



DWIN_HMI USER GUIDE

Beijing DWIN Technology Co., Ltd.



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Instruction

Step1. Open the product package

Accessories:

- DWIN HMI (UART LCM) x1
- DB9 connecting cable x1
- Compact Disc x1
- Double 8 PIN connecting cable x1

Step2. Prepare Terminal Assistant.

- Click by <http://www.dwin.com.cn/en/download.aspx?id=12> or copy correlative software from accessory CD.

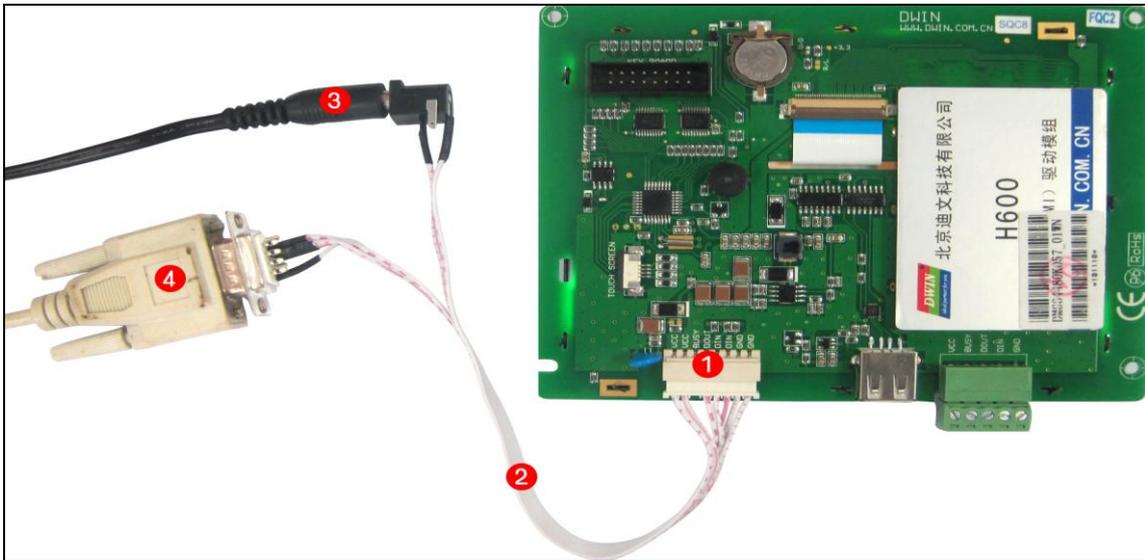


- Install Framework 2.0 at first. This software needs support of Microsoft .NET Framework 2.0 or higher version.
- Download Terminal Assistant_v5.6 and extract it.

Step3. Connect TFT LCD Module with PC

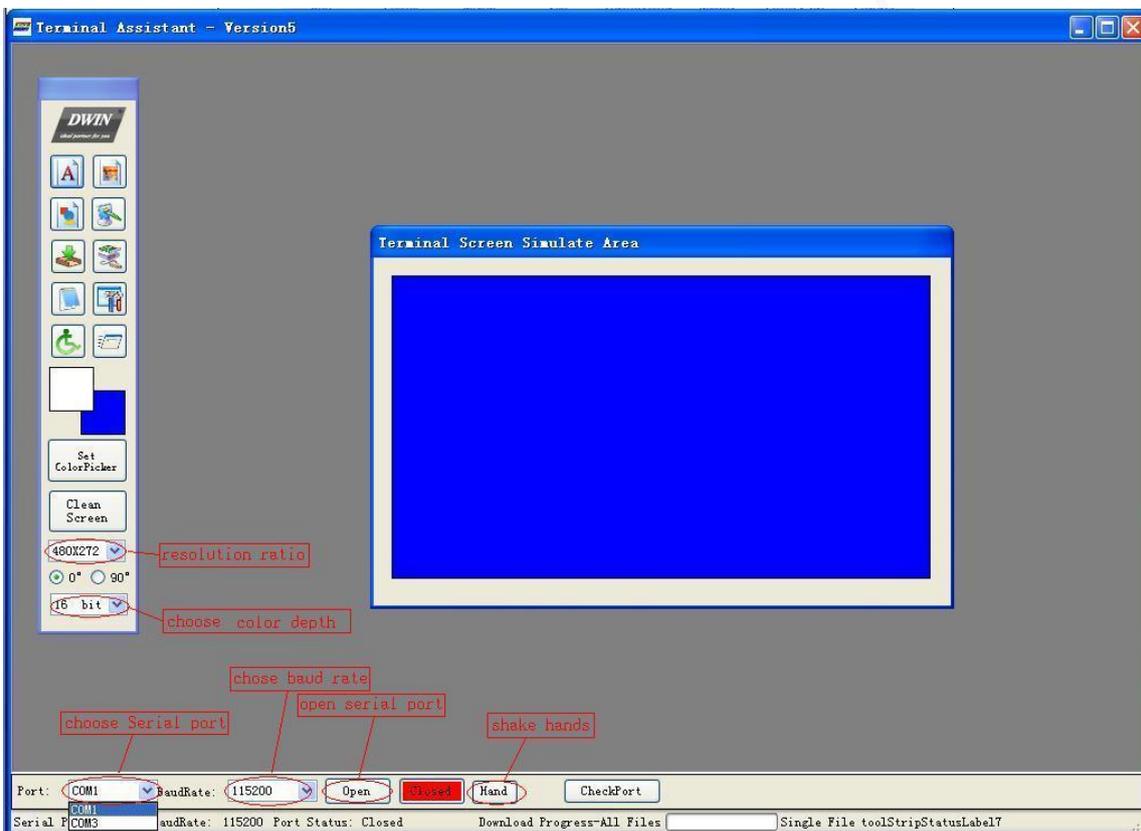
Connect TFT LCD Module with PC as the following picture.

- ① HMI (UART LCM)
- ② DB9 connecting lin
- ③ Power (voltage range caution)
- ④ Serial port of PC



Step4. Shake hands

Double click TerminalAssistant_v5.6.exe



1. Choose resolution ratio and color depth recording to HMI
2. Choose the serial port and baud rate you are using. (default baud rate is 115200)
3. Click button "Open"
4. Click button "Hand"
5. Pop-up Window means that communication between HMI and PC is normal.



Step5. Software operation method



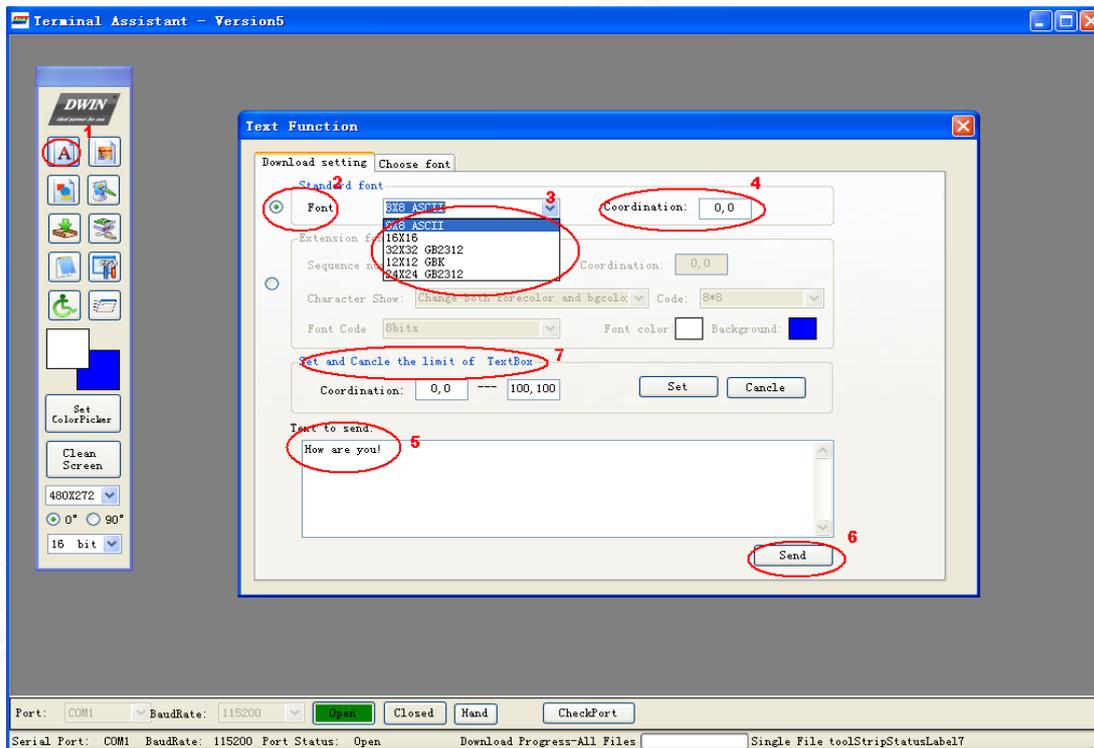
1. Text operation

● Font

- (1) Open "Text Operation"
- (2) Click "Font"
- (3) Select one of five fonts (pre-installed before delivery) you will use.

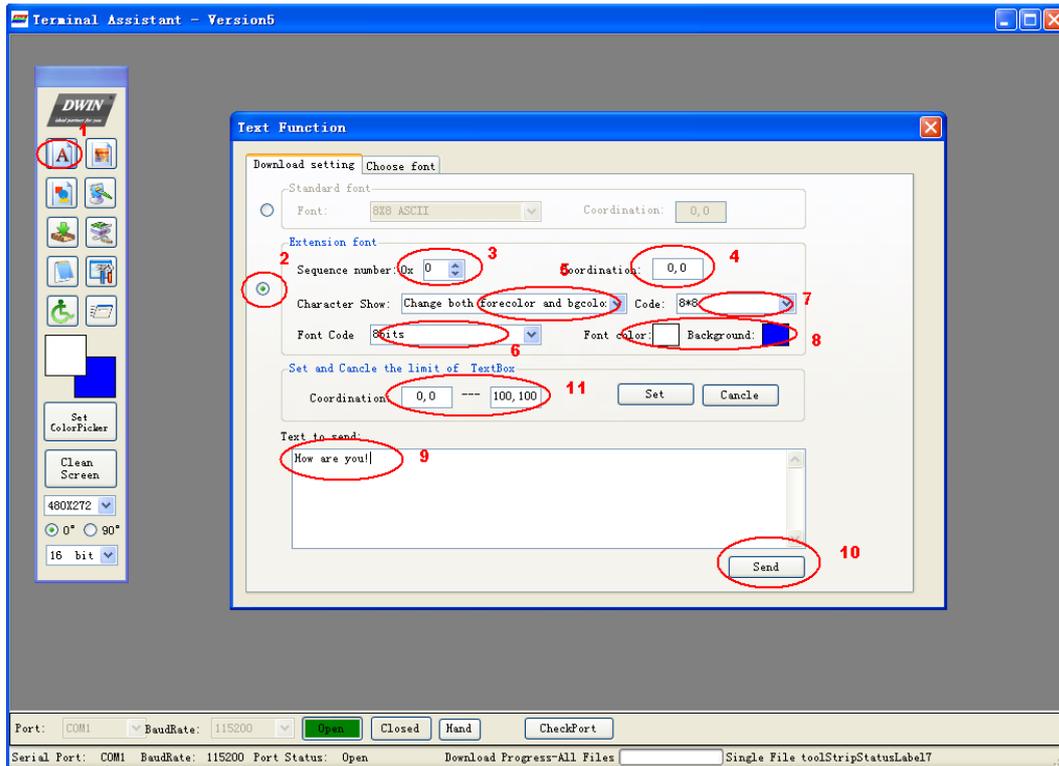
Note: The five fonts are 8*8 ASCII, 16*16 GBK, 32*32 GB2312, 12*12 GBK, 24*24 GB 2312, among which, the last four are for Chinese. So, they can be ignored.

- (4) Select your desired coordinate at which the words will be displayed, such as (0, 0).
- (5) Enter some words you want to be shown on the screen, such as "How are you?"
- (6) Click "Send", the display will show "How are you?" at (0, 0).



- (7) Set the limit of textbox if you need.

● **Extension Font**

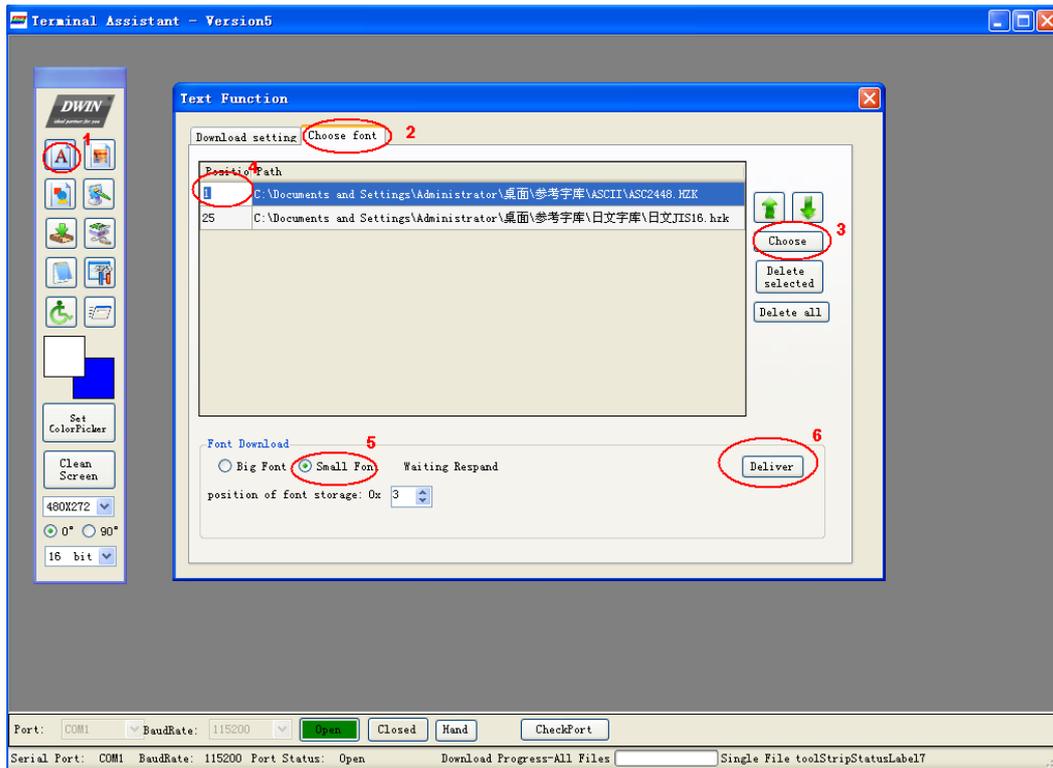


- (1) Open Text operation
- (2) Select "Extension font"
- (3) Select Sequence number you want to use
- (4) Choose the coordination you desired
- (5) Choose character show, such as "change both forecolor and bgcolor"
- (6) Select font code according to the font you are using
- (7) Choose size of the font you use
- (8) Choose color you preferred
- (9) Send words "How are you!" for example
- (10) Click "send"
- (11) Set the limit of textbox if you need

● **Choose font**

This item is used to download newly-made font file into the display module. Take downloading Hebrew 24*24 into the display module and saving it as font library 0x01 for example.

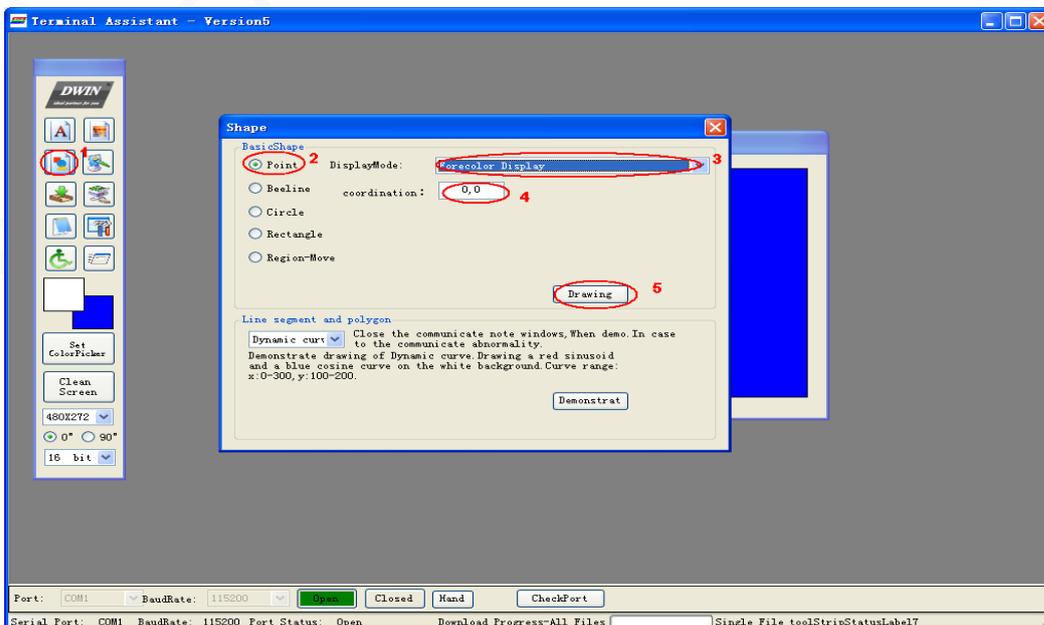
Note: Font library ID ranges from 0x00 to 0x3B. 0x00-0x1F is for 32 small font library of maximum 128KB. 0x00=ASCII 8*8. 0x20-0x3B is for 28 font Library of maximum 1MB. 0x20, 0x21, 0x22, 0x23 are for Chinese font. Please don't change Lib_ID of the five pre-installed font. Otherwise, some text display commands will be meaningless.



- (1) Click "Text operation"
- (2) Click "choose font"
- (3) Click "choose" to load font in your PC.
- (4) Adjust "position path" to download font in the position you preferred
- (5) Smaller than 128KB select "small font", or select "Big font"
- (6) Click "Deliver"

2. Shape

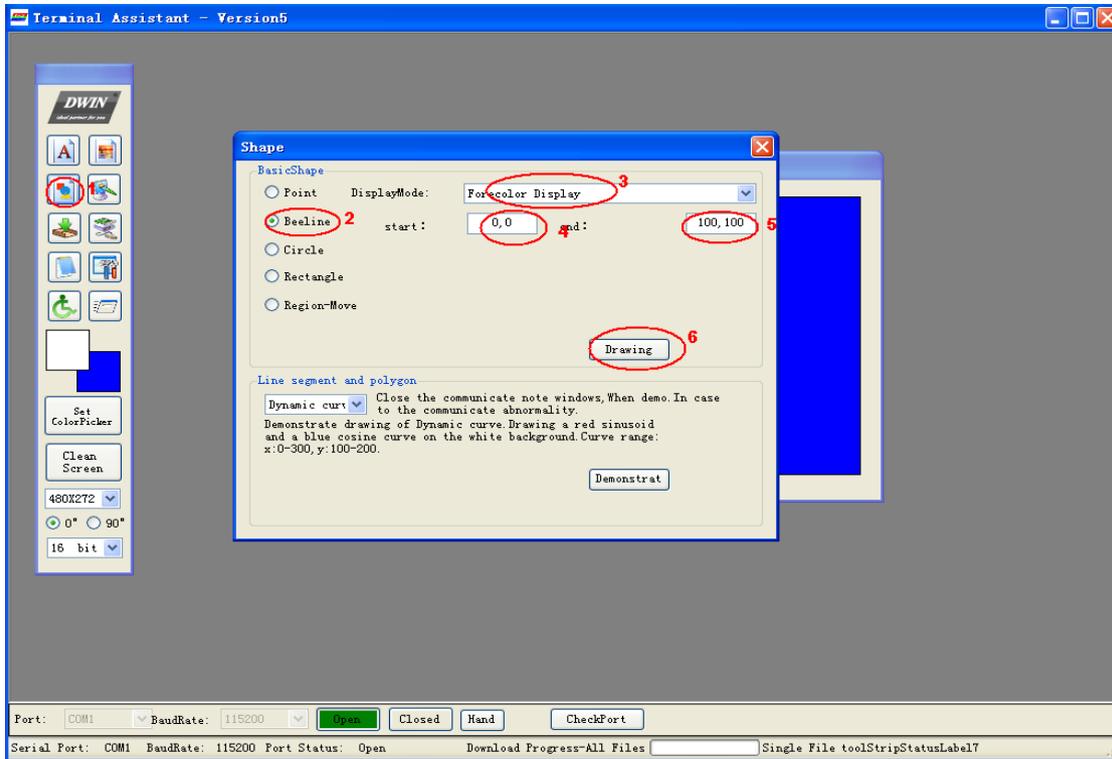
- **Point**



- (1) Open "Shape Operation"

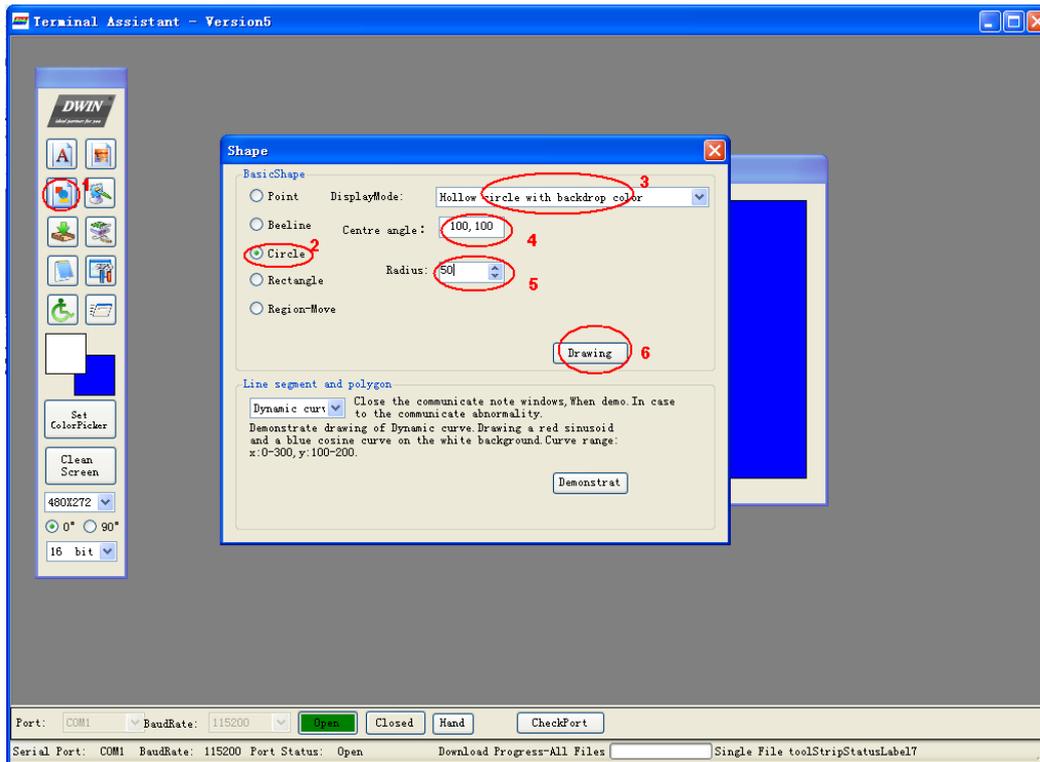
- (2) Select either of two display modes: " Forcolor Display" or "Bgcolor Display". The default color is white and the default background color is blue
- (3) Select your desired coordinate at which the point will be displayed
- (4) Click "Drawing"

● **Beeline**



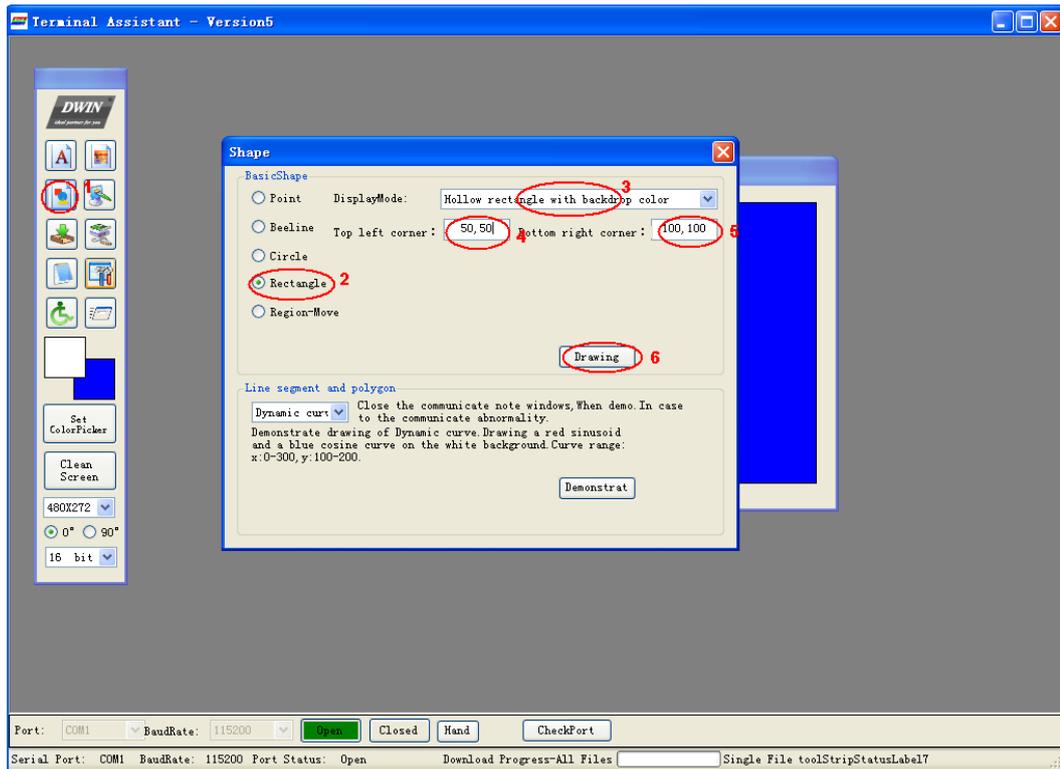
- (1) Open "Shape Operation"
- (2) Click "Beeline"
- (3) Select either of two display modes: " Forcolor Display" or "Bgcolor Display".
- (4) Select your desired coordinate as the start position of the beeline.
- (5) Select your desired coordinate as the end position of the beeline.
- (6) Click "Drawing"

● Circle



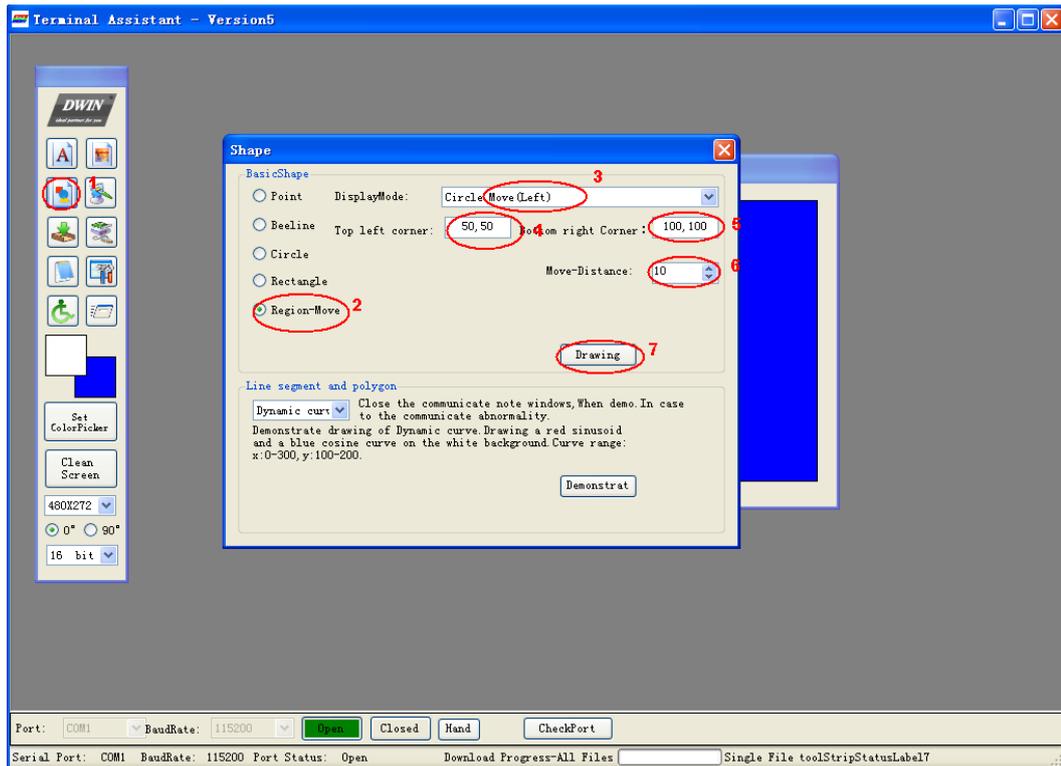
- (1) Open "Shape Operation"
- (2) Click "Circle"
- (3) Select Display Mode from four options: "Hollow circle with opposite color", "Hollow circle with forecolor", "Solid circle with opposite color" and "Solid circle with forecolor" according to the specific requirement.
- (4) Select Centre angle which is the coordinate of the center of a circle.
- (5) Select Radius
- (6) Click "Drawing"

● Rectangle



- (1) Open "Shape Operation"
- (2) Click "Rectangle"
- (3) Select Display Mode from five options: "Hollow rectangle with opposite color", "Hollow rectangle with forecolor", "Solid rectangle with opposite color", "Solid rectangle with forecolor" and "Clean rectangle area" according to the specific requirement.
- (4) Select coordinate of the top left corner of the rectangle.
- (5) Select coordinate of the bottom right corner of the rectangle.
- (6) Click "Drawing"

● Region-Move

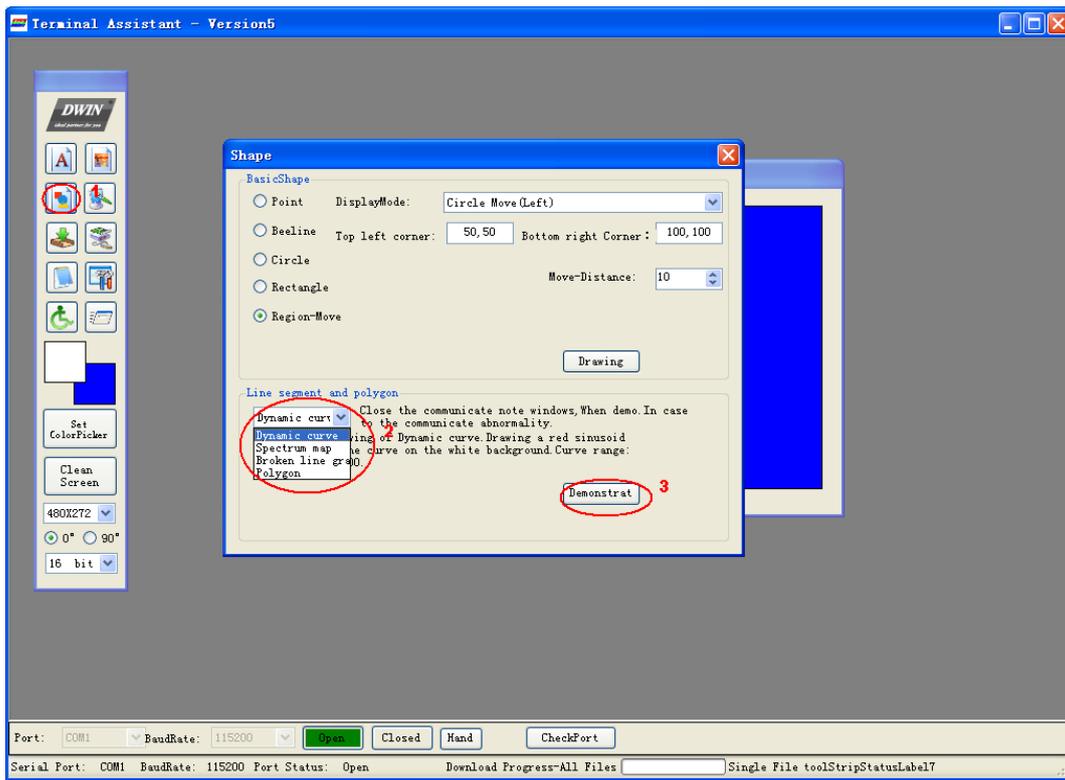


- (1) Open "Shape Operation"
- (2) Click "Region-Move"
- (3) Select Display Mode from five options: "Circle Move (Left)", "Circle Move (Right)", "Move to left" and "Move to right".

Note: For option "Circle Move (Left)", the selected area moves from far-left to far-right with no part missing. For option "Move to left", the selected area moves from right to left with far-left area missing and the missing part will be filled by background color.

- (4) Select coordinate of top left corner of the area that needs to be moved.
- (5) Select coordinate of bottom right corner of the area that needs to be moved.
- (6) Select move distance. 1 means one dot matrix.
- (7) Click "Drawing".

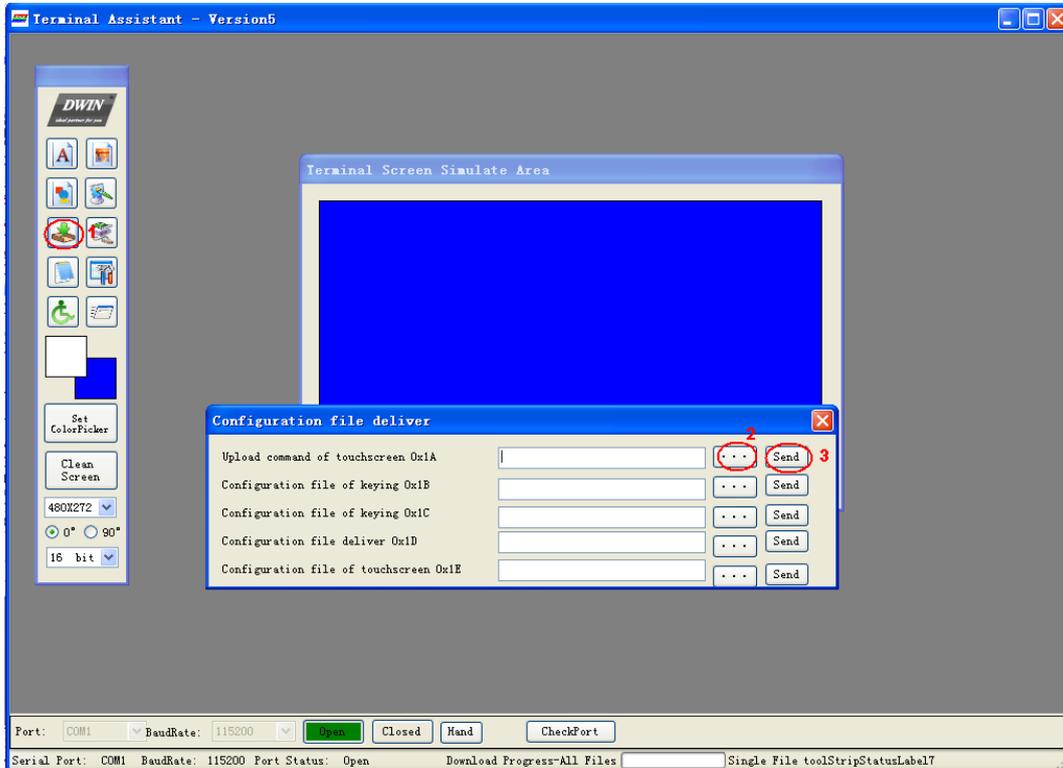
● **Line segment and polygon**



- (1) Open "Shape Operation"
- (2) Select line you desired
- (3) Click "Demon start"

3. File download

Note: This is to download some configuration files into the display module to realize some simple operating system function. In this way, less code workload will be required for the software engineers.



(1) Open "File download"

(2) Click "..." to find the configuration files you want to download

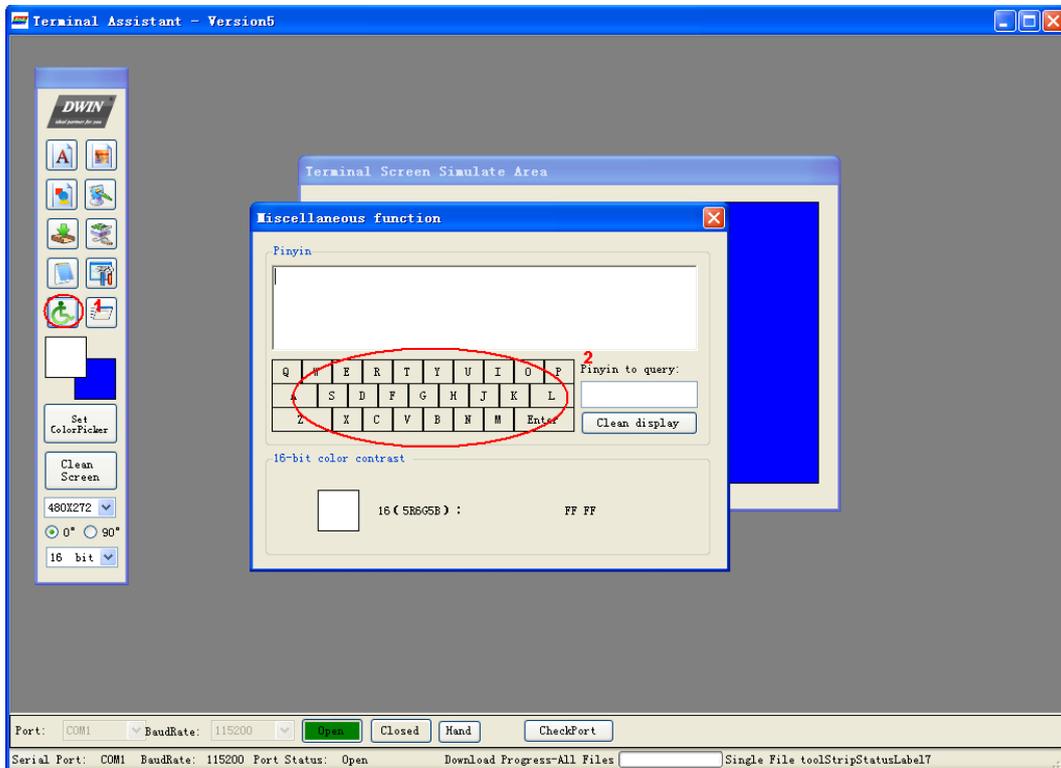
Note: configuration files include 1A,1B,1C,1D, 1E configuration file, please download them in the corresponding position.

(3) Click "Send"

5. Miscellaneous function

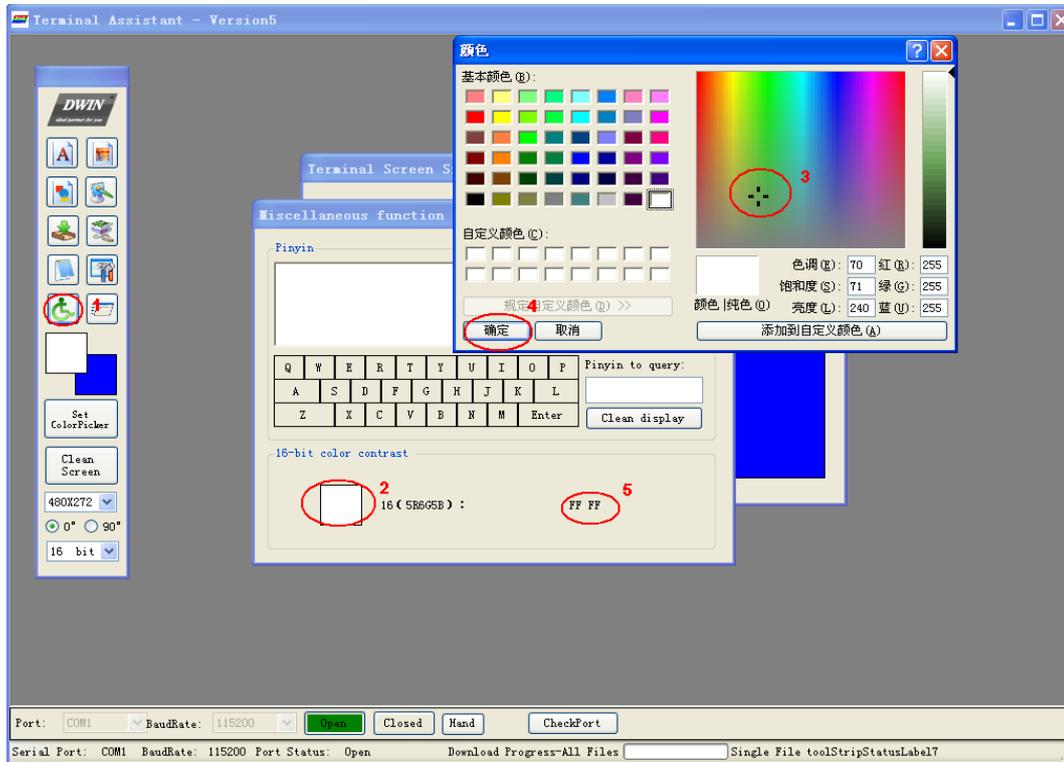
● Pinyin

Note: Pinyin is something in Chinese like phonetic symbols in English. Please ignore this function.



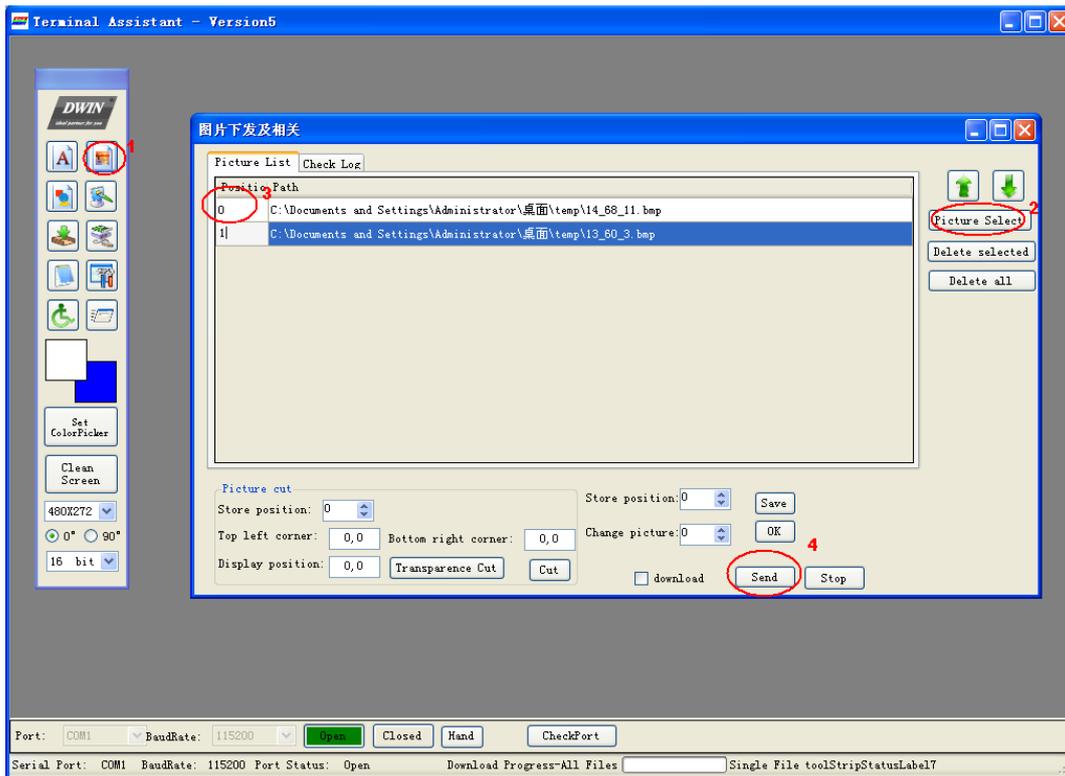
● 16-bit color contract

Note: This is to obtain color value of Hex. The color value is often used when setting fore color, background color and text color.



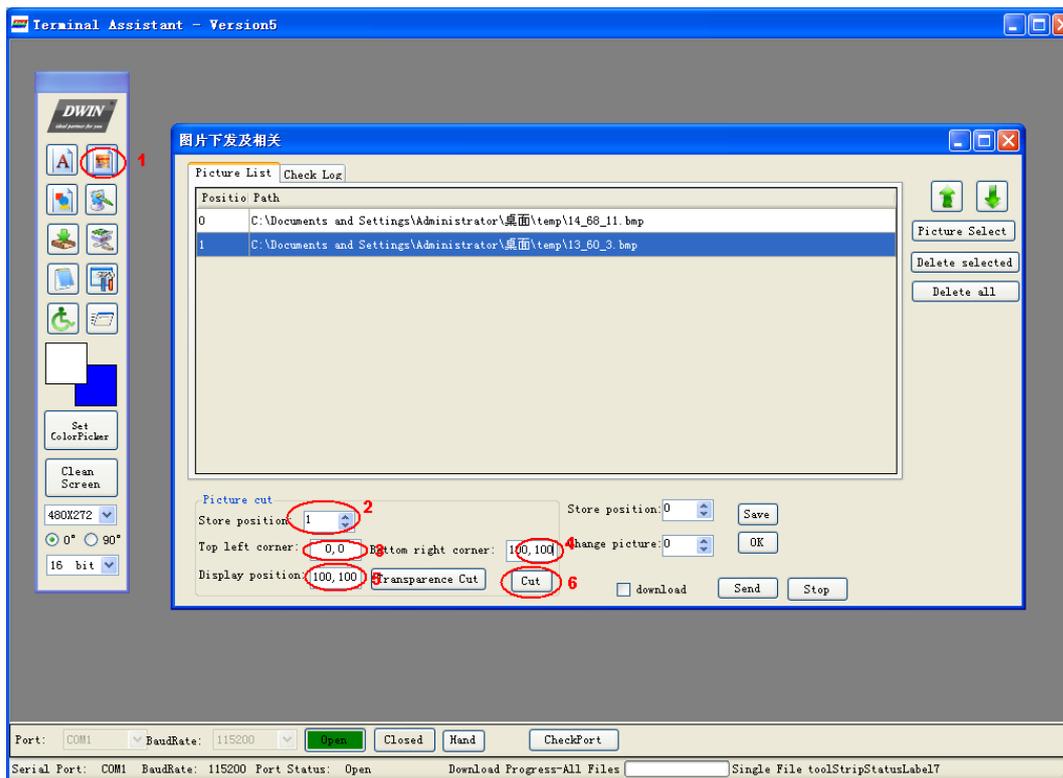
- (1) Click "Miscellaneous function"
- (2) Click the square. The default color is white
- (3) Select one kind of color
- (4) Click "OK"
- (5) Color value of Hex will appear as the color value. Then you can use the value to send some command related to color, such as Command 0x40, 0x98 and so on.

1. Picture Download



- (1) Click "Picture download"
- (2) Click "Picture Select", selecting the pictures you need to save into the display module
- (3) Assign the PIC_ID for the pictures you need to save in the display module. The PIC_ID starts from "0".
- (4) Press "Send".

● **Picture cut**



(1) Click "Picture download"

(2) Select the Pic ID of the picture that you are going to use.

Note: The pictures shall be pre-saved in the display module.

(3) Select the coordinate of top left corner of the picture you are going to cut

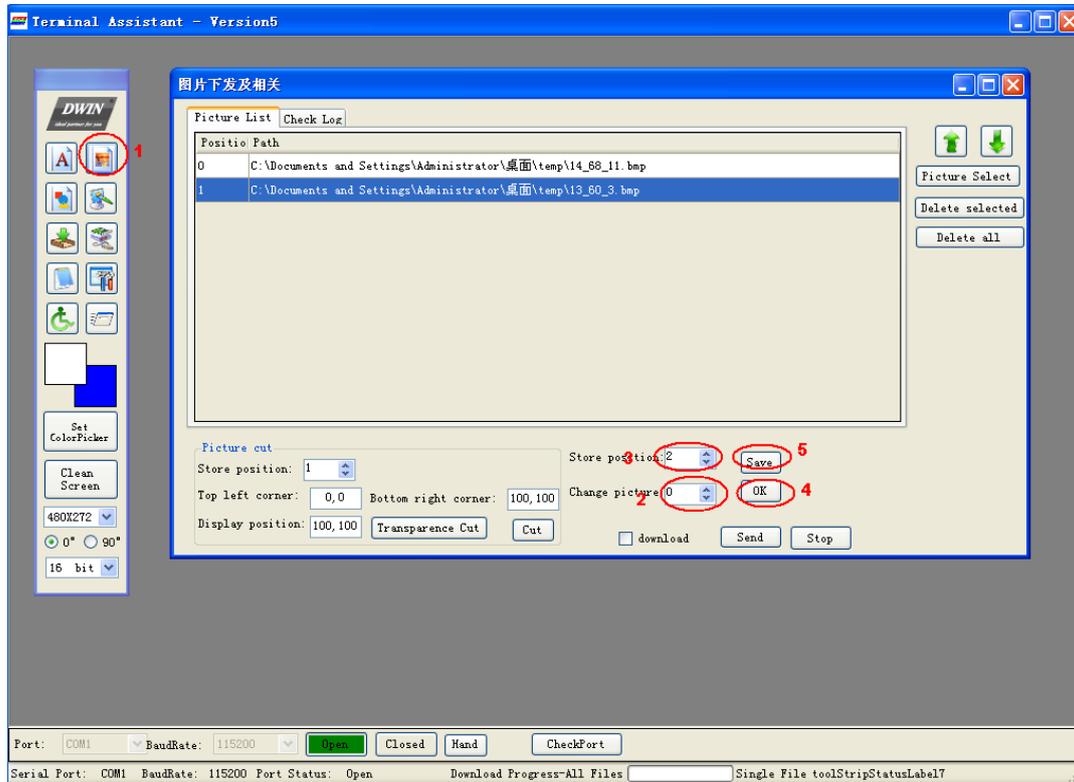
(4) Select the coordinate of bottom right corner of the picture you are going to cut.

(5) Select the coordinate (top left corner), at which the cut picture will show on the current screen.

(6) Click "Cut".

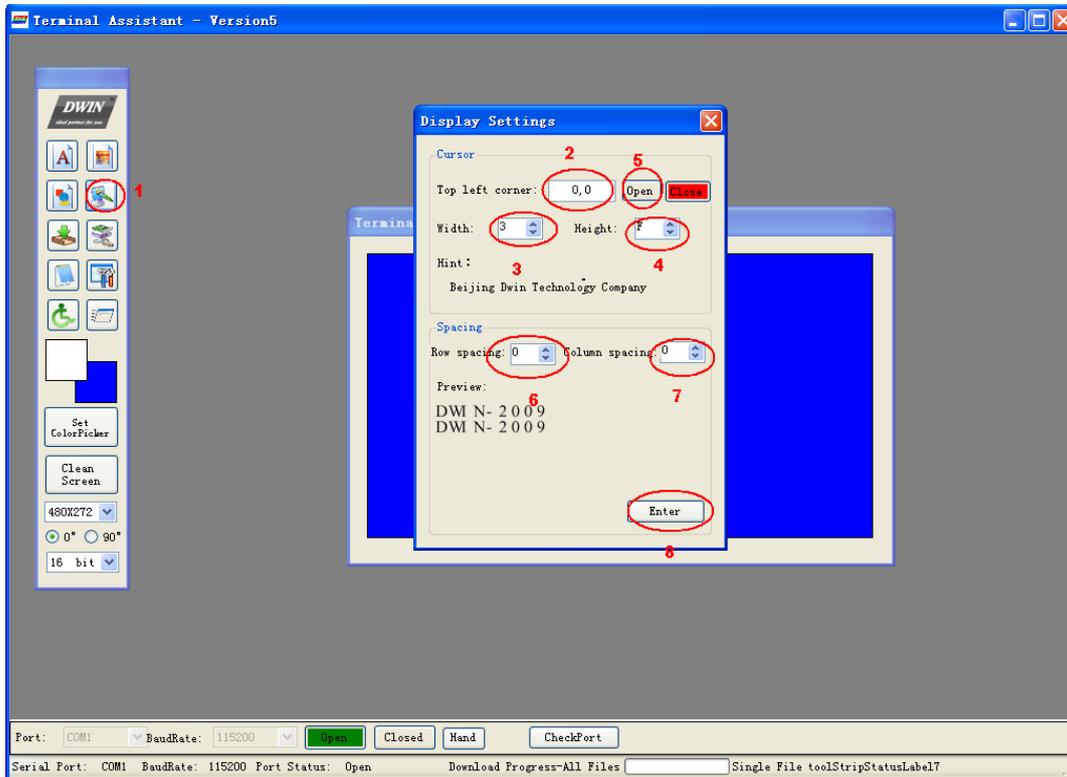
● Change picture

This function used to change picture displayed on the HMI, and save one picture in another position.



2. Display Setting

● Cursor and spacing



(1) Click "Display setting"

(2) Select coordinate of top left corner of the cursor

(3) Select width of the cursor

(4) Select height of the cursor

(5) Click "Open" , then the cursor will appear at prescribed position.

If you don't need the cursor, click "Close". Then the cursor will disappear from the screen.

(6) Select row spacing of character

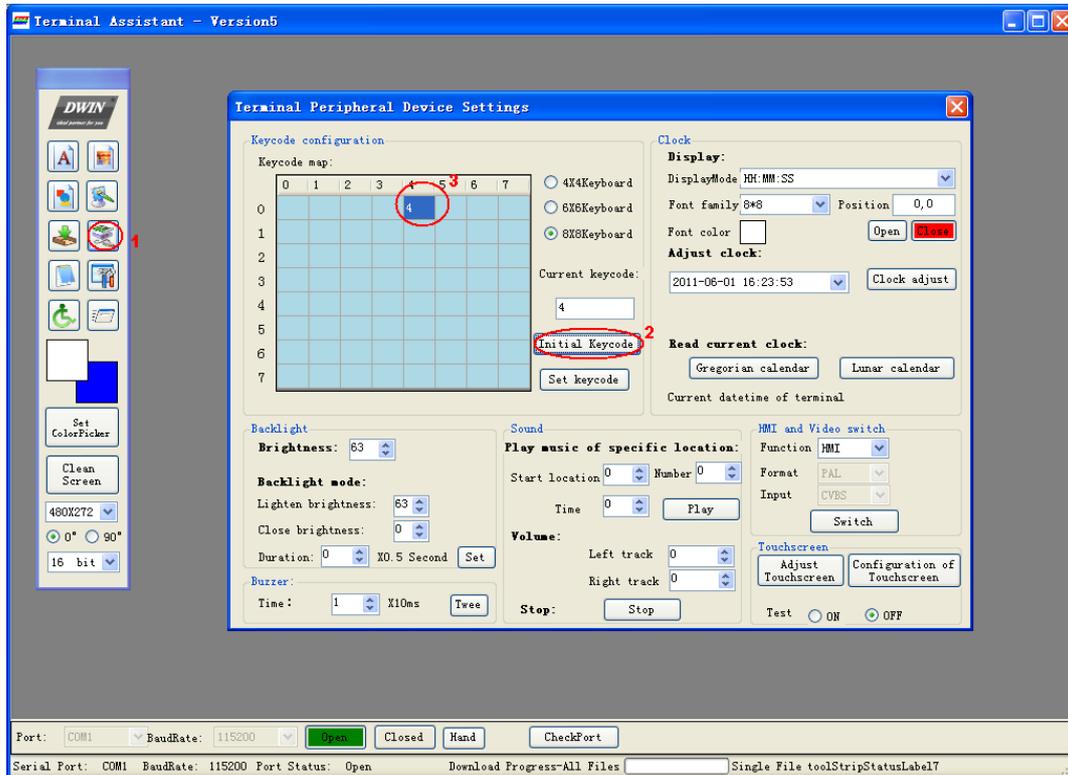
(7) Select column spacing of character

(8) Click "Enter", the spacing will be according to the set value.

3. Peripheral Device

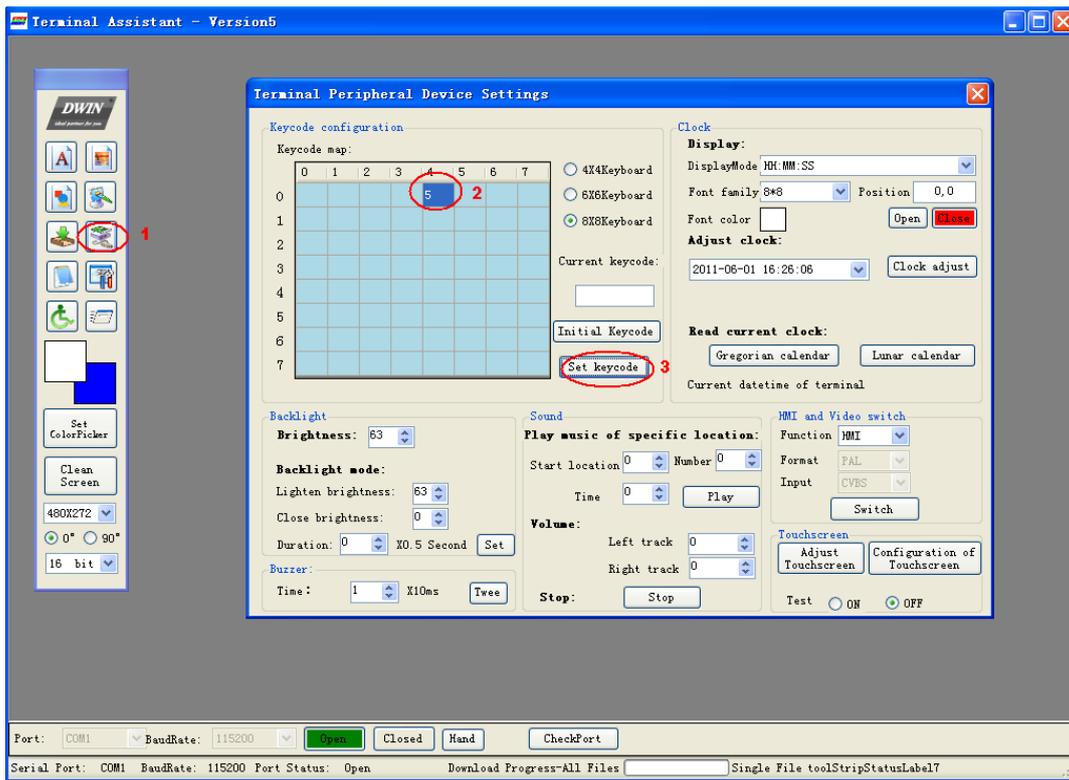
● Key code configuration

Note: This interface is mainly for making configuration file of keying. If you don't need keyboard as peripheral device, this function can be ignored. Take 8*8 keyboard for example.



- (1) Click "Peripheral Device"
- (2) Select "8x8 Keyboard"
- (3) Click "Initial Keycode" for Initialization
- (4) Press one key, then "4" will appear on "Current keycode".

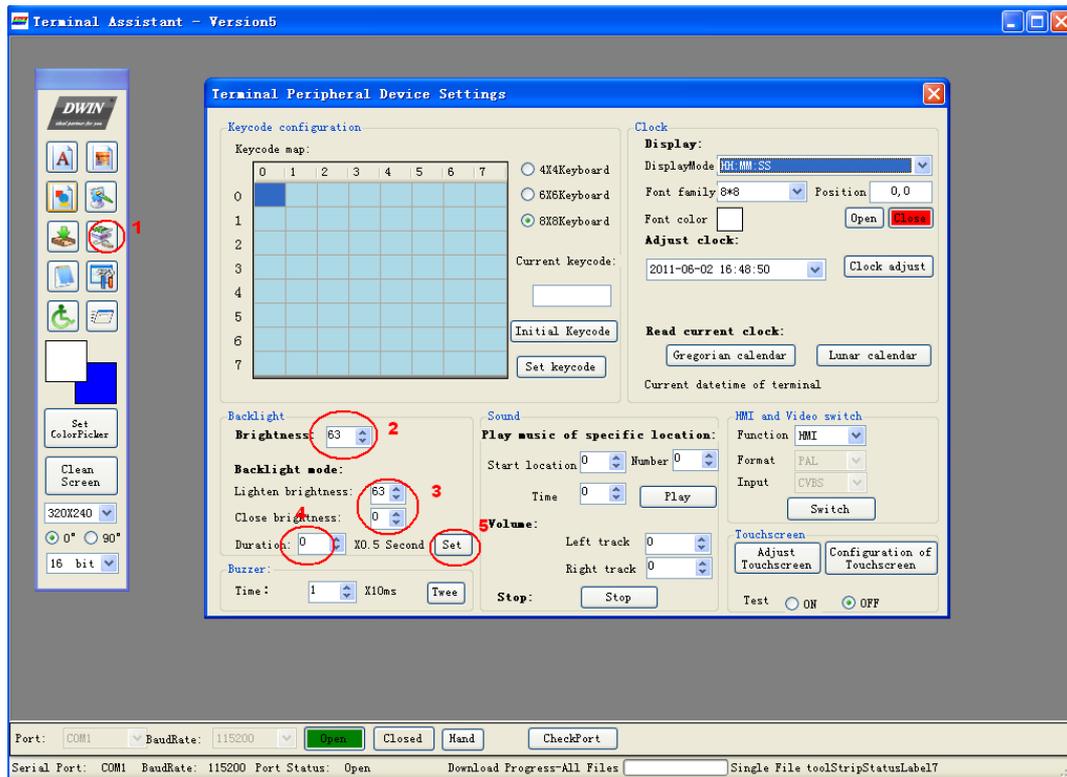
● Set keycode



- (1) Click "Peripheral Device" and Select "8x8 Keyboard"
- (2) Input a keycode you desired
- (3) Press "Set keycode"

● Backlight

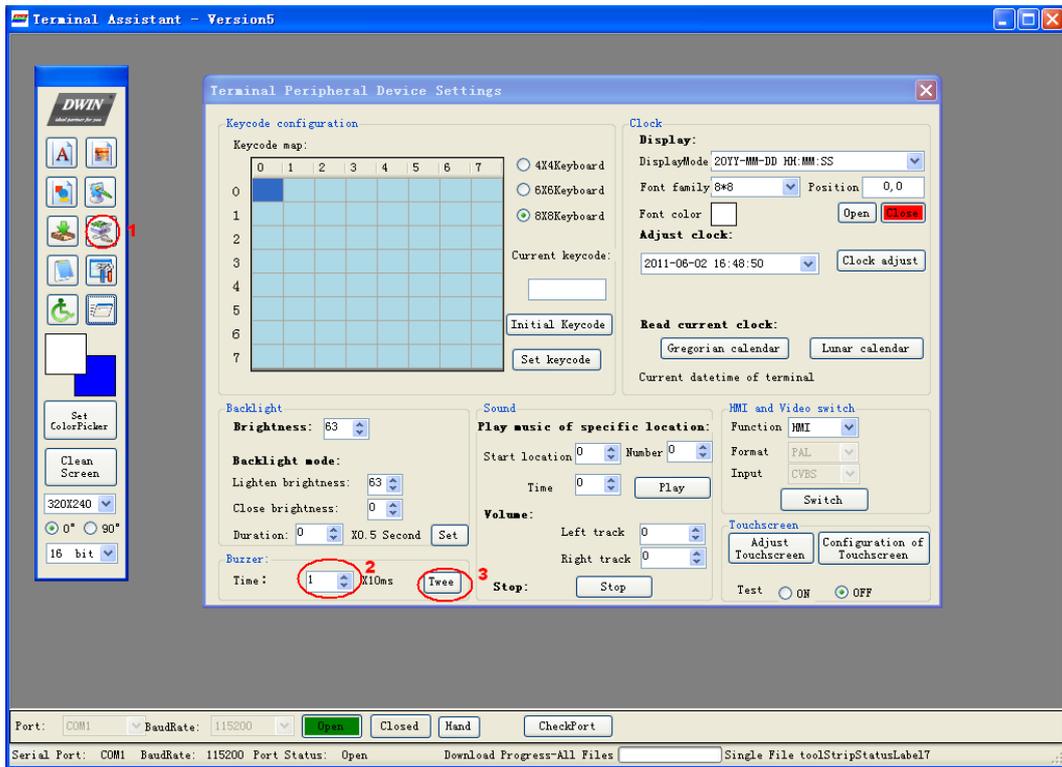
Note: Select the relevant parameters as per your requirements.



- (1) Click "Peripheral Device "
- (2) Adjust the Brightness of the HMI
- (3) Select the backlight mode parameters such as lighten brightness and close brightness
- (4) Select duration
- (5) Press "Set"

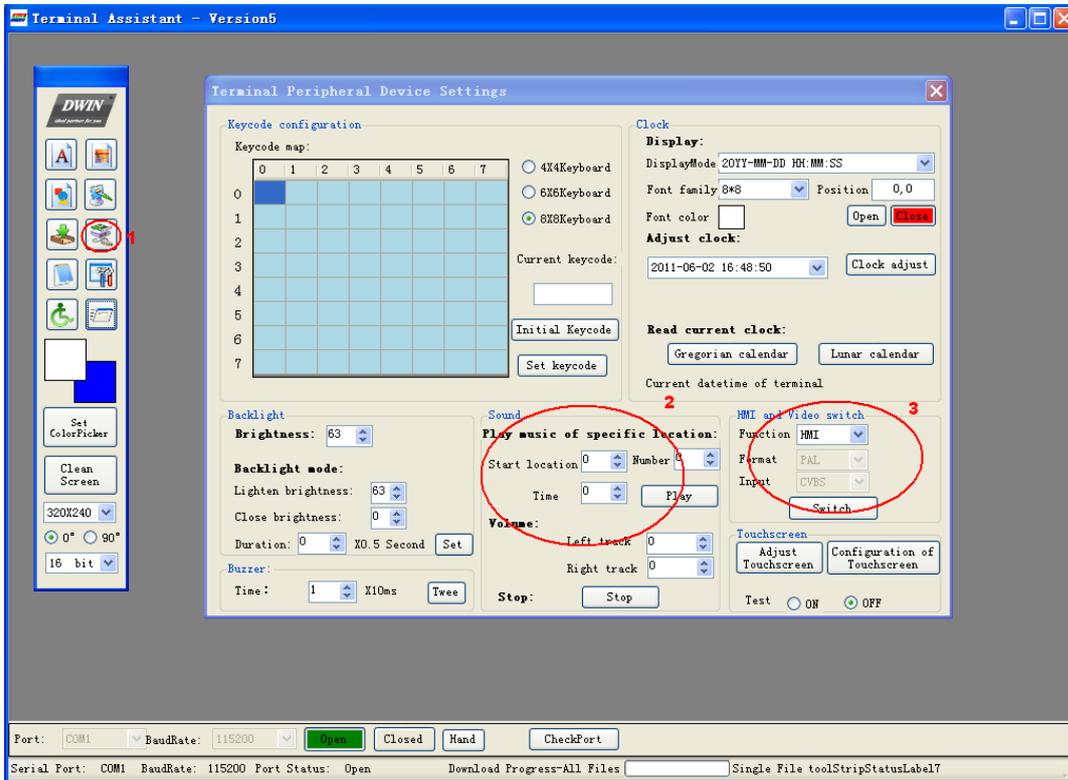
● **Buzzer**

Note: Select the relevant parameters as per your requirements.

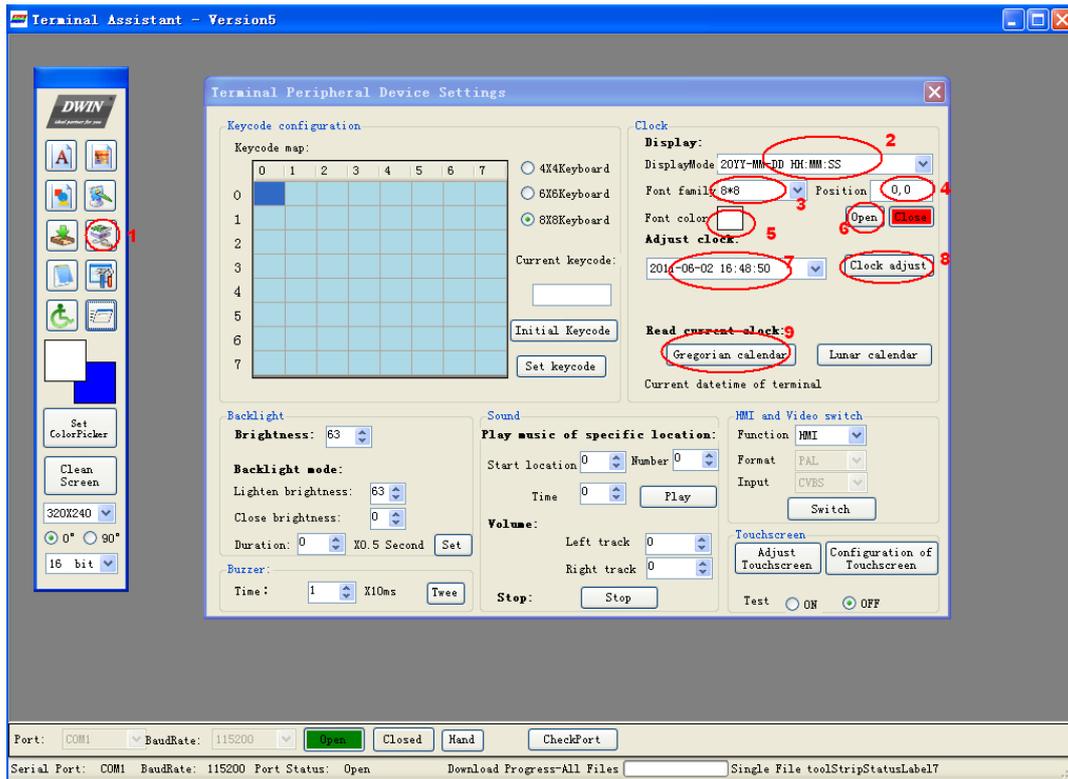


● Sound & HMI and Video switch

Note: This function is not available unless the users ask for it when ordering. Please ignore it.

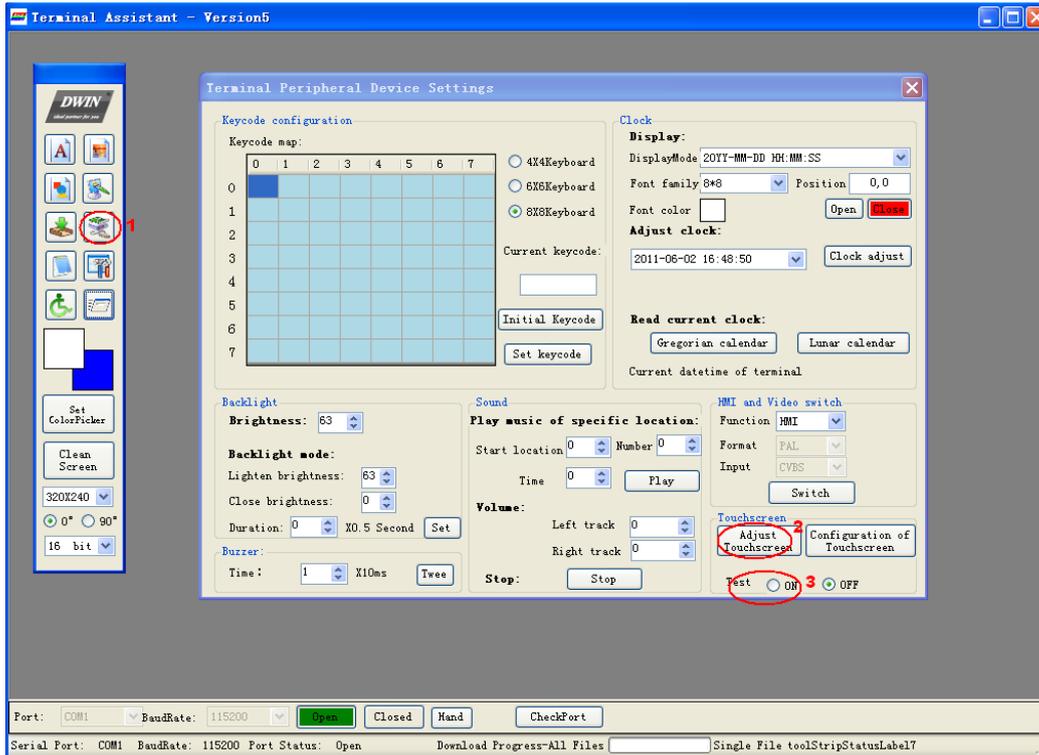


● Clock



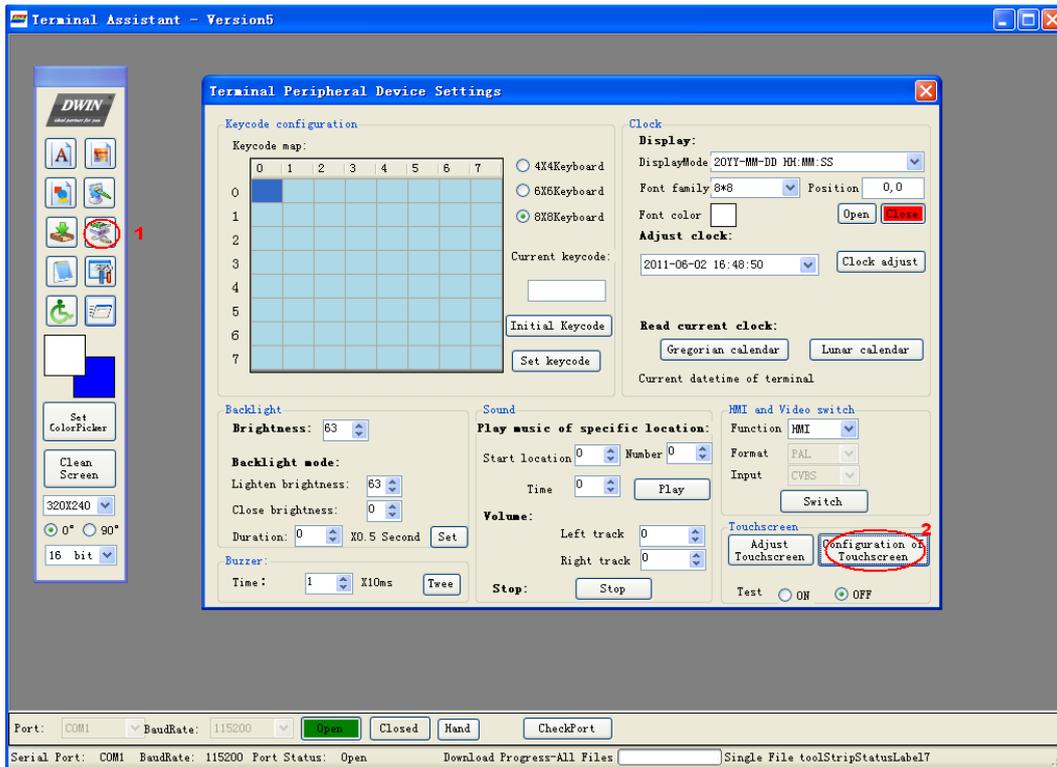
- (1) Click "Peripheral Device"
- (2) Select Display Mode
- (3) Select display mode
- (4) Select position the clock will displayed on the terminal
- (5) Select the color you prefer
- (6) Click "Open"
- (7) Adjust the clock if you need
- (8) Click "Clock adjust"
- (9) Click to read current clock

● Touch screen

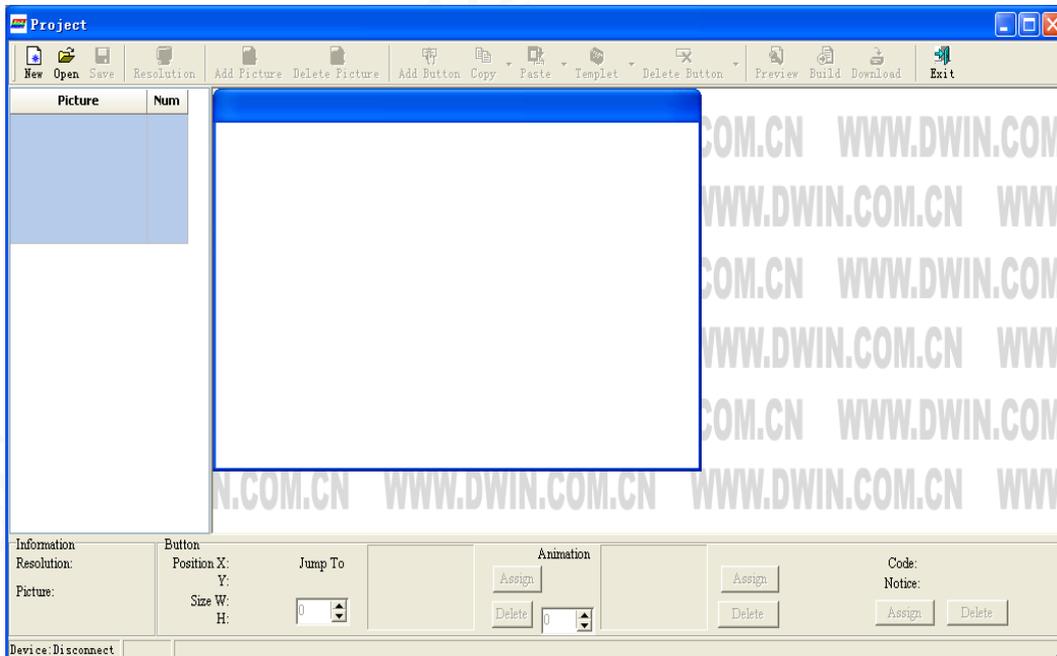


- (1) Click "Peripheral Device"
- (2) Click "Adjust Touch screen" to adjust touch panel accuracy.
- (3) the screen will become blue. Three white spots will appear one by one. Press the three spots as per instruction on the screen.
- (4) Click "on" ,then when you press the touch panel, there will be a dot displayer on the panel

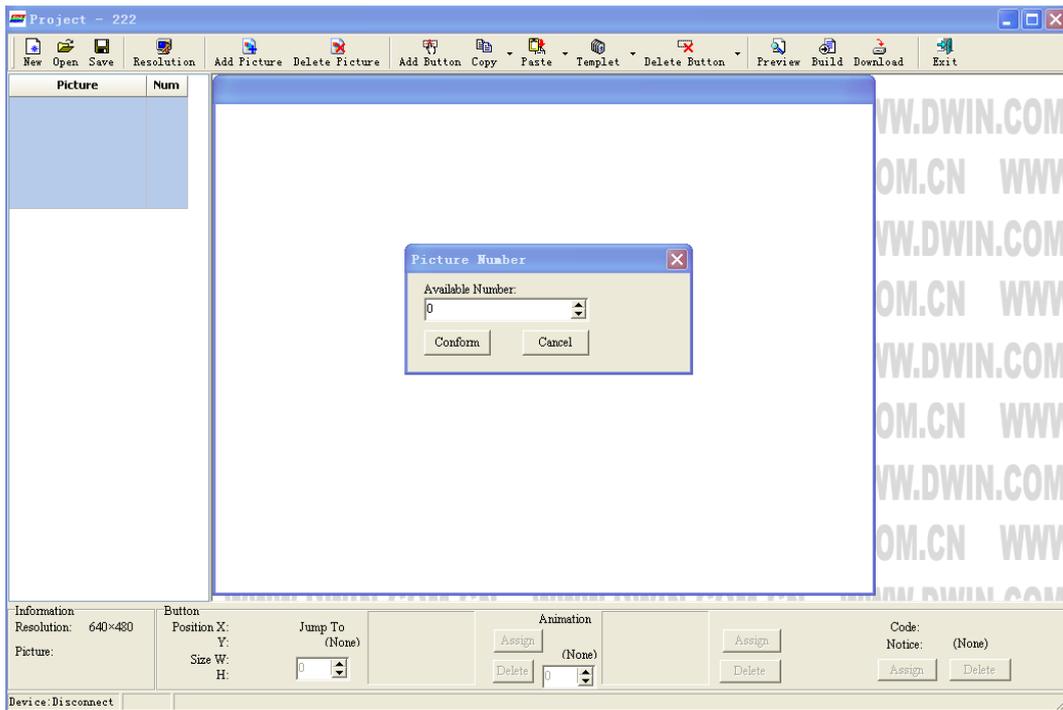
● **Configuration of touch screen**



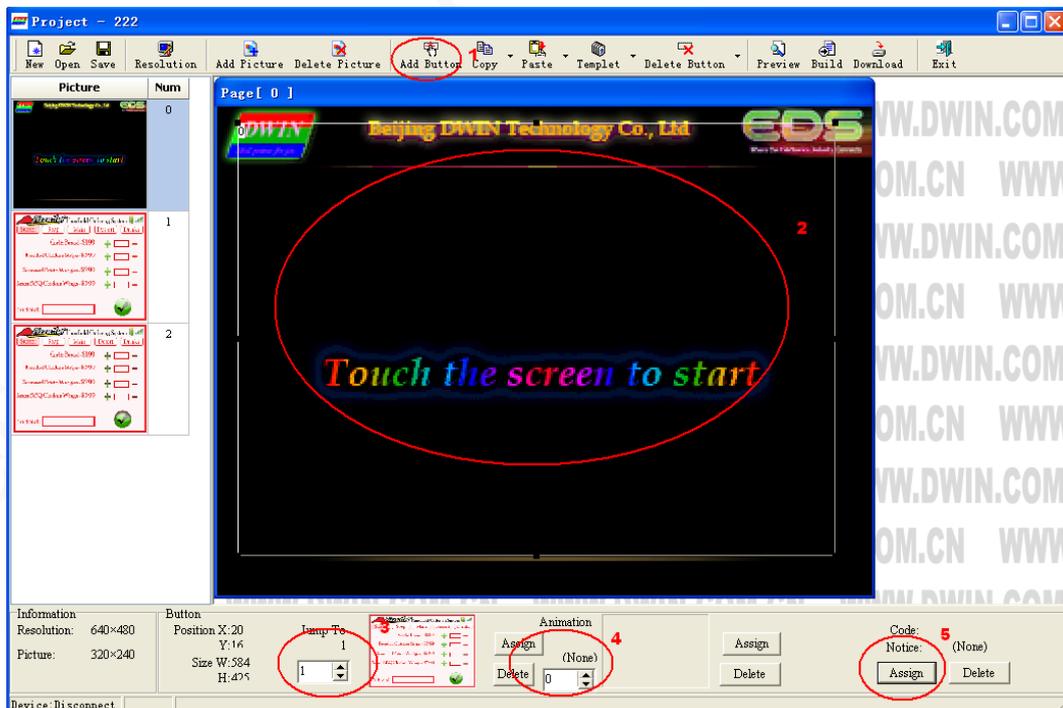
- (1) Click "Peripheral Device"
- (2) Click "Configuration of Touch screen"

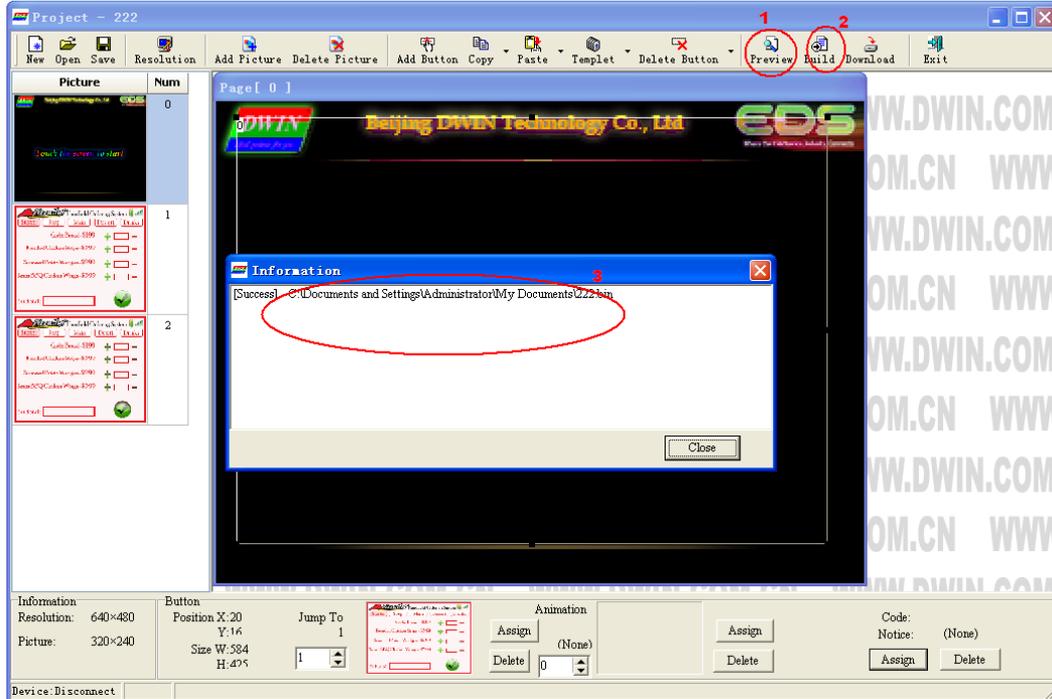


- (3) Click "New" to build a new dmc project
- (4) Click "Add Picture" and input the available number



- (1) Click "Add Button"
- (2) Drag the button to your preferred position
- (3) Choose the picture the button refer to
- (4) Choose Animation if you need
- (5) Defy Code for this button

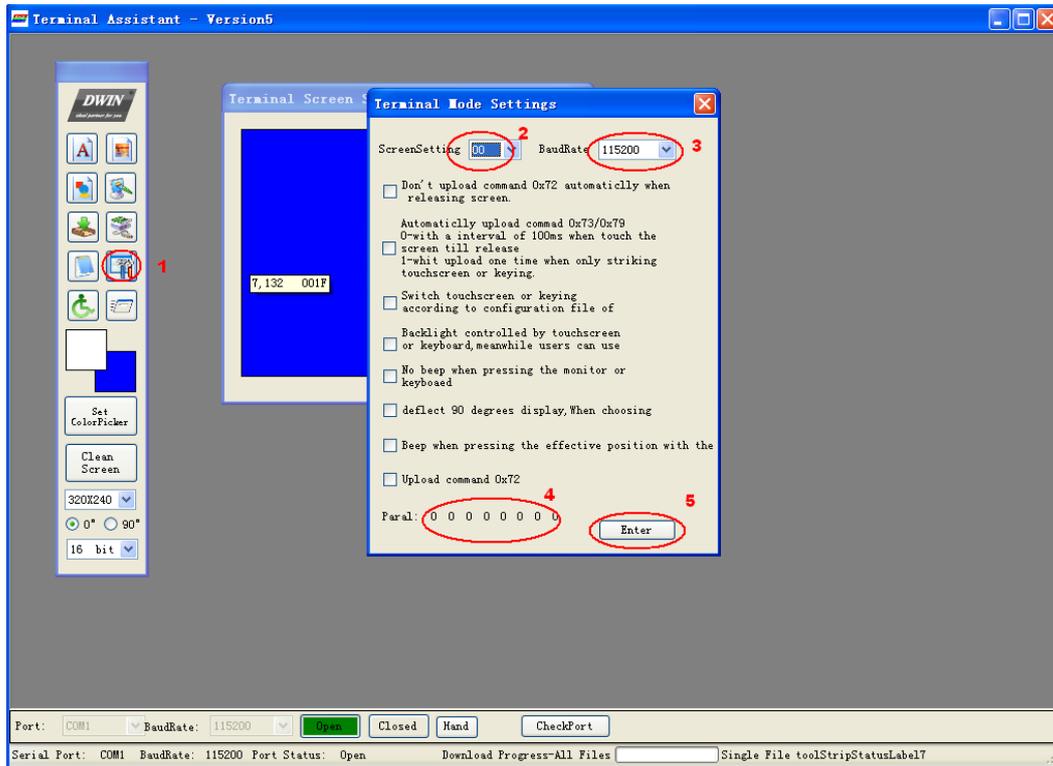




- (1) Click "Preview" to Preview your project
- (2) Click "Build" to build bin file
- (3) Pup up window means success

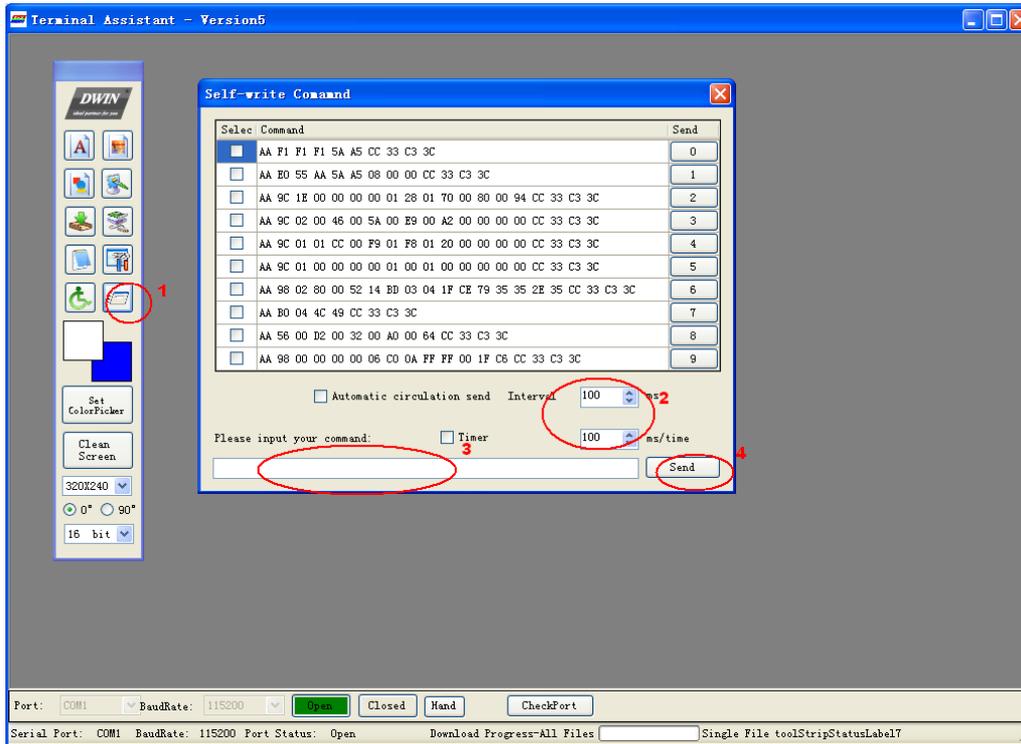
4. System setting

● Terminal Mode Settings



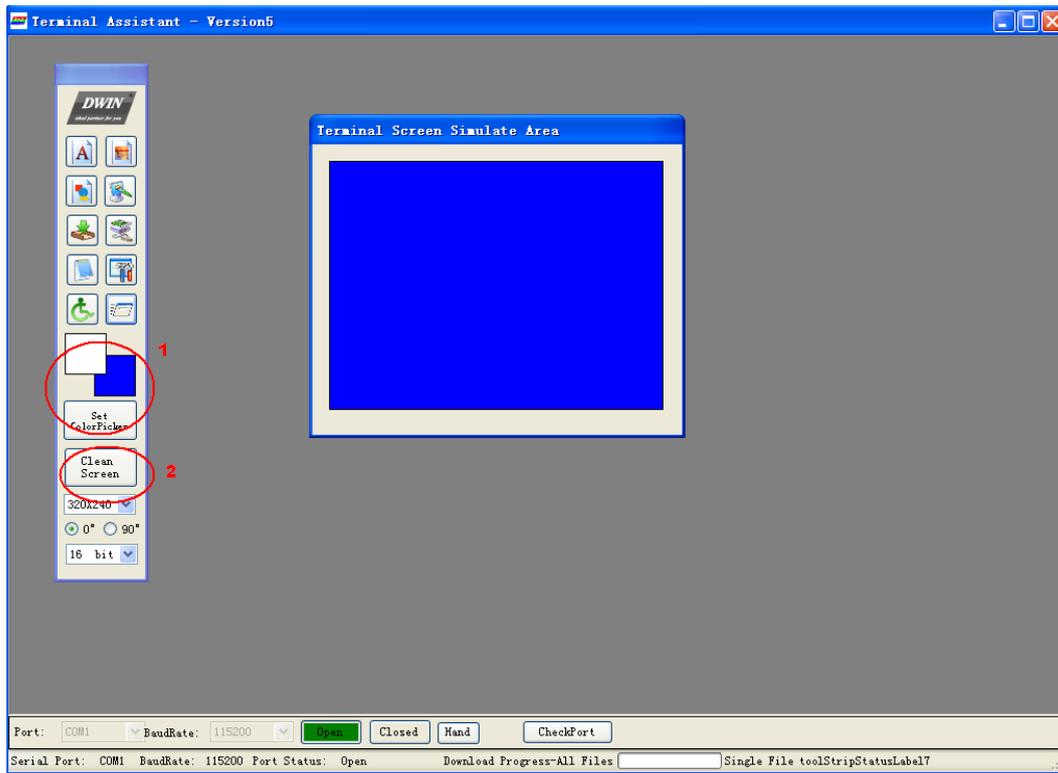
- (1) Click "System setting"
- (2) Select correct "Screen setting"
- (3) The default baud rate is "115200"
- (4) The touch screen configure mode
- (5) Click "enter"

5. self-write command



- (1) Click "self-write command"
- (2) Two different modes to sending command
- (3) Write command in this blank
- (4) Click "Send"

6. Clean Screen



- (5) Set ColorPicker
- (6) Click "Clean Screen"