TRIPLETT

SLDL20
Sound Level Datalogger

CE

Introduction

Congratulations on your purchase of the Triplett SLDL20 Sound Level Meter Datalogger. This device measures and stores approx. 129,920 readings. Using the supplied Windows™ software, the datalogger can be configured for datalogging rate, high/low alarm limits, frequency weighting, response time, start-mode, and other parameters. The software is also used to download the stored data to a PC. Sound Level data can then be graphed, printed and exported to other applications. The data logger is supplied with a long-life lithium battery. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Safety Information ⚠

Read the following safety information carefully before attempting to operate or service the meter. Use the meter only as specified in this manual.

- **Environment conditions**

Altitude: 2000 meters max.
Relative humidity ≤ 90% RH
Operation Ambient 32 to 104°F (0 to 40°C)

- **Maintenance & Cleaning**

Repair or servicing not covered in this manual should be performed by qualified personnel.
Periodically wipe the case with a dry cloth. Do not use solvents or abrasives.

- **Safety symbols** $\mathsf{C}\mathsf{E}$ Complies with EMC

Maintenance

● *WARNING: To avoid electrical shock, disconnect the meter from any circuit and turn OFF the meter before opening the case. Do not operate with an open case.*

Battery Replacement

1. Remove the green protective cover by pushing the bottom of the meter until it slides through the opening at the top.

2. Remove the two Phillips head screws that secure the battery compartment at the back of the meter.

3. Open the battery compartment and replace the 3.6V lithium battery observing correct polarity.

4. Re-assemble the meter before use.
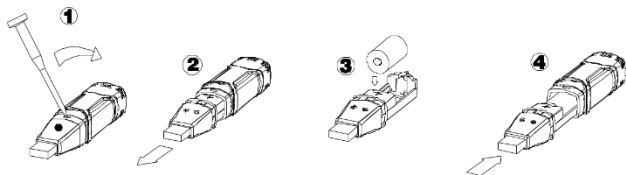
Safety: Please dispose of batteries responsibly; never dispose of batteries in a fire, batteries may explode or leak. If the meter is not to be used for 60 days or more, remove the battery and store separately.

Meter Description

1. Green LED
2. Red and Yellow LED
3. Button
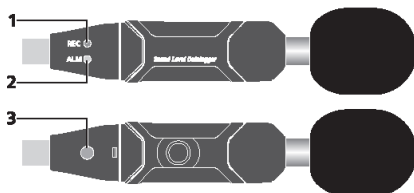
Operation

The maximum number of data points that the logger can hold in its internal memory is 129,920. The maximum number of Real Time measurements is 10,000.

Operating System Compatibility
WindowsTM 2000, XP, Vista, and Windows 7, 10

Minimum Hardware Requirements
- Desktop or Notebook PC with 90MHz (or better) clock speed
- 32 MB RAM
- 7 MB of hard disk space (for Datalogger USB software)
- Monitor display resolution of 1024 x 768 with High Color (16 bit)

File(f)   Instrument(I)   Window(W)   Help(H)

Main Menu

- ## File

Save	Save the recorded data to the disk.
Open	Open a saved file.
Print Setup	Change the printer and printing options.
Print Preview	Preview the graph or the list before printing.
Print	Print the graph or the list.
Exit	Close the datalogger program.

- ## Instrument Cal Adjust   Use the Calibration
  Adjustment procedure if readings exceed the specified accuracy tolerance.

Logger Setup	Configure the sampling rate, the total number

	of data points to log, high and low alarm limits, the LED flash rate, storage (STOR) or real time (RT) logging, frequency weighting (dBA/dBC), response time (fast or slow), and manual/automatic logging start
Download	Download data from the datalogger.
Stop Running	Stop datalogging (real time RT mode only).
Previous Measurement	The most recent measurement data will be recalled.

● Window

| **Instrument** | Show or hide the instrument window. |
| **Info Dialog** | Show or hide the info dialog window. |

● Help

| **About** | Display the software version number. |
| **Help Topics** | Display the software help document. |

Cal Adjust (Calibration Adjustment)

The Cal-Adjust feature corrects for error in the output of the microphone to the calibrated reference value from a Sound Level Calibrator. Note that this procedure can only be performed after the offset is determined empirically from calibrator measurements.

Connect the meter to the computer using the USB extension cable.

Click on the icon [ ] on the menu bar.
The following window appears:
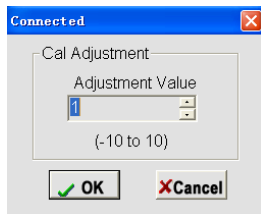
Adjustment Value range: Adjustment Value is a single calibration value range: "-12.5" to"12.5", value "1.0" means "1dB".

For example, assume a reading of 94.5dB when the datalogger is connected to a 94.0dB calibration signal.

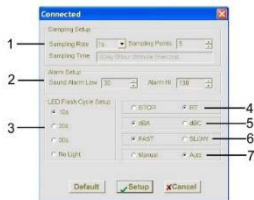Set the "Adjustment Value" to "-5" (-0.5dB) to correct for the 0.5db error.
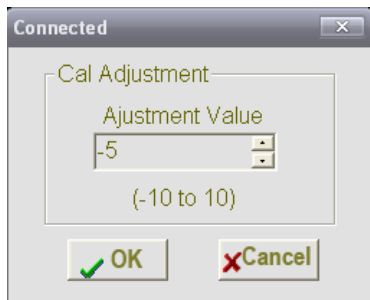
Click "OK" and the "Total calibrated value is -5" statement will appear. The calibration is now complete.
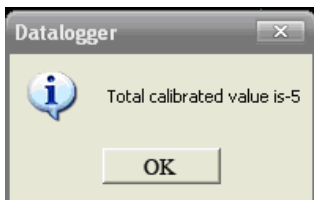
Datalogger Setup

Click the [icon] icon on the menu bar. The Setup window will appear as shown below; Descriptions for each field in the Setup window are provided directly below the illustration:

1. The 'Sampling Setup' field instructs the DATA LOGGER to log readings at a specific rate and for a finite number of data points. The Sampling Time 'combo box' located beneath the Sampling Rate and Sampling Points fields shows the total number of days, hours, minutes, and seconds the Datalogger will run based on the Sample Rate and Sample Point settings. Note that a sample rate of 50ms can only be selected for use in RT (real time) mode.

2. 'Alarm Setup' allows the user to set HIGH and LOW measurement limits.

3. 'LED Flash Cycle Setup' allows the user to set the time in seconds between each flash of the LED. Select "No Light" for maximum battery life.

4. The Datalogging record mode can be set to STOR (store readings to memory) or RT (real time) where readings are displayed in real time on a PC.

5. The Datalogger frequency weighting can be set to dBA or dBC.

   Note: With 'A' weighting selected, the meter responds like the human ear (boosting and cutting the sound amplitude over the frequency spectrum). 'A' weighting is used for environmental measurements, OSHA regulatory testing, law enforcement, and workplace design. Select 'C' weighting for flat response measurements (no boost or cut). 'C' weighting is suitable for the sound level analysis of machines, engines, etc. Most OSHA related testing is performed using 'A' Weighting and SLOW Response Time settings.

6. The Datalogger response time can be set to FAST or SLOW.

   Note: Select FAST to capture noise peaks and noises that occur very quickly. In FAST mode, the meter responds in 125ms. Select the SLOW Mode (meter responds in 1 second) to monitor a sound source that has a reasonably consistent noise level or to average

quickly changing levels. Selection of Fast or Slow is determined by the application and any directives or standards related to that application.

7. The Manual and Automatic select buttons allow the user to start data logging immediately (Auto) or at a later time (Manual).

Click the SETUP button to save changes. Press the DEFAULT button to return the Logger to its factory default condition. Press the CANCEL button to abort the setup.

Note: Displayed data will be permanently erased when "Setup" is selected. To save the displayed data, Select "Cancel" and then use the data Download and Save functions to save the data.

Note: Always ensure that the remaining charge in the battery is sufficient to last the complete duration of the logging exercise. If in doubt, install a fresh battery before logging critical data.

Logging Readings with the Datalogger

1. Configure the Datalogger using the software as explained in this HELP utility.
2. MANUAL LOGGING START: With the datalogger in the Manual mode (configured using the Datalogger Setup screen) and disconnected from the PC, press and hold the Datalogger's push-button for approx. 5 seconds to start logging readings; the LEDs will flash Red, Green, and then Yellow indicating that logging has begun.
3. AUTOMATIC LOGGING START: With the datalogger in the Automatic mode (configured using the Datalogger Setup screen) the Datalogger will start immediately. The LEDs will flash Red, Green, and then Yellow indicating that datalogging has begun.
4. During measurement sessions, the green LED flashes at the frequency selected in the Datalogger Setup screen.
5. When the Datalogger memory is full, the yellow LED will flash for 10 seconds.
6. If the battery voltage runs critically low, the LEDs will display Red and Green lights simultaneously.

7. Replace the battery with a ½ 'AA' 3.6V lithium battery. Battery replacement instructions are provided later in this guide.

Datalogger Download

To transfer the data that is stored in the Logger to a PC:

1. Connect the DATA LOGGER to the same USB port used when the DATALOGGER was initialized.

2. Open the Datalogger software program.

3. Click the Download icon .

4. The window shown below will appear. Click DOWNLOAD to begin transferring readings. The logger will be empty of data once readings are transferred.
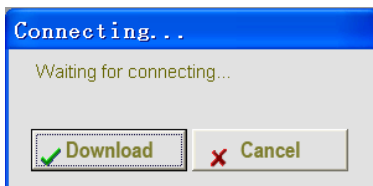
If readings are successfully transferred, the Data graph window (shown below) will appear. If the transfer fails, the most likely reason is that the software driver was not correctly installed when the software was installed. Un-install the program, re-install the program and then retry the download.
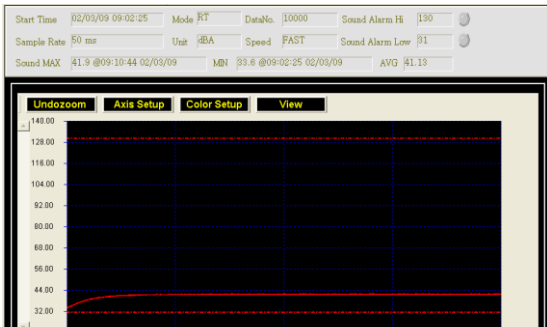
The field at the top of the graph lists detailed information for the transferred readings (start time, mode, number of data points, alarm high, alarm low, data sampling rate, weighting unit, record speed, MAX reading, MIN reading, and AVG reading).
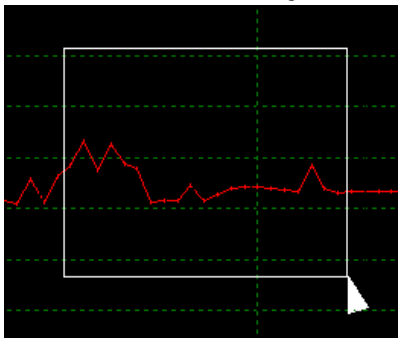
Undozoom	Axis Setup	Color Setup	View

Zoom in:

1. Click the left mouse button and drag a rectangle around the data area to be expanded.
2. Release the mouse button.
3. Use the horizontal scrollbar to scroll through all of the data.
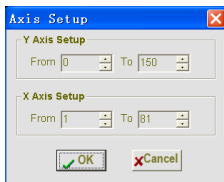4. Use the left vertical scrollbar to scroll through the sound data.

Zoom out: Zoom out to full view by clicking **Undozoom** .

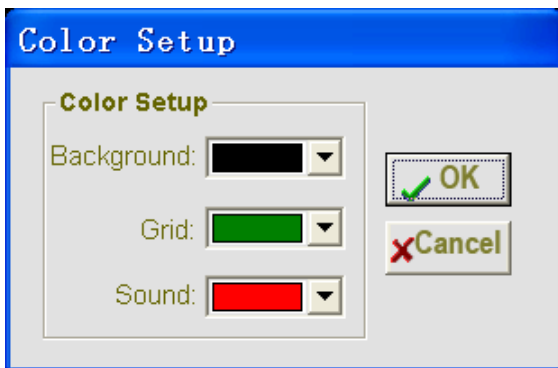**Axis Setup** Configure the X and Y Axis.

Y Axis Setup: Input the desired data range.
X Axis Setup: Input the desired number of data points.

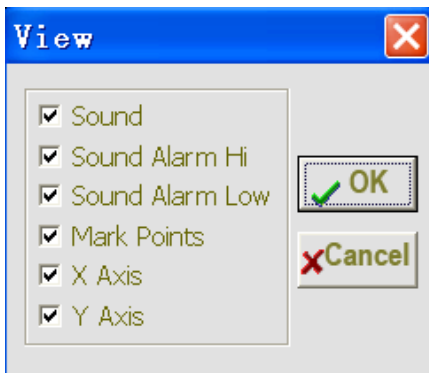The graph will appear based on the corresponding settings.

 Set the background color, grid color and sound
graph color.

Customize the graph window.

Check the items in the above list to view (sound and low/high alarms)
Check to add the x or y axes.
Mark Points: Use dots on the traces that represent the actual data points
(essentially breaking up the continuous nature of the traces).

Import data to list

Click the list icon to import data to a list format.

No.	Time	Sound	Unit	
1	17/04/08 17:31:45	46.7	dBA	
2	17/04/08 17:31:46	46.2	dBA	
3	17/04/08 17:31:47	53.9	dBA	
4	17/04/08 17:31:48	44.6	dBA	
5	17/04/08 17:31:49	43.6	dBA	
6	17/04/08 17:31:50	42.2	dBA	
7	17/04/08 17:31:51	44.8	dBA	
8	17/04/08 17:31:52	49.8	dBA	
9	17/04/08 17:31:53	57.7	dBA	
10	17/04/08 17:31:54	49.1	dBA	
11	17/04/08 17:31:55	42.6	dBA	
12	17/04/08 17:31:56	41.0	dBA	
13	17/04/08 17:31:57	44.8	dBA	
14	17/04/08 17:31:58	79.1	dBA	
15	17/04/08 17:31:59	49.1	dBA	
16	17/04/08 17:32:00	41.2	dBA	
17	17/04/08 17:32:01	50.3	dBA	
18	17/04/08 17:32:02	47.4	dBA	
19	17/04/08 17:32:03	41.7	dBA	
20	17/04/08 17:32:04	42.2	dBA	

The list shows specific time and date with the data.

File save and open

Click the ![icon] icon to open the file save dialog box.
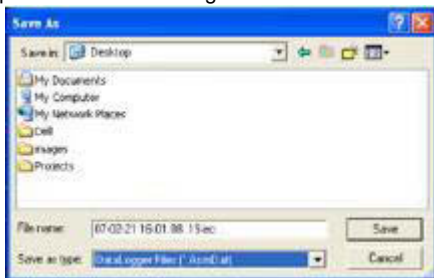
2. Name the file and save it using the default extension. The file will be saved with the
".sound" extension to be reopened in the Datalogger software program and also as a ".xls" file to be opened in a spreadsheet program.

To open an existing data file for viewing on the data graph window, click

the ![icon] icon. When prompted, select a ".sound" file that was saved earlier.

Print graph and list

Click the icon ![Graph] to print the graph.

Click the icon ![list] to import data to list, and then click ![List] to print the list.

Specifications

Standard	IEC61672-1 CLASS2
Accuracy	±1. 4dB
Frequency Range	31.5Hz to 8kHz
Dynamic Range	50dB
Measure Range	30dB to 130dB
Data Memory	129920
Sampling Rate	1 second to 24 hours
Frequency	A and C
Time Weighting	FAST 125ms，SLOW 1Second
Microphone	1/2 inch electret condenser microphone
Operating	Green LED flash
Memory Full	Yellow LED flash
Data Output	USB data traffic
Power	One 3.6 battery, specs:14250 or 1/2AAA
Electric Current	When measuring:5.5mA;when periphery power is o.ff or stop measuring:30uA
Operation Temperature	0 to 40℃ (32 10 104°F 10%RH to 90%RH
Storage Temperature	-10 to 60.C{14 to 140°F} 10%RH to 75%RH
Dimension	130 x 30 x 25mm (5.1 x 1.1 x 0.9")
Weight	20g (1oz)
System	Windows 2000/XP/Vista/7/10
Minimum Hardware	8M EMS memory. 2M hard disk，a free USB jack

Accessories	User manual. Battery windscreeen, CD Transparent cap