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System Requirements:
Win 95 or higher operating system, 486 PC or higher with at least one serial port, RS232 Cable (#840054 sold separately),

Features:
• Up to 16000 sample readings with real-time clock memory.
• Programmable sample interval from 1 second to 3,600 seconds
• Unit displayed with changing setting
• User-defined maximum (High) and minimum (Low) alarm setting.
• Provides further analysis by downloading data to a 3rd party software program. Data is saved in a text format (.txt) and can easily imported into spreadsheets, databases or word processing programs.
• Includes one CD Rom and this operation manual.

Software Installation:
• Connect the RS232 cable to the computer’s com port.
• Insert the CD Rom into the computer.
• Click the Install Software button and follow the directions.
• When the installation is complete exit the program and restart your computer.
• Start the software and configure the com port settings (Fig. 2, Page 5).
General Operating Instructions:

• Start the software. The following screen example (Fig. 1) shows the screen’s appearance before the manometer is connected. The readings in the lower blocks indicate 0.00 and “Undefined” as the title.

![Fig.1]

• Connect the RS232 cable to the computer’s serial port and connect the Manometer to the cable.

![Fig.2]

Com Port Settings

• Click “Com Port” (Fig. 2) on the menu bar, or press Alt + C simultaneously to enter Com Port settings.

• Set up the RS232 port and related settings (Baud rate, Data bits, Parity and Stop bits, Com Port).

• Click OK to save the setting, then click Exit. Click Cancel to exit without saving.
The following example (Fig. 3) shows the lower blocks of the screen with the manometer connected. The word “Pressure” is shown in the left block and indicates differential pressure data logging. The reading is shown with the unit of “PSI”. The right block shows “Undefined” with a zero (0.00) value.

Fig.3
Using High/Low Alarms
Click the Alarm SW button to activate the alarms (Fig. 5). Set your alarm limits using the up or down arrows. If the reading exceeds the high or low limits, the corresponding alarm button will turn red.

Statistics
Click “Statistics” on the menu bar, or press ALT + T to view and print a statistic histogram (Fig. 4). Click EXIT to close.

Fig.4
On the left side of the screen, there are 3 settings for data logging (Fig. 5): Logger Setting, Recording Setting and Y OFFSET.

**Logger Setting**

Select **Sample Data** settings: 4000, 80000, or 16000 records.

Select **Sample Rate** in Seconds: 1 to 3600. If the reading is out of range, a pop-up warning will appear on the screen.

**Recording Trigger Setting**

Click **Start** or Alt+S to start recording

Click **End** or Alt+E to stop recording.

Clicking **Exit** closes the program.

**Display Control**

**Y OFFSET(DIV):** There are 5 ranges: –5, -2, 0, 2, and 5.

**Y GAINS(DIV):** There are 7 settings: 1, 2, 5, 10, 50, 100 and 200.
The above example (Fig. 6) shows the Y OFFSET as “0” and Y GAINS as “50.” The Y range indicates from 0, 50, 100, 150, etc. in increments of 50.
By selecting Y OFFSET as “-5” and Y GAINS as “50, the Y range indicates from –250, -200, -150, -100, -15, 0, 50, 100, 150, 200, etc, in increments of 50 (Fig. 7).
The above screen (Fig. 8) shows Y OFFSET as “0” and Y GAINS as “50”. The Y range indicates from 0, 50, 100, 150, etc. in increments of 50.
The above screen (Fig. 9) shows Y OFFSET as “0” and Y GAINS as “100”. The Y range indicates from 0, 100, 200, 300 etc. in increments of 100.
Display Range

Using the Display Range, you can control which records you view on the screen. There are 5 ranges: 0.5K (500), 1K, 2K, 4K, and 8K. The below screen (Fig. 10) shows the display range indicator on “2K” The record numbers that will be displayed range from 0000 to 1999 for a total of 2,000 (2K) records.

![Fig. 10]
Open an Existing File

- Click **Retrieve File** on the tool bar.
- Click on the desired file name, then click OK.
- The number of retrieved records will be displayed. (Fig. 11).
- All files are in the .txt format.

Fig. 11
Saving Files

• Click Save File on the menu bar.
• Save the data with a new name by clicking Save File and typing a new name as the file name.
• The record number, date, time, and PSI data are saved as a text (.txt) file.
• After saving the file, additional analysis can be performed using 3rd party software.

Using Data with 3rd Party Software

• In your software program, select file, open, then select “All Types” or “Text” from the “Files of type” box. Find the file you saved. Choose the “Tab delineated” file.
• You can now work with the data as you would any other data file in your program. Use the “Save As” selection to save the data in the new format. Consult the 3rd Party Software instructions for more information.

Data Format

Baud Rate: 2,400 bits/sec.
Data Bits: 8, Stop Bit: 1
PXXXX P-XXXX
E1OL: Error msg - the logging data exceeds max. pressure range.
E2UL: Error msg - the logging data exceeds min. pressure range.
Print Options

• Click Print Graph on the tool bar, or ALT + P on the keyboard.
• The following (Fig. 12) is an example of the print option screen. Click Properties to change printers. You can also change paper specifications from this option screen.

Fig. 12
WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for a period of one (1) year from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will break the waterproof seal and void the warranty.

To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
8281 East Evans Road, Suite #103
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days of purchase.