Audio. Implementation of the Function Autoinformer

User Manual

www.galileosky.com
Contents

Necessary Tools, Devices, Materials ................................................................. 3
General Information .................................................................................. 4
Autoinformer Function Setting ..................................................................... 6
Necessary Tools, Devices, Materials

To configure the Autoinformer function it is necessary to 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.

The function of autoinformer is available in all Galileosky tracking devices, except for Lite versions.


**General Information**

Galileosky tracking device (hereinafter - tracking device) allows you to provide automatic (without participation of the driver) announcement of information about stops of public transport with use of satellite navigation system (Autoinformer function).

The main difference from the analogues is that movement direction of the vehicle is considered, thus we can avoid any false response to stops in the same geographical zone.

Apart from audio announcement in Galileosky Base Block and 7.0 tracking devices there is a possibility to display textual information about the current route, including advertisement messages. The information can be displayed by LED information boards ISCRA or ITLINE (user guide “RS485. Information Boards ITLINE and ISCRA” is provided in our site [https://galileosky.com/podderzhka/dokumentacziya.html](https://galileosky.com/podderzhka/dokumentacziya.html)).

The following devices can be used as the sound equipment (Pic. 1):

ATTENTION! Speaker’s resistance should be not less than 8 Ohm.

The tracking device generates the capacity on the linear output from the 32 Ohm speaker up to 250 mW.

For realization of the Autoinformer function connect a loudspeaker to special contacts in the main socket of the tracking device (Pic. 2).
Audio. Implementation of the Function Autoinformer (version 6 dated January 14, 2019)

In case any additional external amplifier is connected, it is necessary to consider that the signal range on the linear output can reach up to 4.2 V. The amplifier input should be able to process a signal of this kind, otherwise it is necessary to use an additional voltage divider (attenuator).

Connection scheme of the amplifier is provided in picture 3. The amplifier input can be connected to any inputs Vol 0 or Lol 1. Ground of the tracking device and the amplifier should be connected.

Instead of using an attenuator, in Galileosky Base Block and Galileosky 7.0 tracking devices it is possible to manage the rate of gain by setting the “Autoinformer gain” parameter at 10 (pic. 4). In this case the signal range lowers up to the level of 500 mV, which is acceptable for amplifier modules without applying an attenuator. The more accurate value of amplifier gain is selected experimentally.
Autoinformer Function Setting

The order of Autoinformer function setting is the following:

1. Place in some catalog in your PC recorded in advance audio files for informing about the stops.

**ATTENTION!** The file should correspond to the following requirements:

- Format *.wav, 16 kHz, mono, 16 bits.
- The file title cannot consist of more than 20 symbols including the format name, for example: PARKOVU.wav.
- The audio file length should be not more than 4 minutes.

2. Start the Configurator and go to the “Routs” tab (Pic. 5);

3. Insert a micro SD card into the computer;

4. Create a route with all stops:

   a) route creation is completed on a built-in map in the Configurator software. The information about all the stops is recorded by filling in special fields (Pic. 6);
b) select removable disk which refers to the micro SD card (Pic. 7), use “-” button to add previously created name of the route or use “+” and “-” buttons to create a new route or delete one of the previously created;

c) to create a new route, you need to enter its identifier and fill in the titles of the first and the final stations (these titles are displayed on the information board if one is used).

d) after that, create a route by adding all the stations one by one: create the first stop by means of “+” button, enter its title, select the corresponding audio-file from the previously created catalog (Pic. 8). If the file’s format is different from the required one, the program will convert it to the required format and copy the necessary file to the route of the microSD-card;
Audio. Implementation of the Function Autoinformer
(version 6 dated January 14, 2019)

e) then on the map you should rightly position the coordinate with the coverage sector –
when the tracker is in this sector (Pic. 9). The corresponding sound file will start being played.

This sector is described by the following fields (Pic. 10):

- Direction angle $\alpha$ (i.e. the angle of the deviation of movement from the North);
- Dispersion of angle $\Delta$ (i.e. how many degrees from the direction of travel movement
  may vehicle deviate);
- Two radiuses of a zone of operation – external $R_{ext}$ ($R_1$) and internal $R_{int}$ ($R_0$).

f) set the sector’s parameters manually by dragging the red points of the sector and, thus,
changing its position on the map;
g) another variant of adjusting the sector is filling the numeric values on the “Station” fields (Pic. 11)

h) parameters of the rest of the stations are set similarly.

**ATTENTION!** When creating a route, it is necessary to set separate zones for each station in both directions, even if the stations are located opposite to each other.

i) if you intend to use an information board to display information on the stations, then it is possible to additionally display various advertisement messages (Pic. 12)

![Advertisements](image)

Buttons “+” and “-” are used to add and delete the messages.

The process of connecting and setting the information board to work with Galileosky tracking devices is given in more detail in User manual “RS485. Information Boards ITLINE and ISCRA” on our site [https://galileosky.com/podderzhka/dokumentacziya.html](https://galileosky.com/podderzhka/dokumentacziya.html)

j) finally click on the «Save route» button to record the changes on the micro-SD card. As a result of all these actions, file “Busline.txt” will be created in the micro-SD card in the catalog with the chosen route (Pic. 13).
Audio. Implementation of the Function Autoinformer
(version 6 dated January 14, 2019)

This file can also be filled in manually if all parameters of stops are known. Latitude and longitude values should be entered through the point "." (For example: 57.9842), where the value after point – degree fractions. To transfer minutes into degree fractions (Xdegr.min.) use the following expression Xdegr.min./60. For example: 57degr.55,4513min = 57.924188degr.

5. Insert the micro-SD card into the tracking device.

- "Autoinformer" parameter determines whether the function of informing will be turned on or not;
- "Repeat messages" parameter describes whether to repeat playback of the file, while the vehicle is in the information playback zone;
- "Output, turned on during playback of message" parameter allows you to specify the output, equipment which performs some action when this output is activated;
- "Route name" parameter specifies the catalog on the micro-SD card, the information in this catalog (file busline.txt) will be analyzed in the process of movement and, in case if the vehicle is in the area of coordinates specified in this file the corresponding sound file will be played.
- "Autoinformer Gain" option allows you to increase or decrease the volume of the sound on the speaker when playing a stop.

7. After making the necessary settings, click “Apply” button.

Besides, the parameters of the Autoinformer function can be configured using the “Autoinformer” command.
Audio. Implementation of the Function Autoinformer
(version 6 dated January 14, 2019)

Command format
Autoinformer OnOff, Repeat, Out, FileName, Gain

Parameters
- **OnOff** – enable/disable Autoinformer function: 1 – the function is enabled, 0 – the black box function is enabled (the navigation data are duplicated and saved to the external microSD card).
- **Repeat** – determines whether the file should be replayed when the device is in the playback zone. If the value is 0, the file is played only once on entering the zone.
- **Out** – output index, which is inverted during the audio file playing. 0 – no output is inverted, 1 – OUT0, 2 – OUT1, 3 – OUT2, 4 – OUT3, 5 – OUT4.
- **Route** – a route name. The route is understood as the number of zones to be announced.
- **Gain** – the gain of the sound signal

Explanation
For more information, see section Autoinformer.

Example
Request: Autoinformer 1,0,0,Marshrut 1,50
Reply: AUTOINFORMER:OnOff=1,Repeat=0,Route=Marshrut 1,Gain=50;

Setting of Autoinformer function is made, the device is ready for operation.

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.