Service. Special Functions of Galileosky Tracking Devices. Power Saving

User Manual

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Contents

Necessary Tools, Devices, Materials ................................................................. 3
General Information ......................................................................................... 4
Power Saving Mode ......................................................................................... 5
Appendix №1 ................................................................................................. 9
Necessary Tools, Devices, Materials

To set special functions you should have Windows-based computer with the installed program of configuration of Galileosky tracking devices – "Configurator". It is recommended to install the latest version of the program from the site https://galileosky.com/podderzhka/programmyi.html
General Information

The Galileosky tracking device (hereinafter - the tracking device, device), besides performance of the main functions - determination of location of a mobile object, record and transfer of number of vehicle parameters, discrete and analog inputs state of the tracking device and digital interfaces to the monitoring server, possesses additional features.

Settings of the tracking device allow:

- to reduce vehicle accumulator load and (or) to prolong operating time from the internal accumulator.
Power Saving Mode

The built-in accumulator allows the tracking device to work without external power supply for a period of up to 8 hours.

To increase operating time and to decrease power consumption of the tracking device in an operating mode it is possible to execute the following actions:

1. **Turn off the unused RS232 ports, to do this**
   1.1. go to the “Settings” tab -> “Digital inputs” of the Configurator
   1.2. set the type of periphery “nothing” for parameters “RS232[0] peripheral type”, “RS232[1] peripheral type” (Pic. 1).

   ![Pic. 1](https://via.placeholder.com/150)
   Setting RS232 peripheral type

   Similar settings can be completed by means of commands RS232 0 or RS232 1.

2. **Turn off the integrated CAN-controller if the tracking device is not connected to a CAN-bus, to do this**
   2.1. go to “Settings” tab -> “CAN” of the Configurator;
   2.2. specify the filter type “CAN turned off” (Pic. 2);

   ![Pic. 2](https://via.placeholder.com/150)
   CAN settings

3. **Turn off the Autoinformer, if it is not used, to do this**
   3.1. go to “Settings” tab -> “Sound” of the Configurator;
   3.2. remove tick from the “Autoinformer” field.
Similar settings can be completed by means of command AUTOINFORMER 0.

To reduce power consumption of the tracking device at a stop activate the mode of power saving.

In the mode of power saving depending on the tracking device settings, certain modules can be disabled (GSM, CAN, RS232, RS485, microSD), frequency of scanning ADC can be decreased, 1-Wire sensors can be not scanned. Besides, with activated mode of power saving, you can specify a period of connection to the server, and the length of the session.

**ATTENTION!** Depending on the device version, power saving can be set either in Configurator software (“Settings” -> “Data transmission”), or by means of an additional algorithm designed on the Easy Logic tab. You can find out which way can be used for your tracking device in Appendix 1 of the present User Manual. Further, settings by means of “Settings” tab are described.

Tracking devices determine the stop by means of:

- accelerometer data;
- external power voltage with working/not working engine;
- ignition sensor.

To complete settings of stop determination of tracking devices use recommendations from user manual “Setting of track by means of the tracking device”, which you can find in our site [www.galileosky.com](http://www.galileosky.com): Support -> User Manuals -> General Information.

To activate power saving mode, you can use either of the two methods:

1. via Configurator service program;
2. by means of commands (SMS or GPRS).

To set the power saving mode in Configurator software you need to do the following:

1. Launch Configurator service program and go to tab “Settings” -> “Power saving”;
2. Tick the necessary parameters (Pic. 4)

- Turn off GPS/GLONASS unit at stop – if this parameter is activated, then the tracking device turns off the GPS/GLONASS unit at stop.
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(version 1 dated from May 8, 2018)

- Switch to deep sleep mode after – set the value in seconds, it defines the period after stop is recognized when the device activates the deep sleep mode. When the value is equal to zero, this mode is not activated.
- Turn off GPS/GLONASS in deep sleep mode – the tracking device turns off GPS/GLONASS unit if this parameter is activated and if the parameter “Switch to deep sleep mode after” has a value different from zero.
- Turn off GPRS unit in deep sleep mode – if this parameter is activated, the GSM module is turned off in deep sleep mode.
- Decrease ADC sample rate in deep sleep mode – if this parameter is activated, ADC sample rate is decreased in deep sleep mode.
- Turn off CAN in deep sleep mode – if this parameter is activated, CAN is turned off in deep sleep mode.
- Turn off RS232[0] in deep sleep mode – if this parameter is activated, RS232[0] is turned off in deep sleep mode.
- Turn off RS485 in deep sleep mode – if this parameter is activated, RS485 is turned off in deep sleep mode.
- Turn off microSD in deep sleep mode – if this parameter is activated, microSD is turned off in deep sleep mode.
- GSM wake up period – if the parameter “Turn off GPRS unit in deep sleep mode” is activated, the tracking device turns on the GSM unit and transmits the data in the period, specified in the parameter “GSM wake up period”.
- GSM session length – the time period in seconds, during which the GSM unit is turned on and data transmission is possible in deep sleep mode (if the parameter “Turn off GPRS unit in deep sleep mode” is activated).

3. Click “Apply” button.

To set the power saving mode you can use command *Sleepmode*
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(version 1 dated from May 8, 2018)

Command format
SleepMode
OffOnStop,DST,GNSS,GPRS,ADC,CAN,RS232,RS485,SD,WakeUp,ST

Parameters
OffOnStop – 0 – do not turn off GPS/GLONASS unit at a stop;
1 – turn off GPS/GLONASS unit at a stop.
DST – Time spent at a stop, after which the tracking device will switch to the deep sleep mode;
GNSS – turn off GPS/GLONASS unit in the deep sleep mode;
GPRS – turn off GSM-unit in the deep sleep mode;
ADC – reduce ADC sampling rate in the deep sleep mode; the maximum frequency that can be measured at inputs is reduced by 2 and the minimum impulse period that can be registered increases twofold;
CAN – turn off the CAN in the deep sleep mode;
RS232 – turn off RS232 in the deep sleep mode;
RS485 – turn off RS485 in the deep sleep mode;
microSD – turn off the microSD card in the deep sleep mode, the reading of trusted iButton keys is supported;
WakeUp – a period in seconds between connections to a server in deep sleep mode;
ST – a length of connection to a server in deep sleep mode.

Explanation
Power saving mode control. In the deep sleep mode, no 1Wire sensors sampling and no battery charging are performed.

Example
Request: SLEEPMODE 1,60,1,1,1,1,1,1,1,3600,600
Reply:SLEEPMODE:OffGNSSOnStop=1,DSTimeout=60,
GNSS=1,GPRS=1,ADC=1,CAN=1,RS232=1, RS485=1,SD=1, GSMWakeUp=3600,
SessionLen=60;

Setting of power saving mode is completed; the tracking device is ready for use.

RSA “Galileosky”, LLC produces satellite monitoring equipment for GPS and GLONASS real time vehicles monitoring. The tracking devices determine the mobile object location recording the time and route as points with geographical coordinates and send the data to the server to be further processed and sent to the traffic controller panel.

In addition, a number of other vehicle parameters are recorded: the state of analog and discrete inputs of the tracking device and the state of digital interfaces.

The tracking devices can be used in any vehicle.
## Appendix №1

<table>
<thead>
<tr>
<th>Device version/ Functionality</th>
<th>Galileosky 2.X</th>
<th>Galileosky 4.0</th>
<th>Galileosky 5.X</th>
<th>Galileosky Base Block</th>
<th>Galileosky7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation in roaming</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Easy Logic algorithm</td>
<td>Easy Logic algorithm</td>
</tr>
<tr>
<td>Stealth mode</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Easy Logic algorithm</td>
<td>Easy Logic algorithm</td>
</tr>
<tr>
<td>GPRS-traffic cost optimization</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Settings tab</td>
<td>Settings tab</td>
</tr>
</tbody>
</table>

Table 1. Parameters of setting special functions depending on the device version