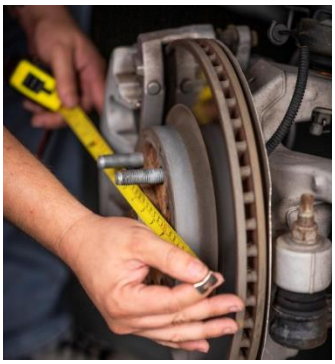
⚠WARNING failure to confirm proper fitment can lead to product and vehicle damage.

Measuring

1. Measure and record the inner diameter of the wheel rim.
2. Measure and record the diameter of the rotor, including the caliper in the measurement.
3. Using the following formula, calculate the ideal wheel light diameter.

$$\text{Ideal Size} = \frac{(\text{Wheel} - \text{Rotor})}{2} + \text{Rotor}$$

4. Select the kit that is closest in size to the Ideal Size, making sure that the kit size is smaller than the Wheel measurement, and larger than the Rotor measurement.



Example: Wheel rim measurement: 19.75"

Rotor measurement: 13.5"

$$\text{Ideal Size} = \frac{(\text{Wheel} - \text{Rotor})}{2} + \text{Rotor}$$

$$\text{Ideal Size} = \frac{(19.75 - 13.5)}{2} + 13.5$$

$$\text{Ideal Size} = \frac{6.25}{2} + 13.5$$

$$\text{Ideal Size} = 3.125 + 13.5$$

Ideal Size = 16.625"

Closest kit: 17"

17" < 19.75" (Wheel)

17" > 13.5" (Rotor)

NOTE For vehicles that have a wheel base over 144 inches, you may want to order (HE-EXTRGB) or (RGBW1-EXT).

HE-RGB1-W[xx] / HE-RGBW1-W[xx]

Wheel LED Ring Lights (4)
(NOTE) *Intended for use with Disc Brake Vehicles Only.*

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What's in the box		
Components	**Cables**	**Hardware**
• LED Ring Light (4)	• Left-side vehicle connections • Right-side vehicle connections	• 4" Zip ties (6 per wheel, 24 in total) • 12" Zip tie (1 per wheel, 4 in total) • Ring brackets (4 per wheel, 16 in total) • 3mm Mounting screws (4 per wheel, 16 in total) • 3mm Bracket screws (4 per wheel, 16 in total) • 7mm Nut (8 per wheel, 32 in total) • Single use thread lock (4) • 3 Amp diodes (2 in total)

Tool required		
Hand tools	**Power Tools**	**Additional Supplies**
Ratchets Socket set Torx® set 3mm Allen driver 7mm wrench Torque wrench Breaker bar Dead blow hammer Tape measure Small clamps Side cutter Pick set Pull rod Crimpers Strippers	3/16" drill bit Drill Impact Cut off wheel/Angle grinder Vice Digital multi meter (DMM)	An assistant Vehicle Service Manual Automotive degreaser such as IBTW or Acrysol or Brake cleaner shop towels Marker Electrical tape Floor jack (4) Floor stands Safety glasses

Pre-Installation

☐ Open Kit, confirm all parts are accounted for.

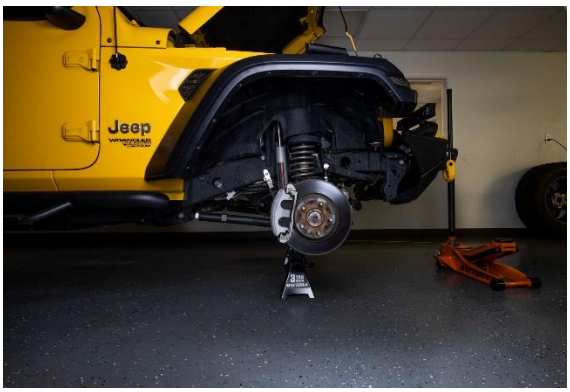
☐ Layout kit on bench, as it would be installed in the vehicle.

☐ Using a 12V battery or 12V power supply, test product functionality

- White Trigger – Reverse light
- Orange Trigger - Turn signal (must diode isolate each turn signal wire when connecting)
- Red Trigger – Brake light

☐ **Installation must be performed on a flat, level, and dry surface. Failure to do so may result in the vehicle falling, causing damage and bodily harm.**

☐ Using the vehicles owner's manual, locate the factory jacking points. To lift vehicle, use an appropriately sized jack and jack stands, lift the front of the vehicle and place floor stands to support front left and right sides. Adjust floor stand heights to the same level. Lower the vehicle onto the floor stands. The vehicle should be stable and the front wheels barely off the floor. If this is not the case, lift vehicle again with jack and adjust floor stands.



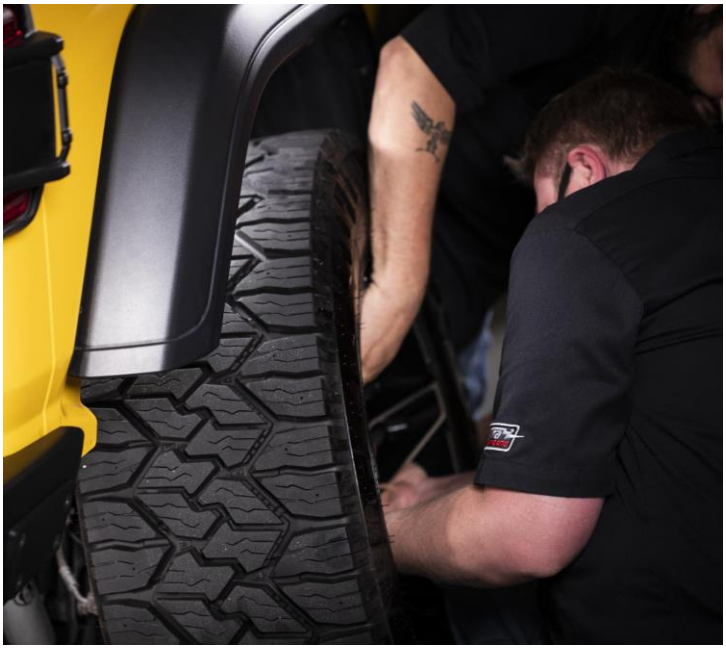
☐ Repeat step above for the rear of the vehicle.

Tire / Wheel Removal

1. Using the impact in a star pattern, loosen and remove the lugs from the front left tire.

(**Note**) You may need a breaker bar to loosen lug nuts, while your assistant holds the brake in the vehicle.

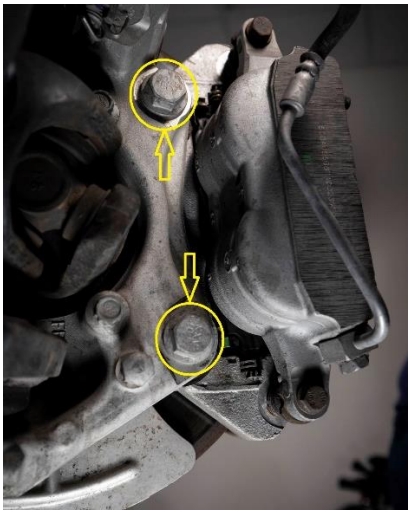
2. With assistance remove wheel and set aside.



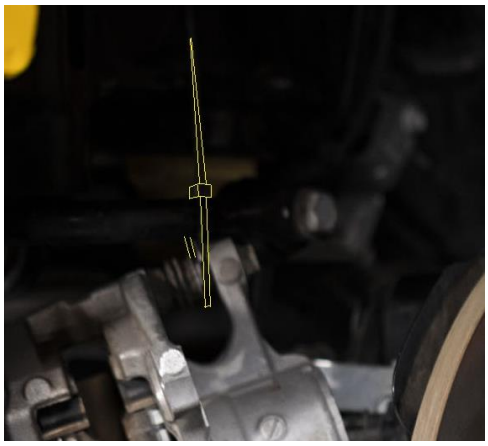
Installation

1. With the wheel/tire removed, test fit the ring to the braking system and rim.

2. Using a ratchet and socket remove the (2) bolts (typically) securing the caliper. The vehicle service manual can assist in identifying these.



3. Using a supplied zip-tie, hang the caliper to the spring or frame, so that it is out of the way and pressure is not applied to the brake lines.



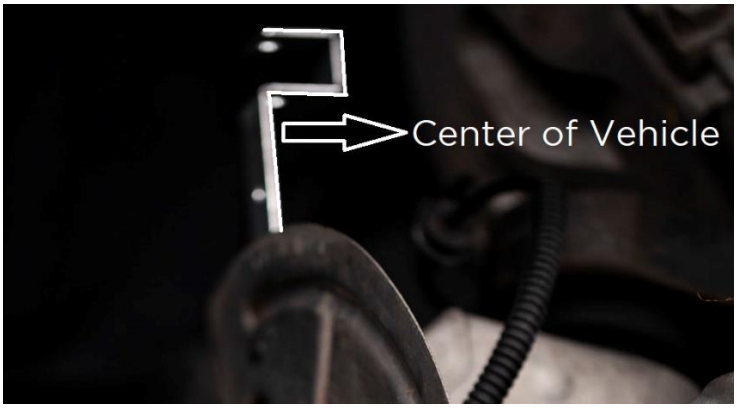
4. Remove the vehicles rotor, from the spindle.

(NOTE)*In some cases, you may need to use a dead blow hammer on the rear of the rotor to free up the spindle hub.*

5. Clean dust shield and rotor free of any dirt and oils
   [Metra recommends using P/N: ACRYSOL-CULV, or IBTW multi-purpose degreaser]

6. Using the cap headed screws mount, a minimum of 3 out of the 4 supplied brackets loosely onto a LED ring.

7. Position the brackets against the dust shield. The brackets should be orientated so that the LED ring is positioned inward toward the center of the vehicle.



8. Using the small clamps, clamp the brackets to the dust shield.

9. Checking for clearance front and rear of the dust shield, shift the brackets into suitable locations. Ideally one bracket in the top region, one in the bottom region, and one in the side region.

10. Adjust the brackets so that the distance from the outer edge of the dust shield to the top of the bracket is the same for all brackets. It may take several little adjustments to all brackets to get this alignment correct.

11. With the brackets clamped in place, use a drill and with a 3/16” drill bit to drill a hole through bracket and dust shield for all three brackets.

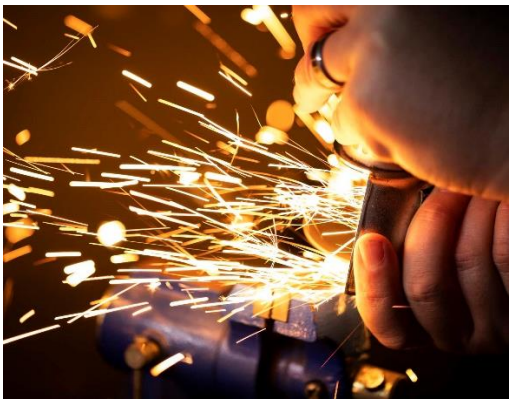
(NOTE) *Mock up and drilling is done on front side of dust shield, installation of the bracket is done on the rear of the dust shield.*

(**NOTE**) *Using a marker label the brackets “T” (top), “S” (side), and “B” (bottom). Also trace the edges of the brackets onto the dust shield to record the bracket positions.*

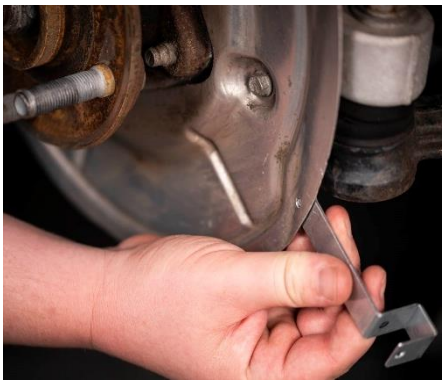
(NOTE)*If there is any interference, such as the bracket is too long to mount to the rear of the dust shield, mark the area of the bracket that needs to be removed.*

12. Remove the clamps, take LED ring back to the bench and remove the brackets.

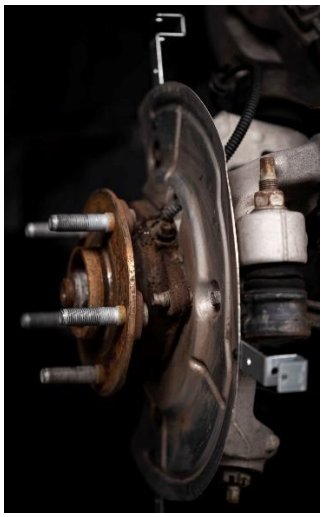
(NOTE) *For any of the brackets that need to be modified, securely clamp them, one at a time, in the vice and use the angle grinder to remove the excess material. Make sure to clean off any burrs or sharp edges.*



13. Take the brackets back to the vehicle along with the button head screws, nuts, and thread lock. Apply a small amount of thread lock to the screw threads, then put screw through the dust shield. Place the correct bracket over the screw from the rear side of the dust shield and tighten in place with the nut. Make sure that the bracket is orientated with the alignment markings on the front of the dust shield.



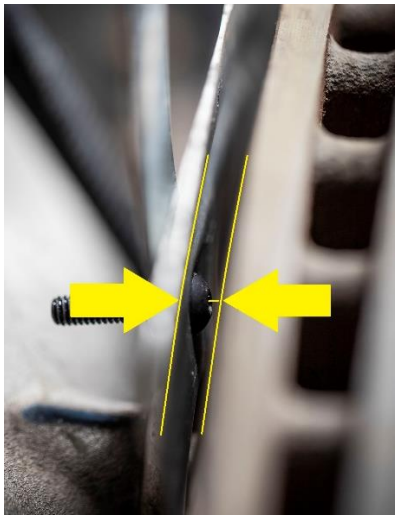
14. Repeat for the other 2 brackets.

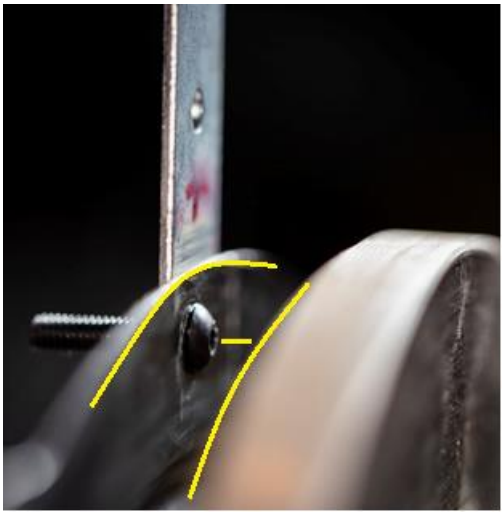


15. Clean the hub and rear of the rotor, making sure to clear any oil, grease, shavings, or debris off.

16. Reinstall the rotor, making sure it is fully seated, then reinstall the retaining screw.

17. Check the gap between the dust shield and the rotor to confirm that the screw heads do not contact the rotor. If there is contact the screws will need to be replaced with a lower profile solution, such as a rivet.

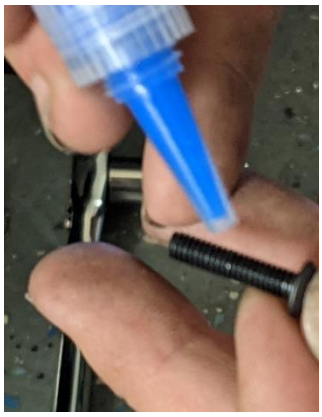




18. Cut zip-tie loose and reposition the caliper onto the rotor, then reinstall the mounting bolts. Torque mounting bolts down to the pressure specified in the vehicle service manual.

19. Insert the LED ring into the 3 brackets. Orientate the ring so that the wires are in the twelve o'clock position.

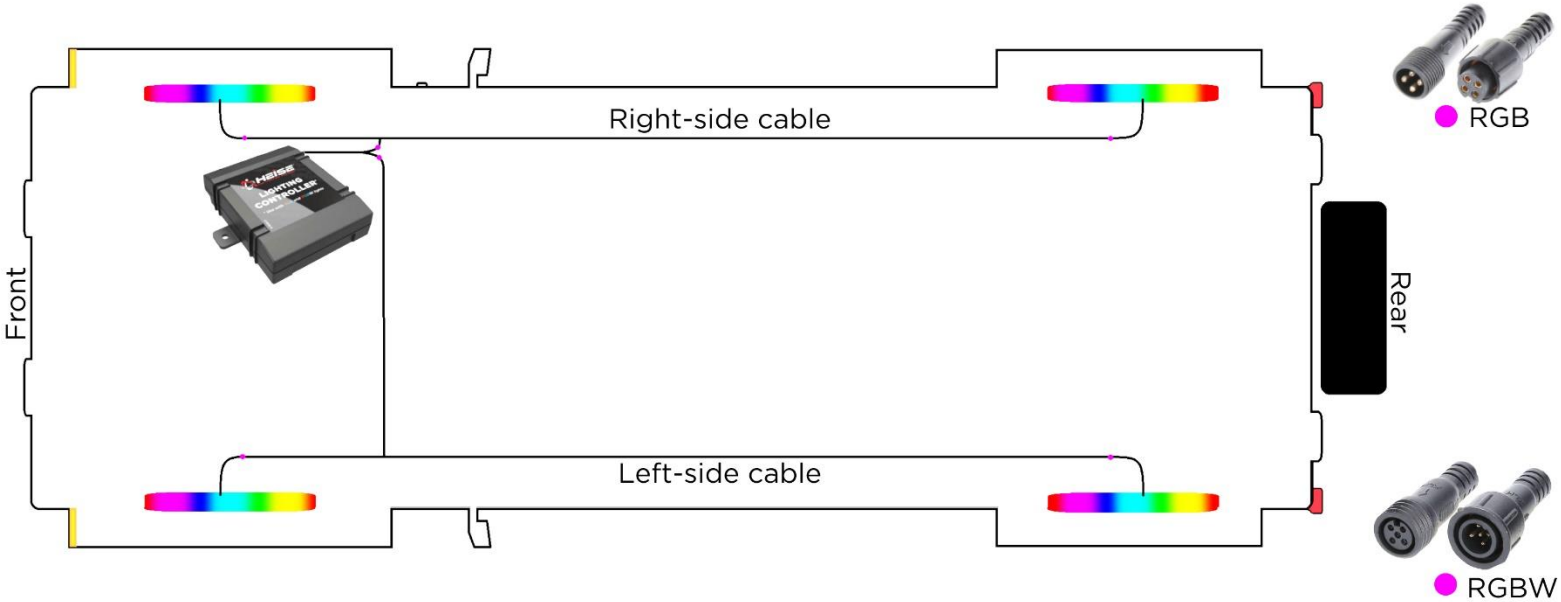
20. Apply thread lock to the cap headed screw threads and secure the light ring using these screws and nuts.



21. Route the wire along the brake line, using the provided zip-ties every 4 – 6 inches. Make sure not to over tighten. Cut off the zip-tie ends flush with the knuckle using the side cutters.

Repeat Install steps 1 through 21 for remaining corners of the vehicle.

Connections and Cable routing



1. Take the left-side cable and connect it to the rear left LED ring. Run the left-side cable under the vehicle to the front left wheel well, securing the cable as you go and avoiding pinch points, moving components, and hot surfaces.

2. Connect the Y of the left-side cable to the front left LED ring, and secure any excess cable. Run the remaining left-side cable into the engine bay near battery.

3. Repeat cabling process on the right-side of vehicle. Again, securing the cable as you go and avoiding pinch points, moving components, and hot surfaces.

4. Connect both left-side and right-side cables to the controller. Install controller following the controller's instructions.

5. Using your DMM locate a +12V switched power source and connect the Red wire. Chassis ground the black wire to the vehicle.

(NOTE) If installing on a 2018 Jeep Wrangler JL/Gladiator, the **JP-APJLJT** can be used to make an easy accessory and ground connection.

(OPTIONAL CONNECTIONS) Locate the +12V brake, +12V left turn signal and +12V right turn signal at the front lights, rear tail lights, or trailer hitch connector. Use the DMM to confirm the wires. Tap the triggers and route wires back to the controller, securing the wires as you go and avoiding pinch points, moving components, and hot surfaces.

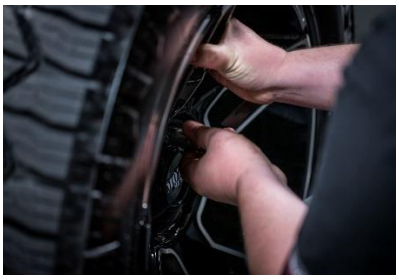
a. White Trigger – Reverse light
b. Orange Trigger - Turn signal (must use included diodes to isolate each turn signal wire when connecting)
c. Red Trigger – Brake light

6. Test kits functionality.

Wheel/Tire reinstall

1. Reinstall all wheels, using a star pattern, and torqueing down the lugs to the pressure specified in the vehicle service manual.

(**Note**) You may need your assistant to hold the brake in the vehicle, while torqueing the lug nuts on wheels.



2. Lift rear of vehicle with floor jack and remove floor stands. Return rear of vehicle to the floor.

3. Lift front of vehicle with floor jack and remove floor stands. Return front of vehicle to the floor.

Post Install Safety Check

☐ With the Vehicle on a flat surface, set the parking brake and verify torque values of each lug nut using a star pattern.

☐ Ensure that the LED rings have clearance, to the rotating assemblies of the brake, rotor, and rim.

☐ Verify all wires are clear of pinch points, rotating assemblies (such as drive shafts), and exhaust.

☐ Test all functionality

Wireless smart device application

Google® Play Store

iOS® APP Store

Federal Communications Commission (FCC) Statement. This device complies with part 15 of the FCC Rules. Operation is subject to the following twoconditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received,

including interference that may cause undesired operation. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide Reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one ormore of the following measures:

•Reorient or relocate the receiving antenna.

•Increase the separation between the equipment and receiver.

•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

•Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this device not expressly approved by **Metra Electronics** may void the FCC authorization to operate this device.Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

RF exposure statement:

The device compliance RF exposure requirement and can installed and used without restriction

Thank you for purchasing your Heise lighting from Metra Electronics! We're excited to see you're installs, but if you have any questions, comments, feedback on the product, please contact at Tech Support email via techsupport@metra-autosound.com.

THE INSTALLER'S CHOICE