

# HOW-TO'S

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## MC Cruise Control, ST1300A

### Supplemental To Installation Instructions

First, let me say that MC Cruise has done their homework and come up with a great product and a great set of installation instructions. This installation is only a mild challenge if you are even slightly mechanically inclined. I won't say it's easy but that is only because of the time it takes. I wouldn't recommend trying to do it all in a day but I have heard of people that have. So if their manual is so great why are you writing up your own? Well, I'm not. This is not a replacement for MC Cruise's installation manual but a supplemental to point out areas I had an issue with in the install or questions I had about the instructions. I'm not going to rewrite a 30+ page install manual although it sounds fun. (Never mind the red tape. That's just a piece I used for padding)



Read through MC Cruise's instructions before you start and then read them again. Make sure you understand the procedures. The instructions that MC Cruise provides are very good although the photos are in black and white so it's hard to see some of the things they are talking about. That's where this supplemental will hopefully pick up. I've tried to include the points here that I had issues with and hopefully they will help others with this install.

**Cost:** ~\$525 (full kit with everything you need)

**Difficulty:** 7 (it just takes some time)

### Parts List:

- [MC Cruise Website](#)
- [Joe Sears' Site, MC Cruise US Distributor](#)
- Joe's Information:
  - Phone: 1-877-246-7187 or 407-334-4539
  - Email: [mccruise@msn.com](mailto:mccruise@msn.com)
  - Website: [www.spoiledbiker.com](http://www.spoiledbiker.com)
- You get everything you need



### Tools:

- What's listed in the instructions
- 10mm combination wrench with ratcheting end (a real time saver)

### Follows the Manual:

This is a great winter project because about 20% of the time on this project will be in getting the body work on and off the bike. That should tell you that this install is not that hard although it does take some persistence and patience. By the way I have none of that and I still managed to get it to work. I take off all the body work in the winter so it was the perfect time to do it. I did have to put the rear, dash, and fairing on though to road test it.

I'm not going to cover taking the bike apart because that's something you can get from the

service manual and the MC Cruise instructions cover everything you need to do. If you don't have one I highly recommend picking it up. It pays for itself in time saved. You don't need to take everything off the bike but I highly recommend removing the upper tank and the side cowlings. If you wanted to pick between the two then go with removing the upper tank. The nice thing about the ST is you can still run the bike with the gas in the lower tank (yes, I tried this and it does work). Before you take the bike apart run the gas down until the low fuel light starts blinking and then you know that the upper tank is empty.

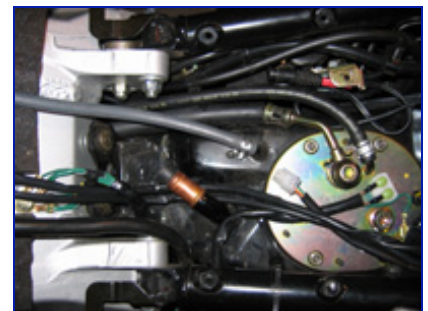
The reason for removing the upper tank is that the critical part of this install is getting the throttle cabling adjusted correctly. It's not hard to do but you want to make sure it's done correctly. The second part is the placement of the CIU assembly. The placement of the CIU is important and you may have to put in and take out the base plate of the air box of few times before you get it just right. If you don't remove the tank you'll get a broken neck spending all that time under the tank trying to get all of that done. And for me that just adds to the frustration of trying to make sure everything is right the first time. I didn't want to screw up my install so I took the time to make sure that the cabling and placement was right before I put everything back together. In the end it paid off and I did all my rode testing with the upper tank off and never had to go back in to adjust the cabling.

I'll break this down into the major sections of the install and try to follow the installation instructions as close as possible.

### Installing the wiring loom

I did not wire wrap anything until I had the entire installation done. The reason I did this was to make sure I could route the wiring and adjust everything to work around tight spots and spots where I needed more slack. This worked well as originally I thought the wiring harness was too long but after the install I realized I had to pull everything back to give enough slack to plug the wiring harness into the control unit.

The wires that run between the tank and the frame are a concern and you want to be sure they are out of the way. I tried to route them a different way but I think the best way in the end is they way the instructions say to do it. The only other wire that was a concern was the wiring that runs to the actuator. You want make sure it doesn't get pinched by anything on the way to the actuator.



Use the space between the rear fender and the frame as a place to pull back any slack in the wiring harness that you need to. You can tuck a lot of wires in the space there right at the place where the harness runs under the rear passenger handle mount. I tried to hide a lot of the wiring but honestly you're going to put the side covers back on so you're not going to see a lot of

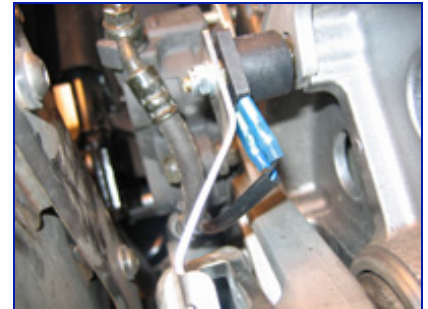
them anyway but if you try and keep them behind other things you'll have a better chance of not pinching anything off.

### Installing the speed sensor

There were two things with the speed sensor but nothing major. Ok maybe three things.

One, the right angle bend that goes around the end of the swing arm on the speed sensor bracket was bent about 2mm to short. The bracket is suppose to go around the end of the swing arm but mine didn't quite make it. It did go around enough though to have the axle nut force it into place. It didn't go on quite perfect but it's tight in place and isn't going to move at all and that's what you really need because you want to make sure that the sensor is right over the magnets that go in the rotor hex bolt heads.

Because the bracket had to be forced on it took me a little longer to get the adjustment of the bracket right. The sensor is suppose to be about 1/8" away from the magnets. Too close or too far will cause the cruise to act jerky and not keep speed. I know because I tried to eyeball before the first road test. I was curious about how exact it had to be. Their tip about using an 1/8" drill bit is perfect because it will stick to the magnets that you put in the rotor hex bolts but put the magnets in first before you line up the sensor so you have them when you're setting the gap. If you think the bracket has the sensor too far out from the rotor bend the bracket so it will be closer to the rotor. Even too close is ok because it's easy to pull out on the bracket once it's mounted to make the gap. If you get it too close rotate the wheel so the rotor is out of the way of the sensor so you can push it towards the rotor to lessen the gap. Doing this isn't hard but again you want to get it right.



The last thing is the wiring harness that goes to the sensor. The sensor bracket has sharp edges so you want to either file the edges down or make sure the wiring harness will not rub on the wiring harness. Or you might want to do both. Remember it's the swing arm so it's going cut into the wiring harness after miles of riding if you let it rub up against the bracket. I routed the wire lightly different than the instructions in that I routed it behind the brake hose first and then followed the instructions for the rest of it. In that way I'm sure the the wiring harness will not rub on the bracket.

### Installing the actuator vacuum hose

The kit includes tubing on both sides of the vacuum switch but I wish there was more tubing on the side from the switch (that's what I'm calling it) to the pressure regulator. The reason is that it is difficult to make the turn to send the tube down to the actuator. This would be a good place where more is better because you can always cut the tubing to the length you think you need. There are two tubes coming off the pressure regulator. The one you need is the smaller one that doesn't have a clip on it. Maybe it's obvious but I had to triple check because I don't know every piece of my bike and what it does. Did I mention the service manual is a good thing to have.



The second part is that this is a vacuum hose and pinching it can be a serious issue also so routing the tube to the actuator was difficult because there is a flange around the lower tank that leads to a pinch point for the tube. Again the tubing being longer would be a big benefit but honestly you can run out and get more if you really want to. The kit does provide the amount you really need but again more would be better. I found a way to route the tube along the tank and come down right at the point where the side cover goes around the lift handle. There's a small gap there where I believe that the hose can travel without getting kinked but it's a really tight spot so I double and triple checked it. The way it's routed in the manual is right over the flange and I just didn't think it would work there without getting pinched.

#### **Installing the vacuum actuator**

This is a time consuming part and taking your time here will pay off. I worked about a total of two hours on it but split it over two days because I get frustrated easily and getting the actuator set right is critical to proper operation. If you have a combination wrench with the ratcheting end it will be a life saver mounting the actuator. A ratchet is too big to get into it and a wrench is too slow because you may have to do it several times to get it right. It's nothing to do with the kit, it's just a tight spot to get into.

They suggest to remove the rod that attaches the preload adjuster to the frame. What I did was not remove it but loosen it almost all the way. What this allows you to do is bring the bar out far enough to work on getting the bracket mounted. I actually mounted the bracket without the actuator on it and then tried to get it set into place first. Then I took it apart and put the actuator on it and bolted it back in. I had to manipulate the bracket with the actuator on it in order to get the cable lined up so it ran behind the frame member straight. I had to do this whole procedure twice to get it right but again this is a critical part of the install so I wanted to get it all out of the way the first time. Making sure the cable is as straight as possible is key at this point.





The cable goes between the rubber heat shield and the frame member. The rubber is glued on the edges so be careful when you pull it away from the frame and the lower tank. The cable should feed through exactly where it shows in the pictures. I thought that the cable would be parallel to the long axis of the bike but once you have it mounted you realize it has to actually be pointed inward a little towards the center of the bike in order to get the cable around the frame member and feed straight up into the air box area. The cable off the actuator is a little too long but the way I resolved this was to feed the cable up and then back down a little before I went around the air box against the right side of the frame. The cable actually comes up so far that it touches the PCV valve bracket that's behind the air box. It's a heavy gauge wire type mount.

Getting the wiring into the actuator is another adventure because you need to allow room for the vacuum tube and you don't want to pinch the wiring. Tape the connector the way it shows in the instructions and then feed the wiring around the other side of the actuator and then up into the gap where it can feed out the top of the actuator housing. To me this allows it to feed out with as minimal pinching as possible but honestly it is going to be pinched in there. Hopefully I've taken enough care to make sure it won't be an issue. Make sure the protective wiring cover is against the actuator cover hole so the wiring is protected inside the actuator cover. The rubber grommet provided will protect everything anyway but making sure the wiring covering goes inside the actuator cover will keep the elements from getting in there. A little RTV might not be a bad idea.



I thought the bracket would put the actuator exactly where it needed to be but honestly it's a three dimensional puzzle and it's hard to get it exactly right. After a while I realized you just have to manipulate it into place because nothings perfect. This is NOT a big deal it just caught me off guard. I have to remember that this is something that is made to fit somewhere that the manufacturer didn't intend to be on the bike. The whole time I'm thinking how cool this is that MC Cruise went to all the trouble to put this kit together. The fact that you have to actually engage your brain when putting this together didn't occur to me until I realized what I needed to do. At first I thought I mounted something wrong but in the end a few extra minutes and it was right in place. I put on the rubber pad provided to prevent the actuator from banging on the lower tank and that was done.

### **Installing the cable interface unit (CIU)**

The CIU is fairly straight forward to put together from the instructions. The issues I had here was getting the CIU to sit down flat and out of the way of the air box. Apparently I encountered not only the idle screw cable being in the way which is normal but also I coolant hose. I suppose you could reroute the coolant hose but what I did was make sure they didn't cross right underneath the CIU. I tried to take pictures of it but it was very difficult because everything on the side of the bike gets in the way. The one picture shows the CIU from the side and you can just barely see the nut on the bottom of the CIU that could rub on the idle screw and/or the coolant hose.

The coolant hose and idle screw cable come from about the same place and go out the side of the bike. The idle screw bracket can be bent to allow the cable to go lower. The coolant hose is in the way but try to put it aside and lay in the CIU unit. Once the CIU unit is in and you have the bolt on make sure that the end of the bolt will not sit on the idle screw or coolant hose. This would cause it to eat into the cable and/or hose which would not be good. I asked Joe Sears on this and he suggested putting some RTV over the nut and the end of the bolt. I ended up putting a thick piece of double sided 3M tape over the bolt. The tape allows it to stick in place but not rub on the other pieces. I didn't have the patience for RTV at that point but I had the tape

handy. The tape is at least a 1/16" thick and almost acts like a pad.



The next piece is getting the new throttle cable lined up with the throttle body. This just takes time playing around with it. It's going to be slightly bent but that's fine. Cables are meant to bend. The play in this cable is important and it's hard to figure out because the play is dependent on where the CIU will eventually sit so find the place where the CIU is going to be and adjust the play from there. Once all the adjustments are done check putting the air box bottom back in. Don't forget to attach the crankcase breather hoses and you'll need to move the clamp on the front hose up and out of the way of the CIU. I had to insert the air box bottom by putting the air scoop in first and then hinge the box bottom down. I didn't have to push down on the air box but I did have to pull it back slightly to get it to sit over the air intakes. I'm guessing this is because the back of the air scoop pushes up against the CIU or one of the cables.

This really took some time to get it the way I felt it would work. The best thing to do is keep testing the throttle to make sure that it moves smoothly with the handlebars in any position and does not pull on the throttle at any time. Make sure there is a little play in the throttle grip from 2-6mm. If you get everything together and there is still a little play in the cable no matter which way you turn then you're all set.

Putting the air box back together was easy but before I took it off I used a greased pencil to mark everything. Make sure you connect both crankcase breather tubes and keep the wiring harness out from underneath the air box. Also while you're concentrating on all that make sure you actually put the air filter back in the air box. Now what idiot would forget that? Hmmmmm.

### Installing the control switch

Now putting the switch where MC Cruise suggests is exactly where it should be but I'm anal about modifying my bike in order to accommodate mounting it. So I just loosened the bolt on the top of the clamp and bolted the control switch there but didn't crank down on it. I'm probably going to end up with a rammount there so I'll mount it to that later. For now it's sturdy and perfect for testing without having to modify my bike. The pictures now show the rammount solution I came up with using the HB2 for the ST.



Routing the wiring for it was not too tough just take time to give enough slack so it gives when turning the handlebars from side to side.

### Wiring loom routing (continued)

When connecting the spade connectors to the power brake switch it doesn't matter which wire goes

to which part of the switch. You can guess this but I thought the instructions should say that it explicitly. I was concerned because this is where the cruise gets it's power. The two wires from the bike are black and it does matter which one gets hooked to the orange wire with the black pigtail and the gray wire with the black pigtail. The orange wire hooks to the bike connector that has power when the bike ignition is turned on and the grey wire hooks to the other connector that has power when the brakes are applied. I would use some RTV on these connectors as they are exposed to the elements. I don't know what the switch looks like on the inside but I found it weird that it didn't matter which wire hooks to which terminal on the power brake switch but it doesn't so just hook it up and get on with it.



### Installing the computer

Cutting the foam block and getting it into place is a bit of an art. I found a different way to mount mine but it probably isn't the most efficient use of that space. That space on the bike is at a premium because everything you install on the bike wants to put something in that space. MC Cruise suggests three ways to place it under the seat but I found a slightly different way noticing that the foam block will slide down into the space where I think the tool kit goes. I actually had the computer sitting so I could see the LED on it while I was testing. I still don't like where it is but I'll work on it over time. The wire loom gives you enough slack to try a few different places.



### Testing

The instructions will tell you more about testing than I can tell you and they have provided very good troubleshooting. If you have taken the time to make sure every piece is in the way it should be you can rule out a lot of things right away and won't have to spend time revisiting them. The only thing I needed to do was adjust the speed sensor which I knew was too far out but when I did the center stand tests it seem to be working fine. Once on the road it was obvious I needed to adjust it. It took a couple tries to get it right but it did work. The cruise will jerk a little when setting it sometimes but this is normal although if it seems like it's doing it too much or doesn't hold a steady speed then you'll need to use the troubleshooting manual to find the issue.

When testing at some point I managed to get the computer at a point where it would not go into diagnostics mode. I ended up leaving the bike powered off for about 5 or 10 minutes and then I was able to get it into diagnostics mode again. So there's a tip that might help if you get stuck. If you're in a hurry you can try disconnecting the negative lead on the battery.

There was a sense of accomplishment when I got it all together and all I needed to adjust was the sensor. Hats off to MC Cruise for putting this together because it is going to make my long distance rides a lot easier on me. Shame on Honda for not providing something like a cruise on a sport TOURING bike. Honda really doesn't get that part of this bike even though their literature seems to talk it up. Hard bags and an adjustable windshield does not a sport-touring bike make.

### Conclusion

As far as I'm concerned this is pretty much a slam dunk install and that is because MC Cruise has taken their time to put together a great kit that simplifies the install. The install manual is a huge benefit and would be very difficult without it. The pictures say a lot about how to do this. I can't say enough good things about how the kit is put together. Recently MC Cruise has managed to get Joe Sears to be the U.S. distributor for MC Cruise. Joe was a great help in answering my questions as he's already done a few of them himself.

Thanks to [MC Cruise](#) and [Joe Sears](#) for the kit and the help. I'll shamelessly plug you all and

your product as I make my way around the states for years to come.

Thanks,  
[Curt](#)