

Tools You Need:

Screwdriver, Dremel with a sanding drum or carving bit, security screw bits (for US Ellipsoid headlights), high temp sealant (Ultra Black), high temp thread sealant, painters tape or a vacuum and compressed air.

To seal the adapters to the factory headlight housings, you have a few options. The adapters are tight once the projector is installed and it makes it a little more difficult to get sealant on the adapter. You can carefully place a bead of sealant on the headlight housing lip, or alternatively, you can get butyl on amazon - which is a factory headlight sealant material. This may be easier to work with than sealant.

Step 1: Remove the factory projector

This entire installation will be easier if you remove the low beam housing from the headlight assembly - especially the MLED.

Remove the factory projector from the low beam housing. On the Bosch, Hella, and Depo smileys there are three screws - should be phillips - remove the screws and pull the projector straight out. On the Ellipsoids there are three security screws, you'll want to use a security bit and remove the screws and the projector.

Bosch: You will be reusing the large o-ring that seals the factory projector to seal the adapter. Do not lose them.

US Ellipsoids: You will need to remove the low beam housing from the bracket for final installation of the adapter. This would be a good time to do it.

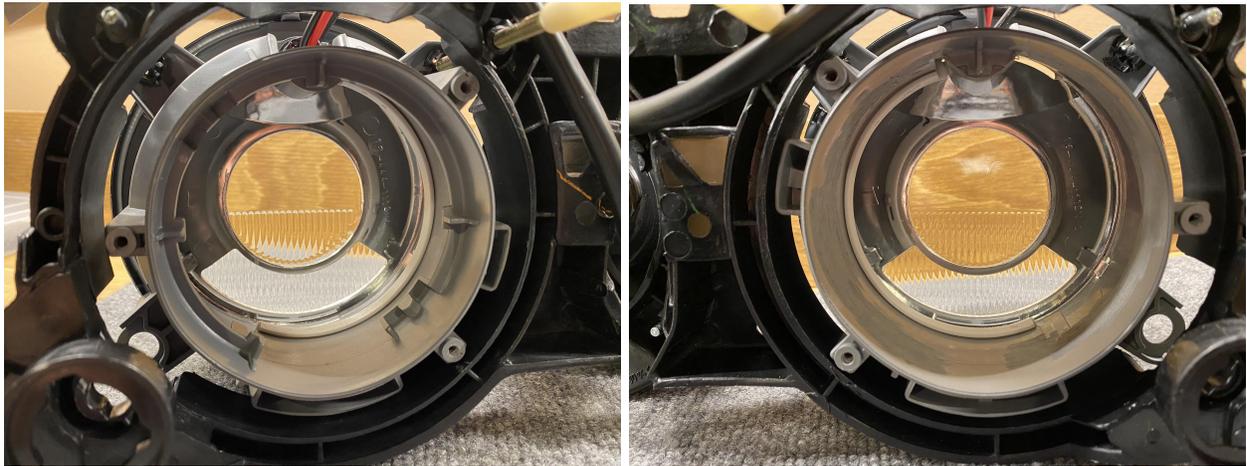
Step 2: Prep the housing

US Ellipsoids: Before you remove the internal ridges and factory projector mounts, use the provided alignment tool to mark the top hole of the adapter.

1. Install the alignment tool using the factory mounting points and screws.
2. Mark the top hole that will line up with the hole on the adapter. You will need this to properly install and line up the adapters because we will no longer be using the factory mounting points.
3. Test fit the adapter after marking the top hole to ensure it is marked properly and to mark the two lower holes.

Use your dremel to remove the ridges inside the headlight housing. On the Smiley headlights, be sure not to damage the DRL opening. If you have an air compressor, simply go to town removing the ridges, vacuum out the headlight, and then blow the rest of the dust out with compressed air. If you do not have an air compressor, use painters tape to seal the bottom of the headlight while you are removing the ridges.

Tip: Use a dremel carving bit such as the Dremel 9901 bit to cut the ridges instead of sanding them with a drum. I have been using this bit and can have the headlights prepped in about 5 minutes.



Step 3: Assemble The Adapters

The aluminum plates are secured to the adapters using four provided screws.

1. Install the provided breather vent on the metal plate.
2. (D2S) Install the provided bi-xenon bulkhead on the metal plate.
3. Run a bead of sealant on the mounting lip of the projector plate and install the aluminum plate.



MLED: The middle mounting hole for the projector should be on the left side of the adapter plate.

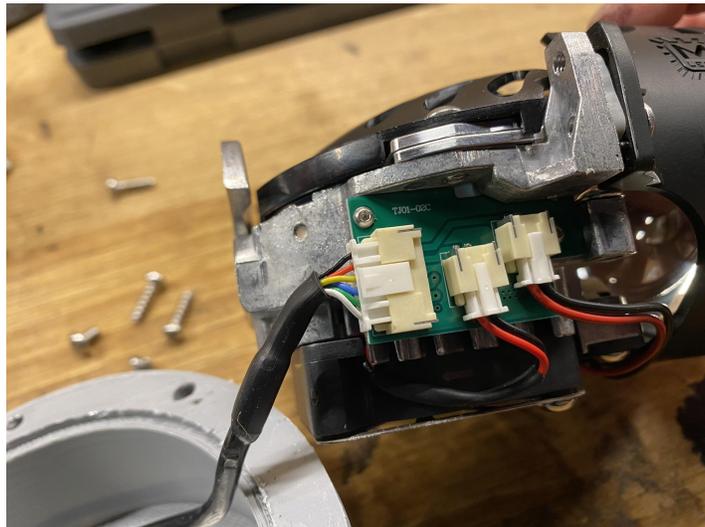
Step 4: Assemble the Projectors

Morimoto MLED:

1. Remove the 4 screws (two on each side) of the lens bracket. Pull the lens off and remove the metal bracket that is sandwiched between the lens and projector assembly. Reassemble the projector using the provided spacers in place of the bracket that was removed.

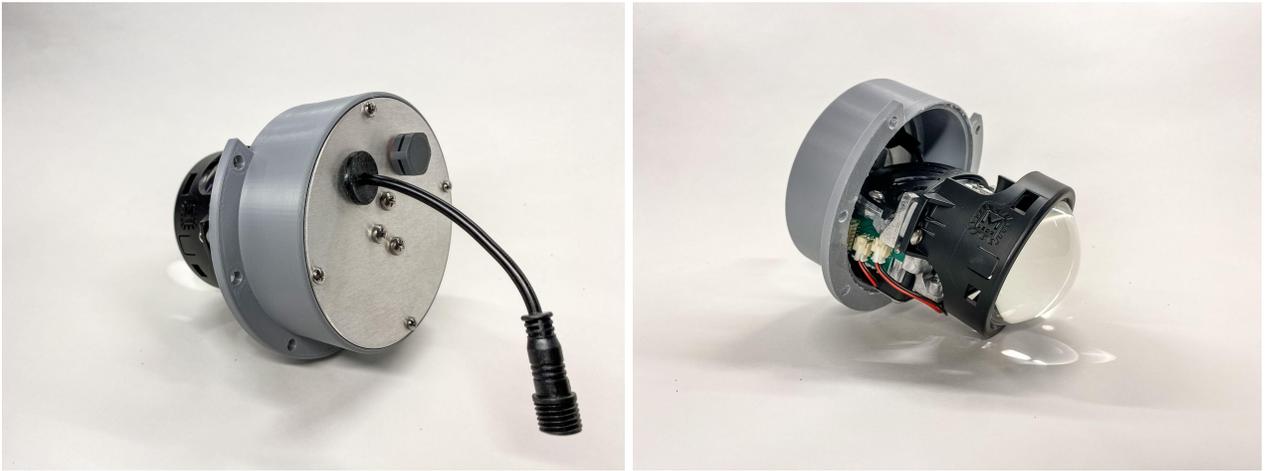


2. Remove the small bracket that is holding the power wire near the main connector and set aside.



3. Wipe a small amount of high temp sealant on the back of the projector assembly where the three screw holes are. Line it up with the aluminum plate, apply a small amount of thread sealant to each of the provided M4 screws and install.

4. Run the power wire out of the larger of the two holes on the plate. The breather vent should already be installed at this point.



D2S:

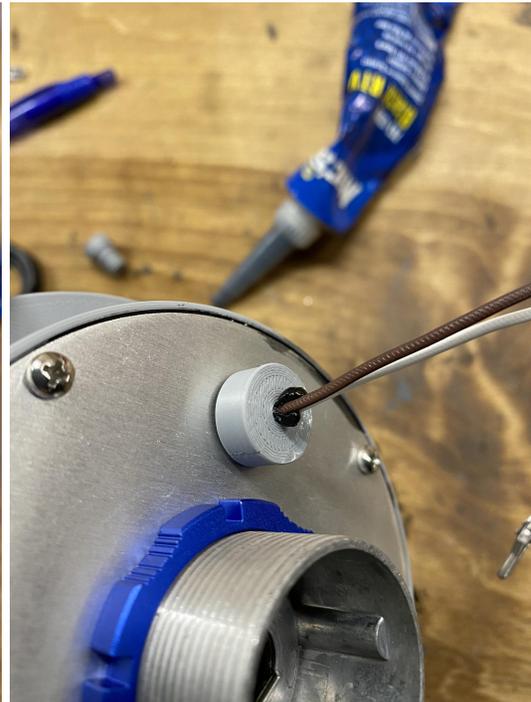
1. Cut the bi-xenon solenoid wires closer to the solenoid connector. From the outside of the adapter, feed the wires through the cap and through the passthrough that you already installed. **Very important to ensure it is all assembled correctly before crimping the wires inside the housing!**



2. Splice the wires back together on the inside of the adapter with the provided butt crimps **once you have double checked that everything is in the correct order! Otherwise you will have to cut the wires and do it again!**



3. Plug in the bi-xenon connector. Install the large silicone washer on the back of the projector and slide the adapter over the threaded shaft, tighten down the retaining nut.
4. Put a dollop of sealant in the wire passthrough and install the cap to push the sealant into the holes and seal the wires.



Step 5: Install Adapter

This is where having the low beam housing removed from the headlight assembly makes it easier. The MLED adapter is very tight and it will likely be easier to run sealant on the lip of the headlight housing rather than on the adapter. Alternatively, you can find butyl on Amazon to use as sealant instead.

Hella & Depo: Run a small bead of sealant (or butyl if you wish) on the lip that will be seated against the headlight housing. Use the provided screws to install the adapter. You don't have to crank these screws down.



Bosch: There is an alignment line on the adapter to align with the center ridge on the top of the headlight housing. Align the adapter before tightening down the provided screws.

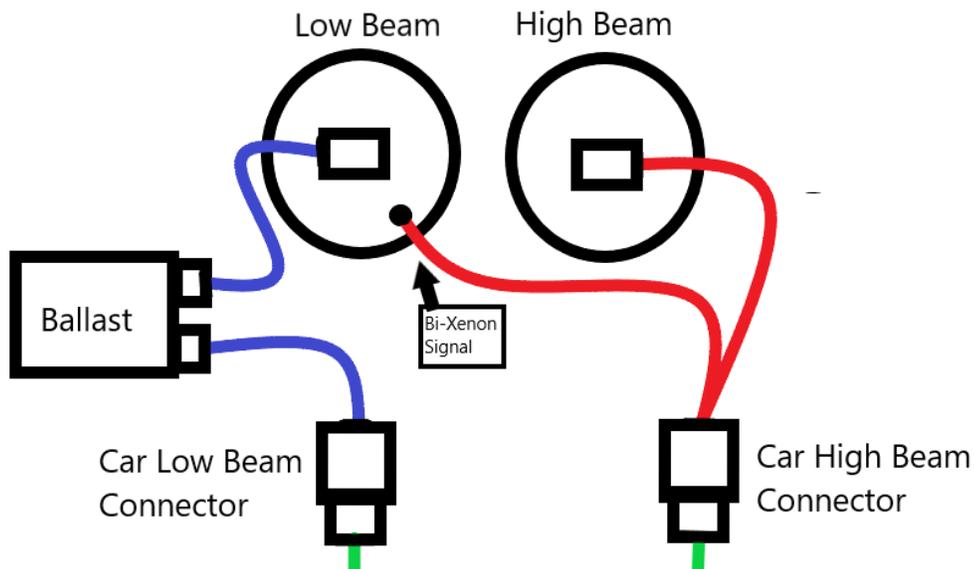


US Ellipsoid: Because of how the mounts are designed for the ellipsoid headlight, we will be using the three tabs on the adapters and creating new mounting holes on the housing.

1. Drill a small hole for the provided M3 screws at the points that you marked earlier.
2. Run a bead of sealant on the seating surface and a hearty layer of sealant on the inside of the mounting tabs.
3. Once lined up, put a dollop of sealant inside the screw holes and thread in the provided screws.
The purpose of this is to seal each of those screw holes.

Step 6: Plugging Them In

Before you begin: All these projectors are bi-xenon. Which means there is a shield inside the projector that creates the cutoff. When activated, the shield drops down and the cutoff is gone, giving you the full light output of the projector as a high beam. This means it needs a signal from your high beam headlights. This can be easily accomplished using a high beam splitter. As the name suggests, this takes your car's single high beam connector, and makes it have two connectors: one for your high beam bulb and one for the bi-xenon solenoid. In order to take full advantage of the projectors, this is something that you will need to do. Below is a basic diagram of how the projectors are installed. The only difference is the MLED projector's ballast has the bi-led signal instead of a separate plug on the projector itself.



MLED: The MLED projectors are very simple to plug in. The included ballast plugs into the projector lead coming out of the back of the plate, and the other two connectors on the ballast are marked for low beam and high beams. Simply plug in your low beam connector into the plug marked low beam and your signal from your high beam connector into the plug marked high beam.

D2S: The D2S bulb harness plugs into the ballast, and the low beam connector on the car plugs into the other connector on the ballast. The bi-xenon solenoid plugs into whatever you choose to get signal from the high beam connector.

I would recommend using the HD Power Relay for the installation of the D2S because they use more power than the LED projector. The HD Power Relay gets a constant 12v source from the battery using a location of your choosing and uses the passenger or driver side low beam connector on the car as the relay switch. The connectors on the relay harness are all marked with what needs to be plugged in. **There is a video on the website that shows how my setup is installed. Please watch that for tips on how to install your harness. I will only provide very limited guidance on wiring because I do not want to be responsible for misinterpretations on how to do wiring.**

Step 7: Aiming

I am going to direct you to do your own research on this. It would be redundant for me to type this out when there are already countless youtube videos and tutorials throughout the internet going into much more detail on how to do it than I could easily type here.

COMMON QUESTIONS:

Will I have a warning light if I use the HD relay?

The short answer is yes. A relay using a constant 12v and a signal or switch feed to power whatever it is you're powering. Because you are using one low beam connector as the switch for both low beam feeds from the relay, one of your car's low beams will be disconnected.

Where do I get power for the relay?

You need a constant 12v source of power for the relay. My battery is in the trunk, so I used the power junction block located on the PS firewall. Beyond that, this is something you will need to do your own research on. Like I said earlier in the guide, I am not going to provide much direction on wiring because I don't want misinterpretations of it and be responsible for you messing something up. Installing these requires some very basic automotive wiring understanding and there is lots of information on this on the internet.

Why do my low beams turn off when I turn on my high beams?

Because your car is wired for Sealed Beams. You will need to do research on converting from sealed beam wiring to projector wiring. There are lots of guides on the internet that cover this.