

Using the TEEMSS CCProbe LabBook

This document describes some of the probeware components developed for the original TEEMSS project. While the screenshots below show the Palm computer the software runs on PalmOS, PocketPC, Windows, MacOS Classic, MacOS X, and Linux.

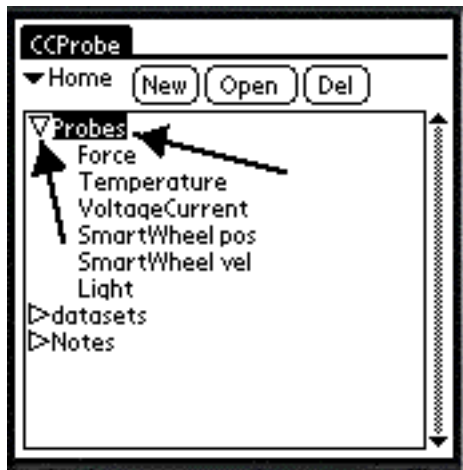
Opening the software

1. To open the software, tap the CCProbe icon.



2. The first screen you see is the LabBook.

Opening the folders and subfolders



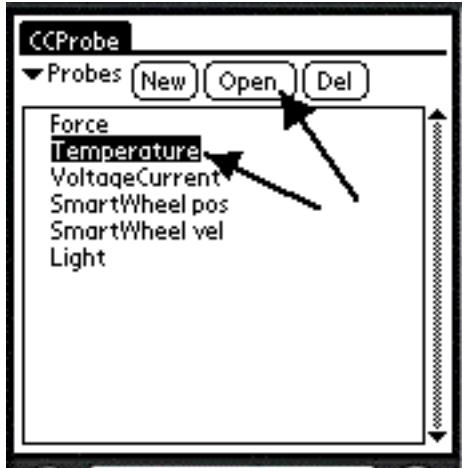
1. The LabBook lists all of the folders, data collectors, notes, saved datasets, and other objects in the LabBook. To open folders and subfolders, tap the triangles or double-tap the folder name.



2. Click Home (upper left) to go back to the top level folder.

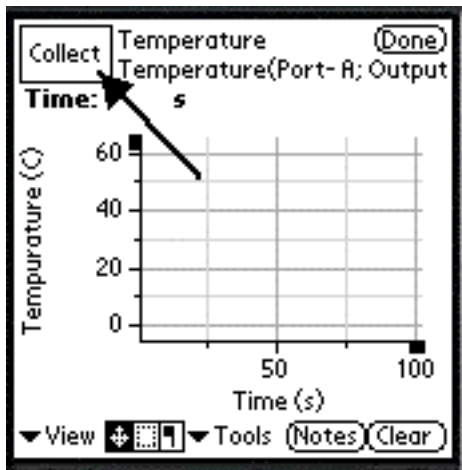
Opening a data collector

1. To take data with a CC probe, you must open or create a data collector. In these investigations, the data collectors have already been created.

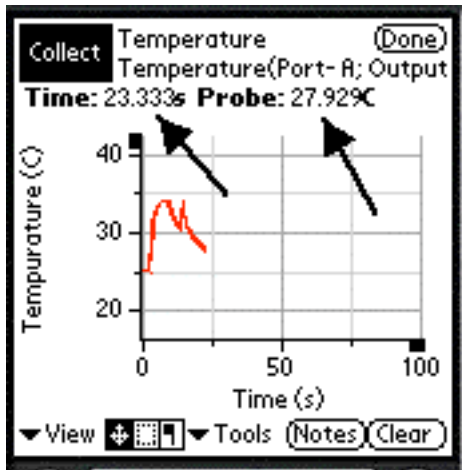


2. To open an existing data collector, highlight its name, then tap it twice or tap Open. It may take a few seconds for the graph to appear.

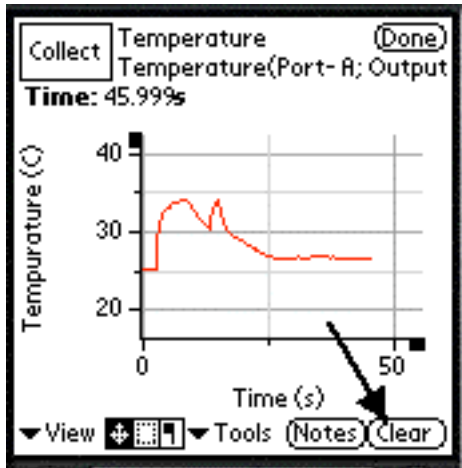
Collecting and clearing data



1. To start collecting data, tap Collect.



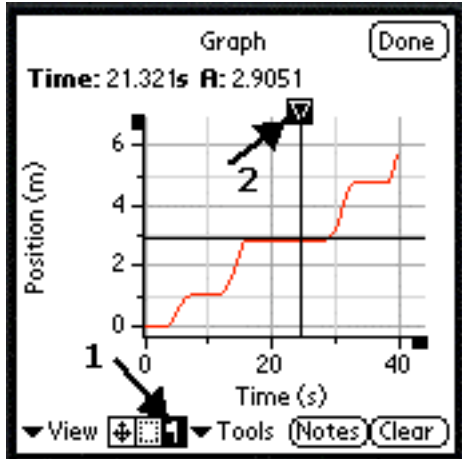
2. As data is collected, the current values appear at the top of the graph. To stop collecting, tap Collect again.



3. You can clear the data with Clear, and then continue collecting data with Collect.

Reading graph values

1. To read values of a graph once it has been collected, tap on the Mark flag and tap where you want to read the value.



2. A little triangle will appear, connected to crossed lines. The mark can be moved around with the cursor, and the x and y values of the graph will show at the top.

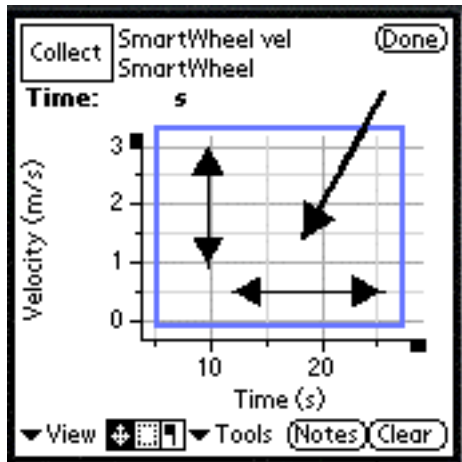
Recognizing collection limits

Currently there is a limit to how much data can be collected at once, about 4000 data points. The collecting will stop when this amount is reached, so plan your experiments with this in mind. In terms of time, the limits are as follows:

| | |
|----------------------|------------------|
| Force probe, 400/sec | about 7 seconds |
| Force probe, 200/sec | about 15 seconds |
| SmartWheel | about 40 seconds |
| All others 3/sec | several minutes |

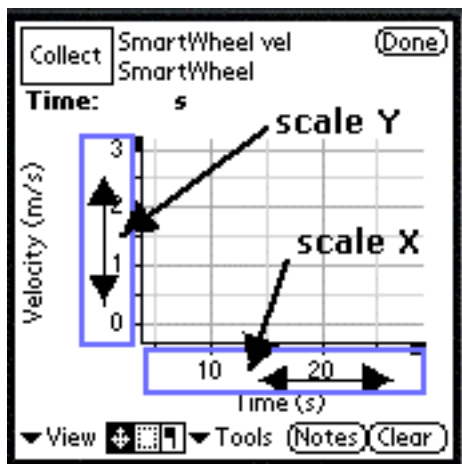
Scrolling around the graph

To scroll around the graph, tap and drag within the graph area itself. There may be a slight delay before the graph responds.

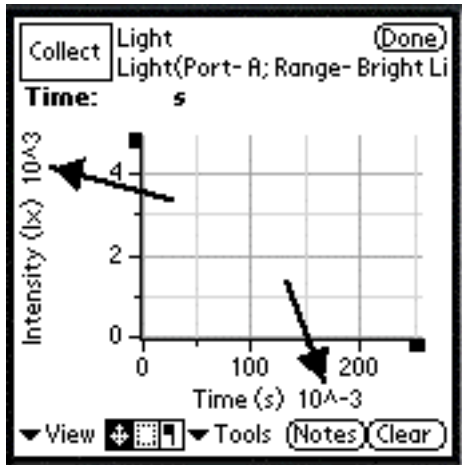


Changing the scale of an axis

1. To change the scale of an axis, tap and drag on the region along the axis. Drag away from zero to expand the scale and toward zero to shrink the scale. There may be a slight delay before the graph responds.

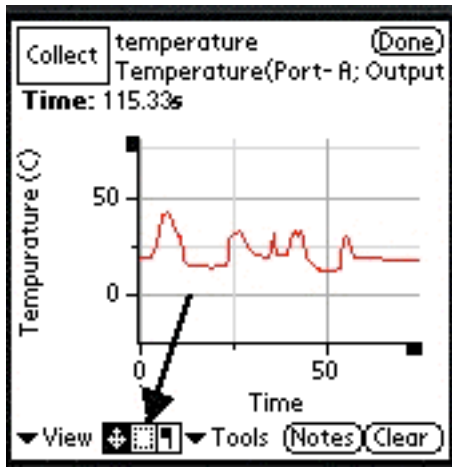


2. If you stretch or shrink the scale a great deal, it will switch by a factor of 1000, shown as 10^3 (for large numbers) or 10^{-3} (for small numbers). For example, in the following screen, time is in milliseconds (1/1000 of a second) and light intensity is in kilolux (1000 lux).

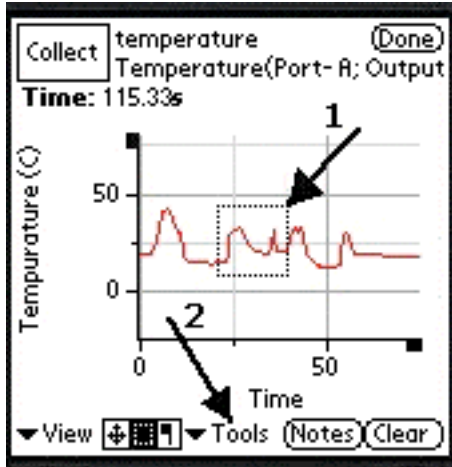


Zooming in on a graph

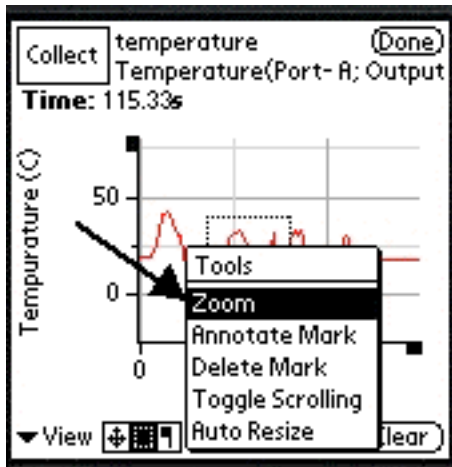
1. To zoom in on part of a graph, tap on the area selector at the bottom of the screen.



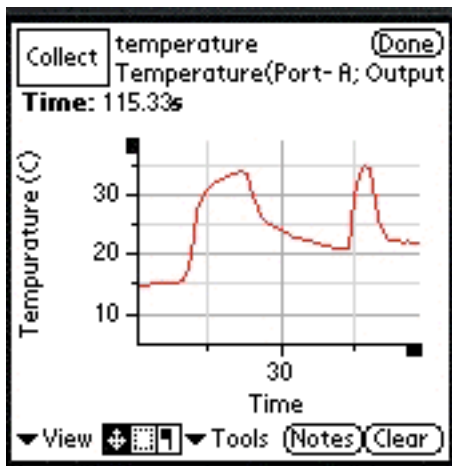
2. Drag the outline around the area of the graph you want to zoom in on, then tap Tools.



3. Click Zoom in the Tools list.

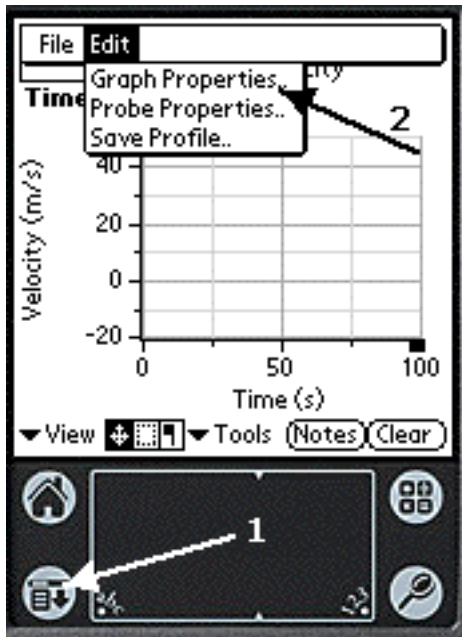


4. The graph will reappear showing just the area you selected.

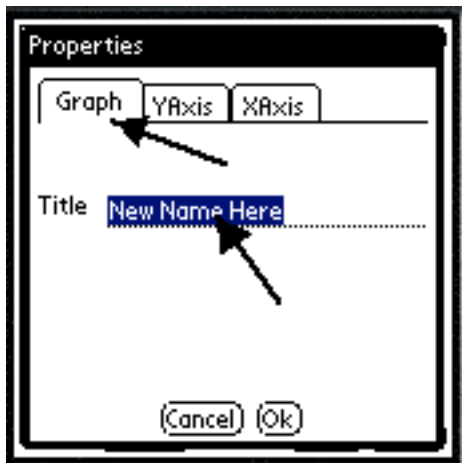


Changing graph properties

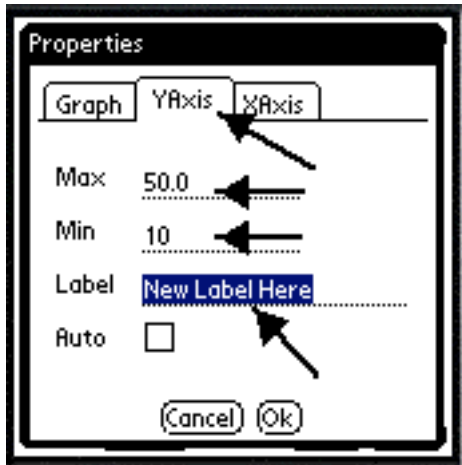
1. To change graph properties, tap the Palm menu icon at the bottom left corner, then the Edit menu item. Tap Graph Properties.



2. To change the title, go to the Graph tab. Write the new title, and then tap OK.



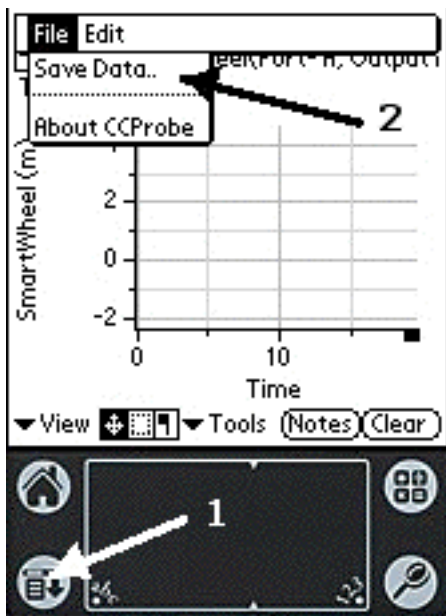
3. To change the range and the label of an axis, tap on the YAxis or XAxis tab. Write in the Max, the Min, and the Label, and then tap OK.



4. Another method of changing the range and the label of an axis is to tap on the ends of axes to open graph properties.

Saving data

1. To save your data, tap the Palm menu icon at the bottom left corner. Then tap Save Data in the File menu. The menu will disappear when the data is saved. This may take several seconds.



2. When prompted, give your data set a name. It will be saved in your LabBook.

Closing the data collector

1. To close the data collector and go back to the LabBook screen, tap Done. Your data will NOT automatically be saved.

