

# X-TRE Power Box

## Installation and Operation Manual

### Model XT-S01

#### For use with the following SUZUKI motorcycles:

**B-King** (2008-2012), **Boulevard C50** (2009-2013), **Boulevard C90T** (2013), **Boulevard M109R/R2** (2011-2013), **DL650 V-Strom** (2012-2013), **DL1000 V-Strom** (2014), **Gladius** (2009-2013), **GSF650 Bandit** (2009-2013), **GSF1250 Bandit** (2012-2013), **GSR400** (2006-2011), **GSR600** (2006-2011), **GSR750** (2011-2014), **GSX650F** (2008-2013), **GSX1250FA** (2010-2013), **GSX1300R Hayabusa** (2008-2013), **GSX-R600** (2006-2013), **GSX-R750** (2006-2013), **GSX-R1000** (2005-2013), **GW 250** (2013), **Inazuma 250** (2013), **Intruder C800** (2009-2013), **Intruder C1500T** (2013), **Intruder M1800R** (2011-2013), **SFV400** (2010-2011), **SFV650** (2009-2013), **VL800 Intruder Volusia** (2009-2013), **VZR1800** (2011-2013)

## 1. Installation

*Disclaimer: Do not attempt to install the product if you don't have basic mechanical skills. HealTech Electronics Ltd. and its distributors shall not be liable for any loss or damage caused by improper installation.*

1. Check the supplied parts:
  - X-TRE Power Box
  - Wiring harness
  - Yellow butt connectors, gel-filled (2 pcs)
  - Red tap connector, gel-filled
  - 4p jumper-plug
  - Cable ties (2+1 pcs)
  - Velcro strips
  - HealTech stickers (2+2 pcs)
2. Make sure the ignition key is in OFF position. Remove the seat.
3. Locate the **ECM** (Engine Control Module).
4. Locate the **Black wire with thin dark Green stripe (B/G)**, in the ECM connector. The wire position for different models is as follows:

GSX-R600 (2008-2013) GSX-R750 (2008-2013) GSX-R1000 (2007-2013)	Black connector, pin no. 23 <i>Middle row, 2<sup>nd</sup> terminal from left to right at the back (wire) side of the connector</i>
SFV400 / SFV650 / Gladius (2009-2011)	Large connector, pin no. 31 <i>Bottom row, 4<sup>th</sup> terminal from left to right at the back (wire) side of the connector</i>
ALL other years and models	Black / Large connector, pin no. 6 <i>Top row, 6<sup>th</sup> terminal from right to left at the back (wire) side of the connector</i>

5. Peel off about 2 cm (0.8") from the black sleeve (tape) around the wires. You may disconnect the ECM plug to have more space around the wires.
6. **Cut the B/G** wire, about 4 cm (1.6") away from the connector.
7. Use one **Yellow butt connector** supplied to splice the XTRE **Black/Green** wire (also labeled "to ECM") to the B/G wire end, which goes to the ECM connector.

*Usage: Insert the two unstripped wires all the way, and press down the yellow cap with pliers. Remove the excess gel around the connector with dry cloth. Visually inspect the splice, and confirm the yellow cap is completely down.*
8. Same way, use the other **Yellow butt connector** to splice the XTRE **Black/White** wire to the B/G wire end, which is at the wiring harness side.
9. If you disconnected the ECM connector, re-connect it now.
10. *B-King only:* Remove the left side plastic engine cover (3 screws) and left frame side cover (pull out).

*Other models:* Prop up the fuel tank.
11. Locate the **GPS** (Gear Position Sensor) coupler. This 3-pole, white, triangular connector is at the back under the fuel tank, on the left side.

*Warning:* You may find more than one of this connector under the fuel tank. You need the one that has **Blue, Pink** and **Black/White** leads.
12. Disconnect the GP sensor coupler. A long, flat head screwdriver may be needed to depress the release tang while the connector is separated.
13. Connect the two X-TRE plugs to the GP sensor plugs. Make sure that none of the metal pins have been pushed out of position, and the connectors are seated properly.
14. Route the XTRE harness to the box and connect the 4p plug.
15. Connect the XTRE **Red** wire to a **switched +12V** wire, e.g. at the 2-pole rear brake light switch connector, at the fuse box or at the ECU connector (*Orange/Green or White/Green wire*). Use the **Red wire tap connector** supplied only if the wire outer diameter is less than 3mm (0.12").

*Usage: Place unstripped run wire (switched +12V) inside run channel. Close side cover until latched. Insert unstripped tap wire (XTRE Red wire) completely and check its position. Insert the blade (u-contact) and press down by finger pressure. Then, depress the u-contact with pliers. Close hinged top cover until latched. Remove the excess gel around the connector with dry cloth.*

If you can't do the splice, connect the Red wire directly to the **battery** positive terminal (*in this case, disconnect the wire if you don't intend to ride the bike for over 4 weeks, otherwise, you may need to charge the battery*).
16. **Test** the Gear Indicator operation. The ignition must be ON, side stand must be UP, and engine stop switch should be in RUN position.
17. If the GI works normally, mount the XTRE box to the inner side of the frame by the supplied Velcro strips, and secure the box and cables with cable ties. Otherwise, refer to chapter 3, Troubleshooting.
18. Install the fuse box, relay switch, side covers, fuel tank and seat.

## 2. Operation

The unit is fully functional after installation. It will improve throttle response, acceleration and will also remove the speed limiter on 1000cc+ bikes. As such, using this product is not allowed on public roads.

X-TRE will not disable the in-dash factory gear position indicator. The module automatically turns off the mapping in Neutral for smooth idle operation.

The unit is fully compatible with other electronics and performance modifications.

### 2.1. Reviewing the TRE mode in use

- Put your gearbox in 1<sup>st</sup> gear
- Have the ignition key in OFF position, stop switch in RUN position, and side stand UP, then wait at least 5 seconds
- Turn ignition ON
- The gear indicator will show the map in use (4, 5 or 6) for a few seconds, then it will return to normal operation.

### 2.2. Selecting TRE mode

- Put your gearbox in 4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> gear, depending on which mapping you'd like to set as per the table below:

B-King, DL1000 and all Cruiser models	4
GSX-R1000 ( <i>see note</i> ), Hayabusa	5
ALL other models	6

- Have the ignition key in OFF position, stop switch in RUN position, and side stand UP, then wait at least 5 seconds
- Turn ignition ON
- The gear indicator will show the new map (4, 5 or 6) for a few seconds, then it will blink once. The setting is stored, and the gear indicator will work normally.

#### Note:

- You can try different setting and see how it works on your bike. E.g. using mode 6 on the GSXR1000 K7+ models give better overall performance but sets the RPM limit lower by about 450 RPMs.
- The unit retains the setting when the battery is removed or disconnected.

### 2.3. Restoring factory condition

- Disconnect the 4p plug from the X-TRE box, and connect the jumper-plug supplied to the harness connector.
- Disconnect the 3p plugs from the box, and connect the bike connectors together.
- You can now remove the box from the bike, factory condition is restored.

### 3. Troubleshooting

In case of problems, please check the followings in this order:

1. Make sure the ECM connector is connected and seated properly.
2. Make sure the side stand is UP, engine stop switch is in RUN position and ignition is ON when you test the gear indicator function.
3. Make sure you did not disconnect anything else, or bent a hose accidentally.
4. Check the 4p and 3p connectors. Make sure the connectors are locked and none of the pins have been pushed out of position. Select neutral, and turn ignition ON. The green neutral indicator should work normally. Otherwise, there is a loose connection in the 3p plugs.
5. Turn ignition off and wait a few seconds. Have the side stand still UP and the stop switch in RUN position. Turn ignition ON while you watch the **X-TRE status LED**.
  - If the LED does not respond at all, redo the splice at the Red wire tap connector, or connect the **Red** wire to the battery positive terminal.
  - If the LED blinks once when ignition is turned on then remains On, check the connection of the X-TRE **Black/Green** wire, and make sure it is connected to the B/G wire at the ECM connector side.
  - If the LED blinks once when ignition is turned on then remains Off, and the gear indicator still does not function, check the connection of the **Black/White** wire, and make sure it is connected to the B/G wire at the main wiring harness side.
6. If the gear indicator works but shows one gear only, check the connections at the 3p plugs, and make sure the sensor wires are Blue, Pink and Black/White. Otherwise, you got the wrong connector.

If the problem persists, please contact us for advice and describe the situation in detail.

### 4. Warranty

The X-TRE is built to last: all leads are protected against reverse voltage, short circuits and high energy transients. Only high quality components have been used, and the epoxy layer construction gives extreme protection for the internal parts from shocks, vibrations and water.

To ensure trouble-free operation from the start, all units have been extensively tested prior to shipment. For this reason, please make sure you followed the install steps properly, and refer to the troubleshooting guide before you report a problem.

Our dealers are offering a 30-day money-back guarantee on HealTech products, thus you will get your money back if the product does not fulfill your expectations. *(All parts must be returned in original condition for full refund.)*

Furthermore the product is covered by our 2-year replacement warranty from the date of purchase.

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