

Introduction

If you're reading this, you're probably thinking that the light in your main cabin of your CR-V is inadequate. Looking at what is available and what could have been done differently, everyone seems to have a suggestion. Anything from adding a second bulb to wiring in front map lights and cargo door light into the main dome would be good ideas. It occurs to me that this could have been at least partially corrected, for no additional cost by simply installing the dome with the switch to the back. Unfortunately, it's not symmetrical and you can't just turn it around.



I started this project with an intention of writing a guide, and a "measure twice, cut once" mentality. Despite being careful, that didn't protect me from a few mistakes, so I hope this guide helps you. I started by just opening things up and decided to take a look. One thing to remember is that you can't uncut a stock wire.

Section 1 – Getting into and understanding your interior lights

Part 1: The Dome Light



To get inside, I used a flathead screwdriver labeled 5-6 but you may want to go smaller for prying the light out. There are 2 catches that you can feel with your fingernail, towards the back of the light, on the lens. Slowly pull each side down, first one, then the other, evenly. You will just be able to get a screwdriver into the corner of the lens to “pop” it out.

This uses a 12 V – 8 W light bulb.

The two screws fit precisely a P2 sized Philips head screwdriver.



Pull it down gently.

The wires behind connecting the light look like 18 gauge, but when I had to strip them, I had to use a 22 gauge stripper.



If you try it now, you probably think you broke it, or jarred the bulb, blowing it. Don't worry; this is normal. If your door is shut, the "timeout" on the light has disabled that switch position, and the "On" position will not work without the two screws in (guess what? They're grounding screws!).

Part 2: Map Lights



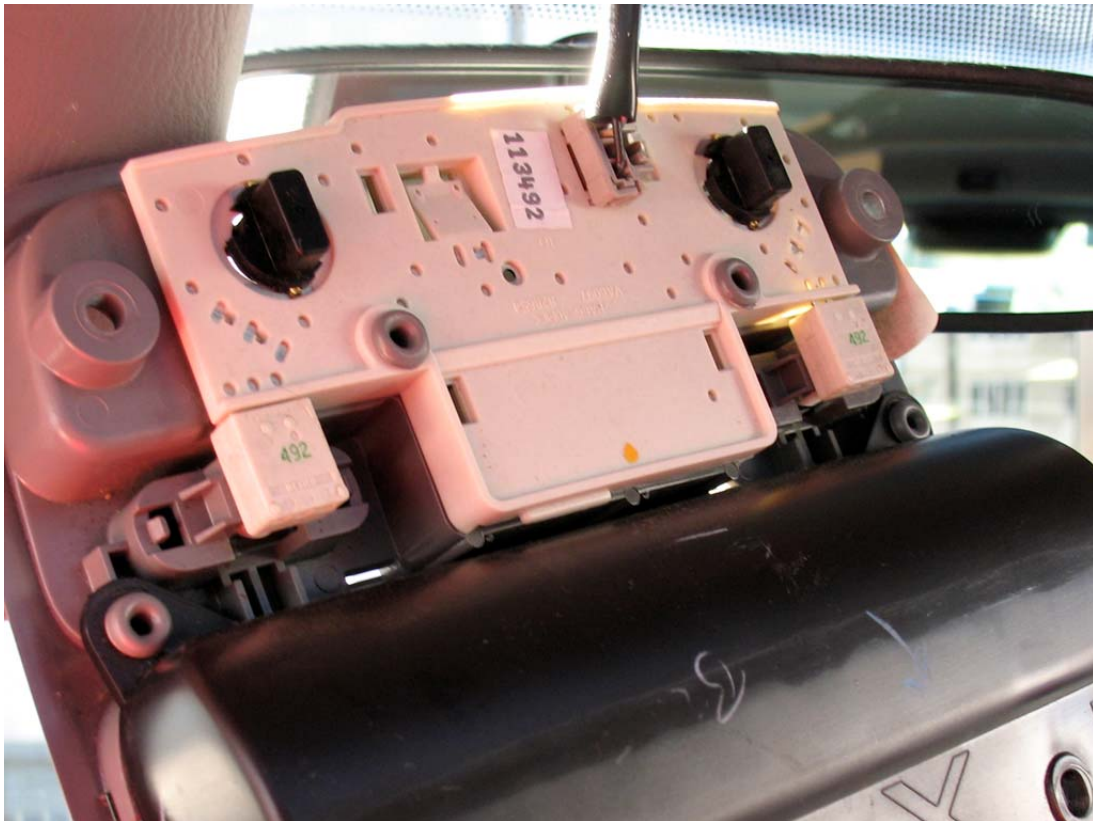
Extracting the map light lens is similar, but as you can see here, the pry-slots are towards the windshield.



Just undo the screws, pull down the side toward the windshield, slowly.



There are catches on the back to hold it in place



There isn't anything weird about the map lights to mention, like with the dome, except that the sunglasses holder should be used to hide some secret gadget like a rear-view camera, ScanGauge II, or radar-lock screen for your front-grille-to-moron smart missiles.

Section 2 – Wow, this moon roof trim looks like the easy part!

Pulling the trim is easy and you don't need to be that careful. The first thing you think is "this is more robust than I had thought it would be". That is misleading. It easily gets out of shape, if, say, someone moves it off of an even surface that it's laying on.



The best thing you can do is pull it away from the trim, so you can see the edge, and get the idea, then put it right back. Don't take the whole thing out, just a little at a time, then put it back after you're done running the wire.

Part 2 – You didn't listen, did you?

Don't worry, I'm a husband, father, and I own a bird; I'm used to it. If you messed up your trim, or otherwise can't get it back in, let it sit top-down (the flatter of the two sides) for a few hours on something solid. If you see any obvious kinks (creases) after that, try to correct them by GENTLY bending it back into shape. Now if it won't settle back in, it is most likely because the middle layer of the trim is landing over the edge of the ceiling. You will usually see the worst buckling around the trim seam, which goes towards the back of the CR-V. What you want to do is get that middle ridge of the trim to go back between the ceiling and the steel structure. If you look closely, the ceiling has 2 hard surfaces, and a semi-hollow middle (foam-type filler) that it is getting caught on.



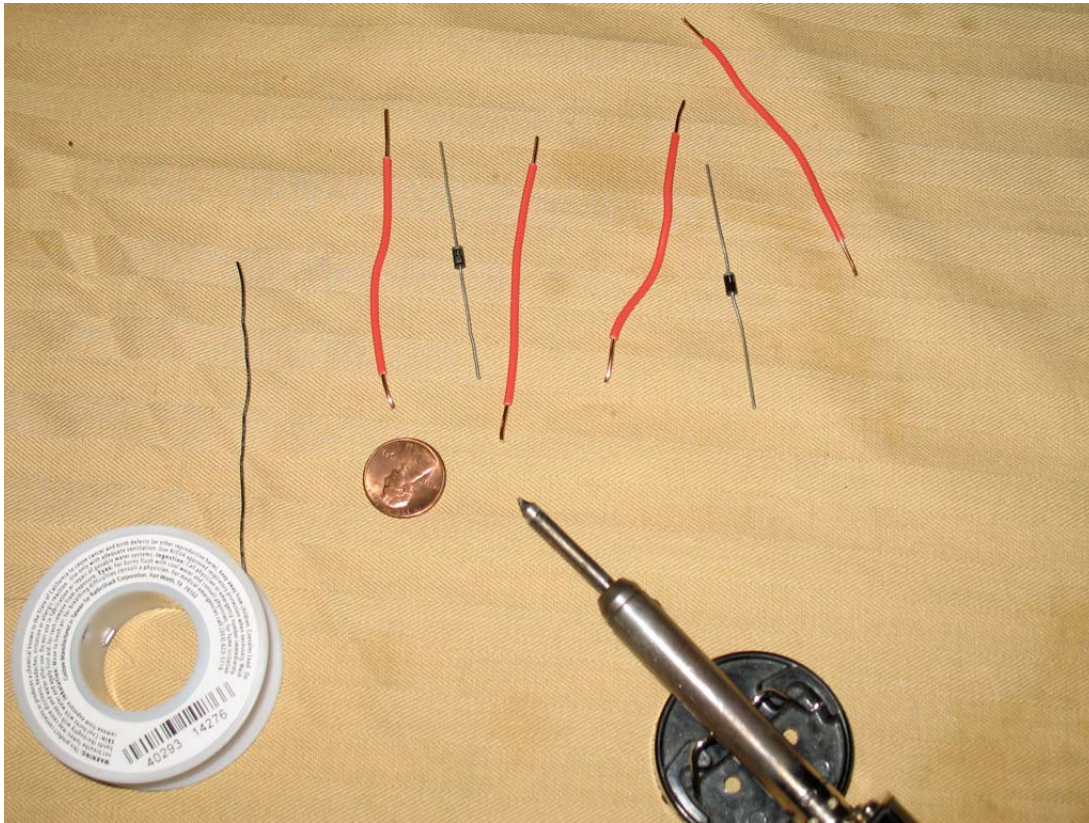
Start by undoing the screws for both lights; this will allow the ceiling to pull away from the steel structure, possibly enough to fix it by hand.

If that doesn't help, get a putty knife and gently pull the ceiling away from the spot you're working on. Work on getting the metal into the trim by pulling the external part of the trim down and you should be able to re-seat it.



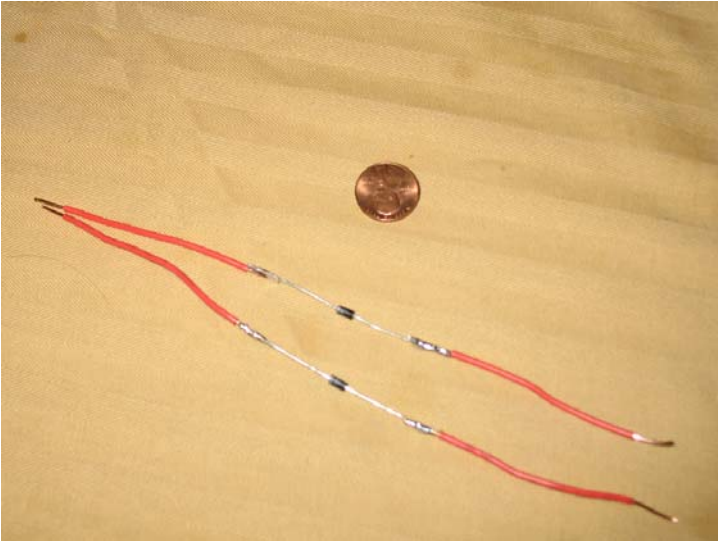
Section 3 – What I don't know about diodes can fill a room.

I found a reasonably good website explaining how diodes work, and the rating on the 1N4007. It seems to have an absurdly high rating on it, but the same site also says that heat soldering can sometimes mess up diodes. The higher rating *MAY* give you more margin for error with soldering, but that is only a guess.



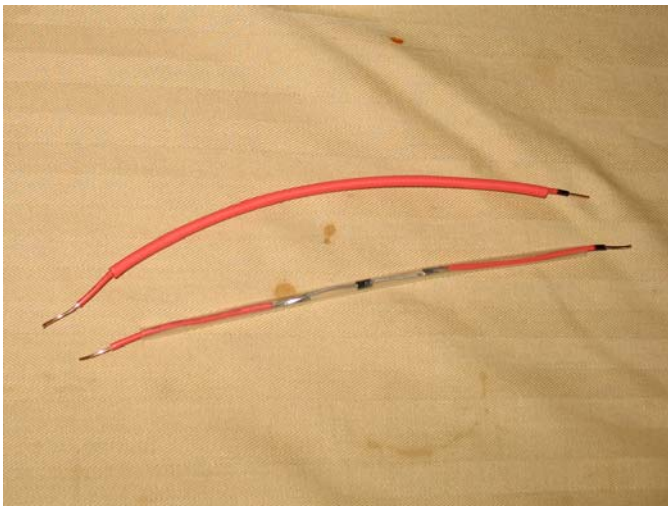
If you look at a diode, reading the lettering side up, the bottom should be connected to a negative or ground, and the top should go to a positive source. In this case, remember that leading away from the unit is the negative, not the positive. If you mix the directions up, you can always check with a light bulb and a 9-volt battery.

Section 4 – Can everyone solder better than I can?

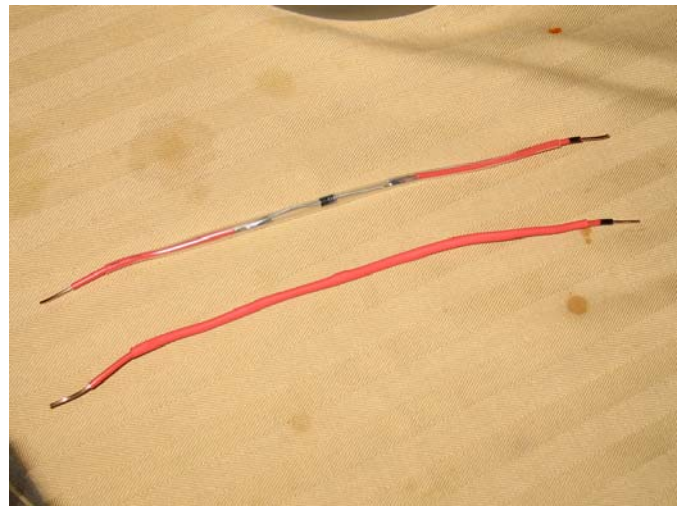


Post-soldering. I didn't have the iron on the diode contacts for a long time, but it was definitely there long enough that it's not a concern.

Most people should be able to do this with no trouble.



Heat-Wrap Added



Heat-Wrap Shrunk (Yeah, they look about the same)

If you're using non-clear heat-wrap, mark the top with a black-magic marker.

One of the assumptions of the original instructions is that you are at **ALL** competent at soldering. The hole that is shown, even if you widen it, isn't big enough if you are mediocre at soldering.

The switch is labeled in green "492". The plastic part above that has the 3 holes discussed on hondasuv.com.

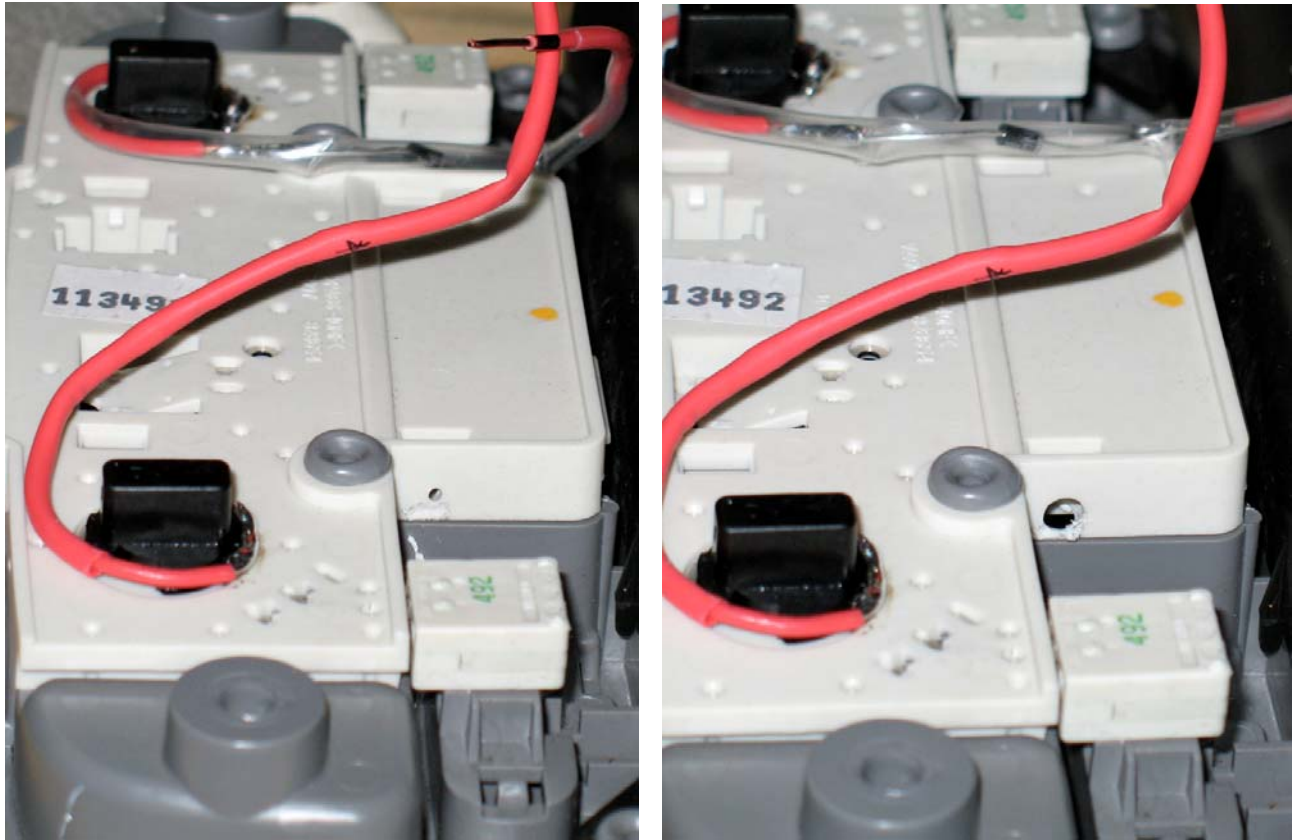
The one above the "4" is what you're aiming for.

Using a Volt-O-Meter (Volt-Ohm Meter), I was able to distinguish that the bottom contact (see the picture above) of the actual light bulb port is negative.



This is a much better target for those of us who aren't good enough to use a cold-heat gun and have to kind of meander around, and re-melt the solder a few times before getting it right. This would have also been easier if I used braided wire instead of solid, but, hey, it was on sale.

This is post soldering; to put holes to tie the wires down, I started with a pilot hole, then drilled a bigger one.



I needed to wire-tie it down so it doesn't pull against the connection.



**Section 5 – Why the original directions said to do it one way,
why I did it this way and why you should do it a different way.**

I kept asking myself WHY were 2 diodes used, then I figured it out – if you connect the negatives together, then put a diode in, if you turn on one map light, the other will turn on, and that's just lame.

The scotch lock from the original directions was a good idea to start with, but it really messed things up for me. First of all, I did this at work where I only had wire strippers/crimpers. I messed up my fingers good trying to get it locked down, and ultimately got it too close to the plug. When you screw the light back on, the wires pull backwards, and if it bends at your joint, it may lose contact and the light won't work. I had to nut the connection back together, then put an extension length of wire in to relieve the tension on the connection.



If you insist on using one of those connectors, do it where it will be straight, further down the wire.

Installation Notes:

When you provide for a way to disconnect the lamp assemblies, there are two clear choices: professional or the professional-amateur look.

The Pro-look:

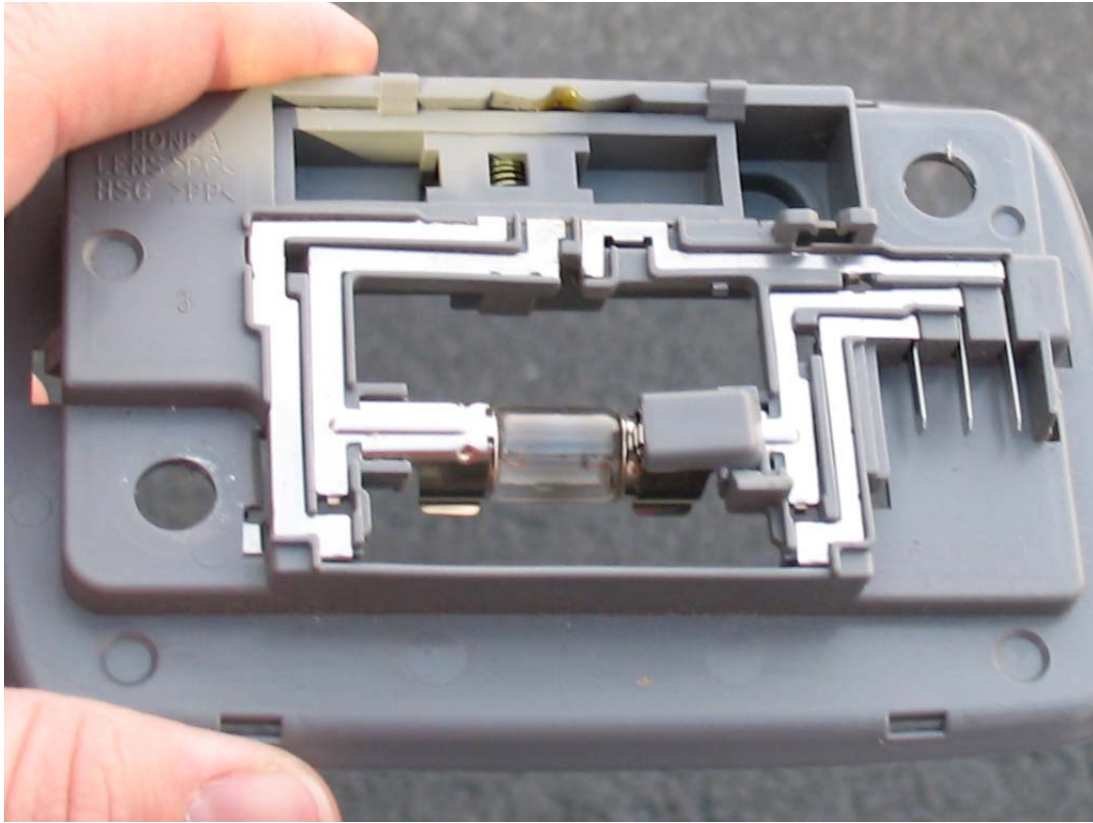
A properly crimped, properly secured Molex connector looks professional, and everyone knows what to do with when they need to take a part out. This may even fool a non-factory-trained technician.

The Professional Amateur look:

The use of wire-nuts isn't exactly professional, but when you have a dealer or other professional working on the CR-V later, possibly after you resell it, it is an acceptable solution. It will look improvise, but it's a safe way to make a connection that will communicate to anyone who understands electrical work that some thought went into the wiring, and it probably isn't dangerous.

NOTE: This part is speculative; I did not do my installation this way so VERIFY before you do this.

The other thing about the original directions that gives you a less than stock feel is the fact that if you turn the switch to "off" on the dome light, the map lights will still activate with the door. It seems a much better decision to solder to a place inside the dome's switch (a small 3-6" tail) and put a connector that allows later disconnection (see below) to your 3' wire that runs between the switches.



Looking here, if you can manage to solder the connector wire to the bulb's contact on the left-hand side, that really completes the project. It adds the final bit of logic that says "only use this connection when this bulb is in use". This allows the dome switch to completely dictate the usage of this new connection.

Section 6 – The information that I began this project with

Startup Data (Quoted or Paraphrased from FlashBastd on hondasuv.com BB)

Summary: Added an extra wire, and a couple of diodes go make front map lights to activate with dome light

Notes: The diodes I used were 1n4007.

Additions: add a slightly brighter light to the domes.

Goal: To make the front map lights are activated when the doors are opened, along with the rear / centre dome light via adding a second (ground) earth to the map lights. Diodes are used to keep the dome light from activating when the map lights are used as map lights. Other than the map lights coming on when the door is opened, everything works as it should.

Remove the dome light

- 1) Use a fine flat screw driver to pry off the lens
 - a. (be careful not to scratch the fragile plastic surrounding it)
- 2) Unscrew the 2 Phillips screws.
- 3) The dome light will drop and you will see the wiring for it.
- 4) There will be 2 wires:
 - a. (on mine they are green and white)
 - b. (I believe the earth wire is the green one)
 - c. there are three positions on the plug
 - d. we want the outer one, that has a wire in it
 - e. (this is the ground (earth) for the courtesy light)

Remove the trim around the inner sunroof aperture

Carefully remove the trim around the inner sunroof aperture in the headlining so you can run the wire above the headlining to the front lights.

Remove the front overhead console

(My car has alarm sensors, some earlier cars have sunglasses holder)

Carefully remove the lens from the map lights

- 1) Use a fine flat screw driver to pry off the lens (closest to the windshield)
 - a. (be careful not to scratch the fragile plastic surrounding it)
- 2) Unscrew the 4 Phillips screws.
- 3) Pull down the console

Connection Notes

You may wish to temporarily connect everything up, reading the following paragraph but not actually soldering, to make sure it works, and that you have connected the diodes in the right direction.

Solder Your Diodes

- 1) Solder one end of each to a length of wire (say, 6 inches)
- 2) Cover with heat shrink
- 3) Join the free ends of wire
 - a. (this will connect to the wire from the dome light)

Find Your Opening on the Map Lights

Just above the switch there are three holes in the plastic backing, (we need the middle one)

Widen the hole to facilitate running the wire (optional)

Take your extended diode and solder one end to the metal behind the middle hole.

Attach the second one.

I used a scotch lock to tap into the power from the dome light wiring, and then used spade connectors to hook this wire to the diodes from the map lights.



A scotch lock looks like this:

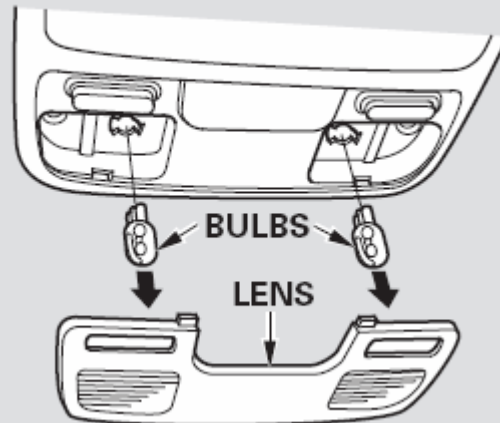
Section 7 – Information on Removing Dome and Map lights (courtesy of Honda User's Guide)

Replacing Interior Light Bulbs*

- 1) Remove the lens by carefully prying on the edge of the lens with a fingernail file or a small flat-tip screwdriver. Do not pry on the edge of the housing around the lens.
- 2) Remove the bulb by pulling it straight out of its metal tabs.
- 3) Push the new bulb into the metal tabs. Snap the lens back in place

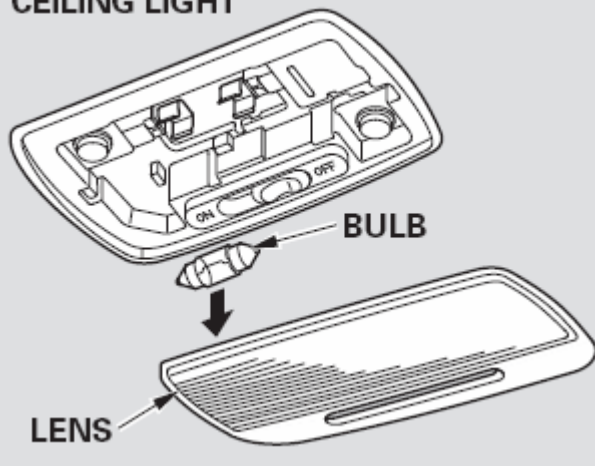
NOTE: Although the ceiling light, cargo area light and spotlights come apart the same way, they do not use the same type of bulbs.

SPOTLIGHTS



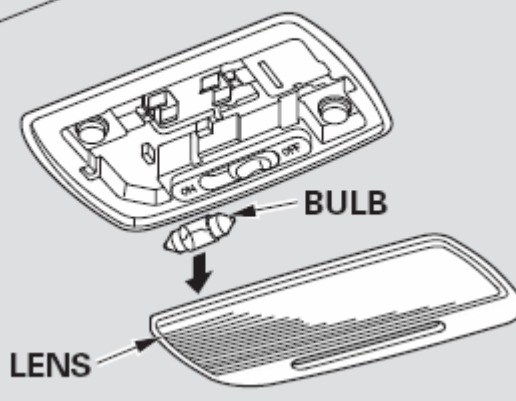
Pry on the front edge in front of both spotlights.
(12 V – 4 CP)

CEILING LIGHT



Pry on the rear edge of the lens near both sides.
(12 V – 8 W)

CARGO AREA LIGHT



Pry on the front edge to the lens near both sides.
(12 V – 8 W)

*From the 2003 Honda CR-V Manual

Section 8 – Comments on leaving the cargo-light as-is.

Think long and hard before wiring up your cargo area in-tandem with the regular dome light. This will completely discard usability of at least one switch, because you have to decide how to hard-wire it.

This is still a doable option in certain circumstances:

If you always want the dome light to be on with the rear door or vice-versa is good if you're playing chauffer, or carting the kids around, shopping, drop-offs etc. but if you have sleeping kids, you may not want the dome to come on when the door opens.

I almost went this way, but it's like wiring wall switches in series and making sure no one moved a switch into a different position; it just didn't seem worth the trouble.

If you want to have them all on to showcase your interior, this is kind of a hick way to do it and I would say to go with a more sophisticated switch system, since you are going for points for style.