



**2021-2023 Hyundai Sonata N-Line BIG  
MOUTH Lit Kit Installation Guide**

## Kit Contents (Full Kit)

Please review this document before attempting installation.

You will need basic hand tools and 2 hours of installation time.

Kit Contents	Qty
M5 x 22mm BHCP	2
M5 lock nut	2
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
Power Cable w/ Pigtail Connector	1
Switch	1
Switch Ground Cable w/ Crimped Connector	1
8" Zip Ties	8
Cable Clip	2
Assembled LIT KIT BIG MOUTH	1



## Kit Contents (LIT Flare Only)

Please review the table below and make sure you have received the kit contents.

Kit Contents	Qty
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
Power Cable w/ Pigtail Connector	1
Switch	1
Switch Ground Cable w/ Crimped Connector	1
8" Zip Ties	8
Cable Clip	2
Assembled LIT KIT BIG MOUTH	1



**If you already own the Velossa Tech Sonata N-Line BIG MOUTH, skip to slide 9 to see install and wiring instructions.**



## **Stock Components Removal**

It is best to Google “how to remove bumper” for your particular trim.

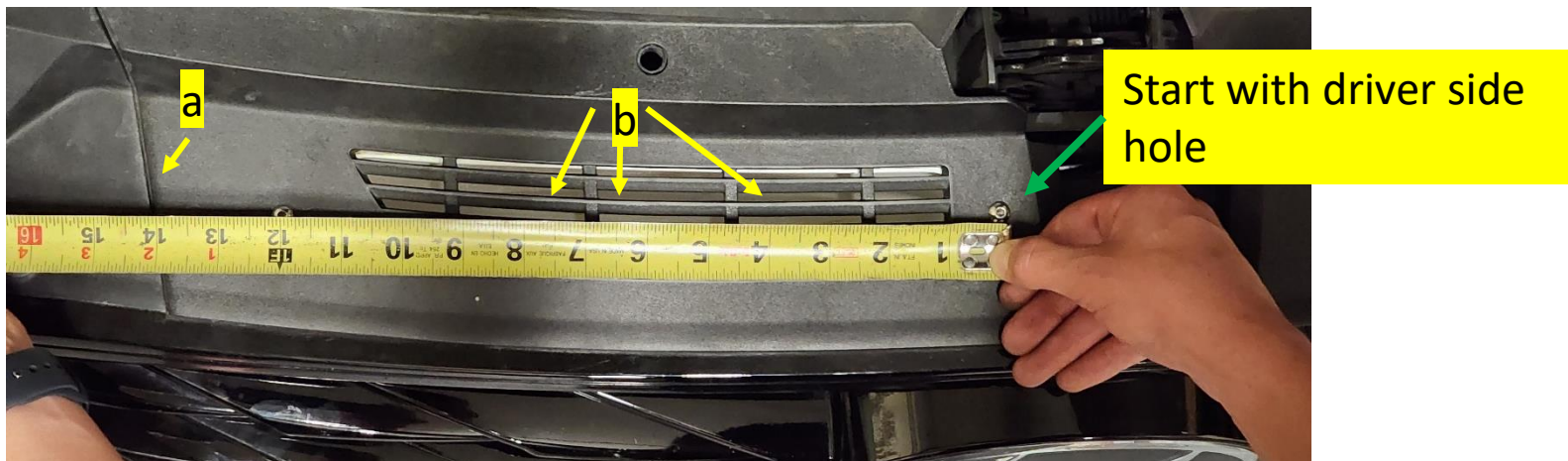
## Driver Side Hole Location

The top shroud is integrated into the bumper and will come off as a single piece with the bumper. It is necessary to drill two  $\frac{1}{4}$ " holes into this shroud to install the Big Mouth but it is recommended to start with a pilot hole before using the  $\frac{1}{4}$ " drill bit.

Use the following references to locate the hole center. **Start with the driver side hole:**

- (a) straight edge on the shroud
- (b) the edges that divide the inlet
- (c) the tape measure
- (d) bolt holes on the Big Mouth. **This reference is particularly helpful for the driver side hole.**

Mark and drill the driver side hole. Confirm this hole location is correct before locating the passenger side hole. An enlarged version of this image is available on the next slide and additional images are provided for locating the passenger side hole (slide 7).

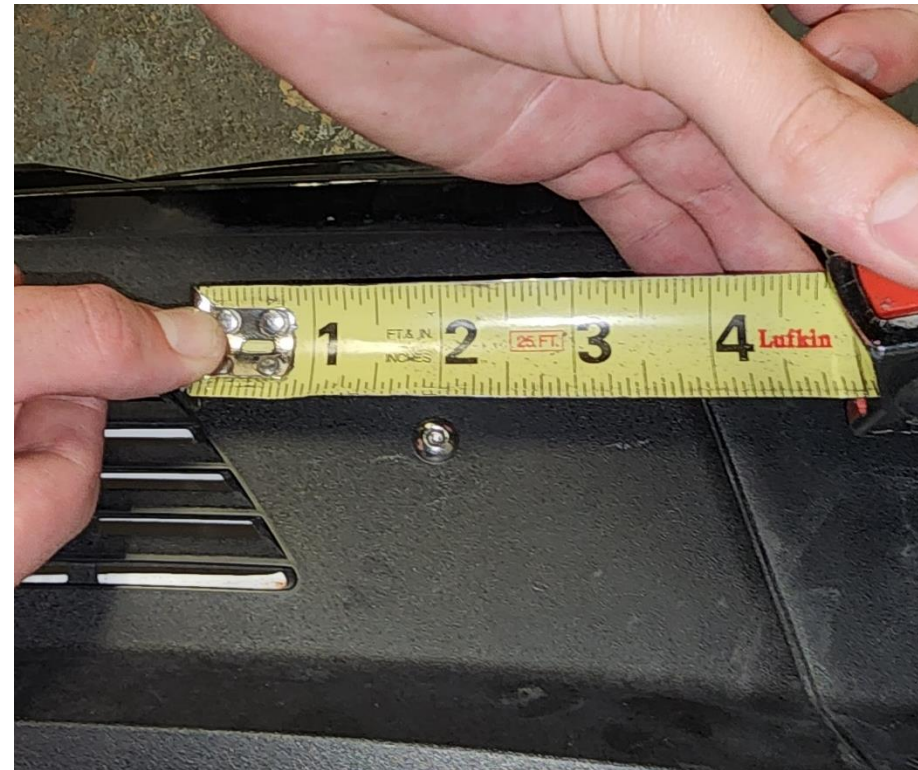


Start with driver side hole



## Passenger Side Hole Location

Use the same references from slide 4 along with these images to locate the hole center for the passenger side hole. Mark and drill the passenger side hole.



## Big Mouth Installation

Once the holes are drilled, install the Big Mouth using the provided M5 x 22mm button head screws and the M5 lock nuts. **DO NOT OVERTORQUE.**





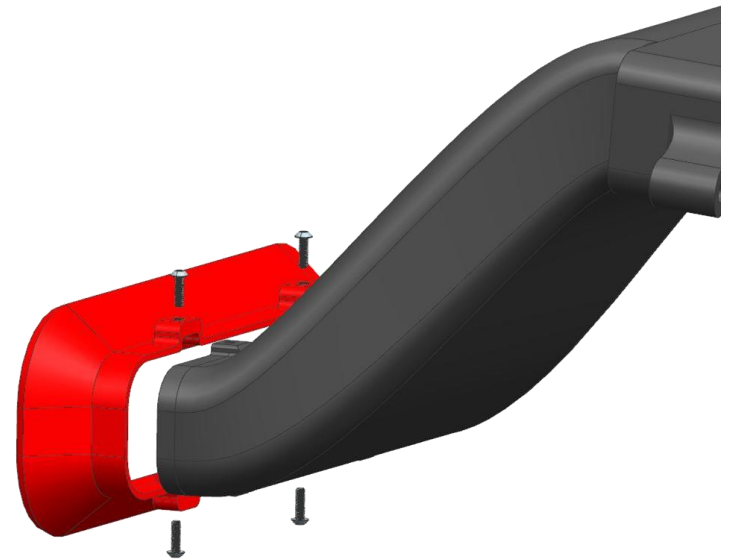
## Install the LIT BIG MOUTH Flare

**SKIP THIS SLIDE IF YOU PURCHASED A FULL LIT KIT**

Attach the supplied cable clip to your BIG MOUTH as shown. Fasten the cable and provide enough slack to not strain the cable.



**Attach the 3M cable clip here**

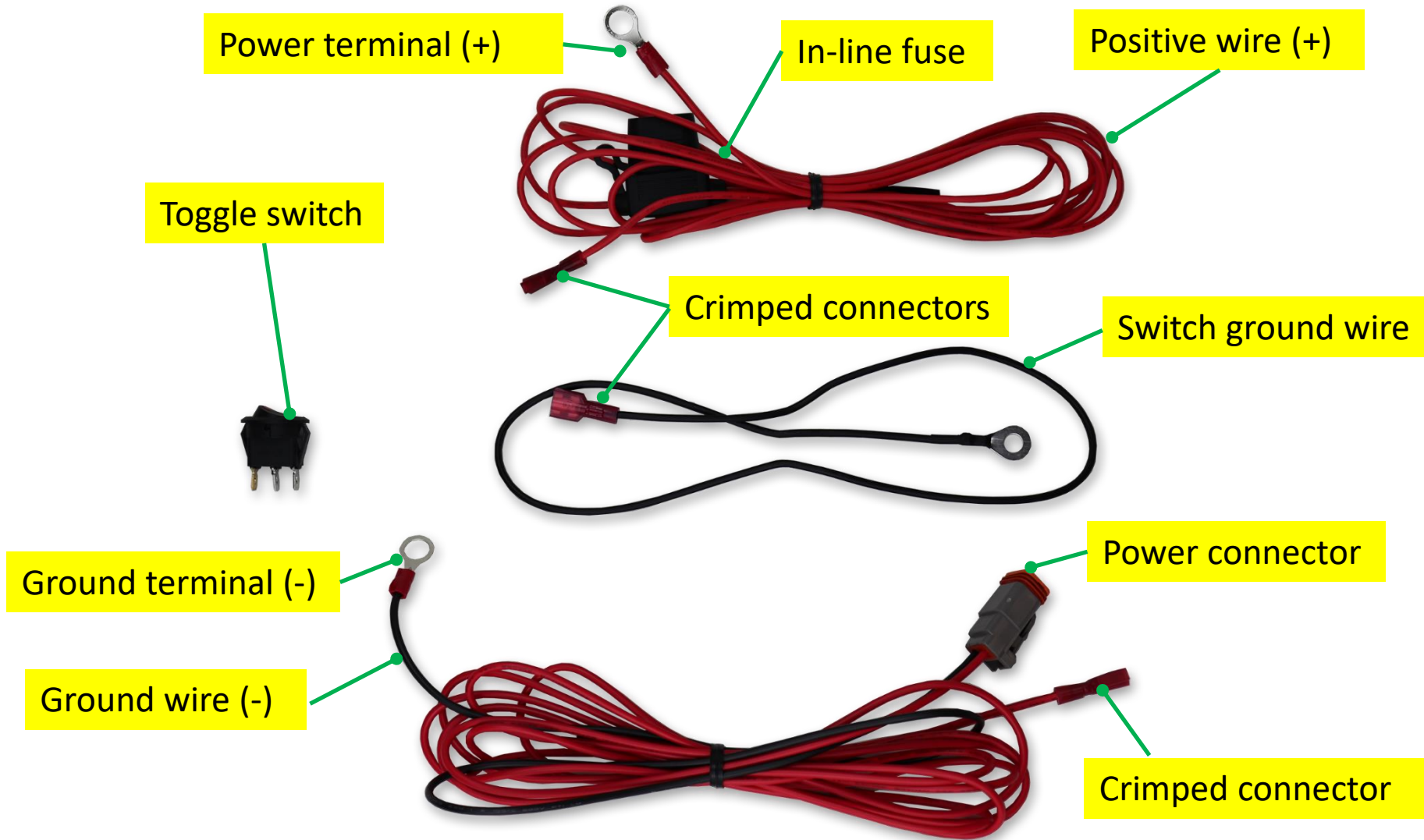


**If you purchased a LIT flare-only and already have a Gen 4 BIG MOUTH. Remove old flare and install the LIT flare with the 4 screws as shown.**



# VELOSSA TECH

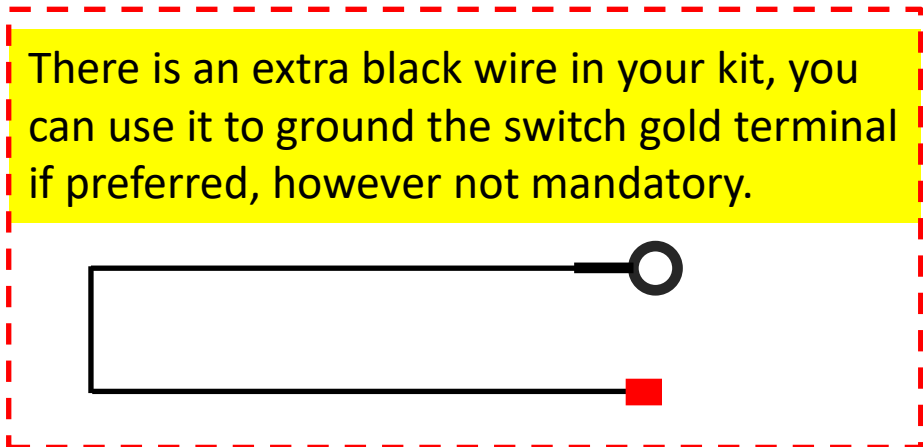
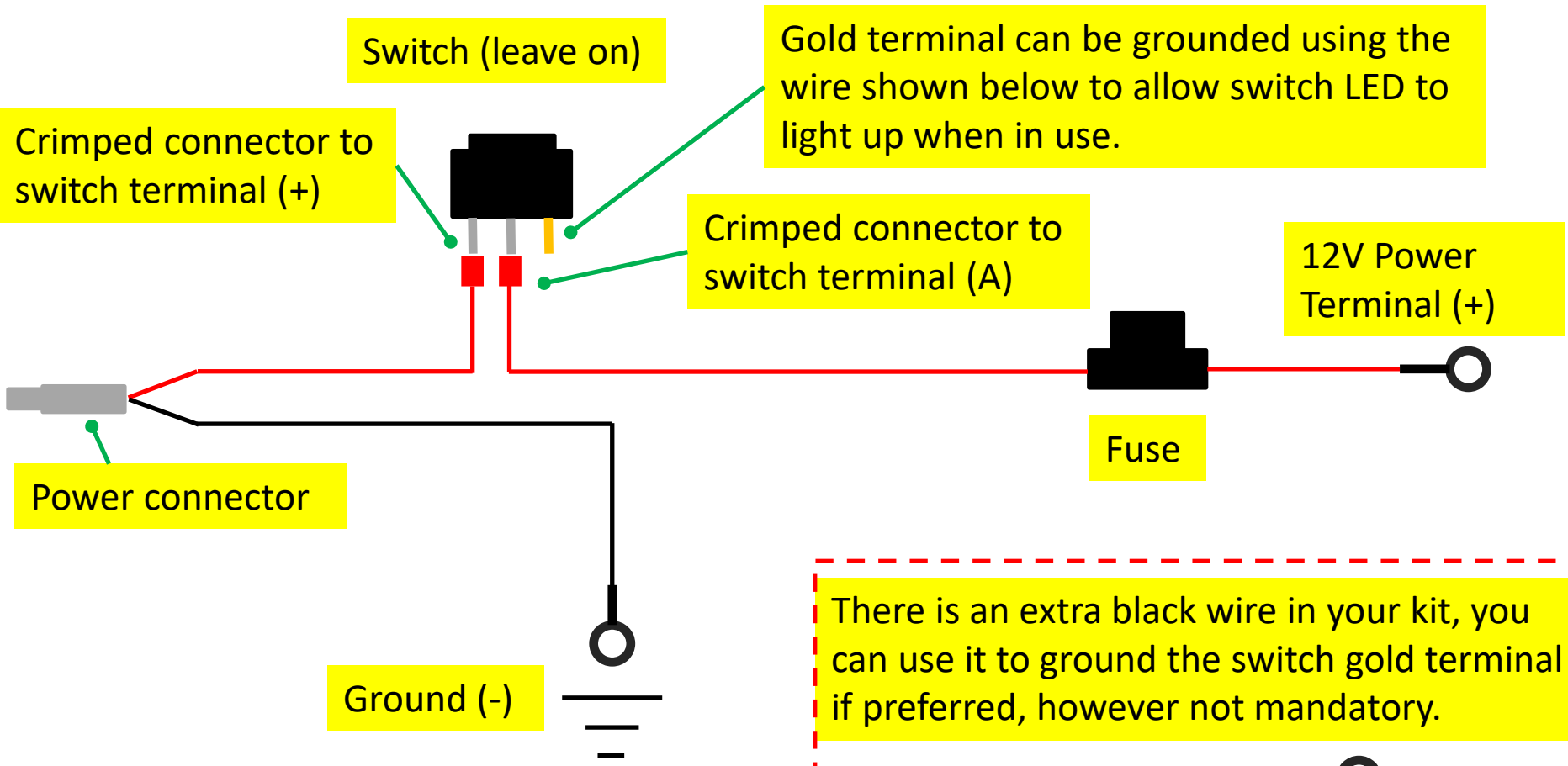
## Wiring Harness





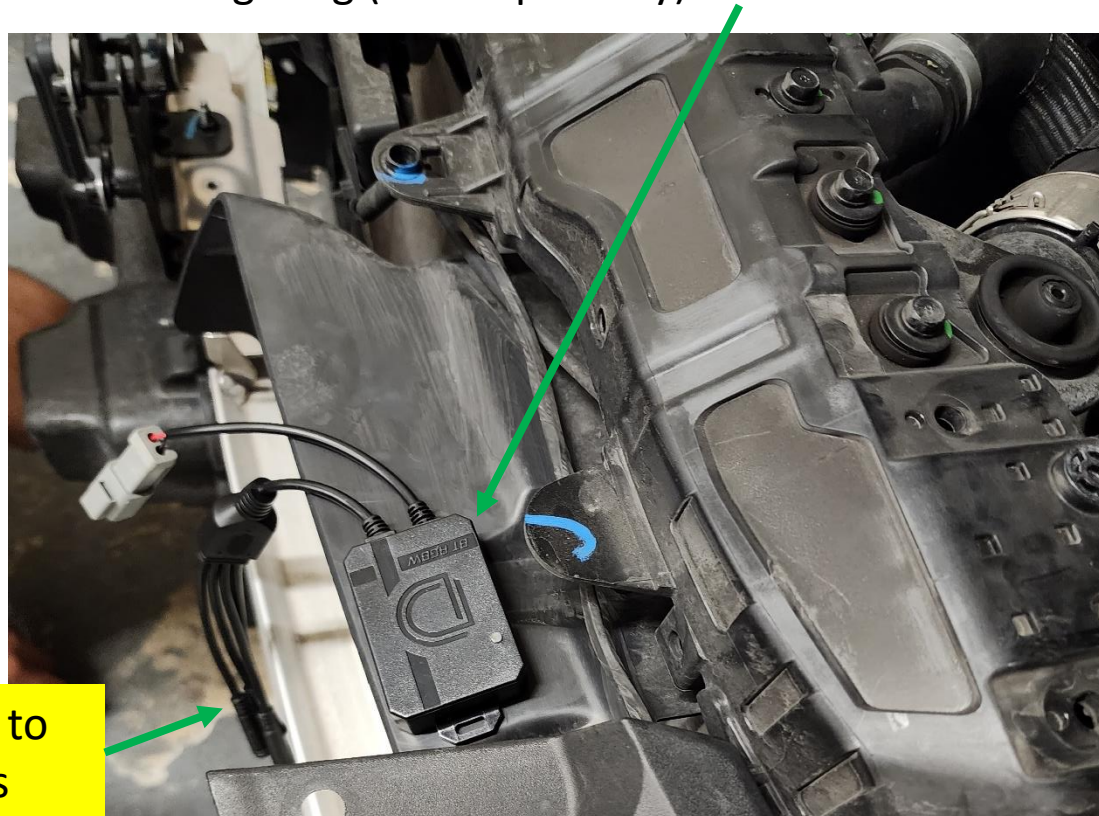
# VELOSSA TECH

## Wiring Harness Schematic



## Controller Location

Clean the surface shown with a dry cloth and use the provided double-sided tape to adhere the Diode Dynamics controller to the shown location. **Ensure the cables are facing passenger side.** Connect the LED strip to one of the controller ports (**line up the arrows on the connectors!**). The other 3 ports can accept any Diode Dynamics lighting strip for underglow or underhood lighting (sold separately).

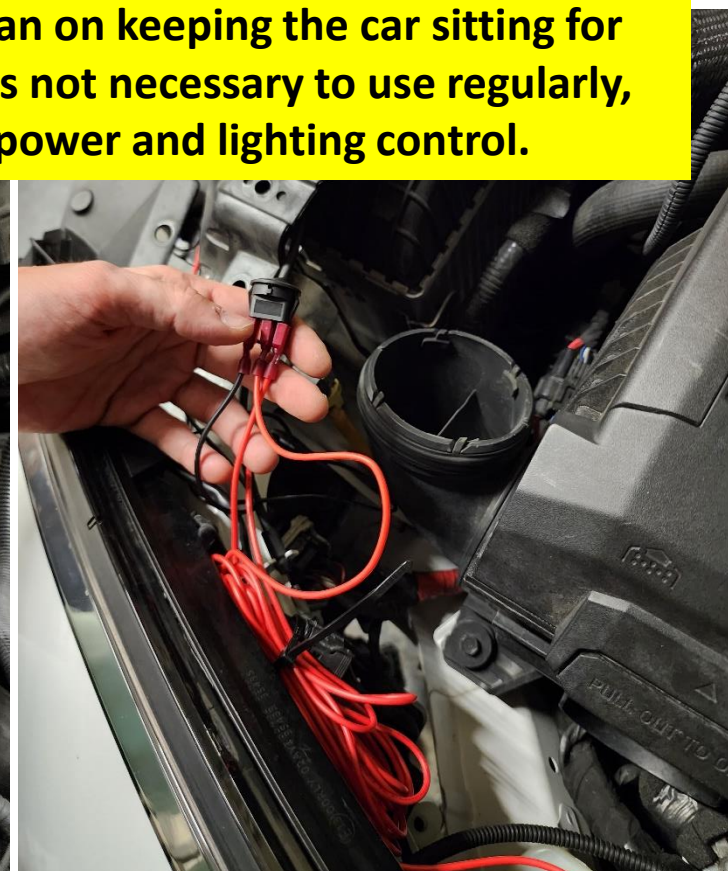
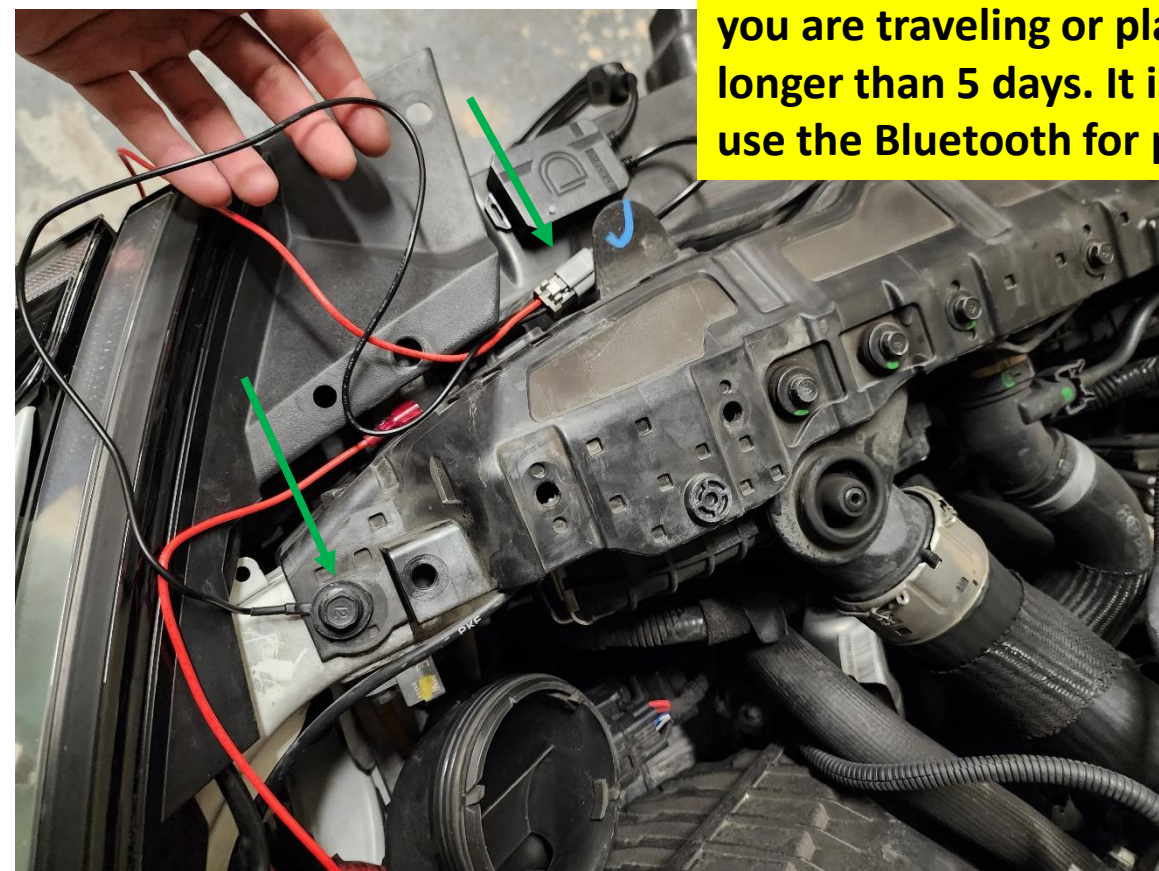


Connect LED strip to one of these ports

## Big Mouth Wiring

Connect the grey pigtail connector to the controller and fasten the ground lugs to a point on the metal chassis. Follow the wiring harness schematic (slide 11) to properly hook up the button switch.

**The power switch is only used to cut off main power if you are traveling or plan on keeping the car sitting for longer than 5 days. It is not necessary to use regularly, use the Bluetooth for power and lighting control.**

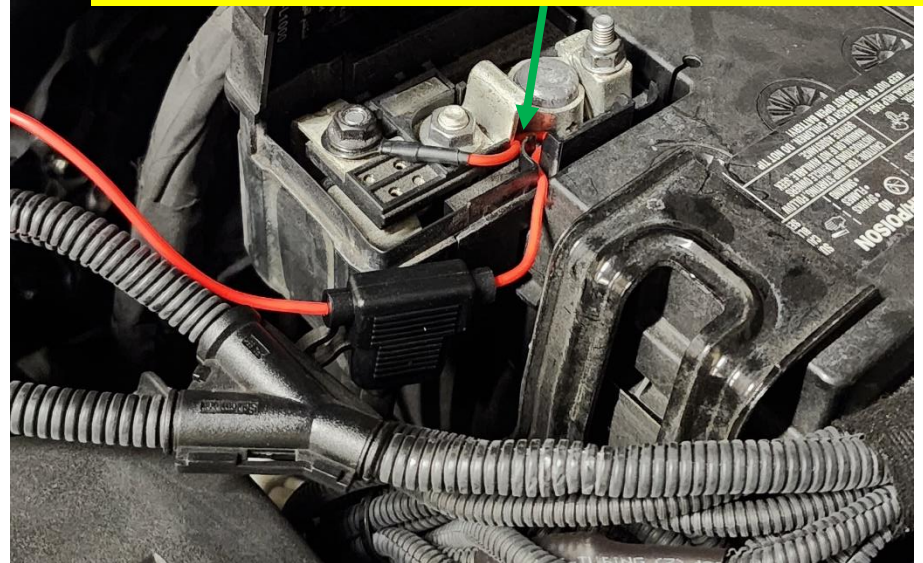


## Big Mouth Wiring

Use the car battery to supply power to the Lit Kit. Undo the nut located on the positive terminal of the battery and fasten the power cable to it as shown. Take care to route the wire through the indicated channel to avoid damaging it when the terminal cover is reinstalled.

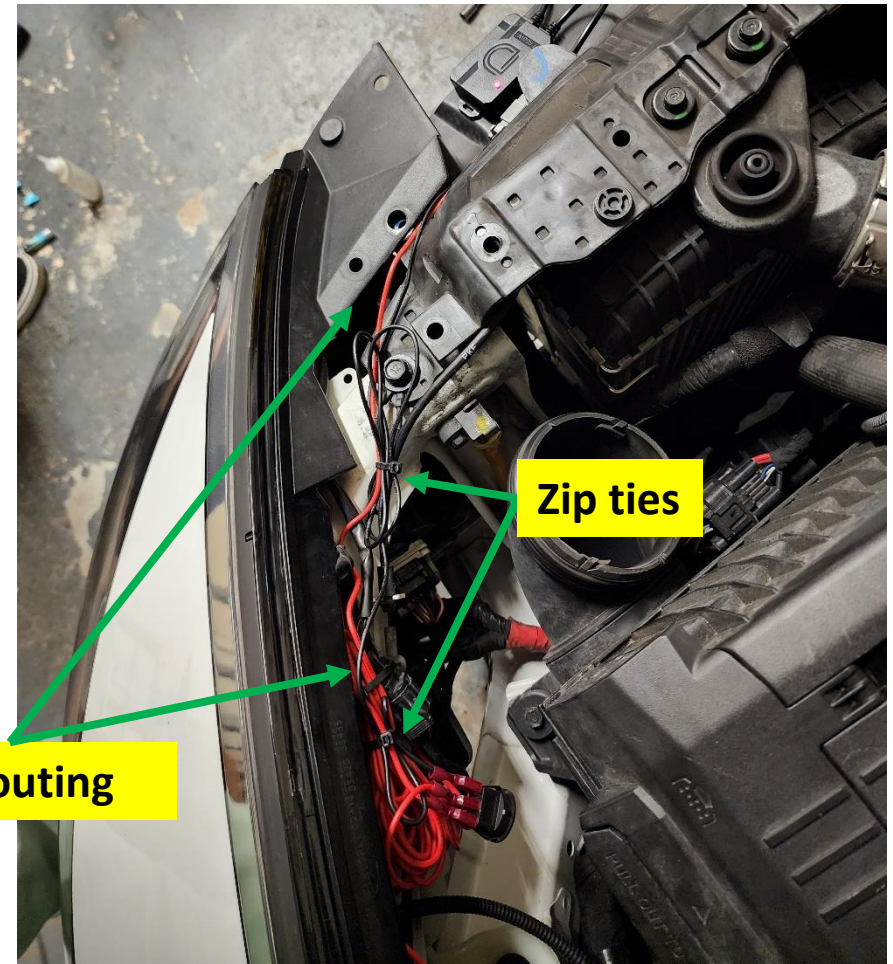
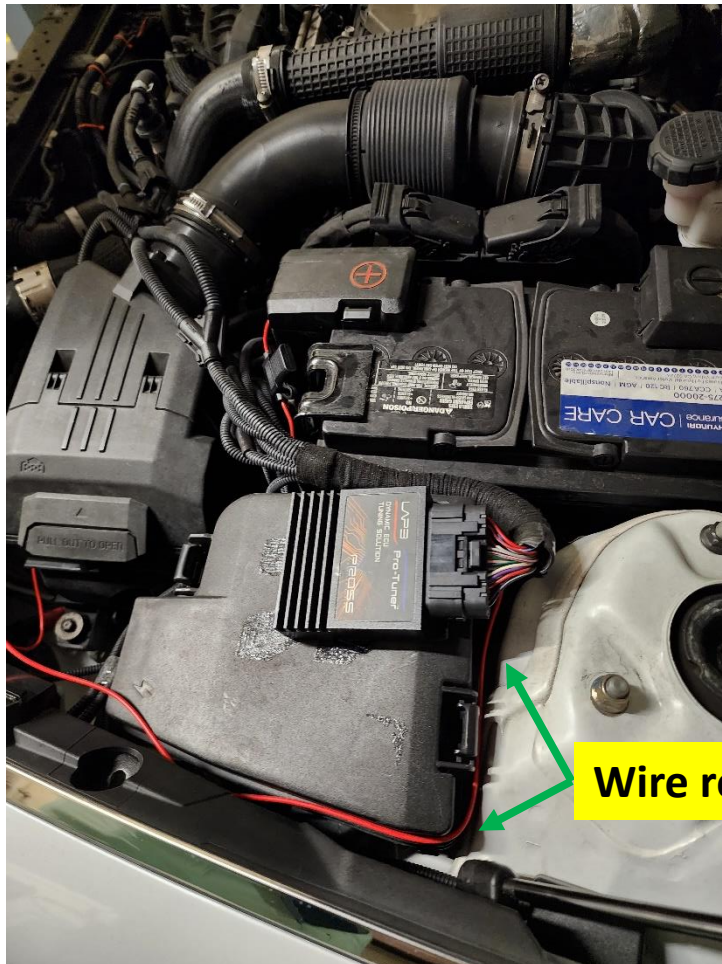


**VERY IMPORTANT:** You may make a small cutout groove to allow the wire to poke through the power box, do not pinch the wire!!



## Big Mouth Wiring

Make use of the provided zip ties and cable clips to bundle and organize the excess wire to avoid straining or damaging the wire.



## Phone App

Download the Diode Dynamics app and connect via Bluetooth.

How to connect to the app:

1. After installing the app from the app store, open the app on your device.
2. Cycle the power to the Bluetooth controller by unplugging it and plugging it back in or flick the power switch and wait a few seconds, then turn it back on.
3. Wait for the app to detect the controller, it will pop up on the app screen as a Bluetooth controller. If necessary, cycle the power once more to refresh the controller.
4. Once the controller shows up on the app, click it and connect. You have 30 seconds to select the controller once it shows up on the app. After 30 second you will need to refresh again to detect the controller again.
5. Note that if you mounted your controller behind a lot of metal components, this may degrade the signal and range.





## Final Assembly Review

Review the install and make sure nothing is binding or causing any preload on any parts, loosen and retighten if adjustment is necessary.



Re-assemble the bumper the same way it was removed to complete installation.