INSTALLATION INSTRUCTIONS

⚠ WARNING

To properly install this headlight you should have a good understanding of automotive electrical procedures and systems, and proficiency in the installation of headlights. **IF YOU DO NOT, PLEASE SEEK PROFESSIONAL ASSISTANCE.**

BEFORE INSTALLATION:

Tools Needed: 3/8" Socket/Wrench (For Mounting)
13mm Socket/Wrench (For Aiming)

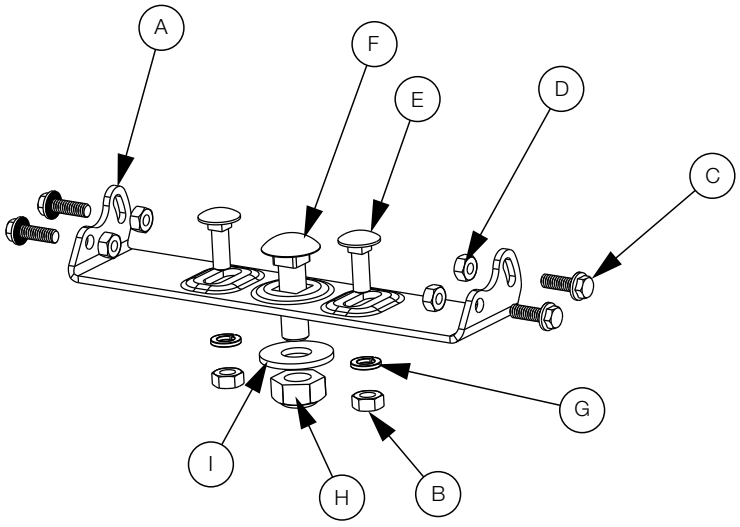
Estimated Time: 30 Minutes

Wire Functions: Black = Ground
Red = Front Position
White = High Beam
Orange = Low Beam
Yellow = Turn Signal
Blue = DRL*
*NOTE: Blue Wire is non-functioning on DOT versions

Input Voltage: 12-24V DC

Operating Voltage: 10-30V DC

In the Box:
A. (x2) Mounting Bracket
B. (x4) M8-1.25mm Hex Nuts
C. (x8) 1/4"-20x0.75" Hex Head Flange Bolts
D. (x8) 1/4"-20 Hex Nut
E. (x4) M8-1.25"x25 Carriage Bolts
F. (x2) Carriage Bolt 1/2"-13x1.75
G. (x4) M8 Split Lock Washers
H. (x2) Nylon Lock Hex Nut 1/2"-13
I. (x2) Flat Washer



REGULATORY COMPLIANCE:

DEPARTMENT OF TRANSPORTATION UNITED STATES OF AMERICA
UNITED NATIONS
ADR

PRE-INSTALLATION GUIDELINES:

1. Read all safety notes and mounting guidelines before installing the product. Verify that all parts listed under "In the Box" are present and complete.

2. Inspect the product for damage. DO NOT install the product if there is any damage. Contact the authorized retailer where you purchased it to initiate a warranty claim if there is damage.

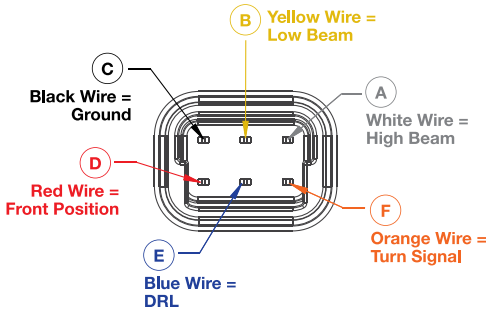
3. Verify that all power supply and/or charging systems comply to the specified voltage limits for the light.

IMPORTANT NOTES:

J.W. Speaker's Model 9900 LP is best suited for normal snow plowing, **not** "high speed" plowing on highways. Consult with your J.W. Speaker salesperson for more information.

PRODUCT WARRANTY:

If you have issues with a J.W. Speaker product, please contact the authorized retailer where you purchased it.



Rev date: 09/9/2019

www.jwspeaker.com • speaker@jwspeaker.com

J.W. SPEAKER® Engineered. Lighting. Solutions.

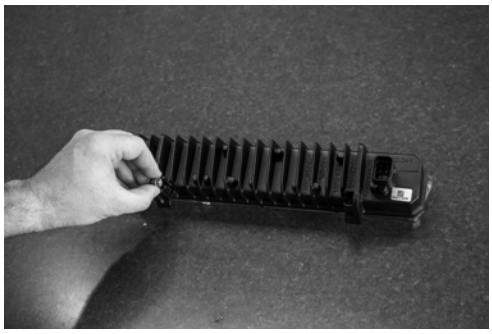
INSTALLATION INSTRUCTIONS:

1. Turn off the equipment and disconnect the power supply.

2. Ensure that the light mounting location is a FLAT, SOLID surface of the same (or larger) size as the bracket or light. This will prevent warping or distortion that can cause cracking or damage to the light and/or bracket.

3. Determine desired base mounting bolt configuration.

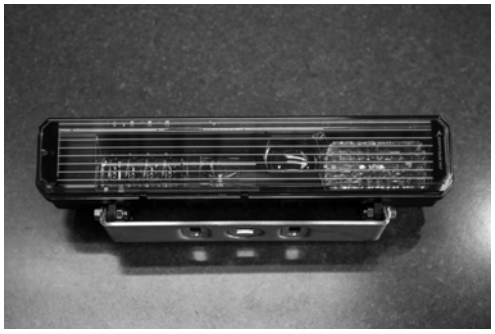
4. Place lamp face down and insert 1/4"-20 rear hex bracket nuts into pockets on lamp housing.



5. Attach 1/4-20 mounting bolts through rear hole of bracket into the hex nuts

6. Turn lamp face up and repeat steps 4-5 for front Bolt/Nuts

8. Mount headlight to the vehicle using the Stainless Carriage Bolts (E/F), Split Lock Washers (G/I) and remaining Hex Nuts (B/H). Carefully splice the wires using the "Wire Functions" and "Voltage" information from page 1 to power the light.



9. All connections should be adequately protected against moisture. Shrink tubing is recommended. Lay and secure wiring/connectors to avoid any pulling or abrasion that may damage the wires.

10. Aim the headlights according to the instructions Available online at www.jwspeaker.com/resources. Use the 4, 1/4"-20 bolts (C) on the side of the Mounting Assembly to angle the light up and down. Once aimed, tighten the 4 bolts to 96 IN-LBS MAX.

11. Frequently check the light to make sure that it is working properly and is securely attached.

Rev date: 09/9/2019

www.jwspeaker.com • speaker@jwspeaker.com

J.W. SPEAKER®
Engineered. Lighting. Solutions.

HEADLIGHT AIMING INSTRUCTIONS

FOR LOW AND HIGH/LOW HEADLIGHTS

⚠ WARNING

Headlight must be securely mounted and properly aimed such that the beam pattern "cut off line" complies with all applicable regulations. **If you are not familiar with the legal requirements for aiming your headlights, please see a professional service provider.** We recommend that headlights are aimed with a headlight aiming system for proper alignment. Failure to properly aim your headlights is a risk to other drivers and could result in tickets or citations with local authorities. J.W. Speaker is not liable for any damage to the vehicle or light, or any tickets/citations as a result of using these guidelines.

BEFORE AIMING:

1. Vehicle is being aimed on a level surface.
2. All tires are properly inflated.
3. Vehicle is at normal driving height.

REQUIRED SUPPLIES:

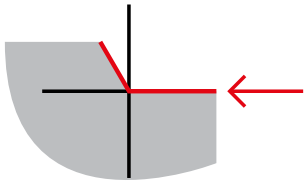
- Tape or chalk to mark lines
- Corresponding tools for your vehicle's aiming mechanism

OPTIONAL SUPPLIES:

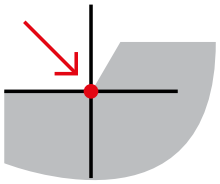
- Laser level to expedite the aiming process and will help to increase accuracy in aiming

KEY TERMS:

Kink (elbow): The top of the pattern that is the cutoff when aimed at a wall.



Alignment Point: The center of the angle in the Kink that must align to the center point when aiming the light at a wall.



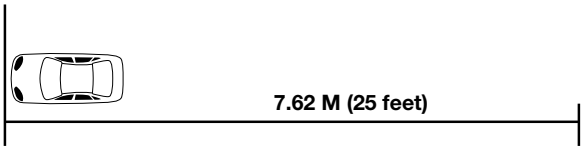
LHT (Left Hand Traffic): ECE Regulation countries like the United Kingdom

RHT (Right Hand Traffic): DOT (and some ECE) Regulation countries like the United States

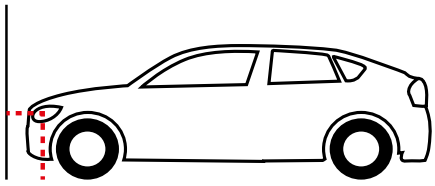
The following instructions are illustrated for RHT vehicles. Aiming for LHT vehicles will be mirrored to what is shown.

AIMING GUIDELINES:

1. Park your vehicle close to a wall, in an area where there is at least 7.62 meters (25 feet) of space behind it (excluding the car length).



2. On the wall, draw a line from the ground to the approximate center point of the headlight. Repeat for the other headlight. This will create your Y axis lines.



Rev date: 09/9/2019

www.jwspeaker.com • speaker@jwspeaker.com

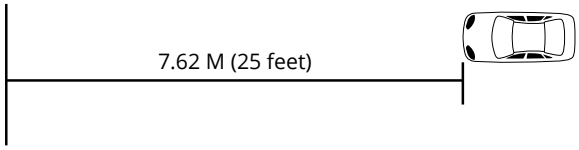
J.W. SPEAKER® *Engineered. Lighting. Solutions.*

AIMING GUIDELINES CONTINUED:

3. Connect the center points between headlights using chalk or tape. This will create your X axis (horizontal) line. **NOTE:** Use a straight edge and a level to make sure this line is straight.

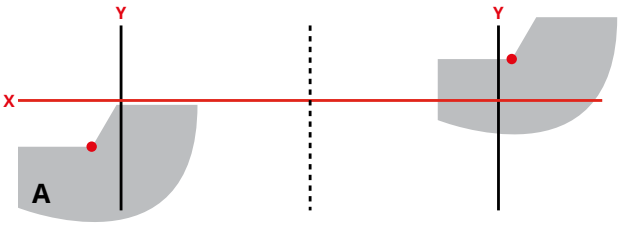
4. Extend your vertical, Y (vertical) axis lines up approximately 3 feet. Your lines should match the diagram below, when looking at the lines straight on.

5. Reverse your vehicle in a straight line so that the front of the headlights are 7.62 meters (25 feet) back from the wall.

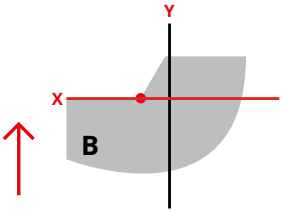


The goal of this sheet is to aim **BOTH** of your headlights so that the **Alignment Point** is at the cross section of the horizontal X and vertical Y lines you have drawn. The following directions illustrate the process and proper aiming of headlights.

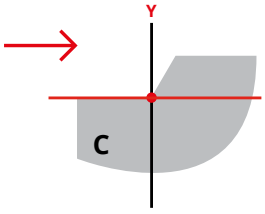
6. When you first turn on your vehicle after installing your headlights, the **Alignment Points** of the LOW BEAM may be positioned differently than shown and will likely be aimed differently from each other.



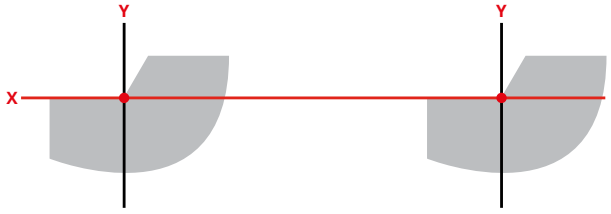
7. Using the alignment mechanisms in your vehicle, adjust one headlight vertically until the **Alignment Point** is even with the X axis.



8. On the same headlight, adjust horizontally until the **Alignment Point** is even with the Y axis.



9. Repeat this process on the other headlight. Both headlights should match the diagram below, where the **Alignment Point** is even with the point where the X and Y axis crosses.



Rev date: 09/9/2019

www.jwspeaker.com • speaker@jwspeaker.com

J.W. SPEAKER®
Engineered. Lighting. Solutions.