



# INSTALLATION INSTRUCTIONS FOR P46 Projector Headlight Kit

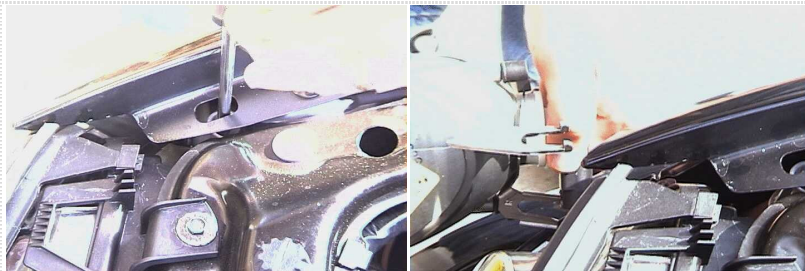
Thanks for purchasing your projector headlight kit from Bimmian.com

These instructions are for E46 but are very similar for other models, such as e90, e36 and x5, however, the electrical details such as where to plug the harness into the car will differ.

**Before you begin** Inspect and test your kit prior to installing. If anything is not working, best to get it replaced before taking your vehicle apart. As always, when working with anything electrical on your car it is recommended that you disconnect the negative terminal from the battery before beginning.

## Step 1 - Remove Parking Light

Upon opening the hood of the car, note the location of the turn signal. There are 3 main styles of turn signals with 2 main release mechanisms. Shown below is the most common Philips screw mounted turn signal - this comes in the post 2001MY cars for most of the headlights shown above. Model Year 1999-2001 will have a push down tensioned clip to remove. This clip is found in the same location as the screw and just requires a gentle push to release.



## Step 2 - Lower Trim Piece Removal

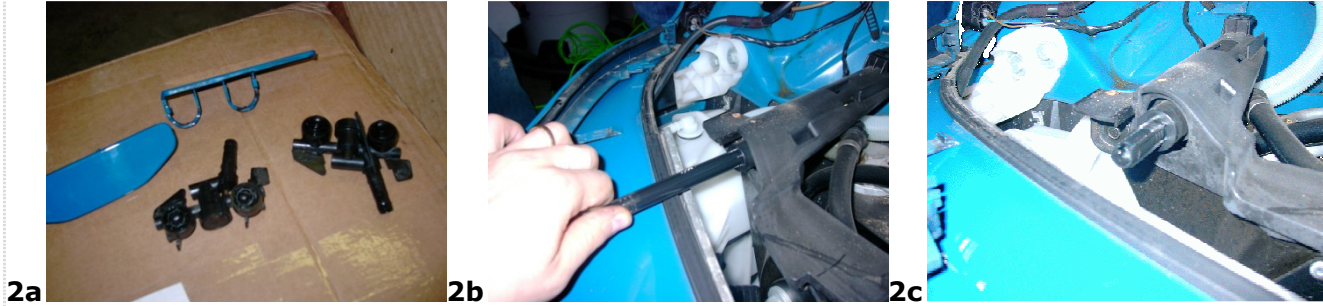
The first step to make is to pull the lower trim piece off of the front of the car. This can be really easy on new cars, or can be particularly difficult on older, longer used cars due to the plastic "seating" more permanently. To start, pull on the inside of the trim piece located nearest to the kidney grills. Pull out towards you, be firm. You will hear a total of 4 clips coming out, the first one will be loud, the next two will be softer and are located just under the lower clips of the headlight, and the 4th clip will be the loudest and most difficult (order: inside grill to outside fender).

Upon pulling the trim piece, do not detach from fender unless your car is a 2002 Sedan Facelift model. Shown below is a non-facelift model.



**Note:** See 2a - 2d for detailed pictures of removal of lower trim piece with washer system. The washer system requires no special care, but does require some preparation. Place towel under washer

nozzle/washer trim, pull from behind released trim piece to pull free the washer trim and nozzle, then just pull on the washer nozzle with some force (you may twist gently). Upon removing the washer nozzle there is a 50% chance that the washer fluid reservoir will begin to drain out, this is normal. DO NOT RELEASE THE WASHER PLASTIC HOSE UNLESS WEARING EYE PROTECTION. Gently release hose taking care to either cover the opening of the hose or stepping to the side to prevent water from spraying you.



### 3. Remove Headlights

Disconnect both electrical connections from the two locations on the headlight.

Once the lower trim is off the headlights, it is now possible to access 4 screws. 2 on top and 2 behind the light. Remove these screws and lift headlight out of the vehicle.



### 4. Insert HID / bulbs into headlights

Before installing the headlights into the car, it is easiest to install the bulbs. A standard rotate-to-release retention mechanism is used to hold the high beam/daytime bulb in place. If applicable remove and replace this bulb.

For the low beam (projector) remove rubber cup from the backside of the light. This will expose a metal clip which is used to hold the bulb in place.

- If you are installing XENESIS bulbs, unlock and pull back the bulb retention clip, insert bulb and reattach retention clip. Once completed, plug yellow/black wire into the base of the bulb and replace rubber boot.
- If you are installing XENOFLO bulbs, unlock and pull back the bulb retention clip, insert bulb and reattach retention clip. You may now choose from two methods for wiring

- Ignore the yellow/black wires found inside the headlight and the associated connector that comes out of the headlight. Also ignore the two wires attached to the hid bulb that do not run into the bulb. Cut a slit into the rubber boot, and run the two wires out that connect directly into the bulb. Reinstall rubber boot onto back of headlight.
- ALTERNATIVELY, for a cleaner installation: check to make sure that the grommet that comes with the HID kit will fit into the grommet hole in the lower corner of the headlights. If so, remove the grommet from the headlight that contains the black/yellow wires. Pull the wires/connectors through to completely remove them from the headlight. Remove the two unused leads from the HID light bulb from the grommet which came with the HID kit. This next part may be tricky but is possible. Feed the 2 connectors + wires that came with the HID bulb through the hole in the headlight that you removed the grommet from. Pull the grommet through the hole to create a seal. NOTE not to pull hard on the connectors, or on the wires where they attach into the bulbs. Pulling too hard on these will cause them to detach, and this is not covered under warranty.

## 5. Install headlights into car

- Repeat instructions in the steps above, but in reverse order to install the headlights back into the car.
- Connect the correct leads into the connector for the high beam lights.

## 6. Install ballasts

- On the back of each headlight you will find 2 connectors, with two white wires going into each.
- Take one ballast and attach the two connectors to the connectors coming out of the headlight.
- You will also have two leads coming out of the HID bulb that are sticking out of the light. Connect the HID ballast included with your kit to these two connectors.
- On the end of the vehicle wiring that used to go into the low beam from your old headlight is a connector, plug this connector into the socket on the HID ballast.



## 7. Install halo wiring

**7a) Lay the wire harness on top of the engine bay.** The relay should be near the passenger side positive (+) battery terminal. See image below for the correct positive terminal. The shorter end of the harness coming from the relay should follow the passenger fender to the passenger headlight. The longer end

end should go across the engine to the driver's side fender towards the driver's side headlight.



**7b) Ground the relay.** Use a *10mm socket* to remove the 10mm nut located in the passenger power terminal area. Mount your relay and ground here. The ground wire is the short black wire coming out of the relay with a ring terminal at the end of it. See picture below. Optionally, you can utilize the factory 19mm ground terminal as pictured in the previous step (step 7a).



**7c) Route the short harness to the passenger side headlight.** If you lift the weather stripping from the passenger side power terminal area, you can slide the harness under the factory harness bundle then route it down the passenger fender to the passenger headlight.



**7d) Connect the black rectangular ballast ballast box to the harness (pictured below) and also to the passenger side Angel Eyes (not pictured).** Do not mount (tape) the ballast box just yet.



**7e) Route the long harness across the top of the engine and secure it over the OEM wire holder.** See pictures below.



**7f) Route the long harness through to the brake fluid / ECU box area then down the drivers side fender.** I chose to go through the OEM weather stripping as pictured below. Leave the trigger wire in the ECU box area for now and run the harness down the drivers fender (being as neat as possible).



**7g) Connect the black rectangular ballast box to the harness and drivers side Angel Eyes.** Do not mount the ballast box just yet.

**7h) Connect the red wire from the relay to the positive (+) terminal found in the power terminal area.**

**(NOTE: If you have the OEM Navigation, make sure it is completely turned off and not on before beginning. There is a chance that your navigation can become damaged if you pull the power when it is powered on.)**

First you must locate the OEM hood switch and unplug the connector. Next lift the weather stripping out of the way then lift the cover up by grabbing under where the positive terminal is. See first picture below. Use a 13mm socket to remove the 13mm nut from the positive terminal. Locate the red wire (with an inline fuse) coming out of the relay and mount it on the positive terminal. I chose to install the red wire underneath the OEM battery cable. Do the reverse to put it all back together then zip tie any loose cables. *TIP: If you zip tie the inline fuse holder to the relay as pictured below (3rd pic on the right) you'll have easy access to the fuse).*



**7i) You are now ready to test your Angel Eyes.** Coming off the relay should be a second trigger wire. After temporarily reconnecting the negative terminal to your battery, have someone touch the brown wire to the positive terminal or use a clamp then examine if your Angel Eyes work. If all is good, remove the brown wire from the positive terminal.

**7j) Assuming everything is in working order after testing it above, you can choose to mount the rectangular ballasts now or wait till you are done with your install.** Mount directly on top of the headlight tucked under the radiator support where you can not see it. See image below.

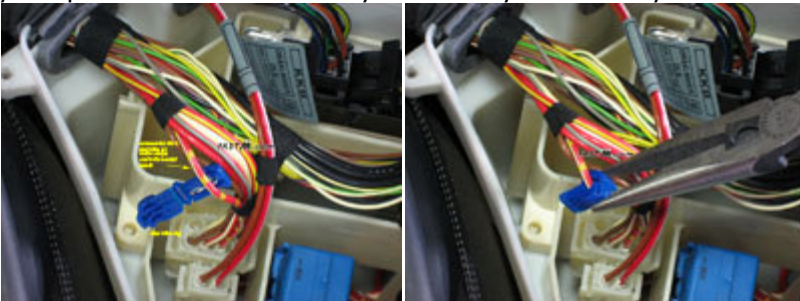


Note: The Accessories wire method is one of many ways to wire the Angel Eyes. This method will allow you to have the Angel Eyes on all the time whenever the car is running. This is independent of whether your headlights/parking lights are on or off. When you turn off your car, the Angel Eyes will stay on for a few seconds since there is still power through the accessories wire. This will not cause any power drain issues as the Angel Eyes do not draw a lot of power.

**7k) Open the cover to the ECU box using a Torx 25 bit to remove four Torx head screws.** (Note: Some earlier cars might be HEX 27). Once the screws are removed, tilt the cover up and pull out.



**7l) Locate the red wire with white stripe and yellow/gold tracers.** Install your blue wire tap using your pliers. DO NOT cut any wires or yank on any wires.



**7m) Route the red trigger wire into the ECU box and connect the end to the blue wire tap.** I chose to lift one of the rubber grommets and lay the red trigger wire under. You can fish it through the grommet if you like for a more professional look.



**7n) Test the Angel Eyes by turning your ignition to position 2.** If your Angel Eyes light up then you are good to go and you can begin cleaning up the loose ends.

**7o) Reinstall the ECU box cover at this point if your Angel Eyes are working ok.**

**7p) Tape the 2nd Trigger wire.** If you are not using the second trigger wire (wire closest to relay), you should tape it using electrical tape and tuck it away. Make sure to tape up the connector end so that it doesn't accidentally get in contact with the frame of the car.

**7q) Zip tie the harness.** Using zip ties, secure the harness down along the fender, etc. Make sure no wires come in direct contact with the engine.

**7r) (*Optional, assuming you made a slit on the rubber boot from steps above*) Silicone the incision area on the rubber boot where the Angel Eye wires were installed.** This should prevent any moisture from possibly getting into your headlights.

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