Audi B8 Adjustable Headlight Leveling Sensor Kit Installation

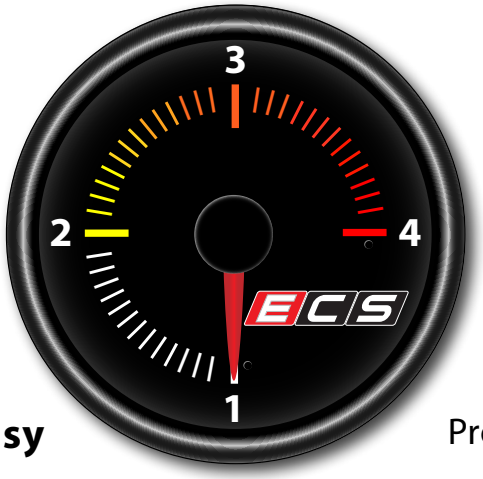
Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

INTRODUCTION

The Project:

Today we are going to install our ECS Tuning Adjustable Headlight Leveling Sensor Bracket Kit into our Audi RS5, but keep in mind the installation process is the same for all B8 chassis Audis. These custom brackets are engineered to make the vehicle think it is higher than it actually is, thus allowing the auto leveling headlights perform normally without the risk of blinding oncoming traffic. The kit comes with four (4) brackets, so you're covered whether your vehicle is equipped with two (2) or four (4) sensors. The kit is extremely easy to install, only requiring a few basic tools. If you don't have a lot of "wrench time" under your belt, rest assured because we are going to walk you through the installation step by step, and once you're done you'll be able to just sit back and admire your work.

ECS Difficulty Gauge



1 - Easy Pro - 4

2 - Moderate Advanced - 3

Take your time and enjoy the project, it'll only take you an hour or so to complete. Read these instructions completely first, and with the project overview under your belt, you'll breeze right through it. Just to make sure you have everything you need, reference the required tool list on Page 5 before you begin. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

TABLE OF CONTENTS

KIT CONTENTS

LH Headlight Leveling Sensor Bracket
ES#3136874 - QTY 2
ES#3161665 - QTY 1

RH Headlight Leveling Sensor Bracket
ES#3136874 - QTY 2
ES#3161665 - QTY 1

M6x10 Mounting Screw
ES#3136874 - QTY 4
ES#3161665 - QTY 2

REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

Required For This Install

Available On Our Website

- **Protecta-Sockets (for lug nuts)** ..... ES#2221243
- **⅜" Drive Ratchet** ..... ES#2765902
- **⅜" Drive Torque Wrench** ..... ES#2221245
- ⅜" Drive Deep and Shallow Sockets ..... ES#2763772
- ⅜" Drive Extensions ..... ES#2804822
- **Hydraulic Floor Jack** ..... ES#240941
- Torx Drivers and Sockets ..... ES#11417/8
- ½" Drive Deep and Shallow Sockets ..... ES#2839106
- ½" Drive Ratchet
- ½" Drive Extensions
- **½" Drive Torque Wrench** ..... ES#2221244
- **½" Drive Breaker Bar** ..... ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set ..... ES#2778980
- **¼" Drive Ratchet** ..... ES#2823235
- ¼" Drive Deep and Shallow Sockets ..... ES#2823235
- ¼" Drive Extensions ..... ES#2823235
- Plier and Cutter Set ..... ES#2804496
- **Flat and Phillips Screwdrivers** ..... ES#2225921
- **Jack Stands** ..... ES#2763355
- Ball Pein Hammers
- Pry Bar Set ..... ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- **Measuring Tape**
- Punch and Chisel Set
- **Hex Bit (Allen) Wrenches and Sockets** ..... ES#11420
- Thread Repair Tools ..... ES#1306824
- **Open/Boxed End Wrench Set** ..... ES#2765907

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - Click Here
- Pig Mats - for protecting your garage floor and work area from spills and stains - Click Here
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - Click Here
- Micro Fiber Towels - for cleaning the paint on your car - Click Here
- Latex Gloves - for the extra oily and dirty jobs - Click Here
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - Click Here
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - Click Here
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

INSTALLATION NOTES

- **RH** refers to the ***passenger side*** of the vehicle.
- **LH** refers to the ***driver side*** of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety. Please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear. **ALWAYS** support the vehicle with jack stands.
- Always read and follow all safety information and warnings for the equipment you are using.

NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

INSTALLING THE ADJUSTABLE HEADLIGHT SENSOR KIT

Step 1:

Safely lift and support the vehicle, then locate the auto leveling sensors on your vehicle. They are mounted on the chassis, with a short rod connecting the sensor arm to the lower control arm. Depending on your application, you may find that you have two or four sensors.

Step 2: 9mm & 10mm Wrenches

While you can remove the wheel for better access, it may not be absolutely necessary. Use a 9mm open end wrench to hold the stud in place while you loosen the 10mm nut.

5mm Allen

Install the adjustable headlight leveling sensor bracket onto the sensor arm so that:

☐ The adjustment holes on the bracket face **UPWARDS**

☐ The ECS Logo faces **OUTWARDS** (towards the outside of the vehicle)

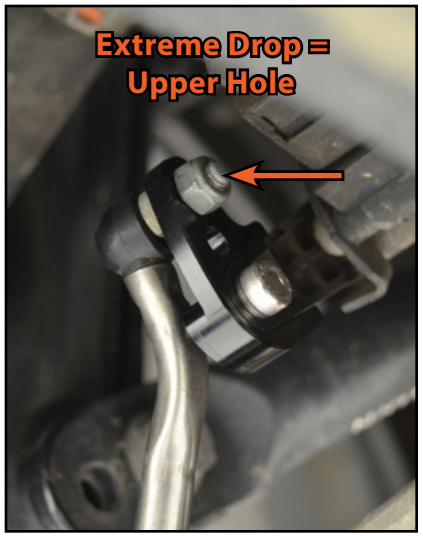
Tighten the bracket screw until it makes contact + ⅛ turn.

9mm Wrench, 10mm Socket & Torque Wrench

Now we need to select which mounting hole you need to use for your application:

- Please refer to Page 10 for more information.

Use a 9mm open end wrench to hold the stud in place while you torque the 10mm nut to 10 Nm (7.4 Ft-lbs). Repeat this process on the rear sensors.



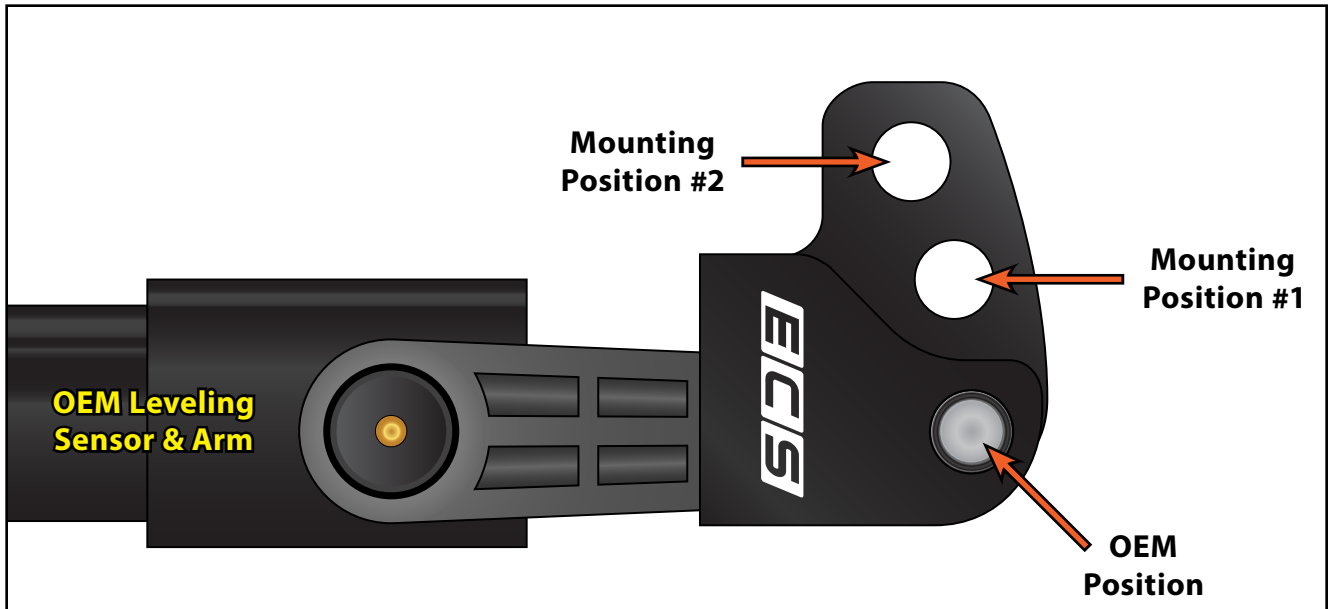
DETERMINING WHICH MOUNTING POSITION TO USE

Adjustable Mounting Points

Let's take a moment to determine where you need to attach the headlight leveling sensor rod to the new adjustable mounting bracket. The diagram on the right shows the new bracket installed onto an OEM Leveling Sensor & Arm, secured into place with the supplied hardware in the "OEM Position". Now our adjustable mounting brackets have two possible mounting positions, allowing you to fine tune for your exact needs.

The table below the illustration details which mounting positions you might need to use depending on how much you have lowered your vehicle. Please note that the table shows mounting positions for both the **FRONT** and the **REAR** brackets. This table is meant to be used as a general guideline, if you find that this information doesn't fit your needs, feel free to select different mounting positions and re-check.

We're almost done, continue to Page 11 for instructions on how to check the angle of you headlight beams, and how to adjust the beams if necessary.



Lowered Amount	Front Mounting Bracket Position	Rear Mounting Bracket Position
Approx. 1"	#1	Stock or #1
Approx. 2"	#2	#1
3+"	#2	#2

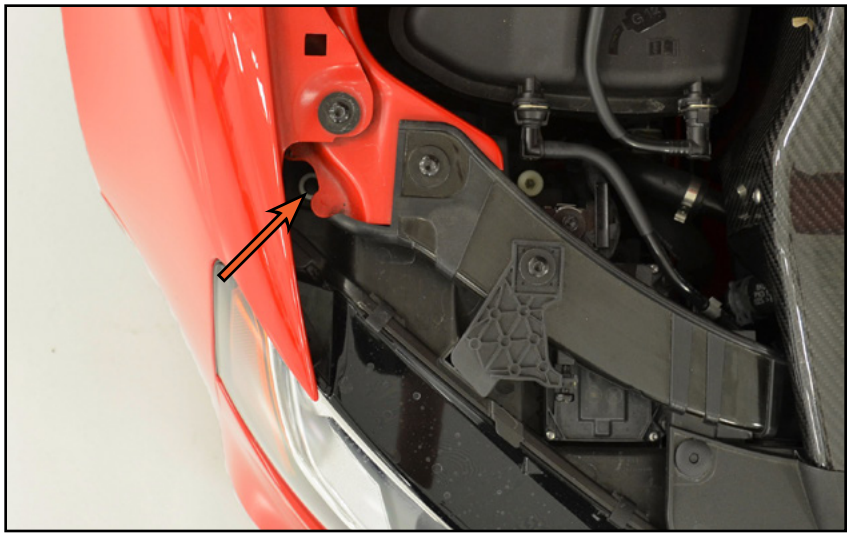
This table is meant to be used as general guideline, your application may differ slightly from these specifications.

ADJUSTING THE HEADLIGHTS

Step 1: Phillips Head Screwdriver

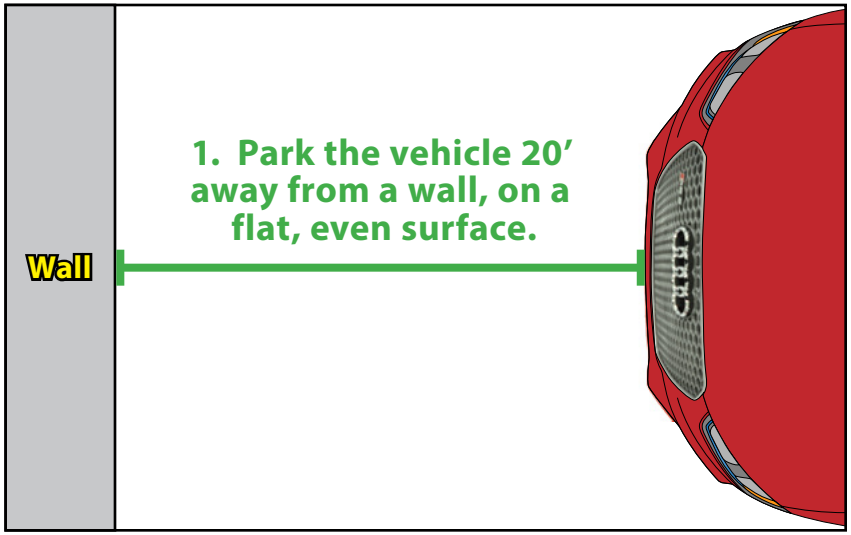
As we discussed earlier, this section is **JUST IN CASE** you need to adjust the headlights on your vehicle after installing the new brackets. This process might be required if your vehicle is lowered to an extremely low height, or maybe if it is on air suspension. A mild to moderate static drop **SHOULD NOT** require these steps.

This photo shows the location of the vertical adjustment screw on the headlamp assembly. This screw can be adjusted with a #2 phillips head screwdriver, turning it clockwise will **RAISE** the beam, counter-clockwise will **LOWER** the beam.



Step 2:

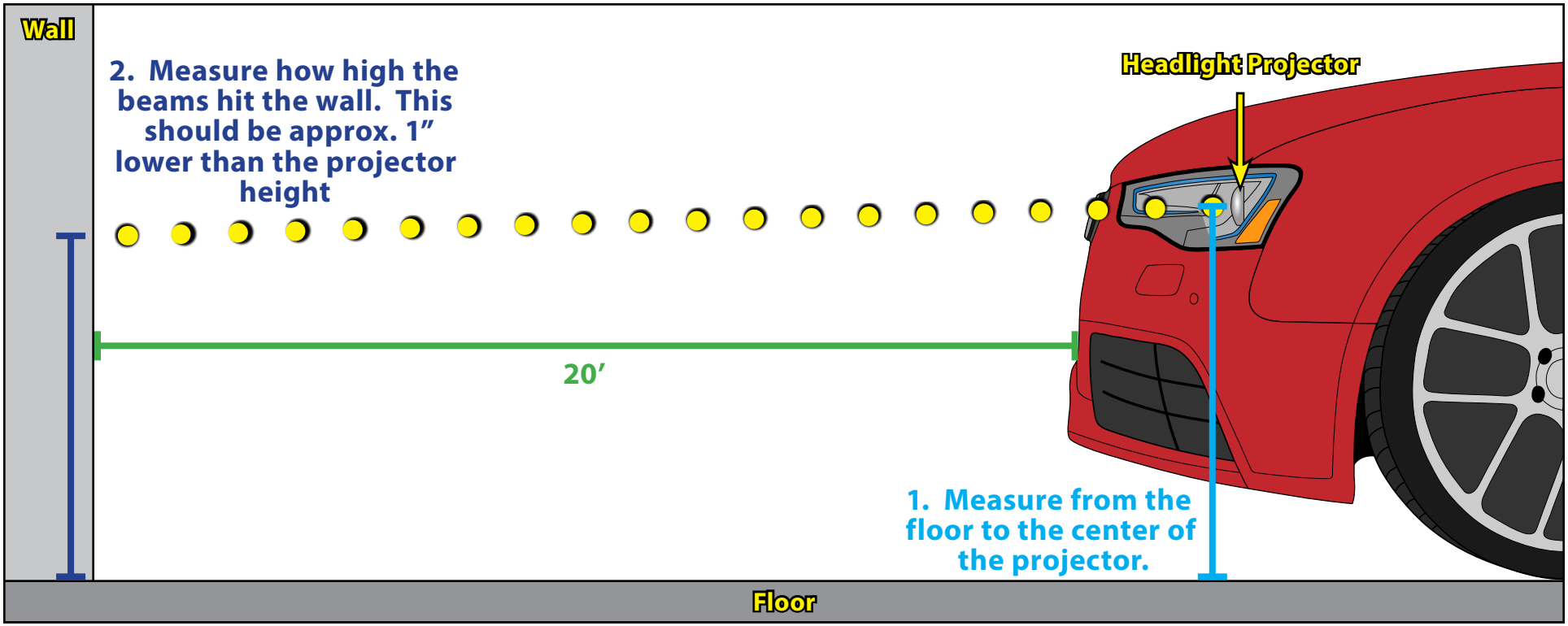
Park the vehicle 20 feet away from a wall, ensuring that it is on a flat, even surface.



ADJUSTING THE HEADLIGHTS

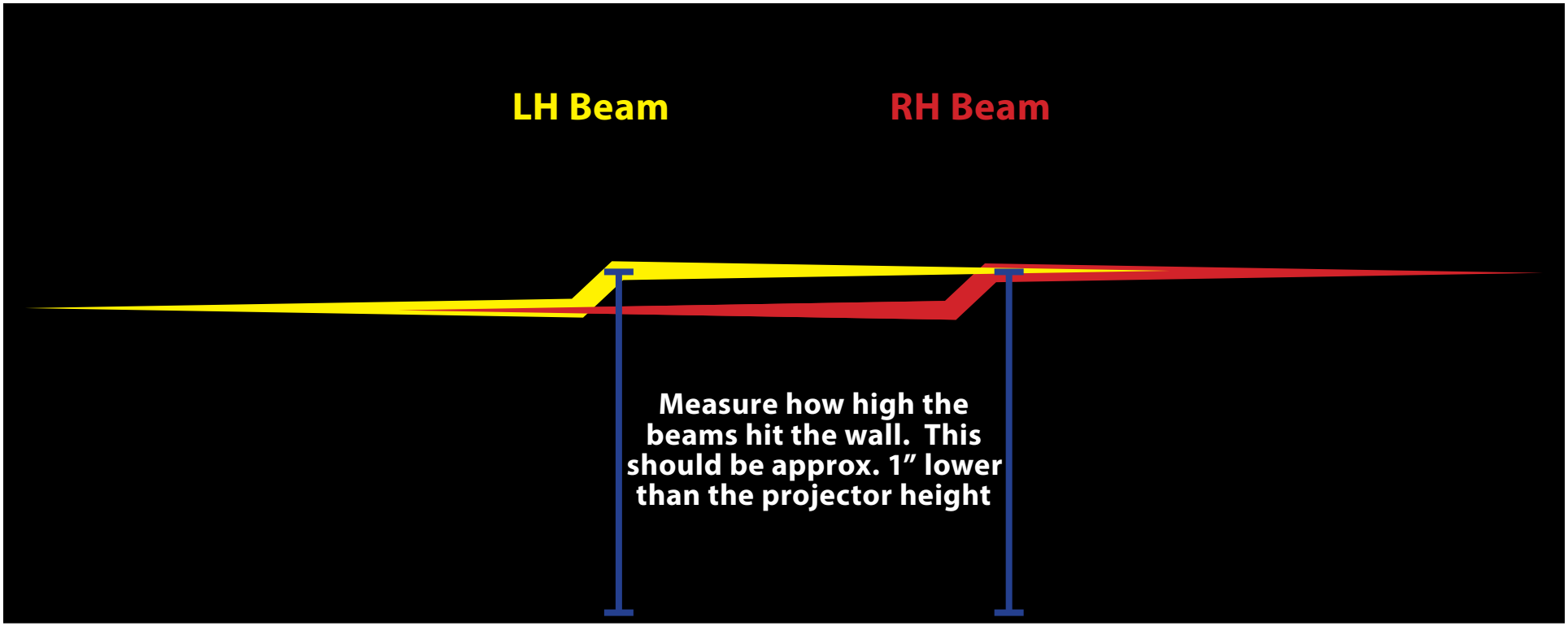
Turn the headlights on and measure from the ground to the **CENTER** of the headlight projector (let's say that height is 25" for the purpose of this example). The headlights should hit the wall at a height approximately 1" lower than the height of the projector over the 20' span, this translates to approximately 1-1.5° of decline, which is the proper specification for a B8. This adjustment will allow you to illuminate the road without blinding other drivers in the process.

Now the beams will not appear "flat" on the wall when they hit the wall, proceed to the next page for an example of what to look for.



ADJUSTING THE HEADLIGHTS

Projectors produce a light pattern as shown in the illustration below. When you take your measurement against the wall, it is important to measure from the HIGHER end of the beam towards the center (shown with the **BLUE** lines below). This will provide the maximum illumination for the road and surrounding area, while preventing oncoming traffic from being blinded by the lights.



SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.

Your Adjustable Headlight Leveling Sensor Kit Installation is complete!

These instructions are provided as a courtesy by ECS Tuning

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