

AcmPost
**Post Processing Software
User Manual**

for the 2D-ACM and 3D-ACM

January 2000

**Falmouth Scientific, Inc.
1140 Route 28A
Cataumet, MA 02534**

**Tel: (508) 564-7640
Fax: (508) 564-7643**



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- Include with all shipments two copies of your commercial invoice showing the value of the items and the reason you are returning them. Whenever possible, send copies of the original export shipping documents with the consignment.
- If the total value of the items is in excess of \$1,000, include the following shippers oath with the invoices. (This can be typed on the invoices or on a separate letterhead.)

I, _____, declare that the articles herein specified are the growth, produce, or manufacture of the United States; that they were exported from the United States from the Port of _____, on or about _____; that they are returned without having been advanced in value or improved in condition by any process of manufacture or any other means, that no drawback, bounty, or allowance has been paid or admitted thereof.

Signed _____

- If there is more than one item per consignment, include a packing list with the shipment. It is acceptable to combine the commercial invoice and packing list with the contents of each carton, clearly numbered and identified on the commercial invoice.
- Consign all air freight shipments to Falmouth Scientific, Inc. in care of Air Sea Forwarders, 140 Eastern Avenue, Chelsea, MA 02150.
- If the items are the property of FSI, please insure for them for their full value.
- Route via Logan International Airport only as the final destination.
- Mail or Fax one copy each of the invoice, packing list, and airway bill to FSI upon shipment.
- Refer to the FSI issued RMA number on all documents and correspondence.
- Prepay the freight.

Preface

Congratulations on your purchase of an FSI precision oceanographic instrument. Founded in 1989, FSI has become an international leader in the development and manufacture of oceanographic instrumentation, including Conductivity/Depth/Temperature (CTD) profilers, acoustic current meters, high performance water samplers, and wave and tide instruments. FSI products provide the highest accuracy for your monitoring needs in environments ranging from estuarine to full ocean depth.

What's in This Manual

This user manual provides information pertaining to the installation and operation of AcmPost, a software program that processes and displays current velocity and CTD data acquired from FSI's 2D-ACM and 3D-ACM Acoustic Current Meters. The manual is divided into the following six sections:

Section 1: About AcmPost describes the key features of AcmPost, and provides a general overview of the AcmPost compatible acquisition software, 3DACM97, and the 2D-ACM and 3D-ACM Acoustic Current Meters.

Section 2: Installing and Starting AcmPost provides installation and startup procedures for getting AcmPost running on your computer, as well as procedures for exiting and uninstalling AcmPost.

Section 3: Windows and Commands describes the AcmPost Main window and how to access menus and choose commands.

Section 4: Opening, Viewing and Printing Data Files describes how to configure and open data files and how to view and print the parameter data in the files.

Section 5: Viewing and Printing the Graphics Displays describes the five graphics displays, and how to view, set up, arrange, and print the graphics displays.

Section 6: Exporting Data and CTD Files describes how you can export parameter data along with calculated current speed and direction, and how you can create and export DAT, C00 and HDR files from the CTD data.

System Configuration Requirements

The system configuration required for Acmpost to operate properly includes the following:

- Microsoft Windows 95[®], Windows 98[®] or Windows NT[®]
- A computer with an Intel 80486[®] or Pentium[®] processor
- Minimum 32 MB of RAM
- A VGA monitor with 800 x 600 resolution
- A CD-ROM drive
- A hard disk with 10 MB free space

Pull-Down Menus

Like most programs, Acmpost uses pull-down menus, which are opened from the menu bar in the program's Main window by pointing to the item with the mouse pointer and clicking the left mouse button. When the menu is open, you can select an item from it in the same manner.

In many of the procedures presented in this manual, the ► symbol is used to represent a sequence of menu item selections. For example, "Choose File ► Open" means select File from the menu bar, and then choose Open from the File menu when it opens.

Notes and Cautions

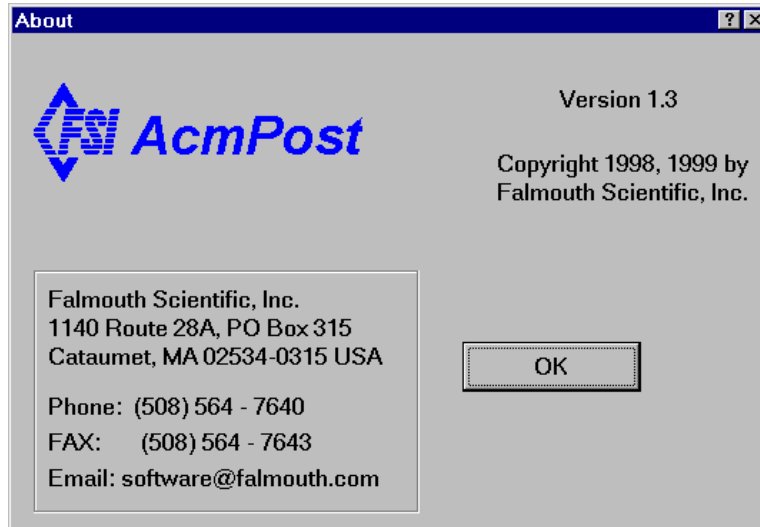
Where applicable, notes and cautions are provided as follows:

***Note:** Recommendations or general information that is particular to the material being presented or a referral to another part of this manual or to another manual.*

***Caution:** A reminder that you are in danger of losing or misinterpreting data.*

AcmPost Version Number

For information about AcmPost, choose Help ► About. The About window opens, which provides important information about your version of AcmPost:



Customer Service

FSI welcomes your feedback. Therefore, please contact FSI customer service to offer any comments or suggestions or to request technical support.

FSI can be contacted using any of the following means:

Mail

**Falmouth Scientific, Inc.
P.O. Box 315
Cataumet, MA 02534
U.S.A.**

E-mail

fsi-tech@falmouth.com

Telephone or Facsimile

**Telephone: (508) 564-7640
Facsimile: (508) 564-7643**

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SECTION 1: About AcmPost

The AcmPost post processing software provides a convenient, user friendly means of processing, viewing and printing parameter data, including CTD data, that have been acquired from FSI's 2D-ACM or 3D-ACM Acoustic Current Meter (ACM) instruments and saved to an ASCII data file. All the parameter data can be viewed in a data window, and the current velocity and CTD data can be viewed in graphics displays.

The 2D-ACM and 3D-ACM collect, output and store current velocity data, pressure data, 3-axis compass data, 2-axis tilt data, temperature data, and data from optional sensors, including a CTD. The 2D-ACM measures current velocity in two dimensions; the 3D-ACM, in three dimensions. All the data stored in a 2D-ACM or 3D-ACM can be retrieved and saved as an ASCII data file using 3DACM97, a software program available from FSI that is also used to configure and to acquire data in real time from a 2D-ACM or 3D-ACM.

AcmPost also creates and exports DAT, C00 and HDR files from the CTD data acquired from the optional CTD. These files can be input to FSIPost, a software program available from FSI that further processes, displays and saves the CTD data.

This section provides an overview of AcmPost and its key features, along with a description of 3DACM97 and the 2D-ACM and 3D-ACM.

AcmPost Overview

AcmPost runs on the Windows 95, the Windows 98 or the Windows NT platform. AcmPost inputs and processes data files that have been created using 3DACM97. In addition, data from a CTD, which can be optionally installed on the 2D-ACM or 3D-ACM, can be processed and displayed. After processing, the data can be viewed in a data window or in graphics displays, and printed. Specifically, the major functions that AcmPost allows you to perform are the following:

Input data by opening any number of data files containing parameter data acquired by a 2D-ACM or 3D-ACM and saved using 3DACM97.

Choose to input either instantaneous or vector averaged current velocities by setting the appropriate data file configuration settings.

Choose the data file properties by setting the appropriate data file configurations settings, including whether to print a header when printing a graph, and adjusting the true north correction.

View the data files in a view data window which allows you to view a selection of any four parameters in any of the open data files simultaneously, and to scroll through all of the scans.

Print the data files from a view data window which allows you to print all the parameter data in any of the open data files.

View header information in any of the open data files.

View the graphics displays for any of the open data files, where the graphics displays comprise four current velocity graphics displays—Velocity Time Series, Speed and Direction, Progressive Vector, and Distribution; and one CTD graphics displays—CTD Time Series.

Set up the graphics displays by selecting the colors of the plots and graph backgrounds, the full scale ranges and other setup parameters.

Change the default graphics display settings for any of the graphics displays setups.

Arrange any number of graphics display windows in the Main window, one for each open data file, and select any window for viewing the graphics displays, setting up the graphics displays, and printing the graphs.

Print preview the graphs in a print preview window for any of the open graphics display windows before printing.

Print the graphs for any of the open graphics display windows from the print preview window, or directly without previewing first.

Export all the parameter data along with calculated current speed and direction, or just the current speed and direction, in comma delimited or Matlab format.

Create and export CTD data files for further processing, displaying and printing by FSIPost.

3DACM97 Configuration and Acquisition Software

Acmpost inputs data that have been acquired in real time from a 2D-ACM or 3D-ACM, or retrieved from the instrument's internal memory, and saved to a file in ASCII format. To acquire or retrieve the data, the 3DACM97 configuration and acquisition software is required and is included with the 2D-ACM or 3D-ACM.

3DACM97 runs on the Windows 95, the Windows 98 or the Windows NT platform and primarily is used to check, to configure and to prepare the 2D-ACM or 3D-ACM for deployment. In addition, 3DACM97 is used to acquire and display

the data in real time, to retrieve data from the instrument's internal memory, to view the data, and to save the data for processing, displaying and printing by Acmpost.

The 2D-ACM and 3D-ACM Instruments

The 2D-ACM Acoustic Current Meter measures current velocity in two dimensions and includes a 3-axis solid state compass for measuring the Earth's magnetic field, a 2-axis solid state accelerometer for measuring tilt, and a solid state temperature sensor for measuring water temperature. The 2D-ACM can also interface with an optional CTD and includes two DC input channels which interface with most DC output sensors, including dissolved oxygen, pH, chlorophyll, light transmission, and others. The 2D-ACM can be powered from an external DC power supply or from an internal alkaline battery pack. Data can be acquired in real time in ASCII format through an RS-232 or optional RS-485 serial interface at baud rates up to 19200 bits/sec, or the instrument can be deployed and the data stored in its standard 1 MB internal flash memory for later retrieval. The 2D-ACM is small in size and low in weight and has a depth rating of 200 meters. In addition, a 3/4 ton working strength 316 stainless steel mooring frame is included, and a 5 ton frame of the same material is available as an option.



The 3D-ACM Acoustic Current Meter measures current velocity in three dimensions and includes a 3-axis fluxgate compass for measuring the Earth's magnetic field, a 2-axis electrolytic tilt sensor for measuring tilt, a solid state temperature sensor for measuring water temperature, and an optional pressure sensor for measuring the depth of the instrument. The 3D-ACM can also interface with an optional CTD and includes two DC input channels which interface with most DC output sensors. The 3D-ACM can be powered from an external DC power supply or from an internal alkaline battery pack. Data can be acquired in real time in ASCII format through an RS-232 or optional RS-485 serial interface at baud rates up to 19200 bits/sec, or the instrument

can be deployed and the data stored in its standard 0.5 MB internal lithium battery backed RAM for later retrieval. The 3D-ACM has a depth rating of 7000 meters, and a “Coastal” version of the same instrument is available that has a depth rating of 1000 meters. A 1.5 ton working strength 316 stainless steel mooring frame is included, and a 5 ton frame of the same material is available as an option.

SECTION 2: Installing and Starting AcmPost

This section describes how to install AcmPost from the AcmPost For Windows 95 CD-ROM. AcmPost is installed using the FSI AcmPost Setup program, which is started by choosing the Add/Remove Programs icon in the Windows Control Panel. In addition, this section describes how to start, exit, and uninstall AcmPost.

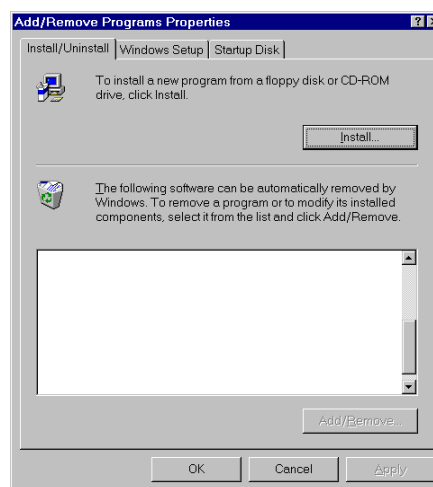
***Note:** Before installing AcmPost, uninstall any previous version of the program if installed on your computer. (See “Uninstalling AcmPost” on page 2-5 for instructions on how to uninstall AcmPost.)*

Installing AcmPost

To install AcmPost:

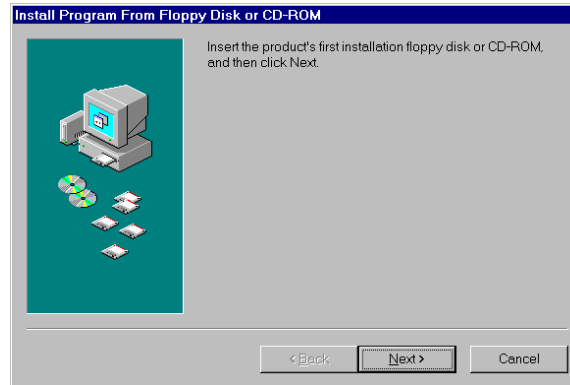
- ▶ Exit all programs and turn off any virus protection or screen saver software.
- ▶ Insert the AcmPost For Windows 95 CD-ROM into your CD-ROM drive.
- ▶ Select Start ▶ Settings ▶ Control Panel to open the Control Panel.
- ▶ Choose Add/Remove Programs in the Control Panel.

The Add/Remove Programs Properties dialog box opens:



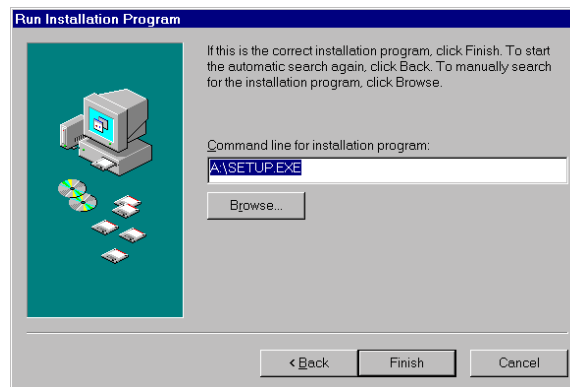
- 5 ▶ Click Install.

The Install Program From Floppy Disk or CD-ROM dialog box opens:



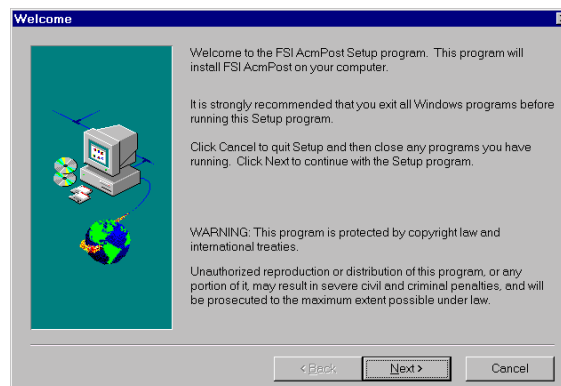
- 6 ▶ Click Next.

The Run Installation Program dialog box opens:



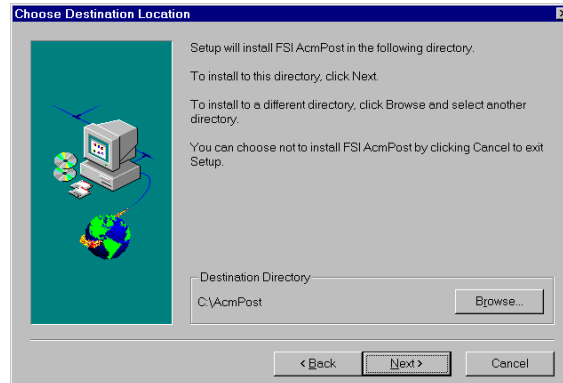
- 7 ▶ Click Finish.

After the InstallShield Wizard is prepared, the Welcome dialog box opens:



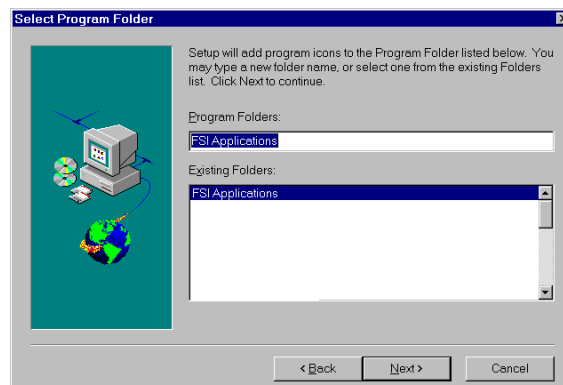
- 8 Click Next.

The Choose Destination Location dialog box opens:



- 9 Click Next to accept the specified destination directory as the directory in which the Acmpost program will be installed. Or instead, click Browse and follow the instructions to select a different directory, and then click Next.

The Select Program Folder dialog box opens:



- 10 Click Next to accept FSI Applications as the name of the program folder in which the Acmpost program icons will be added. Or instead, select an existing program folder from the list or type a new folder name, and then click Next.

The Acmpost program files are copied to the specified destination directory, and then the Setup Complete dialog box opens.

- 11 Click Finish in the Setup Complete dialog box to exit from the FSI Acmpost Setup program.

Acmpost is installed and ready to be started.

Starting AcmPost

To start AcmPost:

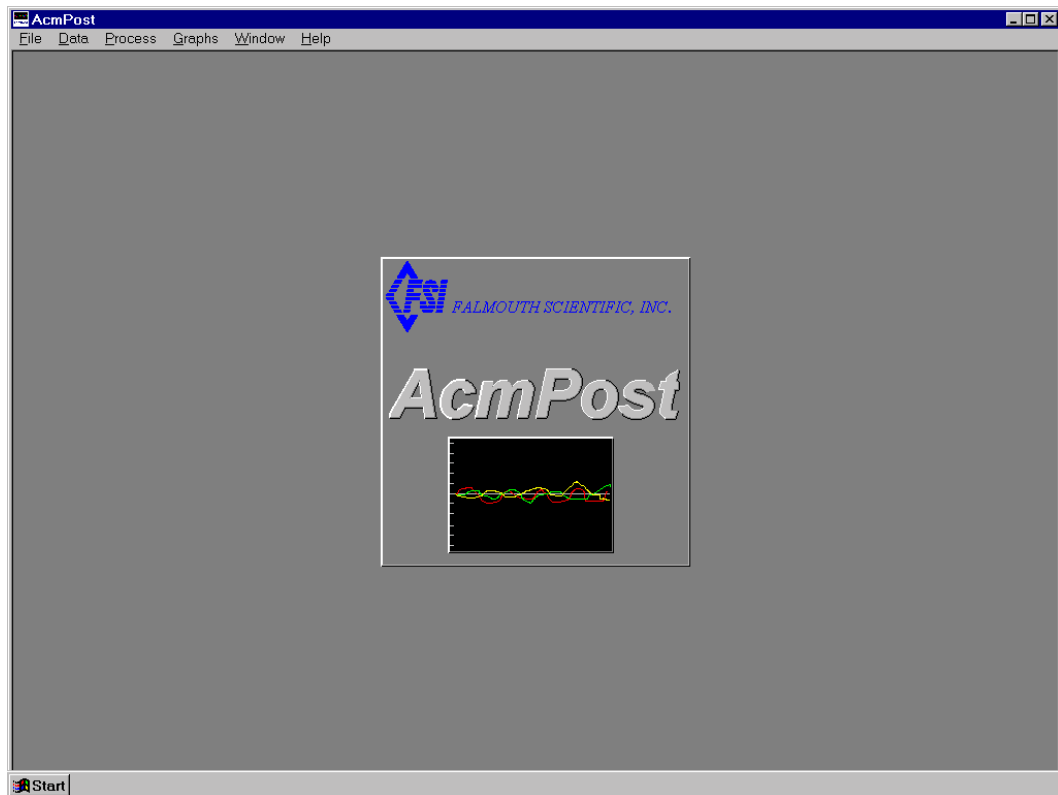
- 1 Select Start ► Programs ► FSI Applications.

The FSI Applications menu opens:



- 2 Choose AcmPost.

AcmPost starts and the AcmPost Main window opens:



Exiting AcmPid

To exit AcmPid:

- 1 Select File from the menu bar in the Main window. (See “SECTION 3: Windows and Commands,” for information on the Main window and how to access commands from the menu bar.)

The File menu opens.

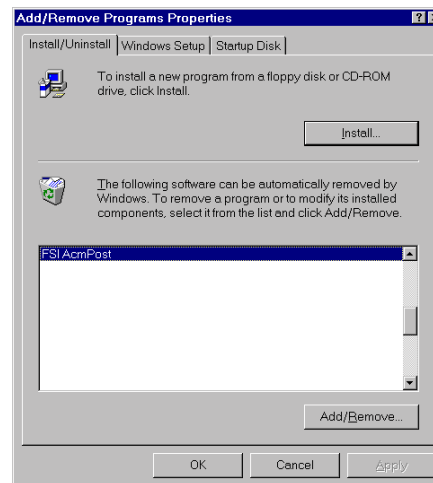
- 2 Choose Exit.

Uninstalling AcmPid

To uninstall AcmPid:

- 1 Exit from AcmPid.
- 2 Select Start ► Settings ► Control Panel to open the Control Panel.
- 3 Choose Add/Remove Programs in the Control Panel.

The Add/Remove Programs Properties dialog box opens:



- 4 Select FSI AcmPid and click Add/Remove.
- 5 Click Yes when asked to confirm that you want to remove the program and all of its components.

AcmPid is removed from your computer.

SECTION 3: Windows and Commands

All of Acmpost's commands are accessed from the Main window, which opens after Acmpost has completed its startup. (See "Starting Acmpost" on page 2-4 for instructions on how to start Acmpost.) This section provides a general description of the Main window and describes how to access menus and choose commands.

The Main Window

After Acmpost has completed its startup, the Main window shown in Figure 3-1 opens. The Main window provides access to all of Acmpost's commands

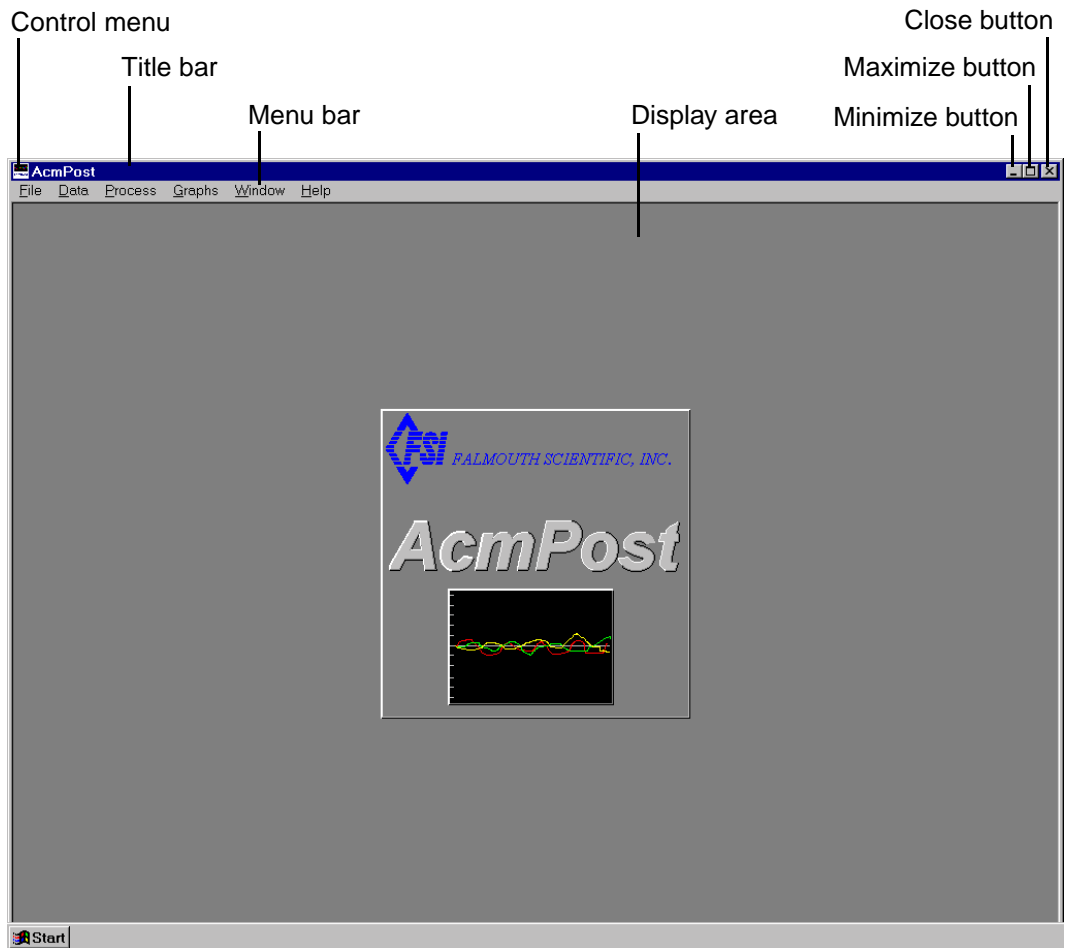


Figure 3-1: The Main Window

through the menu bar. The Main window also contains standard Windows features, such as the Control menu, the Title bar, and the Maximize, Minimize, and Close buttons. The display area composes the rest of the Main window.

Menu Bar

The menu bar, which contains pull-down menus, provides access to all of the Acmpost commands. To open a menu from the menu bar, place the mouse pointer on the menu name to select it and then click the left mouse button. The menu opens as shown in Figure 3-2, which shows the open File menu. To choose an item from the menu, place the mouse pointer on the item to select it and then click the left mouse button.

You can also use the shortcut method for selecting menu items. To do this, press **ALT** followed by the underlined letter of the item you want to select on the menu bar, and then the underlined letter of the item you want to select in the menu that opens.

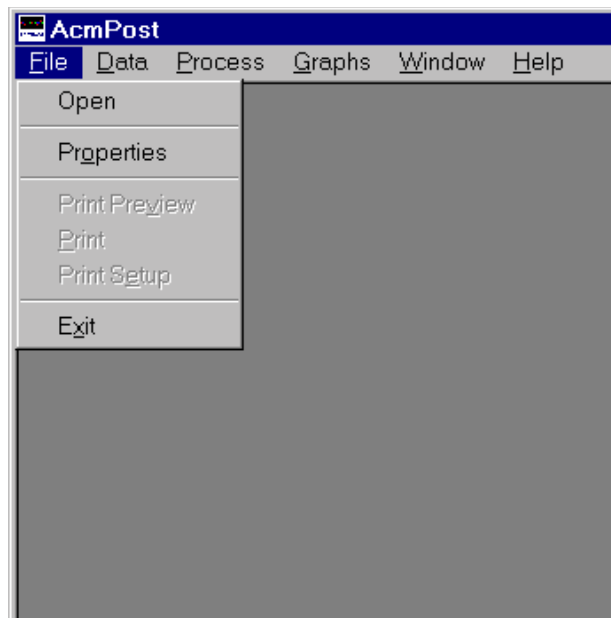


Figure 3-2: The Open File Menu

Display Area

The display area of the Main window is reserved for graphics display windows and dialog boxes. (See Figure 4-3 on page 4-5 for an example of graphics display windows in the display area.)

SECTION 4: Opening, Viewing and Printing Data Files

After using 3DACM97 to acquire data in real time from a 2D-ACM or 3D-ACM, or to retrieve data from the instrument's internal memory, and save the data to an ASCII data file, the current velocity and CTD data, along with all the other parameter data in the data file, can be input to Acmpost for viewing and printing. To input the data, the data file is opened in Acmpost. This section describes how to configure and open data files, and how to view and print the parameter data in the files.

Once a data file is open, the current velocity and CTD data can also be viewed on graphics displays and the graphs printed. (See "SECTION 5: Viewing and Printing the Graphics Displays.")

***Note:** For information on how 3DACM97 is used to acquire data in real time from a 2D-ACM or 3D-ACM, or to retrieve the data from the instrument's internal memory, and save the data to a file, refer to the "3DACM97 Configuration and Acquisition Software User Manual" provided with the 2D-ACM or 3D-ACM.*

Verifying the Data File Configuration

Prior to opening data files containing current velocity and CTD data, it may be required to verify or change the file configuration settings. You need to do this only once, even when opening more than one data file, as long as the configuration requirements remain the same for all the files. Most of the settings, except where noted, can also be changed after the data file is opened.

To verify or change the data file configuration settings:

1 ► Choose File ► Properties.

The Properties dialog box shown in Figure 4-1 opens.

2 ► In the Velocity Data used in Calculations area of the Properties dialog box, select one of the following options:

- Average Velocities (AVN, AVE, AVU) to input only the *vector averaged* velocity data from the data file.
- Instantaneous Velocities (VN, VE, VU) to input only the *instantaneous* velocity data from the data file.

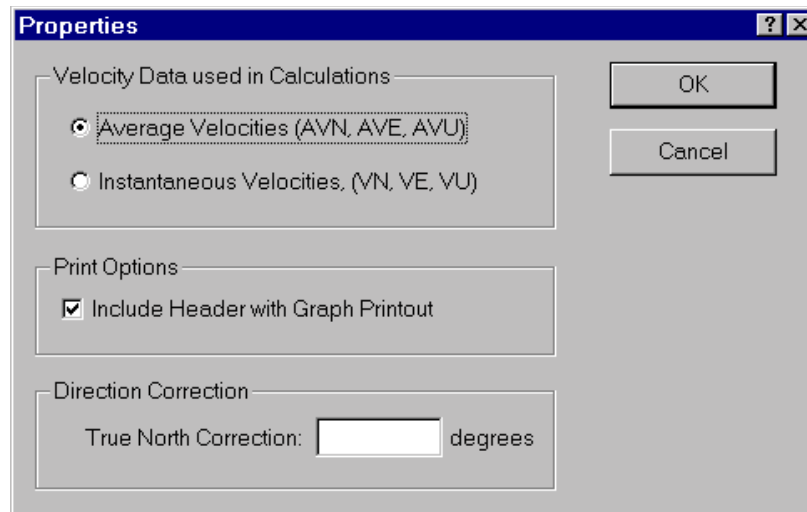


Figure 4-1: The Properties Dialog Box

Note: The instantaneous current velocity and CTD data in the data file are either the instantaneous current velocity and CTD data recorded by the 2D-ACM or 3D-ACM with the vector averaged current velocity data at the end of each averaging interval, or the selected burst current velocity and CTD data recorded during each Burst On Time. Which depends on whether average data or burst data, respectively, is chosen in 3DACM97 when retrieving and saving the data to the data file from the 2D-ACM or 3D-ACM. In addition, if the data in the data file were acquired in real time with 3DACM97, the data are the selected burst current velocity and CTD data, which are acquired at a one second rate.

Note: This selection must always be made before opening the data file. Changing the selection after the file is open has no effect; the file must be reopened for the change to apply.

- 3 In the Print Options area, select the Include Header with Graph Printout check box if you want to print header information when printing a graph, or clear the check box if you want the graph to fill the page. (See “Printing the Graphs” on page 5-18 for instructions on how to print the graphs.)
- 4 If it is required to correct for magnetic field errors, enter a correction for true north in the True North Correction text box in the Direction Correction area. The entered value is subtracted from the current direction calculations.

Caution: Unlike wind direction, which is defined as the direction from which the wind is blowing, current direction is defined as the direction toward which the current is flowing. For example, a current direction of 180 degrees indicates that the current is flowing in the southerly direction—from north to south.

Opening Data Files

Data files containing current velocity and CTD data acquired from a 2D-ACM or 3D-ACM should be opened only after the correct file configuration settings have been made in the Properties dialog box.

To open one or more data files:

- 1 Choose File ► Open.

The Open dialog box for ACM data files shown in Figure 4-2 opens. The example in the figure shows four data files: Acml.dat, Acm2.dat, Acm3.dat, and Acm4.dat.

If the file you want to open is not visible, it may be in a different folder than the one shown. In this case, click the arrow in the Look in drop-down list box and select the folder in which the file is located.

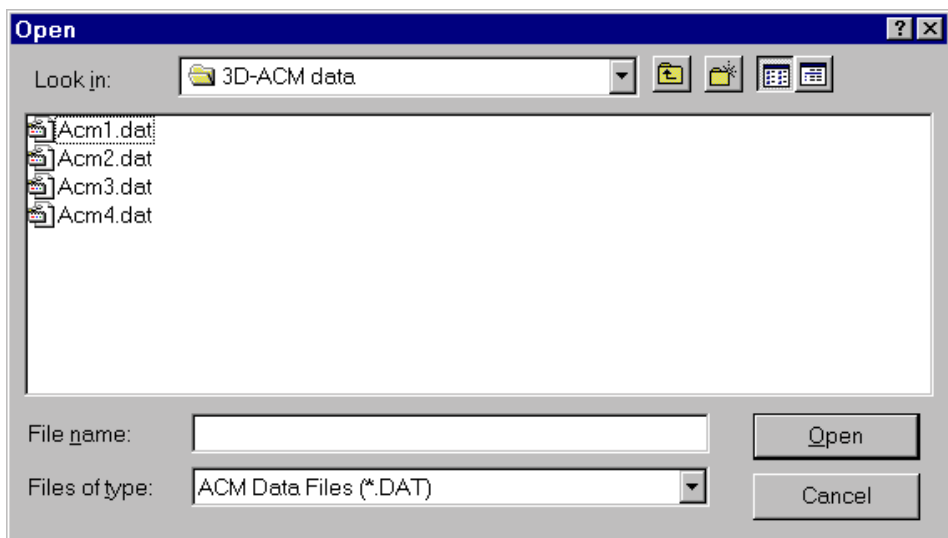
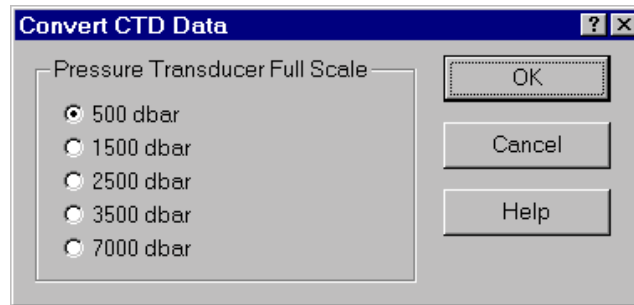


Figure 4-2: The Open Dialog Box for ACM Data Files

- 2 Click the file you want to open, and then click Open.

AcmPost reads the data file, and if the data file *does not* contain CTD data—or if the data file *does* contain CTD data *and* the data are already in floating point format, the Velocity Time Series graphics display opens in a graphics display window with the current velocity data plotted. (For information on the Velocity Time Series graphics display and the other graphics displays, see “Viewing the Graphics Displays” on page 5-1.)

If the data file contains CTD data and the data *are not* in floating point format, the Convert CTD Data dialog box opens:



- 3 Select the option corresponding to the full scale pressure specification for the pressure transducer used in the CTD, and then click OK.

The Velocity Time Series graphics display opens in a graphics display window with the current velocity data plotted.

- 4 Repeat Step 1 and Step 2, and if required, Step 3 for all the data files you want to open.

A graphics display window with the Velocity Time Series graphics display opens and is cascaded automatically for each of the data files, as shown in Figure 4-3, where three data files are open: Acm1.dat, Acm2.dat and Acm3.dat.

- 5 To view any of the other graphics displays in a graphics display window, click the corresponding option button in the upper left corner of the display.

To view a different graphics display window, click the window's title bar to make it the active window. The window moves to the front.

- 6 To close a graphics display window, and its data file, click the Cancel button.

Viewing and Printing Data Files

The current velocity and CTD data and all the other parameter data retrieved from a 2D-ACM or 3D-ACM by 3DACM97 and saved to a data file can be viewed and printed at any time after opening the file in Acmpost. Any number of data files can be open at the same time.

Note: *If you will be printing the data in a data file, set up the page first. To set up the page, choose File ► Print Setup and follow the instructions in the Page Setup dialog box that opens. Once the page is set up, it is not necessary to set it up again unless your page requirements change.*

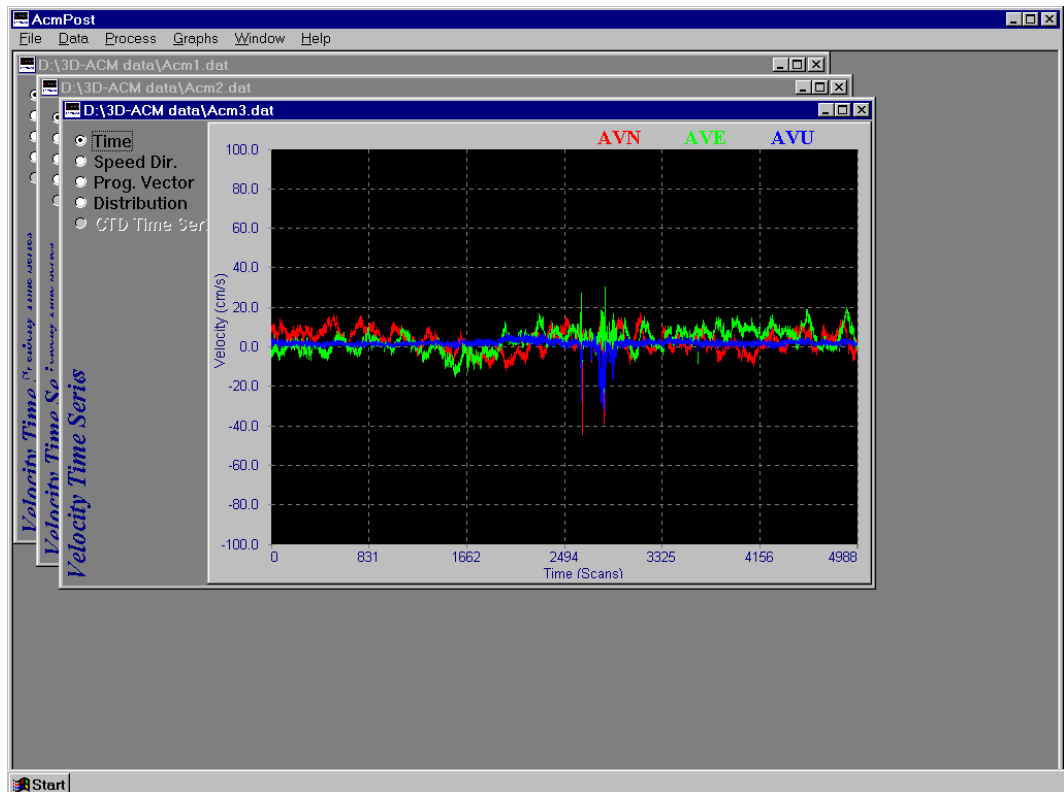


Figure 4-3: Graphics Display Windows for Multiple Open Data Files

The parameter data that can be viewed and printed when the data file contains *instantaneous* current velocity data and CTD data include the following:

SCANS:	Scan number
TIME:	Time in days
VN:	Instantaneous north current velocity in cm/sec
VE:	Instantaneous east current velocity in cm/sec
VU:	Instantaneous up current velocity in cm/sec
COND:	Conductivity in mmho/cm
TEMP:	Temperature in °C
PRES:	Pressure in dBars

The parameter data that can be viewed and printed when the data file contains *vector averaged* current velocity data and CTD data include the following:

SCANS:	Scan number
TIME:	Time in days
AVN:	Vector averaged north current velocity in cm/sec
AVE:	Vector averaged east current velocity in cm/sec
AVU:	Vector averaged up current velocity in cm/sec
COND:	Conductivity in mmho/cm
TEMP:	Temperature in °C
PRES:	Pressure in dBars

Note: All the other parameter data saved to the data file can also be viewed. For a complete list of the parameters, their definitions and units of measure, refer to the “3DACM97 Configuration and Acquisition Software User Manual” provided with the 2D-ACM or 3D-ACM.

To view and print the data in a data file:

- 1 ▶ Open one or more data files.
AcmPost reads the data files, and a graphics display window with the Velocity Time Series graphics display opens and is cascaded automatically for each of the data files opened.
- 2 ▶ If more than one data file is open, click the title bar of the graphics display window corresponding to the data file for which you want to view the data.
The graphics display window is made active. If only one data file is open, the graphics display window for that data file will already be the active window.
- 3 ▶ Choose Data ▶ View Parameter Data.
The View Data window shown in Figure 4-4 opens.
- 4 ▶ In the Parameter 1 column of the View Data window, click the down arrow and select a parameter to display.
- 5 ▶ Repeat Step 4 for the Parameter 2, Parameter 3, and Parameter 4 columns.
- 6 ▶ Click the up or down arrow in the vertical scroll bar to scroll through the data one scan at a time. Or drag the scroll box up or down to quickly scroll through the data.

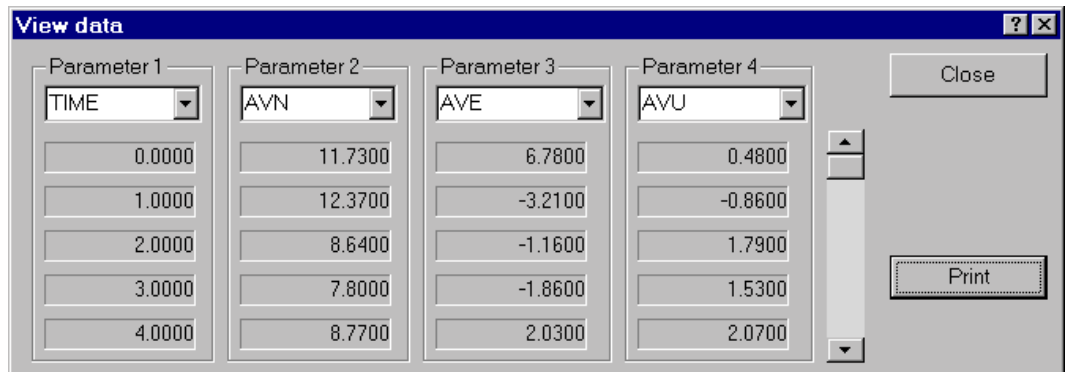
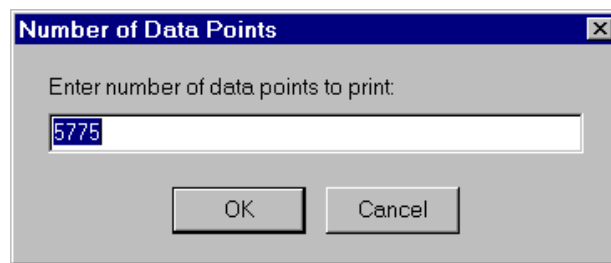


Figure 4-4: The View Data Window

- 7 ▶ If you want to print the data, scroll to the first line of data you want to print, and then click Print. Or to close the View Data window, click Close.

If you click Print, the Number of Data Points dialog box opens:



- 8 ▶ Enter the number of scans to print in the text box, and then click OK.
The Print dialog box opens.
- 9 ▶ Select your printer, and then click OK.
- 10 ▶ To close the View Data window, click Close.
- 11 ▶ To close the data file, click the Cancel button in the graphics display window for the data file.

Viewing Header Information in Data Files

The header information retrieved from a 2D-ACM or 3D-ACM by 3DACM97 and saved to a data file can be viewed and printed at any time after opening the file in Acmpost. Any number of data files can be open at the same time.

To view the header information in a data file:

- 1 ▶ Open one or more data files.

AcmPost reads the data files, and a graphics display window with the Velocity Time Series graphics display opens and is cascaded automatically for each of the data files opened.

- 2 ▶ If more than one data file is open, click the title bar of the graphics display window corresponding to the data file for which you want to view the header information.

The graphics display window is made active. If only one data file is open, the graphics display window for that data file will already be the active window.

- 3 ▶ Choose Data ▶ View Header Information.

The Header Information window shown in Figure 4-5 opens.

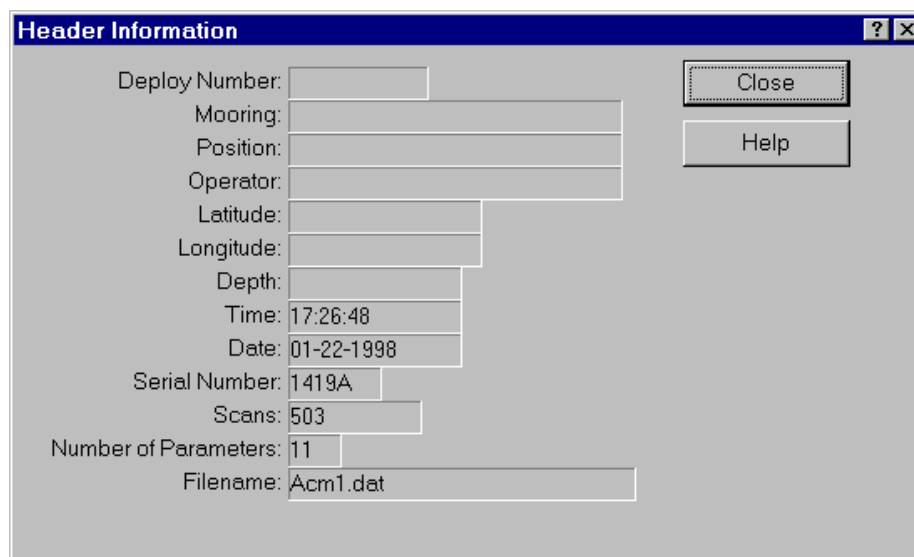


Figure 4-5: The Header Information Window

- 4 ▶ To close the Header Information window, click Close.
- 5 ▶ To close the data file, click the Cancel button in the graphics display window for the data file.

SECTION 5: Viewing and Printing the Graphics Displays

AcmPost provides five graphics displays, where four are specifically designed for viewing current velocity data—the Velocity Time Series, Speed and Direction, Progressive Vector, and Distribution graphics displays; and one is specifically designed for viewing CTD data—the CTD Time Series graphics display. The graph scales, the colors of the plots and graph backgrounds, and various other graphics display settings can be changed from the default or previous setup. This section describes the graphics displays, and how to view, set up, arrange, and print the graphics displays.

Viewing the Graphics Displays

The data displayed in the current velocity graphics displays—Velocity Time Series, Speed and Direction, Progressive Vector, and Distribution—depend on the selection in the Velocity Data used in Calculations area of the Properties dialog box. (See “Verifying the Data File Configuration” on page 4-1 for information on the Properties dialog box.) When Average Velocities (AVN, AVE, AVU) is selected before opening a data file, AcmPost displays the *vector averaged* current velocities read from the data file in the current velocity graphics displays. When Instantaneous Velocities (VN, VE, VU) is selected before opening a data file, AcmPost displays the *instantaneous* current velocities read from the data file. The data displayed in the CTD graphics display—CTD Time Series—are always based on instantaneous CTD data, which are acquired by the 2D-ACM or 3D-ACM from an optional CTD.

Note: *The instantaneous current velocity and CTD data in the data file are either the instantaneous current velocity and CTD data recorded by the 2D-ACM or 3D-ACM with the vector averaged current velocity data at the end of each averaging interval, or the selected burst current velocity and CTD data recorded during each Burst On Time. Which depends on whether average data or burst data, respectively, is chosen in 3DACM97 when retrieving and saving the data to the data file from the 2D-ACM or 3D-ACM. In addition, if the data in the data file were acquired in real time with 3DACM97, the data are the selected burst current velocity and CTD data, which are acquired at a one second rate.*

To view any of the graphics displays, you must first open a data file as described in “Opening Data Files” on page 4-3. Any number of data files can be open at the same time. When a data file is opened, the Velocity Time Series graphics display opens by default.

Viewing the Velocity Time Series Graphics Display

The Velocity Time Series graphics display, which is shown in Figure 5-1, displays plots of instantaneous or vector averaged north, east and up current velocities in cm/sec versus time in seconds or number of scans. When displaying instantaneous current velocities, VN, VE and VU are displayed in the upper right corner of the display; when displaying vector averaged current velocities, AVN, AVE, and AVU are displayed. Although the Velocity Time Series graphics display opens first by default when opening a data file, to view the display from any of the other graphics displays, click the Time option. For instructions on how to set up the Velocity Time Series graphics display, see “Setting up the Velocity Time Series Graphics Display” on page 5-9.

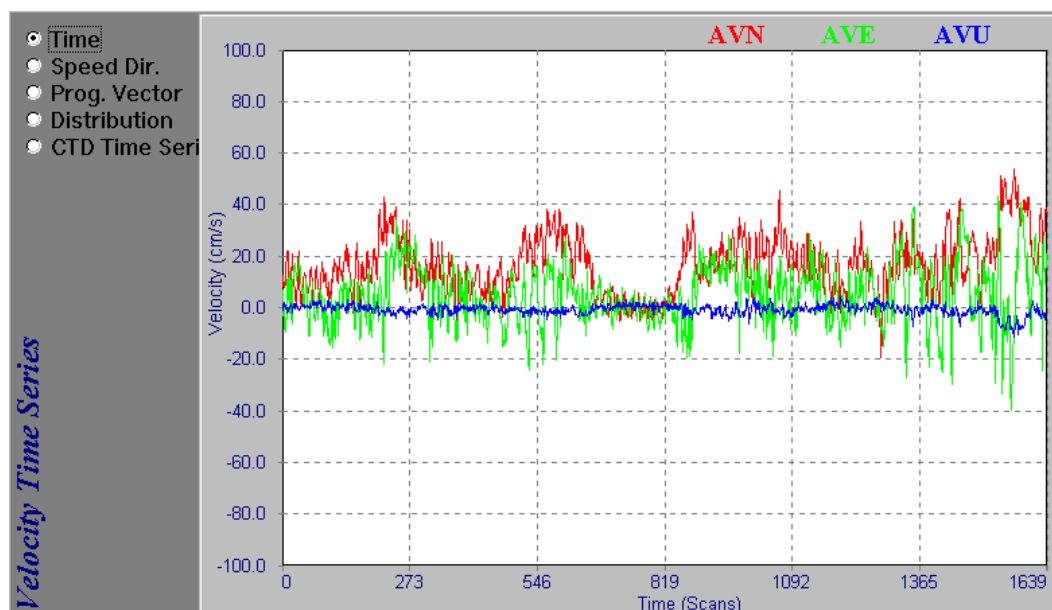


Figure 5-1: *The Velocity Time Series Graphics Display*

Viewing the Speed and Direction Graphics Display

The Speed and Direction graphics display, which is shown in Figure 5-2, provides a stick plot of current speed and direction, where the speed is calculated from the square root of the sum of the squares of the instantaneous or vector averaged horizontal current velocities and the direction is calculated from the arctangent. You can also choose to include the up velocities, along with the horizontal velocities, in the current speed calculations. The current speed in cm/sec is represented as the length of a line—one line for each scan, and the direction as the orientation of each line—0° to 360° clockwise from straight up, where 0° is true north. To view the Speed and Direction graphics display, click Speed Dir. For instructions on how to set up the Speed and Direction graphics display, see “Setting up the Speed and Direction Graphics Display” on page 5-11.

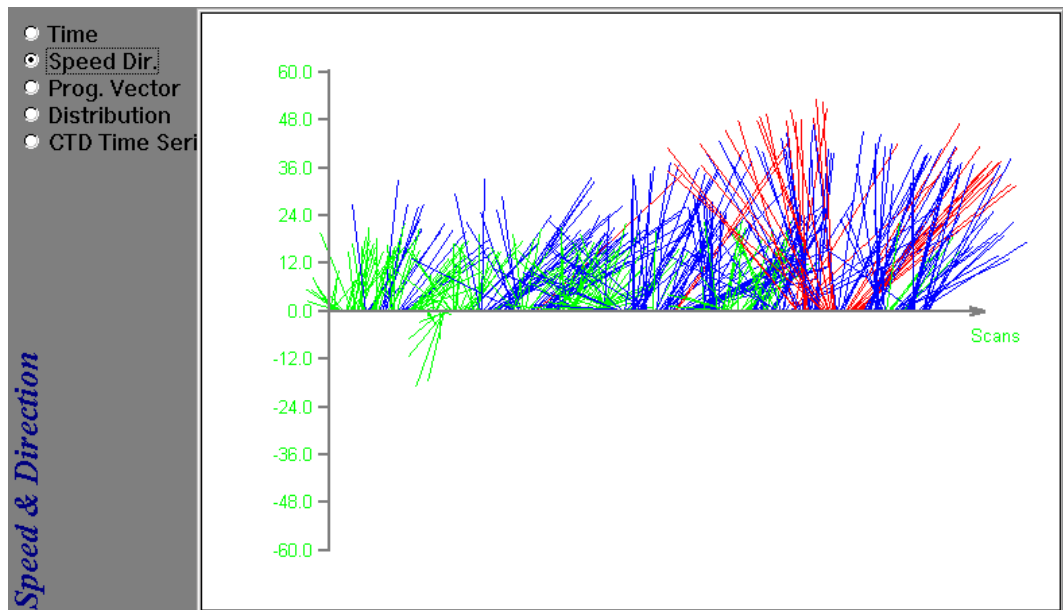


Figure 5-2: *The Speed and Direction Graphics Display*

Viewing the Progressive Vector Graphics Display

The Progressive Vector graphics display, which is shown in Figure 5-3, provides a vector plot of current speed and direction on a polar graph, where the speed is calculated from the square root of the sum of the squares of the instantaneous or vector averaged horizontal current velocities and the direction is calculated from the arctangent. You can also choose to include the up velocities, along with the horizontal velocities, in the current speed calculations. The current speed in cm/sec is represented as the length of a line—one line for each scan, and the direction as the orientation of each line, where 0° is true north. To view the Progressive Vector graphics display, click the Prog. Vector option. For instructions on how to set up the Progressive Vector graphics display, see “Setting up the Progressive Vector Graphics Display” on page 5-12.

Viewing the Distribution Graphics Display

The Distribution graphics display provides a histogram of the current speed or the current direction or both verses number of scans. The current speed in cm/sec is calculated from the square root of the sum of the squares of the instantaneous or vector averaged horizontal current velocities and the direction is calculated from the arctangent, where 0° is true north. You can also choose to include the up velocities, along with the horizontal velocities, in the current speed calculations. The Distribution graphics display shown in Figure 5-4 shows both current speed and direction. To view the Distribution graphics display, click the Distribution

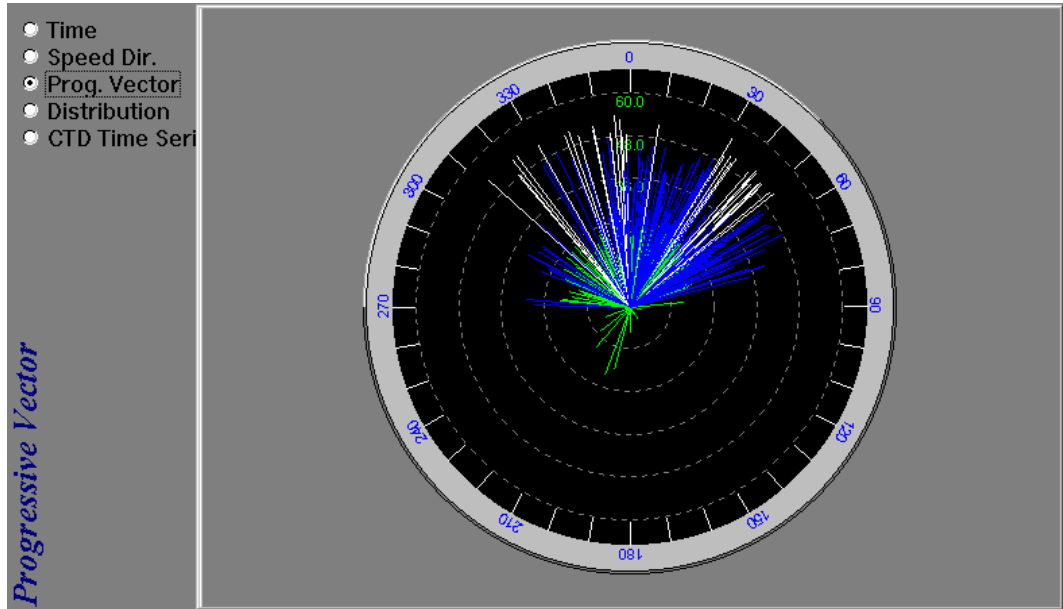


Figure 5-3: The Progressive Vector Graphics Display

option. For instructions on how to set up the Distribution graphics display, see “Setting up the Distribution Graphics Display” on page 5-14.

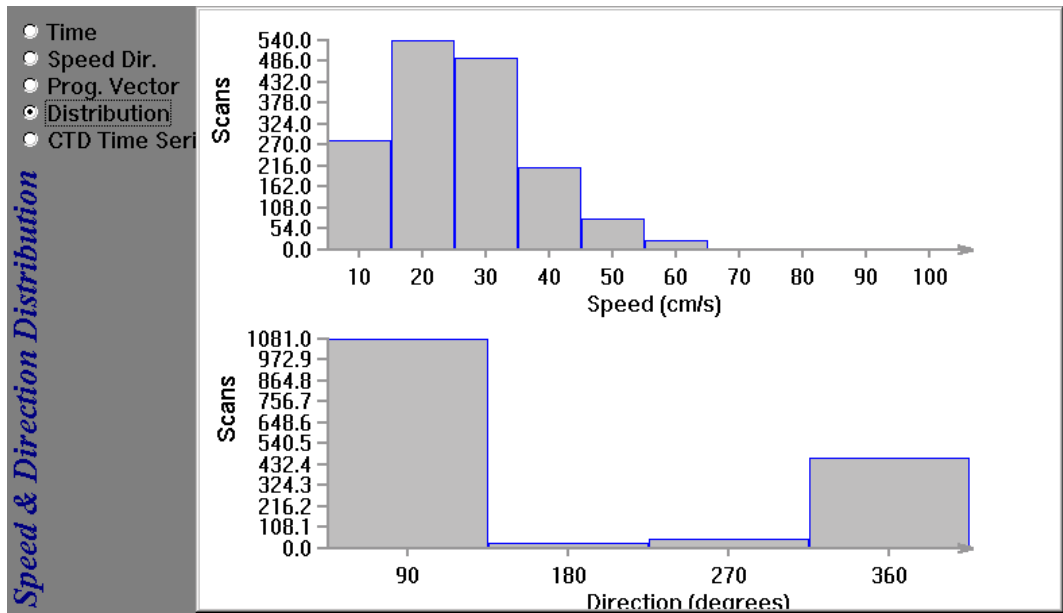


Figure 5-4: The Distribution Graphics Display

Viewing the CTD Time Series Graphics Display

The CTD Time Series graphics display, which is shown in Figure 5-5, displays plots of conductivity in mmho/cm, temperature in °C, pressure in dBars, and salinity in PSU-78 units versus time in seconds or number of scans. The salinity is calculated from the conductivity, temperature and pressure data, where the conductivity and pressure data are lagged to perform a time alignment with the temperature data from the slower responding temperature sensor. The CTD Time Series graphics display is available only when CTD data is present in the open data file. To view the CTD Time Series graphics display, click the CTD Time Series option. If CTD data is not present in the data file, this option is grayed and cannot be chosen. For instructions on how to set up the CTD Time Series graphics display, see “Setting up the CTD Time Series Graphics Display” on page 5-15.

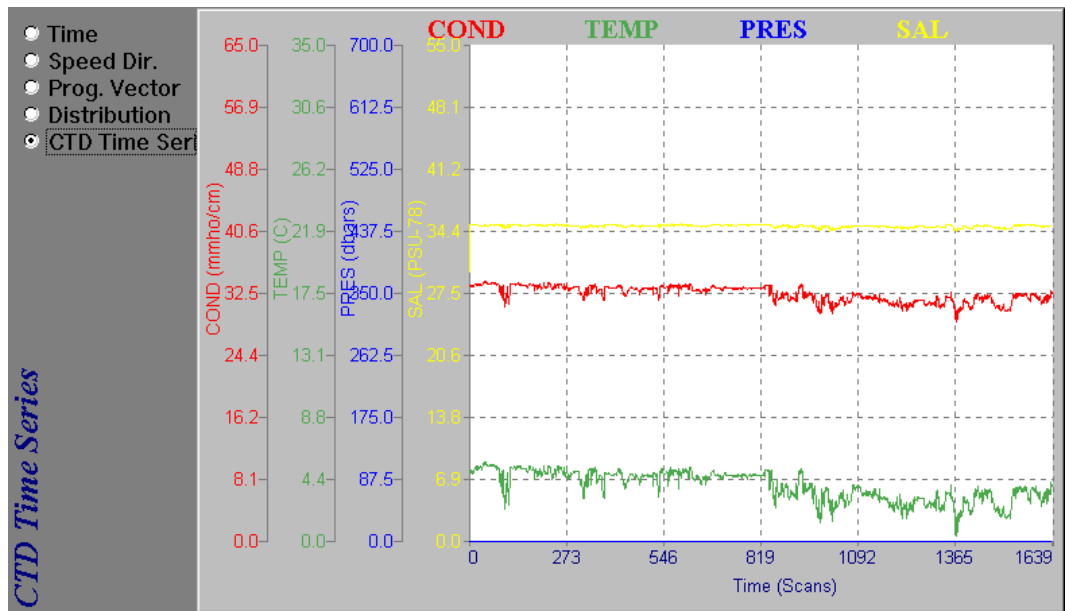


Figure 5-5: *The CTD Time Series Graphics Display*

Arranging the Graphics Display Windows

The graphics displays are viewed in graphics display windows, a separate window for each open data file. As in all Windows based programs, each window can be minimized, maximized, restored, resized, moved, and closed using the Control menu in the upper left corner of the window or, for some of these functions, the buttons in the upper right corner of the window. In addition, an unlimited number of windows can be open at the same time and arranged in a cascade, a vertical tile, or a horizontal tile configuration in the display area of the Main window. When minimized, a window changes to an icon, which can also be arranged with other icons.

To display multiple graphics display windows, open the data file for each. (See “Opening Data Files” on page 4-3 for instructions on how to open data files.) When a data file is opened, the Velocity Time Series graphics display opens by default in its own graphics display window. To change to any of the other graphics displays, click the corresponding option button in the upper left corner of the display. To close a graphics display window, click the Cancel button. Closing a graphics display window also closes its data file.

Arranging Windows in a Cascade Configuration

When multiple graphics display windows are opened, they are automatically cascaded in the display area of the Main window as shown in Figure 4-3 on page 4-5. However, if you move the windows about the display area, they can be cascaded again.

To arrange multiple windows in a cascade configuration in the display area of the Main window, choose Window ► Cascade.

When windows are cascaded, they are arranged in an overlapping configuration so that each title bar is visible on each window. The front window, which is displayed in its entirety, is the active window. Clicking the title bar of any of the other windows brings the window to the front and makes it the active window.

Arranging Windows in a Vertical Tile Configuration

When multiple graphics display windows are open, they can be arranged in a vertical tile configuration as shown in Figure 5-6. Windows arranged in a vertical tile configuration altogether completely fill the display area of the Main window. Clicking a window’s title bar makes it the active window.

To arrange multiple windows in a vertical tile configuration in the display area of the Main window, choose Window ► Tile Vertical.

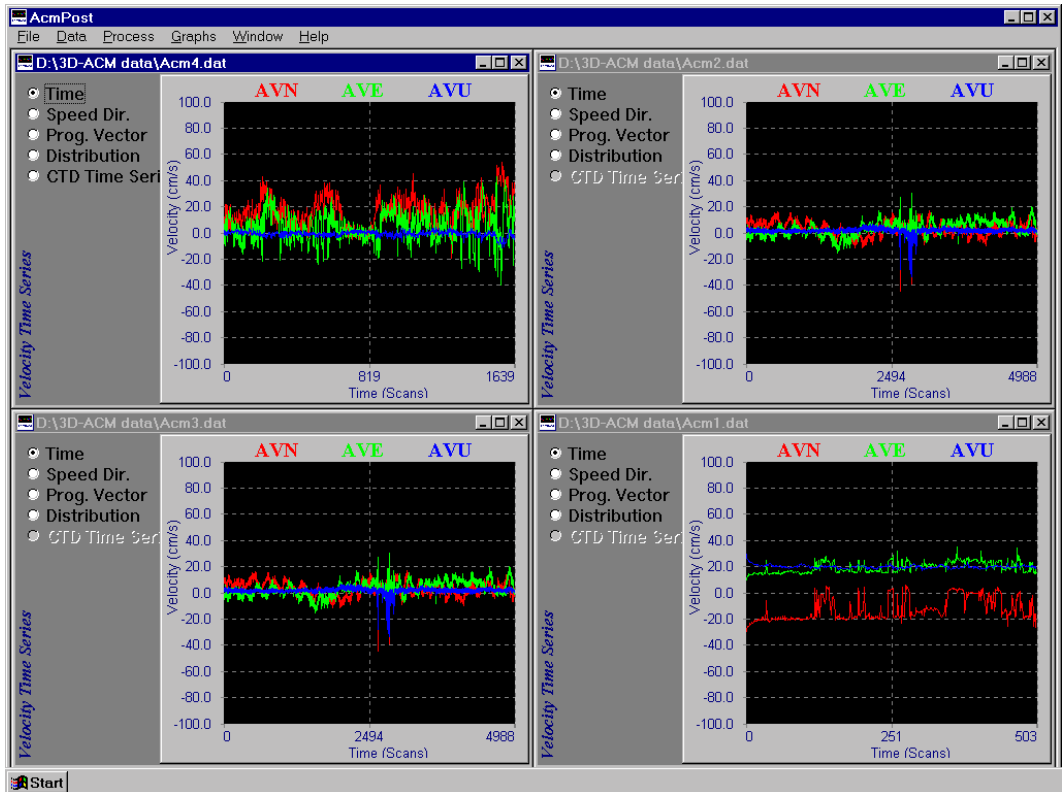


Figure 5-6: Four Graphics Display Windows Tiled Vertically

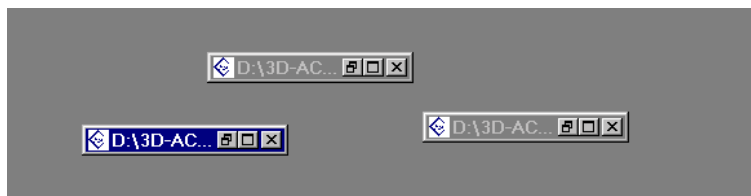
Arranging Windows in a Horizontal Tile Configuration

When multiple graphics display windows are open, they can be arranged in a horizontal tile configuration as shown in Figure 5-7. Windows arranged in a horizontal tile configuration altogether completely fill the display area of the Main window. Clicking a window's title bar makes it the active window.

To arrange multiple windows in a horizontal tile configuration in the display area of the Main window, choose Window ► Tile Horizontal.

Arranging Icons

When windows are minimized, they can be moved anywhere in the display area:



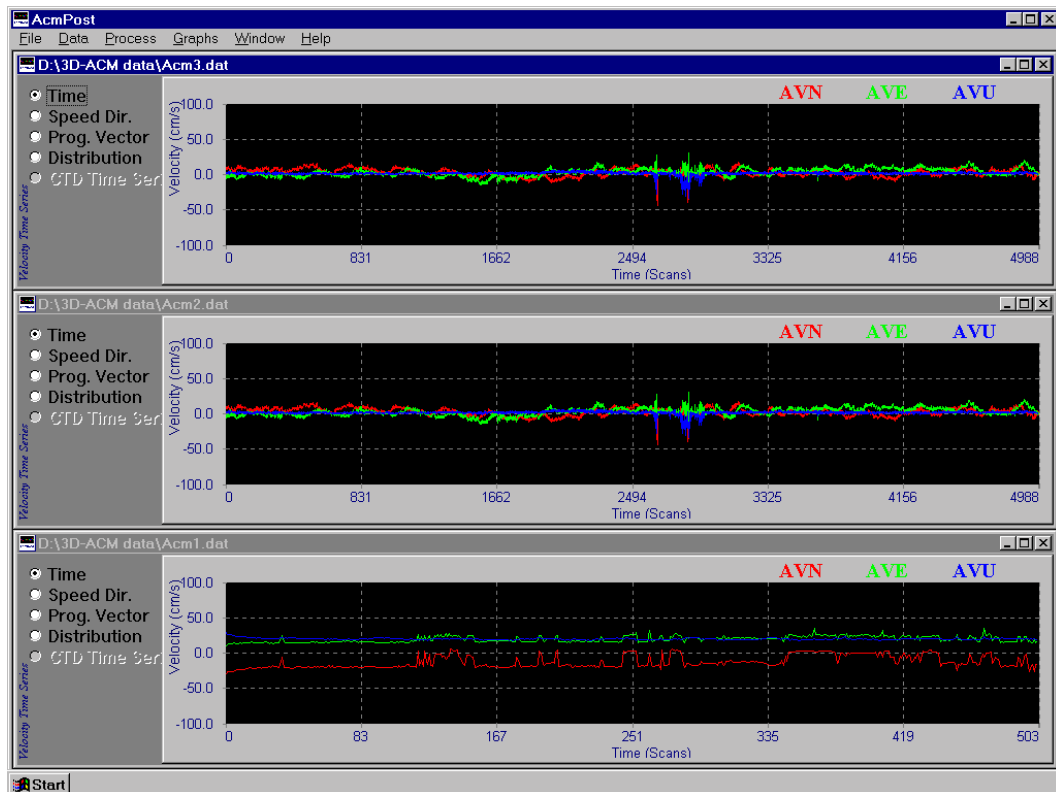


Figure 5-7: Three Graphics Display Windows Tiled Horizontally

To arrange the icons in a neat row at the bottom of the display area, choose Window ► Arrange Icons:



Closing all the Windows at Once

All the graphics display windows can be closed simultaneously. And when closed, their data files close also.

To close all the graphics display windows at once, choose Window ► Close All.

Setting up the Graphics Displays

AcmPost allows you to set up the full scale ranges of the graph scales, the colors of the plots and graph backgrounds and other setup parameters—including the default setup—for the graphics displays. The setups are performed in five dialog boxes corresponding to the five graphics displays.

Setting up the Velocity Time Series Graphics Display

The Velocity Time Series graphics display can be set up to plot any combination of North Velocity, East Velocity and Up Velocity. AcmPost also allows you to adjust the full scale velocity shown on the vertical axis in cm/sec and select either time in seconds or number of scans for the horizontal axis. In addition, the background color of the graph can be selected from a number of available colors, and a grid can be added.

To set up the Velocity Time Series graphics display:

- 1 Double-click anywhere in the Velocity Time Series graphics display, or right-click and then choose Graph Setup from the shortcut menu that opens.

The Time Series Graph Setup dialog box shown in Figure 5-8 opens.

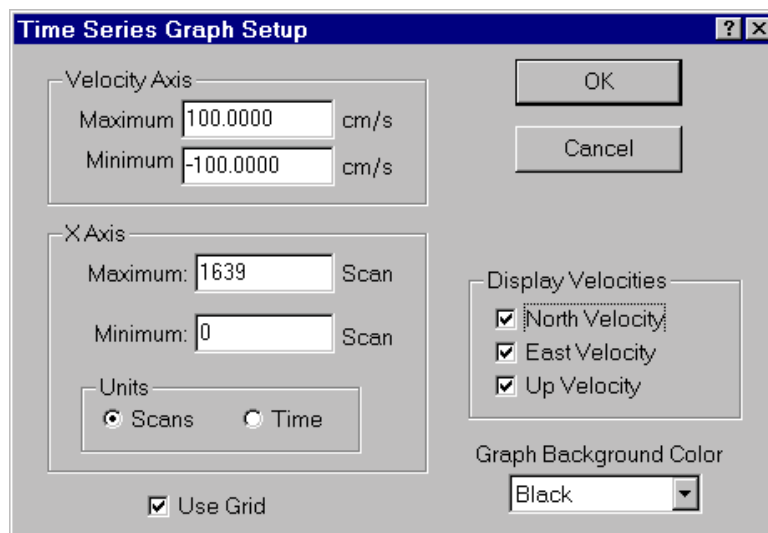


Figure 5-8: *The Time Series Graph Setup Dialog Box*

- 2 In the Velocity Axis area of the Time Series Graph Setup dialog box, do one or both of the following to adjust the full scale velocity for the vertical axis:
 - Enter the maximum velocity in cm/sec in the Maximum text box.
 - Enter the minimum velocity in cm/sec in the Minimum text box.
- 3 In the X Axis area, do one or both of the following to select which scan numbers to display:
 - Enter the maximum scan number in the Maximum text box.
 - Enter the minimum scan number in the Minimum text box.

Note: The minimum and maximum settings affect all five graphics displays.

- 4 In the Units area, select Scans to scale the horizontal axis in number of scans, or Time to scale the axis in seconds.
- 5 In the Display Velocities area, select the velocities you want to display.
- 6 In the Graph Background Color drop-down list box, select a color for the graph background.
- 7 Select the Use Grid check box if you want to place a grid over the graph.
- 8 Click OK to save the new graph setup and close the Time Series Graph Setup dialog box, or click Cancel to close the dialog box without saving the new setup.

In addition to the settings made in the Time Series Graph Setup dialog box, you can automatically fit all the data in the graph plot. To do this, right-click anywhere in the graph, and then choose Zoom All from the shortcut menu that opens. Acmpost automatically scales the vertical axis to fit the maximum current velocities and the horizontal axis to fit all the scan numbers. To set the Velocity Time Series graphics display as it was before selecting Zoom All, perform Step 1 through Step 3 above, and then click OK.

Setting up the Speed and Direction Graphics Display

The Speed and Direction graphics display can be set up to provide three different colors for the stick plots, depending on the range in percent of full scale in which the calculated speed falls for each scan. In addition, Acmpost allows you to adjust the full scale speed shown on the vertical axis in cm/sec and to choose whether to include the up velocities, along with the horizontal velocities, in the current speed calculations. You can also select to have each stick plot represent the average current speed and direction over a specified number of scans.

To set up the Speed and Direction graphics display:

- 1 Double-click anywhere in the Speed and Direction graphics display, or right-click and then choose Graph Setup from the shortcut menu that opens.

The Speed and Direction Graph Setup dialog box shown in Figure 5-9 opens.

- 2 In the Speed and Direction Graph Options area of the Speed and Direction Graph Setup dialog box, enter the full scale current speed in cm/sec for the vertical axis in the Maximum Velocity, Y Axis text box.

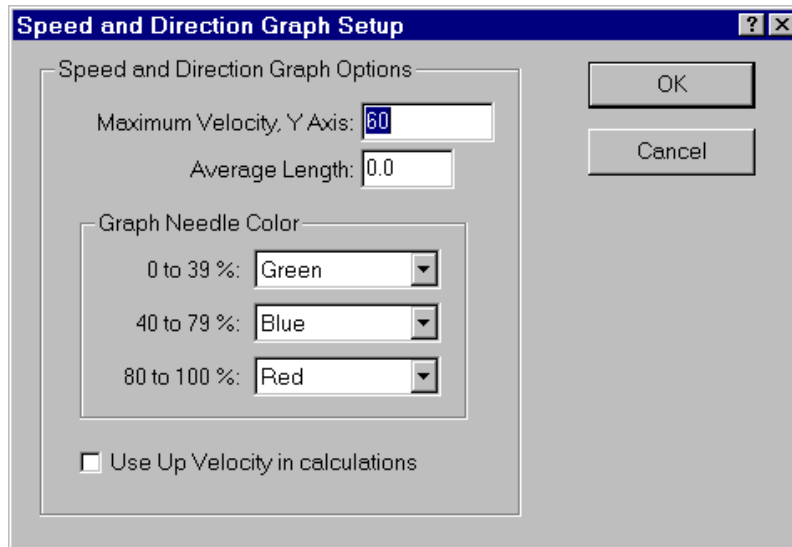


Figure 5-9: The Speed and Direction Graph Setup Dialog Box

- 3 Enter the number of scans over which to average the speed and direction data for each stick plot in the Average Length text box. Or enter zero if you do not want to display averages.

- ▶ In the Graph Needle Color area, click the down arrow in the 0 to 39% drop-down list box and select a color for the stick plots.

The color of the sticks in the plot will be the selected color when the current speed is anywhere in the range 0 to 39% of the Maximum Velocity, Y Axis entered in Step 2.

- ▶ Repeat Step 4 for the 40 to 79% and 80 to 100% drop-down list boxes.

The colors of the sticks in the plot will be the selected colors when the current speed is within the corresponding range of the Maximum Velocity, Y Axis.

- ▶ Select the Use Up Velocity in calculations check box if you want to include the up velocities, along with the horizontal velocities, in the current speed calculations.

- ▶ Click OK to save the new graph setup and close the Speed and Direction Graph Setup dialog box, or click Cancel to close the dialog box without saving the new setup.

Setting up the Progressive Vector Graphics Display

The Progressive Vector graphics display can be set up to provide three different colors for the vector plots, depending on the range in percent of full scale in which the calculated speed falls for each scan. In addition, Acmpost allows you to adjust the full scale speed shown on the polar graph in cm/sec and to choose whether to include the up velocities, along with the horizontal velocities, in the current speed calculations. You can also choose to sum the vector plots and to select to have each vector plot represent the average current speed and direction over a specified number of scans.

To set up the Progressive Vector graphics display:

- ▶ Double-click anywhere in the Progressive Vector graphics display, or right-click and then choose Graph Setup from the shortcut menu that opens.

The Progressive Vector Graph Setup dialog box shown in Figure 5-10 opens.

- ▶ In the Progressive Vector Graph Options area of the Progressive Vector Graph Setup dialog box, enter the full scale current speed in cm/sec for the polar graph in the Maximum Magnitude text box.

- ▶ Enter the number of scans over which to average the speed and direction data for each vector plot in the Average Length text box. Or enter zero if you do not want to display averages.

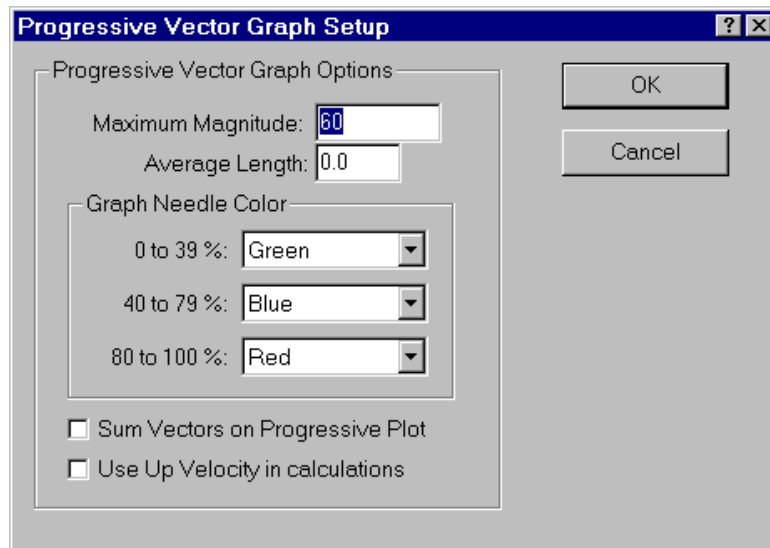


Figure 5-10: The Progressive Vector Graph Setup Dialog Box

- 4** In the Graph Needle Color area, click the down arrow in the 0 to 39% drop-down list box and select a color for the vector plots.

The color of the vectors in the plot will be the selected color when the current speed is anywhere in the range 0 to 39% of the Maximum Magnitude entered in Step 2.
- 5** Repeat Step 4 for the 40 to 79% and 80 to 100% drop-down list boxes.

The colors of the vectors in the plot will be the selected colors when the current speed is within the corresponding range of the Maximum Magnitude.
- 6** Select the Sum Vectors on Progressive Plot check box if you want to sum the vector plots.

If you select the Sum Vectors on Progressive Plot check box, AcmPost sums the vector plots end to end, displaying a figure eight if the current is tidal.
- 7** Select the Use Up Velocity in calculations check box if you want to include the up velocities, along with the horizontal velocities, in the current speed calculations.
- 8** Click OK to save the new graph setup and close the Progressive Vector Graph Setup dialog box, or click Cancel to close the dialog box without saving the new setup.

Setting up the Distribution Graphics Display

The Distribution graphics display can be set up to display current speed or current direction or both verses number of scans. In addition, you can choose whether to include the up velocities, along with the horizontal velocities, in the current speed calculations.

To set up the Distribution graphics display:

- 1 Double-click anywhere in the Distribution graphics display, or right-click and then choose Graph Setup from the shortcut menu that opens.

The Distribution Graph Setup dialog box shown in Figure 5-11 opens.

- 2 In the Plotting Options area of the Distribution Graph Setup dialog box, select the Speed, the Direction or the Plot Both option.
- 3 Select the Use Up Velocity in calculations check box if you want to include the up velocities, along with the horizontal velocities, in the current speed calculations.
- 4 Click OK to save the new graph setup and close the Distribution Graph Setup dialog box, or click Cancel to close the dialog box without saving the new setup.

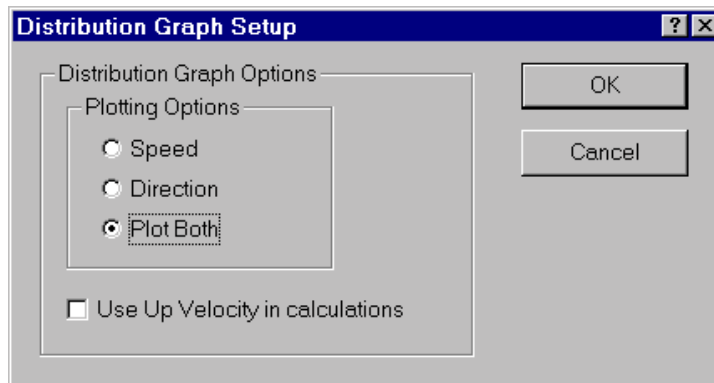


Figure 5-11: The Distribution Graph Setup Dialog Box

Setting up the CTD Time Series Graphics Display

The CTD Time Series graphics display can be set up to plot any combination of conductivity, temperature, pressure, and salinity. Acmpost also allows you to adjust the full scale shown on the vertical axis for each parameter and to select either time in seconds or number of scans for the horizontal axis. In addition, the background color of the graph can be selected from a number of available colors, and a grid can be added.

To set up the CTD Time Series graphics display:

- 1 Double-click anywhere in the CTD Time Series graphics display, or right-click and then choose Graph Setup from the shortcut menu that opens.

The CTD Time Series Graph Setup dialog box shown in Figure 5-12 opens.

CTD Time Series Graph Setup

Conductivity Axis
Maximum: 65.0000 mmho/cm
Minimum: 0.0000 mmho/cm

Temperature Axis
Maximum: 35.0000 Celsius
Minimum: 0.0000 Celsius

Pressure Axis
Maximum: 700.0000 dbars
Minimum: 0.0000 dbars

Salinity Axis
Maximum: 55.0000 PSU-78
Minimum: 0.0000 PSU-78

X Axis
Maximum: 1639 Scan
Minimum: 0 Scan

Units
 Scans Time

OK
Cancel
Help

Display
 Conductivity
 Temperature
 Pressure
 Salinity

Grid

Figure 5-12: The CTD Time Series Graph Setup Dialog Box

- 2 In the Conductivity Axis area of the CTD Time Series Graph Setup dialog box, do one or both of the following to adjust the full scale conductivity for the vertical axis:
 - Enter the maximum conductivity in mmho/cm in the Maximum text box.
 - Enter the minimum conductivity in mmho/cm in the Minimum text box.
- 3 In the Temperature Axis area, do one or both of the following to adjust the full scale temperature for the vertical axis:
 - Enter the maximum temperature in °C in the Maximum text box.
 - Enter the minimum temperature in °C in the Minimum text box.
- 4 In the Pressure Axis area, do one or both of the following to adjust the full scale pressure for the vertical axis:
 - Enter the maximum pressure in dBars in the Maximum text box.
 - Enter the minimum pressure in dBars in the Minimum text box.
- 5 In the Salinity Axis area, do one or both of the following to adjust the full scale salinity for the vertical axis:
 - Enter the maximum salinity in PSU-78 in the Maximum text box.
 - Enter the minimum salinity in PSU-78 in the Minimum text box.
- 6 In the X Axis area, do one or both of the following to select which scan numbers to display:
 - Enter the maximum scan number in the Maximum text box.
 - Enter the minimum scan number in the Minimum text box.

Note: *The minimum and maximum settings affect all five graphics displays.*

- 7 In the Units area, select Scans to scale the horizontal axis in number of scans, or Time to scale the axis in seconds.
- 8 In the Display area, select the parameters you want to display.
- 9 In the Graph Background Color drop-down list box, select a color for the graph background.
- 10 Select the Grid check box if you want to place a grid over the graph.

- ▶ Click OK to save the new graph setup and close the CTD Time Series Graph Setup dialog box, or click Cancel to close the dialog box without saving the new setup.

In addition to the settings made in the CTD Time Series Graph Setup dialog box, you can automatically fit all the data in the graph plot. To do this, right-click anywhere in the graph, and then choose **Zoom All** from the shortcut menu that opens. Acmpost automatically scales the vertical axis to fit the maximum values of the selected parameters and the horizontal axis to fit all the scan numbers. To set the CTD Time Series graphics display as it was before selecting **Zoom All**, perform Step 1 through Step 6 above, and then click OK.

Changing the Default Graphics Display Setups

When any of the graphics displays are first opened in a graphics display window, the graphics display setup is the last saved default setup. Changing the setup for a graphics display does not change the *default* graphics display setup; the changed setup remains in effect only while the data file is open. And for a data file to remain open, a graphics display window for the data file must remain open. Acmpost allows you to change the default setup for any of the graphics displays. The changed default setup, however, becomes effective only *after* Acmpost is restarted.

Note: *A data file does not have to be open to change the default setup for a graphics display.*

To change the default setup for one or more graphics displays:

- ▶ Select **Graph** from the menu bar, and then choose a graphics display from the **Graph** menu when it opens.
The setup dialog box for the selected graphics display opens.
- ▶ Change the graphics display settings in accordance with your requirements.
- ▶ Click OK to save the new default setup for the graphics display.
- ▶ Repeat Step 1 through Step 3 for each graphics display for which you want to change the default setup.
- ▶ Exit and then restart Acmpost.

The new default graphics display setups take effect.

Printing the Graphs

The graph for any graphics display can be printed, and before printing, it can be previewed. To print preview or print a graph, the graphics display window containing the graph must be the active window.

***Note:** If necessary, before printing a graph, set up the page first. To set up the page, choose File ► Print Setup and follow the instructions in the Page Setup dialog box that opens. Once the page is set up, it is not necessary to set it up again unless your page requirements change.*

To print preview and print a graph:

- 1 ► Open one or more data files.

AcmPost reads the data files and the Velocity Time Series graphics display for each data file opens.

- 2 ► If more than one data file is open, click the title bar of the graphics display window for which you want to print a graph.

The graphics display window is made active. If only one data file is open, the graphics display window for that data file will already be the active window.

- 3 ► If you want to print a graph other than the Velocity Time Series graph, select the graphics display for the graph you want to print by clicking the corresponding option button in the upper left corner of the display.

- 4 ► If you want to print header information, choose File ► Properties to open the Properties dialog box. Select the Include Header with Graph Printout check box in the Print Options area, and then click OK.

- 5 ► Choose File ► Print Preview to preview the graph before printing, or File ► Print to print the graph without previewing.

If you choose Print Preview, the Print Preview window shown in Figure 5-13 opens, which shows an example print preview of the Velocity Time Series graph. To print the graph, click the Print Graph button in the upper left corner of the Print Preview window, select your printer in the Print dialog box that opens, and then click OK. Or if you do not want to print the graph, click the Close button to close the Print Preview window without printing.

If you choose Print directly from the File menu, select your printer in the Print dialog box that opens, and then click OK.

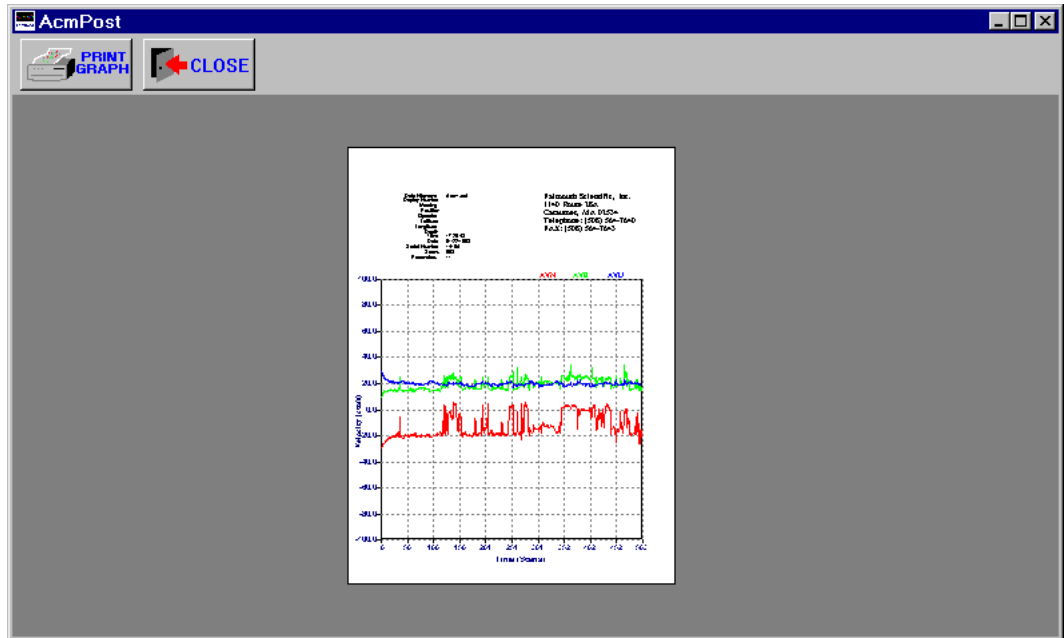


Figure 5-13: Example Print Preview of the Velocity Time Series Graph

Figure 5-14 through Figure 5-18 in the following pages show example printouts of the graphs for each of the five graphics displays.

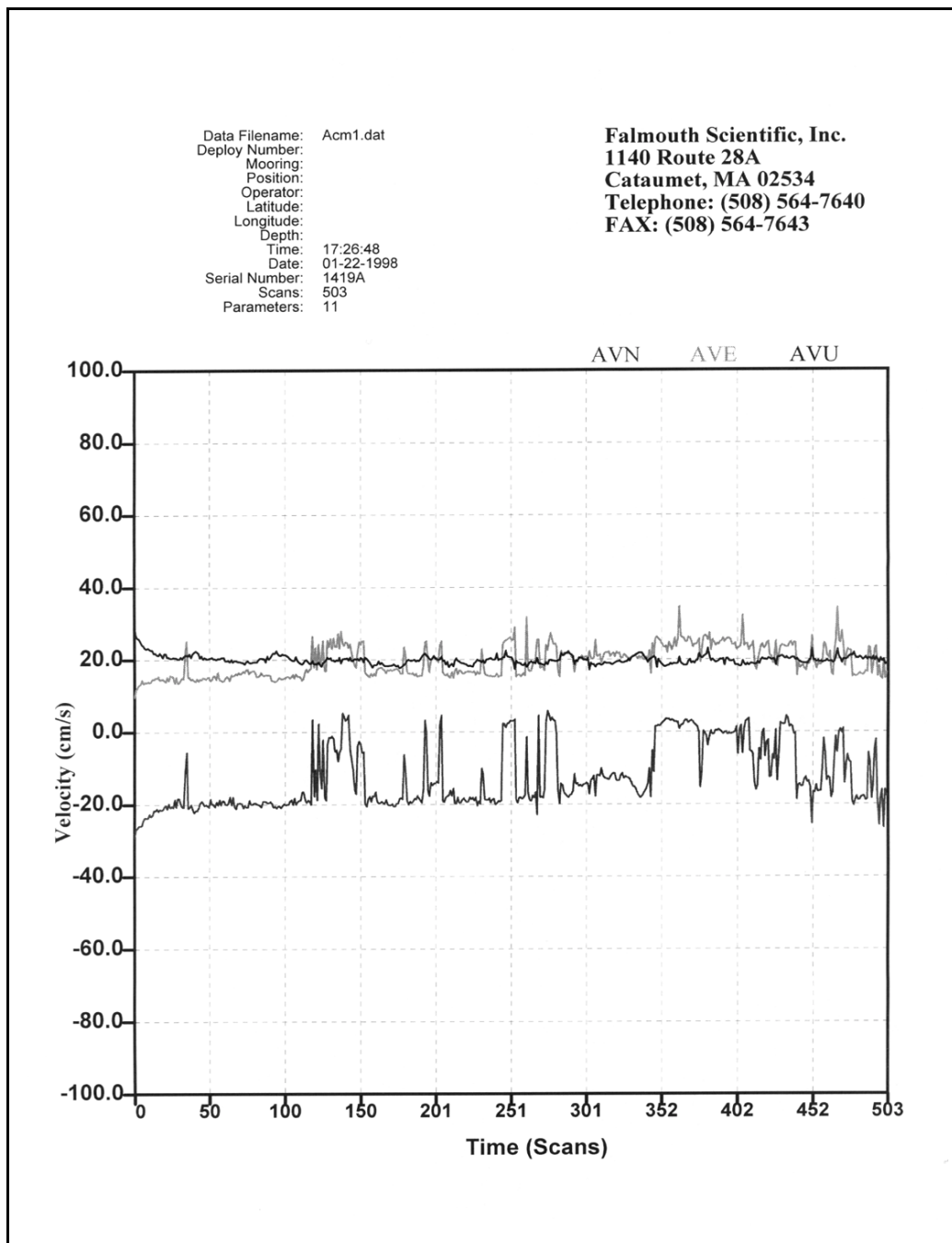


Figure 5-14: Example Velocity Time Series Graph Printout

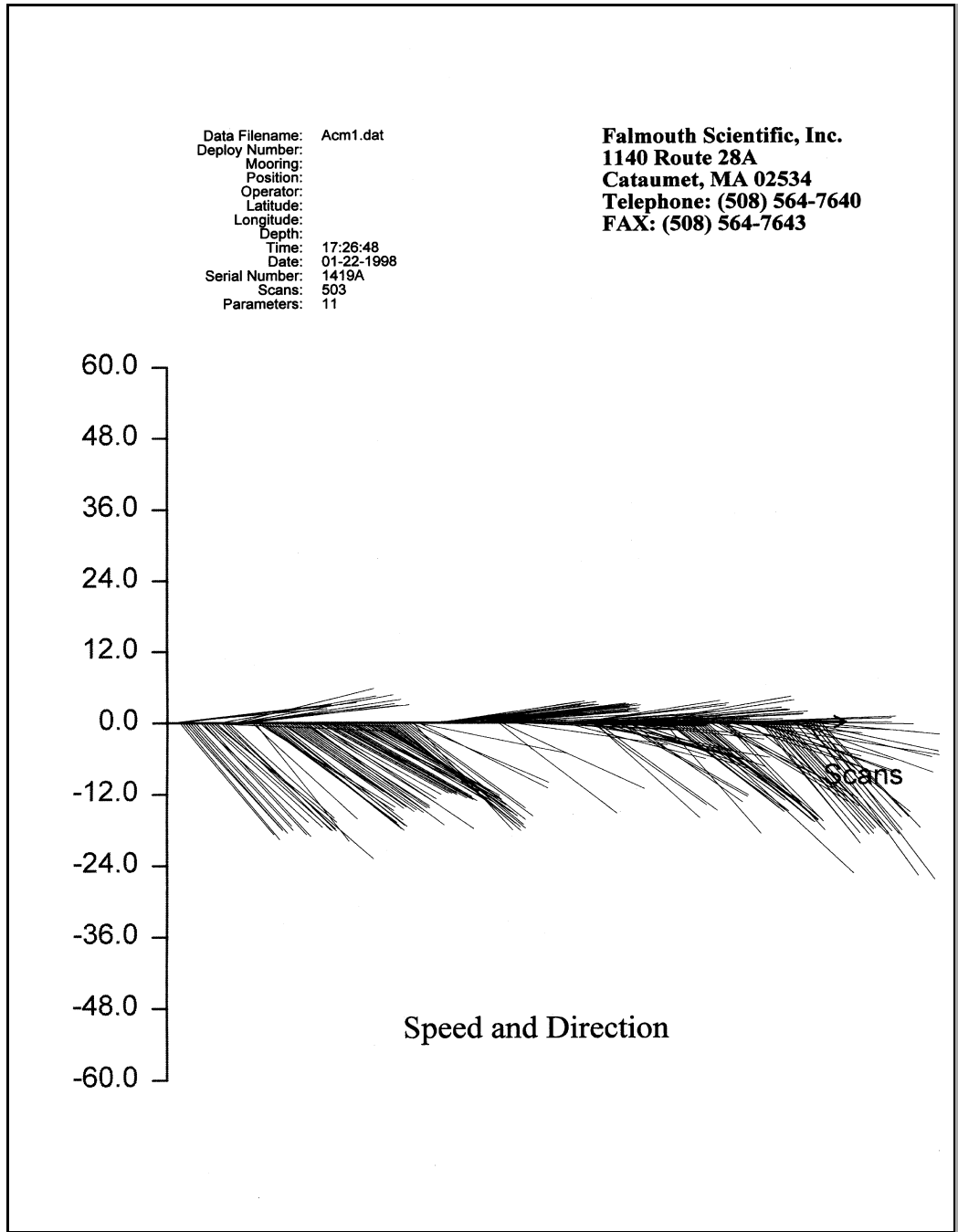


Figure 5-15: Example Speed and Direction Graph Printout

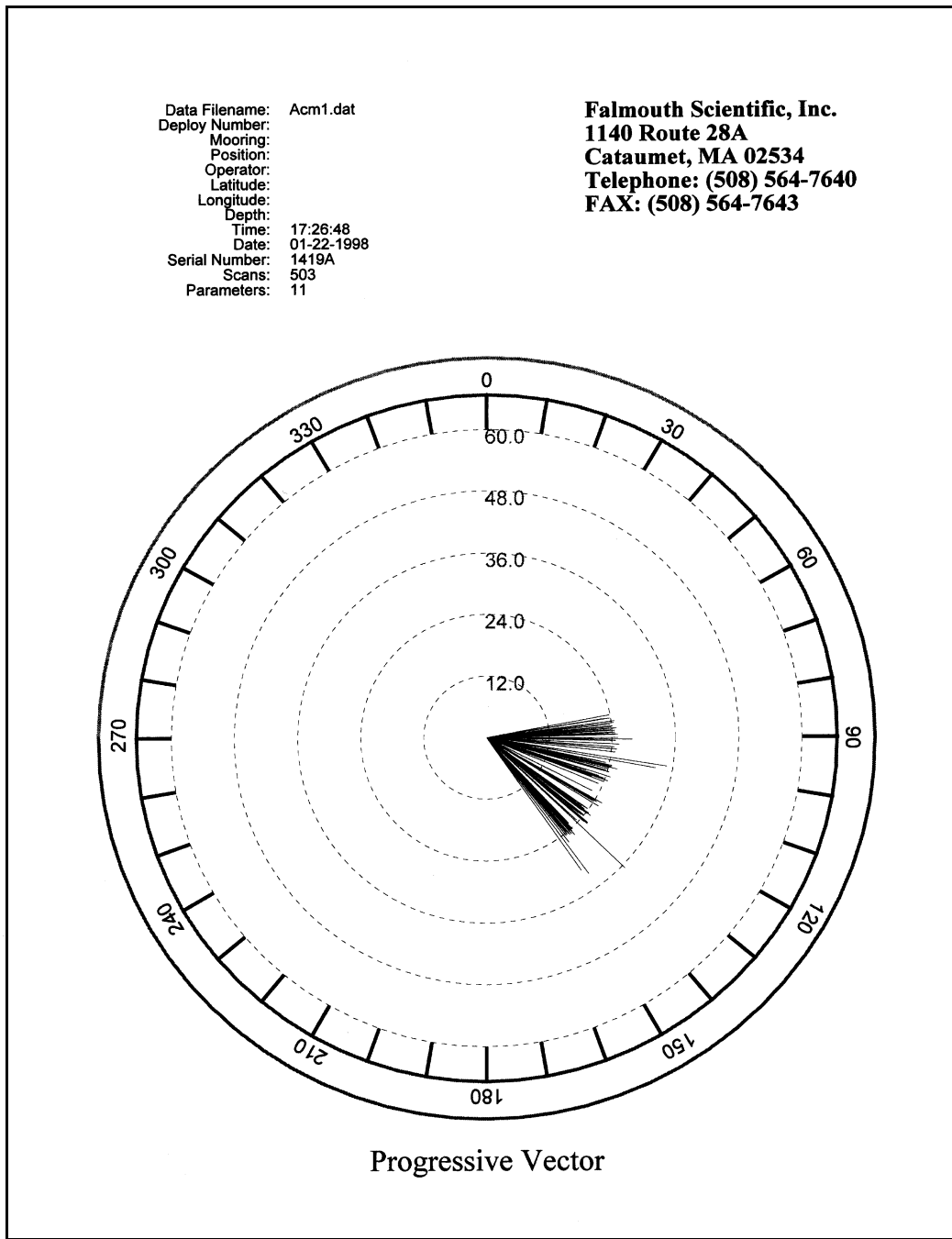


Figure 5-16: Example Progressive Vector Graph Printout

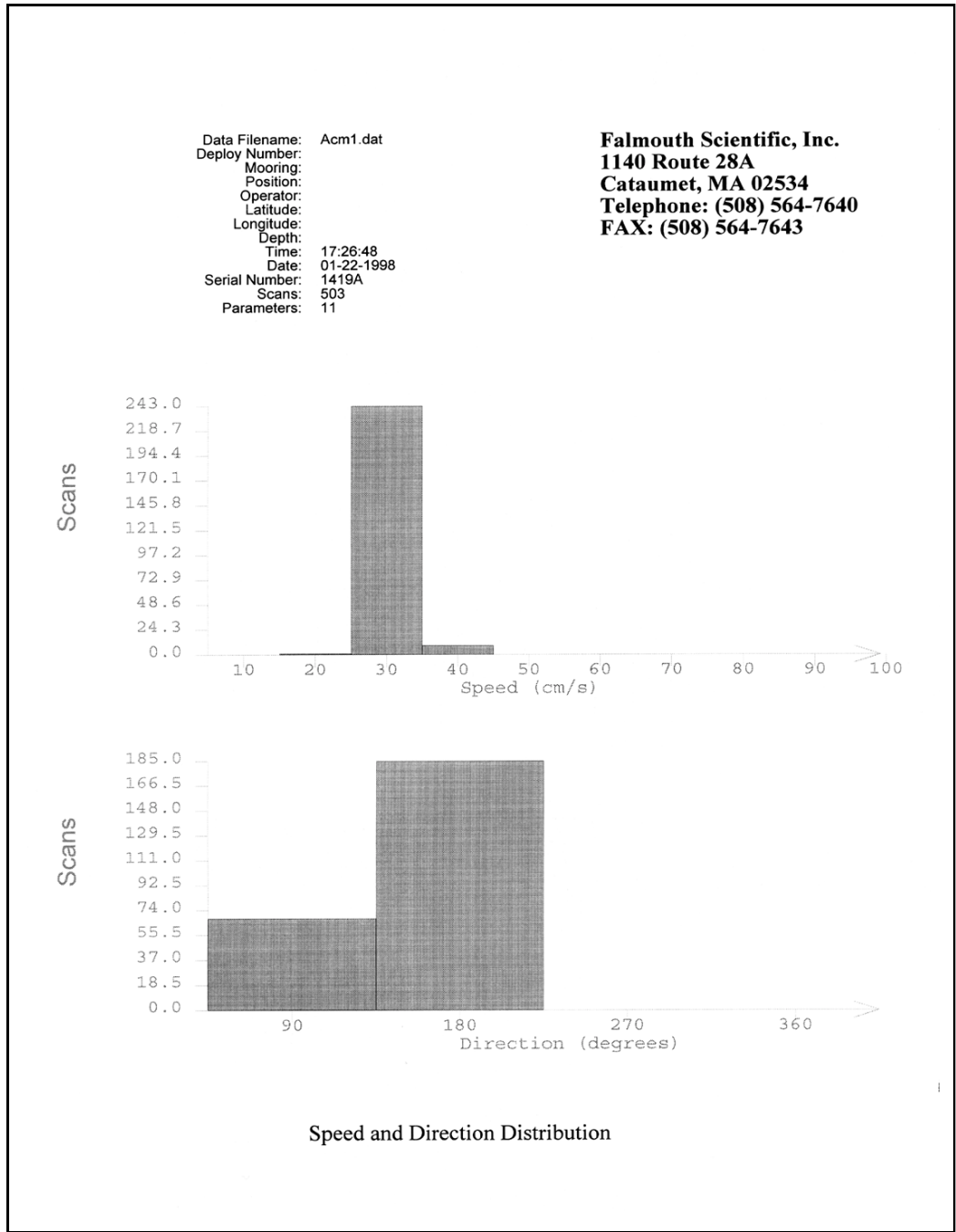


Figure 5-17: Example Distribution Graph Printout

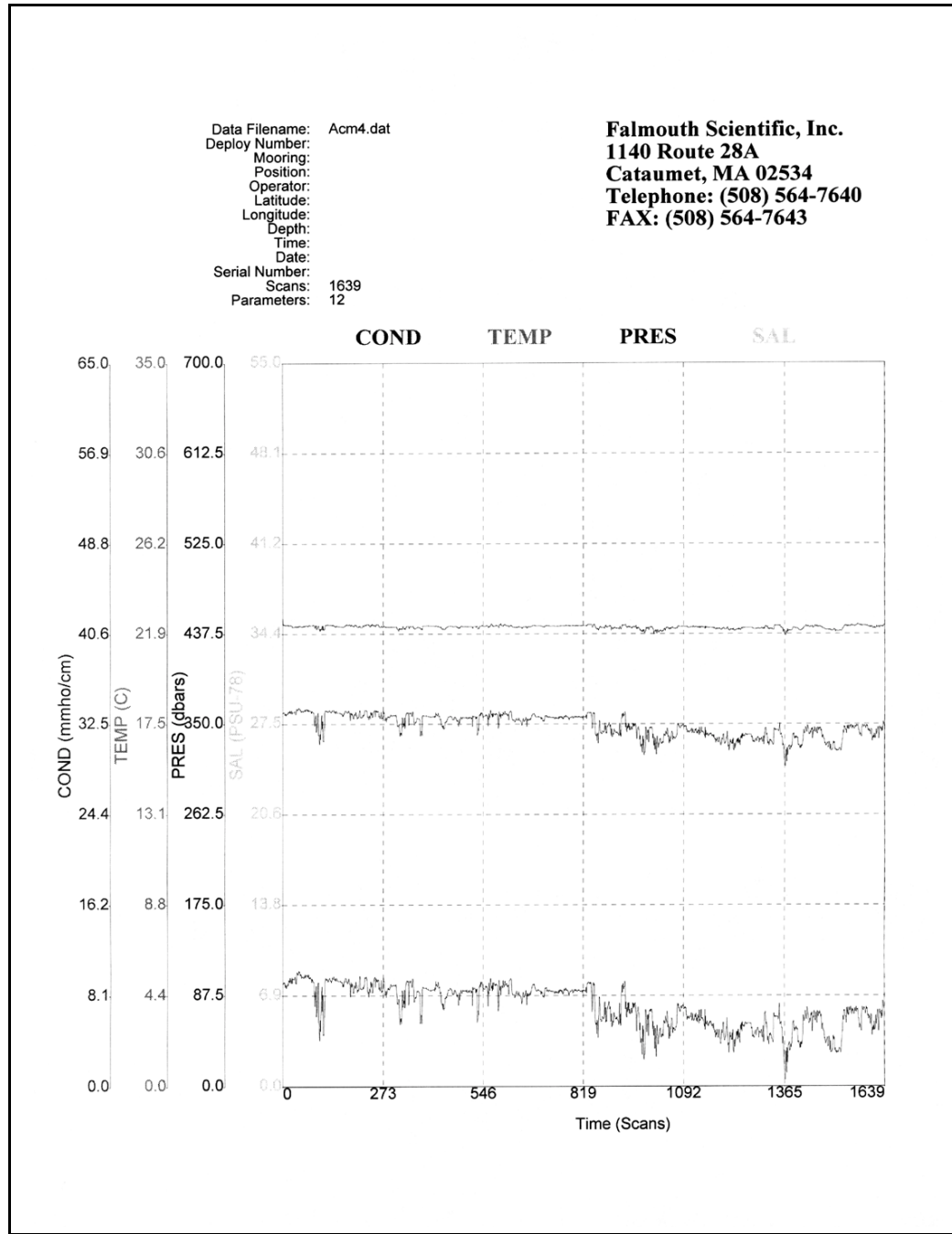


Figure 5-18: Example CTD Time Series Graph Printout

SECTION 6: Exporting Data and CTD Files

All the parameter data from any open data file, along with the calculated current speed and direction, can be exported to a new ASCII data file. In addition, if the data file contains CTD data acquired from a 2D-ACM or 3D-ACM with an optional CTD, Acmpost allows you to create and export three additional CTD files from the data: a data file with extension *.dat*, a calibration file with extension *.cal*, and a header file with extension *.hdr*. These files can be input to FSIPost, a software program available from FSI that further processes, displays and saves the CTD data. This section provides instructions on how to export the parameter data in a data file and how to create and export the three CTD files.

To export the parameter data in a data file, and to create and export the CTD files, you must first open the data file as described in “Opening Data Files” on page 4-3. Any number of data files can be open at the same time. When a data file is opened, the Velocity Time Series graphics display opens by default.

Exporting the Data

Acmpost allows you to export all the parameter data in a data file plus current speed and direction, where Acmpost calculates current speed and direction from the current velocities. You can also choose to export *only* current speed and direction.

To export the parameter data plus the current speed and direction, or just the current speed and direction:

- 1 ▶ Open one or more data files.

Acmpost reads the data files and the Velocity Time Series graphics display for each data file opens.

- 2 ▶ If more than one data file is open, click the title bar of the graphics display window corresponding to the data file to be exported.

The graphics display window is made active. If only one data file is open, the graphics display window for that data file will already be the active window.

- 3 ▶ Choose Process ▶ Output Data

The Select Output Data Format dialog box shown in Figure 6-1 opens.

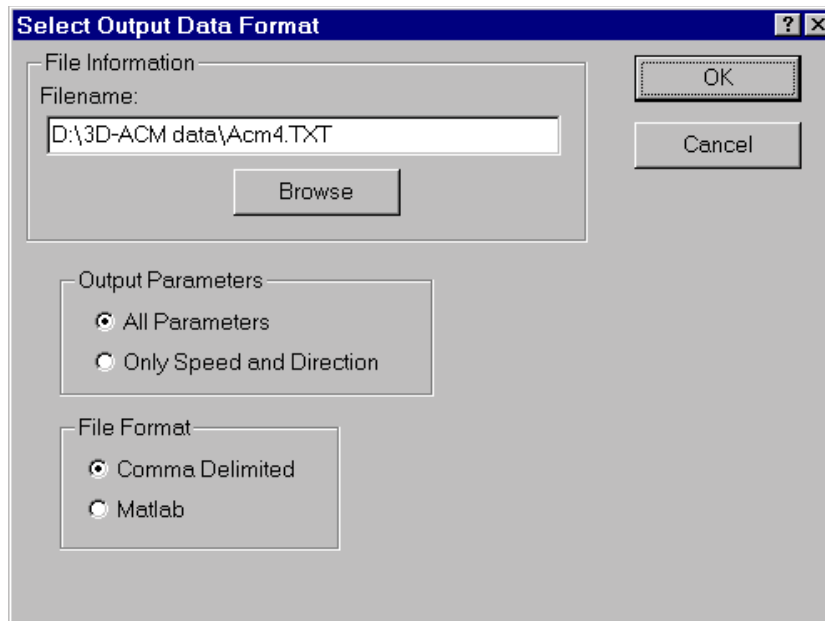


Figure 6-1: The Select Output Data Format Dialog Box

- 4 In the Output Parameters area of the Select Output Data Format dialog box, select one of the following options:
 - All Parameters to export all the parameter data in the data file plus the calculated current speed and direction.
 - Only Speed and Direction to export only the calculated current speed and direction.
- 5 In the File Format area, select one of the following options:
 - Comma Delimited to use a comma delimited format.
 - Matlab to use a Matlab format.
- 6 In the File Information area, do one of the following:
 - Verify that the path and filename AcmPost automatically enters in the Filename text box is satisfactory.
 - In the Filename text box, enter a different path and filename, including a filename extension, of the file to which to export the data.
 - Click Browse. The Save As dialog box for TXT data files shown in Figure 6-2 opens.

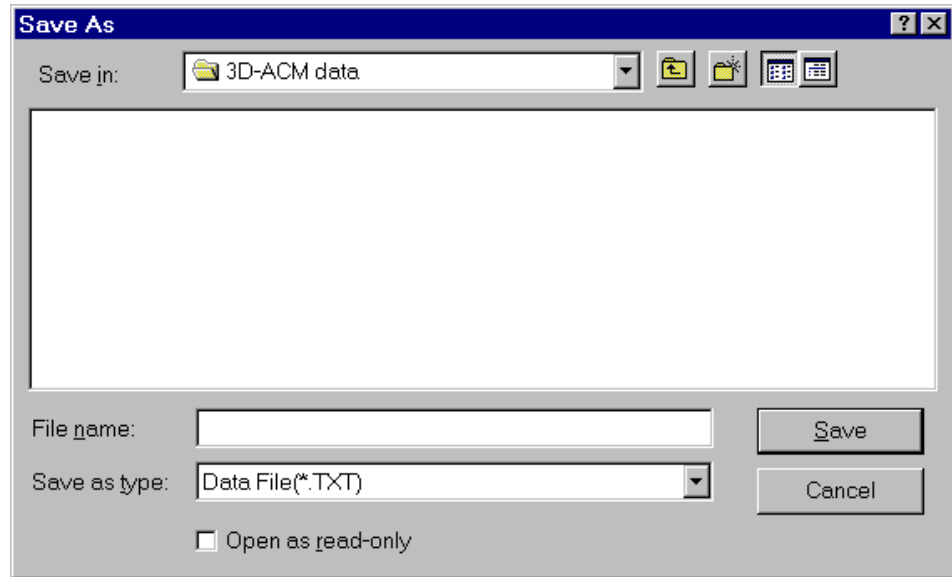


Figure 6-2: The Save As Dialog Box for TXT Data Files

- 7 ▶ If you verified that the filename in the Filename text box is satisfactory or entered a new filename in Step 6, click OK. The data are exported to the specified file, and the Select Output Data Format dialog box closes.
If you clicked Browse to open the Save As dialog box, continue with Step 8.
- 8 ▶ Click the arrow in the Save in drop-down list box and select the folder in which to save the exported data file.
- 9 ▶ Select the file to which to export the data, or enter the name of the file in the File name text box. The extension *.txt* is added automatically.
- 10 ▶ Click Save to close the Save As dialog box.
- 11 ▶ Click OK in the Select Output Data Format dialog box.

The data are exported to the specified file, and the Select Output Data Format dialog box closes.

Creating and Exporting CTD Files

ACMPost allows you to create and export CTD files if CTD data are present in the open data file. The CTD files are the data file (DAT), the calibration file (C00) and the header file (HDR). These files are created with extensions *.dat*, *c00* and *hdr*, respectively.

To create and export the CTD files:

- 1 ▶ Open one or more data files.

WavePost reads the data files and the Velocity Time Series graphics display for each data file opens.

- 2 ▶ If more than one data file is open, click the title bar of the graphics display window corresponding to the data file from which to create and export the CTD files.

The graphics display window is made active. If only one data file is open, the graphics display window for that data file will already be the active window.

- 3 ▶ Choose Process ▶ Output CTD data.

The Output CTD Data dialog box shown in Figure 6-3 opens.

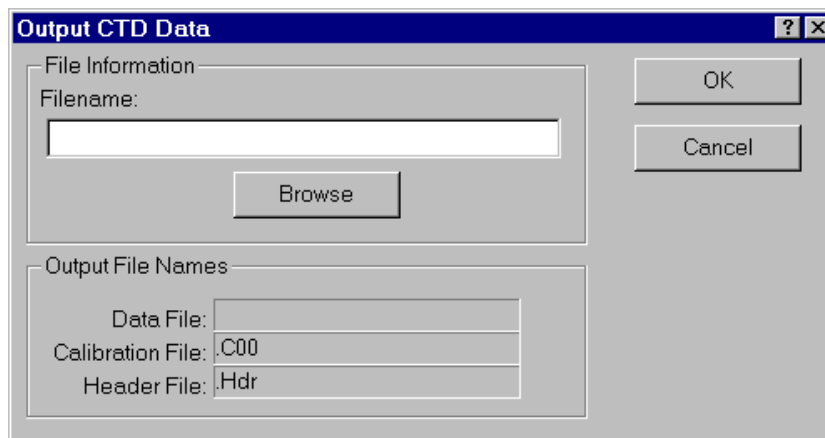


Figure 6-3: The Output CTD Data Dialog Box

- 4 In the File Information area of the Output CTD Data dialog box, do one of the following:
 - In the Filename text box, enter a path and filename, including the extension *.dat* of the data file in which to save CTD data. The names of the three CTD files, including the data file, are automatically displayed in the Output File Names area of the Output CTD Data dialog box. The *.C00* and *.Hdr* extensions are added automatically.
 - Click Browse. The Save As dialog box for DAT data files shown in Figure 6-4 opens.

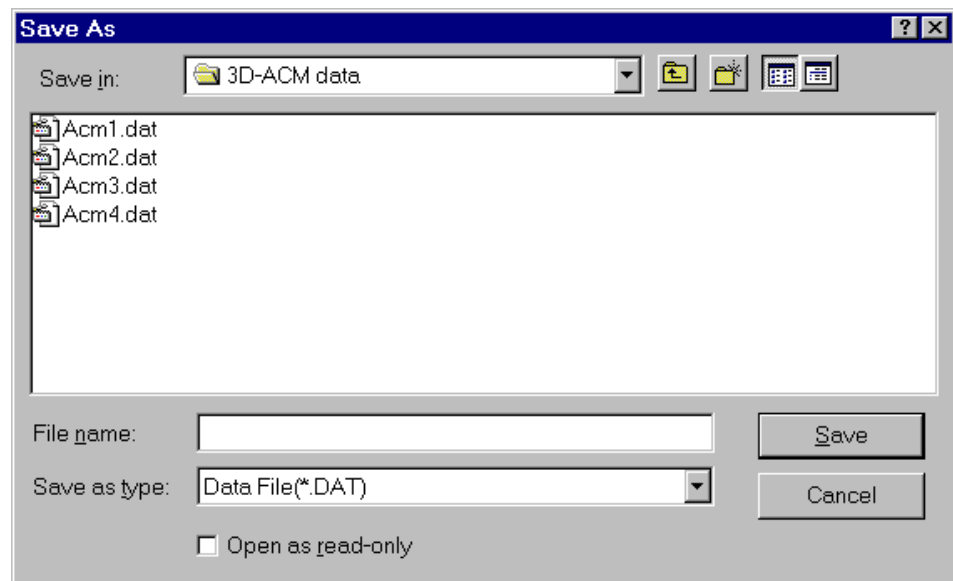


Figure 6-4: The Save As Dialog Box for DAT Data Files

- 5 If you entered a path and filename in Step 4, click OK. The three CTD files are created, the CTD data are exported and the Output CTD Data dialog box closes.

If you clicked Browse to open the Save As dialog box, continue with Step 6.
- 6 Click the arrow in the Save in drop-down list box and select the folder in which to save the exported CTD files.
- 7 Select the data file, a file with extension *.dat*, in which to save the CTD data, or enter the name of the file in the File name text box. The extension *.dat* is added automatically.

- 8 ► Click Save to close the Save As dialog box.

The names of the three CTD files, including the data file, are automatically displayed in the Output File Names area of the Output CTD Data dialog box. The *.COO* and *.Hdr* extensions are added automatically.

- 9 ► Click OK in the Output CTD Data dialog box.

The three CTD files are created, the CTD data are exported and the Output CTD Data dialog box closes.