PQ8 Item 239ND instruction – CFMOTO 450MT

2025-11-30, Rev A

Applications

CFMoto – 450 MT from 2024

Product description

PQ8 Quickshifter system developed for CFMoto 450MT. The quick shift is done by interrupt the ignition and features adjustable kill time, shift force, smooth and compus shift function.

Cordona use strain gauge sensor technology which gives a consistent and distinct shift performance. The GP SG M6 switch is based on same technology platform we have used in Moto3 World Championship together with KTM Factory Moto3 and Honda Factory bikes.

The Cordona PQ8 Quickshifter is maybe the most robust ‘stand-alone’ system on the market. It has been used in Moto2 Word Championship bikes, for racing bikes, street bikes and in many categories for years. It can be used with all variants of strain gauge sensors, like rod linkage, toe PEG or sensors integrated in shift levers.

The PQ8 Item 239ND includes:

PQ8 ND ECU –PQ8 ECU Version 1.20 with pre-sets for CFMoto 450MT models.

GP SG Switch – Digital GP SG switch with M6 size strain gauge sensor.

PQ8 239 loom – loom connecting PQ8 ECU, bike ground, ignition coils, injector and GP SG switch module.

Rod assembly kit

- 70mm aluminium rod with left and right hand M6 threads
- 2x M6 high quality Tescubal rod ends with left and right hand threads
- 1x M6 A4 marine stainless steel left nut
- 3x M6 A4 marine stainless steel right nut
- 1x M6 stainless steel right stud
- 8x cable ties
- Velcro tape PQ8 ECU and GP SG module
- QR code for this manual
- Cordona stickers

Tools needed

- Wrenches 8mm and 10mm to tighten rod linkage
- Ratchet with 7/16 socket
- Nipper for cable ties
- Measuring tape
- Thread-locking fluid, Loctite 243 or similar

Installation

CFMOTO 450MT Cordona Quickshifter Install FULL GUIDE by @motoalchemista

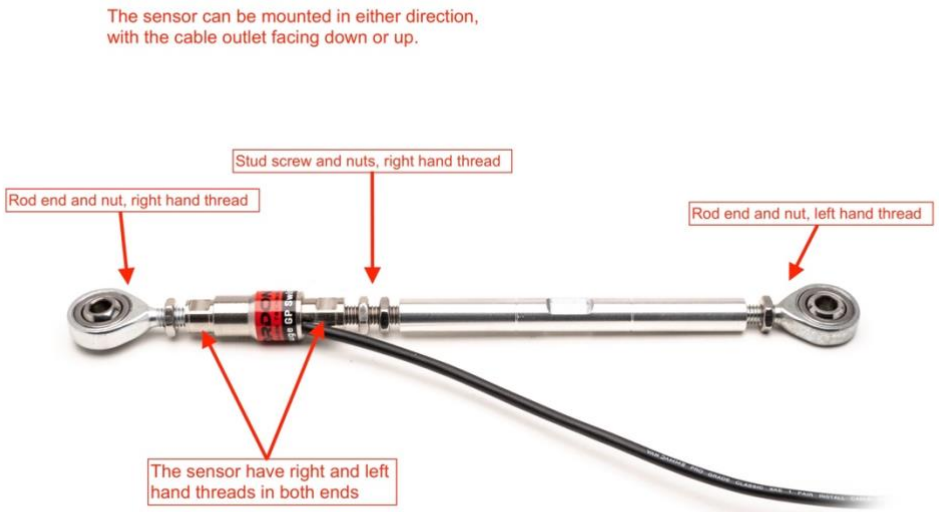
https://www.youtube.com/watch?v=slFyM35xyrQ

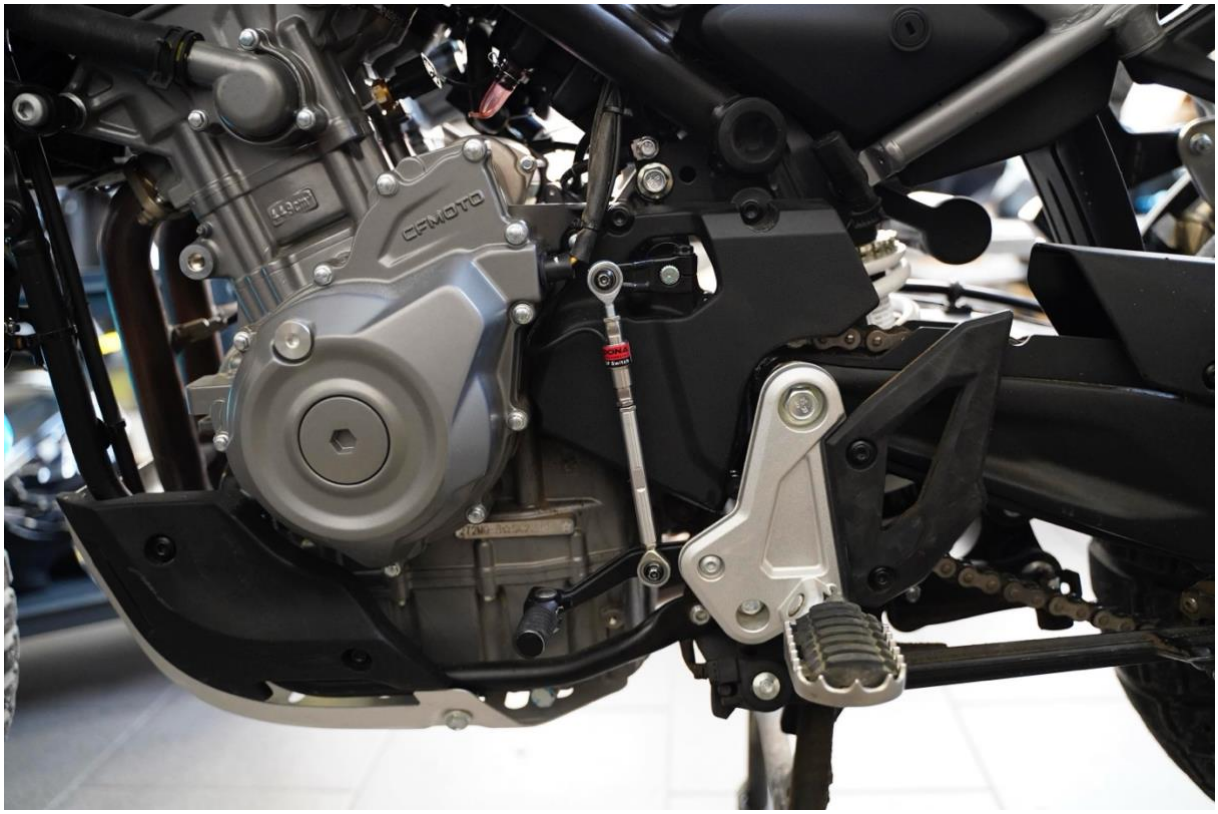
Prepare the bike for the quickshifter installation

- Remove the saddle, right and left side panels and fuel tank.
- Measure the hight of your toe peg at your preferred position.
- Remove shift rod from bike
- Remove small left side panel

Installation of GP SG switch and shift linkage.

Assembly the Cordona shift linkage according to picture below





Gear shift linkage, recommended assembly.

Adjust the hight of the shift peg with adjusting the rod anti clockwise to shorten the length of linkage. Ensure you have enough threads and use minimum 10mm at each rod end, stud screw and sensor threads before securing each part of the linkage.

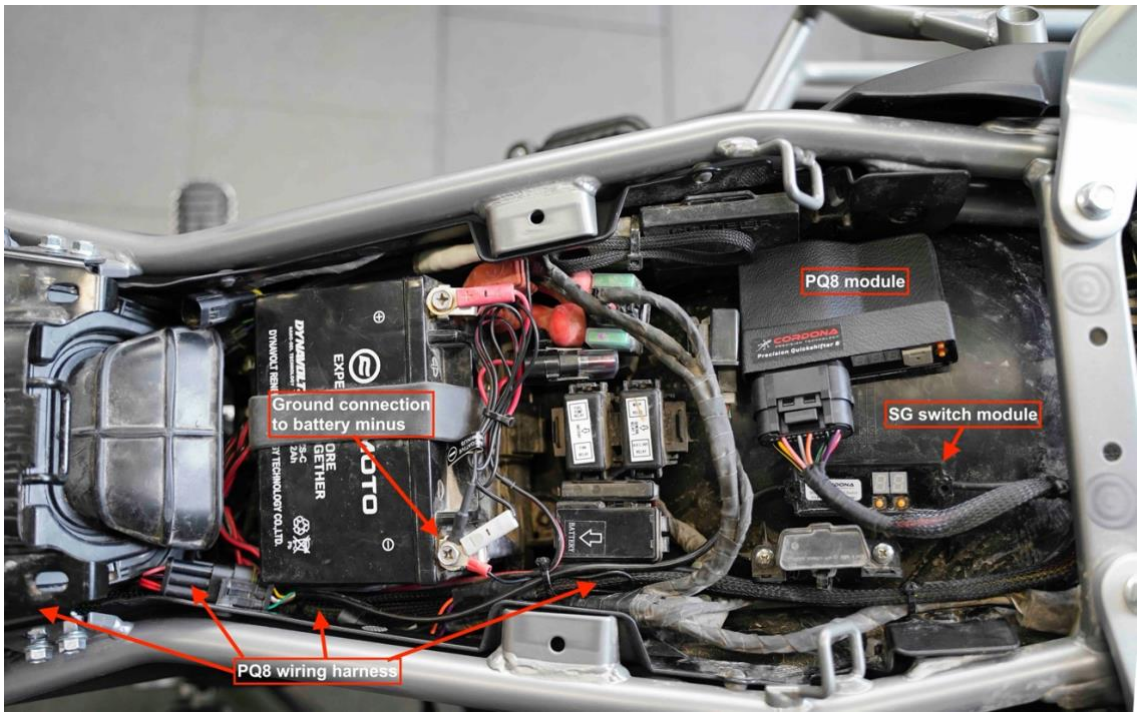
Apply Loctite before tightening all nuts in the linkage.

Use the small cable tie and silicone tube to route the sensor cable according to photo. Tighten the cable tie loosely to avoid long term wear at sensor cable. See pictures below.

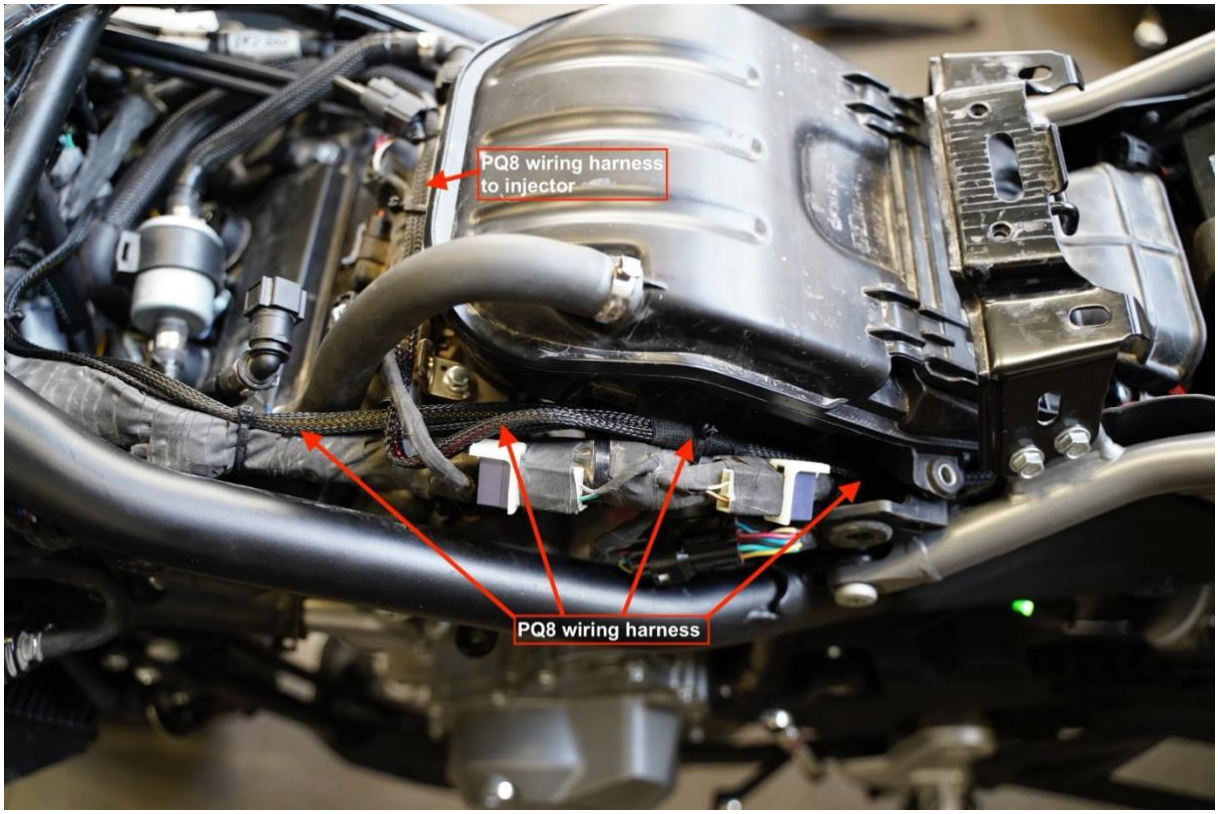
Installation of PQ8 ECU, GP SG switch module and loom

Mount the Velcro at bottom of PQ8 ECU and GP SG module and at the bike wheel arch.

Connect the system together, PQ8 ECU to loom, GP SG Switch to loom and route the loom parts loosely according to picture.

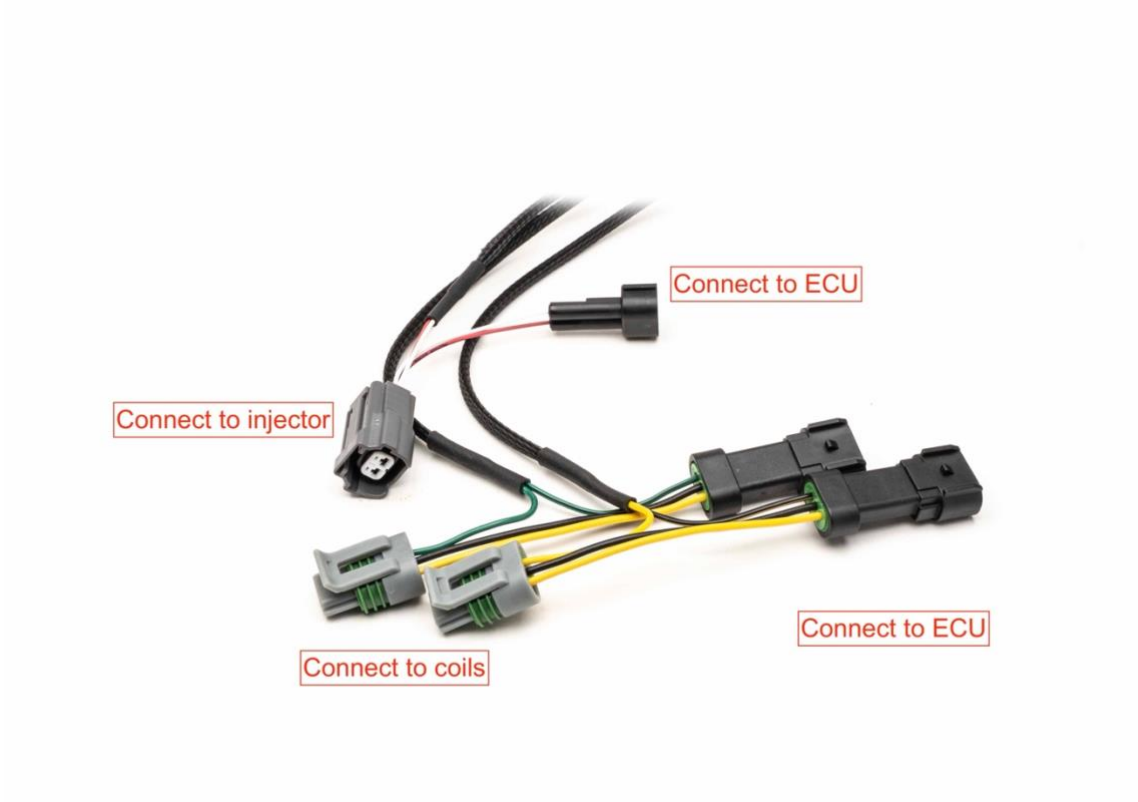


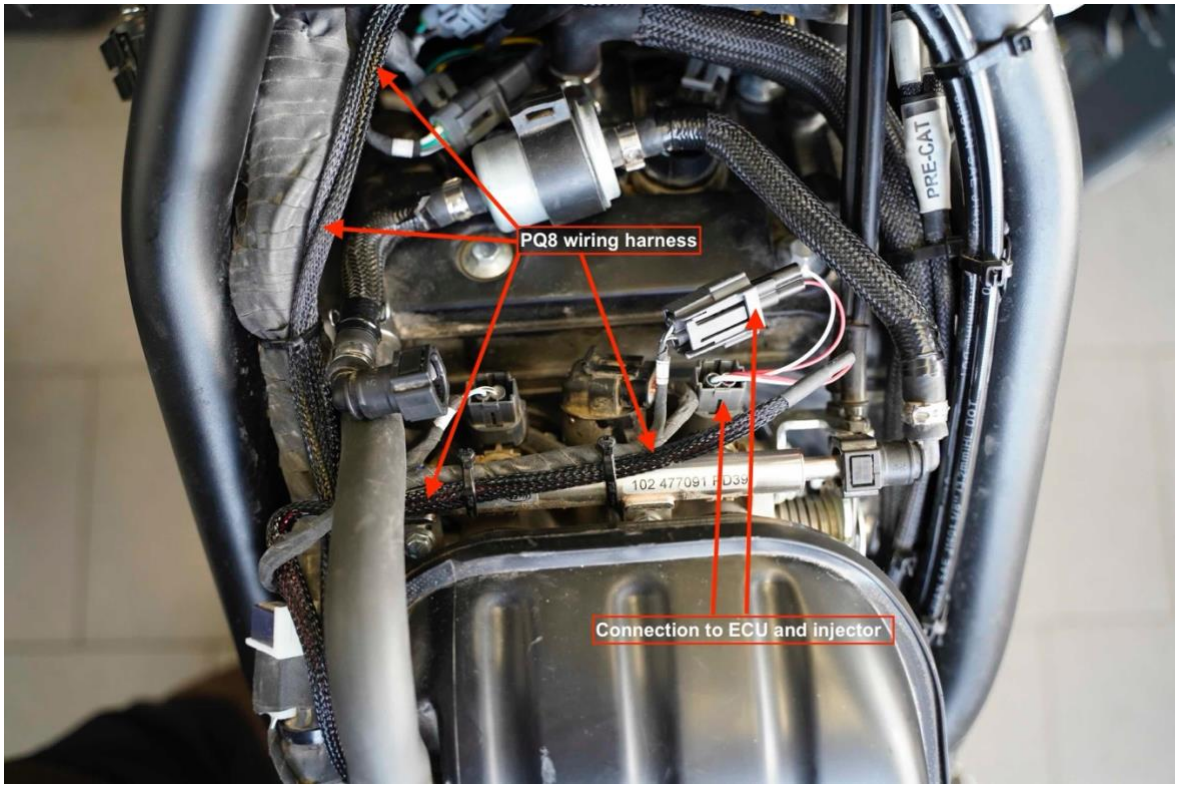
Installation of 239ND loom



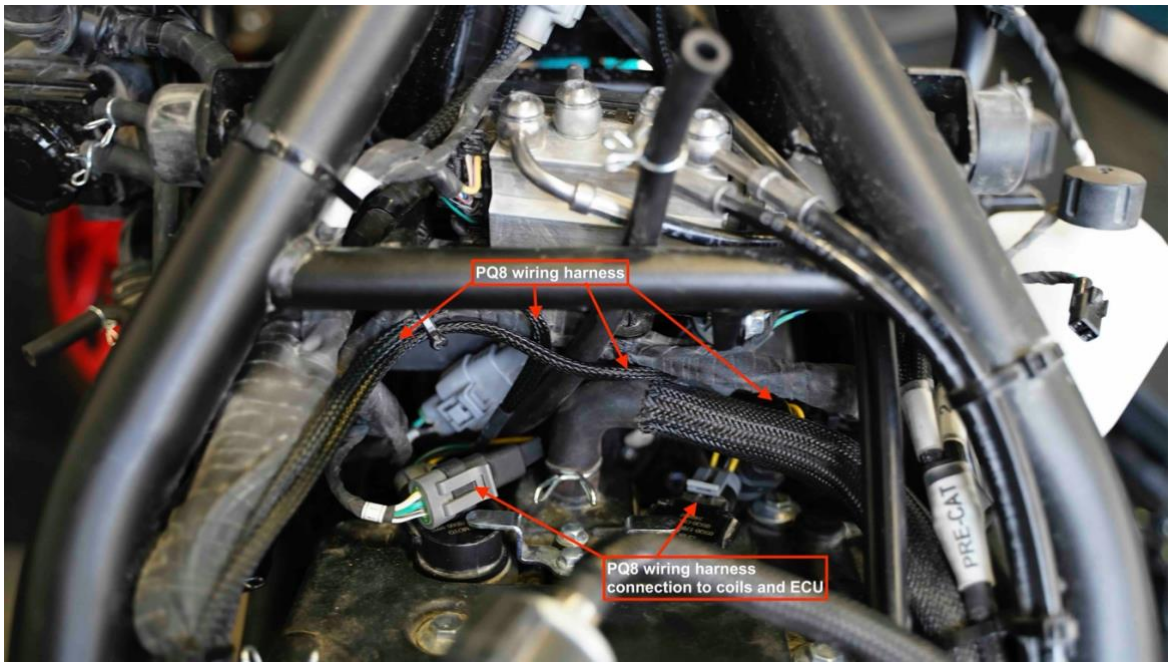
Route the loom with the pairs of connectors for the injectors according to the photo above.

Route the loom with the two pairs of coil connectors according to the picture below.
Disconnect the bike ECU connector to the ignition coils.





Use cable ties to ensure proper cable installation with the cables loosely bundled together. Be careful not to overtighten to prevent tension in the cables. Avoid pulling the cables over sharp edges..



Quickhifter settings

The PQ8 Item 239ND comes ‘plug & play’ pre-set with all settings from our test bike.
To adjust settings according to your preferences, follow the procedures below:

General procedure to change PQ8 ECU settings:

1. Toggle up or down with the two buttons, select the setting to be changed.
2. Press both buttons simultaneously for 1 second to be able to change the setting.
3. The LED display will flash.
4. Change values by toggle the buttons.
5. Save new value by simultaneously press both buttons for 1 second. Two ‘beeps’ will confirm the new setting is locked.

Display defaults PQ8 Item 239ND

At power up the PQ8 display shows FW version 1.20: 1.20

If engine is running, engine rpm is shown.

If left for 4 sec showing 0.0

Lowest rpm for quick shift

Default factory Lowest rpm for quick shift 2000rpm, ‘On3’: On3
Adjustable 0-9000 rpm in steps of 1000rpm, On0 to On9.

Shift light, max rpm for shift

Default factory max rpm for shift, 8500rpm; ‘S7.0’: S8.5

Kill time, how long the ignition or fuel injection will be interrupted at max rpm, in milli sec (ms).

Default factory Kill time, 70ms, ‘t70’: t70

4stroke, rpm reading.

Default factory rpm reading ‘St4’: St4
Can be adjusted between St1 to St4 to set correct rpm reading compared to the tachometer.

Autoshift, this function is not supported in this PQ8 Quickhifter kit.

Default factory Autoshift off, ‘Aof’: Aof
Adjustable Aon or Aof.

Rpm sense input.

Default factory rpm sense input ‘In2’: In2
In ‘In1’ rpm through green wire pair. ‘In2’ rpm through grey-white aux wire to injector.

General procedure change GP SG settings:

Change shift direction

Default factory shift direction, t1 *'compress sensor for an upshift'*.

Change setting:
Hold both buttons simultaneously and turn on ignition/power.
Release the buttons and the display flashes UP- UP- UP

Up-up-up.

Move shift lever in a simulated upshift from 2nd to 3rd gear and hold the shift lever for about 2-3 seconds until a small dot flash in right bottom corner in the LED display.

To confirm you have set the upshift direction correctly, check the small dot flash in the display when do a simulated upshift without engine running.

Change shift force

Default factory setting GP SG, 15kg 15

Change setting:
Press right button and you will see the shift force set.
Press right button and hold, press left button, and hold both buttons for three seconds.
The LED display starts to flash.
Change shift force up or down with the buttons.
Set the new setting pressing both buttons at the same time for 3 seconds.

Change shift loop settings

The factory default loop setting is 'commonly open' loop; t1

Change setting:
With this loop setting you will hear a short 'beep' when do shift, if the PQ8 system is powered up (ignition on at bike).

If you hear a constant 'beep', the loop setting is wrong, and set to 'commonly closed' loop; t2
Change the setting to t1

