

American Voyager Association

<http://www.amervoyassoc.org>

Installation of Heated Grips, 1700 Kawasaki Voyager

By Julian Huby (the1king)

After spending many years riding a BMW with heated grips, I realize how important it is to keep the hands warm, whether it is just rainy, or truly cold. Therefore putting heated grips on my new Voyager was a priority.

After doing research on various heated grips, I narrowed my choice down to the "Hot Grips" brand available at: www.hotgrips.com

Part of the reason why I decided on Hot Grips, is because the company owner "Jim Hollander" was very quick to answer my questions, and provided all the information that I needed. In other words he gave me the "warm fuzzy feeling" about his product. (I wish other suppliers would do that).



I ordered model "525-100" with the optional chrome end caps, and the 2 part epoxy (optional).

(If you want the chrome end caps and Epoxy you need to specify when ordering.)

The grips in this kit are 5-1/4" overall length and meant for 1" handlebars with a 1-1/8" throttle sleeve.

The Kit contains:

- Left and right heated grip (with optional chrome end caps).
- Resistor for the low temperature setting
- High/Low toggle switch
- Fuse holder (not shown)
- Instructions

Not shown is the optional 2 part epoxy that I also bought from Hot Grips.

Below; I have detailed how I installed the grips. Hopefully my experience will help others installing grips. Please make sure that you follow the instructions provided by "Hot Grips".



Remove the Factory Grips

Before removing the factory grips, the "chromed plastic" grip end caps need to be removed. The chromed plastic ends are threaded on, but have "left hand" threads, which means to unscrew you need to turn them clockwise. (The opposite way that you would normally unscrew something) To do that I recommend using, either a rubber strap wrench, or a sheet of thin rubber used as you would to loosen the lid of a jar.

Once I had the end caps off, I used a sharp utility knife to cut through, and peel off the factory rubber grips. (They are only about 1/8" thick so it's easy to do.)

With the rubber grips off, I removed the chromed ring that is adjacent to the left switch housing. The left ring will come off, with a gentle pull, but the throttle side ring will need to be cut off, as it's pressed on. It's easy to do; I cut it off using wire side cutters (see picture on page 3 below).

Factory left and right Grips

www.amervoyassoc.org



After removing the chromed end cap, and the factory rubber grips.

The chromed plastic ring next to the switch housing needs to be cut off.

Note all the ridges on the sleeve, all these except one ridge need to be filed off.

1. Prepare left handle bar for grip installation

The left handle bar is pretty easy to prepare, first I cleaned any glue from the bar, and then gently test fit the left grip, be very careful here as it needs to slide on easily.

As per the instructions, ***“Do not force the grip on with anything greater than gentle hand force”***. Remember after the test fit you need to take it off again. (You could also crack the heated grip if it's too tight).

If you find it too tight, as I did sand the bar using sand paper until it slides on and off easily. On my bike I used an 80 grit sand paper, and it took approx 20 minutes to get a good fit.

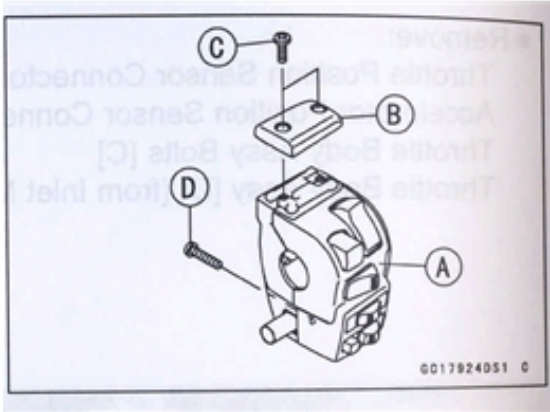


Using a hack saw I cut the threads off the end of the left bar.



2. Prepare throttle sleeve for grip installation

The plastic throttle sleeve needs to be filed to make room for the new grip. As this is easier accomplished on a work bench I opened up the throttle housing and removed the sleeve.



To remove the throttle sleeve, I first put a towel over my tank to protect the paint work in case the housing dropped, then I un-screwed the 2 screws (C) in the chrome cap (B), and then removed screw (D). The two halves of the housing then came apart, then I took the 2 throttle cables off the throttle sleeve and the sleeve slid off the handle bar.

Cut off the plastic Chrome ring.



Using a hacksaw I cut off the threads.

I used a very coarse metal file to remove all the ridges except one from the sleeve.



When filing be very careful not to file through the throttle sleeve, I made sure that I filed on a flat plain, not on an angle.

Attacking one ridge at a time I filed off all the longitudinal ridges except one.

(if you look inside the new "Hot Grip "you will see grooves, by leaving one ridge on the sleeve it nicely locks to the sleeve.)

In addition to filing the longitudinal ridges, I needed to lightly file the raised area around the end of the sleeve, close to the end that had the thread. Also just to the right of the file in the picture above, there is a raised area that needs to be filed.

Test fit the new hot grip; it needs to slide up to the raised area shown with the arrow in the above picture.



The finished throttle sleeve, ready to be re-installed



I then reinstalled the sleeve in the housing. Put both throttle cables back on and tightened all the housing screws. You can see the one ridge that I left on the sleeve.

3. Epoxy on the new grips.

When test fitting the new grips, I decided that the best position for the power wires is straight down or a 6 o'clock position.

I mixed the high heat 2 part epoxy, and applied it using a stick (about the size of a pencil) to the entire throttle sleeve, and then slowly slid on the throttle grip, cleaning up the excess epoxy as the grip slid on. I then repeated the process on the left bar. I found the left bar did not need as much epoxy as the throttle side.



Installed throttle grip.



Installed left grip

The day I installed the grips the temperature was just below freezing, so as per the instructions I connected them up to a 12 volt power source for about 45 minutes, the heat helps to set the epoxy.

4. Connect the Wiring



Leaving a couple of inches slack at the throttle grip, I ran the wires from both grips along the handle bars and neatly secured with cable zip ties.

Just in front of the handlebar clamps, I then connected the wires from both grips to one main power line running to the switch/resistor and Aux ground connection.

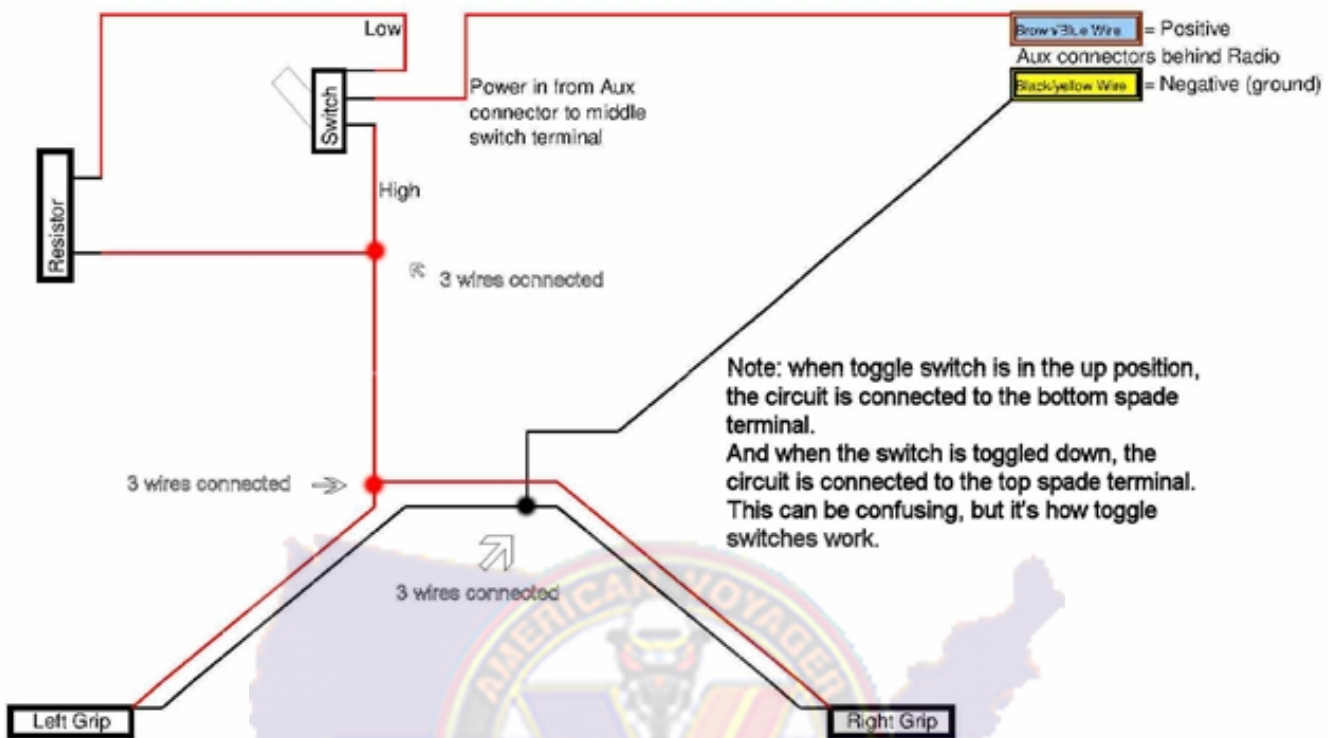
Wiring connections are always a weak point. When making wire connections some people like to solder, however years ago, I found out that solder joints often break due to the vibration on the rigid solder joint. The solution that I found to work better, is a good crimp connector filled with silicone. The silicone not only helps to seal out moisture, but also acts as a vibration dampener.



On a board I squeeze out a line of silicone, and then fill the connector by scooping it in the silicone.

Then insert the wire into the crimp connector and crimp.

Once the silicone is dry I have a moisture proof, vibration resistant connection.



Above is the wiring diagram I used to connect the grips.

To connect the grips all I needed to do was remove the left hand speaker grill and speaker, and the left storage box. This provided access to the AUX power connections, and allowed room to mount the resistor and install the switch.



Using a 4mm hex wrench, remove the 2 bolts on the left speaker grill.



Remove the 4 Philips screws that hold in the left speaker and speaker box, lift out the speaker and un-plug the connectors on the rear of the speaker.



Pull out the speaker box, the 2 speaker wires will slide through the hole in the back.



Next unlock the left storage box and remove the 3 Philips screws. Gently pull out the box allowing the 2 iPod wire connections to go through the hole in the back of the box. A rubber grommet needs to be removed before the plugs will slip through the hole.



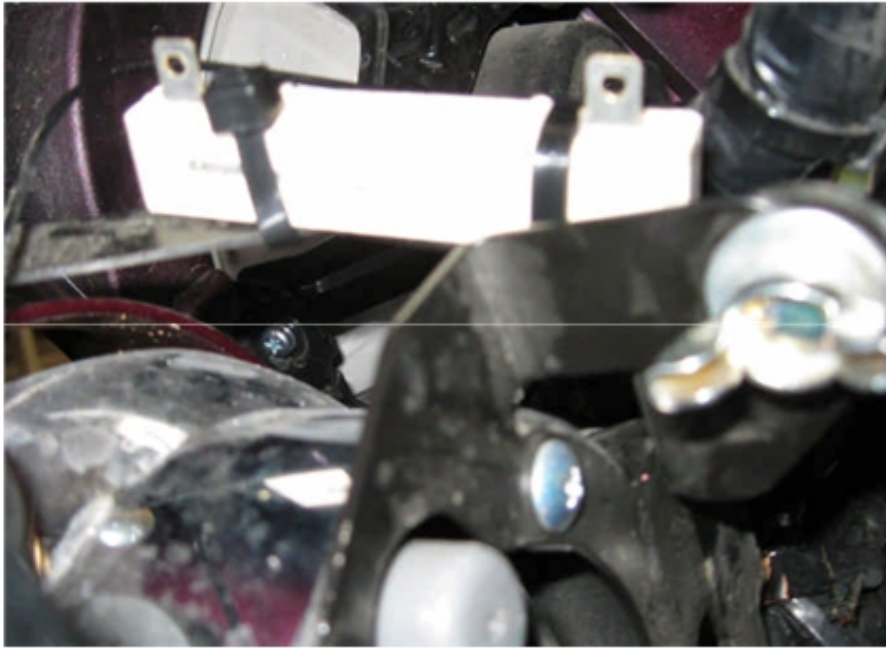
With the speaker assembly and storage box removed, you can reach up and find the 2 Aux power connectors, which are on the top left of the radio.

These connectors take a male "pin" type plug (as shown in the "silicone" picture on page 7)

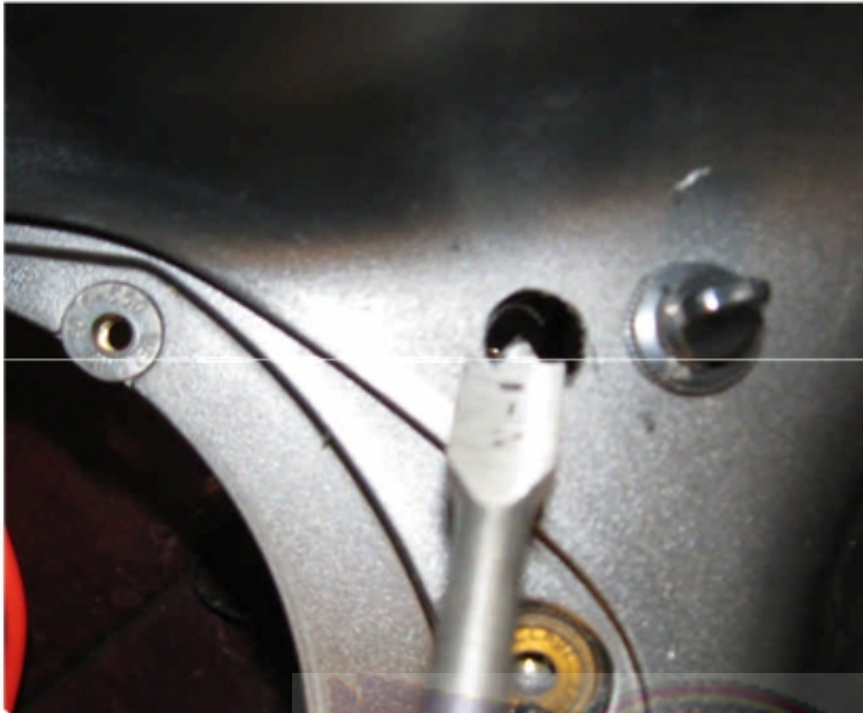
The Brown and Blue wire is the positive, and the Black Yellow is the negative (ground)

I attached the low heat resistor to the metal bar that is part of the driving light bracket, using nylon zip ties.

On to one of the wires running from the grips, I crimped a male pin type connector, and plugged it directly to the Black and yellow wire Aux ground connector.



After resistor mounted.



Next to the left speaker opening I drilled a 1/2" hole in the fairing to accommodate the high/low switch.

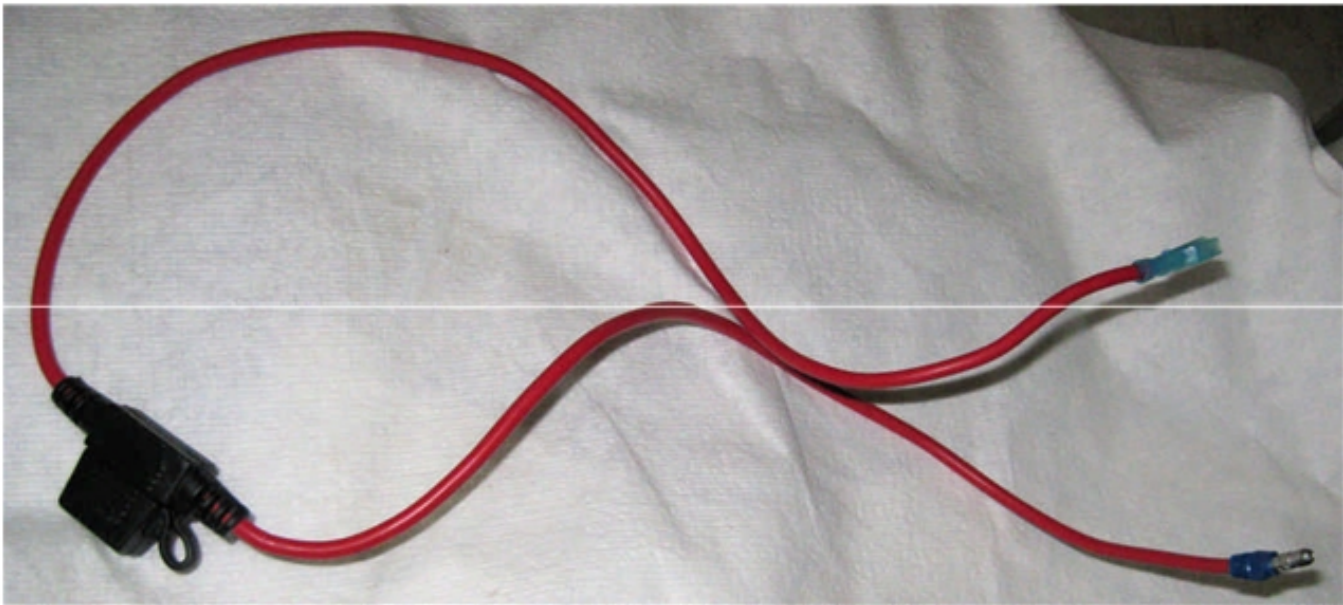
The other switch shown is a power switch for my "Sirius" radio.



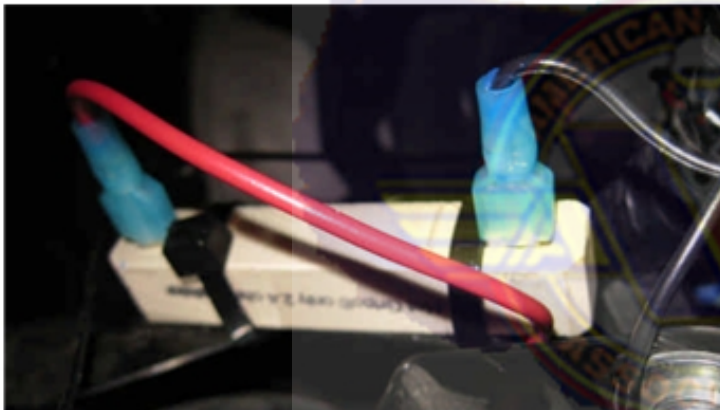
Switch Installed.



The High/low toggle switch does not come with a water proof cover, this I purchased from an auto parts store. It just screws on over the toggle, and results in a weather proof switch that blends in with the fairing.



Using the supplied fuse, I crimped on a male pin plug, and a female spade plug. The male pin plug went into the "Brown and Blue" Aux wire (as shown on page 9), and the female spade plug was plugged onto the center connector on the back of the toggle high/low switch.



As I wanted the toggle switch to be in the low position when it is in the down position, using a wire with crimped female spade terminals on each end, I connected a wire from the top terminal on the back of the toggle switch to the resistor.

I then created another wire with a crimped female spade terminal to the other end of the resistor and ran this wire back to the switch, and connected it along with the positive wire from the grips to the bottom connector on the back of the toggle switch.

It was time to test the grips; the switch center position is off, down is low heat and up is high heat.

After I determined the grips work, I reinstalled the storage box, being sure to reinsert the iPod connections and rubber grommet in the back of the box, and then fasten in place with the 3 Philips screws.

Next I installed the speaker box, inserting the speaker wires through the back, and plugged them on the speaker (note the 2 speaker wires have different sized plugs so you can't mix up the wires). Secure the speaker and speaker box in place using the 4 Philips screws. Then install the chrome speaker grill using the 2 4mm hex bolts.

Now it's time to enjoy the "heat".

