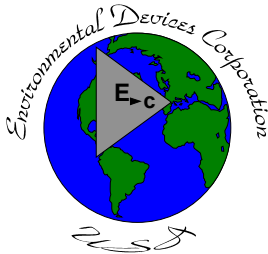


USER'S GUIDE
DUSTCOMM VERISON 1.2

SOFTWARE FOR EDC AIR
MONITORING INSTRUMENTATION

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EDC

New Technology for Monitoring Air Quality

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Introduction to the DustComm Software

Introduction

DustComm is a powerful and flexible Windows application software package designed for use with the Haz-Dust Particulate Monitoring Equipment.

DustComm is both communications software that enables stored project data to be downloaded to a PC, and a data manipulation tool, enabling detailed analysis and reporting of sampled data.

Spreadsheet applications

DustComm easily translates data into spreadsheet ASCII text files. These files can be open into spreadsheet programs such as Microsoft Excel

Data plots

The data plots provided with DustComm enable:

- Detailed statistical analysis.
 - The creation of graphics and charts.
 - The mathematical correction of particle characteristics when aerosol significantly differs from calibration dust.
-

Installing DustComm

Introduction DustComm installation is easy and quick, the entire process should take less than 5 minutes.

Minimum system requirements Windows ME or Higher.
4 MB available disk space.
8 MB RAM.

Software installation Follow the steps in the table below to install DustComm.

Note: It is assumed that the CD-Rom Drive is the “D” Drive. Substitute D with the appropriate drive letter if necessary.

Step	Action
1	Start Windows.
2	Close all open applications.
3	Insert <i>Installation Disk</i> into the D drive.
4	Open My Computer
5	Select the folder named “DustComm V1.2” and double click to enter.
6	Select the icon named “Setup” and double click. See Figure1.
7	Follow the installation wizard steps.

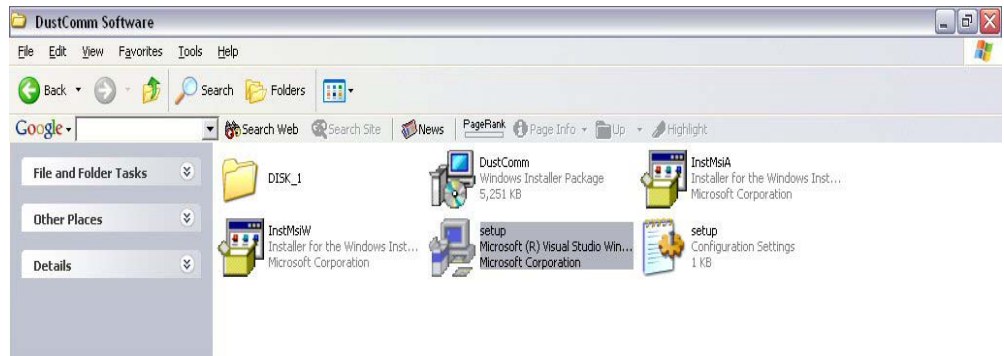


Figure 1: DustComm Software Folder with “Setup” Selected in Windows XP.

Loading the DustComm Software

Windows ME Follow the steps in the table below to load the DustComm software if using Windows ME.

Step	Action
1	Select the Start Menu.
2	Select Programs.
3	Select the folder EDC DustComm Pro 1.2
4	Select DustComm Pro 1.2

Windows NT, 2000 & XP Follow the steps in the table below to load the DustComm Software if using Windows NT, 2000 & XP.

Step	Action
1	Double Click on the icon on your desktop. NOTE: If shortcut icon does not appear on desktop follow the steps for Windows ME.

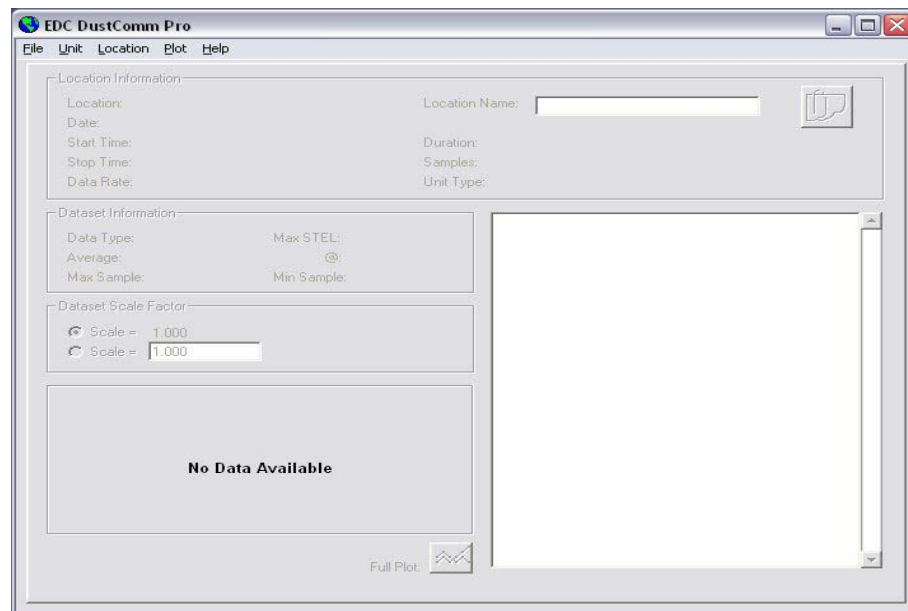


Figure 2. DustComm Screen immediately after loading software.

Menu Selections

Introduction

Figures 3 through 5 show each of the DustComm menu options.

Note: If a menu option is displayed in light type it is not available during the current task.

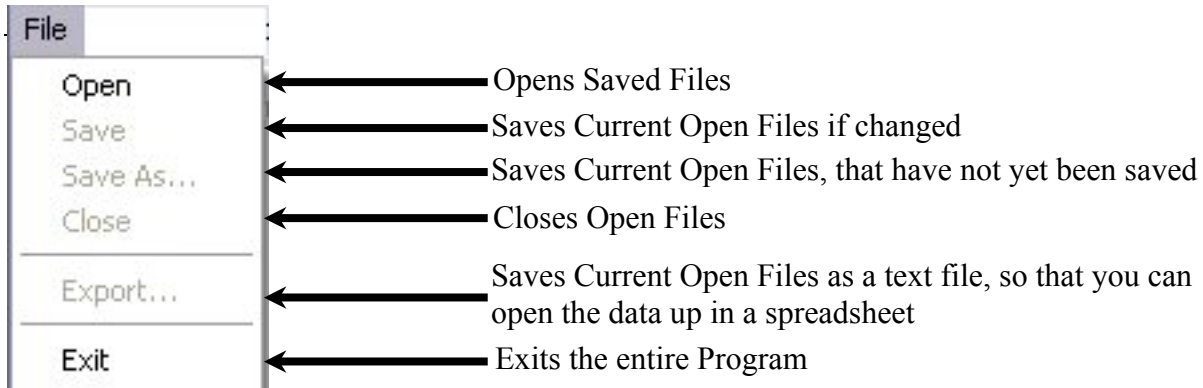


Figure 3. File Menu Options.

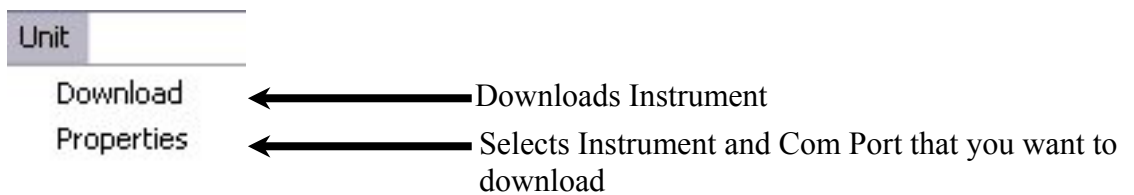


Figure 4. Unit Menu Options.

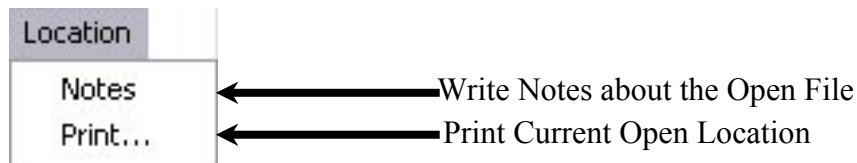


Figure 5. Location Menu Options.

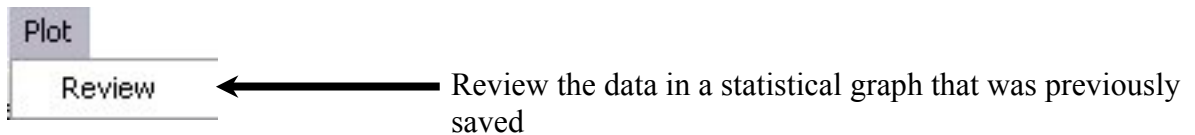


Figure 6. Plot Menu Options.

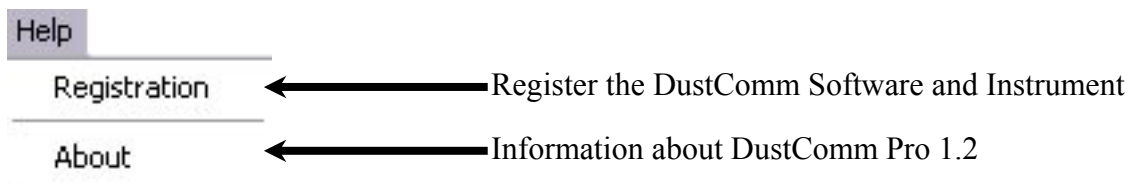


Figure 7. Help Menu Options.

File Menu Commands

Introduction Use the File Menu option to open, save, print, close and export sampled data. You can also use the File Menu to Exit the DustComm Pro Software

Notes:

- Data is sorted by time collected.
 - Data points are reported in mg/m³.
-

Opening an existing project folder

Follow the steps in the table below to retrieve stored project data.

NOTE: A sample .dcm file is preloaded for review of software options.

Step	Action
1	Select File .
2	Select Open .
3	Double click on the desired Project Folder. Note: DustComm will save all files in My Documents, or user selected folder.

Saving a project folder

Follow the steps in the table below to store project data.

Step	Action	
1	Select File .	
2	If... <ul style="list-style-type: none"> • Saving the data in the project folder for the first time, or, • Saving an existing folder to a new name or location. 	Then Select... <ol style="list-style-type: none"> 1. Save As, then, 2. Type a file name for the project file. 3. Select OK.
	Saving an updated version of an existing project folder to the same file name and location.	Save
Result: The data is saved in the new project folder and the new file name is displayed in the title bar. Only with Save As with the data have a new file name and location if selected.		

Continued on next page

File Menu Commands, Continued

Exit software Exit Communication Software in one of two ways.

Option number	Action
1	1. Select File . 2. Select Exit .
	Or
2	Single click on the “X” in the upper right hand corner of the screen.

Downloading Data

Introduction Internally stored data can be downloaded to DustComm for detailed analysis.

Downloading data The three major steps used to download data from the EDC dust monitoring unit to a PC are listed below and detailed in the next few pages.

1. Connect the cable.
 2. Prepare the PC for data transmission.
 3. Prepare the EDC dust-monitoring unit for data transmission.
-

Connect the cable Follow the steps in the table below to connect the cable for data transmission.

Step	Action
1	Connect one end of the supplied RS232 cable to the EDC dust-monitoring unit. Note: If USB compatibility needed you will need to purchase a serial to USB adapter.
2	Connect the other end of the RS232 cable to the appropriate COMM port on the PC. Note: Check that both connections are secure. An intermittent connection can disrupt data transmission.

Preparing the PC Follow the steps in the table below to prepare the PC for data transmission.

Note: Multiple locations will be separated by tabs at the bottom of the program.

Step	Action
1	Open DustComm.
2	Select Unit and Select Properties .
3	Under the Properties selection choose your unit and the Com Port that you want to connect. Press Ok when you are finished
4	Select Unit and Select Download .
5	When the items above are finished you should see the download box appear.

Continued on next page

Downloading Data, Continued

Preparing the unit.

Follow the steps in the table below to prepare the EDC unit for data transmission.

Step	Action
1	Select Playback or Review Data (depending on your instrument) from the Main Menu on the unit.
2	Select Download .
3	Select To Dust Data Collector .
4	Press ENTER . Result: The Transmitting window appears. Note: Bars on the PC screen should increase as the unit downloads.
5	When the transmission is complete... <ul style="list-style-type: none"> • The To Dust Data Collector selection screen is displayed on the units monitor. The unit may be shut off at this time. • The downloaded data is displayed in the Project Folder on the PC. (Figure 9).

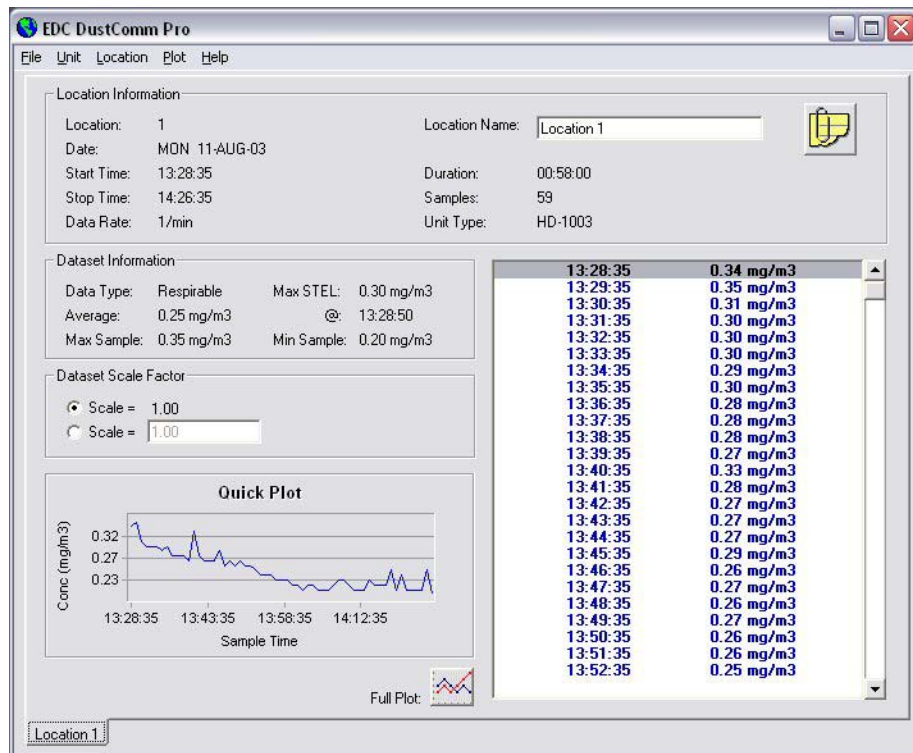


Figure 8. Project File after data has been transmitted.

DustComm Pro Window

Introduction Each section of the DustComm Pro Window will explain a different part of the statistics.

Location Information	The Location information will give you general details about the downloading statistics. Such as date, time, start/stop time, data rate, duration, how many samples were downloaded and the unit. There is also box so that you can name the location and a shortcut to type in any notes you would like to add.
-----------------------------	--

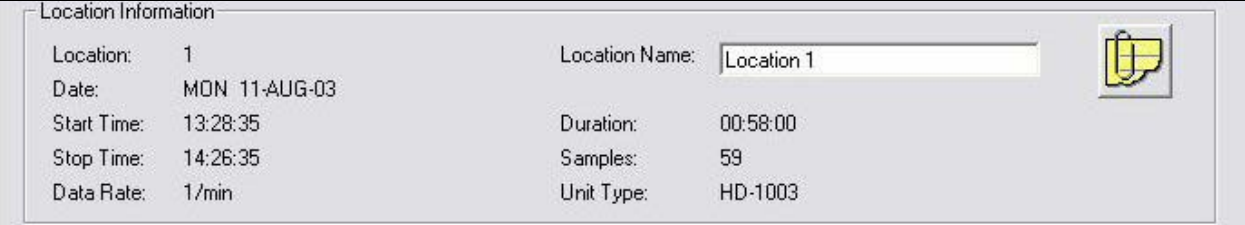


Figure 9. Location Information section of the DustComm Pro Window.

Dataset Information	The Dataset Information will tell you more specific information about the downloaded statistics. Such as type of data, the average, the Max/Min Sample and the Max STEL.
----------------------------	--




Figure 10. Dataset Information section of the DustComm Pro Window.

Continued on the next page

DustComm Pro Window, Continued

Dataset Scale Factor	The dataset scale factor section of the DustComm Pro Window, is so that you can adjust the scale to be equal to your specific type of dust. You can read more about adjusting the scale factor on page15.
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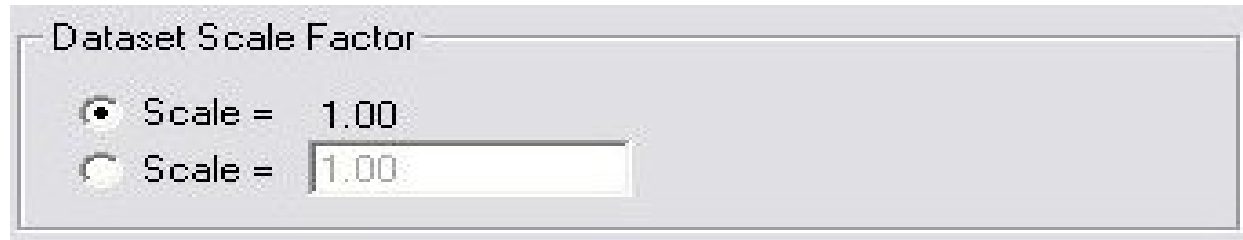


Figure 11. Dataset scale factor section of the DustComm Pro Window.

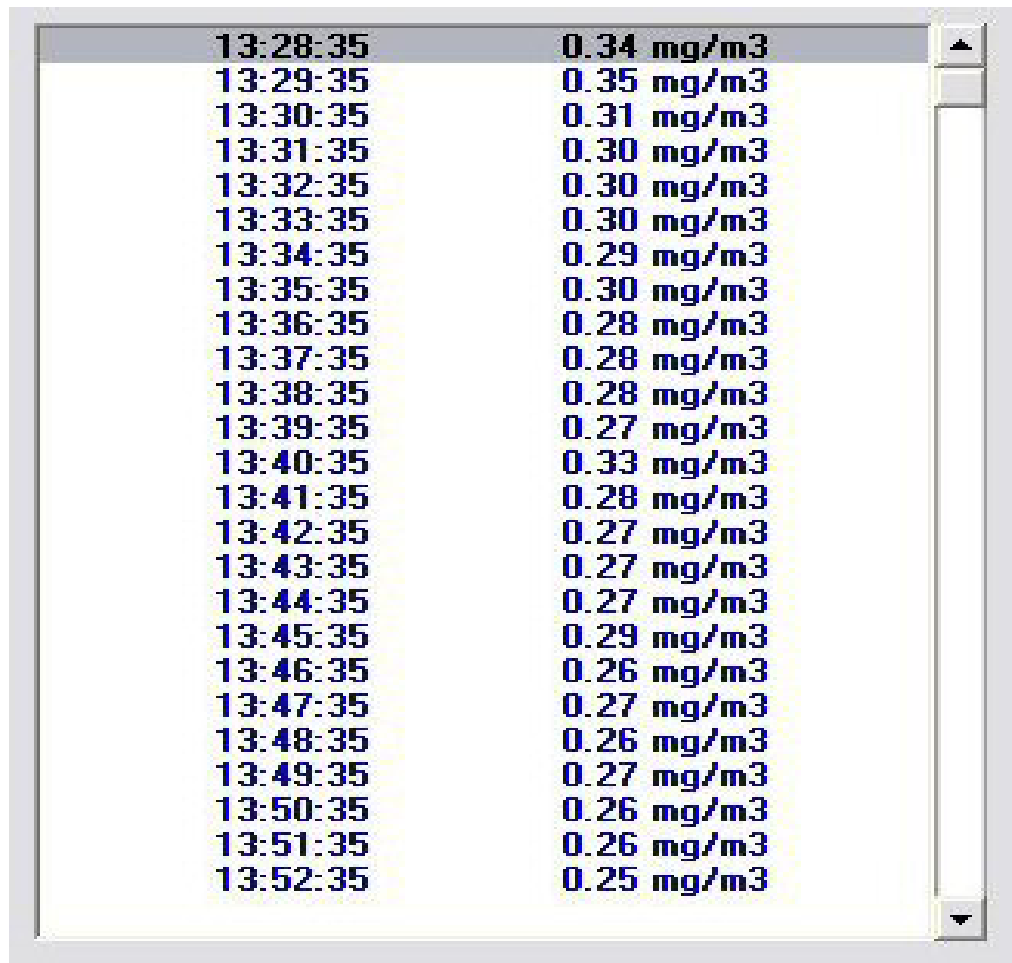
Quick Plot	The Quick Plot graph shows you a miniature version of the Full Plot. The Full Plot button is located directly below Quick Plot can you can read more about Full Plot on pages11-14.
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Figure 12. Quick Plot & Full Plot Button on the DustComm Pro Window.

DustComm Pro Window, Continued

Location Data	The location data section shows you the milligrams per cubic meter you sampled for and the times that they were sampled at.
----------------------	---



13:28:35	0.34 mg/m3
13:29:35	0.35 mg/m3
13:30:35	0.31 mg/m3
13:31:35	0.30 mg/m3
13:32:35	0.30 mg/m3
13:33:35	0.30 mg/m3
13:34:35	0.29 mg/m3
13:35:35	0.30 mg/m3
13:36:35	0.28 mg/m3
13:37:35	0.28 mg/m3
13:38:35	0.28 mg/m3
13:39:35	0.27 mg/m3
13:40:35	0.33 mg/m3
13:41:35	0.28 mg/m3
13:42:35	0.27 mg/m3
13:43:35	0.27 mg/m3
13:44:35	0.27 mg/m3
13:45:35	0.29 mg/m3
13:46:35	0.26 mg/m3
13:47:35	0.27 mg/m3
13:48:35	0.26 mg/m3
13:49:35	0.27 mg/m3
13:50:35	0.26 mg/m3
13:51:35	0.26 mg/m3
13:52:35	0.25 mg/m3

Figure 13. Location Data on the DustComm Pro Window.

Translating Data to an ASCII Text File

Introduction

Project Data must be translated into ASCII text format before it can be read by a spreadsheet application.

Translating data

Follow the steps in the table below to Translate Project Data into ASCII Text format.

Note: A Project Folder must be open to access the translate feature.

Step	Action
1	Select File from the Main Menu.
2	Select Export.
3	An “Export Locations” Window will appear. Select either All for all locations or select the range of locations you would like to export. Click OK when you have selected your locations.
4	An “Export To...” Window will appear. Type in the name that you would like to call your exported data and click Save .
6	When you are ready to open the data in a spreadsheet application. Open the spreadsheet program go to the Open menu, select all files under type of file name and double click on the file you want to review. This will result in your saved data opening in your spreadsheet program.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Location N		1												
2	Location N	Location 1													
3	Date:		MON 11-AUG-03												
4	Start:		13.28.35												
5	End:		14.26.35												
6	Data Type:		Respirable												
7	Unit Type:		HD-1003												
8	Data Scale:		1												
9															
10			13.28.35		0.34	mg/m3									
11			13.29.35		0.35	mg/m3									
12			13.30.35		0.31	mg/m3									
13			13.31.35		0.3	mg/m3									
14			13.32.35		0.3	mg/m3									
15			13.33.35		0.3	mg/m3									
16			13.34.35		0.29	mg/m3									
17			13.35.35		0.3	mg/m3									
18			13.36.35		0.28	mg/m3									
19			13.37.35		0.28	mg/m3									
20			13.38.35		0.28	mg/m3									
21			13.39.35		0.27	mg/m3									
22			13.40.35		0.33	mg/m3									
23			13.41.35		0.28	mg/m3									
24			13.42.35		0.27	mg/m3									
25			13.43.35		0.27	mg/m3									
26			13.44.35		0.27	mg/m3									
27			13.45.35		0.29	mg/m3									
28			13.46.35		0.26	mg/m3									
29			13.47.35		0.27	mg/m3									
30			13.48.35		0.26	mg/m3									
31			13.49.35		0.27	mg/m3									
32			13.50.35		0.26	mg/m3									

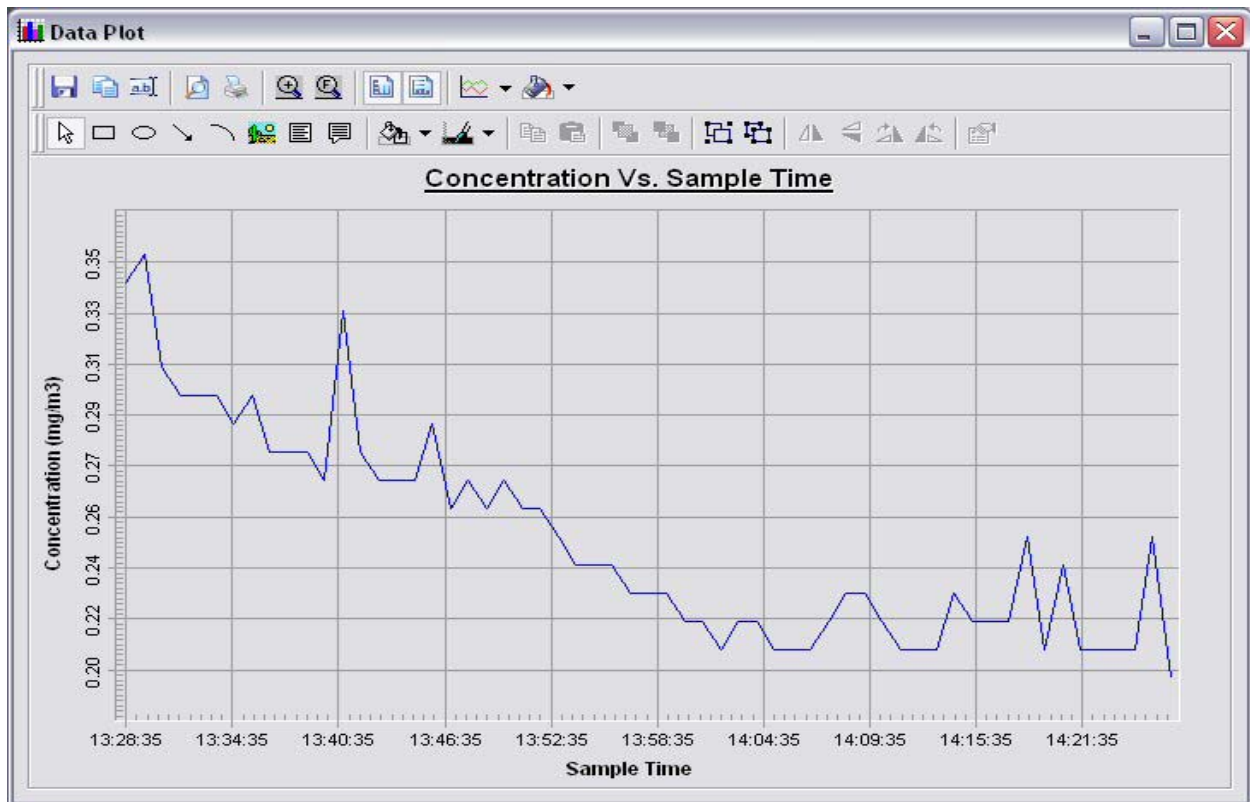
Figure 14. Exported Excel information.

Generating a Plot

Introduction A graph can be plotted with full plot located at the bottom of the DustComm Pro Window.

Generating a graph Follow the steps in the table below to generate a graph using the DustComm Plot menu selections.

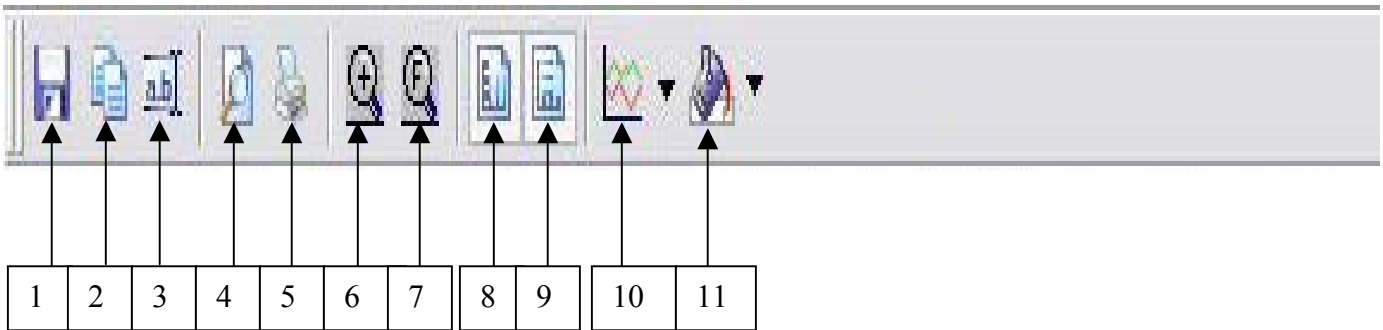
Step	Action
1	Select Plot .
2	Select Review . This option is for graphs that have already been saved. Note: For new statistics click on the “Full Plot” Icon on the DustComm Pro Window.
3	The result is graph will be plotted to the screen (see figure 15 below).



Continued on next page

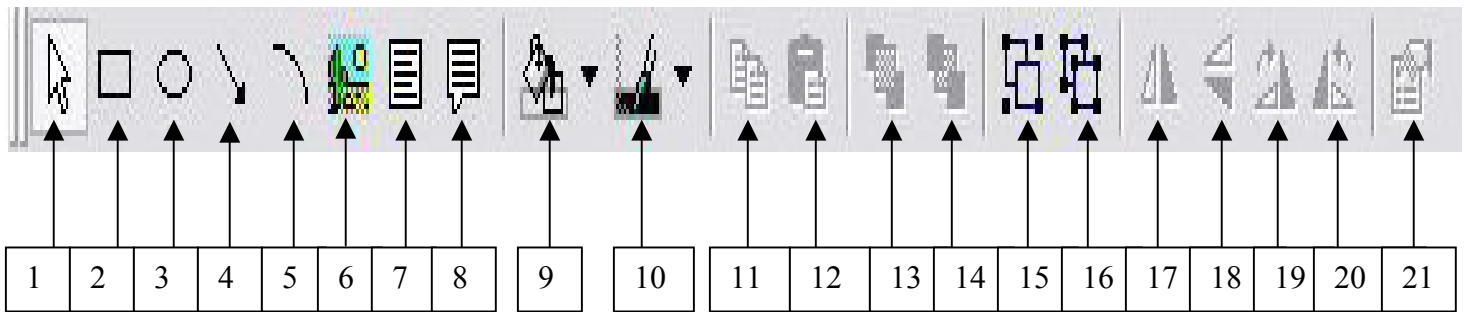
Data Plot Menu Selections

Introduction At the top of the data plot will be a button bar. Below is an explanation of what each button does.



Number	Function
1	Saves plotted information as a DustComm Pro Chart (*.dcc).
2	Copies plot to a bitmap file.
3	Edits the title of the plot.
4	Page Setup Properties.
5	Prints the current plot.
6	Zooms into plot. By Highlighting from point to point that you want zoomed in on.
7	Returns to full screen of plot.
8	Adds or removes vertical lines.
9	Adds or removes horizontal lines.
10	Select the specific type of graph, i.e. bar or line graphs.
11	Changes color of the graph.

Data Plot Menu Selections, Continued



Number	Function
1	Pointer tool.
2	Insert Squares.
3	Insert Ovals.
4	Insert arrows.
5	Insert arched lines.
6	Insert a picture. Choose the size of your picture and then right click on the box and select properties. Select the picture tab and select picture. The picture you chose will appear in the box.
7	Insert a text box.
8	Insert a callouts with text.
9	Change the color of your squares, ovals, text boxes and callouts.
10	Change the color of the text in your text boxes and callouts.
11	Copy squares, ovals, text boxes and callouts.
12	Paste squares, ovals, text boxes and callouts.
13	Bring squares, ovals, text boxes and callouts to front.
14	Send squares, ovals, text boxes and callouts to the back.
15	Group squares, ovals, text boxes and callouts.
16	Ungroup squares, ovals, text boxes and callouts.
17	Flip over left to right squares, ovals, text boxes and callouts.
18	Flip over up and down squares, ovals, text boxes and callouts.
19	Rotate squares, ovals, text boxes and callouts clockwise.
20	Rotate squares, ovals, text boxes and callouts counterclockwise.
21	Properties of selected squares, ovals, text boxes and callouts.

Editing Title

Introduction A customized title can be added to a graph before printing.

Editing the title Follow the steps in the table below to add a title to the graph.

Step	Action
1	Have location plotted already.
2	Select the Edit Title button on the menu bar.
3	A Window will appear where you can edit the title for what you would like its name to be.
4	Select OK when the correct title is in the box. Result: The graph will be created with the new caption.



Figure 16. Edit Title Window.

Applying a Correction Factor

Introduction

A correction factor can be applied to the data collected with the EDC unit to account for variances in gravimetric readings.

Calculating a correction factor

The correction factor is calculated by dividing the Gravimetric reading by the EDC unit reading.

Applying a correction factor

Follow the steps in the table below to apply a correction factor to all data points in the current project folder.

Step	Action
1	Select the 2 nd Scale= with a box where you can type in your scale factor.
2	Type in the Scale factor.
3	After the scale factor is entered press enter. <u>Result:</u> All data points in the project folder have been multiplied by the correction factor.

Removing the correction factor

Follow the steps in the table below to remove the correction factor from the data points in the project folder.

Step	Action
1	Select the 1 st Scale= under the Dataset Scale Factor . <u>Result:</u> Data points should return to original state.

Inability to Download Data to PC

Introduction

If DustComm Software installs properly but downloading instrument to computer is unsuccessful try the following:

- Ensure that the RS232 cable connectors from the PC are *tightly screwed* into place.
- Ensure that the communications settings are set appropriately in the Download Properties screen of the DustComm program. Select Unit, Properties to access this dialog box. The communications port must be set to the appropriate Com Port used on the PC.
- If you are experiencing problems downloading your unit's results to your PC, and the RS232 cable connectors are secured tightly, your cable may be connected to the wrong 9-pin port on your PC. If your PC has more than one 9-pin connection port, attach the cable to another 9-pin port and try to download the dust monitor's results at that port. You may need to try all of your PC's 9-pin ports before finding the correct connection.
- If the previous steps check out, try using the Windows supplied HyperTerminal or other appropriately configured communications software to receive data when downloading from the Haz-Dust Monitor.
- If using a USB port make sure you are using the proper USB to serial adapter.

For service or Technical Questions please call 800-234-2589 or e-mail techsupport@hazdust.com