

PowerTRONIC, Quick shifter and Map switch Installation - Installer Checklist/Configuration/Troubleshooting

Document Version	1	Release Date	05 March 2019
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Application information	Vehicle Specific
Vehicle	Generic
Model	Generic
Year of manufacture	Generic
PowerTRONIC application	All PowerTRONIC ECUs, from firmware version F.3.x onward

Note:

- Read through all instructions before installation and use.
- PowerTRONIC is intended for motorsport use on a closed course, please check with your local laws before using this product. Race Dynamics / PowerTRONIC is not liable for consequences arising out of using the product.

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Connections

1. **Injector connector (INJ)**
2. **Ignition coil connectors (SPK)**
3. **TPS connector (TPS)**
4. **Ground terminal connector (GND)**
5. **CKP connector (CKP)** - For specified bikes only. CKP connector is provided with Single cylinder and Dual cylinder bikes only. All Royal Enfield bikes do not possess a CKP connector.
6. **Quick shifter connection (QS)** - The PowerTRONIC harness contains Quick shifter connector. If you have bought the Quickshifter please attach the connector to it. **[Please refer to the Quick shifter installation and calibration manual]**. If you have not bought the Quickshifter, you can leave it disconnected but make sure the harness is secured using zip ties provided.
7. **Handlebar Map Switch Connection** - Every PowerTRONIC harness contains a built-in Map selection switch. If you have bought the Handlebar map switch, please connect the female connector of the HB Map switch to male connector of the PowerTRONIC Map switch. **Refer to the Handlebar map switch installation manual.**

Accessories - *for specified bikes only*

1. **Oxygen override cable** - RE Himalayan EFI **Refer to the Bike specific PowerTRONIC installation manual.**
2. **Relays** - RE all
3. **Ignition modulators** -RE INT/C-GT 650 **Refer to the Bike specific PowerTRONIC installation manual.**
4. **Tapping clips** - Wherever tapping is required

Software

1. **TPS Calibration.** **Refer to the R-Tune installation and TPS Calibration document.**
2. **Quick shifter calibration** - *(If applicable)* **Refer to the PowerTRONIC Quick shifter installation and Calibration manual.**
3. **Maps** - All PowerTRONIC ECUS are shipped with two pre tuned dyno tested maps. There is no need to download and load it to the ECU unless required. **Refer Maps, Switching and Mixing procedure**
4. **Firmware** - **Refer the upgrading the firmware document**
5. **Tuning** - Get in touch with the support team -support@powertronicecu.com

Important Notes:

- Every powerTRONIC is shipped with two pre tuned dyno tested maps. There is no need to download and load it to the ECU unless required.
- Some parts of the bikes might be hot/sharp and may cause **burns/cuts**. Proceed with extreme caution or wait until the bike has cooled down. Always wear **safety gloves**.
- Ensure that the bike is **switched off** and the **key is out of the ignition** before proceeding with the installation. Also, **DO NOT** click **Burn** in R-Tune software while the bike is turned on. Before clicking Burn, turn off the bike and make sure the key is out of ignition.
- When the installation is complete, make sure to **secure the wiring loom** away from the movable parts or components which tends to heat up during the normal operation of the vehicle at any chance. It is advisable to cover the tapping with clean wrap or insulation tape wherever applicable.
- In case of a multi cylinder bike, connect the Injector connector and Ignition coil connector in the **same order** as they connected in the bike. ie. the number on the SPK harness of ignition coil connections for the spark plugs for the cylinders should match the number on the respective injector connector harness of the same cylinder.
- **DO NOT** proceed with PowerTRONIC ECU without verifying the connections with stock coupler. The colors of the wires which should be tapped may vary from country, model and year of manufacture. To ensure the connection is correct, make sure you do the **Stock coupler test** before connecting the PowerTRONIC. [Refer to the [Stock Coupler test](#) document].
- It is advisable to perform a **TPS calibration** after the installation of PowerTronic ECU. [Refer to the detailed [TPS Calibration](#) document].
- The PowerTRONIC harness contains a Quick **shifter connector**. If you have bought the Quickshifter please attach the connector to it. [Please refer to the detailed [Quick Shifter Installation Manual](#)]. If you have not bought the Quickshifter, you can leave it disconnected but make sure the harness is secured using zip ties provided. While securing the QS sensor wire, ensure that the QS sensor wire is **not tightened and locked using zip ties** completely as this may result in improper working of QS. Allow some freedom for QS sensor wire for the movement.
- For some of the models of KTMs, we have provided **two sets of male and female CKP and TPS** in the PowerTRONIC harness. Choose the appropriate set from the PowerTRONIC harness depends on your bike's stock connectors during the installation. You can leave the other set disconnected but make sure it is away from moving or hot parts of bikes and routed properly using the tags provided within the kit.

