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Title: How To Get A Helios Capture

Applies To: All 1939 and 1708 multiplexed trucks

Change Log

Please refer to the change log text box below for recent changes to this article:

11/21/2017 - Added Table of Contents and the section for Recording 2 Channels
10/11/2017 - Added Figure 5 showing the Vector Format is using Decimal values, which needs to be changed to HEX values as shown in Figure 6.
06/27/2017 - Added information stating the file must be zipped when adding to a case file. Figure 8.
03/10/2017 - Edited coding so article can be viewed by Fleets as well.
10/04/2016 - Added a link to the EZTech Download Center where Helios for 500k can be downloaded to an EZ-Tech. Updated Step 5 to explain you have to select the baud rate when using Helios for 500k.

Description

Helios is a java based diagnostic tool that will allow you to view all data link messages on 500k J1939, 250k 1939 and 1708 data links. What follows is step by step on how to:

- Obtain a Helios Capture in Vector Format to attach to a case file.
  - The Helios capture must be zipped to add to the case file.
- Use Helios as a diagnostic tool to view Signals, Faults and more.

NOTE:

Helios is not an effective sniffer. When a module stops communicating it does not "drop off" the sniffer, it stops counting. This can make it difficult to understand if a module is no longer communicating.

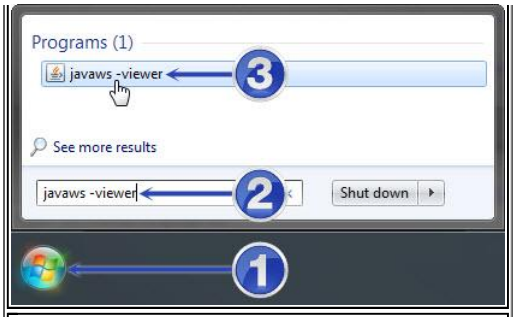
Table of Contents

Obtaining a Helios Capture in Vector Format

1. Helios is now available for 500k Baud J1939. You can download the program by going to IK2700065 - EZTech Download Center. Helios for 500k is item E22 in the Download Center.
   - This version of Helios for 500k works for 500k baud rate vehicles and 250k buad rate vehicles. You will need to select the correct baud rate from the Tools Menu for the vehicle you are working on.
2. If a shortcut to the program like this 

does not appear on your desktop you will have to run the Java viewer to add the shortcut to your desktop.
3. If the Helios Icon is not on your desktop, click Windows - Type "javaws -viewer" and click the icon (Figure 1)

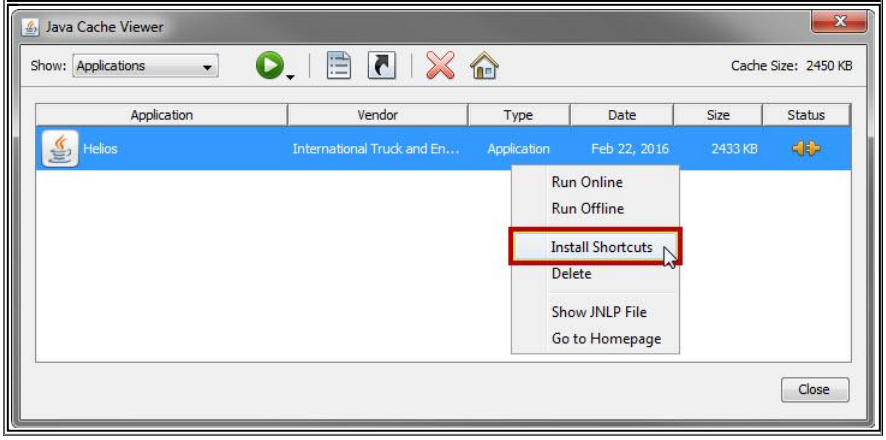
Figure 1



1. Click the Windows Icon
2. Type javaws -viewer
3. Click the Icon to open the Java Cache Viewer

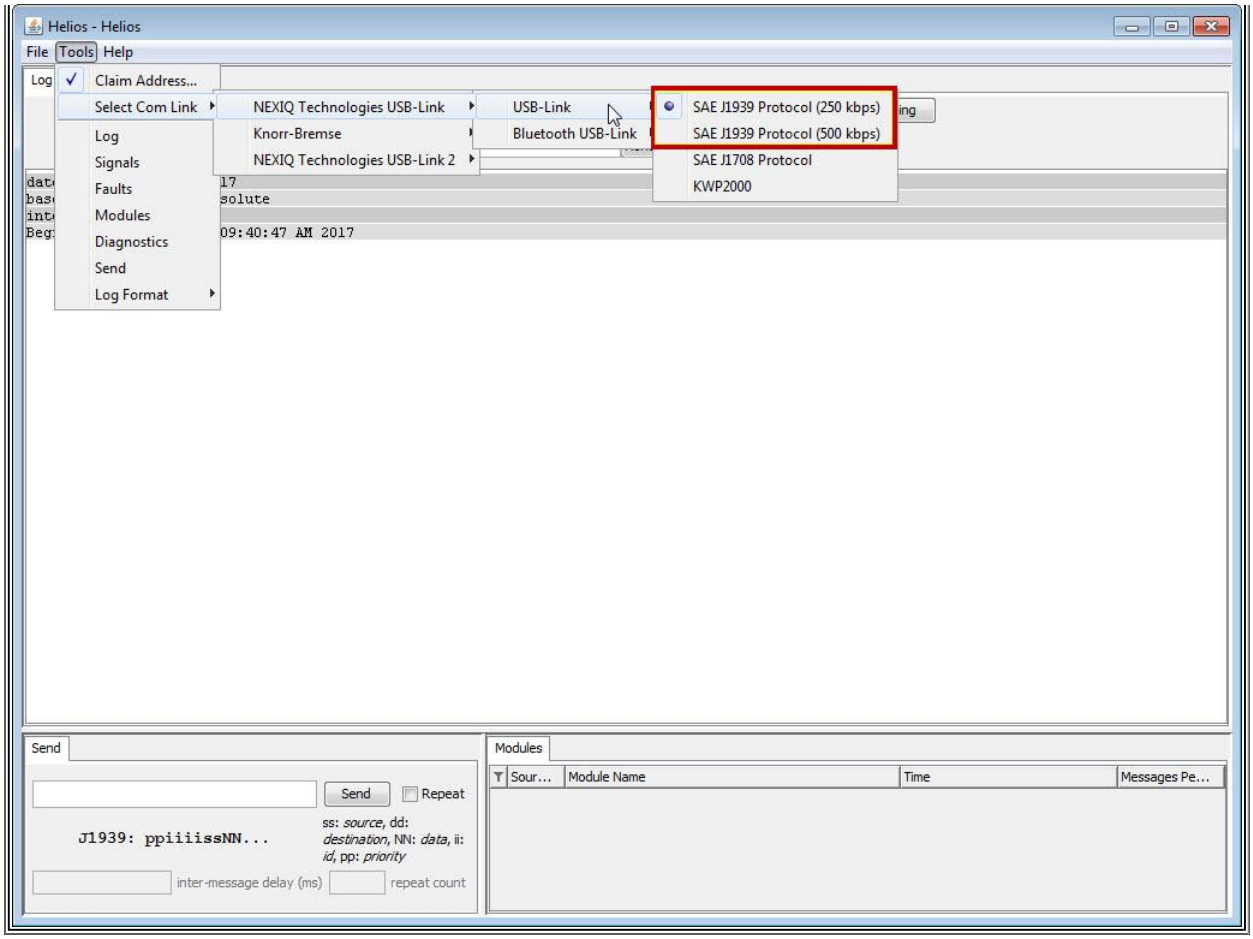
4. You can create a shortcut to your desktop (Figure 2) or launch the program from the "Java Cache Viewer"

Figure 2



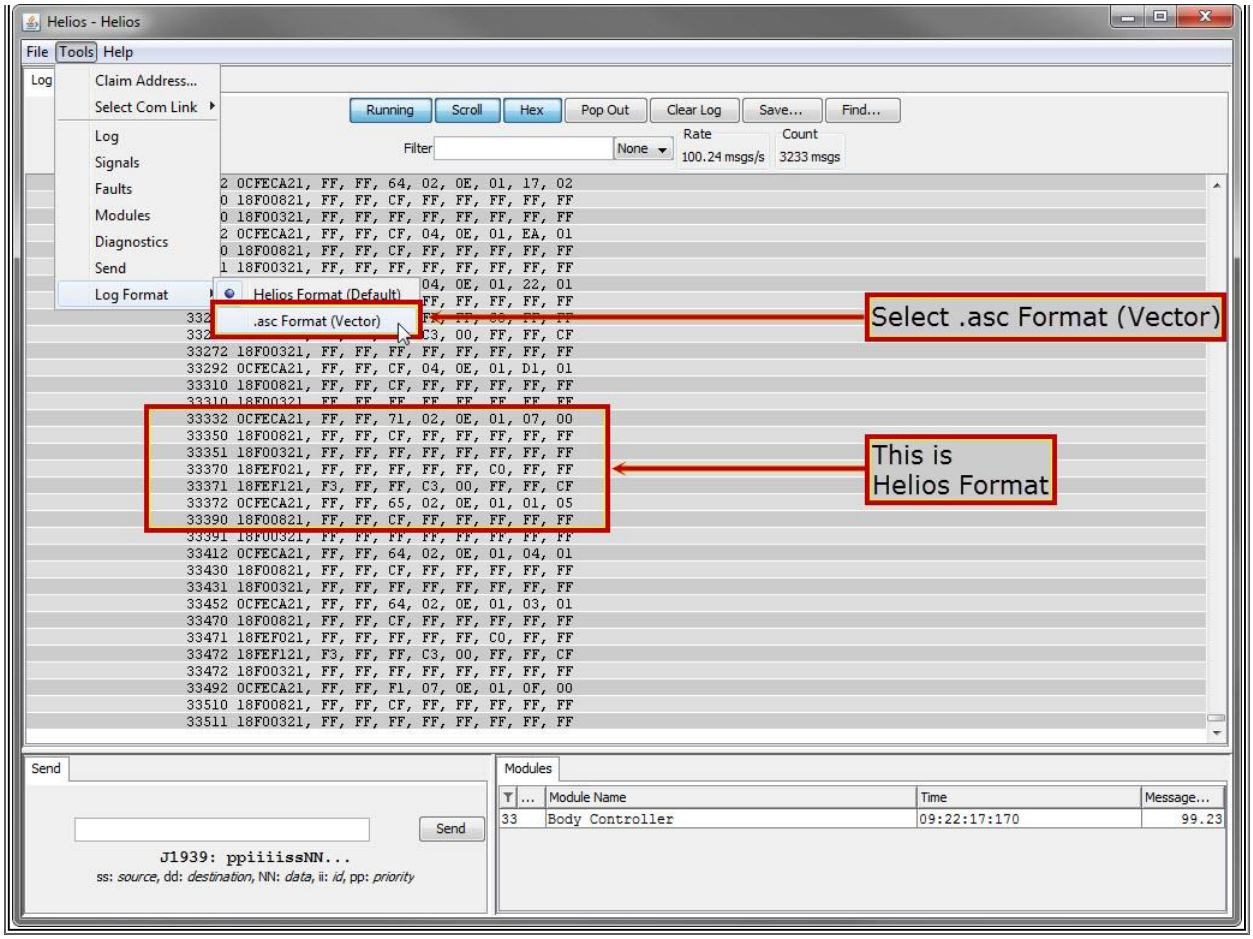
5. Helios will connect and start automatically if you've used it before, and the default format is "Helios Format". If you have not used Helios before, or you are using a different com link, you will need to select your com link from the Tools menu. - Figure 3. If you are using Helios for 500k you will need to select the baud rate you want to record.
   - The SAE J1939 Protocol you select will attempt to connect to Pins C & D on the 9 Pin truck connector when recording a single channel only.
   - A green 9 Pin truck connector utilizes 500 kbps at Pins C & D
   - A black 9 Pin truck connector utilizes 250 kbps at Pins C & D

Figure 3



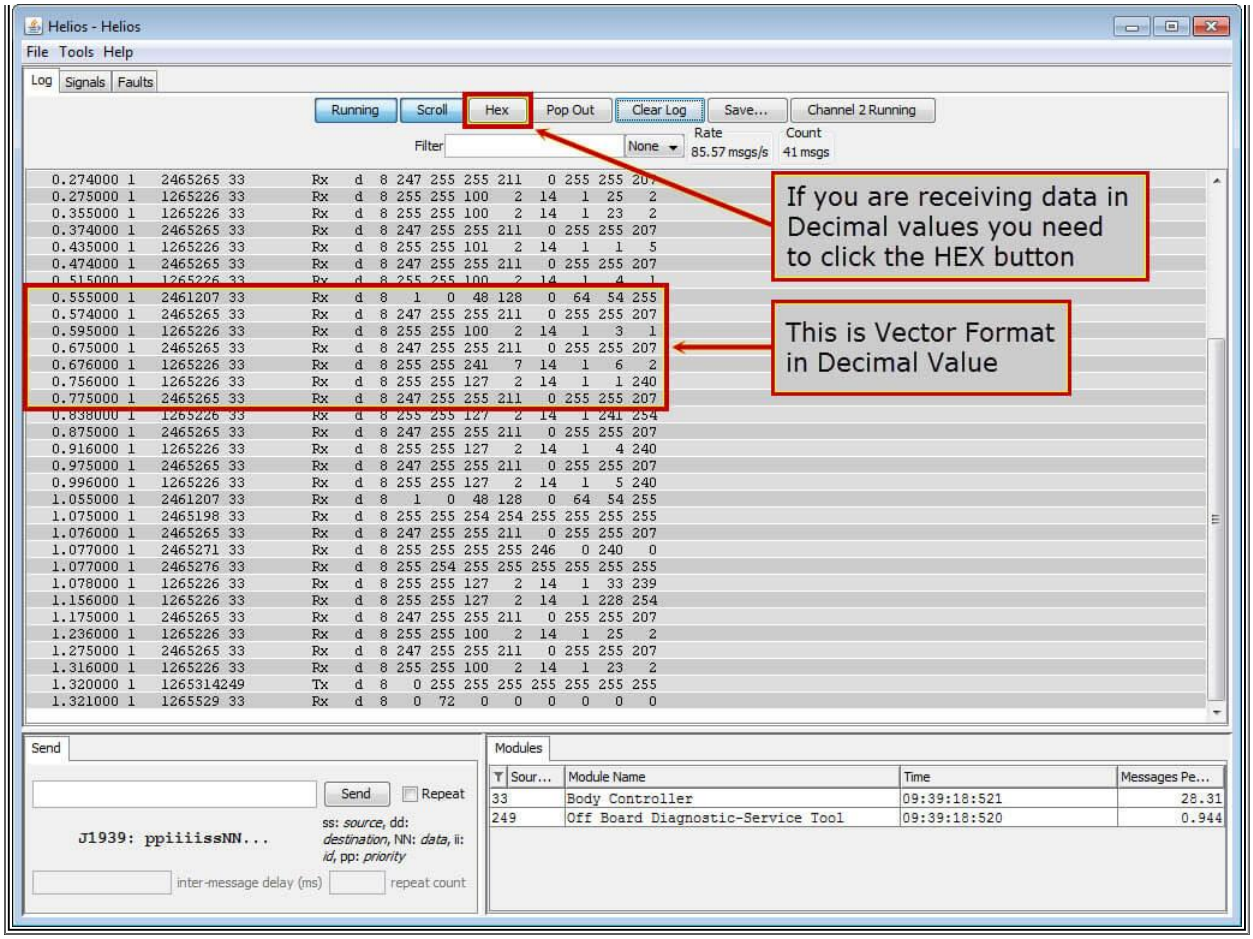
◦ Change the format to .asc Format (Vector) - Figure 4
  - In order to avoid delays on the case file, this step is very important so the file can be played back reliably.

Figure 4



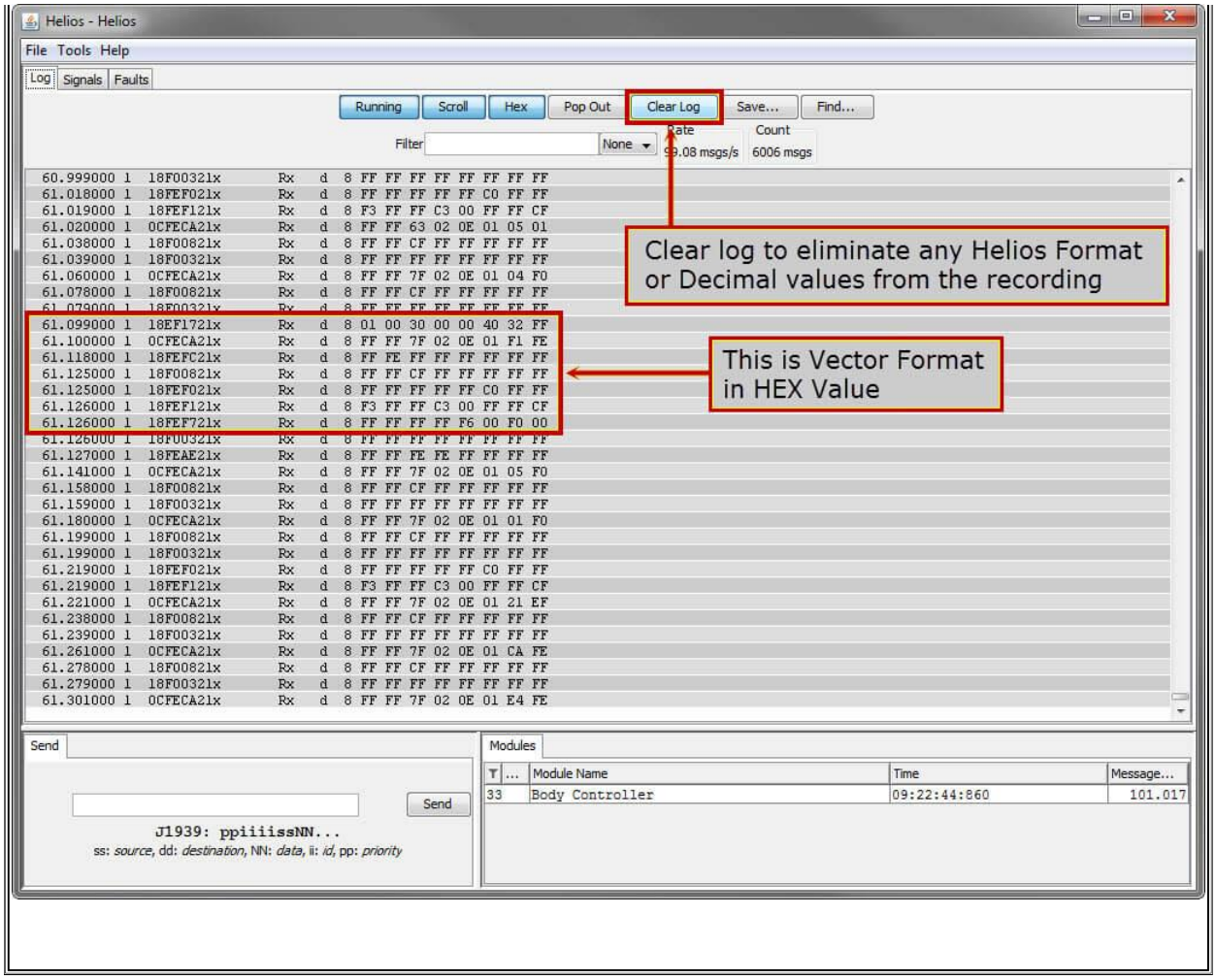
◦ Once you are in Vector Format, you need to verify the data is in HEX value. - Figure 5

Figure 5



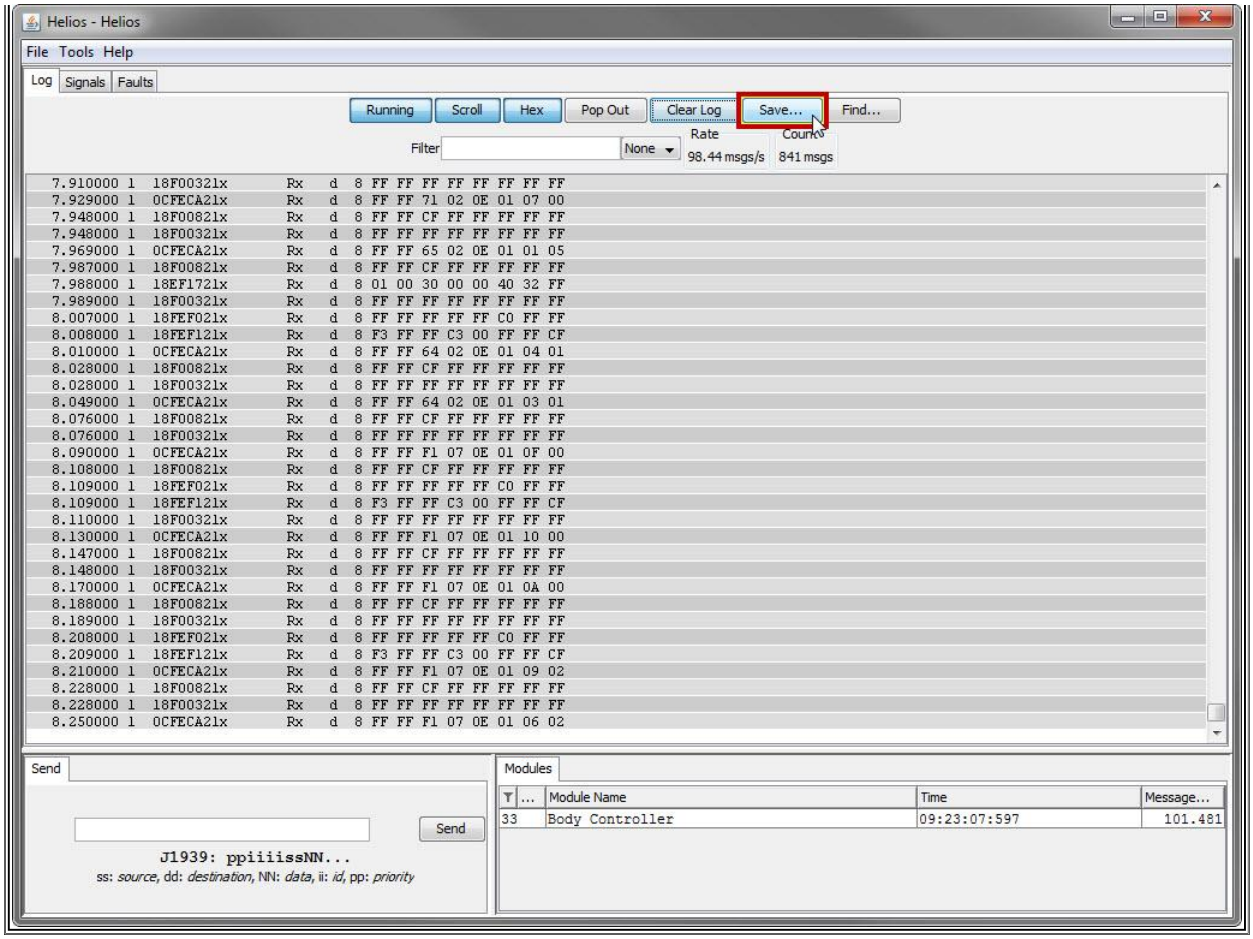
- Once you have verified you are in Vector Format colleting HEX values you need to clear the log to remove any Helios format or Decimal values. - Figure 6
- The HEX button will be BLUE in color, indicating HEX is selected.

Figure 6



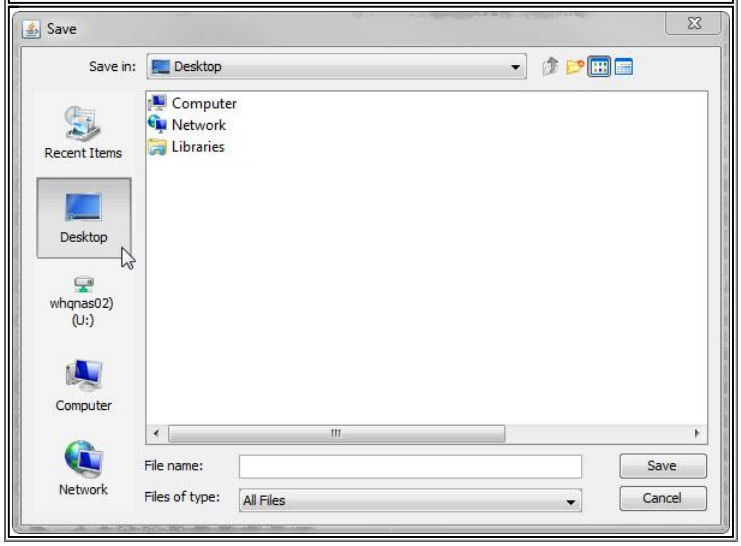
◦ Once you have the data you need, save the file. - Figure 7

Figure 7



◦ Saving the file to your desktop will make it easy to find so you can upload the capture to your case file. - Figure 8

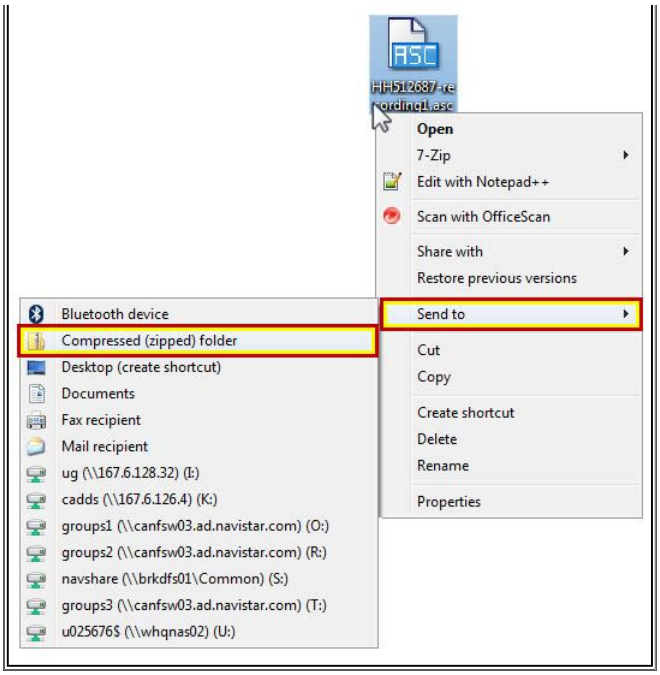
Figure 8



◦ You will need to compress (zip) the file so it can be attached to your case file. -Figure 9

- The file cannot be opened from the case file if it is not zipped.

Figure 9



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Recording 2 Channels

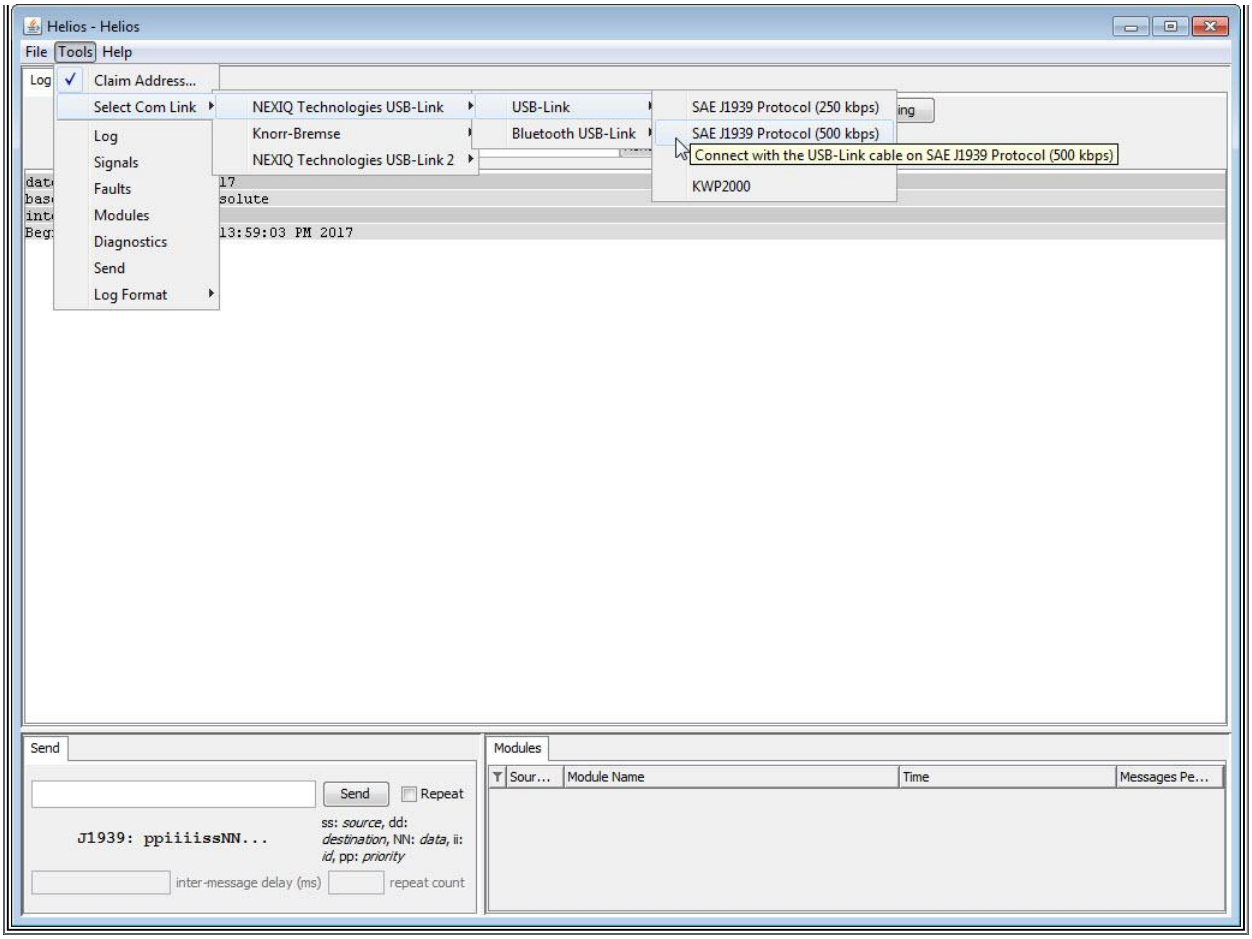
On 500k Baud vehicles, Helios has the ability to record on 2 Channels at the Truck 9 Pin. You can record the data from the 500k Baud Powetrain data link (C & D) as well as the 250k Baud Cab data link (H & J) at the same time, using a single interface device (e.g. Nexiq Interface Cable).

NOTE:

If you are not familair with using Helios, refer to the first section of the iKNow article "Obtaining a Helios Capture in Vector Format" to set up recording, and then initalize the second channel.

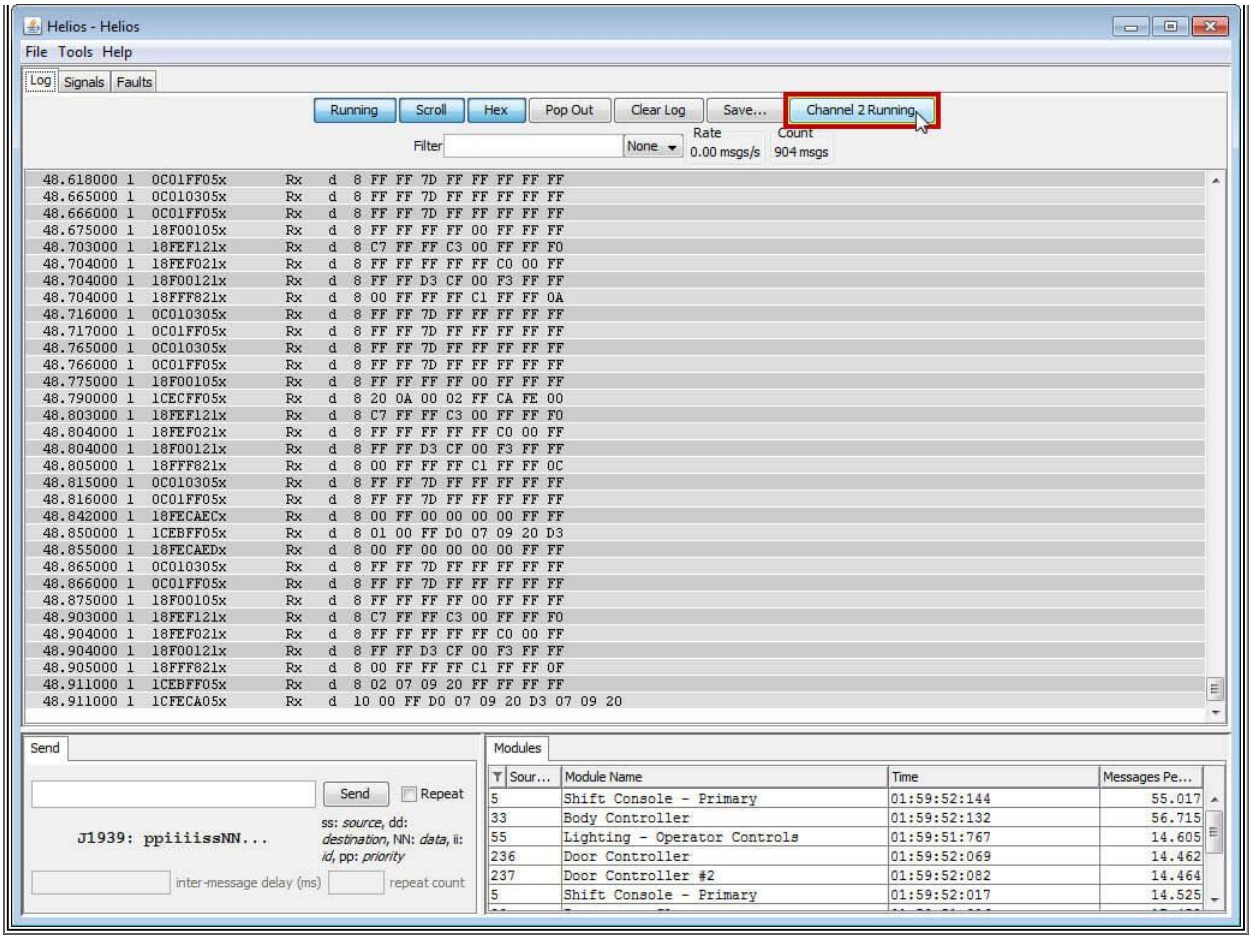
- Connect to the vehicle at 500 kbps.

Figure 10 - Connect to the 500k Baud Data Link



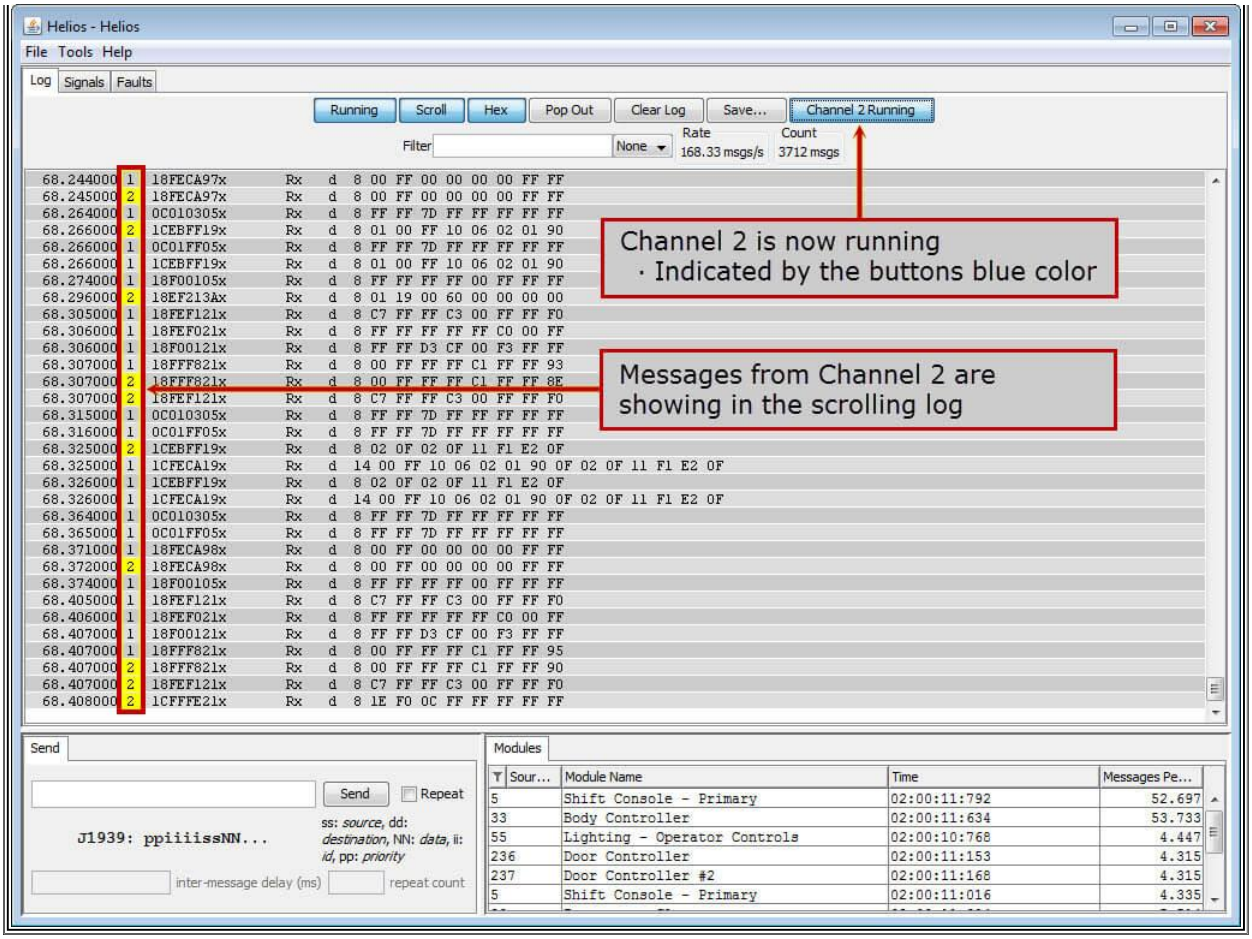
- Initilize Channel 2 by clicking the 'Channel 2 Running' button. The button will be BLUE in color if selected, indicating channel 2 is running.

Figure 11 - Select Channel 2 Running



- Channel 1 and Channel 2 are now both being recorded.
  - Channel 1 is recording at 500 kbps on Pins C & D of the Truck 9 Pin.
  - Channel 2 is recording at 250 kbps on Pins H & J of the Truck 9 Pin.

Figure 12 - Channel 2 is Running



- Clear the log file as needed.
- Save the log file as needed.

NOTE:

If you are not familair with Clearing and Saving the Log File, refer to the first section of the iKNow article "Obtaining a Helios Capture in Vector Format" to set up recording, and then initalize the second channel.

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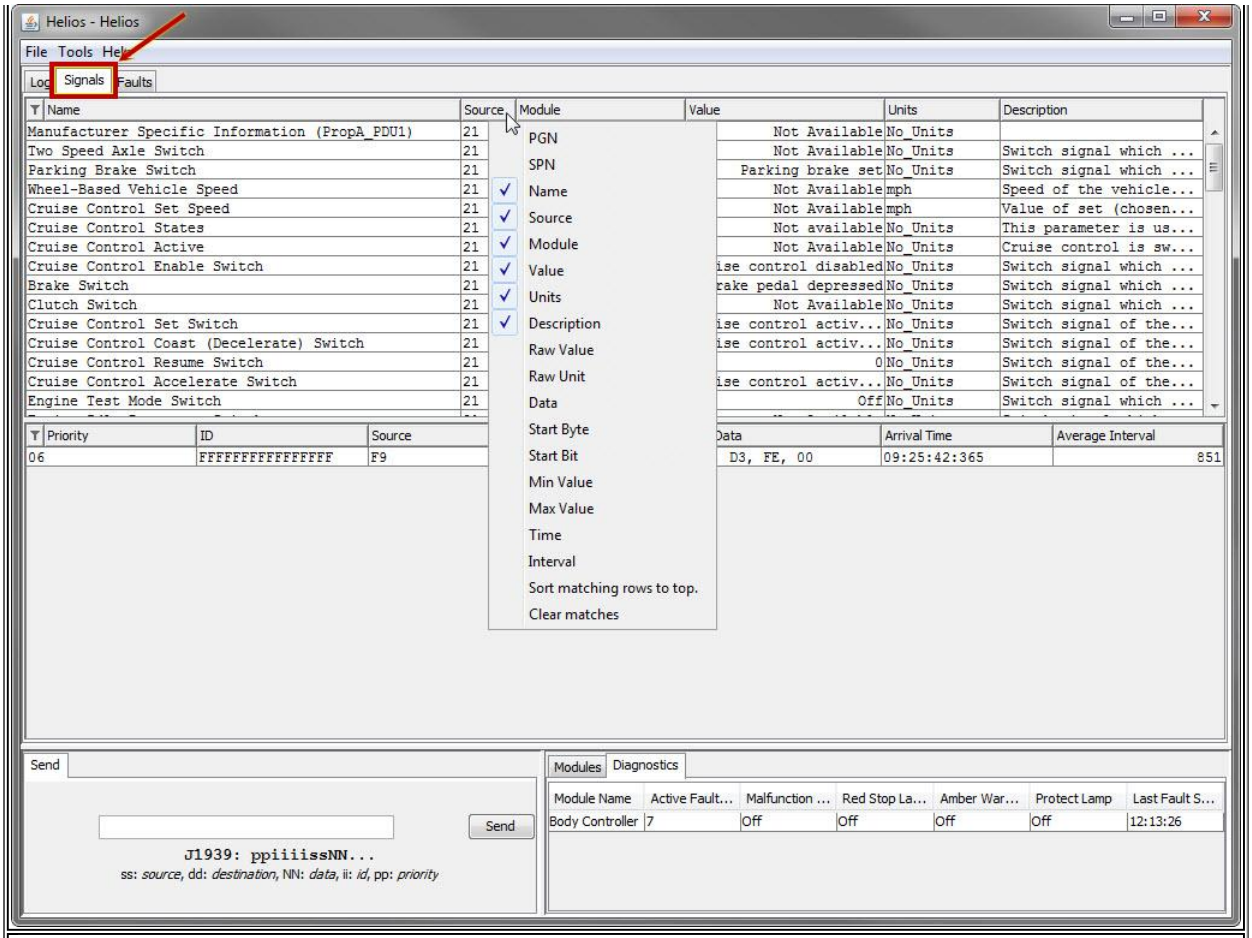
Using Helios to View Signals or Faults

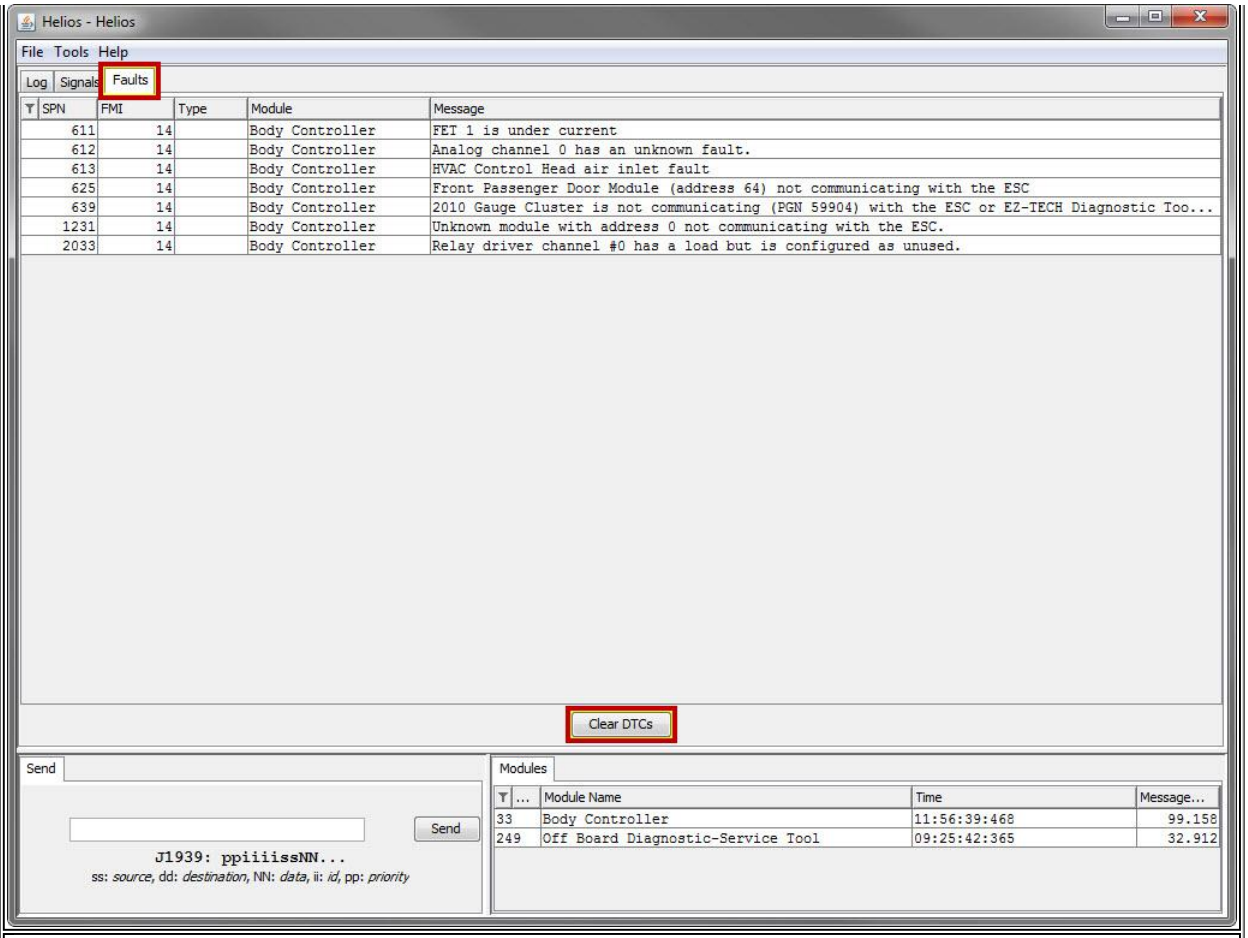
- Helios can also be used to view Signals, Faults, Modules Communicating and a Diagnostic Tab.

Figure 13 - Signals Tab



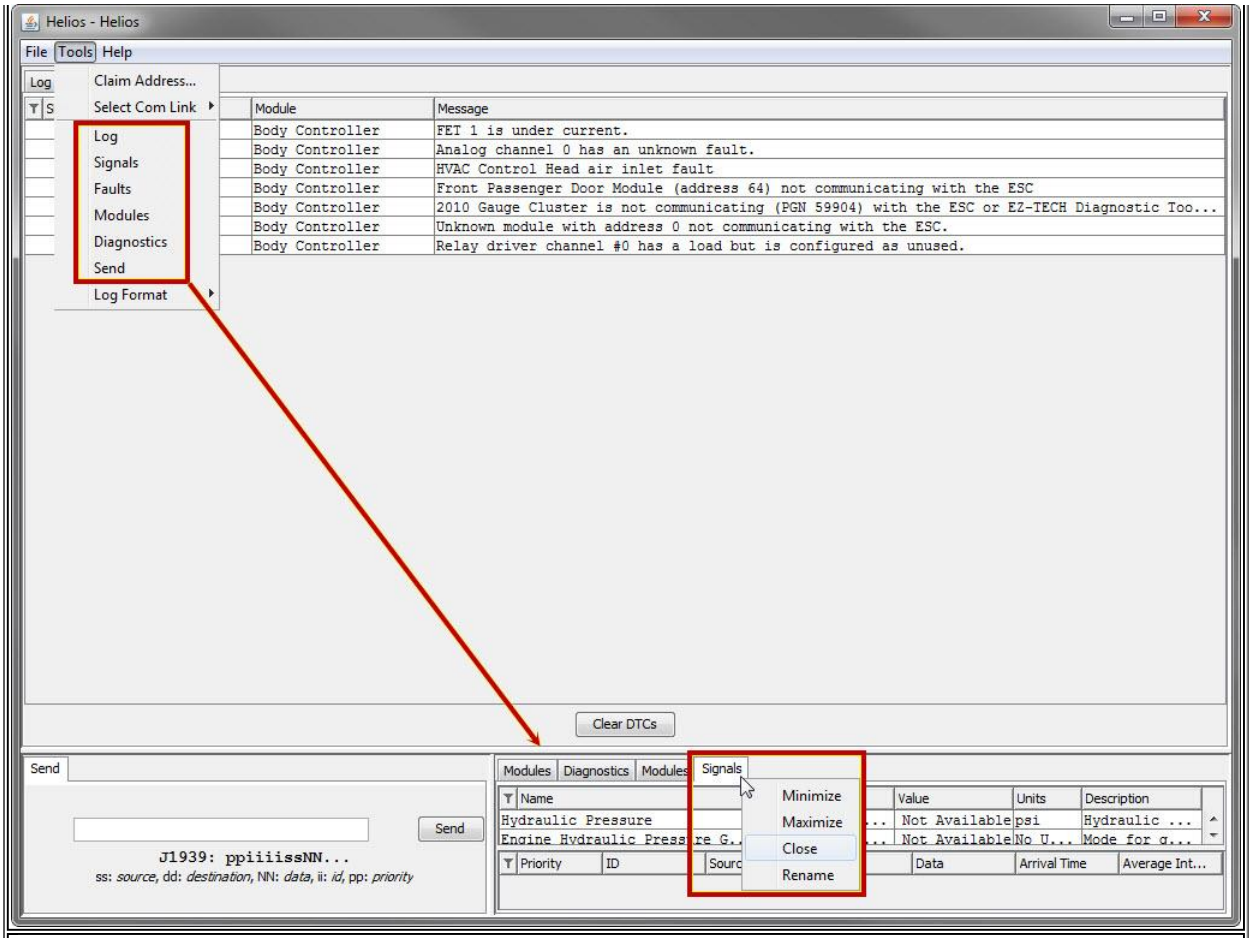
- The Signals Tab allows you to view live data as it is broadcast on the data link.
- You can customize the view by right clicking on the header bar (as shown) and selecting the items you wish to see or hide.
  - Please note the Source is a Hexadecimal value. Converting 21 from Hexadecimal to Decimal gives you 33 (Body Controller)

Figure 14 - View or Clear Faults



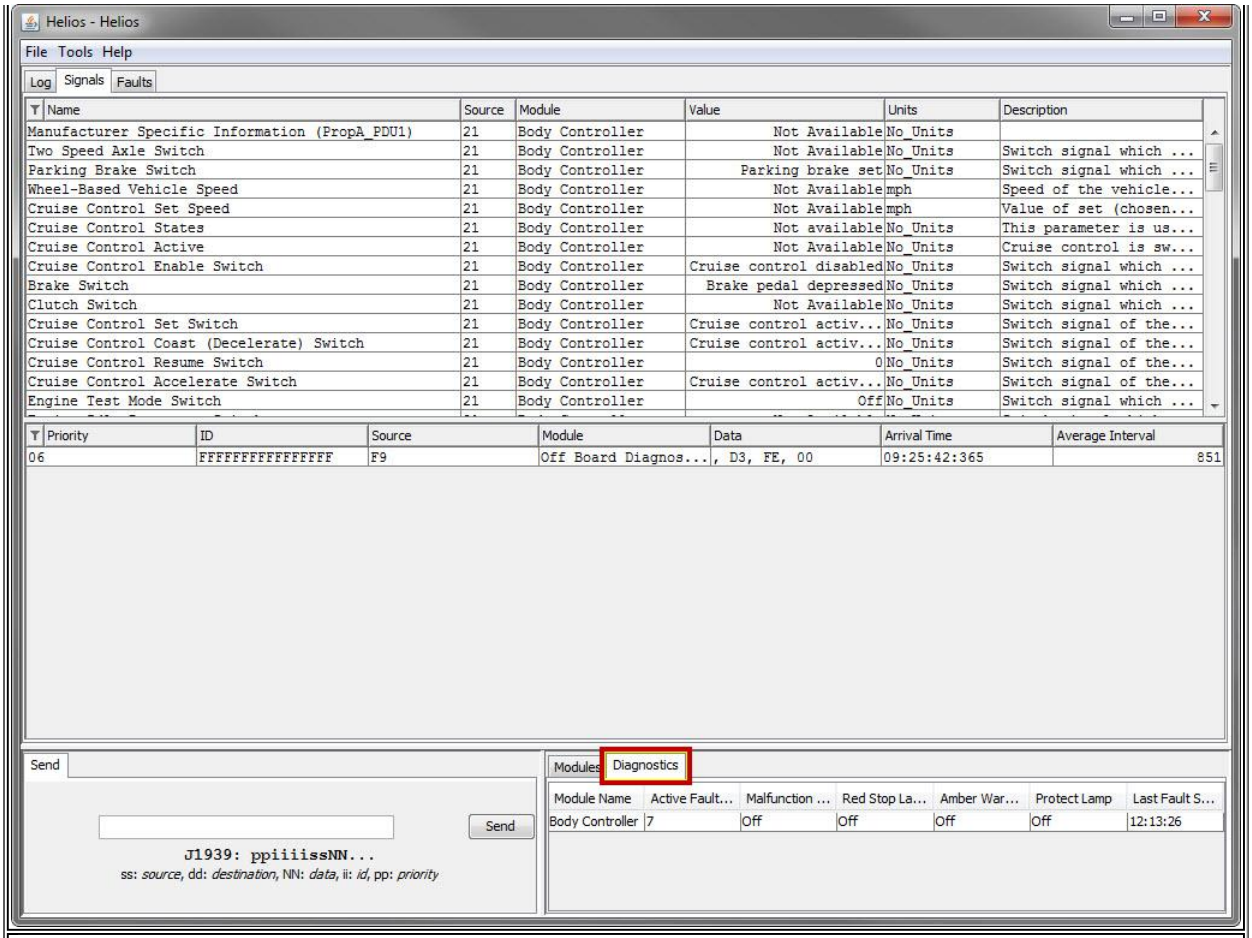
◦ You can view and clear faults in the Faults Tab

Figure 15 - Using the Tools Menu



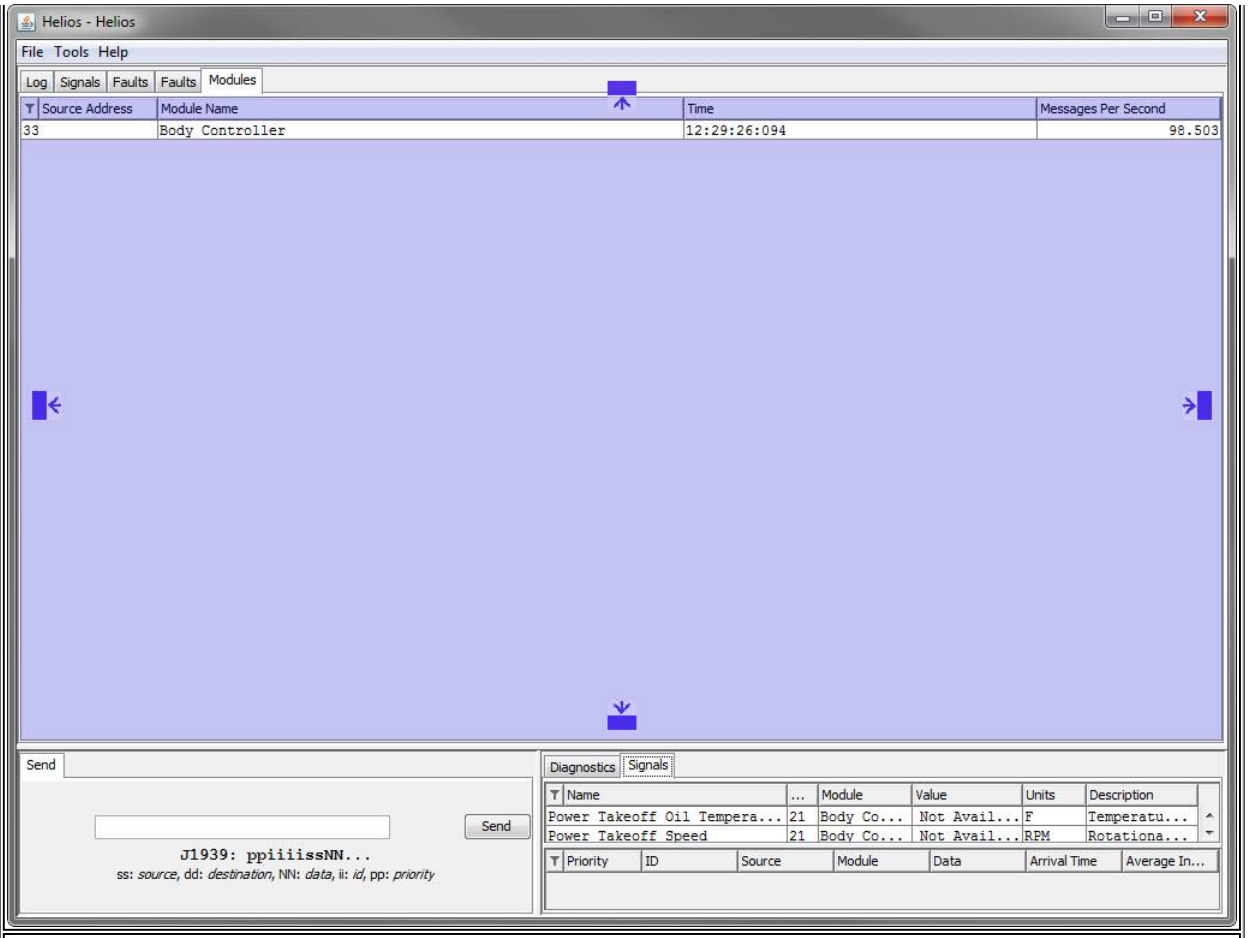
- Use the Tools Menu to view different information.
- A new tab will be opened with the information you requested.
- Right click on any tab to change or close the tab.
  - You can change or close any tab on the screen.

Figure 16 - Diagnostics Tab



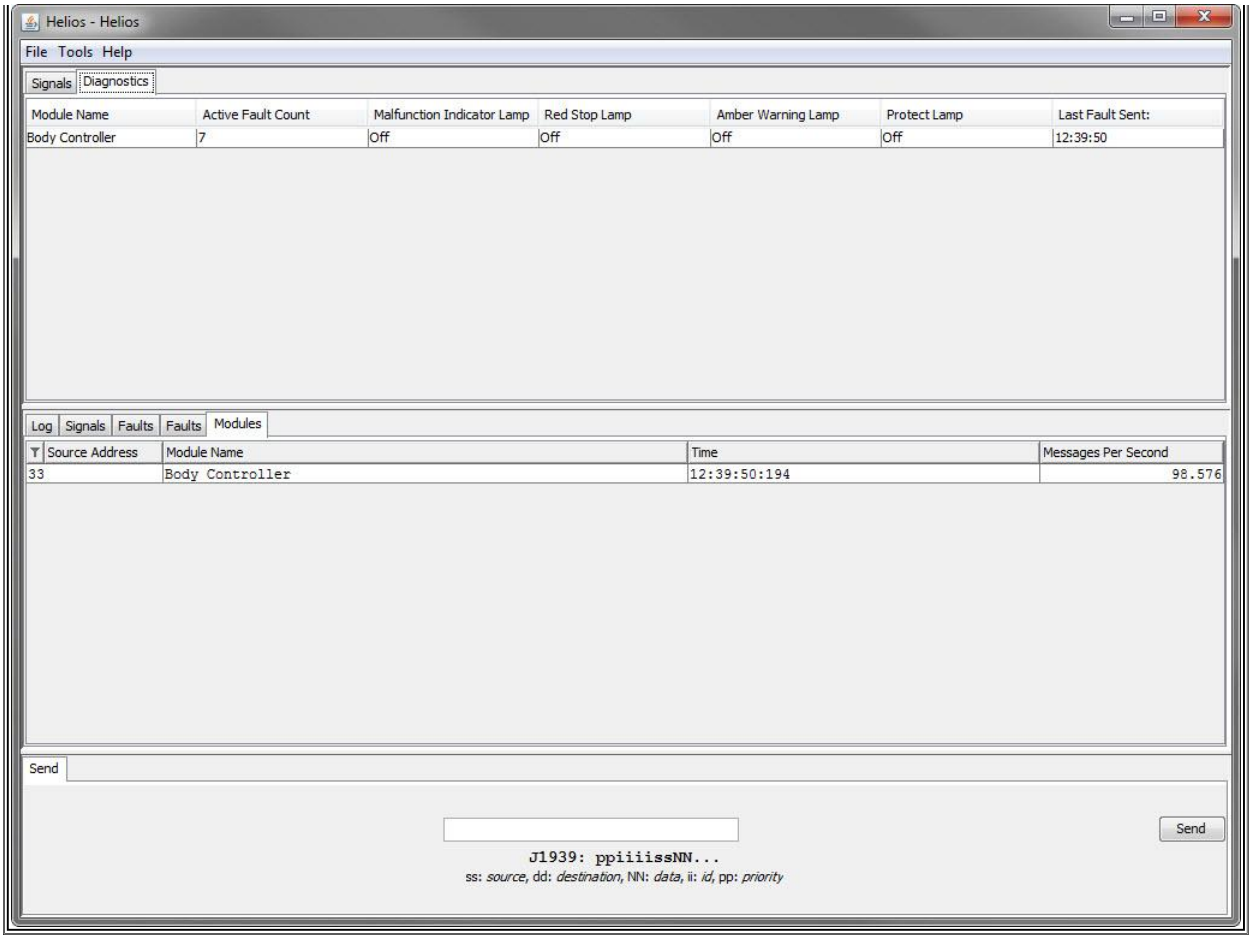
- The Diagnostic Tab gives a useful overview of the modules.
- It can show which module is turning a cluster warning lamp on.

Figure 17 - Moving Tabs



- Left Click and Drag a Tab to various locations on the screen.
- This allows you to view full screen if desired, or organize the tabs.

Figure 18 - Example of Tabs Moved for Viewing



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