



Quickshifter QS PRO & QS PRO 2

**** This product is designed for RACE USE ONLY, and is not legal for road use. Quickshifter is to be used ONLY for upshifting of the gearbox; any improper or unintended use is at user's sole risk. ****

INSTALLATION:

Notes:

a) All female ends of our products (sensor and shift rods) are both LEFT and RIGHT hand thread! You can screw either standard or reverse into any of our female connectors.

b) The blanking plug attached to the end of the QS from your ignition circuit. For wires, for testing the QS operation or want blanking plug in the end of the coil loom advise you to keep this plug on the bike at all times (in your tool kit, etc) so you can use it if ever needed.



your coil loom can be used anytime to remove example, if you crash and damage the sensor or to move the QS to another bike, simply install the and your bike is back to "stock". We strongly advise you to keep this plug on the bike at all times (in your tool kit, etc) so you can use it if ever needed.

1) Make sure you have the correct wire loom for attaching to the plug top coils as well as QS PRO controller and strain gauge sensor assembly before beginning installation.

* The Annitori QS PRO controls either the IGNITION side of the motorcycle through the plug top coils, or the FUEL side through your fuel injectors.

** It is very easy to determine which kit you are using. The part number on the bag the wire loom came in ends in either "CL" or "Fi". Very simply, CL = Coil Loom, and Fi = Fuel injectors, so this will determine which connection you are making. The product listing for your motorcycle in our website also tells you which connection to make, and if still unsure, please contact us.

(our installation instructions below describe a coil installation, EVERYTHING is exactly the same for an injector installation, except where you plug in the harness)

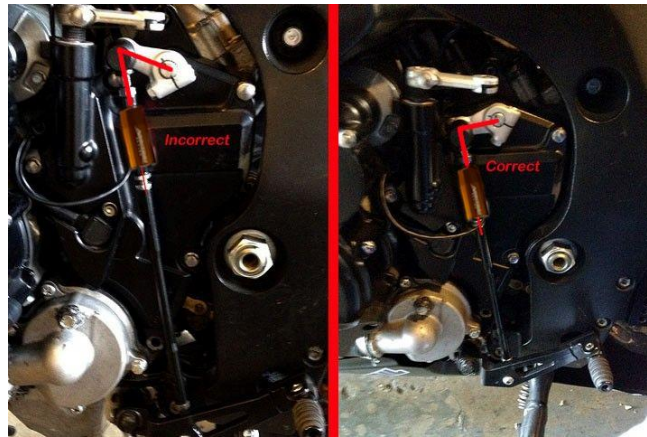
2) Plug the QS wire loom into the connectors on top of the coils, which are located on top of your spark plugs. There are 2 connectors per coil in our loom so you can plug our wiring "in-line" to the circuit. To do this unplug the OEM connector from the coil, plug our connector to the coil, then plug the OEM connector back into our loom on the 2nd connector; thus completing the circuit. Do this for each cylinder on the motorcycle. If there is more than one accessory attached to the coils, the QS PRO connector must be closest to the coils. It does not matter if you attach the coil loom from "right to left" or "left to right", that only depends on where you want the connector end to finish for attachment to the controller.

- 3) Run connection wire back to meet with Controller wire connector (most commonly near the under the seat area), making sure there is no interference with any operation of the machine. Zip tie or wire wrap loom wires as required to ensure proper operation and no interference during motorcycle operation, taking care to not stress, pull or put tension on wires as this will cause non-warranty damage to the product. Be aware that motorcycles experience high temperature variations and high levels of vibration, so your choice of routing should reflect this to ensure correct and safe operation.

VERY IMPORTANT – **DO NOT** over tighten the wires with zip tie's to the machine. Zip ties from vibration, heat expansion, cold contraction, riding, etc., will CUT through the sensor wires beneath the outer sheathing, and cause the shifter to not function. Wires need to have freedom to vibrate, move and flex with the motorcycle, any damage to the wires from improper installation is a **NON-WARRANTY** failure. **BE CAREFUL...!**

Next, the sensor installation:

- 4) Install the QS Strain Gauge sensor onto the correct length shift rod and re-assemble your shift linkage and footrest to correct specifications. Proper shift linkage assembly is key to proper operation and smooth shifting! Keep all your linkage connections, both ends, as close to 90 degrees as possible, or shifting problems can occur



- 5) Regarding the shift rod installation: Be sure, inspect and check that there is no interference of any parts of your shift assembly with any other parts, anywhere in the stroke. The sensor or any part of the shift rod cannot come in contact with anything during the shift. Please check all gears, up and down and make sure you are not rubbing on the frame, shift pedal, etc.

***** If your shift rod is horizontal, mount the sensor so that the wire going into the sensor is on top – meaning as you sit on the bike you look straight down at the wire. If your shift rod is vertical, then have the sensor mounted so that the wire going into the sensor is facing your shin as you sit on the bike. This will help with setup and smoothness!**

- 6) You must have two heim (rose) joints, one at each end. The heim joints **MUST BE FREE** to move and rotate in both directions. When the shift rod is installed, you should be able to take the shift rod between your thumb and index finger, and rotate (spin) the shift rod anywhere from 5-15 degrees in

both directions from normal center. The shift rod must NOT have any “twist” force on it, but instead be “floating” between the heim joints even when weight is applied to the footrests. If you do not know how to install shifter linkage, please ask us or find a source, because loose, mis-installed linkages are a huge amount of the reasons we get calls for help.

- 7) Be sure you are using the exact and correct bolts for attaching thru the heim joints at each end. The bolts should have “shoulders”, the non-threaded section that is specific and correct for the inner diameter of the heim joint bearing you are using. If the bolts are wrong size, the “gap” of the smaller bolt to the bearing may cause the shift rod to not move correctly, freely and/or in a linear motion, and the sensor will pick up the movement of the rod at this loose bolt point as false shift signals and not operate correctly.

**** Remember, loose or mis-installed linkage will cause vibration in the setup, and the strain gage sensor will pick up these vibrations and believe you want to shift and send false kill signals.**

- 8) Run the wiring towards coil loom connector, safely away from any potential interference or damage, locating the QS PRO Controller for easy access during setup. Attach controller to motorcycle in a safe location that will not cause interference with any operation of the machine.

VERY CRITICAL – The wire going into the sensor **MUST HAVE** some slack so that as you move the shift lever up or down the wire has extra length to move with it. If you tighten the wire too much, when you move the shift lever you will pull the wires from their connections inside the sensor and destroy the shifter. **Doing so is a NON-WARRANTY failure.**



Test the operation of the shift lever up and down before using to be SURE there is enough wire for the sensor, as well as not too much to cause any interference or safety issue.

- 9) Attach the 2-pin coil loom connector to the 2-pin Controller connector, and the 3-pin sensor connector to the 3-pin Controller connector **BEFORE** you power the controller. **If you power the controller before attaching the sensor, the shifter will not “see” the sensor and not function.** IF you do this by mistake, make sure you have the sensor connected and simply remove the red + (power) and black (ground) - wire for :30 seconds and then re-attach (reset).

***** Make all of your connections to the controller (coil loom and sensor) BEFORE you attach power. The LAST wires you attach are the red + and black - power wires**

10) We strongly recommend you attach the positive wire (red) to an “on/off” fuse in your fuse box (such as the tail light fuse) so that the QS PRO only comes on when the bike is on. If not able, to the positive terminal of the battery. Attach the ground wire (black) ONLY to the negative (earth) terminal of the battery, making sure you have a GOOD, very clean and solid ground. Most bolts on motorcycles are insulated and are NOT good ground locations, do not use these or any ground failure that destroys the QS PRO will not be covered under warranty. The MOST common reason for calls to our customer support is for problems with the ground wire. Please be sure of this attachment point to the negative terminal on the battery and that the connection is clean and solid.

11) Re-check all connections, clearances, tensions on wires and be sure that there will be no interference with motorcycle operation or potential for wire damage.

PLEASE! - DO NOT over tighten the wires with zip tie’s to the machine. Zip ties are very hard plastic with very sharp edges, and due to normal vibration, heat expansion, cold contraction, riding, etc., will CUT through wires beneath the outer sheathing, and cause the shifter to not function. Wires need to have some freedom to vibrate, move and flex with the motorcycle, any damage to the wires from improper installation is a NON-WARRANTY failure. BE CAREFUL...!

All the connectors on the QS PRO are automotive quality, waterproof connectors – but always be aware of where you are mounting so as to avoid as much “cross electrical interference” as possible, or excessive potential for water damage. As with all the wiring on your motorcycle, never use high pressure washers directly on any electrical components.

12) On the QS PRO 2 when correctly installed you will see a slow blinking green LED.

13) See SETUP instructions for proper QS PRO sensitivity, shift direction and kill time setup procedure.

TIPS and WARNINGS

A) Remember, horizontal shift linkage have the sensor wire on top, facing upwards. Vertical shift linkage have the sensor wire facing back, towards your shin as you sit on the bike. (see #5 above)

B) Make ALL your connections to the controller BEFORE you attach the red + and black – power and ground wires. (see #9 above)

C) If you are attaching the + and – wires to the battery, DO NOT USE A BATTERY CHARGER with the shifter attached. If you attach the charger to the battery, with our + wire attached to the battery as well, you are also “charging” the QS PRO. Our shifter is not designed to be charged by a battery charger! Doing this is NOT a warranty situation, please be sure to disconnect the QS PRO before attaching a charger, or follow the instructions in #7 using a fused circuit for the red positive + wire.

- D) If the shifter has been working and suddenly starts having trouble, a quick and easy reset may be all you need to do. Simply remove the red + wire and black – wire for 2 minutes, re-attach and do the “driveway” test outlined below. This will reset the shifter memory, and might be all you need to do before calling us for help.
- E) Remember! You must have the coil loom connected and the sensor connected to the controller BEFORE you attach the red and black wires to power and ground. If you make a mistake, please be sure both the coil loom and sensor are connected, remove the + and – wires for 2 minutes, and re-attach.
- F) As always, we are here to help! So don’t get angry or frustrated if you are stuck or need to ask a question. Call us toll free, Monday – Friday, 9-5 CST, or email us ANYTIME at info@Annitori.com. We watch email even during strange hours, so we will get back with you as soon as we can and help you get rolling again.

Testing the QS PRO for shift signal

(The “driveway test”)

After you complete the install and before you take your first test ride, or anytime you are wondering, you can make sure you have a kill signal by doing a simple test while just sitting on your bike in your driveway.

To test, start the bike, hold the clutch in and shift to 6th gear. **Do not have the bike on a stand**, simply sit on the bike with both wheels on the ground. **KEEP THE CLUTCH IN – DO NOT RELEASE THE CLUTCH AT ANY TIME DURING THIS TEST!** You are not driving the motorcycle, only sitting on the bike in your driveway and doing these static tests.

Then hold about 5k rpm’s so you can hear the steady sound of the exhaust very easily. DO NOT LET THE CLUTCH OUT!

Now, move the shift lever as if you are going to shift from 6th into 7th gear. You should hear a “burp” in the exhaust note. Sounds like a misfire because we are killing your coils; it is the sound of the kill signal. You can do it multiple times to be sure you hear the sound, it is very distinct and easy to hear.

If you have “both” directions (PUSH and PULL) enabled, you can do the same test for the other direction. Shift into 1st gear, hold the 5,000 rpm’s (do not let the clutch out!) then shift down again as if you are going to “zero” gear. Is there a kill signal?

Quick and easy way to test if your installation is complete and the shifter is working!

Thank you, and thank you again for choosing our Annitori
QS PRO Quickshifter!