



GuardMagic FSM Programming Tool

Table of contents:

1.	INTRODUCTION	3
2.	PACKAGES	3
3.	REQUIREMENTS TO PC.....	3
4.	NECESSARY INFORMATION FOR MODULE PROGRAMMING.....	4
4.1.	NECESSARY INFORMATION FROM YOUR LOCAL GSM PROVIDER.....	4
4.2.	NECESSARY INFORMATION FROM YOUR MONITORING STATION	4
4.3.	NECESSARY INFORMATION TO YOUR MONITORING STATION	4
4.4.	ABOUT ADDITIONAL NAME	4
5.	MODULE CONNECTION	5
6.	START THE PROGRAM AND OVERVIEW OF BASIC FORM.....	6
6.1.	START THE PROGRAM	6
6.2.	SERVICE LINE.....	6
6.3.	CONTROLS ELEMENTS	7
6.4.	OPERATION BOOKMARKS	7
6.5.	MAIN NOTICE	7
7.	OPERATION BOOKMARKS DESCRIPTION	8
7.1.	BASE SETTING	8
7.2.	EXTERNAL DEVICES	9
7.3.	OPERATION PARAMETERS	10
7.4.	COMMUNICATION PARAMETERS	11
8.	STARTING OPERATION WITH PROGRAM.....	13
9.	PROGRAMMING PROCEDURE	14
9.1.	SAMPLE OF “BASE SETTING” BOOKMARK.....	14
9.2.	SAMPLE OF “EXTERNAL DEVICE” BOOKMARK.....	15
9.3.	SAMPLE OF “OPERATION PARAMETERS” BOOKMARK	15
9.4.	SAMPLE OF “COMMUNICATION PARAMETERS” BOOKMARK	16
10.	WIRING DIAGRAMS OF GuardMagic FSM.....	17
10.1.	Power - main connector (24 PIN)	17
10.2.	RS-232 connector (4 PIN)	17

1. INTRODUCTION

“GuardMagic FSM programming tool” is the special technological complete set intended for programming and change the setting of **GuardMagic FSM1, GuardMagic FSM2, GuardMagic FSM3** modules by Personal Computer.



2. PACKAGES

Complete set consist of:

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

3. REQUIREMENTS TO PC

Minimum requirements to the PC:

- MS Windows XP, MS Windows Vista, MS Windows 7;
- Intel Pentium IV 600 or above (or AMD analogue);
- Main memory 256MB or above;
- 500 free space on a hard disk;
- Mouse and keyboard;
- Free serial port (RS-232);
- Video adapter and color monitor with the resolution not less than 800 x 600;
- CD or DVD ROM.

4. NECESSARY INFORMATION FOR MODULE PROGRAMMING

4.1. NECESSARY INFORMATION FROM YOUR LOCAL GSM PROVIDER

Before carrying out of the module programming, it is necessary to get information from your GSM operator:

parameters of GPRS at yours GSM provider, namely:

- **access point name (APN)** - APN server of yours GSM provider;
- **name (Login)*** – user name for access to a server of yours GSM provider;
- **password*** – password for access to the server of yours GSM provider;

* - often GSM provider has not (and don't give) Name and Password to access to its GPRS server.

This information will be entering in module during programming procedure.

4.2. NECESSARY INFORMATION FROM YOUR MONITORING STATION

For the module connection to monitoring station you have to get data from monitoring station (monitoring software), namely:

- **IP address** of the monitoring station (server IP address);
- **port number** of the monitoring station server.

If monitoring station (monitoring software) has an additional module name in system you have to get this information.

You also have to inform monitoring station about type of module and module factory number.

This information will be entering in module during programming procedure.

4.3. NECESSARY INFORMATION TO YOUR MONITORING STATION

For connection module to monitoring station (monitoring software) also will be needed to enter your module (information about your module) in to monitoring software.

This base information is:

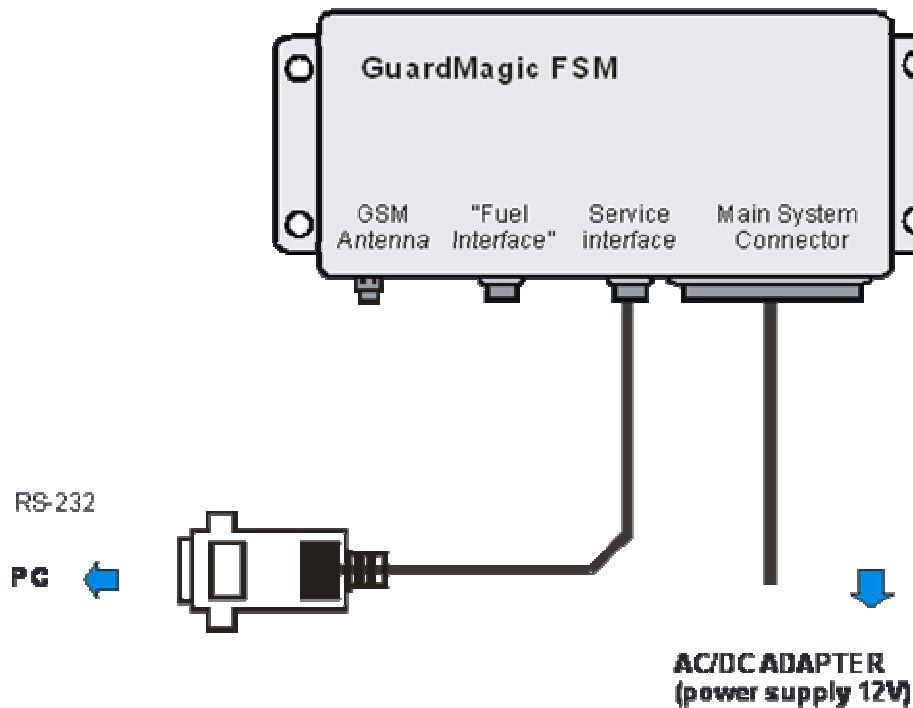
- type of module (code of module type),
- factory number of your module.

4.4. ABOUT ADDITIONAL NAME

GuardMagic FSM modules also support so named “additional module name” in system.

If the monitoring station (or monitoring software) supports this function, “additional module name” can be programming in module and necessary has be taken to monitoring station (entering in monitoring software).

5. MODULE CONNECTION



Connection order:

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

6. START THE PROGRAM AND OVERVIEW OF BASIC FORM

6.1. START THE PROGRAM

Copy program "GM FSM PT" (FSM-programmer.exe) from CD to hard disk of yours PC.

Start the program "GM FSM PT" (FSM-programmer.exe). After start the program on the screen will open the basic form, shown on figure.

All further works with the program is carried out by means of this form.

The screenshot shows a window titled "ProgrammingTool for GuardMagic FSM - 22.09.2010". The window contains several sections:

- Main Data:** Four input fields for "Unit Type:", "Unit Factory Number:", "Unit Firmware Version:", and "BootLoader Version:".
- Navigation Tabs:** "Base Settings" (selected), "External Devices", "Operation Parameters", and "Communication Parameters".
- Form Fields:**
 - "SMS Confirmation Password:" with an input field.
 - "Additional Name:" with an input field.
 - "Coordinates" section with an "activation" checkbox, "Latitude (d.ddd):" with an input field and a dropdown arrow, and "Longitude (d.ddd):" with an input field and a dropdown arrow.
- Footer:** "ProgrammingTool for GuardMagic FSM", "GuardMagic, Riga, Latvia (EU)", "www.guardmagic.com, www.guardmagic.lv", and buttons for "Get Log", "COM1" (dropdown), "Read Data", and "Save Data".

6.2. SERVICE LINE

This screenshot shows the "Main Data" section of the software interface, which is identical to the one shown in the previous image. It features four input fields for "Unit Type:", "Unit Factory Number:", "Unit Firmware Version:", and "BootLoader Version:".

Service line located on bottom of the form and is intended to give main information about connected GuardMagic FSM module:

- Unit Type* – type of module;
- Unit Factory Number* – factory number of module;
- Unit Firmware Version – version of module internal firmware;
- BootLoader Version – version of module BootLoader

* - content of this field will be needed for your monitoring station (monitoring software).

6.3. CONTROLS ELEMENTS

Controls elements located on below of the form and are intended for operations "Read Configuration" and "Write Configuration" in module.



Name	Description	Note
"Get Log"	Button. Receive technical data from the FSM module.	
Serial Port (COM1)	Select the operation serial port (on PC)	
"Read Data"	Button; Read data (configuration) of FSM module	
"Save Data"	Button; Save configuration and setting	

6.4. OPERATION BOOKMARKS

There are four main working bookmarks for module programming:

- Base Setting;
- External Devices;
- Operation Parameters;
- Communication Parameters.

6.5. MAIN NOTICE

Some fields in bookmarks are disabled and are intended for module growing functionality in future.

7. OPERATION BOOKMARKS DESCRIPTION

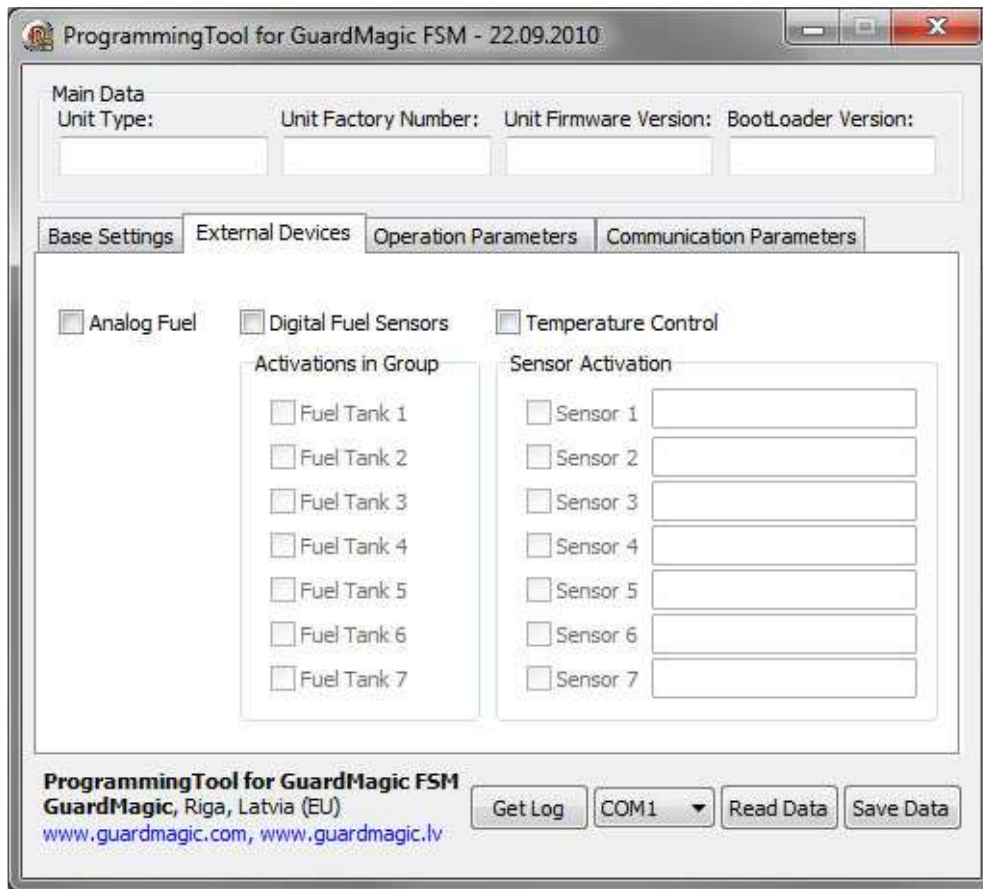
7.1. BASE SETTING

Bookmark is intended for main module setting.

Fields		
Name	Description	Note
Additional Name	GuardMagic FSM unit additional name in the system. Using like additional password.	Enter / Change Not necessarily, depend of system or monitoring software
Coordinates activation	Activate coordinate sending from the FSM unit	Activate / Deactivate Not necessarily, depend of system or monitoring software
Latitude (d.ddd)	Latitude of the FSM unit	
Longitude (d.ddd)	Longitude of the FSM unit	

7.2. EXTERNAL DEVICES

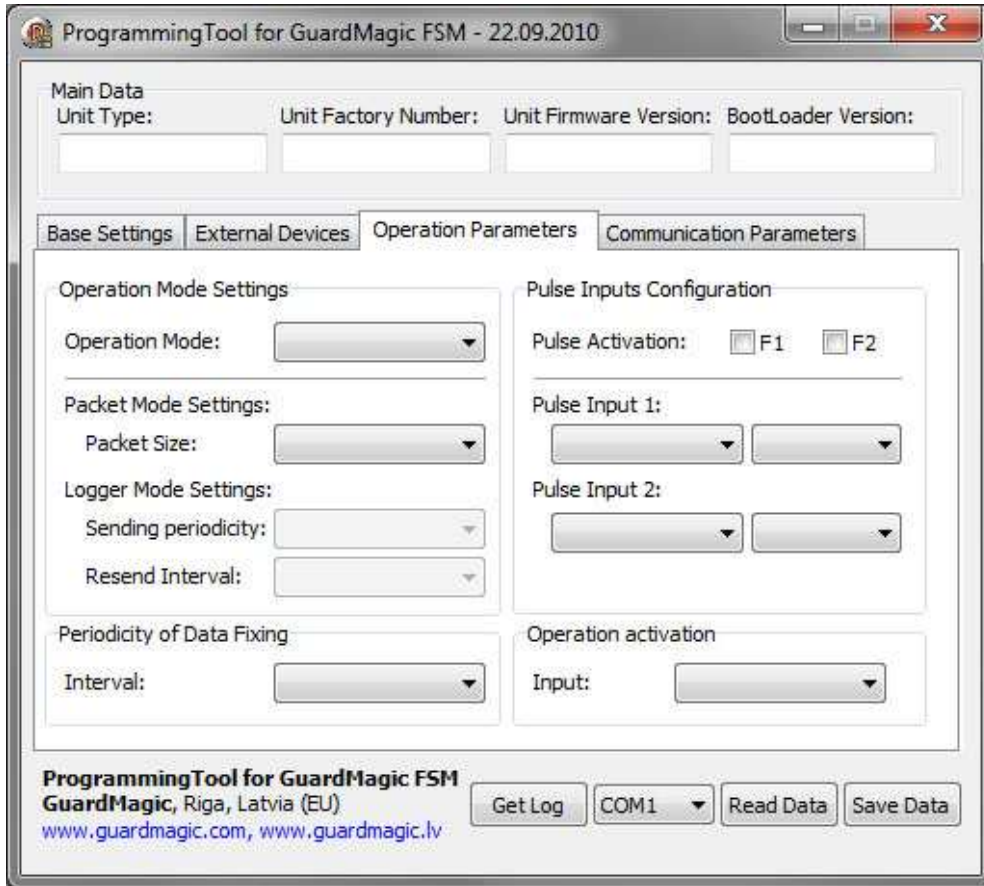
Bookmark is intended for configuration external sensors: fuel and temperature (activate deactivate).



Fields		
Name	Description	Note
Analog fuel sensor	Activation function of "Analog Fuel Records" (fuel level measurement of analog fuel sensors)	Only for FSM1
Digital Fuel Sensor	Activation function of "Digital Fuel Records1" (fuel level measurement of digital fuel sensors group 1)	Only for FSM2, FSM3
Activation in Group Fuel Tank 1- Fuel Tank7	Activation fuel level sensors in main (regular) vehicle tanks.	Only for FSM2, FSM3
Temperature Control	Activation function of "Temperature Measurement".	
Sensor Activation Sensor 1 - Sensor 7	Activation temperature sensors and entering address of temperature sensors on "Temperature Bus"	

7.3. OPERATION PARAMETERS

Bookmark is intended for programming module operation mode and operation parameters.



Fields		
Name	Description	Note
Operation Mode	Select one type of operation mode: "Real Time", "Packet", "Logger".	"Logger" mode not active, for future models
Packet Size	The size of Packet transmitting size on "Packet Mode"	
Logger Mode Setting (Sending Periodicity; Resend Interval)		Not active, for future models
Periodicity of Data Fixing	Select Periodicity of data fixing	
Pulse Activation	Activate F1 pulse input and F2 pulse input	
Pulse Input 1; Pulse Input 2	Set work mode (frequency, impulse counter) and range of measurement (0..255 till 0..65535)	
Operation activation	Set input of the FSM unit activation (none, L1, L2, L3, F1, F2)	

7.4. COMMUNICATION PARAMETERS

Bookmark is intended for programming module communication parameters.

Fields		
Name	Description	Note
APN	APN (Access Point Name) server of yours GSM provider;	Given by GSM provider; Necessary field
GPRS User Name *	user name for access to a server of yours GSM the provider	Given by GSM provider Necessary field
GPRS User Password*	password for access to the server of yours GSM the provider;	Given by GSM provider
Host IP1	IP address of Main monitoring station (server IP address);	Given by monitoring station (monitoring software);
Host IP1 port	port number of Main monitoring station server.	Given by monitoring station (monitoring software); Necessary field
Host IP2	IP address of Reserve monitoring station (server IP address);	Given by monitoring station (monitoring software)
Host IP2 port	Port number of Reserve monitoring station server.	Given by monitoring station (monitoring software)

SMSC	Number of the SMSC (Short Message Service Center)	Given by GSM provider. Necessary field.
Password 1 for GPRS	Password 1 for "Communication Parameters 1" change through GPRS	
GSM1, GSM2, GSM3	Mobile phone numbers with which it is possible to change FSM unit options	
Password 2 for GPRS	Password 2 for "Communication Parameters 2" change through GPRS	

* - often GSM provider has not (and don't give) Name and Password to access to its GPRS server.

8. STARTING OPERATION WITH PROGRAM

After start the program it is necessary to choose COM PORT and to press button "Read Data".

After pressing the button "**Read Data**" will open "Base Setting" and will appear the information like this:

The screenshot shows the 'ProgrammingTool for GuardMagic FSM - 22.09.2010' window. It features a 'Main Data' section with fields for Unit Type (GuardMagic FSM2), Unit Factory Number (80078), Unit Firmware Version (0.1), and BootLoader Version (0.1). Below this are tabs for 'Base Settings', 'External Devices', 'Operation Parameters', and 'Communication Parameters'. The 'Base Settings' tab is active, showing an 'SMS Confirmation Password' field with 'abcd', an 'Additional Name' field with 'Module_234', and a 'Coordinates' section with a checked 'activation' checkbox, Latitude (56.94904 N), and Longitude (24.1841 E). A descriptive text box on the right states: 'GuardMagic FSM programmer is the special technological program intended for user programming the setting of GuardMagic FSM1, GuardMagic FSM2, GuardMagic FSM3 modules by Personal Computer.' At the bottom, there is a footer with the company name 'GuardMagic, Riga, Latvia (EU)', website URLs, and buttons for 'Get Log', 'COM1' (dropdown), 'Read Data', and 'Save Data'.

In the "Service Line" will be information about **GuardMagic FSM** module.

Note:

1. At the first reading the configuration of **GuardMagic FSM** in some fields can appear the "ZERO" or "FFFF" information
2. Record interval can be mark like "Read Only".
It will be necessary to change "record intervals" to the "correct" record interval.
The correct Record Interval value necessary select from the list of record interval.

9. PROGRAMMING PROCEDURE

The module programming procedure is consistently completing the required fields on the persistence and saving entered data.

For the data saving it is necessary to push button “Save Data”.

After saving data for the checking will be needed to read new module configuration (push button “Read Data”).

Samples of programming data are shown below.

9.1. SAMPLE OF “BASE SETTING” BOOKMARK

The screenshot displays the 'ProgrammingTool for GuardMagic FSM' application window. The title bar indicates the date as 22.09.2010. The main data section shows the following values: Unit Type: GuardMagic FSM2, Unit Factory Number: 80078, Unit Firmware Version: 0,1, and BootLoader Version: 0,1. The 'Base Settings' tab is active, showing an SMS Confirmation Password of 'abcd', an Additional Name of 'Module_234', and a checked 'activation' checkbox. The coordinates are set to Latitude 56.94904 N and Longitude 24.1841 E. A text box on the right explains that the GuardMagic FSM programmer is a special technological program for programming GuardMagic FSM1, FSM2, and FSM3 modules. At the bottom, there are buttons for 'Get Log', 'COM1' (dropdown), 'Read Data', and 'Save Data'. The footer includes the text 'ProgrammingTool for GuardMagic FSM', 'GuardMagic, Riga, Latvia (EU)', and the website addresses 'www.guardmagic.com, www.guardmagic.lv'.

Main Data			
Unit Type:	Unit Factory Number:	Unit Firmware Version:	BootLoader Version:
GuardMagic FSM2	80078	0,1	0,1

Base Settings | External Devices | Operation Parameters | Communication Parameters

SMS Confirmation Password:
abcd

Additional Name:
Module_234

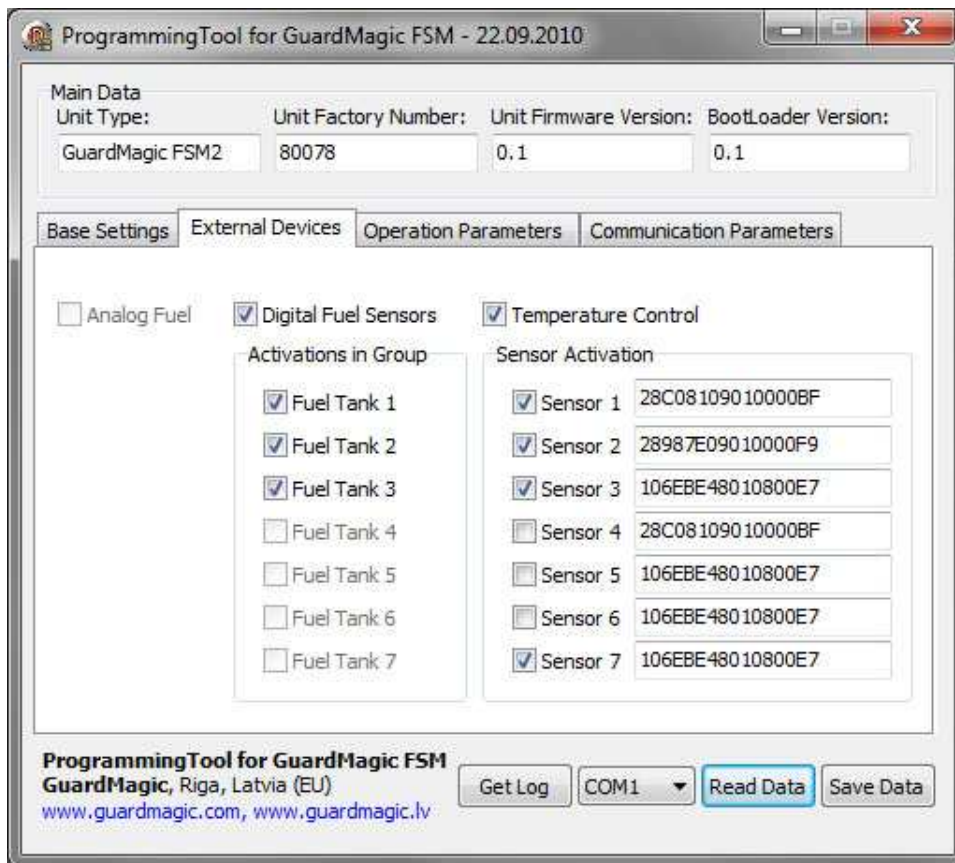
Coordinates
 activation
Latitude (d.ddd):
56.94904 N
Longitude (d.ddd):
24.1841 E

GuardMagic FSM programmer is the special technological program intended for user programming the setting of GuardMagic FSM1, GuardMagic FSM2, GuardMagic FSM3 modules by Personal Computer.

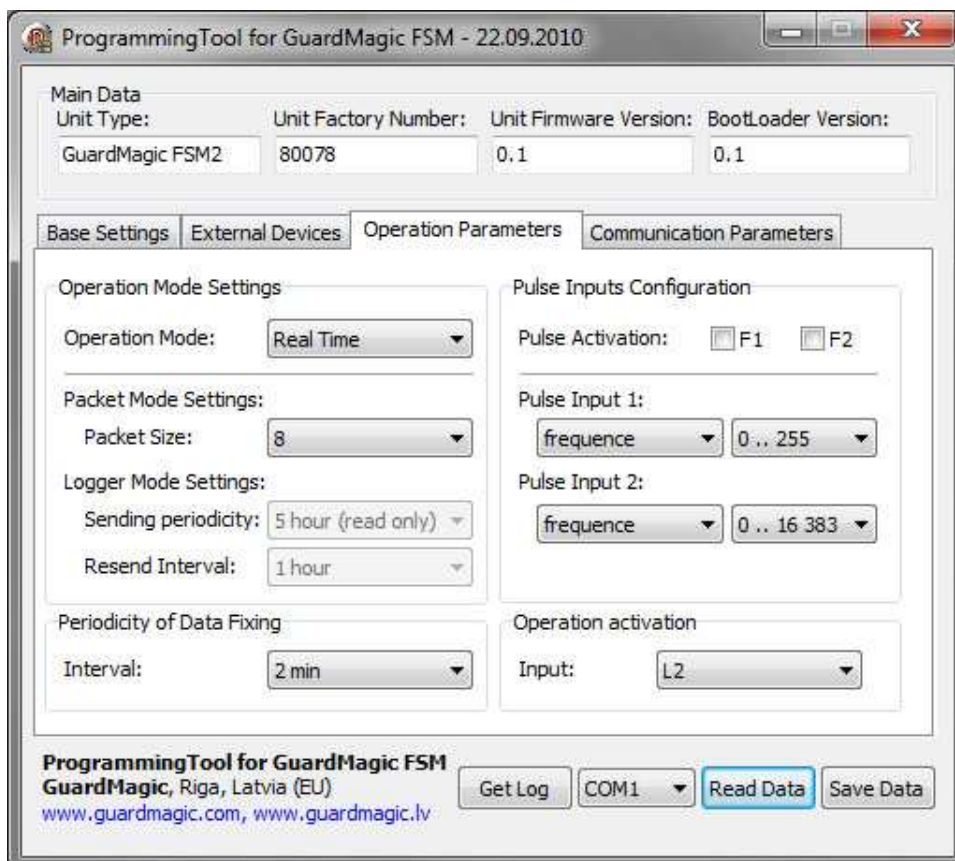
ProgrammingTool for GuardMagic FSM
GuardMagic, Riga, Latvia (EU)
www.guardmagic.com, www.guardmagic.lv

Get Log | COM1 | Read Data | Save Data

9.2. SAMPLE OF “EXTERNAL DEVICE” BOOKMARK



9.3. SAMPLE OF “OPERATION PARAMETERS” BOOKMARK



9.4. SAMPLE OF “COMMUNICATION PARAMETERS” BOOKMARK

The screenshot shows a software window titled "ProgrammingTool for GuardMagic FSM - 22.09.2010". The window contains several sections:

- Main Data:** A table with four columns: Unit Type, Unit Factory Number, Unit Firmware Version, and BootLoader Version. The values are: GuardMagic FSM2, 80078, 0.1, and 0.1.
- Navigation Tabs:** Base Settings, External Devices, Operation Parameters, and Communication Parameters (selected).
- Communication Parameters 1:**
 - APN: internet.lmt.lv
 - GPRS User Name: (empty)
 - GPRS User Password: (empty)
 - Host IP 1: 85.234.179.24, Port: 9998
 - Host IP 2: (empty), Port: (empty)
 - SMSC: 37129202020
 - Password 1 for GPRS: PGM_PSW8902
- Communication Parameters 2:**
 - GSM 1: 37129212186
 - GSM 2: 37129212187
 - GSM 3: 37129212188
 - Password 2 for GPRS: PGM5_PSW901
- Footer:** ProgrammingTool for GuardMagic FSM, GuardMagic, Riga, Latvia (EU), www.guardmagic.com, www.guardmagic.lv. Buttons: Get Log, COM1 (dropdown), Read Data (highlighted), Save Data.

10. WIRING DIAGRAMS OF GuardMagic FSM

10.1. Power - main connector (24 PIN)

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

10.2. RS-232 connector (4 PIN)

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