

Vista Mfg., Inc. 013097 2505 Columbia Dr Rev A Elkhart, IN 46514

ARGB 8A Push Button Controller

Install Instructions

For Your Safety:

- **General Precautions:** Disconnect power source before starting electrical work
- Read all safety notes before installing the product
- Verify that the power supply complies to the voltage limits as shown in the PSG
- The products should not be stacked.
- Avoid installing the product within 6" of power supply.
- Do not install behind or within a metal object.

SPI Controller Installation Precautions:

- If the SPI LED strip is a single-wire control method, the DATA and CLOCK data outputs of the controller are identical, and one controller can connect 4 LED Strips.
- When the load of the light strip exceeds 8A, the light strip needs to be powered separately of the controller by another compatible power supply. In this configuration, the light strip, power supply, and controller need to share the same Ground(-) connection.
- The output power of the power supply needs to be at least 1.2x that of the light strip's load, or the light make flicker.
- The voltage of the power supply must match the voltage of the light strip.
- When wiring the DATA and CLOCK outputs, the wires must be less than 32' [10m] long to avoid signal interference. If the wire length exceeds that length, a SPI Signal Amplifier must be used.
- The SPI DATA and CLOCK outputs must be separated from strong power (100-240 VAC) wires to avoid signal interference.
- Each signal output (DATA, CLOCK) can only be connected to one set of light strips.
- If the light strip is always on and does not respond to controls, it may be that the DATA or CLOCK output is open or that the control chip of the light strip is damaged.



TM1809	UCS2912	GS8208	LPD8806
TM1812	WS2811	LPD6803	WS2801
UCS1903	WS2812	LPD1101	WS2803
UCS1909	TM1829	D705	P9813
UCS1912	TM1914A	UCS6909	SK9822
UCS2903	GW6205,	UCS6912	SM16703P

Factory Reset

Long Press the < and > buttons simultaneously to restore factory default settings. The screen with briefly display 'RES' when complete. Factory default settings for each category are shown in the black and blue example LCD displays on the next page.





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Setup Using the Built-In Screen and Settings Buttons

Short Press < or > to adjust settings within menus Short Press M to switch to next settings menu Long Press M or wait 15s to return to main menu

Factory Default settings are shown in the black and blue digital display examples for each category below

IC Configuration Menu Long Press M + ►		*The pixels per step times the nur	nber of steps cannot exceed 960
Ic Type C11 TM1809 C12 TM1829 C13 TM1914A C14 GW6205 C15 GS8206 C21 LPD6803 C22 LPD8803 C23 WS2801 C24 P9813 C25 SK0822	Num. RGB Order 0-0 RGB 0-1 RBG 0-2 GRB 0-3 GBR 0-4 BRG 0-5 BGR	3b - Step Count *Stepped Connection Mode Only Num. Number of Steps S08 Minimum: 8 steps S99 Maximum: 99 Steps 4 - ON/OFF Mode Num. Description onS Light ON sequential	3c - Step Length *Stepped Connection Mode Only Num. Pixels per Step L02 Minimum: 2 pixels L99 Maximum: 99 Steps Stepped Consection Delay 5 - Sensor Delay Num. Delay Time d05 5 sec
Light Config Long P	guration Menu ress M +◀	onC Light ON synced Press 'M' again to enter OFF settings interface oFS Light OFF sequential oFb Light OFF backwards oFC Light OFF synched	d10 10 sec d30 30 sec 01d 1 min 03d 3 min 05d 5 min 10d 10 min 30d 30 min 60d 60 min d00 No OFF Timer
Num.DescriptionL-1RGB White OnlyL-2Single ColorL-3RGB Color Light	Num. Description o-L Straight Line o-S *Stepped	6 - Daylight Sensor	7 - ON/OFF Delay
3a - Pixel Count Straight Line Connection Only Num. Number of Pixels 008 Minimum: 8 pixels 300 300 pixel segments 900 Maximum: 900 pixels		Num.ThresholdLu110 LuxLu230 LuxLu350 LuxLu4100 LuxLu5150 LuxLu6200 LuxLoFOFF	Num.Thresholdo00Immediateo959.5 secoA010 secoF515 secPress 'M' again to enter OFF settings interfacec00Immediatec959.5 seccA010 seccF515 sec





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Light Control Using the Built-In Screen and Settings Buttons

Short Press < or > to adjust settings within menus Short Press M to switch to next settings menu Long Press M or wait 15s to return to main menu

Factory Default settings are shown in the black and blue digital display examples for each category below

Animation Settings Menu Short Press M



1 - Brightness

2 - Speed

Animation Speed

Minimum speed

Brightness Level
10% brightness
50% brightness
100% brightness

-	
S-8	Maximum speed

Num.

S-1



3 - Custom RGB

Hexidecimal Values - Press 'M' again to change between R, G, and B

Num	Color	Nium	Color	Niumo	Color
num.	Intensity (1)	num.	Intensity (2)	num.	Intensity (3)
100	Min: 0 Red	200	Min: 0 Red	300	Min: 0 Red
17F	Mid: 128 Red	27F	Mid: 128 Red	37F	Mid: 128 Red
1FF	Max: 255 Red	2FF	Max: 255 Red	3FF	Max: 255 Red

Animation Selection Menu Short Press ◀ or ►





LED Color 2nd Diait of Display

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Num.	Color Name	
P0-	Custom RGB	
P1-	Red	
P2-	Orange	
P3-	Yellow	
P4-	Green	
P5-	Cyan	
P6-	Blue	
P7-	Purple	
P8-	RGB 3 Color	
P9-	RGB 7 Color	
PA-	Red + Yellow	
Pb-	Red + Purple	
Pc-	Green + Yellow	
Pd-	Green + Cyan	
PE-	Blue + Cyan	
PF-	Blue + Purple	

Animation Pattern

3rd Digit of Display

Num.	Pattern Name	
P-1	Flow	
P-2	Chase	
P-3	Float	
P-4	Trail	
P-5	Trail + Blank Section	



Tuya App Animation

Requires Tuya App connection			
Num.	Pattern Name		
P-C	Custom		

Alternate Control Options

Match RF Remote Control

Long Press the 'M', < and > buttons simultaneously for 2 seconds. The LCD screen will display 'RLS' when complete. This puts the device into pairing mode. When 'RLS' displays on the LCD screen, immediately press the ON/OFF or Zone button on a compatible RF remote. If the pairing is successful, the LCD screen will display 'RLO'.

Tuya Smart App Connection

Long Press the 'M', < and > buttons simultaneously for 5 seconds. The LCD screen will display '-C-' when complete. This puts the device into pairing mode. In the Tuya Smart App, you should then see a device named "ES-WT". Select the device to and sign into your internet router to complete the connection.



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Typical Application

1. Dual self-reset push switch control

- a. Connect two push buttons for manual control of stair or hall lights by connecting the UP switch to the bottom of the stairs and the DW (down) switch to the top of the stairs.
- b. Set the self-reset timer to 0s for both light on and light off delay.
- c. Short pressing the UP or DW switch will then immediately play the current animation pattern. Pressing the same switch again will cancel the animation and turn the light off.
- d. Long press the UP switch to adjust brightness between 10% and 100%. The DW switch does not have this functionality.
- e. Push button control ignores daylight sensor settings.

2. Self-reset push button to connect multiple controllers

- a. Multiple controllers are connected to one or two push buttoms at the same time and activate sequentially
- b. Set the self-reset timer of each controller to incremental or decremental values. For example, if using 4 controllers, set the
- delay times to 0s, 1s, 2s, and 3s respectively. When the common push button is activated, they will turn on in order.

3. Dual PIR Sensing (if PIR connections are present on model)

- a. Connect two PIR Sensors to enable automatic staircase or hallway light control. The UP Sensor should be installed at the bottom of a staircase and the DW (Down) sensor at the bottom of the staircase.
- b. When the light is triggered by by the UP sensor, the LCD screen will display '-u-'. When it is triggerd by the DW sensor, the LCD screen will display '-d-'.
- c. If daylight sensor detection is set to ON and the sensor is connected, the light will only function in a dark environment.

Wiring Diagram

Wiring Controller with Push Button Inputs

CLOCK (CK) connection may not be present on all types of LED strips



Wiring Controller to Multiple SPI Digital Lights (LED Strip Load over 8A)

CLOCK (CK) connection may not be present on all types of LED strips







Troubleshooting

I don't know what IC or RGB Order my light has?

- First, check your light's instructions or online product sheet, if there is one.
- If no product resources are available, you can cycle through each IC option in order while the light is connected and turned on. Incorrect IC selections will not damage the light, but will show incorrect colors, flickering patterns, incorrect lengths, or other errors. Selecting a pattern with easily visible colors and movement such as RGB 3 Color will make this process of trial-and-error easier.
- Note: it may also be preferable to cycle through IC and RGB Order options using the Tuya app to avoid spending time long-pressing to get in and out of menus using the controller's built-in screen.

What is a pixel? Is it different than an LED?

- A pixel is the smallest unit that your controller can independently control via animations. It also defines the length of your light strip, so having the correct pixel count is important to make sure that animations running on your light strip reach the end of the light strip without running over.
- The cut points on your LED strip are the divider between each controllable pixel. Typically, 5V light strips will have one LED per cut point/pixel, 12V light strips will have three LEDs per cut point/pixel, and 24V light strips will have six LEDs per cut point/pixel. In all cases, each cut point is equal to ONE pixel regardless of how many LEDs are on it. Simply count each segment between cut points to determine the number of total pixels.

My ON/OFF switches are switching the wrong end of the light?

- The intended setup is that the switch or sensor on the lower side of the stairs plugs into the UP input, and the switch or sensor on the upper side of the stairs plugs into the DW input. Verify that your wiring is correct and try the lights again.
- If the problem persists, there may be a mismatch in the installed orientation of the LED strip. Simply swap the wires connected to the UP and DW inputs.

My light gets dimmer or changes color unintentionally near the end of the light strip?

- You may be exceeding the Current limitations on the controller. Check your light strip's specifications and verify that the current draw for the length of light you are using is under the controller's maximum current rating.
- If you are exceeding the current limit, disconnect your power supply and rewire the lights following the wiring diagram for applications with a load over 8 Amps.

