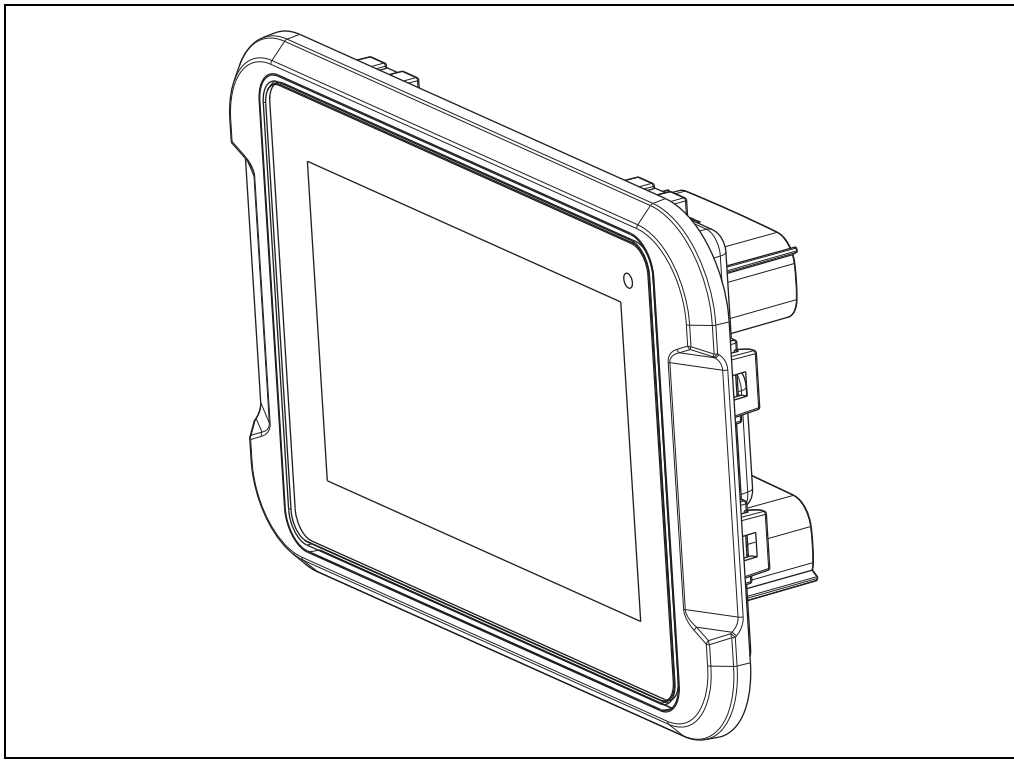
PHD J1939
Stack Generation

Publ no HY33-5021-M4/US
Edition 2017-02-08



ENGINEERING YOUR SUCCESS.

1 Introduction

These instructions are to be used as a reference tool for the vehicle manufacturer's design, production, and service personnel.

The user of these instructions should have basic knowledge in the handling of electronic equipment.

Overview

The PHD software platform consists of various levels of software that support each other to create a complete working system.

The Parker J1939 Stack Generation Tool is used to import the XML file generated from a CAN Database (DBC) file from such tools as the CANdb++ editor from Vector Informatik GmbH, www.vector.com.

Definitions

The terminology used in this manual are defined in the following table.

Abbreviation	Explanation
CAN	Controller Area Network.
DBC	CAN database file used to store all information that describes the network.
Lua	A cross platform programming language for embedded systems.
XML	Extensible markup language
Crank Storyboard Designer	A desktop development suite that enables user interface designers to easily prototype the look and feel of a product and then deploy it to a target equipped with the Crank Storyboard Engine.

Product documentation

The following publications are relevant for users of this product.

- PHD Catalog datasheets HY33-5021/US thru HY33-5023/US
- PHD User Guide/Instruction book HY33-5021-IB/US
- PHD Network Interface Configuration manual HY33-5021-M1/US
- PHD API Reference HY33-5021-M2/US

All documentation may be found on our web pages, located at www.parker.com/ecd.

Contact the manufacturer if there is anything you are not sure about or if you have any questions regarding the product and its handling or maintenance.

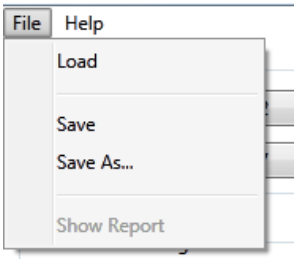
The term "manufacturer" refers to Parker-Hannifin Corporation.

2 J1939 Stack Generation

This software is used to create the .json file to configure the calls for the hardware (HW) level interface for the specified CAN messages in the XML file. In addition, it will create the Lua Script file that can be merged with the Lua Script file developed using the Crank Storyboard Engine.

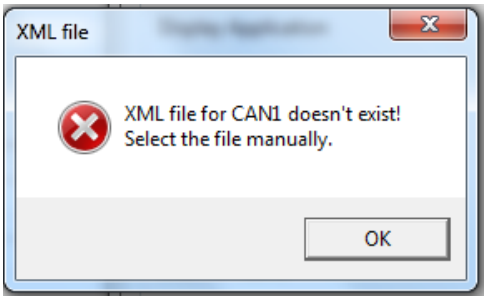
Configuration file

The File menu option is used to save or load a (*.cgt) Configuration file to save your preferred settings and directories.



File menu window

If you have saved a Configuration (.cgt) file, it will save the current XML files and output files locations as default. If you delete or move the XML file, you will get the following error.



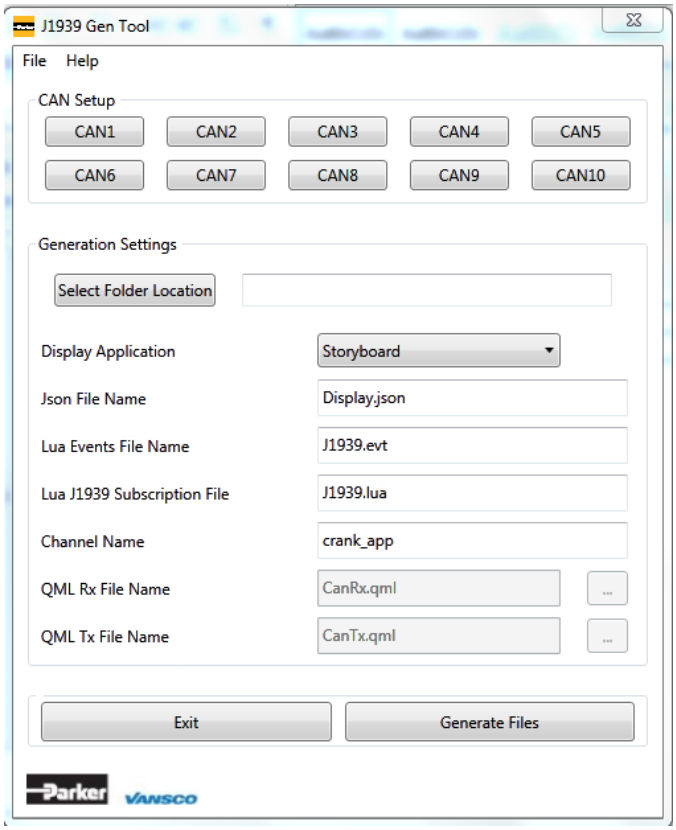
XML error

To resolve this error, go and select the new XML file and then resave the .cgt file.

CAN Node configuration

After the configuration has been loaded, if desired, the CAN Node Configuration may be selected. Up to 10 CAN Port Configurations can be set up, although most applications will only have from one to three ports.

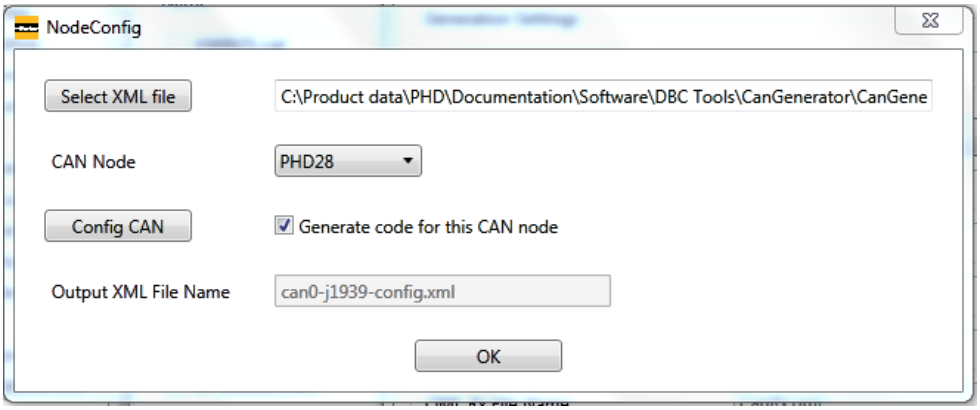
For example, the PHD70 has two CAN ports, and the PHD50 and PHD28 have only one CAN port.



CAN Node configuration window

For PHD applications, you should select the Storyboard Display Application. The QML file selections are only for generating QT applications and do not apply to the J1939, PHD applications.

Once you select which CAN node you wish to build the files for, you need to select the XML file that contains the CAN Message definitions. After you have selected the XML file, the CAN Node Field will populate with the devices available in the XML file.



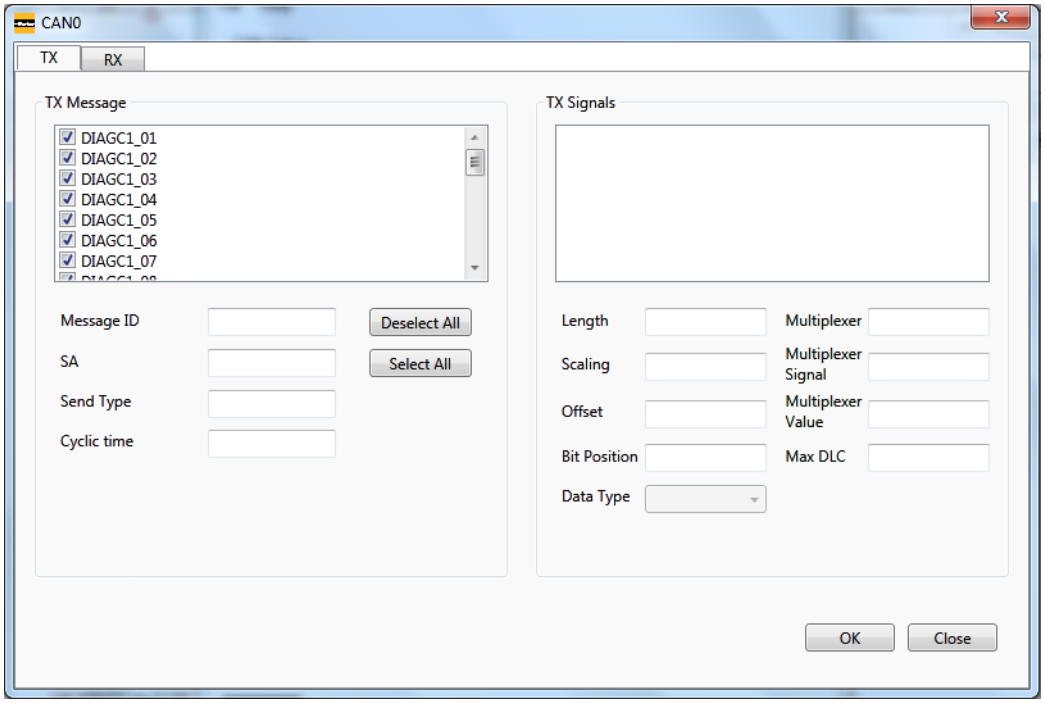
CAN Node field

The "Generate code…" checkbox is provided in case you have loaded XML files for more than one CAN node. Use this checkbox to select the node for which you wish to generate files.

CAN configuration

By Selecting the "Config CAN" button, you can select or deselect the CAN messages that are included in the XML file, but you would prefer not to have built into a specific application.

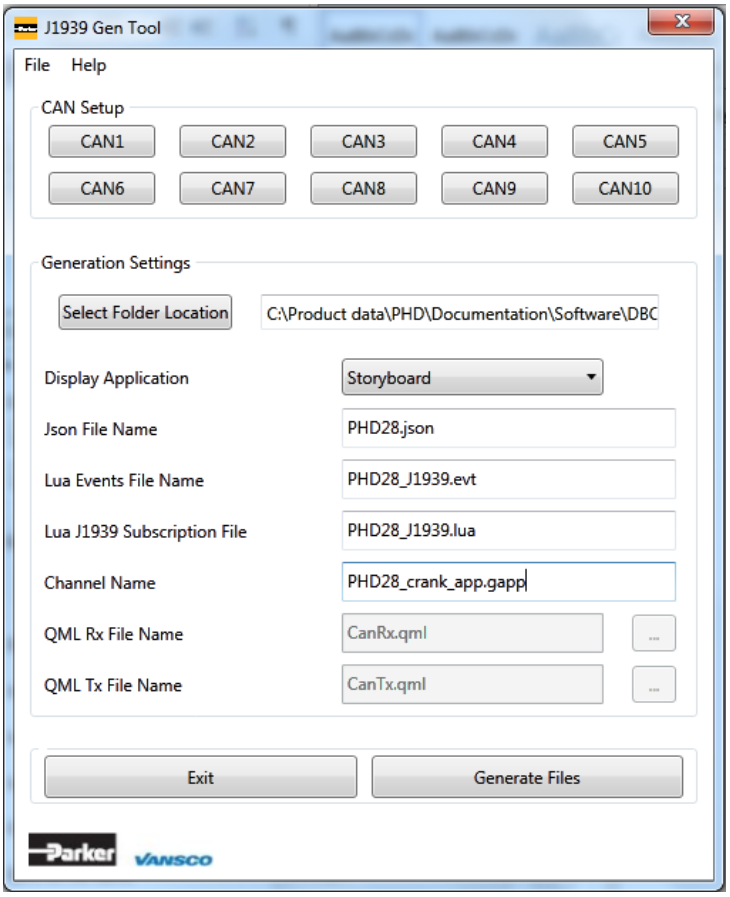
Note that the current release does not support customizing the Message ID Parameters or the Message Signal parameters at this time, so those fields cannot be populated.



CAN configuration window

Customize filenames

After you have loaded the XML file and selected the CAN node for which to generate the files, you can customize the .json file name, or leave it as the default. The .json file is the file that contain the calls to configure the target hardware. You can also customize the Lua Events and Subscription file names. Lastly, the Channel name is the .gapp file from the Crank Storyboard application.

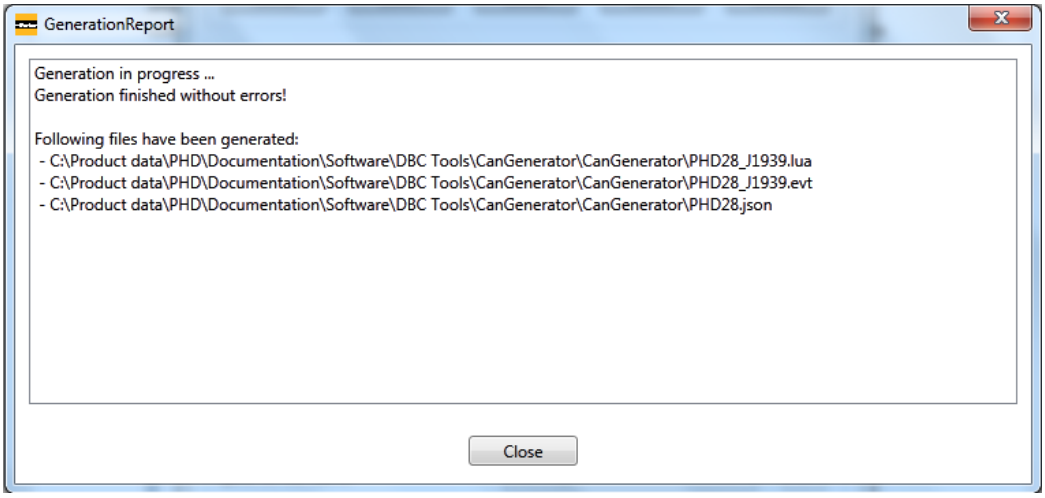


Filename fields

At this point, you can Exit or Generate the corresponding files..

Generating files

When you click on the "Generate Files" button, if the file generation is successful, you will see the following message.



Report window

For latest information visit our website www.parker.com/ecd

Information in this instruction book is subject to change without notice

Publ no HY33-5021-M4/US
Edition 2017-02-08

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