# LED HEADLAMP HIGH/LOW BEAM AIMING INSTRUCTIONS

## Headlamps Must Be Aimed After Installation

Headlamp 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 headlamps, please see a professional service provider.** We recommend that headlamps are aimed with a headlamp aiming system such as a Beamsetter for proper alignment. Failure to properly aim your headlamps is a risk to other drivers and could result in tickets or citations with local authorities. JW Speaker is not liable for any damage to the vehicle or headlamp, or any tickets/citations as a result of using these guidelines.

## Before Installation

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

**NOTE: If a lift kit is added or removed from the vehicle, headlamps MUST be AIMED AGAIN.**

## Required Supplies

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

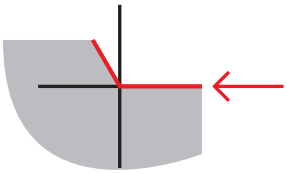
## Optional Supplies

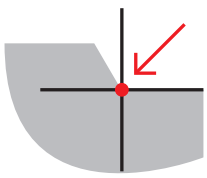
- Laser level to expedite the aiming process and will help to increase accuracy in aiming

## Key Terms:

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

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

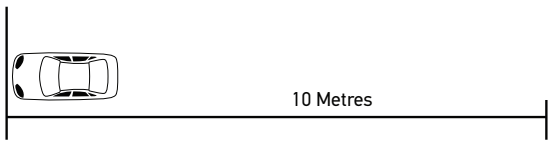




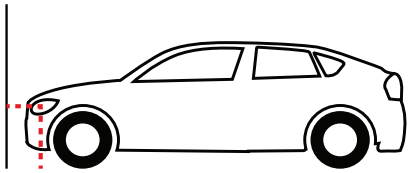



## Aiming Guidelines (If a Beamsetter is not available)

1. Park your vehicle close to a wall, in an area where there is at least 10 metres of space behind it (excluding the car length).

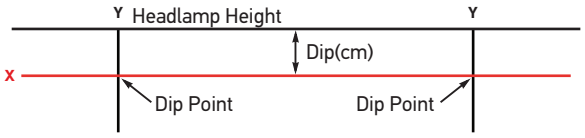



2. On the wall, draw a line from the ground to the approximate centre point of the headlamp. Repeat for the other headlamp. This will create your Y axis lines.



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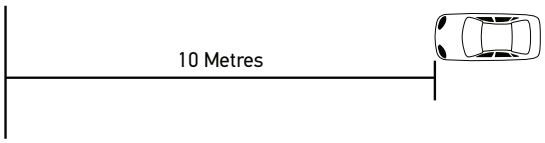
**3.** Measure the height of the headlamp from the ground and select the dip value from the chart (Page 3). Measure down from the line, the amount of dip to create line X. Connect the points between dip points in a straight line, using chalk or tape. This will create your X axis line. NOTE: Use a straight edge and a level to make sure this line is straight.




**4.** Extend your vertical, Y (vertical) axis lines up approximately 750mm. Your lines should match the diagram below, when looking at the lines straight on.

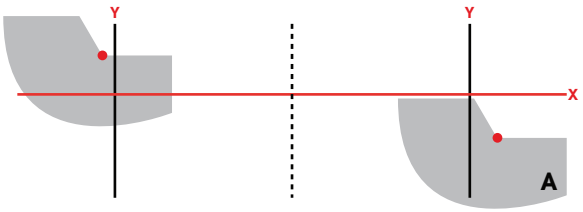



**5.** Reverse your vehicle in a straight line so that the front of the headlamps are 10 metres back from the wall.

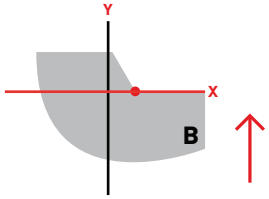



The goal of this sheet is to aim BOTH of your headlamps so that the **Alignment Point** is at the cross section of the horizontal X and vertical Y lines you have drawn. The following directions illustrate the process and proper aiming of headlamps.

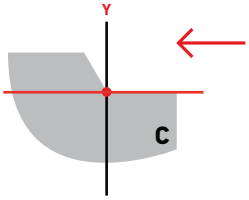
**6.** When you first turn on your vehicle after installing your headlamps, the Alignment Points of the LOW BEAM may be positioned differently than shown and will likely be aimed differently from each other.



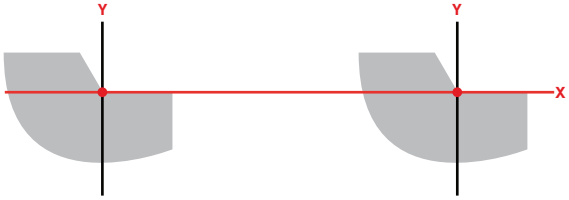

**7.** Using the alignment mechanisms in your vehicle, adjust one headlamp vertically until the Alignment Point is even with the X axis.




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




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



J.W. SPEAKER

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| Dip Value Chart | |
|---|---|
| Height of Headlamp (cm) | Dip (cm/10m) |
| 50 | 10 |
| 55 | 11 |
| 60 | 12 |
| 65 | 13 |
| 70 | 14 |
| 75 | 15 |
| 80 | 16 |
| 85 | 17 |
| 90 | 18 |
| 95 | 19 |
| 100 | 20 |
| 105 | 21 |
| 110 | 22 |
| 115 | 23 |
| 120 | 24 |
| 125 | 25 |
| 130 | 26 |
| 135 | 27 |
| 140 | 28 |