

## **Installing Symtec Heated Grips on a K75, K100 or K1100 w/ a BMW OEM Switch**

**Universal Disclaimer:** This is how I've done this. If you do this you do so at your own risk. If you don't understand electricity or how to properly wire things you can fry electrical components or maybe even start your bike on fire.

I've done this to several K bikes and they work just as well as the BMW OEM ones and using the BMW switch they come out being equivalent to the OEM heated grips but for a lot less moolah.

### **What you'll need:**

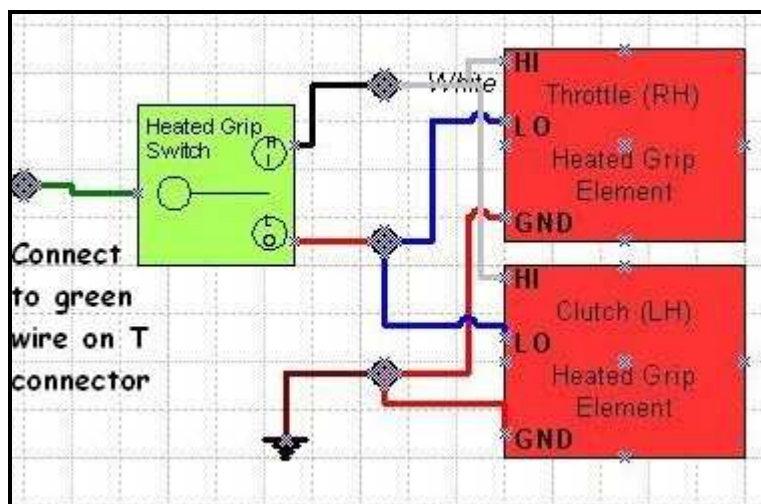
- BMW Heated Grip Switch (Part # 61311459234)
- Symtec Heated Grips: Make sure you get the motorcycle version. They're usually cheapest at <http://www.casporttouring.com>.
- ProGrip model 699 grip rubbers. (optional)
- Some wiring connectors.
- Symtec heated grip elements:



**(Side note:** The ProGrip 699 grip rubbers are what I use on all of my Ks. They're very comfortable even without gloves, transfer heat just fine and last forever. Better yet, they're only \$8/pair. They also come in both closed- and open-ended versions so make sure you get the right ones depending upon whether your bike has bar ends or not.)

### **Wiring Schematic:**

If you're a handy shade tree mechanic then this wiring diagram is all you'll need.



**Warning #1:** If you're like me you don't read instructions and just figure things out for yourself. I did skim over the Symtec instructions though and they warn you not to put power to the heating elements until they're installed or you can burn them out.

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**Warning #2:** The BMW heated grips are powered by Fuse 1. It might not be a bad idea to pull Fuse 1 in case you short something while working. An even better idea would be to disconnect the negative battery ground and power down the bike completely.

**Step 1: Remove the gas tank:** First remove the seat. Disconnect the power supply for the fuel pump – it's the wire that comes out from under the tank and has a four lead connector on the right side of the bike. . There's two clips on posts at the bottom rear of the tank. (Or a bolt on 85 K100s.) Remove those two clips, lift up the rear of the tank and pull it back. If you're careful you can get away with not removing fuel lines and leaving the tank on the bike but you're probably better off removing the fuel lines and putting your tank in a safe place off to the side where it can't get damaged. I'd recommend either emptying the tank or running it really low before starting this project because after you disconnect the fuel lines it will leak out of the aft left outlet. Tilt it against the wall with the front pointing up to keep it from leaking.

**Step 2: Find your power source:** The factory wiring harness for K bikes has a connector for heated grips. It is a "T" connector which has short leads and can be found under the tank on the left side about two thirds of the way back. It has two wires. The green/black wire is switched power from Fuse 1. The brown wire is a ground.

**Step 3: Remove the old grip rubber:** If you're smart you'll just cut the old grips off and throw them away since you already followed my advice and bought a pair of the ProGrip 699s.

**Step 4: Install the heated grip switch:** Pull out one of the switch blanks and then run the switch wires through the hole and install the switch in your dash pad. Then run the wires from that under the tank with your other wires, making sure the wires are not stressed when turning and that it does not hinder steering. Once you have the wiring from the heated grip switch routed under the tank, cut off the connector and strip the ends of the three wires.

**Step 5: Attach the throttle side heating element:** Figure out where your fingers will normally be, remove the backing from the heating element labeled "Throttle" and stick it onto the throttle tube.

One of the weaknesses of the Symtec heated grips is that the repeated stress from twisting the throttle can cause the wiring to become detached from heating element on the throttle side. A few wraps of fine gauge brass wire can reduce the chances of this happening:



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**Step 6: Attach the clutch side heating element:** (Note: If you're replacing BMW heated grips get rid of the old plastic tube on the clutch side - the Symtec element is designed to work on a metal bar.) I recommend that before you apply the heating element to the clutch side of the handlebars that you wrap it once or twice in electrical tape. This will reduce the heat sink effect of the handlebar so the grip will heat up faster and more evenly with the throttle side. Then remove the backing from the heating element labeled "Clutch" and apply it where your left fingers will normally be when riding.

**Step 7: Run the heating element wires under the tank:** Run these along the back of the handlebars with the other cabling and wiring by the steering head and then down under the tank. Be sure to leave enough slack by the throttle so it can have full throttle movement without stressing the heated grip wires. Be sure that you have full side to side motion of the handlebars without stressing the wires and that the wiring does not hinder full steering movement.

(**Note:** The following assumes Symtec has not changed the wiring colors since I last did this. The most important thing is to find out which wire is common to both the high and low heating elements of each heating element and use that as the ground. In my case the common wire was the red one. I also recommend using Posi-Locks or some other reliable connector for connecting wires together. The Scotchlocks that come with the Symtec heating elements are notoriously unreliable.)

**Step 8: Connect the wiring:**

- The **green wire** from the switch is **power to the switch**. Connect that to the **green/black wire** from the factory wiring harness T connector.
- The **black wire** from the heated grip switch is for the **high setting**. Connect that to the **white wires** coming from the heated grip elements.
- The **orange wire** coming from the switch is for the **low setting**. Connect that to the **blue wires** coming from the heated grip elements.
- Using a ring terminal, **ground both red wires** from the heating elements to the main grounding point under the middle of the tank. It's a bolt with a 10mm head and a bunch of brown wires attached via ring terminals.

**Step 9: Test:** Make sure all of your wiring connections are solid and well-insulated. Replace Fuse 1 or reconnect the battery. Turn the bike on. It doesn't have to be running, just on. Move the switch to the low setting (down) and wait a few seconds. Feel the heating elements on both sides – they should be getting warm. Now move the switch to the high setting (up) and they should get even warmer.

**Step 10: Install grip rubber:** The easiest way to do this is to use aerosol hairspray. It works well because it initially will make it easy to slide the grip rubbers on when it is wet and then will set up to hold them in place. If you're using the ProGrips you'll notice that one of them has a smaller inside diameter and slightly thicker rubber. That one is for the clutch side.

**Step 11: Put the tank back on:** Reinstall the fuel lines. The rear one goes to the fuel rail. Then center the tank, straddle the bike, push it forward, then down and make sure the posts seat well in the rubber grommets. (Armor All on the rubber grommets acts great as a lubricant to get the posts reseated.) Also make sure that the drain outlets on the right rear of the tank are hooked up to their hoses or draining into a little cup that sits beneath them. If those outlets end up draining gas onto a hot engine bad flaming things can happen. Also be sure to reinstall the clips onto the posts – without them the tank is more prone to fly off the bike in an accident – which is a bad thing. Then put the seat back on go for a ride. You did remember to hook up the power connection for the fuel pump, didn't you?