

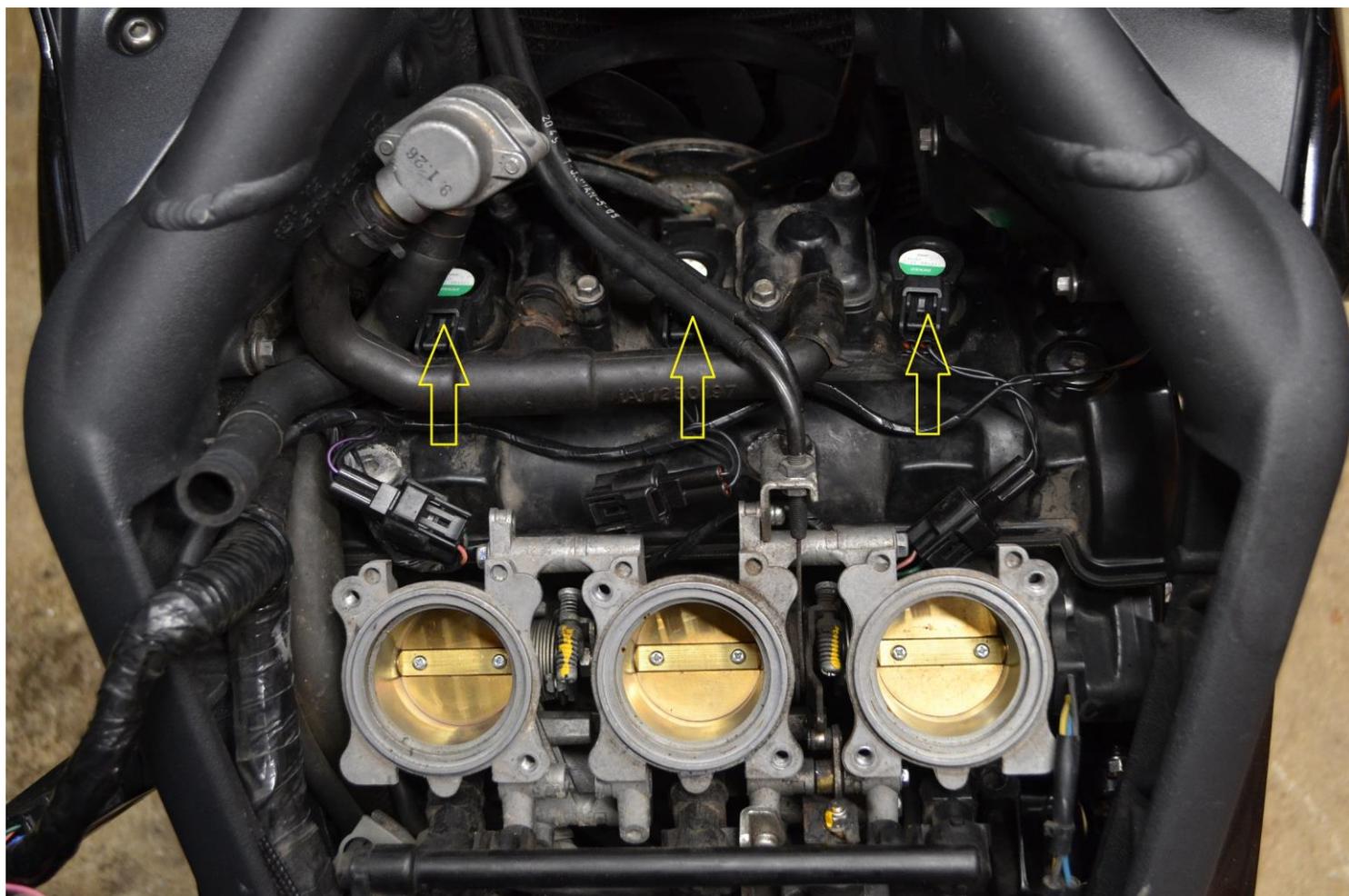
Reading time: 10min

Full Race Unit installation manual part № "C-T6" "C-T1"

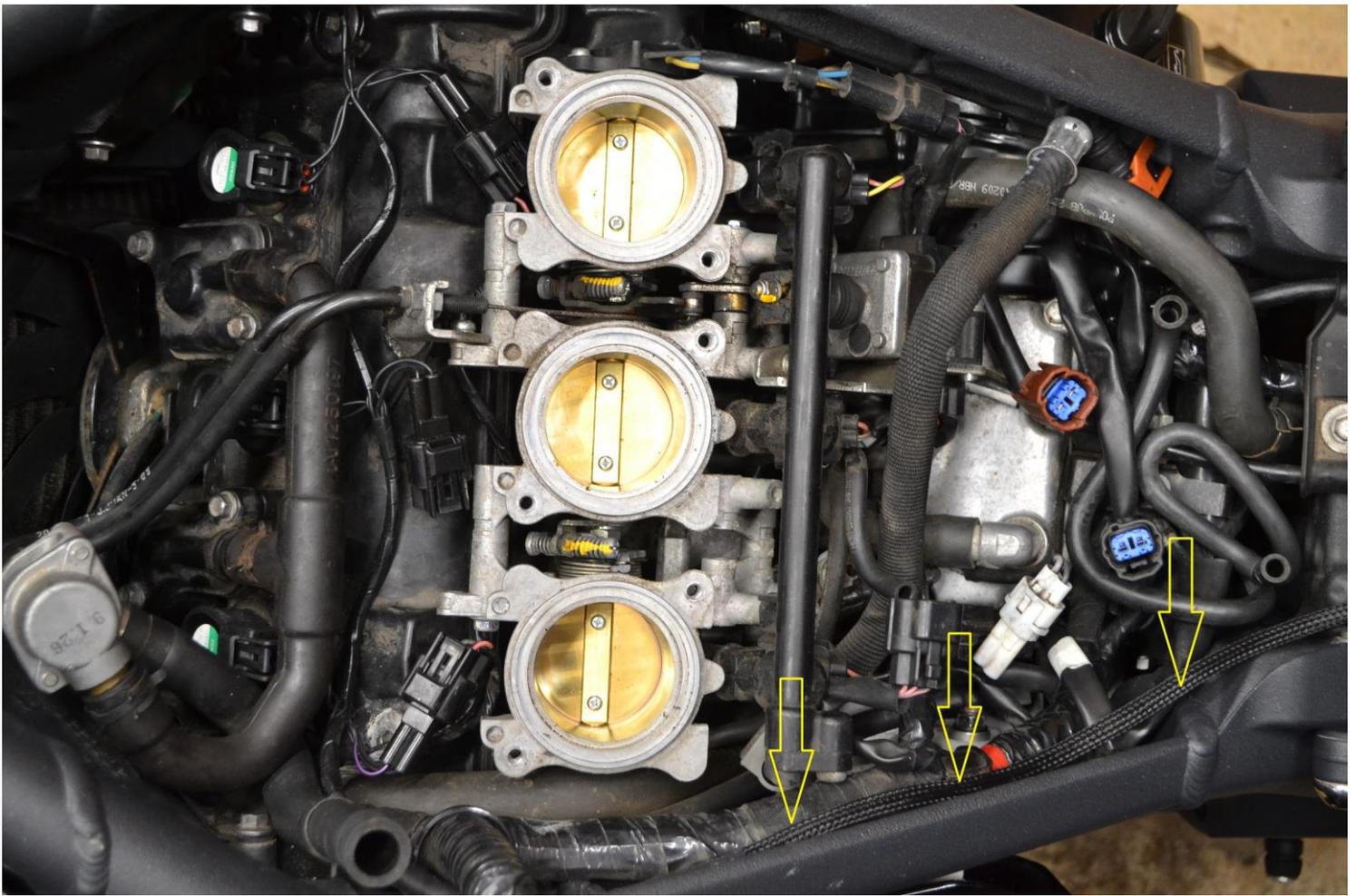
Please read carefully before attempting any use of this product!

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

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 pair connectors to the same corresponding cylinder!



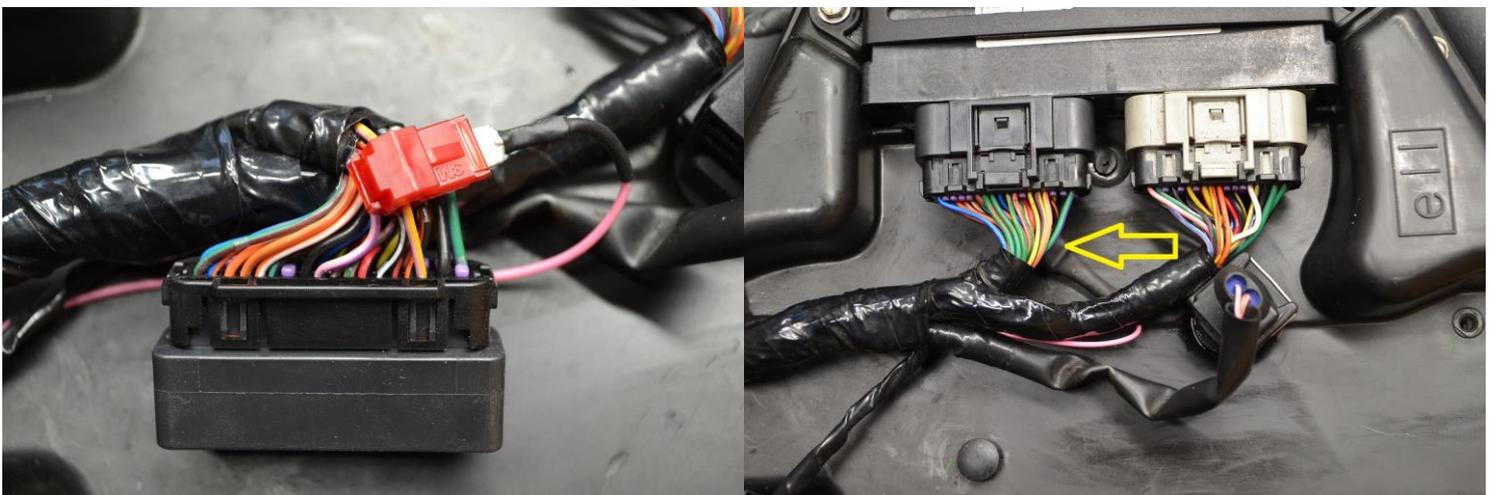
IMPORTANT NOTE: Make sure when plugging the connectors that you press them well enough to lock, as this will provide sealed and reliable electrical connection, vital for the function of the Full Race Unit. Find appropriate place for the Full Race Unit control box and route the cables, they are high quality, 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.



NOTE: The Full Race Unit connects directly to the ignition coils, if you use another product(s) for altering or modifying the ignition coil signals (that needs to be connected to the ignition coils as well) you need to connect the Full Race Unit control box first in line to the ignition coils.

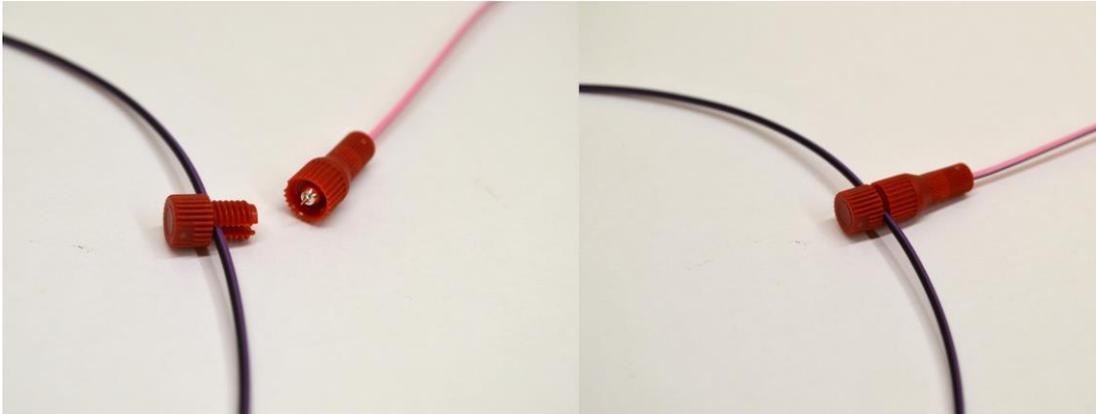
For non ABS equipped models

Connect the Posi-Tap connector to the ECU speed sensor signal. The speed sensor signal is on the ECU black connector Pink with Yellow stripe wire as pictured.



For ABS equipped models:

Connect the Posi-Tap connector to the rear wheel rotation sensor signal wire. The connector is located under the riders.



Posi-Tap connector installation guide:

1. Do not strip run wire.
2. Unscrew the big end cap counter-clockwise
3. Insert the run wire in the big end cap slot.
4. Screw the big end cap to pierce and provide signal.

The Full Race Unit will require negative (ground) connection to power up, connect the single black wire to the battery NEGATIVE (-) lead!

IMPORTANT NOTE: You must never run or even crank the engine with the control box connected to the ignition coils without the single black wire being connected to the battery negative lead, this will damage the control box!

1. 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 internal threads are made 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!

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.

NOTE: You **MUST** set the corresponding speed signal bit for use with the correct model. For NON ABS models you must set the speed signal bit to 0 and for ABS equipped models you must set the speed signal bit to 1.

Setting the speed signal bit: With everything connected press and hold the control box LB(Left Button) then power the control box, at this time count down timer from 3 will display, hold the button until 0, now using the RB(Right Button) set the corresponding bit for use with the particular model. To exit the setting mode power down the control box.

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**

[Full Race Unit C-type control box setup video link](#)

- **To enter setting mode:** Press and hold LB and RB together then power up the control box by turning the ignition key on, hold down the buttons for 3 seconds until the countdown timer elapses.
- **To cycle through the main parameters press LB**
- **To enter a particular parameter press RB**
- **To exit one level up in the menu press and hold LB for 3 seconds.**
- **To exit the setting mode power down the control.**

The following is a menu table for adjusting the control box parameters

Parametar	Description	Value
St	Adjust the engine interrupt time for shifting gears UP(1-2-3-4-5-6)	50ms - 95ms
SS	Sets the shift sensor motion for shifting gears UP(1-2-3-4-5-6)	PH = PUSH PL = PULL

Ad	Sets the Launch Control and Pit Limiter RPM limits	When LC displays engage on 1st gear accelerate the engine to the desired RPM and press RB once to set the limit LC flashes 5 times to indicate settings are accepted	When PL displays engage on 1st gear accelerate the engine to the desired speed and press RB once to set the limit PL flashes 5 times to indicate settings are accepted	
US	Controlling the ultra-smooth shift feature for shifting gears UP(1-2-3-4-5-6)	U1 - ultra smooth feature is enabled	U0 - ultra smooth feature is disabled	
Ar	Sets the Launch Control RPM range when reaching the pre-set RPM limit	r1 3 combustion cycles	r2 6 combustion cycles	r3 9 combustion cycles
SC	Shift sensor sensitivity control adjustable in 5 RPM ranges and 3 levels of force	1 = 3000 - 5000 RPM 2 = 5000 - 7000 RPM 3 = 7000 - 9000 RPM 4 = 9000 - 11000 RPM 5 = above 11000 RPM	A = low force b = medium force c = high force	

The following is shift sensor calibration procedure. Perform only if you are replacing a new shift sensor or you have reset the control box to factory settings.

1. Unplug the shift sensor from the Full Race control box.
2. Power up the Full Race control box by turning the ignition key on and engine kill switch in RUN position.
3. Plug in the shift sensor to the Full Race control box.
4. Ph displays now compress the shift sensor all the way until solid at once without backing off! Release the shift sensor to normal position and the control box displays a number from 55 to 59 is normal operating value if different repeat the procedure from the beginning.
5. Pl displays now extent the shift sensor all the way until solid at once without backing off! Release the shift sensor in normal position and the control box displays a number from 34 to 38 is normal operating value if different repeat the procedure from the beginning.

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 restricted 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 (A = Low, b = Med, c = 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 “rt” starts flashing, module is now reset to the factory pre-set values, refer to the above table.

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

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!