

Owners Manual: TLS-BA4.1-R1-DCS TLS-BA4.1-MT10-DCS
TLS-BA3.1-ECU TLS-BA4-ECU



FORWARD

We wish to thank you for choosing this innovative Translogic product. Your new Translogic product is the result of Translogic's advanced engineering, exhaustive testing and continuous striving for superior reliability, safety and performance.

Read this instruction manual before fitting and operating your product so you will be thoroughly familiar with the proper operation of its controls, features, capabilities and limitations. To ensure a long trouble free life for your product give it proper care and maintenance as described at the back of this manual.

Due to improvements in design and performance during production there maybe, in some cases, minor discrepancies between actual product and the illustrations and text within this manual.

SAFETY

When embarking on the fitment of your Translogic product it is advisable to position the motorcycle/vehicle so it cannot cause injury or damage by falling over/rolling forwards or backwards. The use of a paddock stand is ideal or if necessary chock the wheels.

When removing or adding electrical cables to the vehicle battery or wiring harness always remove the negative earth cable/terminal before the positive cable/terminal. Replace the negative earth cable/terminal last to avoid shorting the electrical system.

FITTING THE BLIP ASSIST ECU

ATTENTION! The Blip Assist ECU should be positioned so it does not exceed an operating temperature of +70°C and must be installed where it is protected from excessive vibration and harsh environmental elements. Under the riders seat or at the front of the motorcycle forward of the head stock area or near the fairing bracket area is an ideal position.

1. Locate a suitable flat surface area for the Blip Assist ECU housing to adhere to. Do not actually fix the ECU into position until you have installed the rest of the components and have routed the relevant cables. Once you have completed the rest of the installation you can then finally fix the ECU into position using the supplied velcro mounting pads. Make sure you degrease and warm up the mounting surfaces prior to peeling the backing off of the velcro pads and securing into position, cold surfaces result in poor adhesion! No part of the Blip Assist ECU housing is permitted to touch any other object such as the chassis, bodywork etc.

CONNECTING THE BLIP ASSIST HARNESSES

ATTENTION! When connecting to the DCS sensor (dual channel sensor) you can choose either to remain in standard 1dn, 5up shifting or you can reverse the shift to race shift 1up, 5dn. You can do this by simply connecting the corresponding 2 pin connector to the Blip assist ECU and OEM Quickshifter connector. The green and blue wired connector is the push format and the red and blue wired connector is the pull format.

Denso or Mitsubishi type ignition coils, stick type

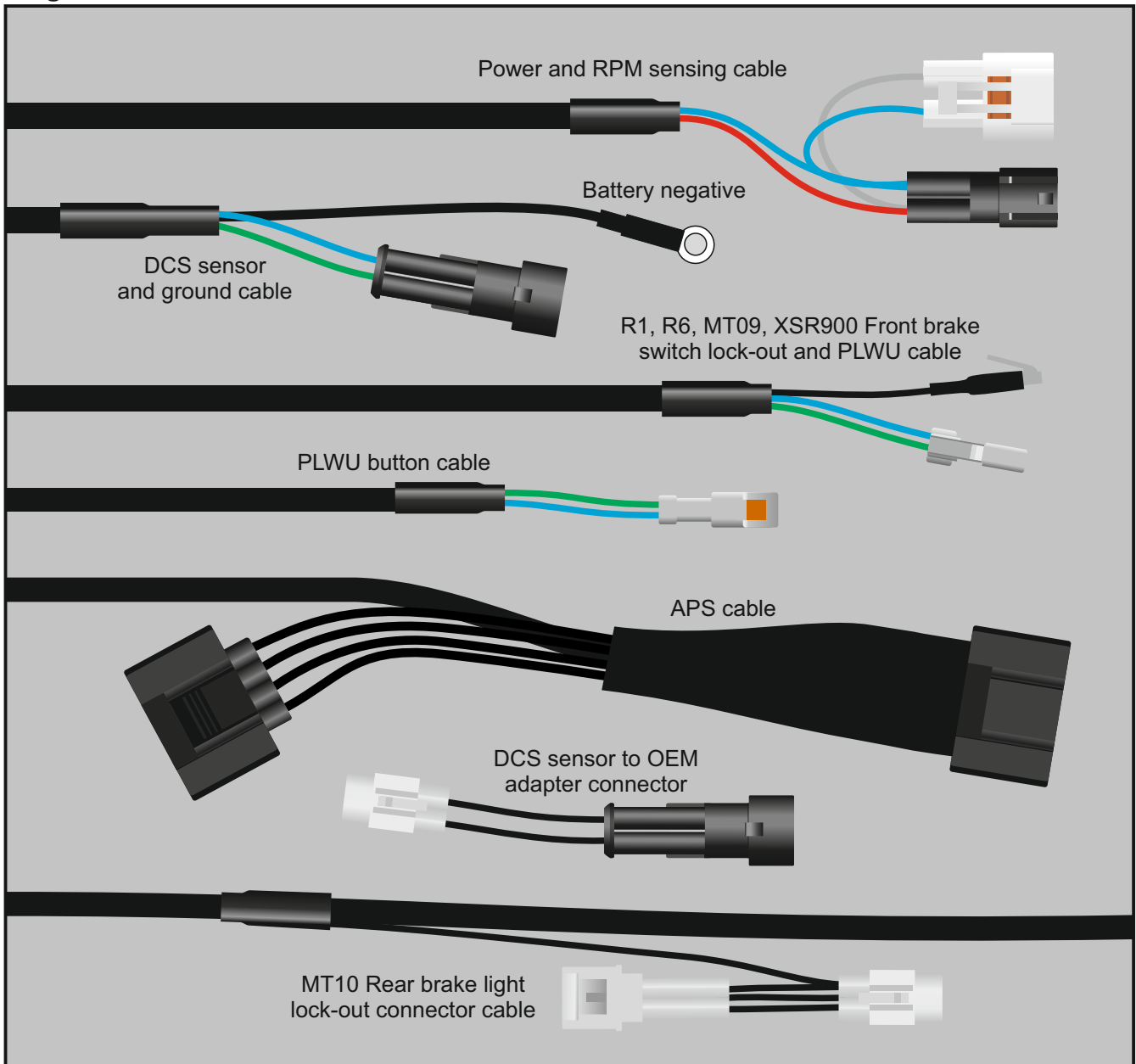
NOTE1: These ignition coils may have the positive and negative pins opposite to Diagram A. so great care should be taken when checking wire alignment. You might be required to swap the wires in the white and black Blip Assist harness connectors so that the grey link wire aligns to the original +12volts supply in the OEM ignition coil connector and the ignition coil positive. See Diagram A. **Failure to have the correct wire alignment or 'crossed over' wires in either of the connectors could result in product malfunction. DO NOT SWAP ANY OTHER WIRES IN ANY OF THE OTHER BLIPASSIST CONNECTORS!**

NOTE2: There will be 2 wires in each OEM ignition coil connector. The wire which is the same colour in each OEM ignition coil connectors will typically be the +12Volt supply wire. In the example shown in **Diagram B** the +12volt wire is 'Gy' (grey) although it might be a different colour with each installation. Using a Digital Volt Meter you can double check to see which of the wires in the OEM ignition coil connector has +12 volts on by un-plugging it from the ignition coil, switch on the ignition and look for which of the wires has +12volts on.

1. Route the black and white Power and RPM sensing connectors from the Blip Assist ECU through the motorcycle/vehicle so they end up in close proximity to one of the ignition coils. Try not to run the Blip Assist ECU harness/cables next to the OEM vehicle harness. Unplug one of the original ignition coil connectors and connect the black and white Power and RPM sensing connectors from the Blip Assist ECU to the ignition coil and its original connector.

2. Attach the black ground ring terminal from the Blip Assist ECU to the negative battery terminal only, do not attach to any other area.

Diagram A.



3. Locate the Accelerator Position Sensor (APS) connector on the throttle bodies, it will be situated at the end of the mechanical throttle cable assemblies. **WARNING!** Do not connect to the Throttle Position Sensor (TPS) connector by accident, ensure you connect only to the APS connector. Now unplug the original APS connector and connect in the male and female APS connectors from the Blip Assist ECU. **ATTENTION!** Ensure the Blip Assist cables cannot become tangled or trapped by the engines throttle body assembly. Ensure no visible wires can become chaffed or trapped. **WARNING!** Great care must be taken during this stage of the installation.

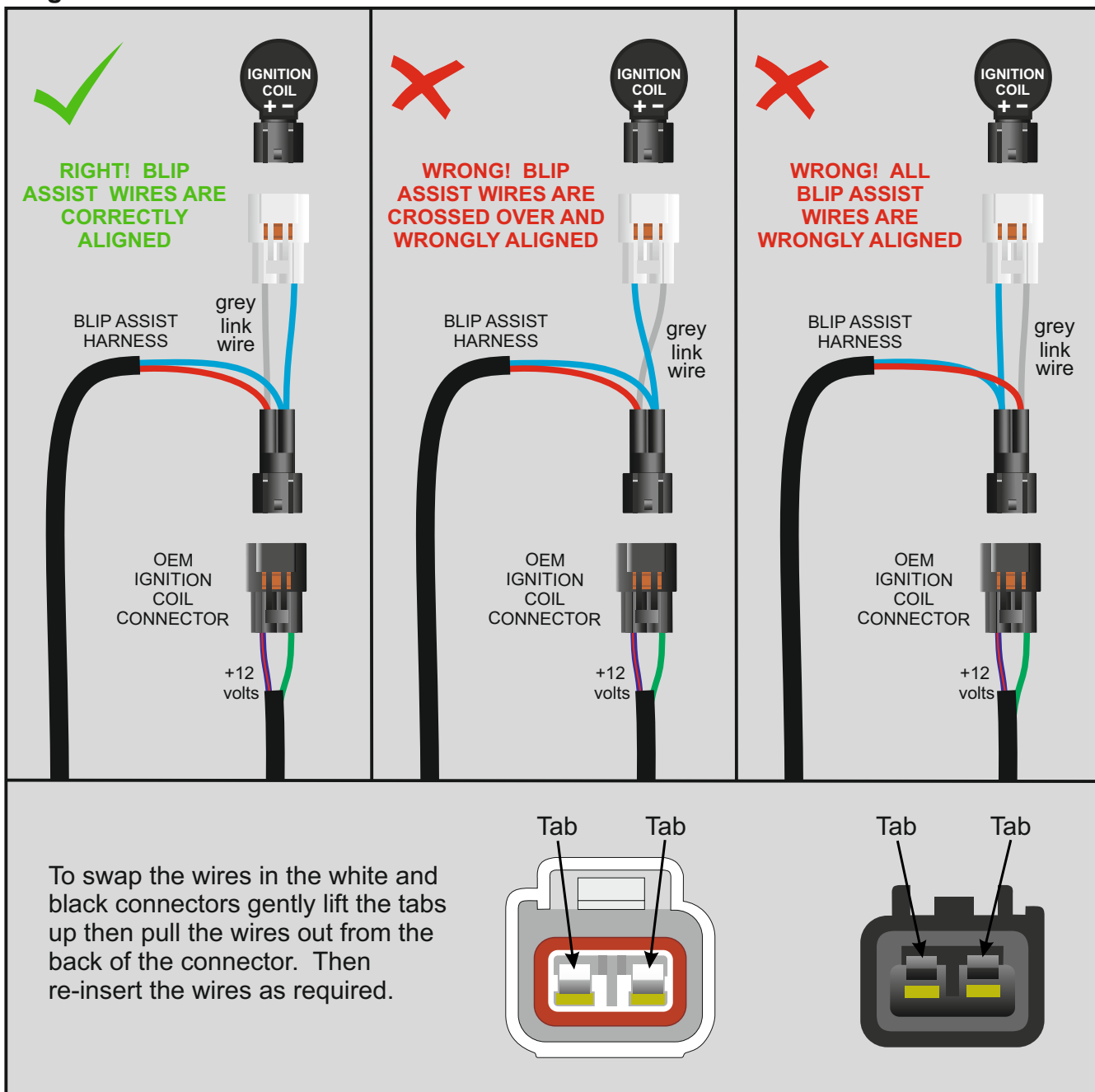
NOTE3 (Applies to R1, R6, MT09, XSR900 models): The front brake switch will be located on the underside of the brake lever and will have 2 small 4.8mm spade terminals connected to it. One of these spade terminals will have a permanent +12v on whenever the ignition is switched on, the other spade terminal will only receive +12v when the front brake lever is pulled in. This 'switched' spade terminal must be connected to by the brake switch lock-out/PLWU cable. **ATTENTION!** The Blip Assist ECU will only activate a throttle blip when the front brake is applied

as this cable/wire must see +12v for the system to activate. *If you connect to the wrong spade terminal then the system will carry out a throttle blip even if the brake lever is not pulled in.*

4. Route the brake switch lock-out/PLWU (Pit Lane Warm Up) cable up to the front brake lever area ensuring the cable is secured correctly to avoid any possible chaffing, allow sufficient cable length/loop for the steering of the handle bars. Now identify the correct switched spade terminal on the brake switch assembly and remove the terminal and then fit the 'piggy-back' spade terminal from the Blip Assist ECU to the original spade terminal, then re-attach the OEM spade terminal onto the 'piggy-back' spade terminal.

NOTE4 (Applies to MT10 models): The OEM 3 pin rear brake light connector will be located under the rider/pillion seat area. Locate the OEM connector and connect in-line the Blip Assist rear brake light lock-out connector. The Blip Assist ECU will only activate a throttle blip when either the front or rear brake is applied.

Diagram B.



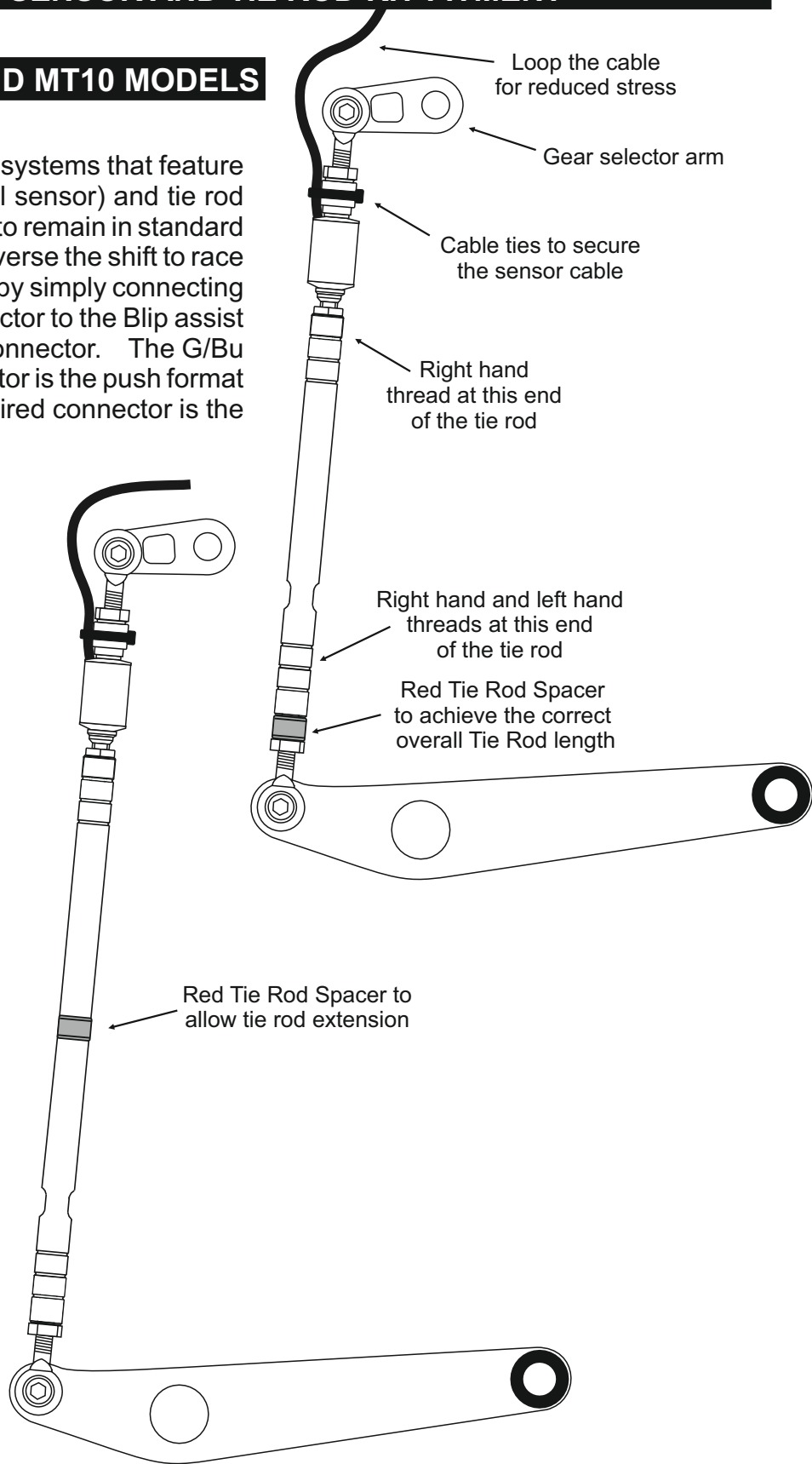
INSTALLING THE DCS QUICKSHIFTER SENSOR

GUIDELINES FOR DCS SENSOR AND TIE ROD KIT FITMENT

2015 ONWARDS R1 AND MT10 MODELS

ATTENTION! On Blip Assist systems that feature the DCS sensor (dual channel sensor) and tie rod kit then you can choose either to remain in standard 1dn, 5up shifting or you can reverse the shift to race shift 1up, 5dn. You can do this by simply connecting the corresponding 2 pin connector to the Blip assist ECU and OEM Quickshifter connector. The G/Bu (green and blue) wired connector is the push format and the R/Bu (red and blue) wired connector is the pull format.

1. Attach the sensor into the end of the tie rod as shown. Use the supplied tie rods and red tie rod spacer to achieve the desired length of tie rod. Now route the sensor cable to the Blip Assist harness connector. If installing to later R1 and MT10 models that feature an existing internal OEM quickshifter connector then plug the corresponding sensor connector together using the adapter connector.



FITTING THE PIT LANE WARM UP BUTTON BRACKET

1. Locate a suitable M5 or M6 bolt to attach the Pit Lane Warm Up (PLWU) button bracket assembly to. **ATTENTION!** Ensure you remember to tighten up any bolt you may have removed! Once you have attached the button bracket route the cable through to the Blip Assist ECU brake switch lock-out/PLWU connector and connect together. **WARNING!** Ensure the button bracket cable cannot become trapped or chaffed by the steering of the handle bars.

NOTE: See 'BLIP ASSIST SYSTEM OPERATION' for instructions on how to activate the Pit Lane Warm Up feature of the Blip Assist ECU.

PRO-TUNER-MODE ADJUSTMENTS & TUTORIAL

It should not be necessary to enter Pro-Tuner-Mode unless you wish to experiment with the FACTORY DEFAULT SETTINGS. It may be possible to improve the 'feel' of the Blip Assist system by incrementing and decrementing the BASE SETTINGS to suit a particular rider or vehicle transmission.

ATTENTION! Dyno testing is essential and safest to get the best out of this Blip Assist system. Ensure only a trained professional installs, adjusts and tests this product.

Entering Pro-Tuner-Mode

To enter 'Pro-Tuner-Mode' switch on the ignition and then within the first 20 seconds move the gear lever into a 'trigger' position where the status LED illuminates solid GREEN and hold in this position for 6 seconds until the GREEN status LED changes to RED then when you release the gear lever the status LED will change to flashing ORANGE to indicate you have entered 'Pro-Tuner-Mode'. You can now release the gear lever.

NOTE1: The default blip duration is 66ms in each RPM band.

NOTE2: The status LED will flash ORANGE in the sensor trigger force section.

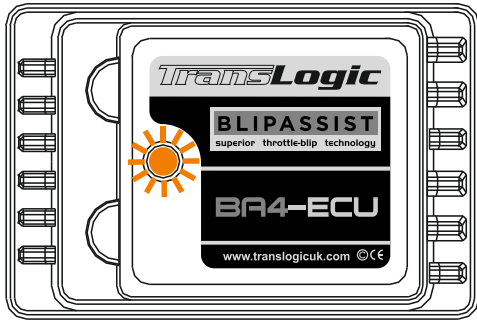
NOTE3: The status LED will flash GREEN to indicate what RPM band you are about to adjust, there are 5 bands, 1 flash equals RPM Band #1, 2 flashes equals RPM Band #2 and so on.

NOTE4: The status LED will flash RED in each of the RPM bands to indicate the blip duration, each flash will increase or decrease the blip duration by 2ms (milliseconds).

Pro-Tuner-Mode tutorial

Go ahead and enter Pro-Tuner-Mode, the status LED will be flashing ORANGE 5 times (default setting) The feel of the sensor trigger force point is a personal thing to the rider. Imagine that you would like to feel a little more force on the gear lever before the throttle blip happens. Let's now increase the sensor trigger force a little. See Example 1.

Example 1.



Action:

Move the gear lever to the trigger position once, you'll see the status LED momentarily change to GREEN when the sensor is in the trigger position, then release the gear lever. You'll now be able to count 6 ORANGE status LED flashes. You can repeat this action up to a maximum of 15 flashes and back to a minimum of 1 flash. (15 flashes will increase the trigger force significantly, 1 flash will have reduced the trigger force).

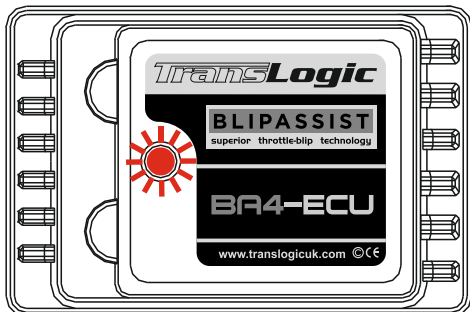
To save the sensor trigger force setting and move onto the next section, Interrupt duration RPM Band#1, hold the gear lever in the sensor trigger position, you'll see the status LED change to GREEN while holding in the sensor trigger position, it will then change to RED after 3 seconds, release the gear lever at this point and then you'll see the status LED flash GREEN once to indicate you are in the throttle blip duration RPM Band#1. You'll now see the status LED flash 10 times to indicate the default blip duration. See Example 2.

Throttle Blip RPM bands.

RPM Band#1	RPM Band#2	RPM Band#3	RPM Band#4	RPM Band#5
3000 to 5000	5000 to 7000	7000 to 9000	9000 to 11000	11000 +

Imagine the throttle blip duration in RPM Band#1 feels too strong and the bike appears to jump forwards a little as you downshift, in this case we would decrease the throttle blip duration from the default 10 RED status LED flashes. Let's go ahead and do that, reduce the throttle blip duration down to 5 RED status LED flashes. See example 2.

Example 2.



Action:

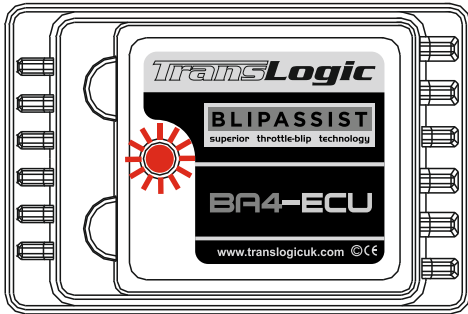
Move the gear lever to the trigger position 15 times, you'll see the status LED momentarily change to GREEN when the sensor is in the trigger position, then release the gear lever. Once you have moved the gear lever to the trigger point 15 times you'll now be able to count 5 RED status LED flashes. By doing this you'll have reduced the throttle blip duration in RPM Band#1 by 10ms. (Remember, each RED status LED flash is worth 2ms)

To save the throttle blip duration in RPM Band#1 and move onto the next section, throttle blip duration RPM Band#2, hold the gear lever in the sensor trigger position, you'll see the status LED change to GREEN while holding in the sensor trigger position, it will then change to RED after 3 seconds, release the gear lever at this point and then you'll see the status LED flash GREEN twice to indicate you are in 'throttle blip duration RPM Band#2'. You'll now see the status LED flash 10 times to indicate the default throttle blip duration. See Example 3.

Imagine the throttle blip duration in RPM Band#2 feels too weak and there is no audible throttle blip and the bike appears to struggle to downshift, in this case we would increase the throttle blip

duration from the default 10 RED status LED flashes. Let's go ahead and do that, increase the throttle blip duration up to 14 RED status LED flashes. See example 3.

Example 3.



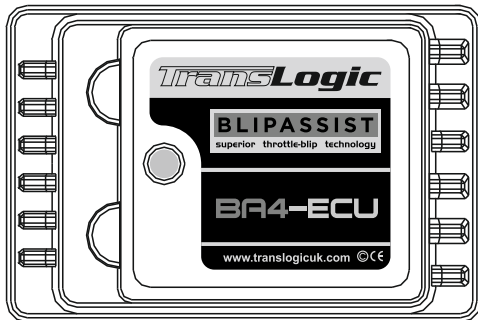
Action:

Move the gear lever to the trigger position 4 times, you'll see the status LED momentarily change to GREEN when the sensor is in the trigger position, then release the gear lever. Once you have moved the gear lever to the trigger point 4 times you'll now be able to count 14 RED status LED flashes. By doing this you'll have increased the throttle blip duration in RPM Band#2 by 8ms. (Remember, each RED status LED flash is worth 2ms)

To save the throttle blip duration in RPM Band#2 and move onto the next section, throttle blip duration RPM Band#3, hold the gear lever in the sensor trigger position, you'll see the status LED change to GREEN while holding in the sensor trigger position, it will then change to RED after 3 seconds, release the gear lever at this point and then you'll see the status LED flash GREEN twice to indicate you are in 'throttle blip duration RPM Band#3'. You'll now see the status LED flash 10 times to indicate the default throttle blip duration.

Let's imagine you are happy with the throttle blip durations in RPM Band#3 and the other remaining RPM bands now you have had a chance to use the Blip Assist ECU. So let's now skip each of the other RPM bands and exit Pro-Tuner-Mode. See example 4.

Example 4.



Action:

Move and hold the gear lever in the sensor trigger position, you'll see the status LED change to GREEN while holding in the sensor trigger position, it will then change to RED after 3 seconds, release the gear lever then immediately repeat this action until you have saved the settings in RPM Band#5 and then you'll notice the status LED will go out completely, the Blip Assist ECU is now ready for operation.

OK, that's the Pro-Tuner-Mode tutorial finished. It might seem a little overwhelming to start off with but once you recognise the protocol you'll find it easy to navigate through Pro-Tuner-Mode.

REMEMBER! If the throttle blip duration feels too long in any of the RPM bands the you can try and shorten the duration. If the throttle blip duration feels too short and the engine struggles to blip and down shift into the next gear then you'll need to lengthen the throttle blip duration slightly.

NOTE: When you enter Pro-Tuner-Mode to make an adjustment you will need to go through each of the stages and exit RPM Band #5 to save the settings and changes made.

BLIP ASSIST SYSTEM OPERATION

1. To use the Blip Assist system ensure the front brake lever is pulled in, then make a full and positive gearshift with your foot/hand in an downshift direction without using the clutch or rolling the throttle. Be aware that the gear lever **must return** fully to the rest position before the system resets itself for the next gear selection. **REMEMBER!** There will only be a throttle blip when the front brake lever is pulled in!

NOTE1: The status LED will flash in unison with the engine whenever the engine is running. See example 5.

NOTE2: The status LED will illuminate solid green when the DCS sensor is in the trigger position, whether the engine is running or not as long as the ignition is switched on and the Blip Assist ECU is receiving power. See example 6.

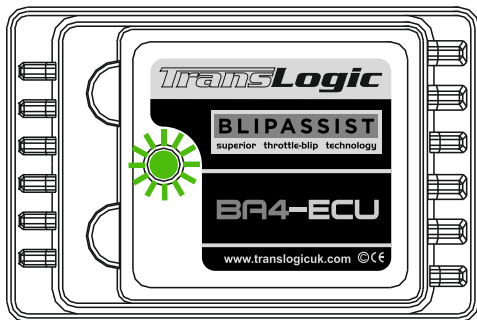
NOTE3: There will be no throttle blip below the approximate 3000RPM minimum threshold or the front brake lever is not pulled in.

2. To activate the Pit Lane Warm Up (PLWU) feature of the Blip Assist system the engine must be running and at idle RPMs. Press and hold the PLWU button for 3 seconds, then release the button after which a sequence of 100 calculated throttle blips will commence. Once the sequence has finished the engine will resume normal idle RPMs and the system will be ready to operate. *You can repeat this button press if your engine requires an extended warm up period.*

NOTE4: You can stop the Pit Lane Warm Up procedure at any time by simply switching off the ignition/power to the Blip Assist ECU.

ATTENTION! If the motorcycle/vehicle ECU has been 'flashed' to incorporate a more aggressive throttle map then you **MUST** make sure that the 'stock' throttle map is operational when the motorcycle is in neutral gear otherwise the 'blip' will be too intense and cause the engine to 'over-rev' during the Pit Lane Warm Up when the motorcycle/vehicle is in neutral gear.

Example 5.



Example 6.



TECHNICIANS INSTALLATION NOTES TO CUSTOMER

Notes to installer, please give details of where wiring has been run etc.

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17. _____

TROUBLE SHOOTING

- 1. No power-up** - Check for incorrect battery terminal connections, blown fuses, poor negative battery terminal connections. Check for severed or trapped wires.
- 2. No throttle blip activation** - Check the Blip Assist is being operated above approximately 3000RPM. Check for correct connection of the Blip Assist power and RPM sensing connectors and their associated grey link wire alignment. Verify the DCS sensor output. Check for severed or trapped wires. Check that the Blip Assist connectors have not been greased as this will cause a poor electrical connection!
- 3. The engine warning light appears** - Check for severed or trapped wires. Ensure all wires are clear of moving objects.
- 4. The engine will not respond to throttle inputs** - Check for severed or trapped wires. Ensure all wires are clear of moving objects, check the APS connectors are connected properly.
- 5. For further trouble shooting:** contact your vendor/supplier or Translogic Systems Ltd.

GENERAL PRODUCT WARRANTY AND SERVICING

As with any technical equipment of this nature it is strongly recommended that the exposed product items such as the Intellishift ECU, GP/DCS/LS sensors should be kept clean and checked regularly. These units should be cleaned by removing excess dust with a cloth or small nylon brush. **AVOID USING A JET WASH WITHIN THE VICINITY OF THESE UNITS.**

1. This Translogic Blip Assist system is covered by a 24 month warranty from the date of purchase, against any defects in materials or workmanship.
2. If any defect should occur during the warranty period the product should be returned to Translogic Systems Ltd, (*see address*), or alternatively to the place of purchase along with proof of purchase. This warranty does not cover return shipping costs.
3. Translogic Systems Ltd will examine the product and if it is found to be defective due to faulty materials or bad workmanship will, without charge, repair or replace the product at their discretion.
4. If the product covered by this warranty is damaged due to accidents, misuse, modification or unauthorised repair, shortening of cables, broken weatherproof seals due to cable exit bending/pulling or incorrect electrical connections then this warranty becomes void.
5. This warranty is personal to the purchaser and is not transferable.
6. Products must not be returned to Translogic Systems Ltd without prior authorisation by email. Returned items should be packed carefully to avoid damage in transit. Please include details of the fault together with your name, address and contact telephone numbers.