

# *Installation Guide*



Well it's time to get stuck in and transform your interior in to a real luxury feel.

Installing a Starlight Headliner isn't necessarily a difficult process, and many choose to perform installations themselves, instead of seeking a professional installation. If you are looking for a shop to install your starlight headliner please check our website to find our Authorised Installers.

Installing a starlight headliner will be a somewhat different process for each vehicle. However, this will serve as a general guide to the, process of Starlight Headliner installation. For vehicle specific processes like removing the headliner or extracting it from the vehicle, we recommend searching online forums dedicated to your car.

## **Step 1: Tools**

Tools required to remove your headliner will vary based on the vehicle. As a general rule, these are the tools we recommend for starlight headliner installation.

### Necessary Tools:

- Set of screwdrivers
- Torx set
- Socket and wrench set (1/4 or 3/8 driver)
- Permanent marker or Pen
- Upholstery T-pins/needle
- Electrical tape
- Scissors
- Hobby Hot Glue gun (Professional/Big guns can get too hot if you're not quick!)
- Spring Loaded End cutting pliers/flush cutting pliers
- Fuse tap/Piggy back fuse
- Extra wire
- Wire cutters

### Additional Recommended tools:

- Automotive Interior Trim Removal Set
- Measuring tape
- Electric Drill with small drill bit set
- A friend to help you out
- 12v Tester

## Step 2: Headliner removal



Removing the headliner will be a process somewhat unique to your vehicle, and may require different or specific tools to do so. In general, interior trim pieces like pillar covers, sun visors, map light, dome light and roof handles will need to be removed before the headliner can be detached from the roof, we recommend conducting some research for your specific vehicle to find the process and tools you may need to do so.

Removing the headliner from the vehicle is one of the more difficult processes of the installation process and you always want to start by disconnecting the vehicles battery. In certain vehicles, it can take some clever maneuvering to extract the headliner through the boot or one of the passenger doors, and may require seats to be removed in order to do so. You'll find that in some cars, headliner removal may not be possible unless the front or rear windshield is removed as well.

Luckily, it is possible to install the fiber optic starlights into the headliner without removing the headliner from the vehicle, this can create a difficult working area, however, many starlight installs are done in exactly this way.

### Step 3: Plotting stars



Now that your headliner is detached from your roof and/or removed from your vehicle firstly you want to prepare the module by inserting the fiber batches in to the outputs and then find a suitable location to place the module. (We like to place them at the front, back or centre of the headliner.)

When determining the light source location, consider the size of the module, the length of the power cable, length of fibers and available space to run the optics out of the headliner if necessary.

You can now begin to plot the starscape on the topside of the headliner.

If necessary, remove the extra bits of foam and plastic from the topside of your headliner. Many of these pieces may get in the way and restrict you from creating a good starscape.

You can mark and number the holes and use different colours if creating an animated effect.

Next, we'll need a way of sectioning off the headliner in order to plot stars equally across the entire area. You may do this in a multitude of different ways and this is where our kit is different then others.

### **RANDOM TWINKLE STARS:**

Draw a grid on your headliner, start by finding the middle point on each of the four sides of your headliner, preferably by using a measuring tape to find the length of the side, and then finding the middle from there. Mark the middles of opposing sides, and then draw a line in between to meet. The grids can also be drawn in different ways such as circles or lines to archive different effects.

Keep dividing the headliner into smaller grids until you have a section size that you're comfortable with. Start plotting where you would like to place lights within each section of the grid. To determine the total number of lights containing within each grid, divide the total number of lights you have in your kit across the number of sections. For example, 900 lights across 12 sections on a headliner equal approx. 75 lights per section. Plot them in the manner you prefer a pattern or others prefer a randomized arrangement, it's completely up to you.

### **SWEEPING/ANIMATED STARS:**

Our modules are like no other and contain 9 or more outputs which can light up in a synchronised motion. There are unlimited effects which can be created with this installation method so writing a guide can be rather hard. However we will give you the basic guide and a simple scenario to give you an understanding.

As an example we will say you would like the stars to sweep from front of the headliner to the back.

Each module has an arrow showing the animated motion of the module (from power cable up lets number each output 1-9).

To create the sweeping motion you would draw out 9 sections on your headliner from front to back .Starting from output 1 you could put all 100 fibers in to section 1 slightly crossing in to section 2 start, then output 2 slightly starting in section 1 end and ending slightly in section 3 start. Keep doing this for all 9 outputs.

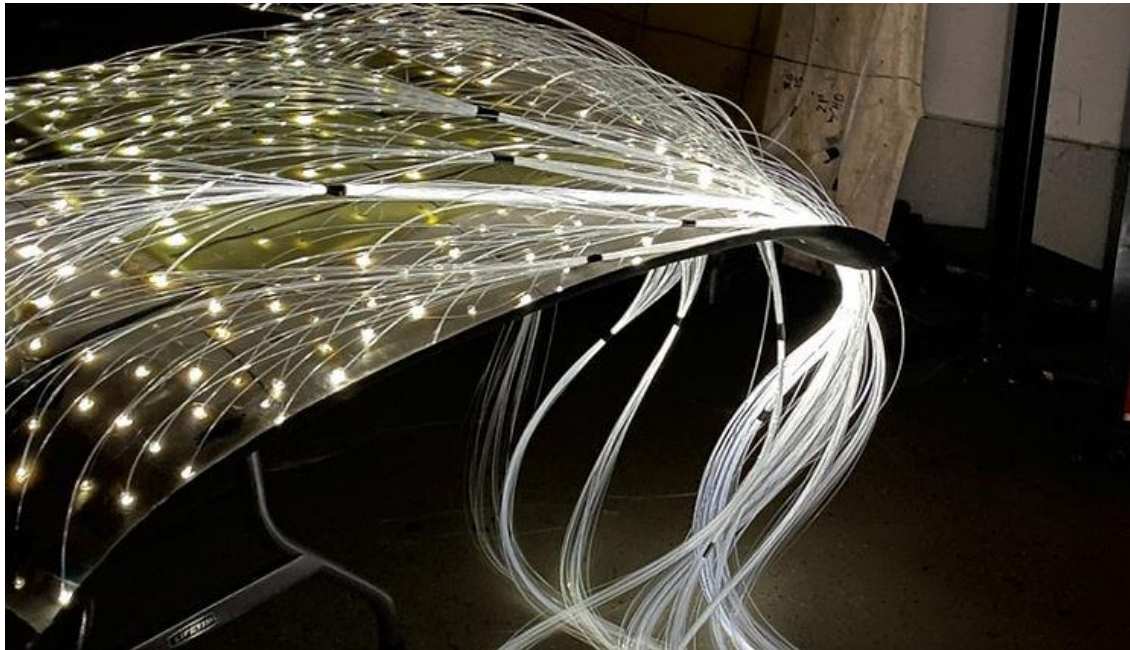
Again the motion can be created in many different shapes and sizes from galaxys to logos etc etc , it can be done with all the fibers or with just some of them (for example only take 50 fibers for the sweeping motion and the rest you can put in random locations for the twinkle effect. You can always use some of our installs for inspiration.



## Step 4: Making holes

Next, take your upholstery pins or drill, and start pinning holes into the dots that you've marked. You want them to just be big enough that the fiber optic lights will fit snug with inserted through the holes. Go section by section in your grid until you've punched all the holes you have marked and numbered.

## Step 5: Setting fiber optic lights



The first section of fiber optics you should set is the ones closest to the light source. When you start laying lights, there are two different options as to how to lay the lights, you can either punch them directly through the cloth of the headliner, and cut the ends off later, or fit them so that the ends of the lights stop right before they pierce through the fabric, both styles have pros and cons within their own right, punching the lights through will make the end result brighter, but setting them behind the fabric will provide a more subtle look, it's up to your preference.

After setting a section of lights snug into the holes, use hot glue to set the lights into place. We prefer to use hot glue as the heat can help bend the lights slightly to fit flush with the

headliner and to angle them into the direction of the module or pillar exit. Be careful not to melt the fibers completely. We recommend a hobby hot glue gun as full size or professional guns tend to get very hot.

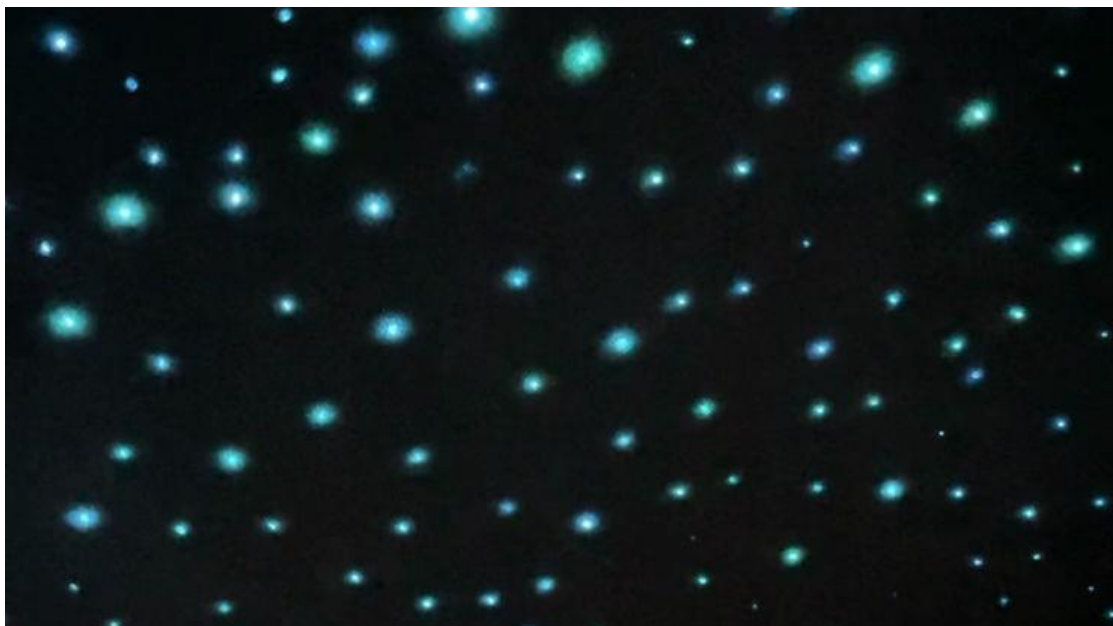
Use tape to tidy up the lights, be sure that they are not blocking any gaps in the headliner that are for the map lights etc. Rinse and repeat until you have laid all the lights in your grid, tapering lights off towards the light source or Pillar exit.

### **Step 7:**

Optic fibres have an extremely low melting temperature and direct contact with your car's roof on a hot summer day could damage the fibres. It is best to apply a layer of our protection fabric over the fibres and slightly glue it down to stop it from moving.

### **Step 8: Re-install your headliner and interior trim.**

We recommend bench testing your setup before reinstallation, to ensure all areas of the star headliner are lit up. When you're ready, reverse the process of removing your headliner to re-install it back into the vehicle, this is best done with help from another person, as the additional weight of the fiber optics and light engine can be potentially difficult to manage just by yourself. Most headliners will click in with certain tab spots on the ceiling, so be sure to locate them beforehand so you know where to push. Don't forget to run your module power cable to a suitable location ( we prefer the interior fuse box).



## **Step 9: Finishing up and wiring.**

If you poked your lights through the headliner, use a pair, flush cut pliers to clip the excess fiber optic from the roof lining.

When it comes to wiring your module for power, there's a few different options.

We recommend using a fuse tap on an ignition feed to allow the function of the starlight headliner to activate when you cars ignition is turned on, you can always turn the module off with the remote.

This concludes our guide to installing your very own Luxury starlight headliner and if you require more assistance you can always reach out to us.