

AREA TRACKING

Product	Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT and Benefon Track Pro NT
Product version	All versions
Document Version	1.0
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DESCRIPTION OF APPLICATION

This application shows how you can get a vehicle or other object, which has an installed Benefon Trackbox or which is used together with Benefon TrackKeeper NT, to send information when entering or leaving a specific circular area. You can also make your handset such as Benefon Seraph NT and Benefon Track Pro NT to send these messages.

For example, if you use Benefon Esc! with maps as your tracking message receiver, all tracking messages are shown at the map as tracking points.

NEEDED EQUIPMENT

Purpose	Product
Service center	e.g Benefon Esc!
Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT, Benefon Track Pro NT configuration	BeneWin Trackbox and Data Adapter

1. CONFIGURING AREA TRACKING

1.1 Without authorization limits

1.1.1 Note

Area tracking can be activated/deactivated via any phone number by any person who knows Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device number, but all tracking messages are sent only to the service center number.

1.1.2 Settings with Benewin Trackbox

- Connect Benewin Data Adapter to Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device's data/NMEA-connector and start Benewin Trackbox.
- Select User Settings window and make the following settings
 - GPS settings /GPS operating mode Full or Low power
 - Full power, GPS is **ON** constantly
 - Low power, GPS is **ON** in cycle mode
 - During battery loading / GPS operating mode any other mode than GPS off (e.g. **No change**)
 - During battery loading / GSM active selected **ON**
- Save user settings to Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT or Benefon Track Pro NT

The screenshot displays the 'User Settings' window for the Benewin Trackbox. The settings are organized into several sections:

- Phone time:** Date (27. 8. 2003), Time (GMT) (14:28:10).
- Activity timer:** Start time (27. 8. 2003), Interval (0= inactive, 10 - 604800 min) (0), Positioning skip (0 - 255) (0).
- Message settings:** SMS service number, Message type (Text messages), Message validity (24 hours).
- GPS settings:** GPS operating mode (Low power), NMEA output (Off).
- Assisted GPS:** Number of satellites (3), SMS number.
- Port and audio settings:** Automatic answer, Data port active, Audio (External), Visible mode.
- During battery loading:** GPS operating mode (No change), GSM active.

Red circles highlight the 'Low power' setting in the GPS settings section and the 'No change' setting in the 'During battery loading' section.

- Select General telematics settings page
 - Write **Service center number** (Number which can change Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device's settings over the air with MPTP commands and where the area tracking messages are sent to)

The screenshot shows the 'General telematics settings' page. At the top, there are tabs for 'Tracking settings', 'General telematics settings', 'Emergency settings', 'Authorized numbers', 'Status messages', 'Pins', 'Log settings', and 'Waypoint tracking'. The 'Service center number' field is highlighted with a red circle. Below it is a table for 'List of allowed callers' and a 'Protocol settings' section.

List of allowed callers		
Number	Name	Automatic answer
1.	<input type="text"/>	<input type="checkbox"/>
2.	<input type="text"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="checkbox"/>

Protocol settings:

- Authorization:
- Message storage on:
- Message validity:
- SMS center number:

- Save telematics settings to Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT or Benefon Track Pro NT

1.2 Adding authorization limits to Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device's area tracking

1.2.1 Note

Area tracking can be activated/deactivated only by authorized phone numbers and by the service center number. Tracking messages are sent to the number where the tracking request is received (if authorized).

1.2.2 Settings with BeneWin Trackbox

- Do the following settings also in addition to the ones before
- Select General telematics settings page

- Select Protocol settings/ Authorization **Enabled**

Tracking settings | **General telematic settings** | Emergency settings | Authorized numbers | Status messages | Pins | Log settings | Waypoint tracking

Service center number *

List of allowed callers

	Number	Name	Automatic answer
1.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Protocol settings

Authorization: **Enabled** (dropdown menu)

Message storage on:

Message validity: 1 h (dropdown menu)

SMS center number:

- Select Authorized numbers page
 - Write the phone numbers that you wish to be authorized

Tracking settings | General telematic settings | Emergency settings | **Authorized numbers** | Status messages | Pins | Log settings | Waypoint tracking

1.	<input type="text" value="1234567"/>	11.	<input type="text"/>
2.	<input type="text"/>	12.	<input type="text"/>
3.	<input type="text"/>	13.	<input type="text"/>
4.	<input type="text"/>	14.	<input type="text"/>
5.	<input type="text"/>	15.	<input type="text"/>
6.	<input type="text"/>	16.	<input type="text"/>
7.	<input type="text"/>	17.	<input type="text"/>
8.	<input type="text"/>	18.	<input type="text"/>
9.	<input type="text"/>	19.	<input type="text"/>
10.	<input type="text"/>	20.	<input type="text"/>

- Save telematics settings to BenefonTrackbox, Benefon TrackKeeper NT, Benefon Seraph NT or Benefon Track Pro NT

2. USING AREA TRACKING

2.1 Activation of area tracking with MPTP message

Area tracking can be activated by sending a SMS -message.

E.g. `?TRG_0_1_1000_0_N68.28.43,9_E027.27.02,4_15`

For example when message area tracking is activated, the radius of the area from the centerpoint (Benefons coordinates) is 1 km and messages are sent every 15 minutes when Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device is inside the circle.

Explanation:

`?TRG_0` (0=area tracking)`_1` (enabled)`_1000` (radius in meters, limits

1-65535)`_0` (0 = alarm inside of circle "arrival", 1 = alarm outside of circle

"departure")`_N68.28.43,9_E027.27.02,4` (coordinates of center point)`_15` (shows how frequently area tracking message is sent when selected conditions are filled. Range is 1 to 65535 minutes).

All letters must be **uppercase**.

Note: Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT and Benefon Track Pro NT tracking messages are sent to the service center number.

Benefon Trackbox, Benefon TrackKeeper NT, Benefon Seraph NT and Benefon Track Pro NT will send a SMS message to the service center number (e.g.

`!TRG_01/01_0_1_norm_085%_gps_1_N60.22.40,4_E023.06.28,6_01.06.2003_09:30:00_080km/h_149deg_81`)

Header	CMD	Part	Tracking type	Enabled	Mode	Battery capacity	Position source	Position format	Position	Time stamp	Speed	Direction	Data
!	TRG	01/01	0	1	norm	085%	gps	1	N60.22.40,4 E023.06.28,6	01.06.2003 09:30:00	80km /h	149deg	81

2.2 Benefon Trackbox, Benefon TrackKeeper NT or your other Benefon device's Area tracking deactivation

Area tracking can be deactivated by sending a SMS -message `?TRG_0_0`