

Section 2

Using ACom for Windows Software

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Important

The following section is a general overview of the features and functions contained in ACom for Windows. It is not intended as a comprehensive guide to the use of ACom. The ACom help system provides complete explanations regarding use. Should additional help be required call 1-800-air-brak (1-800-247-2725).

Starting ACom For Windows

In order to begin using ACom For Windows it is necessary to connect the Bendix Diagnostic Communication Interface (DCI) to the computer and the DCI to the vehicle. Begin the process by turning the computer OFF and making the connections. Refer to the DCI instructions and refer to figures 1, 2 and 5.

Important: For the most part the windows shown in this manual will not be available unless the computer and DCI are connected to the vehicle. ACom software requires a response from the AntiLock controller.

1. After the connection process is complete, turn the computer ON and start Windows.
2. Start ACom For Windows by double clicking the ACom icon and note the opening screen. See figure 11.

ACom File Menu

The ACom File menu contains two selections and allows the technician to alter the Setup of ACom that was selected during the installation of ACom on the computer. The Setup selection is used primarily to set the communications port (only the EC-17 controller is currently supported). The Exit selection is used to close ACom. Refer to figure 12.

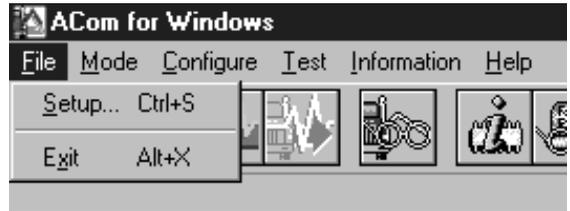


Figure 12

Setup selection

Click Setup and note that the Setup box has 3 file tabs at the bottom entitled;

- Communications
- Tool Bar/Status Bar
- Dialog Preferences”.

Communications Tab

Under “Communications” (see figure 13) there are 4 list boxes. The left two deal with the controller and the right 2 with communication between ACom and the communications adapter, DCI or RS232 to J1708 converter.

- Begin by choosing the correct **ABS Controller Type**. See figure 4 of the DCI instructions and compare to the controller on the vehicle. Note: Initially, only the EC-17 is supported.
- It is recommended that the ACom default **ABS Controller Interface** of J1587 remain unchanged unless you are sure that a different interface is in use. Note: Initially, only J1587 is supported.
- Com1 is the default setting for the **PC Communications Port** and should be changed to the port that the DCI is connected to.
- Under **PC Communications Adapter**, select the “AlliedSignal DCI” v 1.x.



Figure 13

After the selections have been made on the “Com-
munications” tab click Save on the actions menu
along the right side then click the “Tool Bar/Sta-
tus Bar” tab along the bottom.

Note: The default setting can be re-established by
clicking the Default button above the Save button.

Tool Bar/Status Bar tab

The “Tool Bar/Status Bar” tab allows the user to
customize the look of the main window of ACom
screen. The Tool Bar along the top of the screen
displays icons for the most common activities. The
Tool Bar can be disabled so that only the menus
across the top of the screen show.

The Tool Bar may also be customized by adding
or deleting various functions. This is accomplished
by referring to the “Available Tool Bar Buttons”
and the “Selected Tool Bar Buttons” and using
the arrows to add or delete various buttons to the
tool bar.

In addition to the Tool Bar there is a Status Bar
at the bottom of the screen that provides various
handy pieces of information. The Status Bar can
also be disabled. See figure 14.

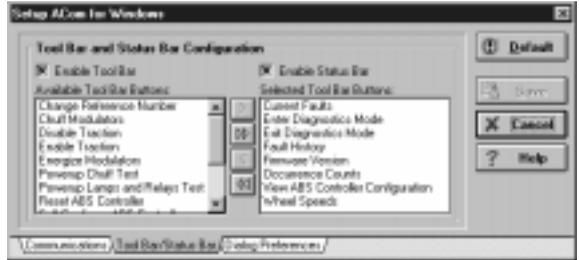


Figure 14

After making the desired changes to the Tool and
Status Bars click Save on the actions menu
along the right side then click the “Dialog Preferences”
tab along the bottom.

Note: The default setting can be re-established by
clicking the Default button above the Save button

Dialog Preferences tab

The “Dialog Preferences” tab allows the user to
modify the way in which ACom responds to the
user’s inputted information. Various notes and
reminders are displayed. For example; ACom re-
quests a confirmation to either save or not save a
file before moving to a different function. It is re-
commended that the default settings not be
changed until the user becomes familiar with the
various functions of ACom. See figure 15.

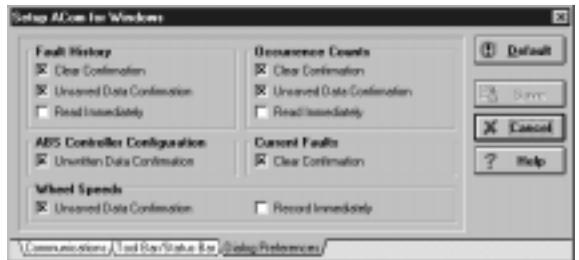


Figure 15

ACom Mode Menu

The Mode menu permits entering and exiting the
Diagnostic mode or enabling and disabling trac-
tion.

ACom defaults out of the Diagnostic mode. The diagnostic mode should only be used to perform stationary testing on the ABS system. When it is entered both the ABS and Traction system are disabled on the vehicle. Entering the diagnostic mode allows the user to perform all but 2 of the tests listed under the Test Menu.

There are four choices available under this menu;

- Enter Diagnostics Mode
- Exit Diagnostics Mode
- Disable Traction
- Enable Traction

When NOT in the Diagnostic mode, 2 of the menu choices are available;

- Enter Diagnostics Mode
- Disable Traction

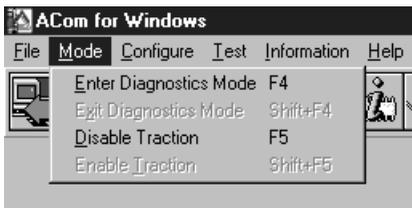


Figure 16

When IN the Diagnostic mode, only 1 menu choice is available;

- Exit Diagnostics Mode

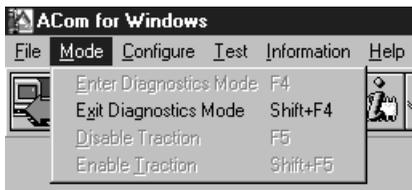


Figure 17

When entering the Diagnostic mode a confirmation box appears advising that ABS and Traction will be disabled.

ACom Configure Menu

The Configure menu offers two selections as illustrated in figure 18.

- View ABS Controller Configuration
- Self Configure ABS Controller

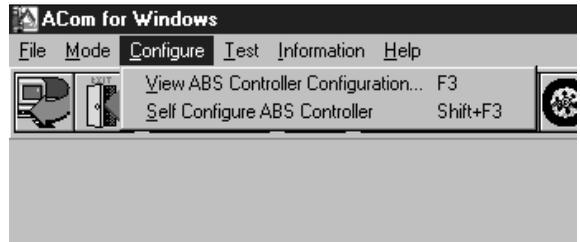


Figure 18

View ABS Controller Configuration selection

Selecting “View ABS Controller Configuration” will allow the user to view the configuration of the ABS system on the vehicle. Note that 3 tabs along the bottom of the box present various pieces of information regarding the system. The tabs are;

- ABS/Tire Radius
- Traction
- Miscellaneous

No selections or choices are required or allowed by ACom under these tabs. The information presented is obtained by ACom through its communication with the ABS controller. This is an informational screen only. Figure 19 illustrates a typical screen.



Figure 19

Self Configure ABS Controller selection

The second choice under the Configure menu is “Self Configure ABS Controller”.

CAUTION: This menu selection should only be made when it is necessary to configure or re-configure the ABS controller. As an example, this function would be used when replacing a malfunctioning controller with a new controller.

Choosing “Self Configure ABS Controller” will immediately initiate the self configure process. The process requires approximately 15 seconds. During this time the ABS system is “interrogated” to determine what equipment and features are present in the system. At the end of the process the controller “remembers” the information gathered during the process. This is the information displayed under the “View ABS Controller Configuration” (step 1).

ACom Test Menu

The ACom Test menu offers 9 possible tests that may be performed. Five of the tests are available outside the Diagnostic mode (see figure 20) and 7 are available when in the diagnostic mode (see figure 21). (See Mode Menu for Entering and exiting the Diagnostic Mode)



Figure 21

Test Communications Interface selection

The Test Communications Interface selection checks the communications link between the ABS controller and the PC computer. For additional help, see the ACom help menu. This test choice can be accessed both in or out of the Diagnostic Mode.

Testing the LEDs

At the beginning of the troubleshooting procedure, check the diagnostic lights on the ABS controller to make sure that they are functioning properly. If the LEDs do not respond to the tests, replace the ABS controller. ACom for Windows allows the lights to be checked by turning them on and off. The LEDs may be tested in one step (all ON & all OFF) or can be illuminated individually. See figure 22. This test choice can only be accessed IN the Diagnostic Mode.

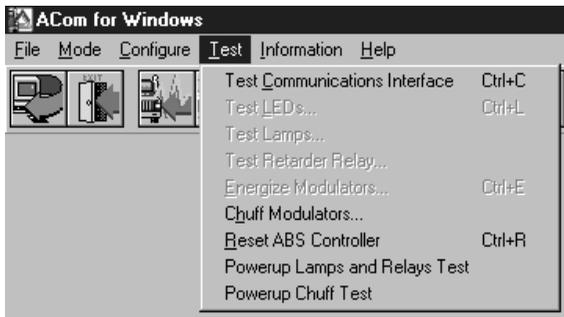


Figure 20

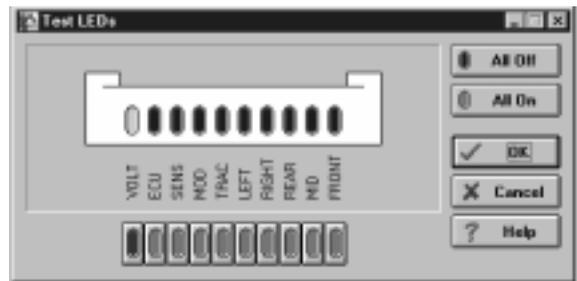


Figure 22

Test Dash Lamps

ACom for Windows allows testing of the AntiLock dash and the traction control dash lamp by turning them on and off. The lamps may be tested in one step (all ON & all OFF) or can be illuminated individually. See figure 23. This test choice can only be accessed IN the Diagnostic Mode.

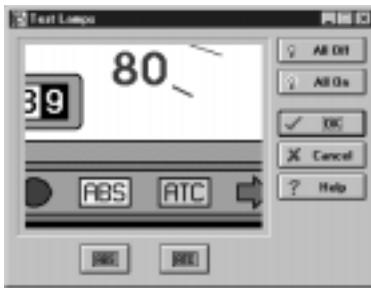


Figure 23

Test Engine Retarder Relay

Use the Test Retarder Relay menu selection to make sure that the relay that enables and disables the engine retarder is working. When testing the retarder relay, listen to the vehicle to ensure that it is responding. See figure 24. This test choice can only be accessed IN the Diagnostic Mode.

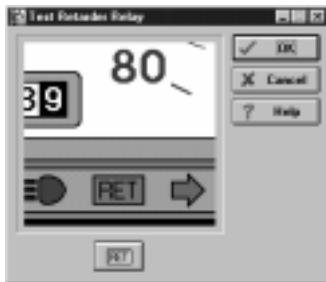


Figure 24

Energize Modulator Test

The Energize Modulators menu selection allows testing of individual solenoids in the AntiLock and traction modulators by energizing them for a fixed

amount of time. Solenoids may energized for .015 up to two seconds. See figure 25. This test choice can only be accessed IN the Diagnostic Mode.

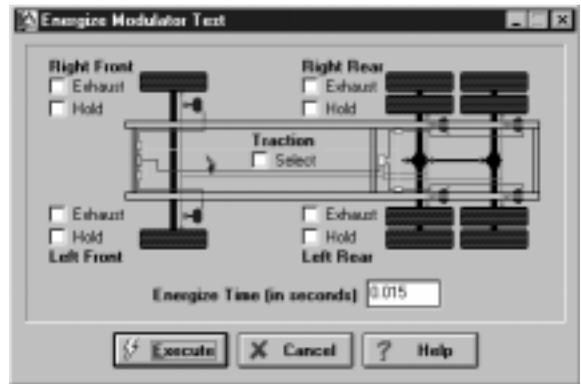


Figure 25

Chuff Modulators selection

The Chuff Modulators selection allows the technician to exercise individual modulators on the vehicle. By making and holding a brake application and using the ACom Execute command the technician can hear an audible "chuffing" sound if the modulator is functioning properly. Refer to figure 26. This test choice can be accessed both in or out of the Diagnostic Mode.

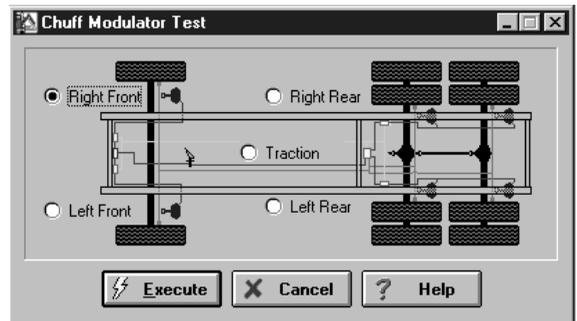


Figure 26

Reset ABS Controller

The Reset ABS Controller menu selection restarts the ABS controller. For additional help, see the ACom help menu. This test choice can be accessed both in or out of the Diagnostic Mode however if this test or command is chosen while in the Diagnostic Mode ACom will automatically exit the Diagnostic Mode to complete the command. Refer to figure 27. This test choice can be accessed both in or out of the Diagnostic Mode.



Figure 27

Powerup Lamps & Relays Test selection

Use the Powerup Lamps & Relays Test selection to perform the same tests that the ABS controller performs on powerup (and reset) to ensure that the AntiLock dash lamp, traction control dash lamp, and engine retarder relay are working properly. For additional help, see the ACom help menu. Refer to figure 28. This test choice can only be accessed out of the Diagnostic Mode.

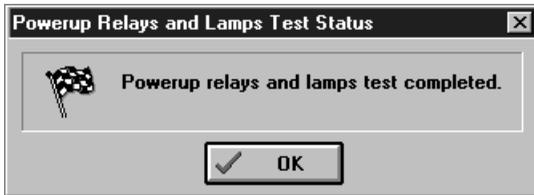


Figure 28

Powerup Chuff Test selection

Use the Powerup Chuff Test selection to perform the same tests that the ABS controller performs on powerup (and reset) to ensure that the AntiLock and traction control modulators, AntiLock dash lamp, traction control dash lamp, and engine retarder relay are working properly.

This test differs from the Chuff Modulators selection, in that this tests all modulators in the same sequence they are tested each time the ignition is turned On. Refer to figure 29. This test choice can only be accessed out of the Diagnostic Mode.



Figure 29

ACom Information Menu

The ACom Information menu offers 6 possible options. 5 of the 6 options can be accessed both in or out of the Diagnostic Mode. The Current Faults option cannot be accessed in the diagnostic mode. Refer to figure 30. (See Mode Menu for Entering and exiting the Diagnostic Mode)



Figure 30

Firmware Version selection

Clicking the Firmware Version selection initiates an interrogation of the antilock controller. The version number assigned to the ABS controller on the vehicle is then displayed in a window. This information may be required when calling for technical support. For additional help, see the ACom help menu. Refer to figure 31.



Figure 31

Change Reference Number selection

Clicking the Change Reference Number selection initiates an interrogation of the antilock controller. The reference number assigned to the vehicle's ABS controller is obtained and then displayed in a window. This information may be required when calling for technical support. For additional help, see the ACom help menu. Refer to figure 32.

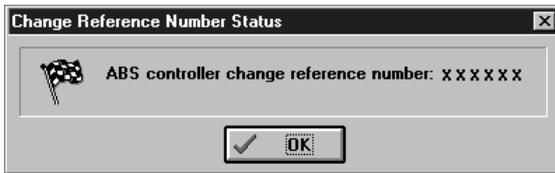


Figure 32

Current Faults selection

Use the Current Faults option under the Information menu to display a detailed list of the vehicle's current faults. The Current Faults selection displays a detailed list of the current faults for the ABS and traction control system. The list of current faults displays;

- * The number of times that a fault has been reported since the last time the list was cleared
- * The location of the fault.
- * A description of the fault.

After you diagnose and fix a fault, you should clear the current fault list. If there are multiple faults, any faults that still exist will be reinstated on the list. Faults are cleared by clicking the CLEAR button on the window. A confirmation box will appear and OK should be selected if clearing the faults is still desired.

For additional help, see the ACom help menu. Refer to figure 33.



Figure 33

Fault History selection

The Fault History selection provides a means of managing a historical record of vehicle faults. The ABS controller maintains a record of vehicle faults in memory. A list of the faults that occurred on the vehicle in the past (as well as the faults that currently exist on the vehicle) can be generated. The list contains details that include the time of the last vehicle powerup when the fault occurred and a description of each fault.

Using the Fault History dialog box, the technician can:

- * Generate a list of historical faults.
- * Clear the fault history.
- * Save the fault history to a file.
- * Open an existing fault history file.
- * Print the fault history.



Figure 34

After opening the Fault History window one of two actions may be taken.

1. The current history can be obtained by clicking the "Read" button.
2. A past history can be opened up by clicking the "Open" button and selecting a previously saved history. Refer to figure 35.

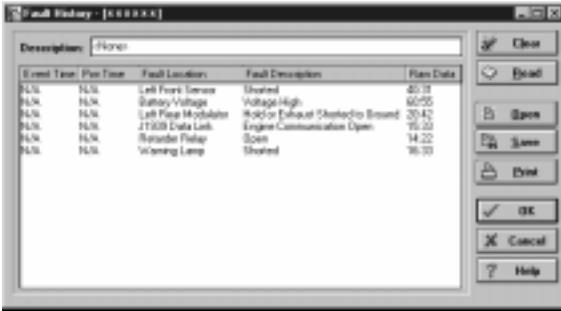


Figure 35

Once the faults are read into the history window the technician can print the history, enter a Description of the inspection and save the fault history to a file on the computer hard drive or diskette. While the faults can be cleared in this window after completing the repairs it is not necessary to do so after repairs are completed. Refer to figure 32.

Once saved the file can be re-opened for reference. For additional help, see the ACom help menu. Refer to figure 36



Figure 36

Occurrence Counts selection

The Occurrence Counts selection functions much the same as the Fault History selection. The technician generate a list that includes the number of faults that have occurred on the vehicle, a description of each fault, and an indication of whether the fault is still active on the vehicle. As with the

Fault History the occurrence count list can be saved and printed.

Also like the Fault History selection, once the window is opened one of two actions may be taken.

1. The current fault occurrences can be obtained by clicking the "Read" button.
2. A past history can be opened up by clicking the "Open" button and selecting a previously saved occurrences file.

For additional help, see the ACom help menu. Refer to figure 37.

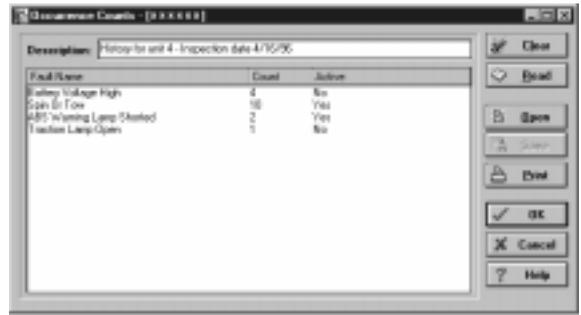


Figure 37

Wheel Speeds selection

ACom for Windows allows the technician to monitor wheel speeds to make sure that all the wheel speed sensors are adjusted and functioning properly. The ABS controller obtains wheel speeds from wheel speed sensors installed on the vehicle axles. When the wheel rotates, the wheel speed sensors generate AC signals which are sent to and interpreted by the ABS controller. The ABS controller can use the information to command the AntiLock brake and traction control system accordingly.

Using the Wheel Speed option under the Information menu, the technician can:

- * Record and play back wheel speeds.
- * Save a wheel speed recording to a file.
- * Open an existing wheel speed recording.
- * Print a wheel speed recording.

The Wheel Speed Data dialog box functions much like a tape recorder with a Play button, Rewind button,... The technician can record and play back the speed of all the vehicle's wheels at once or play back only the speed of individual wheels. The wheel speeds are displayed on a line graph with different colors to represent each wheel. The X in the check box next to the wheel name indicates that the graph will display the speed of the wheel on the graph. The number below the check box shows the wheel's speed at the time at which the recording is stopped. For additional help, see the ACom help menu. Refer to figure 38.

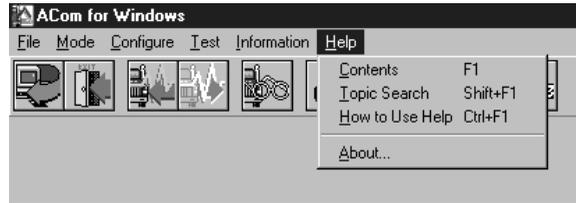


Figure 39

Contents selection

The Help Contents selection provides the user with a concise synopsis of all of the help screens available. Refer to figure 40.

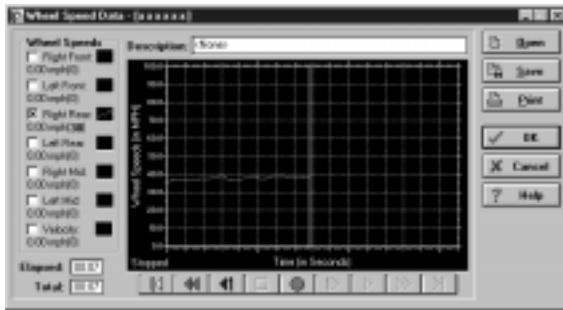


Figure 38



Figure 40

ACom Help Menu

The Help menu, as it name implies, provides the technician with help on the use of ACom for Windows. There are four possible menu selections;

- * Contents
- * Topic Search
- * How to Use Help
- * About

The first three selections guide the user to complete explanations of the use and purpose of ACom for windows. Additional help as well as all of the information contained in this booklet is available in the Help Menu. Refer to figure 39.

Topic Search selection

The Topic Search selection allows the user to enter various terms and view the available help screens covering the term. The technician can use the topic search when using a particular function of ACom and an unfamiliar term or function is encountered. Refer to figure 41.

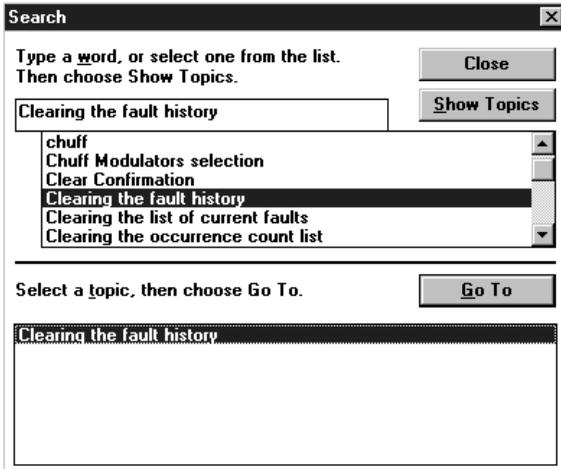


Figure 41

How to use Help selection

The How to use Help Contents selection provides the user with an explanation of the features of the help system as well as a tip on how to get the most from Help. Refer to figure 42.



Figure 42

