NotaBotYet

Studio Jam

Universal Studio Accent Strip Light Kit

Part# J19-100-1

Installation Instructions

Find more information and installation examples at www.notabotyet.com

Studio Jam Installation Instructions

The Studio Jam by NotaBotYet is designed specifically for easy addition of controlled multicolor accent lights to a broadcast studio. The complete kit allows for integration with a broadcast facility's existing GPIO control system. This eliminates the need for an expensive and complex custom DMX control system and programming, and still provides a significant step up in capability over the consumer off-the-shelf IR-controlled LED kits from the local retail chain.

The kit offers the installer flexibility in installations, providing a custom look for a fraction of the cost and time. Some installation examples are:

- Under counter lighting for broadcast studio furniture
- Accent wall wash lighting
- Backlighting for studio signage
- Internal lighting for laser cut studio furniture legs
- Phone or alarm annunciator
- Equipment rack accent lighting
- Virtually anything the installer can think of!

Every installation allows GPIO control of the 31 preprogrammed color programs. Best results can be achieved when using a GPIO control system such as Axia Pathfinder, Wheatnet Screen Builder, or Lawo VSM. However even the simplest forms of GPIO control including simple switches can be used to control the Studio Jam. No programming knowledge is required and no computer interface or network control is required either. A system can be installed; providing accent lights in a matter of minutes!

The kit includes:

- 1 Primary Controller
- 1 6-Amp 12V power Supply
- 16 Feet of RGB Adhesive-Backed Flexible Strip Light
- 4 RJ45-to-LED Strip Solderless Adapters
- 16 Adhesive-Backed LED Strip Mounts

In keeping with the spirit of reduced soldering for quick and easy installation, the kit includes four custom designed RJ45-to-lightstrip adapters. This allows the installer to use off-the-shelf cat 5/6 patch cords to route power and control to the lightstrip from the master controller. Since NotaBotYet does know how far the installer intends to run these inexpensive and readily available cat5/6 cables, t**hese patch cables are not included** in the kit and must be provided by the installer. Since 4 total adapters are included in the kit, the installer may choose to cut the 16 feet of supplied lightstrip into up to four individual sections to the size of their choosing. The sections do not have to be the same length and can be individually connected from the central controller using simple Cat5 patch cables. The kit's 6-amp power supply is powerful enough to light 16 feet of lightstrip at full brightness, therefore no additional lightstrip can be added. However, the Studio Jam Expansion kit is available to power and add 16 more feet of LED strip to a given installation.

Studio Jam Installation Instructions

Installation:

The following installation instructions show how to install the product in a studio furniture leg but the principles of installation can be used to install the product nearly anywhere.

1. First get everything together and make sure you have all of the components of the kit handy and ready for installation.

Figure 1. Studio Jam Components

2. After determining the length needed, cut the flexible LED strip to length ONLY AT A DESIGNATED CUT LINE. Cutting at this line only will prevent damage to the LED strip and ensures that you can use the solderless adapters supplied in the kit. If you encounter a cut line that occurs at a solder joint, cut at one of the lines before or after the solder joint. The solderless RJ45 adapter will not properly connect to a joint on the LED strip that has been soldered.

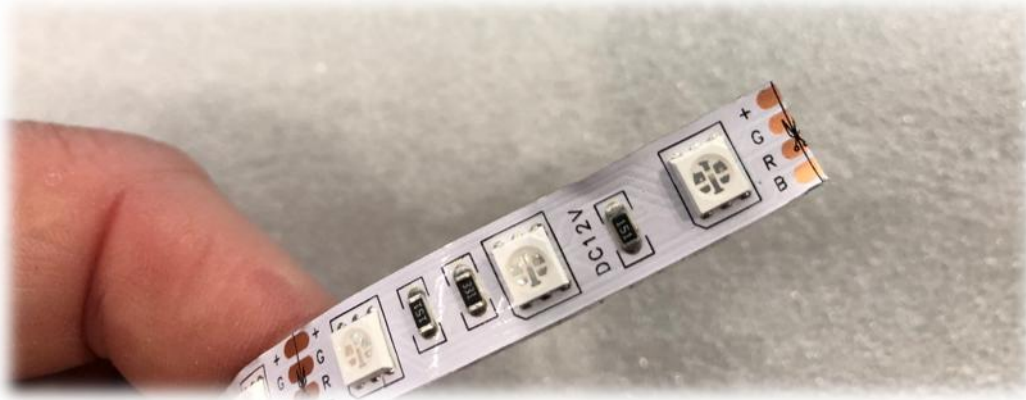*Figure 2. Cutting the LED Strip on a Designated Cut Line*

Figure 3. LED Strip Properly Cut to Size

3. Now that the LED strip is cut, take one of the RJ45 Solderless LED strip Adapters and open the LED Strip End. Gently insert the cut end of the LED strip into the adapter being careful to get the strip under the terminal pins. In addition, the black wire on the adapter should be lined up with the "+" indicator on the strip, or the strip will not work. The other wire colors should also line up with their corresponding connector on the LED strip. If you find that these are completely backwards from each other, simply connect to the other end of your cut section of LED strip and everything should line up properly. Once the strip is inserted the lid can be snapped shut to hold the LED strip in place.
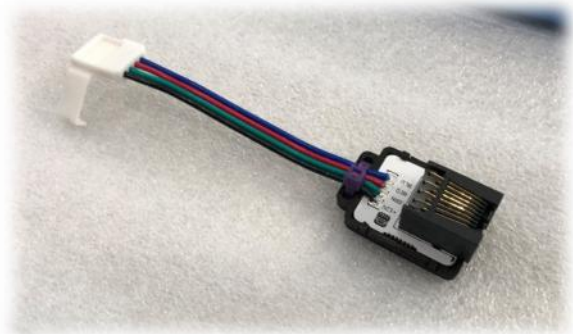

Figure 6. LED Strip Adapter Open and Ready for Connection

Figure 4. Gently Inserting the LED Strip into the Solderless RJ45 Adapter

Figure 5. Lid Snapped Shut and LED Strip Held Firmly in Place by Connector

4. Once the connection is made, the connection can be tested by connecting a cat5 patch cable to the adapter and connect the other end to the Studio Jam controller. Program 2 (input bit 2 shorted to ground) is a good choice to test because it is a steady white program. This lights the red, green, and blue elements of the strip verifying that each color has good connectivity.

5. Now that the adapter is fully connected to the strip and tested, the cat5 cable can be unplugged so the strip can be positioned and mounted in place.
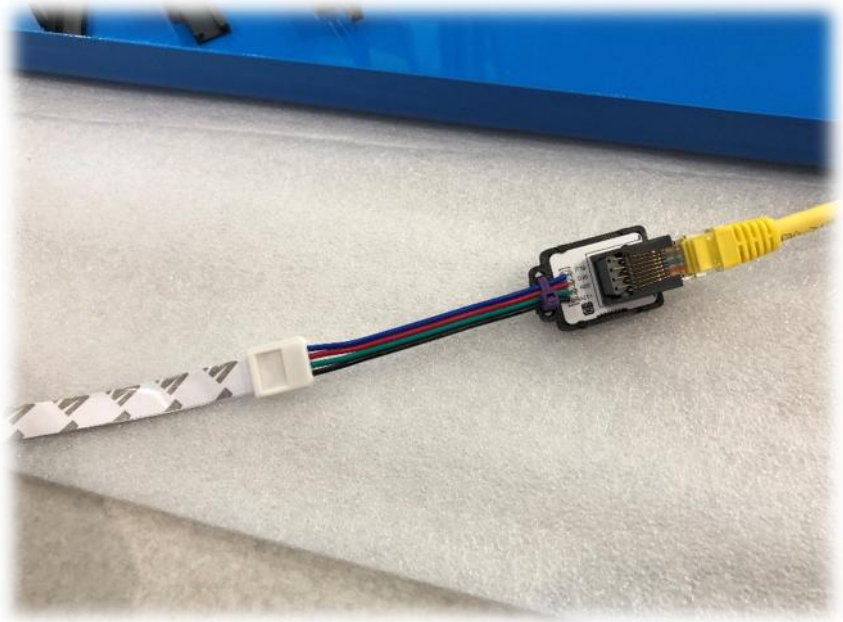
Figure 7. LED Strip Connected to Cat5 Patch Cable using Adapter.

6. Once you have the proper length of LED strip, you can begin mounting it in place. There are a couple of ways to mount it. The strip itself is adhesive backed and may be attached directly to some surfaces, however the adhesive backing may not stick well to all surfaces. The kit also supplies 16 custom right angle LED strip mounting clips. Each clip comes with a patch of double sided adhesive tape. This tape is VHB (Very High Bond) tape and is similar to that used to attach automotive trim to vehicles, therefore it is very strong and sticks to

Figure 9. Laying Out the Strip with the Supplied Mounting Clips.

nearly any surface. To use these clips, simple slide the LED strip through the clip with the LED's facing out. In the figures used in this example, we needed to create a complete circle around a logo to provide the desired glowing effect, therefore 4 clips were used. Different use cases may require different configurations for the installation of the strip.
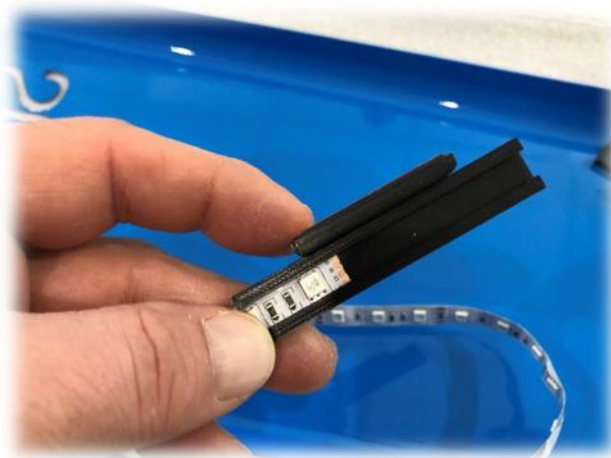
Figure 8. Sliding the LED Strip into the Supplied Mounting Clip.

7. Once the layout is determined and the placement of the clips is finalized, peel off the backing of the VHB tape on the mounting clip. Make sure the mounting surface is clean from any grease or oil that might interfere with the bond. Slightly scuffing the area with steel wool or light abrasive might also give the mounting surface more "tooth" to hold the mounting tape. When ready, gently but firmly press the clip into place so the adhesive tape gets a good bond.

8. Repeat the process for all the mounting clips until all are in their proper position.

9. Peel the cover from the adhesive on the RJ45 LED strip Adapter and place it in its desired location as well if needed.

Figure 13. Peeling Off the Adhesive Backing.

Figure 12. Finished Mounting LED Strip.

Figure 10. For Mounting To Illuminate An Opening, Keep The Strip About 2 Inches Away Where Possible So The Actual Strip Is Not Visible.

Figure 11. Peel The Backing From The Adhesive On The RJ45 Adapter And Stick In Desired Location.

10. Because the clip mounts allow for some slippage in the position of the LED strip, a few well-placed zip ties (very lightly tensioned so as not to damage the LED strip) will keep things from shifting over time.

11. This would be a good time to plug in the RJ45 going to the control box to run another test to make sure the light strip was not damaged during installation. (Again, the example photos are of custom logo furniture legs, but the installation process remains the same.)

Figure 15. Zipties Can Also Be Used To Secure Any Loose Ends. It Is Important Not To Allow Any Of The Electrical Connections Short To Any Metal Surface.

Figure 14. Testing the LED Strip One Last Time.

Figure 16. Well Placed Zip Ties Keep Everything in Place.

Studio Jam Installation Instructions

12. Route the RJ45 patch cable in a clean manner from the LED strip location back to the control box. The control box can be mounted anywhere within 30 feet of the LED strips. Longer distances could cause undesirable results due to the voltage drop across the distance.

13. When using laser cut furniture legs, they need to be put back together carefully to keep the wires concealed.

14. This process should be repeated for each strip segment needed for a given project. The controller can control up to four segments as long as the total length of all segments adds up to no more than 16 feet. At full brightness with all LED's lit, the 16 feet of LED strip would require about 5.5 amps of current at 12 Volts. The controller and power supply are sized accordingly.

15. If additional length or segments are needed, our "Studio Jam Expansion Jam" model "J19-200-1" is available to slave off the master controller. Up to 2 expansion kits may be added to a system.

16. Connect the GPIO input control to the control port on the control box. The pattern of the 5 GPIO input bits will determine the color program that the Studio Jam will run. Table 1. provides the input bit patterns and the resulting program that will be run on the LED strips and all expansions connected to the master unit.

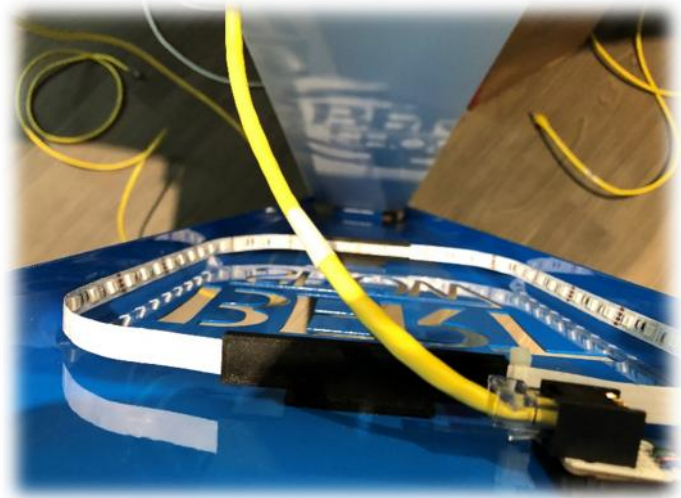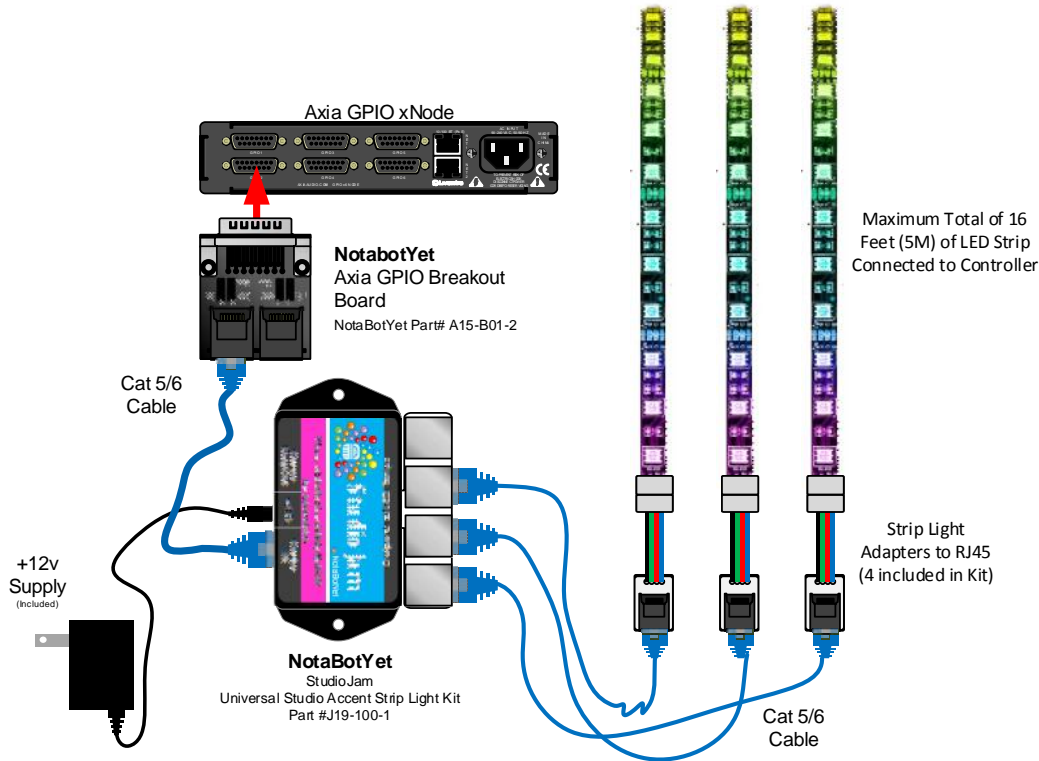*Figure 18. Neatly Route The RG45 Cable As Needed.*

Figure 19. Completed Leg Being Mounted.

Figure 17. Completed And Lighted Furniture Logo Leg.

Studio Jam Installation Instructions

Table 1. Available Color Programs and input combinations to activate them.

In1	In2	In3	In4	In5	Color Mode
Open	Open	Open	Open	Open	Off
GND	Open	Open	Open	Open	Steady Red
Open	GND	Open	Open	Open	Steady White
GND	GND	Open	Open	Open	Steady Blue
Open	Open	GND	Open	Open	Steady Green
GND	Open	GND	Open	Open	Steady Yellow
Open	GND	GND	Open	Open	Steady Aquamarine
GND	GND	GND	Open	Open	Steady Magenta
Open	Open	Open	GND	Open	Rainbow
GND	Open	Open	GND	Open	Red Pulse
Open	GND	Open	GND	Open	Lightning!
GND	GND	Open	GND	Open	Deep Purple
Open	Open	GND	GND	Open	Valentine
GND	Open	GND	GND	Open	Halloween
Open	GND	GND	GND	Open	St Patrick
GND	GND	GND	GND	Open	Christmas
Open	Open	Open	Open	GND	Fourth of July
GND	Open	Open	Open	GND	Deep Sea
Open	GND	Open	Open	GND	Frozen
GND	GND	Open	Open	GND	Sunset
Open	Open	GND	Open	GND	RED ALERT!
GND	Open	GND	Open	GND	Yellow Flashfade
Open	GND	GND	Open	GND	Bert Alert
GND	GND	GND	Open	GND	Purple Flashfade
Open	Open	Open	GND	GND	ColorChanging
GND	Open	Open	GND	GND	Red Strobe
Open	GND	Open	GND	GND	White Strobe
GND	GND	Open	GND	GND	BlueStrobe
Open	Open	GND	GND	GND	GreenStrobe
GND	Open	GND	GND	GND	OrangeStrobe
Open	GND	GND	GND	GND	Aquamarine Strobe
GND	GND	GND	GND	GND	Deep Purple

Studio Jam Installation Instructions

Hookup Diagram:

Axia GPIO xNode

NotabotYet
Axia GPIO Breakout
Board
NotaBotYet Part# A15-B01-2

Cat 5/6
Cable

Maximum Total of 16
Feet (5M) of LED Strip
Connected to Controller

+12v
Supply
(Included)

Strip Light
Adapters to RJ45
(4 included in Kit)

NotaBotYet
StudioJam
Universal Studio Accent Strip Light Kit
Part #J19-100-1

Cat 5/6
Cable

Installation Example

Hookup using Optional Expansion Jam Add-On Module:

+12v
Supply

+12v
Supply
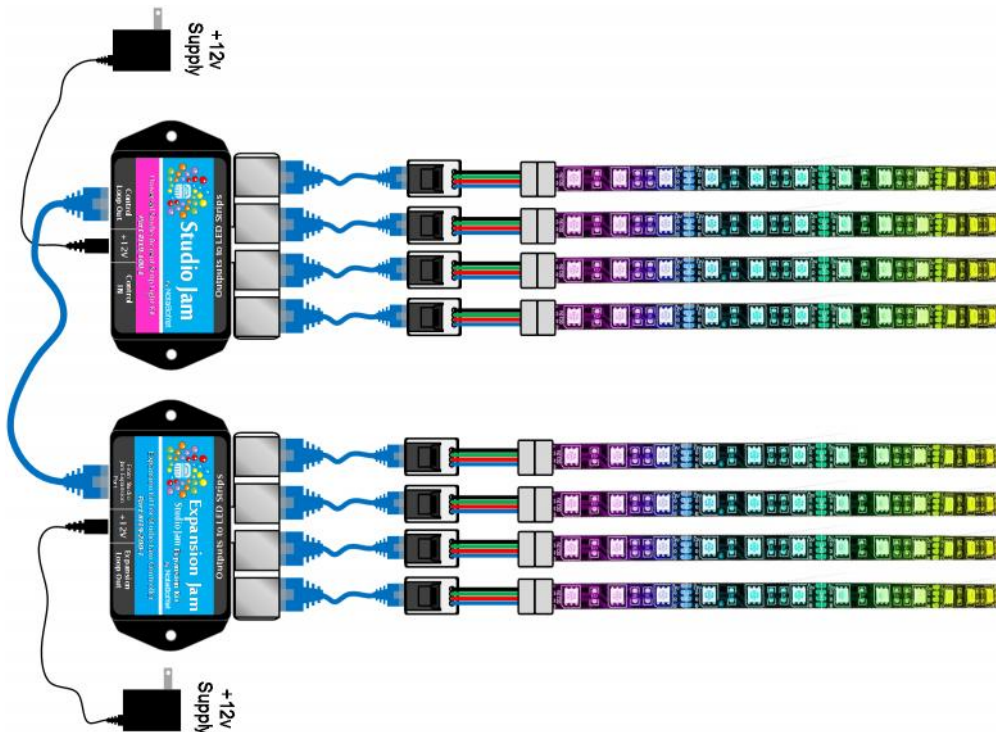
The sky is the limit!

While these installation instructions have shown how to mount in a laser cut studio furniture leg, the image below shows an example of how multiple kits can be used to transform a studio. In this Studio, seven laser cut furniture legs were lit using a Studio Jam and Expansion Jam, the back wall was color washed using a single Studio Jam Kit, the Sign was edge-lit using a single Studio Jam.

*Figure 20. Studio Outfitted with Several **Studio Jam** Systems*

Other possibilities are under counter accents, ceiling grid accents, equipment rack accents, and more. Since the system is GPIO controlled, the LED strips could be used as an annunciator to signal things like an off-air condition, phone caller, Emergency Alert System message, or anything else that can trigger GPIO.
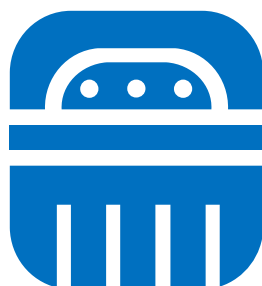
Studio Jam Installation Instructions

Warranty Information

Limited Warranty

NotaBotYet warrants to each buyer of any item manufactured by NotaBotYet that the item will be free from defects in materials and workmanship at the time it is shipped if the item is properly installed, used, and maintained.

Exclusive Remedies

If NotaBotYet, LLC is notified, in writing, of a failure of any item manufactured by NotaBotYet to conform to the foregoing Limited Warranty within 90 days of purchase, and if the item is returned to NotaBotYet for confirmation by inspection, NotaBotYet may opt to replace or repair the defective item.

No Liability for Consequential Damages

To the maximum extent permitted by applicable law, neither NotaBotYet, LLC nor any of its suppliers shall have any liability for any special, incidental, indirect, consequential or punitive damages whatsoever arising out of the use of or the inability to use any item supplied by NotaBotYet, LLC, even if NotaBotYet, LLC has been advised of the possibility of such damages have any liability for any special, incidental, consequential, exemplary or punitive damages.

NotaBotYet, LLC

support@notabotyet.com

www.notabotyet.com