

## Full Race Unit installation manual part № "C-Y6", "C-Y1"

Please read carefully before attempting any use of this product!

To install the SP-Full Race Unit you will have to:

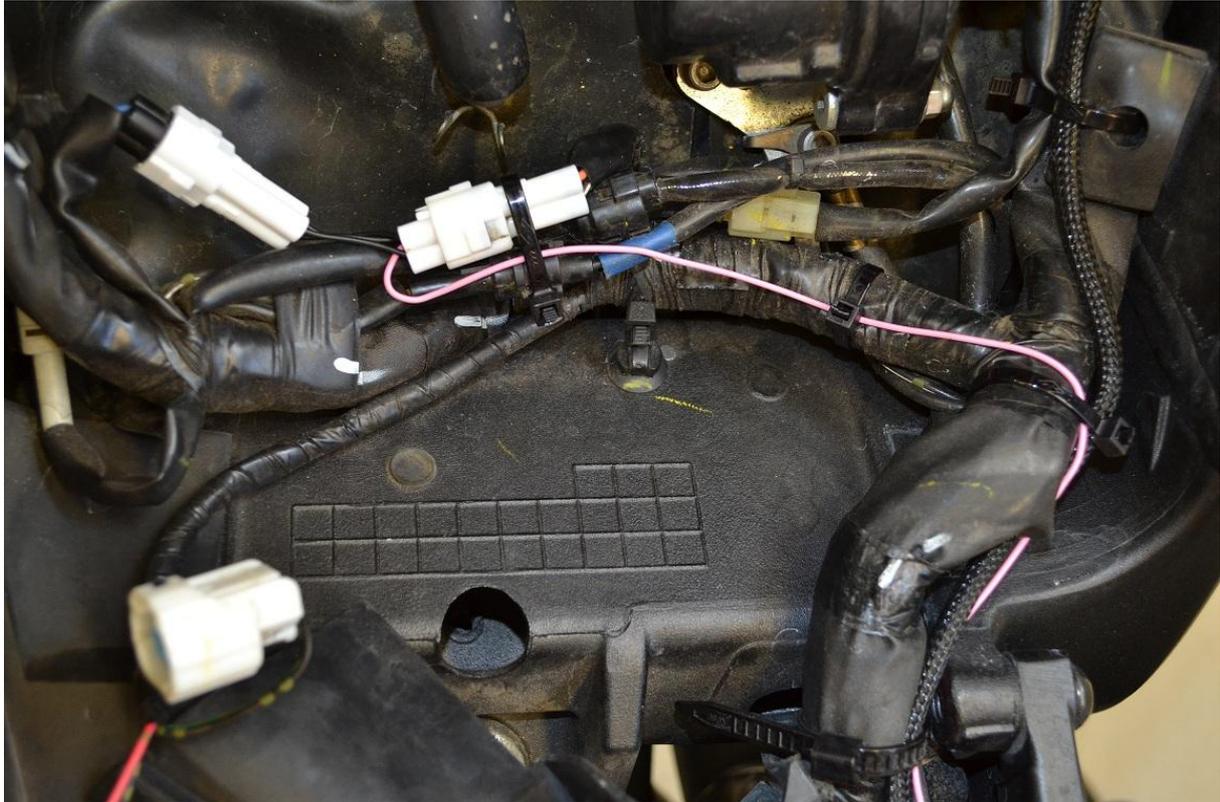
1. Gain access to the ignition coils (for best results refer to your motorcycle service manual). Plug in the female connectors to the ignition coils and the male connectors to the bike's harness. **You must connect each male and female connector pair to the same corresponding cylinder no matter left to right or right to left!**



Stick type coils view

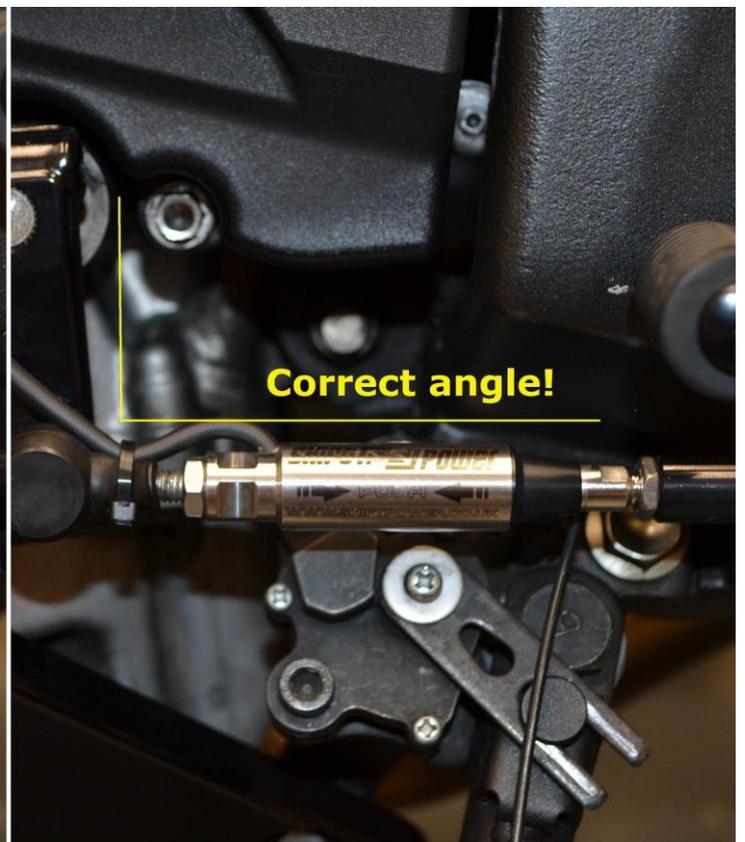
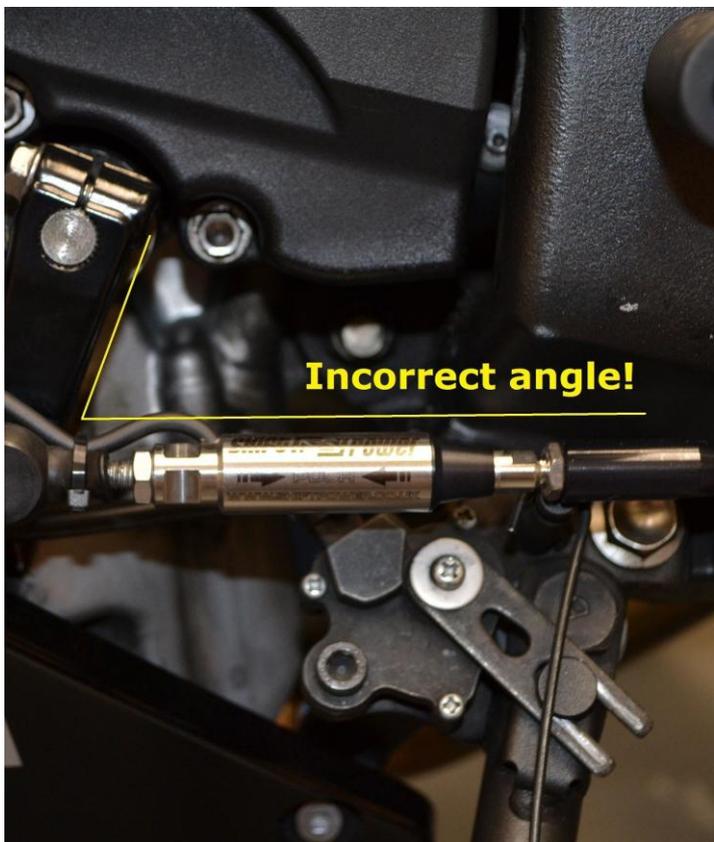
**IMPORTANT NOTE:** Make sure when plugging the connectors that you press them well enough to lock, as this will provide sealed and reliable electrical connection, vital for the function of the Full Race Unit. Find appropriate place for the Full Race Unit control box and route the cables, they are high quality, automotive class, heat resistant cables but there is some care you should take: Avoid moving parts as they might damage them, the best way is to follow other cables from the bike's harness, use the cable ties provided to fasten them. Make sure the place for the Full Race Unit control box is **away from heavy vibrations**, heat, and it is not constantly exposed to rain and water.

2. Connect the male and female 3-way white connectors to the speed sensor. It is usually located to the upper crankcase under the fuel pump and the OEM sensor connector may be black or white depending on model.



**The pictures are for illustrative purposes and from YZF-R1(2007-2008) model.**

3. The Full Race Unit will require negative (ground) connection to power up, connect the single black wire to the battery NEGATIVE (-) lead!
4. Remove your original shift rod and install SP-Shift Sensor with the fitting rod(s) provided to its place. Route the wire to the Full Race Unit control box and plug it in. When installing the sensor, make sure all counter nuts are locked and the sensor wire is not under tension when pressing the gear lever all the way up and down. The rod and sensor provided are made with DUAL THREADS (left and right hand at the same time) which makes fitting universal.



**NOTE:** The gearbox pivot arm must extend to 90 degrees with the shift rod in order to receive equal force in both directions, if not set correctly, the gearbox may not react accordingly and miss gears when using the quickshifter!

After this is done, turn the ignition key ON, make sure the engine kill switch is in RUN position and the gearbox is in neutral, at this time the Full Race control box must power up and enter normal operation displaying SP flashing.

**Perform vehicle speed signal test before using or setting anything!**

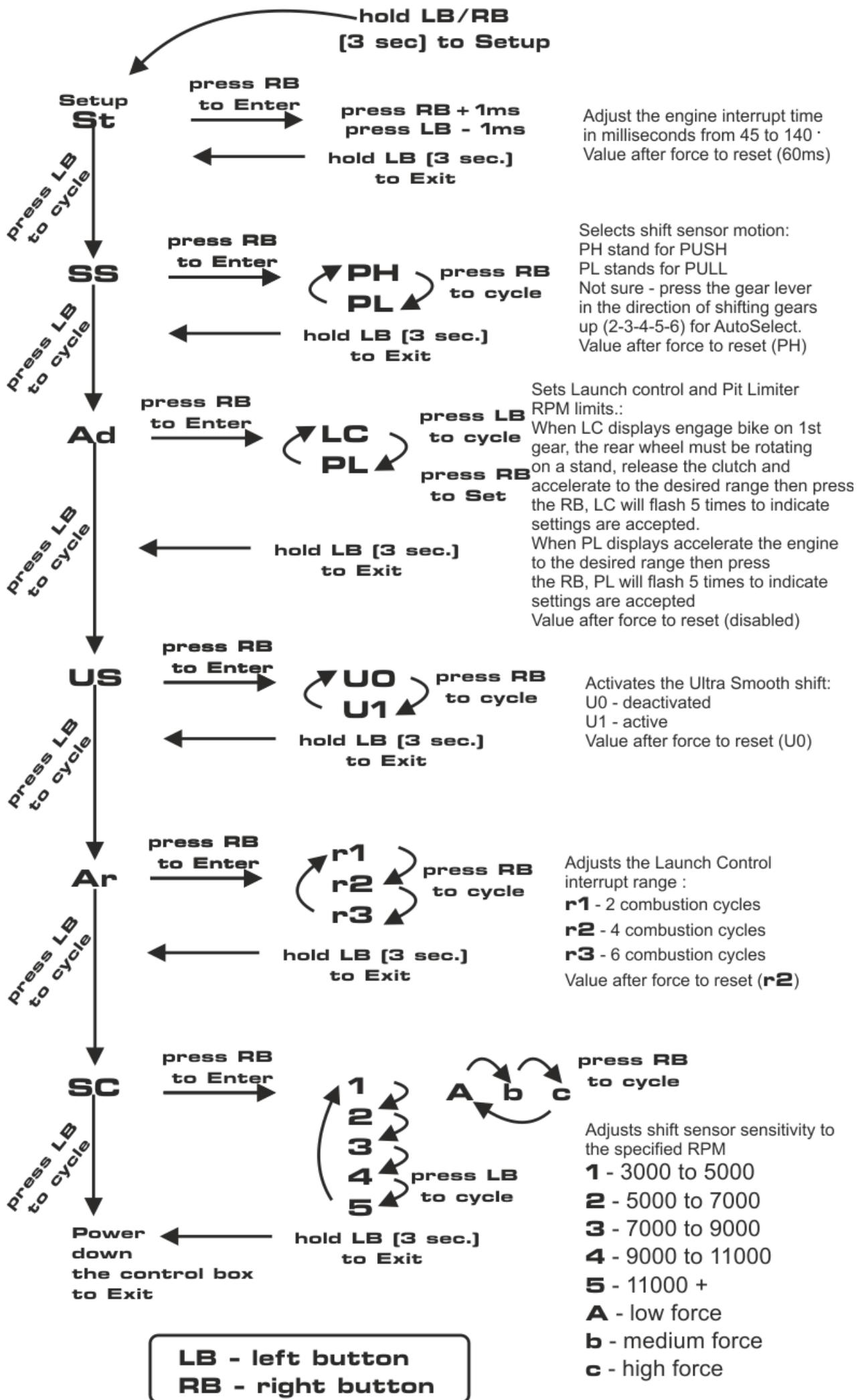
**Speed signal test:** Lift the rear wheel on a paddock stand, with everything connected power up the control box by turning the ignition key on (engine kill switch must be in RUN position, engine must not be running). Now rotate the rear wheel by hand, the control box display must flicker the lights to indicate it can read the vehicle speed signal.

**BEFORE USING THE QUICKSHIFTER YOU MUST ENSURE THE CORRECT SENSOR MOTION FOR YOUR SHIFT SETUP IS SELECTED, PLEASE REFER TO THE FOLLOWING TABLE - OPTION **SS****

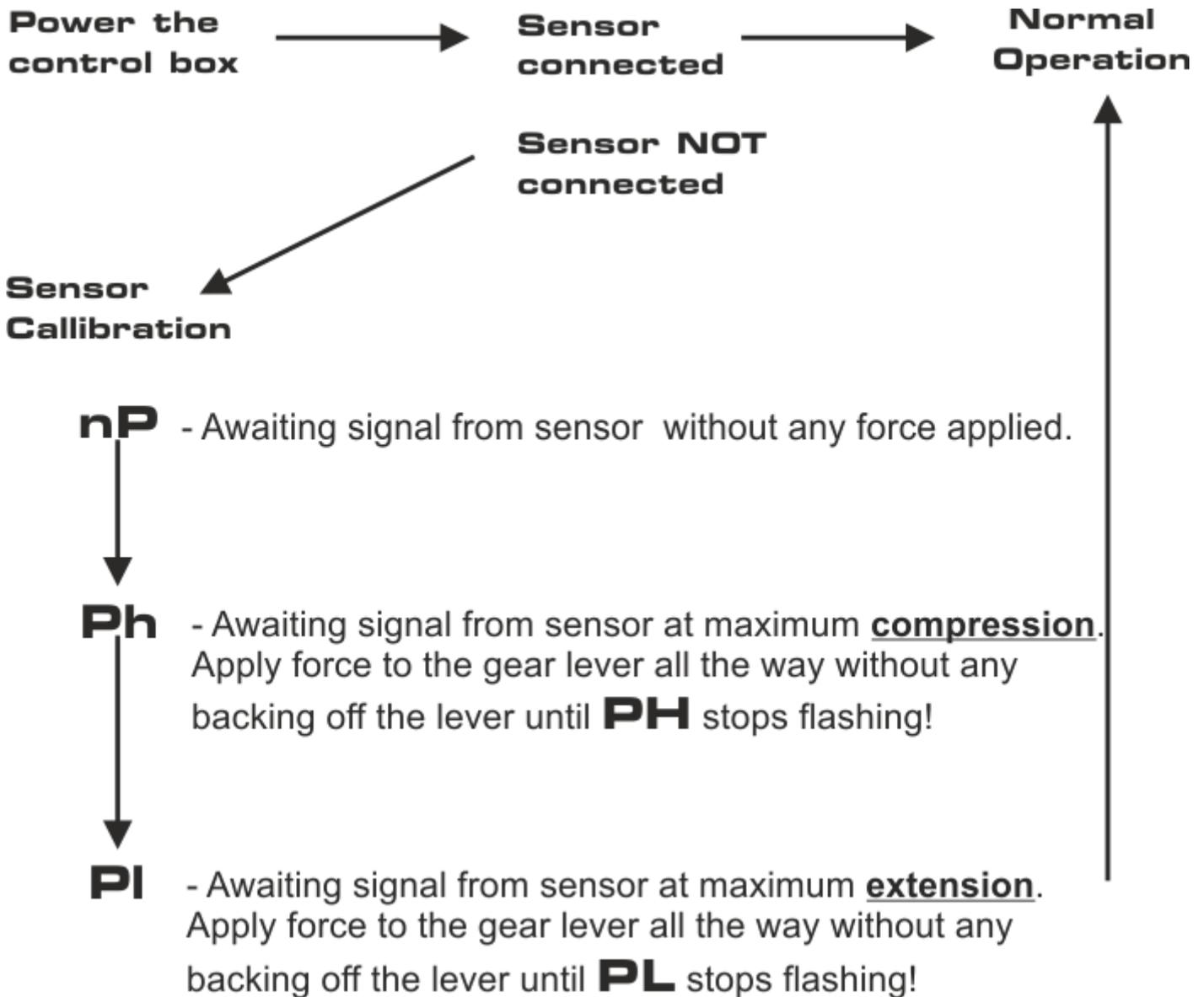
**To enter setup mode:**

**Press and hold LB and RB together then power the control box to initiate count down timer for entering the setup mode, hold down the buttons for 3 seconds.**

**The following is a Menu table for adjusting the control box parameters.**



The following is shift sensor calibration procedure.  
(Required only if you're replacing an existing sensor!)



#### Activating sequence for the Launch Control:

- The vehicle speed must be 0km (rear wheel standing still).
- The engine RPM must drop at idle for at least 1,5seconds.
- The engine RPM must raise to the pre-set Launch Control RPM limit (twist the throttle here).

#### What is the (Ultra Smooth) shift feature:

This option will restore the power on the next gear when using the quickshifter by firing sequential cylinders allowing smooth transition between gears, particularly suitable for cruise and city riding.

#### What is the (Ar) launch control option:

This option defines the active range of the launch control RPM limit, for example if the launch control is set to 7000RPM this option will define how many combustion cycles are allowed when the limit is reached and therefore allowing smaller or greater limit to which the engine RPM are held by the launch control.

### **What is the (SC) shift sensor sensitivity control:**

This option allows you to adjust the force required by the shift sensor to initiate a shift depending on engine RPM. You can adjust 3 levels of force (Low, Med, High) depending on 5 RPM ranges respectively: 1 = (3k to 5k); 2 = (5k to 7k); 3 = (7k to 9k); 4 = (9k to 11k); 5 = (11k to red line). This option has been pre-set from factory we recommend to test ride before changing the parameters.

### **Force reset of the control box**

With everything connected turn the ignition key on with the engine kill switch in RUN position, the engine must not be running then press and hold the shift lever in the direction of upshifting all the way in – at this point the control box will display a counter starting from 1 hold the shift lever until 9 is reached, module is now reset to the factory pre-set values, refer to the above table.

**NOTE:** The Full Race Unit arrives from the manufacturer with the Launch Control deactivated, you have to set the Launch Control RPM limit to make it active.

### **Tips on adjusting your Quickshifter!**

The Full Race Unit arrives with best overall setting to your motorcycle make and model. We strongly recommend you to test ride it before changing the St settings. Use the following as a general guide when adjusting your Quickshifter:

If when using the Quickshifter the gearbox seems to push back the shift lever, the shift feels rough and you have experienced missed gears - this means that the gearbox needs more time to react – increase the St shift time.

If when using the Quickshifter the motorcycle front dives for too long and the shift seems slow - this means that you have to lower the shift time – decrease the St shift time. Best results for most motorcycles are achieved with the following time settings - (60ms-70ms).

The Quickshifter has a threshold RPM which means that the engine speed must exceed the minimum threshold in order to activate the Quickshifter function. The factory setting are over 3000RPM and this is not adjustable.

If for some reason you're experiencing difficulties adjusting your Shift Power product, you think it is not functioning as expected or you would like to share your opinion please feel free to contact us to support you with a professional help.

**Web:** <https://www.shiftpower.co.uk> **Email:** [info@ShiftPower.co.uk](mailto:info@ShiftPower.co.uk)

This product is covered by one year warranty against malfunctions from the original date of purchase under the following conditions – [link click here.](#)

### **Warranty disclaimer:**

Shift Power Ltd shall not under any circumstances, be liable for any special, incidental or consequential damaged including, person, party or property, but not limited to, damage loss of cost of purchased or replacement goods or service, claims of customers of the purchaser,

which may arise and/or result from sale or use of these parts. Installation of these parts could adversely affect the engine manufacturer warranty coverage.

**Thank you for purchasing the Full Race Unit!**