

# Acura NSX DIY LED Taillight Kit

Thank you for purchasing the Acura NSX DIY LED taillight kit. This instruction manual will guide you through the necessary steps to correctly install your purchased LED modules, to be mounted in the Acura NSX taillights.

## Required Tools and Supplies:

- Handheld rotary tool, such as a Dremel, with a cutoff wheel, a sanding band (preferably around 60 grit), and a 7/64 in. or 1/8 in. drill bit.
- Handheld drill with 7/64 in. or 1/8in. drill bit (optional).
- Philips head screw driver.
- Flat head screw driver.
- Heat gun.
- Working stove top (large enough to hold a lobster pot or equivalent, around 12 in. in diameter).
- Large pot, like a lobster pot or equivalent, with a diameter around 12 in. and height near 12 in. or taller (the taller the pot, the easier it will be to pull the taillights apart).
- 12 volt power supply (drill battery, old computer power supply, etc.).
- Utility Knife.
- Caulking gun.
- Tube of 100% clear silicone caulking (Preferably GE Silicone I).
- Clear epoxy glue (preferably syringe type for clean application and no premixing).
- Pliers
- Clamps (Optional)

## Instructions:

1. First, test all the LED modules provided in the kit with a 12 volt power supply or something close 12 volts. I use a Samlex 13.8V regulated DC power supply. (Ref. 1A) Connect the shell of the bulb base to ground and connect the positive wire lead from your power source to the contact point on the bottom of the bulb base. (Ref. 1B) If you are testing the parking/brake lights, test both functions to see if they work properly. If one of the modules does not work properly, please contact me using one of the methods provided at the end of this manual.
  
2. Next, you are going to open your taillights. Take your time and be delicate during this process, your taillight lenses could possibly become cracked or scratches, if not handled correctly. Start by unscrewing the 5 screws from the top trim plate on the back side of the taillights using a Philips head screw driver. (Ref. 2A)

3. Next, take your lobster pot (or equivalent) and fill it with water near to the top, but not completely full. Next, stick the pot on the stove and turn the stove up high, to get the water up to boil. Wait till the water starts boiling, and then you can start dipping your taillights in the water.
4. Dip one end of your taillight in the water and let it stay in the boiling water for about a minute. After a minute, take the taillight out, and with your flat head screw driver, start working it in between the taillight lens and the taillights housing. Use the screw driver as if you are shucking an oyster, by getting in between and turning the screw driver to pry up the lens. The key is also to get the tabs on the taillight lens loose from the housing. When you notice the taillight glue to become hard again, put the taillight back into the boiling water for another minute and repeat the process. You also want to flip the taillight around and dip the under side in also. The key is even heat and pressure on the lens. If you pry too much on one side, you risk cracking the lens. I like to dip one side and work it, then dip the other side and work it; basically go back and forth on the side until you get lens separated from the housing a little. Keep working the lens off the housing with the heat until you can safely pull the lens off the housing completely. Again, please TAKE YOUR TIME! Sometimes the glue in some spots is not as soft as others, so it might take a little patience pulling the lens off the housing.
5. Once the lens is finally pulled off the housing, place both the housing and lens in an area to dry. I would say either outside on a nice, sunny day, or in a dehumidified room.
6. After the taillight housings are dry, it's time to do some prep work to them. You need to get out the old glue from the channels, where the lens used to sit, in order to have the lenses go back on properly. Take your heat gun and wave it back and forth, working on little sections at a time, to soften the glue. (Ref. 6A) You'll notice the glue will become shiny as you heat it up. As soon as the glue becomes shiny, take your flat head screw driver and scrape out the old glue. (Ref. 6B) I like working a little section at a time on the housing, as opposed to heating up the whole taillights and scraping all the old glue out at once. You'll periodically want to clean off your screw driver, for the glue will stick to it pretty easily. Just place the screw over the heat gun and wipe it off. (Ref. 6C) You'll also want to get the glue off the inner side wall of the housing too. (Ref. 6D) The amount of time you take getting this glue out will determine how well your lens fits back on the housing in the end. You won't be able to get all the glue out, but you should be able to get most of it out. (Ref. 6E) By the end, you should have a nice pile of glue next to you for each taillight. (Ref. 6F)
7. Next, if they haven't come out already, pop out the plastic inner diffusion reflector pieces inside the taillight housings using a flathead screw driver. There is one for the parking/brake light and one for the turn signal. (Ref. 7A)

8. Then, unscrew all the metal reflector pieces inside the taillight. There is one for each lighting section in the taillight. (Ref. 8A) Pull out all the metal reflectors; you will not need them anymore. (Ref. 8B.)
9. Next take your rotary tool, with cutting disk attachment, and cut out the divider in the parking/brake light section. (Ref. 9A) Then cut off the little tabs that held the metal reflectors in place, making them level with the bottom of the housing. (Ref. 9B.)
10. Take your rotary tool (or optional drill) and using either a 7/64 in. or 1/8in. drill bit, and drill a hole through the screw hole that once held the turn signal's metal reflector piece. (Ref. 10A) If you have the 3-bar style parking/brake light kit, drill an additional hole at the "C" location, where the metal reflector holding tab use to be. (Ref. 10B)
11. Next, find one 1 in. flat head screw and a heat sink, provided in the kit. (Ref. 11A) Take your 1 in. long flathead screw, provided in the kit and place it in the new hole you made at the turn signals. (Ref. 11B) Take your heat sink and thread it onto the screw until the heatsink is tight on the housing. (Ref. 11C) It might seem rough to thread at first, but don't worry, the heatsinks are threaded customary while the screw is metric. The steel screw will be re-thread the aluminum once the screw goes fully through the heatsink. If you have the 3-bar parking/brake light kit, follow the same procedure with the screw and heatsink, but use the 5/8 in. Philips head screw instead. (Ref. 11D)

If you have purchased the LED turn signals for the 02+ taillights, please read steps 12 and 13. If this does not apply to you, skip to step 14.

12. In order for the LED turn signals to fit on the 02+ taillights, we need to trim the circular reflector plate. First, find you turn signal reflector pieces. (Ref. 12A) Using your rotary tool with cutoff disc, cut out the general perimeter of the plastic reflector piece; safety glasses are recommended. (Ref. 12B) You now want to take your sanding drum attachment for your rotary tool and sand the remaining reflector until it is smooth with the rest of the opening. You'll notice when sanding that the plastic will melt, and not sand off in nice pieces. In this case bring the sanding drum to be level with the lip, and sand around the perimeter of the piece, keeping the sanding drum close to the edge. (Ref. 12C) Do this until you make one full revolution around the perimeter. Once you make one full revolution, the perimeter should look like this: (Ref. 12D). Finally, take your pliers, and break off the melted pieces around the perimeter. When all the pieces are broken off, the perimeter should look pretty clean. (Ref. 12E) Take your sanding drum, and go around the perimeter again to sand it perfectly smooth. (Ref. 12F)

13. Next, you'll need to mount the turn signal LED module on the back of the original turn signal plastic piece. When you first mock it up, you'll notice it doesn't sit completely flush with the back of the piece. (Ref. 13A) You will have to do a little sanding to the outer LEDs and the inner housing, on the backside of the plastic piece. (Ref. 13B) Please careful when sanding the LEDs; be aware of the metallic wiring in the LED. You don't want to accidentally cut a wire trace and ruin the LED. After the necessary sanding it done, the LED module should sit flush on back of the plastic piece. (Ref. 13C) With the LED module mounted on the back of the plastic piece, take your clear epoxy glue and place some around the perimeter on the back side. (Ref. 13D) When it's all dried, take the voltage regulator attached to the turn signal and place it over the threaded bolt in the heatsink. (Ref. 13E) Then thread the nut over the bolt and tighten down. (Ref. 13F.) Finally, snap the turn signal module back into the housing.
  
14. It's now time start gluing in the LED modules into the taillight housings. Let's start with the parking/brake light. Take the green control module connected to the parking/brake light module and place it in the parking/brake lights section closest to the turn signals. Use the sanded indent in the control module as a guide to mount it in the proper location. (Ref. 14A) Make sure to also stick the wired bulb base from the control module underneath the control module and through the bulb socket hole in the taillight housings before you start to glue this module in place. (Ref. 14B) Next, lay the control module flat on the bottom of the taillight housings, and place your glue all around the edges of the module. If it helps, stick a weight on top of the control module, so the module doesn't move around when drying. Once dried, place the voltage regulator attached onto the threaded bolt in the heatsink, and thread a supplied metric nut on top of the bolt, and tighten down. (Ref. 14C) Once that is taken care of, place the entire LED parking/brake module in the taillight housing, and place glue all around the edges. (Ref. 14D) Make sure the parking/brake light module sits flat in the housing while the glue dries; it helps to stick a weight in the middle on top, to even it out. Repeat the same process on the other side.
  
15. Next, take your turn signal LED modules. Take the attached voltage regulator and place it over the threaded bolt in the heatsink. (Ref. 13E) Then thread the nut over the bolt and tighten down. (Ref. 13F.) Again, make sure you stick the wired bulb base through the socket hole in the housing before gluing down the turn signal module. Finally, place the LED turn signal module in the housing and put glue around the edges. (Ref. 15A) Repeat the same process on the other side.
  
16. Then, take your reverse light modules and again stick the wired bulb base through the socket hole, and lay the module flat in the housing. Make sure you mount the LED reverse module with the gap on the circuit board on the bottom side. (Ref. 16A) Glue around the edges and let it dry. (Ref. 16B) Repeat the same process on the other side.

17. It's time to put the lenses back on. Use your 12V power supply again to test if everything works before you put the lenses back on. Next, take your silicone glue of choice (I prefer GE Silicone 1 clear glue) and using a caulking gun, lay a bead of glue in the channels of the taillight housing, where the old glue used to be. (Ref. 17A) Take your lens, and start to put it back on. I like to get the outer edges of the taillights snapped in first; otherwise it will be a breeze to get one end in, and a pain to get the other end in. Press the lens on the housing until the tabs on the lens snap in on the openings in the housings. Go around the whole taillight to make sure all the tabs are snapped in. Once all the tabs are snapped in, wipe the excess glue from the edges of the taillights. If one or a couple tabs aren't holding to the openings in the housings, take a clamp to that area and gently clamp it down, make sure to stick a cloth in between where the clamp meets the lens to prevent scratching. (Ref. 17B) It is also a good idea to screw the top mounted backing plate back on the housing to make sure there are no gaps in between the backing plate and the lens. Let the glue dry for 24 hours.

So there you go, your finished project:



1A.



1B.



2A.



6A.



6B.





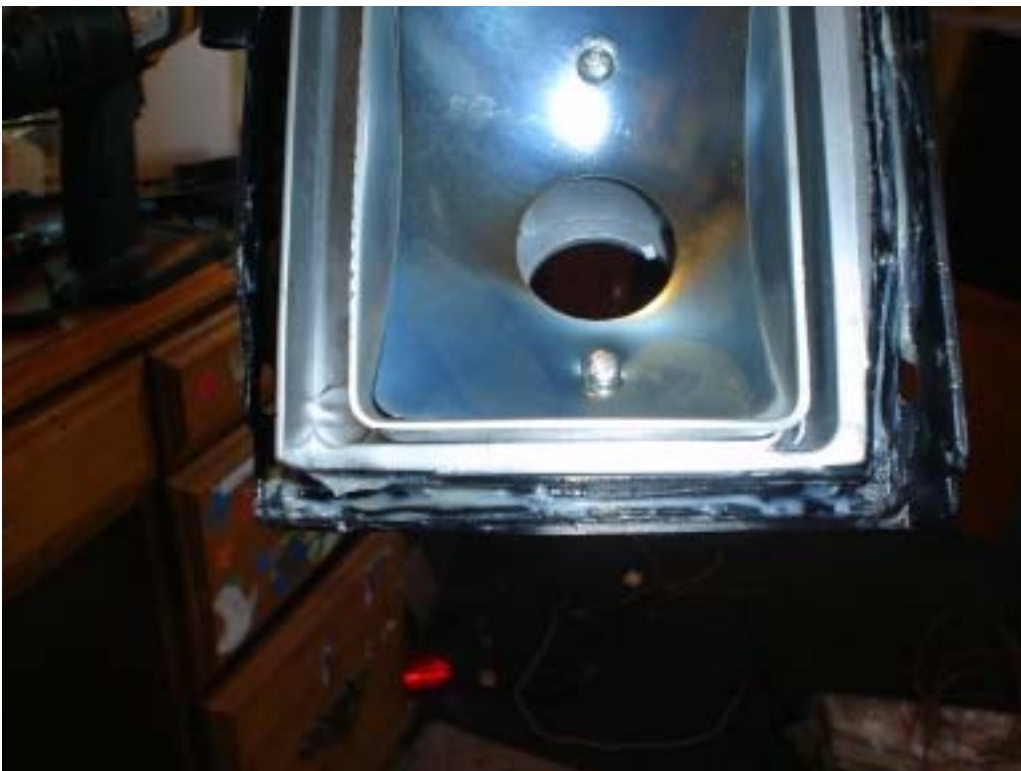
6C.



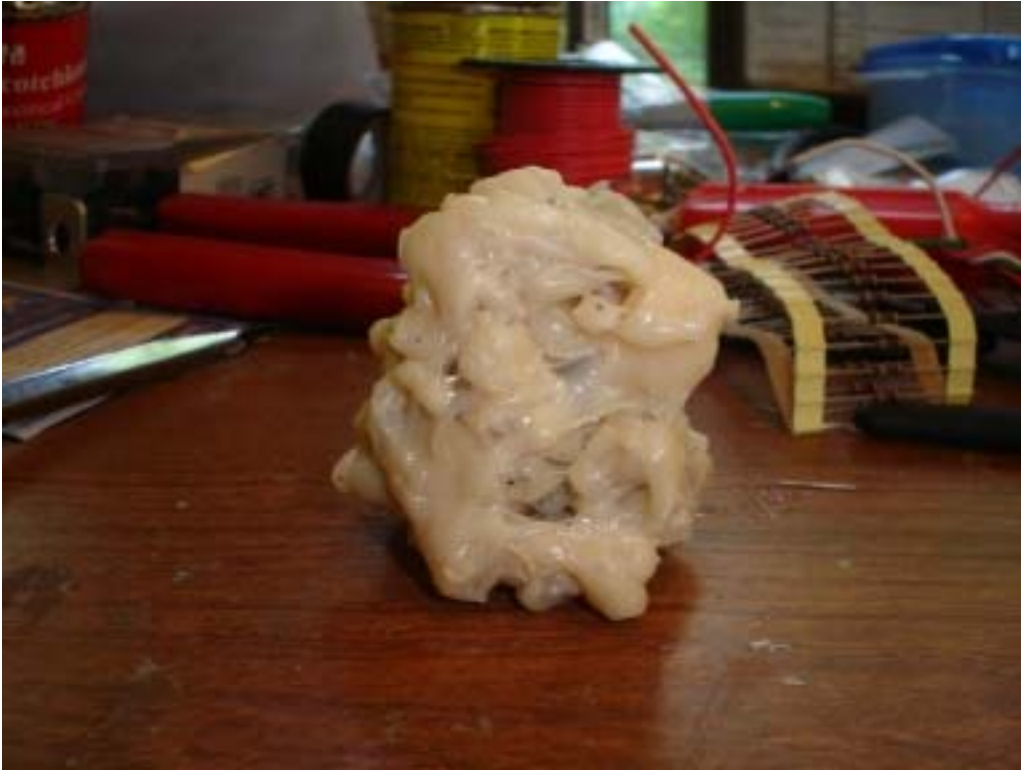
6D.



6E.



6F.



7A.



8A.



8A continued..



8B.



9A.





9A continued..



9B.



9B continued..



10A.



10B.



11A.



11B.



11C.



11D.



11D continued..



12A.



12B.



12B continued..



12C.





12D.



12E.



12F.



13A.



13B.



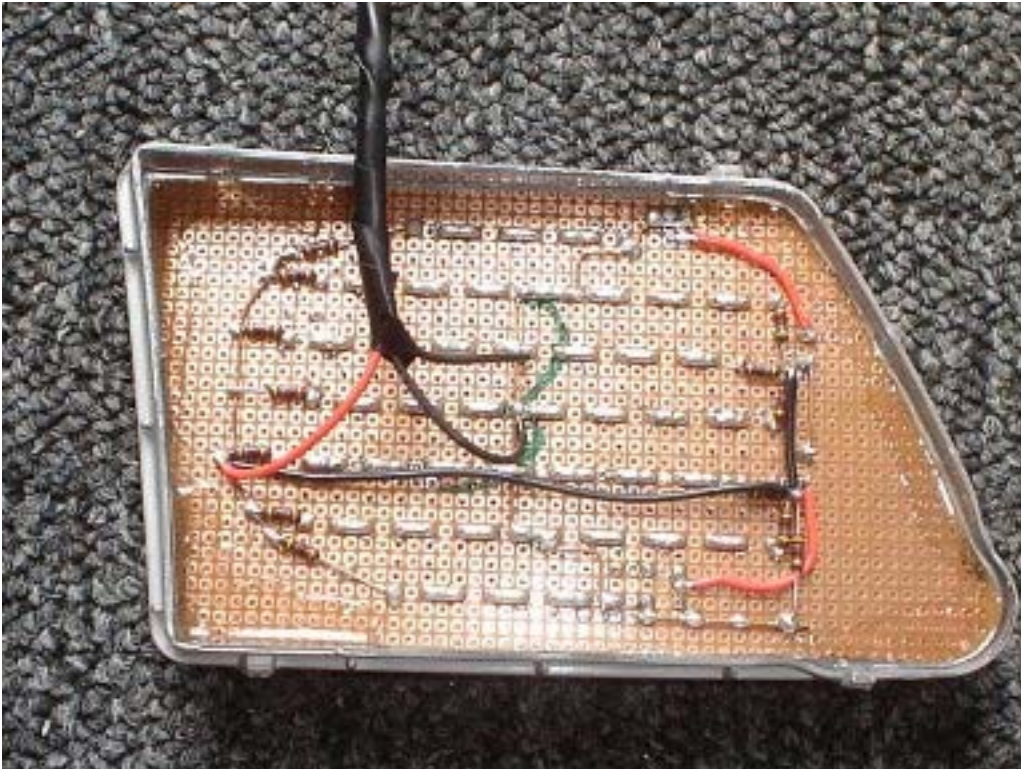
13B continued..



13C.



13D.



13E.



13F.



14A.



14B.



14C.



14D.



15A.





16A.



16B.



17A.



17B.



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