ADVANCED PRO RS232 SERIAL LED CONTROLLER

epixsky
experience light

PRODUCT MANUAL

Specifications

Power Requirements

Operating Voltage

Input: 12-24VDC

Output: 4 Independent channels @12-24 VDC (same as voltage supplied)

Channel Current

10 A - 12 VDC (120W) per channel

5 A - 24 VDC (120W) per channel

Communication Interface

epiX Hub:

- **epiX Star Control App** - WiFi or Bluetooth - Available at Apple and Android App Stores

Serial RS232 from third party control system (Control 4, Crestron, Etc.)

9600 Baud, 8 Data Bits, no parity,
no handshaking, no flow control
2400 Baud, 8 data bits, no parity,
no handshaking, no flow control

Recommended Wiring

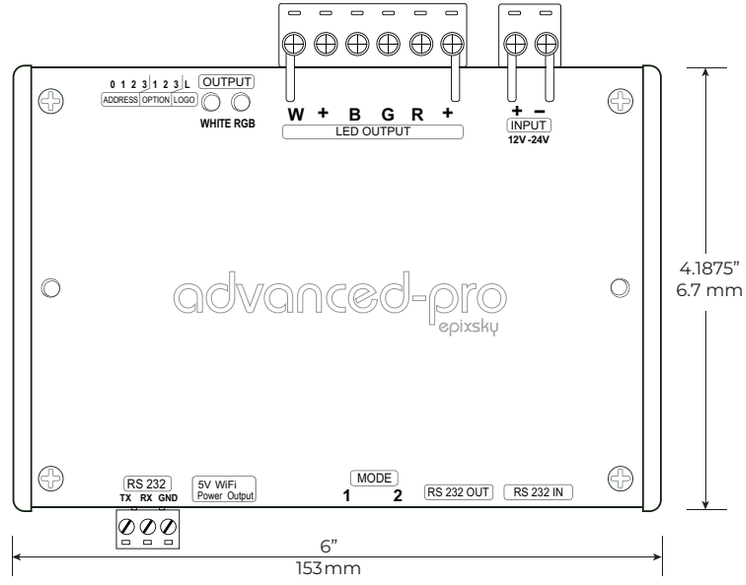
18 AWG up to 5 amps total
16 AWG up to 10 amp total
12 AWG up to 20 amp total
10 AWG up to 40 amp total

(See Pg. 5 for more details)

Technical Diagram

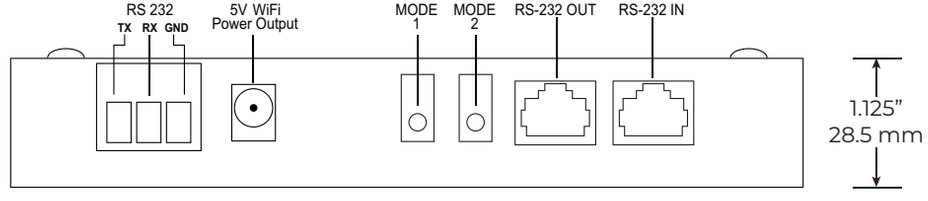
Dimensions

Length: 6" - 6" (153 mm)
Width: 4.1875" (6.7 mm)
Height: 1.45"
Weight: 1 lb.

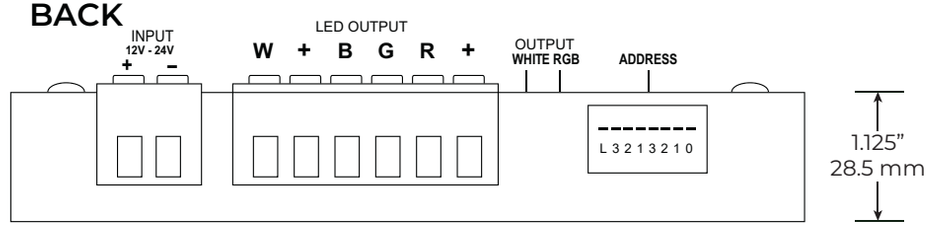


Product Layout

FRONT



BACK



Test/Stand-Alone Mode

To run the controller in test/stand-alone mode, you will use the two 'Mode Buttons' (See pg. 2 for functions).

The controller will respond to the last command given either via RS232 or a button press. When the controller is powered off then on, it will resume the last command it was given.

Mode Button Actions - Stand-Alone Operation

Mode Button 1:

Mode Button 1 is used to switch through color modes of the controller. With no RGB
LED channels on, a quick press of Mode 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 Mode Button 1 will pause the RGB Color Changing Cycle and the color showing when paused will remain on. A quick press of Mode Button 1 will then start the RGB Color Changing Cycle again.
A long press of Mode 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.

Mode Button 2:

Mode Button 2 is used for 2 purposes. If the controller is in RGB Color Changing Cycle mode, this will increase the speed of the RGB Color Changing Cycle. The RGB Color Changing Cycle has 10 selectable speeds. The default speed is 5. A quick press of Mode Button 2 while in RGB Color Changing 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 Mode Button 2 is done, the speed will go to 1.
A long press (more than 1/2 second) of Mode Button 2, while in RGB Coloring Cycle mode, will reset the speed to the default (5).

White Led Channel Mode:

A short press (less than 1/2 second) of Mode Button 2, while not in RGB Color Changing Cycle mode, will increment the white LED channel by 10%. When the white LED channel has reached 100%, and a short press of Mode 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 Mode Button 2, while not in RGB Color Changing Cycle mode, will fade the white LED channel to off if it is on. If a long press of Mode Button 2 is performed while the white LED channel is off, the white LED channel will fade up to 100%.

Dip Switch Settings

Address Switches 0-3:

The Address Switches are used to specify the address of the controller to be able to run up to 8 of the controllers on one serial communication line. Please see “Addressing the Controller” on page 4 for more detailed instructions.

Option Switches 1-3:

For future expansion of features on the controller.

Logo Switch:

If this switch is on, the blue glow of the logo will light up and pulse
with certain Mode Button presses. If the switch is off, it will remain unlighted.
After changing any dip switch settings, the controller must be power cycled (off then on) for any of the changes to take affect.

Serial Commands

Serial Format:

The serial format is 9600 baud, 8 bits, no parity, 1 stop bit, and no flow control. The default baud rate is 9600, but you can change it to 2400 baud rate by pressing both Mode Buttons while powering up the controller. The same procedure switches it back. When the baud rate changes (and the ‘L’ dip switch is on), the Logo LED will flash 2 times when switching to 2400, and 9 times when switching to 9600. Once the baud rate has been changed, it will remain even if powered off.
All commands require a “carriage return” <CR>. All commands are lowercase and with no spaces.

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>'. This command is valid for red, green, blue, and white.

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 White, White 2 with Blue, White 3 with Green, and White 4 with Red. 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>'. Firmware 2.7 will return “White 3 40%”, while firmware 2.9 will return “#grn40”.

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 following list are the solid colors and commands.

Color:	Command:
Red	allred
Green	allgreen
Blue	allblue
Magenta	magenta
Cyan	cyan
Gold	gold
RGB White	rgbwhite
Orange	orange
Light Blue	ltblue
Light Green Violet	ltgreen
Pink	violet
RGB Warm White	pink
	rgbww

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>'.

RGB Off (firmware 2.9):

This command will turn off R, G, and B channels and leave the white channel as is. For example, if you wanted to turn off all RGB channels on a controller with the address of 2, you would send the command, '2rgboff<CR>'.

Preset Color Shows:

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

The following list is the available shows, their commands, and their colors.

Show:	Command:	Colors:
Sunset	sun	Orange, Gold, and RGB White
Tranquility	ocean	Blue, Light Blue, and Light Green
Morning Sky	sky	Light Blue and RGB White
Valentine	val	Red, Pink, and White
Easter	east	Pink, Gold, and Cyan
Christmas	xmas	Red and Green
Autumn	atm	Orange and Violet
Royal	royal	Pink and Violet
Romance	love	Red, Pink, and White
USA	usa	Red, White, and Blue
Twilight	twilight	Orange, Gold and RGB White
Rainbow	rainbow	All - slow
Mardi Gras	party	All - Medium
Cool Caberet	disco	All – Fast

RGB Color Changing Cycle:

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

RGB Color Changing Cycle Pause:

To pause the RGB Color Changing Cycle mode on a certain color, send the address followed by 'pause'. For example, if you wanted to pause the RGB Color Changing Cycle mode on a controller with the address of 6, you would send the command, '6pause<CR>'. This does not work with preset Show modes.

Rate:

If you want to change the rate or speed of the RGB Color Changing 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.

Ramp:

This command selects the ramp rate when the 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 (firmware 2.7):

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.

Bright (firmware 2.9):

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,
'7brt<CR>'. LED's will be brightened separately, and once any color reaches 100%, it will remain at 100% with each additional bright command.

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.

R, G, and B Bright & Dim Commands (firmware 2.9):

You can brighten R, G, and B channels by 2.5% with the commands, “btr”, “btg”, and “btb” respectively. You can also dim the R, G, and B channels by 2.5% with the commands,
“dmr”, “dmg”, and “dmb”. They also must have the address prefix in the command as well. So if you are working with a controller with the address of 1 and you wanted to dim the red channel and brighten the blue channel, you would send the commands, "1dmr" and "1btb".

Status Command:

You can query the status of a controller by sending the command "status" (Firmware 2.7) or "stat" (Firmware 2.9). This command will return the levels of all channels and the ramp rate.

Address Query:

You can send the command “address”(firmware 2.7) or
“addr” (firmware 2.9) and the controller will return the address that it is set to.

For a comprehensive list of commands, please see the Advanced Command Sheet for the firmware version of your controller at:
https://www.epixsky.com/specification-literature/

Serial Commands (cont.)

Addressing the Controller:

Address Switches 0-2 are used to set the controllers address. Each switch represents a value, and the sum of all the value is the address. Switch “0” represents 1, Switch “1” represents 2, and Switch “2” represents 4. So if you had Switches “0 & 2” on, the address would be 5. The controllers default address is 0, and that is by having no switches on. Address Switch 3 is not used at this time.

After changing any dip switch settings, the controller must be power cycled (off then on) for any of the changes to take affect.

Use the examples below to help address your controller

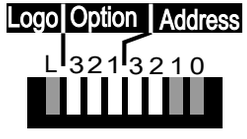
▯ = Switch is up.
▮ = Switch is down.

Address 0

Address 1

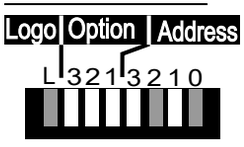
Address 2

Address 3

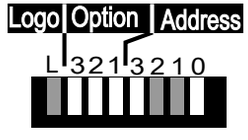


Address 4

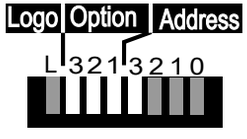
Address 5



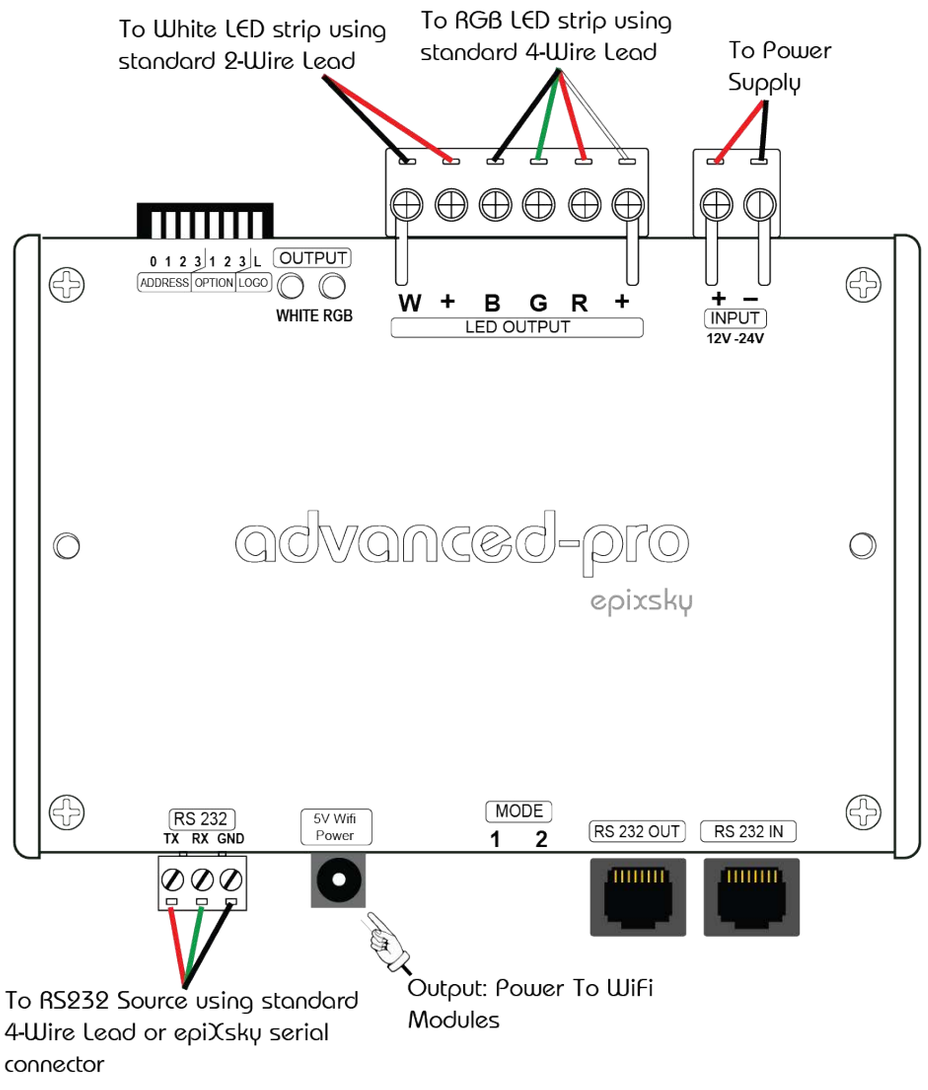
Address 6



Address 7



Basic Wiring Diagram



***Always follow wiring instructions for your specific LED product. Always match the +,R,G,B wires from your product to the corresponding terminals on the Advanced-Pro**

Qualifying Your Automation System

The Advanced Pro is designed to be controlled via RS-232 serial communication. If your system can output ASCII text strings via an RS-232 port, you can control our products. The RS-232 format is 8N1, or 8 data bits, no parity, and 1 stop bit. This format is standard on many devices. (more details on pg. 2)

NOTE REGARDING AUTOMATION SYSTEM DRIVERS:

As we are a lighting company, we supply lighting controllers, but not the drivers for them. We do not have access to the control systems, so we cannot create or test drivers. Commands are all ASCII text strings and are straight forward. If you can create a button on your automation system that sends an ASCII text string out of a serial port, you can control the Advanced Pro

Control4 drivers are now available on their website.

You can **download** them here ---> **Download Control4 drivers - EpiXsky**
Disclaimer: We are not responsible for the operation, updating, or support of these drivers.

All equipment is tested and inspected before shipment.
All secondary parts warranties are carried by their respective manufacturers with typical industry standard warranty periods.
Buyer must inspect goods for any defects prior to installation, within 10 days of receipt. No claims will be accepted after 10 days. **All goods must be installed and inspected by a qualified installer or electrician, as appropriate for the product.** Impact Lighting, Inc. warrants its products to be free from defects in material and workmanship for one year from date of purchase. This warranty is limited to the correction of any such defect or the replacement of the defective item. This warranty does not cover labor, shipping or installation costs, and specifically excludes any product that has suffered from misuse, negligence or accident, has been used in a manner contrary to accepted normal use or to Impact Lighting, Inc.'s printed instructions, if any, or been improperly installed, overloaded, altered, tampered with, or otherwise abused or in which any parts, including glass, have been reworked, repaired, or replaced outside of Impact Lighting, Inc's facility. This warranty specifically excludes finishes due to the unsuitability of many cleaning agents. There are no other express warranties including any warranty of merchantability or fitness for particular purpose. Impact Lighting, Inc. shall not be liable for consequential damages or cost of removal and reinstallation of its products. This warranty is strictly limited to the original purchaser.