



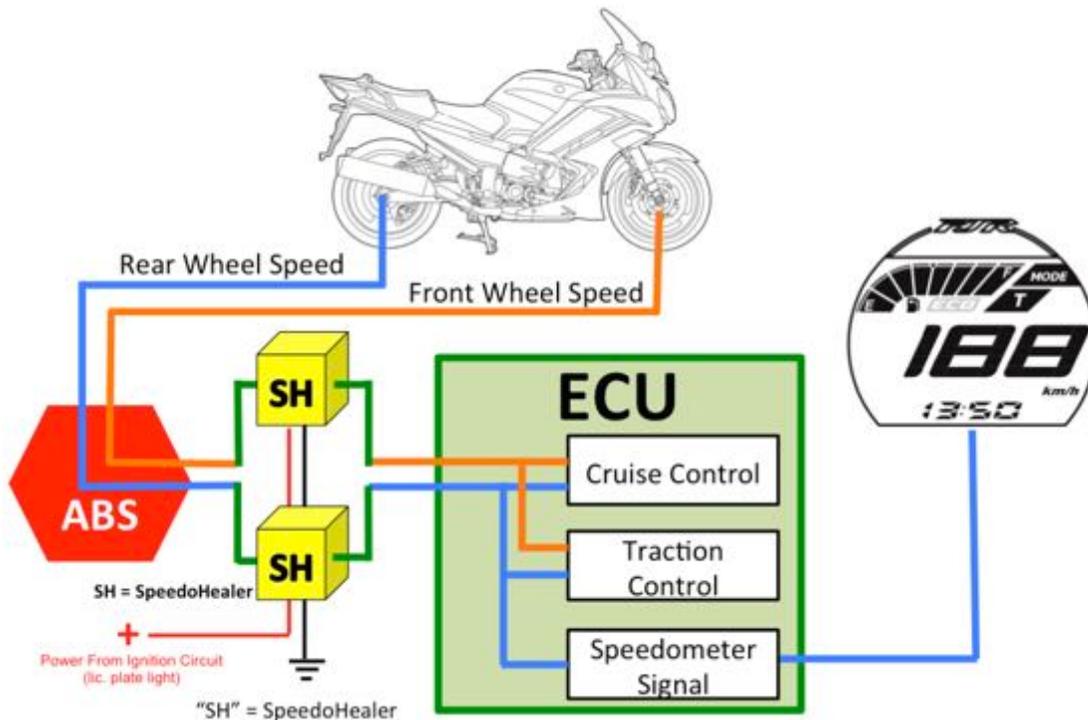
SpeedoHealer Installation

Yamaha FJR1300 Gen3 2013+



In several countries, the speedometer on the Yamaha FJR1300 displays a speed which is higher than the actual speed. This can be corrected by installing SpeedoHealer (“SH”) from HealTech Electronics. The “SH” is typically installed in the rear wheel speed signal wire.

The 2013 model year and newer FJR1300s (“Generation 3” or “G3”, “Gen3”) have “Yamaha Chip Controlled Throttle (“YCCT”), Traction Control System (“TCS”) and Cruise Control. These systems utilize speed readings from BOTH front and rear wheels. Therefore, for optimal operation, **you may want to install TWO (2) SpeedoHealer units** – one for Front and one for Rear wheel speed signals – and program both of them exactly the same.



The Engine Control Unit (“ECU”) does not add the extra amount to the odometer. **Installing SpeedoHealer(s) will likely alter your odometer accuracy. In some jurisdictions this is against the law.** Check your local laws and do not install SH if is illegal. It may also affect the warranty and/or the re-sale value of the motorcycle. This is all at your own acceptance and risk.

There are known issues with the cruise control: It cancels at seemingly random times – on average about every 15 minutes, and when set to ‘Conversion Mode’ (switch from a km/h reading to MPH) the it does not work at all. HealTech says some users either don’t have these problems or solve it by installing a 2nd SH on Front wheel circuit, which I tried without success. I usually prefer the accurate speedo and just re-set the cruise when it drops out. I can quickly bypass the SHs anytime I want the cruise to function properly. The 2nd SH might make the TCS and ABS function better due to consistency in the front and rear wheel speed info sent to the ECU.

ITEMS & TOOLS REQUIRED

- 2 of SH-V4 (June 2015 or newer) SH kits
- 2 of SH-U01 SpeedoHealer Wiring Harness Kits.
- Motorcycle Key
- Phillips Screwdriver*
- 4 mm Hex key/driver/socket*
- 10 mm wrench and/or socket driver *
- Wire Cutter
- Pliers* (Scotchlok connector crimping tool recommended)
- Optional: approximately 40 cm of 18 – 20 gauge red and black wires, heat-shrink tubing, electrical tape, solder, soldering iron – if making optional combined harness for SH power feed connection.
- - included in motorcycle tool kit.
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IMPORTANT!

Without at least basic electronics and mechanical knowledge, the reader should not attempt to install SpeedoHealer (“SH”). The SH(s) should improve speedometer accuracy, however, neither HealTech Electronics Ltd., nor its distributors nor the author(s) of this document shall be held responsible for any injury, loss, damage, or malfunction of the motorcycle (especially safety-relevant components) that may arise due to this installation or inaccurate speed readings.

Except for cruise control, I am not aware of any problems with the motorcycle’s ABS, Traction Control, or other systems resulting from this installation; however this has not been tested professionally or been approved by the motorcycle manufacturer. Malfunctions of the motorcycle including its safety systems ARE possible and they may cause a crash.

**Installation & use of SpeedoHealer(s)
is entirely at your own risk!**

INSTALLATION OVERVIEW:

- a. **Read ALL the instructions, including the section of details with images, before beginning the installation.**
- b. Remove seats, seat height adjuster, side covers, under-seat tray, and air filter access area cover.
- c. Un-plug ABS module plug (pull up its locking tab to release) and remove plastic protector cap..
- d. Splice in the wires for the two SH units into the front and rear wheel speed sensor wires.
- e. Re-place protective cap and ABS plug.
- f. Connect SH(s) to a source of power which is constantly on when the key is in the "ON" position.
- g. Carefully route and secure all wires. Use zip ties provided with SH.
- h. Mount the SH units and connect their wire harnesses.
- i. Re-install tray, air filter area cover, side covers, seat height adjuster and seats. Re-connect battery if you have disconnected it.
- j. Program both SH unites with the value you have calculated.

REFER TO THE NOTES AND IMAGES ON THE FOLLOWING PAGES FOR FURTHER DETAILS:

DETAILED INSTALLATION INSTRUCTIONS

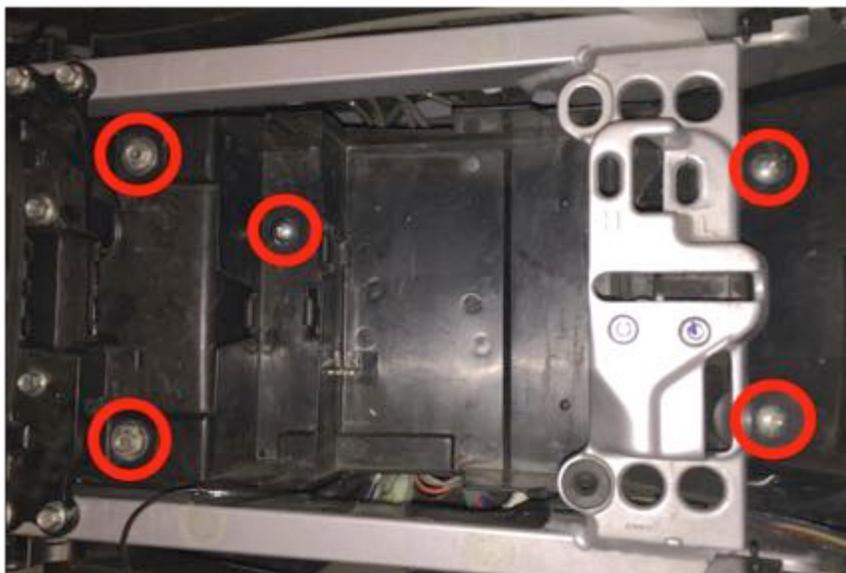
Make sure motorcycle is turned OFF and remains OFF for the entire installation. Strongly recommended: disconnect the negative battery terminal. For info on how to access the battery, see to FJRowners.com forum (search "battery access").

Remove both seats and the seat height adjuster. You may have to remove the two bolts holding the rear of the fuel tank and lift it up slightly to get this off. Remove Side Covers. There are 4 quarter-turn plastic Phillips snaps, two hex screws, and one pull-snap. The left side has an additional hex screw by the lift handle.

To remove the Phillips snaps, turn the screw counter-clockwise one quarter turn while pressing only very lightly on the screwdriver as the head turns left and comes out. When the head pops out a couple mm, pull the entire snap out by its outer flange. To re-install, with the screw-head still popped out slightly, push the entire thing back in the hole, then push the screw-head in until it clicks.

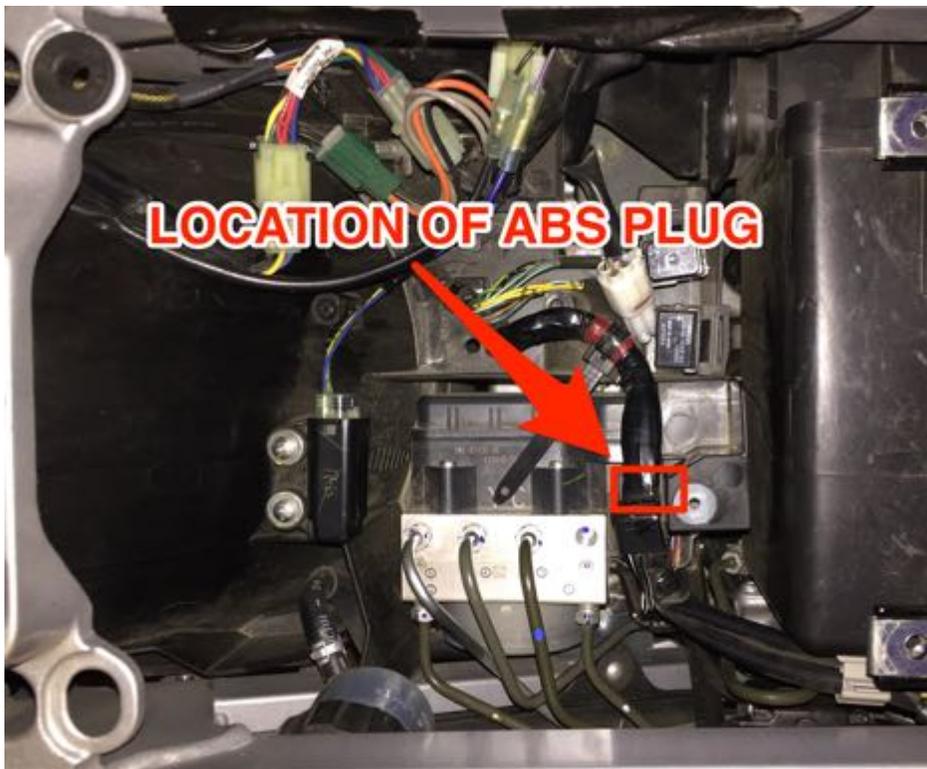
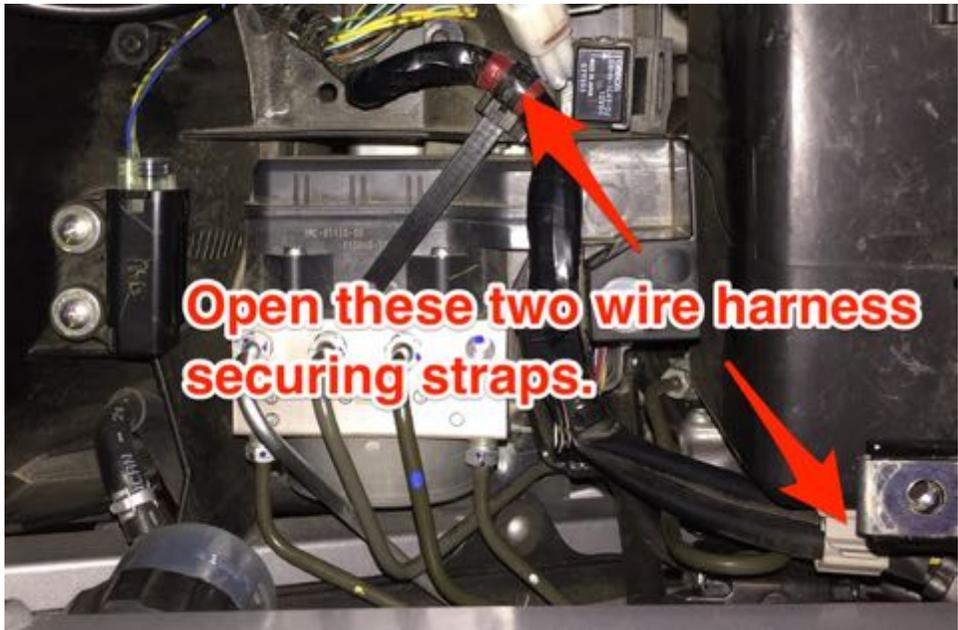


With seats and seat height adjuster removed, remove 3 Phillips screws and 2 10mm bolts and remove the plastic tray. It may take some wiggling and bending to get the front tabs clear.

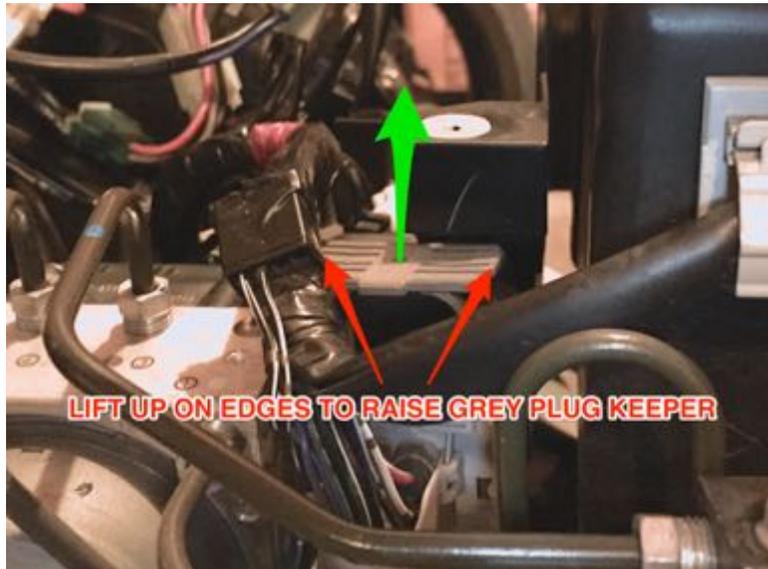


Move the wiring harness aside by undoing the two plastic straps holding it. The black one has a small tab just beneath the strap at the junction that you push down and away from the strap to release. The grey one simply un-snaps at the pinch point.

If your FJR is equipped with electronic suspension or clutch, there may be additional items and wires you need to move or remove. The photos here are of a 2013 Canadian model without electronic suspension or clutch.

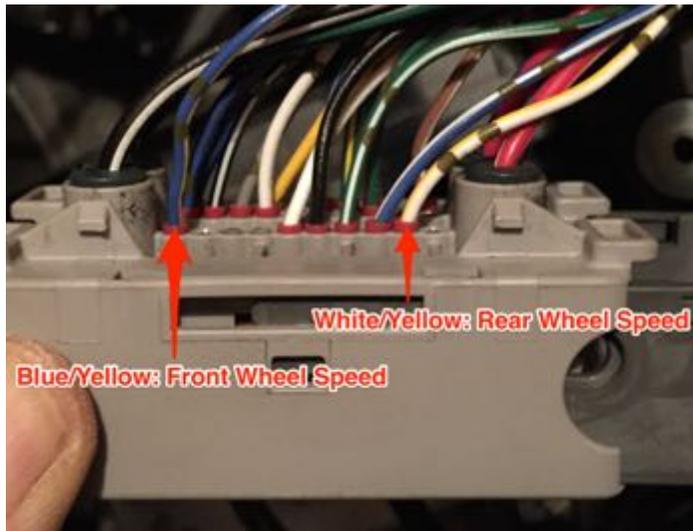


Un-plug the ABS control unit. To do this, the dark gray plastic keeper tab on top of the plug must be pulled all the way up (about 6 cm). DO NOT pull on any of the wires. Pull only on the plastic keeper structure itself. Pulling that keeper extracts the plug straight out from the socket. Once you have pulled the grey keeper out, the plug is free.



Remove the protective cap from the plug, exposing the wires coming out of it. A small screwdriver can be carefully used to un-do the 4 snaps securing this cap. Carefully fan out the wires.

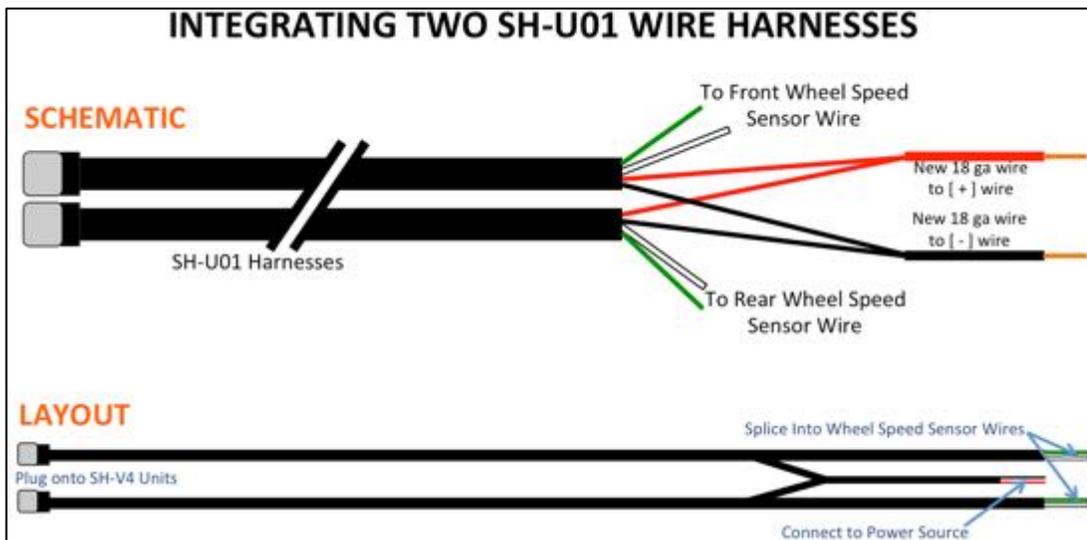




The Rear Wheel Speed wire is White and Yellow (W/Y). Front Wheel Speed wire is Blue and Yellow (L/Y). Installing SH on the REAR wheel circuit is REQUIRED, adding a second SH to the FRONT is optional (see note on page 1).

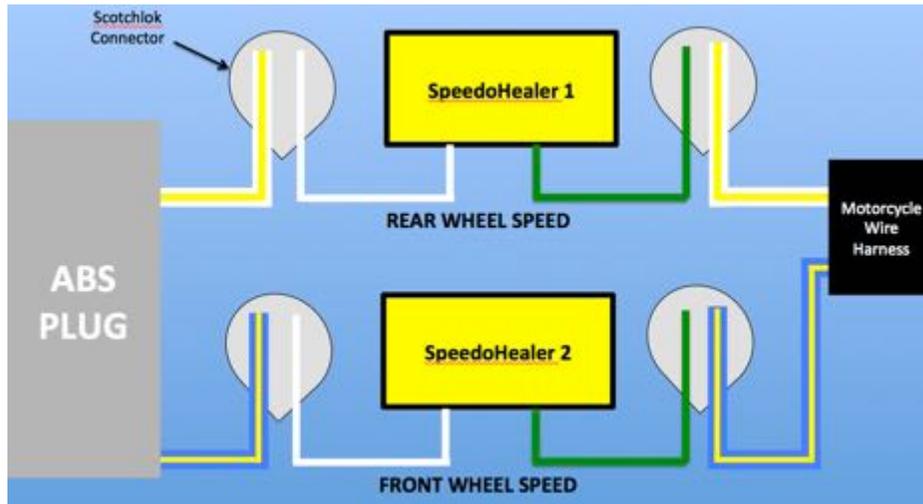
Ignore the black bands that appear along the wires. Wire colors related to the colors that appear all the way along the wire.

If installing 2 SHs, you should integrate the two SH-U01 wire harnesses at this point. Lay out the wire harnesses along this route, then carefully cut open the outside wrap of the wire harness several inches to pull out the power supply wires (red and black). Connect them together as per the illustration and cover them with heat-shrink and/or electrical tape.



At the ABS plug, cut the **White/Yellow wire for the Rear Wheel Speed** about 4-5 cm from where it goes into the black wrapped wiring harness. You must have enough of the wire free to stick it ALL the way into the 3M Scotchlok UY2 connector and not have a sharp bend or kink in the wire.

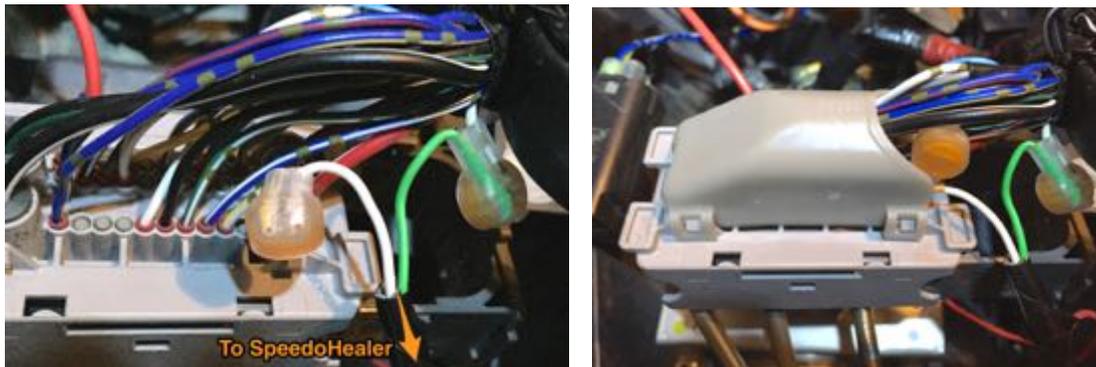
The SH's white wire brings the signal from the wheel into the SH. The SH's green wire sends the converted signal from the SH to the ECU and on to the speedometer.



Insert the WHITE/YELLOW wire **from the ABS plug** into one of the holes in the 3M Scotchlock connector, and the WHITE wire of the SH into the other. Make sure both wires are pushed ALL the way in, then carefully squeeze the orange button into the connector. Try to press it STRAIGHT in. You may see some gel inside the connector – this is for waterproofing the connection.

Then connect the other part of the White/Yellow wire (running into the harness) to the GREEN wire of the SH with the other ScotchLok connector

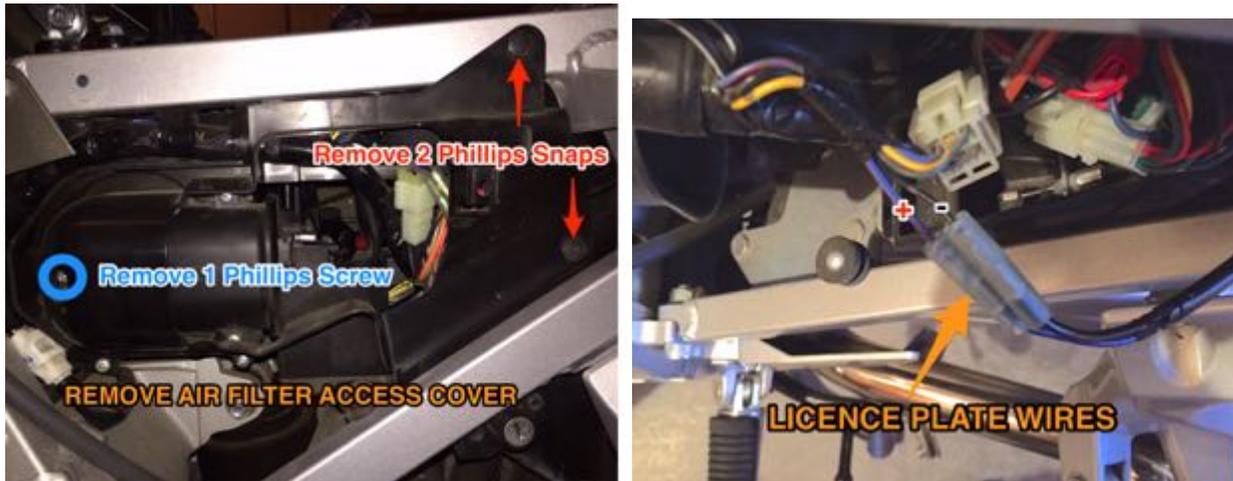
If installing 2 SH units, repeat the above process in the Blue/Yellow wire of the FRONT Wheel Speed Circuit



Rear Wheel Speed Sensor spliced in, and with the wire protector cap back on. The Front Wheel Speed splice is not shown in this photo.

Snap the protective cover back on the plug, being careful it does not pinch any of the wires and the Scotchloks are positioned OK. Then re-place the ABS plug. Re-installing the plug is easy as once it is lined up, pushing down the keeper draws the plug straight back into its socket and locks it. It should be smooth and easy – if not, figure out what's wrong, but do not force it.

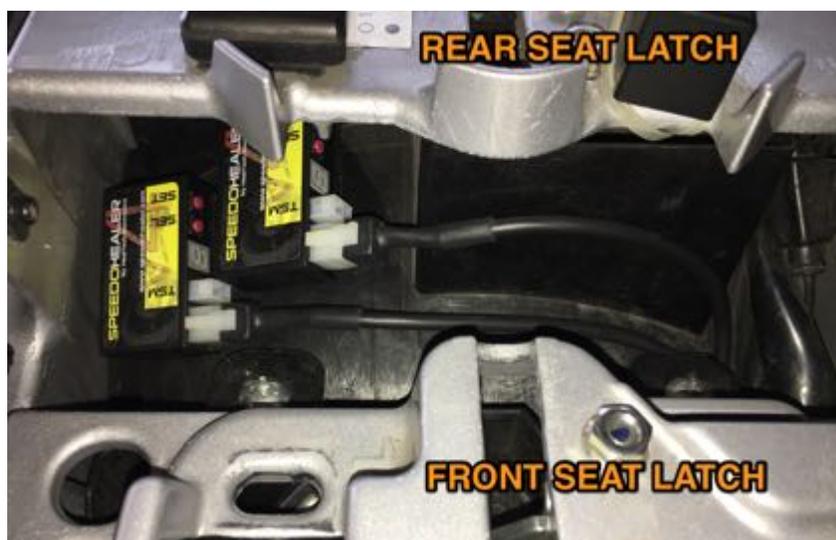
Connect the SH to a power source. Suggested: License Plate Light wires. Remove the air filter access cover on the left side to access these wires. Tap into these wires either by making a plug-in "T" harness to connect to the bullet connectors or use the red Snap-Tap connectors provided in the SH-U01 Harness Kit.



Mount the SHs in a safe location. A great spot to mount the SH units on the FJR1300 is on top of the fender under the front part of the rear seat.

First carefully route the harnesses and test-fit the SH's. You may want to access them easily to use the conversion mode and/or change the program value (there will be a small difference between a new and well-worn tire). Clean the surface thoroughly (isopropyl alcohol recommended) and let dry. Use the included Velcro pads to stick the SHs to the fender just behind the driver's seat latch as shown in this photo. Make sure the SH units are not rubbing or bumping against anything. Route and secure the wire harnesses properly, ensuring there is a small amount of slack so there is no strain on them.

NOTE: The "Top Speed Memory" button & harnesses supplied with the SH may not work properly with a dual SH installation.



The last step is to program the SH(s) as per the instructions provided by HealTech. Carefully read all the instructions that came with your SpeedoHealer first.

Determine the 'Correction Value' to program into the SH to accurately calibrate your speedometer to the correct reading.

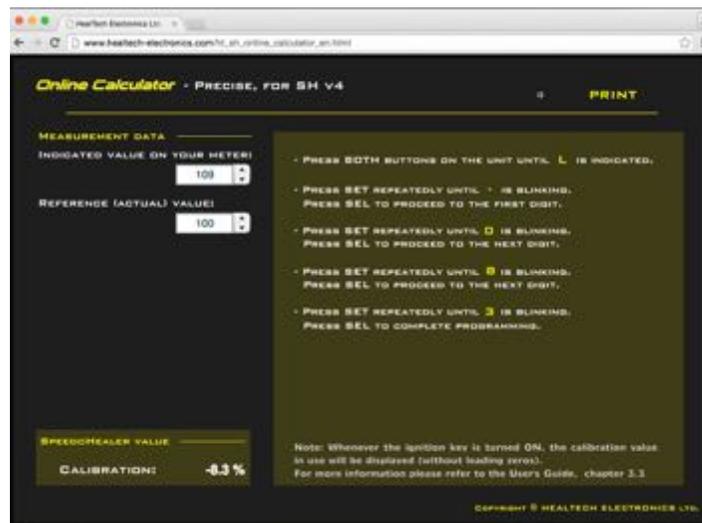
It is easiest way to calculate your Correction Value if you know the 'true' speed of your motorcycle compared to the indicated speed. This is best done by riding the motorcycle with a GPS unit which displays the speed. Most GPS units are quite accurate with the speed reading, but there is a delay up to several seconds. So it is suggested you ride out in the flattest open road you have available (for maximum reception of satellites) at a steady speed in a straight line and note the GPS speed and Speedometer speed at low, medium, and highway speeds.

Another way is to use one of those road-side "Your Speed" radar displays – sometimes set up where a reduced speed limit has been recently applied. Drive at these at a steady speed, and note the indicated speed on your bike.

Then simply enter the amount of error you noticed into the SpeedoHealer website tool or smartphone app and it will give you the Correction Value and simple, clear instructions on how to program the SpeedoHealer.

It is important to program BOTH SpeedoHealer units with EXACTLY the same value. Also, if you switch to Conversion mode (to display speed in MPH), do that to BOTH SH units too.

Watch both SHs when you turn on the bike's power – they should both run identical startup displays.



It is recommended you test your ABS and Traction Control VERY CAREFULLY in a safe area away from all traffic, like an empty gravel parking lot. If you suspect the antilock braking or traction control is not working correctly, bypass the SH and have a mechanic, preferably a Yamaha Dealer, check the motorcycle.

To retain best speed accuracy, you MAY want to change the program value when tires are well worn or replaced. With dual SHs, always program BOTH SH units the same.

You can deactivate and bypass the SHs by un-plugging their wire harnesses and attaching the supplied bridge on the harness end. If 2 SHs installed, do BOTH.