



GW3-TRBO[®]
RC
Software Version 2.12
Module Book

GW3-TRBO[®]

600-2.12.0-V.1
1/8/2016

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Refer to the *Troubleshooting & Support* section of the GW3-TRBO Manual Shell (Book 600-2.11.0-AA.1) for complete support and contact information.

Document History

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Goals

This manual describes the role and function of the RC tool in the GW3-TRBO solution.

Who Should Read This Manual?

This manual is written for the intended audience of mid-level MOTOTRBO radio system users and novice to mid-level PC users. If you are responsible for any of the following, then you should read this manual:



- Monitoring system events such as Emergency Alarms.
- Issuing radio commands such as Selective Inhibit, Call Alert, etc.

How This Manual Is Organized

This manual is organized as follows:

- **Overview:** Provides an overview of the RC tool.
- **Setup:** Describes the process of setting up RC for use.
- **Monitoring Events:** Describes how to monitor system radio events (such as Emergency Alarms) and the workflow for these events.
- **Issuing Commands:** Describes how to issue radio commands (such as Selective Inhibit, Call Alert, etc.).
- **Monitoring Commands:** Describes how to monitor the progress of an issued command (such as Selective Inhibit, Call Alert, etc.).
- **Radio Compatibility:** Gives a list of radios that are tested to be compatible with the radio commands issued by Halcyon via RC.

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.

Important Note

The MOTOTRBO “backbone” that GW3-TRBO uses is a powerful stream of data that, as time goes by, will be revealing much more of its power. You may notice GW3-TRBO terms, setup options or real-time activity properties that may not make sense in the current MOTOTRBO world. If you see terms, options or properties that are not adequately explained in your GW3-TRBO documentation, please contact support, look in the Glossary section of the GW3-TRBO Manual Shell, or on our GW3-TRBO web site. If you see terms, options or properties that you understand, but do not pertain to MOTOTRBO, please disregard them for the time being. As new MOTOTRBO features are added over time, you will begin to understand that your GW3-TRBO is ready for those MOTOTRBO enhancements!

This chapter provides an overview of the RC interface and its features.

This chapter contains the following sections:

- **What is RC?:** Defines the role and function of the RC tool.
- **Menu Options:** Describes the menu options provided by RC.
- **Information Panels:** Describes the RC information panels.
- **Selecting Radio IDs:** Describes the process of selecting radio IDs.

What is RC?

The **R**adio **C**ontrol tool allows you to:

- Monitor system radio events, including:
 - Emergency Alarms
- Issue batch commands, including:
 - Call Alert
 - Request Radio Affiliation (also known as Radio Check or Radio Ping)
 - Selective Inhibit / Cancel Selective Inhibit
 - IP Console Inhibit / Cancel IP Console Inhibit
 - Slot Disable
 - Repeater Enable / Disable

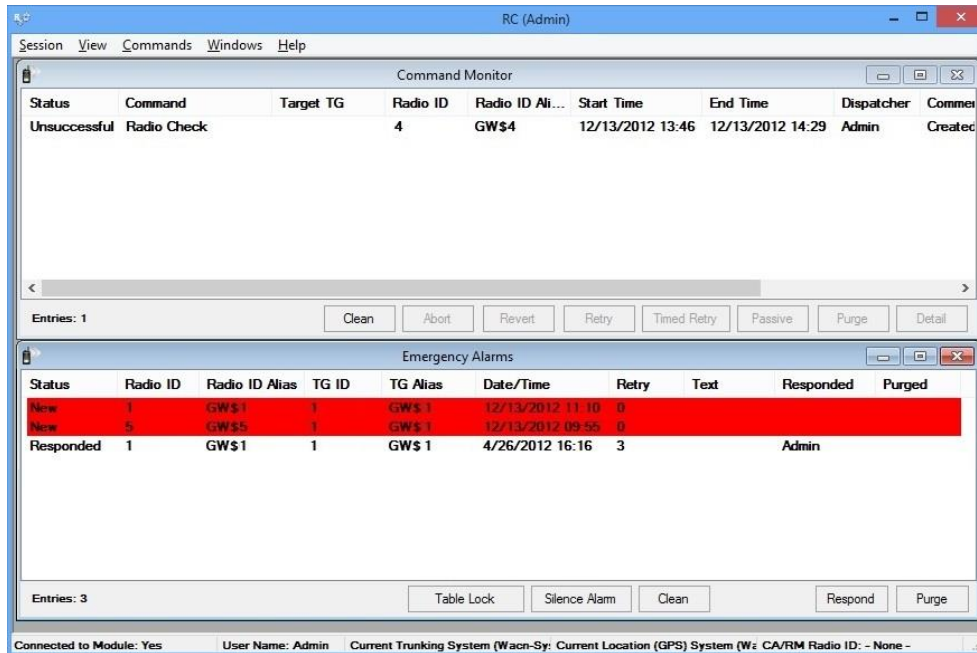


Figure 1.1 – RC GUI



Any of the above windows can be closed to preserve screen space for the windows that you actually use.

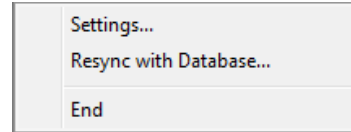
Menu Options

The following menu options are available in RC:

Session Menu

Settings...

This screen allows you to choose the system that will broadcast the commands that you issue. This selection does not limit the system that you are monitoring for system radio events. In this screen you can also choose the radio ID to use as the originating radio ID when issuing Call Alert commands.



When using an RF control station to issue radio commands, it is advisable to choose the radio ID of the control station as the source radio ID.

Resync With Database...

This synchronizes the RC screen with the GW3-TRBO database. This should rarely, if ever, need to be used. GW3-TRBO maintains all necessary system information in memory in case the database goes down, so that it can continue to function without database connectivity.

If you find that you are repeatedly losing connectivity to the module and/or database, or notice that some information in your RC screen does not match what you see elsewhere in GW3-TRBO, you will want to use this feature to make sure that your RC screen's system information is fully updated.

Likewise, if you are notified by a system administrator that the GW3-TRBO database will be going down (for maintenance, etc.), it would be prudent to use this feature to ensure that you are fully synchronized before the database goes offline.

End

Ends the session and closes the RC screen, saving current window states to your profile settings.

View Menu

Command Monitor

Shows / hides the *Command Monitor* window. The check to the left of this menu option indicates if the window is currently visible. (See Figure 1.1, section 2)

Emergency Alarm Window

Shows / hides the *Emergency Alarm* window. The check to the left of this menu option indicates if the window is currently visible. In order to open this window, you must be licensed for Emergency Alarm and your user must have the *Emergency Alarm* privilege. (See Figure 1.1, section 3)



Show All

Opens all of the licensed View windows that are valid for this user.

Refresh

Requests a “list reload” from the Halcyon module. This will clear each window and request a list of current commands and events from Halcyon. While waiting for their list of commands, each window will show (*Loading List...*) text in the title of the window. Once the first command or event is received, the text will change to (*Loading list x of n...*), where *x* is the current command index in the reload and *n* is the number of commands that will be received in the reload. The lists also display this information when the RC screen is first loaded.

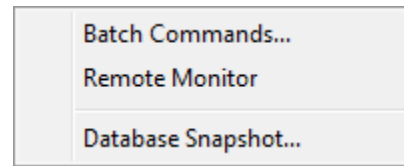


Requesting a Refresh will undo the effect of the **Silence Alarm** button. If your *Emergency Alarms* window contains one or more new Emergency Alarms, the alarm will sound until silenced again.

Commands Menu

Batch Commands

Allows you to create and send radio commands that can target from one to 100 radio IDs. Batch commands include Selective Inhibit, Call Alert, etc. See Chapter 4 for a detailed list and description of batch commands.



Database Snapshot

Returns a historical query for a single radio. This provides a quick glance of the state of a radio. In order to open this window, you must be licensed for Database Snapshot and your user must have the Database Snapshot privilege. See Chapter 4 for more information on database snapshot.

Windows Menu

Tile

Tiles all open windows.

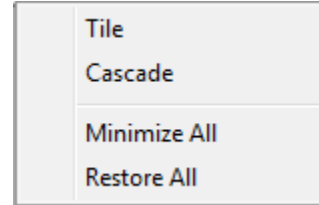
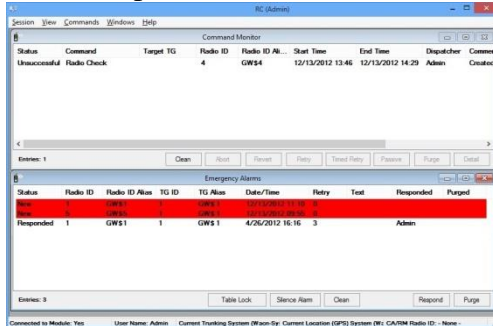


Figure 1.2 – Tiled Windows

Cascade

Cascades all open windows

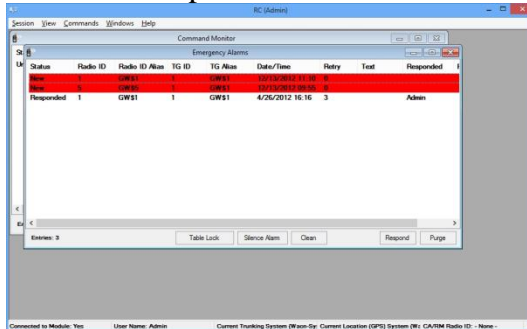


Figure 1.3 – Cascaded Windows

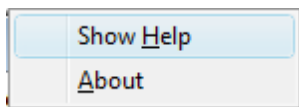
Minimize All

Minimizes all open windows

Restore All

Restores all open windows that are minimized, returning them to the state they were in before they were minimized.

Help Menu



Show Help

Shows the help for RC.

About

Shows the RC About box.

Information Panels

The RC tool contains the following information panels:

- **Module Connection:** Shows one of two messages:
 - **Connected To Module: Yes** – This indicates that the RC screen is currently connected to the Halcyon module.
 - **Connected to Module: No** – This indicates that the RC screen is NOT currently connected to the module. This is bad. If you see this state on RC screen, report this to your system administrator.
- **User Name:** Shows the user name of the current RC user. This panel shows “none”:
 - If the RC module is disconnected from the Halcyon module.
 - Until the user is authenticated by the Halcyon module. This is only done when the RC screen first loads.
- **Current Trunking System:** Shows the current target system for radio commands issued in the RC GUI for the current user.
- **Current Location (GPS) System:** Shows the current target system for GPS location commands issued in the RC GUI for the current user.
- **CA Radio ID:** Shows the source radio ID provided in Call Alert commands sent in the RC module for the current user. This is the radio ID displayed on the target radio when a call alert is sent.

Connected to Module: Yes // User Name: Admin // Current Trunking System (Wacn-System:Zone:Site): 00000-1404:1:1 Current Location (GPS) System (Wacn-System): None Selected CA/RM Radio ID: 25

Figure 1.4 – Information Panels



When the RC screen is not connected (via TCP/IP) to the Halcyon module, some menu options are disabled (see module connection above).



When the RC database is not connected, some menu options are disabled.



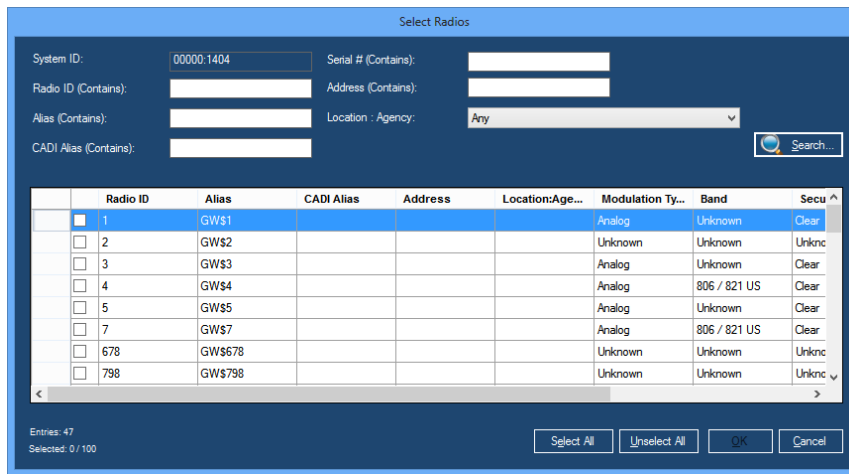
If any information in the Information Panel is not viewable, place the mouse cursor over the information to see a tooltip containing all information for that section.

Selecting Radio IDs

Whenever RC needs a radio ID to accomplish a selected task, it provides the *Select Radios* window. With this window you can query the Alias database for radio IDs and select them from the list. This approach eliminates data-entry mistakes.

To perform a search using the *Select Radios* window, follow the steps below:

1. Enter your search criteria (or leave blank for all).
2. Press enter or click on the **Search** button: This will load the radio list.
3. In the radio list, check each radio ID that you want to select (or click the **Select All** button).
4. Press the **OK** button.



The screenshot shows the 'Select Radios' window with the following search criteria:

- System ID: 00000:1404
- Radio ID (Contains):
- Alias (Contains):
- CADI Alias (Contains):
- Serial # (Contains):
- Address (Contains):
- Location - Agency: Any

The search results table is as follows:

Radio ID	Alias	CADI Alias	Address	Location:Age...	Modulation Ty...	Band	Secu
<input checked="" type="checkbox"/> 1	GW\$1				Analog	Unknown	Clear
<input type="checkbox"/> 2	GW\$2				Unknown	Unknown	Unknc
<input type="checkbox"/> 3	GW\$3				Analog	Unknown	Clear
<input type="checkbox"/> 4	GW\$4				Analog	806 / 821 US	Clear
<input type="checkbox"/> 5	GW\$5				Analog	Unknown	Clear
<input type="checkbox"/> 7	GW\$7				Analog	806 / 821 US	Clear
<input type="checkbox"/> 678	GW\$678				Unknown	Unknown	Unknc
<input type="checkbox"/> 798	GW\$798				Unknown	Unknown	Unknc

Buttons at the bottom: Select All, Unselect All, OK, Cancel. Status: Entries: 47, Selected: 0 / 100.

Figure 1.5 – Select Radios window

The most common way to select a radio ID is to type in a partial radio ID alias and press the **Enter** key. For example, if you want to selective inhibit a radio ID with an alias of CITY 1, then you would take the following steps:

1. Type **CITY** into the **Alias** box.
2. Press **Enter**: This will return all radio IDs with the word **CITY** in their alias, such as **CITY 1**, **CITY 2**, and **NY CITY**.
3. Click the check box next to **CITY 1**.
4. Click the **OK** button.

Why are some Radio IDs missing?

GW3-TRBO will omit a radio ID from the list for the following reasons:

- The search criteria you entered do not include the radio ID.
- You are attempting a Batch Command and the radio ID is already included in the Batch Command's radio ID list.
- The radio ID does not exist in the Alias database under the system associated with your Current System.
- Your user does not have a radio ID's **Default Group** as a talkgroup in its attachment list (for more information on attachment lists, see the Security section of the GW3-TRBO Core Manual).

RC settings are stored on a per-user basis. If a user loads the RC tool on a different computer and later on her normal computer, the RC tool will still load the settings that were saved from the last session on the normal computer. These settings include:

- Current system.
- Source radio ID for call alerts.
- Open windows (such as *Command Monitor* window, *Emergency Alarm* window, etc.).
- Window positions and sizes.

This chapter describes how to set up user options for the RC screen.

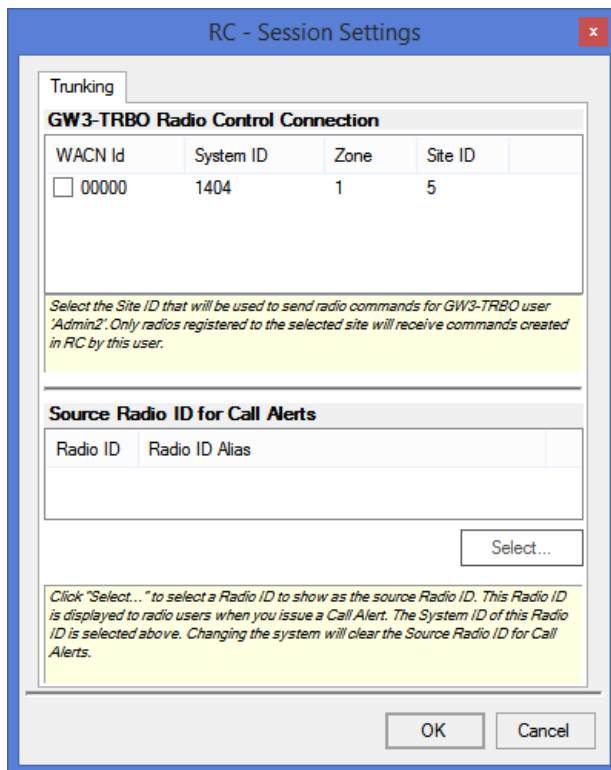


Figure 2.1 – Session Settings Screen

Setting User Options

The user options are set in the *Session Settings* window. To set the user options, take the following steps:

1. In the RC menu, click on Session → Settings: This will open the *Session Settings* window (Figure 2.1).
2. In the **GW3-TRBO Radio Control Connection** list, choose your system by checking the checkbox next to the desired system.
3. Under the **Source Radio for Call Alerts** list, click the **Select...** button; this will load the *Radio ID Selector* window.
4. Choose the radio ID that you would like to display on Call Alerts.
5. Click the **OK** button.
6. In the *Session Settings* window, click **OK** to save your user changes.



If your user's attachment list does not contain at least one talkgroup on a system, this system will not be shown in the *Session Settings*' **Systems** list. If your role contains the *ViewAllGroups* privilege for Halcyon, systems WILL NOT be excluded from this list based on your user's attachment list.



You will not be able to issue Call Alerts until you have selected a **Source Radio ID for Call Alerts**.



If you are not licensed for Call Alert or if your user's role does not contain the *Call Alert* privilege for Halcyon (in Security) then you will not have access to the **Source Radio ID for Call Alerts** section of this screen.



Your selected system determines the system that will issue the commands you create in RC. It does not prohibit event delivery.

RC monitors the following system radio events:

- **Emergency Alarms**

These events are referred to as **Reactive Commands** or **Reactive Events**. This is because these events are issued from a radio and the dispatcher's workflow involves reacting to these events. Reactive Events are not initiated by a dispatcher. They are initiated by a radio user. This chapter describes how to monitor and react to these events.

This chapter contains the following sections:

- **User Validation and Events:** Refers to the Halcyon module book for detailed information about user validation and events.
- **Reactive Event Life Cycle:** Describes the reactive event workflow offered by RC.
- **Reactive Event Limits:** Shows the storage limit of each reactive event type.
- **Common Event Window Buttons:** Describes the buttons common to each event window.
- **Emergency Alarms:** Describes how RC displays and processes emergency alarms.

User Validation and Events

Refer to the *Halcyon module book* for a description of Halcyon's user validation for reactive events. See *Help\Halcyon\Halcyon.htm*.

Reactive Event Life Cycle

This section describes the life cycle of a reactive event.

The life cycle is as follows:

1. A radio user issues a reactive event.
2. The Halcyon module receives the event.
3. The Halcyon module archives the event, marking it as *New*.
4. The Halcyon module passes it to each valid (see *User Validation and Events* above) RC connected user.
5. RC user selects the event in its list, marking the event as *Recognized* on this user's screen only.
6. RC user clicks the **Respond** button targeting the selected event(s), marking the event(s) as *Responded* on all connected user's screens.
7. RC user clicks the **Purge** button, targeting the selected event(s). This marks the event(s) as *Purged* on all other connected user's screens and removes it from the list of the user that issued the purge.

Reactive Event Limits

Halcyon will store a maximum of 1,000 Emergency Alarms.

This limit includes all users and all systems monitored by Halcyon. If an event is received and the event limit is reached, Halcyon will purge the oldest event. All users that have this event in their event list will see the event as Purged. In this case, the Purged By column will read “HALCYON-PRUNING.” This means that Halcyon automatically purged this event, and not a GW3-TRBO user.

Each event list shows the entries count for the list in the bottom left of the window. The event windows are limited to showing 25 of the newest events. When the 26th event is received, it is added to the top of the list and the oldest event will drop off the end of the list. This dropped event is not purged; it is just not shown in the list. If there are ever more events in Halcyon than can be shown in the list, the Entries count will show something like **Entries: 25 (of 30)**. This indicates that there are actually 30 events available for this user, but only 25 are shown.



Each reactive event window will show a maximum of 25 of the latest reactive events. You must purge newer events to view the older events. This is not the archived maximum. This is only a display maximum (see *Reactive Event Limits* section later in this chapter).

Common Event Window Buttons

Each Event Window features the following common buttons (Figure 3.1):

- **Table Lock:** This button allows you to turn on and off table locking. When a table is locked, RC does not add new events to an Event Window. This feature allows you to manage existing events without being interrupted by new ones. The new events are received by RC; they are just not added to the list until the table is unlocked.
- **Clean:** This button clears all Purged events from the Event Window. This feature allows you to keep your Event Windows clean with only a single button click.



Figure 3.1 – Common Event Window Buttons

Emergency Alarms

Radios issue Emergency Alarm events when the radio user presses the radio's Emergency Alarm button. Refer to the *Reactive Event Life Cycle* section for more information on how your actions on this screen can lead to status changes for the event.

Monitoring Emergency Alarms

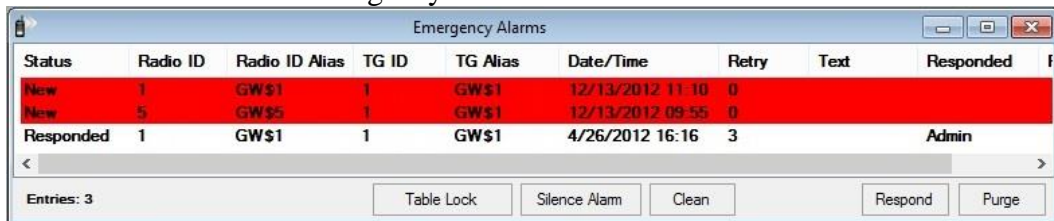
Emergency alarm events are shown in the *Emergency Alarm* window (Figure 3.2). Each new emergency alarm is added to the top of the list. The emergency alarm list contains the following values:

- **Status:** Shows the current status of the command. These statuses include:
 - **New:** You have received the event.
 - **Recognized:** You have clicked on the event.
 - **Responded:** You or another user has responded to the event.
 - **Purged:** Another user has purged the responded event.
- **Radio ID:** The radio ID that issued the event.
- **Radio ID Alias:** The alias of the radio ID that issued the event.
- **TG ID:** The talkgroup the radio ID was on when the event was issued.
- **TG Alias:** The alias of the talkgroup the radio ID was on when the event was issued.
- **Date / Time:** Date and Time the event was issued.
- **Retry:** The number of times this event from this radio ID was received before the event was Responded.
- **Text:** The emergency text value assigned to the radio ID in the Alias screen. Such as "Call x3322" to prompt the RC user to call a particular extension when this radio ID issues an emergency alarm.
- **Responded:** Who (if anyone) responded to this event.
- **Purged:** Who (if anyone) purged this event. This is the result of another RC user purging an event that is in your list.

Audible Alarm

As long as the Emergency Alarm list contains a non-responded event, an audible alarm will sound. To silence the alarm, take one of the following actions:

- Respond to all non-responded events
- Click the **Silence Alarm** button: The audible alarm is silenced until RC receives a new Emergency Alarm



The screenshot shows a window titled "Emergency Alarms" with a table of events and control buttons. The table has columns for Status, Radio ID, Radio ID Alias, TG ID, TG Alias, Date/Time, Retry, Text, and Responded. The first two rows are highlighted in red, indicating they are new events. The third row shows a responded event. Below the table are buttons for "Table Lock", "Silence Alarm", "Clean", "Respond", and "Purge".

Status	Radio ID	Radio ID Alias	TG ID	TG Alias	Date/Time	Retry	Text	Responded
New	1	GW\$1	1	GW\$1	12/13/2012 11:10	0		
New	5	GW\$5	1	GW\$1	12/13/2012 09:55	0		
Responded	1	GW\$1	1	GW\$1	4/26/2012 16:16	3		Admin

Figure 3.2 – Emergency Alarms Window

The **Silence Alarm** button will blink red as long as the audible alarm is active. Anytime the *Emergency Alarm* window is evaluated (selecting **Clean** or removing an entry with **Purge**) and contains an emergency with a **Status** of new the audible alarm will be activated.

RC allows you to issue commands to radios. Some commands can target multiple radios; others target single radios. These commands are referred to as **Proactive Commands**, because the RC user originates the command.

This chapter contains the following sections

- **Batch Commands:** Describes the radio commands that can target up to 100 radio IDs.
- **Single Radio Commands:** Describes the radio commands that target exactly one radio ID.

Each of these command types are described in detail in the following section.

Batch Commands

Batch commands are commands that can target up to 100 different radio IDs.

Batch commands include:

- **Call Alert:** Sends a Call Alert event to a radio, showing the radio ID of the dispatcher. You must be licensed for *CallAlert* and your user's role must have the *Call Alert* privilege or this command will not be available. Additionally, you must set up a source radio ID for call alerts in **System Settings**.
- **Radio Check:** Pings the radio to determine if it is active on the system. You must be licensed for *RadioCheck* and your user's role must have the *Radio Check* privilege or this command will not be available.
- **Selective Inhibit:** Disables a radio. The radio still receives commands, but cannot transmit events or receive conversation. You must be licensed for *RadioInhibit* and your user's role must have the *Selective Inhibit* privilege or this command will not be available. On Connect Plus systems, this command will be considered successful when the controller responds.
- **Cancel Selective Inhibit:** Enables a radio that was previously disabled via selective inhibit. You must be licensed for *RadioInhibit* and your user's role must have the *Selective Inhibit* privilege or this command will not be available. On Connect Plus systems, this command will be considered successful when the controller responds.
- **IP Console Inhibit:** Disables the radio's ability to transmit or receive call activity on its current channel. For Capacity Plus systems, the radio is prevented from monitoring any frequency on the system. You must be licensed for *IPConsoleInhibit* and your user's role must have the *IP Console Inhibit* privilege or this command will not be available. The involved repeaters and radios must have a minimum firmware version of R1.7 to transmit or receive the IP Console Inhibit command.

- **Cancel IP Console Inhibit:** Enables a radio that was previously disabled via IP Console Inhibit. You must be licensed for *IPConsoleInhibit* and your user's role must have the *IP Console Inhibit* privilege or this command will not be available. The involved repeaters and radios must have a minimum firmware version of R1.7 to transmit or receive the Cancel IP Console Inhibit command.
- **Slot Disable:** When a Slot Disable command is issued, the Trbo module will detect whether the targeted radio is transmitting a call. If so, Halcyon will instruct the repeater on which the call is sourced to disable its over-the-air repeating function on the appropriate slot. When the repeater detects the end of the call, it will automatically re-enable the slot for repeating. In addition, on IP Site Connect wide area channels, the repeater may automatically target the selected radio with an IP Console Inhibit command to prevent further use of the radio system. If the targeted radio is not transmitting a call when this command is sent, Halcyon will place the command into the Passive state and retry the next time the radio keys up. You must be licensed for *SlotDisable* and your user's role must have the *Slot Disable* privilege or this command will not be available. The affected repeater must have a minimum firmware version of R1.7 to accept a Slot Disable command. Note that the Slot Disable command will be sent by the repeater multiple times over the duration of the PTT.
- **Repeater Disable:** Disables and reboots a repeater on the MOTOTRBO system. This will prevent the repeater from receiving or transmitting until it is re-enabled. This command can target a channel or satellite receiver. You must be licensed for *RepeaterDisable* and your user's role must have the *Repeater Disable* privilege or this command will not be available.
- **Repeater Enable:** Enables and reboots a disabled repeater on the MOTOTRBO system. This command can target a channel or satellite receiver. You must be licensed for *RepeaterDisable* and your user's role must have the *Repeater Disable* privilege or this command will not be available.

On Connect Plus systems, only the Selective Inhibit, Cancel Selective Inhibit and Radio Check commands are available.

Batch Commands Window

Batch Command Window Options

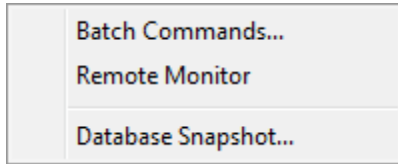
Batch commands are issued from the *Batch Command* window. This window allows you to define and send your batch command. The *Batch Command* window contains the following properties (refer to Figure 4.1):

- **Command:** The command to issue (see Batch Commands above for a list of commands).
- **Target Radio IDs:** All radio IDs targeted by the Batch Command. Up to 100 different radios can be selected.
- **Comment:** Optional comment to display for this batch command.



The Commands window will show a maximum of 100 commands. RC will not allow you to create a command while you have 100 commands in your *Commands* window. To create a command, purge one or more commands in the *Commands* window. See Chapter 5 for more information on purging commands.

Issuing a Batch Command



To issue a batch command, follow the steps below:

1. Load the *Batch Commands* window (Figure 4.1) by choosing **Commands** → **Batch Commands...** from the **Commands** menu.
2. Choose a **Command** from the drop-down list.
3. Click the **Add...** button: This will load the *Radio ID Selector* screen
4. Choose the radio ID(s) that you wish to target with this command.
5. Click **OK** to close the *Radio ID Selector* screen.
6. Optionally, enter a comment.
7. Click the **Submit** button: This will send the batch command to the Halcyon module. You will see your command appear in the **Command List**. From here you can monitor its progress.

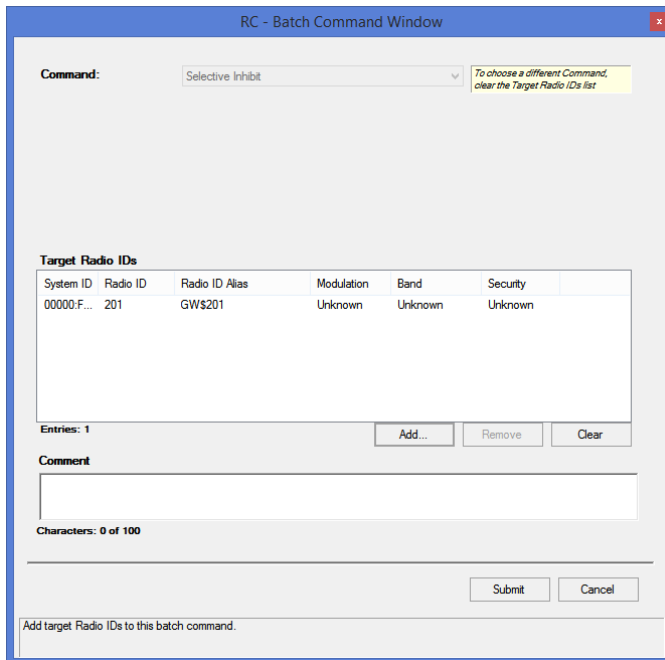


Figure 4.1 – Batch Commands

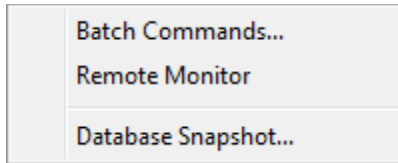
Single Radio Commands

Single radio commands are commands that target a single radio ID. These commands include:

- **Database Snapshot:** Queries the Halcyon database for radio command and radio event history for a radio ID. You must be licensed for Database Snapshot and your user's role must contain the Database Snapshot privilege or this window will not be available.

Each command is described in detail in the following sections.

Issuing Database Snapshot Commands



To issue a Database Snapshot command, take the following steps:

1. Click on the **Database Snapshot...** option under the **Commands** menu: This will load the *Database Snapshot* window (Figure 4.3).
2. Click on the **Select...** button: This will load the *Radio ID Selector* window (see Figure 1.5).
3. Select exactly one radio ID.
4. Click the **OK** button: This will close the *Radio ID Selector* window.
5. Click the **Query...** button: This will execute a query on the Halcyon database and fill in the applicable values in the **Database Snapshot** grid.

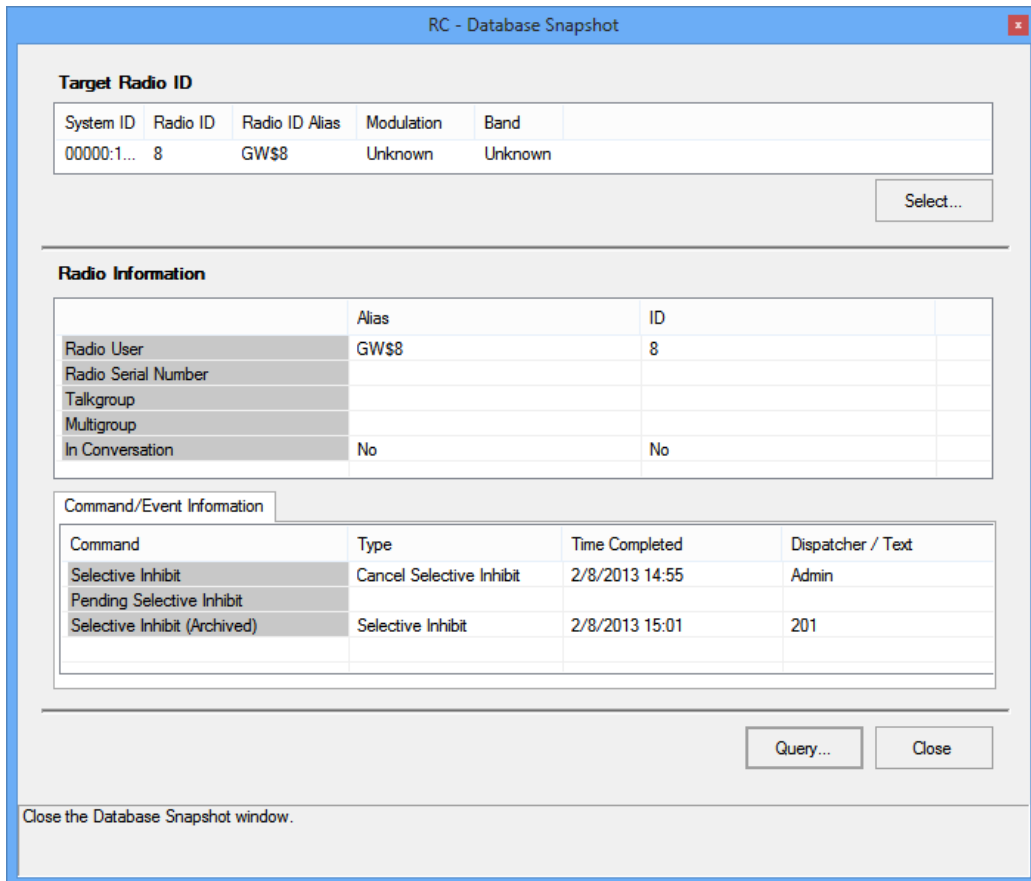


Figure 4.3 – Database Snapshot with Results

Radio Information

The **Radio Information** is pulled from the GW3-TRBO alias database. This is the **last known** information. This information is followed by (*database*) to indicate it was pulled from the alias database.

The **In Conversation** row indicates via **Yes** or **No** if Halcyon determines the radio was in a conversation at the time of the database snapshot. If the row shows **Unknown**, Halcyon was unable to determine the status of the selected radio ID.

The **In Conversation** row will indicate **Yes** if:

- The selected radio is in a group call it initiated.
- The selected radio is a party to a private call.
- A call is in progress on the last talkgroup on which the radio ID issued a group call.

Command/Event Information

This section shows information for the last Inhibit command issued to this radio ID. For example, this section will either show completed or pending information, but not both. If the last Inhibit for this radio ID is completed, then the Inhibit row is populated. If the last Inhibit for this radio is pending, then the Pending Inhibit row is populated. The Archive row shows the last successful Inhibit command in the archive tables, which can include radio to radio inhibits.



NOTE: This screen does not support printing. If you wish to print this screen, hold down the Alt button and press the PrtScrn button. This will copy the Database Snapshot window to your clipboard. Load Microsoft Paint (click Start, Accessories, Paint). Copy the contents of your clipboard into Microsoft Paint by holding down the Ctrl button and pressing the V button. From the File menu of Microsoft Paint, choose Print. This will print to the Database Snapshot screen to your printer. You can also copy your clipboard (using Ctrl+V) into Microsoft Word and many popular email applications.

Each proactive command will contain a proactive task per radio ID and per command type included in the command. A proactive task is a single radio command (such as selective inhibit or call alert) that targets a single radio ID.

This section contains the following sections:

- **Proactive Command Limits:** Describes the quantity limit on proactive commands.
- **Command Monitor:** Describes the *Command Monitor* window.
- **Command Details:** Describes the *Command Details* window.
- **Proactive Task requests:** Describes the actions you can request Halcyon to perform on tasks within a command.

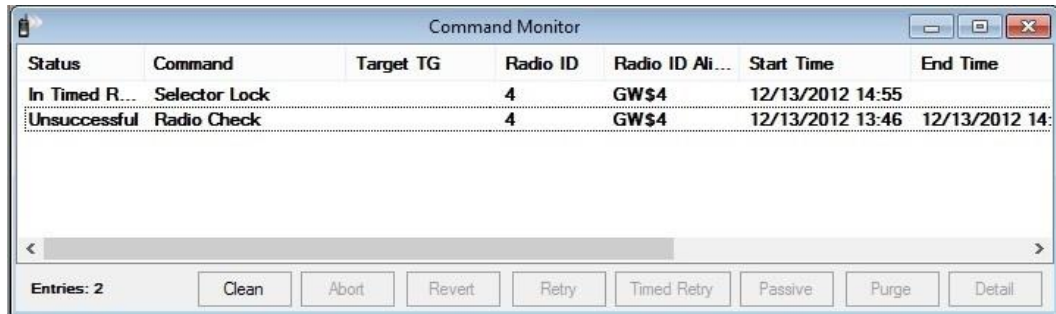
Proactive Command Limits

Halcyon will store a maximum of 500 commands. This limit includes all users. If a command is issued and a command limit is reached, Halcyon will prune the oldest command in its list. This includes all tasks for this command. The user that issued the pruned command will notice that the command is deleted from his or her Command List. No other notification that a command was pruned is issued. The deleted commands are still available for reporting. This process simply frees up room for more current commands.

The Command List shows the entries count for the list in the bottom left of the window. The command window is limited to showing 100 of the newest commands issued by this user. When the 101st command is issued, it is added to the top of the list and the oldest command will drop off the end of the list. If there are ever more commands in Halcyon than can be shown in the Command List, the Entries count will show something like **Entries: 100 (of 110)**. This indicates that there are actually 110 commands issued by this user, but only 100 are shown. As you purge commands from the Command List, the commands that were previously in excess of the 100 command limit will begin to show.

Command Monitor

The *Command Monitor* (Figure 5.1) shows up to 100 of the most recent non-purged commands executed by the current user. These commands include the Batch Commands described in the previous chapter.



The screenshot shows a window titled "Command Monitor" with a table of command execution records. The table has seven columns: Status, Command, Target TG, Radio ID, Radio ID Ali..., Start Time, and End Time. Two rows are visible in the table. Below the table is a horizontal scrollbar and a row of control buttons: Entries: 2, Clean, Abort, Revert, Retry, Timed Retry, Passive, Purge, and Detail.

Status	Command	Target TG	Radio ID	Radio ID Ali...	Start Time	End Time
In Timed R...	Selector Lock		4	GW\$4	12/13/2012 14:55	
Unsuccessful	Radio Check		4	GW\$4	12/13/2012 13:46	12/13/2012 14:

Figure 5.1 – Command Monitor

Command Monitor Columns

The *Command Monitor* contains the following columns:

- **Status:** The collective status of the tasks within the command (see Command Details for more information on these statuses).
 - In Passive
 - In Timed Retry
 - Unsuccessful
 - Initializing
 - In Progress
 - Successful
- **Command:** The basic command type. These types include:
 - Radio Check
 - Selective Inhibit
 - Cancel Selective Inhibit
 - Call Alert
 - IP Console Inhibit
 - Cancel IP Console Inhibit
 - Slot Disable
- **Target TG:** Talkgroup targeted by the command (if any) if there is exactly one talkgroup targeted by all tasks.
- **Channel:** Channel (repeater) targeted by the command (if any). This only applies to Repeater Enable and Repeater Disable commands.
- **Radio ID:** Radio ID targeted by the command if there is exactly one radio ID targeted by all tasks.
- **Radio ID Alias:** Radio Alias targeted by the command if there is exactly one radio ID targeted by all tasks.
- **Start Time:** The date and time the command was issued.
- **End Time:** The date and time the last task in the command completed (either successful or unsuccessful).
- **Dispatcher:** The dispatcher (RC user) that issued this command.
- **Comments:** Comment assigned to the command when the command was created.
- **Reason:** The reason a task in the command failed, shown for the most recently failed task within the command (if any).

Proactive Task Life Cycle

Each proactive command contains at least one task. A task is an operation (such as Selective Inhibit, Call Alert, etc.) targeting a single radio ID. The state of command is derived by the state of the tasks within the command. The highest priority state of the tasks is shown as the state of the command in the Command Monitor. The task statuses have the following priorities, shown from highest to lowest priority:

1. In Passive
2. In Timed Retry
3. Unsuccessful
4. Initializing
5. In Progress
6. Successful

This means that if a command contains Task A with state Successful and a Task B with state In Passive, the command's state will show as In Passive, because Task B's state has a higher priority.

Command Monitor Buttons

The following buttons are shown at the bottom of the *Command Monitor*:

- **Clean:** Purges all Successful and Invalid commands.
- **Abort:** Aborts each qualified task within each selected command. Qualified tasks have a status of In Progress, In Timed Retry or In Passive. *Abort* means Stop. Halcyon will stop processing each aborted task. Each Aborted task will show a state of *Unsuccessful* with a Reason of *Aborted by User*.
- **Revert:** Reverts each *Successful* task within each selected command. Halcyon will undo the action of the task. For example a *Revert* on a *Selective Inhibit* task will result in a *Cancel Selective Inhibit*. *Call Alert*, *Radio Check*, and *Slot Disable* cannot be *Reverted*.
- **Retry:** Retries each *Unsuccessful* task within each selected command. This is a one-time manual retry that will attempt a simple *Retry* of each *Unsuccessful* task. *Unsuccessful* retries are placed in *Timed Retry*.
- **Timed Retry:** Places each *Unsuccessful* task within each selected command into *Timed Retry*. Each task will be attempted once per minute for five minutes, or until *Successful*. Tasks that are still *Unsuccessful* after *Timed Retry* are placed into *Passive*.
- **Passive:** Places each *Unsuccessful* task within each selected command into *Passive*. If the radio ID targeted by the *Passive* task issues activity, Halcyon will *Retry* the task.
- **Purge:** Purges each *Successful* and *Unsuccessful* task within each selected command. If all tasks are purged from the command, then the command is also purged (removed from the Command List). Tasks are still available for reporting.
- **Detail:** Shows the *Command Details* window for the selected command.

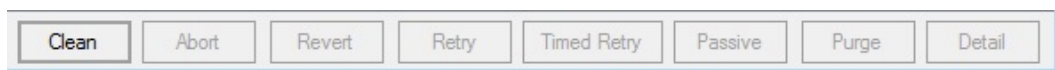


Figure 5.2 – Command Monitor Buttons

Command Details

The *Command Details* window shows each task within a command. To access the *Command Details* window, take the steps below:

1. In the *Command Monitor*, click on a command in the list.
2. Click the **Details** button, or double-click on the command in the list: This will open the *Command Details* window.

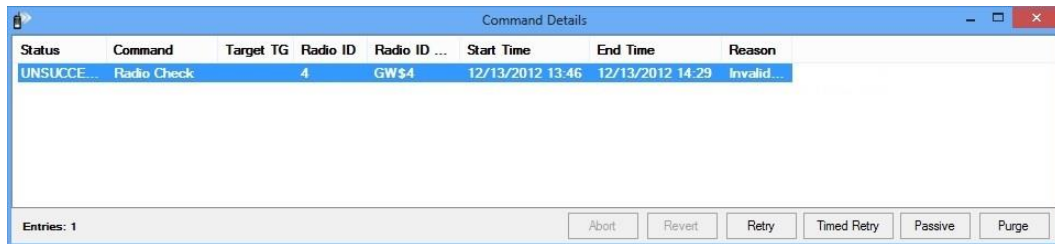


Figure 5.3 – Command Details

The current status of a task in the task workflow is shown in the **Status** column of the *Command Details* window. This status can be one of the following values:

- **Initializing:** The task has been sent to Halcyon and has not been sent by the input module (Trbo).
- **In Progress:** The task has been sent by the input module (Trbo).
- **In Passive:** The original attempt to execute the task failed, and the user placed the task in Passive mode or Timed Retry period (5 minute period) expired and Halcyon automatically placed the task in Passive. The next radio activity (including End of Call, Emergency Alarm or Call Alert) for the radio ID in the task will cause Halcyon to reissue the task.
- **In Timed Retry:** The original attempt to execute the task failed, and the user or Halcyon placed the task in Timed Retry mode. Halcyon will reissue the task every minute for 5 minutes. Within this 5 minutes, if the task is aborted or command succeeds, timed retry will end.

- **Successful:** The task completed successfully.
- **Unsuccessful:** The task failed to complete. The Reason column contains the failure reason. You may choose to take the following actions on unsuccessful tasks:
 - **Retry:** Manually retry the task.
 - **Timed Retry:** Halcyon will retry the task once every minute for the next 5 minutes. If after 5 minutes, the task is still unsuccessful, the task will transition back to passive.
 - **Passive:** Halcyon will watch for activity from the target radio ID. If activity is detected from the target radio ID, Halcyon will retry the task. If this attempt is unsuccessful, Halcyon will put the task in Timed Retry.
 - **Purge:** Remove the task from the command.

The *Command Details* window contains the following columns:

- **Status:** The current status of the task.
 - In Passive
 - In Timed Retry
 - Unsuccessful
 - Initializing
 - In Progress
 - Successful
- **Command:** The basic command type. These types include:
 - Request Radio Affiliation (Radio Check)
 - Selective Inhibit
 - Cancel Selective Inhibit
 - Call Alert
 - IP Console Inhibit
 - Cancel IP Console Inhibit
 - Slot Disable
- **Target TG:** Talkgroup targeted by the task (if any).
- **Channel:** Channel (repeater) targeted by the task (if any).
- ***System ID:** System ID that the command was issued on.
- ***Zone ID:** Zone ID that the command was issued on.
- ***Site ID:** Site ID that the command was issued on.
- **Radio ID:** Radio ID targeted by the task.
- **Radio Alias:** Radio Alias targeted by the task.
- **Start Time:** The date and time the task was issued.
- **End Time:** The date and time the task completed (either successful or unsuccessful).
- **Reason:** The last reason the task failed (if any). Once successful, this value is cleared.



Columns denoted by * are columns that will have a width of zero by default. These columns can be expanded by the user by dragging the right edge of the column to expand it, ex.. to expand

the Site ID column the user would need to select the column separator on the left side of the Radio ID column header and drag it to the right.

Command Detail Buttons

The following buttons are shown at the bottom of the *Command Details* window:

- **Abort:** Aborts each qualified selected task. Qualified tasks have a status of In Progress, In Timed Retry or In Passive. *Abort* means Stop. Halcyon will stop processing each aborted task. Each Aborted task will show a state of *Unsuccessful* with a Reason of *Aborted by User*
- **Revert:** Reverts each selected *Successful* task. Halcyon will undo the action of the task. For example, a *Revert* on a *Selective Inhibit* task will result in a *Cancel Selective Inhibit*. *Call Alert*, *Radio Check*, and *Slot Disable* cannot be *Reverted*.
- **Retry:** Retries each selected *Unsuccessful* task. This is a one-time manual retry that will attempt a simple *Retry* of each *Unsuccessful* task. *Unsuccessful* retries are placed in *Timed Retry*.
- **Timed Retry:** Places each selected *Unsuccessful* task into *Timed Retry*. Each task will be attempted once per minute for five minutes, or until *Successful*. Tasks that are still *Unsuccessful* after *Timed Retry* are placed into *Passive*.
- **Passive:** Places each selected *Unsuccessful* task into *Passive*. If the radio ID targeted by the *Passive* task issues activity, Halcyon will *Retry* the task.
- **Purge:** Deletes each selected *Successful* and *Unsuccessful* task. If all tasks are purged from the command, then the command is also purged (removed from the Command List). Tasks are still available for reporting.



Figure 5.4 – Command Detail Buttons

Task Failure Reasons

The table below contains each reason that a task could fail and a course of action to take to resolve the issue:

Reason	Description	Solution
Unknown	-	Contact Genesis support
Invalid Radio Command (INVALID_ISW)	Radio command was rejected by TRBO.	Contact Genesis Support
Invalid Target System (INVALID_TARGET_SITE)	The current system does not exist as an RC capable connection.	Change your current system setting OR current system is incompatible.
Requests Exceeded for the specified Radio ID (limit of 6 pending requests) (REQUESTS_EXCEEDED)	The target radio ID already has 6 tasks in the queue.	Retry the task later.
The target system is not available (LINK_DOWN)	The connection is down.	Re-establish the TRBO connections.
Passive search time out after 5 minutes in ISW queue (TIMED_OUT)	The radio displayed an active (involved in a call) status for 5 full minutes.	Retry the task later.
Task aborted by user (ABORTED_BY_USER)	Task was aborted by pressing the Abort button.	-
Active search time out. Radio ACK exceeded 10 seconds. (30 seconds for Radio Check) (TIMED_OUT_ACTIVE)	Request was sent, but the radio did not send out an acknowledgement.	Retry the task.
Echo search time out. Repeater echo of ISW exceeded 5 seconds. (TIMED_OUT_ECHO)	Request was sent to the repeater, but the repeater did not broadcast the request.	Retry the task.
Radio issued a not-acknowledged (NACK)	Radio responded to the request with a NACK (request was denied by radio)	This task will not succeed on this radio ID.
Target ID was not keyed up (TARGET_NOT_IN_CALL)	The radio must be generating a call to be targeted by this command.	Retry the task when the radio is transmitting.
Virtual Peer was not present in peer map. (VIRTUAL_PEER_MISSING)	The repeater network does not contain the virtual peer that represents the Capacity Plus rest channel for use by non-repeater applications.	Try trunking the rest channel to a different repeater or rebooting the repeaters.
Target ID not found.	The XRT 9000 did not find	The target radio must

(TARGET_DOES_NOT_EXIST)	the target radio in the list of radios registered to the system.	re-affiliate to the system.
The command source has insufficient privileges. (INSUFFICIENT_PRIVILEGES_SOURCE)	The XRT 9000 denied the request because the source is not assigned the necessary privileges.	Check the user programming in the XRT 9000.
The command destination has insufficient privileges. (INSUFFICIENT_PRIVILEGES_DESTINATION)	The XRT 9000 denied the request because the target is not assigned the necessary privileges.	Check the user programming in the XRT 9000.
The requested feature has not been activated on the target radio. (RADIO_FEATURE_NOT_ACTIVATED)	The targeted radio is not programmed to allow the requested feature.	Check the radio programming.
No available session resource (NO_SESSION_RESOURCE)	The XRT 9000 did not have a session available to perform the task.	Retry the task.
Presence information is unavailable for the target radio. (TARGET_LOCATION_UNKNOWN)	GW3-TRBO did not have any information about the last channel and slot used by the targeted radio and thus could not determine which repeater should receive the command.	Retry the task after GW3-TRBO has recorded an activity by the targeted radio, or leave the task in the In Passive state.
The channel is busy. (CHANNEL_BUSY)	The rest channel (or, in IPSC systems, the slot last used by the targeted radio) was in use.	Retry the task.
The target repeater is already in the selected state. (REPEATER_STATE_UNCHANGED)	The repeater is already in the state requested by the command. For example, the Repeater Enable command was sent to an enabled repeater.	If the repeater is being rebooted, wait a few moments for the Trbo module to reconnect and get the repeater's new status.
The target peer is not present in the peer map. (PEER_MISSING)	The repeater network does not contain the peer targeted by the command.	Verify that the peer is connected to Trbo and retry the task.
The target peer does not have an active RDAC connection. (NO_RDAC_CONNECTION)	The target peer is not using the RDAC interface for repeater diagnostics and controls.	Verify the target peer is RDAC-capable and there are four or fewer RDAC peers connected to it. Otherwise, retry.

Proactive Task Requests

Task requests can be performed from two different locations:

- **The Command Monitor screen:** When issued from here, the request will be made on each task with a valid status within the selected command.
- **The Command Details screen:** When issued from here, the request will be issued for each selected task with a valid status.

The table below shows each proactive task request, when it can be requested and its intended effect:

Request	Valid Task Statuses	Effect
Abort	Initializing In Timed Retry In Passive In Progress	Aborts any actions on the task and marks the task as unsuccessful. Will first be prompted if current status is "In Progress."
Revert	Successful	Performs the opposite of the original command. For example, Selective Inhibit becomes Cancel Selective Inhibit.
Retry	Unsuccessful	Tries the task again.
Timed Retry	Unsuccessful	Places the task into a timed retry queue that will send the command once every minute for 5 minutes until aborted or unsuccessful. If the 5 minutes elapses, the task is placed into Passive.
Passive	Unsuccessful	Places the task into a passive queue that will send the task when the target radio ID issues a Call Alert, End of Call, Emergency Alarm or an Acknowledgement. Slot Disables in the passive queue also will be sent when the target radio ID issues a Channel Assignment.
Purge	Invalid Unsuccessful Successful	Removes the task from the command. After this, the task cannot be recovered.
Detail	All (only available in Command Monitor)	Shows the <i>Command Details</i> screen for the selected command.

Table 5.2 – Tasks Request and Statuses

This chapter gives a list of radios that the Halcyon module is tested to be compatible with. Other radios may work with the software, but have not been fully tested and certified.

Fully Compatible

The following radios are fully compatible with the Halcyon module.

MOTOTRBO XPR Series	
Manufactured by	Motorola