

The SGRACE_BLIPPER is our latest high performance design. We have put an enormous amount of energy in the form of time, technology and knowledge to create a reliable and innovative product. It is a "Strain Gauge" sensor style that ensures long lasting performance. To bring this product into reality we have used all the manufacturing tricks, electronic formulae and rendered a keen eye on software support to make this happen. This product is encouraged to use in a on a closed circuit only. It is not homologated for road use. The manufacturer of this product is not liable for any injury or damage to the operator, vehicle, or third parties from the use of this product.

MADE IN ITALY



DISCLAIMERS



- System setup must always be done when bike is at complete halt and is parked on stands.
- A wrong setting could affect, partially or fully, the system's effectiveness, ultimately damaging the gearbox.
- System setting is the responsibility of the user and not of the manufacturer. While fixing sensors, take extra caution to not damage while screwing and unscrewing the bike. It is a delicate product.
- The use of this product is at the total discretion of the private parties.
- Each system modification, both of hardware and software, as well as harness or single components, could affect the system functionality. It can do potential damage or cause injury to the user, vehicle, or to third parts and this will negate the product warranty.
- Installation must be done carefully It is mandatory that you follow instructions provided in the manual book. After installation it is highly recommended that you do proper test of the product before riding on.
- Installation is an extremely crucial setup for system efficiency. Be sure it is done by competent and specialized mechanic.

This manual is issued on Dec 23rd 2016 in Rev. 1.0. It is the end user's responsibility to periodically visit the website www.irccomponents.it in order to check for revised and updated manual guides.



WARNING



Our blipper provides an additional throttle % when you need to downshifting. If the engine revs are high, near the red line, the system will provide this acceleration but the bike ECU will cut it to avoid the over revving with engine damage. Result is that the gear could be not engaged or not properly engaged.

We suggest don't pass the 80% of max engine revs when you start the downshifting.

1. DISPLAY

After switching on the system, the ECU makes a general check and, if passed, the display will show the firmware version.



WARNING: Do not start any process, setting or action on sensor until the above routine is completed.

When the pre load threshold has passed (par. 2.4 and 2.7), the display will show "--" .

In case of failure, the display will show an "E" followed by a number. Give this code to the assistant.

There are 2 ways to connect the blipper at the bike:

1: REPLACING THE OEM SENSOR ONLY

2. INITIAL SET UP

To set up initial program press both the buttons to enter into the system.

Push lower button to scroll the menus forward.

Push the upper one to scroll the menus backwards.

Press and maintain the lower button to enter into the various menus. However, to exit from the menu and undermenus press upper or both buttons. System will go out of programming session if no button is pushed except the "r" menu. Also during programming, the quickshifter is disabled.



WARNING: Act only on the following setup options.

2.1 Signal time programming "t"

Set at the maximum allowed value. Upshift timing will be regulated by the original DUCATI ECU and not by the IRC UNIT.

2.2 Downshift rpm "rL"

Leave as it is

2.3 Downshift timing "SL"

Leave as it is (max). downshifting timing will be regulated by the original DUCATI ECU and not by the IRC UNIT.

2.4 Upshift Pre Load adjustment "L"

The default value is fixed at "16" however it's possible to change the load necessary to apply on the sensor for having the upshift signal. Shift lever should move through the spring load in gearbox until gear resistance can be sensed. If rpm is above the set value at par. 2.8, The panel LED should show "---" for a while. If this happens too early or too late; then change the preload setting.

2.5 Actual Load displaying "S"

Entering in this menu it's possible to read the actual load value. Useful feature for preload adjustment and for gearbox check and maintenance.

2.5.1 Max Load displaying "---"

Pressing and holding the lower button, the display will show blinking "---" for about 10s. Afterwards it will show the max load value registered in this period.

2.6 Downshift Timing "tS"

Leave as it is (max). downshifting timing will be regulated by the original DUCATI ECU and not by the IRC UNIT.

2.7 Downshift Pre Load adjustment "LS"

The default value is fixed at "16" however, it's possible to change the load necessary to apply on the sensor for having the downshift signal. Try to select the lower gear by switching off the engine and keeping the ignition on. Shift lever should move through the spring load in gearbox until gear resistance can be sensed. If rpm is above the set value at par. 2.8, The panel LED should show "---" for a while. If this happens too early or too late; then change the preload setting.

2.8 Minimum rpm limit "Sr"

Leave as it is

2.9 Pushing/Pulling "CE"

Referring to the upshift, "C" to set pushing, "E" to set pulling. OEM bike is "C".

2.9 Normally Open/Closed circuit "OC"

SET IT TO "O": commonly open circuit, default value for OEM quickshifter and for most all additional quickshifter module.

3. CONNECTIONS

Please following the following steps to install Blipper in your Panigale:

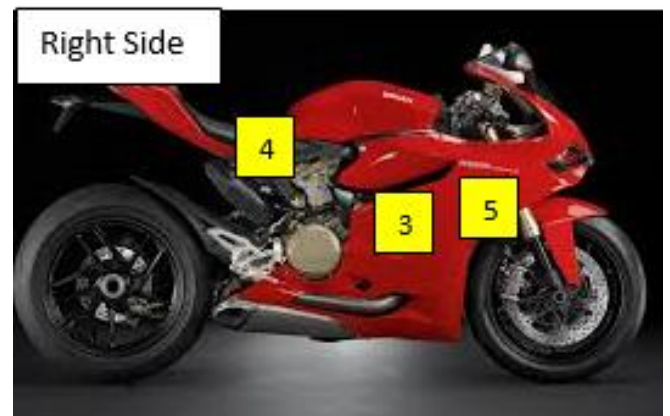
3.1) Fix Main Board on the frame (left side)

3.2) Load Cell Installation (left side)

3.3) Coils connector installation (right side)

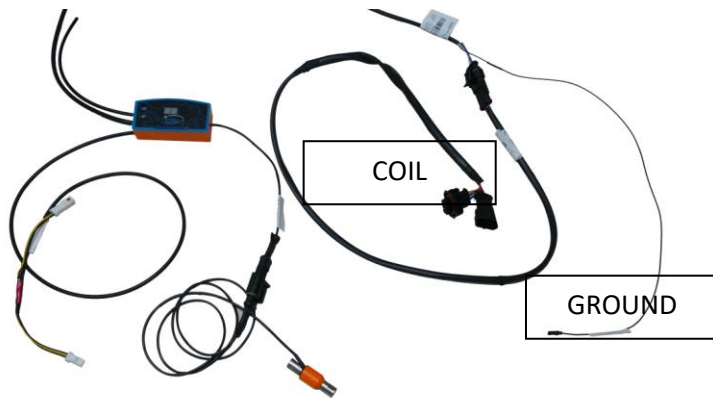
3.4) Up Shifter Connection. (left side)

Reference pictures for following operations:



Refer to the below picture:

UPSHIFT

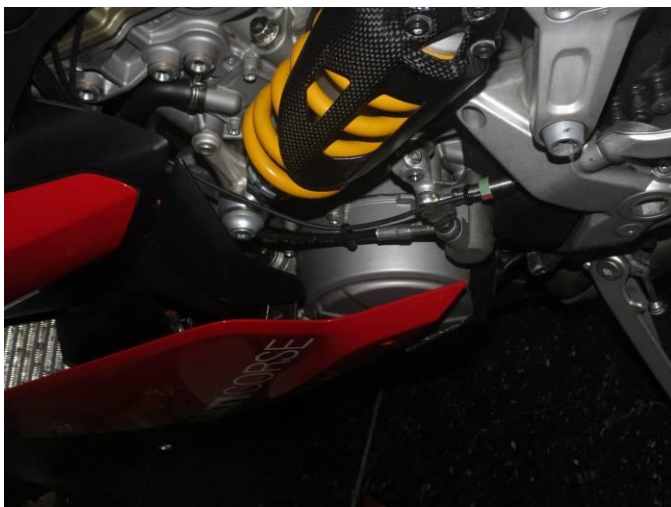


3.1 Fix the Main Board on underseat

If present connect the black ground to the battery.

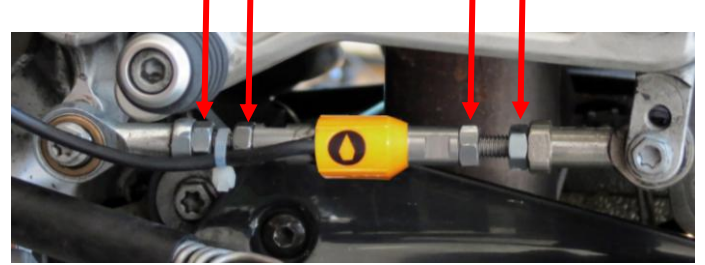


3.2 Load Cell installation



Sensor has "magic threads" i.e. both right and left. Connect the sensor (LABELED SENSOR) to the provided shiftrod. Cut it if necessary. Tight the nuts and

the eventual grubs to avoid disconnections and loss of functionality due to vibrations.



Install sensor and rod with uniball links on both ends, most bikes have uniballs stock, check that the shiftrod does not rub or touch anything. Put sensor far from very hot parts. Make sure wire has a slight bend/loop so it does not tighten up and pull at the sensor during up or down shift. Warranty doesn't cover ripped out wires.



WARNING: To adjust sensor positioning, act on the proper planes on it. Sensor failure could occur if acting on the cover.

3.3 Coils connector installation.

Take the coil harness:

Pass the wire closed to the frame taking care that the wire not touch hot parts and connect the harness to coils placed on the right side of the frame .



3.7 UpShift Connector

The upshift connector is plug&play with the OEM harness. It has a RED tape around. There are both male and female connector, use the one needed to replace the original quickshifter, leave the unused connector as they are or seal them.



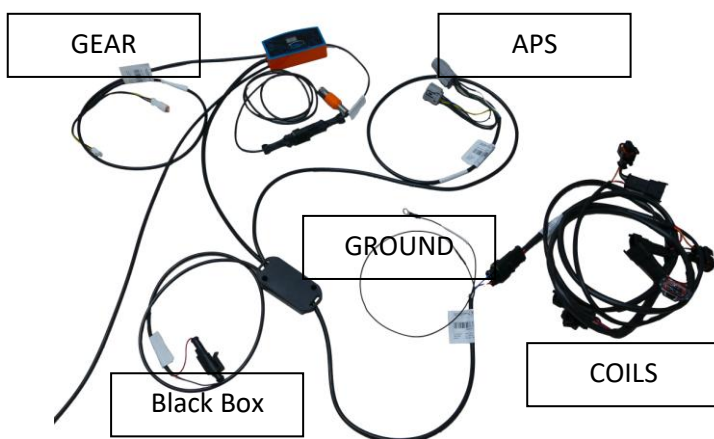
It is just below the front pivot of the rear shock absorber.



Wire must be maintained closed to the frame. Use hose clamp to assure this.

2: FULL MANAGEMENT THROUGHT IRC UNIT

Refer to the below picture:



2. INITIAL SET UP

To set up initial program press both the buttons to enter into the system.

Push lower button to scroll the menus forward.

Push the upper one to scroll the menus backwards.

Press and maintain the lower button to enter into the various menus. However, to exit from the menu and undermenus press upper or both buttons. System will go out of programming session if no button is pushed except the "r" menu. Also during programming, the quickshifter is disabled.



WARNING: Act only on the following setup options.

2.1 Signal time programming "t"

Set at the maximum allowed value. Upshift timing will be regulated by the original DUCATI ECU and not by the SGRACE_BLIPPER.

2.2 Downshift rpm "rL"

The "Blip" will not work below 3,000rpm. Above this limit the timing of the blipper is automatically set in function of customer's choice. "rL" are the lower rpm limit level.

2.3 Downshift timing "SL"

To set the downshift timing; adjust the preferred timing of the "blip" at "rL" rpm (see par. 2.2).

2.4 Upshift Pre Load adjustment "L"

The default value is fixed at "16" however it's possible to change the load necessary to apply on the sensor for having the upshift signal. Shift lever should move through the spring load in gearbox until gear resistance can be sensed. If rpm is above the set value at par. 2.8, The panel LED should show "--" for a while. If this happen too early or too late; then change the preload setting.

2.5 Actual Load displaying "S"

Entering in this menu it's possible to read the actual load value. Useful feature for preload adjustment and for gearbox check and maintenance.

2.5.1 Max Load displaying "--"

Pressing and holding the lower button, the display will show blinking "--" for about 10s. Afterwards it will show the max load value registered in this period.

2.6 Downshift Timing "tS"

Set the "Blip" timing within 20÷98ms at 8,000 rpm.

Default timing is set at 63ms. Consider that the blip timing at 12,500rpm will be 70ms higher.

In the between the CPU will interpolate the value.

A too long timing allows gear in but then you'll feel the bike pushing a while. A too short timing doesn't allow a proper downshift. We recommend to initiate the process with high value and reduce it during the tests on the road.

2.7 Downshift Pre Load adjustment "LS"

The default value is fixed at "16" however, it's possible to change the load necessary to apply on the sensor for having the downshift signal. Try to select the lower gear by switching off the engine and keeping the ignition on. Shift lever should move through the spring load in gearbox until gear resistance can be sensed. If rpm is above the set value at par. 2.8, The panel LED should show "--" for a while. If this happen too early or too late; then change the preload setting.

2.8 Minimum rpm limit "Sr"

Set rpm value below which the system is not cutting. Visualization: /1000.

2.9 Pushing/Pulling "CE"

1: REPLACING THE OEM SENSOR ONLY

Referring to the downshift, "C" to set pushing, "E" to set pulling. OEM bike is "C".

2: FULL MANAGEMENT THROUGHT IRC UNIT

Referring to the upshift, "C" to set pushing, "E" to set pulling. OEM bike is "C".

2.9 Normally Open/Closed circuit "OC"

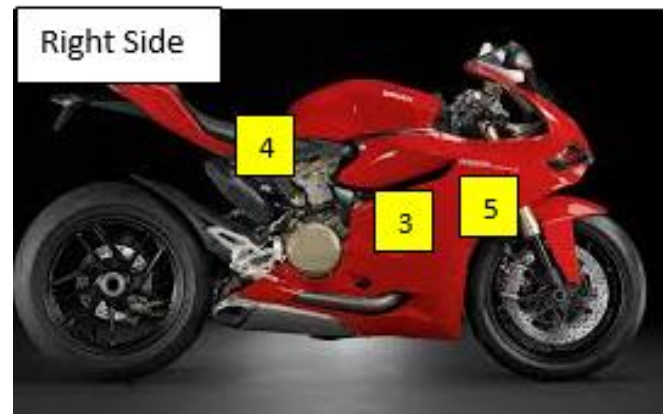
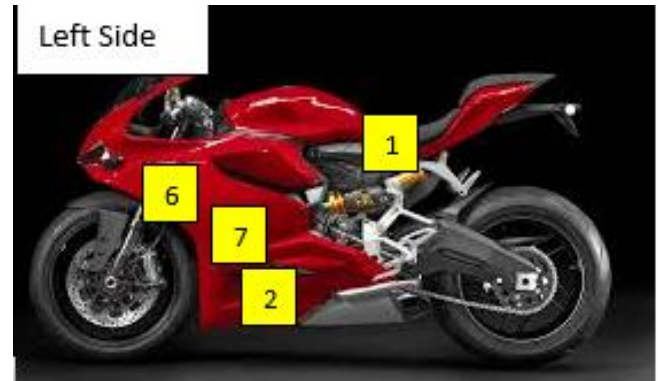
Set it to "C": commonly closed circuit, for direct cut of coils (UPKIT) or for Power Commander V and some others.

3. CONNECTIONS

Please following the following steps to install Blipper in your Panigale:

- 3.1) Fix Main Board on the frame (left side)
- 3.2) Load Cell Installation (left side)
- 3.3) Coils connector installation (right side)
- 3.4) Gearshift Connector (right side)
- 3.5) APS Connector. (right side)
- 3.6) Clutch Switch. (left side)
- 3.7) Up Shifter Connection. (left side)

Reference pictures for following operations:



3.1 Fix the Main Board on underseat

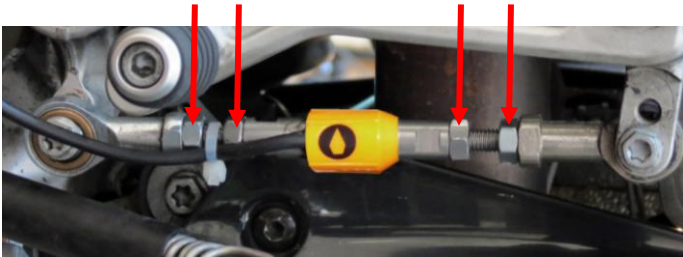
If present connect the black ground to the battery.



3.2 Load Cell installation



Sensor has "magic threads" i.e. both right and left. Connect the sensor (Labeled SENSOR) to the provided shiftrod. Cut it if necessary. Tight the nuts and the eventual grubs to avoid disconnections and loss of functionality due to vibrations.



Install sensor and rod with uniball links on both ends, most bikes have uniballs stock, check that the shiftrod does not rub or touch anything. Put sensor far from very hot parts. Make sure wire has a slight bend/loop so it does not tighten up and pull at the sensor during up or down shift. Warranty doesn't cover ripped out wires.

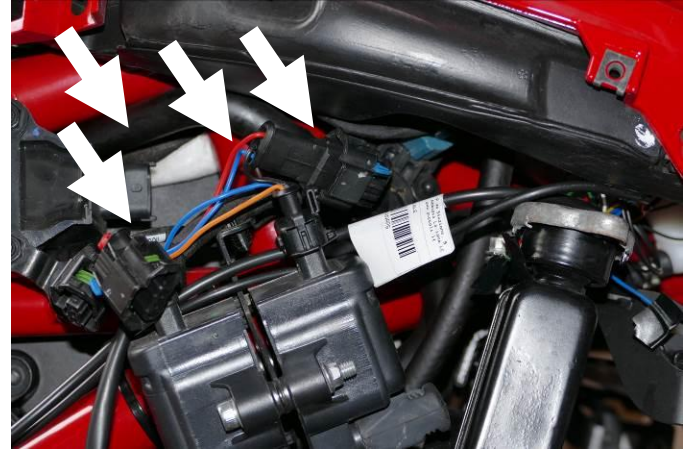


WARNING: To adjust sensor positioning, act on the proper planes on it. Sensor failure could occur if acting on the cover.

3.3 Coils connector installation.

Take the coils harness:

Pass the wire closed to the frame taking care that the wire not touch hot parts and connect the harness to all coils of the bike.



3.4 Gearshift Connector

Take the gearshift harness. Locate the gearshift connector.

It is on the right side just behind and below the right coil.



Unplug it and connect the blipper ones in the between



3.5 APS Connector

Locate the APS connector Disconnect it and connect in the between the IRC's one.



WARNING: Properly fix the wires using hose clamps avoiding contacts with the exhaust pipes.

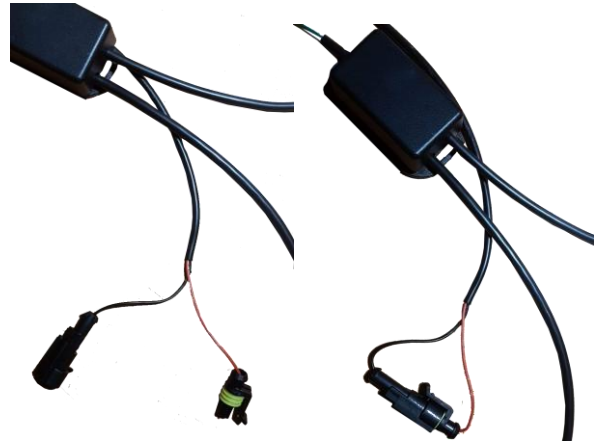
3.6 Clutch Switch

On Panigale 899 connect the red wires to the Clutch pin connector



3.7 Black Box Connector

The system is provided as per left picture. If blipping amount isn't enough i.e. "ts" already set to max and the feeling is that some throttle amount is missing, plug the 2 connectors according to the right picture below.



WARNING: Plug the connectors only if necessary.

4. QUICK PRESETTING SUGGESTIONS

The system is provided fully working. Just properly set "CE" to immediately enjoy the blipping. However all

parameters are set in safety way. Every rider must properly adapt the system to his riding mode.

These are some suggestions:

4.1 Preloads setting: Give power, don't start engine, don't touch the lever, enter in the menu, go to "S" and check that you read "00" or oscillating "01", not more. Then put 3rd gear and try to push the pedal in the upshifting way till you just "feel" the gears load, not till the upper gear enter. You should read values between "08" and "17". Set this value in "L". Now try to push the pedal in the downshifting way till you just "feel" the gears load, not till the lower gear enter. You should read values between "08" and "17". Set this value in "LS". LS should be around L. Difference mustn't be higher than 2Kgs.

4.2.1 Blipping timings setting: concentrate on blipping in gears above 3rd and revs above 10,000rpm. Is the bike "pushing" you after the downshifting? If yes, reduce "tS". Is the downshifting "harsh"? Increase "tS".

4.2.2 After setting the above, now concentrate on blipping in gears above 3rd and revs around 5,000rpm. Is the bike "pushing" you after the downshifting? If yes, reduce "SL". Is the downshifting "harsh"? Increase "SL".

4.2.3 Now check the downshifting in 3-2 and 2-1 gears. Is the downshifting "harsh"? Increase "1A".

4.3.1 For Upshifting on coils users: Set "OC" to "C". We suggest to set "rr" at the beginning of red zone. If the upshifting are still "harsh", increase this value, if instead it is too smooth, reduce this value. Eventually change the parameter "t".

5. TROUBLESHOOTING

5.1 System continuously cut or blipping even if the foot isn't acting on the pedal: check the sensor. Tight the nuts and the eventual grubs to avoid disconnections and loss of functionality due to vibrations as per Par.3.1.

5.2 Blipper works, upshifting no: Check "OC" and properly set as per above suggestions. Check the connection to the upshifting unit (IRC or OEM or additional module or remapping).

5.3 System works in reverse manner: check and properly set "CE".

4. WORKING CONDITIONS

10÷17.5V; -20°C÷+95°C

We value your business with us.

For any questions or troubleshooting queries, please contact us at:

tech-support@irccomponents.it ; Ph. (+39)0108352973