



**STYLE 6046 AKRO VIEW DIAGNOSTIC SOFTWARE
INSTALLATION AND OPERATIONS MANUAL**

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Introduction

The AkroView program was DESIGNED to provide you with a diagnostic look inside the CAN network on your Akron Brass system. This program will allow you to use your Akron Brass USB to CAN (60460001) interface to send and receive CAN messages to communicate with your network and will provide the following features:

- View all the devices on your CAN network in a graphical manner including a picture of each system component
- Display serial number and other board information
- Allow the device to be placed in a diagnostic mode whereby extra information can be seen to assist in the commissioning of new systems and in diagnosing connection issues.
- Allow firmware upgrades to any of the devices connected to the network
- Display CAN bus diagnostic information including warnings and errors that may be the result of improper wiring or termination
- Save CAN data to a file for sending to another location for remote diagnostics
- Replay CAN data using the same system to display all device information and diagnostics

Software Installation

Your installation disk will contain an install program called AkroView_Installer.exe. This program should be run before the Akron Brass USB to CAN Adapter is plugged into your computer as the required interface drivers will be installed as part of the software installation.

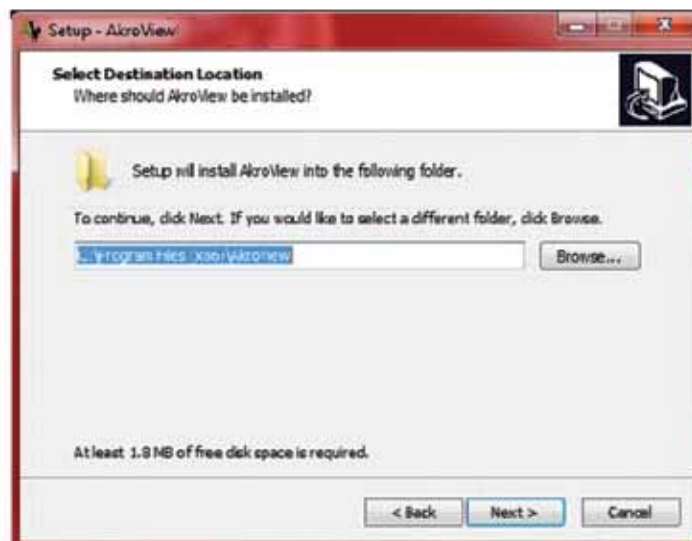
When you run the AkroView_Installer.exe program, the first screen will present you with language options for the install process



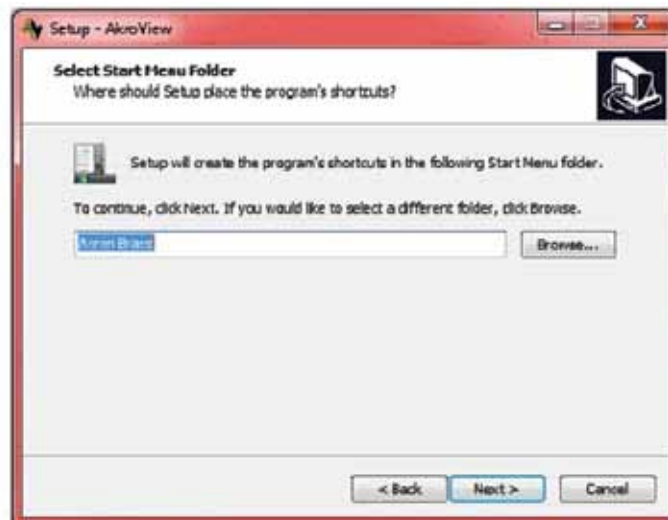
When you've chosen your preferred language, the next screen will be as follows



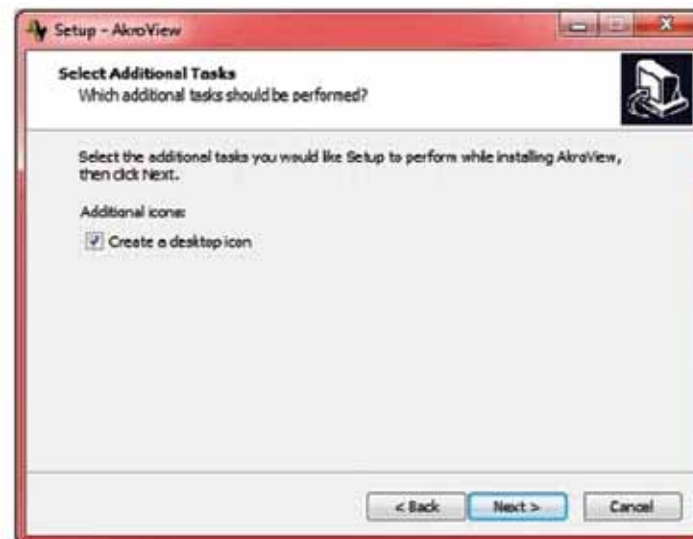
The following screen gives you an option of installing to the default directory on your computer or a directory of your choosing.



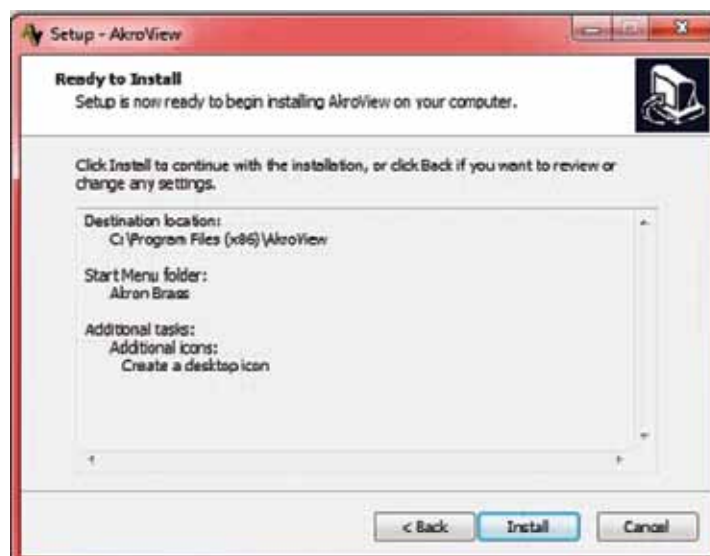
The next screen will give you the option of naming the folder in your Start Menu or selecting the default setting.



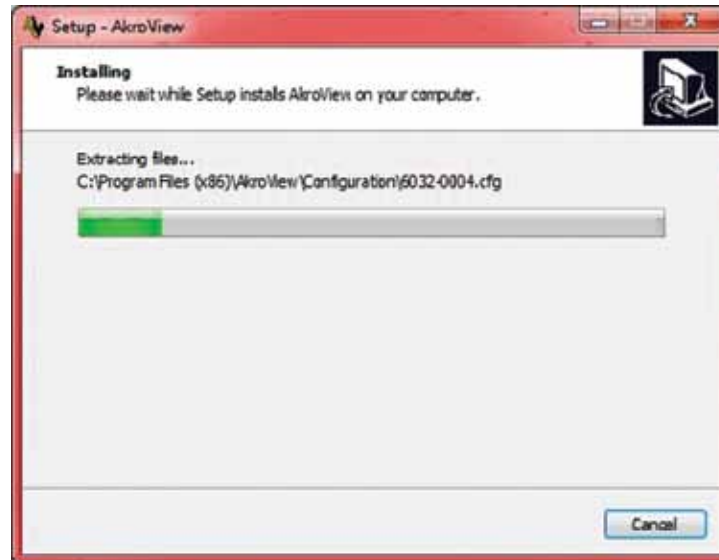
The next screen will give you the option of creating an icon on your desktop for easy access to the AkroView program.



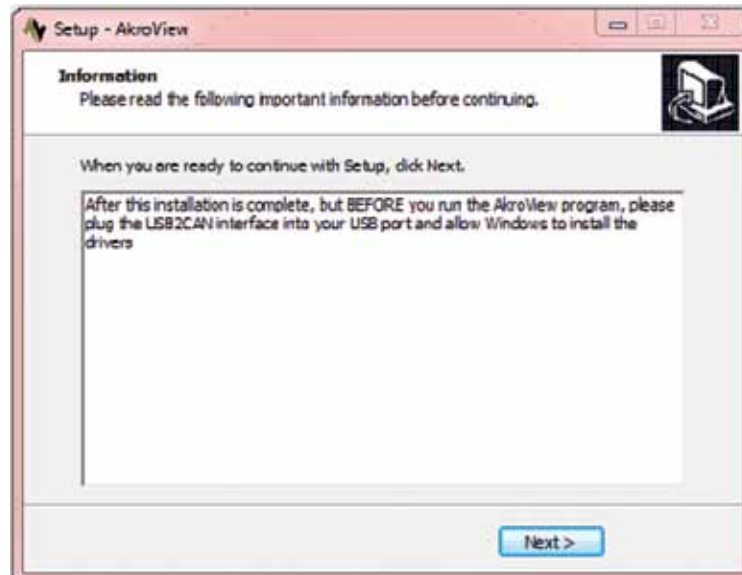
The next screen will summarize your install preferences before continuing with the installation process. Choose "Install" to continue.



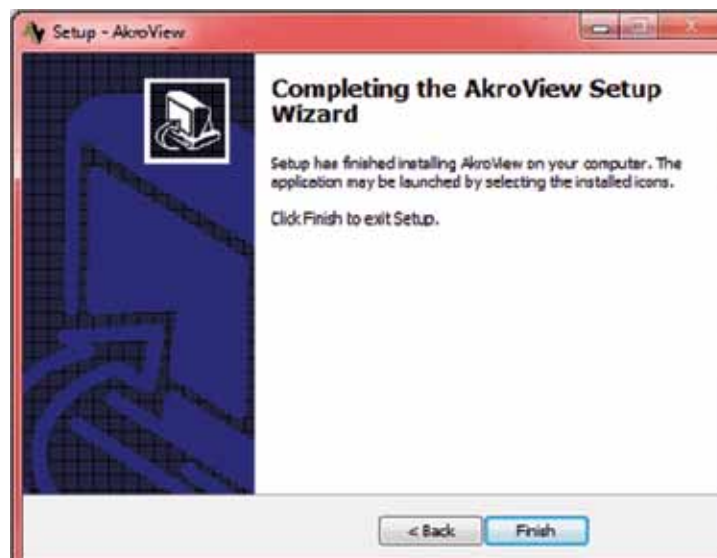
The installation program will then proceed to install the required files on your computer.



The next screen will provide you with an important installation notice telling you that after the installation program is run but before you run the AkroView program, you should plug the USB to CAN Adapter into your computer's USB port and allow the drivers to install themselves.



The last screen will tell you that you have successfully installed the AkroView software on your computer.



USB to CAN Adapter

Now that the AkroView software has been installed on your computer, it is time to plug the USB to CAN Adapter in and verify that the appropriate drivers are installed. The driver software will automatically determine your computer's operating system and will install the version that is required. Currently, the following systems are supported:

- Windows XP – 32 bit
- Windows Vista – 32 and 64 bit
- Windows 7 – 32 and 64 bit

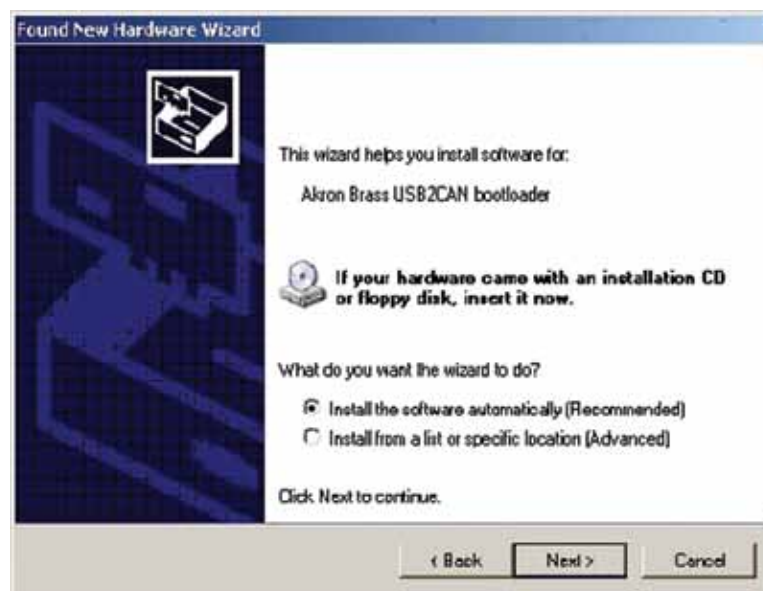
Windows XP

After the Adapter is plugged into a USB port on your computer, your computer should tell you that new hardware has been found and present you with the following screen. Note that the following process will be repeated twice, once for “Akron Brass USB2CAN bootloader” and a second time for “Akron Brass USB2CAN”

On the following screen, choose “No, not this time” and “Next” to continue.



The following screen will now appear. Choose “Install the software automatically”.



The following screen will show you the status as the appropriate files are copied to your computer. Note that it is now installing the “Akron Brass USB2CAN bootloader” device.



After some amount of time, the following warning screen will pop up. This is normal and you can safely press the “Continue Anyway” button to continue.



When complete, the following screen will appear, notifying you that the first of two devices has been installed.



Note: This process will automatically repeat after a few seconds with the same screens and warnings except this time the device being installed will be the “Akron Brass USB2CAN”

When complete, the LED on the top of the USB2CAN interface will switch from red to green to show that the drivers have been successfully installed. If the LED is not green, see the troubleshooting section of this manual.

Windows Vista and 7, 32 and 64 bit

After the interface is plugged into a USB port on your computer, your computer should tell you that new hardware has been found and the entire process should occur without any user intervention on your part. The following messages may pop up on the lower right portion of your screen



And, when completed, the following pop up message.

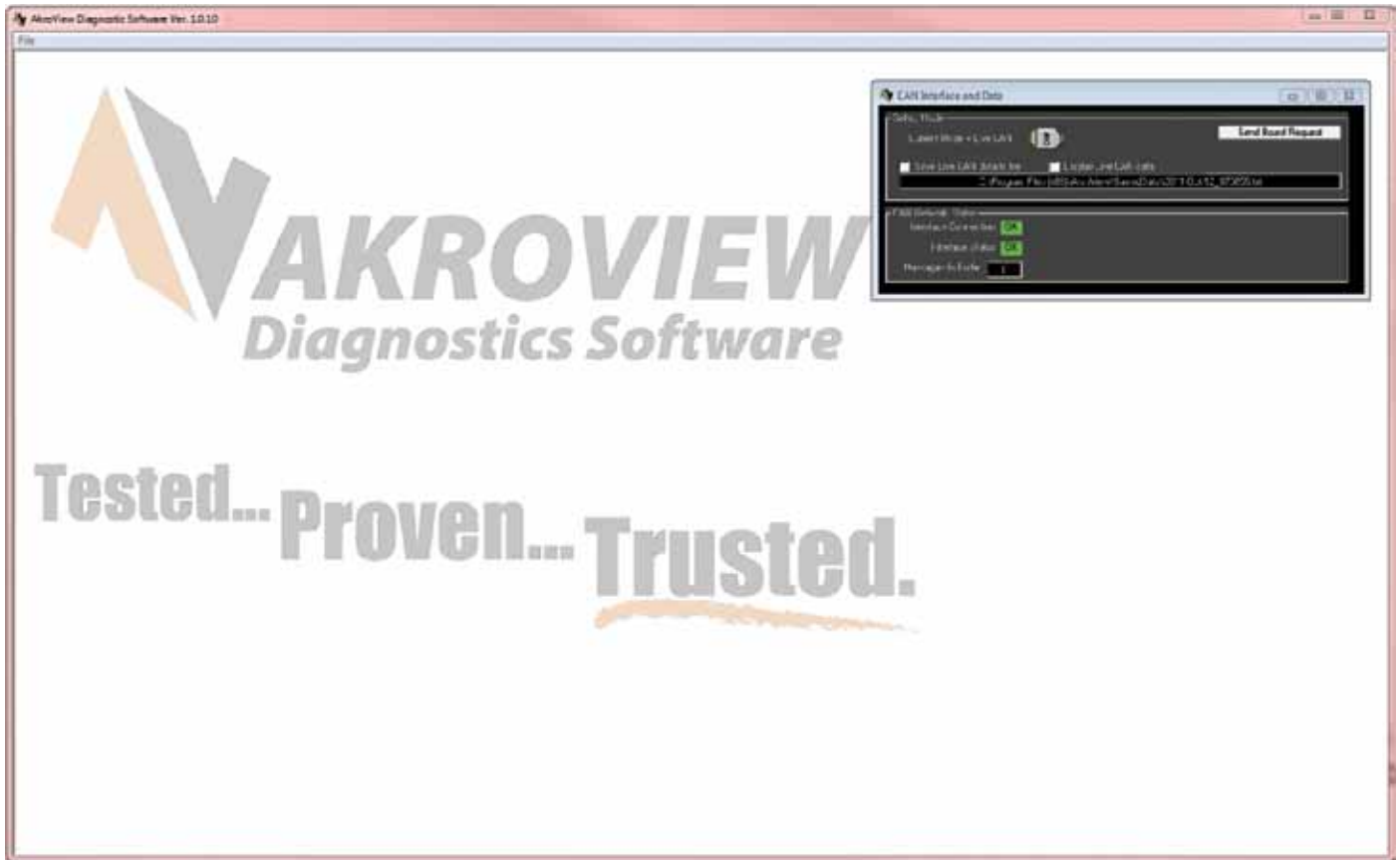


The LED on the USB2CAN interface will change from red to green after the interface has successfully loaded its drivers. If the LED is not green, see the troubleshooting section of this manual.

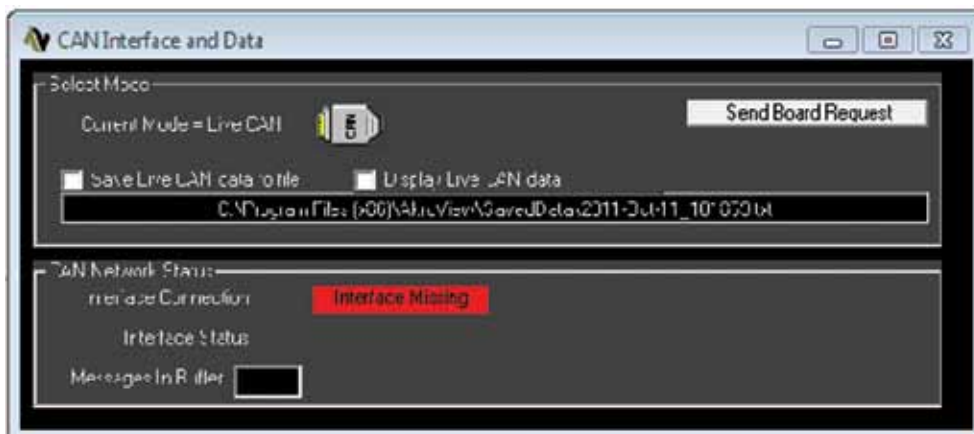
Software Operation

Main Screen

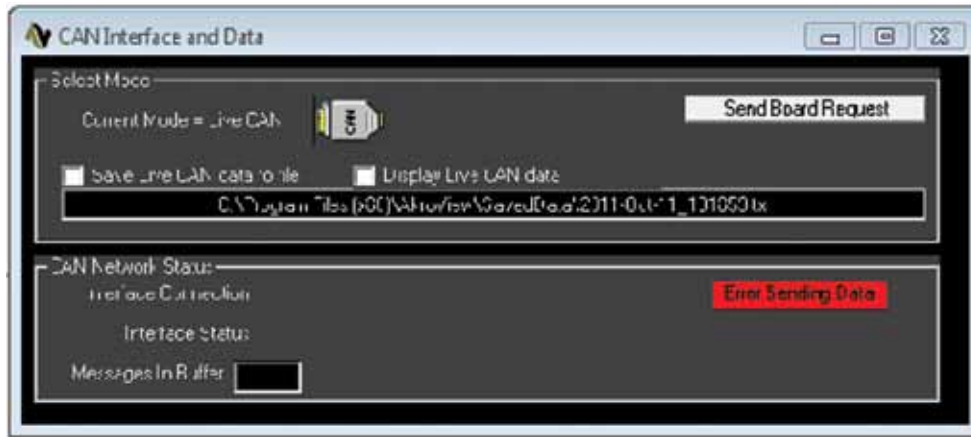
When you run the Akroview software, the following screen will appear after a brief splash screen showing you the current software version in the upper left hand corner. The initial screen will consist of an open workspace with one form showing the state of the CAN interface and the CAN bus.



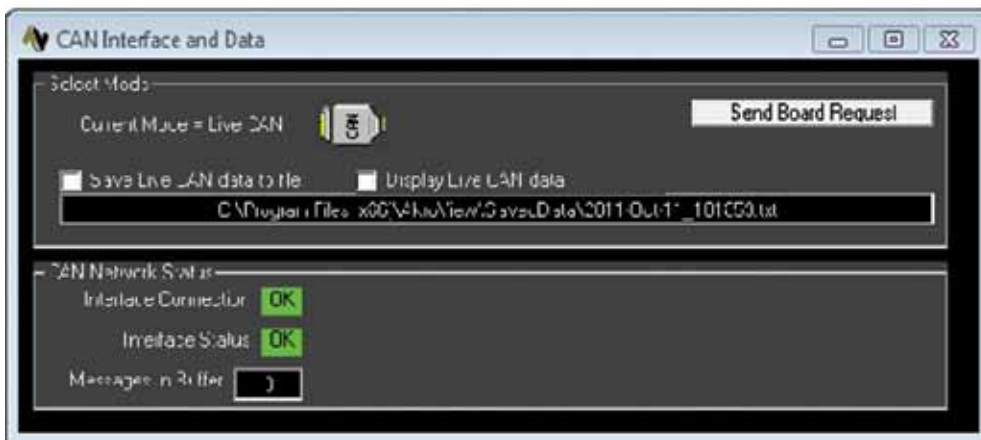
CAN Interface Form



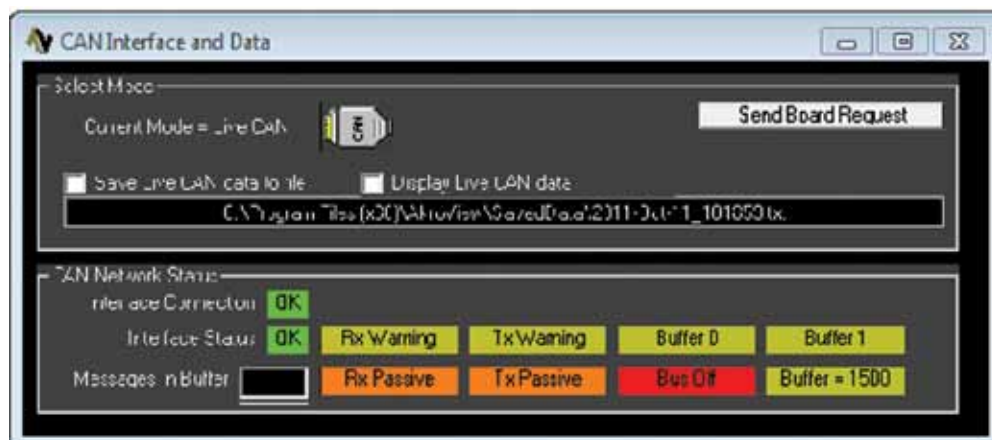
The CAN interface form contains two main sections, the Select Mode area and the CAN Network Status area. Within the CAN Network Status area, information is given about the connection to the interface itself, through the USB port and the installed drivers, and the connection to the CAN bus itself once the interface is working correctly. In the above screen shot, the CAN interface has been disconnected from the computer before the program was started which results in the "Interface Missing" error shown. Should this error be displayed when the interface is in fact connected, please refer to the troubleshooting section.



The above screen shot is the result of the interface being properly plugged in but the CAN bus not being connected. The interface will continuously try to communicate with the CAN bus so that when you have it properly connected, the Interface Connection Status will display the following message.



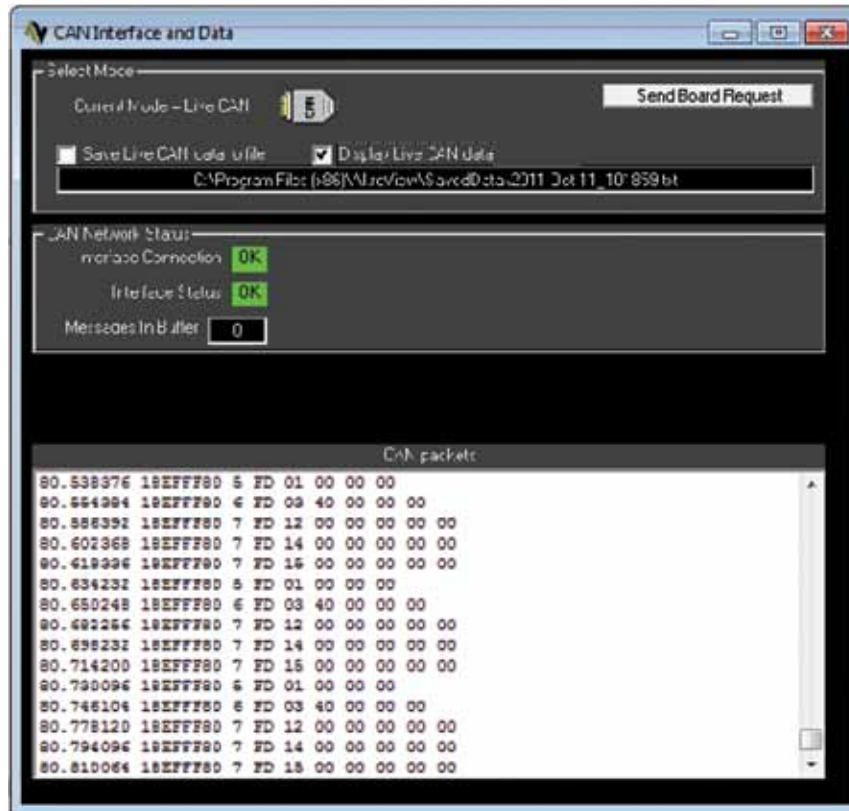
You will notice the Interface Connection now says “OK” and the Interface Status shows “OK”. The Status will display any potential issues with your CAN bus connection and give you warnings about possible communications issues with your wiring.



The above screen shot shows all of the possible warning and error conditions but under normal, proper operating conditions, only the two “OK” status’s should be shown

Displaying Live CAN Data

At any time you can see the data that is on the CAN bus by enabling the “Display Live CAN data” option. This will expand the screen to display the data as shown below.



The above screen shot shows a sample of the CAN bus data being displayed. The data shown consists of the following parameters with the sample data taken from the first line of the above printout.

Time Stamp	CAN ID	# of Data Bytes	Date 0	Date 1	Date 2	Date 3	Date 4	Date 5	Date 6	Date 7
80.538376	18EFFF80	5	FD	01	00	00	00			


Where the Time Stamp is in seconds and fractions of a second and will count till 99.999999 and then roll over. The CAN ID and the data bytes are displayed in hexadecimal notation and the # of data bytes will be from 0 to 8.

The actual meaning of the CAN data is beyond the scope of this manual and is only presented here as information for the more technically minded.

Saving CAN Data

Within the same area of the CAN Interface Form is the option to save the CAN data to a file. This feature allows you to save the data as it is seen on the CAN bus to a text file using the default file and name location on the text line as shown below. The default directory will be the \SavedData directory found under the directory that the AkroView software was installed to. The default filename is taken from the date and time that the program was run. Each time you stop and start the Save CAN data feature, it will append the data to the current filename until you either change the filename or restart the AkroView program. Note that the “Display Live CAN Data” feature does not have to be enabled for the CAN data to be saved to the file. Also note that if you change the default directory to a remote drive or a flash disk, the performance of the program may be compromised due to the longer write times of a remote drive and for that reason is not recommended.

Reviewing Historical CAN Data

By clicking on the CAN interface icon  you can change the current mode to the File Mode in order to load and display CAN data that was previously recorded to file. The CAN Interface Form will change to the following.



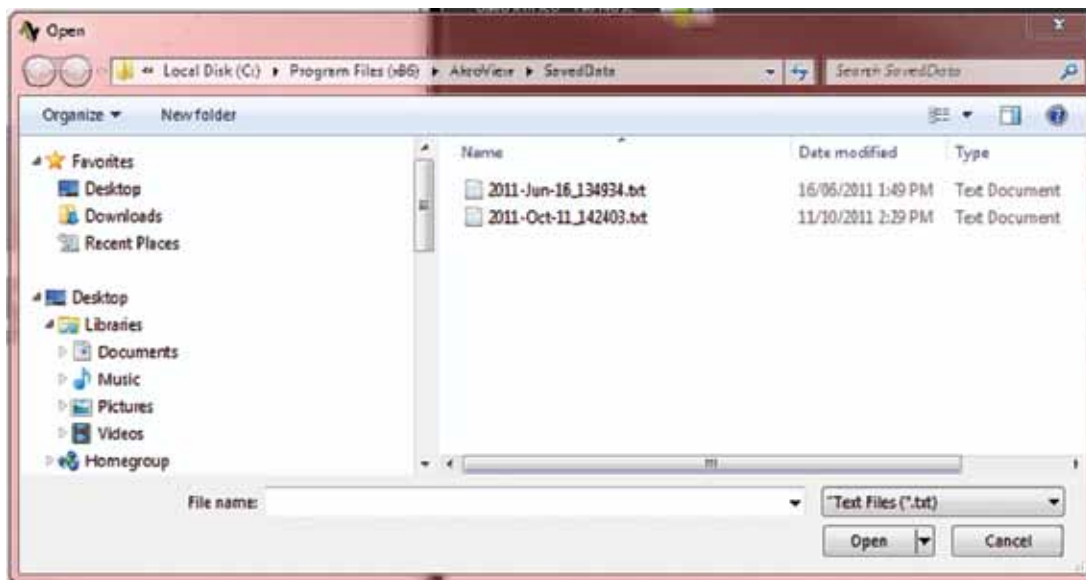


Loading a New File

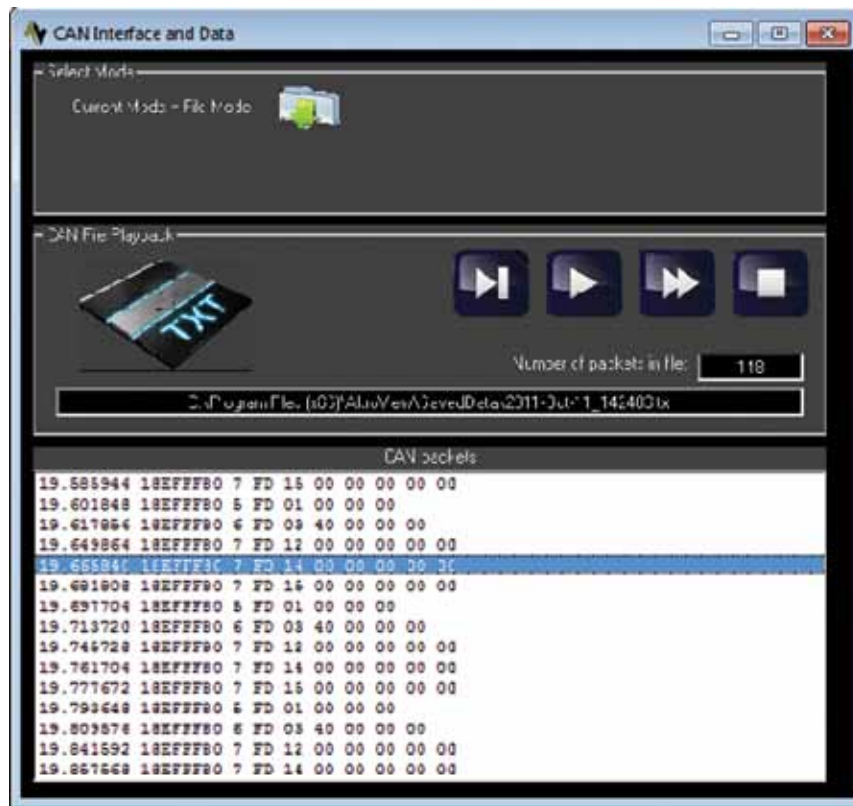
By clicking on the Txt File icon



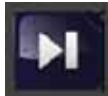
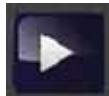

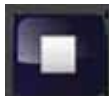
the file manager form will open as shown below.



This screen now gives you the option of opening a previously saved CAN data file.



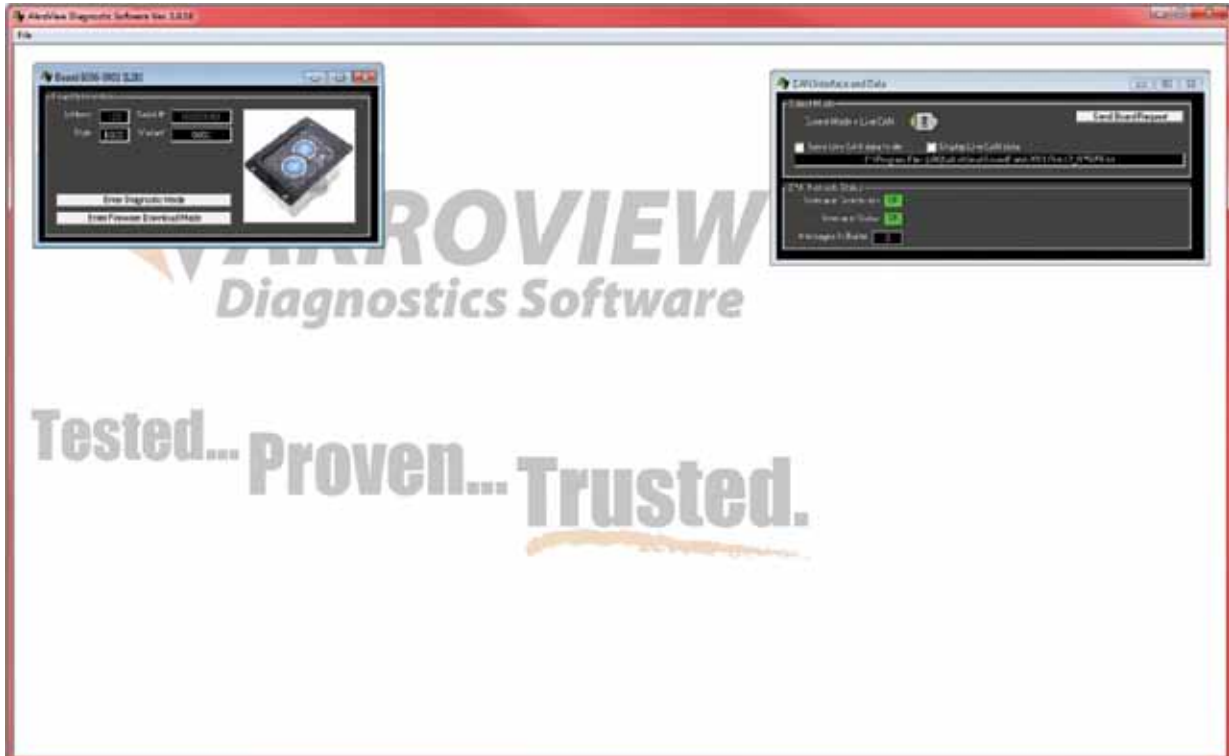
Once the CAN data has been loaded, you have a number of options for playing back the data to the program.

- You can click on a single line of data and it will process that data as if the program had received it from the CAN bus
- You can “Step” through the data one line at a time with the Step button 
- You can allow the program to Step through the data at a rate of 10 per second with the Play button 
- You can allow the program to Step through the data at its full speed with the Run button 
- You can Stop the program from Stepping at any time with the Stop button 

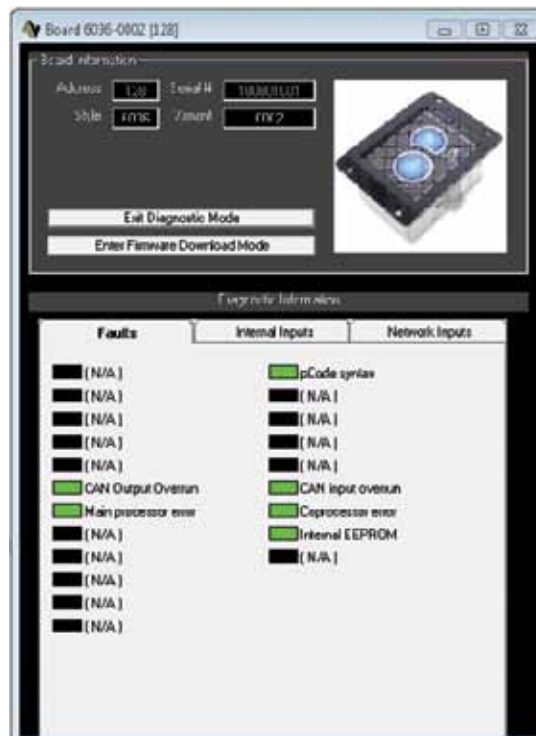
Connecting a Device to the Network

Devices that are connected to the CAN network can be displayed in the AkroView program in one of two ways:

- 1) If the AkroView program is already running when a device is connected, the device will automatically announce itself and will appear on the AkroView screen.
- 2) If the AkroView program has just been started, you can click on the “Send Board Request” button in the CAN Interface Window and all the devices that are connected will appear on the AkroView screen.



In the above screen shot, the Position Indicator 6036-002 has been added to the network with its CAN network address shown, serial #, Style number and Variant number. As well, a picture of the device is shown for reference.



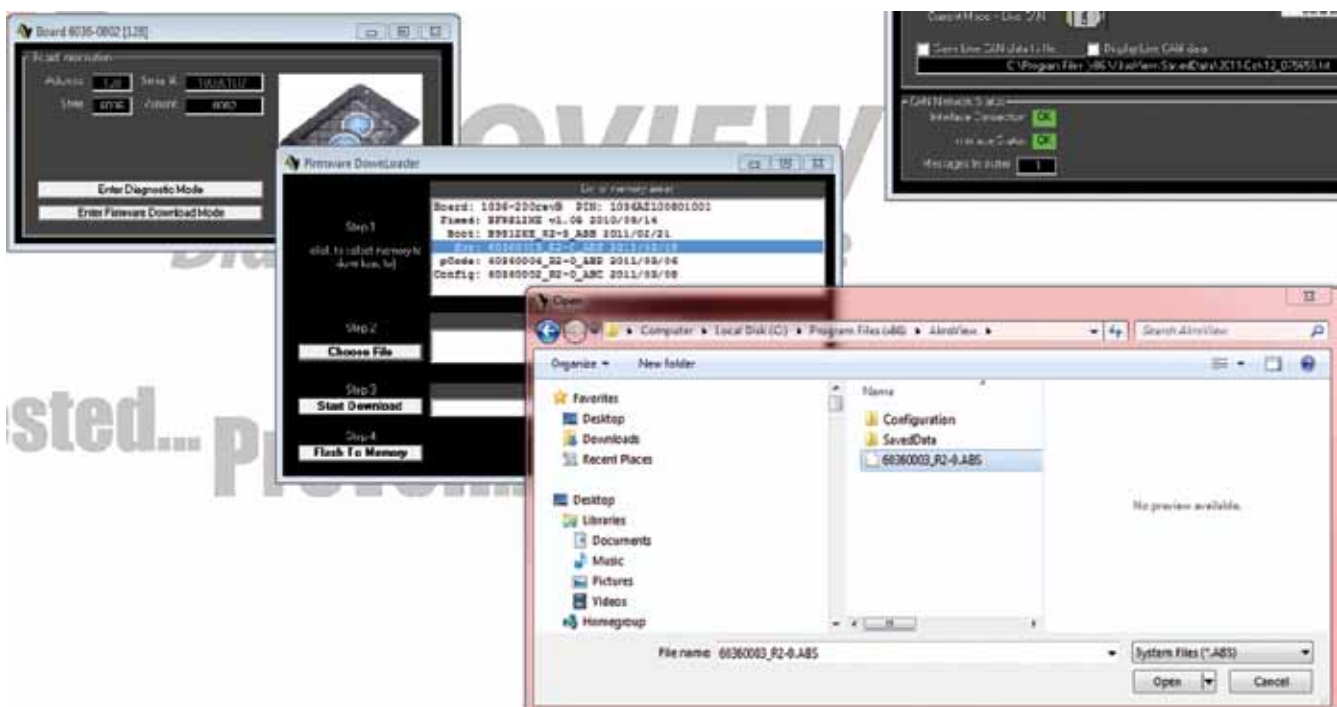
Each device on the network can be placed in a diagnostic mode where an expanded screen of information is presented and updated.

Firmware Upgrading

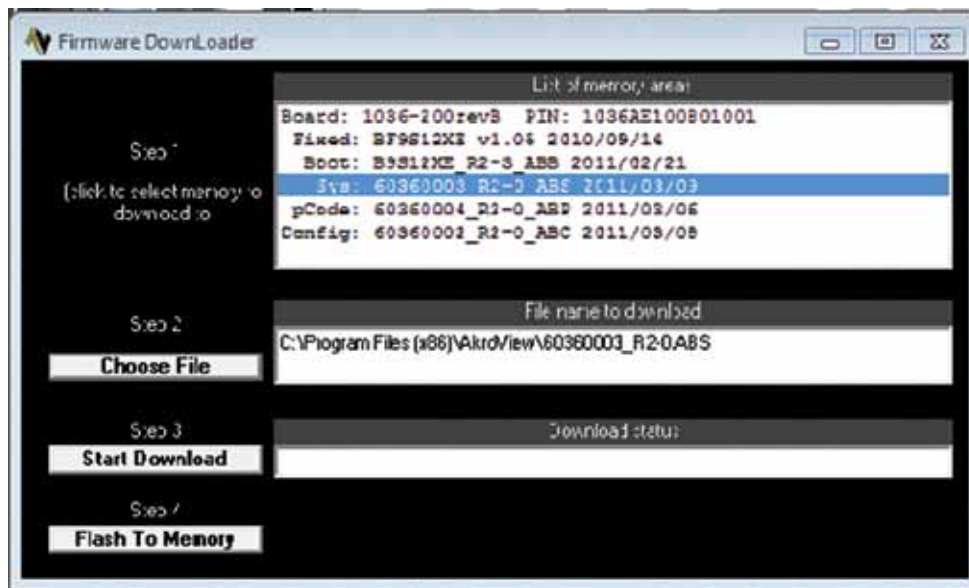
Should you require the firmware within your device to be updated, you can do so within the AkroView program by selecting the “Enter Firmware Download Mode” within the devices window. When you do, the following window will open.



A list of memory areas will be displayed including the top three lines that will show you detailed device information. You have the option of updating any of the bottom four areas, Boot, Sys, pCode and Config. Selecting the top two entries, Board and Fixed will cause an error beep.



By selecting the memory area and choosing the “Choose File” button, a file dialog form is opened that will display the file types that are appropriate to the memory area you have chosen. Once the correct file has been selected you can press the “Start Download” button to begin the process. Further instructions will be presented to you within the Download status area.



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Once all files have been downloaded, the “Flash to Memory” button must be pressed to finish the update. When complete a message in the “Download Status” area will prompt you to cycle the device power to complete the process.

Troubleshooting

Error Form

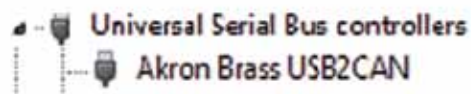
The AkroView program is equipped with an advanced warning and error detecting feature that will trap and display any internal errors in the unfortunate event that they occur. This form will appear automatically in the AkroView workspace should an error occur. Please contact Akron Brass should you require help.

Driver not loading

During software installation, the following files will be copied to your Windows directory. Please ensure that you have the proper system rights during the installation and verify that the follow files are present

- \Windows\inf\AkronBrass_USB2CAN.cat
- \Windows\inf\AkronBrassUSB2CAN.inf
- \Windows\inf\AB\AkronBrass32.sys
- \Windows\inf\AB\AkronBrass64.sys
- \Windows\inf\AB\AB_U2CFirmware.spt

Under your Windows Control Panel, System, Device Manager, you should have an entry for the USB2CAN interface as shown,



There should not be any warning exclamation marks beside the entry.

Cannot enter Diagnostic Mode

If you are trying to enter the diagnostic mode for a device and you get the following pop up message



It means the device that you are viewing does not have the corresponding configuration files present in the \Configuration directory and that your AkroView software requires an upgrade. Please contact Akron Brass for more information on upgrading.

Forms on the workspace are not appearing

The AkroView program will automatically remember the position of a Form when moved on the screen and will try to place the Form in the same location the next time the program is run. It is possible to move a Form off of the right side or the bottom of the workspace and the workspace will automatically add horizontal and vertical scroll bars to the screen. Should a Form be too far to the right or bottom, you can use the scroll bars to adjust the screen and bring the Form back to the upper left area.



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