

# 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:

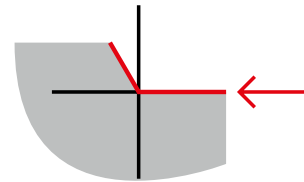
- Tape or chalk to mark lines
- Corresponding tools for your vehicle's aiming mechanism

### OPTIONAL SUPPLIES:

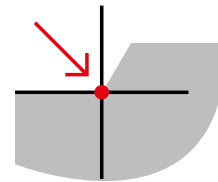
- Laser level to expedite the aiming process and will help to increase accuracy in aiming

### KEY TERMS:

**Kink (elbow):** The top of the pattern that is the cut-off when aimed at a wall.

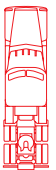


**Alignment Point:** The center of the angle in the Kink that must align to the center point when aiming the light at a wall.



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

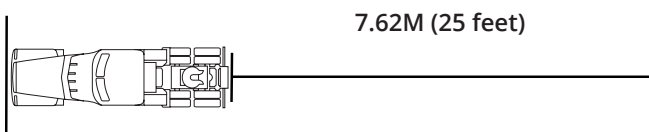
**RHT (Left Hand Traffic):**  
DOT (and some ECE)  
Regulation countries like  
the United Kingdom



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

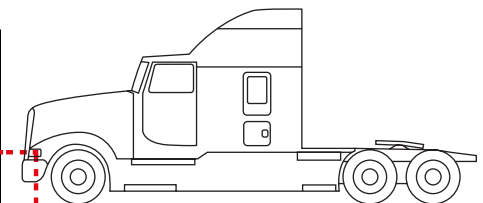
### AIMING GUIDELINES:

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 truck 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.

To meet proposed 5-Star rating, lights must be installed on vehicles at gross weight with headlights at 0.8—1.2m off the ground.



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

## AIMING GUIDELINES CONTINUED:

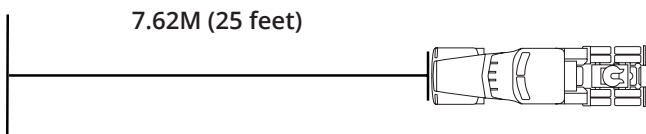
3. Connect the center points between headlights in a straight line, using chalk or tape. This will create your X axis (horizontal) line. **NOTE:** Use a straight edge and a level to make sure this line is straight.



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.

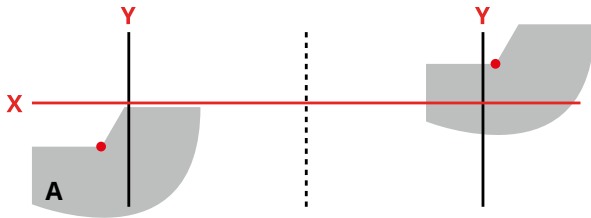


5. Reverse your vehicle in a straight line so that the front of the headlights are 7.62 meters (25 feet) back from the wall.

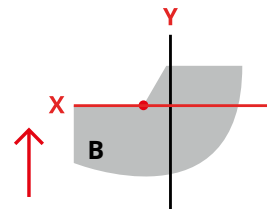


The goal of this sheet is to aim BOTH of your headlights so that the **Alignment Point** is at the crosssection of the horizontal X and vertical Y lines you have drawn. The following directions illustrate the process and proper aiming of headlights.

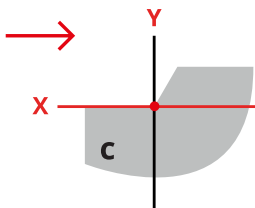
6. When you first turn on your vehicle after installing your headlights, the **Alignment Points** of the **LOW BEAM** may be positioned differently than shown and will likely be aimed differently from each other.



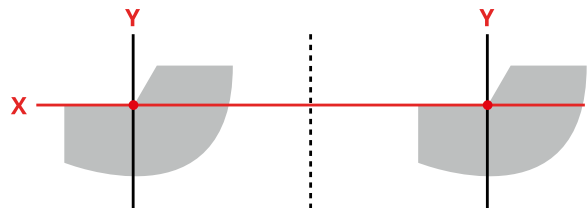
7. Using the alignment mechanisms in your vehicle, adjust one headlight vertically until the **Alignment Point** is even with the X axis.



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.



# HEADLIGHT AIMING INSTRUCTIONS

## FOR HIGH/DRIVING BEAM ONLY 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:

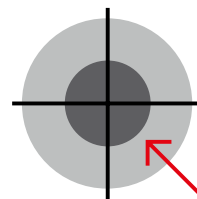
- Tape or chalk to mark lines
- Corresponding tools for your vehicle's aiming mechanism

### OPTIONAL SUPPLIES:

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

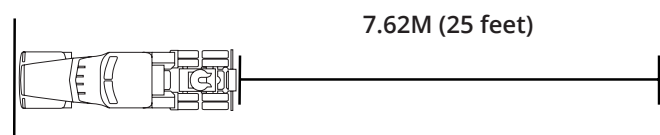
### KEY TERMS:

**Hot Spot:** The top of the pattern that is the cut-off when aimed at a wall.



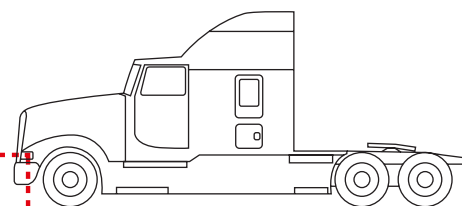
### AIMING GUIDELINES:

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 truck 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.

To meet proposed 5-Star rating, lights must be installed on vehicles at gross weight with headlights at 0.8—1.2m off the ground.



3. Connect the center points between headlights in a straight line, 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.



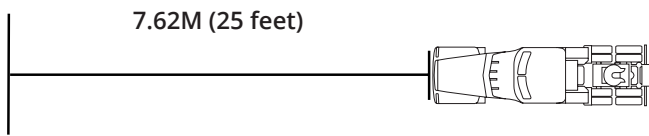
4. Extend your vertical, Y (vertical) axis lines up approximately 3 feet. Your lines should match the diagram below, when looking at the lines straight on.



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

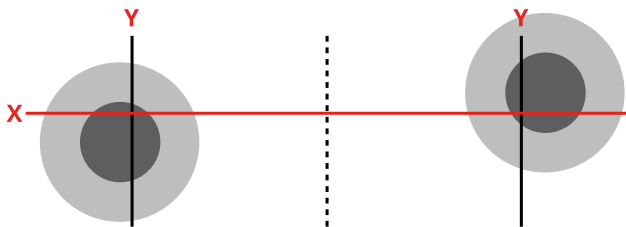
## AIMING GUIDELINES CONTINUED:

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.

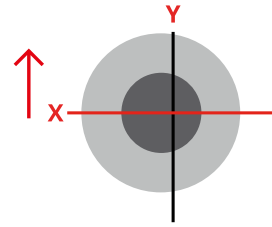


The goal of this sheet is to aim BOTH of your headlights so that the center of the **Hot Spot** is at the v of the horizontal X and vertical Y lines you have drawn. The following directions illustrate the process and proper aiming of headlights.

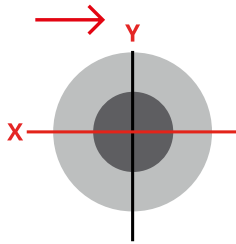
6. When you first turn on your vehicle after installing your headlights, the **Alignment Points** may be positioned differently than shown and will likely be aimed differently from each other.



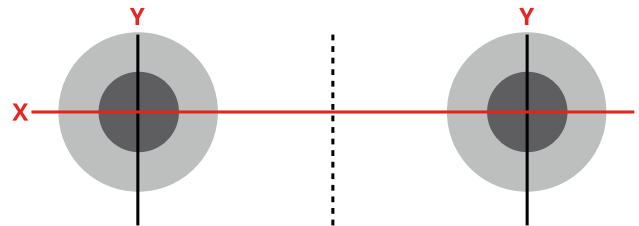
7. Using the alignment mechanisms in your vehicle, adjust one headlight vertically until the alignment point is even with the X axis.



8. On the same headlight, adjust the same headlight 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.



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