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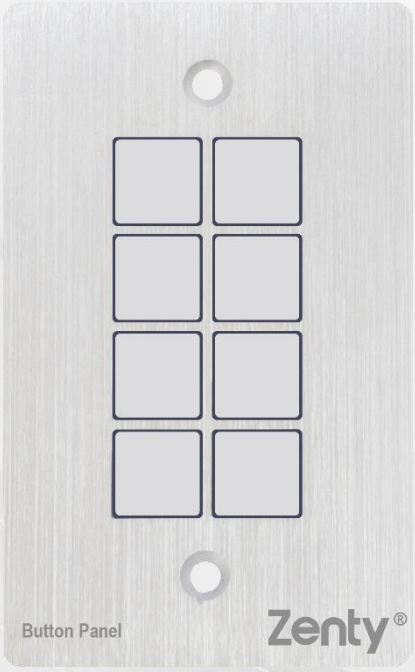
User Manual [V1.0]



8-Button Wall Plate Control Panel

ZT-136 | ZT-CP8

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HDMI HIGH DEFINITION MULTIMEDIA INTERFACE RoHS compliant CE FC

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1. Introduction

The programmable control panel ZT-CP8 is a wall control panel. Every button is programmable and works either individually or together. The programmable control panel is built in the programmable 3 RS232, 1 RS485, 3 Infrared and 2 Relay, and 1 mini-USB for programming.

Please notice, RS232 (1) and IR2 share the same port, and cannot be used at the same time. Also, RS232 (2) and IR3 share the same port, and cannot be used at the same time.

It can fully control our products (you can download pre-configured drivers from our website www.jtechdigital.com, as well as third party devices such as projectors, screens etc. It is an easy-to-use control device for presentations show rooms,, classrooms, and boardrooms.

2. Key Features

- Every button can be programmed to send the bi-direction RS232 and RS485 commands simultaneously to control third party devices
- Every button can be programmed to send the IR code, control the relay, to let them work simultaneously to control the third-party devices
- Every button is built in the IR code and RS232 code learning function, and baud-rate setting
- ID looping function. 99pcs programmable control panels can be looped and controlled together by ID identifying
- Programmed by USB or RS232, working with the PC software
- Crystal and backlit buttons with easy user-friendly customizable changeable labels
- The backlit brightness is controllable
- Dimensions: 11.4cm long and 7cm wide

3. Package Contents

(1) x ZT-CP8 Control Panel

(3) x 2-pin Captive Screw Connector

(8) x Button Caps

(1) x USB Converting Cable

(1) x Power Adapter (DC 12V)

(2) x IR Emitter

(1) x Button Label

(1) x User Manual

4. Installation

- Dig a hole on the desk to the size marked on the aperture paper (shown in figure 1-1)
- Put the device into the hold and adjust it to flush with the table (shown in figure 1-2)
- Plug a set screw in to the fixing mounting and screw the nuts tightly

Figure 1- 1 Aperture paper

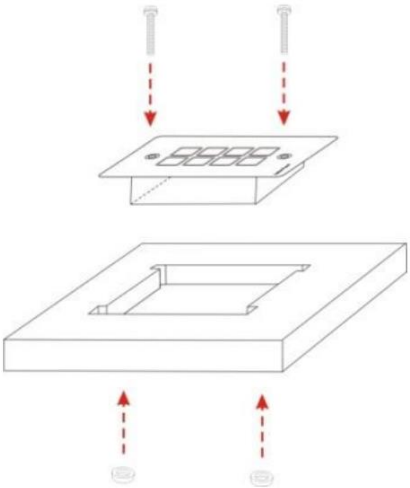
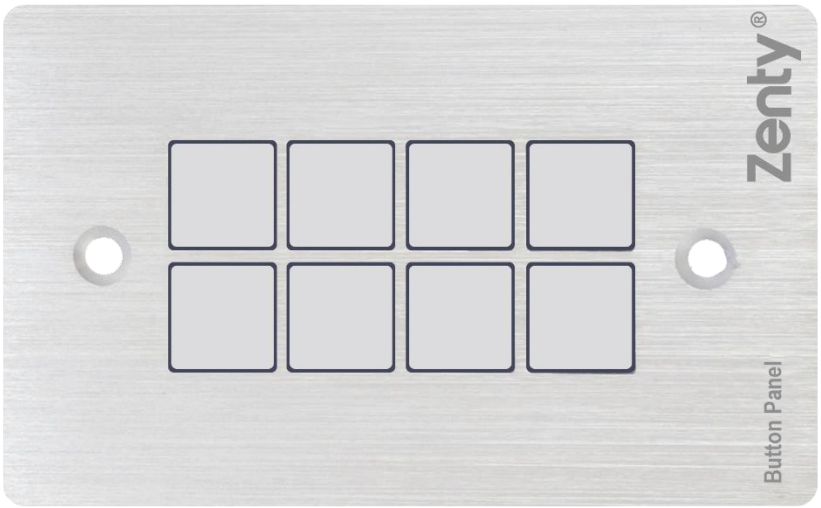


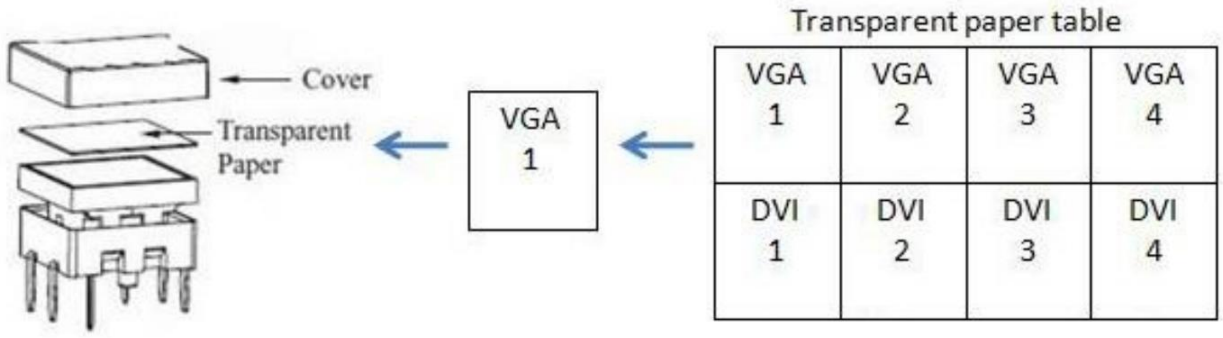
Figure 1- 2 Installation Guide

5. Panel Description

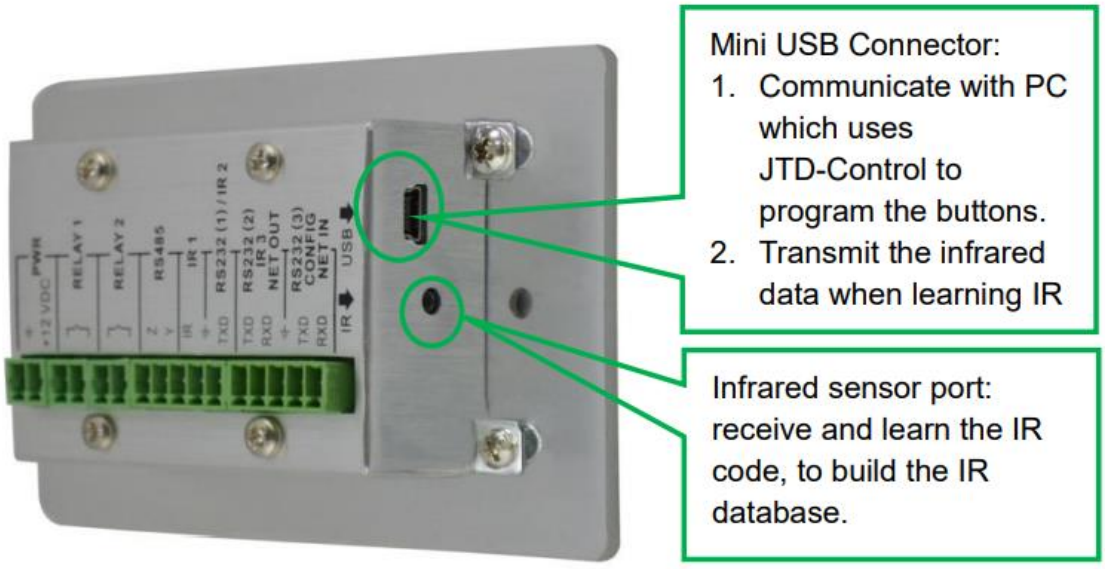
5.1 Front Panel



- Crystal and luminescent, programmable buttons. Every button can be programmable with the software JTD-Control
- Connect the PC via USB or RS232
- Every label inside the button can be changeable. You can choose the label you need and change it easily

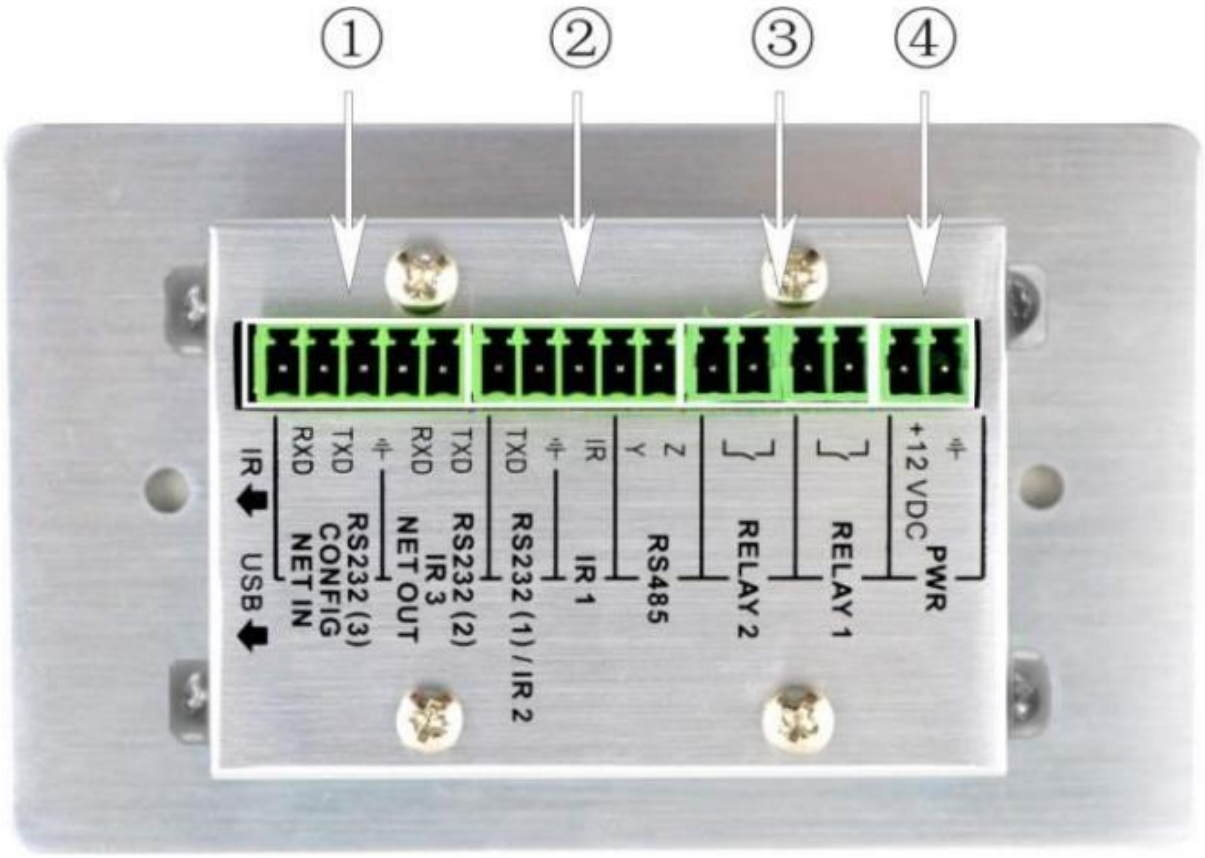


5.2 Side Panel



Note: When use this USB port to program the control panel's buttons, the available COM port number should not be more than 10.

5.3 Rear Panel



The programmable control panel has various ports in the rear panel, including Lopping port, RS232 port, RS485 port, IR port, Relay port and Power port. Below is the introduction:

① This port includes two parts: One part is RS232 (2)/IR3, it can be used for control other devices or looping output. RS232 (2) and IR3 share the same port, the detailed use depends on the setting of JTD-Control. Other part is RS232 (3), it can be used for control other devices or looping output, or connect with PC. These two parts share the same grounding.

② This port includes: RS232 (1)/IR2, IR1 and RS485. a) RS232 (1)/IR2: share the same port, the detailed use depends on the setting of JTD-Control. When be used as RS232, it is unidirectional transmission, transmit data but without receive. b) IR1: for control other devices, it can be programmable by the JTD-Control. c) RS485: the RS485 can be programmed as different commands and control the device with RS485 port. The command of RS485 is the same as RS232 (1).

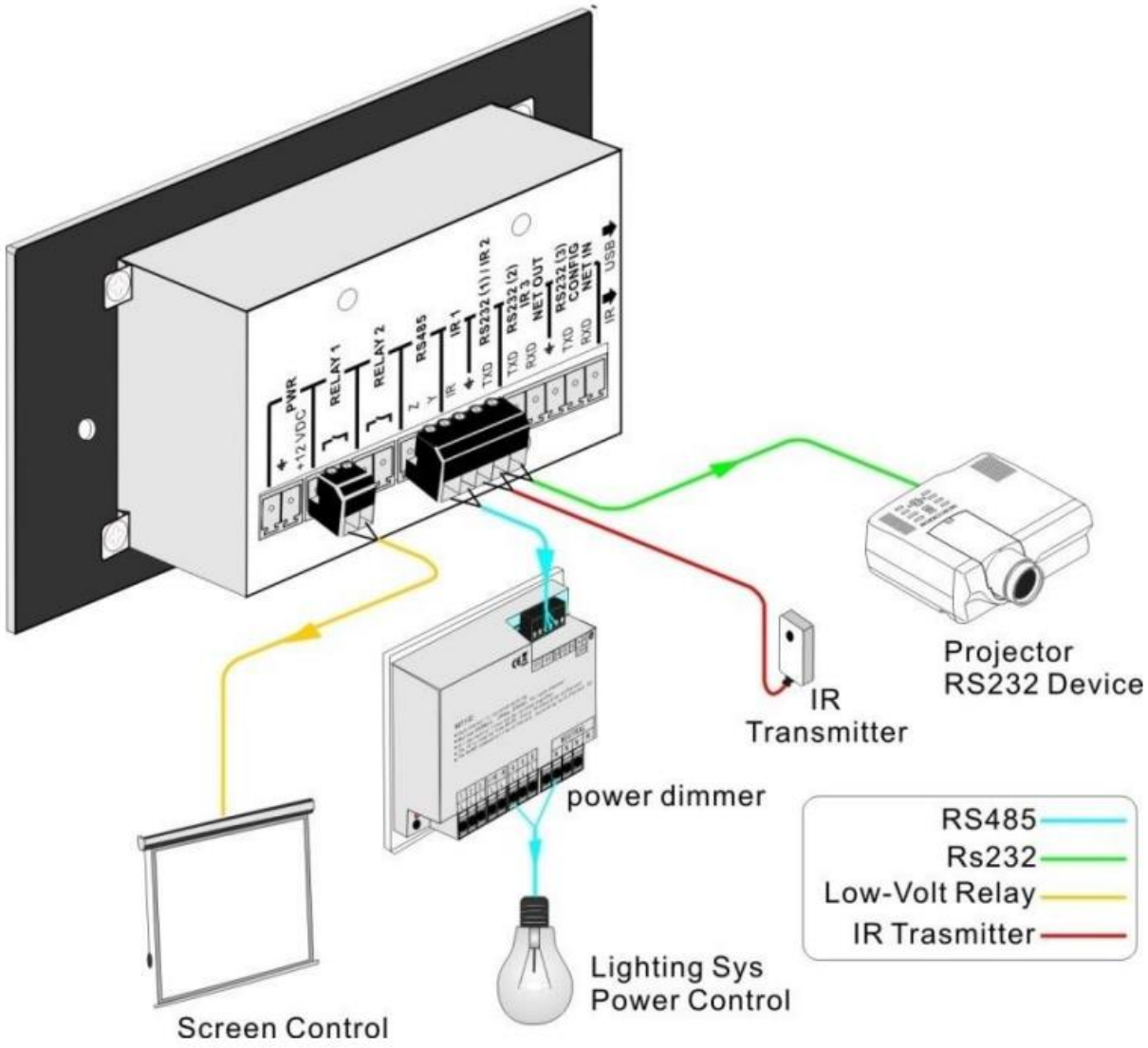
③ Low-Voltage relay ports: set the relay on/off by software JTD-Control

④ Power connector: 12VDC. Be sure that the “+” and “-” never be mixed or wrong connection.

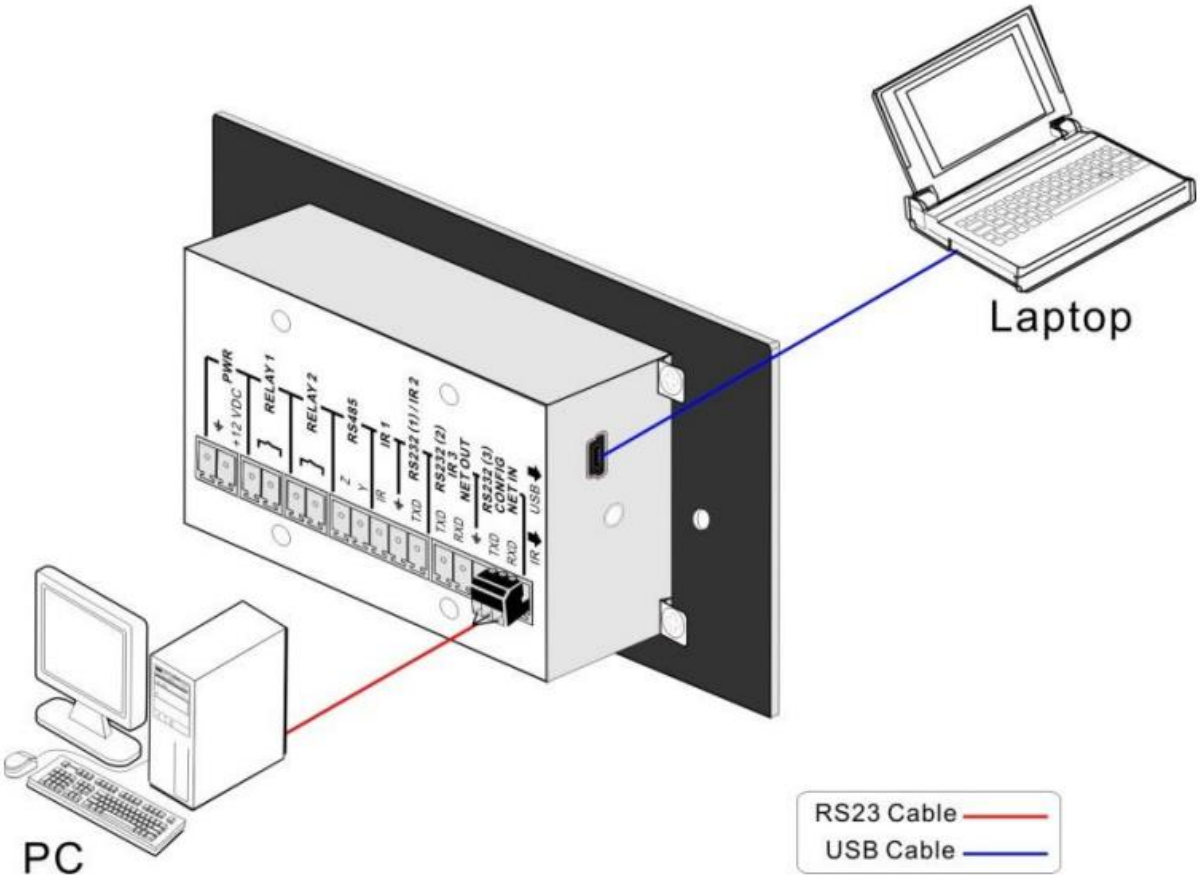
6. Connection Introduction

6.1 System Diagram

The programmable control panel can active different ports at one time. It means every button can send the RS232 and RS485 commands, IR code and control the relay at the same time. The demo system diagram as below:

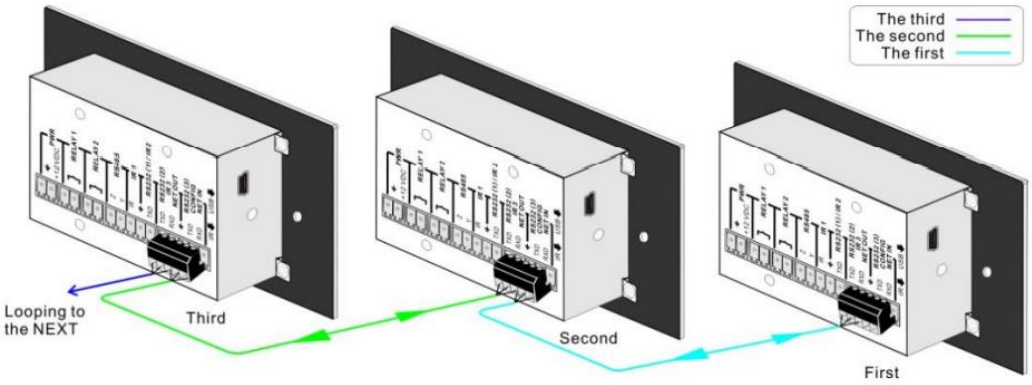


6.2 Connection of Programming and Looping



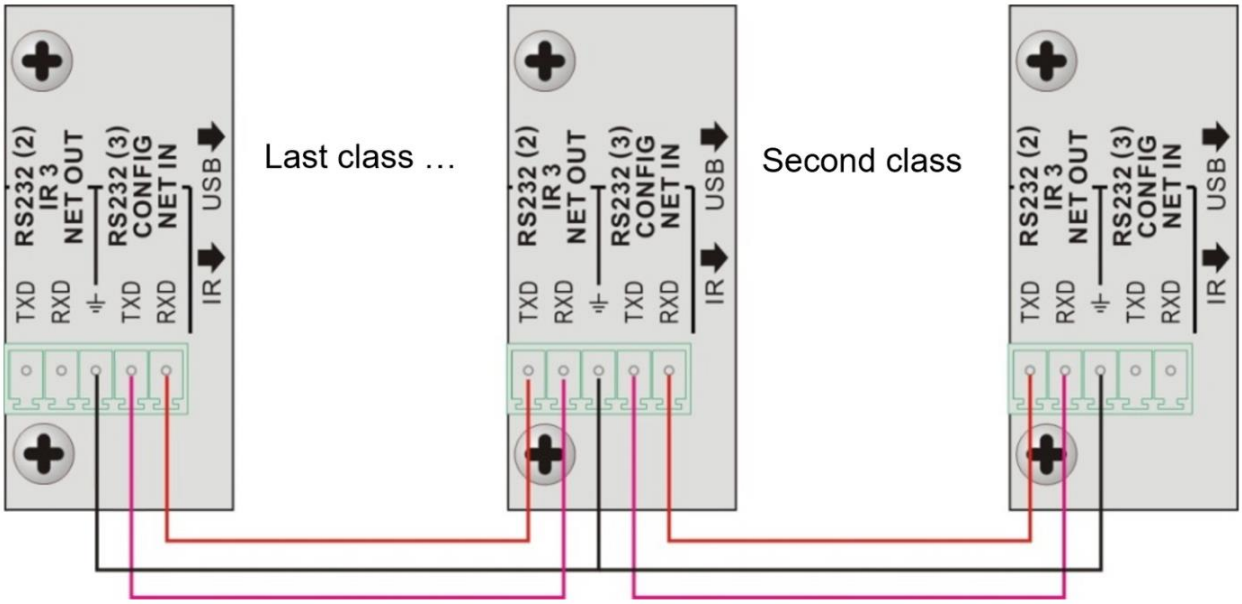
Programming Connection

Several pieces programmable control panels can be also looped to be a system, for control more devices. It is looped by the inter RS232 setting. Please check the demo picture as below:



Several programmable control panels Looping connecting

After connect the programmable control panels as above, and then we should set the ID of each programmable control panel by JTD-Control. The ID number is from 01 to 99, and it also is the class of the programmable control panel in the loop, different programmable control panels should set to different ID. After connections finish, we can set the control modes by JTD-Control. For detailed connecting, please check the picture below:



Note: Up to 99 programmable control panels can be looped within one system. However, to achieve normal interaction, loop less programmable control panels (10 tops) in the system

7. System Operations

7.1 USB Driver Installation

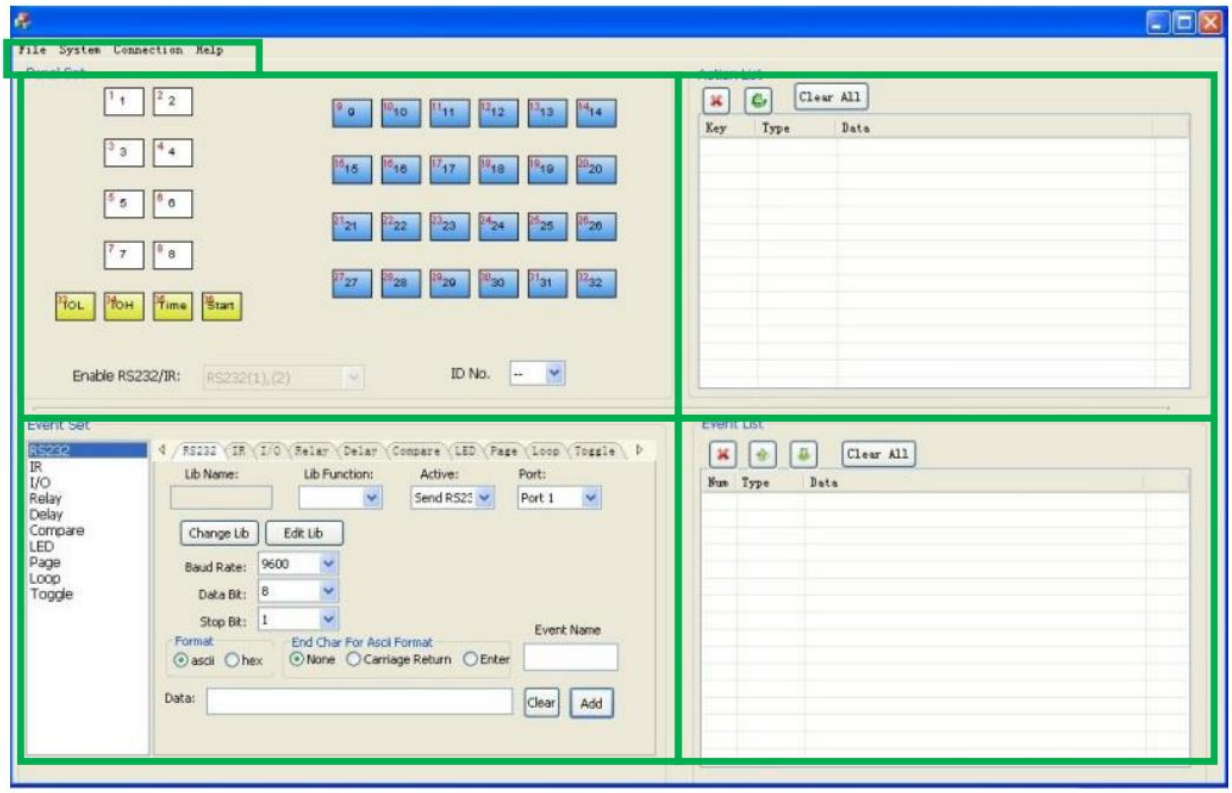
There are USB driver file and JTD-Control software in the disk. The JTD-Control can run directly without installation. But when connect the programmable control panel with PC by USB, it may need to install the USB driver. Use the driver file to install the driver of USB, we can use USB to program the programmable control panel.

7.2 Software Programming

You can use this software JTD-Control to easily set every button of the programmable control panel.

After connecting the programmable control panel with PC by USB or RS232, we can open the JTD-Control to program the buttons for controlling. The main window of JTD-Control has five parts: main menu, panel (button) setting, event setting, action list and event list. In this manual we will take programmable control panels-V for example, to show the uses of all functions.

The main window of JTD-Control is as below:



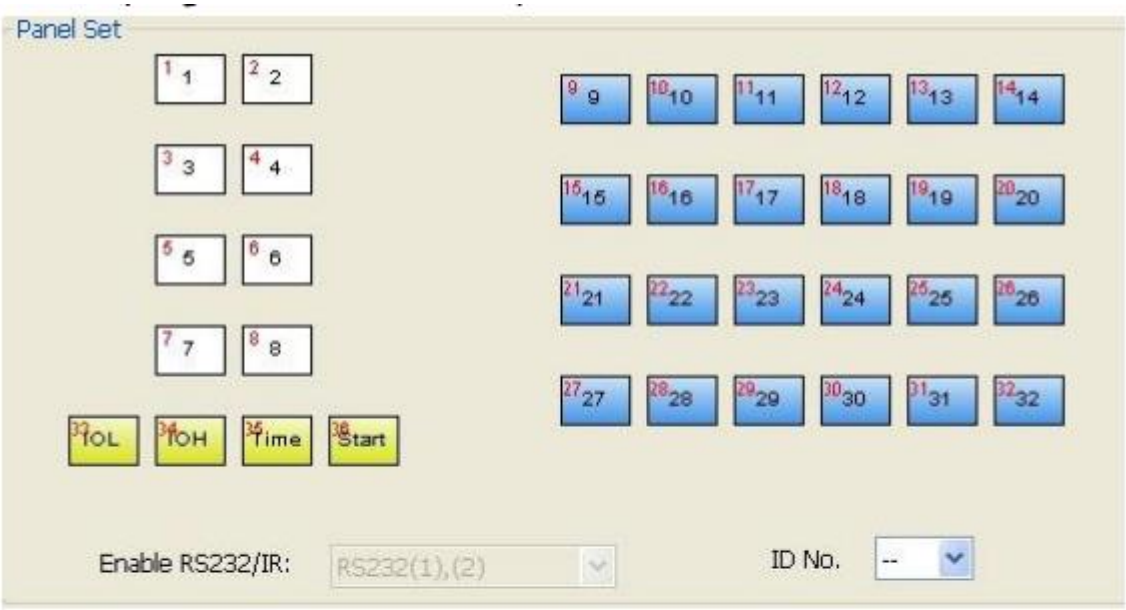
We will introduce all the configurations one by one.

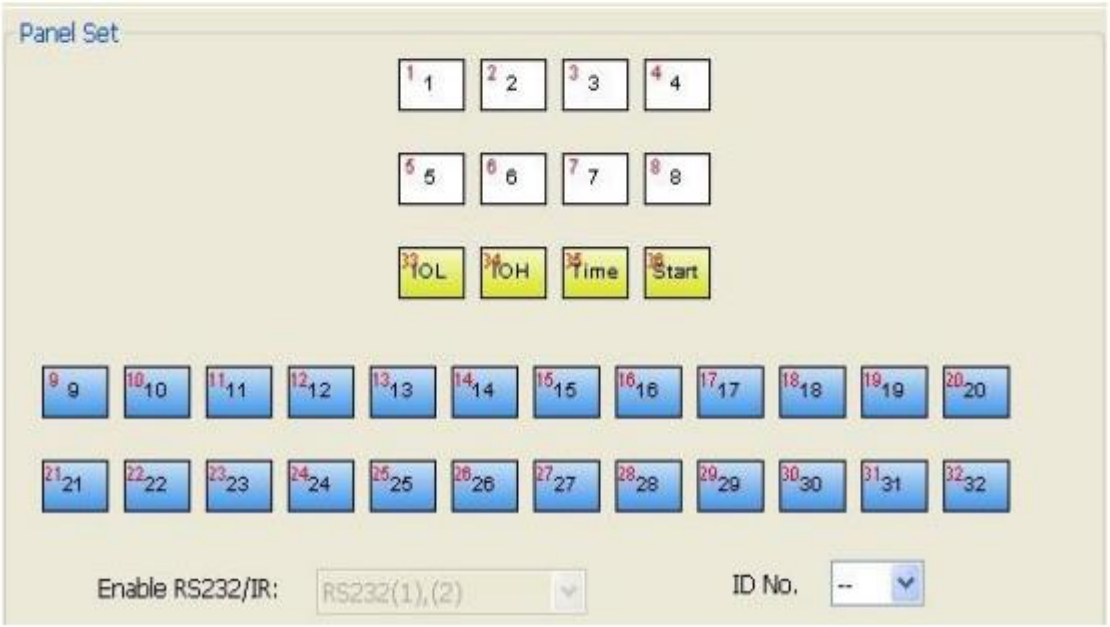
7.3 Main Menu

The main menu includes file management, system model, connection type and help.

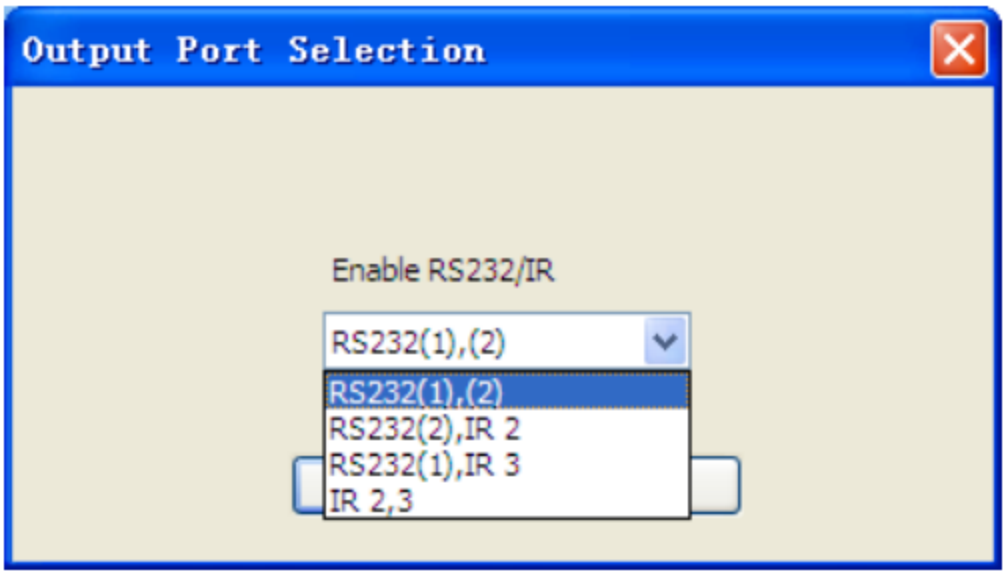
1. File management: Open/Save/Save as a configuration. After program, user can save the configuration to a file, so that you can use the same configuration next time.

2. System model: includes programmable control panels-H, programmable control panels-V, WP19R etc., and the buttons interface view are different with different models. The pictures below show the differences between programmable control panels-V and programmable control panels-H.





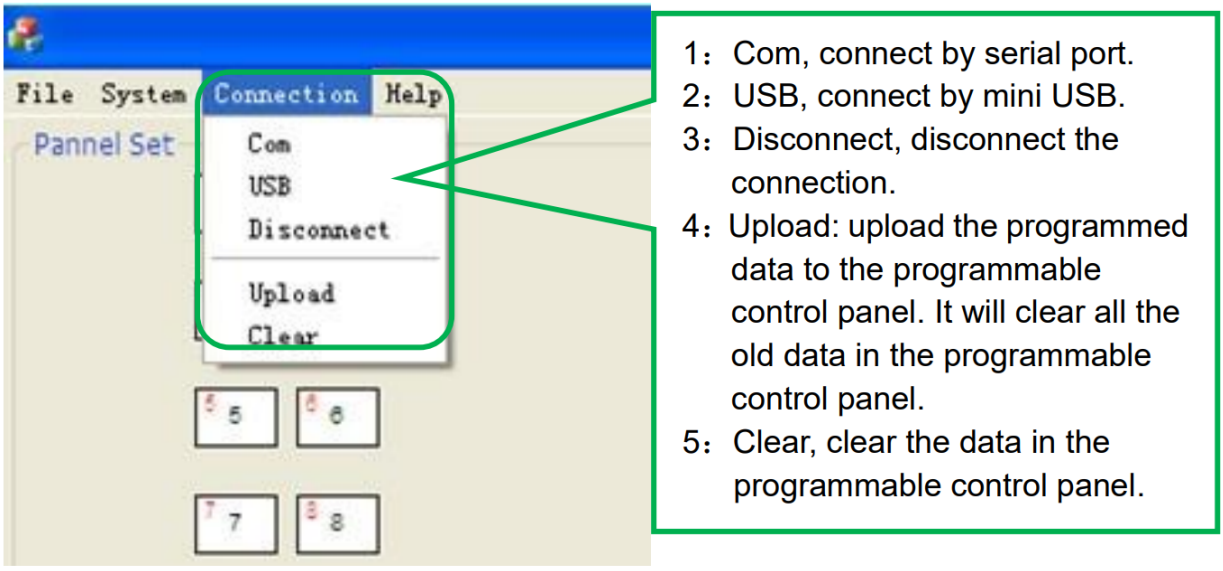
Note: When select the model, it will pop up “Output Port Selection” dialog, user can select different RS and IR types, depend on the uses of the two shared ports. The dialog is as the picture below:



The output port set in JTD-Control and the port used in the programmable control panel is corresponding. And there are four output types. They are showed as below form ("√" means port is available):

Output port of the Panel / Output mode of JTD-Control	IR1	RS232(1)	IR2	RS232(2)	IR3	RS232(3)	RS485
RS232(1)(2)	√	√		√		√	√
RS232(2),IR2	√		√	√		√	
RS232(1),IR3	√	√			√	√	√
IR2,3	√		√		√	√	

3. Connection type: the instructions are in the picture below:

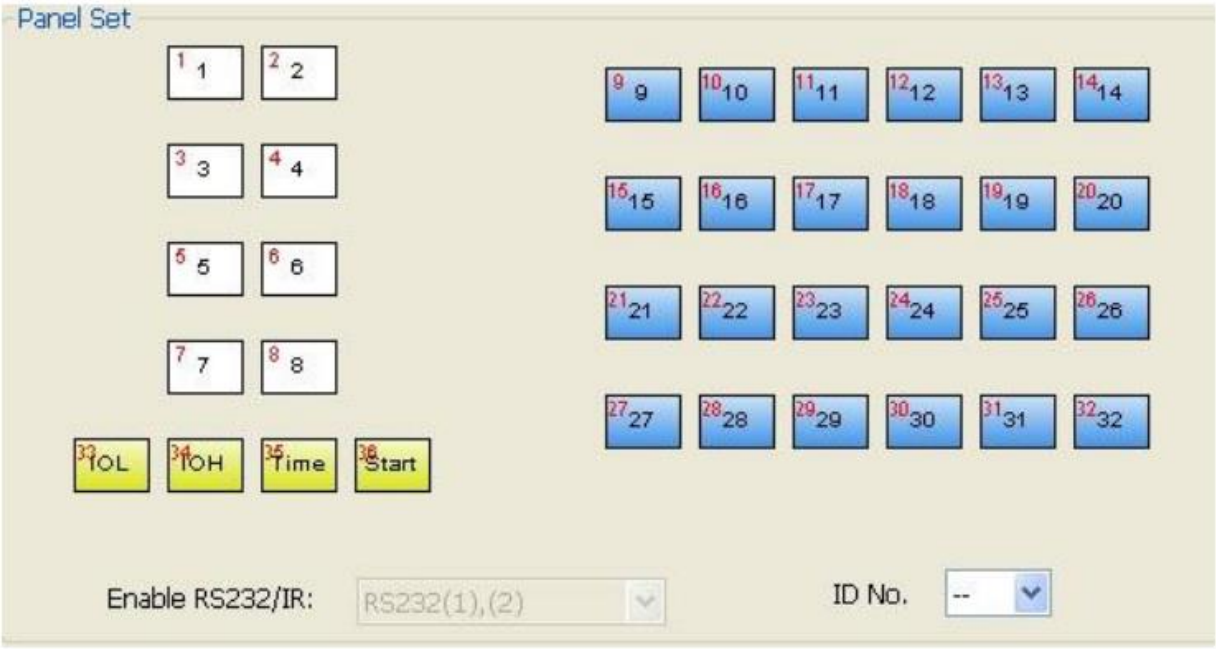


The functions of the programmable control panel's buttons will be available only after the programmed data is uploading successfully.

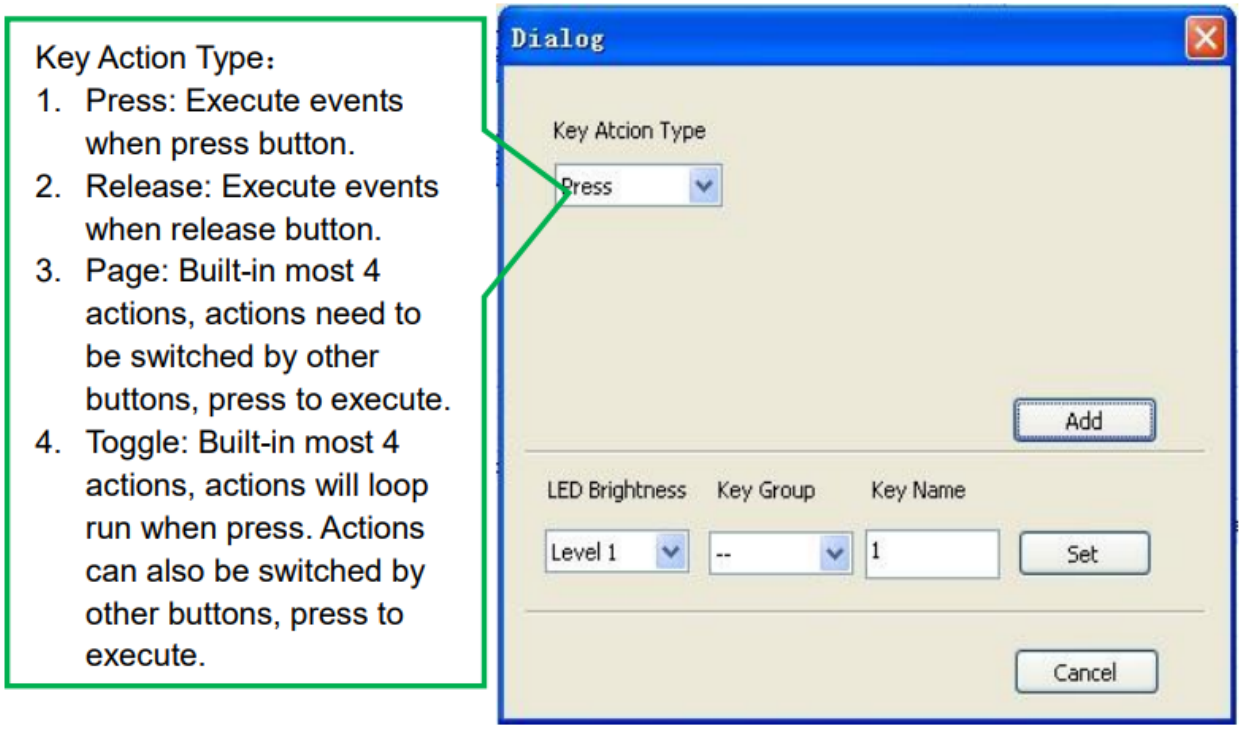
4) Help: Show the information of JTD-Control.

7.4 Panel/Key Setting

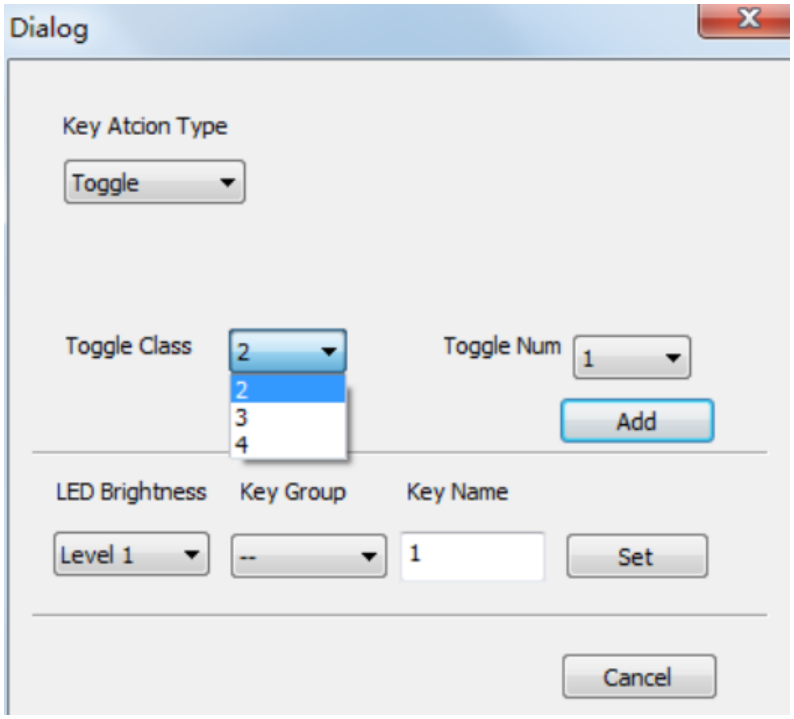
There are three different colors of keys in the panel set of JTD-Control. Add a key action to action list, then add events to this action, make this action will execute the events. Here take programmable control panels-V for example, to introduce the uses of different buttons



1. White keys: keys 1-8, correspond to the buttons on the programmable control panel. Click the key, it will pop up dialog as below:



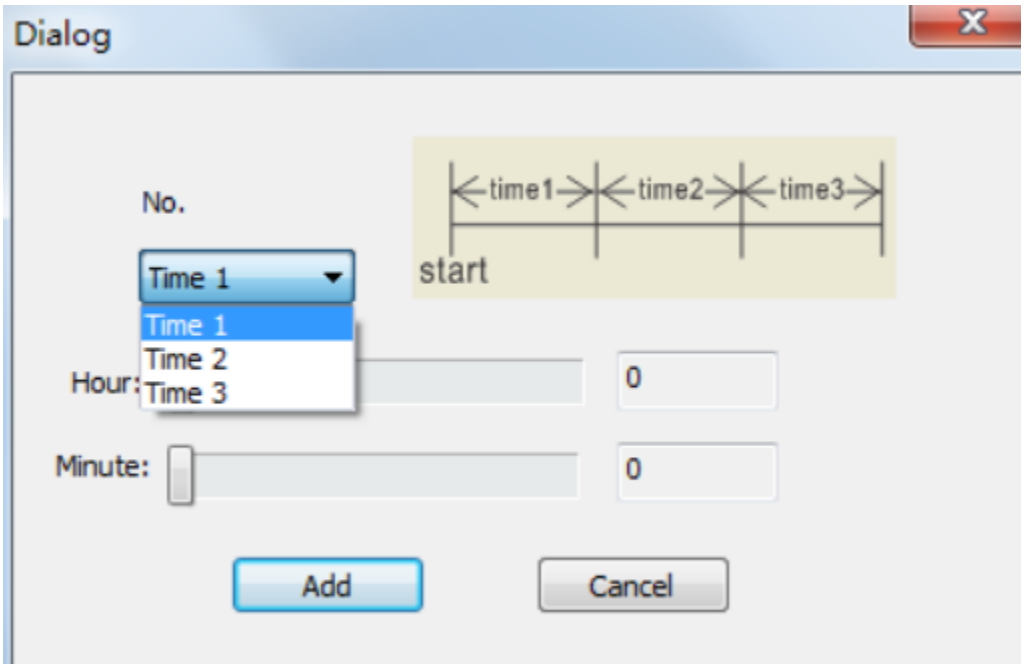
When select the type “Toggle”, the setting interface is as below:



The toggle class is the action loop class, depends on the numbers of looped actions. When the class is 2, there are two actions in the toggle. And so on.

2. Blue Keys: Keys 9-32, all are virtual keys, used in the loop function. When use the loop function, the ID must be set, the ID can be 1 to 99. Press “add” will add the button to action list.

3. Yellow Keys: Keys 33-36, all are virtual keys. Key 33 and 34 are for I/O control, which is not supported with the programmable control panel. Key 36 is a start action, if add events to this action, when the programmable control panel is power on, it will execute the events in this action. Key 35 is delay button there are three time slots can be set. See in the picture below:

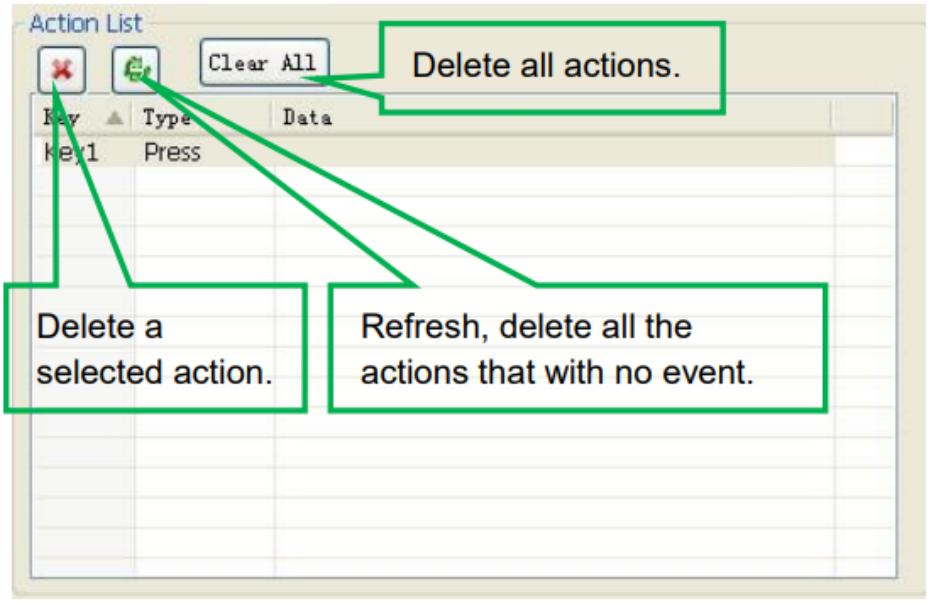


The time is counted from the programmable control panel start. When come to time1, the programmable control panel will execute the events in time1. Then recount from time2, and then time3.

Example: Set time1 to 5 minutes, and time2 to 3 minutes, add event1 to time1 and event2 to time2. When the unit starts, it will execute event1 after 5 minutes, and then execute event2 after 8 minutes.

7.5 Action List

Action list shows all the set actions. An available action must be added to the list. The action list is as the picture below:

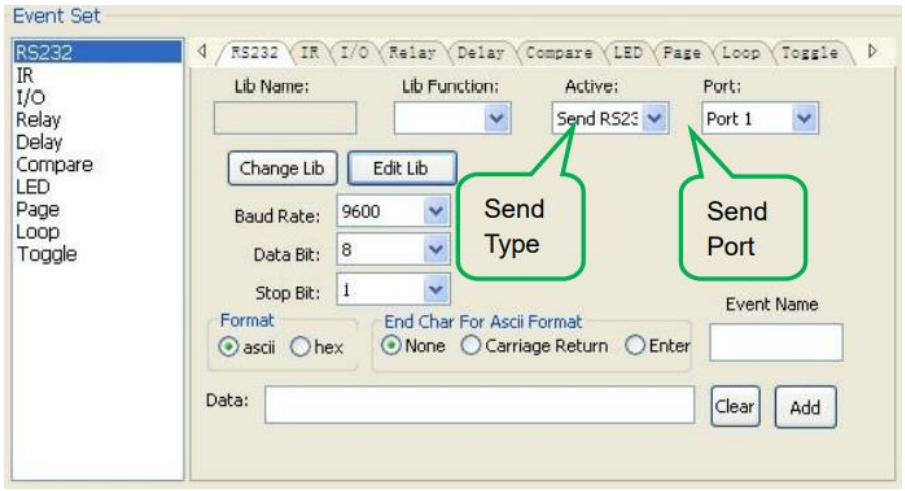


7.6 Event Setting

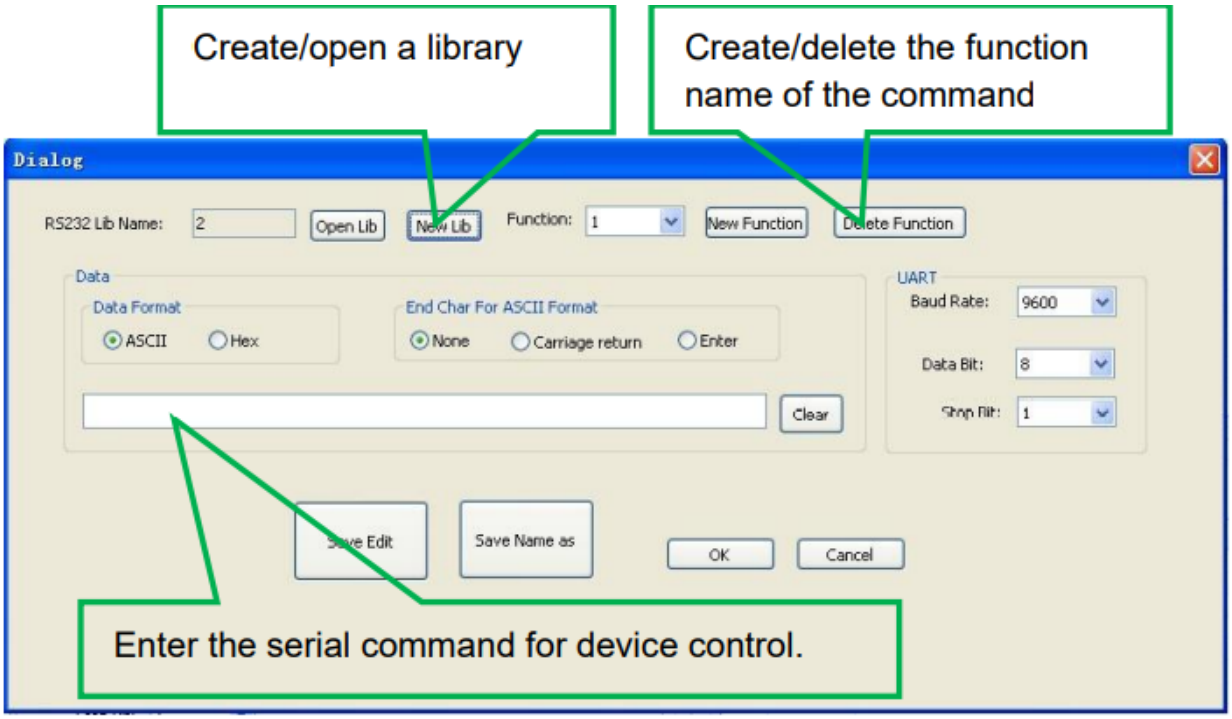
Event setting includes RS232, IR, I/O, Relay, Delay, Compare, LED, Page, Loop and Toggle setting. Before set events, an action must be added first. The following introduction will show you the setting of each event:

➢ RS232 Setting

This item is used for setting the parameters of the programmable control panel's serial ports. Click "RS232", it will show as below:

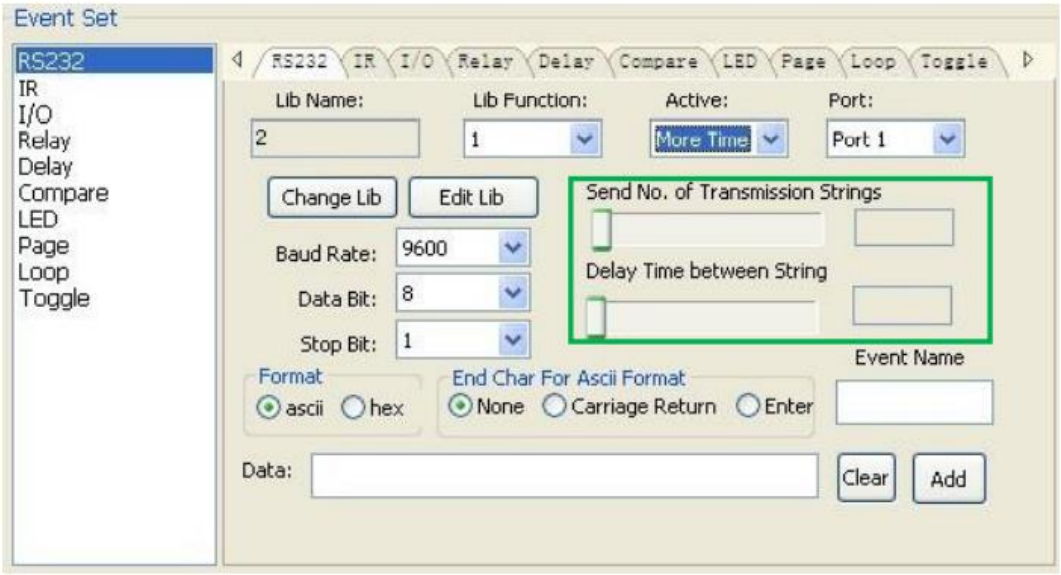


1. The data of RS232 can be directly entered or selected from library. Click “Change Lib” to select a library file and open it. Click “Edit Lib” to create or edit a library file as below:



Note: When editing finish, remember to save the editing, and then press “OK”.

2. There are two send types: send once and send more times. When select “more times”, the send times and the delay between times can be set. See in picture below:

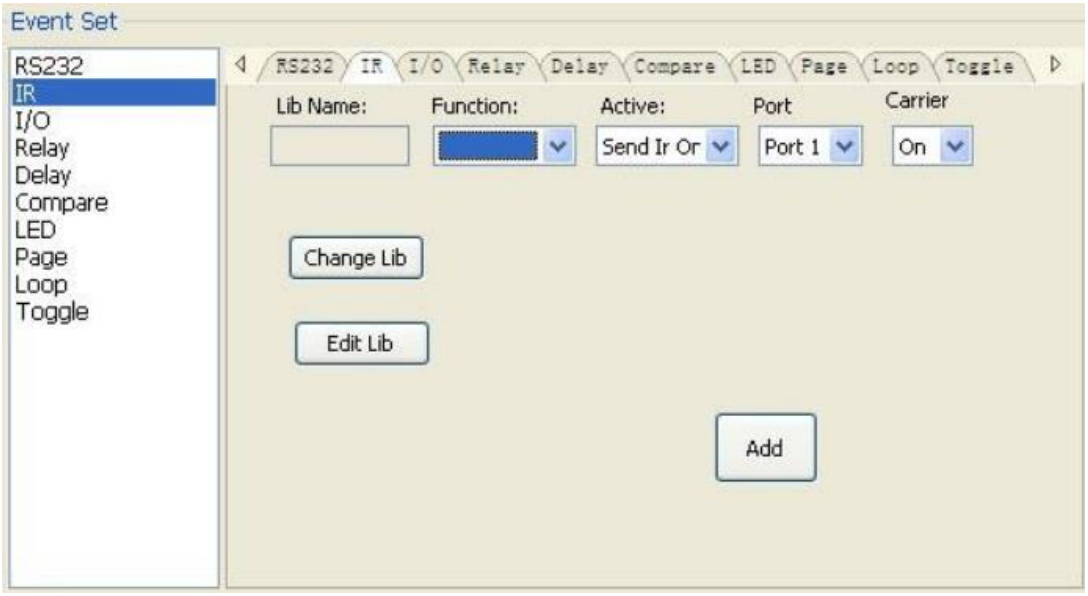


3. The send port must be selected as the same as model setting, otherwise the event cannot be added.

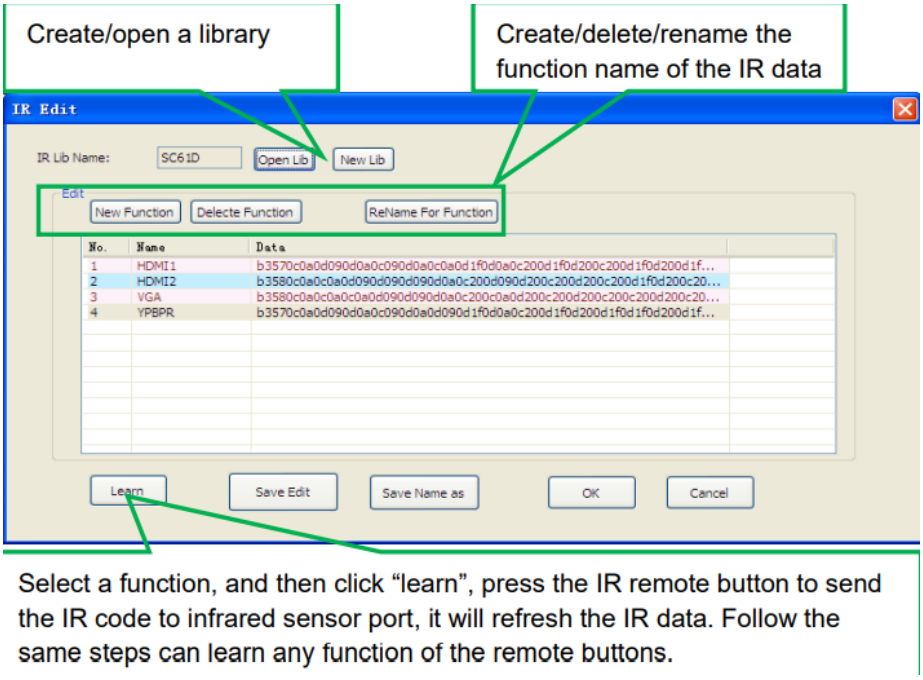
4. User can set the event name. It is optional function, not necessary.

➢ IR Setting

This item is used for setting the parameters of the programmable control panel's IR ports. Click "IR", it will show as below:

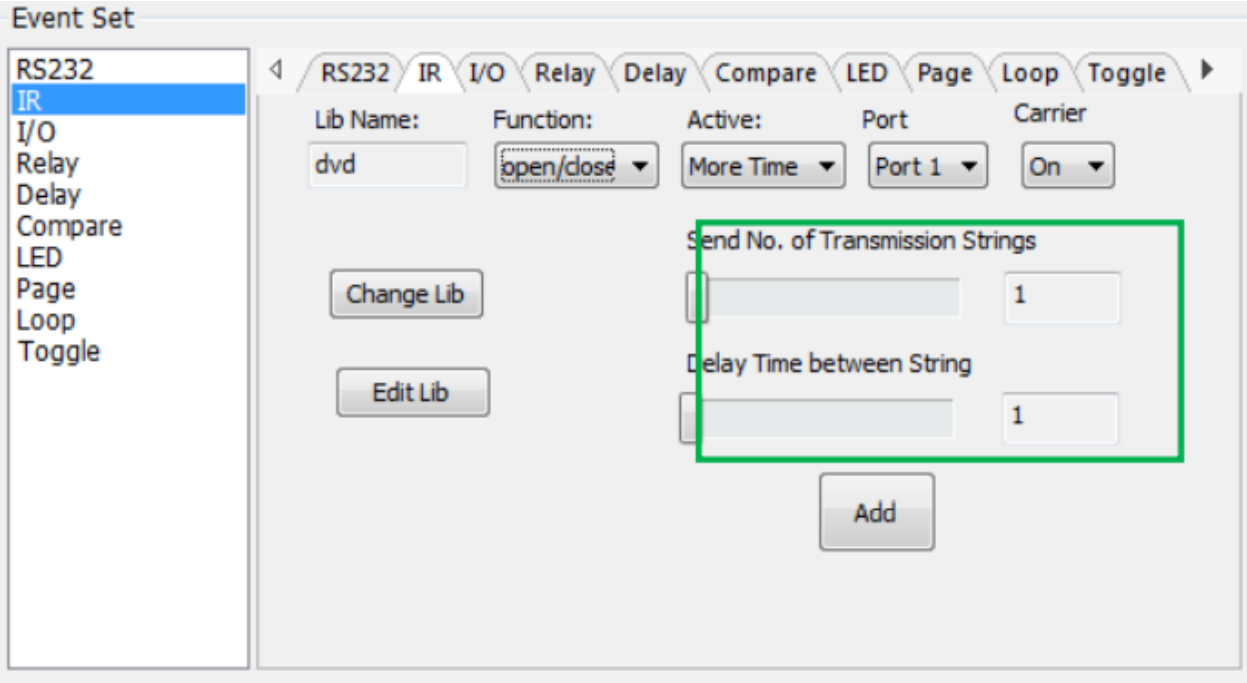


1. The data of IR need to be selected from library. Click "Change Lib" to select a library file and open it. Click "Edit Lib" to create or edit a library file as below:



Note: When editing finish, remember to save the editing, and then press "OK".

2. There are two send types: send once and send more times. When select “more times”, the send times and the delay between times can be set. See in picture below:



3. The send port must be selected as the same as model setting, otherwise the event cannot be added.

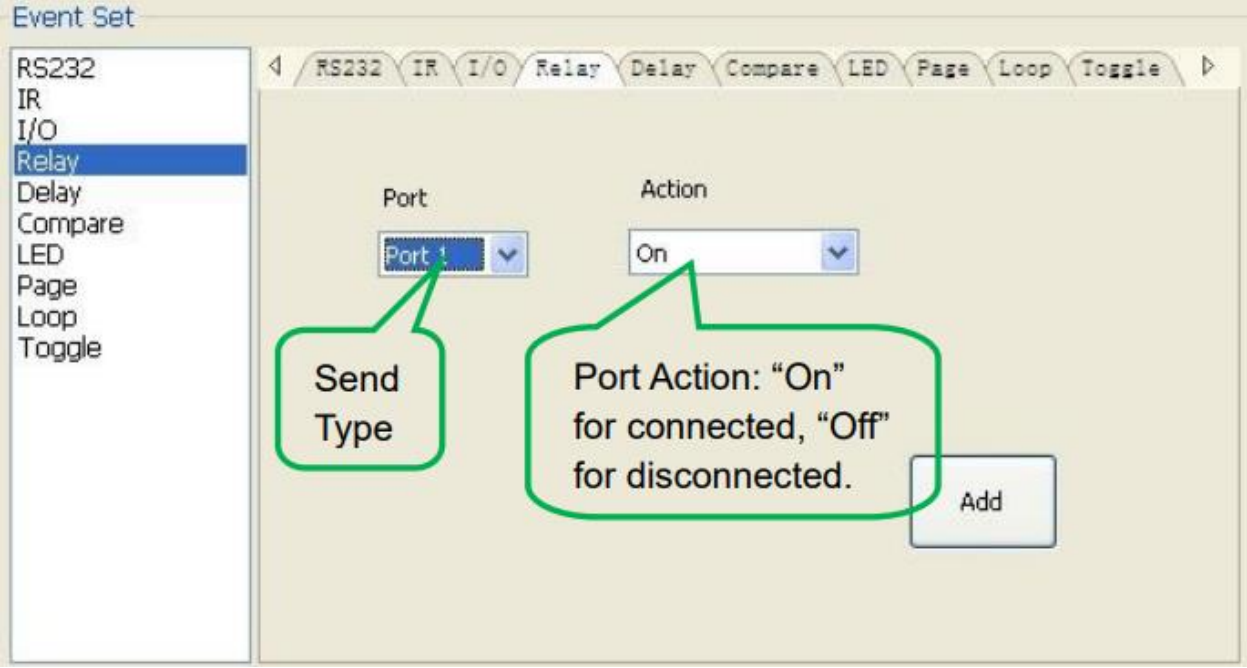
4. The IR can set the carrier on/off, to turn on/turn off the IR sending.

➢ I/O Setting

There is no I/O port in the programmable control panel, so the setting is not introduced in this manual.

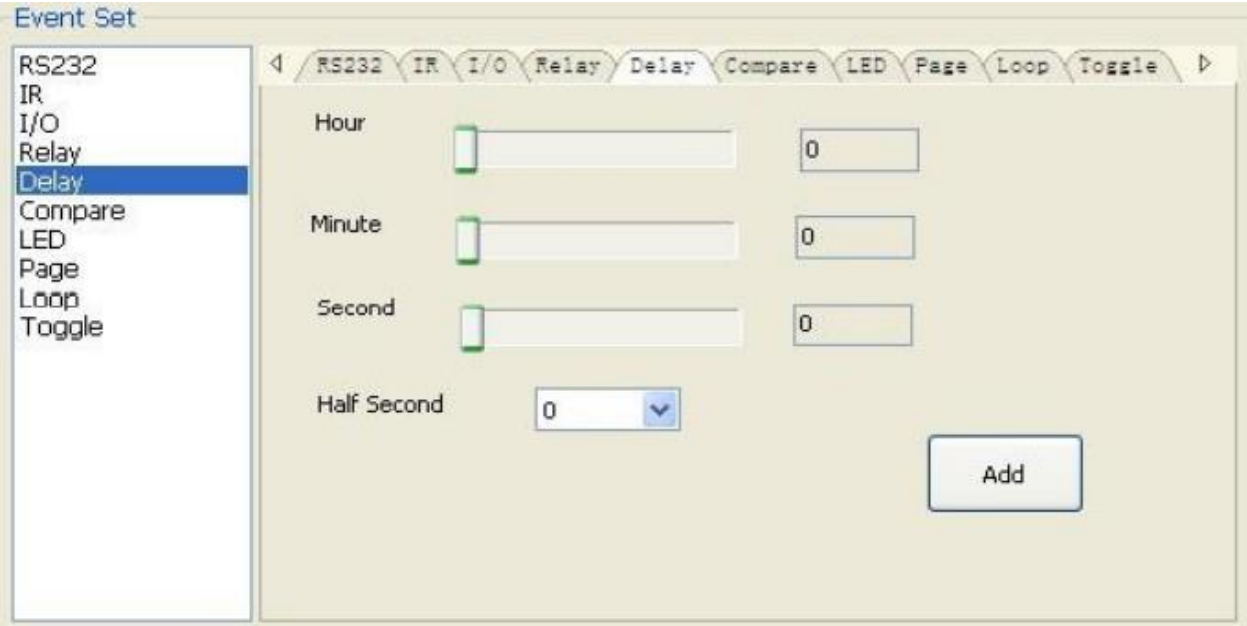
➢ Relay Setting

This item is for the replay ports setting. The setting is as the picture below:



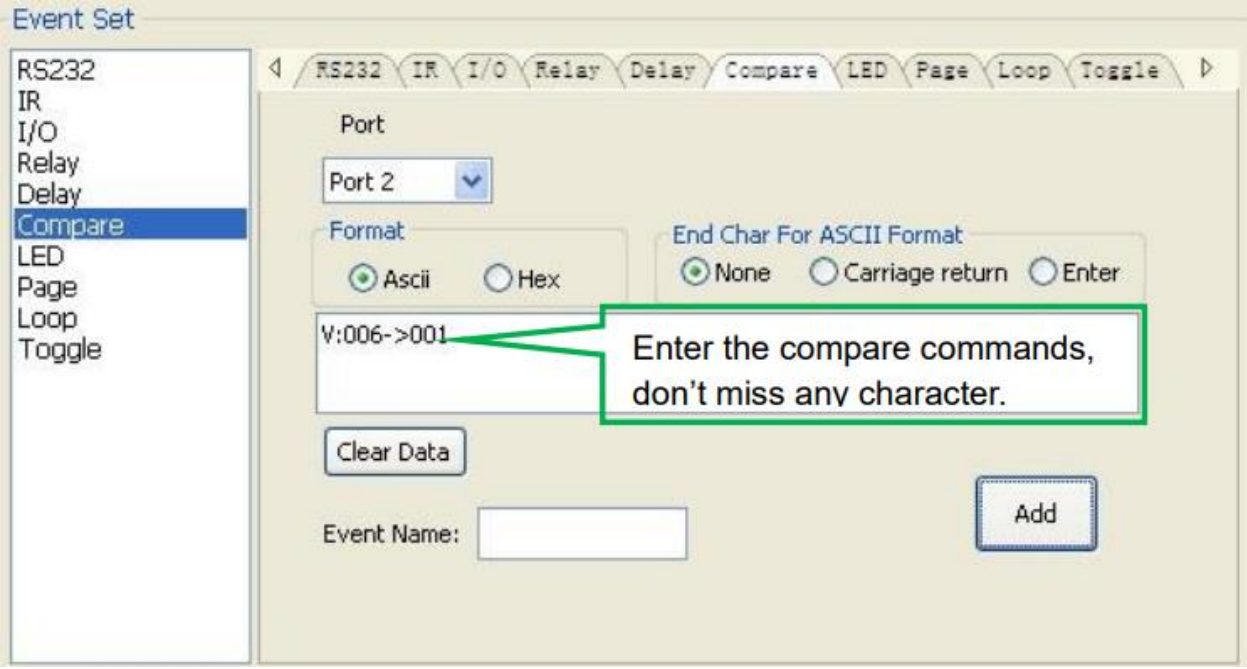
➢ Delay Setting

This item is to set a delay time, user can add a delay between two events; so when one event is finished, it will delay a certain time then start another event. The delay setting is as picture below:



➢ Compare Setting

This item is used for compare the feedback of RS232 commands. When the programmable control panel send a RS232 command to the controlled device, the device will send back a feedback. If we add the correct feedback in the data, the programmable control panel will compare it with the feedback received from controlled device, to verify the command is work or not. The compare setting is as the picture below:



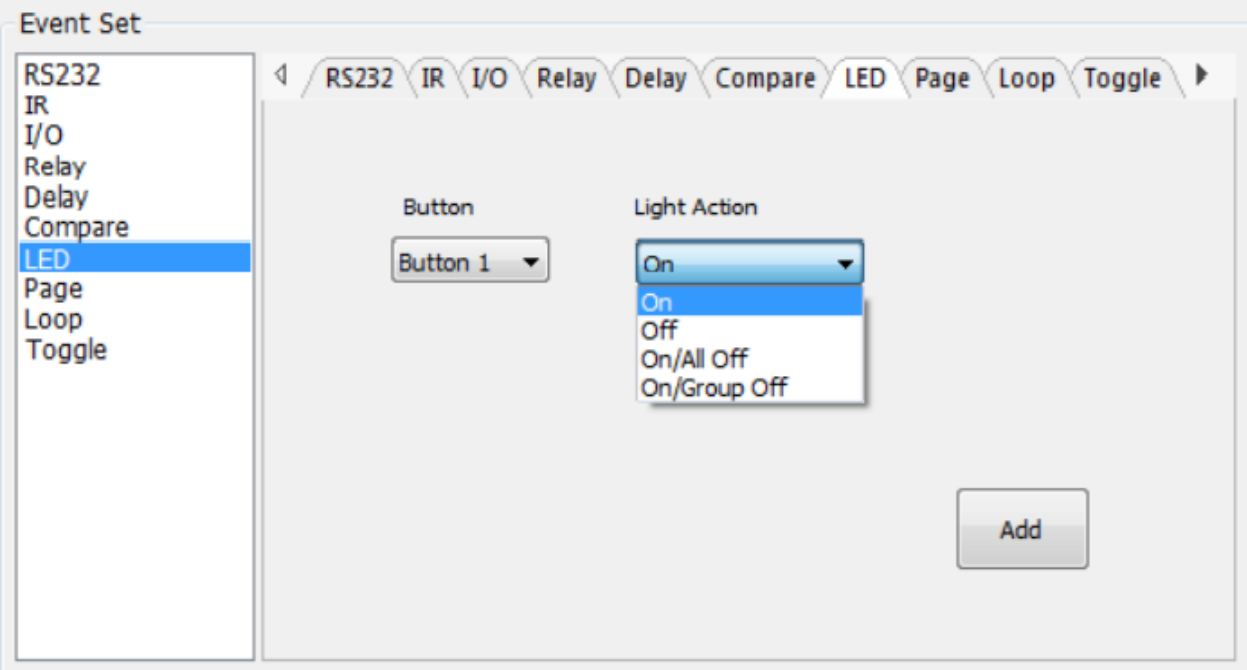
1. The send port must be selected as the same as model setting, otherwise the event cannot be added. And port 1 cannot be used for compare, for there is no a receive pin in this port.

2. User can set the event name; it is optional function, not necessary.

3. For the events in one event list have priority, from top to bottom, so that the compare function can be used in action which with three or more events. When send a serial command, we can add a compare-then other events. If the compare is incorrect, the event behind compare will not be executed.

➢ LED Setting

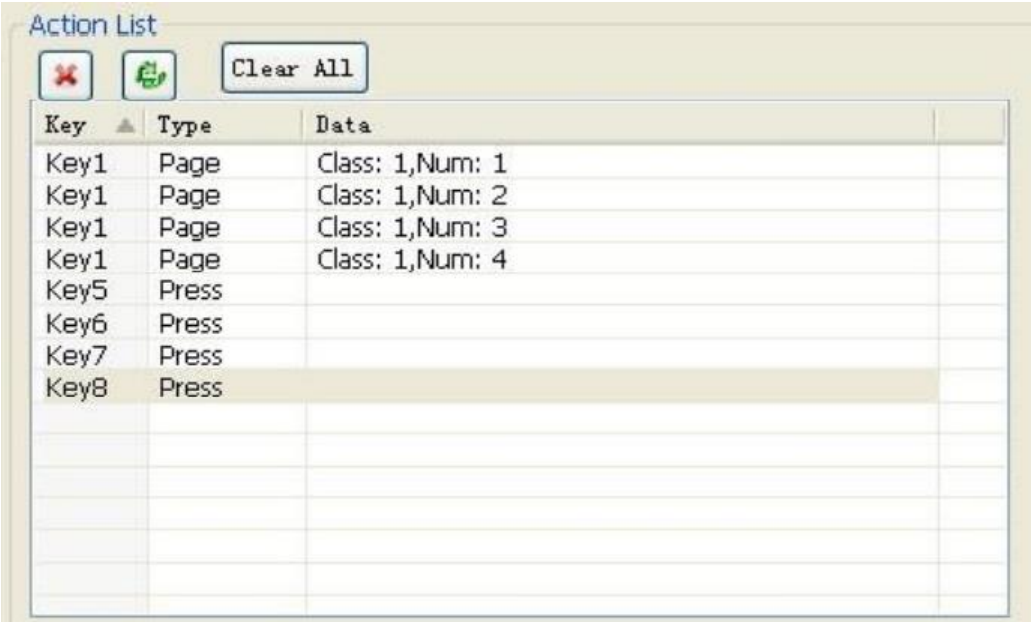
This item is used for set the button LEDs in the programmable control panel to turn on/off. The setting is as below:



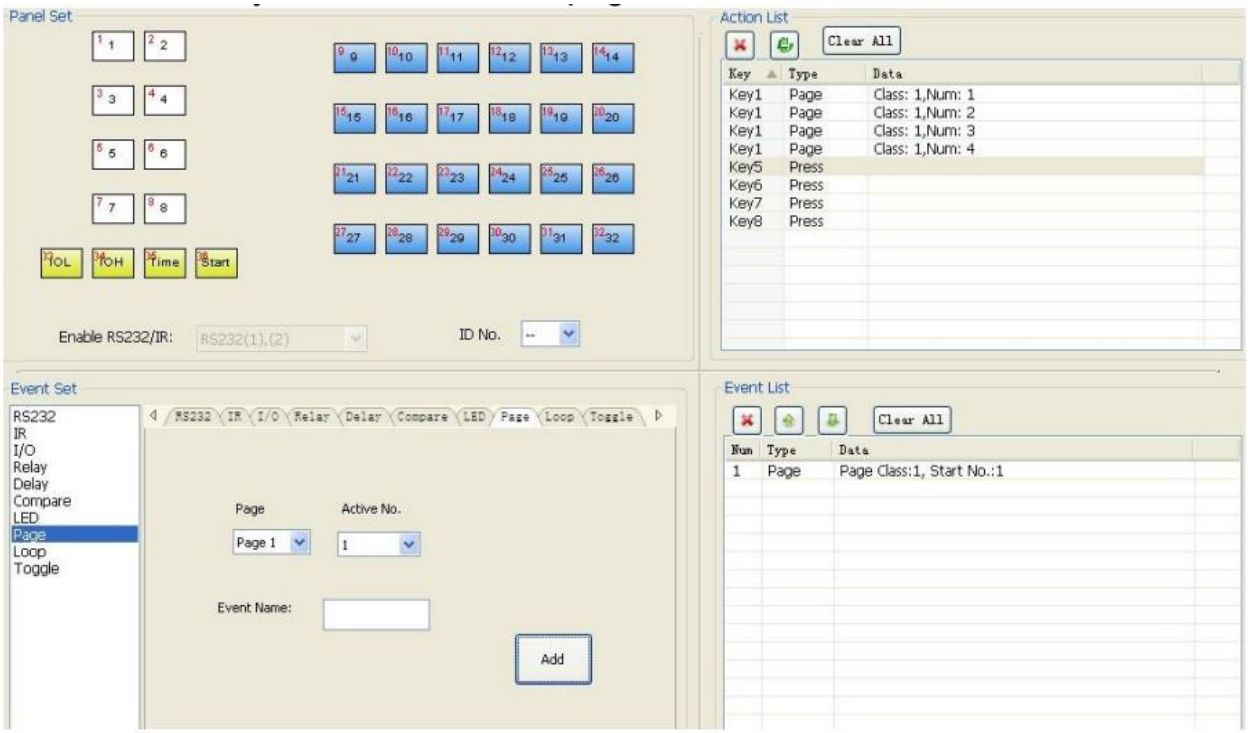
➢ Page Setting

White buttons can be set to type “page” that include four actions. To change different actions, it will need other white buttons to active the page action number. Here take a example to show you the use of this function:

1. Take button1 for example: click key1 and select the action type “page”, add the four actions to the action list. Then add other four buttons “press” action to the list (here take keys 5-8 for example):



2. In event setting, we add four different events to the four page actions of key1, and the four other keys will be added the page event to each of them as below:



Then set the “page” event to make four “press” actions to active the four page number: key5-num1, key6-num2, key7-num3 and key8-num4. It will perform like this:

▪ When you press the button5 and then button1, the button1 will execute the event of num1, press button1 more times it will execute num1 more times;

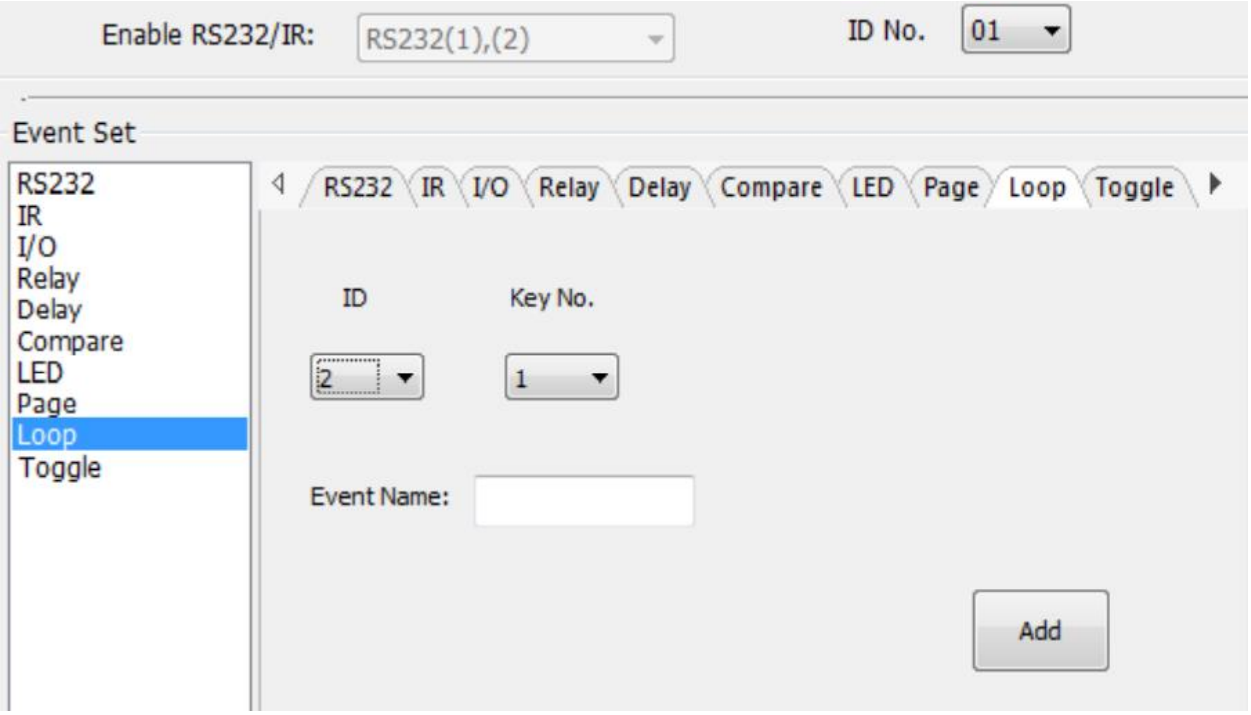
▪ When you press the button6 and then button1, the button1 will execute the event of num2, press button1 more times it will execute num2 more times;

▪ When you press the button7 and then button1, the button1 will execute the event of num3, press button1 more times it will execute num3 more times;

▪ When you press the button8 and then button1, the button1 will execute the event of num4, press button1 more times it will execute num4 more times.

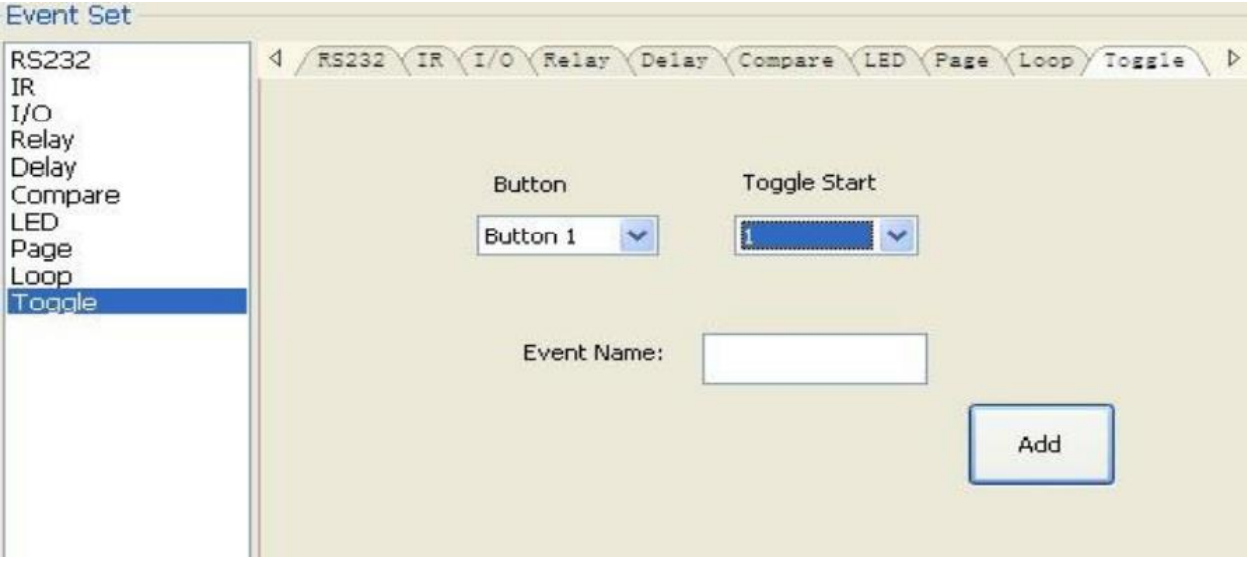
➢ Loop Setting

This item is used for looping the programmable control panel. When use the loop function, the ID of each programmable control panel must be set.



➢ Toggle Setting

The toggle setting is as the picture below:



The setting steps of toggle are similar with the page setting. But toggle performs differently, for the actions in it are loop running, it will perform as below (take the same example like page function):

a. When press the button5 and then button1, the button1 will execute the event of num1, press button1 more times it will execute num2, then num3->num4->num1 and so on.

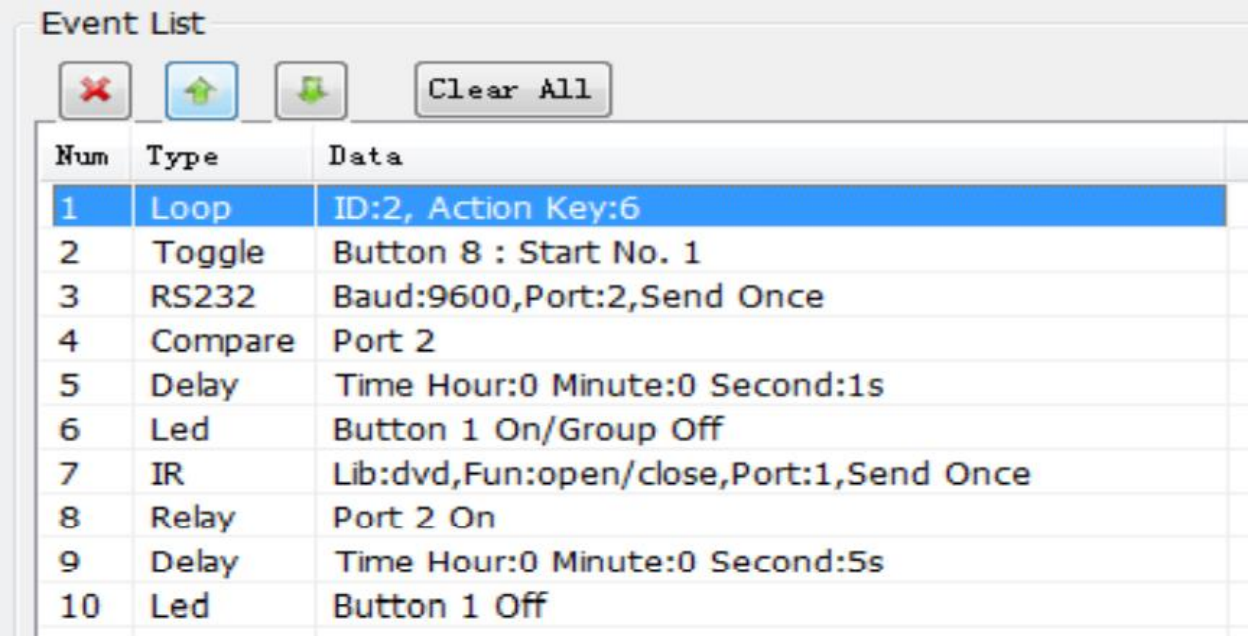
b. When press the button6 and then button1, the button1 will execute the event of num2, press button1 more times it will execute num3, then num4->num1->num2 and so on.

c. When press the button7 and then button1, the button1 will execute the event of num3, press button1 more times it will execute num4, then num1->num2->num3 and so on.

d. When press the button8 and then button1, the button1 will execute the event of num4, press button1 more times it will execute num1, then num2->num3->num4 and so on.

7.7 Event List

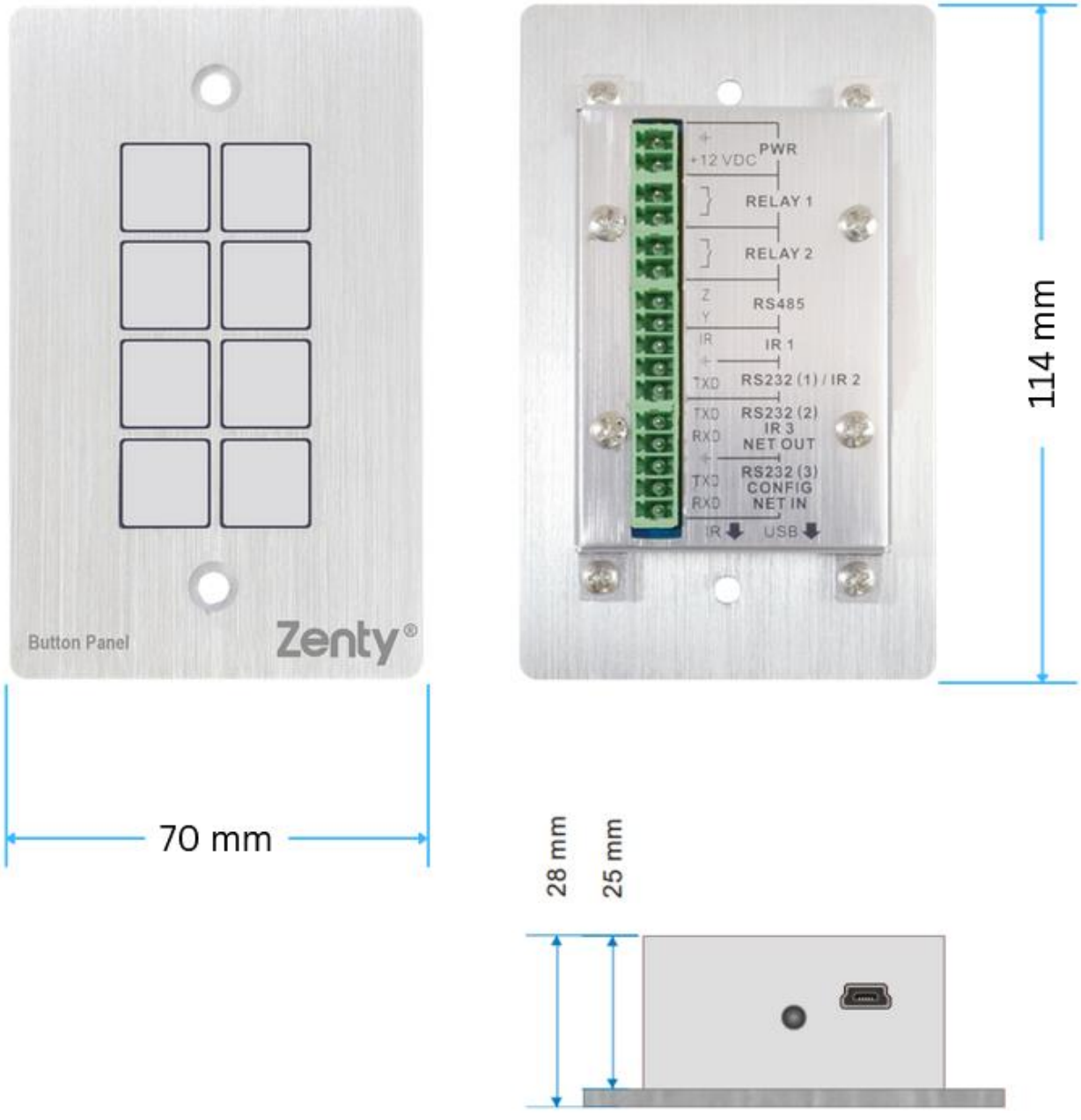
The event list shows all events of the selected action, and for each action of the programmable control panel, the most events can be added is ten. The executing priority is from 1 to 10, see the picture below. If there is an event execute incorrectly, all the events behind it will not be executed



8. Specifications

Program Port	USB or RS232
Output Port	(3) RS232 | (1) RS485 | (3) IR | (2) Relay
Serial Control Port	RS232
Baud Rate and Protocol	9600 baud | 8 data bits | 1 stop bit | no parity
Software	JTD-Control
Frequency Response	20Hz ~ 20KHz
Operation Temperature	(-10°C ~ 55°C) | (14°F – 131°F)
Storage Temperature	(-25° ~ 70°C) | (-13°F – 158°F)
Relative Humidity	10% - 90%
Power Supply	Input: 100VAC ~ 240VAC | 50/60Hz Output: 12V DC 2A
Max Power Consumption	1W
Dimensions (W x H x D)	114mm x 70mm x 28mm 4.5” x 2.8” x 1.1”
Net Weight	150g | 0.33lbs

9. Panel Drawing



10. Troubleshooting & Maintenance

❖ When the control panel cannot work, please check and make sure the power cord connection is well, plug cannot be mixed or connect wrong. Then restart, if still not work, the control panel may be broken. Please send it to the dealer for repairing.

❖ When USB cannot open or without response, please make sure the USB driver is installed correctly, and then reconnect the USB cable.

❖ When uploading the USB cannot be found, please restart the software or panel.

❖ When the LED of a button cannot be lighted, please check if there is a compare event in this button. If yes, delete the compare and try again. If still not work, the LED may be broken. Please send the unit to dealer for repairing.

❖ When serial commands sending without function executed, please check the baud rate and make sure is correct, and the serial connection is well.

❖ If the controlling queue is confused when use loop function, please reboot the programmable control panel.

11. Warranty

If your product does not work properly because of a defect in materials of workmanship, our company (referred to as "the warrantor") will, for the length of the period indicated as below, "Parts and Labor (5) Years", which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the "Labor" limited warranty period, there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

12. Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

13. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or

failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER “LIMITED WARRANTY COVERAGE”. THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTAIL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.

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