

# WHELEN<sup>®</sup>

## ENGINEERING COMPANY

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### Installation Guide: WeCanX<sup>®</sup> Edge<sup>®</sup> 9X Series Lightbar

#### Warnings to Installers

Whelen's emergency vehicle warning devices must be properly mounted and wired in order to be effective and safe. Read and follow all of Whelen's written instructions when installing or using this device. Emergency vehicles are often operated under high speed stressful conditions which must be accounted for when installing all emergency warning devices. Controls should be placed within convenient reach of the operator so that they can operate the system without taking their eyes off the roadway. Emergency warning devices can require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or vehicle damage, including fire. Many electronic devices used in emergency vehicles can create or be affected by electromagnetic interference. Therefore, after installation of any electronic device it is necessary to test all electronic equipment simultaneously to insure that they operate free of interference from other components within the vehicle. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving; sudden braking or collision. Failure to follow instructions can result in personal injury. Whelen assumes no liability for any loss resulting from the use of this warning device. **PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.**

#### Warnings to Users

Whelen's emergency vehicle warning devices are intended to alert other operators and pedestrians to the presence and operation of emergency vehicles and personnel. However, the use of this or any other Whelen emergency warning device does not guarantee that you will have the right-of-way or that other drivers and pedestrians will properly heed an emergency warning signal. Never assume you have the right-of-way. It is your responsibility to proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. Emergency vehicle warning devices should be tested on a daily basis to ensure that they operate properly. When in actual use, the operator must ensure that both visual and audible warnings are not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should be familiar with all applicable laws and regulations prior to the use of any emergency vehicle warning device. Whelen's audible warning devices are designed to project sound in a forward direction away from the vehicle occupants. However, because sustained periodic exposure to loud sounds can cause hearing loss, all audible warning devices should be installed and operated in accordance with the standards established by the National Fire Protection Association.

#### 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.

**⚠ WARNING:** This product can expose you to chemicals including Methylene Chloride which is known to the State of California to cause cancer, and Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **Whelen Engineering requires the use of waterproof butt splices and/or connectors if that connector could be exposed to moisture.**
- **Any holes, either created or utilized by this product, should be made both air- and watertight using a sealant recommended by your vehicle manufacturer.**
- **Failure to use specified installation parts and/or hardware will void the product warranty.**
- **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 the 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<sup>®</sup>, 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 (this does not include products that use cigar power cords).**
- **If this product uses a remote device for activation or control, make sure that this device is located in an area that allows both the vehicle and the device 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!**

## Pre-Installation Notes:

Read *all* instructions before use. This product is a WeCanX® Lightbar. This product is only compatible with the Whelen Core Command® System and can not be used alone or with any other control system.

- *This lightbar should be located a minimum of 16" from any radio antennas.*
- *During the wiring process, it is recommended to terminate the shield wire at the control system's shield connection to help reduce unwanted electromagnetic interference.*

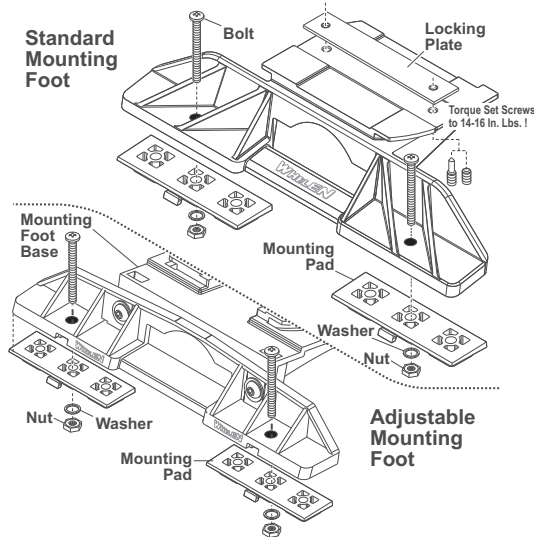
For shield/comm connection locations and connector wiring, scan the QR code:



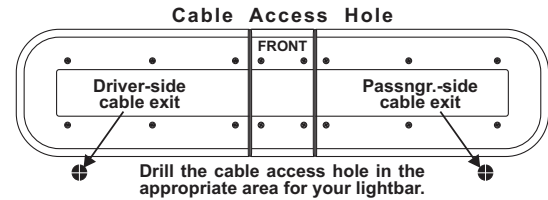
<https://whelen.widen.net/view/pdf/y1gohpkacv/14H22.pdf?t.download=true&u=zxfer>

## 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. When properly positioned, this plate is centered from side-to-side on the mounting foot.



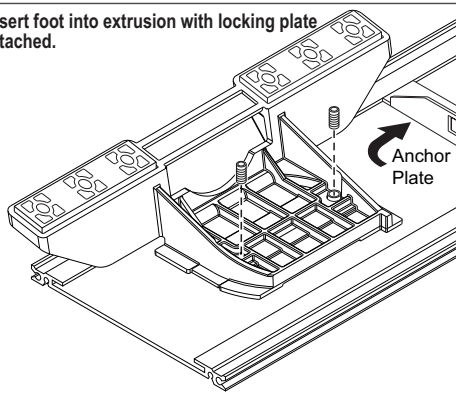
2. Orient the lightbar upside down and place the mounting foot onto the extrusion.
3. Rotate the mounting foot 90° in a counter-clockwise direction. Make sure that the edges of the mounting foot swing into position under the extrusion mounting lip.
4. Repeat this procedure for the remaining mounting foot and return the lightbar to its right side-up position.
5. Position the lightbar onto the vehicles roof, a recommended location is directly above the B-pillars.
6. Adjust the two mounting feet outwards so that they are as close to the edge of the roof as possible. Make sure that both mounting feet are 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 the mounting feet are in their proper position, lightly tighten the mounting foot allen head set screws.
7. Turn the lightbar upside-down and tighten all of the set screws from step 6 (2 or 4 per side) to 14-16 In. Lbs.
8. Place the lightbar in its final mounting position on the vehicle, mark the mounting/wire passage hole locations off onto the mounting surface, remove the lightbar.
9. Drill an appropriately sized wire passage hole through the vehicles roof. Use a grommet or similar waterproofing method between the wire and bare metal passage hole.
10. Place the lightbar back onto the vehicle, run the required wires through the vehicles roof, and secure the mounting feet to the vehicle using the supplied hardware.



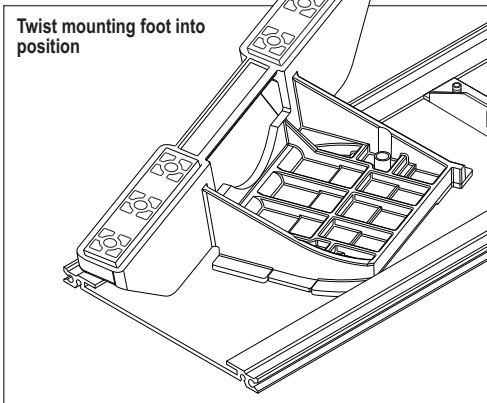
## Strap Mounting:

1. Locate the mounting foot, locking plate and tinnerman plate included with your lightbar. If not already present, install the locking plate onto the mounting foot. When properly positioned, this plate is centered from side-to-side on the mounting foot.
2. Flip the lightbar upside-down to expose the bottom of the extrusion and place the mounting foot onto the extrusion.
3. Rotate the mounting foot 90° in a counter-clockwise direction. Make sure that the edges of the mounting foot swing into position under the extrusion mounting lip. Install a tinnerman plate onto the extrusion in the same manner.
4. Repeat this procedure for the remaining mounting foot and tinnerman plate and return the lightbar to its right side-up position.
5. Position the lightbar onto the vehicles roof, a recommended location is directly above the B-pillars.
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 the mounting feet are in their proper position, lightly tighten the mounting foot allen head set screws.
7. Return the lightbar to an upside-down position. Slide each tinnerman plate outwards until it is fully engaged with its corresponding mounting foot. With the mounting feet and tinnerman plates in their proper positions, tighten all of the set screws (2 or 4 per side) to 14-16 In. Lbs. Flip the lightbar right side-up and return it to its mounting position.
8. 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 procedure for passenger side.
9. 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 tinnerman nut on the tinnerman plate. Tighten slightly with a long shafted, Phillips screwdriver. Repeat procedure for passenger side.
10. If your mounting strap has mounting holes in the end of the strap, use these holes as a template to drill appropriately sized pilot holes through the strap and into the vehicle. Repeat for passenger side of the vehicle.
11. Mark a wire passage hole and remove the lightbar from it's mounting location.
12. Drill an appropriately sized wire passage hole through the vehicles roof. Use a grommet or similar waterproofing method between the wire and bare metal passage hole.
13. Place the lightbar back onto the vehicle, run the required wires through the vehicles roof, and firmly tighten the tension bolts to secure the lightbar to the vehicle.

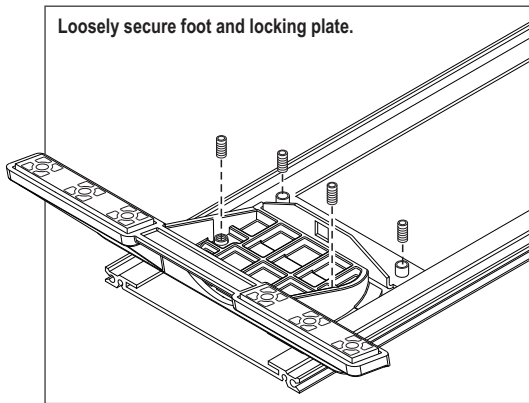
Insert foot into extrusion with locking plate attached.



Twist mounting foot into position



Loosely secure foot and locking plate.

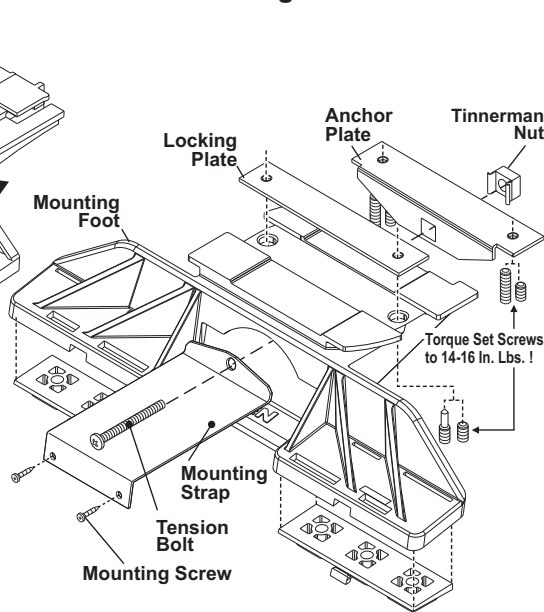
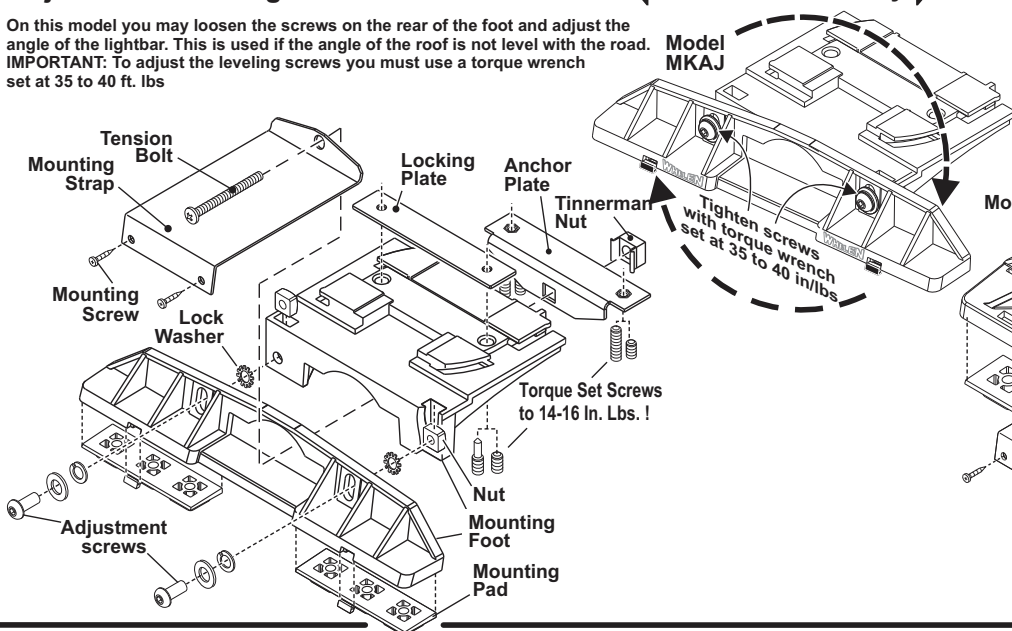


## Adjustable Mounting Foot / Model MKAJ

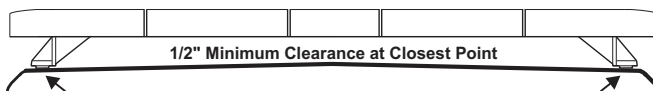
On this model you may loosen the screws on the rear of the foot and adjust the angle of the lightbar. This is used if the angle of the roof is not level with the road. **IMPORTANT:** To adjust the leveling screws you must use a torque wrench set at 35 to 40 ft. lbs

◀ For Reference Only ▶

## Standard Mounting Foot / Model MKEZ



**IMPORTANT:** For strap mounted bars, be sure you have the right sized lightbar for your vehicle. The lightbar should be about the same width as the vehicle roof. If the lightbar is too large or small it will not mount properly to the vehicle and may shift or come loose during driving.



## Connecting the Power Cable:

**IMPORTANT:** 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. For 25" through 59" model lightbars, install a 20 amp fuse block (customer supplied) on the end of the RED wire in the power cable. For 66" and 70" model lightbars, install a 40 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 a vehicle Ground. It's recommended to use a manufactures designated grounding point.

## Connecting the Communication Cable:

Splice the GREEN and GREY wires from the lightbar to the GREEN and GREY wires from the Controller.

**IMPORTANT:** Do not connect a 12v lightbar to a 24v power supply.

## Troubleshooting:

Your lightbar should now be fully operational. If it is not functioning properly, check your connections for the following:

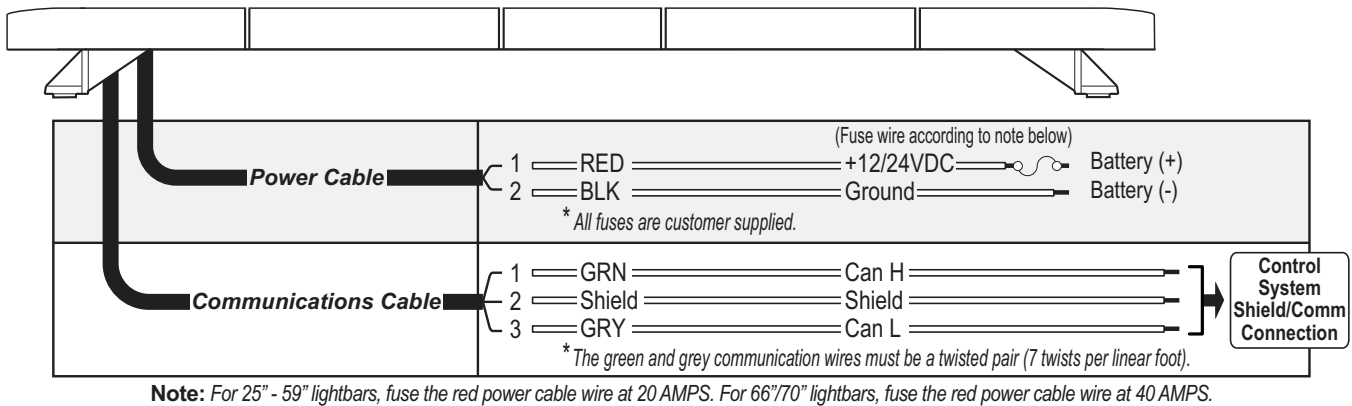
- The positive wire (RED) is properly connected to the battery, by way of the user supplied fuse block.
- A working 20 amp / 40 amp fuse is installed in the fuse block.
- The ground wire (BLACK) is properly connected to the factory vehicle ground. Be sure that the wire is fully grounded to this location.
- The two communication wires (GREEN and GREY) are properly connected to their communication designations.

Refer to your controller instructions for connections and operation.

**Note:** When servicing the Edge® 9X lightbar, ensure all lenses are seated and flush along the lightbar base for a proper seal.

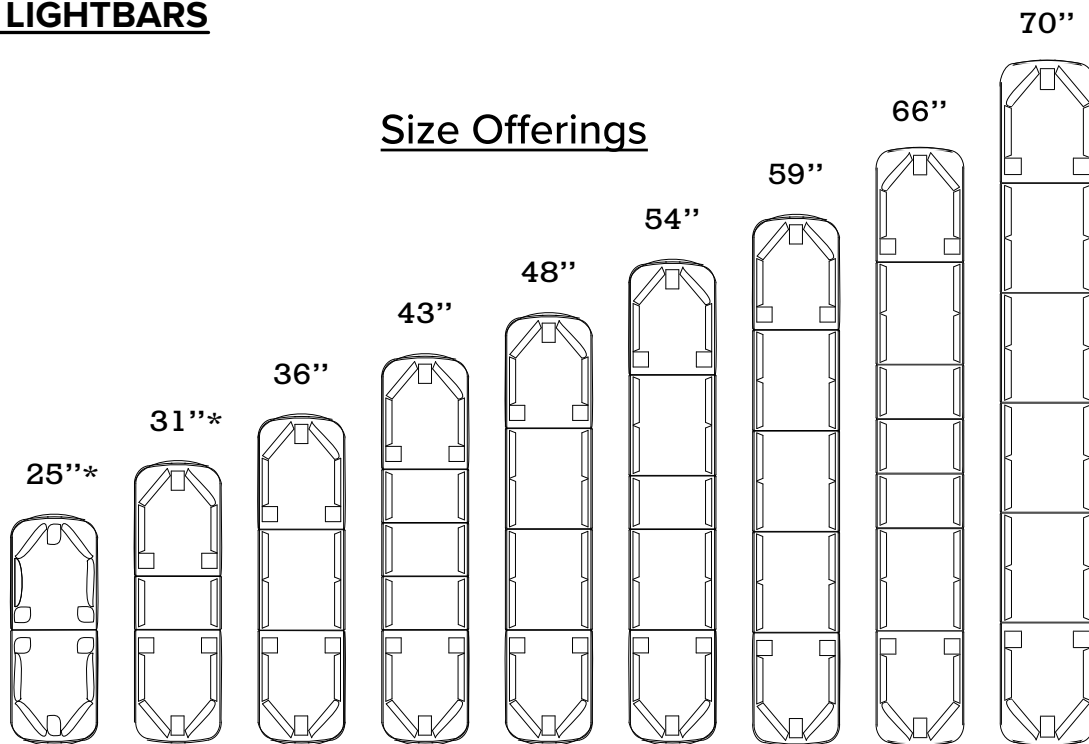
### IMPORTANT WARNING!

**CAUTION! DO NOT LOOK DIRECTLY AT THESE LED'S WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!**

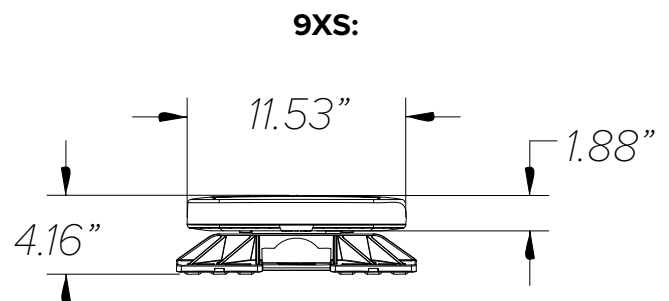
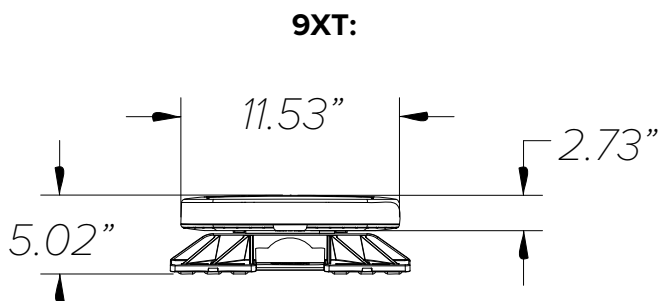


# Edge® 9X

## SERIES LIGHTBARS

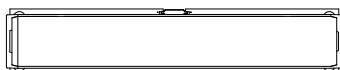


## Dimensions

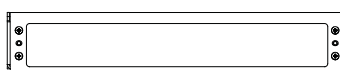


## Lighthouse Options

**Brake/Tail/Turn:**



**Lighted Sign:**

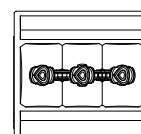


\* Option not offered

**Directional (Corner / Inboard):**

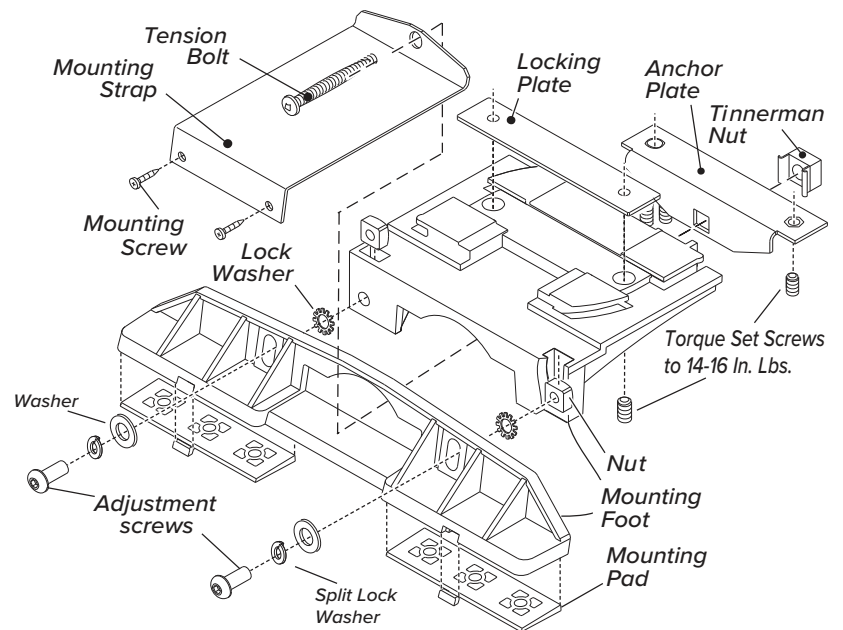


**Warning / Alley-TD:**

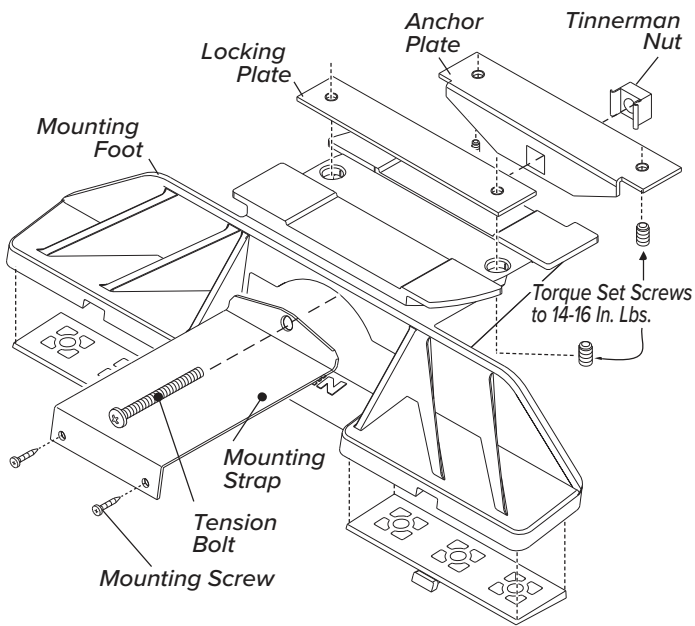


# Mounting Options

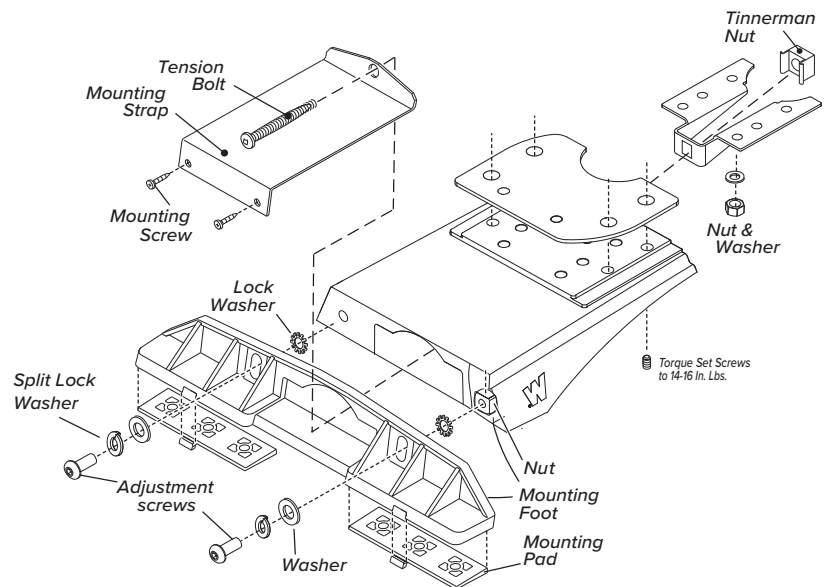
## Adjustable Mounting Foot:



## Standard Mounting Foot:

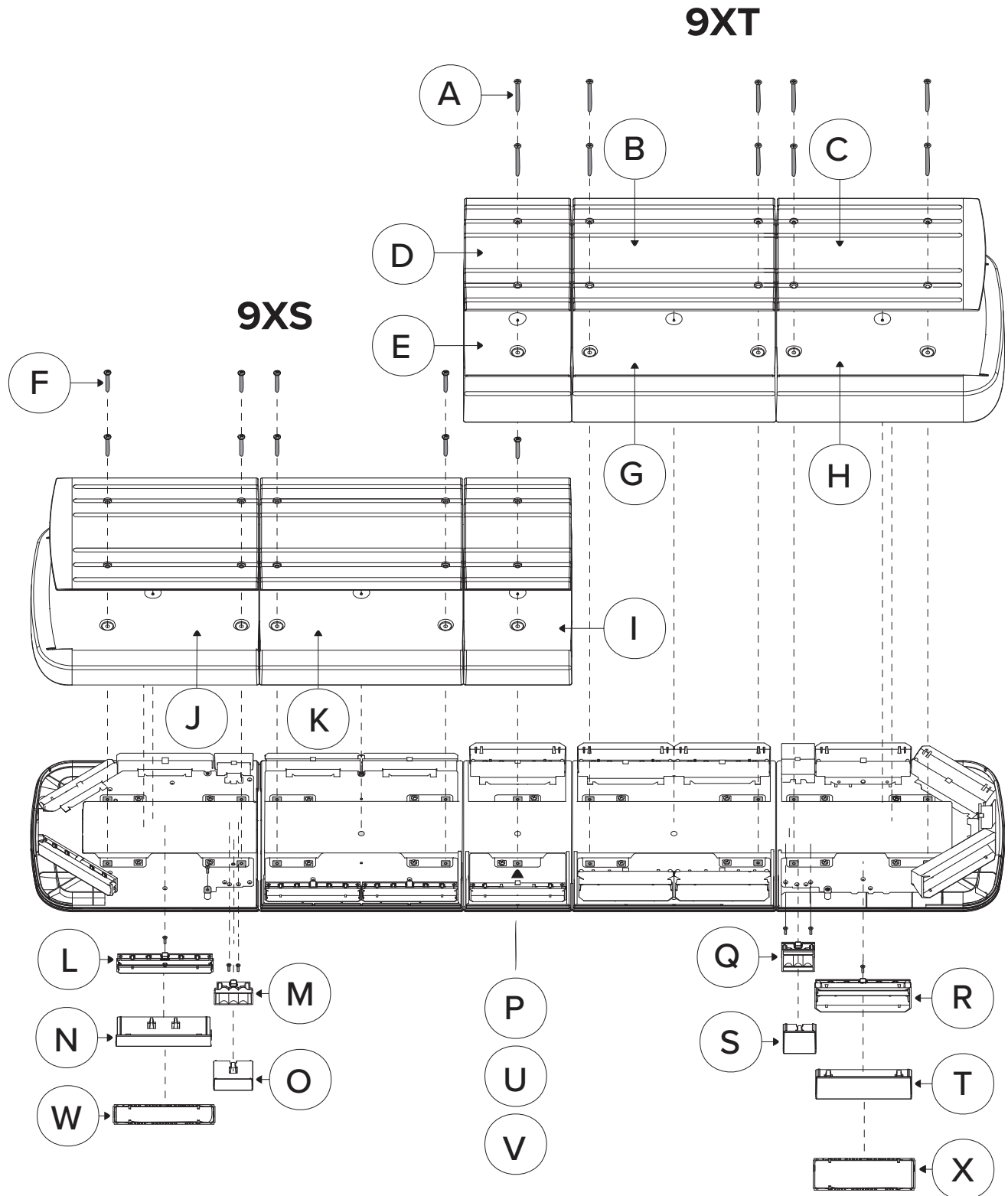


## Extended Adjustable Mounting Foot:



# User Replaceable Parts:

Note: See parts list on next page





# User Replaceable Parts:

Item	Part Number	Description
A	15-010416-362T	10 x 2-1/4" PPHSMS Screw
B	11-26K771-000	Edge® 9X Dual Center Top Cover
C	11-26K770-000	Edge® 9X End Top Cover
D	11-26K772-000	Edge® 9X Single Center Top Cover
E	68-196K769-*0	Edge® 9XT Single Center Lens
F	15-101416-222	10 x 1-3/8" PPHSMS Screw
G	68-1988948-*0	Edge® 9XT Dual Center Lens
H	68-1988946-*0	Edge® 9XT End Lens
I	68-196K768-*0	Edge® 9XS Single Center Lens
J	68-1988945-*0	Edge® 9XS End Lens
K	68-1988947-*0	Edge® 9XS Dual Center Lens
L	01-026L094***	Edge® 9XS Directional Lighthead
M	01-0248508-**	Edge® 9XS Warning/Alley-TD Lighthead
N	07-26K890-000	Edge® 9XS Directional Filler Panel
O	07-26K891-000	Edge® 9XS Alley-TD Filler Panel
P	21-0048415-00	#8/10 Rectangle Screw Grommet
Q	01-0248509-**	Edge® 9XT Warning/Alley-TD Lighthead
R	01-026L095***	Edge® 9XT Directional Lighthead
S	07-26K871-000	Edge® 9XT Alley-TD Filler Panel
T	07-26K889-000	Edge® 9XT Directional Filler Panel
U	01-026L099***	Edge® 9XT Duo/Split Directional Lighthead
V	01-026L098***	Edge® 9XS Duo/Split Directional Lighthead
W	01-026L259-**	B/T/T Edge® 9XS
X	01-026L260-**	B/T/T Edge® 9XT