



clearwater
LIGHTS™



For S1000XR Years 2009-2019

Installation Manual

BMW S1000XR with CANopener

Darla LED Light Kit

Dimmable

Patent Pending



Made in USA

Parts List and Bike Preparation

Please be sure to read our instructions thoroughly before attempting installation.

- Check the parts list supplied with your kit to be sure all parts are handy.

D-73 Fender Mount Parts List

2 Light Assembly



B764 - CANopener HARNESS BAG

1 Harness + Fuse + Fuse Holder



B41 - HARDWARE BAG

2 611 - Fender Mount Bracket



2 Spacer #14 - Bottom



2 Spacer #18



4 M6 X 14 Hex head Bolt



2 M5 X 40 SHCS



2 M5 X 45 SHCS



4 M6 Flat Washers



4 M5 Flat Washers



4 M5 Shoulder Washers



4 1/4" Plastic Washers



B715 - CAN5 BAG

1 5' Long Data Cable



1 CAN-Opener



B805 - CONNECTION BAG

1 Ring Terminal



12 6" Zip Ties



2 12" Zip Ties



1 Zip Tie Pad



2 2 ft Extension



Last Updated: 1/25/21

D-77 Pendant Mount

2 Light Assembly



B715 - CAN5 BAG

1 5' Long Data Cable



1 CAN-Opener



B764 - CANopener HARNESS BAG

1 Harness + Fuse + Fuse Holder



B77 - HARDWARE BAG

1 619b - Pendant Bracket w/ Foam Left



1 619b - Pendant Bracket w/ Foam Right



4 M6 X 14 BH



2 M5 X 25 BHCS



4 M6 Flat Washers



2 M5 Neobond Washer



NOTE: Add foam to bottom of brackets

Last Updated: 1/25/21

B805 - CONNECTION BAG

1 Ring Terminal



12 6" Zip Ties



2 12" Zip Ties



1 Zip Tie Pad

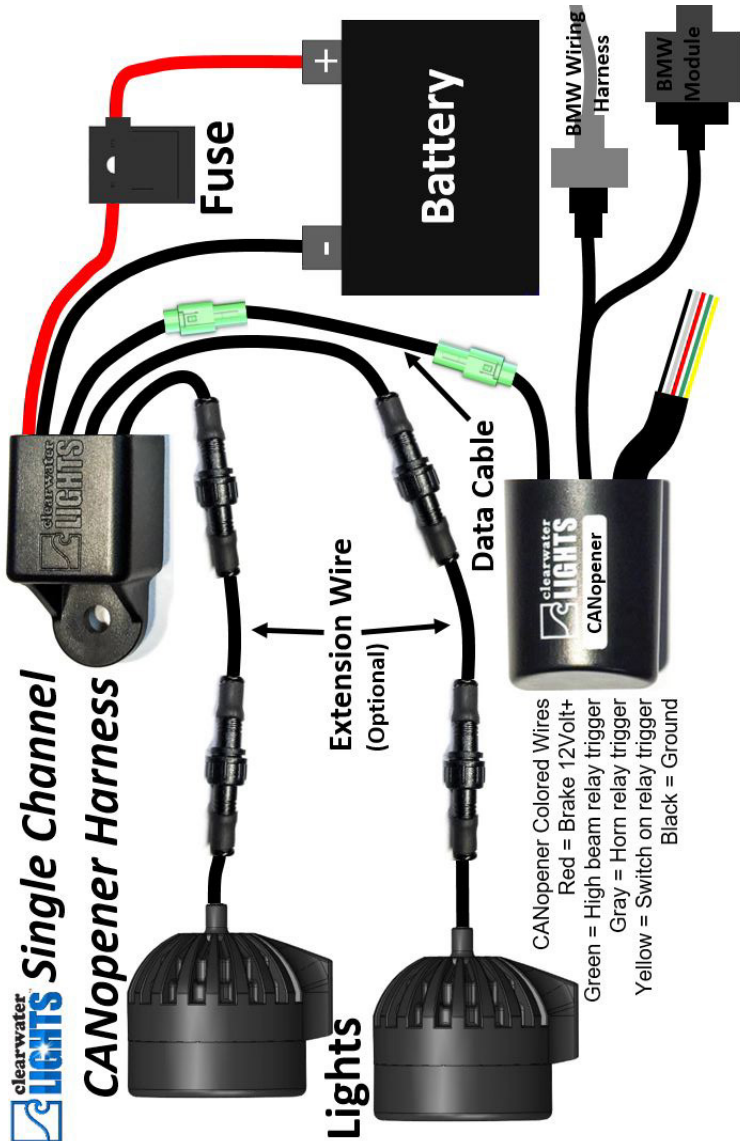


2 2 ft Extension



Wiring Diagram (S1000XR)

- First, park the motorcycle on hard pavement or concrete to insure the bike will be stable during the installation. If you can mount the bike on a stand with tie-down straps, this will help secure the motorcycle.
- Follow the manufacturers guidelines for disconnecting the battery. This is important to prevent damage to the electrical system.



Note: The engine needs to be running for lights to work

Mounting The Lights / Fender Mount D-73

Warning: Make sure not to force the fender mounting bolts. Forcing them will cause the bolts to break. Avoid this by tightening the top bolt half way then tightening the bottom bolt half way, and alternating until both are snug.

Fender Mount Overview:

- Attach the bracket to the Darla Light using two M6 x 14 bolts and two M6 flat washers.
- Attach the mounting bracket (now with the light attached to it) to the fender. To do this you will use a M5x40 SHCS bolt with the 14mm #14 Spacer on the top and a M5x45 SHCS bolt with the 19mm #14 Spacer on the bottom.
- Next repeat the above steps on the other side of the bike.
- Route wires from the lights up the brake lines, making sure to leave a drip loop (as seen on page 4) at the light. Run wires to right hand side of the bike, leave loose behind fairing for now.



Mounting The Lights / Beak Mount D-77



Remove the bolt shown in (Fig. A) using a torx wrench.



Using the included neobond washer, foam piece and M5x25mm bolt, mount the darla light into the bike as seen in (Fig. B) above. (Fig. C) below shows an exploded of the bracket and mounting bracket hardware.



Disassembly

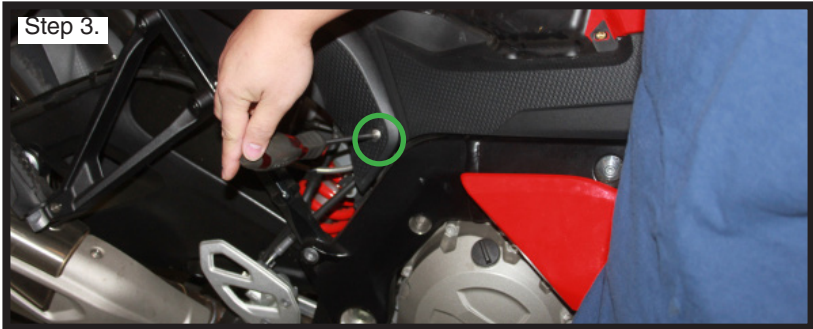
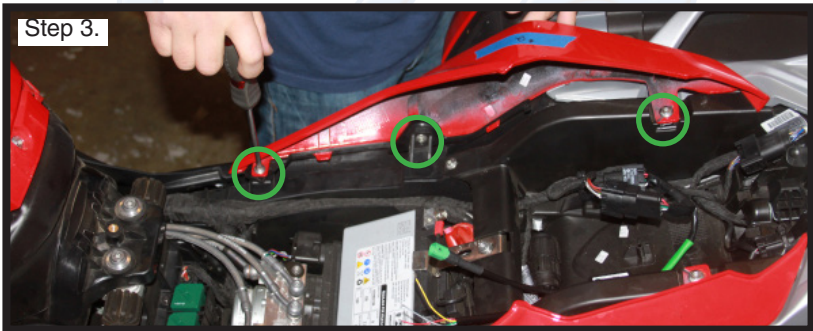
In this section we will cover which fairings must be removed in order to perform this installation, and how to easily do so.

Step 1. To start we will be removing the seat. To do this you will just insert your key into the slot on the rear of the bike.

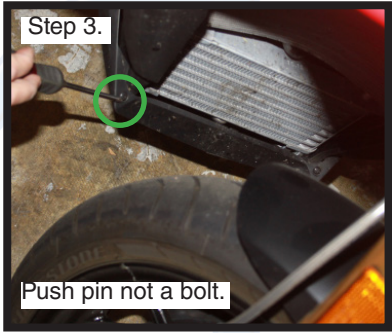


Step 2. With the seat now off we will remove the black fairing overlapping the tank cover. Remove 1 bolt then pull gently to avoid breaking the plastic tabs.

Step 3. Next we're going to remove the right side black plastic fairing, this will help us route the wires later. To do this we will remove 11 bolts.



Disassembly



Disassembly

Once you have removed all the bolts and tabs up to this point you will pull down the black fairing shown in **Step 4** below in order to get to the bolt hidden beneath it.



Now we can gently pull back the colored right side fairing in order to get to the final bolt that is tucked away behind the fairing. We can call this **Step 5**.



Wiring

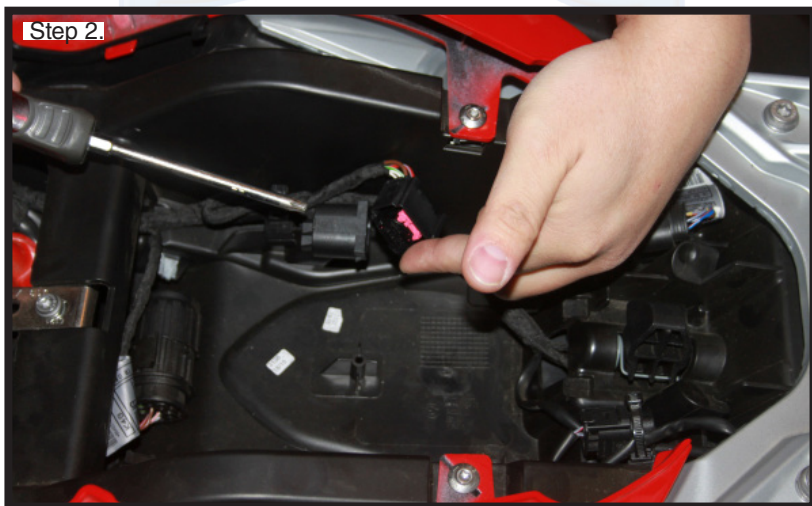
CANopener Mounting:

Step 1. Locate the BMW alarm connector which can be found under the seat.

Note: This model doesn't have the alarm box located here under the seat. If your bike does have the alarm box located here you should be able to follow the next few steps with only minor changes to the procedures. Remember the connectors fit together uniquely, so don't force any connections and this should be a piece of cake.



Step 2. Disconnect BMW alarm connector.



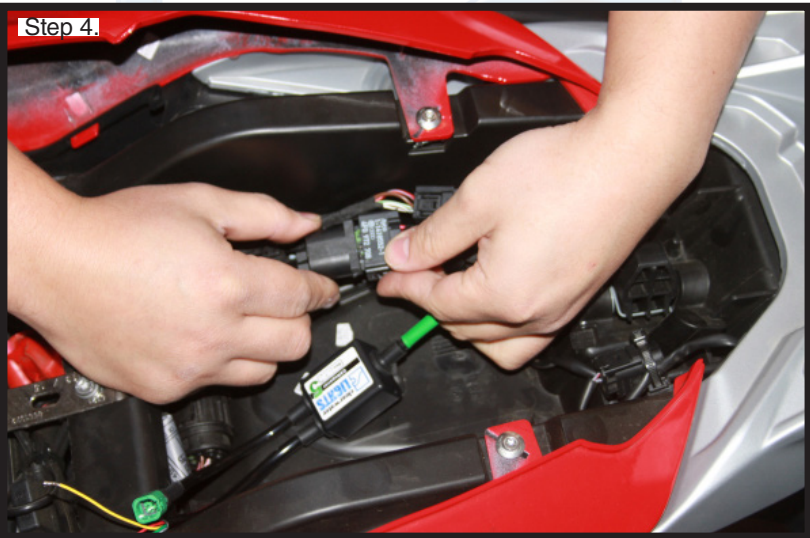
Wiring

CANopener Mounting:

Step 3. Plug the connector with the pink plastic inside into the CANopener 5.



Step 4. Put the cap on the other connector attached to the CANopener 5.



Step 5. Route the wires from the CANopener along the main wiring on the right side of the bike to the front. Leave the wires hanging here for now.

Step 6. Secure the CANopener to the plastic inner fender with provided Velcro strip. Be sure to clean any dirt or dust from area before affixing the CANopener.

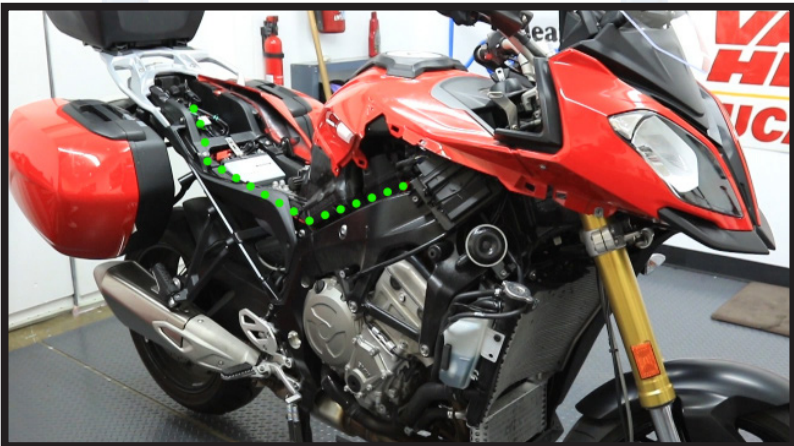
Wiring

Wire Routing:

- While routing wires be sure that they cannot become tangled or caught in either suspension or steering parts. Check movement of both steering and suspension before riding the bike.
- Mount the CANbus relay next to the frame supports of the bike.
- Run the short RED and BLACK double wires up to the lights, then connect the longer set of wires to the battery.
- Connect the RED wire with the fuse holder and ring terminal to the positive battery terminal. Remove fuse from the fuse block before hooking up battery to prevent accidental shorts.
- Connect the BLACK wire ring terminal to the negative battery terminal.
- Plug trident to data cable.
- Route data cable along bike to CANopener with stock wiring harness.
- Using a RED Posi-Lock, connect the RED wire from the CANopener to the thin RED wire from the relay harness (2 wires).
- Use a BLUE Posi-Twist to connect the GREEN wire from the CANopener to the two GREEN wires from the lights (3 wires).
- Use a BLUE Posi-Twist to connect RED from the harness relay to the RED wires from the lights (3 wires).

Clearwater lights include a simple and high quality means of connecting to the motorcycle's electrical system. "Posi" devices made by Posi-Products are used to securely and safely make electrical connections on the bike.

Wire Routing Diagram



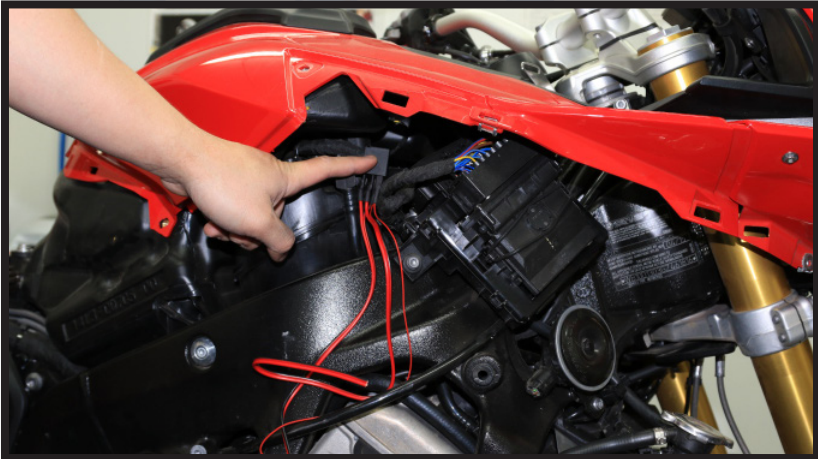
Wiring

Wire Routing Continued:

- Again use a BLUE Posi-Twist to connect BLACK wire from the harness relay to the BLACK wires from lights (3 wires).
- Secure the RED, GREEN and BLACK wire junctions together with a provided zip tie and tuck out of the way behind the fairing. Secure with another zip tie.
- Reinstall fuse into the harness relay and start motorcycle to test lights. On low beam, you should be able to adjust the brightness with the Wonder Wheel. On high beam the lights should go to full brightness.
- Be sure all wires are tucked out of the way, securing where needed with the included zip ties.
- Reinstall side and battery covers, verify that no wires interfere with the steering or suspension parts of your bike and enjoy!

Note: The YELLOW and WHITE wires coming from the trident adapter won't be used in this installation. The YELLOW wire is an optional on/off switch. The GREY wire is for bikes without the Wonder Wheel and allows for a dimmer switch to be installed in these situations.

Wiring Harness Relay Mounting



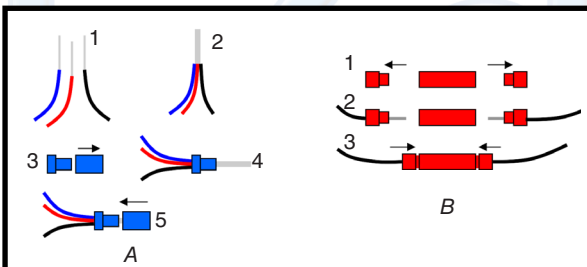
Helpful Hints

Do Not Kink The Grommet

To maintain the integrity of the water sealling grommet, do not kink, deform or put pressure on the grommet when dressing the wires during install of Clearwater Lights.



Posi-Products Installation Instructions:



Posi-twist (A):

1. Strip all wires to be inserted 1/2"
- 2. Twist all wires together before inserting into the Posi-twist.**
3. Completely unscrew the top from the Posi-twist.
4. Feed the twisted wires through the bottom portion of the Posi-twist.
5. Attach the top and tighten, while ensuring the wires do not slip out of the bottom of the Posi-twist.

Posi-lock (B):

1. Remove both ends from the Posi-lock.
2. Strip wire 1/2" and insert into bottom portion of the Posi-lock.
3. Hand tighten the Posi-lock onto bottom portion with wire, repeat for other side.





Thank you for purchasing your **Clearwater Lights**. We hope this product will help make you a safer rider. Please feel free to send us comments or suggestions at any time. We learn from you. Visit our website for more exciting products to help you see better at night.

Ride safe!

Sincerely,

Glenn and the team at Clearwater.



The Clearwater Company - 11305 Sunrise Gold Circle, Suite D
Rancho Cordova, CA 95742
Phone: (916) 852-7029 | Fax: (916) 852-9410 | www.clearwaterlights.com
As of 6/9/22