

LIMITED WARRANTY

Sealed Unit Parts Co., Inc. hereby warrants that it will repair or replace, at its option, any part of the Event Data Logger, which proves defective by reason of improper workmanship or material, free of charge for parts and labor, for a period of one year from the date of original purchase by the buyer. This warranty does not apply if, in the sole opinion of Sealed Unit Parts Co., Inc., the Event Data Logger has been intentionally damaged due to misuse, neglect, improper packing, shipping, modification or servicing by other than Sealed Unit Parts Co., Inc., or personnel authorized by Sealed Unit Parts Co., Inc.. For information on how to obtain service under this warranty contact the dealer where your Event Data Logger was purchased, or Sealed Unit Parts Co., Inc. at the address printed below:

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LIABILITY DISCLAIMER STATEMENT

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EVENT DATA LOGGER INSTRUCTIONS

The SUPCO Event Data Loggers are self-contained precision instruments for recording the presence or absence of voltage, light, sound or dry contact closure. The DLEV and DLEC are supplied with 2 clip leads, the DLEL and DLES are self-contained with internal light and sound transducers. Each Event Logger can store up to 8,000 event measurements for each recording. The recordings can be read using the PC interface cable or printed to the optional SUPCO Data Plotter or retrieved to the DataStor.

The Windows™ compatible software allows the user to read the recorded data in text or graphical format, and to store the recorded data for future reference or analysis. Applications include monitoring of environmental areas, coolers, freezers, food or storage areas, laboratories, greenhouses, museums, etc. Refer to the following instructions for explanations of how to record and how to retrieve event recordings.

SOFTWARE INSTALLATION

The **Data Logger to PC** program is supplied on 3½" floppy disks. To install the software follow the instructions below:

1. Insert disk 1 into Drive A.
2. If you are using Window98/95, click on **START**, click on **RUN**.
3. Type **A:SETUP** and press **Enter**.
4. If you are using Windows 3.1, click on **Program Manager**.
5. Select **FILE**, and select **RUN**.
6. Type **A:SETUP** and press **Enter**.

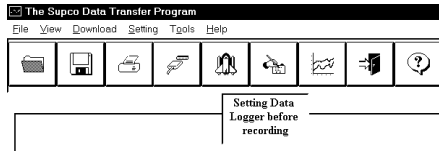
If you are not familiar with the above commands refer to the instructions that are supplied with your version of Windows.

SETTING THE EVENT LOGGER

The Event Logger records the time and date for every occurrence of event change. In the case of the DLEV that will be when the voltage goes from ON to OFF or from OFF to ON. For the DLEC the time and date will be recorded every time the dry contacts the logger is connected to open or close. When using a DLEL or DLES the time and date will be recorded every time the light intensity or sound level passes above or below the threshold set by the sensitivity control. A user message of up to 20 characters can also be stored. This message can be used to identify a customer's location or identify a particular logger for tracking purposes. Use the example below to set an Event Logger.

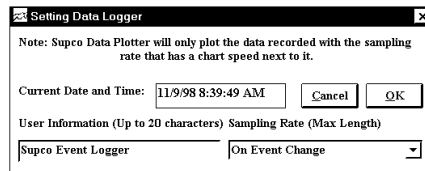
1. Plug the PC interface cable (DLCABLE) into the printer port of the computer being used. Plug the Event Logger being set to the cable from the PC interface.
2. Start the Data Logger program. If you are using Windows 98/95, click on **Start**, click on **Programs**, click on **Supcolog**, click on **SUPCOLOG**.
3. If you are using Windows 3.1, double-click on the window labeled **Supcolog**, then double-click on the **SUPCOLOG** icon.

4. The program will open with a blank window showing no text or graph. On the toolbar located along the top of the screen, click on the **Setting Data Logger before recording** button.



This will open a secondary window **Setting Data Logger**.

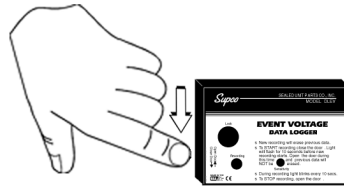
5. All Event Loggers record on event change. That means there is no recording interval to set. The setting window will allow you to update the clock in the Event Logger and also to enter a user message. If a user message is desired, click in the **User Information** field and add the desired message. Note that the last message entered will be displayed and will remain until it is erased or changed by the user.



6. The time and date the logger is set to will be the same time as the PC clock. It is important to make sure the time set in the PC is correct. The PC time will be displayed as the **Current Date and Time** in the setting window. Refer to the owner's manual for your computer to find instructions on setting the PC time if it is not correct.
7. When all of the settings are to your satisfaction, click on OK to store the setting and to close the window.
8. The Event Logger is now set and ready to begin a new recording. Disconnect the Event Logger from the PC interface. Note that all four Event Loggers are set by using the same procedure.
9. To exit the program click on the **Exit** button on the tool bar.

TO START A RECORDING

To begin a new recording slide the access door closed. The LED indicator will begin to flash for 10 seconds. During this period the recording can be canceled without losing the data previously recorded. When the LED indicator stops flashing, a new recording has begun and any previous data has been erased.



START Recording / Slide Door DOWN

The Event Logger recording function can be “locked” on by passing a Ty-Wrap™ or similar restriction through the logger-mounting opening. This can be used to prevent accidental or intentional disruptions of an event recording.

The LED will flash every 10 seconds to indicate operation. A bright flash of the LED is used to indicate that an event function has occurred and been recorded. This is also how the sensitivity control is adjusted if you are using a DLEL or DLES. A dim flash is used to indicate the Event Logger is operating properly and no event functions have occurred or have been recorded. The LED indicator will continue to flash until the user stops the recording, or the memory has reached its maximum capacity of 8,000 event samples.

NOTE: If the battery is exhausted during a recording the Event Logger will automatically terminate the recording and save any temperature data recorded up to that point. The LED will stop flashing and the Event Logger will not allow a new recording to be started until the battery has been replaced. Recorded data can be retrieved regardless of the condition of the battery.

SETTING THE SENSITIVITY CONTROL

The DLEL and DLES both have a sensitivity control that allows the user to set the threshold of light or sound intensity that triggers an event recording.

The easiest way of setting the control is to start a test recording and turn the sensitivity control to the middle of its range. Turn the control so that the LED gives a bright flash when the light or sound increases (ON) and a dim flash when the sound or light decreases (OFF). In some cases the maximum sound or light level will be beyond the range of the control so the best result will be to set the sensitivity range above the minimum level far enough that false triggering will not occur. After the sensitivity control is set the recording can be terminated and a new recording started to capture the actual event information.

CONNECTING THE DLEV

Plug each clip lead firmly into the DLEV. Make sure that there is no strain that could pull the clip leads out of the DLEV socket. Attach the clip leads from the interface box to the points being measured. The polarity of the leads is not important.

MAKE SURE THE EQUIPMENT POWER IS OFF BEFORE CONNECTING THE LEADS!

CAUTION!

Electrical connection to any type of operating equipment is Dangerous. The DLEV leads should only be connected when it has been determined that the power is off and the equipment is safe to touch!

CONNECTING THE DLEC

Plug each clip lead firmly into the DLEC. Make sure that there is no strain that could pull the clip leads out of the DLEC socket. Attach the clip leads from the interface box to the dry contacts being measured. The DLEC can only be connected to dry contacts. The polarity of the leads is not important.

DO NOT connect the DLEC leads to any contacts that have electrical power applied. This will cause permanent damage to the DLEC!

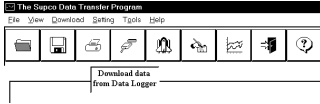
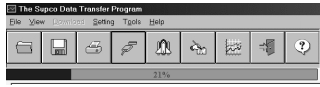
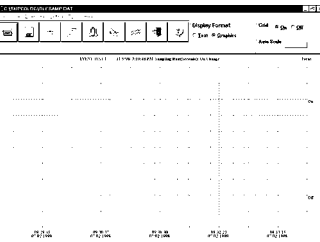
TO STOP A RECORDING

Slide the access door open (If locked, first remove the restriction device). The LED indicator will stop flashing. The recorded event information can be retrieved using the Windows compatible software and PC interface cable, or the event recording can be plotted on a circular chart using the optional SUPCO

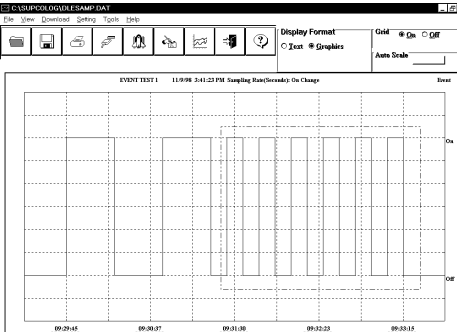


Data Plotter DP3 or retrieved to the DataStor. **NOTE: Do not close the door until a new recording is desired!** It is important to leave the door open until you want to start a new recording. Starting a new recording now will erase any previous recording. To prevent accidental erasing of recordings the sliding access door of the Event Logger can be “locked” open by passing a Ty-Wrap™ or similar restriction through the lock opening. The event recording will remain in the Event Logger until a new recording is started. The recordings may be retrieved as many times as required or the battery can be removed with no effect on the stored data.

RETRIEVING EVENT RECORDINGS

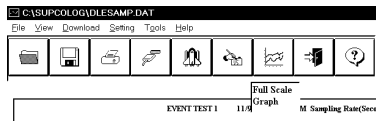
1. Plug the PC interface cable into the printer port of the computer being used.
2. If you are using Windows 98/95, click on **Start**, click on **Programs**, click on **Supcolog**, click on **SUPCOLOG**.
3. If you are using Windows 3.1, double-click on the window labeled **Supcolog**, then double-click on the **SUPCOLOG** icon.
4. The program will open with a blank window showing no text or graph. On the toolbar located along the top of the screen click on the **Download data from Data Logger** button. When you click this button the program will retrieve data from the logger immediately.
 
5. Along the top of the screen you will see a progress bar to indicate that data is being retrieved from the Event Logger. Depending on the size of the recording a Pentium based PC will take several minutes to retrieve the information. The slower the computer speed the longer it will take to retrieve and display information.
 
6. When all the data has been retrieved from the Event Logger the screen will automatically change to an auto-scaled graphic screen. Note the example picture on the right.
 

VIEWING A RECORDING AS A GRAPH

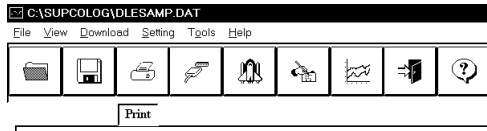
1. After data has been retrieved from the Event Logger it is automatically displayed as a graph. The program will display the entire recording as a plotted graph with the event function on the vertical scale and the time on the horizontal scale.
 
2. To zoom to a particular part of the graph place the mouse cursor in a corner of an imaginary box that will enclose the area of interest.
3. Press and hold the left mouse button and move the cursor in a diagonal direc-

tion from the original position of the cursor. A dashed line forming a box will be displayed.

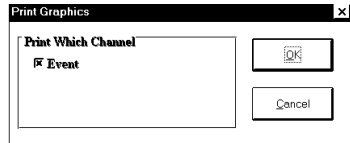
4. Move the cursor until the box encloses the area of interest and release the left mouse button.
5. The box will now be stationary on the screen. Move the mouse cursor so that it is inside the box and click the left mouse button.
6. The enclosed area of the box will now be zoomed so that it fills the entire window. This may be repeated if additional magnification of an area of the graph is desired.
7. To return to the original graph click on the **Full Graph** button. Note that for Event Loggers the Full Graph and the Auto-scale button perform the same function.



8. The graph on the screen may be printed at any time by clicking on the **Print** button. Note that the print-out will be what is displayed on the screen when the button is clicked.

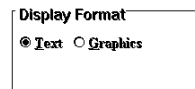


9. A window will open in the middle of the screen. In the case of the Event Loggers the only print option is the event information. To print this click on **OK**, or click **Cancel** if you change your mind.

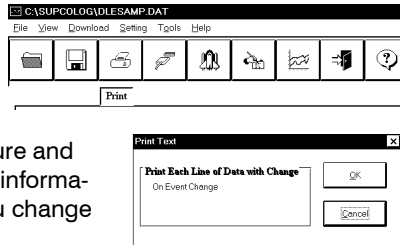


VIEW A RECORDING AS TEXT

1. When a recording is first retrieved or when a saved recording is opened, the default format is an auto scaled graph of the recording.
2. To view a recording as text when a graph is on the screen click the **Text** button located in the display box.
3. Use the Windows scroll bar on the right hand side of the screen to scroll through the text information.

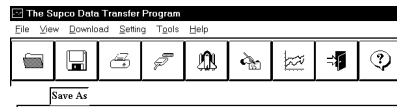


4. To print the text information as text data click on the **Print** Button. A window will open in the middle of the screen. The event function does not use the filter that is available with the temperature and humidity loggers. To print the text information click **OK** or click **Cancel** if you change your mind.



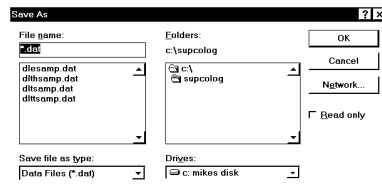
SAVING A RECORDING

A recording may be saved at any time in either the text or graphic display. All recordings are saved in a text format that is compatible with all major word processors and Excel. To save a recording click on the **Save As** button,



this will open a window prompting you to type a name for the recording and which directory you wish to store the file.

To type a file name click in the box below **File Name** next to the asterisk. Type in a name for the recording of eight characters or less and delete the asterisk. Do not change the **dat** extension of the file, as the program will not recognize it as a valid data file.



When you have typed in a name for the recording you wish to save click **OK**.

BATTERY INSTALLATION AND REPLACEMENT

The Supco Data Loggers use a 9-volt Alkaline battery (not supplied), which will have an average life of 1 year. The actual life of the battery will depend on a variety of factors such as the temperature the battery is used in, the sampling rate of the logger, and how often the Data logger is used. Extreme temperatures will result in reduced battery life. If the battery is exhausted during a recording, the Data Logger will automatically terminate the recording and save any data recorded up to that point. The LED will stop flashing and the Data Logger will not allow a new recording to be started until the battery has been replaced. Recorded data can be retrieved regardless of the condition of the battery.

When the logger will not be used for an extended period, or when the battery is exhausted, it is strongly recommended to remove the battery to avoid damage to the logger from battery leakage. **Use only Alkaline batteries.**

Substitution of a different battery can result in reduced performance or permanent damage to this instrument.

To install or replace the Data Logger's battery follow the steps below:

1. Make sure the logger is not set in the recording position. If so, slide the door open. Any information recorded up to this point will not be lost and is automatically saved.
2. Remove the rear battery cover.
3. The battery and battery clip may be extended from the battery compartment to facilitate replacement.
4. If you are replacing the battery remove the discharged battery from the battery clip and dispose of properly. **Allow at least one minute to elapse before attaching a new battery. Failure to do so will result in the logger not resetting properly and the logger will not function.**
5. Line up the connector of the new battery and push onto the pins of the battery clip with a firm fluid motion. It is important not to make repeated momentary contact, as this will cause a reset failure in the logger. **Do NOT reverse the battery connection, even momentarily, as this can result in loss of data or permanent damage to the logger.**
6. Place the battery in the battery compartment of the Data Logger.
7. Replace the battery cover.
8. Test the logger by closing the door and observing that the LED begins flashing within 5 seconds of the door being closed. If the LED does not flash or the LED stays on constantly go back to step 4 and repeat the replacement procedure.

Once the battery has been replaced it will be necessary to reset the logger's internal clock. Refer to the section **Setting the Data Logger** for instructions on how to do this.

EVENT LOGGER PRODUCT SPECIFICATIONS

DLEV Range	24VAC to 270VAC (50/60Hz.) 24VDC to 180VDC
DLEC Range	DRY Contacts from 0 to 10 Ohms
DLEL Range	Illumination Threshold Range 18 LUX to 1900LUX +/- 20%
DLES Range	Sound Threshold Range 40db to 114db @ 1Khz +/- 20%
Ambient Operating Temperature Range	+10°F to +140°F (-12°C to 60°C)
Storage Temperature	-40°F to +170°F (-40°C to 76°C)
Time Accuracy	+/- 100ppm @ 75°F (24°C)
Measurement Capacity	8,000 Event Samples
Size	2.5" x 3.6" x 1.1" (63.5mm x 91.4mm x 1.1mm)
Weight	0.26 Lbs. (0.12Kg.)
Power Source	9 Volt Alkaline Battery
Battery Life	1 Year (Average Use)

DP3 DATA PLOTTER - PART No. DP3

The SUPCO DP3 is an optional accessory instrument that allows the user to retrieve data and program SUPCO data loggers in the field without the need of a computer. Using the DP3 you can plot recorded information from a data logger or change the settings of a data logger prior to making a different data recording. The DP3 can be operated from batteries or from the supplied AC adapter. The DP3 uses a series of structured menus to provide a user friendly intuitive style of operation. The DP3 also serves as a conventional temperature recorder similar to the popular SUPCO CR87 series of temperature recorders.



DATASTOR - PART No. DST

The DataStor is a battery powered hand-held instrument that allows the user to retrieve and store recordings made with any of Supco's data loggers. The user can then transfer the stored recordings to a computer or print them on-the-spot to virtually any parallel printer without using a computer. The DataStor can save up to 31 full recordings from any of Supco's data loggers. Each recording is individually identified so the user can transfer a single recording or all of the saved recordings to a computer using the data logger software.

