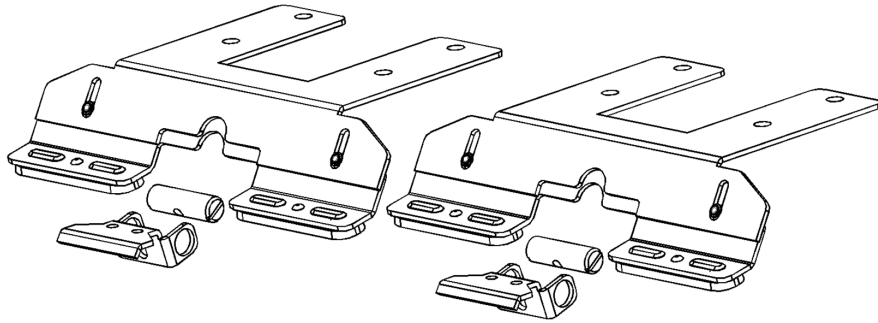


INSTALLATION AND INSTRUCTION MANUAL

220-39AP 520-39AP 720-39AP

Adjustable Pivoting Lightbar Mount Kit



PROUDLY MADE IN THE USA
An ISO 9001:2015 Certified Company

STAR
Safety Technologies by *Crote*

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PLIT433 REV. E 2/20/24

NOTICE

Due to continuous product improvements, we must reserve the right to change any specifications and information, contained in this manual at any time without notice. Star Safety Technologies, Inc. makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Star shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this manual.

Please Note: These instructions are provided as a general guideline only. *Some vehicles may require special mounting, wiring, and/or weather-sealing. This is the sole responsibility of the installer.* Star Safety Technologies assumes no responsibility for the integrity of the installation for this or any of its products.



It is the sole responsibility of the owner to ensure the lightbar is mounted securely. Check your light every time you enter the vehicle to ensure that it is mounted securely. The manufacturer assumes no responsibility for the secure mounting of this light.



PLEASE NOTE: THE DIRECT MOUNT IS THE STANDARD MOUNT INCLUDED WITH THE LIGHTBAR. THE HOOK MOUNTS MUST BE USED ON ALL POLICE AND/OR OTHER EMERGENCY VEHICLES!!!
THE HOOK MOUNTS ARE SOLD SEPARATELY. THEY ARE NOT INCLUDED WITH EACH LIGHTBAR. THEY MUST BE ORDERED SEPARATELY. SEE THE ACCOMPANYING HOOK MOUNT SHEET FOR A COMPLETE LIST OF AVAILABLE MOUNTS AND KNOWN VEHICLE APPLICATIONS.

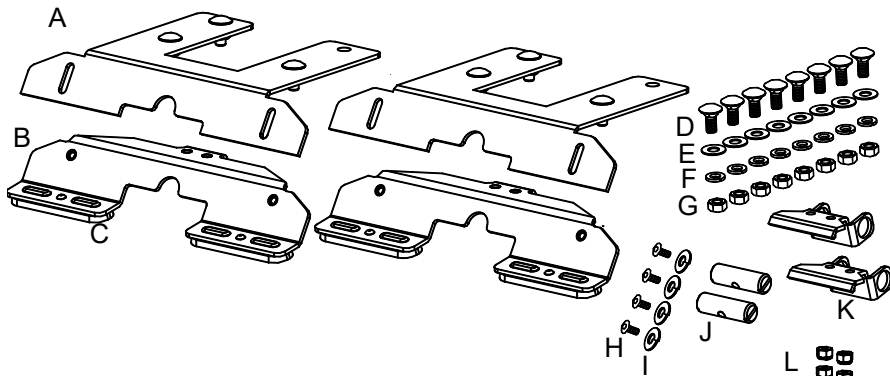


When mounting your lightbar, please be sure to keep any radio frequency sensitive equipment at least 20" from the bar and power cable (s). This is especially critical in lightbars utilizing strobes. Our strobe power supplies have been designed to limit RFI emissions, but certain very sensitive equipment may still be affected. Symptoms may include, but are not limited to, sporadic operation and degraded performance. Star Safety Technologies cannot assume any responsibility for any radio frequency induced malfunction or damage to any radios, sirens, lightbars, or any other equipment mounted within 20" a strobe lightbar. Any antennae mounted in the proximity of the lightbar may cause your radio to suffer the aforementioned results.

Direct and Hook Mounting Instructions

Please review this entire manual prior to mounting your lightbar.

	<u>QTY</u>	<u>Part #</u>	<u>Description</u>
A	2	P30147-162P	Top Mounting Brackets
B	2	S30147-162-2	Bottom Mounting Brackets
C	4	P30046-1	Rubber Feet (attached to bracket)
D	8	P30057-6	5/16" x 3/4" Carriage Bolt
E	8	P30077-1	5/16" Flat Washer
F	8	P30077-2	5/16" Lock Washer
G	8	P30097-1	5/16"-18 Hex Nut
H	4	P30056-38	1/4-20 x 1/2" Button Head Bolt
I	4	P30076-2	1/4" Split Washer
J	2	P30069-63	Threaded Pivot (pre-installed inside K)
K	2	P30147-162-3P	Pivot Bracket
L	4	P30096-7	1/4-20 Nylock Hex Nut



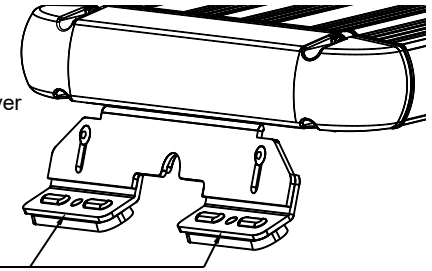
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1. All lightbars come complete with the *direct* (permanent) roof mount kit included, for mounting through your rooftop (or other mounting surface).

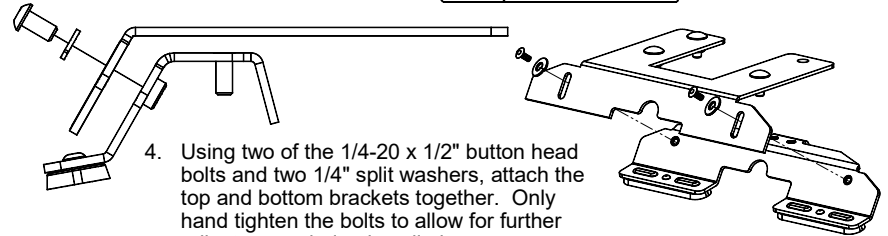
If you ordered an optional hook mount kit, it should also come packaged in the same box as the direct mount.

Carefully remove the lightbar and the mounting kit included with the bar from its shipping carton. Place it on a clean, flat surface while taking care not to damage the lightbar or wiring harnesses. Examine the unit for any possible damage during transit.

2. Determine if you are going to be using the Direct Mount to bolt the mounting legs directly to your mounting surface, or if you will be using one of the optional Hook Mounts for gutter or gutterless mounting.



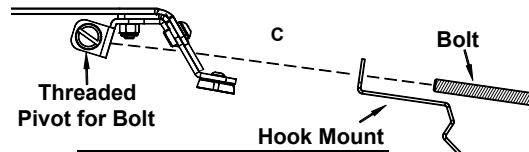
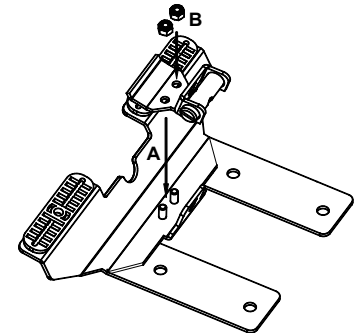
3. **If you are direct mounting**, use a screwdriver to poke through the center holes of each leg on the mounting bracket, and knock out the center hole in each rubber foot.



4. Using two of the 1/4-20 x 1/2" button head bolts and two 1/4" split washers, attach the top and bottom brackets together. Only hand tighten the bolts to allow for further adjustments during installation. Repeat for the other leg.

5. **If you will be using a hook mount**, attach one fixed pivot bracket assembly to each leg:

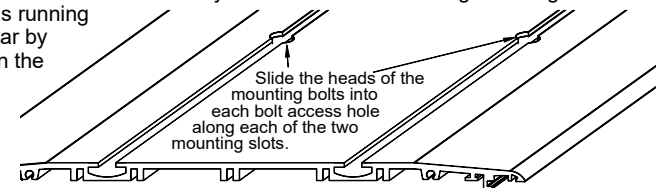
- A. Slide the fixed pivot bracket over the two threaded studs on each leg.
- B. Secure them with the nylock hex nuts.
- C. Secure the pivot in the bracket by attaching the optional hook mount to each bracket using the bolt provided with the mounts. Slip the **bolt** through the hole in the **hook mount bracket** and screw it into the **threaded insert** in the mounting leg.



Please Note: For some applications, the bolt we provide may not be long enough. If the mounting brackets are fully extended and the hook mounts still will not reach the edge of the vehicle, you may use a longer 5/16"-18 bolt obtained locally.

APPLY ANTI-SEIZE LUBRICANT OR EQUIVALENT TO PIVOT NUT THREADS BEFORE INSTALLATION.

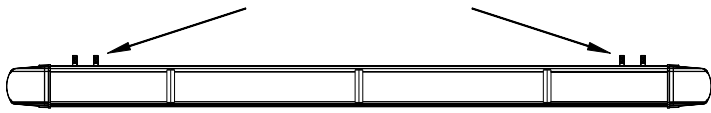
6. Turn the lightbar over to access the channels along the bottom of the lower extrusion, taking care not to scratch the lenses and or your vehicle. Install the eight carriage bolts into the channels running underneath the lightbar by inserting the heads in the center hole.



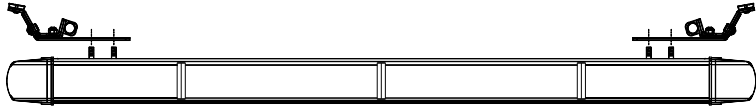
Bottom View of Extrusion

(DIRECT AND HOOK MOUNTING INSTRUCTIONS CONT'D)

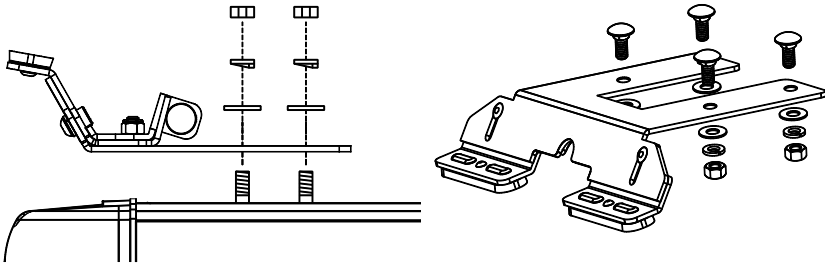
7. Slide two bolts in each channel towards both ends. You will use four bolts on each end (two in each channel) to secure each mounting bracket.



8. Position one bracket on the four bolts at each end of the lightbar in the approximate locations to match up with the roof area where you will mount your lightbar. Be aware of your wire access to the lightbar when choosing the location of these brackets.

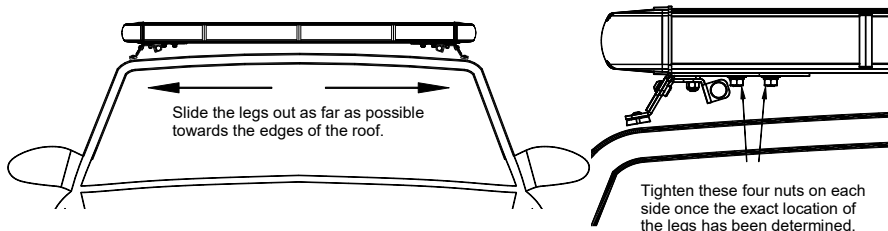


9. After the bracket has been placed on the four carriage bolts, install one flat washer, one lock washer, and one hex-nut on each carriage bolt. Tighten hex nuts until snug, but loose enough that the mounting bracket can still slide for accurate pre-positioning.



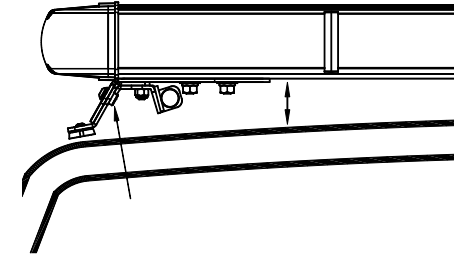
Please Note: If not using the optional Hook Mounts, you will not need the pivot bracket shown above.

10. Using two people, carefully place the lightbar on the vehicle roof and locate it in a position which is level front to back, and is centered side to side. The area above the B-pillars is often used, since it is usually the strongest part of the roof. Slide the bracket outwards so that the rubber feet are as close to the edge of the roof as possible. Tighten the hex nuts on the carriage bolts to secure the mounting brackets in position.



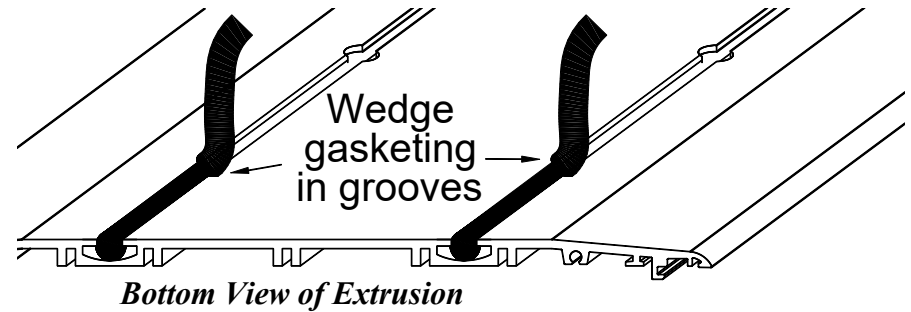
(DIRECT AND HOOK MOUNTING INSTRUCTIONS CONT'D)

11. Slightly loosen the bolts that secure the top and bottom bracket pieces together. This will allow the leg to slide up and down. Adjust the bar to the desired height. The front and rear bolts may be set at different heights to compensate for any forward or rear tilt of the roof of the vehicle. Once the bar is at the desired height and leveled, tighten the bolts.

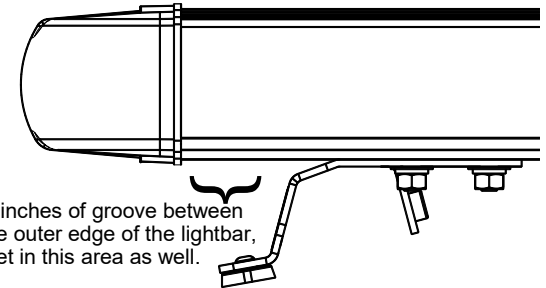


12. **OPTIONAL** - The aerodynamics of some vehicles may result in the creation of excessive "wind noise" at high speeds, as the air passes over one or both of the channels in the extrusion of the lightbar. If you are experiencing such a noise, please install the enclosed gasketing as described below.

- A. Starting from one of the legs, wedge one gasket into each of the grooves on the underside of the lightbar.



- B. Work your way towards the center of the bar until you reach one of the Gortex™ covered weep holes in the channel. Cut the gasket short so that it does not cover the weep hole.
- C. Start running the gasket again on the other side of the weep hole until you reach the next hole.
- D. Repeat this until both channels are filled.



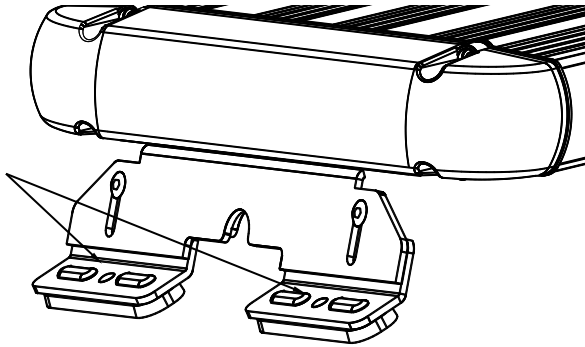
- E. If you have more than a few inches of groove between the mounting bracket and the outer edge of the lightbar, you may wish to install gasket in this area as well.

13. Finish your installation following the appropriate section on either page 5 or page 6.

Direct Mounting

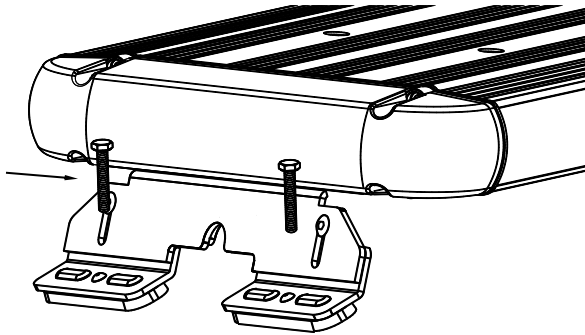
Skip to the next page if you ordered the optional hook mounts.

1. Using the two center holes in each bracket as a template, mark the four (4) locations (2 for each leg) that you will drill your mounting holes.



2. Carefully remove the bar and drill the appropriate holes in mounting surface, taking care not to drill through the headliner (if applicable).

3. Use a suitable fastener to permanently mount the bar (1/4"-20 stainless steel bolts recommended).



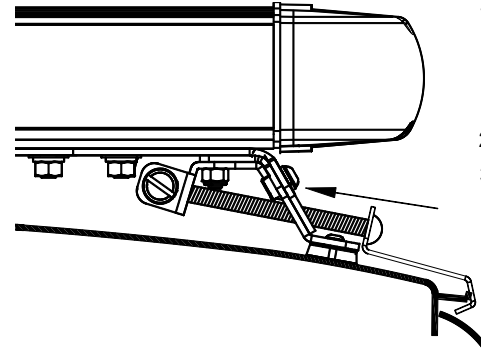
4. If necessary, select a suitable location in the roof to drill a hole for the cable. **DO NOT drill through any structural supports!!** Select a drill size that will be sufficient to route the cable through (cable sizes may vary). After drilling the hole, be sure to remove any burrs and file down any sharp edges so that they do not damage the cable. Route the cable through the hole and seal it with RTV silicone.



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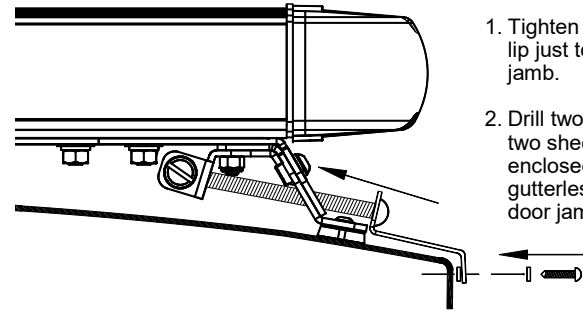
Hook Mounting

Vehicles with Gutters



1. With the bar positioned on the roof and the legs tightened in place as far out as possible, tighten the hook mount bolt on one mounting bracket until the hook is just under the gutter.
2. Repeat this on the other side.
3. Then alternate sides, tightening each bolt approximately 1/2 turn until the mount is secure.

Gutterless Vehicles



1. Tighten the bolt until the gutterless hook lip just touches the inside lip of door jamb.
2. Drill two or three holes and install the two sheet metal screws through the enclosed rubber washers to secure the gutterless hook on the inside lip of the door jamb.
3. Repeat this for the other side of the bar.
4. Then alternate sides, tightening each bolt approximately 1/2 turn until the mount is secure.



Do not over-tighten either mount! It is not necessary to dimple the roof in order to achieve a secure, stable mount.