

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

A Setup - Akrolliew	
	Welcome to the AkroView Setup Wizard
	This will install AbroView version 1.0.10 on your computer.
	It is recommended that you close all other applications before continuing.
	ClickNext to continue, or Cancel to exit Setup.
A CONTRACTOR OF THE OWNER	
CR S	
11 200	
	Next > Cancel

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

Setup - AkroView			acception and the second
Select Destination Location Where should AkroVew be installed?			E.
Setup will install AkroView into the f	rana Tanana A	older, click B	rovce.
W.M. regram Hida (xxx) Waterrew			Browse
At least 1.8 MB of free disk space is required	L		

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

Setup - AkroView		
Select Start Menu Folder Where should Setup place the program's s	hortzuts?	<u>M7</u>
Setup will create the program's of To continue, click Next. If you would like to		
AzeriBart		Browsen
	< Back Next >	Cance

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

Ay Setup - AkroView	
Select Additional Tasks Which additional tasks should be performed?	æ.
Select the additional tasks you would like Setup to perform then click Next.	while installing AkroView,
Additional icones	
Create a desktop icon	
hadden de george de de la companye de la	
< 8ack	Next > Cancel

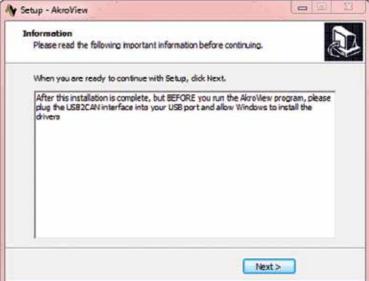
The next screen will summarize your install preferences before continuing with the installation process. Choose "Install" to continue.

Ready to Install Setup is now ready to begin install		
Setup is now ready to begin install	ng we over on your computer.	2 C
Click Install to continue with the installation, or click Back if you want to review or change any settings.		
Destination location: C:\Program Files (x86)\AleoV	ev	
Start Menu folder: Alzon Brass		
Additional tasis: Additional icons: Create a desktop icon		

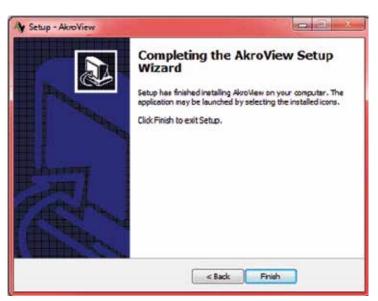
The installation program will then proceed to install the required files on your computer.

Setup - AkroView	Solition
Installing	
Please wait while Setup instals AkroView on your computer.	C
Extracting files	
C:\Program Files (x86)\Arro\lew\Configuration\6032-0004.cfg	
	1
	Cancel

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".

Found New Hardware Wizar	d
	This wizard helps you install software for: Akron Brass USB2CAN bootloader
1 Sec	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want line wizard to do? Install the software automatically (Recommended) Install from a list or specific location (Advanced)
	Click Next to continue.

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.

Hardwar	re Installation
æ 1	The software you are installing for this hardware: Akron Bisss USB2CAN bootbader has not passed Windows Logo testing to verify its compatbility with Windows XP. (Tall me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommende that you stop this installation new and contact the herdware vendor for software that has passed Windows Logo testing.
	Continue Anyway

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.

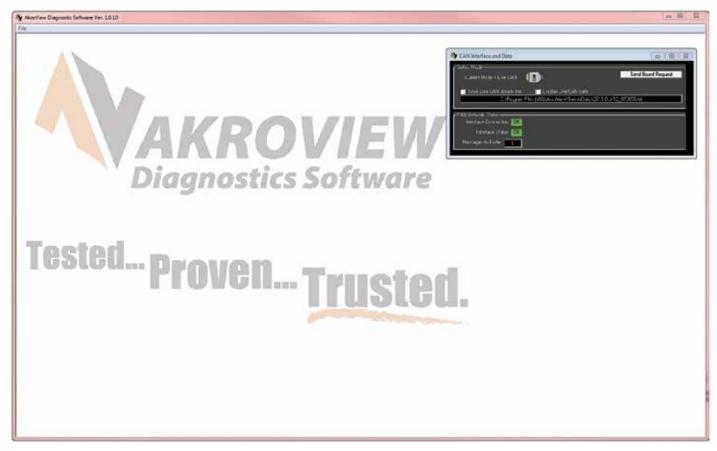


The LED on the USB2CAN interface will change from red to green after the interface has successfully loaded its drivers. If the LED is not green, see the troubleshooting section of this manual.

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

CAN Interface and Data		
- Select Moco Current Mude = Live CAH	Ð	Send Board Request
Save Live CAN cala rotile	Display Live LAN data Files (200)\AkucVisv\SavedDatas201	11-Du-11_101050 M
CAN Network Status meniase Curneolion Interface Status	Minterface Missing in	
MerezgeeinR dier	1	

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.

CAN Interface and Data	
Solest Mace Current Mode = _ine CAN	Send Board Request
Save Line LAN, cata to tie Display Line 1 C.\"Tugrain Tiles (SOC)\"Ahronfren \"	
	37606-0.0 iz 111000 i _ 131003 (x
	Enor Sending Data

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.

CAN Interface and Data	00
- Select Mods Current Mace = Live DAN	Send Board Request
	lay Live CAN data wA'iew/.Save.Data\2011-0U.11_101050.txt
- 74N Nativerk Status Interlace Connection	
Interface Status 🛄	

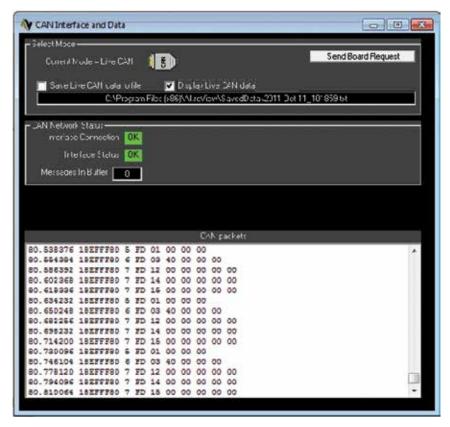
You will notice the Interface Connection now says "OK" and the Interface Status shows "OK". The Status will display any potential issues with your CAN bus connection and give you warnings about possible communications issues with your wiring.

AN Interface and Data				0
lost Maco Current Mode = Live CAN	13		3	end Board Reques
Save Live LAN cata to ite		.ive LAN data sv\SazedDa.a'.2)1	1-3-1-1-1010	21x
C. V. 12510	In meetingeligenteeri			
ii. S				
N Network Status				
N Network Statu:		TxWaning	Buffer D	Buffer 1

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 and display CAN data that was previfollowing.



you can change the current mode to the File Mode in order to load ously recorded to file. The CAN Interface Form will change to the

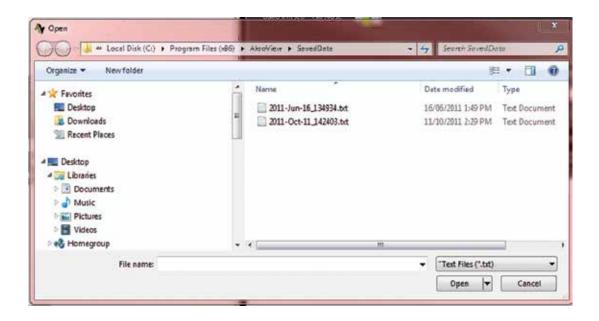


Loading a New File

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.

CAN Inter	ace and Dat	a							
Curcut	todo - Filc M	to				ļ			
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							Č.	AN -	backels
19.585944	18272280	7	FD	15	00	00			00
19.601848	18EFFF80	5	FD	01	00	00	00		
19.617856	10EFFF80	ę	FD	03	40	00	00	00	na an a
19.649864	18EFFF80	7	FD	12	00	00	00	00	00
19.665840	LEETTFAC	7	Ð	14	00	00	0.0	0.0	26
19.601908				2.5	00	0.0		00	00
19.697704			TD	01	00	00	00		
				03	40	00	00	00	24
19.713720	1 ADDDDDA A		FD	14	00	00	00		00
19.745728			-			~~	44		
19.746728 19.761704	18EFFF80	7	FD	16	10.0	00	00	0.0	00
19.745728 19.761704 19.777672	18EFFF80 18EFFF80	77	FD	15	00	00	00	00	00
19.746728 19.761704	18EFFF80 18EFFF80 18EFFF80	7 7 5	FD		00		00	00	1979 - 1970 - 19700 - 19700 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 -
19.745728 19.761704 19.777672 19.793648	18277780 18277780 18277780 18277780	7766	FD	01	00	00	00	00	1979 - 1970 - 19700 - 19700 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 - 1970 -

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

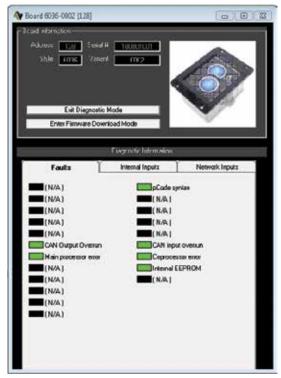
Devices that are connected to the CAN network can be displayed in the AkroView program in one of two ways:

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.



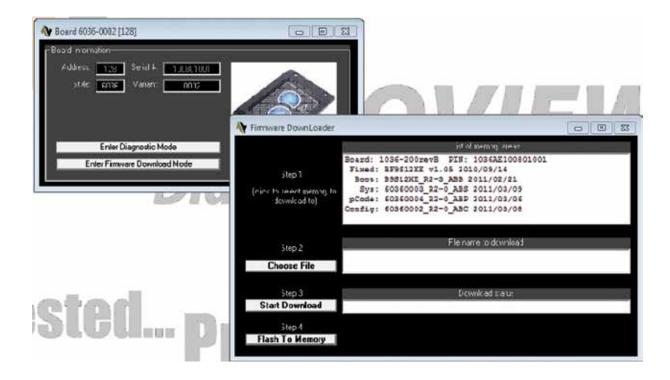
In the above screen shot, the Position Indicator 6036-002 has been added to the network with its CAN network address shown, serial #, Style number and Variant number. As well, a picture of the device is shown for reference.



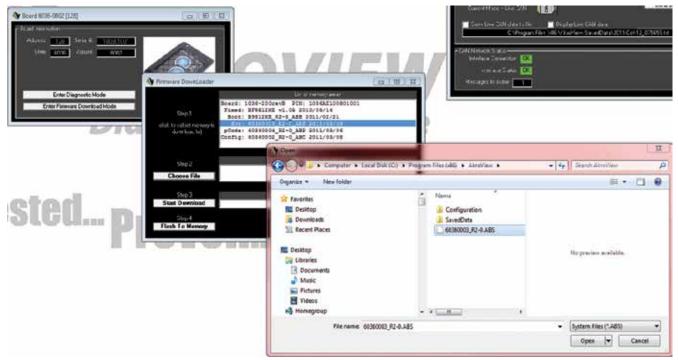
Each device on the network can be placed in a diagnostic mode where an expanded screen of information is presented and updated.

Firmware Upgrading

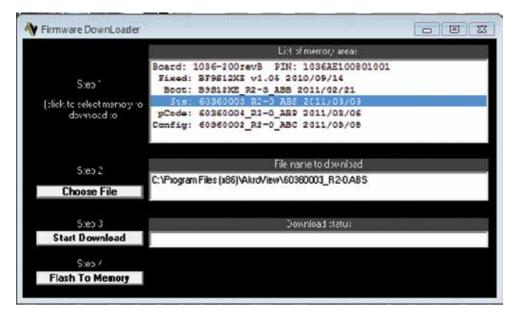
Should you require the firmware within your device to be updated, you can do so within the AkroView program by selecting the "Enter Firmware Download Mode" within the devices window. When you do, the following window will open.



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 be 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

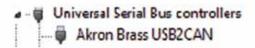
The AkroView program is equipped with an advanced warning and error detecting feature that will trap and display any internal errors in the unfortunate event that they occur. This form will appear automatically in the AkroView workspace should an error occur. Please contact Akron Brass should you require 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
- $\bullet \ \ inf\ \ AkronBrassUSB2CAN.inf$
- \Windows\inf\AB\AkronBrass32.sys
- $\bullet \ inf\ AB\ AkronBrass64.sys$
- \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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