

❖ IMAGE**❖ INTRODUCTION**

- Today, most Motorcycles and Scooters are using engine control by electronic technology with microprocessors. To determine the trouble is very difficult complex, can't seen and diagnosis by "clinical" method such as conventional mechanical repair before. The ECM firmware repair is easiest if you have special tool for reinstallation or upgrade.
- The sensors, actuators and electronic control unit will be information together by special electrical signals in an overall link and self-contained, so the repairs independent electronic is very difficult to do when you don't have tools.
- One other way, electronic repairman for motorcycle and scooters very need to have signal simulator and tested pulses to confirm the their diagnosis is completely accurate before ordering multiple days for the purchase new replacement parts as sensors for ECT / EOT, MAF, MAP, TPS, O2S, CKP, IACV, Injectors and ECU.
- Moreover, electronic repairman for motorcycle and scooters need to have signal pulse generator dedicated the motorcycle that is able to adjust in large range to check, diagnose, calibrate to repair hardware of electronic functional units as the ECU, solenoid valve continuous strip, electronic injectors, step motors ...
- To solve the problems mentioned above. We are pleased to introduce a new product: **MOTOBOX - Model: MT0006**

MOTOBOX is the name of an electronically accessory is research, manufacture success in 2015. This is one of application product line advanced science and technologies to life by Group Technology DTDAuto, Institute of Physics developed over the years are posted on the website: www.dtdauto.com.

MOTOBOX designed as a accessory that hardware add in and compatible with [MOTOSCAN](#) handheld (since version 5.7) and [MOTODATA](#) software on Smartphone or window O.S. computer aims to support data and advanced functions for repairing of motorcycles and new generation scooters.

MOTOBOX used for motorcycle repair workshop and professional training vocation to repair, programmable electrical systems in Vietnam and other countries around the world.

The product designed beautiful, strong, compact integrated, low cost, suitable for all repair workshops.



❖ APPLICATION

- Used to repair hardware and firmware inside the ECU for motorcycles and scooters in repair workshop.
 - Used as a training equipment in motorcycle technical training center.
- MOTOBOX an intensive fittings for electrical engineering and electronics in the repair workshop to repair ECU hardware, reprogram ECU firmware and calibrate specifications.
- An advanced accessory adds in for [MOTOSCAN](#) in 2015.

❖ FUNCTION

1. Simulate the input signals of ECU

- Digital signals and Analog signals:

Generating the digital TTL signal to simulate the electromagnetic sensor signals and Hall effect sensors such as vehicle speed sensor (*VSS*), the wheel speed sensor (*for ABS*), crankshaft position sensor (*CKP*), camshaft sensor (*CMP*) etc ... the signals can simulate changes amplitude, frequency, amount of teeth and ring gear for most kinds of sensor rotors.

- Analog voltage signals change slowly, including wide range and narrow range

Simulation Analog signal voltage in the range (*0V to 5V*) to simulate the signals such as engine temperature sensor (*ECT*), intake air temperature sensor (*IAT*), throttle position (*TPS*), intake manifold absolute pressure sensor (*MAP*) and intake air flow sensor (*MAF*) and Oxygen sensor (*O2S*).

2. Simulate the output signal of ECU:

Simulate electromagnetic pulse to control the actuators such as relays, solenoids valve, Ignition coil, injectors...

To correct voltage, amplitude, frequency, similar to the signal carried on the vehicle, effective in the diagnosis, segmentation, exclusion and repairs.



3. Programming to correct value of digital speedometer (ODO) for removable external EEPROM type of HONDA, YAMAHA motorcycles

- **HONDA:** AIR BLADE 125, CBR 250, FUTURE NEO Fi, FUTURE X Fi, LEAD 125 (2013-2016), LEAD 125 (2017-2018), PCX (2008-2018), SH 300i (2008-2015), SH 300i (2016-2017), SH 125/150/125D/150D/SM (2013-2017), SH MODE (2013-2017), MSX, VARIO 150, WINNER, DYLAN, WAVE 125 (Thailand), CLICK 125i (2013-2014), CLICK 125i (2015-2017), VARIO 150, SCOOPY-i
- **YAMAHA:** NVX, JANUS, TFX, EXCITER 2019, ACRUZO, EXCITER, FZ 150, FZ 150i, GRANDE, NOUVO SX, NOUVO LX, YZF-R3, R15
- **SUZUKI:** RAIDER 150

Edit, decode odometer data and convert information automatically in EEPROM



4. Reinstall, repair, upgrade firmware for:

- **PIAGGIO/VESPA:** ECM types are AC19I/AC20I/AC24I/AC25I/AC27I/AC32I, MIU G3/RIU1, PGN04/PGS02/PGT01 and PGQ16*
- **HONDA:** AIR BLADE 125, LEAD 125, SH MODE, VISION 110, VISION ESP*








Upgrade firmware for PIAGGIO



Upgrade firmware for HONDA

Notes: The advanced functions with an asterisk (*) will appear on the next version

❖ PACKAGE

NO.	DESCRIPTION	IMAGE
01	Main machine	
02	Data cable to connect MOTOSCAN with MOTOBOX	
03	Data cable for YAMAHA (CAN bus communication protocol)	
04	Quick Guide	
05	Case	

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