GuardMagic
MONITORING GUARD NAVIGATION

GuardMagic mTF Programming Tool

2008

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1. INTRODUCTION

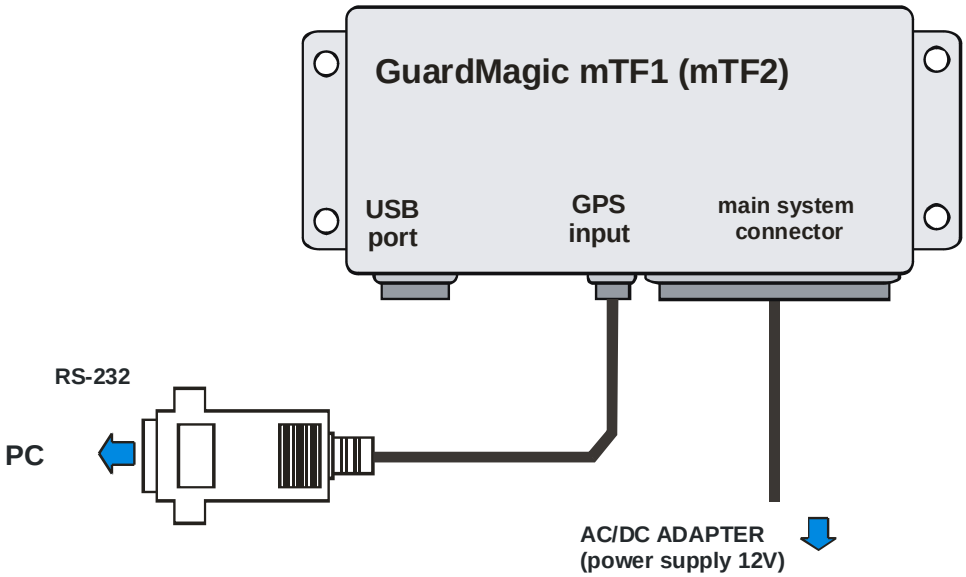
"GuardMagic mTF programming tool" - the special technological complete set intended for programming and change the setting of **GuardMagic mTF1**, **GuardMagic mTF2**, **GuardMagic mTF3** modules by Personal Computer.

2. PACKAGES

Complete set consist of:

- Program "**GM PT mTF**" – 1CD;
- Connection cable "**GuardMagic mTF – PC** (RS-232)";
- 220/12V AC/DC power adapter with cable (for connection to GuardMagic mTF);
- User manual.

3. CONNECTION



Connection order:

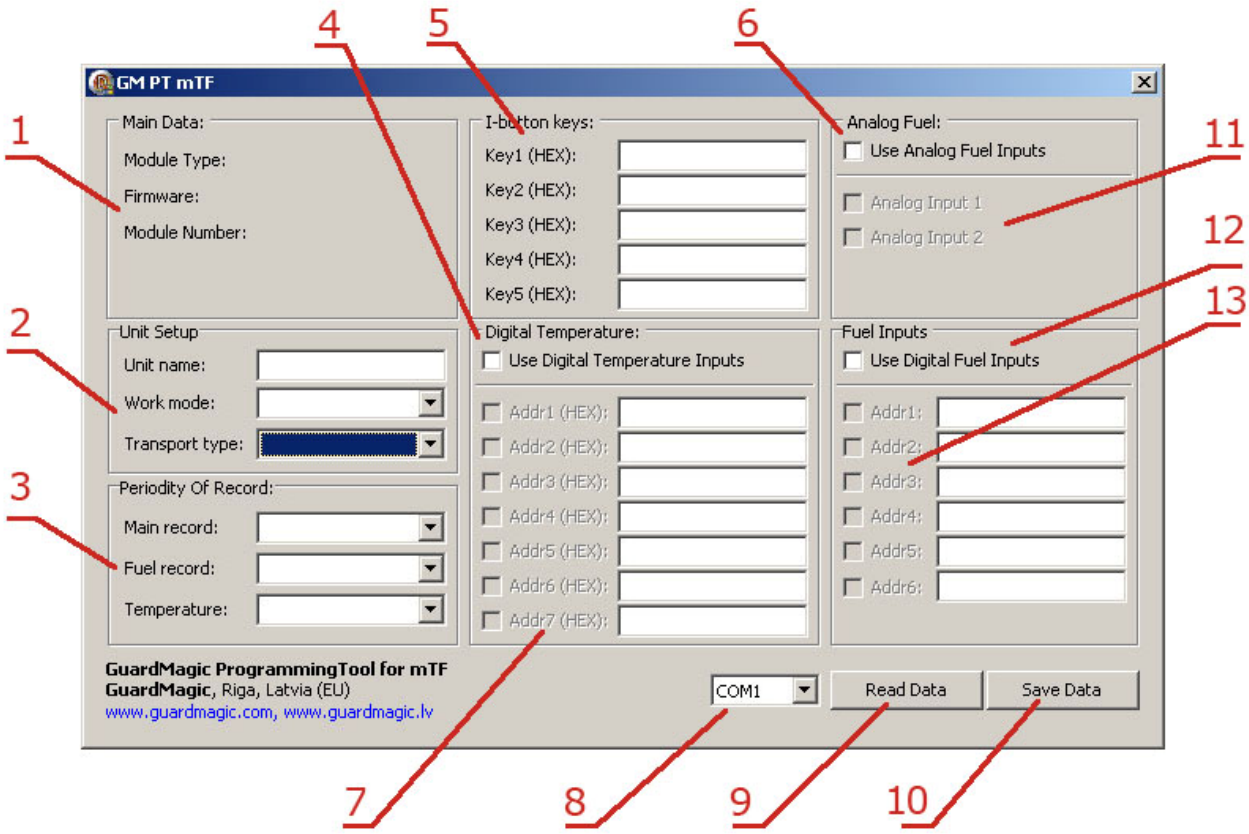
- Connect module **GuardMagic mTF** to serial port of personal computer by the special connection cable (Connection cable PC-GuardMagic mTF);
- Connect the cable of AC/DC power adapter (from complete set) to 4 pin connector on GuardMagic mTF;
- Connect power adapter to AC 220 V.

4. START A PROGRAM AND WINDOW DESCRIPTION

4.1. Start the program

Copy program “GM PT mTF” (mTF-programmer.exe) from CD to hard disk of yours PC.

Start the program “GM PT mTF” (mTF-programmer.exe).
After start the program on the screen there will be the basic form, shown on figure.
All further works with the program is carried out by means of this form.



The basic form of the program consists of the next main fields:

Fields			
Num.	**Name**	**Description**	**Note**
1	Main Data	information about mTF module	cant be change
2	Unit Setup	Main module setting	
3	Record Interval	Interval of records	
4	Digital Temperature	Activation the function of temperature records	only for mTF3
5	i-Button Keys	Driver ID code	
6	Analog Fuel	Activation the function of analog fuel records	only for mTF1, mTF2
7	Temperature Sensor Address	Address of temperature sensor on temperature bus and activation of concrete sensor	only for mTF3
8	Serial Port	Select the working serial port (on PC)	

Num.	Name	Description	Note
9	Read Data	Button, to read data (configuration) of mTF module	
10	Save Data	Save configuration and setting	
11	Analog Input	Activation of concrete analog fuel sensor	only for mTF1, mTF2
12	Use Digital Fuel Sensor	Activation the function of digital fuel records	only for mTF3
13	Digital Fuel Inputs	Address of digital fuel level sensor on the “Fuel” bus and activation of concrete sensor	only for mTF3

4.2. “Main Data” field

Contain the main information about the connecting mTF module:

1. “**Module Type**” – type of connected mTF module (mTF1; mTF2; mTF3);
2. “**Firmware**” – the version of module firmware;
3. “**Factory Number**” – GuardMagic mTF factory number;

User can only read this information.

4.3. “Unit Setup” field

Series of main setting of module.
It is programmed by the user.

1. “**Unit Name**” – the customer name of module in system;
2. “**Operation Mode**” – the type of working mode. “**Standard**” or “**Calibration**”. “**Calibration** mode” is the technological mode for the sensor calibration procedure only. “**Standard** mode” is the normal working operating mode;
3. “**Transport Type**” – “**Special Technics**” or “**Transport**” operating mode. “**Special Technics mode**” is intended for motionless or inactive technics (special machinery, tractors, excavators, bulldozers, loaders etc.).

4.4. “Records Interval”

It is programmed by the user.

1. **Main Record** – the time interval of “Main record”. Select one;
2. **Fuel Record** – the time interval of “Fuel Record”. Select one;
3. **Temperature Record** - the time interval of “Temperature Record”. Select one.

4.5. “Digital temperature”

Only for mTF3 module.
Activate the function of temperature records. For the activation mark the “box”.

4.6. “i-Button Keys”

The field for enter driver ID code, that will have the access to drive the vehicle.
Five fields for entering till 5 ID keys (5 ID driver numbers);

Drivers code (i-button code), which will have access rights (management) of transport.
Code information are entered in form “Key” form from the i-button:

Main i-Button code will be (like from photo): **00000F2E3013**

Additional code:
family code : **81**
control code: **01**

It will be necessary to enter: ”family code” + “main code” + “control code”;
Like: **8100000F2E301301**

4.7. “Analog Fuel”

only for GuardMagic mTF1, GuardMagic mTF2.

Activate the function of “fuel” records. For the activation mark the “box”.

4.8. “Temperature Sensor Address”

Only for mTF3 module.
Enter the address of temperature sensors on the “Temperature Bus” and mark the box that temperature sensor have to be active.
The function “Use digital temperature inputs” have to be active.

4.9. “Serial Port”

Select the “Com port” (serial port) to them is connecting GuardMagic mTF.

4.10. “Read Data” Button

For the reading configuration and data from Giardmagic mTF is necessary to push the “Read Data” Button.

4.11. “Save Data” Button

This button is intending for the saving configuration and data to GuardMagic mTF.
After you entering the data on the program working window it will be necessary to save this data in GuardMagic mTF. For the saving this data push the button “Save Data”.

4.12. “Analog Input”

only for mTF1, mTF2.
Mark the “box” of analog inputs that will be active in system (analog input to that is connect analog fuel level sensor).

4.13. “Use Digital Fuel Sensor”

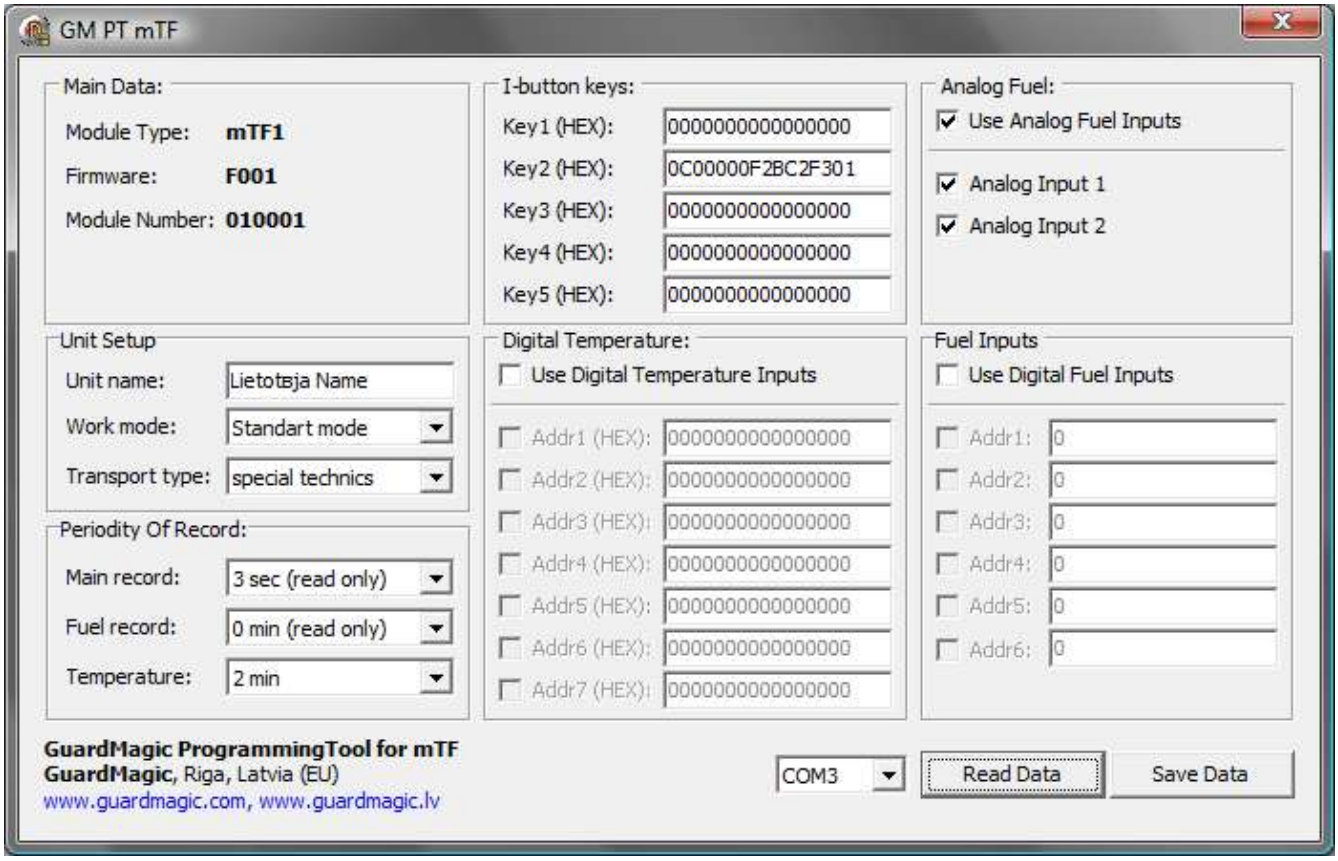
only for mTF3.
Activation the function of “digital fuel record”.
For the activation mark the “box”.

4.14. “Digital Fuel Sensor”

only for mTF3.
Mark the address “box” of digital fuel sensor that will be active in system and enter the address of Digital Fuel Sensor in “Digital Fuel Bus”.
Each Digital Fuel sensor has its own unique address in “Digital Fuel Bus”.

5. OPERATING WITH PROGRAM

After start the program it is necessary to choose COM PORT and to press button "Connect".
In “Service line” will appear information “connected” and buttons “Read” and “Save” will became active.
After pressing the button “**Read Data**” will appear the information like this:



Note:
At the first reading the configuration of **GuardMagic mTF** in periodicity of record will (can) appear the “ZERO” information of record interval. This record interval can be mark like “Read Only”.
It will be necessary to change all “record intervals” to the “correct” record interval.
The correct Record Intervals select from the list of record interval.

In the “Main Data” form will be information about **GuardMagic mTF** module.

For the **GuardMagic mTF** module programming it will be necessary to enter necessary data in main fields:

- Unit Setup;
- Periodicity of record.

Driver identification keys have to be enters in “i-Button Keys” block.

Fuel and temperature fields will be activate and entered the data if will be connect the necessary sensors to module.

In normal in “Operation mode” field have be select the “Standard Mode”.
Calibration mode is using only for the calibration procedure.

For the saving entered data will be necessary to push “Save Data” button and all this data will be saved in module.

For the checking saved data will be needed to press button “Read Data”.

For exit from the program it is necessary to press the button "**X**"

6. WIRING DIAGRAMS OF GuardMagic mTF

6.1. Power - main connector (24 PIN)

pin	name	description
15	+12 V	Power + 12 V
16	GND	Ground

6.2. RS-232 connector (4 PIN)

pin	name	description
1	GND	Ground
3	RXD	Data RX
4	TXD	Data TX