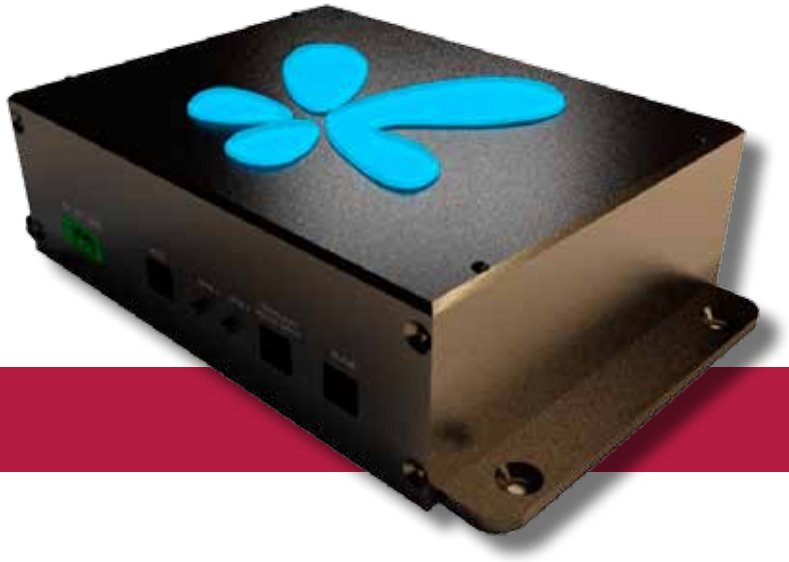


EPIC'S RS232 ADVANCED

Product Introduction:

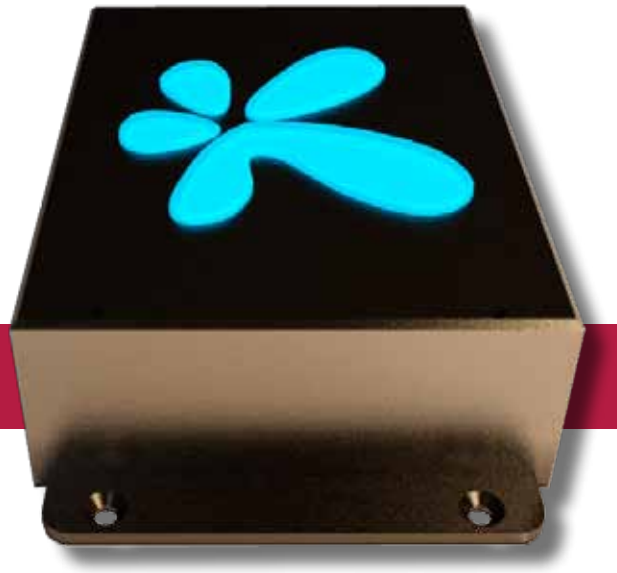
The EP-RS232-ADV LED Controller is a highly professional and intelligent system to control common anode LED lighting or incadescent light bulbs via 2-way RS232 serial commands. The EP-RS232-ADV provides 4 high current channel to create light scenes. The controller can also operate in a standalone mode which includes pre-programmed light sequences. This LED controller is ideal used for flexible ThinGlow™ LED strips. The EP-RS232-ADV LED Controller also operate independantly 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 acessoroes such 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.
- Serial TTL interface to control from your microcontroller or PC - interface sold seperately.
- Addressable. Multiple modules can be connected with independent control for each module.
- Small form factor (Al 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 disruppted for any reason.
- Reverse polarity protection.
- Work independantly 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 seperately)
Operating Voltage:	Input: 8-24V DC
	Output: 8-24V DC (depends on input)
Channel Current:	10Amp@12V DC Per Channel
	10Amp@24V DC Per Channel



Specificatios (con't)

LED intensity control:	255 intensity levels/channel
Communication Interface:	Serial RS232 and serial TTL interface, 9600 baud, 8 data bits, 1 stop bit, no parity, no handshaking, and no flow control
Dimension:	4" x 6.75" x 1.75" in
Weight:	3.5 lbs

Control & Indicators

Net ID:	DIP switches
Power:	Blue LED on logo, indicates when power is applied
RGB Speed:	Blue LED on logo, indicates color changing speed
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.

Reccommended 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	10Amp	120W	10Amp	240W
Green	10Amp	120W	10Amp	240W
Blue	10Amp	120W	10Amp	240W
White	10Amp	120W	10Amp	240W
Total	40Amp	480W	40Amp	960W

Control Manual

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

BUTTON ACTIONS:

Button 1:

Button 1 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 1 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 1 is done, the speed will go to A long press (more than 1/2 second) of button 1, while in color cycle mode, will reset the speed to the default (5).

Button 2:

Button 2 is used to switch through color modes of the controller. With no RGB LED channels on, a quick press of button 2 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 2 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 2 (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.

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 3 parts, address, color, and level. The command 'xredyyy<CR>' is the command for setting the red level. x represents the address of the unit, 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% on a controller with the address of 4, you would send the command, '4red63<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 address, followed by the color. For example, if you wanted to set the color pink on a controller with the address of 2, you would send the command, '2pink<CR>'. The '<CR>' represents a carriage return. The following list are the valid colors and their commands.

Color:	Command:	Color:	Command:
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 Cycle Pause:

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.

Mode:	Command:	Colors:
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

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, the 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 the address, and then 'bright'. For example, if you wanted to brighten the RGB LED's on a controller with the address of 7, you would send the command, '7bright<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 the address, and then 'dim'. For example, if you wanted to dim the RGB LED's on a controller with the address of 4, you would send the command, '4dim<CR>'. LED's will be dimmed separately, and once any color reaches 0%, it will remain at 0% with each additional dim command.

DIP Switch Settings:
The DIP Switches are for enabling different options that are available on the Epic controller. The individual switches are for different options as well as setting the controllers address.

Switches 1-3 are used to set the controllers address. Each switch represents a value, and the sum of all the value is the address. Switch 1 represents 1, Switch 2 represents 2, and Switch 3 represents 4. So if you had Switches 1 & 3 on, the address would be 5. The controllers default address is 0, and that is by having no switches on.

Switch 7 is used to enable Jandy or pool mode. If this switch is down, the controller will respond to the Jandy relay adapter with the following modes - Off, White, Blue, Cyan, Green, Red, Pink, Gold, and Color Cycle.

Switch 8 is used to select the logo LED option. If this switch is on, the logo will light up and pulse with certain button presses. If the options off, it will remain unlighted.

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

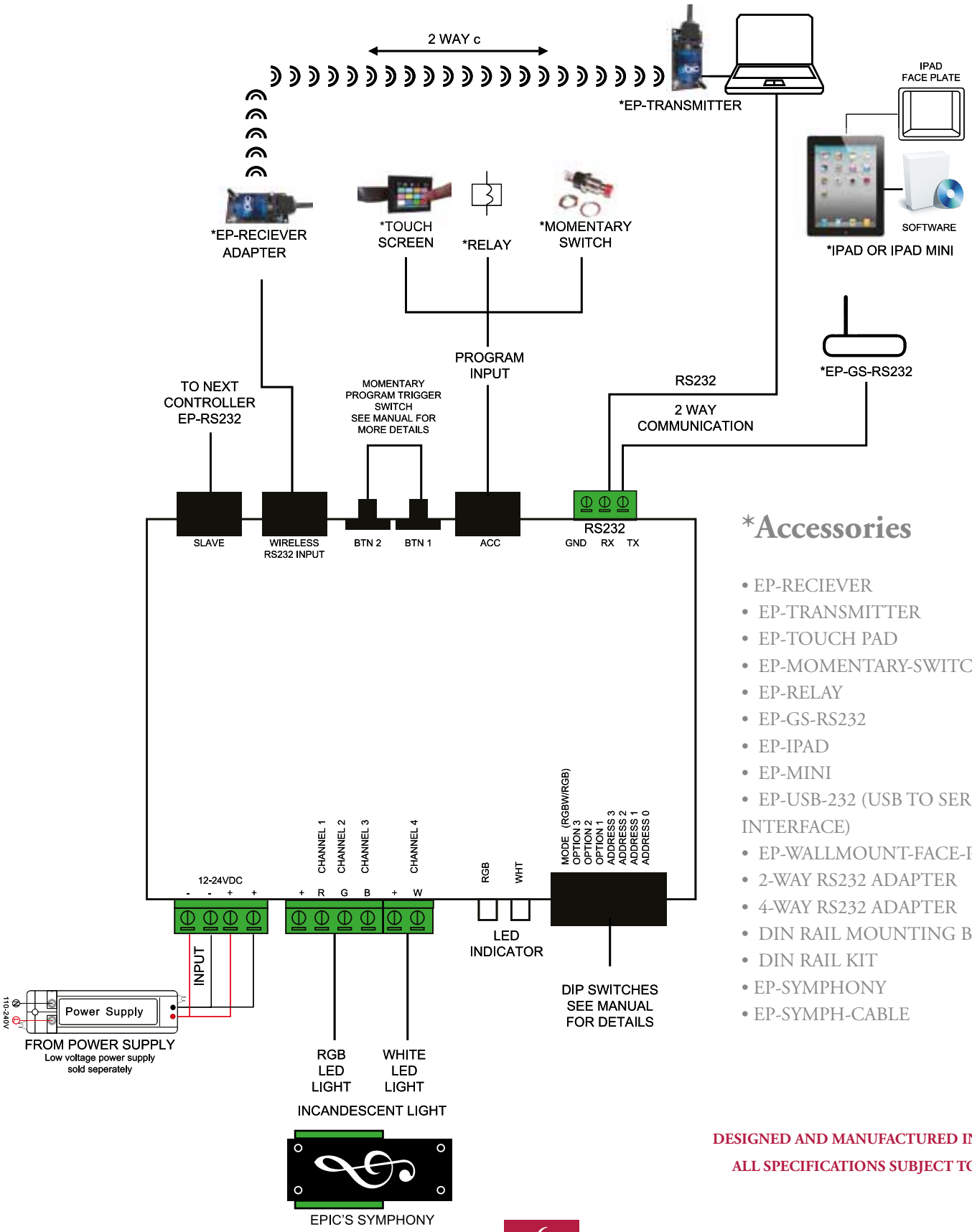
Help:
You can send the command "help" and the controller will give you some instructions about basic operation in a small paragraph via the serial connection.

Status:
You can send the address followed by the command "status" and the controller will give you all RGB levels and the ramp rate.

Safety Warning: Do not open box, Rs232 controller has no serviceable parts inside. Disconnect electrical power before installing or serviceing this equipment.

This product is to be installed by a qualified person only.

EP-RS232-ADV
OVERVIEW



*Accessories

- EP-RECIEVER
- EP-TRANSMITTER
- EP-TOUCH PAD
- EP-MOMENTARY-SWITCH
- EP-RELAY
- EP-GS-RS232
- EP-IPAD
- EP-MINI
- EP-USB-232 (USB TO SERIAL INTERFACE)
- EP-WALLMOUNT-FACE-PLATE
- 2-WAY RS232 ADAPTER
- 4-WAY RS232 ADAPTER
- DIN RAIL MOUNTING BRACKET
- DIN RAIL KIT
- EP-SYMPHONY
- EP-SYMPH-CABLE

DESIGNED AND MANUFACTURED IN THE USA

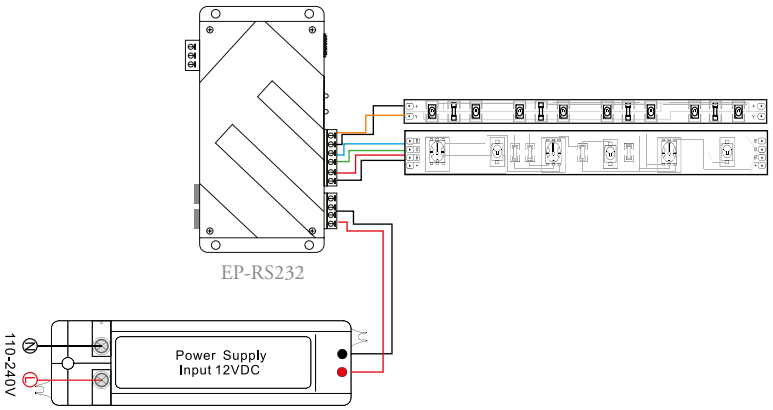
ALL SPECIFICATIONS SUBJECT TO CHANGE

EP-RS232-ADV

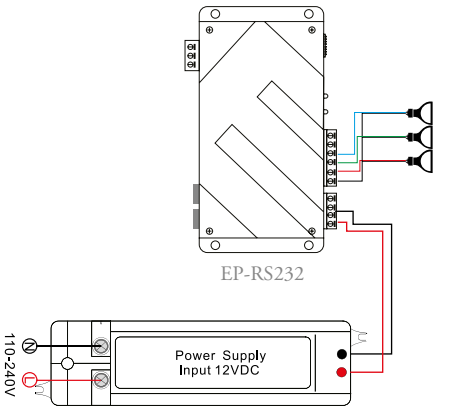
OVERVIEW

WIRING OPTION

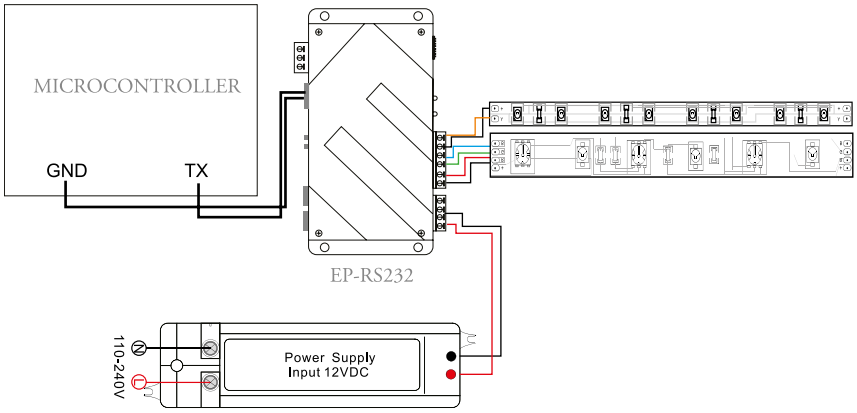
COMMON ANODE LED STRIP CONNECTION



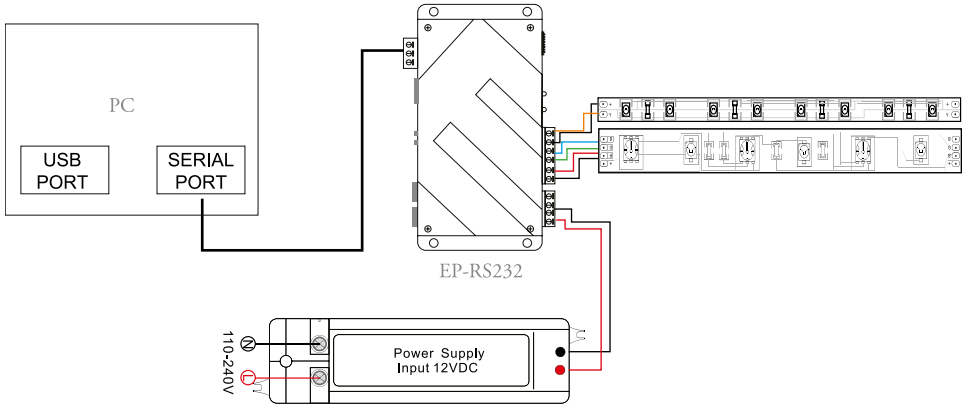
INCANDESCENT (12V / 24V DC) LIGHT BULB CONNECTION



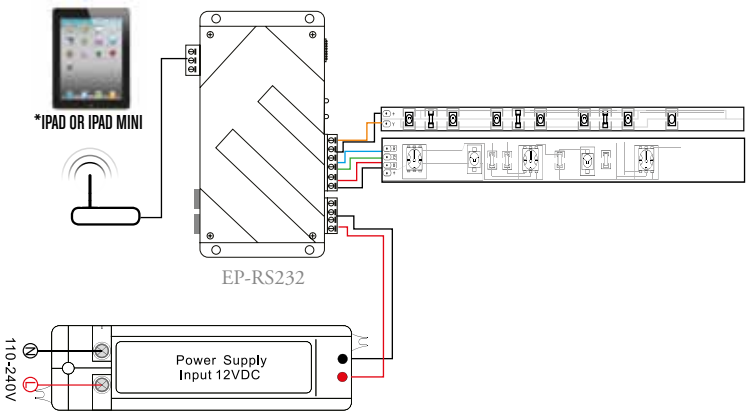
CONTROLLER CONNECTION TO A MICROCONTROLLER (SERIAL TTL INTERFACE)



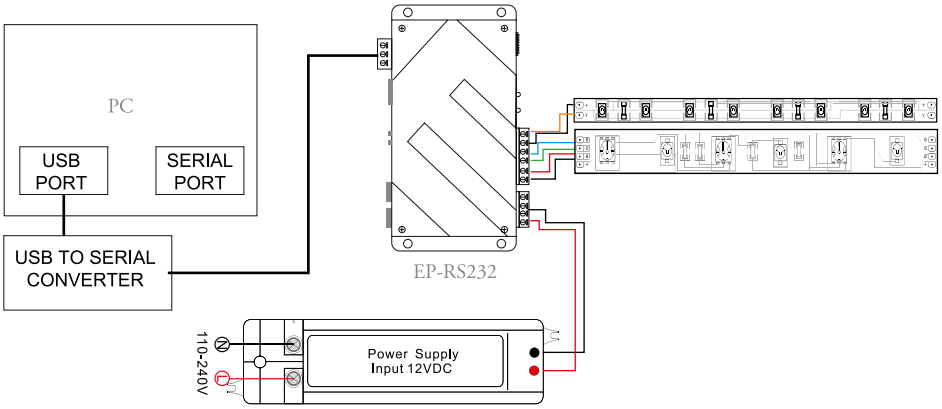
CONTROLLER CONNECTION TO A COMPUTER SERIAL PORT



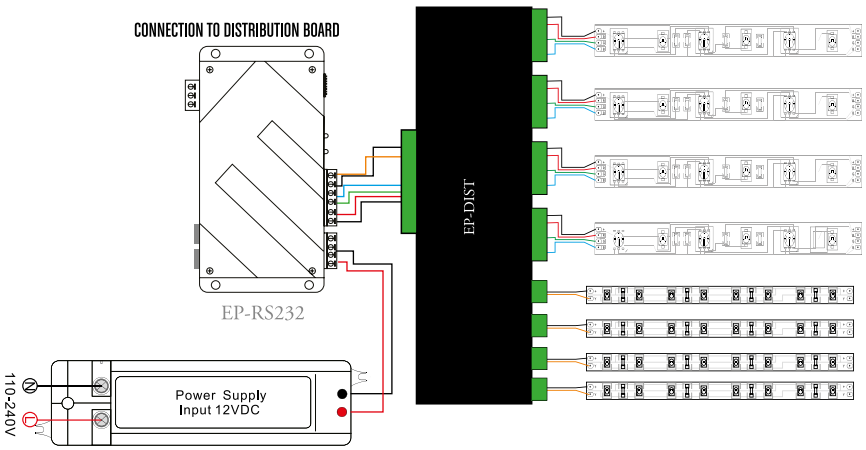
CONNECTION TO IPAD / IPAD



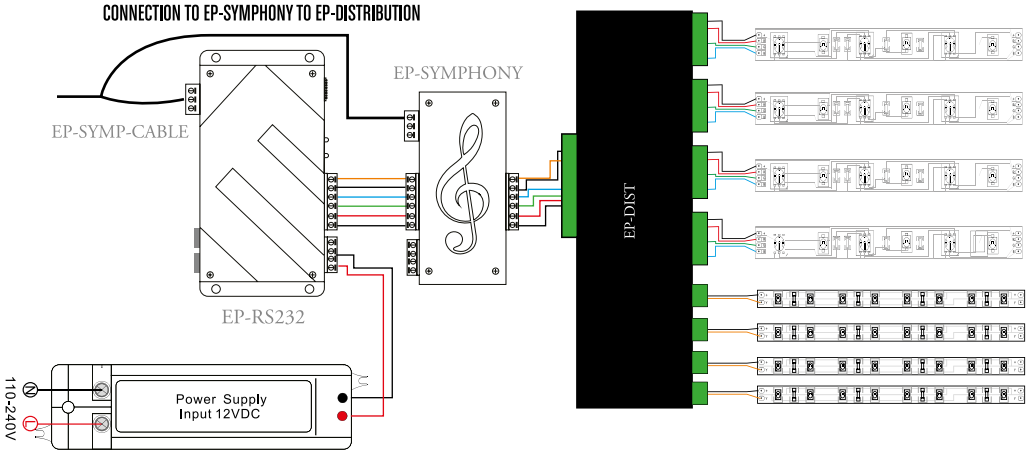
CONTROLLER CONNECTION TO A COMPUTER USB PORT

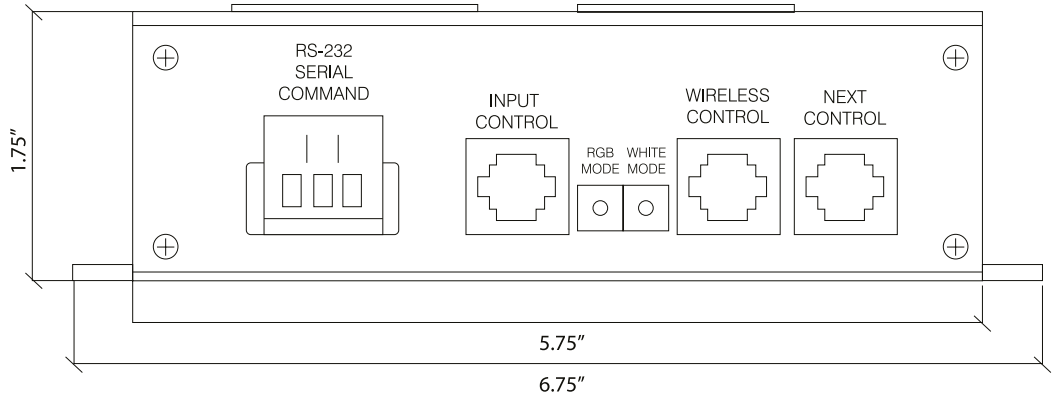


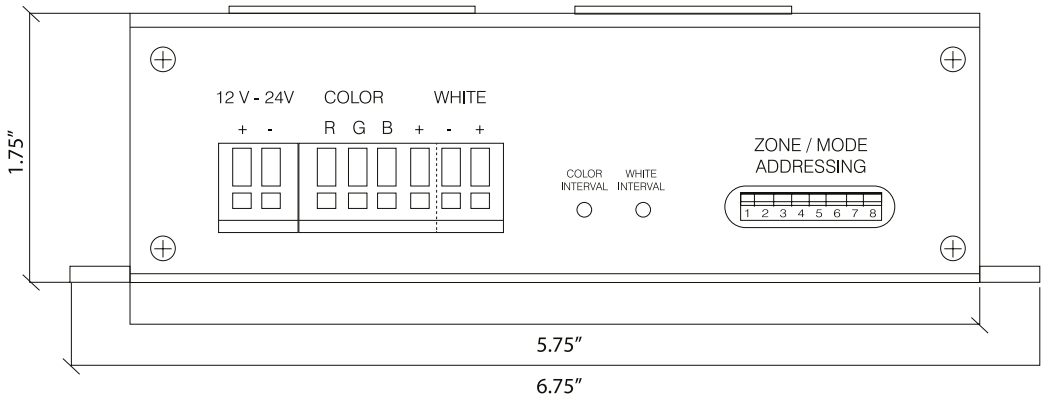
CONNECTION TO DISTRIBUTION BOARD

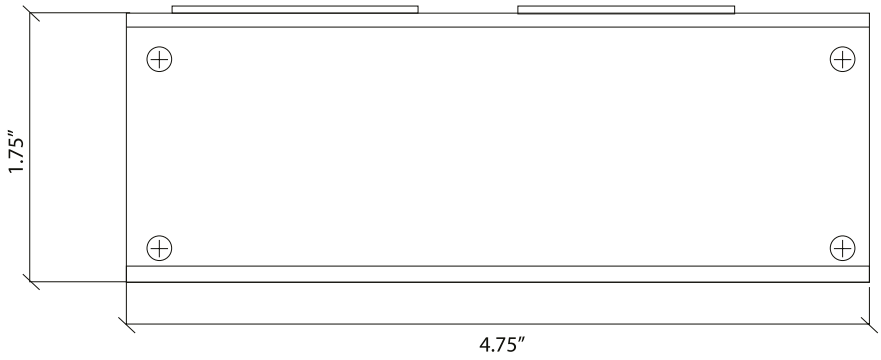


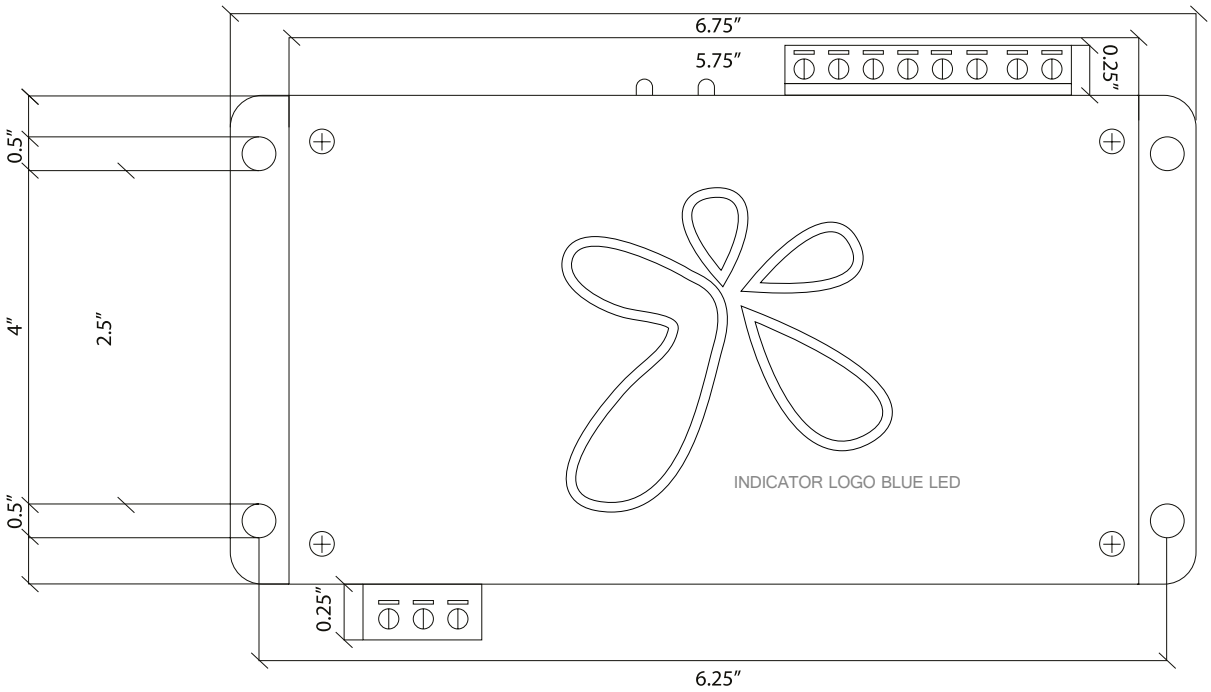
CONNECTION TO EP-SYMPHONY TO EP-DISTRIBUTION




RS-232
SERIAL
COMMAND
INPUT
CONTROL
RGB
MODE
WHITE
MODE
WIRELESS
CONTROL
NEXT
CONTROL
1.75″
5.75″
6.75″


12 V - 24V
+ -
COLOR
R G B
WHITE
+ - +
COLOR
INTERVAL
WHITE
INTERVAL
ZONE / MODE
ADDRESSING
1 2 3 4 5 6 7 8
1.75″
5.75″
6.75″


1.75″
4.75″


6.75″
5.75″
0.25″
0.5″
4″
2.5″
0.5″
INDICATOR LOGO BLUE LED
0.25″
6.25″