TRBONET
Dispatch Systems

neocom software

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TRBOnet Option Board

Configuration Guide

Version 2.2

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1 Introduction

The software is designed to work with both TRBOnet and Motorola's generic option boards. You can easily configure safety-related alarms such as Man Down or No Movement, use the Store and Forward technique for GPS data or even Geofencing alarms specific to this particular radio. It works seamlessly with TRBOnet Enterprise or Plus, but it can also run in the standalone mode.

1.1 Features and Benefits

- Frequent Location Updates
- Efficient Channel Usage
- Fast iBeacon Detection
- Geofencing
- GPS Store and Forward
- Seamless Tracking
- Battery Status
- Voice Recording
- Dynamic Channel Selection

1.2 Supported Option Boards

- Generic option board (GOB) by Motorola (the memory capacity is 8 MB)
- Swift option board by Neocom (the memory capacity is 512 MB)

1.3 Supported Radio Systems

- Direct Mode
- IP Site Connect
- Capacity Plus (Capacity Plus Single Site)
- Linked Capacity Plus (Capacity Plus Multi Site)
- Capacity MAX

2 Configuring Option Board

This section describes how to configure the option board with TRBOnet Swift CPS.

Notes: Make sure the Option Board capability is enabled on the radio channels (*MOTOTRBO CPS* > *Channels* > *Zone*> *Channel* > *Option Board*).

In addition, make sure that the Enhanced GNSS feature is disabled on the radio channels.

2.1 Preparing Option Board

- Connect a radio unit equipped with a Swift option board (or Motorola GOB) to the PC using a USB port.
- Run TRBOnet Swift CPS.
- Make sure that the **Allow changing device firmware type** option is set to ON (**Tools > Options**).
- Expand the **Connection** menu and click **USB**.
- On the **Device** menu, click **Read**, or click the **Read** button on the toolbar.

  Or:
- On the **File** menu, click **Open Sample**.
  - In the folder, click the sample file intended for your type of device. Click **Open**.
- In the **Device Information** pane, click **Update Firmware**.
- In the **Firmware update** window, open the **Update to** menu and click the firmware version to which the device will be updated.

2.2 Configuring Event Logic

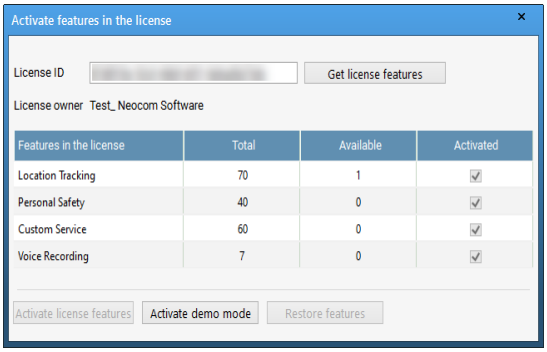
For how to configure Swift Logic parameters, refer to section *4.5, Swift Event Logic* in *TRBOnet Swift CPS User Guide*.

Once you have finished configuring required Swift Logic parameters:

- On the **Device** menu, click **Write**, or click the **Write** button on the toolbar.

2.2.1 Activating Features

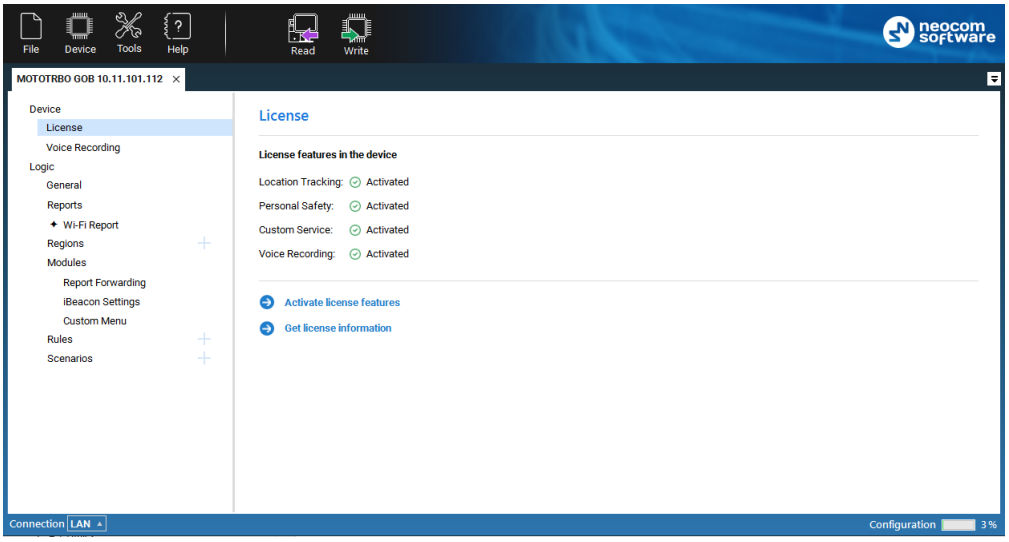
- In the left pane, click **Device > License Information**.
- In the right pane, click **Activate features**.



- In the **Activate features** window, enter the license key.

  Notes: To obtain the license key, contact your Neocom sales representative.
  Your PC must be connected to the Internet when you click the **Check** button.

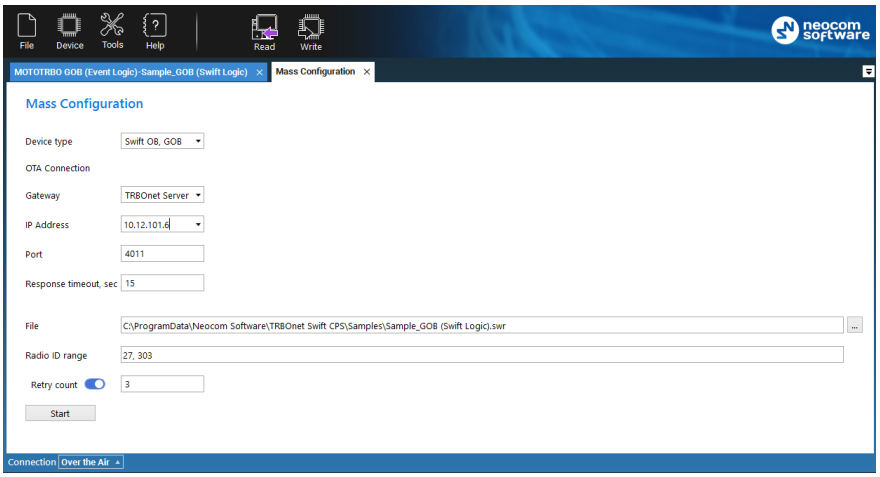
- If the license key is valid, the **Activate features** window displays all features included into the license.
- Click the **Activate features** button.
  - The **Location Tracking** license allows the option board to receive GPS and iBeacon location data from the radio.
  - The **Personal Safety** license allows the option board to use accelerometer to provide personal safety features.
  - The **Voice Recording** license allows the option board to receive voice recording data from the radio.



2.2.2 Mass Configuration

You can configure multiple option boards at once by using the Mass Configuration mode. The OTA connection is used for over-the-air programming of endpoint devices such as an option board ST002 installed into a MOTOTRBO radio.

- On the toolbar, click **Tools > Mass Configuration**.



- In the **Mass Configuration** page, enter the following parameters:
  - **Device type**
    From the drop-down menu, select 'Swift OB, GOB'.
  - **OTA Connection**
    In this section, specify the OTA (over-the-air) Connection-related settings.
    - **Gateway**
      The gateway that can establish an IP connection with TRBOnet Swift CPS and that can communicate with the device over the air.
      Values: TRBOnet Server, Swift IP Gate: Swift A100/ A200
    - **IP Address**
      The IP address of the gateway selected above.
    - **Port**
      This is the Forward Data service port of the TRBOnet Server (if selected above). Default: **4011**.
      To get the port number, launch the TRBOnet Enterprise (PLUS) Server application and select **Radio Systems > Services** in the left pane. Find the port number under the **Forward Data service** option.

      Note: Make sure that the **Forward Data service** option is selected (see section 4.1, TRBOnet Server).

- **Response timeout**
  The time period, in seconds, to wait for a response from the server side (TRBOnet Server, Swift IP Gate).

- **File**
  Enter the full path name for the configuration file (*.swr) that will be sent to the radios specified below.
- **Radio ID range**
  Enter the range of Radio IDs to which the configuration file selected above will be sent.

  Note: Separate each Radio ID with a comma, for example, "105,106,111", or enter the range using the following example: "105-111".
- **Retry count**
  Select this option and enter the number of retries allowed.

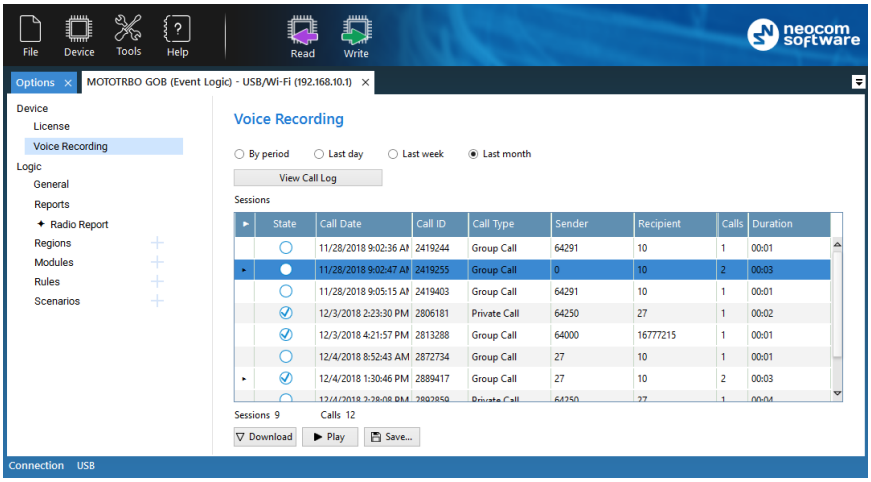
- Once you have specified the desired configuration settings, click **Start**.

3 Voice Recording

The Voice Recording tool available in TRBOnet Switch CPS allows you to retrieve call recordings from the radio and listen to them by using the TRBOnet Player.

Note: In the Swift ST002 option board, the amount of memory for voice records is limited to 256 MB.

- In the left pane, click **Device > Voice Recording**.



- In the **Voice Recording** pane on the right, choose the appropriate time period and click **View Call Log**.

  In the **Sessions** table, you will see the list of audio sessions.
- Select a record or a group of records in the table and click the **Download** button.
  The downloaded record(s) will be marked as checked in the **State** field.
- Once downloaded, the records can be listened to by clicking the **Play** button.
  The TRBOnet Player will open and start playing the selected audio record(s).
- To save downloaded records, click the **Save** button.
  In the **Save As** dialog box, locate the folder where you want to save the audio file, specify the file name, and click **Save**.

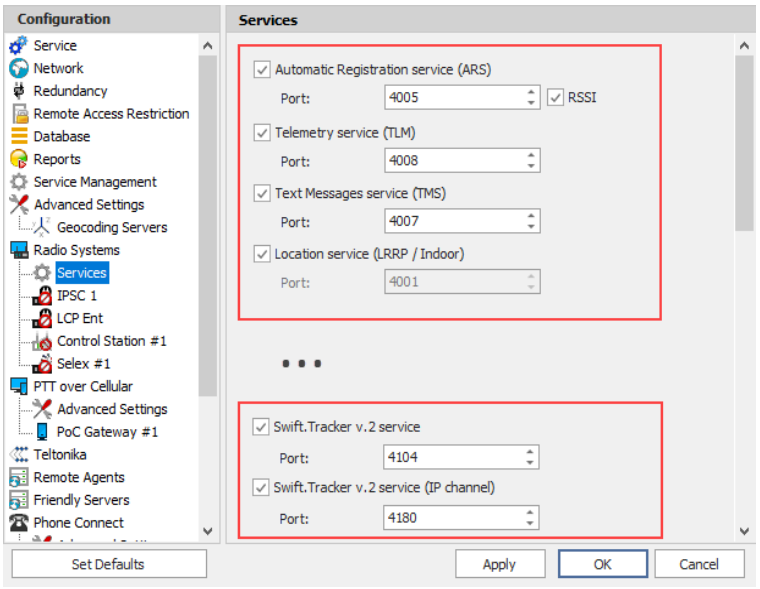
  Note: The audio records will be saved in the TNA format, which is a proprietary audio format that contains additional information about radio calls, such as radio ID, start time, end time, and other parameters. This format provides more details about call participants and allows easy navigation within recorded audio files.

4 Configuring TRBOnet Enterprise

This section describes how to configure TRBOnet Enterprise software to take advantages of using option boards.

4.1 TRBOnet Server

- Run TRBOnet Enterprise Sever.
- In the **Configuration** pane, select **Radio Systems > Services**.



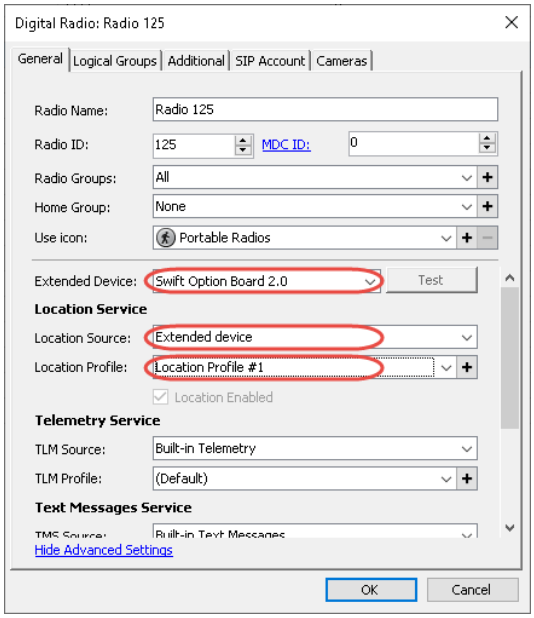
- In the **Services** pane:
  - Select the **Swift.Tracker v.2 service** option and make sure the port number is **4104**.
  - Select the **Swift.Tracker v.2 service (IP channel)** option and make sure the port number is **4180**.
  - Select the **Forward Data service** option and make sure the port number is **4011**.

Note: Selecting the **Forward Data service** option is required for using Mass Configuration in TRBOnet Swift CPS.

4.2 TRBOnet Dispatch Console

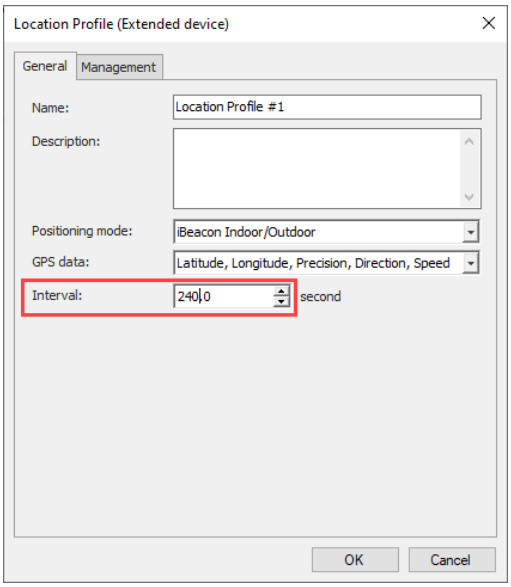
- Run TRBOnet Enterprise Dispatch Console.
- Go to **Administration > Radios**.
- Double-click the desired radio in the list of registered radios.

  The Digital Radio dialog box opens:



- **Extended Device**
  From the drop-down list, select **Swift Option Board 2.0**.
- **Location Service>Location Source**
  From the drop-down list, select **Extended device**.
- **Location Service>Location Profile**
  From the drop-down list, select the location profile to apply.

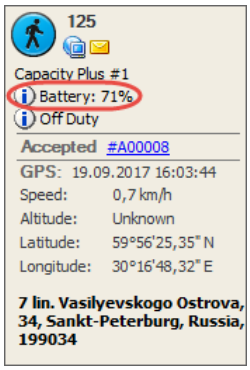
Note: In the applied Location Profile (**Administration > Location Profile**), set the **Interval** parameter to a value two-three times as large as that specified in TRBOnet Swift CPS (**Logic > Report Profiles > Radio Report > Send report every X sec**).



5 Using Option Board Features in Dispatch Console

5.1 Battery Status

- Select a radio in the Radio List and hover the mouse pointer over it:

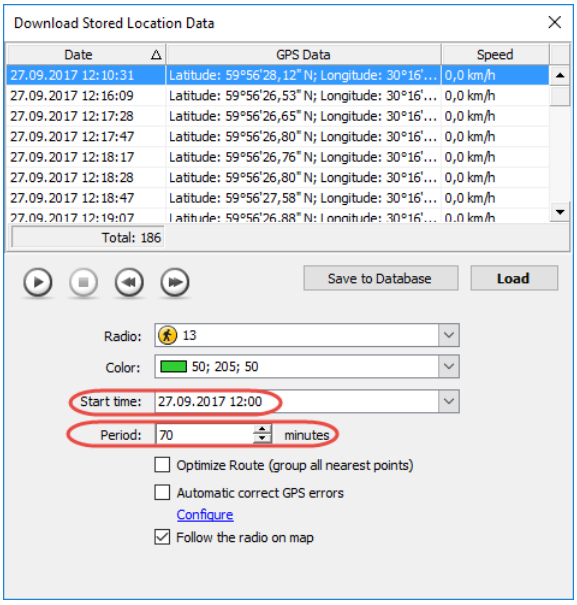


In addition to the common information, you'll see the battery status received from the radio.

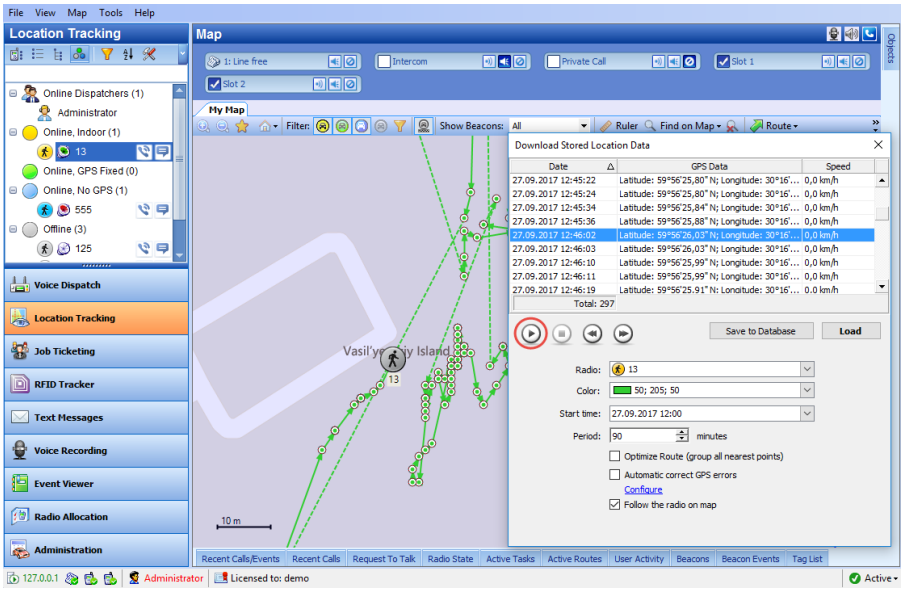
Note: The version of TRBOnet Enterprise must be **5.2.0.1359** or later. The Swift ST002 device firmware version must be **03.00.13** or later. If the radio is equipped with an Impres battery, the dispatcher will be able to see the percentage remaining battery level. Otherwise, the radio will send an alert in the case of a low battery level.

5.2 Downloading Location Data

- Right-click a radio in the Radio List, and on the context menu, choose **Monitoring > Download Stored Location Data**.



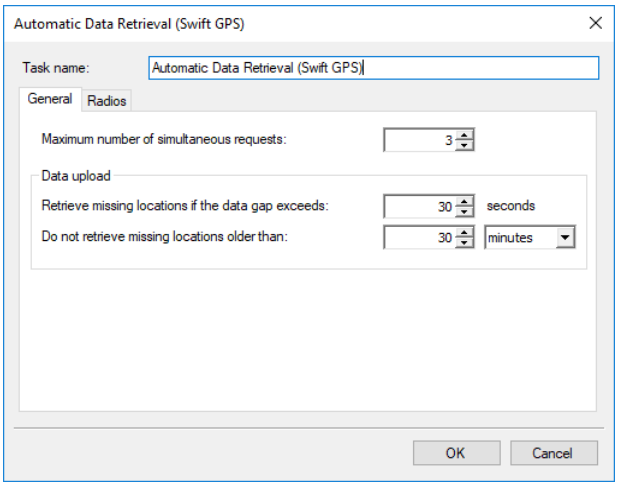
- In the dialog box, specify the following parameters:
  - **Start time**
    Specify the date/time starting from which to load location data from the radio's option board.
  - **Period**
    Specify the time period, in minutes, for which to load location data from the radio's option board.
  - Click **Load** to start loading location data.
  - Once you have finished loading location data, click the **Play** button and see the route made by the radio user on the map.



5.3 Automatic Data Retrieval

The **Automatic Data Retrieval** task is used to automatically retrieve missing location data from the radio's option board.

- Go to **Administration**, **Tasks**.
- In the **Tasks** pane, click **Add > Automatic Data Retrieval (Swift GPS)**.

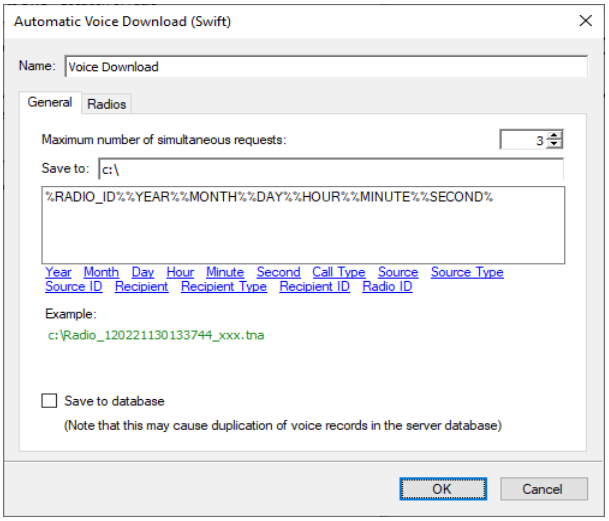


- In the dialog box, specify the following parameters:
  - **Maximum number of simultaneous requests**
    Specify the maximum number of radios being requested at the same time.
  - **Retrieve missing locations if the data gap exceeds**
    TRBOnet Server automatically checks whether the location data is continuous. If it detects data gaps between any consecutive location data that exceed this value, it will attempt to retrieve missing information.
  - **Don't retrieve missing locations older than**
    TRBOnet Server doesn't check location updates for consistency if they are older than this value in seconds, minutes, or hours.
  - On the **Radios** tab, specify the radio(s) to retrieve location data from.
- In the list of tasks, activate the **Automatic Data Retrieval (Swift GPS)** task by selecting the box next to the task name.

5.4 Automatic Voice Download

The **Automatic Voice Download** task is used to automatically retrieve voice data from the radio's option board when the radio is in WiFi zone.

- Go to **Administration**, **Tasks**.
- In the **Tasks** pane, click **Add > Automatic Voice Download (Swift)**.



- In the dialog box, specify the following parameters:
  - **Maximum number of simultaneous requests**
    Specify the maximum number of simultaneously requested radios.
  - **Save to**
    Specify the path where to save voice data on your PC.
  - On the **Radios** tab, specify the radio(s) to retrieve voice data from.

In the list of tasks, activate the **Automatic Voice Download (Swift)** task by selecting the check box next to the task name.