

## ***World's Cheapest Lightbar*** By FrankQc

First step, shorten your front turn signals as described on this site and on [Briman's site](#). You do not absolutely need to do it but it just looks better. You probably noticed that the wire is no longer coming out of the end, but from the rear. You'll understand why later.



I removed the screw behind the turn signal and cut the rubber with a utility knife to be able to pass the wire by this hole. I glued the rubber inside the housing with epoxy to get this thing tough without the screw. Let's see what's next...



Here's the exciting part. I went to Home Depot and found everything I needed for this mod! I bought a 36" 10mm stainless steel threaded rod (the only available length, enough to mod two vols) with some 10mm stainless steel nuts, 10mm 2" link nuts and a couple spacers. I removed the turn signal holding bracket off the bike (with no turn signal on it) and installed the threaded rod. This is a one piece rod, which gives a lot of strength to the whole bracket. This strength is essential when putting lights like these to avoid vibration. Take a look at the couple next pictures for a closer look of this bracket.

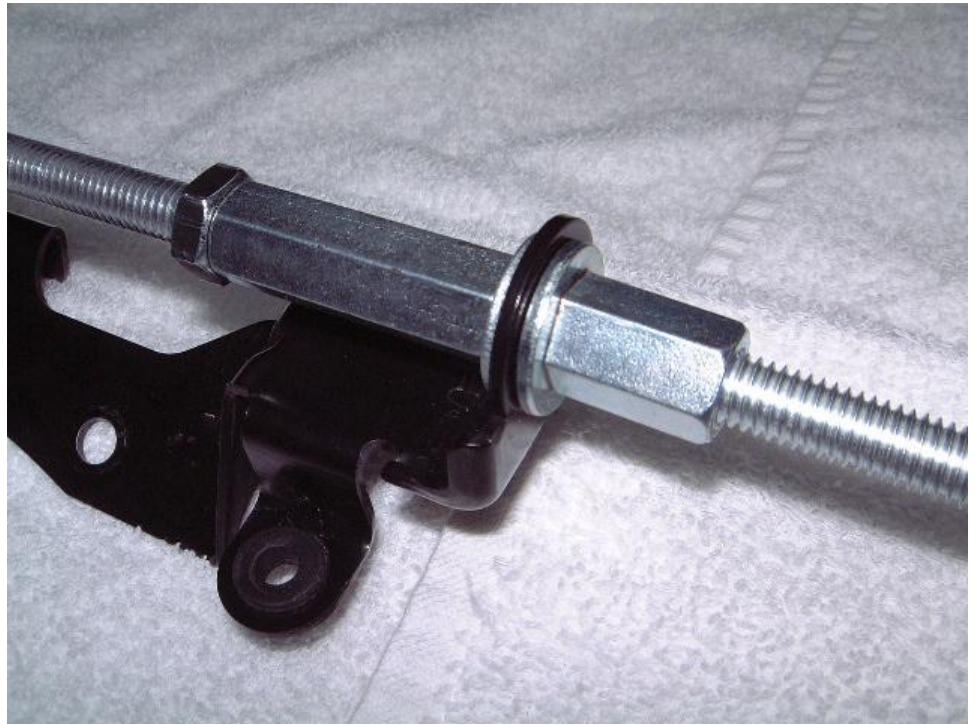


Another view of the assembly

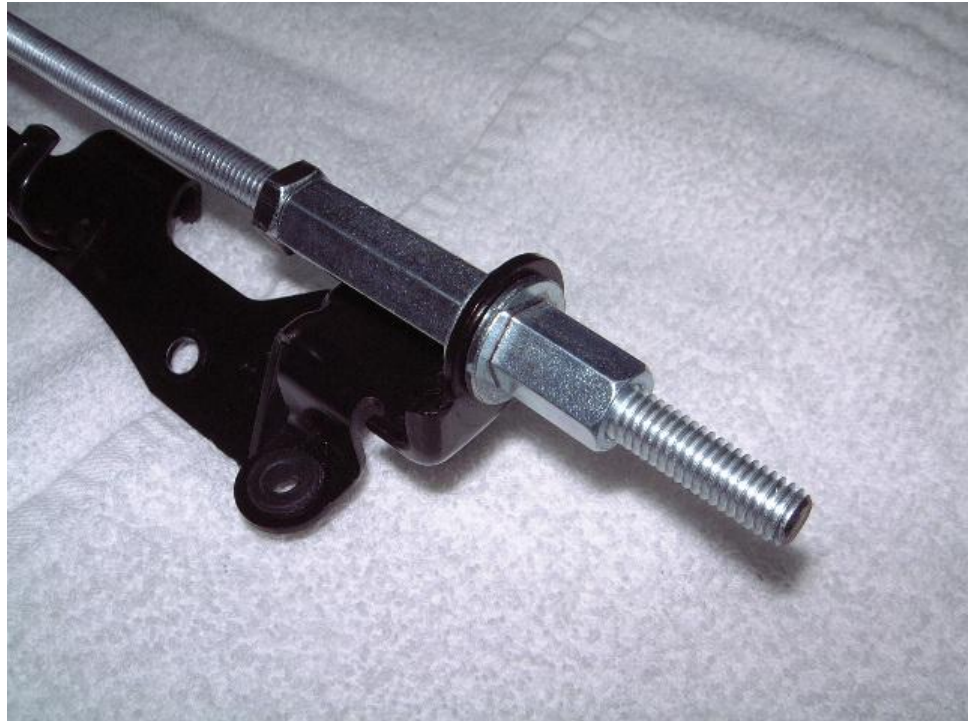




Closer look at the right side of the bracket. From left to right: Nut (to prevent the 2" link nut from moving), 2" link nut (could use a 2nd ordinary nut but that's what I had in my hands, so I used it), Spacer, OEM Bracket, Spacer, And a 2" link nut that I cut in two pieces to get two 1" nuts. One for the left and one for the right. No wasting here! Be sure to cut the link nut perfectly straight to avoid bending the rod when you will tighten the 1" nut you just made. This 1" nut is going to be the space between the chrome plastic cover and the light's bracket, so you may cut it the size you like. I think that 1" looks just fine on the bike. It could be 3/4" or even 1/2" depending on how close you want your new lights to the OEM headlight. You need at least 1/2" to be able to put back the plastic chrome cover.



I now cut the threaded rod to the desired length (which is not very important since it is going through a 2" long link bolt that you'll see later...) I left about 1 1/2", that's more than enough. Don't forget to put a nut on it before cutting the rod. You will probably damage the threads when cutting the rod and removing it afterwards will repair those damaged threads.



As you probably guess, everything is tight and LockTite... I still add some liquid weld on the joints to avoid problems with vibrations. This liquid weld is some kind of epoxy with metal particles in it. This is hard like steel when dry. It can be painted, buffered, drilled end even threaded! (Not something that we'll do here) You do not need to do this, but personally, I really hate long term problems.



Here are the lights I used. Those are truck lights with 4411 bulbs. I paid 22\$ CAN each, which is about 17\$ USD. That's very cheap! They are well made and well chromed too. I added Highway Hawk visors on both lights to give them a nice "bike" look.





This is a close look at the back on the light. They are made by Grote. Its written 6412 on the back of the light but the official part number is 64111. [Here is the link](#) to see this product on Grote's website. Please forgive my fingerprints as they will be removed later.



Here is the light assembly, with the visor. Seems big on this picture but it's a 5 1/4" light with a 4 1/2" lamp, and it's only 2 7/8" deep, so it fits nicely even with a windshield.



I then installed the turn signals to one side of the light's bracket using another 2" link nut. This nut screws right in the turn signals threads. I then covered with my magical liquid weld (option). Notice on the left the little gap between the light's bracket and the 2" link nut. That's the place where the locking nut will fit when assembling this thing to the threaded bar.

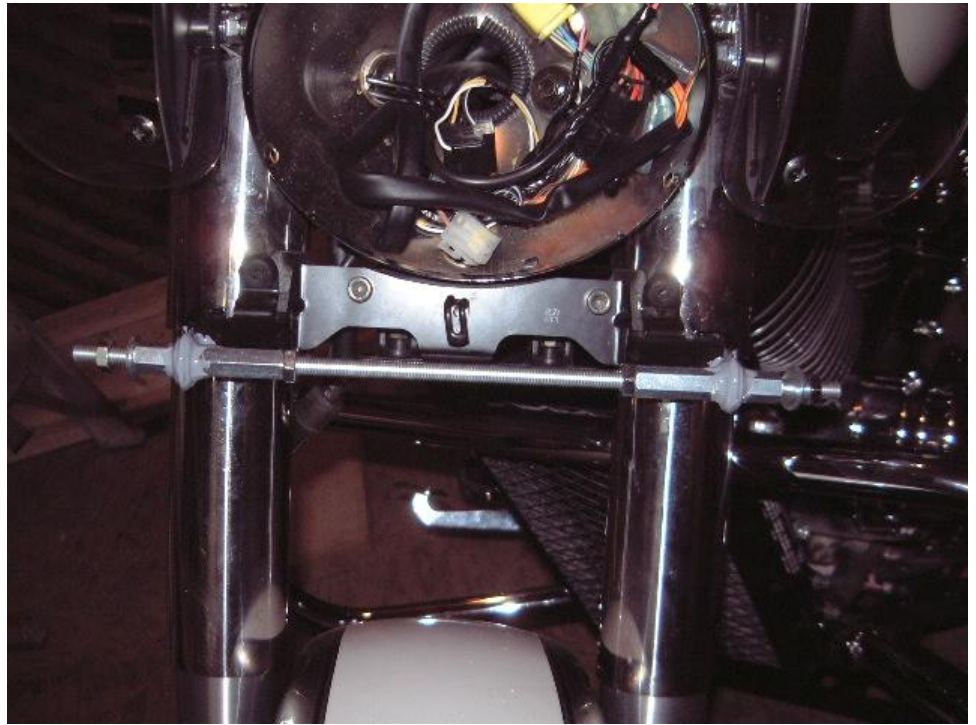


This is what both lights look like when the turn signals are installed on them.

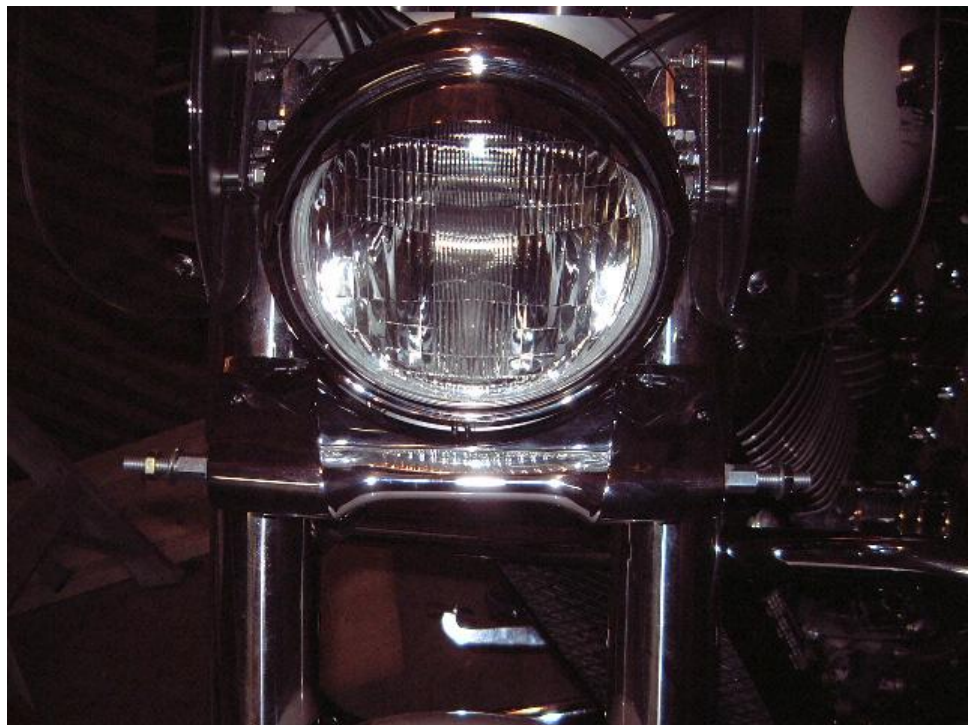




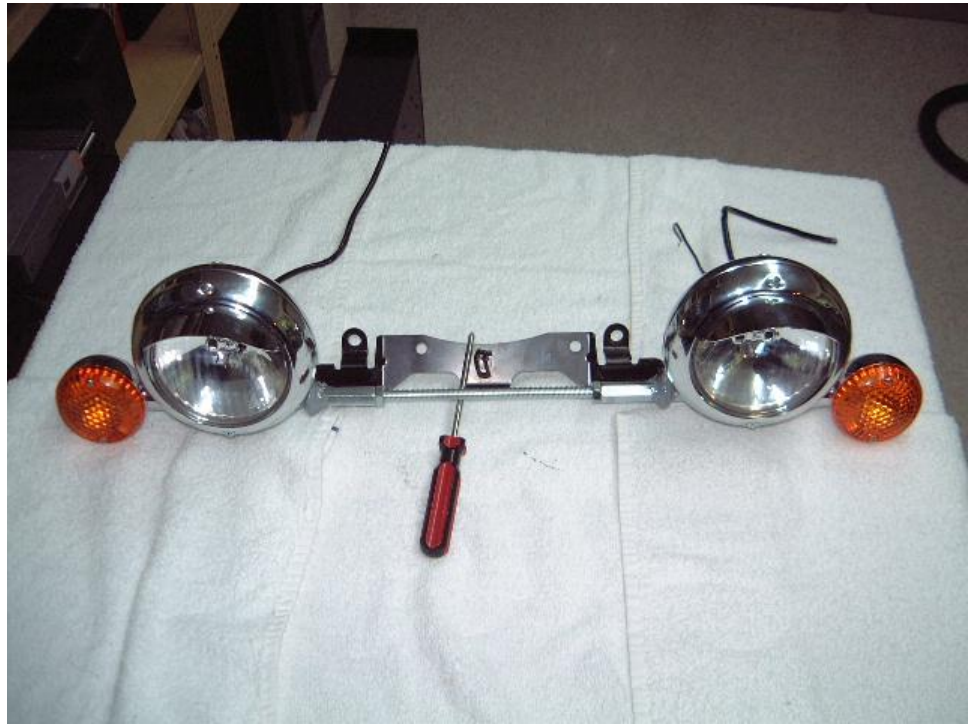
Reinstalled the turn signal bracket on the bike with the threaded rod on it just to see how it fits.



Same thing with the chrome cover and with the headlight. Everything seems ok, let's go back in the shop with this thing and install the lights.



Here it is! I installed the lights on the ends of the threaded bar. I think I do not need to tell you how I did that. I locked the adjustment with a bolt that fits in the gap stated in Step 11. You probably now understand why I re-routed the wire from the turn signals ;-). Don't forget to put power to the lamps and adjust their level on the bike before locking them permanently. It is not a very tough mod to do, if you're a little bit handyman. Please notice that the screwdriver doesn't come with the kit. What's pleasant with this mod is that you do not break anything on the bike, so you can always go back if you don't like it. As a cheap man I am, I reused the OEM turn signals, but you may replace them with the ones you like. So you wanna see this on the bike ?? Take a look at the next pictures!

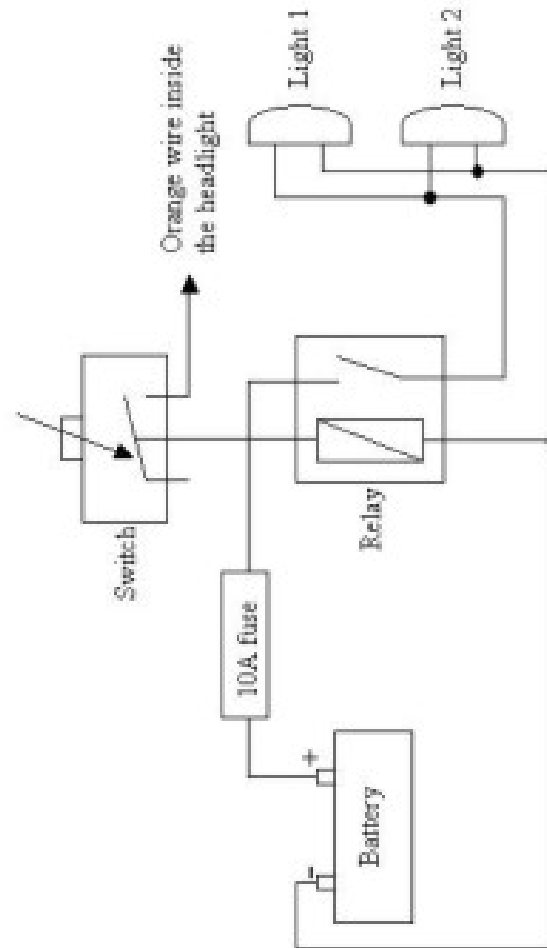


Here's a very very close look at the back of my lightbar. Someone asked me to post it so here it is. He wanted to know how I hidden the wires from the Grote lights and turnsignals. After assembling everything, I just covered the 2-3" visible part with a electrical wire harness (the same kind of plastic thing used in cars in the engine compartment). I added epoxy glue on both ends of it and painted to give a more finished look.





Here's the electrical schematic for the Lightbar. Connected this way, the Lightbar will still work even if the main headlight goes off (fuse, bulb or wiring problem). If you leave it always on, it will follow the ignition key. I installed my switch in the starter's housing on the right handle (see picture Dec 5, 2003 9:43 PM). I used very small flexible wires (old telephone extension) to connect the switch to the relay/orange wire and passed it through the same harness as the starter switch. Hint: Install the fuse as close as possible to the battery and install the relay inside the headlight housing.



This is what it looks like once installed. Sorry it's a little bit dark in here. The wiring is not done yet and it still needs a little bit of anti-rust black paint on the two 3/4" visible parts between the plastic chrome cover and the light's bracket. I will remove it later to do it.



What else to say...  
Hmmmmm... 45 degree view  
???!



Another shot...





As requested, here's a view with all three lights on. The turn signals are not connected yet.

