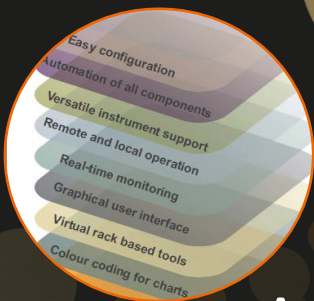
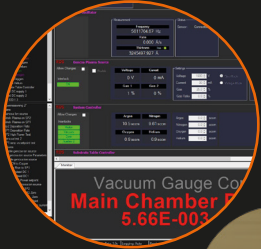




# Spectrum Control Software



A powerful and intuitive package  
designed by  
experienced vacuum deposition specialists

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Overview

An intuitive “drag and drop” interface allows the user to quickly select instrument controllers and drag any subset into the virtual rack. Variables can be dragged onto a chart or into an enlarged digital monitor window

Configured instrument list

Virtual rack

Charting of multiple parameters

Recipe selection

Digital monitor display

Windows can be positioned and sized to a user’s preference. The layout is stored as a ready-to-go desktop

Configure virtual rack to suit your process.

Easy to add and remove instruments.

Real time charting.

Interlock monitoring.

Recipe control.

Data logging.

Create and store your own desktop layout



Power Deposition

The Detail

Virtual electronics rack

Display customisation

The virtual rack can be configured to display the desired functions for any task. Use the “drag and drop” interface to create, edit and organise the information within the virtual rack tab.

Comprehensive instrument interface

The interface supports both the newest instruments and existing tools. The modular configuration allows new instruments and system components to be seamlessly added to expand system functionality as your deposition requirements evolve.

Variable refresh rate

The instrument communication polling rate can be selected from several options and can be as frequent as every 0.5s.

Remote and local mode of operation of all instruments

Remote mode disables the front panel controls on the physical electronics rack allowing control through the software only. In local mode software control is disabled, however, changes made to parameters from the front panel of the rack are still monitored and can be logged if desired.



Graphical charting

Real-time display

The charting module provides a real-time display of numeric readings and settings for any chosen system parameter. The charts can be set to auto scale, or the range can be set by the user.

Graphing options

Each parameter is plotted on a separate but synchronised chart. The data will be displayed in different colours as wells as lines, points, or crosses. There are smoothing options available to give a clearer picture from noisy data.

Easy chart manipulation

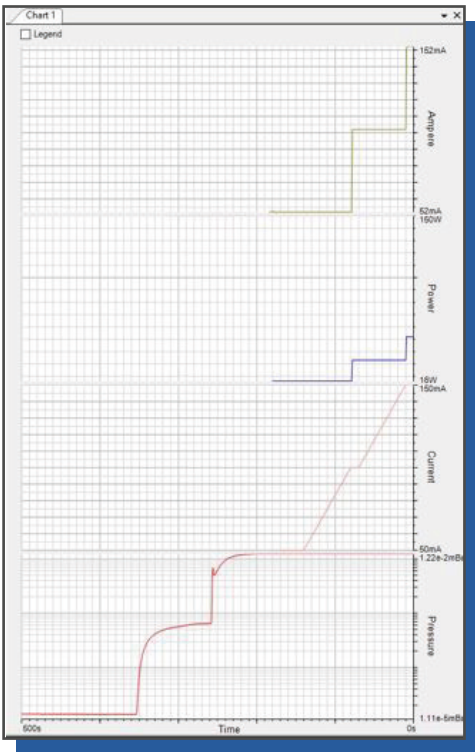
Parameters of interest are simply dragged from the instrument list and dropped into the chart tab. There is no limit on the number of parameters that can be concurrently plotted other than the amount of information that can sensibly be displayed. Parameter charts no longer required are easily removed by a simple right click.

Image export

Each displayed plot can be instantly saved as a bitmap.

Variable time display

The time range may be altered to display the timeline for up to 1000 seconds.





## Parameter logging

### Easy logging

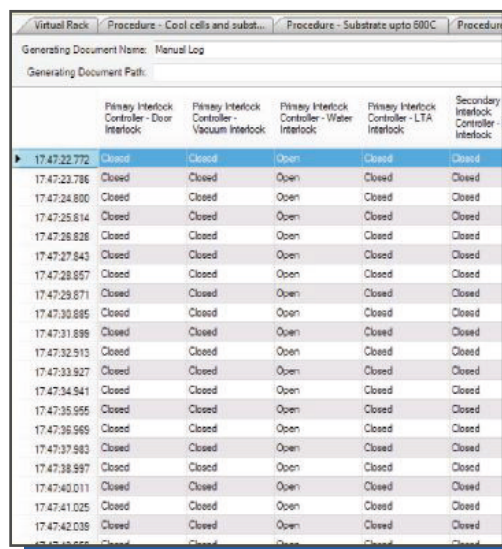
Store all process and system parameters in a single file.

### Popular file format

The text file is TAB delimited and can be read and amended by most spreadsheet editing programs for rapid, detailed inspection of any process parameter.

### Instrument settings

All instrument parameters are logged by default – no possibility of forgetting to log a critical parameter when running a process if auto logging is enabled!



	Primary Interlock Controller - Door Interlock	Primary Interlock Controller - Vacuum Interlock	Primary Interlock Controller - Water Interlock	Primary Interlock Controller - LTA Interlock	Secondary Interlock Controller Interlock
17:47:22.772	Closed	Closed	Open	Closed	Closed
17:47:23.786	Closed	Closed	Closed	Closed	Closed
17:47:24.800	Closed	Closed	Open	Closed	Closed
17:47:25.814	Closed	Closed	Open	Closed	Closed
17:47:26.828	Closed	Closed	Open	Closed	Closed
17:47:27.843	Closed	Closed	Open	Closed	Closed
17:47:28.857	Closed	Closed	Open	Closed	Closed
17:47:29.871	Closed	Closed	Open	Closed	Closed
17:47:30.885	Closed	Closed	Open	Closed	Closed
17:47:31.899	Closed	Closed	Open	Closed	Closed
17:47:32.913	Closed	Closed	Open	Closed	Closed
17:47:33.927	Closed	Closed	Open	Closed	Closed
17:47:34.941	Closed	Closed	Open	Closed	Closed
17:47:35.955	Closed	Closed	Open	Closed	Closed
17:47:36.969	Closed	Closed	Open	Closed	Closed
17:47:37.983	Closed	Closed	Open	Closed	Closed
17:47:38.997	Closed	Closed	Open	Closed	Closed
17:47:40.011	Closed	Closed	Open	Closed	Closed
17:47:41.025	Closed	Closed	Open	Closed	Closed
17:47:42.039	Closed	Closed	Open	Closed	Closed
17:47:43.053	Closed	Closed	Open	Closed	Closed

## Recipe process control

### Full control

On a fully automated deposition system, procedures or programs can control any necessary setting on any system component.

### Easy operation

Once written - recipes can be controlled through “Run”, “Pause” and “Stop” buttons for ease of use.

### Program management

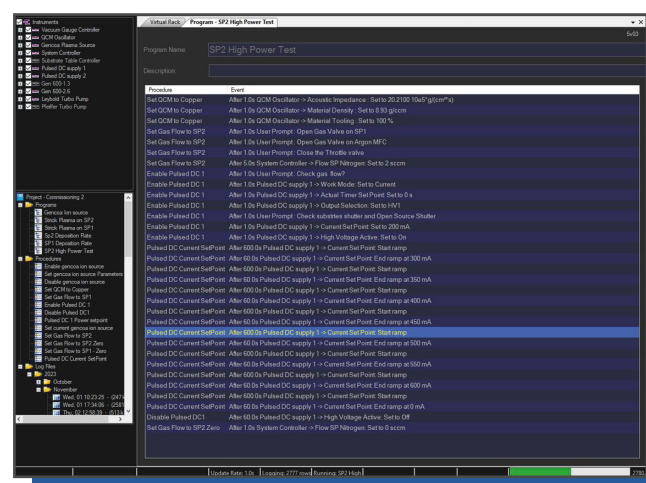
Recipes can be edited, saved, and reloaded from disk. Users can set up their own project directory where relevant recipes are stored.

### Simple recipe editor

Recipes are defined using procedures (effectively a sub-routine) for basic tasks and programs for longer more complex processes. Simply “drag and drop” the parameter of interest into the sub-routine sequence, specify an action from a drop-down menu and set a value. Writing a program is just as simple - drag and drop the desired sub-routines into the program sequence. A repeat function allows sub-routines to be run as many times as necessary within a loop.

### Recipe status

Prior to a program being run, the software will automatically check that all events are properly defined. During the run, the event that is being



processed will be highlighted and a progress bar and timer will display the program progression to the operator.

### Automated pump down and venting of the system

Vent and pump down recipes ensure a consistent approach to these critical operations, minimising the risk of operator error causing unnecessary wear or damage to expensive components.

