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Overview
This manual describes how to use the software utility named as “FlashTool”; an application to flash (i.e. to modify the application software as well as certain stored data) and also to modify the odometer value. FlashTool was specifically designed for Vision and Victory models and will only work with compatible products. This manual covers software version 4.00 and later.

NOTES:
- Administrative privileges are required to install the software.
- FlashTool requires and only works with a Kvaser CAN Leaf HS USB interface or compatible. For more information on this product, go to www.kvaser.com
- FlashTool requires Windows 7®, Windows XP®, Windows 2000® or a compatible operating system.
How to install the software

1. Insert the FlashTool CD
2. Browse and look for Setup.bat and double click on it.

![Setup.bat icon]

**NOTE:**
This setup program will install both, the Kvaser driver and the FlashTool application. If you want to skip the drivers setup just cancel this part of the installation and continue with the FlashTool setup on step No. 5.

3. First, the installer will copy the driver files required by the interface:

![Kvaser CAN Drivers Setup]

**Welcome to the Kvaser CAN Drivers Installation Wizard**

This wizard will guide you through the installation of Kvaser CAN Drivers version 4.4.

This package contains both 32-bit and 64-bit drivers. The appropriate type will be selected automatically. All types of Windows, from Windows 2000 and onwards, are supported.

Click Next to continue.

![Kvaser driver installation window]

4. Follow the on-screen instructions.
5. After completing the driver setup, the installer will ask you to continue installing the FlashTool application:
6. Click on the “Next” button and in the next screens; choose the default folders and shortcuts.
7. Once the installation is complete, you will be able to use the FlashTool utility.
How to flash an instrument cluster unit

1. Connect the Kvaser’s CAN interface to the Bus harness:

2. Connect the Kvaser USB connector to the computer’s USB port and the Bus connector to the Bus port

NOTE: See page 19 for Bench harness connections.
3. Once everything is connected, open ignition.
4. Run the FlashTool application, double click in the icon on your desktop:

![Stoneridge's FlashTool]

5. You will see the following screen (main window):

![Main window]

- Hex file name
- Open file button
- Flash button
- Exit button
- Status messages box
6. Click on "**Open Hex File...**" button
   a. Select a valid hex file
7. Click on "**Flash!**" button
   b. A confirmation window will appear, click on "**Flash!**" button

![Flash Unit Confirmation](image)

**Make sure the unit is connected to the CAN bus and ignition is on.**

**WARNING:** Once the "Ok" button is pressed, you will not be able to cancel the operation.

- Flash!
- Cancel

Flash confirmation window

8. Wait for the cluster unit to automatically restart.
9. Done.

**NOTES:**
- An instrument cluster unit can be flashed while is installed and connected in the bus, there is no need to remove it from the panel.
- Once the flash process was started, there is no way to abort.
How to modify the odometer

In the odometer window it is possible to write a given value in miles or kilometers to the cluster unit. To access this feature, go to:

Menu
   Tools
       Odometer…

This feature is password protected and the window shown below will appear:

Enter password window

NOTES:

• The password is case-sensitive.
• The application comes with a default password; keep this password in a safe place as it can be valid again after resetting the password defined by the user to the default value (See **Settings** section).
• It is strongly suggested that the administrator (i.e. the person who is installing the software and has access to this manual) change the default password to a user defined right after installing the application.
1. Once in the Odometer window, select the proper units (Mi or Km) in which you will be entering the value.
2. Type the desired odometer value in the upper box. This value must be between 0 and 1,677,721 miles or the equivalent in kilometers (2,699,956 km).
   a. Make sure the cluster unit is powered up (ignition open)
   b. Make CAN adapter is connected to the computer and to the cluster unit.
3. Click on “Write Odometer To Cluster” button to modify the odometer value.
4. The status box will display the following message:

   “Odometer was successfully written!”
5. Verify in the unit’s display the correct odometer is shown.

WARNING:
Be careful when modifying the odometer, because the previous value stored in the instrument cluster will be overwritten.
How to modify the settings

Go to the Options window to modify the default communications (comm) settings as well as to change the password.

Menu
    Tools
    Options…

Available options:

Load defaults. Click on this button to load the default value for all of the settings, that’s it, the “factory defaults”, except the default password. The serial port will be set to com 1, odometer units to Miles and the templates folder to the application path.

Load defaults confirmation
**Serial Comm**

**CAN is connected to serial port.** Use this option to select the serial port to which the Kvaser CAN adapter is connected to.

---

Options window, Serial comm tab
**Odometer**

Default Odometer Units. Use this option to select which units (Miles or kilometers) will appear in the odometer window after running the application.

---

Options window, Odometer tab

Set Password. Click on this button to access the Set password window:

---

Set password window
Once on this window, enter the actual password (the first time after installing the software will be the default password), then type your desired new password in both boxes: “New Password” and “Confirm Password”. Click “Ok” to accept the changes.

NOTES:
- The maximum password length is 15 characters
- Only alphanumeric characters are allowed (no special characters or blanks).
- The password is case-sensitive.

I Forgot My Password. Use this feature in case the custom password set by the user was forgotten. Click on this button to access the Reset password window:

![Reset password window](image)

Reset password window

You will be prompted to confirm once more before proceeding to do the changes:

![Reset password confirmation window](image)

Reset password confirmation window
If you finally click on “Yes, reset password” button, then the custom defined password by the user will be replaced by the factory default password (NOT included in this manual). Use this option as the last resource, since you will have to obtain the factory default password from the manufacturer.

**Templates**

**Default Templates Folder.** Use this option to tell the FlashTool application in which folder are your template files. Every time you run the application, this will be the default folder when you click the “open hex file”.

![Options window, Templates tab](image)
# Troubleshooting guide

The following list describes some potential errors and their suggested solution.

<table>
<thead>
<tr>
<th>Issue Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The flash button is disabled</td>
<td>Did you open a hex file first?</td>
</tr>
<tr>
<td></td>
<td><strong>Solution:</strong> Open a Hex file. They are typically located on the Templates folder.</td>
</tr>
<tr>
<td>I cannot re-flash the unit</td>
<td>Is ignition on?</td>
</tr>
<tr>
<td></td>
<td><strong>Solution:</strong> Open ignition.</td>
</tr>
<tr>
<td></td>
<td>Is the CAN interface connected to both, the computer and the cluster unit?</td>
</tr>
<tr>
<td></td>
<td><strong>Solution:</strong> Connect the Kvaser CAN interface to the USB port.</td>
</tr>
<tr>
<td></td>
<td>Is the serial port number set properly?</td>
</tr>
<tr>
<td></td>
<td><strong>Solution:</strong> Go to Menu “Options”, “Serial Comm” tab, and set the serial port to which the CAN interface is connected.</td>
</tr>
<tr>
<td></td>
<td>Is the correct hex file the one you opened?</td>
</tr>
<tr>
<td></td>
<td><strong>Solution:</strong> make sure you are using the right hex file. Is not the same for Vision than for Victory.</td>
</tr>
<tr>
<td>After flashing, the cluster unit’s display only shows the legend:</td>
<td>This means that the flash operation was not completed.</td>
</tr>
<tr>
<td>“Flash Mode @250” and doesn’t respond.</td>
<td><strong>Solution:</strong> Try to flash the unit again.</td>
</tr>
</tbody>
</table>
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument Cluster</td>
<td>An instrument gauge cluster provided by Stoneridge Electronics.</td>
</tr>
<tr>
<td>CAN</td>
<td>Controller Area Network. A serial interface used in automotive industry</td>
</tr>
<tr>
<td>Kvaser</td>
<td>A manufacturer of CAN tools and adapters.</td>
</tr>
<tr>
<td>Flash</td>
<td>To modify the contents of the program and/or data memory of an instrument cluster.</td>
</tr>
<tr>
<td>Hex file</td>
<td>A binary file with a particular format.</td>
</tr>
<tr>
<td>USB</td>
<td>Universal Serial Bus. A serial port available in most personal computers</td>
</tr>
</tbody>
</table>

### Notice

The trademarks “Blue Bird”, “Vision” and “Victory” and the Blue Bird and Vision logos are property of Blue Bird Corporation.
Connect to computer USB port

Connect to Stoneridge Cluster Connector “A”

Connect white wire to negative, black wire to positive on 12 volt power supply

Optional bench program harness part # 00128107

Kvaser’s CAN interface and Bus harness included in kit part # 00114694