



## Z3 Footwell Light Kit

**WARNING:** Installation of footwell lights can and probably will void a portion of your vehicle warranty. Read all instructions before you do anything to your car. If you are unsure of any portion of the following procedure, please contact us *before* you start any work on your car or else contract your BMW dealer to do the work for you. Improper installation of footwell lights can cause serious damage to your car.

**ALWAYS DISCONNECT THE NEGATIVE BATTERY TERMINAL ON YOUR CAR BEFORE DOING ANY WORK WITH THE CAR'S ELECTRICAL SYSTEM!**

<u>Kit Contents</u>	<u>Tools Required</u>
BMW footwell lights, qty. 2 LeatherZ footwell light electrical harness with BMW connectors, qty. 1 Scotch lock connector, qty. 1 BMW trim caps, black or beige, qty. 6 Wire harness tie-downs, qty. 4 Light cutout template, qty. 1 LeatherZ installation manual	Flatblade screwdriver Needlenose pliers Phillips screwdriver <u>10mm socket driver</u>

### Overview

The LeatherZ Z3 footwell light kit uses original BMW parts. Installation requires removal of the glovebox and the footwell trim panels on both the driver and passenger's side of the car. Installation requires cutting holes in the footwell trim panels to accommodate the lights and tapping into the dimmed lighting system as well as securing a ground connection. Installation for the average do-it-yourselfer will take approximately 1 hour.

#### 1. Passenger side footwell trim removal

The passenger side trim panel is black plastic. It is located underneath the glovebox. It is held in place with 3 ¼ turn fasteners. Begin by releasing the fasteners. Turn them gently either 90 degrees clockwise or counterclockwise. It does not matter which way you turn them. Be gentle as they are plastic and it is easy to shear off the head. They are all the same size so you do not have to keep track of where they came from. Pull the footwell panel towards the rear of the car. It has slots that fit into slots. Pay attention to these connections so you know how the panel should be re-installed later. Put the footwell panel aside in a safe place.

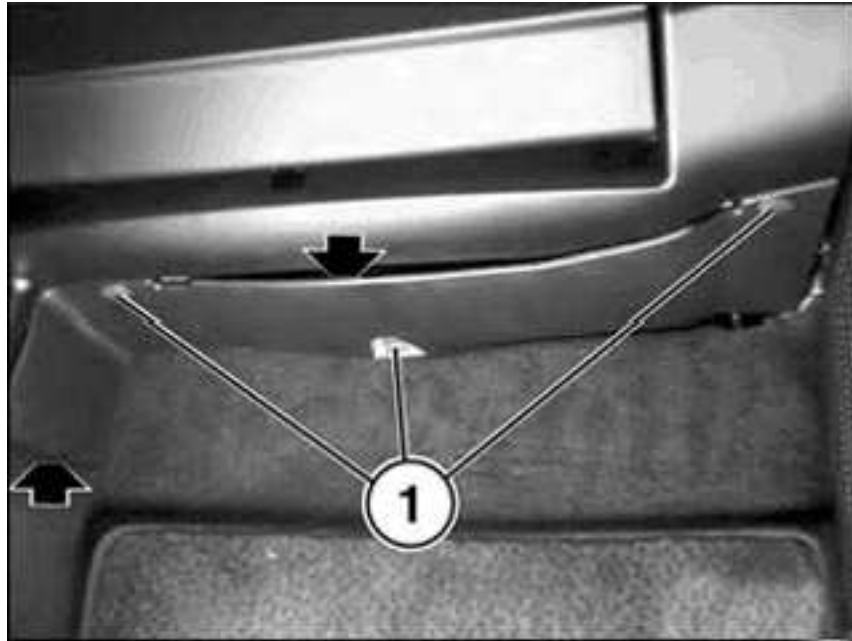


Figure X. Location of 1/4 turn fasteners on passenger footwell trim panel. Driver's side is similar.

## 2. Glovebox removal

In order to remove the glovebox, you will have to remove 6 Phillips screws. The screws are hidden by plastic screw trim caps. Although it is possible to remove the trim caps without damaging them, we do not recommend it. Instead, we suggest pulling the screws off with needlenose pliers. This will destroy the caps, but it is less likely to cause any damage to your glovebox or other expensive interior trim pieces. We have included new trim caps with your kit so there is no need to preserve the caps for reuse. Pull the caps off of the screw heads and remove the 6 screws shown. Pay attention to the lengths and types of screws. They are different among the 6 locations based on the load requirements of the glovebox.

Once all 6 screws are removed, the glovebox can be pulled out of the car. It is best to close the glovebox for this operation. Be aware that there are sheet metal speed nuts on the glovebox at the screw locations. When removing the glovebox, be careful not to let the speed nuts come into contact with any other interior parts as they will cause scratches. To remove the glovebox, tip the outboard (right) side down. Lift up as much as possible on the inboard (left) side. The right rear corner of the glovebox interior will collide with a sheet metal support to the right of the glovebox. The glovebox is slightly flexible and you will have to bend it as required to clear the bracket. It is important to lift up on the left side so that the left edge of the glovebox trim and clear the right edge of the center console. It is not necessary to bend the edge of the center console.

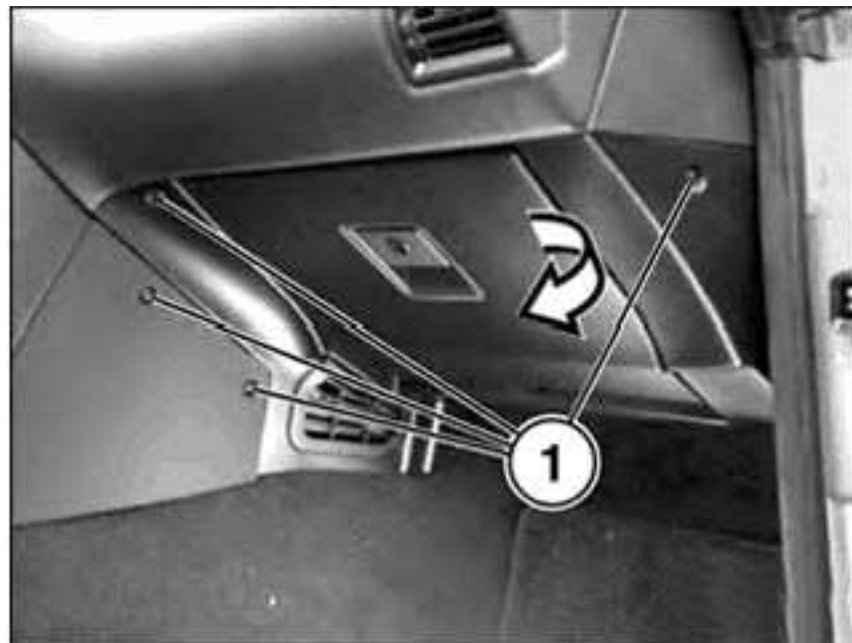
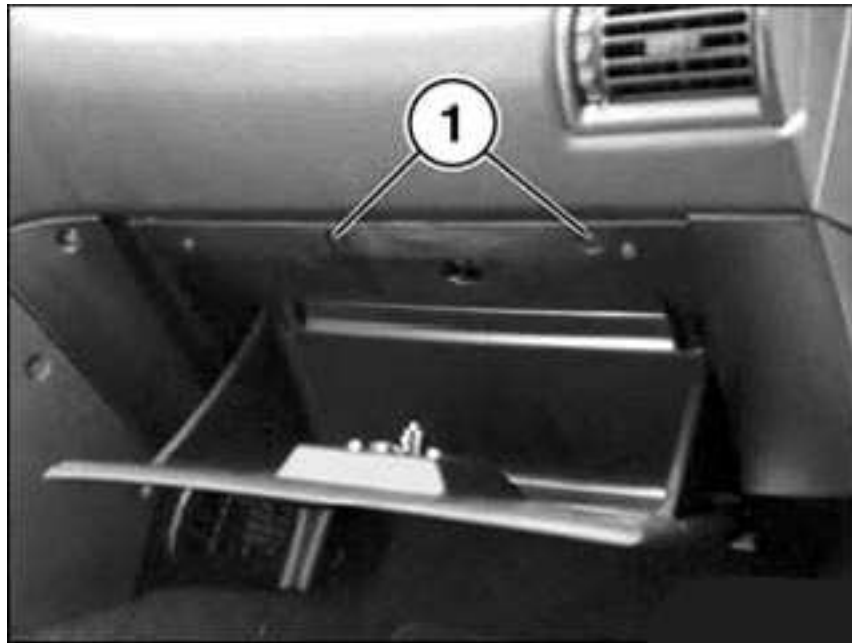


Figure X. Location of screws to remove on glovebox.

### 3. Driver's side footwell trim removal

Removal of the driver's side footwell trim is similar to the passenger side, except there are only 2 ¼ turn fasteners. Remove them as before and pull out the panel.

### 4. Cutting the footwell trim panels to accept lights

You will need to cut each of the footwell trim panels in order to accept the new lights. It is important that you cut as accurately as possible. If your cutouts are too big, the lights will fit loosely and could fall out.

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The lights are located differently for the passenger and driver side panels. Use the supplied cutout template and mark and outline of the template on the finished side of each panel with indelible pen. You can cut the panel with a new, very sharp Exacto blade, a sharp utility knife, or with a Dremel tool. Take care not to cut or mark the panels outside of the template marking you drew earlier. If you use an Exacto or Utility blade, we recommend using many shallow cuts. If you try to cut through the plastic on the first pass, you will surely cause damage to yourself or the trim piece. If you are uncomfortable with this step of the procedure, you can send your footwell panels to us and we will cut them for you. We ask that you pay return shipping in this case.

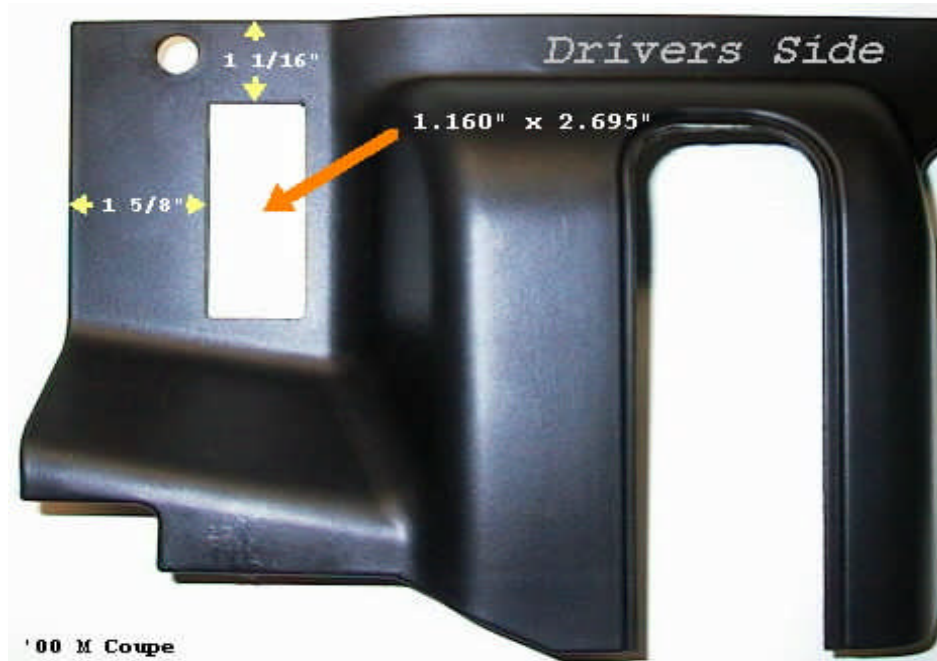


Figure X. Cutout location for light. Looking at finished side of **driver's** footwell panel.

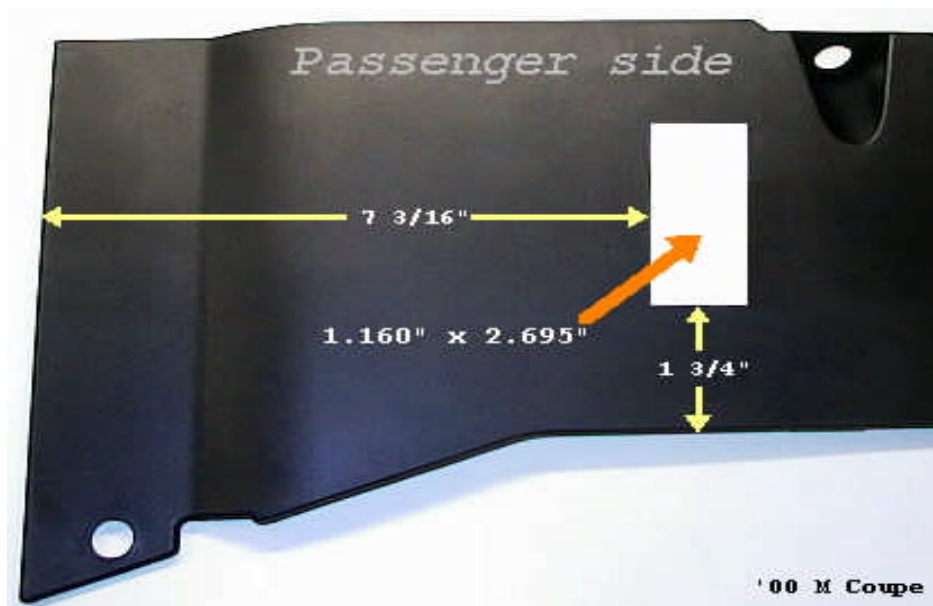


Figure X. Cutout location for light. Looking at finished side of **passenger's** footwell panel.

Install each of the lights included into your kit into the holes you cut. The connector side of each light should face the firewall (forward) of the car. This will make a cleaner wire run during the next step.

## 5. Wire Harness Installation

The brown (GROUND) wire of the wire harness has an O-ring connector crimped onto the end. This connector must be attached to the chassis of the car. The best and most convenient location for a ground connection is one of the two 10mm bolts on the right hand side of the dashboard. There are 2 of these bolts, painted black, that were exposed when you removed the glovebox.

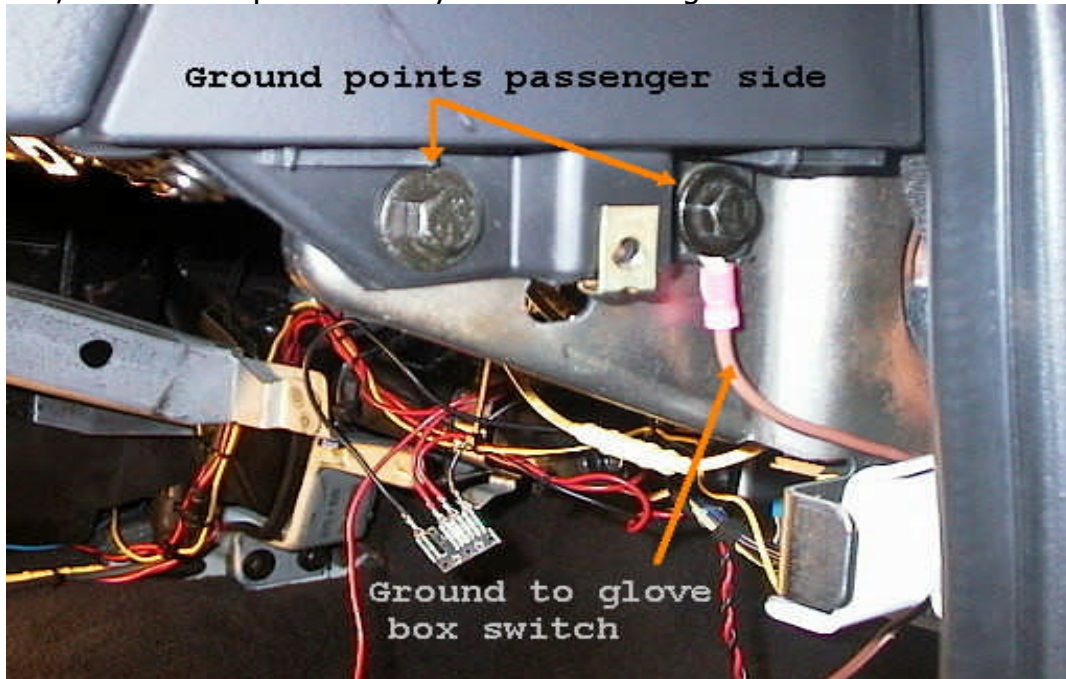


Figure X. Ground Point Location

Remove one of the two bolts, fit the O-ring connection onto the bolt, and reattach the bolt to the car.

The remaining end of the wire harness (Gray Wire) is for the dimmed lighting (HOT) connection. You will use the supplied scotch lock to tap into the car's wiring. The dimmed lighting connection is located on the wire harness marked 1. in the following picture. The connector comes from the factory on some cars taped (sometimes tie-wrapped) to other nearby wire harnesses. You will have to free the connector by removing the tape, etc. The wire to tap into is located in pin 4 of the BMW connector and it is brown with a black stripe. **It is extremely important that you only tap into the brown wire with black stripe!** There is only one of these wires in the area you are working with. **Do not guess as to which wire to tap into.** The pin numbers of the wire harness are marked on the male pin side of the connector, but the numbers are very small and may be difficult to see without sufficient lighting.

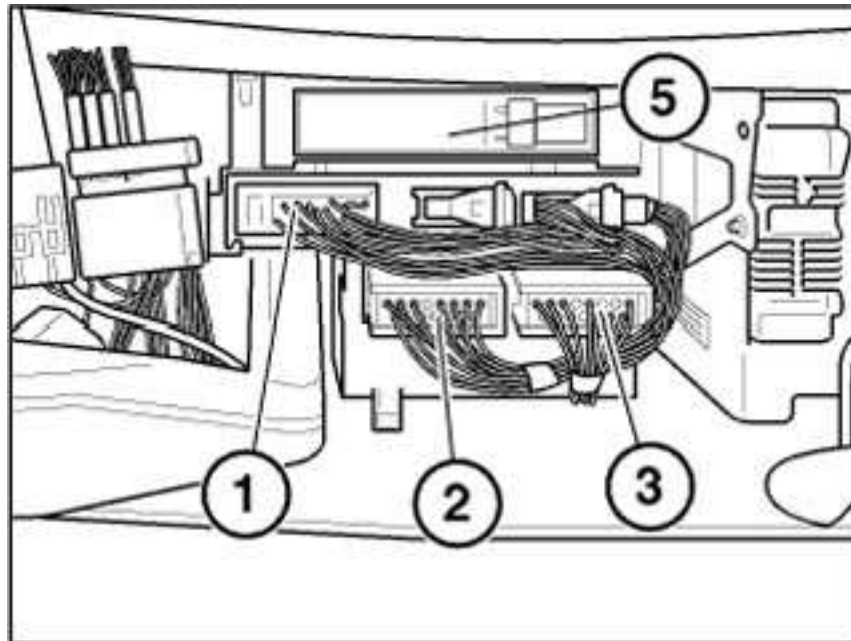


Figure X. Item 1 is the BMW ZKE Module.

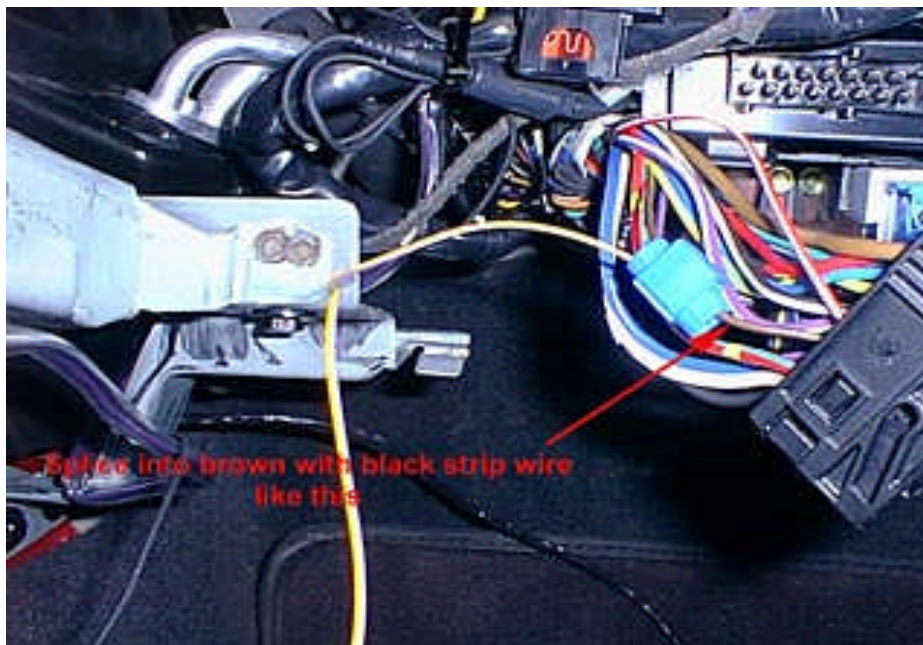


Figure X. Tap into the brown/black wire in pin 4 of the BMW ZKE Module.

The scotch lock works by compressing a metal conductor onto each of the two wires, BMW's brown/black and LeatherZ's gray. The scotch lock must be compressed with sufficient force so the conductor can penetrate the insulation on both wires. It may help to squeeze the connector with needlenose pliers to verify you have a good electrical contact. Lock the connector closed.

## 6. Testing

At this point you should test your footwell kit. It's better to find a problem now rather than after you have re-installed the glovebox. Lay each of the footwell trim panels with newly-installed lights into the car. Connect the LeatherZ wire harness to each light. Reconnect the Negative battery terminal. If the doors of your car have been open for a long time, the lights will not illuminate. BMW does this to conserve battery power. Close both doors and re-open one of them. The footwell lights should work. If they do, you can proceed. If not, verify your ground connection is tight. Also verify that the scotch lock connector is tight.

## 7. Wire Routing

The LeatherZ wire harness must be routed from the passenger's side to the driver's side. Disconnect the wire harness from the lights. I was able to run the wiring easily from the passenger to the drivers side in my 3.0 Coupe by going as close to the firewall as possible. I did not run into any trouble routing the wires this way:



If you run into trouble and need an alternate route for the wires, I recommend starting at the passenger side and route the wire harness up into the center console. The center console is pliable and you should be able to push the wires up a few inches. Remove the shift boot in the car. Pull straight up to do so. Pull up on the foam sound insulation under the shift boot. There is no need to remove the shift knob in your car. Put one of your hands into the shifter opening of the car. Feed the driver's side connector on the wire harness with one hand to your other hand and pull the harness under and across the center console of the car. Put the wire harness in front of the shifter and make sure there is plenty of clearance so the wire harness will not be touched by the shifter. Feed the end of the wire harness out of the other side of the center console. Continue pulling the harness and routing it under the center console towards

the driver's foot well. Route the harness behind the pedals of the car and clear from all moving parts. Adjust slack as necessary.

#### 8. Reinstall Glovebox

Installation is reverse of removal. Again, make sure you use the correct screws in each location. It may help to have someone hold the glovebox until the first few screws are installed. Do not tighten any screw completely until each screw is started. Once each screw is started, go back and tighten them hand tight. Install the new screw caps provided with the kit.

#### 9. Reinstall footwell trim panels

Connect each of the wire harnesses to your new footwell lights. Reinstall each of the trim panels. Installation is reverse of removal. Make sure all of the plastic tab and slot connections are made and then reinstall the ¼ turn fasteners. The ¼ turn fasteners will only go into the car in one orientation. Push them all the way in (up) and then turn them gently ¼ turn. Do not force them. They do not work like screws... only a ¼ turn is required.

That's it! You're finished.

#### Customer Satisfaction

Please do not hesitate to contact me if you need help installing your lights. I have done many installs and have plenty of tricks to make your life easier.

If you like my work, please drop me a line and let me know. Tell other BMW owners. If you are not happy with my work, let me know. Let me make it right for you. -- Andy Maddux