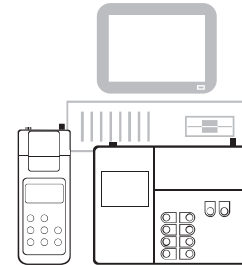# Instruction Manual

HH610-SW

Application Software for
Portable & Bench Meters

OMEGA®

Dear Customer,

Thank you for choosing an Omega product. Please read this instruction manual carefully before using the software. This manual will provide you with the necessary information for the correct installation and use of the program.

TABLE OF CONTENTS

Windows®, Excel® are Registered Trademarks of "Microsoft Co."

PRELIMINARY EXAMINATION

Remove the diskettes from the packing material and examine them to make sure that no damage has occurred during shipping. If any diskette is missing or damaged, please notify your Dealer.

Note: Save all packing material until you are sure that the diskettes function correctly. Any defective item must be returned in the original packing with the supplied accessories.

GENERAL DESCRIPTION

HH610-SW is an application software that allows the transfer of data from Omega portable and bench meters to a personal computer.

The software is available in two versions, **HH610-SW16** (for Windows®3.11) and **HH610-SW32** (for Windows®95) and it helps the elaboration of data collected by Omega models.

The data can be stored in XLS format and exported in CSV format. The stored data can be displayed and printed using commercial spreadsheet programs such as Excel®.

During setup, the program will ask for the Omega Instruments model and for additional information such as user name. The software provides a list of all Omega meters that can be chosen.

Make sure that you select the correct meter. In fact, once a model number is selected, that will be the only operative model.

HARDWARE REQUIREMENTS

To use **HH610-SW** on your computer, make sure you have the following minimum system requirements:

- IBM-PC AT, PS/2 or compatible PC (386 or higher)
- 4 Megabyte of RAM memory
- A hard disk with 5 Megabyte free disk space
- One mouse serial port and another one for the communication cable (if a mouse port is not available, the keypad can also be used)
- **HH610Logg**, infrared transmitter for portable meters, or connection cables for GLP portable meters and bench meters respectively, both available with 9-pin or 25-pin RS 232 connector.

SOFTWARE REQUIREMENTS

The program needs Windows®3.11 (**HH610-SW16**) or Windows®95 (**HH610-SW32**). The program may not work properly if other communication programs (modem, fax, etc.) are running at the same time.

INSTALLATION

The files on the **HH610-SW** diskettes are compressed and cannot be used until the installation has been completed.
Turn your computer on and start Windows®.

Place the **HH610-SW** diskette #1 into the appropriate drive.

Prior to running the setup program, close all Windows® applications. Then choose the **Run** command from the startup menu in Windows®95 or from the File menu of the Program Manager window in Windows®3.11 and type **a:\setup**.

The setup program will be running and loading the setup files into memory.
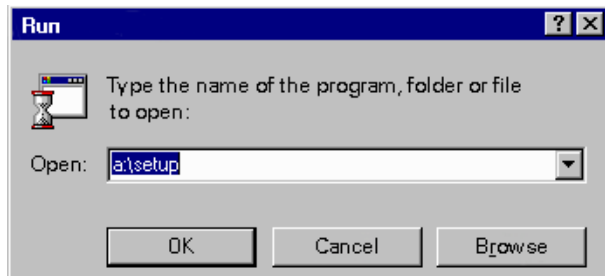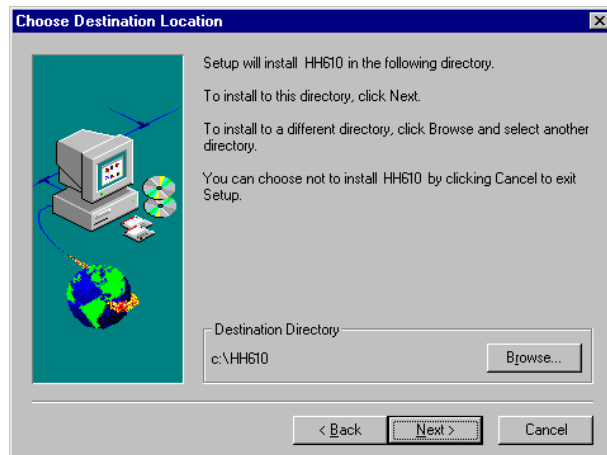

Follow the instructions and insert the successive diskettes when requested.

The dialog boxes of the installation program are described step-by-step in the following pages.

The **Installation Program** dialog box appears. To proceed with installation, click on **Next** or press the **Enter** key (click **Cancel** to abort the setup program).
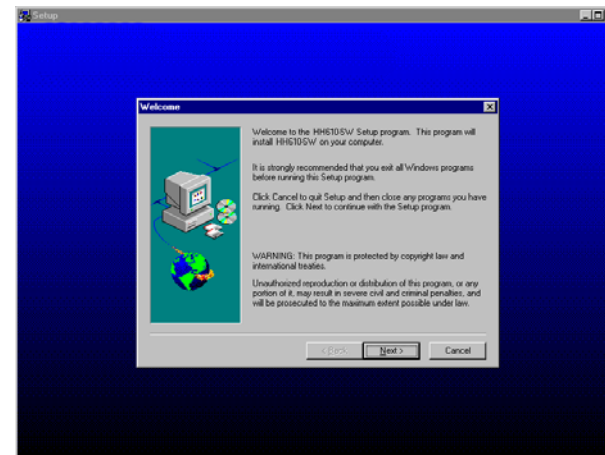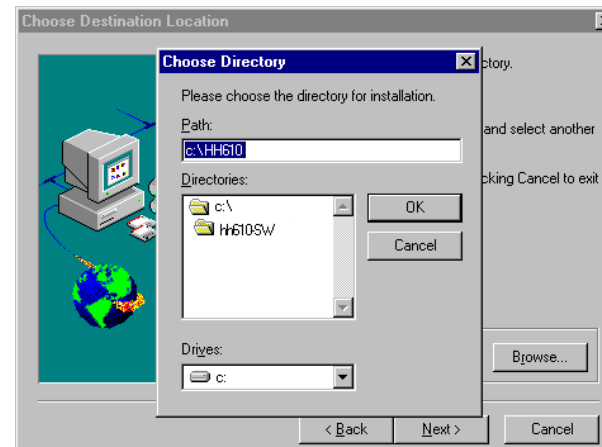
The program will then display a dialog box to confirm the installation directory for the HH610-SW software. The default directory is: **C:\HH610**.


To change the directory, press the **Browse** button. The following window appears:

From the **Directories** box, select the new directory. If you want to change the drive, use **Drives** menu to select the drive where the program files will be installed.

Note: You can create a new directory by simply writing the correct path in the appropriate box.

To confirm your choice press the **Enter** key or click on the **OK** button and the program will return to the previous window (Choose Destination Location).
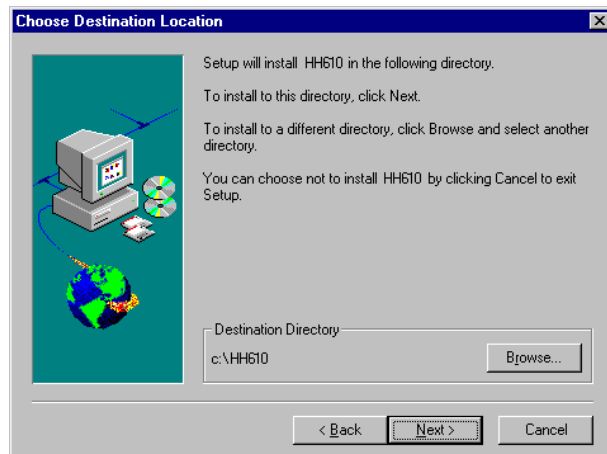

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Click **Next** to proceed with the installation.

The program will then display a window to confirm or change the program folder to which **HH610-SW** will be added. The default folder is Hanna Instruments. You can either choose an existing one by simply clicking on
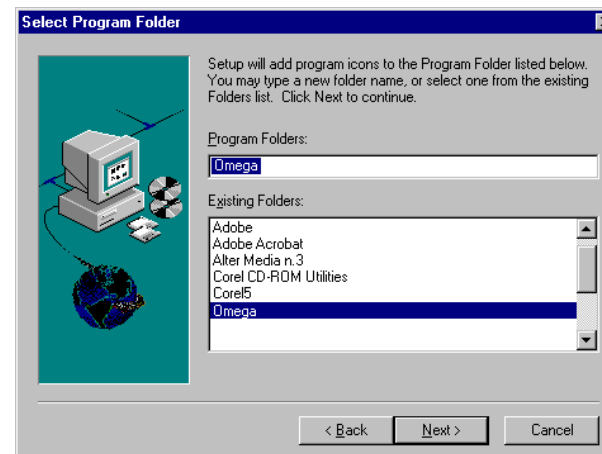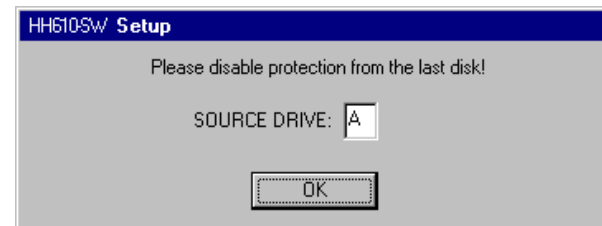

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its name, or write a new name in the Program Folders box.

Click on **Next** to continue the installation. The program will now install the program files. Insert the successive diskettes and press **OK** or the **Enter** key when requested.
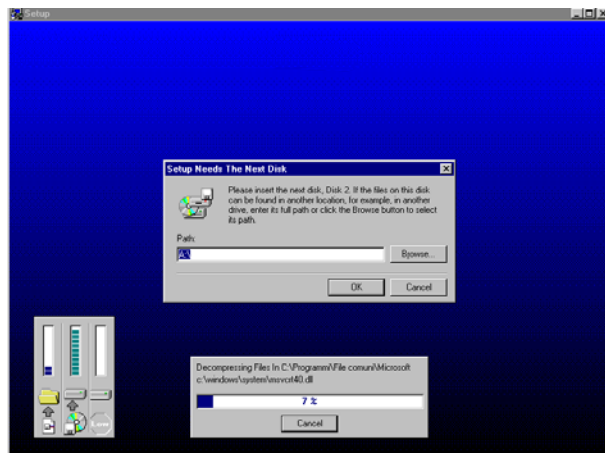
Prior to finishing the installation, the program will ask you to remove the protection from the last disk.

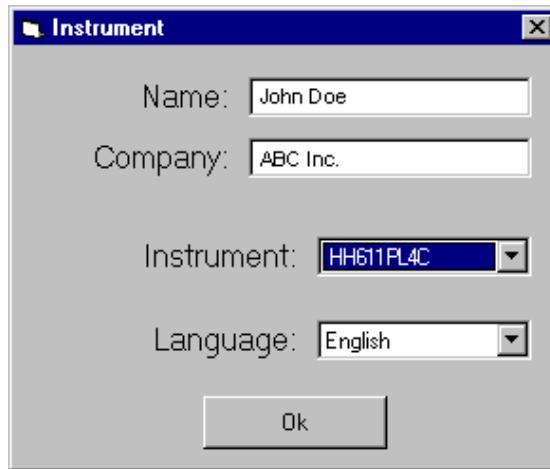Remove the diskette, remove the writing protection and reinsert the diskette.

Press the **OK** button and the Registration window will appear.

Enter the requested information and select the part number of your instrument and the language from the respective lists. The setup program will then notify your selections asking for confirmation in a new window.

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Note: It is very important that you make sure the correct part number is selected since after the installation this entry cannot be changed.

After a few seconds the program will notify the end of the installation and may ask to restart the computer.
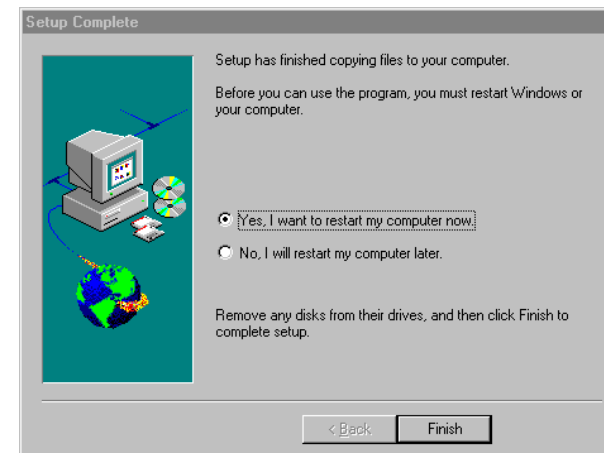
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In any case, remove the diskette from the drive and click **Finish** to complete the Setup procedure.

Note: If the programs asks to restart your system, you can choose to do this immediately or later, but in order to complete the installation of the software, you must restart the system in either case.

When the installation is complete, a **HH610-SW** Program Folder (Program Group for Windows®3.11) and icon are created.

Note: Store the set of diskettes in a safe place away from heat, dust and magnetic fields.

REMOVING THE PROGRAM

In case you need to remove the **HH610-SW** program from your computer, it is always recommended not to simply delete the files, but to remove the application correctly. To do this for Windows®95, run install/disinstall applications from the control panel; for Windows®3.11 simply run the disinstallation program with a double click on the icon provided in the **HH610-SW** Program Group.

INITIAL PREPARATION

For Bench (non-logging) meters only:

To connect your Omega Instruments bench-top meter to the PC use the **9-25 pin RS232** connection cable, available through your Omega Dealer.

Make sure that your meter is switched off and plug the connectors, one into the meter's RS 232 connector, the other into the serial port of your PC.

Note: Cables different from the **9-25 pin RS232** may use a different configuration. In such cases no communication between the meter and the PC is possible.

For Portable (logging) meters only:

All Hanna portable meters with the possibility of storing data contain an infrared emitting circuitry.

Simply place your portable meter on a **HH610Logg** Infrared Transmitter (ensuring that the two infrared LEDs are placed on top of each other). The memory can be downloaded to your PC through the **HH610Logg**'s RS232 port.
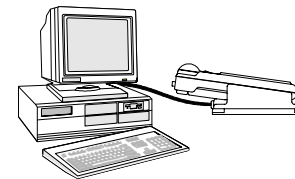
Using the **HH610Logg** Infrared Transmitter, all recorded data can be fed to your Personal Computer for easy reproduction, storage or elaboration without the interference of cables or cords between the meter and the transmitter.

When all connections are ready turn the Omega meter on. Refer to your instrument instruction manual for transferring the data to your PC.

USE

There are two different windows for non-logging (bench) and logging (portable) instruments. When you start the program you are requested to choose the kind of meter you have by pressing the corresponding button in this window.

See pages 4 and 5 for a full list of meters and whether they are regarded as bench or portable by the software.
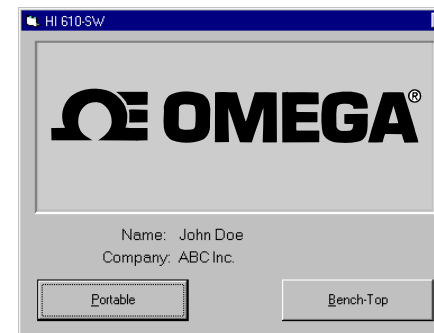
In both versions, in the main window the title bar displays the name of the program and its version and the status bar displays messages during execution.

FOR BENCH METERS

With the bench meters communication program, you can retrieve the measurements taken by your bench instrument (or by the GLP portable meters and process meters regarded by the program as bench meters – see list on page 5).

The connection between the instrument is by an RS 232 cable attached to one of your PC's serial ports.

The setting window contains information about data communication rate, port number and so on.
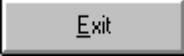
Readings can be logged and then saved in Excel®4.0 format (XLS) or exported as a CSV text file (see below).

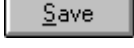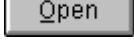When the **HH610-SW** program is connected to a bench meter, the data available on the LCD of the instrument is displayed in a large frame on the upper part of the screen.

Before connection, the main window will show:
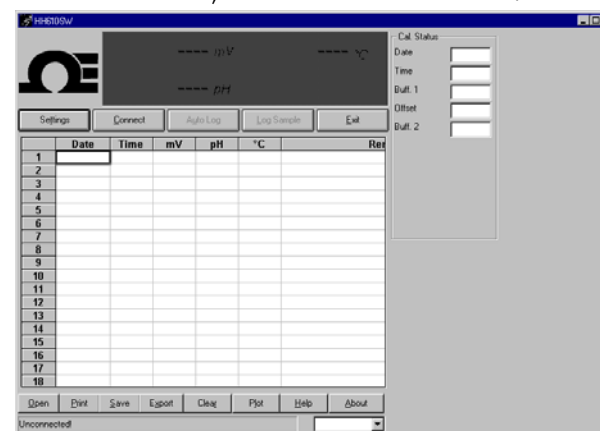
In this window several functions are available from the buttons:

| Settings | To show the setting window |

| Connect / Unconnect | To start/stop the communication with the instrument, depending on the communication status |

| Auto Log | To start a logging session (with a fixed interval between two samples) |

| Stop | To stop a logging session |

| Log Sample | To log the current sample on the PC screen |

| Exit | To exit the application |

| Help | To open the help window |

| About | To open the general information window |

| Plot | To obtain a graphic plot of the data |

| Print | To print the data or graph |

| Save | To save the data to a .XLS format file |

| Open | To review previously saved data |

| Export | To export in .CSV format |

| Clear | To clear all data from the worksheet |

Note: Commands are also available by holding the ALT key and then pressing the underlined character.

SETTINGS

When you click on the **Setting** button the screen will show the Bench-Top Settings window:

In this window the following settings of the program may be entered:

Auto Log

Sample Delay: the logging interval between two consecutive samples

Max. Sample: the maximum number of measurements to be taken

LCD

Delay: the interval of time the program will hold a reading of the meter on the PC screen before updating it

Communication

**Port**: the COMM port to which your meter is connected

Baud Rate: the transmission speed

Note: the instrument and the mouse cannot use the same COMM port. If the 'Port not available' message is shown, the system is already using the port that you have selected. In this case, you should select another port number.

CONNECTION

To connect the meter to the computer click on **Connect**. The main window will then look like the following:
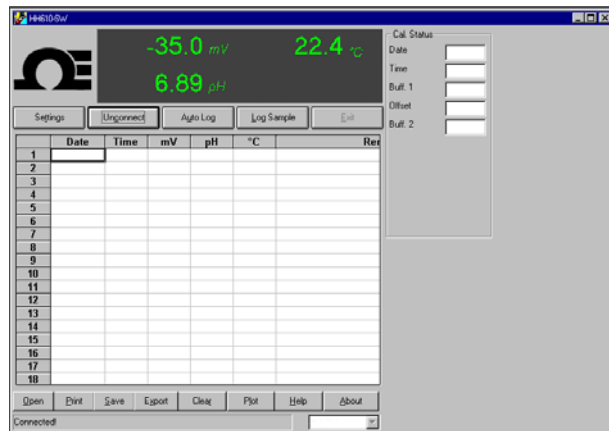
This will enable the **Auto Log** and the **Log Sample** functions and will start the LCD updating process.

Note: Before connection the correct communication port and baud rate have to be selected in the **Settings** window.

LCD Display Information

An LCD simulator displays the readings on the upper part of the main window.

Note: This feature is available only after the connection has been completed (by pressing **Connect**).

During connection, the program will update the readings of the LCD on the PC screen with the interval set in the delay dialog box of the **Settings** window (see above).

There can be up to 4 values displayed, depending on the model of the meter connected and channels in use.

AUTO LOG

When the instrument is connected, you can log subsequent readings automatically. The sampling interval and the maximum number of samples must be set in the **Settings** window. To start logging, click on **Auto Log**.
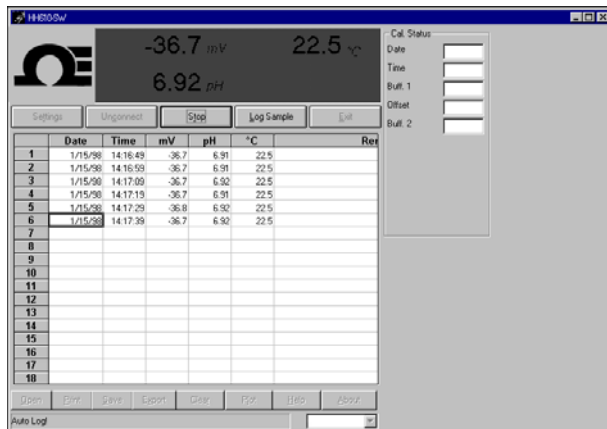
During automatic logging, the samples are shown on the worksheet in the main window. The user can add a remark for each sample in the last column.

To stop logging before the maximum number of samples is reached, click on the **Stop** button (which is now displayed in place of **Auto Log**).

When logging is stopped, you can save, export, print or clear the table by pressing the proper button on the main window.

LOGGING A SINGLE SAMPLE

If you need to log a single sample (even during auto logging) click on the **Log Sample** button and the current LCD reading will be added to the table.

PRINTING, PLOTTING, SAVING, REVIEWING AND EXPORTING YOUR DATA

The **Print**, **Open, Save** and **Export** buttons bring up the dialog boxes where standard print and save options are available.

If you have a printer installed in your system, when you click **Print**, the printer's dialog box will appear and allow you to print data on the worksheet.

By pressing **Save**, you can save data on the worksheet as an Excel®4.0 worksheet file.

By pressing **Export**, you can export data on the worksheet as a .CSV text file (Comma Separated Values), which is well recognized by most of worksheets programs.

By pressing **Open**, you can select a previously saved file (in Excel®4.0 .XLS format) of data to review.

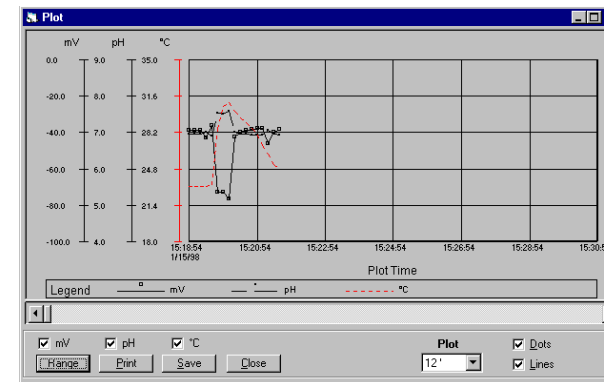The **Plot** button is to obtain the data selected on the worksheet in graphic format. If no data is selected, **all** data will be plotted.

Note: To select desired lines, just press the left mouse key and drag over the lines.
Plotting of selected lines is disabled when logging is in progress.

Once **Plot** is pressed, the **Plot** window pops up. This window includes:
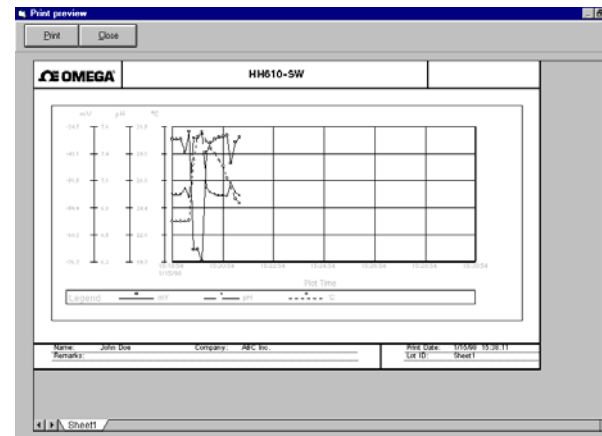
• graphs of selected magnitudes;

- checkboxes for showing/hiding magnitudes;
- selection list for plot period (i.e. the time span for the displayed graph, for example 30 minutes);
- checkboxes for showing/hiding dots and lines on the graphs;
- **Range** button, to pop up the **Plot settings** window to select ordinate axis minimum and maximum values for each magnitude and decimal points;

- **Print** button, to pop up a **Print preview** window and then print it by means of the **Print** button or escape by pressing **Close**; user can also obtain a magnified view of a part of the graph by clicking on it. Another click will revert back to the full view;
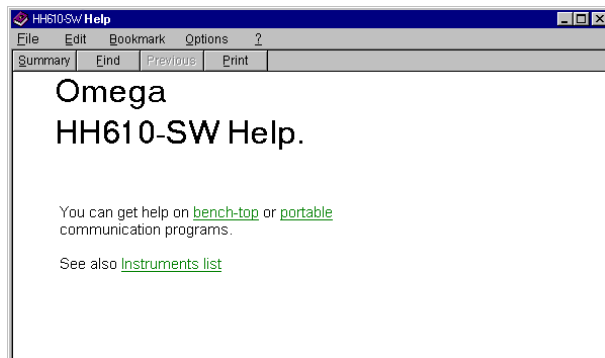
- **Save** button, to save graphs to a Windows MetaFile (with .WMF extension) that can be imported by a number of applications;
- **Close** button, to close **Plot** window.

GETTING HELP

When in the main window, click on **Help** and the **HH610-SW Guide** window will pop up.

EXIT THE PROGRAM

Before quitting the program, stop the logging sequence, if it has been active. Then press the **Unconnect** button to disconnect the meter and then press **Exit**.

The program will prompt the following message:
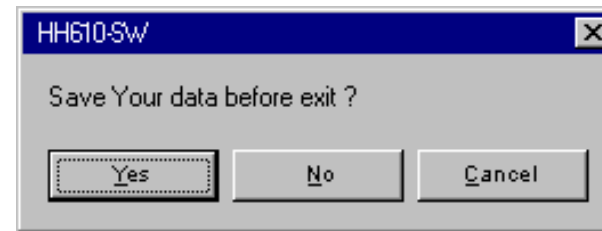
If you press **Yes**, the save dialog box will be opened before exiting.

If you press **No**, the program will exit and discard the memorized data.

If you press **Cancel**, the program will return to the main window.

HH610-SW FOR PORTABLE METERS

With the portable communication program you can retrieve the logged data of your portable instrument (see list on page 4).

The connection with the PC is via one of the computer's serial ports. Information about data communication rate and port number can be found in the **Settings** window.

Make sure that your portable meter has some data memorized prior to connecting it to the PC (refer to the meter's instruction manual).
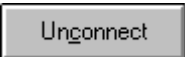
Logged data can be saved in Excel® 4.0 format or exported as a CSV text file.

When the **HH610-SW** program is used with a portable meter, the main window will look like the one shown on next page.
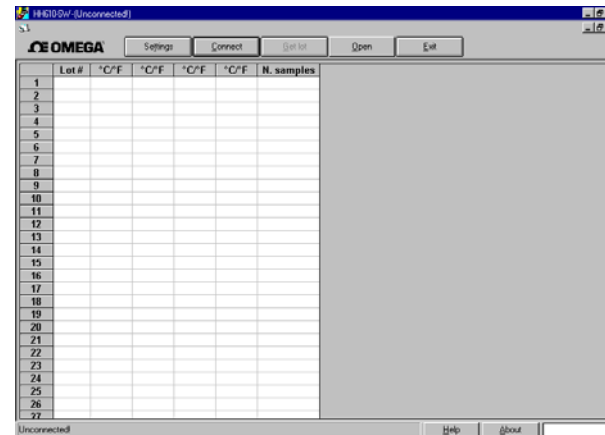
In this window several functions are available from the corresponding buttons:

  To show the setting window
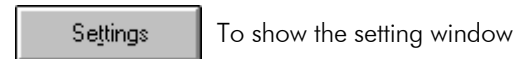
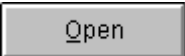| Button	Description
Connect	To start the communication with the instrument
Unconnect	To stop the communication with the instrument
Get lot	To load a sample lot from the instrument
Open	To review a previously saved file of data
Exit	To exit the application
Help	To open the help window
About	To open the general information window

Note: Commands are also available by holding the ALT key and then pressing the underlined character.

SETTINGS

The **Portable Settings** window make it possible to set communication parameters. Click on the **Settings** button and the following window will appear:
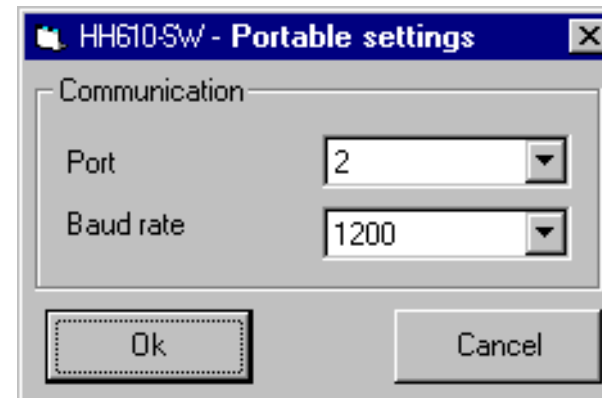
In this window the two following parameters can be set:

Port: the COMM to which the meter is connected;

Baud Rate: the transmission speed.

Note: The meter and the mouse cannot use the same COMM port. If the 'Port not available' message is shown, the system is already using the port that was selected.

CONNECTION

To connect the meter to the computer, press **Connect** in the main window of the program.

During connection, the instrument status is loaded and displayed in the **Instrument Status** window. This window reports, for each lot of data previously logged by the instrument, the lot number, the channel number and the number of samples logged.

The **Instrument Status** is only available while the instrument is connected and it is closed when the **Unconnect** button is pressed.
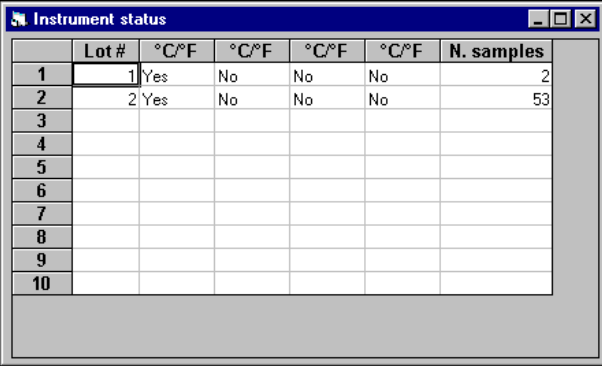
Note: If your portable meter has no data stored in its memory, you cannot connect it to the PC. The

	Lot #	°C/°F	°C/°F	°C/°F	°C/°F	N. samples
1	1	Yes	No	No	No	2
2	2	Yes	No	No	No	53
3						
4						
5						
6						
7						
8						
9						
10						

program will then display a message to notify that this condition has occurred; refer to the meter's instruction manual for the logging procedure.

Before connection starts, it is necessary to select the correct COMM port and the Baud rate in the **Settings** window (see above).

RETRIEVING A SAMPLE LOT

To load a sample lot from the instrument, the program must be connected to the instrument, so that the **Instrument Status** is displayed. Select the desired lot in the **Instrument Status** and then press **Get Lot** in the main
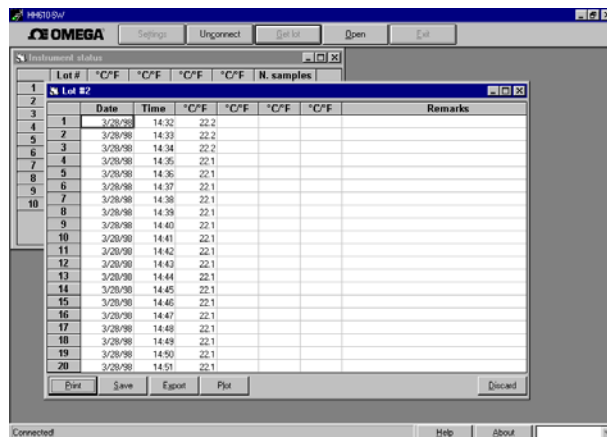
window. The **Lot** window will be opened reporting the samples measured.

In this window, you can add remarks to your data by typing them in the last column. You also can save, print and export the data.

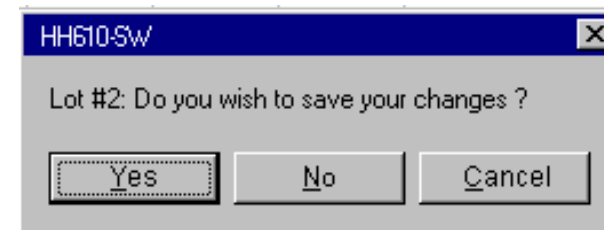 To close the window, press the **Discard** button at the bottom of the **Instrument Status** window.

The program will ask if you want to save or to discharge without saving the current lot by displaying the following message:

PRINTING, PLOTTING, SAVING, REVIEWING AND EXPORTING YOUR DATA

The **Print**, **Save** and **Export** buttons in the **Lot** window and the **Open** button in the **Main** window bring up the dialog boxes where standard options are available.

If you have a printer installed in your system, when you click **Print**, the printer's dialog box will appear and allow you to print data on the worksheet.
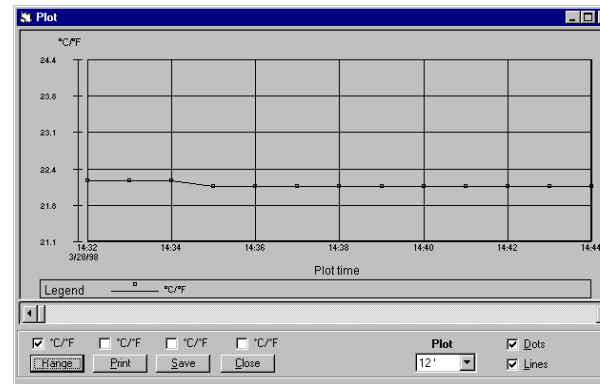
By pressing **Save**, you can save data on the worksheet as an Excel®4.0 worksheet file.

By pressing **Export**, you can export data on the worksheet as a .CSV text file (Comma Separated Values), which is well recognized by most of worksheets programs.

By pressing **Open**, you can select a previously saved file (in Excel®4.0 .XLS format) of data to review.

The **Plot** button in the Lot window is to obtain the data selected on the worksheet in graphic format. If no data is selected, **all** data will be plotted.
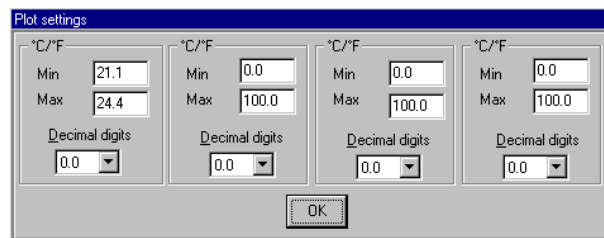
Note: To select desired lines, just press the left mouse key and drag over the lines.

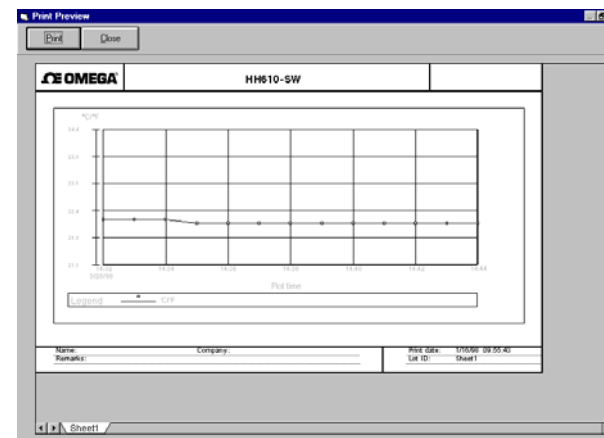Once **Plot** is pressed, the **Plot** window pops up. This window includes:

- graphs of selected magnitudes;
- checkboxes for showing/hiding magnitudes;

- selection list for plot period (i.e. the time span for the displayed graph, for example 30 minutes);
- checkboxes for showing/hiding dots and lines on the graphs;
- **Range** button, to pop up the **Plot settings** window to select ordinate axis minimum and maximum values for each magnitude and decimal points;

- **Print** button, to pop up a print preview window and then print it by means of the **Print** button or escape by pressing **Close**; user can also obtain a magnified
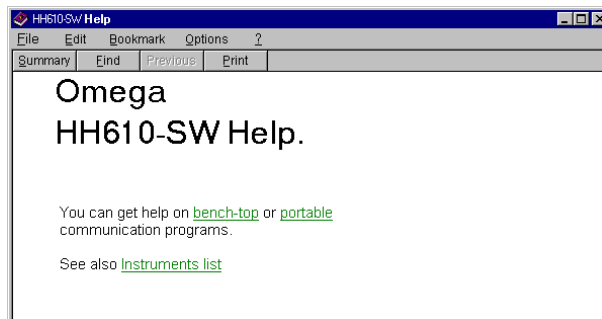
view of a part of the graph by clicking on it. Another click will revert back to the full view;

- **Save** button, to save graphs as Windows MetaFile (.WMF) that can be imported by many applications;
- **Close** button, to close **Plot** window.

GETTING HELP

When in the main window, click on **Help** and the **HH610-SW Guide** window will pop up.

EXIT THE PROGRAM

Before quitting the program, press the **Unconnect** button (if still connected) and then press **Exit**. This will close all open windows.

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