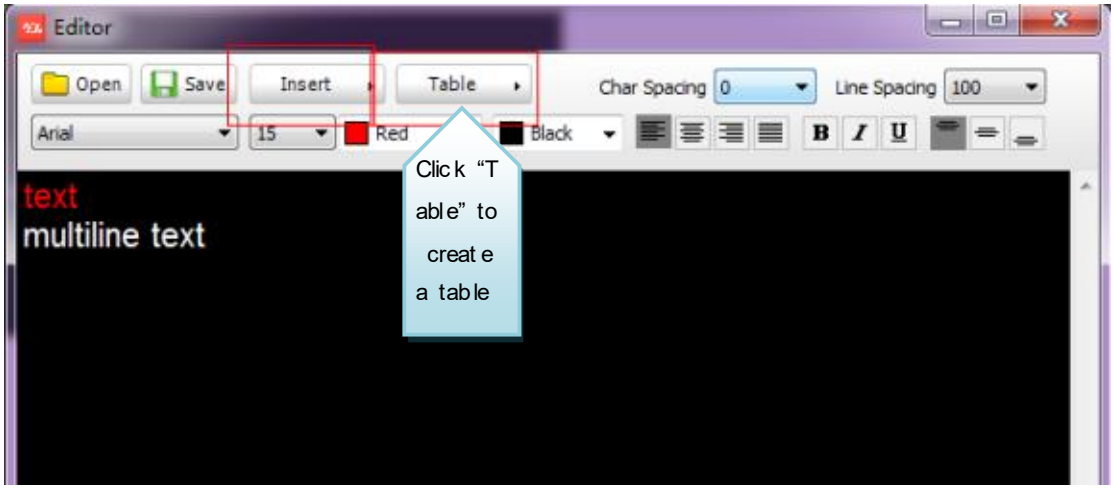
5.2 Multiline text display

In the multiline text area, you can use the Enter key to switch to a new line, open the *.hf file and add pictures, tables are also supported here.



Stroke is unavailable when it is the single color.

As the green arrow in the figure above shows, you can add pictures, create tables and open the *. hf file by clicking the edit box.



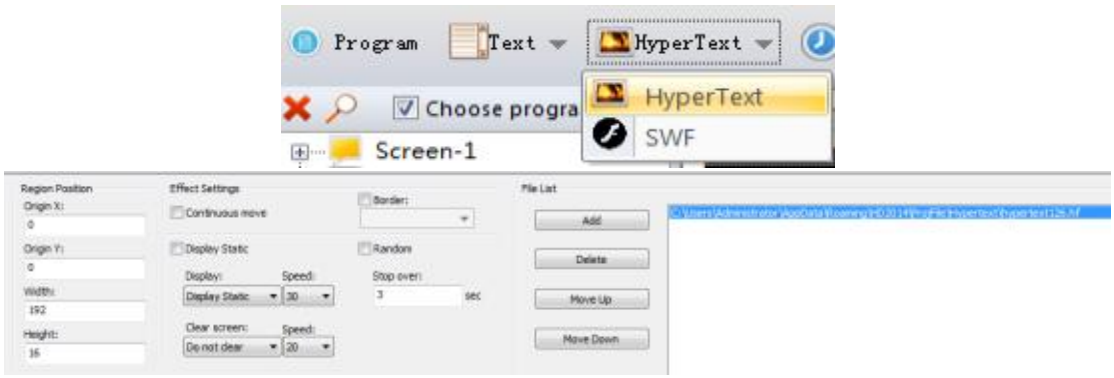
Insert: All of TXT documents, LOGO or picture (only JPG, BMP, PNG and GIF formats), *. HF and RTF files can be inserted.

5.3 Hypertext display

If you want LOGO or picture (only JPG, BMP, PNG and GIF formats) to be displayed on the screen, how to set? Steps are as follows:

Steps: Please refer to 4.1 and 4.2 to create screen- program;

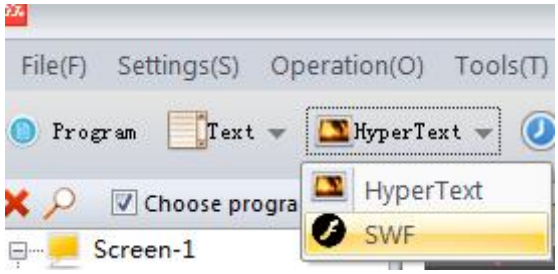
After clicking the "Hypertext", a hypertext area (The coordinates, length and width can be set freely) will appear, then you can add the pictures to be displayed to the bottom file list, see below:



5.4 SWF

Steps: Please refer to 4.1 and 4.2 to create screen program;

Click “HyperText”, then select “SWF”, a SWF area will appear (The co ordinates, length and width can be set freely.)

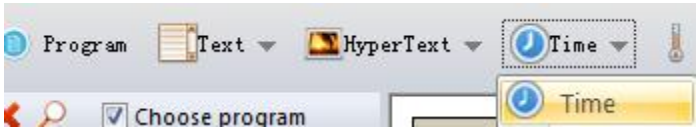


5.5 Time display (calendar time)

Time display of screen is similar to text and hypertext display, just clic k the time area, steps are as follows:

Steps: Please refer to 4.1 and 4.2 to create screen-program;

After clicking “Time”, the time area (The coordinates, length and width can be freely set.) will appear. Just set the position, so easy! See belo w:



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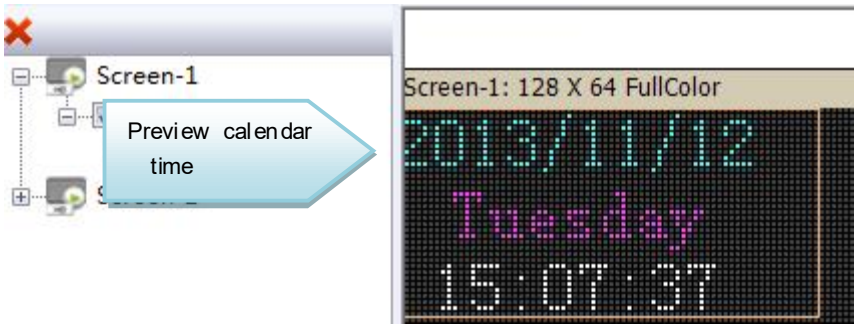
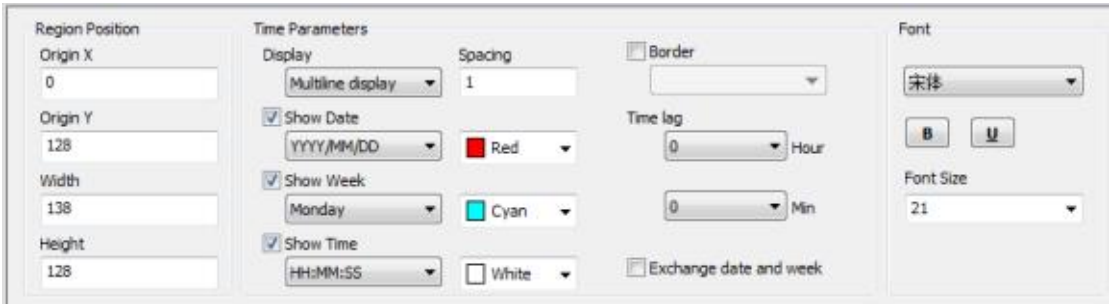


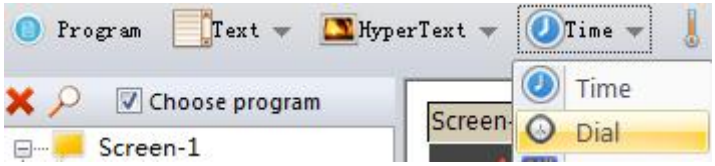


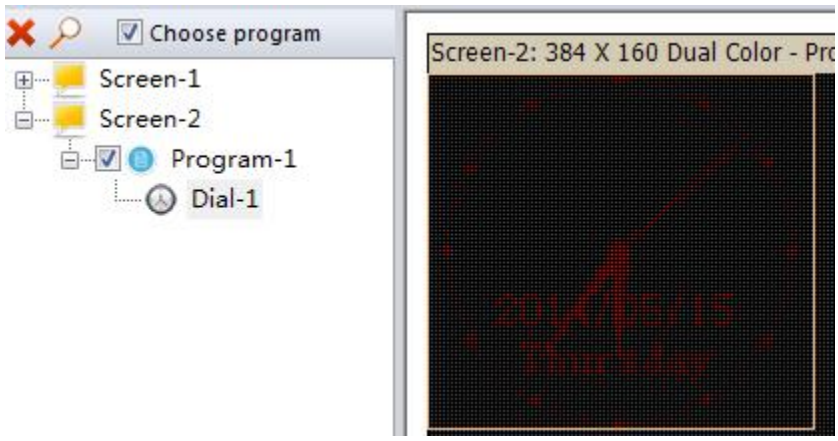
5.6 Clock display (analog clock)

The clock display is similar to text and hypertext display, just click the clock area, the steps are as follows:

Steps: Please refer to 4.1 and 4.2 to create screen-program;

After clicking the clock, a clock area (The coordinates, length and width can be freely set.) will appear. It's very simple to set, just set the position, as below:



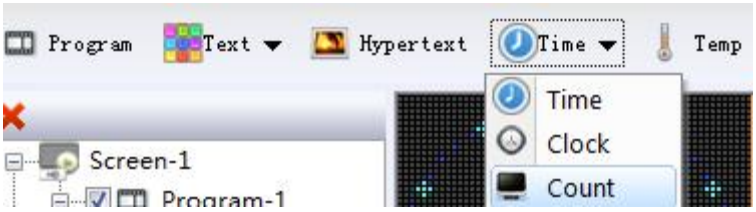


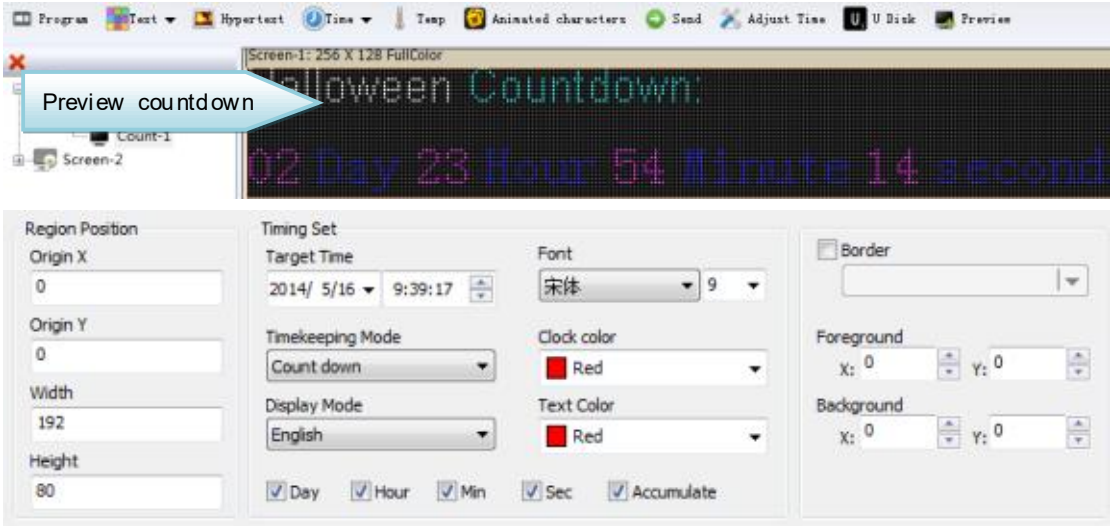
5.6 Clockwise / counter-clockwise count display

The screen displays clockwise / counter-clockwise count.

Steps: Please refer to 4.1 and 4.2 to create screen-program;

After clicking “Count”, a count area (The coordinates, length and width can be freely set.) will appear, as below:



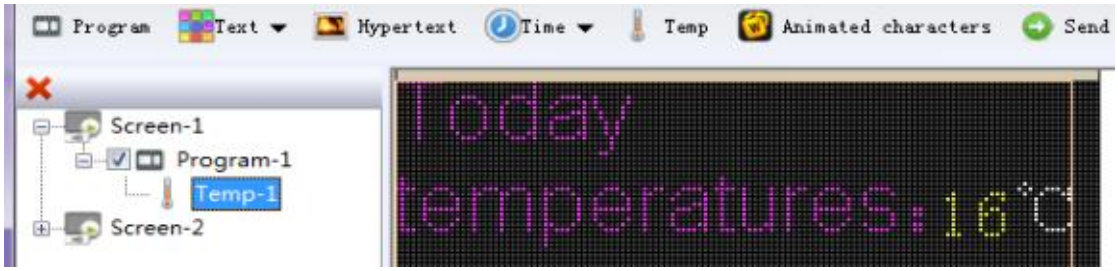


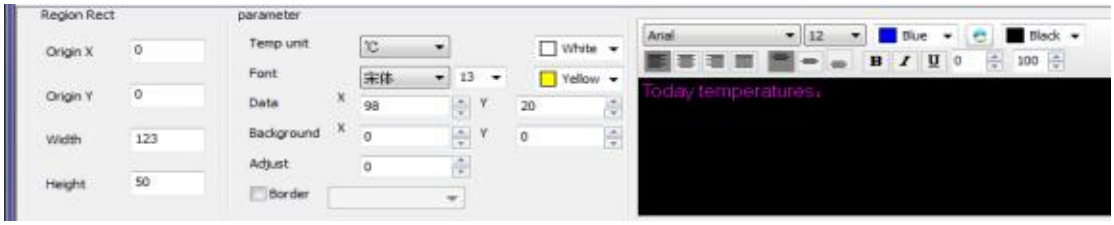
5.7 Temperature display (Sensor is required to bu y.)

The screen displays the current environment temperature.

Steps: Please refer to the content of 4.1 and 4.2 to create screen-pro gram;

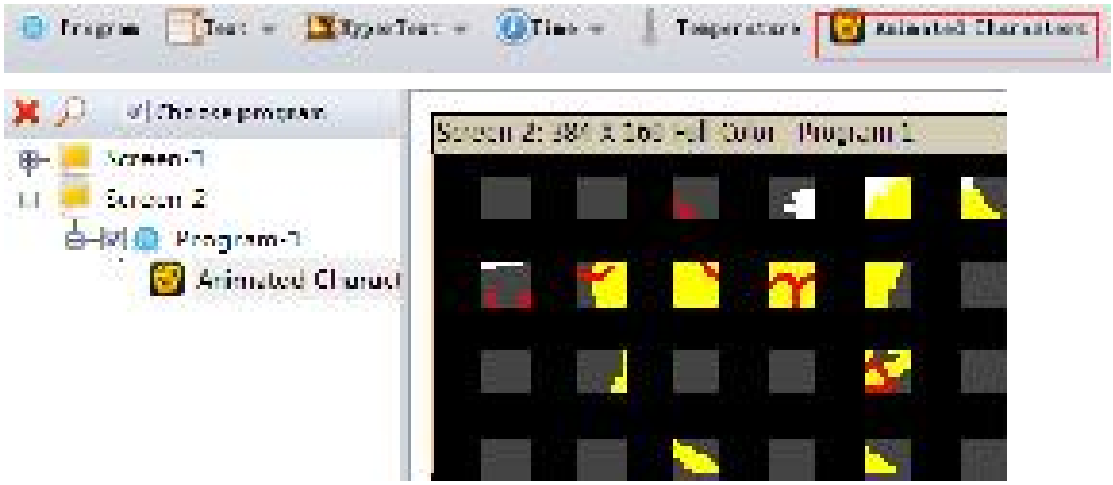
After clicking the “Temperature”, a temperature area (The coordinates, l ength and width can be freely set.) will appear, see below:

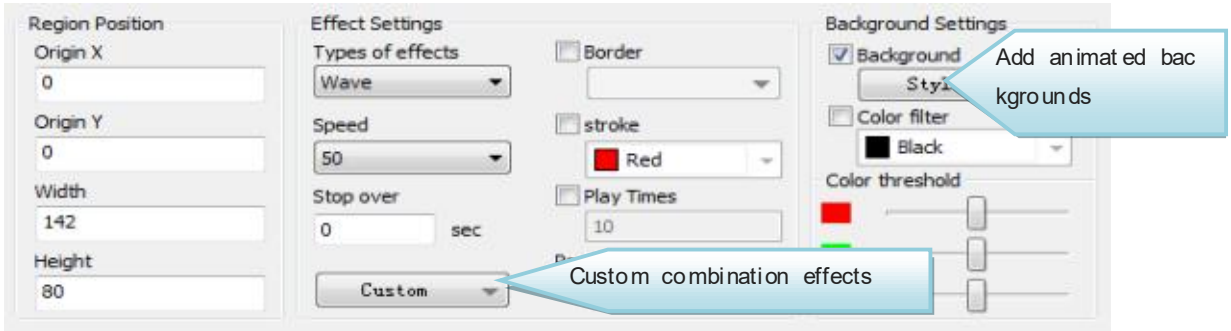




Through the 5.1-5.6 above, you can know that our software can set multi-functional as well as multi-regional content, so that it can be enough to meet the applications in various scenes.

5.8 Animated character display





Animated background support SWF, JPG, GIF and BMP. Image package is one or more still images, multi-frame image is a picture with animation, SWF is flash files. Multi-frame images and SWF type can only add a picture, image package can add multiple pictures.

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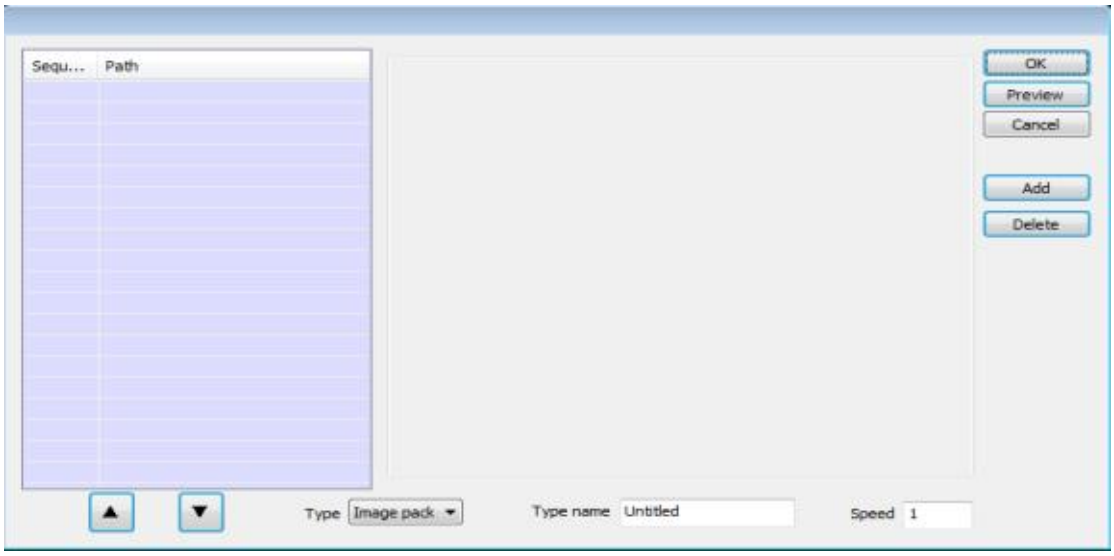
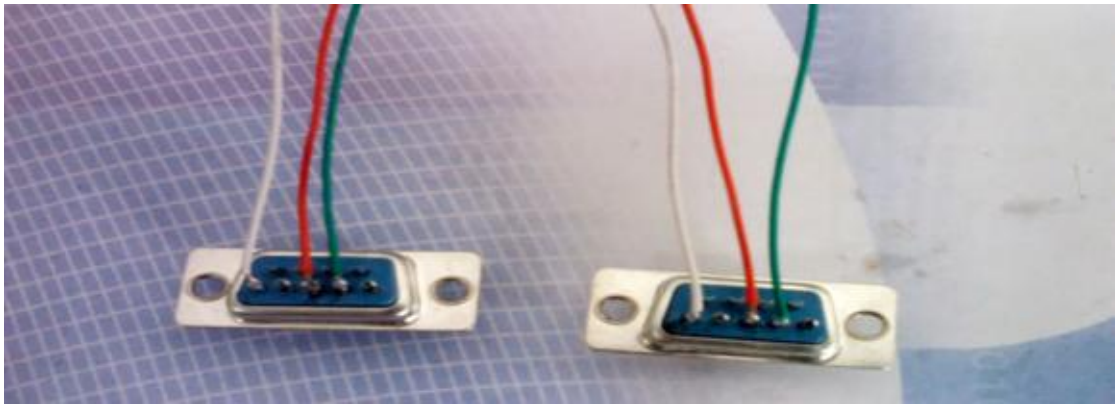


Chapter 6 Communication Settings

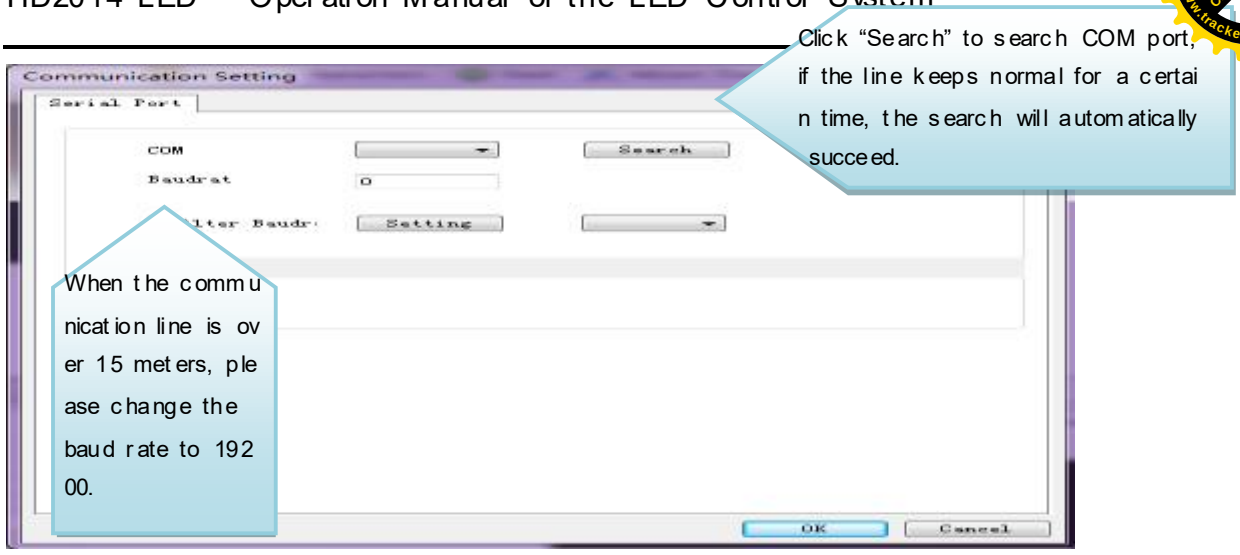
6.1 Production of Serial line

Our system uses the direct RS232 communication line, see below for the finished line:



6.2 Communication settings (serial port)

Methods: Settings - Communication Settings (Please confirm the drive installed correctly when using a USB instead of the serial port.), see be low:



If the communication is free of trouble, the characters “Finish search” will appear; if it breaks down, the characters “Sending is overtime” will be shown on the output window (check whether the communication line is normal, re-plug the serial line and search again if normal.).

6.3 Production of network line

Network line consists of two kinds: overlapping line (Control card connects with computer.) and direct line (Control card connects with router.).

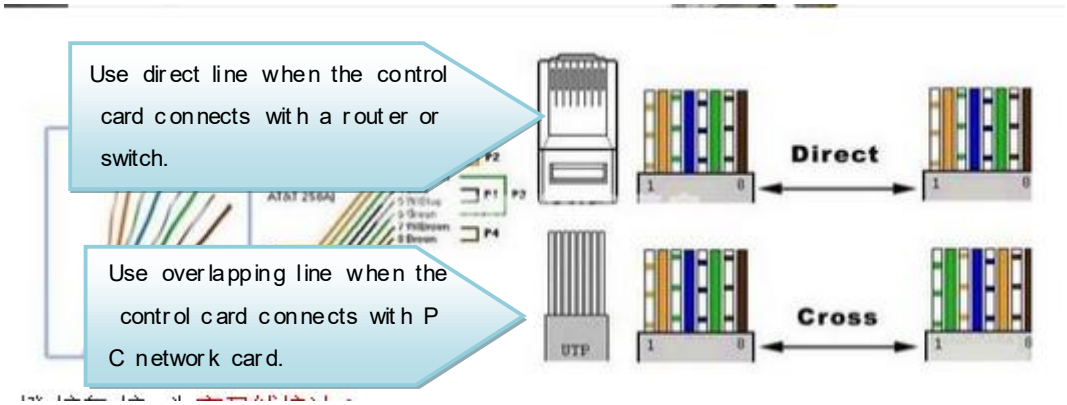
Overlapping line:

The production of two crystal ends is different, one takes TIA/EIA-568B as standard, the other TIA/EIA-568A standard. It is generally used for the same device, such as PC network card and PC network card, HUB common port and HUB common port.

Direct line:

The production of two crystal ends is the same, both of them take the accordant standard, for example, both use the TIA/EIA-568B standard or TIA/EIA-568A standard. It is used between PC network card and HUB common port, and HUB common port and HUB cascading port. Direct line is used so widely that it can applies to all common purposes.

Please use the direct line if the control card connects with a switch.



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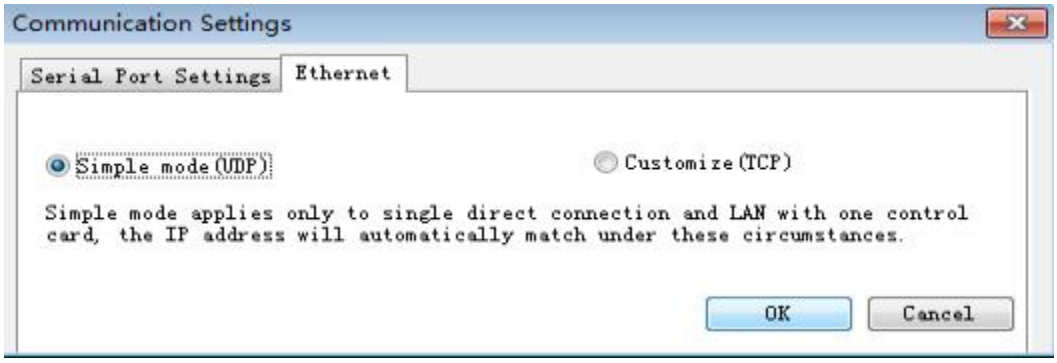
6.4 Communication settings (network interface)

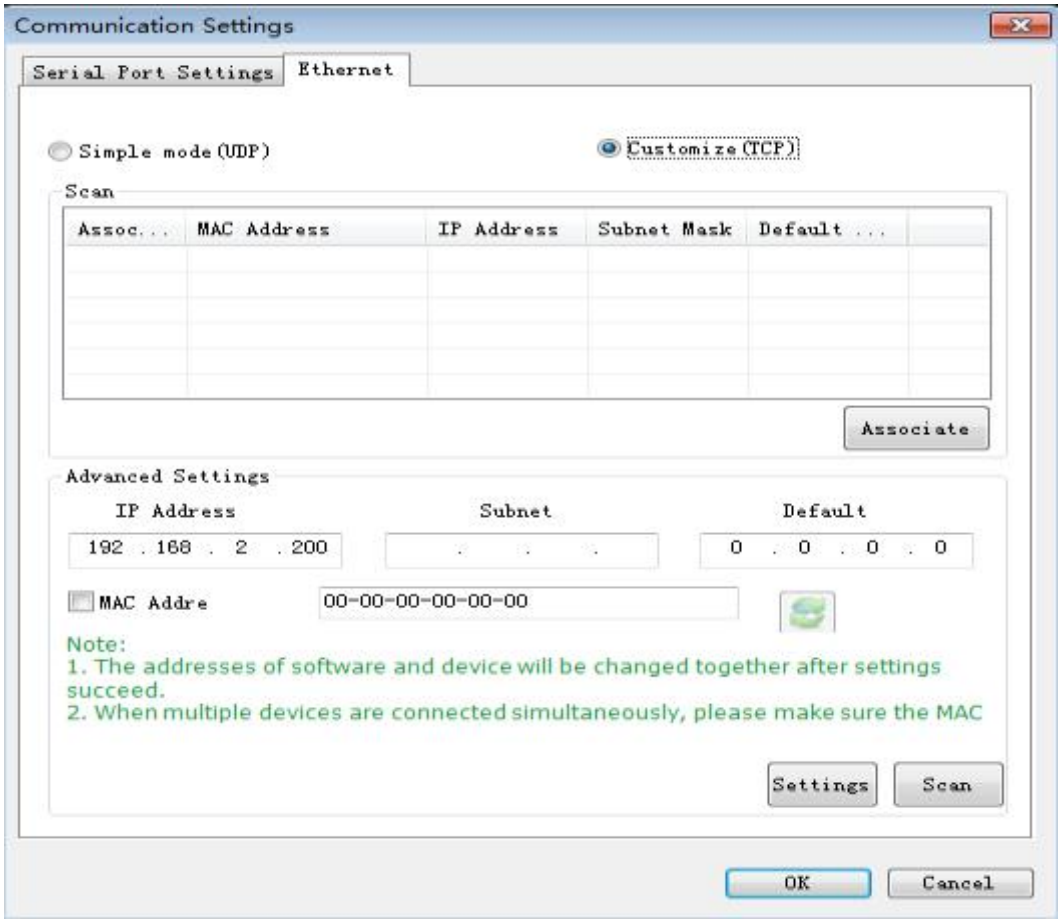
6.4.1 Single network communication in LAN

Methods: Settings - Communication settings, please use the Simplify Mode when only one control card is connected to LAN, see below:



6.4.2 Multiple network card communication in LAN

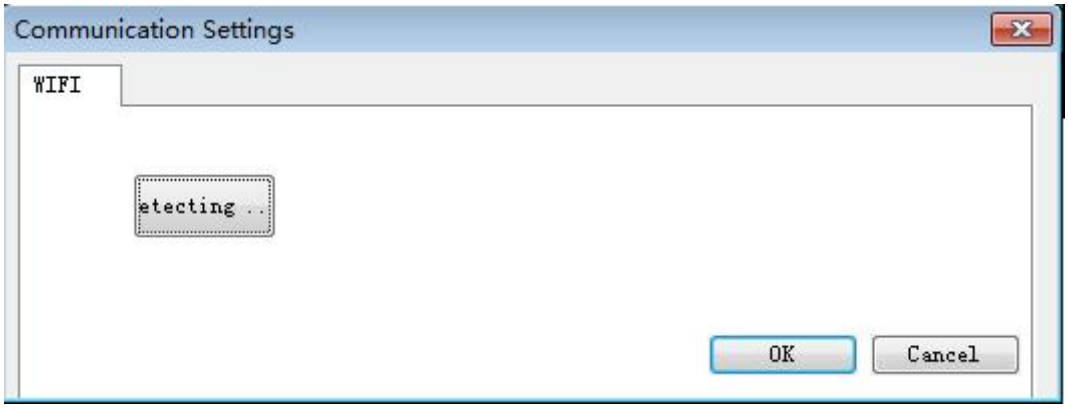
Methods: Settings - Communication settings, when there are multiple network cards to communicate, please use the Customize Mode,as below:



After completing this setting is, you need to reset the IP of each control card in LAN, the methods are as follows: Click the Operation menu-IP Management tools, see below:

6.5 Communication settings（WIFI）

Methods: Connect to wireless network emitted by WIFI card, and set the screen parameter to W40/W42, then detect wireless network through communication settings; if the detecting is successful, you can communicate with control card. See below:



Appendix 2 Common Settings during Use

Appendix 2.1 How to remotely upgrade the control card?

Remote upgrade of control card is mainly used for updating the product's features, or dealing with major bugs, while normal use does not need to be updated, the specific methods are as follows:

Download the corresponding control card firmware (Each product has a

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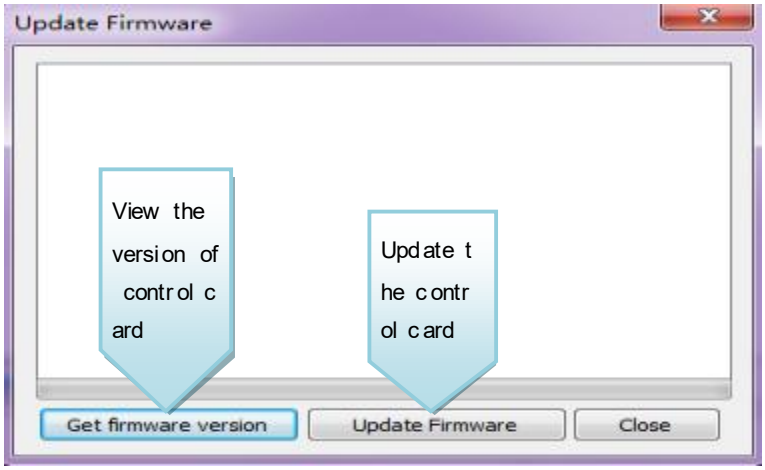
corresponding. Bin file.);

Click Operation> Update Firmware (The code is 168.) >Operation Interface, see below:



Click “Update Firmware” on the interface, select the corresponding bin file, now the operation is completed (Firmware upgrade only can be carried out via RS232 or network port, U disk cannot be updated in this way.).

Note: Keep the power on and do not pull out the serial line during the upgrade.

Appendix 2.2 How to restore the controller card to factory settings?

There are two ways to restore the control card to factory settings: hardware recovery and software recovery.

Hardware Recovery: Firstly power off > manually press the TEST button (do not let go) > power on (do not let go) > hold for six seconds > let go to finish rebooting.

Software Recovery: Software operation > Clear display data (This step is required to be done in the normal communication state.);

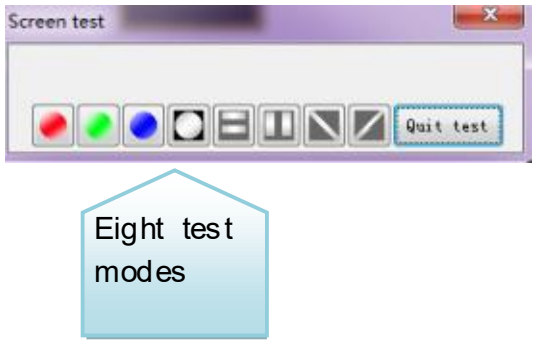
Appendix 2.3 How to test screen with the control card?

There are two ways to test screen: hardware test and software test.

Hardware Test: Adjust the parameters firstly, press the TEST button of the control card (power-on) and hold it for seven seconds, let go after entering test status, then click eight times for eight different test modes.

Software Test: Software operation> Screen Test> Interface for testing,

as below:



Appendix 2.4 Time switch for screen

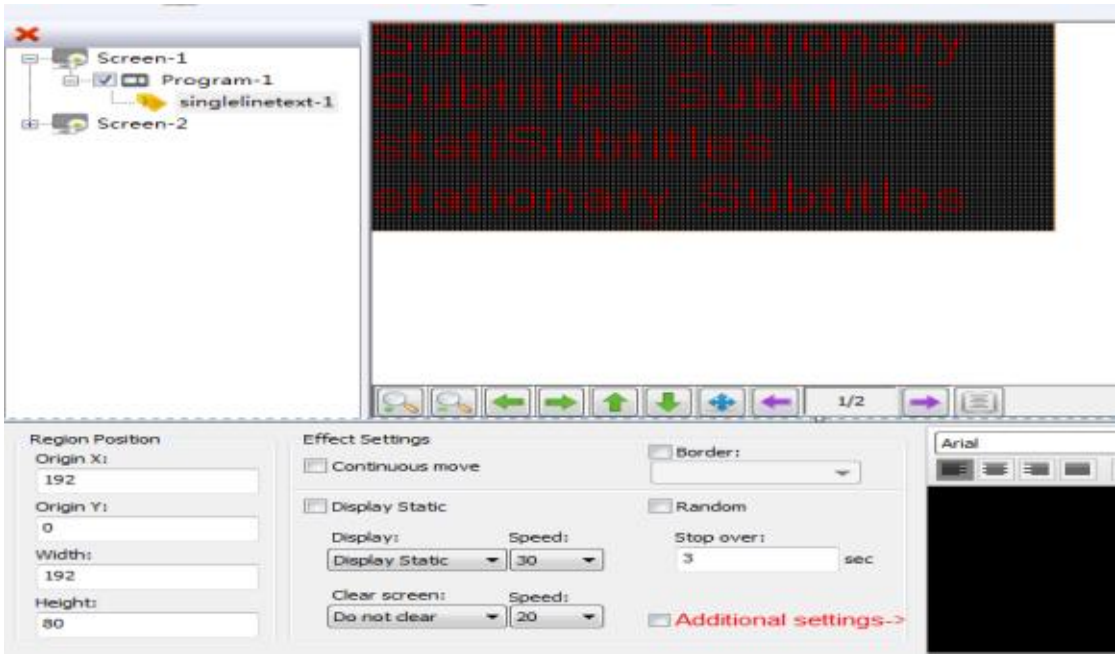
Please refer to 4.1 for screen's time switch settings.

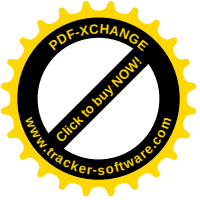
Appendix 2.5 Play screen at a specified time

Please refer to 4.2 for playing screen in a specified period and at a fixed time.

Appendix 2.6 How to set subtitles to be stationary?

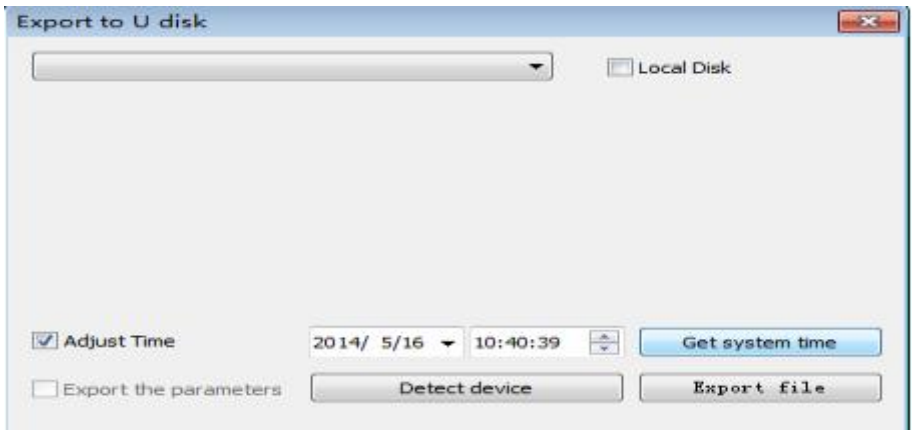
Setting the subtitles to be stationary must be done in the Text window, see below:





Appendix 2.7 Export to U disk

Export Content: After the program is completed, plug the U disk, then just select the "Export to U disk"; if the program contains a time area, you need to adjust the time before exporting in order to ensure the accurate time. See below:

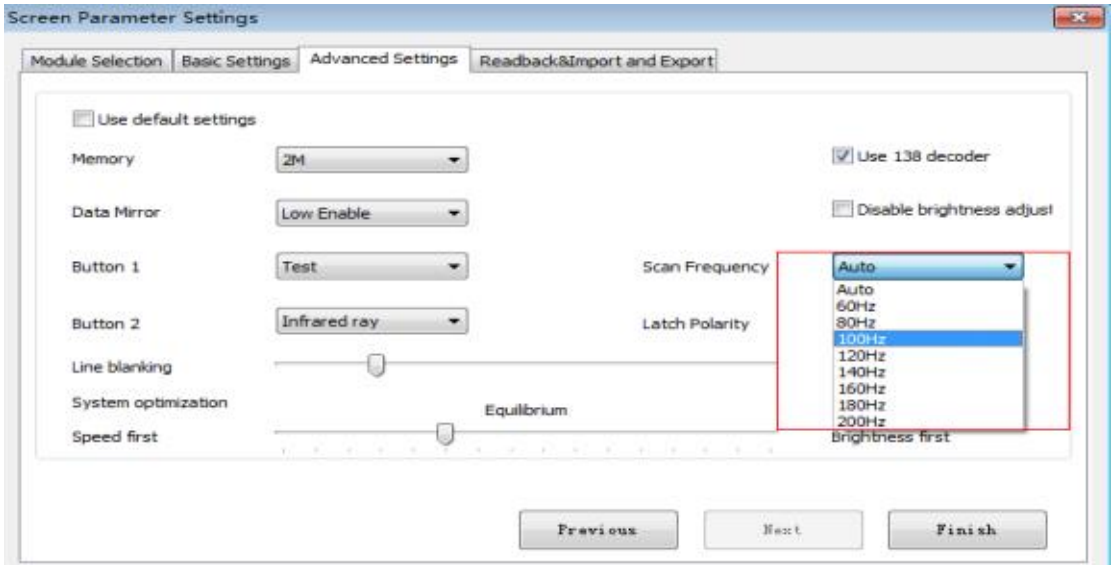


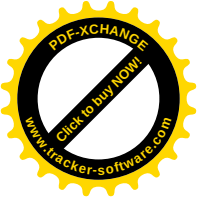
Adjust the time for U disk: Select the "Adjust time" before exporting, you can use the system time, or set it by yourself.

Luminance Settings: Set the luminance according to your own requirement, the current luminance will be displayed when you re-export the content.

Appendix 2.8 Common solutions to uneven luminance on the screen

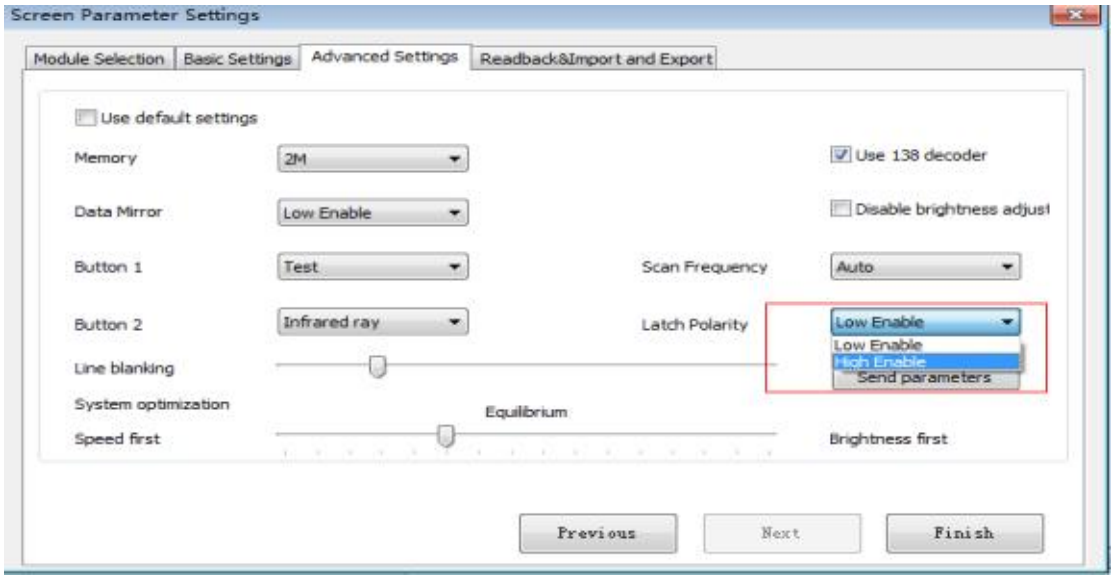
1, Change the frequency to 100% or other values under the advanced settings of screen parameter settings, see below:



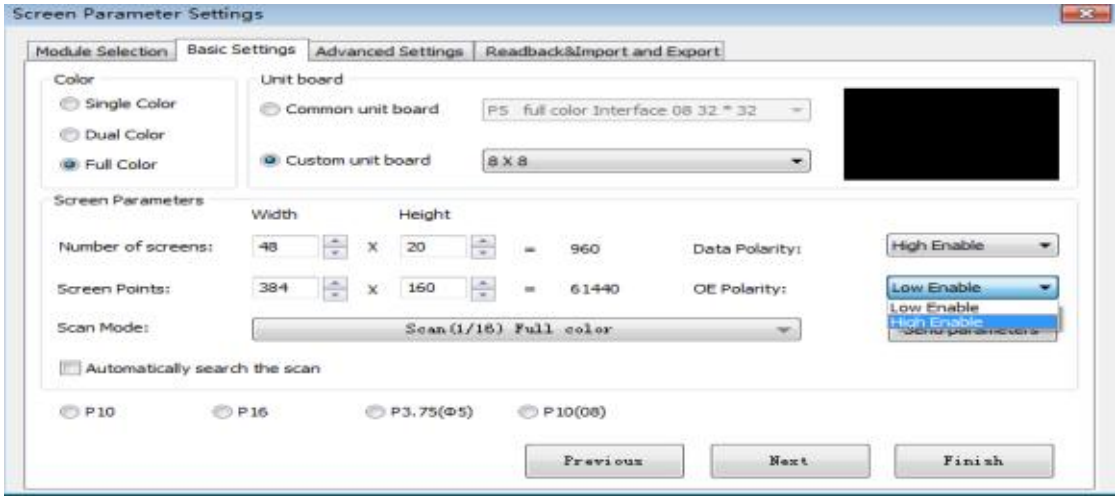


2, Set the value of speed and luminance to 5,6,7,8, that is to say, drag the progress bar to the right, as the bottom red box in the picture above shows.

3, Modify the value of latch polarity.



4, Switch the value of OE polarity.



Appendix 2.9 Operation of buttons on the control board

Button S1 / test: 1, Test screen. Press this button for about 3 seconds when the screen is bright, all the lights will turn red, it has entered screen test at this moment; if you press it again, the red, green, blue and white lights will be bright at the same time, see below:

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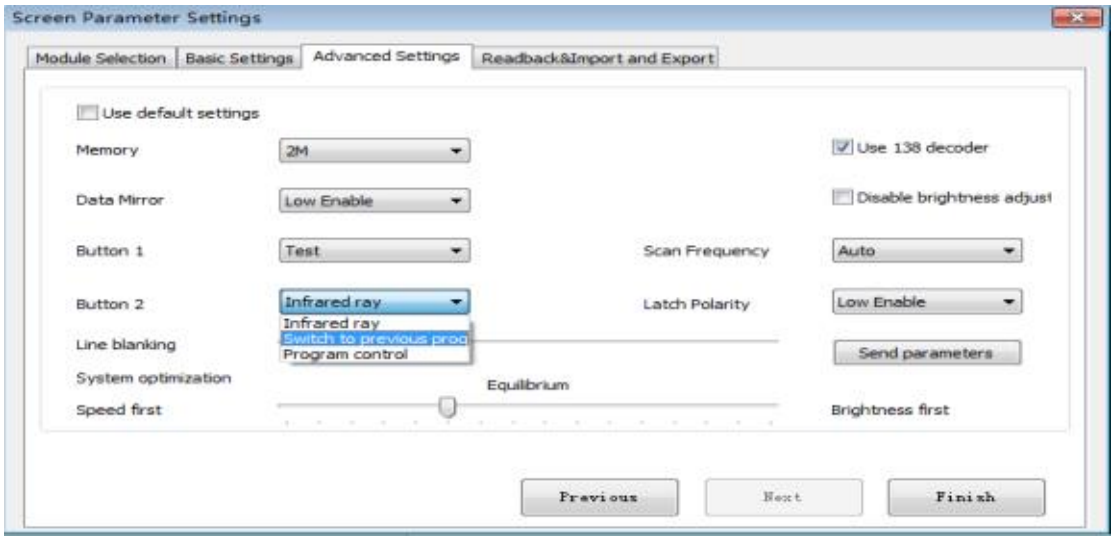
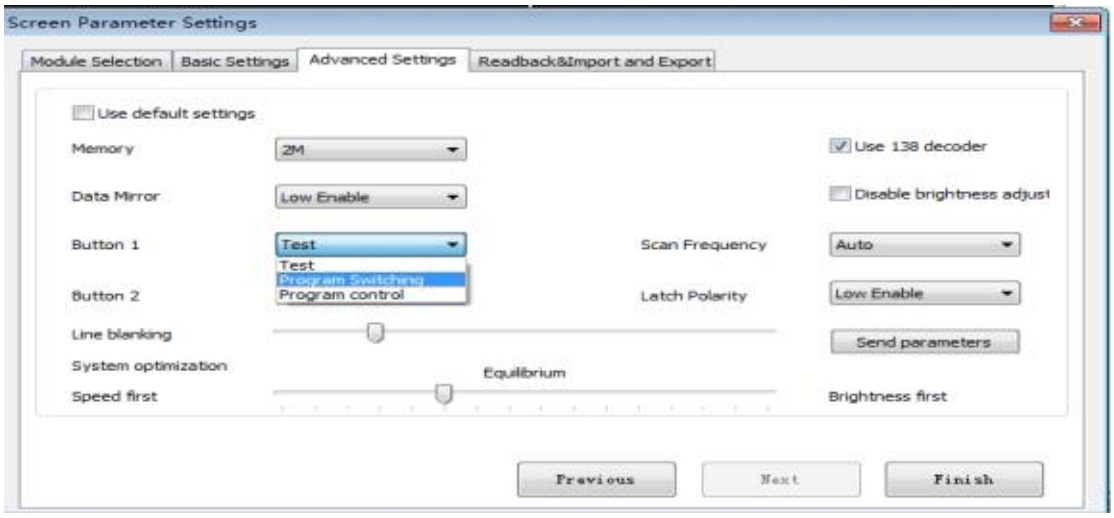
2, Press this button and hold it for about 5 seconds after the control card is power on, all the contents in the control card will be cleared.

Button S2 / RGB: 1, Switch to previous program:

AQ0 card needs to set the button 2 to “Switch to previous program" under the advanced settings, and send the content to the control card, now it can be switched normally. See below:



E43/G3 cards cannot switch to the previous program normally unless set the button 1 is set to "Program Switching" under the advanced settings, see below:



2, If the S2 button can switch programs normally, please turn the control card off, press and hold this button to turn the power on, three lights of the control card will be bright and one is dark, now the firmware has been cleared. If you want to use the control card again, you must update the latest firmware.

AQ0 card can use this function only when the button 2 is set to "Switch to previous program", while E43/ G3 cards must set the button 1 to “Program Switching”, see above.