

SMaRT

Software History

Purpose

This document summarizes the changes made to the Solartron SMaRT software since the initial release.

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The table below lists the major software revisions. Revision numbers missing from the sequence were not formally released.

Revision	Date	Changes Included
3.3.1	15 th June 2015	1296 experiments with amplitude > 3V generated a voltage spike at the end of the experiment. When Set DC level tasks occur after Set AC level tasks, an incorrect levels may be applied. Added support for Lakeshore 336 temperature controller. Added calculation of AC Conductivity and Resistivity Added V & I range information to the Status Grid
3.2.3	7 th June 2013	Fixed problem starting an experiment after stopping a 'Sample & Reference' experiment. Added support for Lakeshore 335 temperature controller.
3.2.1	14 th February 2013	Added user parameters to Run External Program task. Added Current Range limit for 1296. Note: Data files and Experiments created with this version will not load correctly on previous versions of SMaRT. Manual Temperature control can either prompt the user to set the temperature or use the Run External Program task. Added settling delay between changing I-V range and starting next measurement. Improved handling of current overloads from the FRA.
3.1.1	2 nd February 2012	Fixed plotting permittivity from Normalised data files. Fixed noisy measurements when scanning DC and measuring at low frequencies.
3.1.0	21 st July 2011	Runs as a normal user on Windows 7. Fixed problems on computers with >4GB memory. Accurate Balancing would sometimes run indefinitely. Fixed Balance every 'n' measurements. Added support for Lakeshore 332 temperature controller. Temperature is no longer set to 25 C at the start of an experiment. Set Point and Control temperatures are now shown in tabular data and exported CSV files. Allows FRA and 1296 to be on different GPIB boards. Improved 1296 communications reliability. Sample Definition window disables unused values. Fixed crash when complex plane graph is very small.
3.0.1	18 th February 2009	Fixed problem adding a Delay task to an experiment.

3.0.0	12 th February 2009	<p>Improved graph setup and display: Shows correct graph divisions when zooming graphs. Improved appearance when changing zoom. Popup context menu acts on the correct graph. Added None to trace style to allow switching off lines. Improved selection of Log/Lin axes with axis quantity. Improved positioning and axis scale for complex plane graphs. Real-time graphs can be selected individually. (E.g. just complex plane)</p> <p>The Data File Information screen allows selection of sweeps to plot. AC/DC coupling now works correctly for 1260 standalone.</p> <p>Improvements to the Experiment editor: Fixed problems where experiment became corrupted. Add Task button adds after selected step. When a Set... task is changed from fixed to sweep, the end task is inserted after the Set... task. The Set... and End... tasks can move past Set... and End... tasks of the same type. Fixed problem when measuring a list of frequencies, and there is a jump of several decades in frequency. Help system now works under Vista.</p>
2.8.0c	18 th September 2007	Improved support for Lakeshore 331 temperature controller with Janis cryostat.
2.8.0b	9 th August 2006	Updated installer program.
2.8.0	23 rd December 2006	1260 DC bias fix. 1250 status byte fix.
2.7.0	7 th September 2005	<p>Measurement speed option added. Current range problems fixed. Various other minor changes.</p>
2.5.0	18 th May 2005	GPIB read errors fixed. This should fix "data inversion" problems.
2.4.0	22 nd February 2005	<p>Y-axis phase, coupling, and ranging problems fixed. Faster measurement speed.</p>
2.2.0	27 th May 2004	<p>Added support for Lakeshore 331 temperature controller. Fixed AC/DC coupling problem.</p>
2.0.0	27 th February 2004	<p>Now 'Windows XP friendly'. Graph and graph config window improvements. Normalisation problems fixed. 1294 current problems fixed. Chinese/Japanese Windows calibration problems fixed. Previous project auto-load bug fixed. CSV export improved. Permittivity error fixed.</p>

1.10	3 rd August 2003	Various minor bug fixes. AC/DC limits extended. Graph config msgboxes changed. Address combos no longer appear blank. Experiment editor buttons now stretch. Ext ref changed from 0.000000001 S to 1 fS. Data reader now uses temporary type to speed up file read. Multiple file selection in export/import. Polish windows fix. Sample LED not going out fixed. Complex scaling sorted. Dynamic RT axis changing done. Complex resize now smooth. 'C units bug fixed. Exp end error fixed.
1.0.0	23 rd April 2003	Initial release



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