

BusMaster

From Embedded Systems Learning Academy

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BusMaster

While working on your project understanding what is happening on the CAN bus is extremely important. While there are many ways to monitor this data flow (logging, debug statements, etc.), one of the most useful methods allows you to monitor this traffic in real time. BusMaster is a CAN tracing tool which logs and displays all information on the CAN bus in an extremely easy to use GUI. This page will show you what is needed in order to set up BusMaster and how to use some of the program's basic functionality.

Setting up BusMaster

Step 1: Downloading Necessary Files

BUSMASTER

Calvin

← → ↻ ↗

https://rbei-etas.github.io/busmaster/

☆



BUSMASTER

BUSMASTER is an Open Source Software tool to Simulate, Analyze and Test data bus systems such as CAN, LIN, FlexRay.

Download, run, study, modify and redistribute. Join the BUSMASTER community to benefit from the updates, bug-fixes and to contribute!

→ [Click to participate in the BUSMASTER Survey](#)

User Information

- [Download \(Newest Release: v3.0.0\)](#)
- [Download VS2013 Redistributable](#)
- [Download MinGW](#)
- [User Manual](#)
- [Hardware Support](#)
- [Release Roadmap](#)
- [Bugs and Feature Requests](#)

Developer Information

- [Project Page](#)
- [Development Environment](#)
- [Further Documents](#)
- [Contribution Process](#)

This project is supported by

BUSMASTER was conceptualized, designed and implemented by Robert Bosch Engineering and Business Solutions (RBEI). Presently it is a joint project of RBEI and ETAS GmbH. Details on the project and offerings is available on the ETAS product page [BUSMASTER](#)

Join our [YouTube](#) Channel where user-contributed videos on contributions, web-based trainings and other offerings are updated.

The Open Source Community includes several Organizations, Universities and enthusiastic individuals, some of which are listed below.

**BOSCH**
Invented for life



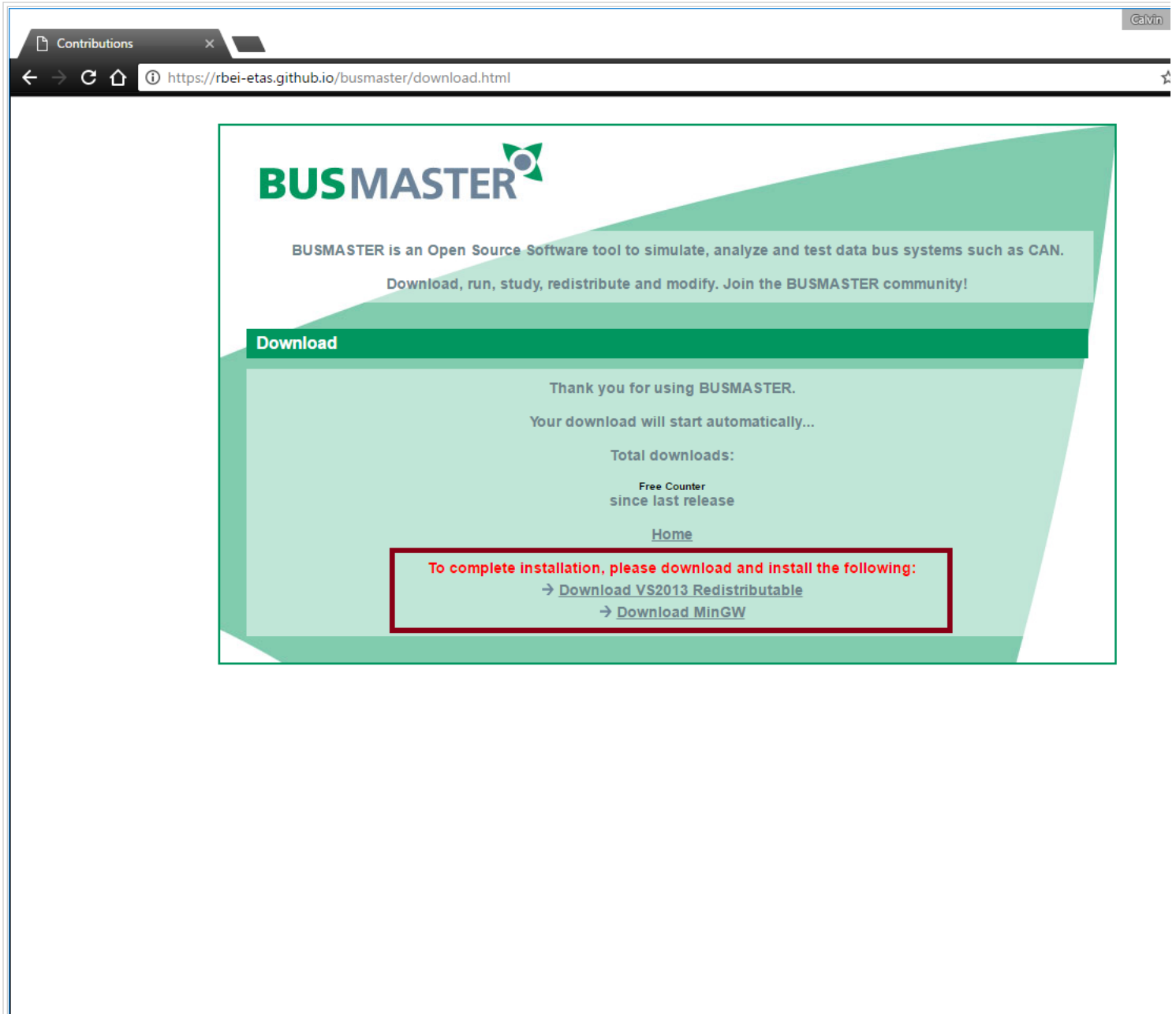






https://github.com/rbei-etas/busmaster/wiki/Visual-Studio-2013-Redistributable

BusMaster can be found at the following location: BusMaster (<https://rbei-etas.github.io/busmaster/>)



The screenshot shows a web browser window with a single tab titled 'Contributions'. The address bar displays the URL <https://rbei-etas.github.io/busmaster/download.html>. The page content features the BUSMASTER logo at the top left. Below the logo, a text block states: 'BUSMASTER is an Open Source Software tool to simulate, analyze and test data bus systems such as CAN. Download, run, study, redistribute and modify. Join the BUSMASTER community!'. A green 'Download' button is positioned below this text. Further down, a message reads: 'Thank you for using BUSMASTER. Your download will start automatically...'. This is followed by a 'Total downloads:' section, which includes a 'Free Counter' and the text 'since last release'. A 'Home' link is located below the counter. At the bottom, a red-bordered box contains the instruction: 'To complete installation, please download and install the following:', followed by two links: '→ Download VS2013 Redistributable' and '→ Download MinGW'.

BUSMASTER

BUSMASTER is an Open Source Software tool to simulate, analyze and test data bus systems such as CAN.
Download, run, study, redistribute and modify. Join the BUSMASTER community!

Download

Thank you for using BUSMASTER.
Your download will start automatically...

Total downloads:
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since last release

[Home](#)

To complete installation, please download and install the following:
→ [Download VS2013 Redistributable](#)
→ [Download MinGW](#)

You will also need to download VS2013 and MinGW. The links are available after you download the BusMaster Installer

CAN USB - PCAN-USB A

Grid Connect Inc. [US] | https://gridconnect.com/pcan/can-adapters/can-usb.html

FREE SHIPPING ON ALL ORDERS > REQUEST A QUOTE > SALE ITEMS > LOGIN


gridconnect.


Search by keywords or part nu

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Home > CAN > CAN Adapters & Routers > CAN USB Adapter (PCAN-USB)

PRICE CUT





★ ★ ★ ★ ★ 3 Reviews

8 Questions \ 8 Answers

Part Number: GC-CAN-USB
MPN: IPEH-002021, IPEH-002022

List Price: \$225.00
YOUR PRICE: \$225.00

QUANTITY	PRICE EACH	YOU SAVE
2	\$220.00	3%
5	\$215.00	5%

Quantity: 1

Availability: In Stock - Ships same or next business day

DESCRIPTIONFEATURESSPECSDOCUMENTATIONREVIEWS

PCAN-USB Hardware Manual (PDF)

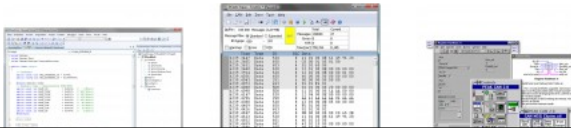
Downloads:

- PCAN-USB Windows Driver Package (ZIP file)
~ Includes: Drivers, PCAN-VIEW Monitoring Software and PCAN-BASIC Program
- PCAN-USB Linux Drivers

Third Party Program Information:

- CANopen Object Browser for Windows
- CANopen Object Browser for Linux
- CANopen Commandline Tool
- CANopen-over-TCP/IP Client
- CAN Monitor using SocketCAN
- CAN Monitor for Mac OS X Lion (10.7)

RELATED PRODUCTS

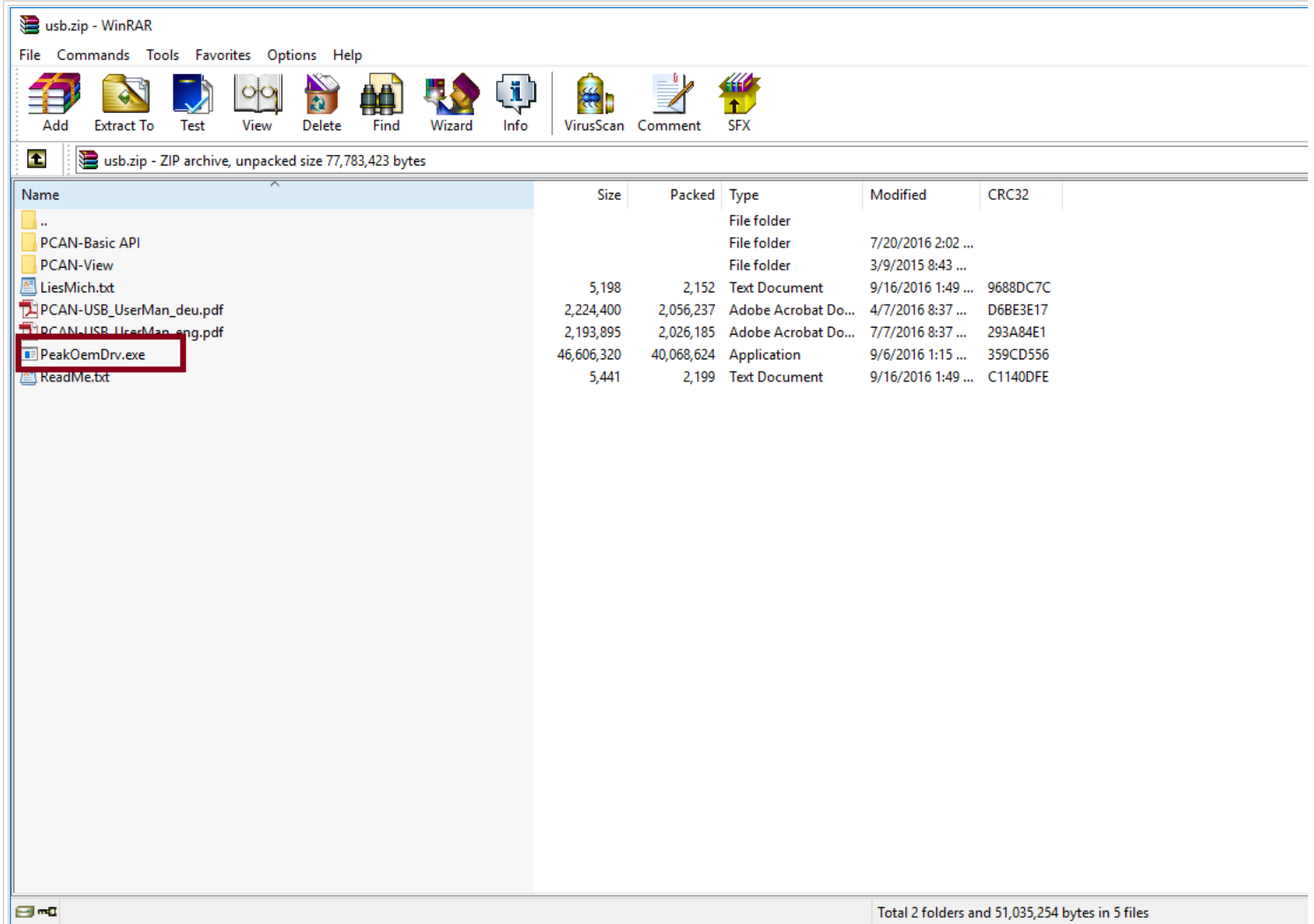


gridconnect.com/media/catalog/product/cache/1/image/.../GC-CAN-USB_1.jpg

PCAN Dongle Drivers can be found here: Drivers (https://gridconnect.com/pcan/can-adapters/can-usb.html)

socialledge.com/sjsu/index.php/BusMaster

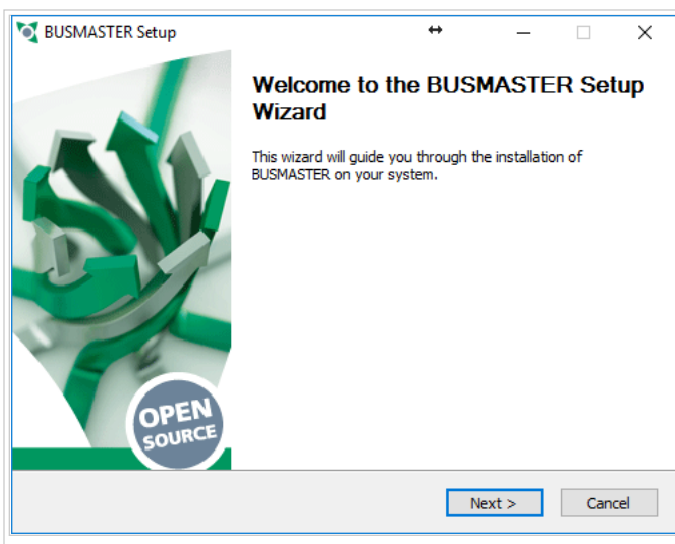
4/15

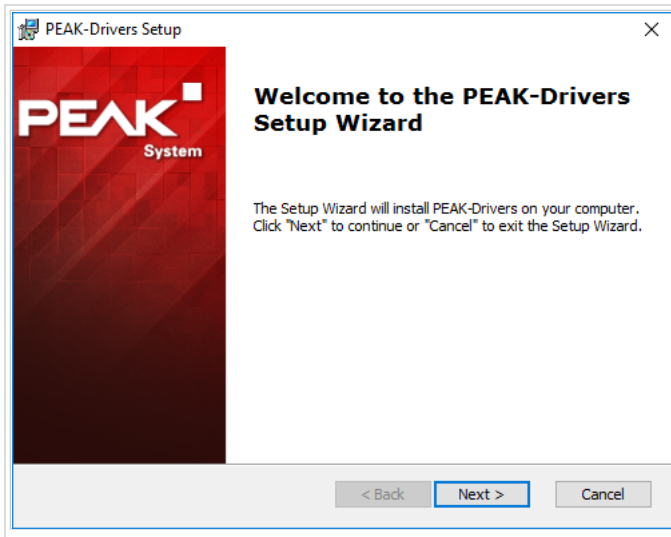


The correct file for the drivers will be in the usb.zip file and is named: PeakOemDrv.exe

Step 2: Installing

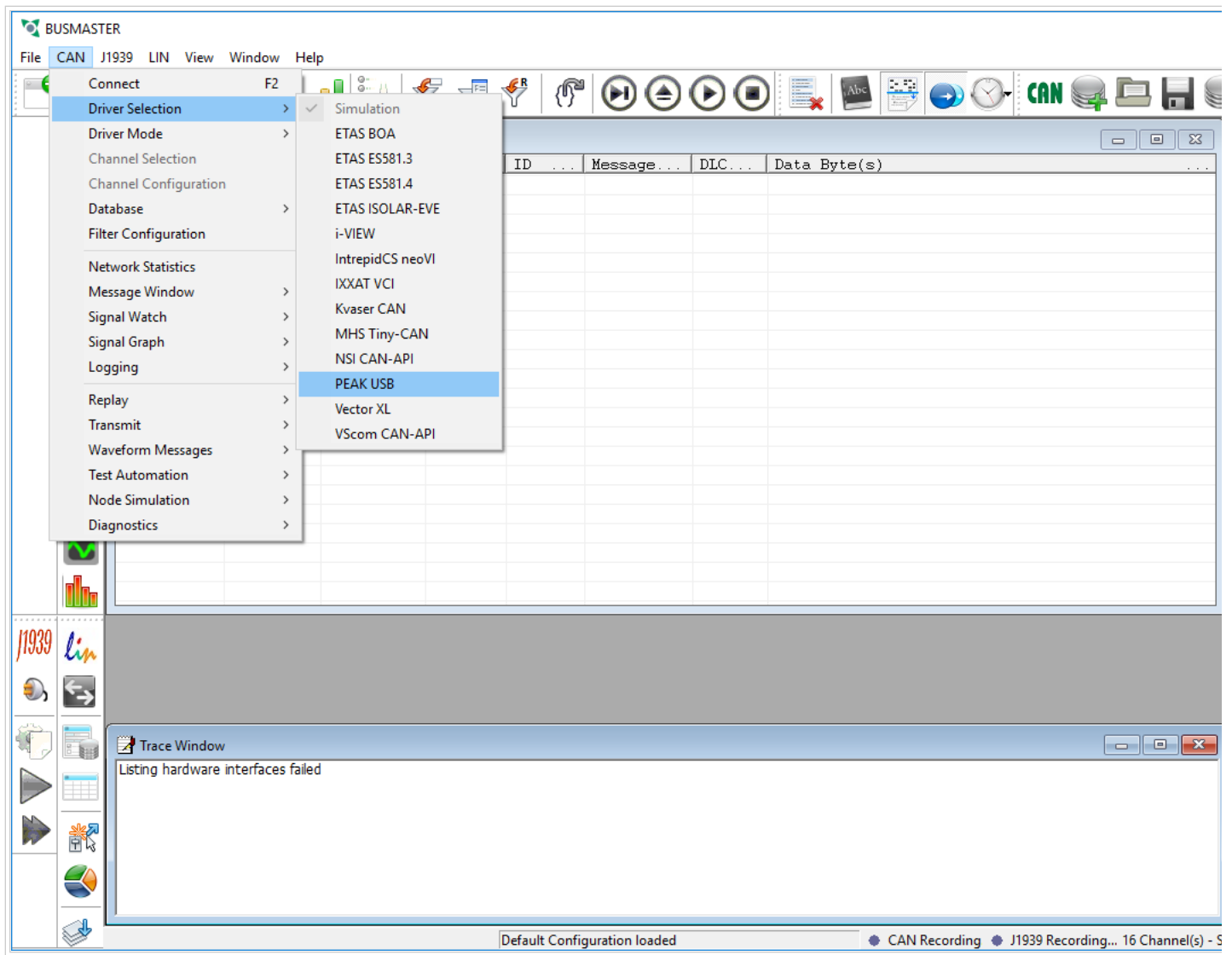
1. Install VS2013, MinGW, BusMaster, and PCAN Drivers with all default values.



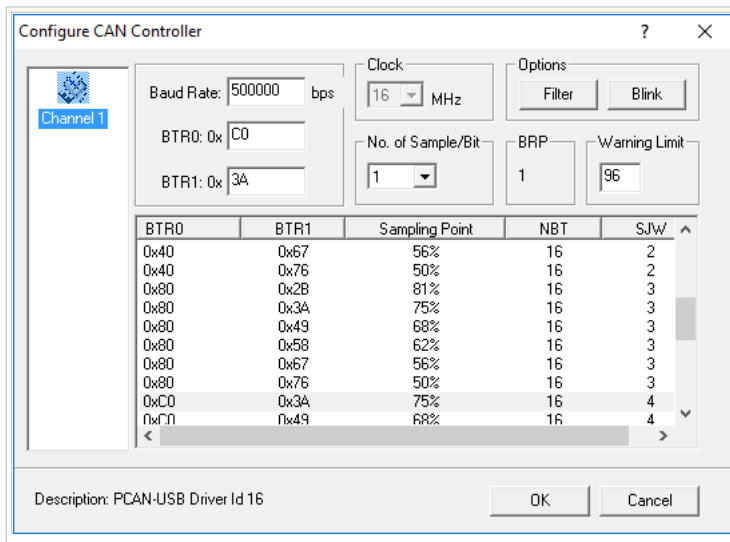


Step 3: Configuring BusMaster

1. Open BusMaster
2. Under the CAN menu go to **Driver Selection** and select **PEAK USB**

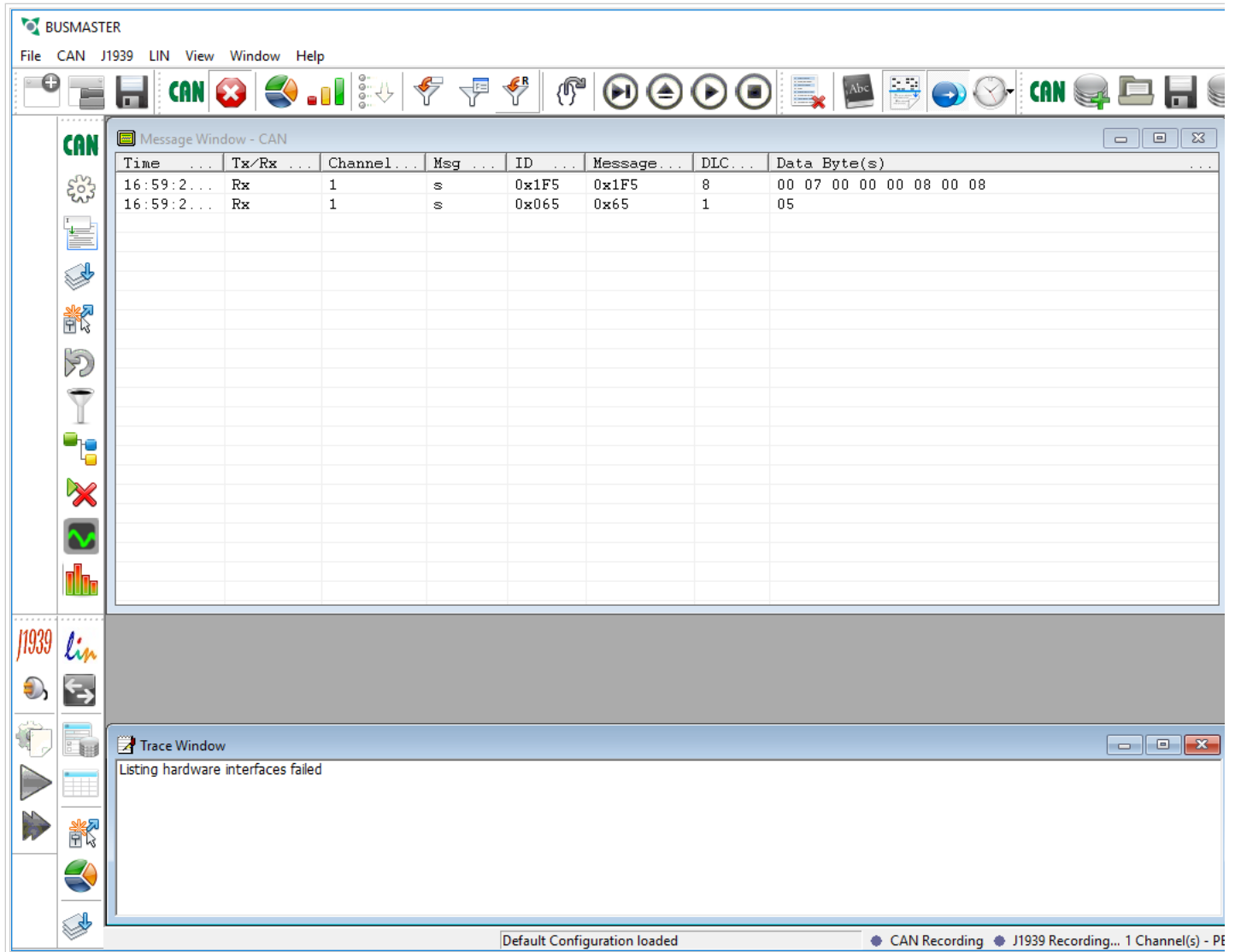


3. Under the CAN menu go to **Channel Configuration** and change the **Baud Rate** to match your CAN bus and click **OK**.

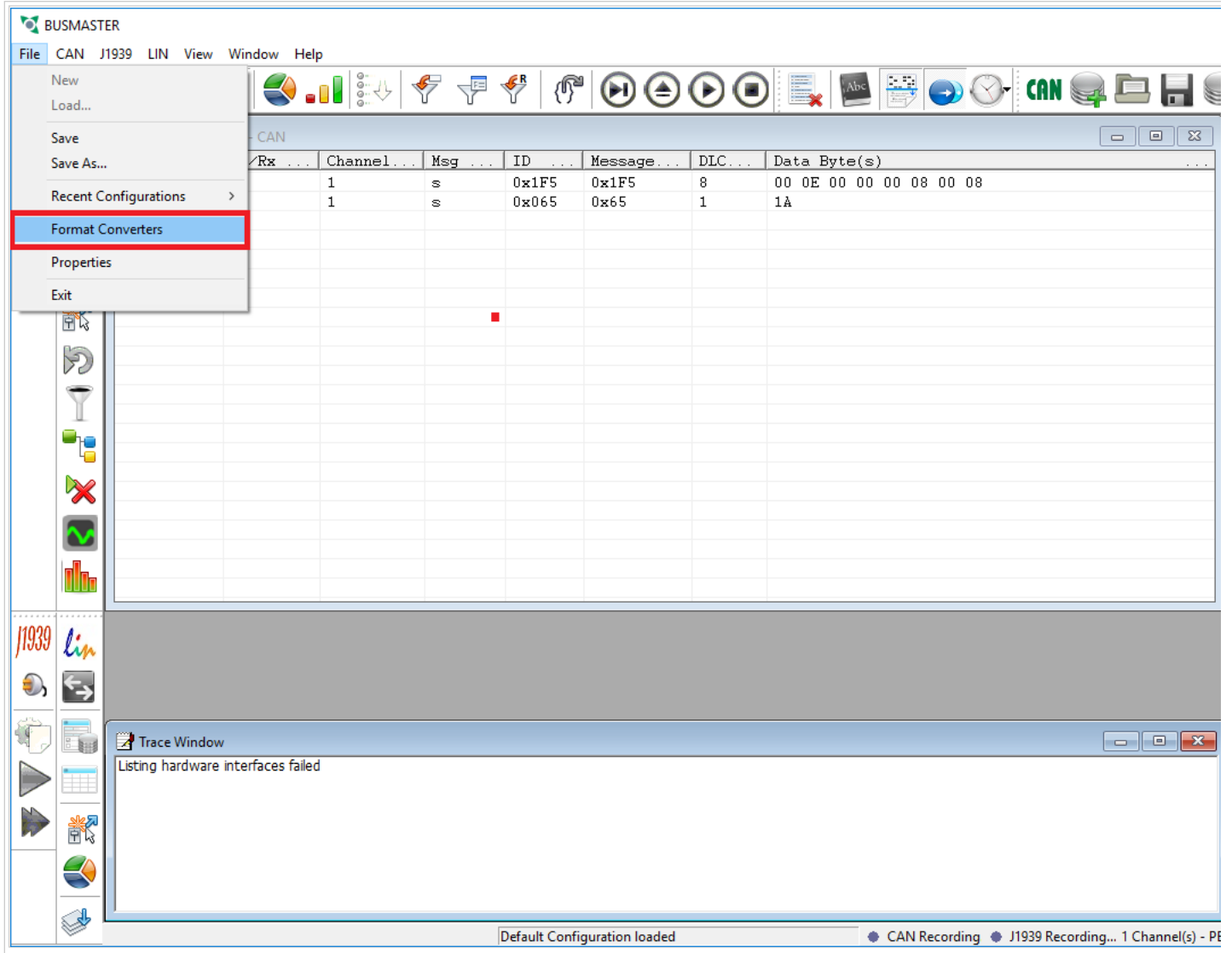


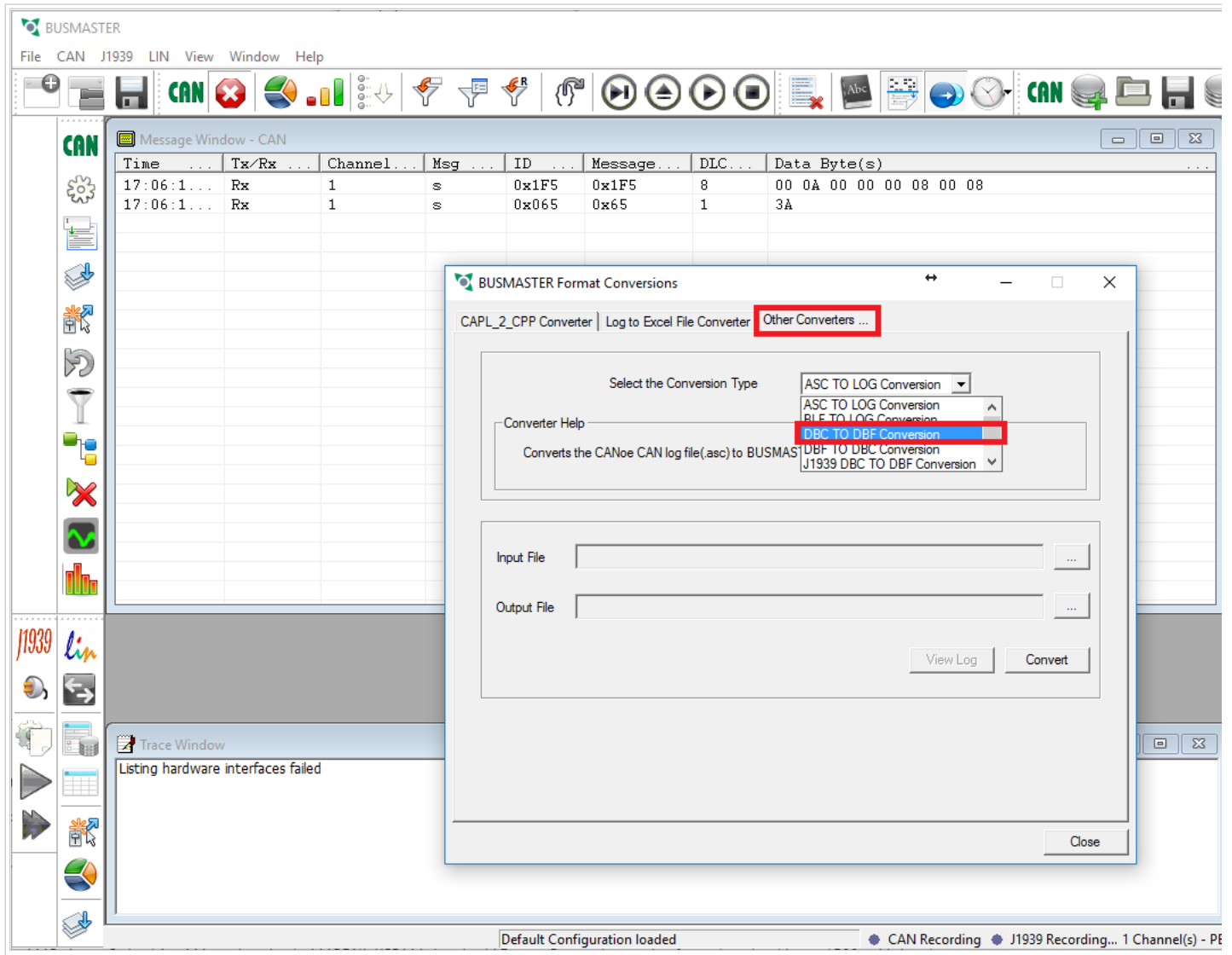
4. Under the CAN menu click **Connect**

5. If everything went correctly you should now start receiving any messages that are being sent on the CAN bus.

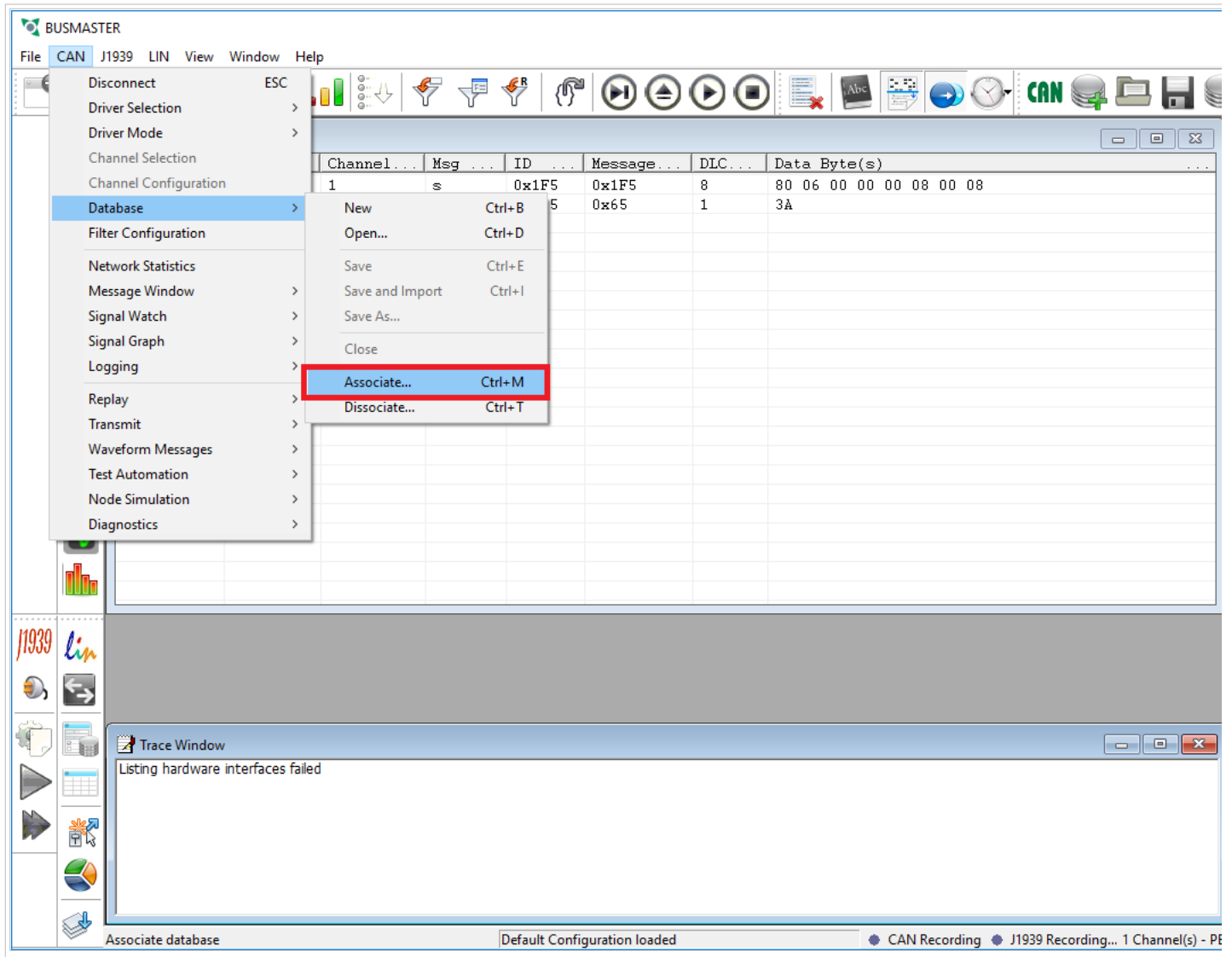


Now that we are receiving messages the next step is to get them to decode properly. That way we can see the physical values of the messages instead of the hex values of the raw data frames. To do this we need to attach a database file to this configuration. Since the **DBC** file format is proprietary BusMaster uses a similar file type called **DBF** instead. However, BusMaster comes with a function that will allow us to convert DBC files to DBF files. Please follow the instructions below to convert your file and attach it to this instance.

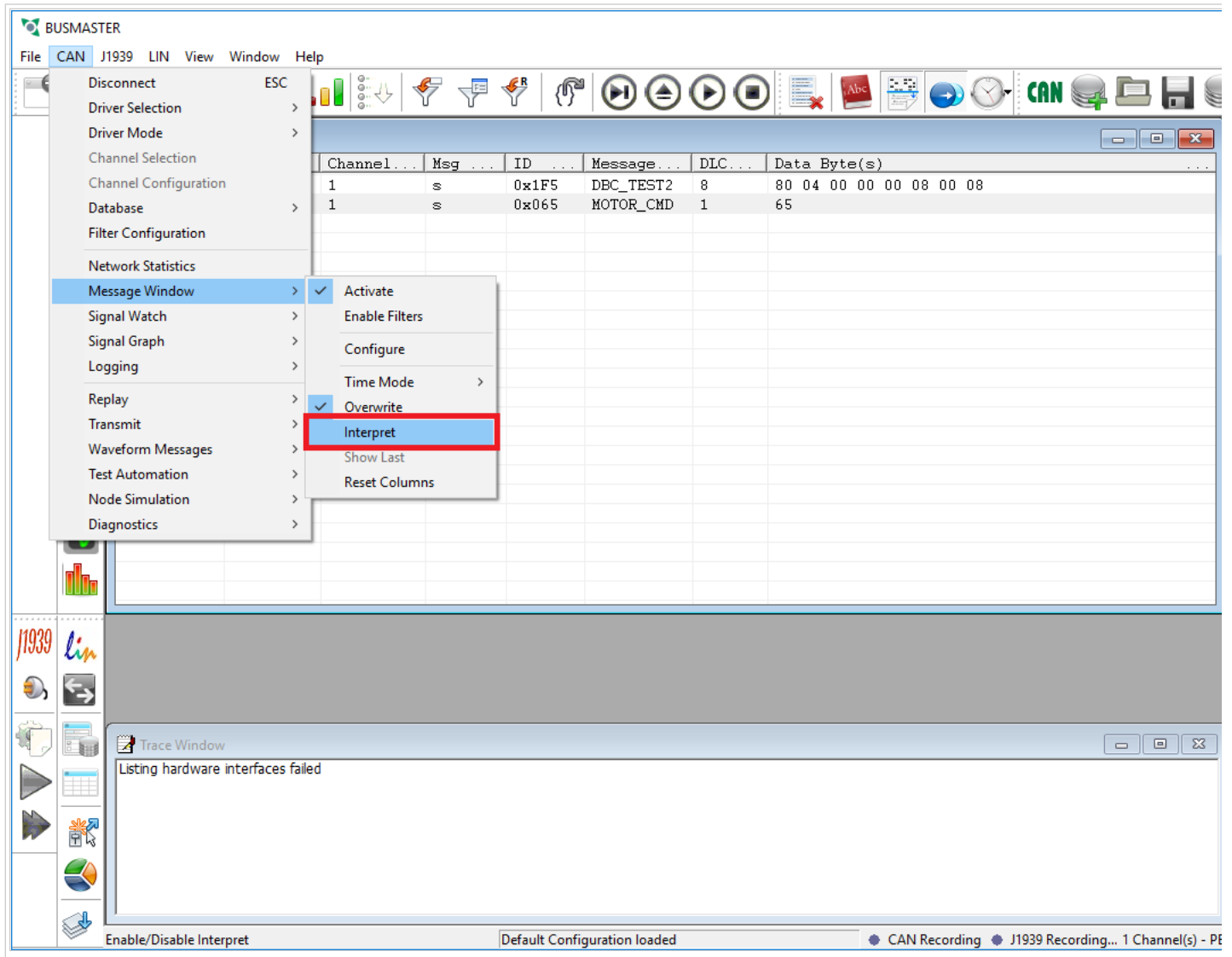
1. Under the **File** menu go to **Format Converters**2. Select the **Other Converters** tab and then choose **DBC to DBF** in the drop down menu



3. Choose your DBC file as the Input File. The Output File's name and location will be the same as your DBC file except with the extension of .DBF. Close the dialog box when the conversion is complete
4. Under the CAN menu go to **Database** then select **Associate** and choose the newly converted DBF file.



5. The **Message Window** should now show the correct names for the messages on the bus. The next step is to **interpret** the signals in the messages so that we can see what the physical values are.



6. After enabling the **interpret** function you will see a small + box next to the messages. If you click this box the messages will expand and show you the individual signal values.

7. Now would be a good time to save you configuration in case your settings get reset so that you do not have to reconfigure BusMaster.

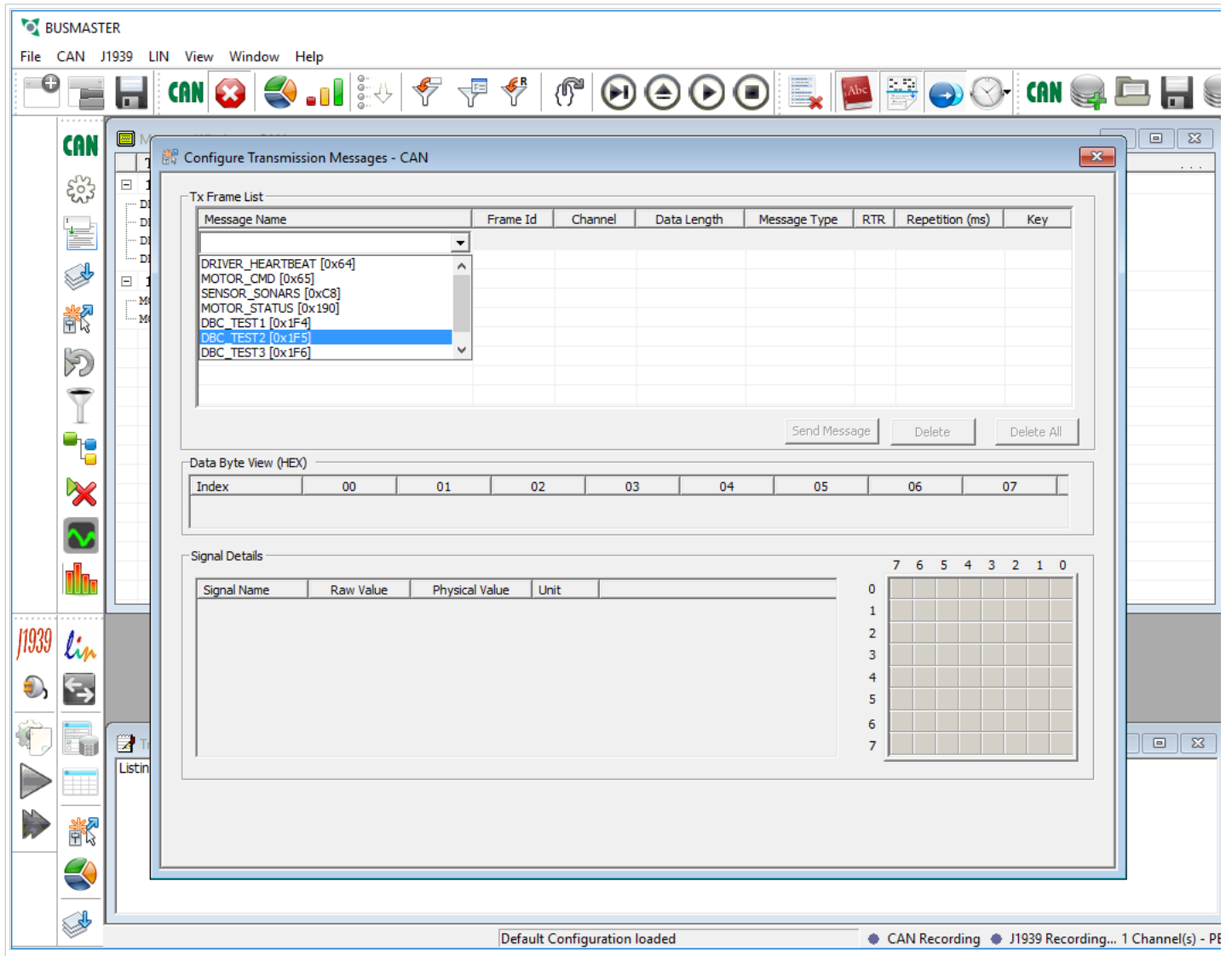
File:Busmaster
usage2.pngcenter
500px

Useful Functions in BusMaster

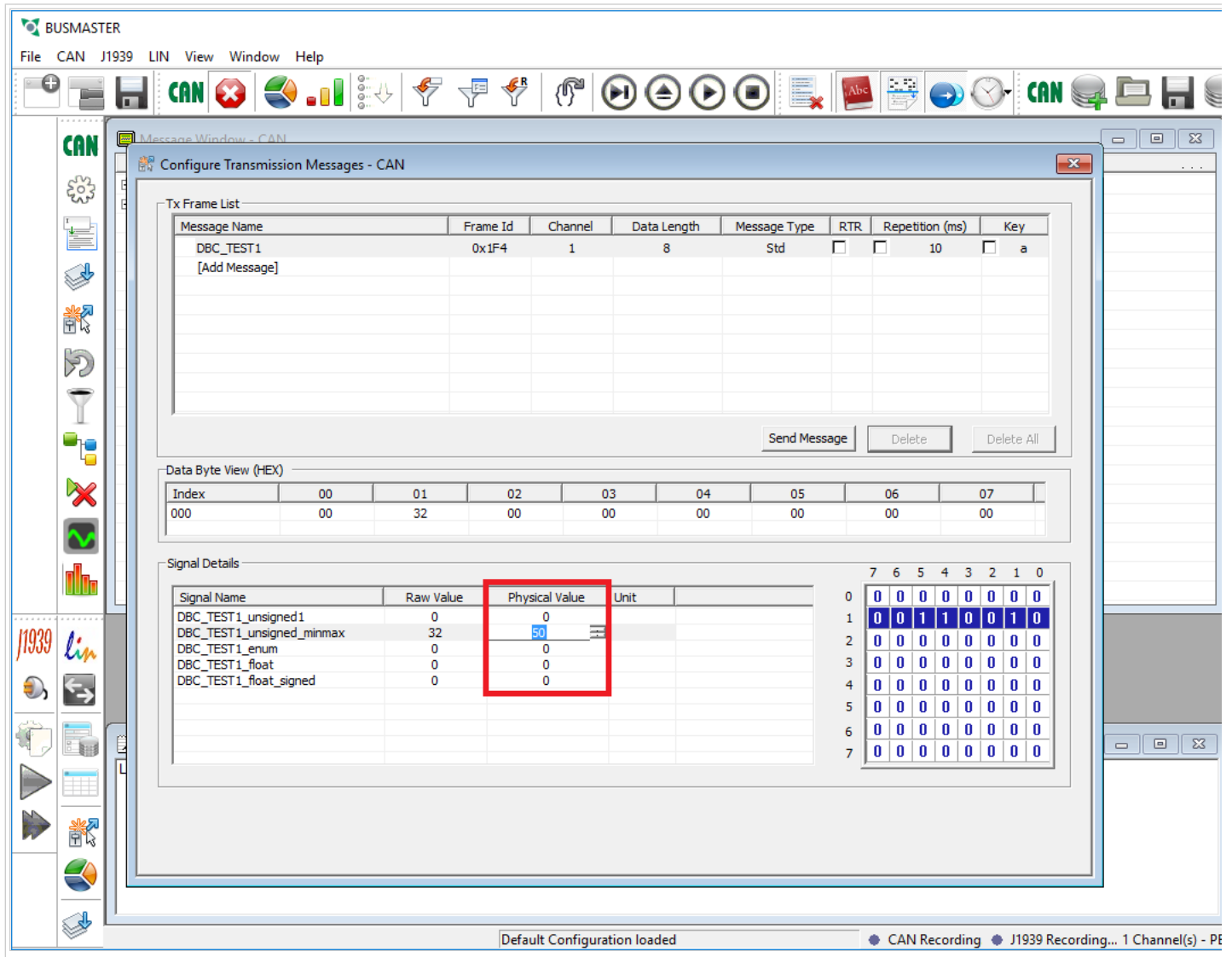
Transmitting Messages

BusMaster allows you to transmit messages on the CAN bus as if it is an ECU. When these messages are put out on the bus they will act like every other message. This can be useful if you are trying to test how your ECU will react to certain messages or if you need to simulate a heartbeat signal to prevent error handling logic to take over.

1. Under the CAN menu select **Transmit** then **Configure**
2. To configure a message simply double click on the [Add Message] line and select the message you wish to translate on the bus.



3. After selecting the message you want to send you may change the value of each signal found within that message.

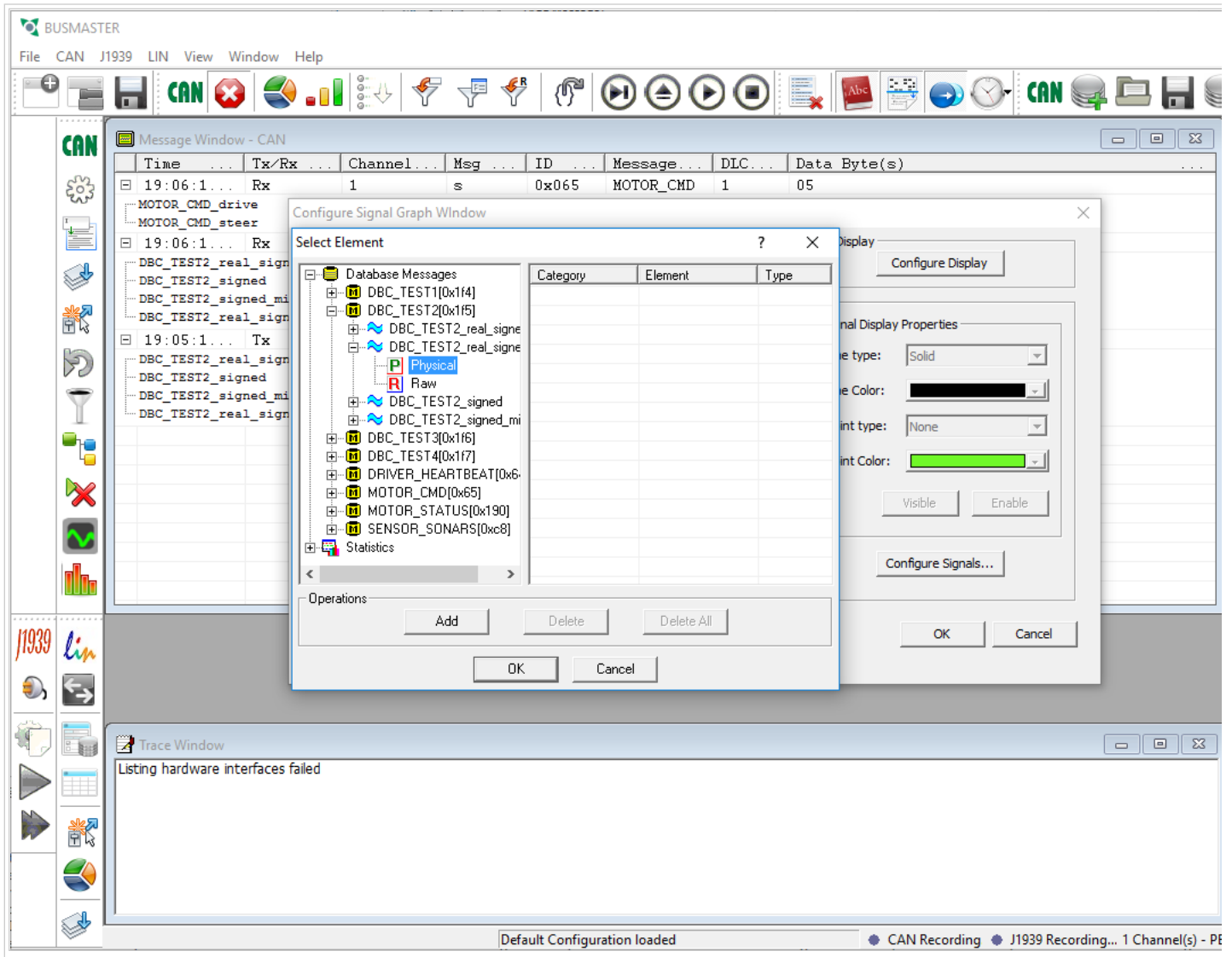


4. If desired you may check the **Repetition** box to allow the message to be sent periodically.
5. To send the message you may either select it and click the **Send Message** button.

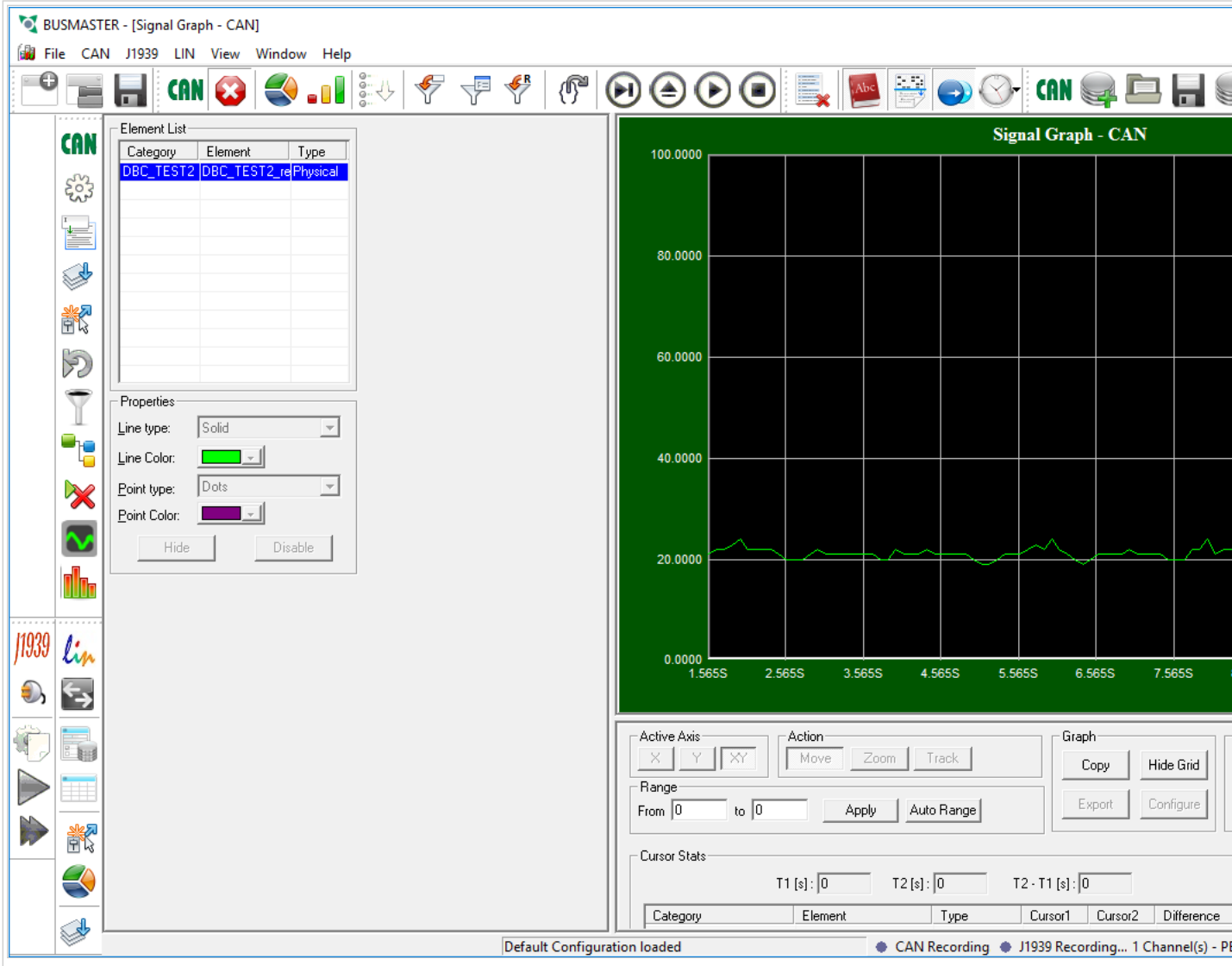
Graphing

You may find it beneficial to be able to see a graph of the values that are being reported over CAN. The graph allows us to watch how values are changing over time, for instance how a sonar sensor is reporting objects in its view.

1. Under the **CAN** menu select **Signal Graph** then **Configure**. From the dialog box that pops up click the **Configure Signals** button. A second dialog box will pop up that allows you to select which signal you want to graph.



- After selecting the signal(s) you want to graph and adding them you may click **OK** to close all the dialog boxes. Now go to the **CAN** menu select **Signal Graph** then **Activate**. A new window should now show up with real time graphing of the signals you chose.



Logging

Coming soon!

Replaying Logs

Coming soon!

Troubleshooting

Coming soon!

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