505650 M-Flex Isolated CAN Bridge Module User Guide

CREATED:	G. SCHAUER	DATE:	02/25/20
CHECKED:	S. JOHNSON	DATE:	03/02/20
APPROVED:	S. JOHNSON	DATE:	03/03/20
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Launch the 'ProgTool' application by double clicking the icon.

The 'Main' screen will appear and automatically detect compatible Kvaser dongle(s) connected to the PC USB port(s).

Figure 1: Main screen of Marlin CAN-USB Programmer

If multiple Kvaser dongle(s) are connected, you will need to select which one you want to use from the drop down menu as shown:
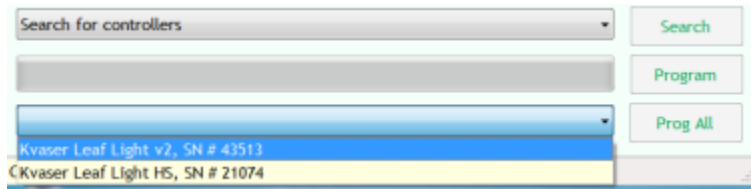

Figure 2: Tool select drop down menu

Once selected, the Marlin CAN USB Programmer will auto-detect any modules connected to that specific Kvaser dongle. Consult the device outline drawing(013284O_) to ensure the dongle chosen is connected to CAN channel 1 of the desired device.
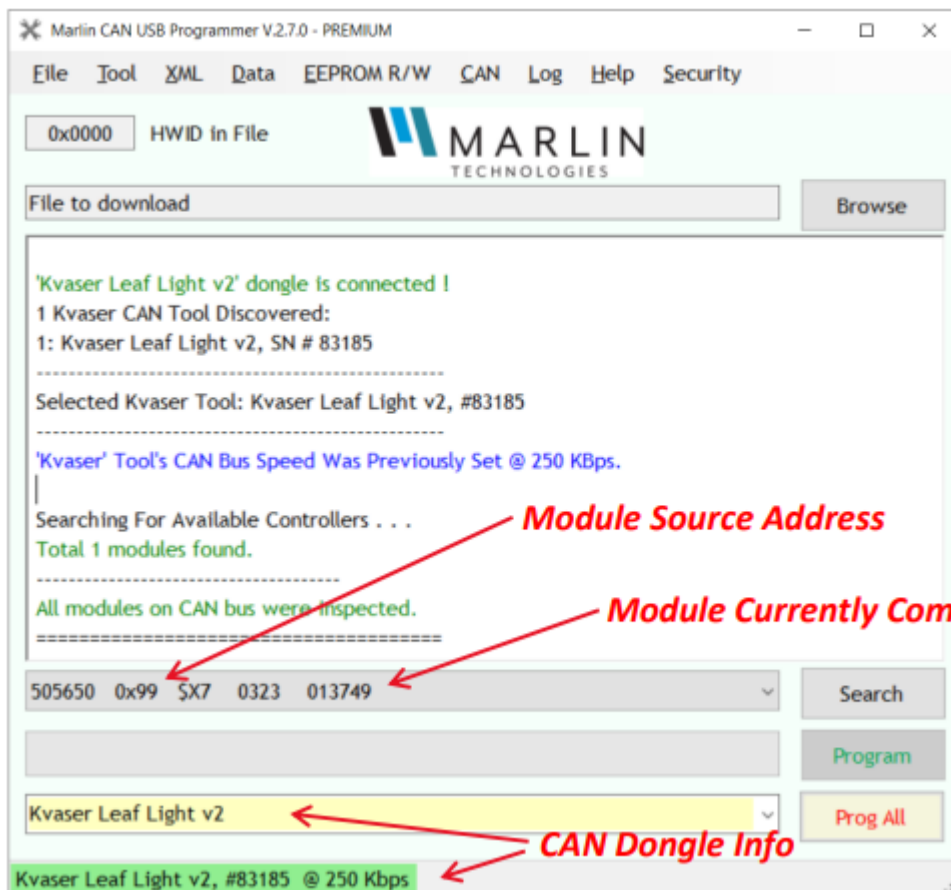

Figure 3: device being detected on the CAN bus. Shows CAN bus speed, source address and module information.

Note: If just a single Kvaser dongle is connected, the program tool will automatically connect to the dongle and any devices on the CAN bus.

Use the drop down menu from the main screen to navigate to and open XML file 014066S_.
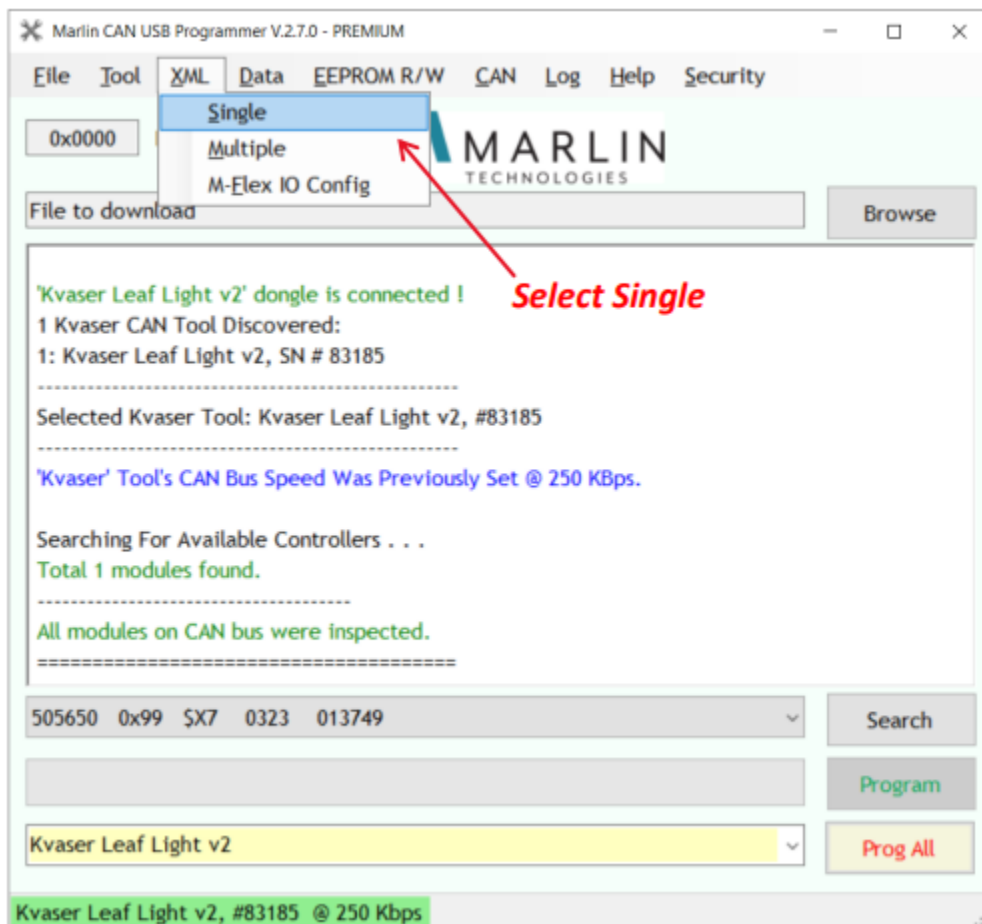

Figure 4: Choose "Single" from XML drop down menu

A new window will open giving access to the various configurable elements of the CAN Bridge. Type the hexadecimal source address(detected in Figure 3) of the device you are attempting to configure and click the "Read from EEPROM" button. This serves to confirm that you are successfully communicating with the device(as indicated by message in dialog window), and will also put the device into "Beacon" mode. Beacon mode turns both CAN LEDs to an amber color to give the user a visual indicator that the device is being configured. The device will remain in Beacon mode until a "Write to EEPROM" is done, OR until power to the device is cycled. The user can re-enter Beacon mode at any time by clicking the "Read from EEPROM" button.
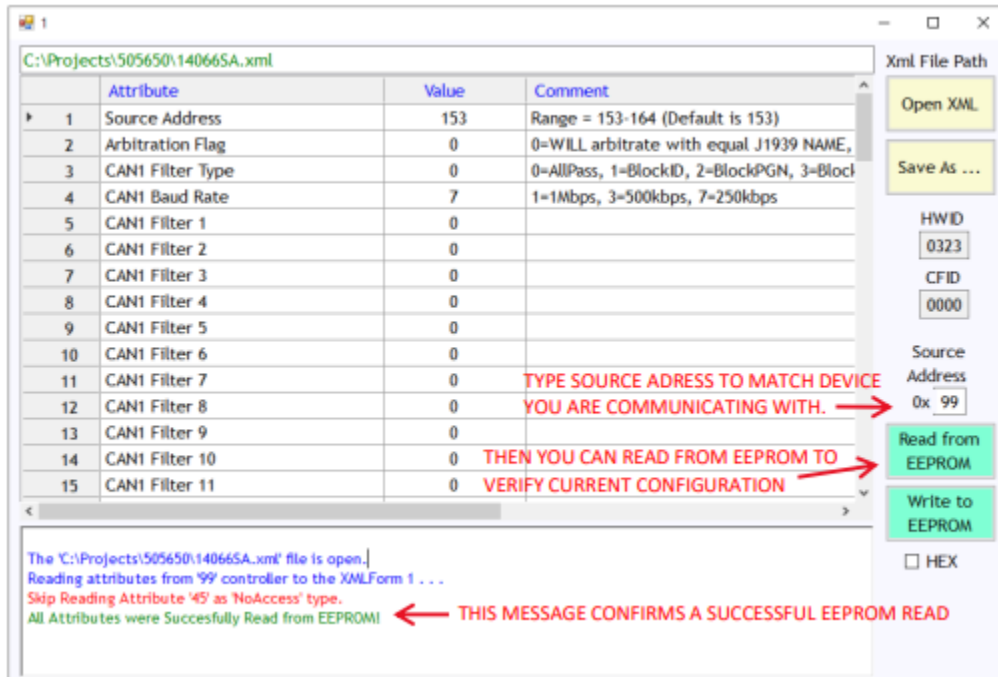
Figure 5: XML spreadsheet opened in separate window. Note the scroll bars. The "Comment" field is cut off by the default size of the window, but contains details regarding acceptable values for the corresponding attribute. There are 40 filters for CAN channel 1, and all attributes are repeated for CAN channel 2 at the bottom of the spreadsheet.

The XML gives the user control over the filter type, baud rate, and specific filter parameters to be set for CAN channel 1 and CAN channel 2.

There are seven filter types that can be applied to either CAN channel: Pass All(no filter), Block J1939 ID, Block J1939 PGN, Block J1939 Source Address, Pass J1939 ID, Pass J1939 PGN, and Pass J1939 Source Address. Baud rates of 250K, 500K, and 1M baud are supported and can also be selected. After selecting a filter type and baud rate, the user can enter the applicable data in up to 40 filter fields per channel.

The default source address of the CAN bridge module is 0x99, but if more than one CAN bridge is present, J1939 arbitration will take place. If the user prefers, they can manually select a device source address to avoid J1939 arbitration. The valid range of source addresses is 153(0x99) to 164(0xA4), where 153(0x99) is the default. *It is recommended to lock the device source address(es) by setting the "Arbitration Flag"=1 once source addresses have been set(either by arbitration or manually).

Please note: The XML spreadsheet supports both, the standard and extended CAN frame format. Please refer to Figure 6/7 below for a quick reference on Standard/Extended ID format. Refer to specification drawing 014066S_ for further details on filter composition.

Data can be entered in either decimal or hexadecimal format, but can only be written to the device in the decimal format. There is a convenient check box to quickly convert between the two formats.
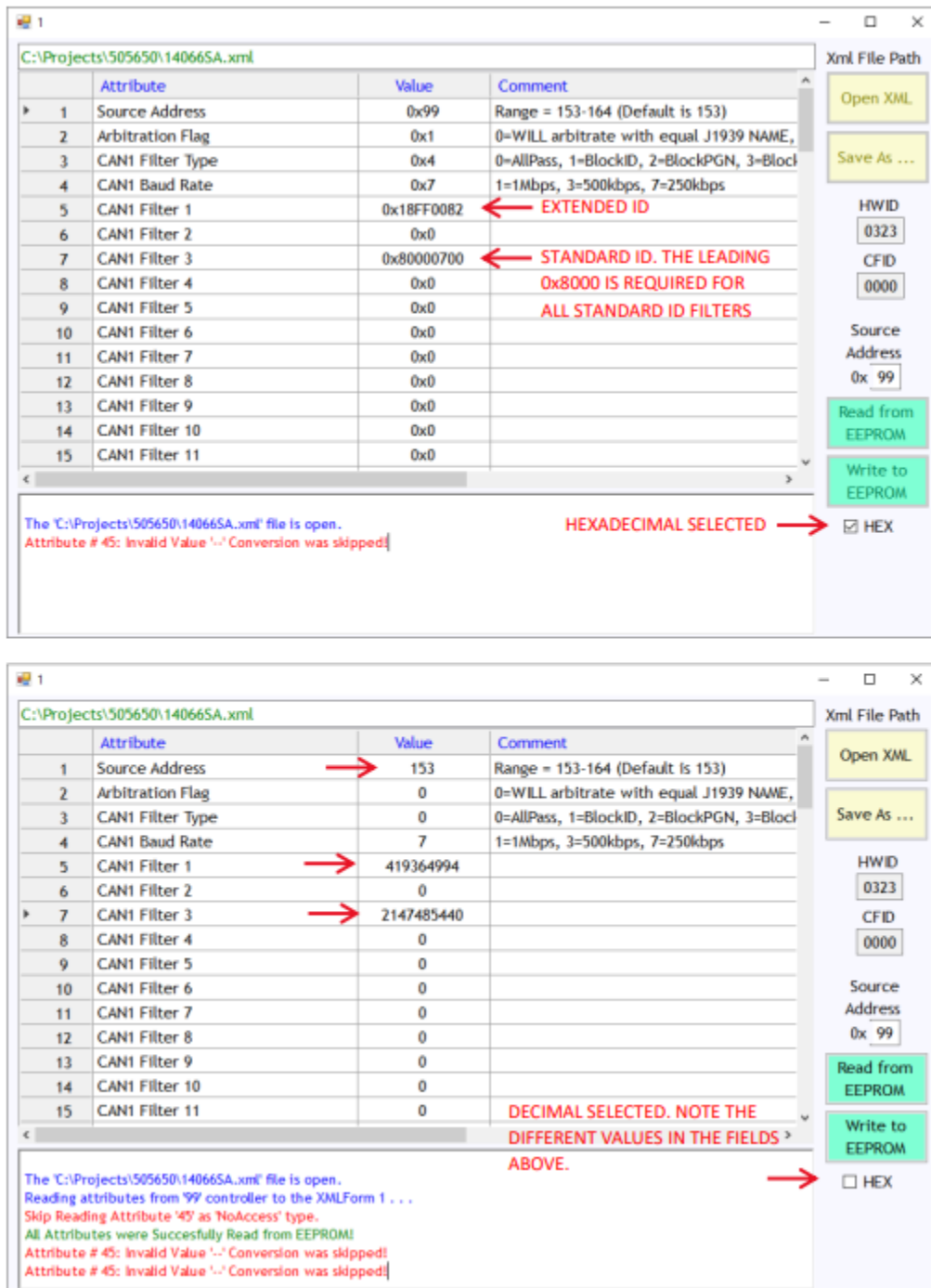
Figure 6/7: Data entered is converted between hexadecimal and decimal simply by checking/unchecking the "HEX" box.

When all attributes are set according to user requirements, and the format is converted to decimal, click the "Write to EEPROM" button to configure device.

The window below will pop-up to confirm your selection. Click "OK" to write attributes to the device or "Cancel" to cancel your selection.
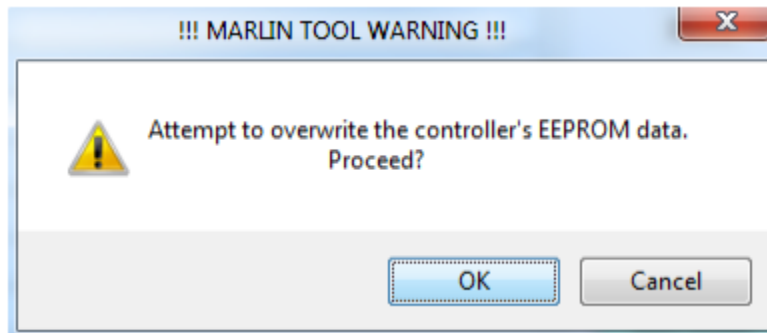

Figure 8: Pop-up window to confirm the user's desire to overwrite the device EEPROM data.

If the dialog box indicates trouble reading/writing from/to the various EEPROM locations, check that the source address is correct, and once again verify the Kvaser dongle is connected to CAN channel 1.
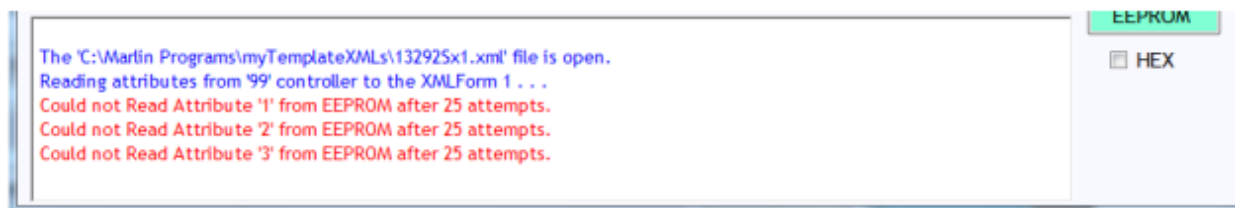

Figure 9: Dialog messages indicating a problem communicating to the selected device.

The dialog box will give positive feedback when the user has successfully configured the device EEPROM.

Figure 10: Dialog message indicating a successful write to the device EEPROM.

If you have any additional comments, questions, or concerns, please contact Marlin Technologies Inc customer service by calling 920-485-4463.