

# How to Correctly Align Your New Retrofitted Headlamps

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You have just received your Newly, Custom Designed HID Retrofit. You have waited for this a long time and you finally have them! Before you get too excited and throw those headlamps on, let us take the time to align these correctly. Image meeting this gorgeous girl and when you see her, her eyes are all crooked. Completely defeats the purpose of the hot girl if she can't even look you in the eyes. That is the same scenario with nice retrofitted headlamps that are not aligned correctly. Just defeats the whole purpose! So, let us get started!

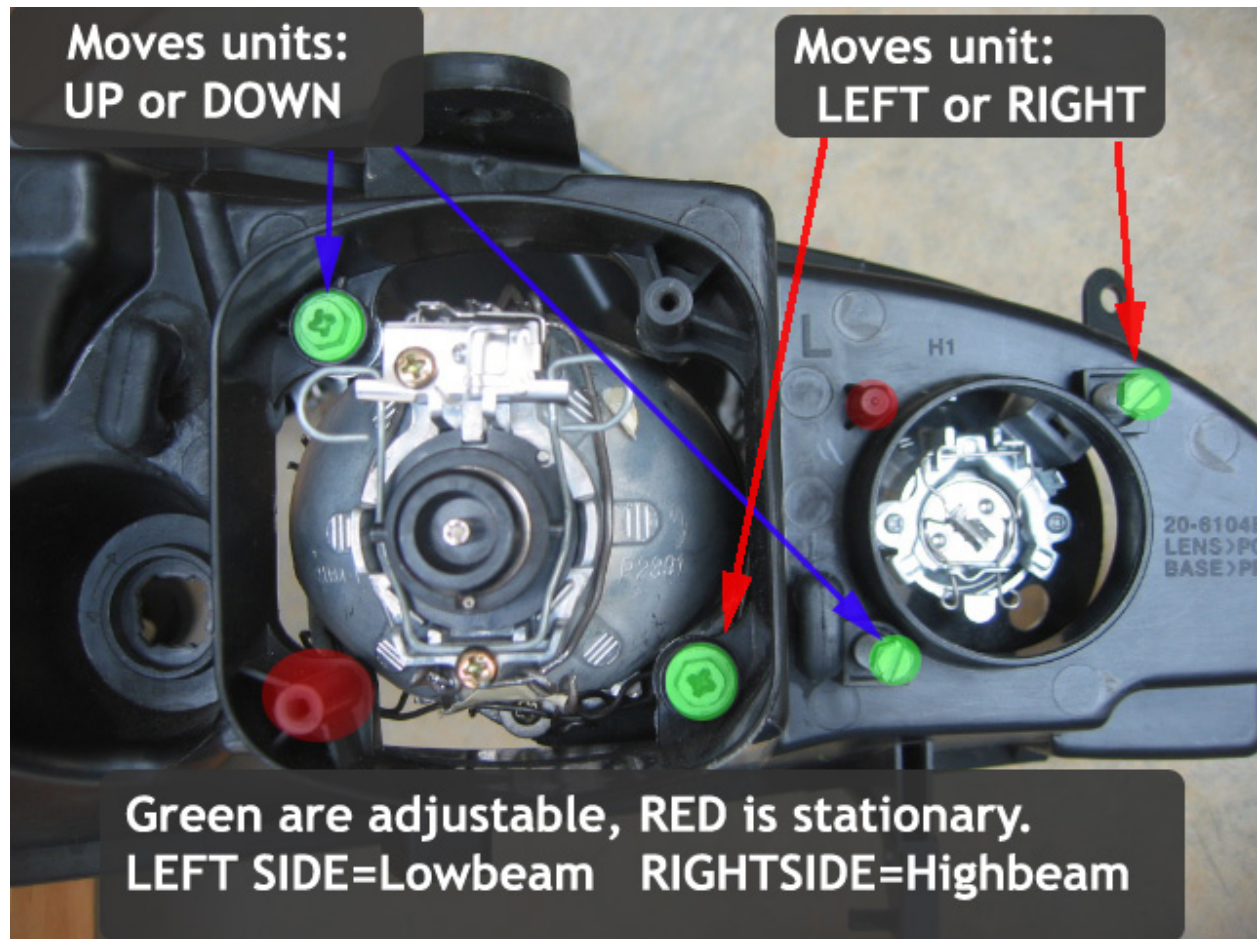
- Part 1. Observation
- Part 2. Partial Installation
- Part 3. Alignment and Evaluation
- Part 4. Final Installation

A Simple four part process where we: Observe the alignment screws, and adjusting points; Partially install by installing lamps on without front bumper; Align the projectors by comparing them with the high beams while installed partially and evaluating that process; Make adjustments that are crucial and then evaluate those adjustments; When everything is perfect, finalize the installation process by completing the installation of your front bumper, etc. DONE! This process can be tedious and time consuming, grab a friend one Saturday morning and get started. Give that gorgeous girl some pretty eyes! (By no means am I saying that you, or anyone you know that has crooked eyes, is not pretty. It's just an example.)

## Part 1: Observation

First we observe that alignment screws on our headlamps. I will use an Accord aftermarket headlamp made by TYC that was retrofitted with TSX projectors as an example. Look here where the alignment screws have been highlighted GREEN. These are adjustable and will move the low beam projector, or the high beam reflector up or down, and left or right. The stationary mounting points are highlighted in red and secure the projector. It is very important to make sure to find this point before adjusting screws. The position of this is crucial when finding out which screws do what.

Locate the stationary mounting point and directly to the left or right will be a adjustment screw. THIS screw will adjust the projector or reflector left or right. Directly above or below the stationary mounting point there will be another adjustment screw, this screw will adjust the projector or reflector up or down. Some OEM headlamps have already been adjusted left and right perfectly so all you may have is one screw to adjust both low and high beams up and down at the same time. Lets look at the back of the Accord Aftermarket TYC Headlamp below:



Once you have a general understanding of how to adjust the lamps, now we need to place the lamps on to the vehicle, but do not complete the installation, leave your bumper off and any other accessories, just install the lamps. Your car may resemble this on the right while the bumper is off.



Now that you know which screws will adjust what, and what we need to do in Part 2, let us continue!

### Part 2: Partial Installation

Not much explanation in this part, install the lamps, but that is all. The reason we are doing this is so we can adjust the lamps on the vehicle so we have a real-time look at where the lamps are aiming when we adjust them. If you do not know how to take off your bumper or headlamps check out a car forum to find out how to do this. I have listed a few below:

Toyota Vehicles	<a href="http://toyotanation.com">toyotanation.com</a> , <a href="http://9thgencorolla.com">9thgencorolla.com</a>
Scion Vehicles	<a href="http://scionlife.com">scionlife.com</a>

Honda/Acura Vehicles	<a href="http://honda-acura.net">honda-acura.net</a>
Any other vehicles	<a href="http://automotiveforums.com">automotiveforums.com</a>

### Part 3: Alignment and Evaluation

Items you will need to take with you:

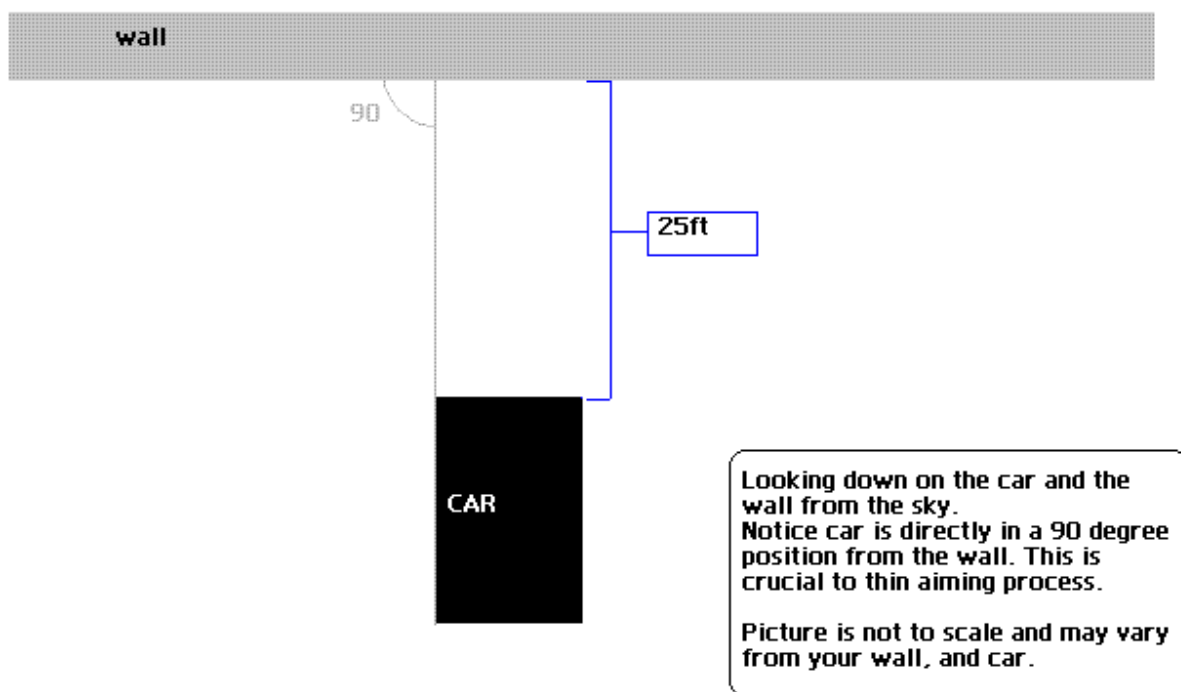
- Screw driver set
- Flash light
- 25ft or greater tape measure
- Any other tools needed to install lamps.

Alignment should be done against a flat, white or beige wall. It should be on a completely flat level, absolutely NO hills. Behind buildings or in parking decks are great places to align the lamps, be sure to bring a friend with you while you're in these types of areas.

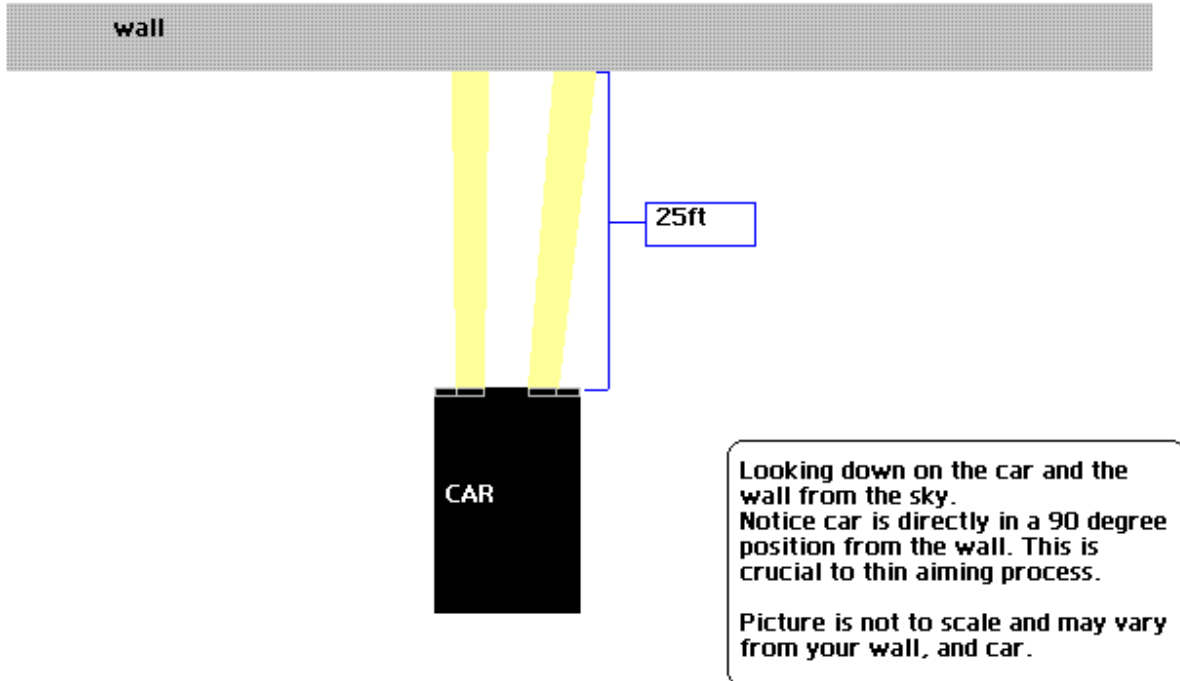
First, we will measure a 25 ft distance between the vehicle and the wall at exactly a 90 degree angle.

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Once the vehicle is in place, and you have made sure the vehicle is in a 90 degree angle to the wall we will then turn on just the high beams and align the projectors directly at a 90 degree angle. You will adjust the adjustment screw right next to the stationary mounting point. This will adjust the high beam left or right. So let us turn on the high beams:

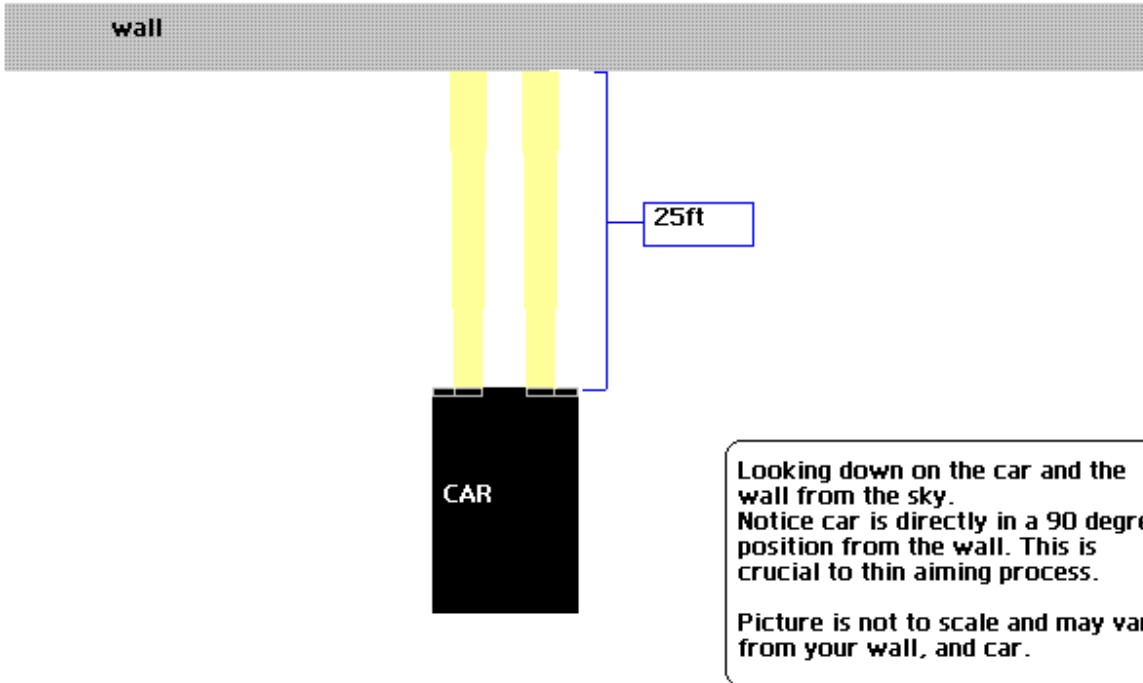


We notice that the passenger side high beam does not shoot directly in front of us, so we will need to adjust the adjustment screw that is directly next to the stationary mounting point. Usually:

If the screw is on the right, turning it clockwise will move the reflector towards the right.

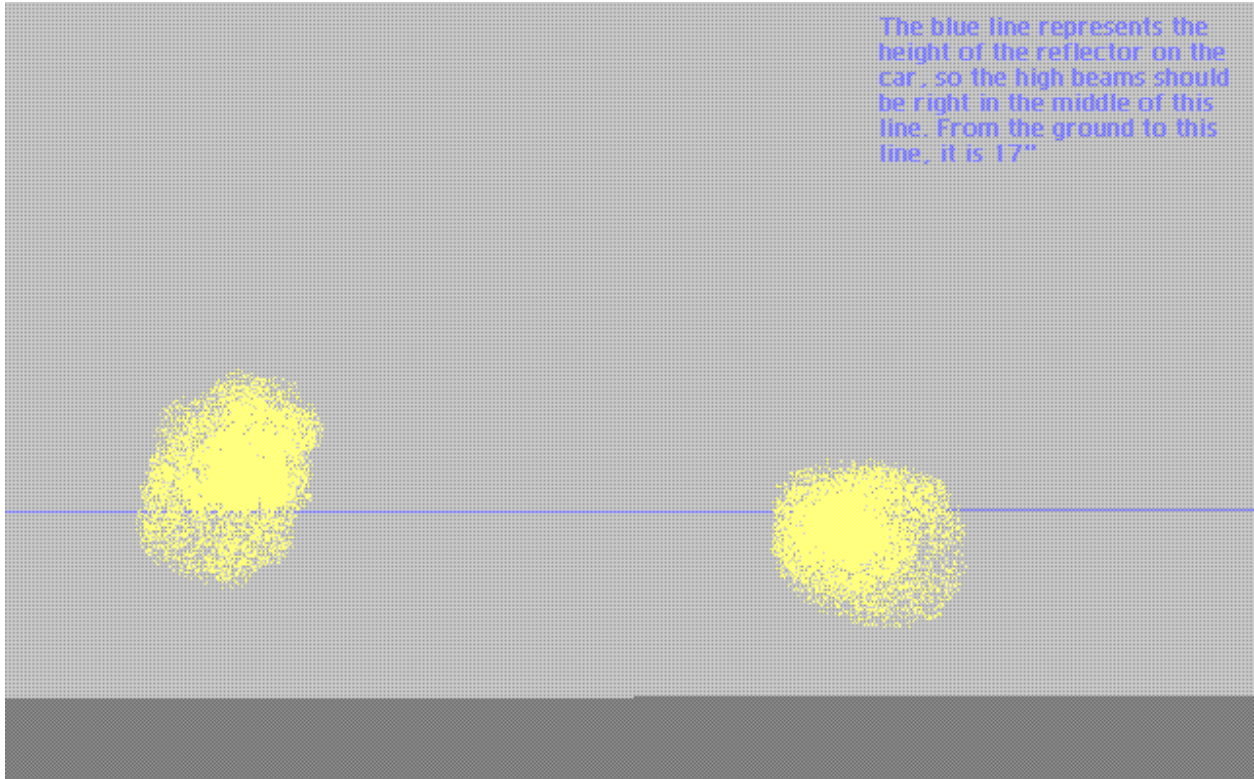
If the screw is on the left, turning it clockwise will move the reflector towards the left.

So we will go ahead and adjust that right now:



Now that they are perfectly aligned left and right take a piece of tape or sharpie marker and mark that screw so we don't mess with it anymore. Now that the high beams have been aligned left or right, we still need to align them up or down.

In the high beam case it needs to be directly in front. The height of the reflector from the ground needs to be the same on the wall from the ground to the center of the high beam pattern. Measure the distance from the ground to the high beam reflector and then compare this to the beam pattern against the wall. If the center of the light is not within a few inches then you may need to adjust the high beam reflector, ONLY using the other adjustment screw that has not been marked as stated above.



(Looking directly at the wall while in the vehicle)

On the wall you will have two spots where the high beam is shining onto the wall. They are probably a little crooked, so measure from the center of the driver side on the wall to the ground, lets say its roughly 19" and the passenger side is 14", and the measurement we took from the car of the distance of the high beam reflector to the ground is 17". So, well need to move the driver side down 2" and the passenger up 3".

Once that has been done the two yellow beams will be at 17" and equal to the height on the vehicle. Now its time for the Low Beam Projectors!

So let us turn on those projectors and see what we get:

From the looks of this driver side in picture A, the low beam projector needs to be moved more to the left so the step:

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On the low beam projector is even with the high beam spot on the wall.

Be sure not to adjust the high beam, only the low beam projector.



Now this second picture, picture B the projector has been moved over to the left. You see that the step is closer to the actual high beam spot. Remember not to move the high beam reflector but only adjust the low beam projector.

Continue to move that the step is exactly in the middle of the spot, and then move the low beam projector down right below the spot. Once the output resembles picture C then you are ready to adjust the passenger side.

(image was taken from a google search)



Once you have both headlamps adjusted and you have evaluated the lamps we can precede with the full installation process. Be sure to seal up the back of the lamps if necessary and remember to place all your tools back in their appropriate place.

#### Part 4: Final Installation

The final installation usually varies between automotive manufactures. Check with your closest car forum with help. Usually, reverse the actions you took to taking the lamps off to put them on. Check all wiring, fuses, and connections.