

WHELEN[®]

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Installation Guide: Justice[®] WC Lightbar

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

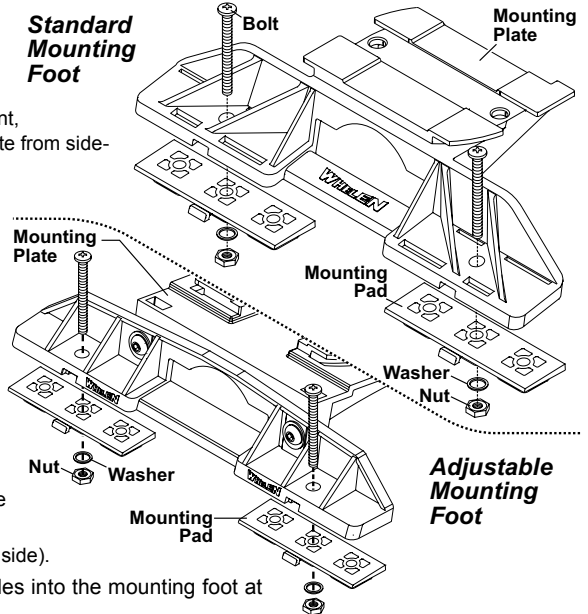
- Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.
- If mounting this product requires drilling holes, the installer **MUST** be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.
- If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro[®], clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.
- Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.
- For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the **NEGATIVE (-)** battery post.
- If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.
- Do not attempt to activate or control this device in a hazardous driving situation.
- This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.
- Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.
- It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

For warranty information regarding this product, visit www.whelen.com/warranty

IMPORTANT! The lightbar should be a minimum of 16" from any radio antennas!

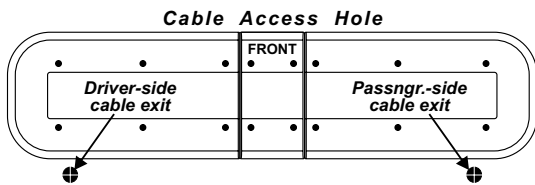
Permanent Mounting:

1. Locate the mounting foot and locking plate included with your lightbar. If not already present, install the locking plate onto the mounting foot using the supplied set screws. Center this plate from side-to-side on the mounting foot.
2. Flip lightbar upside-down to expose bottom of extrusion. place mounting foot onto extrusion.
3. Rotate the mounting foot 90° in a counter-clockwise direction. Make sure that the edges of the foot swing into position under the extrusion mounting lip.
4. Repeat procedure for remaining foot and return lightbar to its right side-up position.
5. Position the lightbar onto the vehicle roof in the desired mounting location. One often selected location is directly above the B-pillars. This area is the strongest part of the roof. Refer to your lightbar manual for your lightbars cable exit location, to be sure that the lightbar is facing the proper direction.
6. Adjust the two mounting feet outwards as close to the edge of the roof as possible. Make sure that both mounting feet are in full contact with the roof (see below). There should be no less than 1/2" clearance between the roof and the lightbar at their closest point. When the mounting feet are in the proper position, lightly tighten the allen head set screws.
7. Turn the lightbar upside-down and firmly tighten all of the set screws from step 6 (2 or 4 per side).
8. Note that on the adjustable foot, use the hole in the pad as a guide to drill the two holes into the mounting foot at the locations shown.
9. Place the lightbar in its final mounting position on the vehicle and mark the mounting hole locations off onto the mounting surface. Remove lightbar and drill the mounting holes.
10. Place the lightbar back onto the vehicle lined up with the mounting holes and secure the mounting feet to the vehicle using the supplied hardware.



Slide Bolt Mounting (Permanent):

1. Position the slide bolt mounting plates onto the bottom of the lightbar extrusion. These plates rotate into position the same way as the mounting foot. Position the plates as far outward as possible (if a 3rd mounting plate is used, it should be positioned under the center of the lightbar).
2. Secure the plates to the extrusion using the set screws provided.
3. Position the lightbar onto the vehicle and mark the mounting bolt locations. Drill the necessary mounting holes using an appropriately sized drill bit sized for a 1/2" bolt.



IMPORTANT: For strap mounting, be sure you have the right sized lightbar for your vehicle. The bar should be approximately the same width as the vehicle roof. If too large or small it will not mount properly and may come loose during driving.

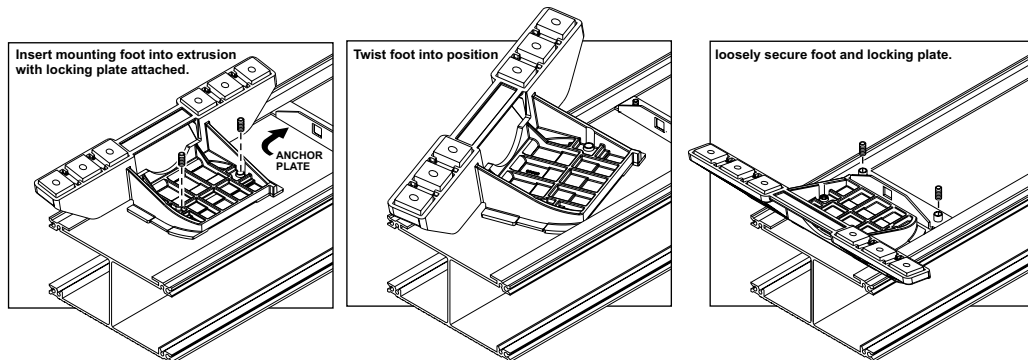
Drill the cable access hole in the appropriate area for your lightbar.



NOTE: Unless otherwise specified, the lightbar mounting feet must be sitting as close to the edge of the roof as possible. They must also be in full contact with the roof and not be hanging off the edge.

Strap Mounting:

1. Locate the mounting foot, locking plate, anchor plate and tinnerman nut supplied with the lightbar. If not already present, install the locking plate onto the mounting foot. Center this plate from side-to-side on the foot.
2. Flip the lightbar upside-down to expose the bottom of the extrusion. First slide the anchor plate into the extrusion, then place the mounting foot onto the extrusion.
3. Rotate the mounting foot counter-clockwise 90°. The edges of the mounting foot must swing into position under the extrusion mounting lip.
4. Repeat this procedure for the remaining mounting foot and return the lightbar to its right side-up position.
5. Position the lightbar onto the vehicle roof in the desired mounting location. One often selected location is directly above the B-pillars. This area is the strongest part of the roof. Refer to your lightbar manual for cable exit location, to be sure that the lightbar is facing the proper direction.
6. Adjust the two mounting feet outwards so that they are as close to the edge of the roof as possible. Both mounting feet must be in full contact with the roof. Be sure that there is no less than 1/2" clearance between the roof and the lightbar at their closest point. When both mounting feet are in their proper position, lightly tighten the allen head set screws.



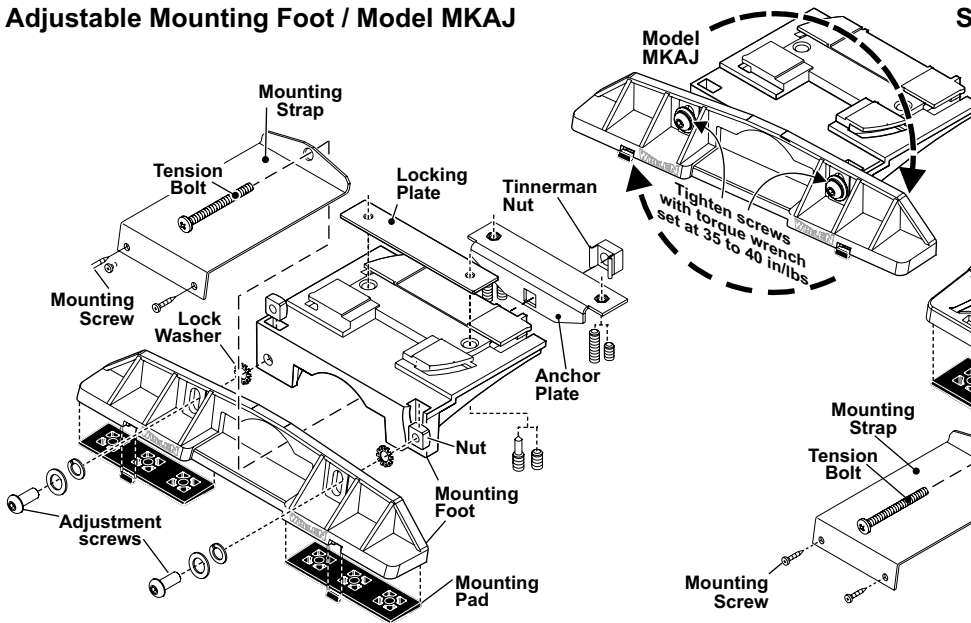
- Return the lightbar to an upside-down position. Slide each anchor plate outwards until it is fully engaged with its corresponding mounting foot. With the mounting foot and anchor plate in their proper positions firmly tighten all of the set screws (2 or 4 per side). Flip the lightbar right side-up and return it to its mounting position.
- Open both drivers side doors. In the area directly below the mounting foot, carefully pull the drivers side weather-strip away from the vehicle. Remove enough so that the area where the mounting strap will be secured to the vehicle is exposed. Repeat for passenger side.
- Insert the mounting strap through the mounting foot. Be sure that the strap fits flush against the area where it will be secured onto the vehicle. Insert the tension bolt through the mounting strap and into the anchor plate and secure it with the tinnerman nut. Tighten slightly with a long shafted, Phillips screwdriver. Repeat procedure for passenger side.

- If your mounting strap has mounting holes in the end, use these holes as a template to drill holes through the strap and into the vehicle and secure it with sheet metal screws. Repeat passenger side.
- Firmly tighten the tension bolts to secure the lightbar to the vehicle.

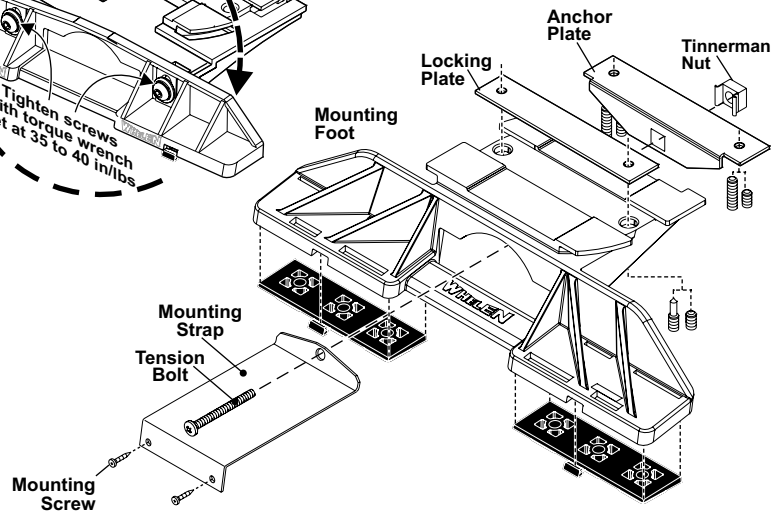
NOTE: Model MKAJ is an adjustable mounting foot. On this model you may loosen the screws on the rear of the foot and adjust the angle of the lightbar. This feature can be used if the angle of the roof is not level with the road.

IMPORTANT: To adjust the leveling screws you must use a torque wrench set at 35 to 40 in./lbs.

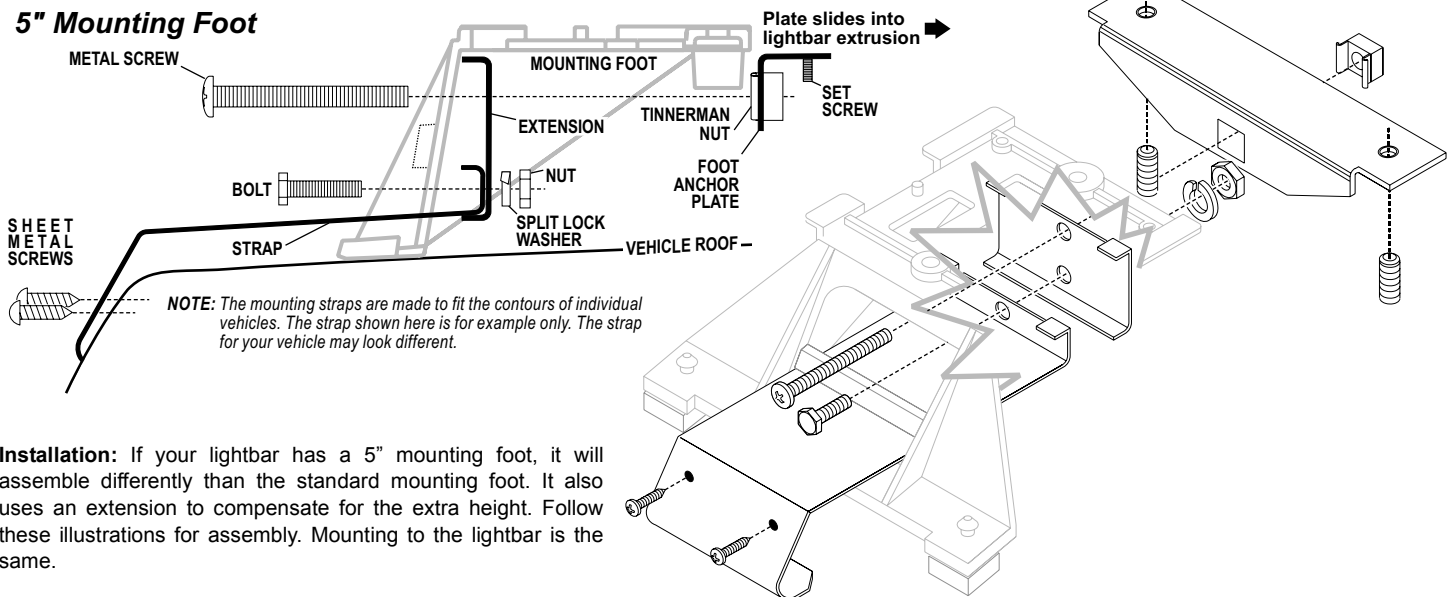
Adjustable Mounting Foot / Model MKAJ



Standard Mounting Foot / Model MKEZ



5" Mounting Foot



Installation: If your lightbar has a 5" mounting foot, it will assemble differently than the standard mounting foot. It also uses an extension to compensate for the extra height. Follow these illustrations for assembly. Mounting to the lightbar is the same.

IMPORTANT! It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment!

Routing your Lightbar Cable(s):

1. To protect the headliner from damage caused by drilling the cable access hole through the vehicle roof, allow a 5" to 7" distance between roof and headliner by lowering the headliner before drilling. Using a 1" hole saw, drill the cable access hole.

NOTE: There may be a roof support member that spans the distance between the driver's and passenger's side. DO NOT DRILL THROUGH THIS MEMBER! Adjust the location until the hole can be drilled without contacting this support member.

2. Use a round file to smooth and de-burr the edges of the hole. Install a 1" grommet (user supplied) into the cable access hole.
3. Insert the cable(s) through the cable access hole into the vehicle. Use RTV silicone to weatherproof the access hole after the cable(s) are pulled completely into the vehicle.

Route the cable(s) one at a time to their respective destinations (power cable to vehicle battery; control cable to customer switch panel). It is left to the installation technician's discretion to select a path for these cables that will both protect the cables from possible damage and not interfere with the operation of any other vehicle components or equipment. Refer to the instructions included with your switches for switch wiring information.

IMPORTANT AIR BAG WARNING! Do not install this product or route any wires in the air bag deployment zone of your vehicle. Equipment mounted or located in air bag deployment zones will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual to learn the air bag deployment zones for the vehicle. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.

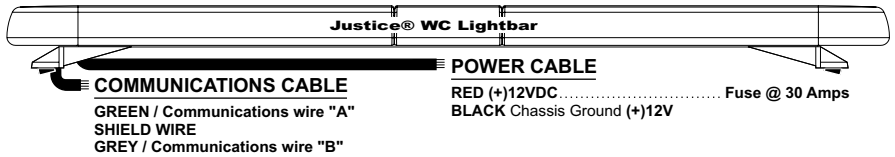
Connecting the Power Cable:

WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

1. Follow the factory wiring harness through the firewall. It may be necessary to drill a hole in the firewall. If so, be absolutely sure that there are no components that could be damaged by drilling. After the hole has been drilled, insert a grommet to protect the cable.
2. Route the cable along the factory wiring harness towards the battery. Install a 30 amp fuse block (customer supplied) on the end of the RED wire in the power cable. **NOTE: Remove the fuse from the fuse block before connecting any wires to the battery.**
3. Connect the BLACK wire to Chassis Ground.

Connecting the Communication Cable:

Splice the GREEN and GREY wires from the lightbar to the GREEN and GREY wires of the Whelen® WC Controller.



Troubleshooting:

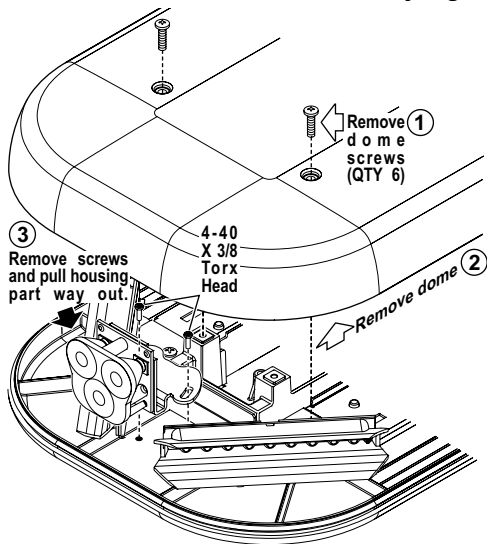
Your lightbar is now fully operational. If it does not function properly, check these connections:

- The positive wire (RED) is properly connected to the battery, by way of the user supplied fuse block.
- A working fuse of the correct amperage is installed in the fuse block (See illustration above, for the specific fuse rating).
- The ground wire (BLACK) is properly connected to the factory ground. Be sure that the wire is fully grounded to this location.
- The two communication wires (GREEN and GREY) are properly connected to their communication designations.

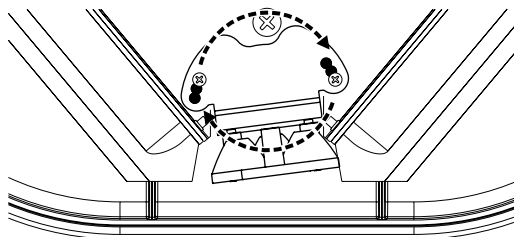
IMPORTANT WARNING!
CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

If these connections are good, contact your Whelen® representative for further assistance.

LR11 / Removal & Installation / Alley Light



LR-11 LED / Angle Adjustment



LR11's can be adjusted up to 7.5° to either side.

The LR11 mounting brackets angle is adjustable in whichever position it is installed in. An alley light is shown here.

