LogIT explorer set

These ergonomic data loggers can gather light, sound and temperature data to support the science and geography curricula. This can then be analysed using the accompanying laptop and software.

Using the Data Logger

To turn on your Log IT data logger press the green button.

Note: If the Log IT does not turn on you may need to change the batteries. Remove the 5 screws in the back of the data logger and insert 4 new AA batteries.

The Log IT records temperature (degrees Celsius), Light (Lux), and sound (decibels).

You can also add external sensors (e.g temperature probe) by plugging them into the sockets at the top of the Log IT.

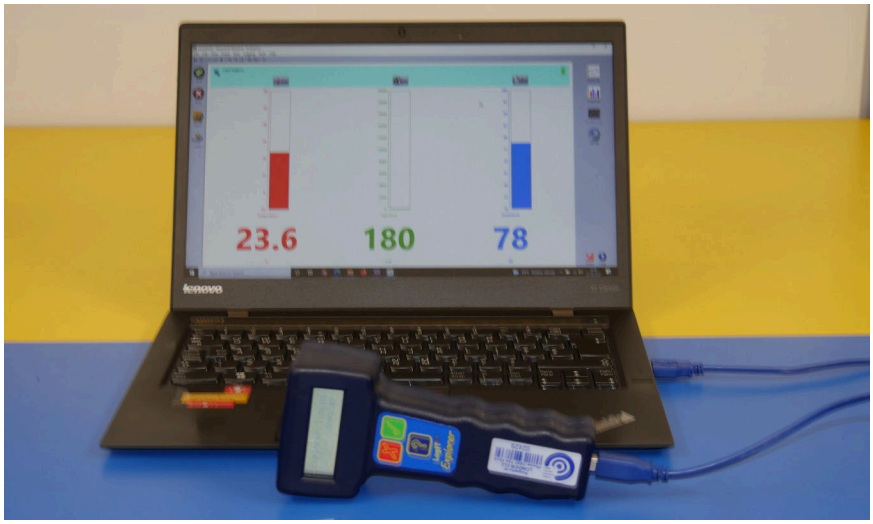
To save some data onto the Log IT press the green button. The Log IT will begin to record. You can access this data once you plug the Log IT into your computer.

Be aware the Log IT can only record 4 sets of data. If you begin logging for a fifth time, the first set of data will be deleted.

Whilst recording you can press the green button to store a 'marker'. This will allow you to pinpoint an exact time in your data set.

You will be able to see the markers once you review your data on the computer.

Press the red button to stop logging. Press the red button again if you wish to turn off the data logger.



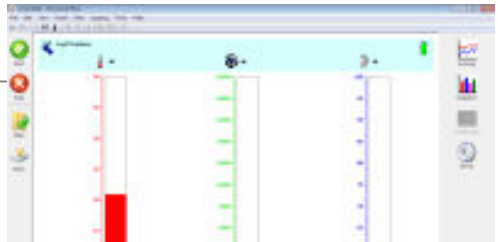
Using the Software

Plug your data logger into the computer using the USB cable provided. Now open the 'Sensor Lab' software from the start menu.

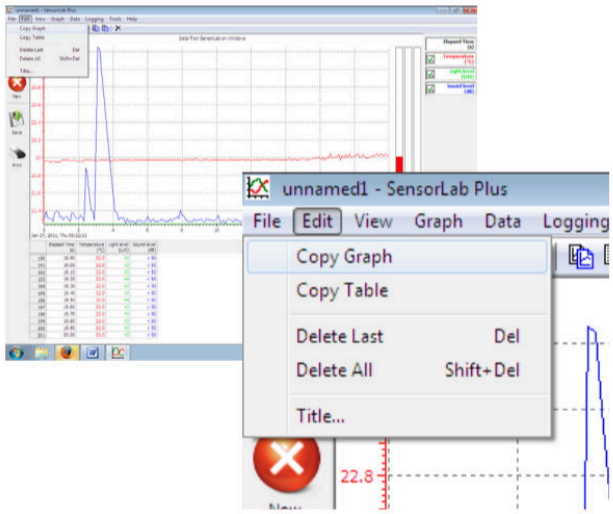
You should now see a meter, showing a live reading from the sensors.

To load data recorded on the Log IT press the 'Fetch' button.

A new window will appear listing the 4 files saved on the data logger. Select the appropriate file from the list.
Press 'OK' and a graph will appear.



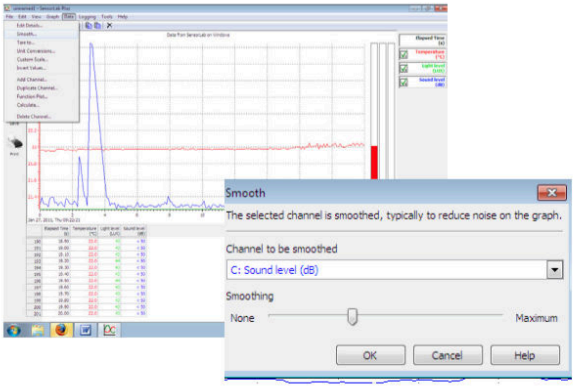
Alternatively, you can produce a live graph on the computer.
Just press 'Start ' and the Log IT will begin recording data.
Press 'Stop' to finish recording data.



Once you have a data set there are a number of simple tasks you can perform to aid analysis.

Firstly you can simply copy the graph into another program to annotate and present (e.g. Word or Powerpoint) or you can copy the data table into a spreadsheet to perform some statistical analysis (e.g. into Excel to find an average).

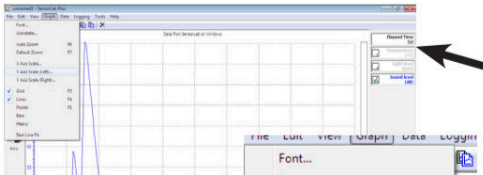
Just press **'Edit' > 'Copy Graph' or ' Copy Table'**.



Sometimes data appears to fluctuate erratically. This can make it difficult for pupils to identify trends.

To make things clearer you can 'Smooth' out your graph.

Click **Data > Smooth**. Select the line you would like to smooth (i.e. Temperature, Light, or Sound), and move the slider to find the appropriate smoothness.



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To make things clearer you can also remove data you don't want to see. Just click on the green tick boxes in the top right corner to show or hide data.

You can also change the axis to display the relevant scale (e.g. Lux or Decibels).

Click on 'Graph' (next to 'Edit' in the menu bar) and select the desired axis (i.e. X or Y) and then select the correct measure from the drop down menu.

Once you have finished manipulating your data remember to save your work by clicking **File > Save**, just as you would in any other program.

In your classroom

- Ask students to take sound readings from each classroom in the school to see which is the noisiest.
- Ask students to take temperature and light readings from different rooms in the school to find out where plants would best grow.
- Attach a large paper sail to a toy car and roll it down a ramp. Place the data logger at the bottom of the ramp opposite a torch or lamp. Measure the speed of the car by looking at the graph to see how long the light level dips as the sail passes between the torch and the data logger, thus interrupting the flow of light. Be careful this can be quite tricky to get right.