

How To Guide



Subject: Updating VersaStudio Software and Firmware and Verifying Version Consistency

Introduction

Our Global Support Team has decades of experience providing our users practical solutions to common issues in electrochemical measurements. This document is part of a series to formalize these suggestions and make them directly available to our users. First verify the VersaStudio Software version being used is up to date and that the software version matches the instrument's firmware version. Each release of VersaStudio includes both application software and instrument firmware. Application software controls the user interface and firmware is the code that runs the potentiostat's internal microprocessor. The application-side and instrument-side must communicate in a consistent manner for the system to operate correctly. Given that the software and firmware work together, if these programs are mismatched, successful operation will be impacted and give unpredictable results. This How To Guide will explain how to determine whether or not a new version of VersaStudio is available, how to update the software and firmware if needed, and how to ensure that the installed software and firmware match.

Procedure

I. Checking if a New Version of VersaStudio is Available for Download

Launch VersaStudio and make sure the correct instrument window is active (Tools → Select Instrument). If the instrument does not appear in the Select Instrument window, make sure it is connected to the PC by USB and that it is powered on. Then, within VersaStudio, go to Help → Check for Latest Updates... and one of the messages shown below in Figure 1 will appear.

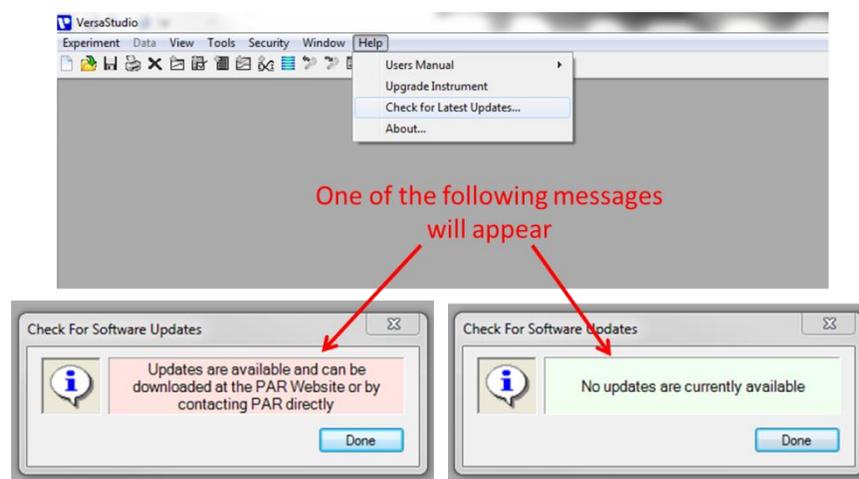


Figure 1: Screen shot demonstrating how to determine if the most recent version of VersaStudio is installed.

II. Downloading the Latest Version of VersaStudio from the Princeton Applied Research Website

If the message indicates that updates are available, follow this [link](#) to download the latest version of the software. When downloading the latest version, be sure to read the instructions provided on the website and update the firmware when prompted.

Note: It is critical that ALL computers used for data acquisition or post-data acquisition analysis be upgraded to the same VersaStudio application software version to avoid any compatibility issues.

After updating the firmware, run the DC calibration by navigating to Tools → Options, selecting the Instrument tab and clicking on the "Calibrate now" to Calibrate for Best DC Accuracy. Be sure that the correct instrument is selected. The Calibration process takes approximately 2 minutes, but can take up to 10 minutes. There is no message indicating a successful calibration; the lack of a failure notice confirms a successful calibration.

Note: After calibration, the potentiostat will automatically restart, disappearing from the VersaStudio Select Instrument window. It will take ~30 seconds for the instrument to reappear in this window.

III. Multichannel Systems

Though there is only 1 update required for the software application; each potentiostat has its own firmware. Therefore, the firmware update procedure must be executed on each channel. These prompts appear when that given channel is first activated through the Select Instrument window. As described above, with these firmware updates, the channel resets. This will move that channel to the far-right position in the Select Instrument window. Be sure that the firmware is updated for all channels connected to a given PC whenever the software is updated.

IV. Checking if the VersaStudio Software and Firmware Versions Match

Whether the software and firmware versions were updated or not, it is always an important part of troubleshooting to check that the VersaStudio software and firmware versions match. Within VersaStudio, go to Help → About to verify the application and firmware versions. From the screen shot in Figure 2, the application version can be read as "VersaStudio 2.42.3". Note that the application version may have additional subrelease information as shown to the right of the second decimal point. This additional information is not considered in a consistency check. The firmware version is 2.42 as read in the line "VersaSTAT 3F: Model -500 (2.42, 2.42, 2.42)". In this example, the consistency is verified as the software and firmware versions are both 2.42 and therefore agree.



Figure 2: Screen shot showing the information included in the VersaStudio "About" window.

Certain scenarios are likely to incur a software/firmware matching issue:

- Installation of a newly purchased channel for use with an existing channel.
- A potentiostat that has been returned after service.
- A potentiostat being driven from several different computers.

If the software and firmware versions do not match and the software has already been updated to the latest version as confirmed in Step I of this How To Guide, please contact Technical Support at <http://www.princetonappliedresearch.com/support-center/contact-us/index.aspx> or PARSOLSR.support@ametek.com.

Conclusion

If the software and/or firmware were updated and found to match in Step III of this How To Guide, an internal dummy cell test should be performed. Please see the [How To Guide – Subject: Performing an Internal Dummy Cell Checkout Test](#) for instructions. If the problem is not resolved by updating the software and firmware or if the software and firmware were found to match, please refer back to the [Guide to Practical Solutions for Common Technical Questions](#) for guidance on how best to proceed with troubleshooting.