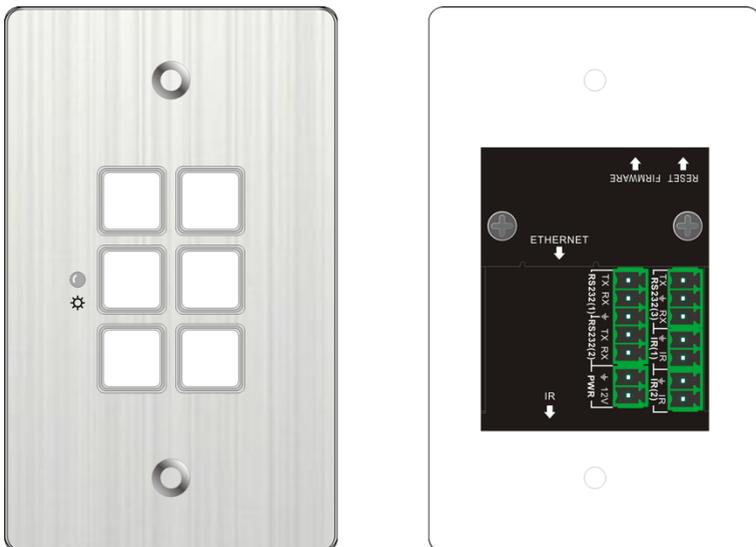


User Manual

WP6-IP

Wallplate Control Panel-6 buttons

Program buttons to send RS232 commands to control projectors, screens and other third-party devices.



All Rights Reserved

Version: WP6-IP_2018V1.1

Wallplate Control Panel-6 buttons

Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only, different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



Wallplate Control Panel-6 buttons

SAFETY PRECAUTIONS

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

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Wallplate Control Panel-6 buttons

1. Introduction

1.1 Introduction to WP6-IP

The Wallplate Control Panel has (3) built-in programmable RS232 connectors and (2) Infrared (IR) connectors.

The Programmable Control Panel can fully control the compatible switches, as well as third-party devices such as matrix switcher, compact scaler switcher, projectors, screens, etc. Use the device for presentations in showrooms, classrooms, and boardrooms.

1.2 Features

- Each button can be programmed to send bi-direction RS232 commands simultaneously to control third party devices.
- Each button can be programmed to send the infrared codes simultaneously to control the third-party devices and support infrared code learning function.
- The unit may be programmed through the ENTERNET port, via the Control Software.
- Crystal and backlit buttons with easy user-friendly customizable changeable labels.
- The backlit brightness is controllable.
- Dimension: 70mm long and 41mm wide.

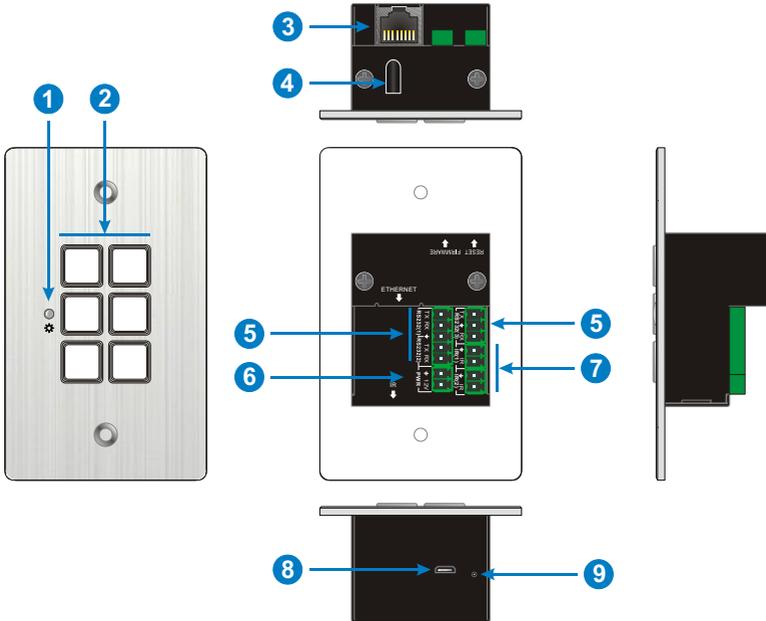
1.3 Package List

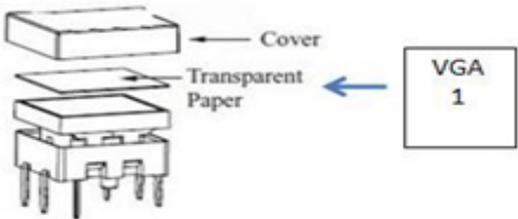
- 1 x WP6-IP
- 1 x Power adapter (12VDC 1A)
- 1 x 3-Pin Pluggable terminal block
- 1 x Button label
- 1 x User Manual
- 2 x Screw (M4*35)
- 3 x 2-Pin Pluggable terminal blocks
- 1 x 5-Pin Pluggable terminal block
- 6 x Button caps

Note: Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

Wallplate Control Panel-6 buttons

2. Panel Description



No.	Name	Description
1	Power LED	Illuminates red when power on.
2	Button	<p>(6) crystal and luminescent programmable buttons: Each button can be programmed with the Control Panel Software. Each label within a button can be easily changed. Simply select the label you need and change it as shown below:</p> 

Wallplate Control Panel-6 buttons

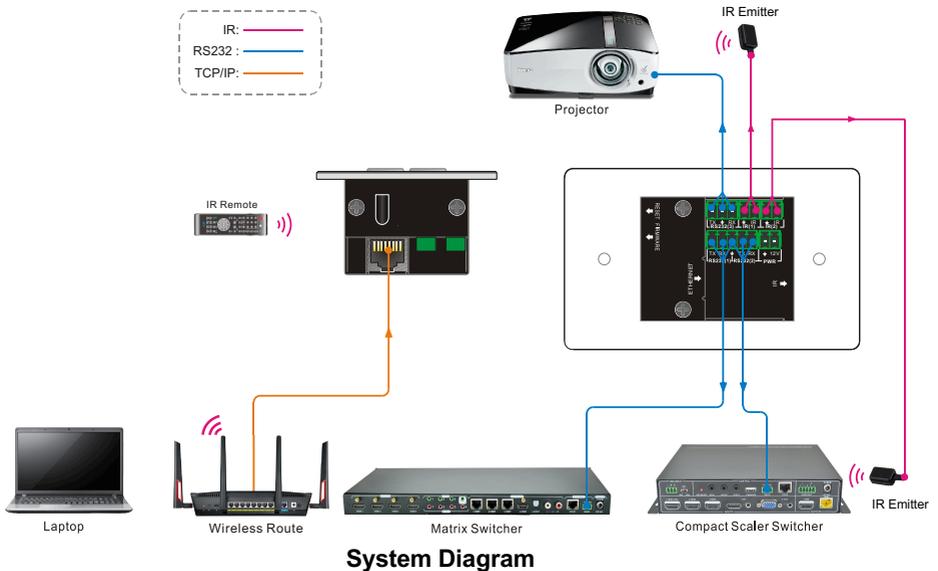
3	ETHERNET	RJ45 connector. Connects with PC to run the Control Panel Software to customize button control. After setting button functions, the port can be connected to the third-party device to control it by buttons.
4	IR Sensor	Receives and learns the IR code to build the IR database.
5	RS232(1)~ RS232(3)	Total 3 RS232 ports. Connect the third-party devices which are need to be controlled via the Control Panel Software.
6	PWR(12V)	Connects with 12V DC power adaptor.
7	IR(1)~ IR(2)	2 IR output ports. Connect with IR Emitter to control other devices via the Control Panel Software.
8	FIRMWARE	Micro USB port for updating firmware.
9	RESET	Long-press this button 3 seconds until the power LED goes out to start to the restore factory defaults, and then the LED will light up while the resetting is successful.

Wallplate Control Panel-6 buttons

3. System Connection

The WP6-IP can active different ports at one time. It means every button can send the RS232 commands, IR code at the same time.

The demo system diagram as below:



- 1) Connect the WP6-IP to the LAN port of Wireless Route, or control device (such as PC) to ETHERNET port.
- 2) Connect the third-party devices (such as Matrix Switcher, Compact Scaler Switcher or Projector) that need to be controlled to RS232 (1) ~RS232 (3) ports.
- 3) Connect the IR Emitters to IR (1) ~ IR (2) ports.

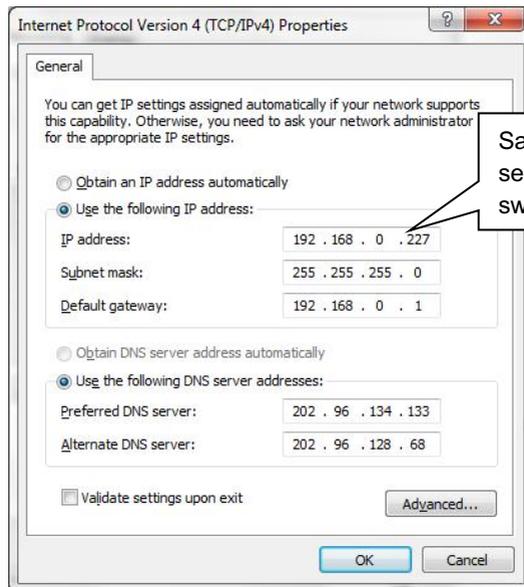
Wallplate Control Panel-6 buttons

4. Control Panel Software

4.1 Basic Setting

You can use Control Panel Software to easily set functions for every button.

- 1) Connect the control PC to the ETHERNET port.
- 2) The default IP of WP6-IP is 192.168.0.178 (modifiable), the control PC should be set its network segment to the same as the WP6-IP's.



Modify the IP of PC

- 3) Installation/uninstallation of Control Panel Software:
 - Installation: Copy the software file to the computer connected with WP6-IP.
 - Uninstallation: Delete all the software files in corresponding file path.

Wallplate Control Panel-6 buttons

4) Double-click the below software icon to run this software:



The main window of the Control Panel Software has five parts: Panel Set, TCP/IP, Action List, Event Set and Event List.

The main window of Control Panel Software is shown as below:

Panel Set: Click "1~6" to set key action

TCP/IP: Show IP addresses of all connected devices in LAN.

Action List: Show all key actions, and any action can be selected for setting events.

Event Set: Set events for the selected action.

Event List: Show all events.

The interface includes the following components:

- Panel Set:** Six buttons labeled 1 through 6, and input fields for IP Address, Net Mask, Gateway, and Port.
- TCP/IP:** A table with columns 'Num' and 'Data' for displaying connected devices.
- Action List:** A table with columns 'Key', 'Type', and 'Data' for listing actions.
- Event Set:** A configuration panel for the selected action (RS232) with options for Lib name, Lib Function, Port, Baud Rate, Data Bit, Stop Bit, Format (ASCII/HEX), and End Char for ASCII.
- Event List:** A table with columns 'Num', 'Type', and 'Data' for listing events.
- Status Bar:** Displays system status including 'CP Status: Disconnected', 'UDP Status: Activated', 'Local IP: 192.168.13.17', and the website 'http://www.putron.com/'.

Wallplate Control Panel-6 buttons

The header of the main window has four titles including File, System, Connection and Help.

- Click “File” → “Save” to save the current setting.
- Click “File” → “Save as” to save all configuration information as a file.
- Click “File” → “Open” to invoke a configuration file.
- Click “System” → “Version” to query the current software version.
- Click “System” → “Message” to query the Link Status, Machine Type, Software Version, IP Information, MAC address.
- Click “File” → “Software Update”

Hold the button “3” and power on system until the button lights up to enable update mode → Open upgrade Web page (<http://192.168.0.178:4001/>) on IE → Type User ID (admin) and Password (123456) → upload update file → Click “Upload”

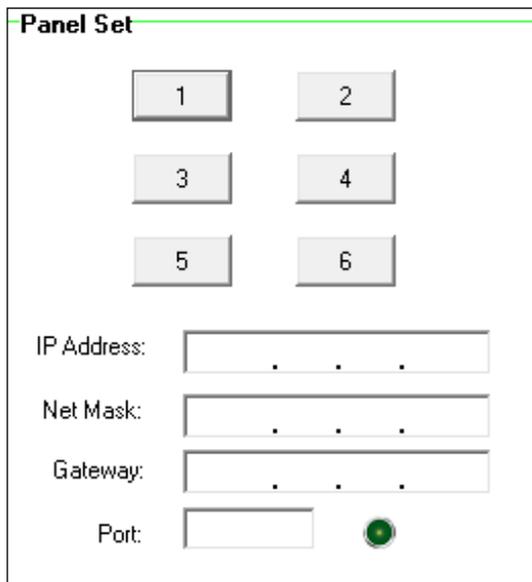
- Click “System” → “Factory Defaults” to restore factory defaults.
- Click “Connection” → “TCP/IP” → “Reconnect” to reconnect all WP6-IP.
- Click “Connection” → “Upload” → to load the MCU information from the selected WP6-IP to control software.
- Click “Connection” → “Download” → to download the current setting information to the selected WP6-IP from the control software.

Wallplate Control Panel-6 buttons

4.2 Panel Set

Total 6 customizable buttons on the front panel can be set via this software. Add a button action to show on the action list, and then add events to make this action will execute the events.

Here set one button for example:

Panel Set


1	2
3	4
5	6

IP Address:
Net Mask:
Gateway:
Port: 

Wallplate Control Panel-6 buttons

Keys 1-6, correspond to the buttons on WP6-IP. Click the key 1, it will pop up dialog as below:

Key Type:

1. Press: Execute events when press button.
2. Release: Execute events when release button.
3. Toggle: The button can be regard as composite key, press the button twice to execute different events.

Built key group for LED setting.

Dialog

Key Type: Press

Key Group Key Name

Group 1 1

4.3 Action List

All Panel Set actions will be shown on the action list and available actions must be added to the list. The action list is as the picture below:

Action List

Clear All

Empty all actions.

Key	Type	Data	
1	Key1	Press	
2	Key2	Press	
3	Key3	Toggle	

Delete the selected action.

Delete all invalid actions.

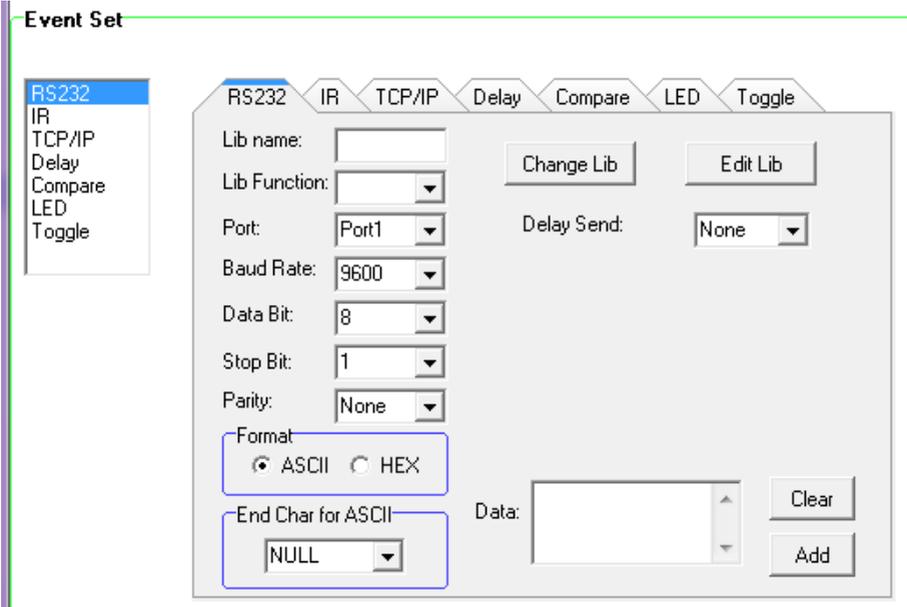
Wallplate Control Panel-6 buttons

4.4 Event setting

Event Set part includes RS232, IR, TCP/IP, Delay, Compare, LED and Toggle setting. Before set events, an action must be added first. The following introduction is about how to set events for each action.

4.4.1 RS232 Setting

This item is used for setting the events for RS232 (1) ~ RS232 (3) ports. Click “RS232”, it will show as below:



Event Set

RS232 IR TCP/IP Delay Compare LED Toggle

Lib name:

Lib Function:

Port:

Baud Rate:

Data Bit:

Stop Bit:

Parity:

Format
 ASCII HEX

End Char for ASCII

Change Lib Edit Lib

Delay Send:

Data:

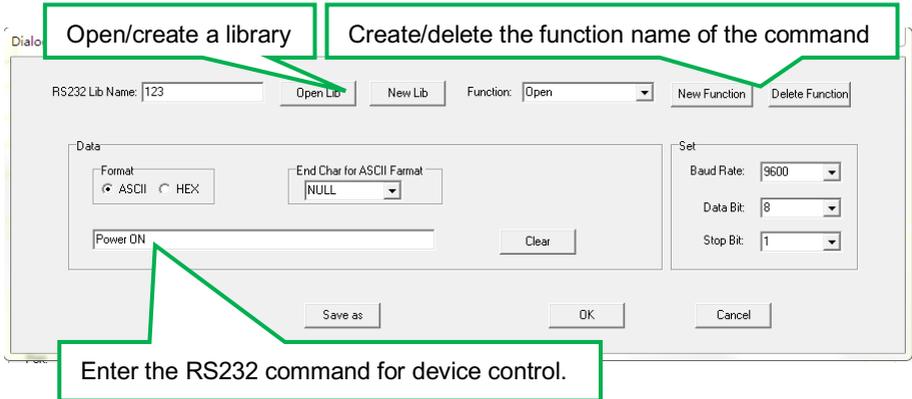
Clear Add

Operation procedure:

- 1) Select the button action in action list.
- 2) Set the “Lib name” and “Lib Function”. It is optional function, not necessary.
- 3) Select the RS232 port. The port must be same as model setting, otherwise the event cannot be added.
- 4) Confirm and set the baud rate, data bit, stop bit and parity.
- 5) Enter RS232 command in data box, and then press “add” to save setting.

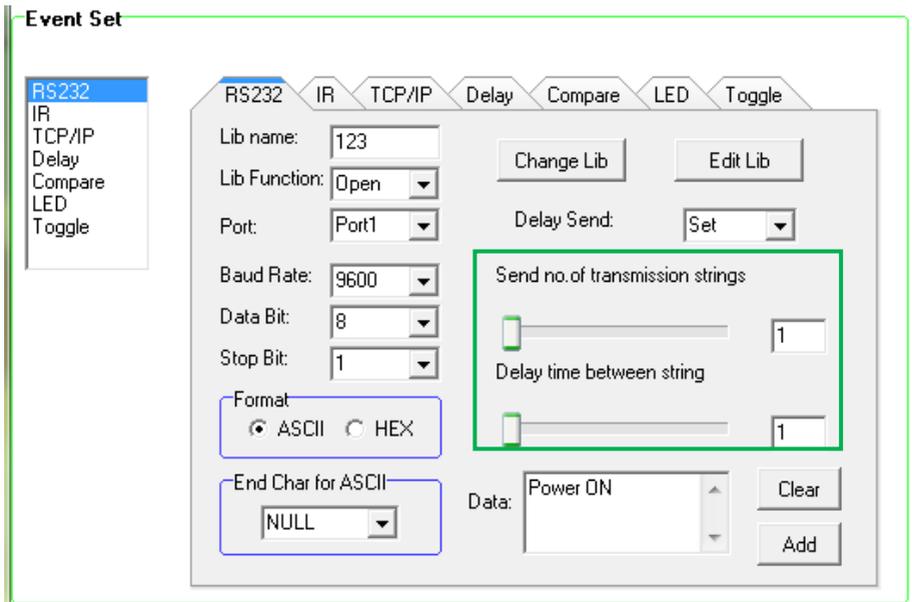
Wallplate Control Panel-6 buttons

- 6) The RS232 data also can be selected from library. Click “Change Lib” to select a library file and open it, or Click “Edit Lib” to create a library file as below:



Note: Once set up, please press “Save” to save the editing or “Save as” to save as a file, and then press “OK”.

- 7) There are two delay send: Set and None. When select “Set”, the number of sending strings and the delay time between strings can be set.



Wallplate Control Panel-6 buttons

4.4.2 IR Setting

This item is used for setting the events for IR (1) ~ IR (2) ports. Click "IR", it will show as below:

Event Set

RS232 IR TCP/IP Delay Compare LED Toggle

Lib name: Delay Send:

Lib Function: Send no. of transmission strings

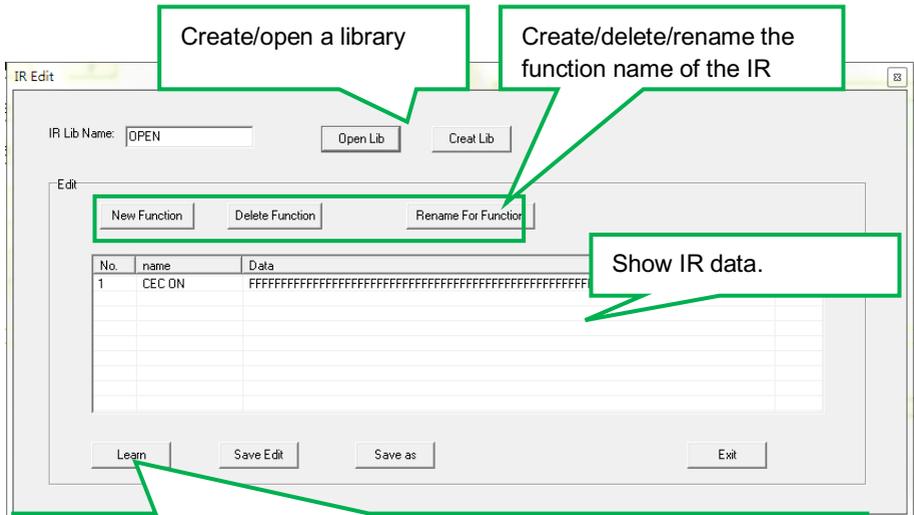
Port:

Carrier: Delay time between string

Wallplate Control Panel-6 buttons

Operation procedure:

- 1) Select the button action in action list.
- 2) Set the “Lib name” and “Lib Function”. It is optional function, not necessary.
- 3) Select the IR port. The port must be same as model setting, otherwise the event cannot be added.
- 4) Set the IR carrier mode: On/Off
- 5) The IR data 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:



IR Leaning Procedure:

1. Click “learn” to enter IR learning mode.
2. Put the IR Remote close to the IR sensor of WP6-IP.
3. Press any button on the IR Remote to send the IR code to IR sensor, and it will refresh the IR data.
4. Follow the same steps can learn any function of the remote buttons.

Note: The IR learning mode will be exit automatically while if no operation within 3 seconds.

Note: Once set up, please press “Save Edit” to save the editing or “Save as” to save as a file, and then press “OK”.

Wallplate Control Panel-6 buttons

- 6) There are two delay send: Set and None. When select "Set", the number of sending strings and the delay time between strings can be set.

Event Set

RS232 IR TCP/IP Delay Compare LED Toggle

Lib name: Delay Send:

Lib Function:

Port:

Carrier:

Send no. of transmission strings

Delay time between string

Wallplate Control Panel-6 buttons

4.4.3 TCP/IP Setting

The TCP/IP port supports pass-through function. You can set the events for different IP port via commands.

Event Set

- RS232
- IR
- TCP/IP**
- Delay
- Compare
- LED
- Toggle

RS232 IR **TCP/IP** Delay

Type the IP address of the device need to be set.

IP:

Port:

Format: ASCII HEX

End Char for ASCII:

Data:

Clear

Add

Type the control command.

Wallplate Control Panel-6 buttons

4.4.4 Delay setting

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

Event Set

- RS232
- IR
- TCP/IP
- Delay**
- Compare
- LED
- Toggle

RS232 IR TCP/IP **Delay** Compare LED Toggle

Hour:

Minute:

Second:

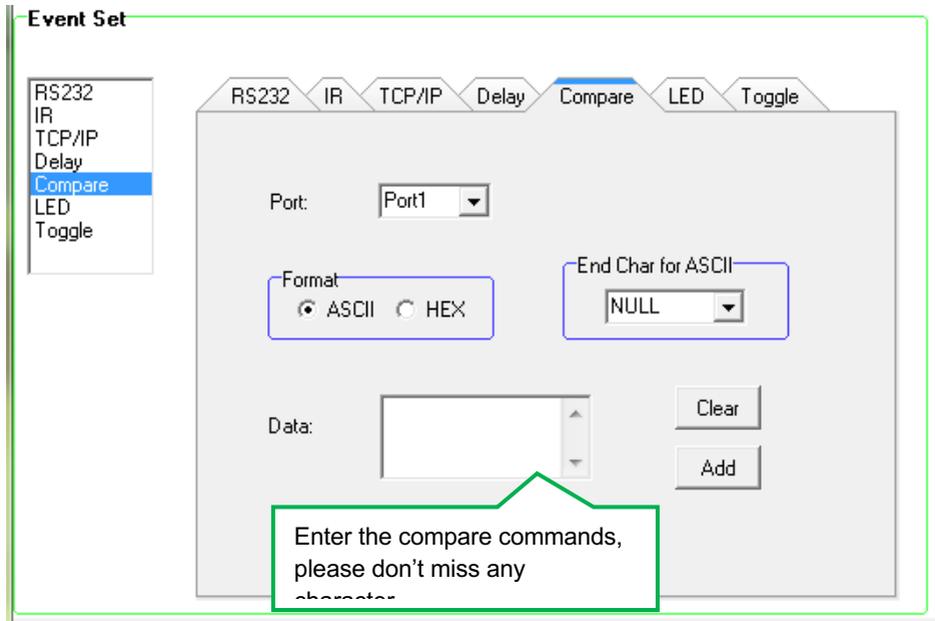
Reset

Hour: 0~24;
Minute: 0~60
Second: 0~60

Wallplate Control Panel-6 buttons

4.4.5 Compare Setting

This item is used for compare the feedback of RS232 commands. When WP6-IP send a RS232 command to the controlled device, the device will send back a feedback. If we add the correct feedback in the data, WP6-IP 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:



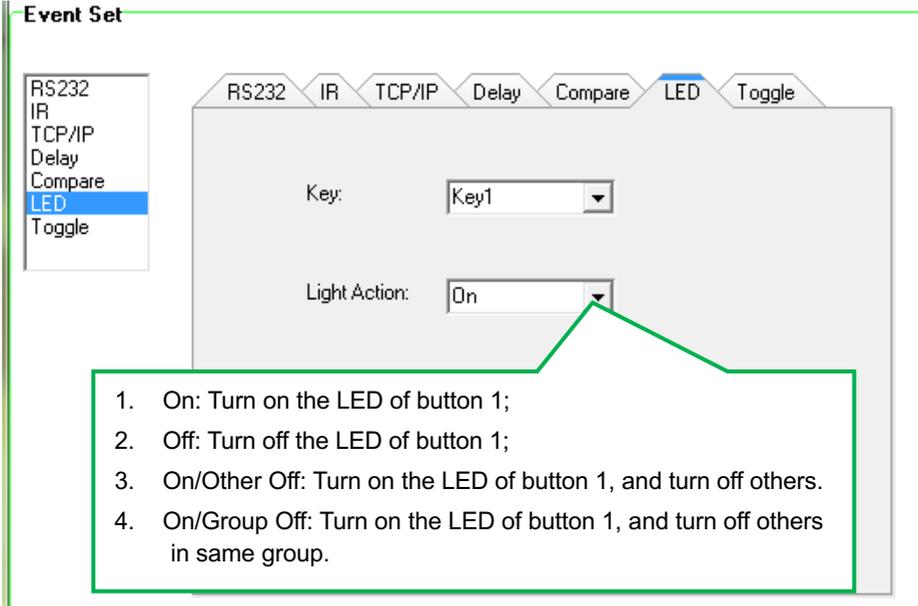
Operation procedure:

- 1) Select the button action in action list.
- 2) Select the RS232 port. The port must be same as model setting, otherwise the event cannot be added.
- 3) Set the command format ASCII or Hex, and then set the terminator for ASCII.
- 4) Enter the RS232 command needed to be compared in data box, and then press "add" to save setting.
- 5) Add an event that the LED lights up to indicate the comparative result.
- 6) 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.

Wallplate Control Panel-6 buttons

4.4.6 LED setting

This item is used for set the button LEDs in WP6-IP to turn on/off. The setting is as below:



The screenshot shows the 'Event Set' configuration window. On the left, a list of event types includes RS232, IR, TCP/IP, Delay, Compare, LED (highlighted in blue), and Toggle. The main configuration area has tabs for RS232, IR, TCP/IP, Delay, Compare, LED (selected), and Toggle. Under the LED tab, there are two dropdown menus: 'Key:' set to 'Key1' and 'Light Action:' set to 'On'. A callout box points to the 'Light Action:' dropdown with the following instructions:

1. On: Turn on the LED of button 1;
2. Off: Turn off the LED of button 1;
3. On/Other Off: Turn on the LED of button 1, and turn off others.
4. On/Group Off: Turn on the LED of button 1, and turn off others in same group.

Wallplate Control Panel-6 buttons

- 2) Add toggle & RS232 events for the Key 1.

Event Set

Rs232 | IR | TCP/IP | Delay | Compare | LED | **Toggle**

Button | Toggle Start

Button1 | 1

Event name: 1

Add

Wallplate Control Panel-6 buttons

5. Specification

Program Port	TCP/IP
Output Port	3 x RS232, 2 x IR
Output Connector	3 x 3-Pin Pluggable terminal blocks, 2 x 2-Pin Pluggable terminal blocks,
Baud Rate and Protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Software	WP6-IP
Power Consumption	1W (Max)
Operation Temperature	0 ~ +40°C
Storage Temperature	-10 ~ +55°C
Relative Humidity	10% ~ 90%
Power Supply	Input: 100VAC~240VAC, 50/60 Hz; Output: 12VDC
Net Weight	150g
Case Dimensions (W*H*D)	70mm x 114mm x 41mm

Wallplate Control Panel-6 buttons

7. Troubleshooting & Maintenance

- 1) When WP6-IP cannot work, please check and make sure the power cord connection is well, power connector cannot be mixed or connect wrong. Then restart, if still not work, the WP6-IP may be broken. Please send it to the dealer for repairing.
- 2) When connect unsuccessfully, please make sure the network segment of control PC and the WP6-IP is same.
- 3) 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.
- 4) When serial commands sending without function executed, please check the baud rate and make sure is correct, and the serial connection is well.
- 5) If the controlling queue is confused when use loop function, please reboot the WP6-IP.

Remarks: For further assistance or solutions, please contact your local distributor.

Wallplate Control Panel-6 buttons

8. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. These terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed three years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusions:

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
 - ✓ Normal wear and tear.
 - ✓ Use of supplies or parts not meeting our specifications.
 - ✓ No certificate or invoice as the proof of warranty.
 - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
 - ✓ Damage caused by force majeure.
 - ✓ Servicing not authorized by distributor.
 - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: For further assistance or solutions, please contact your local distributor.