



**GW3-TRBO®**  
**Location**  
**Software Version 2.17.4**  
**Module Book**

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**GW3-TRBO™**

600-2.17.4-KK.1  
2/11/2021



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## Support

Customer satisfaction is our number one priority at Genesis. We are here to provide you with the best software possible, and we want to know when you have any questions, concerns or problems with GW3-TRBO so that we can make it a better product for everyone.

Refer to the *Troubleshooting & Support* section of the GW3-TRBO Manual Shell (Book 600-2.17.4-AA.1) for complete support and contact information.

## **Document History**

<b>Revision</b>	<b>Description</b>	<b>Author</b>
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### Goals

This manual provides instructions on creating and managing Location connections.

### Who Should Read This Manual?

This manual is written for the intended audience of novice to mid-level MOTOTRBO radio system users and novice to mid-level PC users. If your GW3-TRBO installation is licensed for Location connections and you are responsible for setting up these connections, you should read this manual.

### How This Manual Is Organized

This manual is organized as follows:

- **Overview:** Defines the Location module and Location graphical user interface (GUI) and gives instructions on creating and managing location connections.
- **TRBO Location Connections:** Describes how to create and manage TRBO location connections.

This manual contains the following images, used to indicate that a segment of text requires special attention:



**Additional Information:** Additional information is used to indicate shortcuts or tips.



**Warning:** Warnings are used to indicate possible problem areas, such as a risk of data loss, or incorrect/unexpected functionality.





This chapter defines the Location module and the Location GUI and gives instructions on managing Location connections.

This chapter contains the following sections:

- **Terms:** Describes the terms that are needed to understand the Location module.
- **What is Location?:** Defines the Location module and Location GUI.
- **Location Information in GW3-TRBO:** Describes how GW3-TRBO uses location information provided by Location connections.
- **TRBO Location Connections:** Describes properties of the Location connections and how to manage them.
- **Raw Data Files:** Describes how GW3-TRBO archives raw data files.

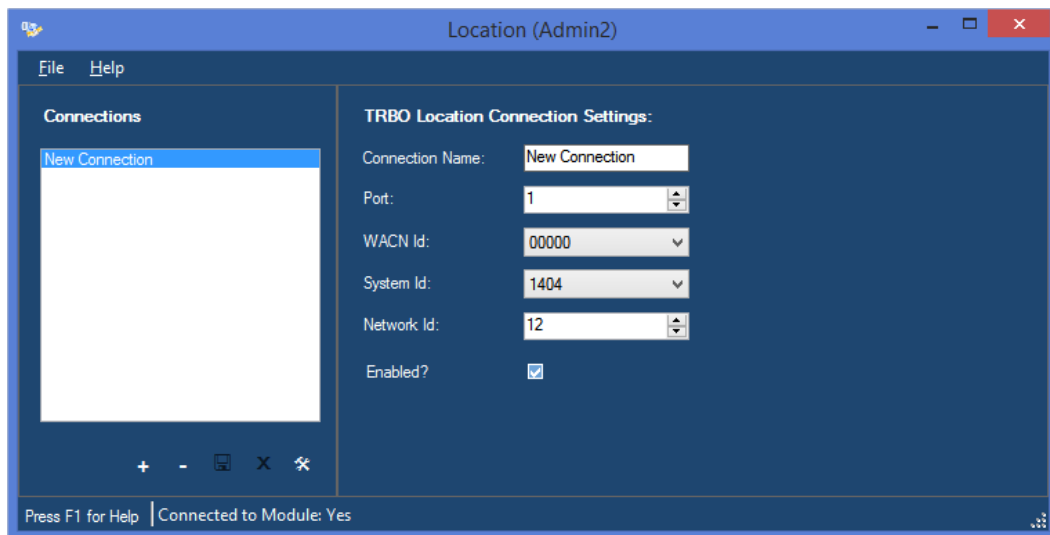


Figure 1.1 – Location GUI

## Terms

- **Location Connection:** Connection that listens for GPS data through one or more connected control station radios.
- **ARS:** Automatic Registration Service.

## What is Location?

The GW3-TRBO Location module manages communication to and from GPS servers via Location connections. Managing these connections includes:

- Listening for GPS data from one or more control station radios connected to the GW3-TRBO PC via USB.
- Reporting connection and session-related errors to the event log.
- Converting proprietary GPS information packets to GW3-TRBO GPS Location packets.

These are just a few of the functions of the Location module. Most of its functions are transparent to GW3-TRBO users.

The Location GUI allows you to manage location connections. These connections reside in the Location module and provide connections to one or more control station radios. Through this GUI you can:

- Add a new connection.
- Update an existing connection.
- Delete an existing connection.

These options are discussed in detail within the specific connection type sections below.

## Location Information in GW3-TRBO

GW3-TRBO uses location information to:

- **Provide *last known location* information to radio-originated activity:** Radio-based activities such as push-to-talks and emergency alarms include the last reported location information of the radio.
- **Report radios that move improbable distances in a short time:** SAM uses time and distance formulas to determine if a radio ID is moving in mysterious ways.
- **Provide GPS information to other third-party applications:** GenSPOut allows you to create custom outputs and forward GPS location information to a serial, TCP/IP or UDP port.

## TRBO Location Connections

To set up a Location connection, you must set up the following hardware and software requirements:

1. The Motorola Multi-Channel Device Driver must be installed on the GW3-TRBO host machine. This driver is responsible for correctly routing data between the PC, the control station radios and GPS-enabled radios in the field.
2. Radios in the field must have GPS and ARS enabled to send and receive GPS data.
3. One or more radios must be connected to the GW3-TRBO host machine using USB programming cables. These radios will receive GPS data over the air from remote radios and forward the data to the connected PC. The control stations also will be used to send GPS requests from GW3-TRBO. (*Note: It is not necessary to create an RF Control Station connection in the Trbo module.*)

### Connection settings

Each Location connection includes the following settings:

- **Connection Name:** Alias of the connection, used to distinguish the connection from other connections.
- **Port:** UDP port used for Location data. MOTOTRBO radios use port 4001.
- **WACN Id:** WACN ID of the system being monitored.
- **System Id:** System ID of the system being monitored.
- **Network Id:** ID number of the CAI network used by the radio system. MOTOTRBO radios have a default CAI network ID of 12 but can be reconfigured in the Customer Programming Software.
- **Enabled:** Indicates if the connection should be started.

### Adding a New Connection

To add a new Location connection, follow the steps below:

1. Click the **Add** button/ Location shows a new connection in the **TRBO Location Connection Settings** panel.
2. Update the connection properties.
3. Click the **Update** button to add the new connection. To cancel adding the new connection, click the **Cancel** button.

## Updating an Existing Connection

After you create a Location connection, the properties of that connection are static (do not change). If, for any reason, you need to change the properties of a connection (network ID needs to be changed, the **Connection Name** has a typo, etc.) take the following steps:

1. Select the connection that you wish to update from the *Connections* list. This will show the properties of this connection in the *TRBO Location Connection Settings* panel.
2. Change the settings that you wish to change.
3. Click the **Update** button. This will save your changes and inform the Location module of the changes. If you wish to cancel this update, click the **Cancel** button.

## Deleting an Existing Connection

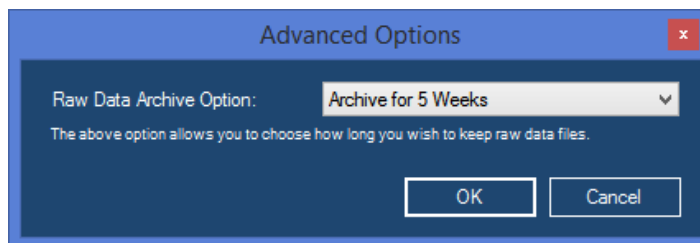
If you ever need to delete an existing connection (in case a connection is no longer valid, etc.), take the following steps:

1. Select the connection that you wish to delete from the *Connections* list. This will show the properties of this connection in the *TRBO Location Connection Settings* panel.
2. Click the **Delete** button. This will result in a confirmation prompt.
3. Click **Yes**.

## Loading the Advanced Options Window

To load the *Advanced Options* window, take the following steps:

1. Load the Location GUI.
2. Click on a connection in the **Connections** list. This will show the connection's properties and enable the **Options** button (bottom left of the window).
3. Click the **Options** button. The *Advanced Options* window will appear.



**Figure 1.2** – Advanced Options Window

## Connection Advanced Options

Each Location connection has advanced options. The list below describes the advanced options:

- **Raw Data Archive Option:** This option allows you to choose how long the GenWatch3 raw data files remain on your GenWatch3 computer.
  - **Do Not Archive:** GenWatch3 should not archive raw data files.
  - **Archive for 1 Week:** GenWatch3 should archive one week's worth of raw data files.
  - **Archive for 2 Weeks:** GenWatch3 should archive two weeks' worth of raw data files.
  - **Archive for 5 Weeks:** GenWatch3 should archive five weeks' worth of raw data files (default).

## Raw Data Files

GW3-TRBO stores raw data files on your GW3-TRBO computer. Genesis and Motorola support personnel use these files to help diagnose GPS data decode issues you may have with GW3-TRBO.

By default, GW3-TRBO will keep five weeks' worth of raw data files per Location connection (2-20 GB depending on GPS activity). You may wish to conserve hard drive space by choosing to keep only one week's worth of raw data files. We suggest you keep the full five weeks, just in case it takes you awhile to notice a GPS server data decode issue.

GW3-TRBO stores the Location raw data files in the following directory:  
*ProgramData\Genesis\GenWatch3\RawData\Location\<WACNId>\<SystemId>*

In the default GW3-TRBO installation directory, if the WACN ID is 500 and the system ID is 1404, the GW3-TRBO raw data directory is:

*C:\ProgramData\Genesis\GenWatch3\RawData\Location\500\1404*

The files in this directory are in the following format:

*GW3\_<year><month><day>\_<hour>.RAW*

The raw data file for the 3:00pm hour on 10/12/2010 would be:

*GW3\_20101012\_15.RAW*

## Changing the Raw Data File Directory

Changing the GW3-TRBO raw data directory is usually not recommended. However, if the default location might not have enough disk space to store the raw data, you may wish to move this archive operation to another drive. For instructions on how to change the raw data file directory, see the *GW3-TRBO Config Files* section of *Chapter 3 – GW3-TRBO Service* in the *GW3-TRBO Core Manual*.



**Warning:** Make sure you only change the *RawDataFilePath* tag. Changing *GenWatch3.config* tags in other areas can cause your computer to become unstable or even unusable. When in doubt, ask for assistance from your IT department or Genesis support.