

# RiderWest

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## K1200LT LED Saddlebag/Trunk/Extension Light

This light kit provides an LED light that mounts to the inside of either saddlebag or the trunk. The light is supplied with a 15' wire that allows you to pull down the light from its Velcro mounting, stretch out the wire, and use the light anywhere you need to around your bike. The LEDs use a fraction of the current that an incandescent bulb uses and hardly put any drain on the motorcycle's battery, so extended use is not a problem.

If you only purchased one light kit, decide whether you want to mount it in the trunk or in a saddlebag, and proceed to that section of this document. If you have multiple kits, the saddlebag and trunk installations are independent of each other so you can do either one first. Of course, if you're installing lights in both saddlebags, you'll want to do them at the same time, though parts and instructions are included so you can install one now and easily add a second light later.

You can also adapt this kit to be your front map light if you removed the original so you can install other accessories. Use the enclosed piggy-back connectors to make the connections if you're already tapped into the wires. The brown wire that used to go to the map light connects to the wire with the white stripe or copper color from the LED light. Mount the light in any convenient spot.

Thought this document is long (it's extremely detailed and full of photos), the installation is very easy and straightforward. No special skills or knowledge is required to install the kit.



**NOTE:** It's a good idea to read a section all the way through and study the photos before you start drilling or cutting so you know what to expect.

If you have any questions about this kit, contact [support@riderwest.com](mailto:support@riderwest.com).

A full color version of this document can be viewed or downloaded from [www.riderwest.com](http://www.riderwest.com).

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## What you Get

- (1) LED light assembly with wire, Velcro wrap, and mounting Velcro attached
- (1) Small piece of Velcro (to hold the wire to top of saddlebag)
- (2) Piggy-back adaptors, crimp-type (for trunk installation)
- (1) Blue butt connector, crimp-type (for saddlebag installation)
- (1) Red butt connector, crimp-type (for adding a saddlebag light after one has already been installed)
- (1) Ground wire assembly with a red ring on one end and a 5/16" ring on the other (for saddlebag installation)
- (1) Pin switch assembly with wire and nut (for saddlebag installation)
- (2) 4" cable tie (for saddlebag installation)
- Detailed instructions (what you're reading now)

## What you Need

You need the following tools for either installation location:

- Wire cutter/stripper
- Crimping tool (for standard, automotive-type connectors)
- Drill with 1/8" bit

To install the light in the trunk, you'll also need:

- Small screwdriver or other object (for inserting in 1/8" hole for releasing the existing BMW trunk light)

To install the light in the saddlebag, you'll also need:

- 5/16<sup>th</sup> drill bit (for mounting pin switch)
- 5mm Allen wrench (for removing passenger seat)
- 4mm Allen wrench (for removing a screw for the ground connection)
- 7/16<sup>th</sup> nut driver or socket (for mounting pin switch)
- Tiny dab of caulk or hot glue (for sealing the hole in the saddlebag where the wire comes through)
- Electrical tape (for replacing the wrapping removed from the wiring harness)

## Trunk Installation

The existing BMW trunk light is identical to the one over the dashboard. However, if you look at the front one you'll note that it has a release hole on the left side of the light. To remove the BMW trunk light, you must create your own release hole.

**Note:** Before proceeding, you may want to remove the front map light so you can see the catch that you're trying to access on the BMW trunk light. To remove it, insert a small screwdriver in the release hole and then push out the light. It should come out quit easily.

1. In the trunk, drill a 1/8" (or 3/16") hole immediately to the left of the BMW trunk light, centering the hole with the side of the light (see Figure 1). First, drill the hole perpendicular, then angle the drill towards the light and drill the hole again.



Figure 1: Drilling the release hole

2. Insert a suitable object (like a small, flat blade screwdriver) and push on the side of the light to release the catch. The light should pull out. Let it hang by the wires.
3. Drill a 1/8" hole for the wire on the left side of the BMW trunk light opening, toward the back (see Figure 2). The drill will have a tendency

to “dance” around before the hole is actually made, so be careful. Start with a slow drill speed to help minimize scratching the surface of the plastic. You can also first drill a pilot hole with a smaller bit, which will less of a tendency to “dance” around.



Figure 2: Drilling the hole for the wire

4. Push the end of the wire from the LED trunk light through the hole and pull about 10” of wire through the opening (see Figure 3).



Figure 3: Wire pulled through hole and BMW trunk light opening

**Note:** If you installed a light in a saddlebag (or plan to) with the wire kept long, you can trim the trunk light wire so there's only enough to mount the light. Tape the short wire to the top of the trunk to keep it out of the way.

5. Tie a knot in the wire about 6" from the end. This will keep the wire from pulling through the hole and stressing the electrical connections.
6. Crimp the supplied piggyback connectors onto the wires.
7. Note which tabs are used by the wires on the BMW trunk light (there are three tabs—only two are used).
8. Remove the connecting wires from the BMW trunk light (you may have to rock them a little with a long nose pliers to get them to come off).
9. Push the piggyback connectors on to the tabs previously used by the BMW wires. It doesn't matter which wire goes to which tab.
10. Determine which wire from the LED trunk light is the ground and which one is "hot." Your pair of wires may have one wire marked with a white line and one that isn't, or the pair will have one wire that is copper color and one that is silver. The ground wire is the one with the white line or the one that is silver colored.
11. Push the brown BMW wire on the tab with the ground wire from the LED trunk light (either silver-colored or with a white stripe). Push the remaining wire on the remaining tab (see Figure 4). Test the LED trunk light by turning the toggle switch on and off. The LED light should work regardless of the position of the switch on the BMW trunk light. Also, if you have a 2003 or later LT, both the BMW and LED trunk lights turn off when the trunk is closed.



Figure 4. All wires connected to BMW trunk light

12. Pull the LED trunk light wire back through so the knot is up against the hole.
13. Snap the BMW trunk light back into its mounting hole.
14. Remove the backing from the Velcro and mount the LED trunk light up against the top of the trunk (see Figure 5).



Figure 5. LED trunk light mounted to the top of the trunk

15. Tuck the excess wire into the area behind the mirror (see Figure 6). Try to keep the wire against the top of the trunk. You're done.



Figure 6. Installation complete



## Saddlebag Installation

If you purchased two light kits, one for each saddlebag, we suggest that you install them at the same time. If you're adding a saddlebag light after you already installed a light in one saddlebag, a red butt connector is provided for making the connection to the previously installed wire. See the section, *Adding a Second Saddlebag Light* near the end of this document for instructions for adding the second light.

**Note:** The saddlebag light can be installed with either the wire kept long so the light can be extended and used anywhere around the bike, or with the wire trimmed so the light is only used in the saddlebag. These instructions assume you're leaving the wire long. If you're installing a second saddlebag light and the first one has a long wire, or you installed a kit in the trunk and left the wire long, you may want to trim the wire in the saddlebag. In either case, the wires are connected in the same way.

To install one or two saddlebag lights:

1. Lift up the driver's seat to gain access to the two screws holding the passenger seat. Remove the screws and pull the passenger seat toward the front of the bike to release it (see Figure 7). Be careful to not let the metal inserts in the mounting holes fall out and get lost.



Figure 7. Remove two screws under the driver's seat to remove passenger seat (viewed from driver's seat facing back)

2. Unplug the connector for the heated seat (see Figure 8).



Figure 8. Connector for heated seat wires (viewed from left side of bike)

3. From the inside of the saddlebag, drill a 1/8" hole in the top of the saddlebag (see Figure 9). If installing lights in both saddlebags, drill both sides.



Figure 9. Location for drilling hole for wire (viewed straight down from left side of bike with saddlebag door closed)

4. Locate the connector for the trunk wires (see Figure 10). Pull it out from its holder and twist counter-clockwise to separate the two halves.



Figure 10. Connector for trunk wires

5. Use a sharp knife to cut the black wrapping back two or three inches from the connector (see Figure 11 and Figure 12). Be careful not to cut the insulation or the wires. **Tip:** I insert the knife under the wrapping and cut away from the wires.



Figure 11. Carefully cut the wrapping with a sharp knife



Figure 12. Wrapping cut back to expose the wires

6. Separate the purple wire from the bundle (see Figure 13).



Figure 13. Purple wire for making "hot" connection

7. Cut the purple wire far enough away from the connector so you have room to work. Strip each end of the cut wire and twist the strands together. **Caution:** This wire is "hot" so don't let it touch the frame of the bike or you'll get sparks.

8. Feed the end of the wire from the saddlebag light through the 1/8" hole you drilled earlier. Pull through about 18" of wire and tie a knot in the wire so it cannot slip back through the hole (see Figure 14). If installing lights in both saddlebags, do both sides.



Figure 14. Knot tied in wire so it can't slip back into saddlebag

9. Determine which wire from the light is the ground and which one is "hot." Your pair of wires may have one wire marked with a white line and one that isn't, or the pair will have one wire that is copper color one that is silver color. The ground wire is either the one with the white line or the one that is silver colored. The other wire (the "hot" one) is the one you want now.
10. Twist the "hot" wire from the saddlebag light together with one of the cut purple wires and insert the twisted pair into one end of the blue butt connector and crimp. **Note:** If you prefer, you can solder your connections instead. After soldering, insulate with liquid tape, electrical tape, or heat shrinkable tubing.
11. Insert the other end of the purple wire into the open end of the butt connector and crimp. If installing two kits, twist the hot wire from the second light with the other purple wire before inserting it into the butt connector. The result (for one kit) should look like Figure 15.



Figure 15. Blue butt connector attached to wires

12. Temporarily twist the connector back together and see if the light in the trunk works. If not, check your connections again. When the trunk light works correctly, separate the connector and tape the bundle of wires (see Figure 16).



Figure 16. Bundle of wires taped after installing blue butt connector (viewed straight down from left side of bike)

13. Twist the connector back together and insert it back into its holder. At this point, you should be able to touch the ground wire from the light to any metal part of the frame and switch on the saddlebag light.
14. Mark the location for the pin switch by removing the nut from the switch and holding it against the plastic where it mounts (see Figure 17). Do the following steps for both sides if you're installing lights in both saddlebags.



Figure 17. Marking the location for the pin switch

The location is just to the right of the front-most door catch. You want to mount the switch low so the plunger doesn't hit the plastic in the back. With the nut in position, use a 1/8<sup>th</sup> drill bit to mark the center of the hole. Move the nut and drill a pilot hole with the 1/8<sup>th</sup> drill bit. The plastic drills very easily.

15. Drill a 5/16<sup>th</sup> hole for the pin switch where you just drilled the pilot hole.
16. Insert the pin switch (with the attached wire) through the hole.
17. Install the large ring of the ground wire assembly over the pin switch.
18. Install the nut on the pin switch. While you hold the nut, use a 7/16<sup>th</sup> nut driver or socket to tighten the pin switch. (see Figure 18)



Figure 18. Pin switch installed

19. Run the wires coming from the pin switch under the bike frame and wiring harness, toward the center of the passenger seat area.
20. Attach the red ring on the ground wire to the screw (use a 4mm Alan wrench) in front of the fuse box (see Figure 19). Route the wire from the back. **Note:** On 2005 models, there is no fuse box at this location. There is a 4mm screw closer to the saddlebag that looks like it might be a good ground connection, but experience has shown that this screw is unreliable as a ground. Don't use it.



Figure 19. Ground wire connected



21. Crimp the red butt connector from the pin switch to the ground wire coming from the light.
22. The light is completely wired at this point and should work with the saddlebag door open and the toggle switch on. Push the pin switch in and make sure the light goes out.
23. With a 4" cable tie, secure the wires from the pin switch to the wires coming out of the connector below where the pin switch is mounted (see Figure 20). The cable tie does not have to be tight—just secure enough to keep the pin switch wires low and out of the way.



Figure 20. Pin switch wires secured to wiring harness

24. Route the wires neatly and secure with the cable tie (see Figure 21). Ignore the green wire in the photo.



Figure 21. Wires routed and secured with cable tie for one light (viewed looking back from driver's seat)

25. Peel off the backing from the Velcro on top of the light and secure the light to the top of the saddlebag, near the hole for the wire. Stick the small piece of Velcro to the side (or top) of the saddlebag behind the light. The Velcro cable wrap will stick to this piece of Velcro when the cable wrap is wrapped the correct way. See Figure 22.



Figure 22. Light and wire bundle secured to top of saddlebag

26. Place a little caulking or hot glue over the wire coming through the hole in the saddlebag to prevent water from entering your saddlebag.
27. Test your light again. If all is well, replace the passenger seat (don't forget to plug in the connector for the heated seat).

## **Adding a Second Saddlebag Light**

To add a second saddlebag light after previously installing one:

1. Follow the directions above, but do the following to make the electrical connections.
2. Cut and strip the existing "hot" saddlebag wire going to the purple wire in the connector, and twist the strands together on each wire.
3. Twist the new "hot" saddlebag wire together with one of the cut wires and put the combined wires in one end of the red butt connector and crimp.
4. Put the other end of the cut wire in the open end of the red butt connector and crimp.
5. Ground the light as you did the first one, either under the same screw or the opposite screw near the opposite fuse box.
6. Route the wires neatly and secure with the cable ties.

## **Vehicle Adapters**

Adapters are available directly from Rider West so you can use your saddlebag/trunk light with other vehicles, including cars with standard cigar lighter sockets and BMW Powerlet-type sockets. See our Web site for details (<http://www.riderwest.com/K1200LTSaddlebag-Trunk.htm>).