



# EPIC'S RS232 PRO



## Product Introduction:

The EP-RS232-PRO LED Controller is a highly professional and intelligent system to control common anode LED lighting or incandescent light bulbs via 2-way RS232 serial commands. The EP-RS232-PRO provides 4 high current channels to create light scenes. The controller can also operate in a standalone mode which includes pre-programmed light sequences. This LED controller is ideal used for flexible ThinGlow™ LED strips. The EP-RS232-PRO LED Controller also operates independently or integrated into a whole-house control system.

## Key Features

- 4 high current channels with independent control - **The highest in the industry. RGB+White.**
- Suitable for common anode RGB LED strips, LEDs and incandescent bulbs.
- Standalone mode with 8 preprogrammed light sequences.
- Custom user-editable sequence via RS232.
- Wide-range effect speed adjust.
- Wide-range of external input accessories such as IPAD, relays, and wireless transmitter.
- Complete lists of color and scene serial commands to save programming time.
- Memory for last selected sequence and user-editable sequence.
- Addressable. Multiple modules can be connected with independent control for each module.
- Small form factor (A1 sending sizes).
- PWM of 480 Hz to deliver smooth dimming and a wide range of color spectrum of LED light fixtures.
- Override memory feature that allows last program to continue even in an event whereby the RS232 is disrupted for any reason.
- Reverse polarity protection.
- Work independently or integrated into a whole-house control system.
- Proprietary power conditioning design to work with magnetic transformers.

## Specifications

Power Requirement	External power supply - (power supply sold separately)
Operating Voltage:	Input: 8-24V DC Output: 8-24V DC (depends on input)
Channel Current:	5Amp@12V DC Per Channel 5A@24V DC Per Channel
UL Number:	E359996



**Specifications (con't)**

LED intensity control: 255 intensity levels/channel  
 Communication Interface: Serial RS232  
 9600 baud, 8 data bits, 1 stop bit, no parity, no handshaking, and no flow control  
 Dimension: 4" x 5" x 1.75" in  
 Weight: 2.5 lbs

**Control & Indicators**

Power: Blue LED on board/or logo  
 RGB Speed: Blue LED on board/or logo  
 R-G-B output: RGB LED on board  
 White Output: White LED on board

**Enclosure**

Black anodized aluminum with laser engraving  
 Logo - optical grade acrylic with LEDs

**Connectors**

Screw terminal up to 10Awg conductor diameter.

**Recommended Wiring**

18 Awg up to 5 Amp total  
 16 Awg up to 10 Amp total  
 \*12 Awg up to 20 Amp total  
 \*10 Awg up to 40 Amp total

\*May use distribution board. See distribution page.

**AMPERAGE**

Color/Channel	12V	Wattage	24V	Wattage
Red	5Amp	84W	5Amp	336W
Green	5Amp	84W	5Amp	336W
Blue	5Amp	84W	5Amp	336W
White	5Amp	84W	5Amp	336W
<b>Total</b>	<b>28Amp</b>	<b>336W</b>	<b>56Amp</b>	<b>1344W</b>



# Control Manual

Congratulations on your purchase of Epic's RS232-PRO LED Controller. Welcome to a more colorful world brought to you by AIT Technology.

## BUTTON ACTIONS:

### **Button 1:**

Button 1 is used to switch through color modes of the controller. With no RGB LED channels on, a quick press of button 1 quickly (less than 1/2 a second) will cycle through the solid colors. The color order is: red, green, blue, magenta, cyan, gold, and (RGB) white. Color cycling will start after the solid colors. Once color cycling starts, a quick press of button 1 will pause the color cycle and the color showing when paused will remain on. A quick press of button 1 will then start the color cycle again.

A long press of button 1 (more than 1/2 second) will result in the RGB channels fading to off. This will work for solid colors as well as the color mode.

### **Button 2:**

Button 2 is used for 2 purposes. If the controller is in color cycle mode, this will increase the speed of the color cycle. The color cycle has 10 selectable speeds. The default speed is 5. A quick press of button 2 while in color cycle mode will result in the speed increasing by 1. The logo will pulse the speed number you have selected. When the speed is on 10 and a quick press of button 2 is done, the speed will go to A long press (more than 1/2 second) of button 2, while in color cycle mode, will reset the speed to the default (5).

### White LED Channel:

A short press (less than 1/2 second) of button 2, while not in color cycle mode, will increment the white LED channel by 10%. When the white LED channel has reached 100%, and a short press of button 2 is performed, the logo will pulse 1 time to indicate the white LED channel is at 100%.

A long press (more than 1/2 second) of button 2, while not in color cycle mode, will fade the white LED channel to off if it is on. If a long press of button 2 is performed while the white LED channel is off, the white LED channel will fade up to 100%.

# Serial Commands

### **Serial Format:**

The serial format is 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control.

### **Color Commands:**

The color commands are in parts, color, and level. The command 'xredyyy<CR>' is the command for setting the red level. red represents the color, and y represents the desired LED level from 0 to 100. For example if you wanted to set the red level to 63%, you would send the command, 'red63<CR>'. The '<CR>' represents a carriage return. This command is valid for red, green, blue, and white.

### **Preset Color Commands:**

The preset color commands are for preset solid colors. To activate a solid color, the command is the color. For example, if you wanted to set the color pink, you would send the command, 'pink<CR>'. The '<CR>' represents a carriage return. The following list are the valid colors and their commands.

<b>Color:</b>	<b>Command:</b>	<b>Color:</b>	<b>Command:</b>
Magenta	magenta	Cyan	cyan
Gold	gold	RGB White	rgbwhite
Orange	orange	Light Blue	ltblue (light blue)
Light Green	ltgreen (light green)	Violet	violet
Pink	pink	RGB Warm White	rgbww
allred	red	allgreen	green
allblue	blue		

### **All LED's Off:**

the command for turning all LED's off is 2 parts, the address and the alloff command. For example, if you wanted to turn all LED's off on a controller with the address of 5, you would send the command, '5alloff<CR>'.

### **Global Off:**

This command will turn off all LED's on all controllers connected, regardless of it's address. The command is, 'globaloff<CR>'.

### **Color Cycle:**

The command for starting a controller into color cycle mode is the address, followed by 'cycle'. For example, if you wanted to start a color cycle mode on a controller with the address of 3, you would send the command, '3cycle<CR>'.

### **Color Modes:**

The command for starting a controller into a color mode is the address, followed by the mode. For example, if you wanted to start the color mode ocean on a controller with the address of 3, you would send the command, '3ocean<CR>'. The following list is the available modes, their commands, and the colors in them.

<b>Mode:</b>	<b>Command:</b>	<b>Colors:</b>
Sunset	sunset	Amber, Gold, and RGB White
Tranquility	ocean	Blue, Light Blue, and Light Green
Morning Sky	skylight	Blue and RGB White
Romance	love	Red and Pink
Royal	royal	Pink and Violet
Rainbow	rainbow	All - slow
Mardi Gras	party	All - Medium
Cool Cabaret	disco	All - Fast
USA	usa	Blue, Red, and White
Twilight	twilight	Violet and blue
Christmas	xmas	Green and Red
Autumn	atm	Orange and Violet
Easter	east	Pink, Gold and Cyan
Valentines Day	val	Pink, Violet, and Red

### **Color Cycle Pause:**

To pause a color cycle on a controller, send the address followed by 'pause'. For example, if you wanted to pause a color cycle on a controller with the address of 6, you would send the command, '6pause<CR>'.

### **Rate:**

If you want to change the rate or speed of the color cycle, you would send the address, then a value from 0 to 255. The fastest change rate is 0 and the slowest would be 255. For example, if you wanted to set the rate to 2 on a controller with the address of 7, you would send the command, '7rate2<CR>'. The default rate is preset to 4.

### **Stay:**

This command selects how long, in seconds, the color cycle stays on a solid color before cycling to the next one. You send the address of the controller, then the 'stay' command, then the number of seconds you desire. For example, if you wanted to set the stay value to 5 seconds on a controller with the address of 1, you would send the command, '1stay5<CR>'. The default stay value is preset to 0 seconds.

### **Ramp:**

This command selects the default ramp rate when LED's change brightness levels. The fastest rate is 0 and goes up to 255. To change the ramp value, you would send the address, then 'ramp', then the ramp value. For example, if you wanted to change the ramp rate to 6 on a controller with the address of 2, you would send the command, '2ramp6<CR>'. The default ramp value is preset to 4.

**Bright:**

This command brightens the red, green, and blue LED's on a controller. To use the bright feature, you would send 'bright'. For example, if you wanted to brighten the RGB LED's on a controller, you would send the command, 'bright<CR>'. LED's will be brightened separately, and once any color reaches 100%, it will remain at 100% with each additional bright command.

**All White Mode:**

The controller may be set up with white LED's on all 4 channels. The channels are labeled on the board and share the color channels, White 1 with Red, White 2 with Green, White 3 with Blue and White 4 with White. You can control the white channels by using the optional white commands. The command is the address, followed by wht followed by the channel, followed by a level. For example, if you wanted to set White 3 to level 40% on a controller with the address of 7, you would send the command '7wht340<CR>'.

**Dim:**

This command Dims the red, green, and blue LED's on a controller. To use the dim feature, you would send 'dim'. For example, if you wanted to dim the RGB LED's on a controller, you would send the command, 'dim<CR>'. LED's will be dimmed separately, and once any color reaches 0%, it will remain at 0% with each additional dim command.

**Address Query:**

You can send the command "address" and the controller will return the address that it is set to.

**Help:**

You can send the command "help" and the controller will give you some instructions about basic operation in a small paragraph via the serial connection.

**Safety Warning:** Do not open box, Rs232 controller has no serviceable parts inside. Disconnect electrical power before installing or servicing this equipment. This product is to be installed by a qualified person only.

## Warranty

AIT warrants its products to be free from defects in material and workmanship. The exclusive remedy for this warranty is AIT factory replacement of any part or parts of such product which shall within 12 months after delivery to the purchaser be returned to AIT factory with all transportation charges prepaid and which AIT determines to its satisfaction to be defective. This warranty shall not extend to defects in assembly by other than AIT or to any article which has been repaired or altered by other than AIT or to any article which AIT determined has been subjected to improper use. AIT assumes no responsibility for the design characteristics of any unit or its operation in any circuit or assembly. This warranty is in lieu of all other warranties, express or implied; all other liabilities or obligations on the part of AIT, including consequential damages, are hereby expressly excluded.

Note: Carefully check the control for shipping damage. Report any damage to the carrier immediately. Do not attempt to operate the drive if visible damage is evident to either the circuit or to the electronic components.

All information contained in the manual is intended to be correct, however information and data in this manual are subject to change without notice. AIT makes no warranty of any kind with regards to this information or data. Further, AIT is not responsible for any omissions or errors or consequential damage caused by the user of the product. AIT reserves the right to make manufacturing changes which may not be included in the manual.

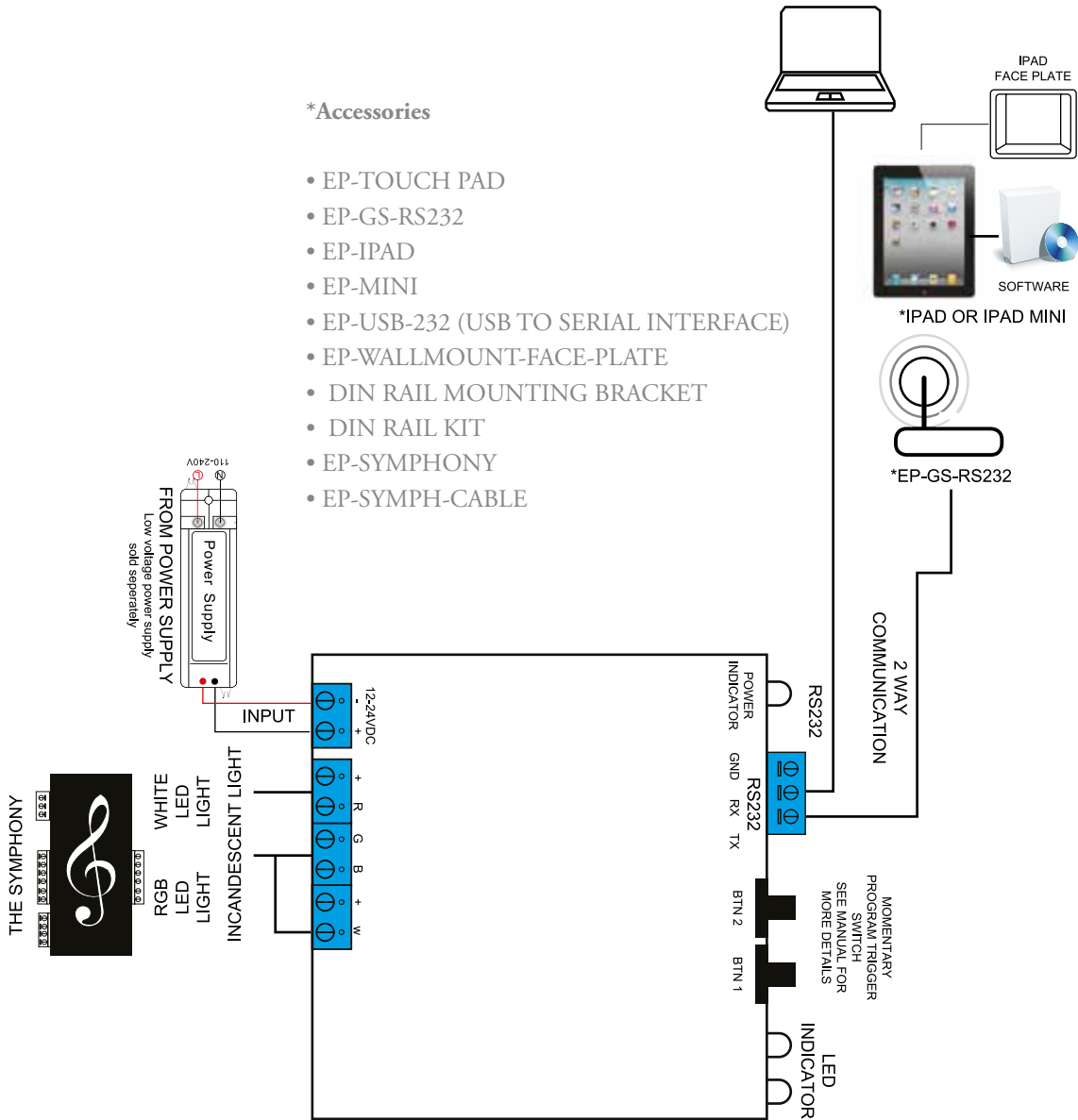
**Warning**

Improper installation or operation of this control may cause injury to personnel or control failure. The control must be installed in accordance with local, state, and national safety codes. Make certain that the power supply is disconnected before attempting to service or remove any components. The power disconnect point is out of sight. Lock it in disconnected position and tag to prevent unexpected application of power. Only a qualified electrician or service personnel should perform any electrical troubleshooting or maintenance.

# EP-RS232-PRO OVERVIEW

### \*Accessories

- EP-TOUCH PAD
- EP-GS-RS232
- EP-IPAD
- EP-MINI
- EP-USB-232 (USB TO SERIAL INTERFACE)
- EP-WALLMOUNT-FACE-PLATE
- DIN RAIL MOUNTING BRACKET
- DIN RAIL KIT
- EP-SYMPHONY
- EP-SYMPH-CABLE



DESIGNED AND MANUFACTURED IN THE USA  
ALL SPECIFICATIONS SUBJECT TO CHANGE

# EP-RS232-PRO

## OVERVIEW

## WIRING OPTION

