GW3-TRBO®
Activity
Software Version 2.23.5
Module Book

600-2.23.5-E.1
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Refer to the *Troubleshooting & Support* section of the GW3-TRBO Manual Shell (Book 600-2.23.5-AA.1) for complete support and contact information.

Document History

Revision	Description	Author
2.0.5	Initial Release	JAW
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2.0.5	Added clarification about [LE] and [RDAC] activity.	REB
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2.2	Update of Screenshots and Descriptions	CWF
2.2	Revisions Before Release	CWF
2.3	Revisions Before Release	CWF
2.4	Revisions Before Release	CWF
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2.12	Revisions Before Release	JAW
2.13	Revisions Before Release	ATG
2.14	Revisions Before Release	JAW
2.15	Revisions Before Release	REB
2.16	Revisions Before Release	JPS
2.17	Added CSV export	DEW

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Goals

This document describes the role and function of the Activity module and Activity GUI (Graphical User Interface) within the GW3-TRBO solution.

Who Should Read This Manual?

This document is written for an intended audience of novice to intermediate MOTOTRBO system users and novice to intermediate PC users.

How This Manual Is Organized

This manual is organized as follows:

- **Overview:** Describes the basic function of the Activity module and GUI.
- **Advanced Options:** Describes the function of the advanced Activity options.

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.

Chapter 1 Overview

This chapter defines the Activity module and Activity GUI and gives instructions on filtering and color-coding packets.

This chapter contains the following sections:

- **What is Activity?:** Defines the Activity module and GUI.
- **Monitoring Channel Activity:** Describes how to interpret the data in the activity list.
- **Customizing Channel Activity:** Describes how to customize the Activity GUI.

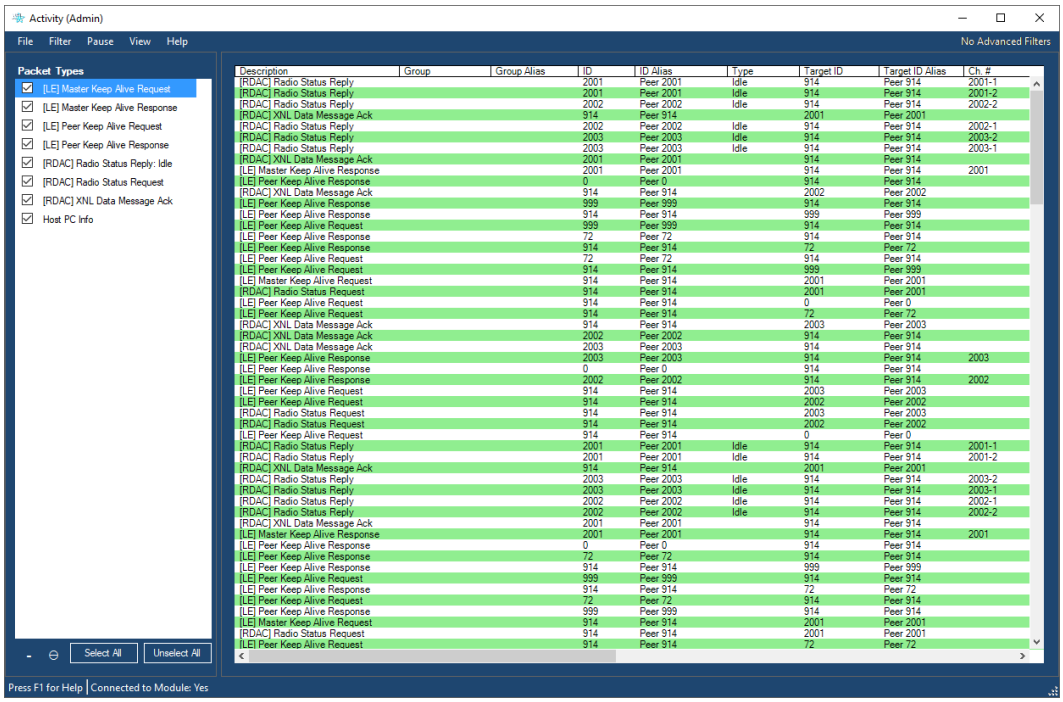


Figure 1.1 – Activity GUI

What is Activity?

The Activity GUI shows real-time activity from each GW3-TRBO input connection. Through this window you can:

- Monitor channel activity.
- Filter the packet types.
- Assign colors to specific packet types.
- Customize the font and column order of the activity list.
- Suppress duplicate packets.
- Pause the activity list.
- Print the activity list.

Monitoring Channel Activity

The Activity GUI provides the activity list. This list allows you to view stream activity in real time. For a description of the type of information that can be received for an input type, refer to the module book for the associated input module.

Refer to the *Troubleshooting & Support* section of the GW3-TRBO Manual Shell (Book 600-2.23.5-AA.1) for complete support and contact information.

Activity Values

The activity list contains the following columns:

- **Description:** Broad category of the activity (e.g. Channel Assignment, Call Alert, etc.).
    - Activity that is prefixed with [LE] indicates link establishment data that is sent only over the IP network and is not transmitted over the air. Such data usually is related to creating and maintaining the connection between GW3-TRBO and the other network peers.
    - Activity that is prefixed with [RDAC] indicates communication between GW3-TRBO and an RDAC connection within a repeater. RDAC connections grant access to repeater diagnostic information.
- **Group:** Target group (if any) of the activity.
- **Group Alias:** Alias of the target group (if there is a group). See note on aliases below.
- **ID:** Primary radio ID (if any) of the activity. The primary ID is the source of a call or the radio being affected by a radio command such as an inhibit. For repeater-based activity, this may show the peer ID.
- **ID Alias:** Alias of the primary radio ID (if there is a radio ID). See note on aliases below.
- **Type:** Activity subcategory. Further describes the type of activity.
- **Target ID:** This will contain one of the following values, if the value is provided in the packet:
    - **Target Radio ID:** For call alerts, private calls, etc.
    - **Requester Radio ID:** For radio checks and inhibits.
    - **Diagnostic Condition Description:** For system diagnostics
- **Target ID Alias:** This will contain one of the following values, if the value is provided in the packet:
    - **Target Radio ID Alias:** For call alerts, private calls, etc. See note on aliases below.
    - **Requester Radio ID Alias:** For radio checks, inhibits, etc.
- **Ch. #:** This column will contain the Channel Number that the activity took place on. For IP connections, the Channel Number will generally be the repeater's Peer ID followed by the slot number ("3-1" to indicate Peer 3, Slot 1). For multisite IP Site Connect calls, this value will show the Site-Channel-Slot combination for all slots on which the call occurred. (For example, "10-1-2, 11-1-2" if the call occurred on slot 2 of sites 10 and 11.) For activities from satellite receivers, this value will show the voting repeater ID followed by the satellite receiver ID. (For example, "15-21" if voting repeater 15 has a satellite receiver with a peer ID of 21.)
- **Ch. Freq.:** This column will contain the frequency of the channel the activity took place on.
- **Ch. Alias:** This column will contain the alias of the channel the activity took place on. For multisite data, this column will be empty. See note on aliases below.

- **Timestamp:** The date and time when the activity was received or originated. This will be the packet time stamp for packets that include a time stamp. Otherwise, it will be the date and time the packet was received by the input module.
- **Elapsed Time:** The duration of the activity. Only Calls and Busies provide an elapsed time.
- **System ID:** The system on which the activity originated.
- **System ID Alias:** The alias of the system on which the activity originated. See note on aliases below.
- **Zone ID:** The zone on which the activity originated.
- **Zone ID Alias:** The alias of the zone on which the activity originated. See note on aliases below.
- **Site ID:** The site on which the activity originated.
- **Site ID Alias:** The alias of the site on which the activity originated. See note on aliases below.

You can view the details of an activity by double-clicking on an entry in the activity list. This will result in a dialog box showing every property that GW3-TRBO knows about the selected activity. This functionality is also available in the *Pause* window.

Aliases (ID, Group, Target Radio ID, Channel, System ID, Zone ID, and Site ID) can be changed in the Alias GUI. If the alias has not been changed it will appear in the appropriate column using the respective GW3-TRBO default GW$[ID], GW$[Group ID], GW$[System ID], etc., format alias.

Maximizing the Activity List

The Activity GUI allows you to resize the activity list. To resize the activity list, follow the steps below:

1. Hover over the slider bar between the **Packet Types** check list and the activity list. This will show a resize mouse pointer.
2. Hold down the left-click button and move the mouse left and right to resize the activity list.
3. You can also double-click on the slider bar to maximize the activity list and hide the **Packet Types** check list. To show the **Packet Types** check list again, double-click on the slider bar. This can also be done by checking/unchecking the **Packet Types** menu option under the **Filter** menu.

Customizing Channel Activity

The visual appearance of the data shown in the activity list can be customized in various ways. Features such as the font, font size, columns, column order, packet type colors, and more can be changed. These allow you to customize the look of the data to fit your needs.

Changing Activity List Font and Size

To change the font or size:

1. Click the **Font** menu option in the **View** menu. This will display the **Font** window.
    a. You can also right-click on the activity list and choose the **Font** menu option from the menu that appears.
2. Choose the Font, Font style (italic, bold, etc.), Font Size, among other options.
3. Click the **OK** button to apply the changes to the activity list.

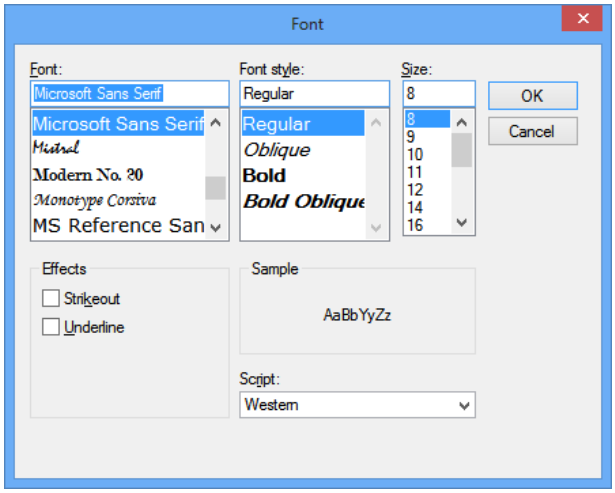


Figure 1.2 – Font Window

Enabling/Disabling the Green Bar

Another feature that can be enabled is the **Green Bar**. When enabled, the background of the rows in the activity list is alternately colored green and white. This allows you to easily distinguish between consecutive packets and not confuse the data on adjacent lines. To enable/disable the **Green Bar**, either select the **Green Bar** menu option from the **View** menu or right-click anywhere on the *activity list* and select the **Green Bar** option from the menu that appears.

Notice that the Group and Radio ID columns may not change to the green background color. If a Group or Radio ID's background color has been changed in the Alias GUI, those colors assigned will be used instead. See the Alias module book for more details on changing foreground and background colors for groups and radio IDs.

Showing/Hiding Columns

To select the visible columns in the activity list:

1. Click the **Select Columns** menu option under the **View** menu. This will display the **Select Columns** window**.**
    a. You can also right-click on the activity list and choose the **Select Columns** menu option from the menu that appears.
2. Check the columns you wish to see in the activity list. By default, all columns will be checked and thus will appear in the activity list.

3. Click the **OK** button to apply the changes to the activity list.

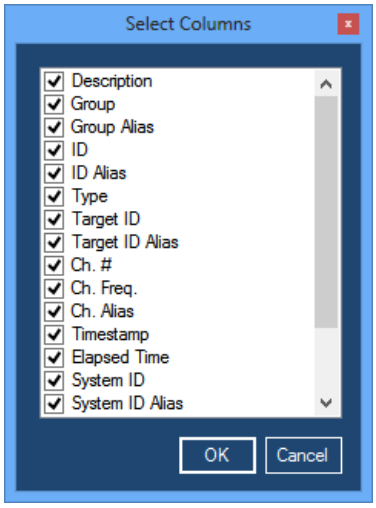


Figure 1.3 – Select Columns Window

Reordering Columns

To change the location of a column:

1. Click the column header (column title) of the column you wish to move and hold the mouse button.
2. Drag to the left or right until you have reached the desired position. As the column is being dragged, the column you are currently over will be highlighted.
3. Release the mouse button when you have reached the desired position. The column you dragged will be placed at the position of the currently highlighted column. The highlighted column and all columns to its right will now be to the right of the dragged column. All those to the left will continue to be to the left.

Adding a Little Color to Your Life

To assign a color to a packet type, take the following steps:

1. Right-click on the packet type in the **Packet Types** list. This will result in a color dialog box.
2. Select the color that you wish to assign to the packet type.
3. Click **OK**. This will change the color of the selected packet type to the chosen color. All activities of this packet type in the activity list will also change to the selected color.

The Group and Radio ID columns do not change to the selected color. This is because these columns use the colors assigned to them in the Alias GUI. See the Alias module book for more details on changing foreground and background colors for groups and radio IDs.

Filtering Packet Types

The Activity GUI contains a **Packet Types** list that shows all known packet types. This list will start off empty and will add new packet types as they are received by

GW3-TRBO. New packet types will default to checked (included) in the **Packet Types** list. All checked packet types will appear in the activity list as they are received. Packet types that are unchecked will not be shown in the activity list.

Figure 1.4 – Two Checked (Included) Packets

Selecting All Packet Types

Click the **Select All** button to select all packet types in the list. This will show all activity for all known packet types.

Unselecting All Packet Types

Click the **Unselect All** button to unselect all packet types in the list. This will exclude all activity for all known packet types, thus stopping the scrolling activity.

Deleting Packet Types

Click on a packet type to select it, then press the **Delete** key to remove that packet type from the list. Holding the **Shift** key while pressing **Delete** will remove all packet types from the list. You can also click the **Delete** and **Clear** buttons under the **Packet Types** list.

Deleted packets will be re-added to the list with default colors the next time Activity receives that type of packet.

Figure 1.5 – Packet Types List Buttons

Suppressing Duplicate Packets

This option allows you to filter out consecutive packets with very similar details. To be hidden, a packet must have the same type, ID, target ID, etc., as the previous packet. To enable/disable duplicate packets check/uncheck the **Suppress Duplicates** menu option in the **Filter** menu by clicking on that menu option.

Chapter 2 Advanced Options

This chapter describes the advanced options available in the Activity GUI.

This chapter contains the following sections:

- **Advanced Filters:** Describes how to filter packets by system ID, zone ID, or site ID.
- **Pausing the Activity List:** Describes how to create an *Activity Pause* window and the *Activity Pause* window options.
- **Activity Details:** Describes how to view the detailed information for an activity.

Advanced Filters

The Activity GUI, by default, accepts activity from all connected systems, zones, sites, groups, radios and agencies. The sections below describe how to filter the activity.

Trunking Filters

If you wish to filter the Activity GUI based on Trunking Systems, click on the **Advanced** menu option of the **Filter** menu, then click on the **Trunking Filters…** menu option. This will load the *Advanced Filters* window.

The current state of any trunking filters is displayed in the menu bar. Clicking on this text will load the *Advanced Filters* window. If you have applied any filters in the *Advanced Filters* window, the menu bar will provide details on the types of active filters.

System Filter

This filter will allow the Activity GUI to be filtered by System, Zone and Site.

1. Click on the **System** tab.
2. Uncheck the nodes of the Systems, Zone and/or Sites that you wish to exclude. Filters are applied to the scrolling data as you check/uncheck nodes.
3. Click the **OK** button. This will return you to the Activity GUI.

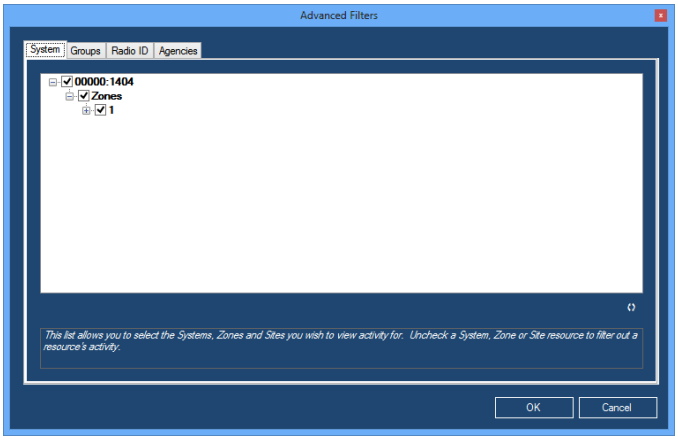


Figure 2.1 – Advanced Filters – System Tab

This tree only contains system IDs, zone IDs and site IDs received by the Activity GUI. This window does not reference the GW3-TRBO Alias database for a list of these IDs.

For multisite systems, if activity contains a Site ID List and one of the sites in the Site ID List is marked as Allowed, Activity will show this activity. You can see an activity's Site ID List via the *Activity Details* window. See the *Activity Details* section below.

Group Filter

This filter will allow the Activity GUI to be filtered by group.

1. Click on the **Groups** tab.
2. Click the **Filter Activity by Group** option.
3. Click the **Add** button to add one or more groups.
4. Click the **OK** button. This will apply your filter and return you to the Activity GUI.

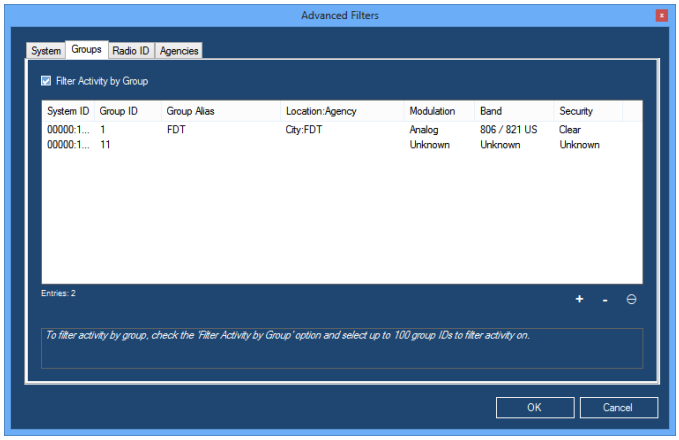


Figure 2.2 – Advanced Filters – Groups Tab

Radio ID Filter

This filter will allow the Activity GUI to be filtered by radio ID.

1. Click on the **Radio ID** tab.
2. Click the **Filter Activity by Radio** option.
3. Click the **Add** button to add one or more radio IDs.
4. Click the **OK** button. This will apply your filter and return you to the Activity GUI.

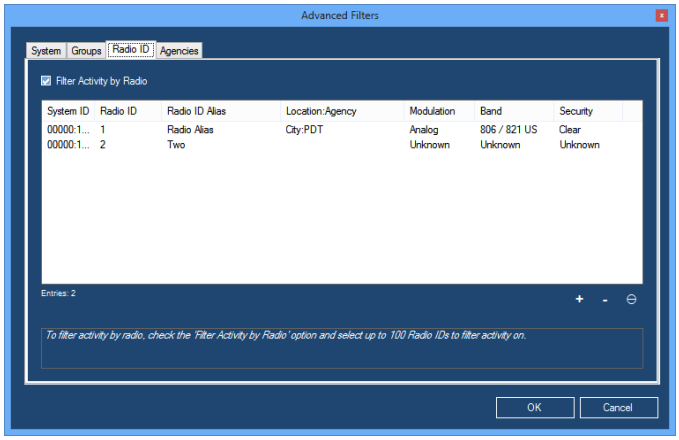


Figure 2.3 – Advanced Filters – Radio ID Tab

Agencies Filter

This filter will allow the Activity GUI to be filtered by agencies.

1. Click on the **Agencies** tab.
2. Click the **Filter Activity by Agency** option.
3. Click the **Add** button to add one or more agencies.
4. Click the **OK** button. This will apply your filter and return you to the Activity GUI.

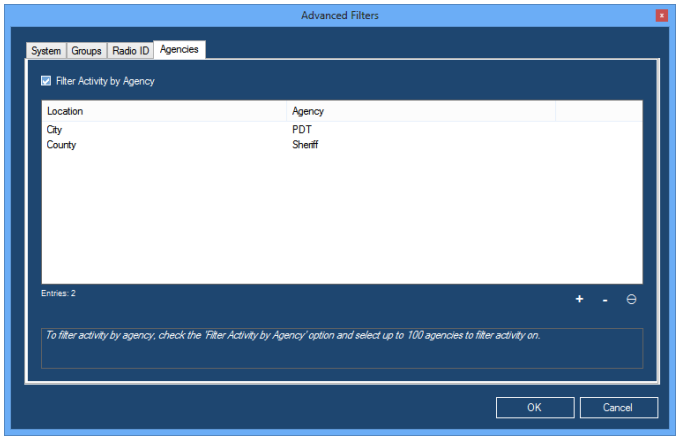
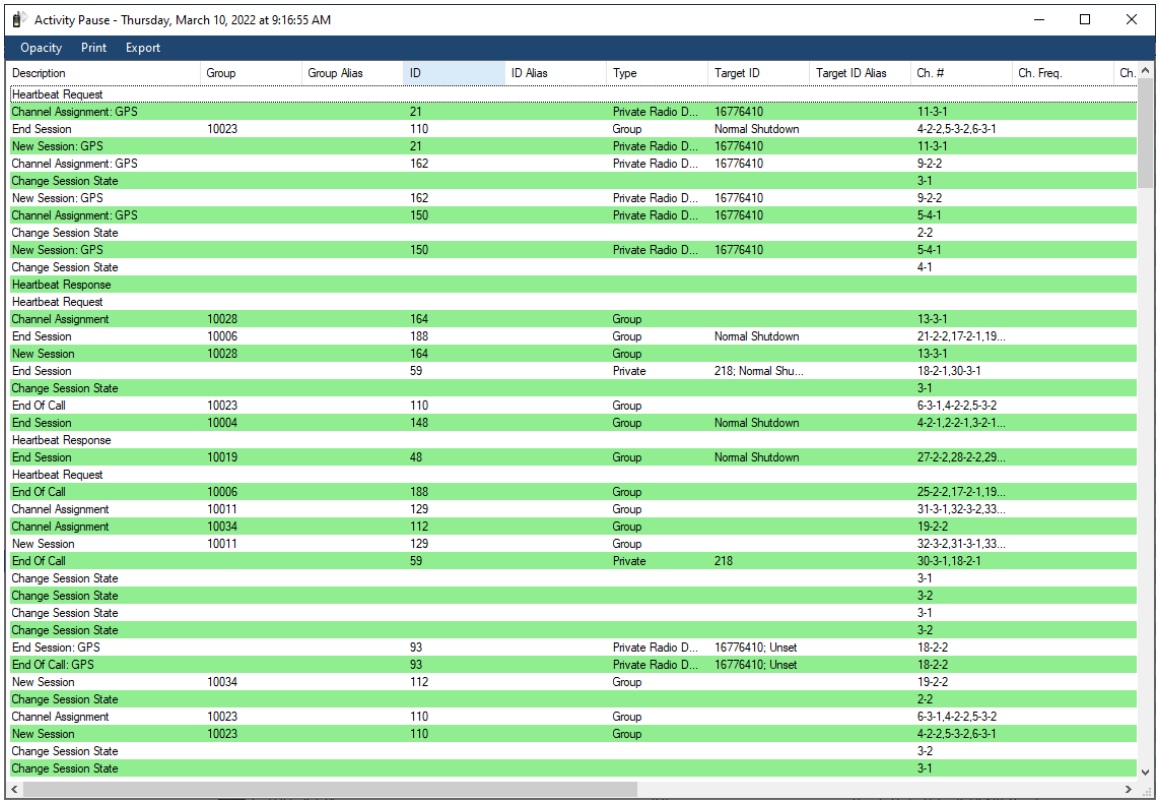


Figure 2.4 – Advanced Filters – Agencies Tab

Pausing the Activity List

You may wish to pause the activity list to view a snapshot of activity data or to make double-clicking on an activity easier. To pause the activity list, click the **Pause** menu button. This will open an *Activity Pause* window that contains the data in the activity list at the time of the pause.



Description	Group	Group Alias	ID	ID Alias	Type	Target ID	Target ID Alias	Ch. #	Ch. Freq.	Ch.
Heartbeat Request										
Channel Assignment: GPS			21		Private Radio D...	16776410		11-3-1		
End Session	10023		110		Group	Normal Shutdown		4-2-2,5-3-2,6-3-1		
New Session: GPS			21		Private Radio D...	16776410		11-3-1		
Channel Assignment: GPS			162		Private Radio D...	16776410		9-2-2		
Change Session State								3-1		
New Session: GPS			162		Private Radio D...	16776410		9-2-2		
Channel Assignment: GPS			150		Private Radio D...	16776410		5-4-1		
Change Session State								2-2		
New Session: GPS			150		Private Radio D...	16776410		5-4-1		
Change Session State								4-1		
Heartbeat Response										
Heartbeat Request										
Channel Assignment	10028		164		Group			13-3-1		
End Session	10006		188		Group	Normal Shutdown		21-2-2,17-2-1,19...		
New Session	10028		164		Group			13-3-1		
End Session			59		Private	218; Normal Shu...		18-2-1,30-3-1		
Change Session State								3-1		
End Of Call	10023		110		Group			6-3-1,4-2-2,5-3-2		
End Session	10004		148		Group	Normal Shutdown		4-2-1,2-2-1,3-2-1...		
Heartbeat Response										
End Session	10019		48		Group	Normal Shutdown		27-2-2,28-2-2,29...		
Heartbeat Request										
End Of Call	10006		188		Group			25-2-2,17-2-1,19...		
Channel Assignment	10011		129		Group			31-3-1,32-3-2,33...		
Channel Assignment	10034		112		Group			19-2-2		
New Session	10011		129		Group			32-3-2,31-3-1,33...		
End Of Call			59		Private	218		30-3-1,18-2-1		
Change Session State								3-1		
Change Session State								3-2		
Change Session State								3-1		
Change Session State								3-2		
End Session: GPS			93		Private Radio D...	16776410; Unset		18-2-2		
End Of Call: GPS			93		Private Radio D...	16776410; Unset		18-2-2		
New Session	10034		112		Group			19-2-2		
Change Session State								2-2		
Channel Assignment	10023		110		Group			6-3-1,4-2-2,5-3-2		
New Session	10023		110		Group			4-2-2,5-3-2,6-3-1		
Change Session State								3-2		
Change Session State								3-1		

Figure 2.5 – Activity Pause Window

Pause Window Options

Opacity (available in menu only)

Opacity measures how close a window is to solid (not transparent). You can adjust the opacity of an *Activity Pause* window (making it more transparent) to allow you to see real-time activity while viewing the *Activity Pause* window.

Print (available in menu and right-click)

Prints the *Activity Pause* window. This window will print in a landscape format (longer horizontally than vertically). You may need to adjust the column widths of the *Activity Pause* window to print the desired data.

Export (available in menu and right-click)

Exports the *Activity Pause* window to a CSV file. The data in this window will be exported to a CSV file that you specify.

Select All… (available in right-click only)

Contains the following options for selecting like activity in the *Activity Pause* window.

- **Activities on the selected group:** Selects all activities with the same **Group** as the topmost selected activity.
- **Activities from the selected radio ID:** Selects all activities with the same **ID** as the topmost selected activity.
- **Activities of the selected type:** Selects all activities with the same **Description** and **Type** as the topmost selected activity.
- **Activities in the selected conversation:** Selects all activities within the same conversation as the topmost selected activity. This generally involves packets that share a common **Conversation Number** or **Call Index**.

Activity Details

Each activity shown in the Activity GUI contains much more information than what is shown in the columns of the activity list. To view this additional information, double-click on the desired packet in either the main window or an *Activity Pause* window. This will show the *Packet Information* window, shown below.

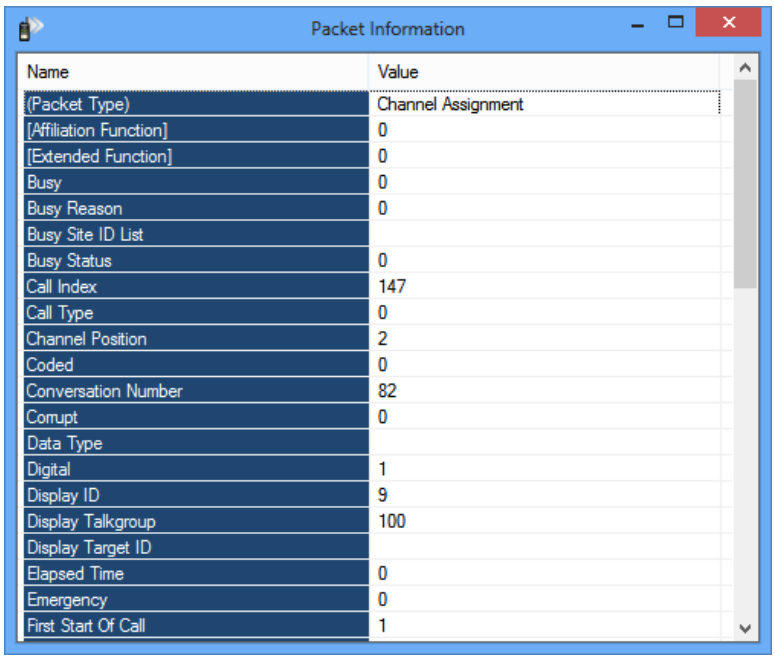


Figure 2.6 – Packet Information Window