User Guide

Model 407001
Windows™ Data Acquisition Software

Introduction

Congratulations on your purchase of the Extech Model 407001 Data Acquisition Software Package that includes a CD-ROM and an interface cable. The software is dedicated for use with Extech's Heavy Duty Meter Series. The 407001 software displays data in the following formats: Analog meter, Digital meter (with Max/Min readings), Data List, and X-Y Graph (for last 100 data points). Data is stored as a text file that can then be opened in spreadsheet and other software programs.

Hardware Connection

The Heavy Duty meter connects to a PC with the supplied DB-9 to 3.5mm mini-plug (mono) interface cable. The DB-9 end connects to the PC serial com port. The mini-plug end connects to the Heavy Duty meter

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Software Installation

> **NOTE:** This program may require supporting files that are missing or more recent then those presently residing in the PC. If an error message appears during installation that indicates an update is necessary, go to the Microsoft web site (www.microsoft.com) to locate and perform the Windows Critical Updates and Service Pack Updates for the specific operating system.

1. Insert the supplied software disk in the computer's CD-ROM drive.

2. Run the SETUP.EXE program included on the software disk.

3. When prompted, select a directory location for the program files.

   PC Operating System compatibility: Windows™ 95 / 98 / 2000 / NT / XP

Software Operation

1. Once the setup is complete, double click the green DataACQ program icon which resides in the same directory as the directory selected in step 3 of the Software Installation procedure above.

2. The COM SELECT window (shown at right) opens, prompting the user to select the PC com port that will be used to connect to the meter (typically Com 1 or 2). Select SLM Enabled for Model 407768 Digital Sound Level Meter use only. Click OK when done.

3. The DISPLAY TYPE window (shown at right) opens, prompting the user to select the appropriate meter display configuration (single or dual display). If unsure, check the Table that lists all of the Heavy Duty meters and their display types later in this manual. Click OK when done.

4. The DATA_ACQ window opens and prompts the user to click YES or NO. Press YES if you intend to view readings and <u>save them in a file</u>. Press NO if you wish to view readings but not save the readings to a file.

5. If YES was selected in the previous step, the SAVE AS window appears prompting the user to name the data file and to select a directory to place it in. The confirmation window appears showing the new file and its path. Click OK.

6. The DATA COLLECTION window (at right) opens. Refer to steps a. through d. below:
   a. Use the **Select Sample** scroll bar to select the time between readings (from 1 second to 60 minutes).
   b. Use the **Total Number of Samples** selection to save a specific number of measurements. The range is 1 to 10,000 samples.
   c. Use the **Start/Stop Time** fields to define a data collection time period. The time period is entered in 24-hour format (HH:MM:SS). The range is 00:00:00 to 23:59:59. Leave blank to start logging immediately.
   d. If both **Number of Samples** and **Start/Stop Time** are selected, the recording will begin at the start time and end when either the Stop time or the Total Samples has been reached, whichever event occurs first. When recording automatically stops, the FILE CLOSED message will appear on the PC screen.
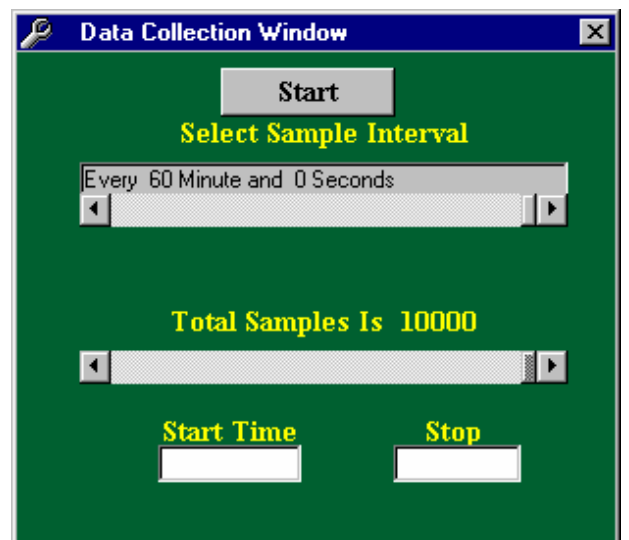
Automatic Power OFF

Many Heavy Duty Meters have an AUTO POWER OFF feature that turns the meter off after approximately 10 minutes. This feature must be disabled before starting a datalogging session to avoid having the meter shut off in the middle of a session. Disable AUTO POWER OFF by pressing the meter's RECORD key. While the meter is in the RECORD mode, the AUTO POWER OFF feature will be disabled.

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Datalogging

Initiate Datalogging by clicking START in the DATA COLLECTION window (shown on the previous page). The main program window appears (as shown on the cover of this manual) displaying the Extech logo and the following menu selections:

File

- Create/Save File: Saves the currently opened file or creates a new file
- View File: Opens a previously saved data file
- Close Current File: Closes the file currently open
- Download Datalogger: Initiates a data transfer from the optional Extech Datalogger

View Mode

- Display Analog: Presents the data as an analog meter.
  Note that the Analog display is scaled using the largest reading logged. If changes to the unit of measure are made or if large changes in readings occur, the display window should be closed and re-opened to reset the scaling.
- Digital: LED-type display with High and Low Reading fields (diagram below left).
- Display File Count: Provides a tally of data points logged.
- Display Data: Provides logged data in list format

Data Graph

- The graph plots the last 100 data points in x-y graph format (diagram below right).
- Print Graph: Prints graph to a printer connected to the PC.
- Label 1 and 2 represent the units of measure for the primary and secondary meter displays. Note that some Heavy Duty meters do not have a secondary display. The Labels automatically recognize the meter's units of measure. Labels 1 and 2 are color coded for easy viewing. Press HIDE to close the data graph window.
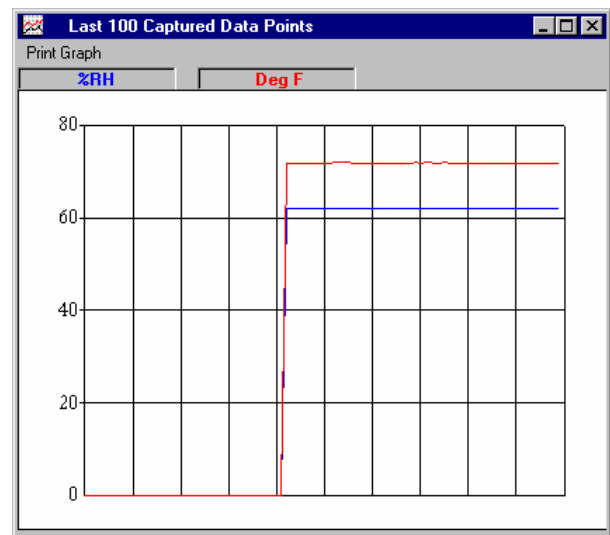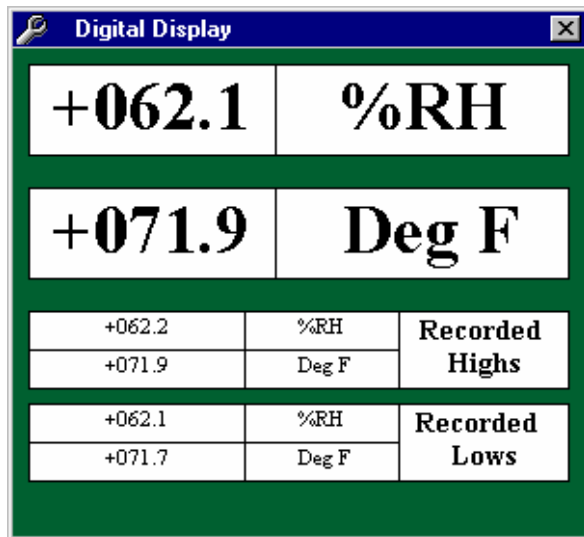
Important Note: The Recorded High and Low values (shown, for example, in the diagram above left) are the highest and lowest values observed at any time during the recording period. These values, especially for long sample rates, may not be the same as the high and low values listed in the data file.

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Model 380340 Datalogger Download Operation

The Extech 380340 Datalogger stores readings from Heavy Duty Meters for later transfer to a PC. The Software supplied with the 380340 Datalogger should be used to transfer data to a PC (refer to the documentation supplied with the 380340 Datalogger to do so). To download data using the 407001 software, follow the steps below.

1. Connect the Datalogger to the PC as described in the Datalogger manual.
2. Run the 407001 Software as previously described (select NO in step 4 on page 2).
3. Select **Download Datalogger** from the 407001 Software FILE menu.
4. Follow the on-screen instructions to download and save the datalogger data.

Heavy Duty Meter Display Configuration

Heavy Duty meters have either a single or a dual display. Refer to the Table below for details.

Model	Meter Type	Single/Dual Display
407026	Light Meter	S
407112	Vane Anemometer	D
407114	CFM Thermo-Anemometer	D
407117	Mini Vane Thermo-Anemometer	D
407123	Hot Wire Anemometer	D
407227	pH / mV / Temperature	D
407303	Conductivity Meter	D
407401	Dual Thermometer	D
407412	Thermo-Anemometer / Humidity	D
407428	IR Thermometer	S
407119	CFM Hotwire Anemometer	D
407445	RH / Temperature Meter	D
407495	Pressure meter	S
407510	Dissolved Oxygen (DO) Meter	D
407768	Sound Level Meter	S
407777	Moisture Meter	S
407820	Torque Meter	S
407850	Vibration Meter	S
407907	RTD Thermometer	S
407910	Differential Pressure Manometer	S

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