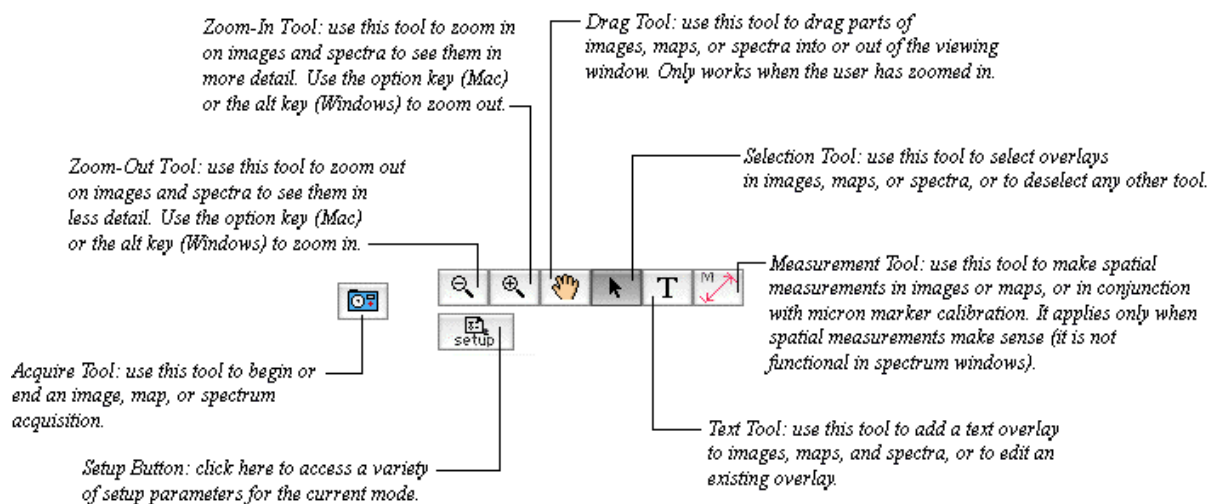


## Launching Revolution

- Launching Revolution is easy: just double-click on the Revolution program icon. No special preparation is needed. The initial launch will automatically create default preferences in the Revolution folder. *Note the discussion below concerning preferences from older versions of Revolution!*
- **Preferences:** It is **recommended** that you place any **new** version of Revolution into its own new folder, and copy the preferences from the old version over to the new folder (all Revolution preference files start with an underscore). This insures that your original preferences are safe if any bug prevents older preferences from being read correctly. If you have settings you need to preserve, you should export them from the old version and import them into the new version. ~~See the instructions for importing and exporting- Preview and Acquire Size Menu preferences and Mag Menu preferences.~~
- Windows 2000/XP and Mac OSX will use swap-file memory management as needed; however, running with too little physical memory installed may cause swap-file access to significantly degrade performance of the entire computer. If you are displaying real-time previews and you are also displaying other already-acquired images, it adds up! [Older versions of Windows are unlikely to have threading or memory management capabilities needed by Revolution for a useful experience. Mac OS9 is unlikely to have threading capability to allow Revolution to run in some instances; in addition, a default memory allocation must be set. Most users will want to increase the memory allocation as needed. Mac OS9 users running with too little memory allocated may prevent Revolution from opening or acquiring more than a certain number of images.].
- When Revolution is launched, the program looks to see what Spectral Engine hardware is available, and probes the hasp. Based on this information, the program will attempt to open the most appropriate set of tools for your hardware. All subsequent launches of the program will return you to the last set of tools that were in use. Each toolset is accessed from the **Mode** menu. Each mode presents the user with the controls and instrument feedback needed to perform a particular task, all in one easy-to-navigate toolbar.
- Revolution maintains a consistent user interface for all the modes. Several of the common tools that appear in every mode are described below.



Details of using the individual toolbars can be found by following these links.

[SEM Image Mode Toolbar](#) (acquisition of SEM digital images)

SEM Linescan Mode Toolbar (acquisition of linescan data to accompany image acquisition): **unimplemented in 1.6.0**

SEM Video Mode Toolbar (acquisition of real-time video capture): **unimplemented in 1.6.0**

[EDX Spectra Mode Toolbar](#) (acquisition of X-ray spectra)

EDX Probe Mode Toolbar (acquisition of probe spectra): **unimplemented in 1.6.0**

[EDX Image Mode Toolbar](#) (acquisition of X-ray maps)

[TEM Image Toolbar](#) (acquisition of TEM images with CCD cameras): **currently same as in 1.5.6**

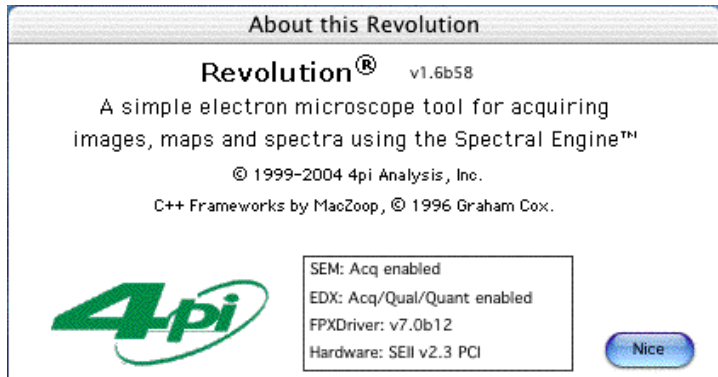
Multi-Toolbar: **unimplemented in 1.6.0**

## Determining Hardware and Software Version Numbers

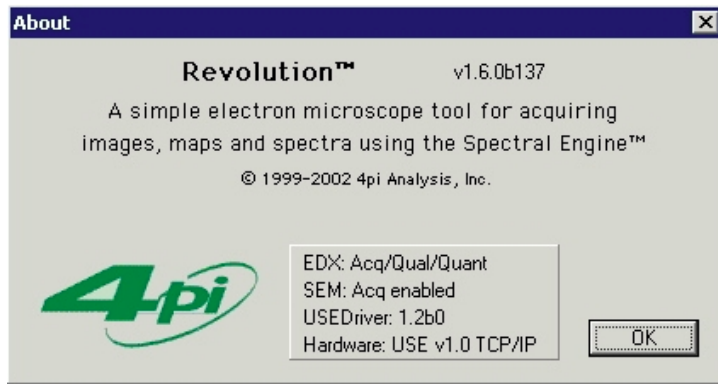
- To determine the version number of **Revolution**, its functionality, and detect the type of **Spectral Engine** hardware available, perform the following operation:
  - Macintosh OSX: select **About this Revolution...** under the **Revolution** Menu
  - Windows: select **About** under the **Help** Menu

The following dialog box will appear:

The OSX screenshot shows a typical display for a Spectral Engine II:



The Windows screenshot shows a typical display for a Universal Spectral Engine:



- The Revolution version number appears at top. Next is the status of the EDX and/or SEM subsections of hardware, and the drivers and type of hardware itself. Some hardware only has one subsection installed; however, if you know that a subsection is installed but is marked **not installed** or **demo mode**, it may indicate a failure, and 4pi tech support should be contacted. The status of the SEM and EDX subsections of the board are also controlled by the hasp delivered with the product. If an analysis feature is not included, it will be missing from the status or marked "demo".
- If a hardware subsection or capability is not installed, Revolution will automatically run in demo mode for that subsection.

## Runtime Notes

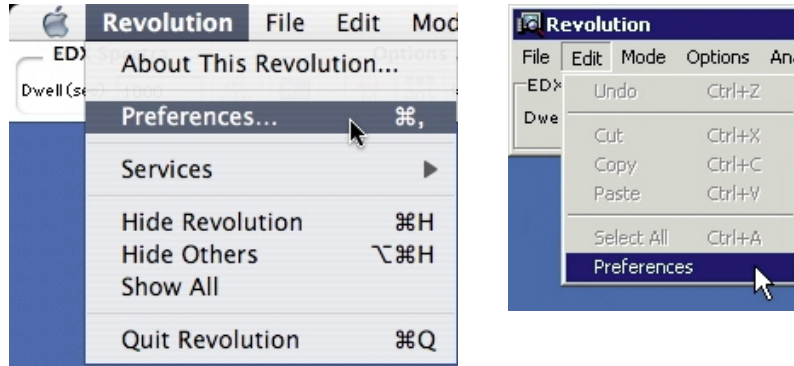
- Revolution is a fully multi-tasking application on all platforms. It can run in the foreground or background, and other programs can be run simultaneously; however, unless you have a very fast processor, running another application in the foreground may slow Revolution window updates, and vice versa. Note that all Spectral Engines run independently of Revolution; therefore, low-level functions such as scanning and acquiring data will always run at full speed, even if screen updates are slowed by other processes.
- **(Mac OS9 only)** Although NIH Image, Photoshop, DTSA, etc. can be open and running simultaneously with Revolution, we don't recommend trying to **acquire** data for the Spectral Engine with Revolution and any of them simultaneously. In case you do anyway, you may hit a number of debugger breaks complaining of something being busy. If you type **g** and **return** in response to each, it should continue operation. This mode of operation is not supported. It is merely a curiosity.
- In order for Revolution to communicate with any Spectral Engine, the correct drivers must be installed, and the hardware hasp must be installed. If not, Revolution will revert to a demo mode that mimics actual operation but does not allow access to acquisition or analysis features.

## Quitting Revolution

- To quit Revolution on the Mac, either select **Quit** from the **File** menu or **clover-Q** on the keyboard.
- To quit Revolution on Windows, either select **Exit** from the **File** menu, or **control-Q** on the keyboard, or use the standard Windows close box.
- **Note:** Revolution will not quit if an image or spectrum acquisition is in progress. Any scan or spectrum must finish (or be halted by the user) before the program can be exited.

## Revolution Preferences

- New in version 1.6.0 and going forward, a number of the old preferences have been moved into different setup dialog locations, with the understanding that they need to be accessed only once or at worst, very few times. This page gives some general guidelines to using those preferences that are still accessed "traditionally" in Revolution. After Revolution is launched, the Preferences can be accessed by selecting "Preferences" from the appropriate menu:



- The Preferences window opens to the last set of preferences that were examined or set. If Revolution is being run for the first time, the initial preferences shown are the **General Prefs**. The Preferences window and its individual panes can be left open or closed during the operation of Revolution, whichever one prefers. Most changes take effect immediately; if a change is one that could affect a preview display, the effect is shown in real time. Because of this, there is no "cancel" on a preference setting. To go back to a previous setting, simply reset it.
- **Note:** values entered into edit fields are also updated immediately unless illegal values are entered; in this case, the last known good value is retained. Further note that the keyboard filtering does not **visually** trap out illegal values until the prefs window is refreshed.
- Select from the 3 pages below to view the individual preference settings in detail:

[General](#)

[Scan Generate](#)

[SEM Linescan](#)