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# PROGRAMMING MANUAL ZeelProg PPV-MT10

Supported control units: PPV-MT10

The **PPV-MT10** is a programmable controller designed to manage the operation of the EXUP valve in Yamaha MT-10 motorcycles and other compatible models. It provides riders with the ability to switch between the factory-original valve operation and a fully open mode, depending on their riding needs.

This controller is ideal for both street and track use allowing noise reduction and improved low-end torque during normal riding, while enabling maximum performance and unrestricted exhaust flow for racing environments. The PPV-MT10 supports both switch and push-button input and also includes an option for permanently setting the valve to the open position.

The EXUP valve can be operated in two modes:

**Original Mode** – functions as intended by the manufacturer.

Always Open Mode – keeps the valve fully open at all times (ideal for track use).

#### **Switch Operation**

- When the switch is in the closed position, the servo operates in Always Open Mode
- When the switch is in the open position, the servo operates in **Original Mode**.

#### **Push Button Operation**

- Press and hold the button for more than 2 seconds to activate Always Open Mode.
- A short press returns the servo to Original Mode.

#### **Permanent Open**

 To permanently keep the servo in the open position (without using a switch/ push button), connect the **brown** and **brown/white** wires together.

#### **TECHNICAL DATA**

- recommended power supply voltage

- maximum power supply voltage

12÷15 Volts 17 Volts

#### Features:

- operates with 5 wire EXUP servo
- operation selection with the switch or push button
- automatic detection of valve closed position
- programmable valve open position
- programmable valve position deviation
- detection of engine operation
- recall EXUP position
- switch/ push button test function

PPV-MT10 can be programmed with handheld or PC-USB programmer. This manual explains how to program with the computer.

## ZeelProg SOFTWARE



Software can be downloaded from our web site: <a href="http://www.zeeltronic.com/page/zeelprog.php">http://www.zeeltronic.com/page/zeelprog.php</a>

**ZeelProg** application can be installed on Windows XP/Vista/7/8/10/11.

**ZeelProg** is PC application for programming ZEELTRONIC engine *control units*. A special PC-USB programmer is required for programming.

- ⇒ ZeelProg automatically detects PC-USB programmer connection and enables all functions (without PC-USB programmer, the ZeelProg application is locked).
- ZeelProg automatically detects the type of engine control unit connected to PC-USB programmer.

### ZeelProg USER INTERFACE

#### **Auto detection**

**Zeelprog** automatically detects USB-Programmer and type of *control unit*.

⇒ Programmer connected, product (*control unit*) connected:



⇒ Programmer connected, product (*control unit*) not connected:



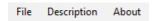
⇒ Programmer connected, product (*control unit*) not supported:



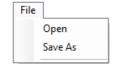
⇒ Programmer not connected, product (*control unit*) not connected:



#### Menu structure



⇒ File menu is active when PC-USB programmer is connected



Open Save As

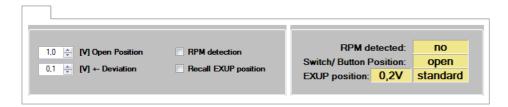
- → Open an existing \*.zee file
- → Save all parameters to \*.zee file
- ⇒ **Description** can be added to the settings. The description is saved in the file and also programmed into the product (ECU).



⇒ Clicking on **About** opens the About window and shows some basic information about **ZeelProg** application.



#### **PPV-MT10 parameters**



- ⇒ **Open Position** ... the EXUP valve position must be programmed to fully open position. Check valve position by activating *Always Open Mode* using the switch or push button.
- ⇒ **Deviation** ... defines how accurately the valve moves to calculated position. If the deviation is set too low, the servo motor position may become unstable it will constantly make small adjustments to reach the exact position. The default setting is ±0.1 V, which is sufficient in most cases.
- ⇒ **RPM detection** ... means that the controller detects whether the engine is running, not the actual RPM value. When RPM detection is enabled, the valve will automatically close if no RPM is detected.
- Recall EXUP ... is useful when a push button is used instead of a switch. When Recall EXUP is enabled, the controller remembers the servo position when the key is switched off and restores the last servo position when the key is switched on. Recall EXUP works correctly only when the programmer is not connected.

#### **MONITORING**

**RPM detected** indicates if engine running, or not.

Switch/ Button Position indicates switch of push button position.

**EXUP position** indicates EXUP servo position:

STADARD = when servo is controlled by the motorcycle ECU OPENED = when servo is opened by PPV-MT10 controller

#### PROGRAMMING AND SETTING NEW PARAMETERS

➡ While programming or reading, the control unit does not need to be connected to a power supply, as it is powered through the PC-USB programmer.

#### **Changing control unit parameters**

① Read parameters from the connected *control unit*, by pressing the **Read** button.

Read ...

The progress bar indicates the reading and verification process.

Successful reading is indicated by:

Error while reading is indicated by:

Read

If error occurs, repeat the reading.

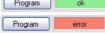
- ② Change parameters

The progress bar indicates the programming and verification process.

Successful programming is indicated by:

Error while programming is indicated by:

If error occurs, repeat programming.



# Make new \*.zee file without connecting control unit

- ① Connect the PC-USB programmer to PC to unlock ZeelProg.
- ② Set parameters
- 3 Save parameters by clicking **Save As** from the **File menu**.

