

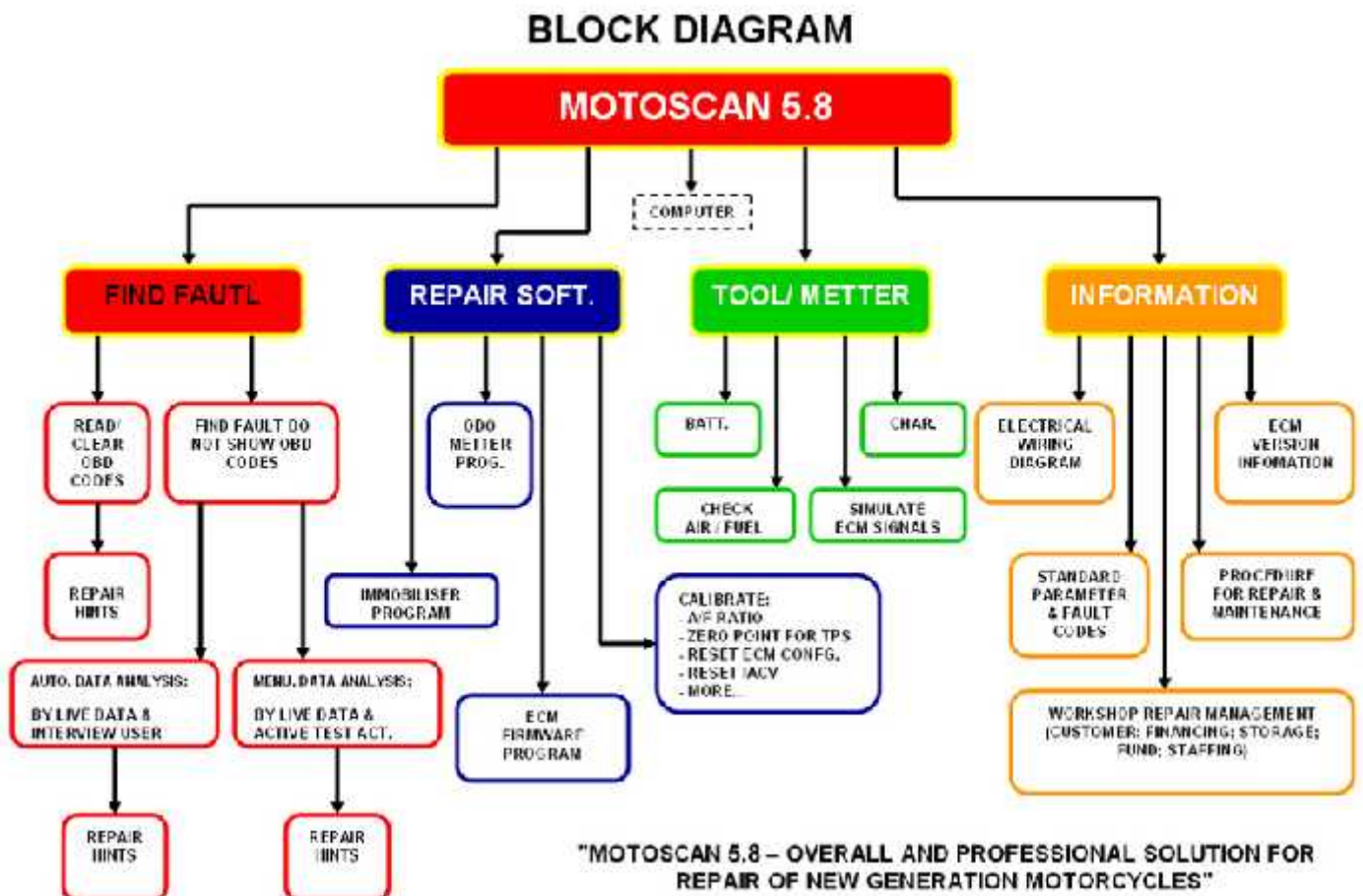
**❖ IMAGE****❖ INTRODUCTION**

- MOTOSCAN is a small motorcycle & Scooter scanner. It researched and manufactured by DTDAuto Technology Team, Institute of Physics, Vietnam Academy of Science and Technology since 2013.
- This is equipment used for the repair workshops and motorcycle vocational training that identify fault electrical of PGM-FI/ FI motorcycles.
- MOTOSCAN was friend with the technicians in the repair workshop to identify fault, repair fault, measure and look up of electrical circuit diagram and standard specification for most small motorcycles and scooters in Asia market.
- Since MOTOSCAN 5.8 has able communicated to the electrical [MOTOBOX](#) accessory to perform more advanced functions, especially for professional repairer as correct odometer value, ECU reprogramming, simulate most ECU signals...
- MOTOSCAN 5.8 supported advanced function that used diagnose solution by analyzing auto data. It can determine hard faults that MIL does not indicate as: Idling stop fault, over idle speed, more fuel consumption, weak engine, hart start, injector mechanical fault, dirty air filter, exhaust pipe block, air hole block/dirty of MAP sensor/throttle, intake manifold leak, and mechanical faults that normal diagnostic tools cannot execute.
- Support strong functions for programming, adjusting and parameter setting of ECU as key immobilizer programming, offset TPS zero point, adjust Air/ Fuel ratio and idle speed, pulse width calibration for fuel injection time...
- Support look up information as the ECM version, [MOTOBOX](#) version and sync with a [MOTODATA](#) software on the computer to look up electrical circuit diagrams, standard specifications and suggest repair is detail.
- Equipment designed as the handheld, good quality, low cost and suitable for small and medium repair workshop.

❖ **SELECT VERSIONS**

OPTIONS	MODEL	LAST VERSION	APPLICATION
SINGLE MODE	<b>4H</b>	4.8	All HONDA PGM-FI/FI motorcycles
	<b>4Y</b>	4.8	All YAMAHA PGM-FI/FI motorcycles
	<b>4S</b>	4.8	All SYM PGM-FI/FI motorcycles
DOUBLE MODE	<b>4HY</b>	4.8	All HONDA, YAMAHA PGM-FI/FI motorcycles
	<b>4HS</b>	4.8	All HONDA, SYM PGM-FI/FI motorcycles
MULTI MODE	<b>4M</b>	4.8	All HONDA, YAMAHA, SYM, SUZUKI PGM-FI/FI motorcycles
FULL MODE	<b>5</b>	5.8	All PIAGGIO, HONDA, YAMAHA, SYM, SUZUKI, KYMCO PGM-FI/FI motorcycles
MOTOBOX ACCESSORY		1.2	All PIAGGIO, HONDA, YAMAHA, SYM, SUZUKI, KYMCO PGM-FI/FI motorcycles

❖ **FUNCTION LIST**



**FUNCTION 1: FIND MALFUNCTION****1.1. Read, clear fault codes stored in ECU****1.2. Find complex faults that MIL lamp does not indicate include such as:**

- Diagnose faults by the automatic data analyzing and interviewing the technicians
  - + Can't start engine
  - + Idling stop fault
  - + Fuel consumption
  - + Starter is not work
  - + Random acceleration
  - + Constant acceleration
  - + Idling not work
  - + Hard to start engine
  - + Weak engine
  - + Injector mechanical fault
  - + Dirty Air filter\*
  - + Exhaust pipe block\*
  - + Air hole dirty/block of MAP sensor/Throttle\*
  - + Intake manifold leak\*
- Diagnose faults by analyzing the engine live data and activate the actuators
  - + Voltage and open angle of throttle position sensor (TPS)
  - + Voltage and value of intake air temperature sensor (IAT)
  - + Voltage and value of manifold air pressure sensor (MAP)
  - + Voltage and value of engine temperature sensor (ECT)
  - + Voltage and value of oxygen sensor (O2S)
  - + Value of atmospheric pressure sensor
  - + Engine speed (CKP/ NE)
  - + Vehicle speed (VSS)
  - + Status of fuel pump
  - + Ignition timing advance (ISA)
  - + Fuel injection time (Ti)
  - + Starter signal (STP)
  - + Status signal of side stand switch (SSTAND-SW)
  - + Evaporative purge cut solenoid valve output signal (PCS)
  - + Output signal active starter relay (ON/OFF)
  - + Output signal active PCV
  - + Output signal active IACV
  - + Output signal active MIL
  - + SCS input signal status (service check signal)
  - + Open state of step motor (IACV)
  - + State of heater of O2 sensor
  - + Battery voltage (BATT)
  - + Short term fuel trim in closed loop
  - + Environmental revision coefficient in closed loop
  - + Fault code and total fault codes
  - + And other parameters vv...
- Activate and reset the actuators: Fuel pump, IAC valve, injector, ignition coil, Head-lamp...

**FUNCTION 2: REPAIR FIRMWARE ERROR & CALIBRATION****2.1. Programming key immobilizer for PIAGGIO (MIU G3)**

Reset immobilizer, register new key when lost all of the keys, register additional keys

**2.2. Correct and adjust value of digital odometer of HONDA, YAMAHA (ODO) \*\***

Edit, decode odometer data and convert information automatically in EEPROM

**2.3. Programming ECM firmware for HONDA: AIR BALDE 125, LEAD 125, SH MODE, VISION 125\*, YAMAHA EXCITER 150\*, PIAGGIO 3V ie 125-150 \*\***

Initialize and repair data errors, upgrade the versions of MCU, EEPROM

**2.4. Calibrate and set control parameters in the ECM:**

- Calibrate air/fuel ratio (AFR): YAMAHA, PIAGGIO, SYM
- Reset to manufacturer value of ECM: HONDA, YAMAHA, PIAGGIO
- Offset zero point value of throttle position sensor for all of PIAGGIO (MIUG3)
- Reset IACV: HONDA, YAMAHA, KYMCO
- Adjust pulse band width to control fuel injectors (Ti) and idle speed: YAMAHA,

SYM

- Create new and repair data errors, upgrade the version MCU, EEPROM

**FUNCTION 3: SPECIALIZED MEASURE TOOL****3.1. Fast measure and assess capacity, quality of battery****3.2. Reviewed charging status and rated the quality of the generator, regulator****3.3. Measure the air/fuel ratio (A/F) to assess the instantaneous fuel consumption****3.4. Emulate the signals on motorcycle for fault diagnosis, ECU hardware repair \*\*****FUNCTION 4: INFORMATION****4.1. Show the current ECM firmware version****4.2. Look up electrical wiring diagram: principle diagram, schematic assembly and specified conditions****4.3. Look up the OBD fault codes, specifications, repairing suggestion****4.4. Look up the process assembly, repair, maintenance mechanic****4.5. Manage repair workshop: customer, financial, store, treasury, employees****4.6. Update version of data software and firmware via Internet****NOTES:**

- The advanced functions with an asterisk (\*), will appear on official version of MOTOSCAN 5.8

- The advanced functions with an asterisk (\*\*), you must purchase additional [MOTOBOX](#)

**❖ ADDRESS & APPLICATION RANGE**

- Diagnostic scanner in motorcycle repairing workshop and equipment and trainers for technical vocation training
- A semi-finished products connect to trainer for electronic injection & ignition system of PGM-FI motorcycles
- MOTOSCAN used to read, clear fault codes, show live data, active actuators, repair firmware and immobilizer, lookup content of fault codes, suggesting repair for most small

motorcycles of **PIAGGIO, HONDA, YAMAHA, SUZUKI, SYM, KYMCO** manufacturers use PGM-FI/FI system such as:

Notes: Models of motorcycles can vary according to country, models type don't have as below can connect to MOTOSCAN if have same ECM.

- **PIAGGIO:** VESPA LX, VESPA PRIMAVERA, VESPA S/S3V, VESPA SPRINT, VESPA GTS, VESPA LT3V, VESPA LXV, LIBERTY, FLY, BEVERLY vv...
- **HONDA:** LEAD 110, LEAD 125, AIR BLADE FI, FUTURE NEO FI, FUTURE X FI, FUTURE 125 FI, PCX, VISION, WAVE RSX FI, WAVE RSX FI AT, SH 125i, SH 150i, SH125 ESP, SH150 ESP, SH MODE, SCR, PS, MSX 125 SCOOPY-I, WAVE 110-I, WAVE 125-I, CLICK-I vv...
- **YAMAHA:** CUXI, JUPITER FI GRAVITA, JUPITER FI GRAVITA GREEN, JUPITER FI RC, LUVIAS GTX FI, LUVIAS FI, NOZZA, NOZZA LIMITED, NOUVO LX, NOUVO SX RC, NOUVO SX STD, NOUVO SX GP, SIRIUS RC FI, GRANDE DULUXE, GRANDE STD, FZ1 FAZER, FZ1150I, FZ1 150I GP, FZ-S, YBR, YZF vv...
- **SUZUKI:** HAYATE 125 SS, UA125-T, VIVA 115, GZ150-A, EN150-A, THUNDER150/150S, IMPLUSE vv...
- **SYM:** ELIZABETH EFI, ELIZABETH SMART, JOYRIDE, SHARK 125, SHARK 125 CBS, PASSING EFI, POWER EFI, VENUS EFI vv...
- **KYMCO:** PEOPLE S FI, PEOPLE 16 FI, MANY MACAROL FI, MANY FI, LIKE FI, JOCKEY FI vv...

The next versions will update more data and type of motorcycle.

#### ❖ **ADVANTAGE**

- In-depth features, application range compatible most small motorcycles and scooters in Asia market
- A safe and convenient solution support both MIL and K-Line protocol
- Simple operation with keypad direct on handhelds (*without computer*)
- Equipment has integrate compact, design beautiful, professional, high strength mechanics
- Effective, fast, accurate, reliable, detailed
- Lookup more detail information for repairs by the MOTODATA software on computers
- Technical support consultant directly from manufacturer by SMS thought the Skype, Yahoo, WhatsApp, Zalo, Email, Teamviewer
- Update via Internet
- 12 months warranty and maintenance as required
- Low price

#### ❖ **EQUIPMENT COMPANENT**

- 01 Handheld with LCD and function control buttons
- 01 Data cable used to determine faults (CAN, K-line communication protocol)
- 01 Cable receiver signal and optical sensor
- 01 Cable check battery and generator
- 02 Jumper for reading fault code by MIL (for some kind of vehicles only)
- 01 12V/DC Power cable
- 01 220V/AC to 12V/DC power converter
- 01 Extendable cable for Yamaha
- 01 MOTOBOX - electrical accessory (an optional only and isn't included of standard pack)

- 01 MT0006 LINK - data cable (an optional only and isn't included of standard pack)
- 01 Accessory measure exhaust (an optional only and isn't included of standard pack)
- 01 Update cable (an optional for 5.X model only and isn't included with 4.X models)
- 01 CD video use guide and free [MOTODATA](#) software (you need to make [REGISTRATION FILE HERE](#) on your computer to make active code for using professional version)
- 01 Guide book
- 01 Hand cloth bag

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