



2022+ Cadillac CT4-V Blackwing BIG MOUTH “ LIT KIT” Ram Air Intake Installation Guide



Kit Contents (Full LIT KIT)

Please review this document before attempting installation.

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

Kit Contents	Qty
#6 x 1/2" flat head screw	6
Bluetooth controller	1
Rocker switch	1
Positive cable w/ in-line fuse	1
Remote	1
Cable clip	8
8" zip tie	10
M6 x 12mm socket head screw	1
M6 lock nut	3
Assembled BIG MOUTH kit	2
Retainer clips	6





Kit Contents (LIT Flare Only)

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

Kit Contents	Qty
Bluetooth controller	1
Rocker switch	1
Positive cable w/ in-line fuse	1
Remote	1
Cable clip	8
8" zip tie	10
M6 x 12mm socket head screw	1
M6 lock nut	3
Assembled LIT flare	2



If you already own the Velossa Tech Cadillac CT4-V Blackwing BIG MOUTH, skip to slide 6 to see install and wiring instructions.

Big Mouth Placement

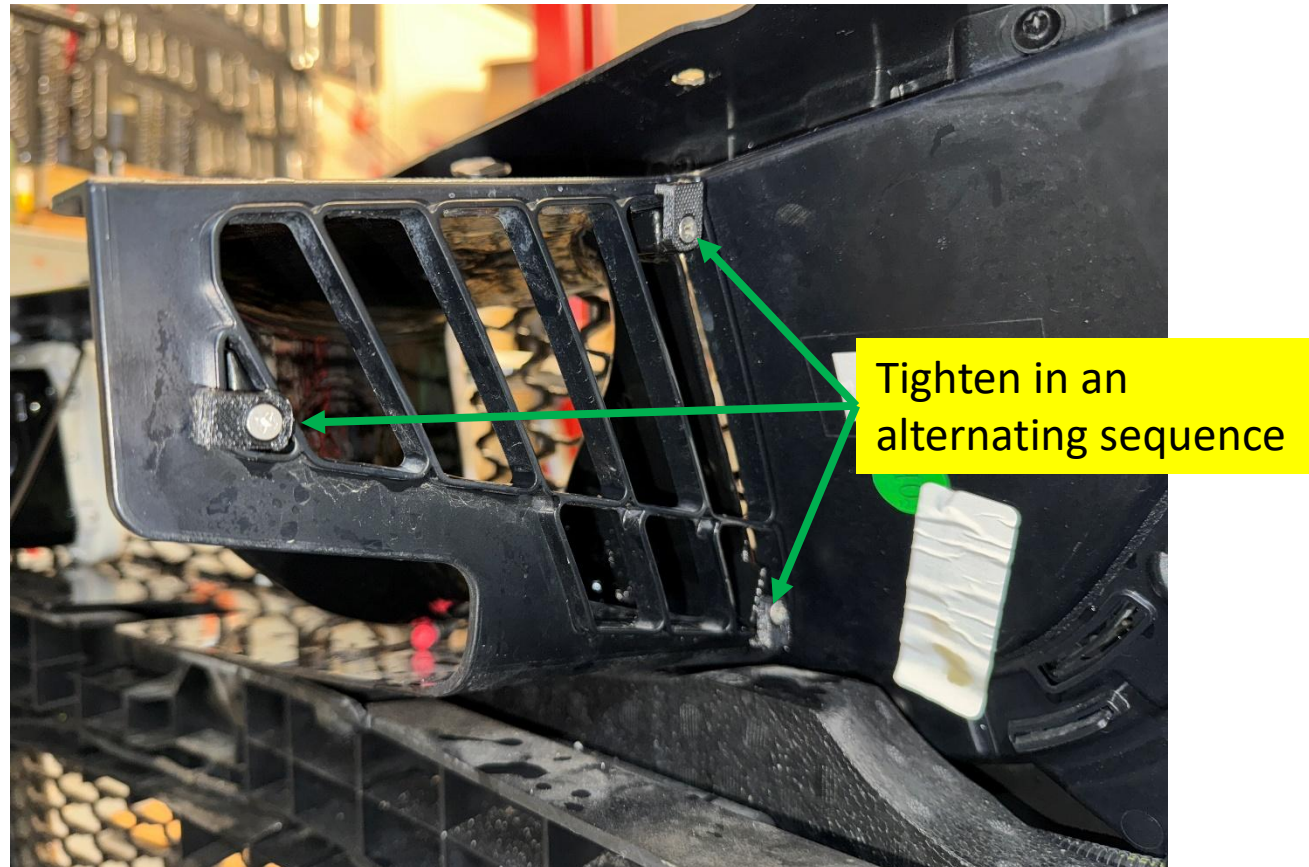
Look for the indicators on each body ('D' for driver's side and 'P' for passenger side) and position each Big Mouth on its respective wing. Insert the rearmost standoff into the cavity of the same shape.



Position standoff in the opening of the same shape

Fastening

Use the supplied retaining clips and #6 x ½" screws to fasten the Big Mouths to the wing. Tighten in an alternating sequence and take care **NOT TO OVERTIGHTEN** as that can damage the threads needed to secure the part.

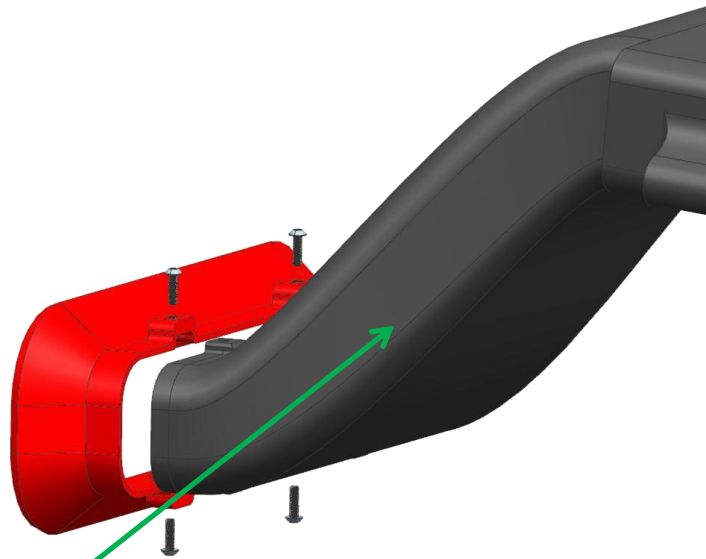




Install the LIT BIG MOUTH Flare

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.



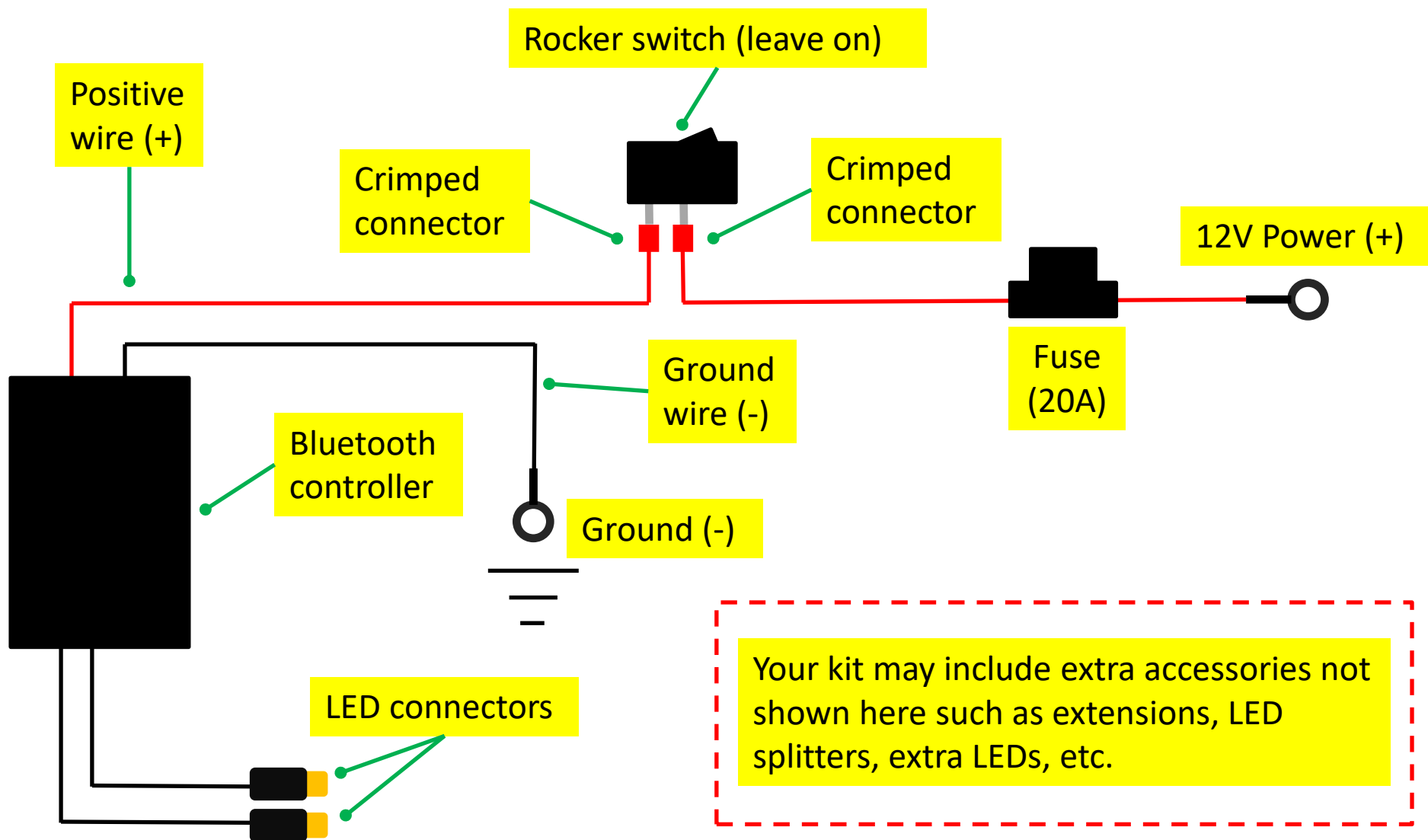
Attach the 3M cable clip here

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.



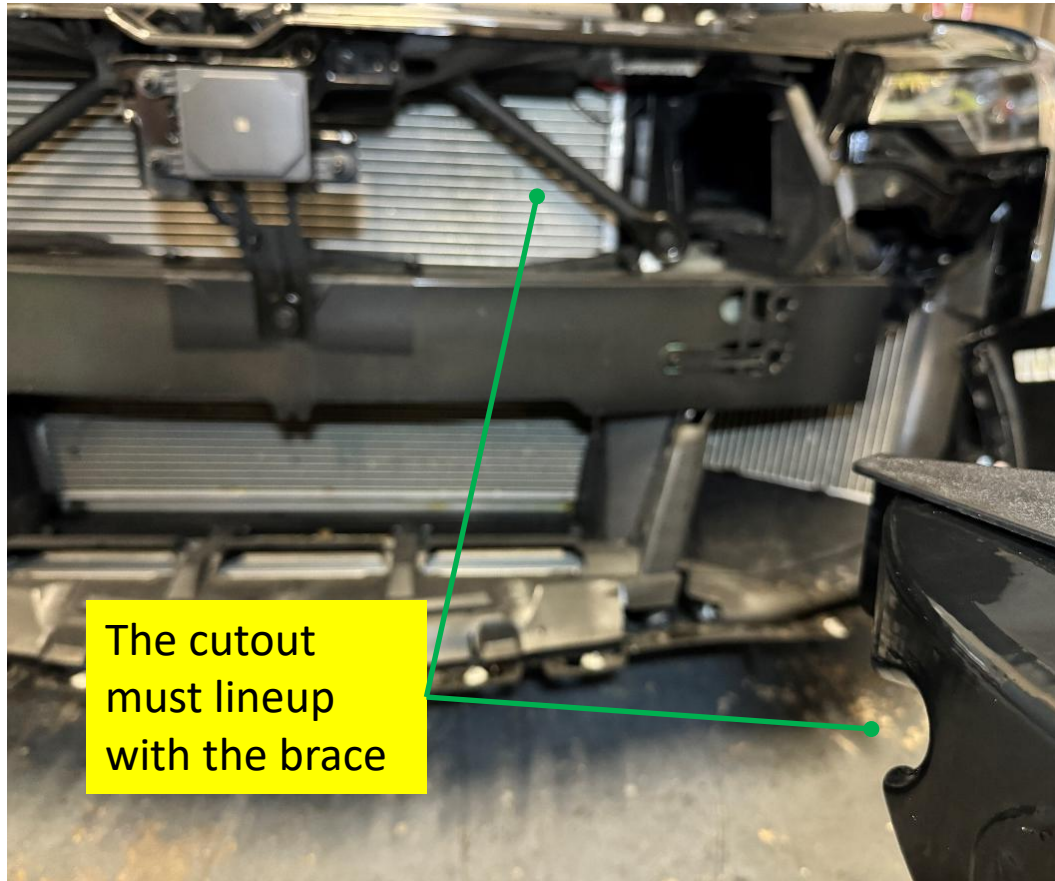
VELOSSA TECH

Wiring Harness Schematic



BIG MOUTH Bumper Re-install

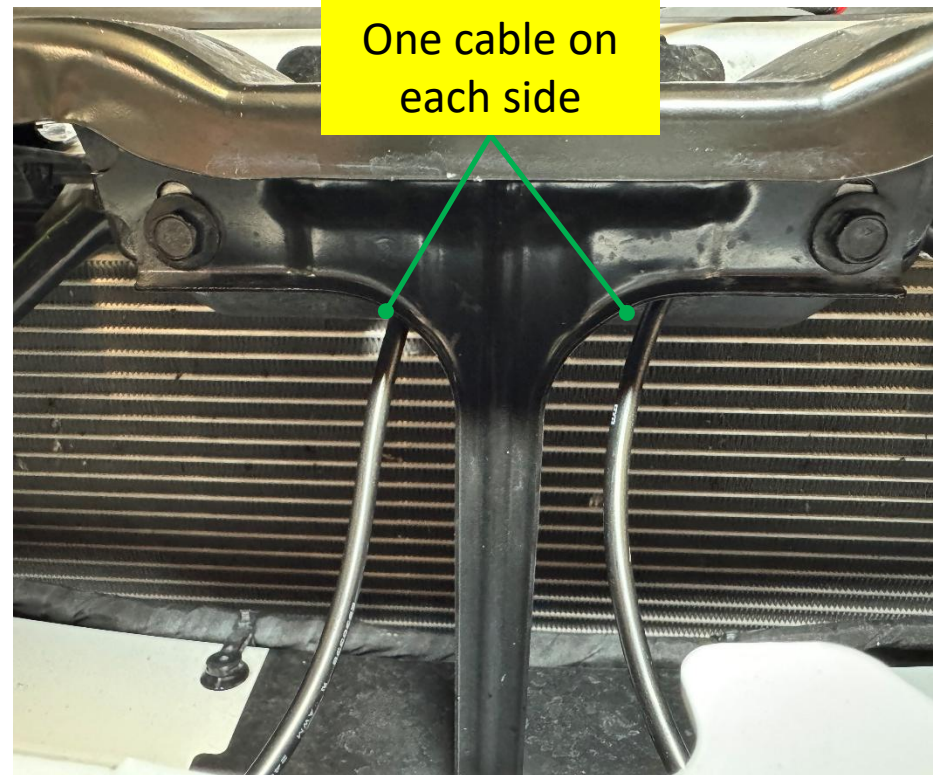
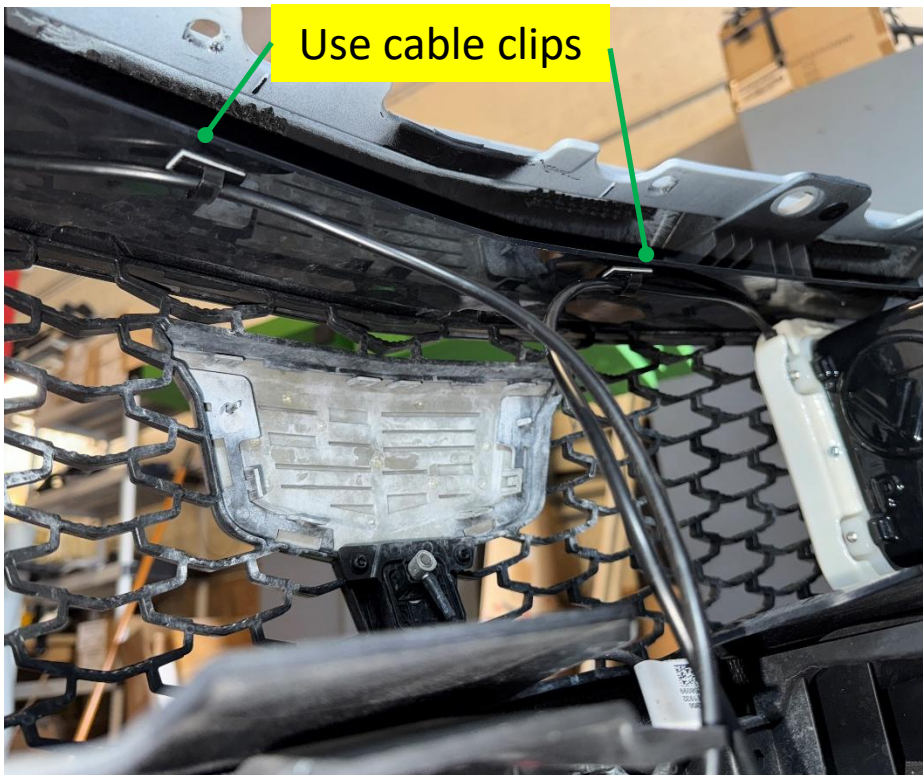
Since the BIG MOUTH is attached to the grille, you'll need to maneuver the bumper back on while avoiding interference and keeping access to the LED cables. It's important that the cutout on the backside of the BIG MOUTH lines up with the diagonal brace. Additional details for bumper re-install can be found in the next two slides.





BIG MOUTH Bumper Re-install

You can set the bumper back on the car and clip it on but **DO NOT FULLY FASTEN YET** until all electrical connections are made and confirmed working. Use cable clips to secure the LED cables to the shroud. As you manipulate the cables into the engine bay, make sure that one cable goes on each side of the T-frame. See pictures on next slide for reference.





BIG MOUTH Bumper Re-install

Push down on the plastic trim to make room for the cables and route them into the engine bay through the indicated gap.





LIT KIT TIPS: Controller Placement

When considering where to place your Bluetooth controller, pay attention to the following factors:

- **Distance:** The controller leads need to be able to reach the LEDs so proximity to the BIG MOUTH is important.
- **Bluetooth signal:** Placing the controller as close as possible to the driver will help with signal strength. Place the controller in a location where there is minimal metal mass in between the driver and controller.
- **Heat and weathering:** Avoid subjecting your controller to excessive heat and limit its exposure to environmental wear.

Some commonly found solutions for controller placement include:

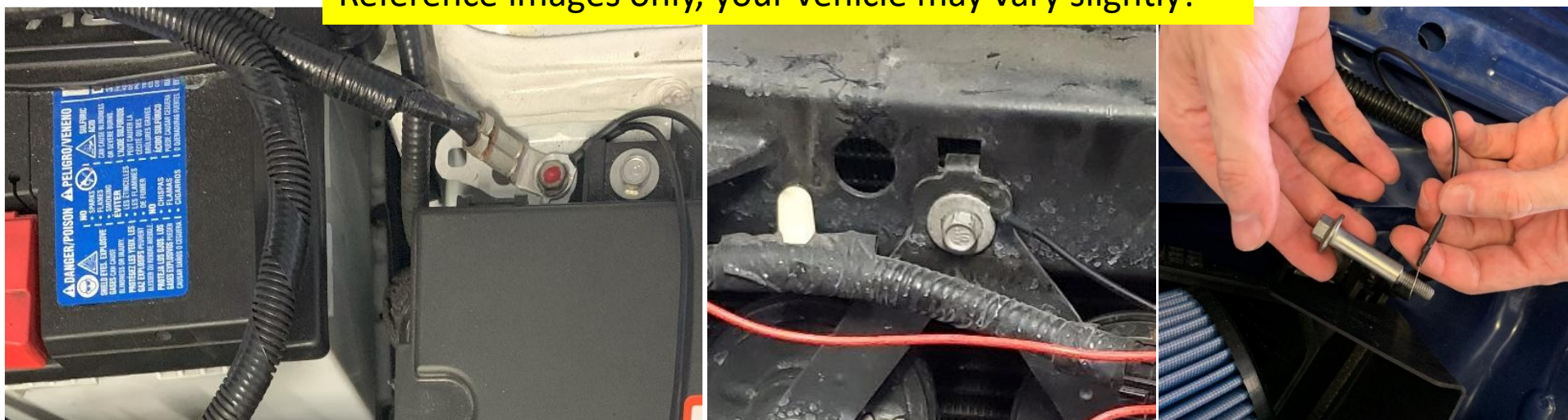
- Adhere to a flat spot on the cowl, inside or near battery box, radiator support (driver side if possible), behind headlight, airbox, etc. using the supplied double-sided tape
- If using a location near the hood latch, take the necessary precautions to ensure the wiring will not get entangled with the hood latch.
- Using zip ties to attach the controller to a thick wire loom is also a handy solution
- Some locations near the firewall/battery tend to be good locations for signal and low temperature.

LIT KIT TIPS: Ground

When considering where to ground the circuit, pay attention to the following factors:

- **Location:** The best and most reliable ground connections exist on the chassis, on the engine block or on the negative terminal of your battery. These can exist as a threaded hole, shoulder bolt or stud.
- **Conductivity:** The ground point should be clean, unpainted and free of rust or grease for a solid connection. Fasten it securely to avoid vibration loosening the connection.
- **Distance:** Make sure the location of your chosen ground point is within range of the provided ground wiring.

Reference images only, your vehicle may vary slightly!



LIT KIT TIPS: Power

When considering the power side of the circuit, pay attention to the following factors:

- **Location:** By default, our LIT KIT is powered using the positive terminal on the battery. If you decide to re-configure your kit for a switchable power source, we recommend you research the use of a fuse tap and follow best practices outlined online.
- **Conductivity:** The connection to the battery must be tight and secure. Loose connections create excess heat and shorten the life of the electronics. Ensure the terminal is free from corrosion, damage or debris.
- **Safety:** When working with a car battery, exercise best safety practices such as using insulated tools and wearing the correct protective equipment.

Reference images only, your vehicle may vary slightly!



LIT KIT TIPS: Wiring Best Practices

When considering how to route the wiring through your engine bay, consider the following:

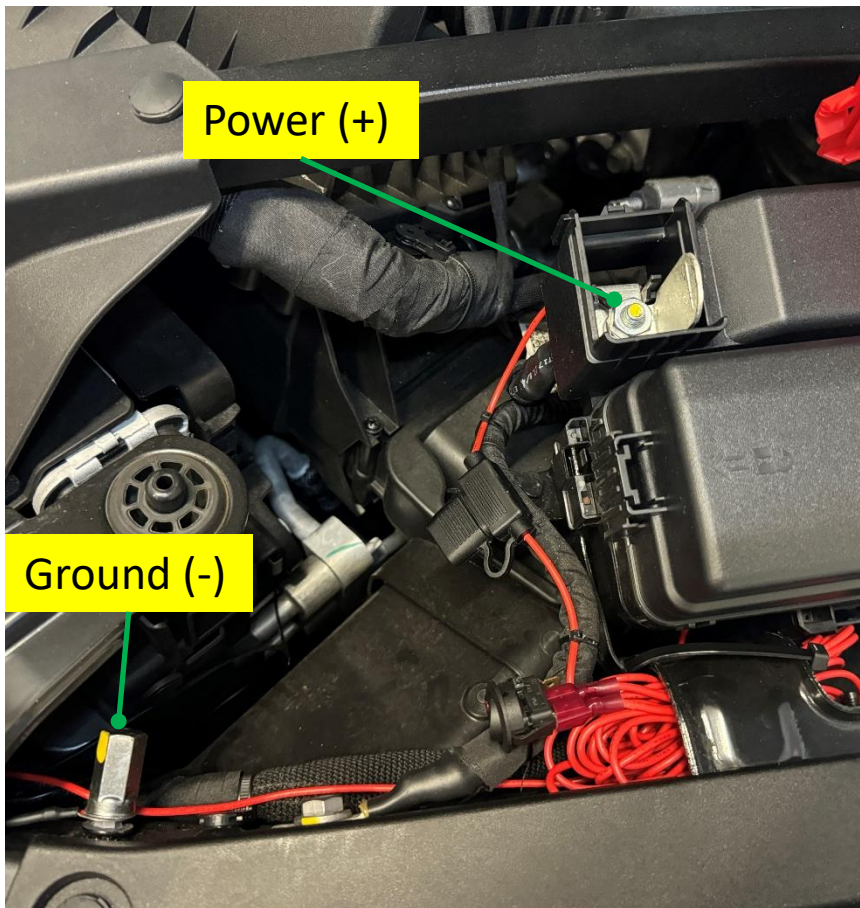
- **Strain relief:** Use the provided zip ties and cable clips to secure wiring to its environment while maintaining slack at each point. All wiring should be free from strain and tension.
- **Components to avoid:** Avoid moving parts, such as hood latches and pulleys, and exhaust components that can melt wiring. Also take care to avoid pinch points.
- **Routing:** Whenever possible, route the wiring along factory harnesses, underneath trim or along the perimeter of the engine bay. Bundles of wire should be tucked underneath plastic covers and secured using zip ties.

Reference images only, your vehicle may vary slightly!



LIT KIT: Overview

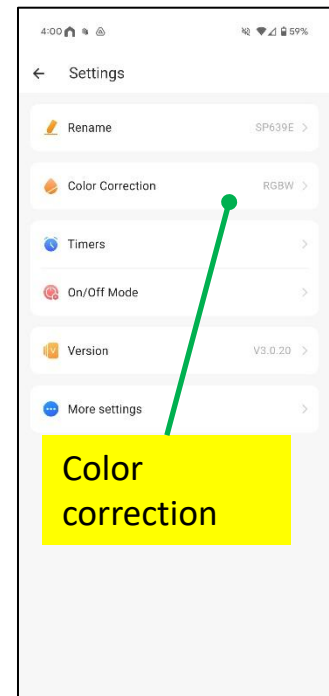
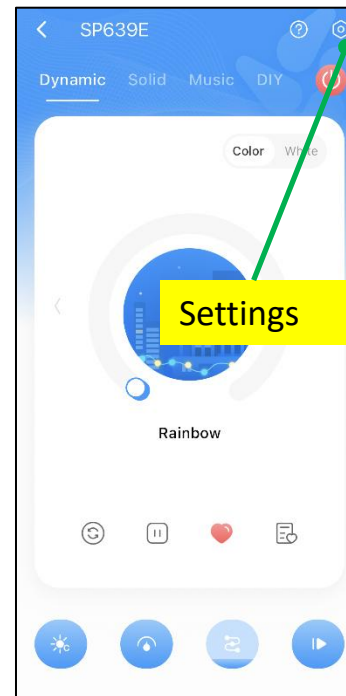
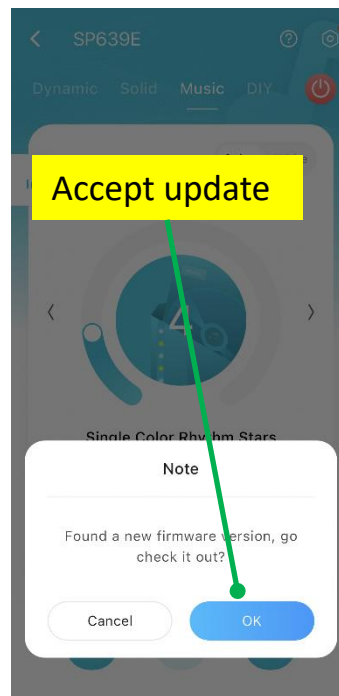
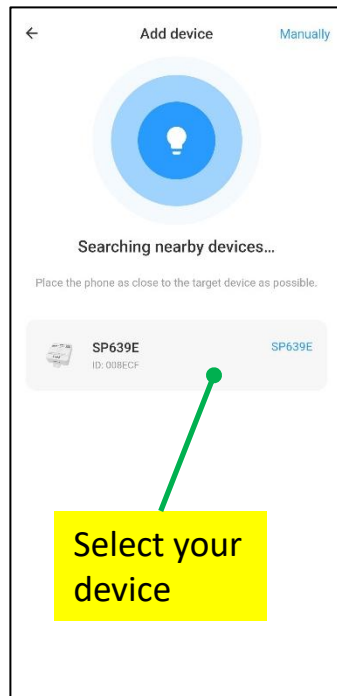
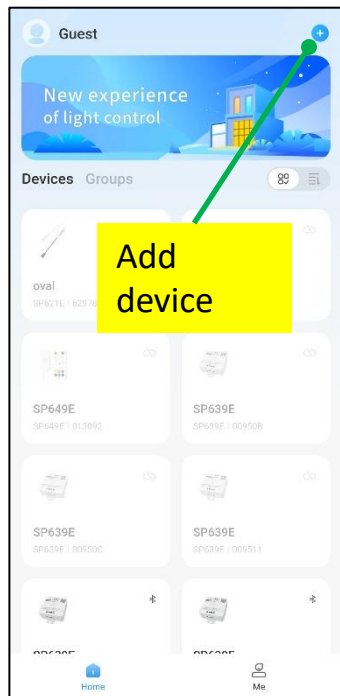
Using the wiring schematic, connect the kit to ground and power the kit using the positive terminal on the battery. Exercise strain relief and clean cable management.





Phone App: Initialization

Download the **BanlanX** app from your app store and turn on your LIT KIT through the switch. Open the app and select the + sign at the top right of your screen. If you are within range and Bluetooth is on, your phone will search for nearby devices, and you will likely see your Bluetooth controller available as SP639E. Select your SP639E Bluetooth controller. Once selected, it is very likely that you will be prompted to update the firmware. Once the update is complete, navigate to the Settings -> Color Correction. Choose the colors that are displayed on your LEDs and once the calibration is done, go back to the 'Home' screen.



Phone App: Control

Once on the 'Home' screen, go to the 'Dynamic' tab, familiarize yourself with the interface and have fun with the presets! There are many ways to customize your LIT KIT, including DIY configurations.

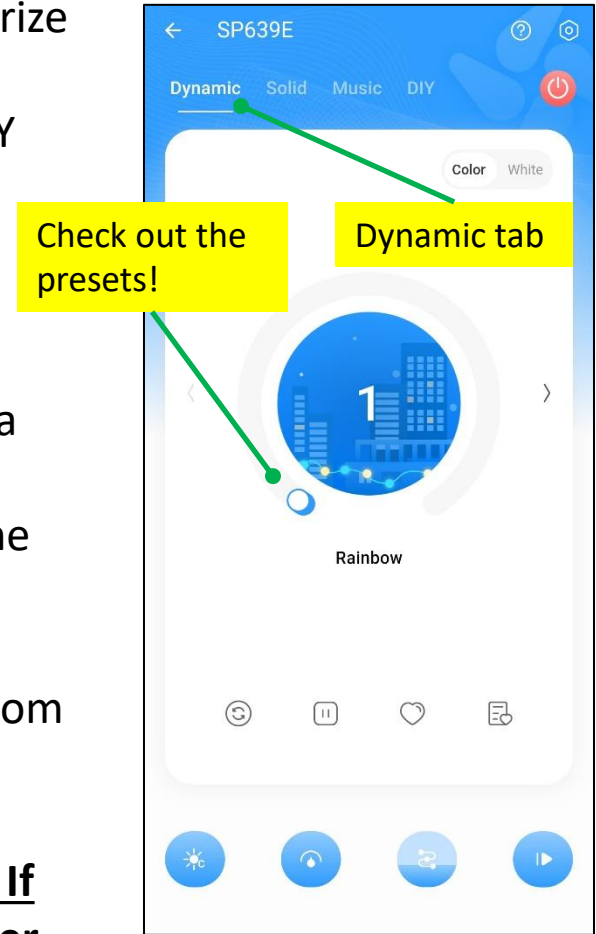
Troubleshooting

If you are having trouble connecting, cycle the power to the Bluetooth controller by toggling the power switch and wait a few seconds, then turn it back on.

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.

If the problem persists, reach out to support@velossatech.com

Note that if you mounted your controller behind a lot of metal components, this may degrade the signal and range. If this is your case, reconsider the placement of your controller.





Finalize

Reinstall the bumper the same way it was removed and enjoy!

