

Installing LED lights in a Hypercharger

By Keith Edwards – Joker's Wild! (Wildjokr)

THINGS YOU WILL NEED:

- A Hypercharger (duh!)
- LEDs (*The ones I got were from Benny Bryant at "Fantasies on Wheels" in Sylacauga, AL. Great folks to deal with!*)
- A switch (*also from "F.O.W."*)
- Double sided, heavy duty tape
- Wire ties and extra wire
- Drill with assorted drill bits (especially 1/4")
- Phillips head screwdriver
- Needle nose pliers
- Small (22 gauge) ring terminals and butt joint terminals
- Wire crimping tool
- Electrical tape
- 80mm fan cover
- Dielectric grease and shrink tubing
- 1/4" x 1/2" aluminum spacers (optional)

Ever since seeing the "neon bagel" mod, I've wanted to install some type of LED lighting in my Hypercharger. I went back to the stock configuration to do this; I used to have the blood groove cover on the Hypercharger, but I figured that it would be easier to drill through the stock cover to install the LED. This is the stock look I started with.



After seeing several different styles and manufacturers of LEDs, I decided to order some from Benny Bryant at "Fantasies on Wheels" in Sylacauga, Alabama. Service was great, and shipping was quick! Overall, I was very happy with my purchase.

These were the lights that I ordered from Benny.



I also ordered the optional 3-way switch that Benny has available, so I wouldn't have to do anything special with this installation. (*I'm kind of lazy when it comes to starting a project, but once I get going, I really want to get it done!*) I don't think this switch is waterproof, so if you're planning on installing it somewhere on the bike that it will get really wet, you're better off going with another switch assembly. These were the LEDs that I ordered. Small sized control box, even smaller lights, and you will not believe how bright they are!

The only extra I had to buy was a roll of heavy-duty double stick tape. The local Home Depot or similar D.I.Y. home center should have it. This was 3M weatherproof double stick tape. *(It feels more like foam than tape and will stick well to the frame of the bike.)*

You will need to drill a small hole underneath the seat in the metal for a ground bolt, so have a drill handy for this. For the ground, you can use a self-tapping sheet metal screw, but you'll still want to drill a pilot hole to make it easier on yourself. You will also have to drill a hole in the Hypercharger cover for the LED. Along with the drill, you'll need to have several small diameter drill bits, a Phillips head screwdriver and possibly a pair of needle nosed pliers.

Once you have everything ordered and ready to go, you'll need to start by removing your speedometer, battery cover, driver's seat and gas tank. You will also need to remove the cover on the Hypercharger to install the lights. It will help if you can set the bike upright on a jack- even the \$20 homemade unit will help you out quite a bit.

When you get the cover of the Hypercharger off, you need to take out the filter inside so you can keep the wires behind the filter. If you haven't done it yet this season, this would be a good time to make sure your filter is oiled properly!

Figure out where you'd like to install your switch to control the LEDs; most states have requirements for lights, so you'll have to have a switch to turn these on and off. I installed mine on the battery cover; it can be a pain when you want to take the cover off in the future, so if you install the switch here, I'd recommend adding a small wire lead to the lengths coming off the switch to give you some extra room to work.



Start out cutting the rubber bushings off of the LEDs; you will not need them for this installation. Then, insert the LEDs in the rear drain hole of the Hypercharger and use the double stick tape to hold them in place. I put one of the LEDs in the front of the Hypercharger, just behind the butterflies.

The other is left loose so I can insert it in the hole that I'll drill in the cover of the Hypercharger.

Once the LEDs are taped inside the Hypercharger, you can re-assemble the Hypercharger, except for the small cover on the outside.



Let the LED that you'll put in the cover hang through the opening, and start routing your wires toward the battery box.

Use the double stick tape to hold the wires to the airbox assembly and route your wires along the top of the frame toward the battery box.



(It might be easier for some to start at the rear of the bike and work forward towards the Hypercharger, which is fine; just remember not to leave too much wire at the front.)

Once you get the wires in place, you need to drill a hole in the seat support for the grounding screw.



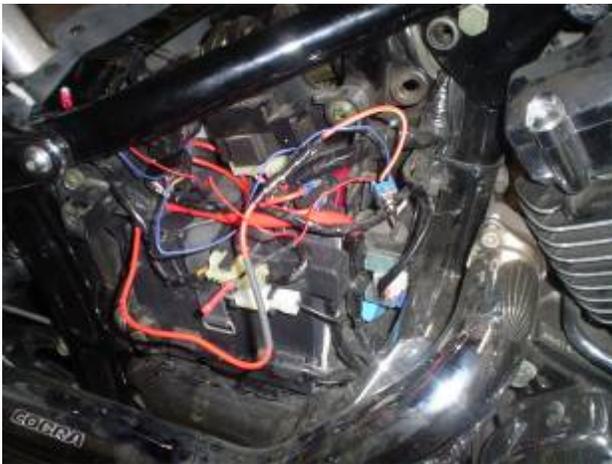
I had a screw already, so I just drilled a hole through the metal to match the size of the screw. I also crimped a ring terminal onto the end of the wire so that the wire would not come off the ground screw.

After the wires are run and the ground is hooked up, you'll need to find a suitable mounting place for the control box. I used a large piece of double stick tape and mounted it next to the ground screw, underneath the seat. Wire tie all of the excess wire from the LEDs up out of the way; just make sure you leave enough wire to run to the switch location you've chosen.

When installing the switch, make sure to follow the directions that come with it; you do not want to hook up power to the switch unless ALL of the leads are attached! Pay special attention to which way the diode is facing; you'll need to have it the right way for the switch and the lights to work properly.



I drilled a small hole (*1/4"*, I think; *just measure up the top of the switch with a drill bit. You'll be able to tighten it down enough if the hole's a hair big*) in the battery cover and assembled the switch in the cover.



You can use splice connectors to make contact with your HOT and COMMON wires here, but I added a little length to my wires and used butt connectors and just crimped them on.

OK; the middle wire on your switch is your HOT wire. I crimped a ring terminal on this wire and added it right on the positive terminal of the battery- this way I always have power to the LEDs. (*In case you want to show them off without having to start the bike...=)*) Then, just connect the other two wires from the switch to the corresponding wires from the control box. It is a good idea to use a bit of dielectric grease on the wires before crimping them together, and shrink tubing wouldn't hurt either. This way, you make sure that everything is protected from moisture.

When you're done making all your electrical connections try using the lights. Make sure everything works correctly before bundling your wires and tying them up inside the battery box. If everything works, bundle all the wires up, and put your battery cover back on.

Now, take your drill with the $\frac{1}{4}$ " bit (*Again, I think that this is the closest size to the size of the LEDs*) and drill into the center of the Hypercharger cover, but up on a slight angle. If you hold the drill with your right hand and the cover with your left, put the drill bit in the center of the cover, so that its perpendicular to the cover. Now, angle the drill bit upwards, so that it's almost parallel to the inside dimple of the cover. Drill your hole and clean it up.

Insert the LED through the back of the chrome cover. If you have a little play left in the hole, use some of your double stick tape to hold it in place. The tape will also help seal the hole against the elements.

Have your 80mm fan cover ready when you mount the chrome cover to the Hypercharger. I found it easiest to install a screw to hold the cover in place, then add the fan cover when I tightened down the next screw. You may have to dremel the holes in the fan cover to match up to the mounting holes in the HC. I also used $\frac{1}{4}$ " aluminum spacers that I got from Home Depot to clean up the look.



After everything is back together, it's just a matter of cleaning everything up, remounting the seat, tank and speedo and waiting until it gets dark. Then, take the bike out for a ride, and enjoy the looks you'll get for lighting up the night!



