

Install Guide for **SH-U01** Harness Kit

For use with the following motorcycles (not complete list):

APRILIA **RS125**, **RS250**, **RSV Mille**, **Dorsoduro**, **Shiver**, **Tuono**, **Falco**, etc..

DUCATI, ALL models with ABS

HARLEY Davidson **VRSC family** [e.g. V-Rod] (2002-2013),
ALL models manufactured since 2007

HONDA **CB1100** (2010-2013), **Crossrunner** (2011-2013), **Crosstourer** (2012-2013),
VFR800X (2011-2013), **VFR1200** (2010-2013)

KAWASAKI **ZX-6R** (2005-2006), **ZX-6RR** (2005-2006)

SUZUKI **VL1500** (1998-2004), **LT-A700X** KingQuad [ATV] (2005-2007), **LT-A750X**
KingQuad [ATV] (2008-2011)

YAMAHA **FZ6** [ABS] (2006-2012), **FJR1300** [ABS] (2004-2013), **XJ6** [ABS] (2009-2013),
TDM900 [ABS] (2004-2013), **VMAX** (2009-2013)

VOXAN Cafe-Racer, Street Scrambler, Scrambler, Black Magic, Roadster, etc..

Also fits other vehicles (motorcycles, cars, vans, ATVs, snowmobiles) with 3-wire speed sensor and 2-wire ground switch sensor.

***Disclaimer:** Do not attempt to install the product if you don't have basic mechanical skills. The SpeedoHealer is intended to improve speedometer accuracy. However, HealTech Electronics Ltd. and its distributors shall not be liable for any loss, damage or penalties caused by improper installation or inaccurate speed readings.*

1. Locating the Speed Sensor coupler

Preparation:

- The ignition key should be in OFF position.
- Raise the rear wheel off the ground by using a stand.
Make sure the rear wheel spins freely.
- Remove the seat.

The Speed Sensor is usually located on the top, or the side of the gearbox and reads the revolution of the countershaft. The 3-pole speed sensor coupler either connects directly to the sensor, or situated 10-30 cm (4"-12") away from sensor.

The connector is usually accessible by raising the fuel tank or removing a side fairing. If the speedometer is driven off the front wheel, the sensor coupler is usually in the headlight bucket.

→ You might find information about the location of the speed sensor coupler specific for your bike model on our web: <http://www.speedohealer.com>

If in doubt, check the bike's Service Manual or ask your dealer for the location of the Speed Sensor coupler.

If you have a Ducati, KTM or Yamaha ABS model, please contact us for instructions.

Confirmation:

Separate the Speed Sensor coupler (you might need to use a small flathead screwdriver to get the coupler apart). Rotate the rear wheel while the ignition is on. Does the speedometer show 0, turn the ignition off and proceed to the next step. Otherwise, try again since you have disconnected something else.

2. Identifying the Speed Sensor wires

Your speed sensor has three wires. You have to determine which wire is the **Power**, **Signal** and **Ground**.

- a) At first, check our website where you may find install tutorial for your bike model.
- b) Otherwise, the following table may help:

	Speed Sensor wire colors (typical)		
	Power	Ground	Signal
Aprilia	Green	Blue/Orange	Grey/White
Buell	Red	Black	White
Honda	Violet	Green/Black	Pink/Green
Harley D.	Red	Black	White
Triumph	Orange/Red	Black/White	Pink

- c) If your bike is not listed, or the wire colors are different, identify the wires by using a voltmeter (multimeter):

1. Reconnect the Speed Sensor coupler.
Switch the instrument to DC 20V position. Connect the black meter probe to the negative terminal of the battery.
Turn the ignition ON.
2. At first, identify the **Signal** wire out of the 3 wires.
Connect the red meter probe to one lead in the 3p plug through the back, by using a thin needle for back-probing.
Rotate the rear wheel by hand. The Signal wire is the one where the voltage level changes periodically (e.g. 0V → 5V → 0V). If the voltage does not change as the wheel turns, try another lead.
3. Identify the **Power** wire from the remaining two.
Measure the voltage level on the remaining two leads.
The voltage reading on the power lead should be +5V to +12V
4. Confirm that the remaining wire is the **Ground**.
Switch the voltmeter into resistor or continuity test mode.
Connect the red meter probe of the instrument to the remaining lead of the 3p plug through the back. The value indicated should be approx. 0 Ohms.
5. Take note of the wire colors and their functions.
Turn ignition OFF and disconnect the Speed Sensor coupler.

3. Installation

→ We recommend soldering all connections.

1. Cut the Signal wire about 5 cm (2") away from the sensor connector.
Grab the wire end that goes to the sensor and strip off approx. 1 cm (0.4") of insulation.
Splice the **White** SH wire to this point, and isolate with the supplied shrink tubes or electrical tape.
2. Similar way, splice the **Green** SH wire to the other wire end of the Signal cable.

3. Splice the **Black** SH wire to the Ground wire of the Speed Sensor, or to any other ground wire.
4. Splice the **Red** SH wire to the Power wire of Speed Sensor, or to any other fused power lead.
5. Make sure that all connections and insulations are good.
6. Connect the 4-pole harness connector to the SH box.
7. Check whether the SH is installed and working properly:
 - Have the ignition OFF.
 - Press **SEL** and keep it depressed while you turn ignition ON. **[t]** (test) is now indicated. Release the button.
The speedo should indicate a number other than zero.
 - Rotate the rear wheel.
[t] should be blinking as the wheel turns.
 - Press **SEL** to exit from Test mode.
The speedometer should work the same way as with no SH installed.
8. Find a place in your bike for the SH box regarding the followings:
 - To be able to change the settings easily, place the unit where it is quickly accessible.
 - Frequently wet areas should be avoided.
 - Do not place the unit very close to hot places like the engine or exhaust pipe.
 - Keep at least 2 cm (1") distance from other electronics, such as the bike's ECU or a Power Commander.

In most cases, the under-seat compartment is the best location for the box. Secure the unit with the supplied Velcro strips.

9. Neatly route the SH harness from the connections to the mounting location, preferably along the frame. To reduce possible interference, try not to route the SH harness along with other electrical cables.
Do not bend the SH harness near the SH connector. Otherwise the pins may break over time.
To minimize cable stress, use the supplied cable ties to fasten the unit and the harness to a solid part of the bike. Make sure that the SH switches won't be hit by loose objects in the trunk.
10. Connect the 2-pole plug of the remote button. Route the harness towards the front end of the bike and secure the remote button at the dashboard with the supplied cable ties.
If you wish, you can easily change the harness length or replace the remote button per your liking (any SPST momentary "push-to-make" switch can be used).
11. This Kit includes a 4-pin **Jumper-plug** which you can use to restore the original speedometer function, when the SH box is disconnected.
12. Please visit **www.speedohealer.com** and use our on-line calculator to generate set-up instructions for your SH. Alternatively, refer to the *User's Guide* for instructions.