

Software User Guide Ver6.6

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1. Important Notes

- All the safety user's guides of your computer also apply when the Cross is used.
- Remember to make backup copies of all important data to protect against possible loss or alternation.
- Power for the Cross MUST be switched off before you are going to unlock the control box of Cross and touch any device in it.
- Cross frame is designed with four vents on one direction to keep Cross in good heat dissipation. Make sure the Cross must be installed with the direction of four vents downward so that rain/dust will not come into Cross through the vents.

- Cross Resolution:

Resolution of **40\60\80\100\120** Cross is 48 × 48, **110\130** Cross 64 × 64.

- Cross Address / Search Cross:

Each Cross is set and supplied with only one ADDRESS. The address is very important, before you are able to use the software to control and send messages from computer to Cross, you MUST know the ADDRESS of each Cross and input the CORRECT address in the window of "Search Cross". Only if you input the correct address, the software is able to find the Cross after run "Search Cross". Please see more instruction of address setting in part 3.3

Address:
7AD521FB

2 Get Correct Communication with Cross

It is very important to know how to get correct communication between your computer and Cross.

With regard to single color **40\60\80\100\120** specifications' Cross, we provide RF wireless communication; To **110\130** and all specifications' full color Cross, they have been set as wired communication when leave from our factory. Also provide spare RF wireless communication to the system.

For wired communication, must be as follows:

Must make sure that the communication cable we provide to install at the computer's Com port and correct connector of cross's.

-Make sure the communicating option switch is turned to 《Wired》 direction at the cross, please refer as following:



Explanation: communicating speed is 115200bps in general when select wired communication, is approximately ten times of RF wireless communication (9600bps) , so we suggest to select wired communication when operate single color of 110\130 and all full color crosses (For these crosses information data much more) .

To get correct wireless communication between computer and Cross, you should:

- get the RF USB transmitter working on your computer
- set correct Cross resolution and Baud rate in the software
- set correct ADDRESS of Cross in the software and search Cross.

Attention:

If need to change wire communication to RF wireless, operating steps as follows:

1. Change cross's baud rate as 9600bps;



2. Get the communicating option switch to 《Wireless》 side;

2.1 Get the RF USB transmitter working on your computer

The RFUSB transmitter parameters as following:

- Transmitter distance 100m; FSK, GFSK modulate mode
- Frequency 433 MHz, ISM frequency
- 8 channel
- Interface speed: 9600bps
- USB interface: compatible with PC or laptop USB COM port.



To get the RF USB transmitter working on your computer, you should install the driver of it.

First, screw the small black antenna on Cross. See photos below for reference:



Factory original status - Red cap on antenna



Take off the Red cap, screw on the small black antenna on Cross

Second, connect the RF USB transmitter with one USB COM port of your computer.

Go to the CrossEdit software folder, find the driver



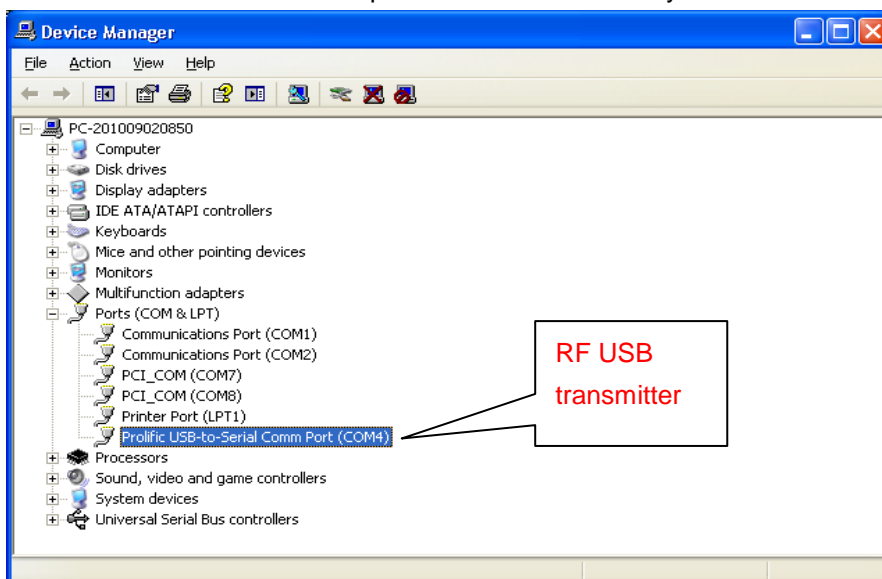
PL2303_Prolific_...
Setup.exe
Macrovision Corp...



PL2303_Prolific_DriverInstaller_v190 Folder. Run **PL2303_Prolific_DriverInstaller_v190.exe** to install the driver.

After driver is installed, the RF USB transmitter can be found in Device Manager.

After running the CrossEdit, the software will search for the COM port of RF USB transmitter automatically. User does not need to set the COM port in Cross software anymore.



2.2 Set Cross resolution and Baud rate

Resolution: 48 x 48 (pixel)

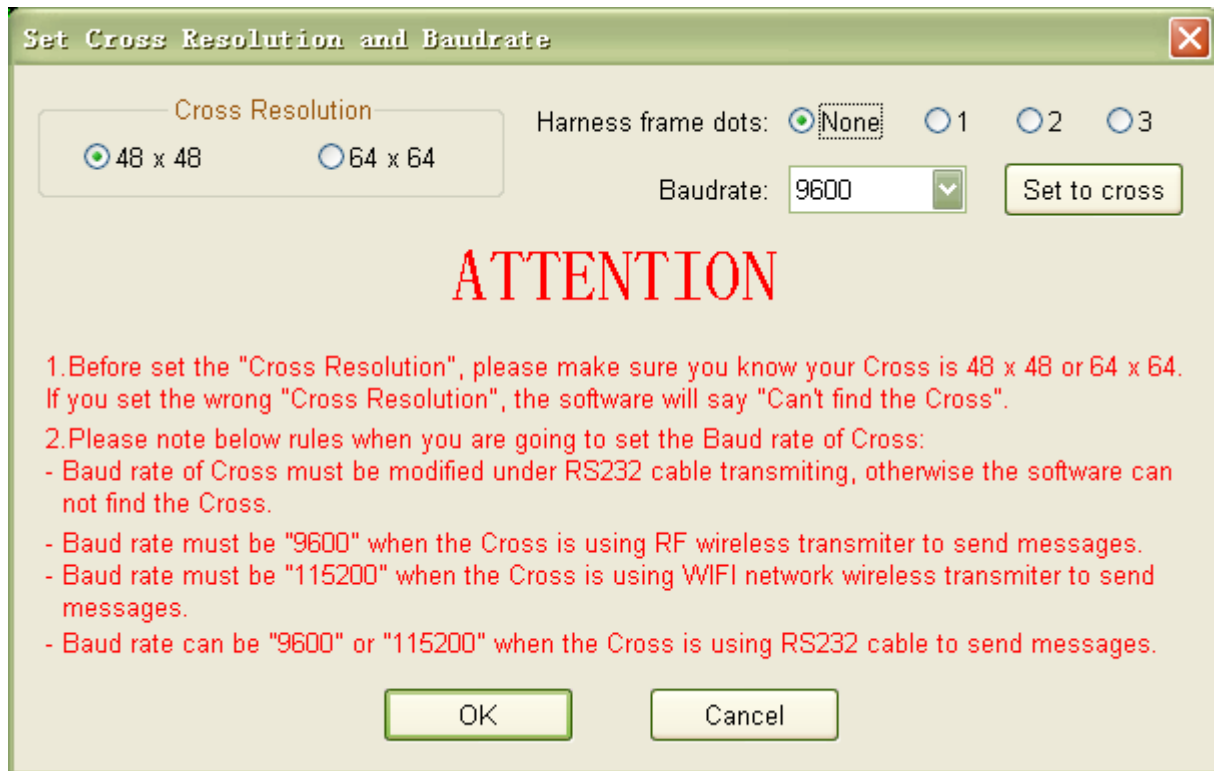
Baud rate: 9600 (Bps)

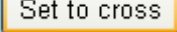
Usually the default value of software Cross resolution is 48x48, Baud rate is 9600.

Select 64 x 64 when it is 110 Cross.



Click the fourth button to set the Cross resolution and Baud rate:



Just click , then "OK".

2.3 Set Cross address(Search Cross)

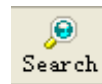
Each Cross is set and supplied with one exclusive ADDRESS. The address is an 8-digit code which is composed of numbers (0~9) and capital letters (A~F). It is usually [printed on a label sticked inside the control box of Cross](#) and [on the label which is sticked on the outside package of Cross](#). Below is an example of the address code label:



CrossEdit
CrossEdit MFC Ap...

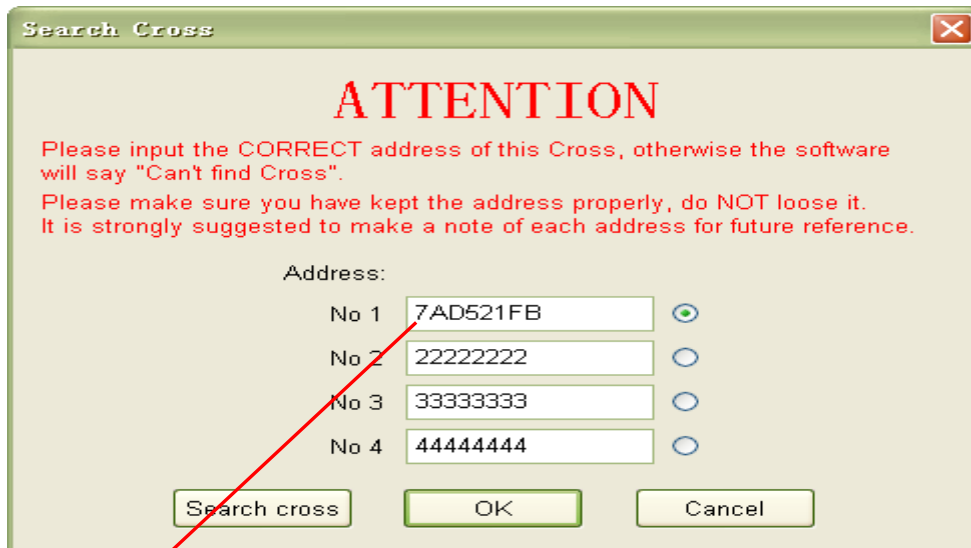
Double click

to run the software. Find the fifth button

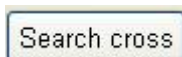


on software

window and click it to see a new window as following:



Type the 8-digit address code of the Cross which you want to send messages, click

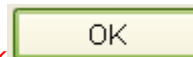


to run the software searching Cross automatically.

Attention please:

The software can control 4 crosses at the same time, user just need to fill in each crosses' address ID at the 4

address frames, select the cross which one need to control, click



, that will do.

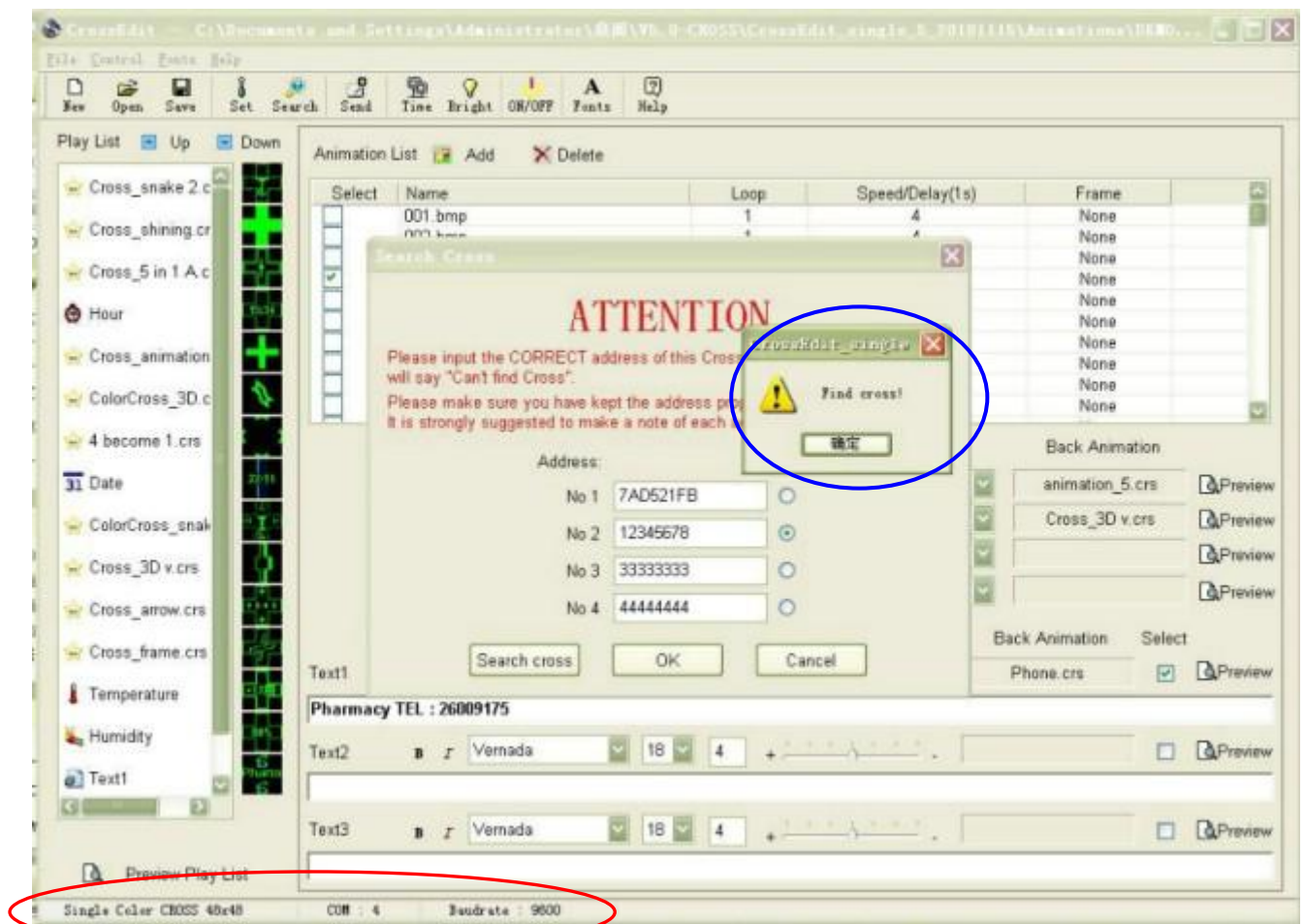
At this stage, if all the setting is correct, the software get the correct communication and will say **"Find cross!"** and show the correct setting at the left bottom of CrossEdit software.

"Single Color CROSS 48 x 48"

"COM: 8"

"Baud rate: 9600"

See picture as following:



As soon as the software finds the Cross, user can already send messages to the Cross.

If there is any incorrect setting, the CorssEdit software can't get correct communication, and will say "**Can't find cross!**"



Software will show "**Can't find cross**", "**COM: ---**", "**Baud rate: -----**" at the left bottom of the window.

3 CrossEdit Software Manual

The software is supplied in a compressed *.rar format, user does not need to install it, just needs to decompress the *.rar file to a local disk of computer.

3.1 Hardware and software requirement

To run the software files, user should have:

- Windows 98/2000/XP/Vista/Win7 32Bit/Win7 64Bit.
- a PC with at least one working USB COM port
- at least 9 MB of free disk space.

3.2 Software Configuration



CrossEdit_Single
2009-10-21 10:04

CrossEdit

Main program of software, to set Cross parameters, edit program and send messages to Cross.

CrossEdit.ini

Parameter configuration files, to save software configuration files.



Animations

Animation Folder

To save *.crs files and *.plst files.



NewAnimation

NewAnimation Folder

To save the animation editing software Cross Animation 80



PL2303_Prolific_...

PL2303_Prolific_DriverInstaller_v130 Folder

To save the driver of RF wireless USB transmitter (Windows 98/2000/XP/Vista/Win7 32Bit or 64Bit compatible)

Fonts Folder

To save the font of words animations of Text 1, Text 2 and Text 3.



XListCtrlDDRA.dll
1.4.0.1
XListCtrl Dynamic...

XListCtrlDDRA.dll

Parameter configuration file.

CrossEdit.ini.bak

Picture of main
software folder for
reference:



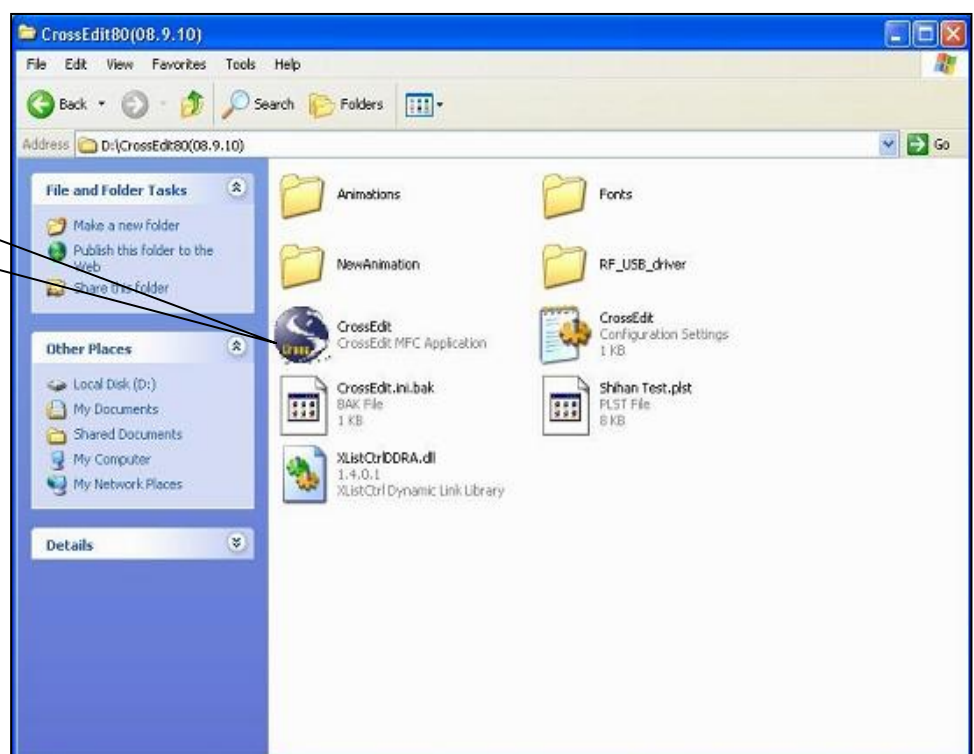
CrossEdit_Single
2009-10-21 10:04

Bicolor cross's control
software



CrossEdit_Color
2009-10-10 19:33

Full color cross's software



3.3 CrossEdit Software Introduction

CrossEdit is the main program of the software system.

The screenshot shows the CrossEdit software interface with several annotations pointing to specific features:

- Main tools:** Points to the top menu bar (File, Control, Fonts, Help) and the toolbar (New, Open, Save, Set, Search, Send, Time, Bright, ON/OFF, Fonts, Help).
- Animations /Graphics list:** Points to the 'Animation List' table.
- Preview play list:** Points to the 'Play List' area on the left.
- Play List area:** Points to the 'Play List' area on the left.
- Add text message:** Points to the 'Text1' through 'Text3' input fields.
- Preview Date, time, Humidity, temperature messages:** Points to the 'Preview' buttons for the 'Date', 'Temperature', and 'Humidity' sections.

Animation List Table:

Select	Name	Loop	Speed/Delay(1s)	Frame
<input type="checkbox"/>	001.bmp	1	4	None
<input type="checkbox"/>	002.bmp	1	4	None
<input type="checkbox"/>	1.crs	1	4	None
<input checked="" type="checkbox"/>	4 become 1.crs	1	4	None
<input type="checkbox"/>	animation_1.crs	1	4	None
<input type="checkbox"/>	animation_3.crs	1	4	None
<input type="checkbox"/>	animation_4.crs	1	4	None
<input type="checkbox"/>	animation_5.crs	1	4	None
<input type="checkbox"/>	blooming.crs	1	4	None
<input type="checkbox"/>	Color example_framed animation.crs	1	4	None

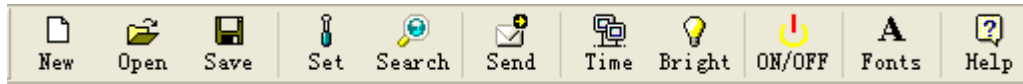
Text Input Fields:


- Text1: Vernada, 18, 4, Speed: 1, Back Animation: Phone.crs, Select: ☒ Preview
- Text2: Vernada, 18, 4, Speed: 1, Back Animation: Phone.crs, Select: ☒ Preview
- Text3: Vernada, 18, 4, Speed: 1, Back Animation: Phone.crs, Select: ☐ Preview


Preview Messages:


- Hour: ☒ 5, One dot, animation_5.crs, Preview
- Date: ☒ 5, Flash two dots, Cross_3D v.crs, Preview
- Temperature °C: ☒ 5, Two dots, Preview
- Humidity: ☒ 3, One dot, Preview


Main tools introduction:





The first button  is to create a new play list. Each play list includes several messages, like animation files(*.crs, graphics(*.JPG and *.bmp) and date/ hour/ temperature/ text messages. Each play list includes maximum 30 messages, and it will be divided into 2 Groups when message number is bigger than 15(each Group includes 15 messages max.).


The second button  is to open an existing play list.


The third button  is to save the play list.


The fourth button  is to set the Cross resolution and Baud rate. Setting of this button is very important in communication; detailed introduction will be specified in later passages.


The fifth button  is "Search", click it to set the Cross address and launch the software searching Cross automatically.


The sixth button  is "Send", click it to send the play list to Cross, and the Sending process will be seen in "Sending process display area".

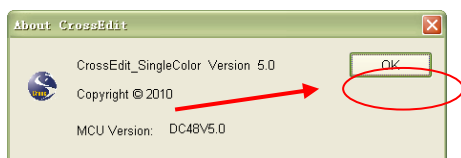
The seventh button  is "Synchronize Time", click it under correct communication status to synchronize Cross time with the computer.

The eighth button  is "Set Cross Bright", to schedule the Cross adjust luminosity automatically.

The ninth button  is "Cross On/Off", to schedule the Cross turn On and turn Off automatically.

The tenth button  is "Fonts", to add or delete fonts for text message editing.



The eleventh button  is "Help", you can know the MCU Version number of that cross connected with the software via this button.




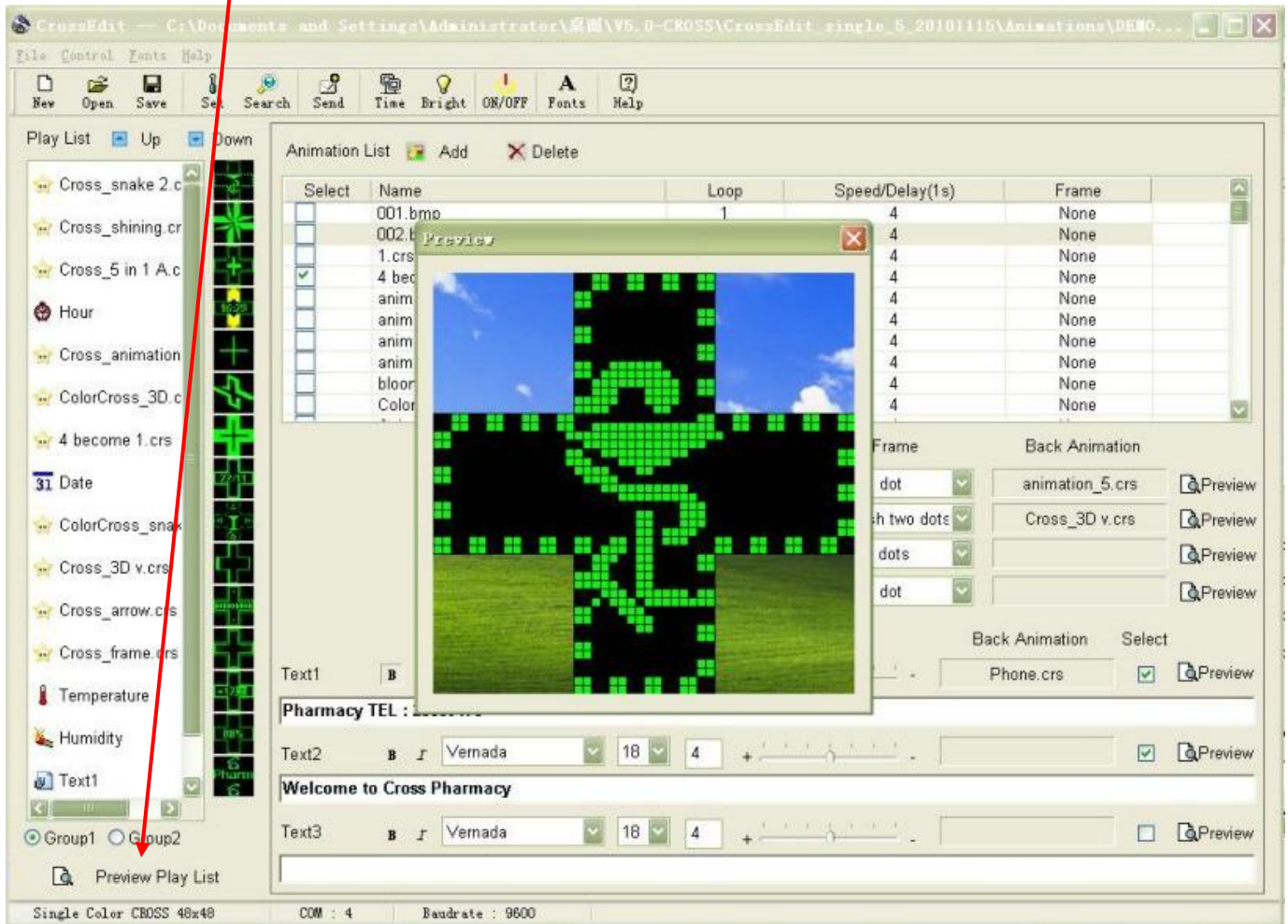
Play List Area:

The play list shows names of the animations (*.crs), graphics (*.JPG and *.bmp) and date/hour/temperature/text messages which are selected by user.

User can adjust the sequence of these messages by clicking “Up” or “Down”

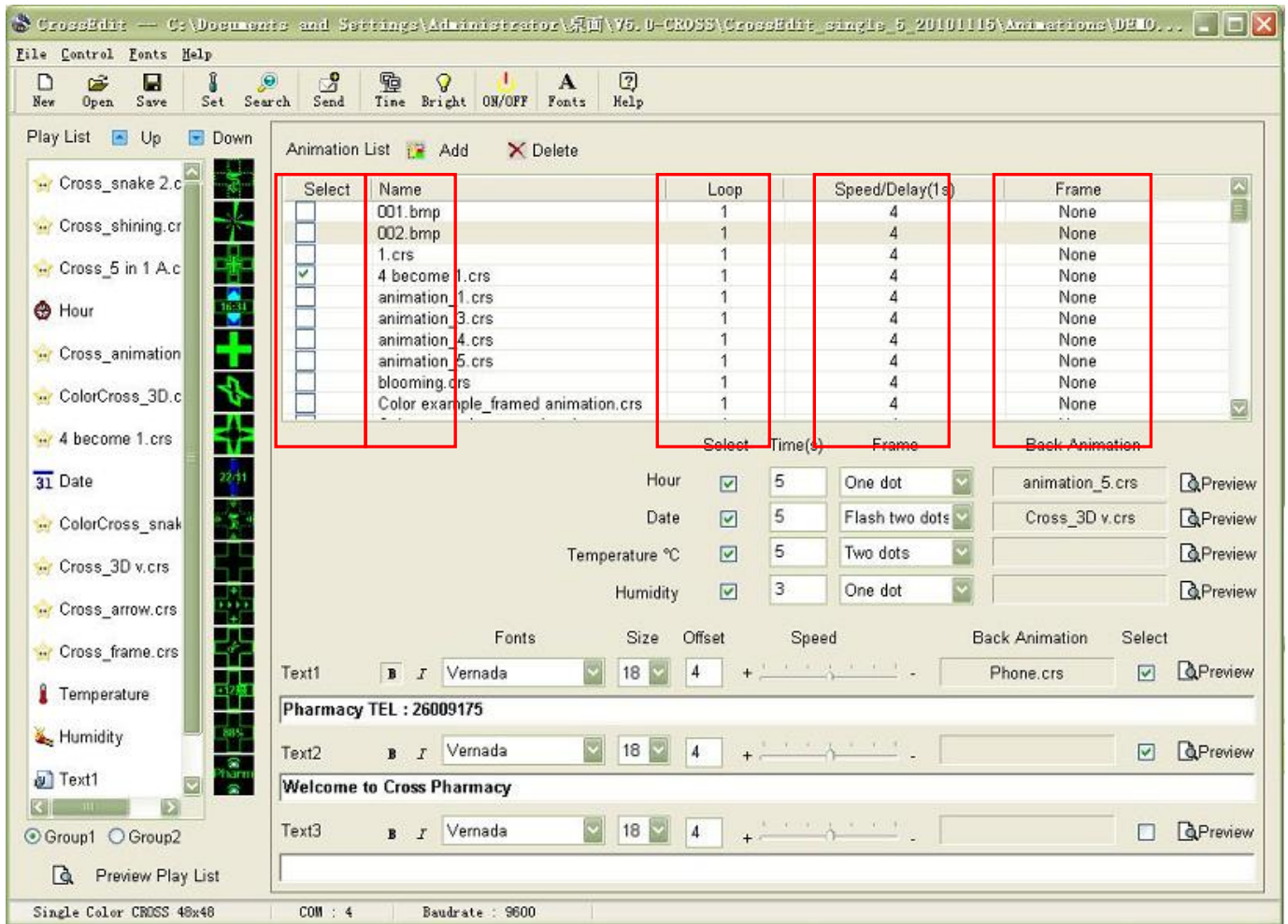
Play List  Up  Down

Click  Preview Play List button to preview the selected messages sequent.



Animations/ Graphics List

The software will show all the graphics and animations which are saved in Animation Folder.



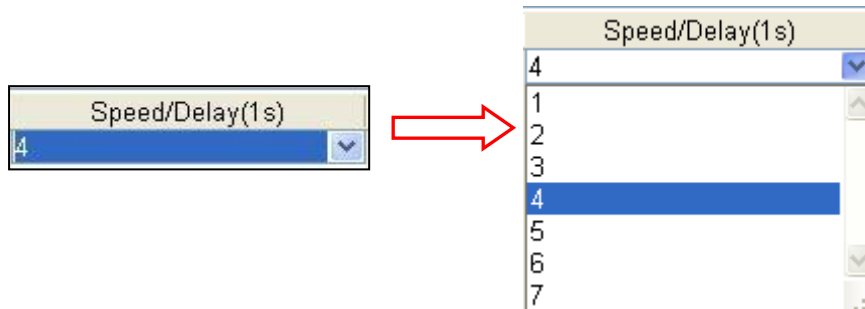
There are 5 rows of setting parameters:

- 1) **Select** ☒ click left mouse to select the message and add it to Play List.
- 2) **Name** t1.crs all message names are listed in this row. Double-click mouse on the name of message to preview it, like an example as following:
- 3) **Loop** this row shows the loop time of each message. Default value is 1 loop time, click left mouse on the value "1" and input a new loop time. For example,

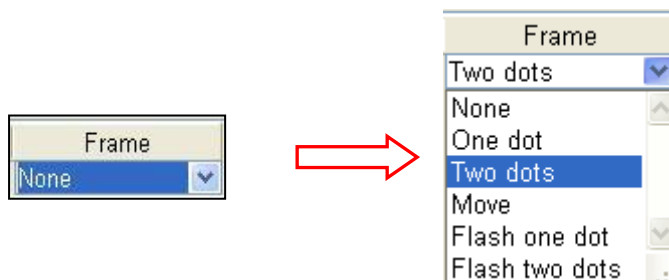


4) **Speed/Delay(1s)** the display speed of each message. Value of this row is read as message display speed when it is *.crs message, and is recognized as graphic delay time if it is *.bmp or *.jpg message.

For each *.crs message, the speed is optional from level 1 to 7, level 1 is the fastest display speed; for each *.bmp or *.jpg message, the delay time is optional from 1 second to 7 seconds.



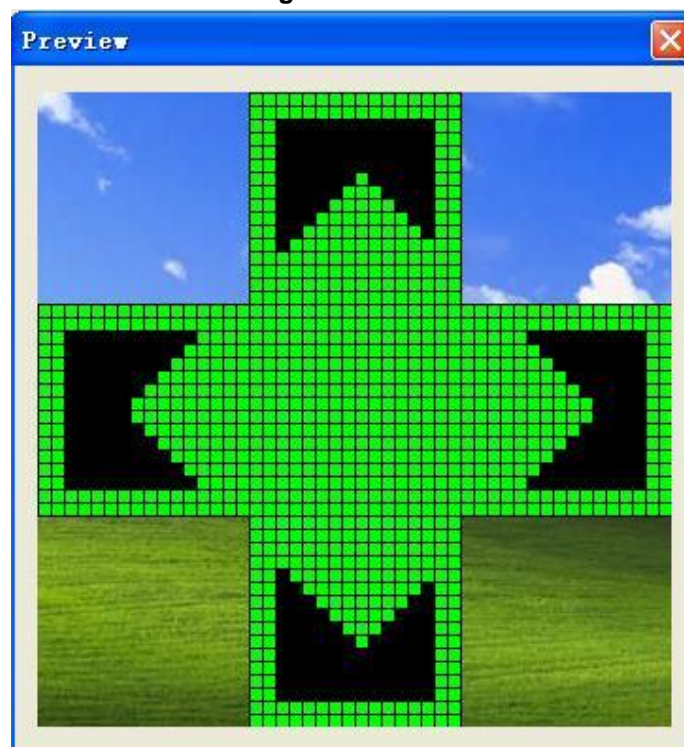
5) **Frame** the frame style can be selected in this row.



User can add none or one of the frames to the message. System includes 5 built-in frame styles for user's option.

- One dot it means the message always has one row of LEDs lighted around the Cross.
- Two dots it means the message always has two rows of LEDs lighted around the Cross.
- Move it means the message always has 2 x 2 LEDs lighted clockwise around the Cross.
- Flash one dot it means the message always has 1 row of LEDs flash around the Cross.
- Flash two dots it means the message always has two rows of LEDs flash around the Cross.

Below is an example of an animation message + Two dots frame:



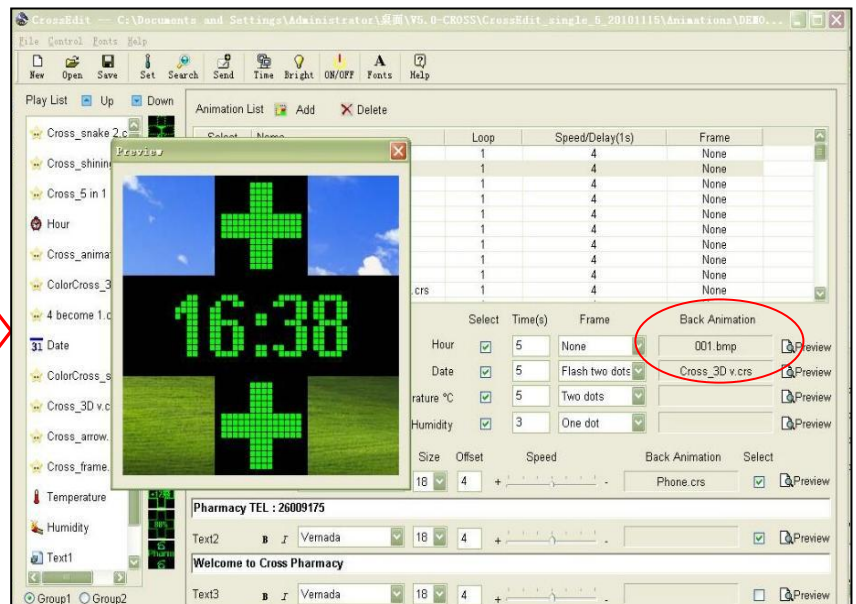
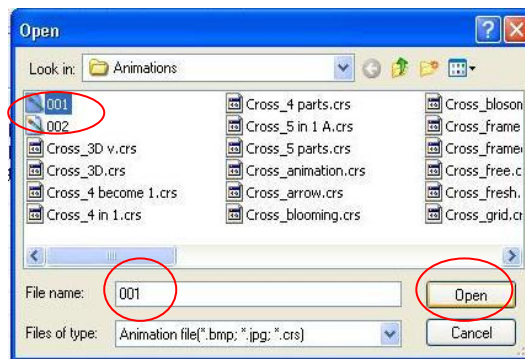
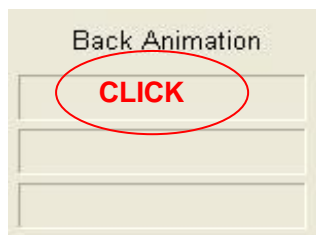
Display Hour/Date/Temperature

	Select	Time(s)	Frame	Back Animation	
Hour	<input checked="" type="checkbox"/>	5	One dot	animation_5.crs	
Date	<input checked="" type="checkbox"/>	5	Flash two dots	Cross_3D v.crs	
Temperature °C	<input checked="" type="checkbox"/>	5	Two dots		
Humidity	<input checked="" type="checkbox"/>	3	One dot		

Select ☒ to add the Hour/Date/Temperature messages to Play List, input the delay time and select a

frame style for the message, or click left mouse on the blank rows under the

Back Animation to add a background graphic or animation to the Hour/Date/Temperature messages.



Click right mouse to clear the background animation of Hour / Date / Temperature/Humifity messages.

Quick creating a text message

The software provides user with quick creating text messages function. User can create and send maximum 3 new text messages in a very quick and efficient way, maximum length of each text message is 256 characters. Type texts, select a font/size/speed, add a background graphic or animation to text message, click **Preview** to see if the text is displayed in the right position on Cross:

	Fonts	Size	Offset	Speed	Back Animation	Select
Text1	B <i>I</i> Vernada	23	4	+	002.bmp	<input checked="" type="checkbox"/> Preview
Pharmacy cross display						
Text2	B <i>I</i> Vernada	23	4	+	earth.crs	<input checked="" type="checkbox"/> Preview
Farmacia cruz display						
Text3	B <i>I</i> Vernada	23	4	+	colorCross_animation.cr:	<input checked="" type="checkbox"/> Preview
lékárny pes displej						




When the text is not displayed in the right position, input a number(usually 0~10) under “Offset” to raise the text position on Cross x lines so that the text will be displayed completely and in the middle of Cross horizontally. For example,

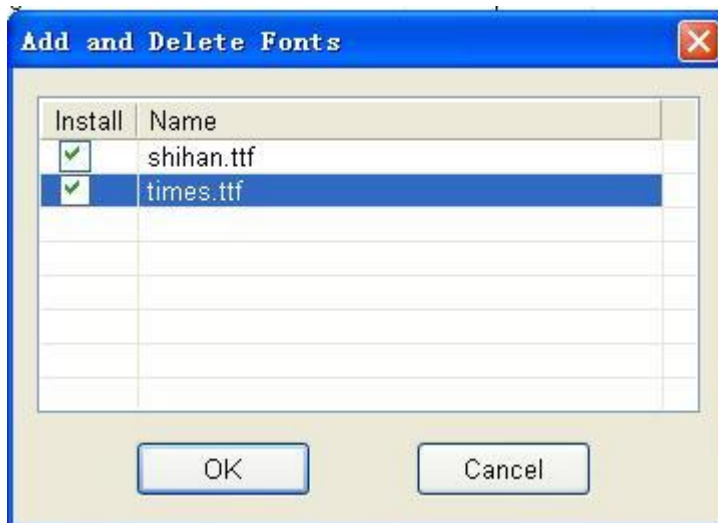
Offset
2 : to raise the text 2 lines



Text Font:

The software provides with 3 default fonts for options (Arial Narrow, Vernada, Tahoma). User can go directly to <C:\WINDOWS\Fonts>, copy font files which are *.TTF format and paste them under CrossEdit Fonts

folder  . Click  to add these *.TTF fonts, select  of each font and click OK.

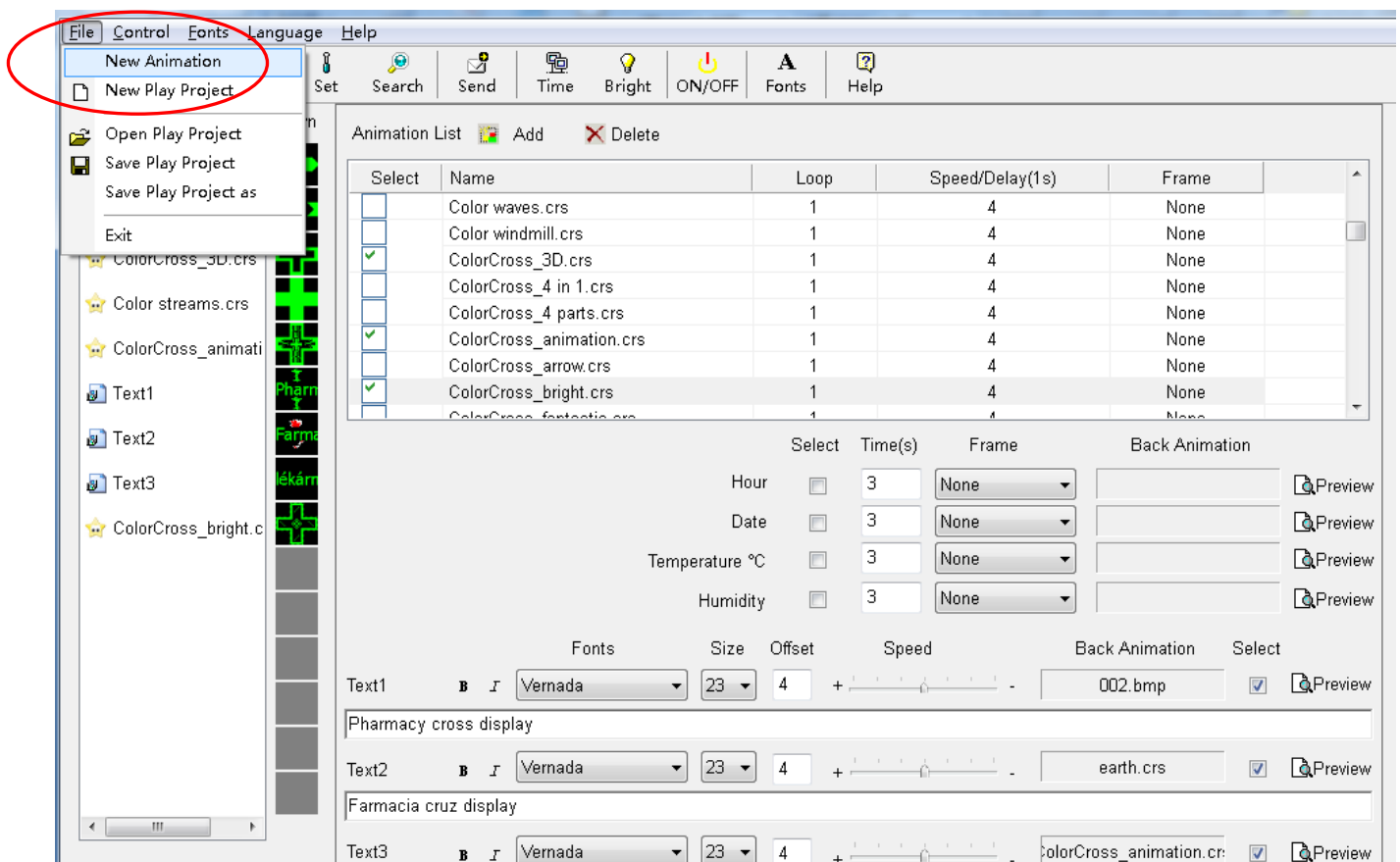


Now the new fonts are available in the Font of Text1, Text2 and Text3.

3.4 Edit Cross Animation software introduction

Edit Cross Animation software is the tool to create new *.crs messages, it can convert the *.gif format animation to *.crs format, edit *.crs format messages, and create text message in *.crs format file.

Click “File” button of CrossEdit software to find “New Animation” as following:



Click “New Animation” to get a new window “Cross Resolution” displayed as below:



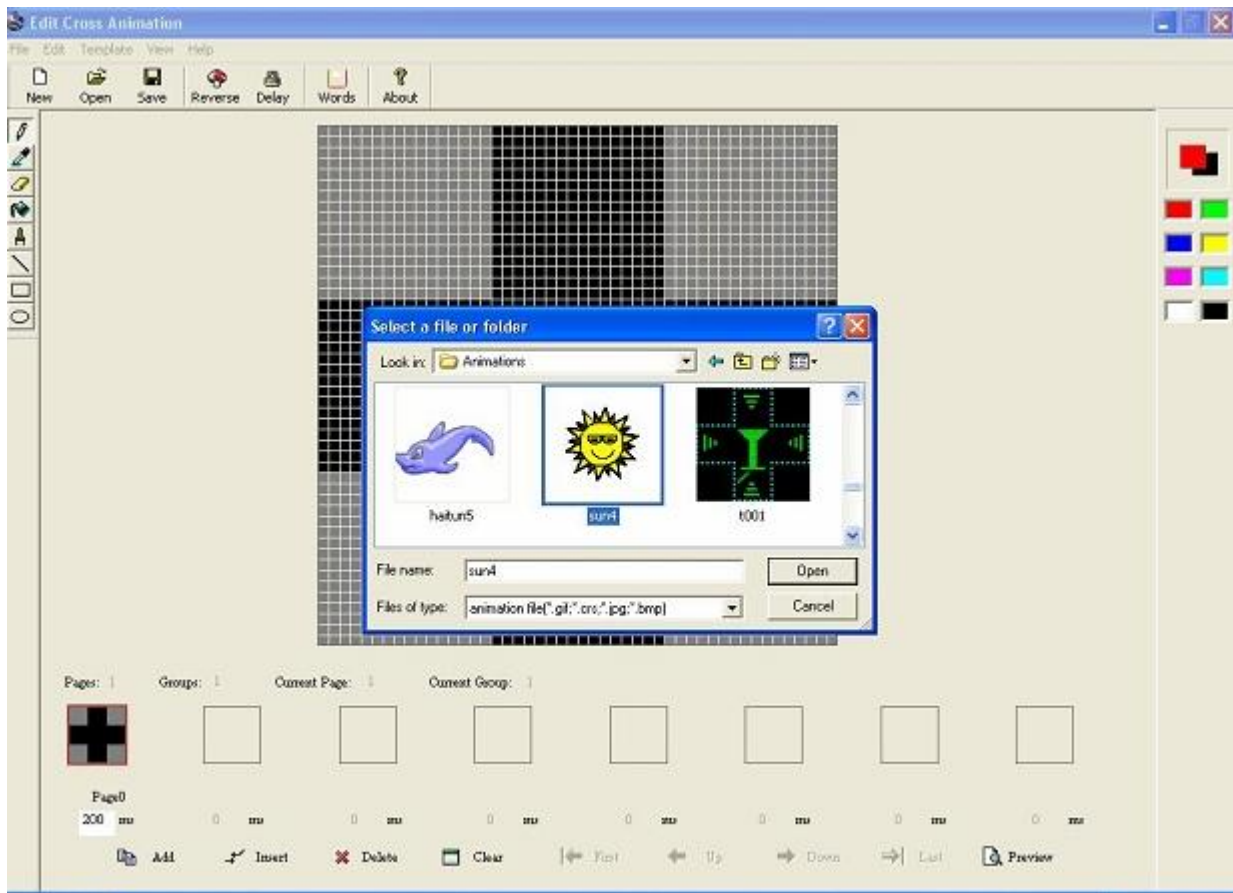
Click OK to enter new window "Edit Cross Animation" to create or edit an animation message.

There are two ways to get animation messages:

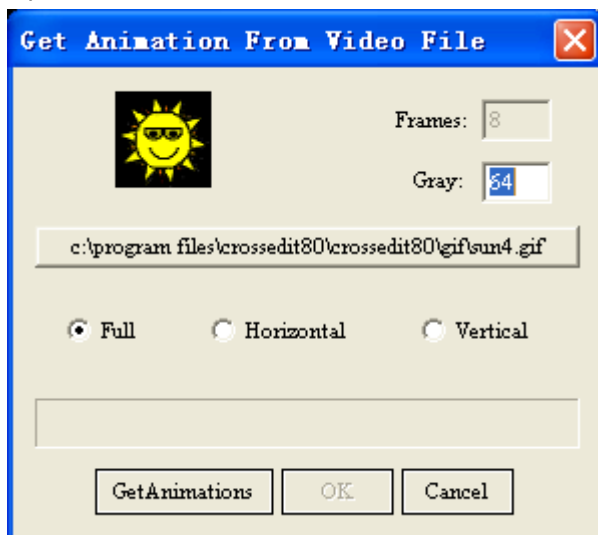
A. Get animation from existing *.gif format animation:

Prepare the *.gif animation in your PC (there are numerous GIF files on the internet).

Click “Open” and find the GIF animation from your PC.



Open it and see “Get Animation From Video File” as below:



There are 3 options:

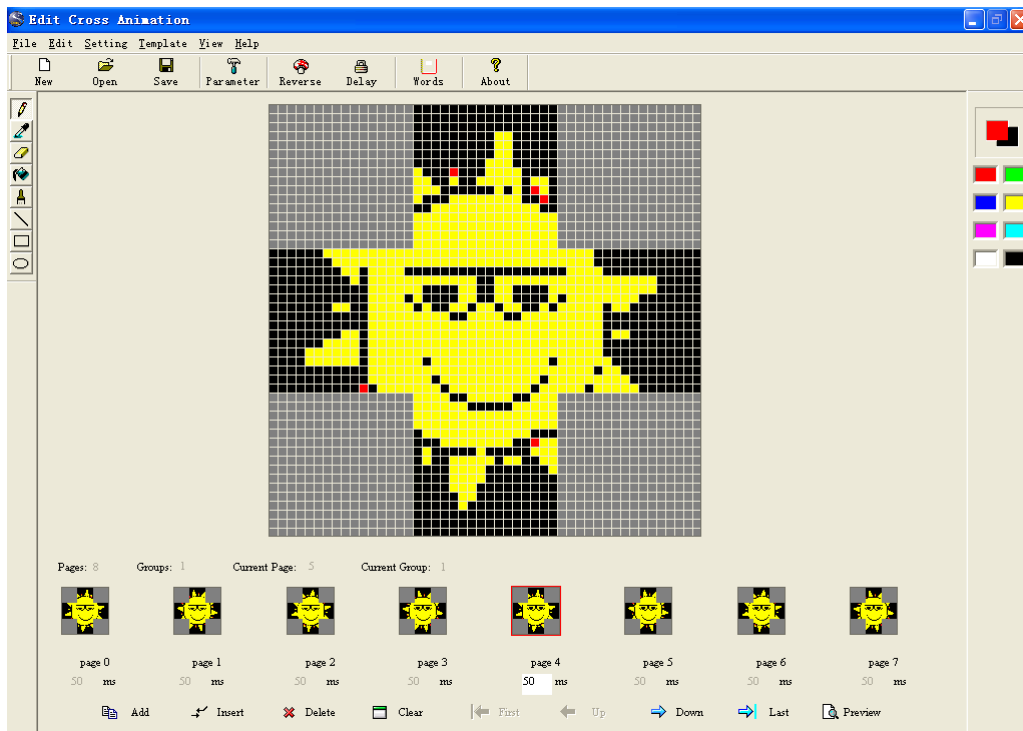
Full: display the GIF on full screen of the Cross.

Horizontal: compress to display horizontally and centrally.

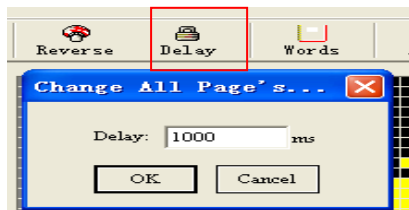
Vertical: compress to display vertically and centrally.

Click  to transform the GIF, click “OK” when progress shows finishing and exit.

User will see all pages of the transformed animation in “Edit Cross Animation”(user can set delay time of all the pages and preview the animation).

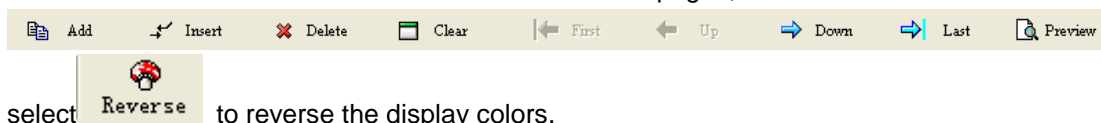


User can input the delay time(unit: millisecond) under each page, or set delay time of all pages via “Delay” button:



To modify a page, user must select the page. When frame of the page becomes red, user can modify or redraw graphics via the drawing tools in the left column and the drawing colors in right column.

The software contains tools as below to edit one of the pages;



select **Reverse** to reverse the display colors.

Save the animation in your PC under file “Animation” after finish editing.

NOTE: the software provides multi-color tools for the convenience of drawing and editing only, the monochrome Cross cannot display all the colors, can only display the color(s) of LEDs on Cross.

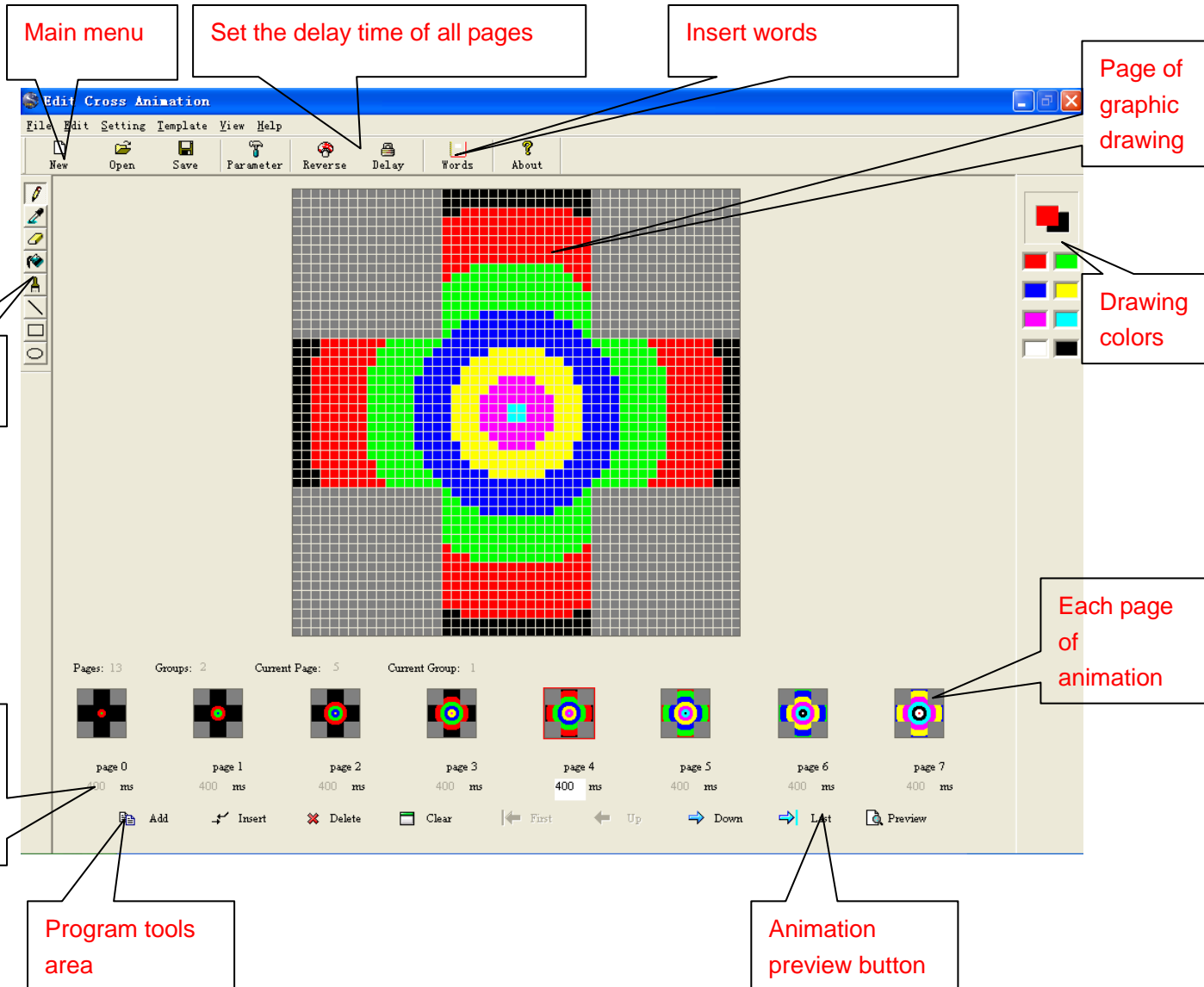
B. Use “Edit Cross Animation” to create new animation message

User needs to create a new animation and draw the graphics on each page:

Enter “New Cross Animation”, click “New” to create a new *.crs.

Use the drawing tools and drawing colors to draw graphics on the dot matrix page.

The software provides user with tools as below to edit and draw a new animation message:



Save the animation in your PC under file “Animation” after finish editing.

NOTE: the software provides multi-color tools for the convenience of drawing and editing only, the monochrome Cross cannot display all the colors, can only display the color(s) of LEDs on Cross.

4 Software Special Functions


The software provides with some special functions as following:

- Cross time can be synchronized with user's computer
- Cross brightness automatically adjusting function
- Cross turns On and turns Off automatically

4.1 Synchronize Cross Hour and Date with computer

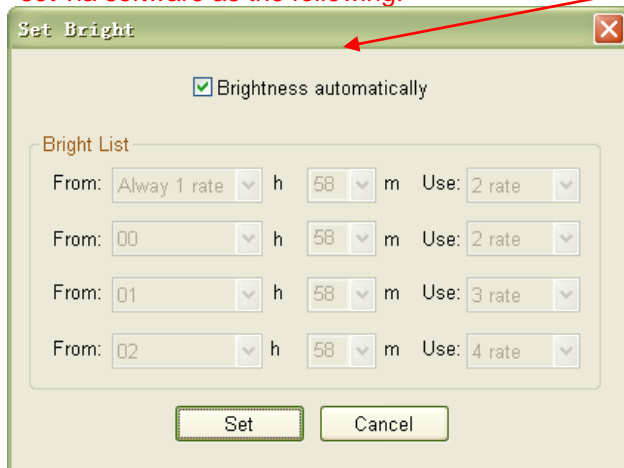
When the Cross time is not correct, it can be corrected by using "Synchronize Cross hour and date" function. This is to make the Cross time synchronized with your computer. Before correct Cross time, make sure the Cross is under a correct communication with your computer.



Click the seventh button  once, then select Hour and Date messages and send them to Cross. The Cross will display the exact same time and date as your computer after these messages are sent completely.

4.2 Cross brightness automatically adjusting function

The device have the function of change cross's brightness automatically according to environment's brightness, set via software as the following:



Attention: Please keep the photosensor's surface cleaning while using brightness adjustment automatically function. Or will cause brightness control inaccurate.

The software provides with a function to adjust the Cross brightness at pre-set time, user can get the Cross

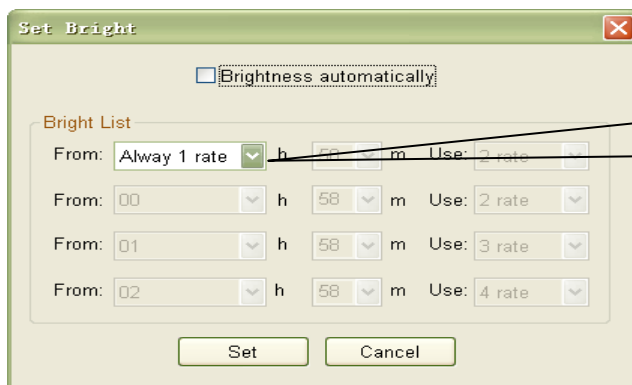


brightness adjusted automatically by using to control Brightness rate of Cross under a time-table. The Brightness can be set 4 rates, the brightness is valued as following:

"1 rate" < "2 rate" < "3 rate" < "4 rate"

That is to say, "4 rate" is the highest while "1 rate" is the lowest. It is suggested to use "1 rate" in the evening, "4rate" in the afternoon, "2 rate" or "3 rate" in the morning.

Example 1:



"Always 1 rate" means: there is no schedule to adjust the brightness, the Cross will be always in the highest brightness.

Example 2: (Don't forget to click "Set" to send the setting to Cross.)

Set Bright ✕

☐ Brightness automatically

Bright List

From:	08	h	00	m	Use:	1 rate
From:	12	h	00	m	Use:	2 rate
From:	18	h	00	m	Use:	3 rate
From:	21	h	30	m	Use:	4 rate

Set
Cancel


This schedule means:

- from 8:00, the Cross is at a brightness of "4 rate".
- from 12:00, the Cross will change to the brightness of "3 rate".
- from 18:00, the Cross will change to brightness of "2 rate".
- from 21:00, the Cross will change to brightness of "1 rate".

4.3 Cross turns On/Off function

The software provides with a function to turn on and turn off the Cross LEDs at pre-set time, user can get the



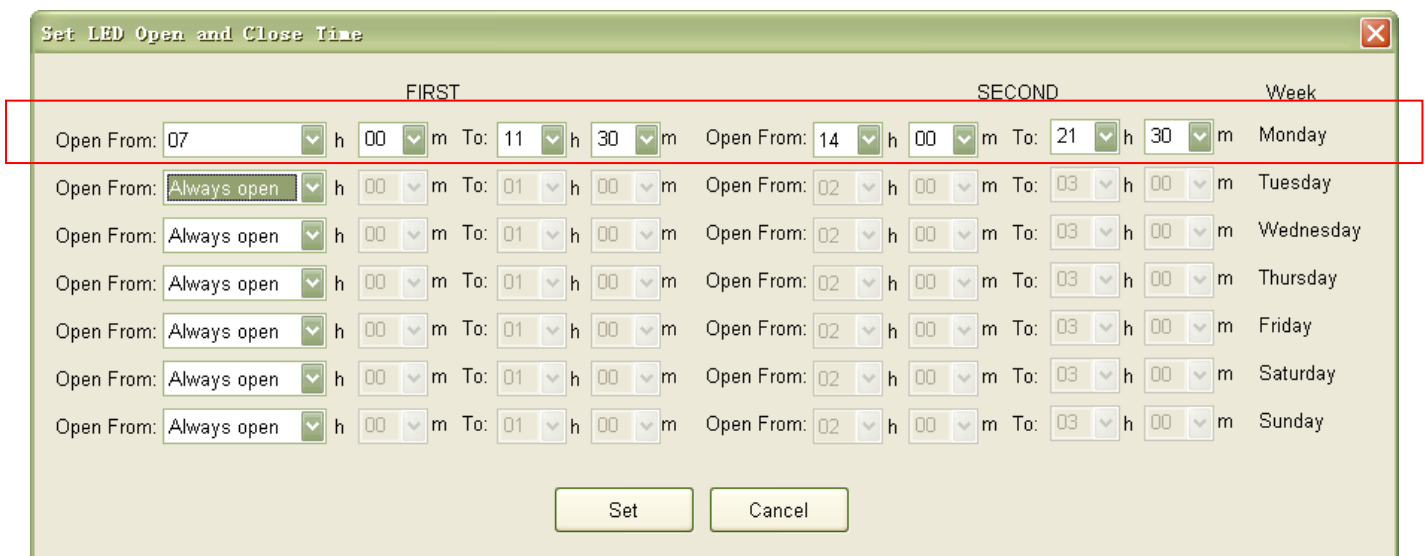
Cross turn on and turn off automatically by using  to control the On/Off of Cross under a time-table.

The default setting of this function is “Always open”. That means the Cross is “Turned On” all the time, unless the power is plugged out.



FIRST		SECOND		Week
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Monday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Tuesday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Wednesday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Thursday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Friday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Saturday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Sunday

Example:



FIRST		SECOND		Week
Open From: 07 h 00 m	To: 11 h 30 m	Open From: 14 h 00 m	To: 21 h 30 m	Monday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Tuesday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Wednesday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Thursday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Friday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Saturday
Open From: Always open	To: 01 h 00 m	Open From: 02 h 00 m	To: 03 h 00 m	Sunday

This time-table means if today is Monday ,the Cross will be turned on from 7:00 and turned off automatically at 11:30; it will be on again at 14:00 and off again at 21:30 .

When Cross at "OFF" work condition, it will display time date temperature and humidity alternately.

Do not forget to click “Set” to send the On/Off time-table to the Cross.

ATTENTION

It is not suggested to use this function too frequently. Under the On/Off function, the system doesn't light the LEDs, but the power supply is not cut and Cross is still working.

Lifespan of Cross may be affected if frequently use this function. It's better to plug off the power when not use the Cross.