

INSTALLATION AND INSTRUCTION MANUAL

820-39-P*

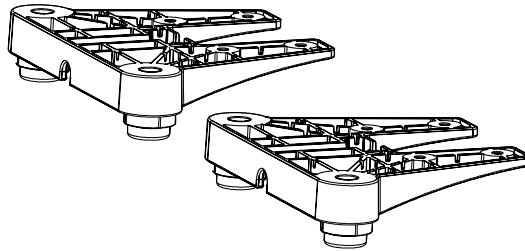
Adjustable Mount Kit
for

INTERCEPTOR

SABRE

RAZOR

Lightbars



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 Headlight & Lantern Co., Inc. assumes no responsibility for the integrity of the installation for this or any of its products.



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.



PROUDLY MADE IN THE USA
An ISO 9001:2008 Certified Company



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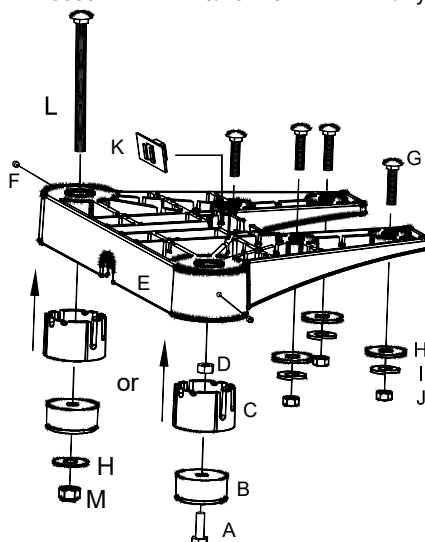
BRADFORD
Vehicle Solutions

www.starheadlight.com

PLITSTR321 REV. D 3/27/17

820-39-PB MOUNTING BRACKET PARTS LIST

	<u>QTY</u>	<u>Part #</u>	<u>Description</u>
A	4	P30056-22	1" Bolt (1/4"-20)
B	4	P920-37	Molded Rubber Foot w/Metal Washer Insert
C	4	P30150-76-1*	Adjusting Cup
D	4	P30096-5	1/4"-20 Lock Nut w/Nylon Insert
E	2	P30150-76	Plastic Mounting Bracket
F	4	P30053-19	Allen Head Screw
G	8	P30057-4	5/16" x 1" Carriage Bolt
H	12	P30077-1	5/16" Flat Washer
I	8	P30077-2	5/16" Lock Washer
J	8	P30097-1	5/16"-18 Hex Nut
K	2	30258-1P	Tinnerman Clip w/Retaining Plate
L	4	P30057-14	5/16"-18 x 3" Carriage Bolt
M	4	P30097-4	5/16"-18 Lock Nut w/Nylon Insert



Direct and Hook Mounting Instructions

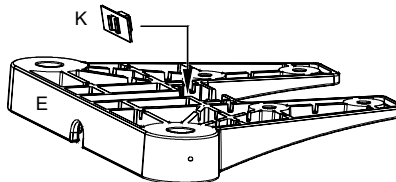
Please review this entire manual prior to mounting your lightbar.

1. The first step to mounting your lightbar is to determine if you are going to direct mount it (bolt it through the roof or other surface) or if you are going to use a hook mount.

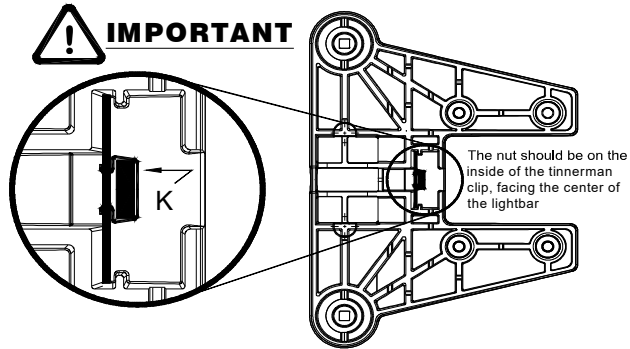


Once you have decided, follow the appropriate instructions.

- 2a. If you are going to **Direct Mount** your lightbar (bolt it through the roof of the vehicle) be sure that the Tinnerman Clip (K) is removed from the Mounting Brackets (E).

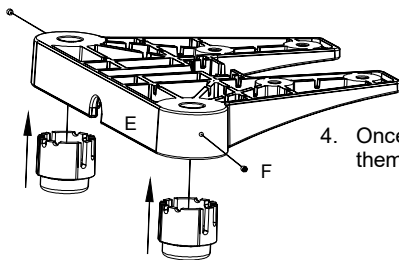
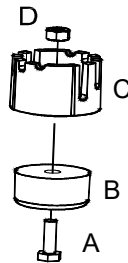


2b. If you are going to use a **Hook Mount** be sure that a Tinnerman Clip (K) is installed in each bracket. Make sure that the clip is installed in the correct slot and that the nut is towards the inside of the bar. (See the diagram to the right.)



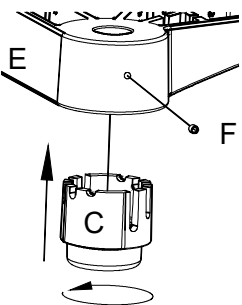
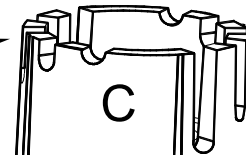
Please Note: The Tinnerman Clip sits loosely in the mounting bracket. It is held in place only when the hook mount is attached and tightened down.

3. Attach the molded rubber feet (B) to the adjusting cups (C) using the hex head bolts (A) and lock nuts (D). Tighten the nut just enough to keep the bolt and nut from rattling. The rubber foot should still be able to "pivot" slightly on the cup. This will allow the rubber foot to conform to the slope of your roof. Repeat this for all four feet.



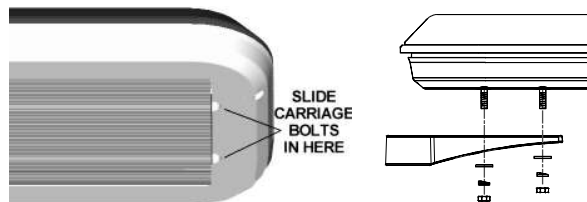
4. Once the rubber feet are attached to the cups, insert them into the mounting brackets (E).

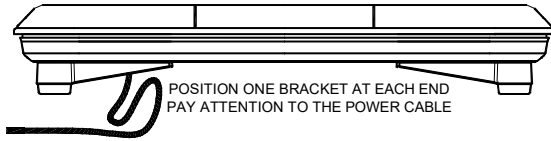
5. There are grooves in the top of each cup (C) that allow the feet to be adjusted to different heights.



6. Rotate the cup so that it is at its highest setting. Tighten the Allen head screws (F) to hold all four cups in place. **Do not over-tighten any of the Allen head screws!**

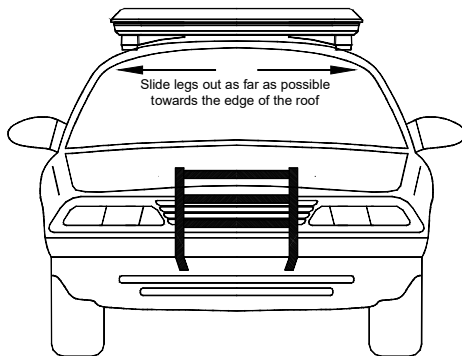
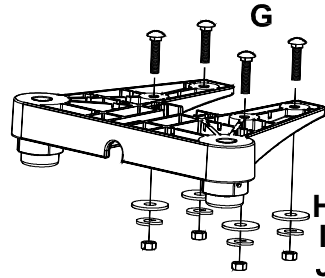
7. Install the mounting legs on the lightbar by sliding the heads of the eight 1" carriage bolts (G) into the channels running underneath the lightbar (four into each channel). You will need four of the carriage bolts for each mounting bracket.







8. Position one bracket at each end of the lightbar. Be aware of the power cable exiting 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 (H), one lock washer (I), and one hex-nut (J) on each carriage bolt. Tighten hex nuts until snug, but loose enough that the mounting bracket can still slide for accurate pre-positioning.




10. 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. Slide the brackets outward so that the rubber feet are as close to the edge of the roof as possible.

 *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 Headlight & Lantern Co., Inc. 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.*

 **WARNING!** *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.*

Hook Mounting Instructions

 **THE HOOK MOUNTS MUST BE USED ON ALL POLICE AND/OR OTHER EMERGENCY VEHICLES!!!**
 For direct mounting (bolting through the roof or other surface), go to the Direct Mount section. For hook mounting, proceed below.

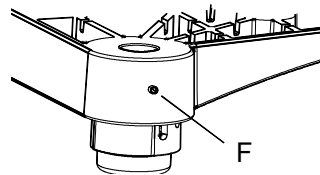
THE HOOK MOUNTS ARE OPTIONAL. THEY ARE NOT INCLUDED WITH EACH LIGHTBAR. THEY MUST BE ORDERED SEPARATELY. SEE THE ENCLOSED HOOK MOUNT SHEET FOR A COMPLETE LIST OF AVAILABLE MOUNTS AND KNOWN VEHICLE APPLICATIONS.

Please note that the instruction below are a general guideline. The order the steps are performed in is not crucial, and you may find that changing the order may work better for your particular application. Each installation is different.

- For some applications it may be easier to attach the mounts to the lightbar prior to placing the bar on the vehicle.
- If you are using gutterless mounts that are attached to the door jambs, it may be easier to install the mounting bracket to the vehicle, then connect it to the mounting legs.

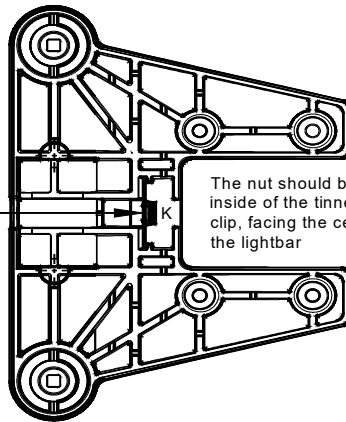
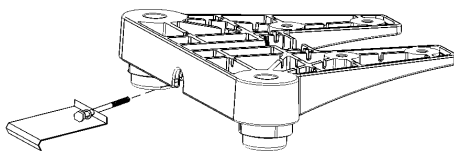
Please read through the entire procedure, then determine how you wish to approach your installation.

1. Once the lightbar is in the position where you want it mounted, you may set the bar to the desired height. Slightly loosen the Allen head screws (F) holding each foot in place. Lift each corner of the lightbar and rotate each individual foot until the lightbar is at the desired height. There are five different height settings for each leg. Repeat this for all four feet.



2. After you have adjusted each of the four feet to the desired height, check to see that the lightbar is level both side-to-side and front-to-back then tighten the Allen head screws. **Do not over-tighten any of the Allen head screws!**

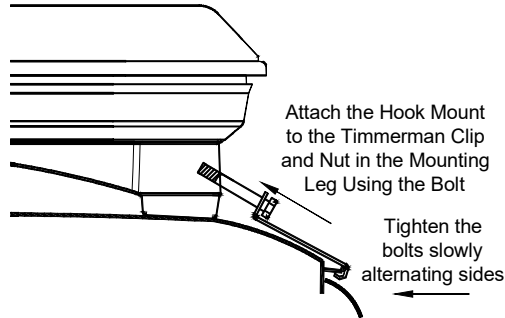
3. Attach the optional hook mount to each bracket using the bolt provided with the mounts. Slip the bolt through one of the split washers and then the hole in the hook mount and screw it into the Timmerman Clip (K).



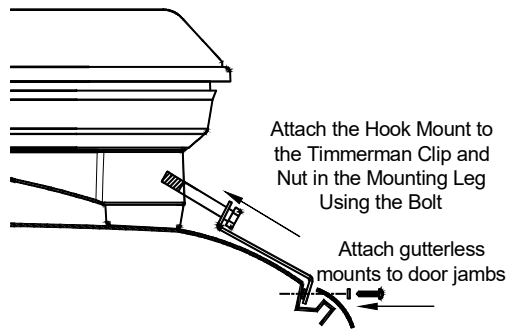
The nut should be on the inside of the Timmerman clip, facing the center of the lightbar

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" bolt obtained locally.

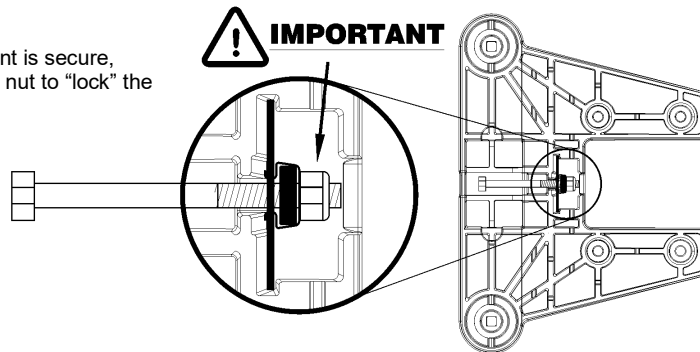
4. If using a Gutter Hook, tighten the bolt on one mounting bracket until the hook just until it is just under the gutter. Repeat this on the other side. Then alternate sides, tightening each bolt approximately ½ turn until the mount is secure.
Do not over-tighten either mount! It is not necessary to dimple the roof in order to achieve a secure, stable mount.



5. If you are installing a gutterless hook, tighten the bolt until the gutterless hook lip just touches the inside lip of door jamb. Drill the 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. Repeat this for the other side of the bar. Then alternate sides, tightening each bolt approximately ½ 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.



6. Once your mount is secure, install the nyloc nut to "lock" the bolt in place.

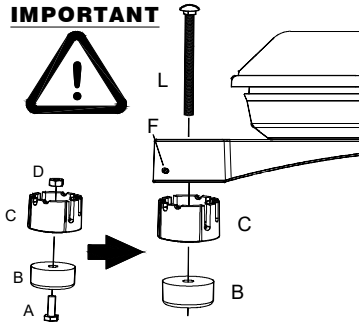
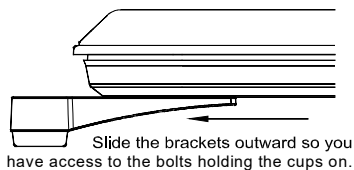
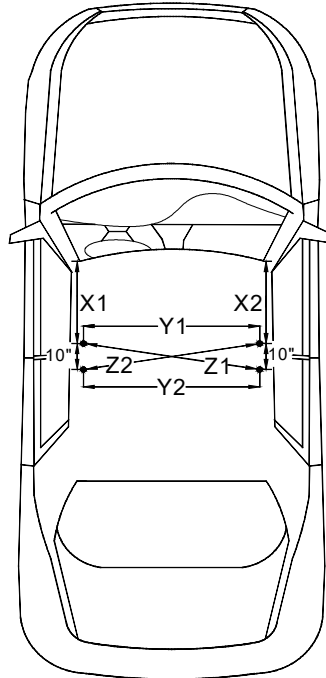


Direct Mounting

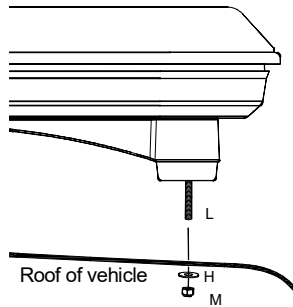
 **THE HOOK MOUNTS MUST BE USED ON ALL POLICE AND/OR OTHER EMERGENCY VEHICLES!!!**

PLEASE NOTE: THE DIRECT MOUNT IS THE STANDARD MOUNT INCLUDED WITH THE LIGHTBAR. BE SURE THAT YOU HAVE OPENED BOTH ENDS OF THE BOX WHEN LOOKING FOR THE DIRECT MOUNTS. THE HOOK MOUNTS ARE OPTIONAL. THEY ARE NOT INCLUDED WITH EACH LIGHTBAR. THEY MUST BE ORDERED SEPARATELY. SEE THE ENCLOSED HOOK MOUNT SHEET FOR A COMPLETE LIST OF AVAILABLE MOUNTS AND KNOWN VEHICLE APPLICATIONS.

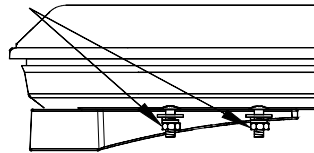
1. Once the lightbar is in the correct position, level front to back and centered side to side, and the mounting brackets are slid into position as close to the edge of the vehicle as possible, mark the location of the four feet. Check that the distance from the front windshield to one of the front holes (X1) is the same as the distance from the front windshield to the other front hole (X2).
2. Measure the distance between the two marked spots (Y1) and note it. Check that the marked spot for the rear holes are 10" back from the two front marked spots. Ensure the distance between them (Y2) is identical to the distance between the two front locations (Y1).
3. Confirm your marked spots are square by measuring the diagonals (Z1 & Z2). They should be equal.
4. Remove the lightbar, and drill four 11/32" holes in the roof of the vehicle.
CAUTION: Check the underside of your roof to ensure you do not damage anything beneath the holes. Remove any burrs.
5. Slide each of the mounting brackets outward allowing you access to the bolts (A) and nuts (D) that hold the rubber feet (B) to the cups (C).



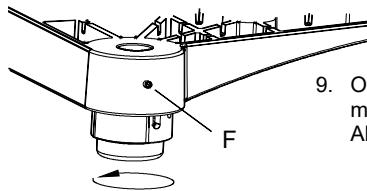
6. Remove the nut (D) and bolt (A) holding each rubber foot onto the cup. Fasten the cup and rubber foot to the mounting bracket using the 3" carriage bolt (L). Repeat this for all four feet.
IMPORTANT: The 3" carriage bolt must pass through the mounting bracket, cup and foot. Please note: It will be necessary to remove the metal washer (not shown) inside of the rubber foot (B) so the carriage bolt (L) will fit through the foot. You may tighten the Allen head screw (F) to hold the cup in place **temporarily**.



7. Mount the bar on the roof through the holes you drilled. Loosely install a flat washer (H) and the nut (M) to each bolt (*shown to the left*), but **DO NOT tighten them yet**. You need to leave them loose enough to lift the bar to gain access to the bolts securing the brackets to the lightbar.

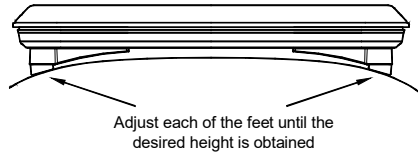


8. **Before tightening everything down**, from the front of the vehicle, check that the bar is centered from side to side. Once it is positioned satisfactorily, tighten the eight nuts which secure the mounting brackets to the bar itself, **leaving the four bolts through the roof loose**.



9. Once both mounts are secure to the lightbar itself, you may set the bar to the desired height. Slightly loosen the Allen head screws (F) holding each foot in place.

10. Lift each corner of the lightbar and rotate each individual foot until the lightbar is at the desired height. There are five different height settings for each leg. Repeat this for all four feet.



11. After you have adjusted each of the four feet to the desired height, check to see that the lightbar is level both side-to-side and front-to-back then tighten the Allen head screws. **Do not over-tighten any of the Allen head screws!**

12. Once the Allen head screws are tightened and you have double-checked that the bar is level and at the desired height, you may tighten each of the locknuts (M) on the carriage bolts (L).
13. The rubber feet will provide a barrier that separates the hard plastic leg from the metal of the roof. It helps to absorb any excess vibration and provides a barrier against any leakage. You may need to seal the holes with RTV (not included) if the rubber feet do not make a good enough seal with the roof of your vehicle.
14. The mounting is complete and you may wire your lightbar.

