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971-FP

Flash Purification

Software Upgrade

Instructions

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First published February 2010.

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1. Introduction

This document describes how to upgrade the Varian IntelliFlash software and firmware on the 971-FP and IF310 instruments. These versions of software and firmware address known bugs and offer new features.

Failure to follow the instructions EXACTLY may result in an unusable instrument. If you render the device inoperable, you may be required to remove and replace the inoperable device.

You should install the IntelliFlash software only on a 971-FP or 310 Flash instrument. Running the IntelliFlash software on external laptop or desktop computers is not supported.

To perform the software and firmware installation you will need the following items:

- Access to the Varian website:
<http://www.varianinc.com/products/chrom/support.html>
- USB Flash Drive
- Computer with Windows & WinZip software
- ELSD USB-Serial cable (optional)

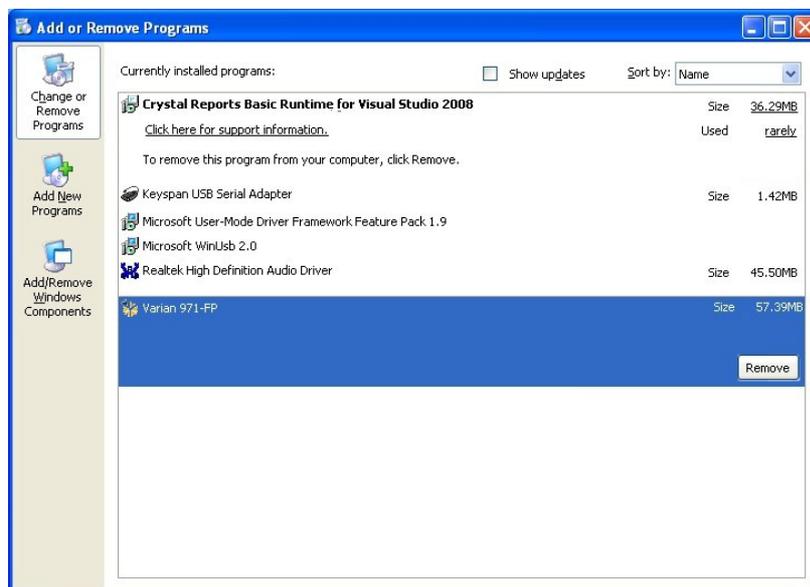
2. Software Installation

This section outlines the procedure for installing the latest IntelliFlash Software.

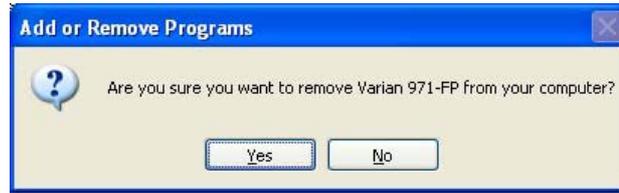
1. Download the self-extracting ZIP file **971-FP_Install_V3.1.524.exe** from the Varian website <http://www.varianinc.com/products/chrom/support.html> onto a folder on your PC
2. Using Windows Explorer, browse to the folder and double click on the file "971-FP_Install_V3.1.524.exe" to unzip.
3. Select a destination folder, e.g. C:\TEMP and select Unzip.
4. The folder "971-FP_Install_V3.1.524" will be created in the destination folder and contains the install image.
5. Copy this unzipped folder from the PC onto a USB flash drive.
6. Power on the Varian 971-FP flash purification system.
7. Export any historic runs you wish to keep from the current software to a USB flash drive or your company network.

NOTE: All historic data files will be lost following software installation

8. Select "Add or Remove Programs" from Window's Control Panel.
9. Highlight **Varian 971-FP** or **IntelliFlash** and select REMOVE to uninstall the software



10. Select Yes to remove the current software from the 971-FP instrument.



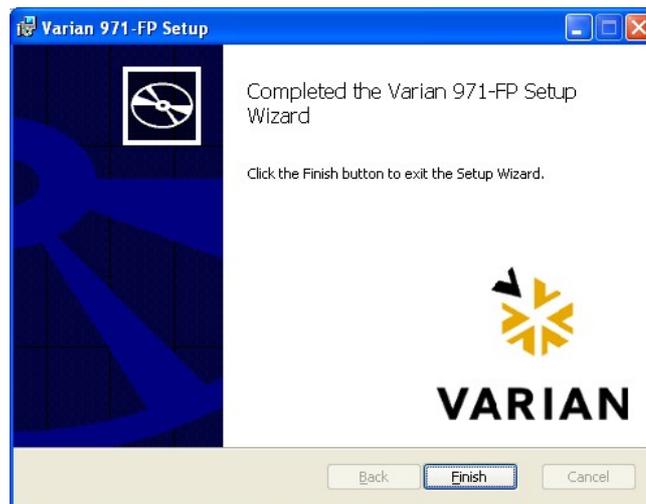
11. Now insert the USB drive, from step 5, and run the **setup.exe** file located under the folder "971-FP_Install_V3.1.524".



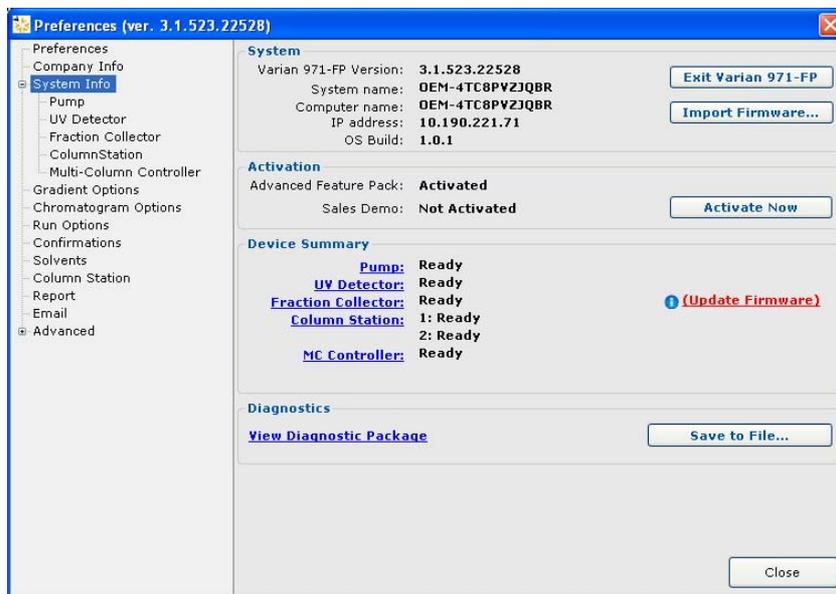
NOTE: You do not need to manually copy any files onto the instrument's hard drive. The software can be installed direct from the USB drive.

12. Follow the on-screen prompts to complete the installation.

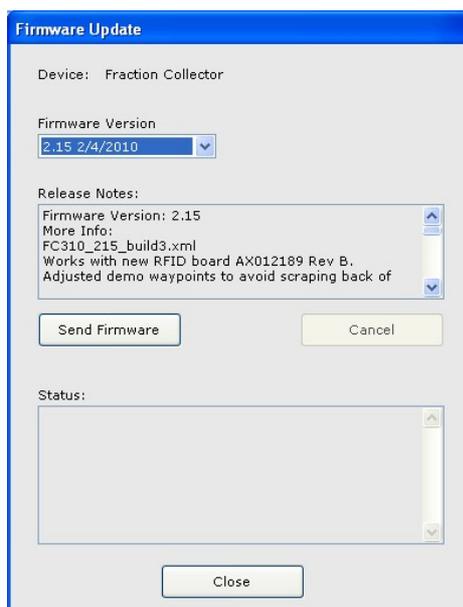
13. After the installation setup is complete, select "Finish" then restart Windows.



14. Upon restart the Varian IntelliFlash Software will load automatically.
15. Once the 971-FP software has loaded select the “System Info” menu from the Preferences screen
16. The Fraction Collector and possibly the UV detector will require a firmware update.

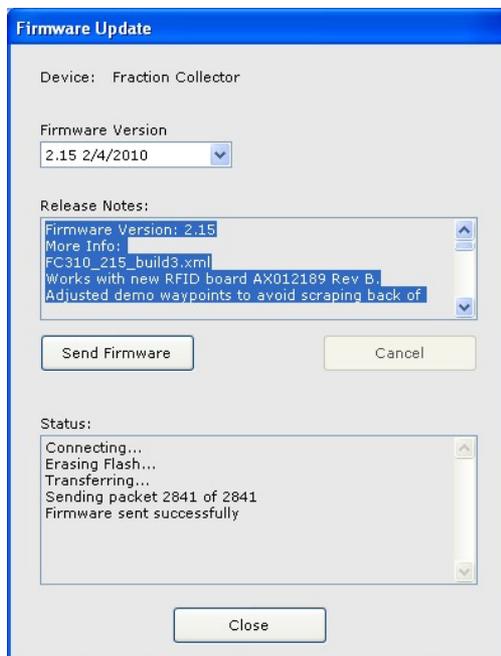


17. To begin the firmware update process, simply click on the “Update Firmware” message for the appropriate module.
18. In the Update Firmware window, check that the latest firmware version is highlighted in the drop-down menu.
 - a. Fraction Collector v2.15
 - b. UV detector v2.05



19. Click on the “Send Firmware” button to update the modules firmware. A final reminder screen will appear to validate the firmware version being downloaded. Select “Yes” to proceed.

20. The status window will show if the firmware upgrade was successful.



21. Click the “Close” button once the firmware has been downloaded.

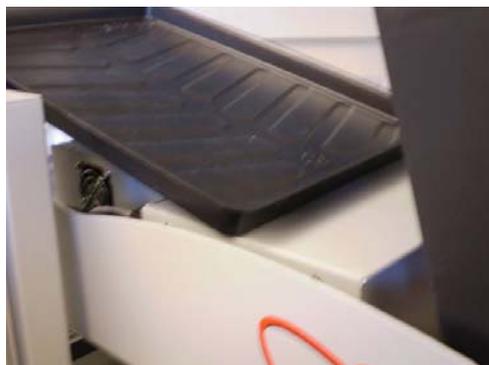
22. It is highly likely that you will receive one of the following error messages whilst trying to upgrade the UV detector.

- a. **Timed out waiting for device to enter bootloader mode...**
- b. **No reply from update command. Aborting...**

23. To rectify the problem the UV module will need to put into manual bootloader in order for the upgrade to take place.

24. To put the UV into bootloader mode you must do the following:

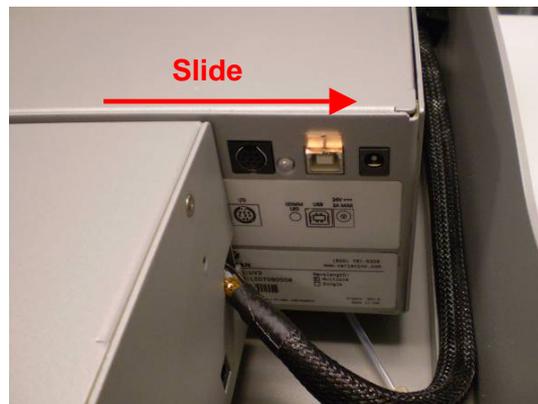
25. Place the reservoirs safely to the side of the instrument and remove the solvent tray



26. Unplug the power cable from the rear of the UV detector
27. Unscrew the thumbscrew holding the detector in place. This thumbscrew is located directly under the detector module to the right of the fraction collector track.



28. Slide the UV module to the right (as viewed from the rear) to access the bootloader switch.

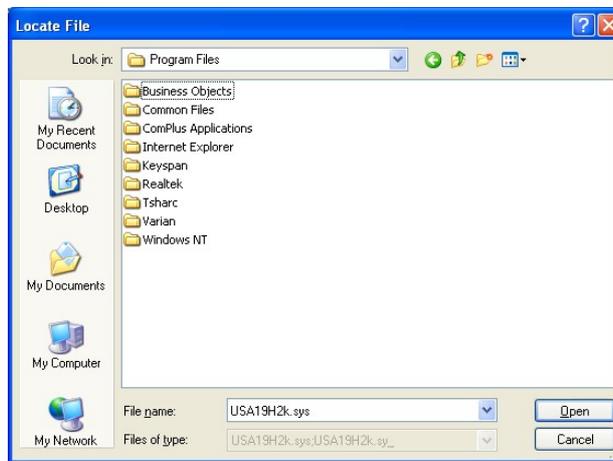


29. Using a paper clip, press and hold the bootloader switch
30. Re-connect the UV power cable.
31. Continue to hold the bootloader switch for 5-7s.
32. If the module has successfully gone into bootloader mode then the module's green status light (near USB connector) will blink rapidly (2-3 flashes/second)
33. The module's firmware can now be upgraded using the process outlined in steps 16-19.
34. For instruments that have ELS detection using the Serial to USB cable, the driver for this cable must be re-loaded.
35. Insert the ELSD Serial to USB cable into a USB port of the 971-FP

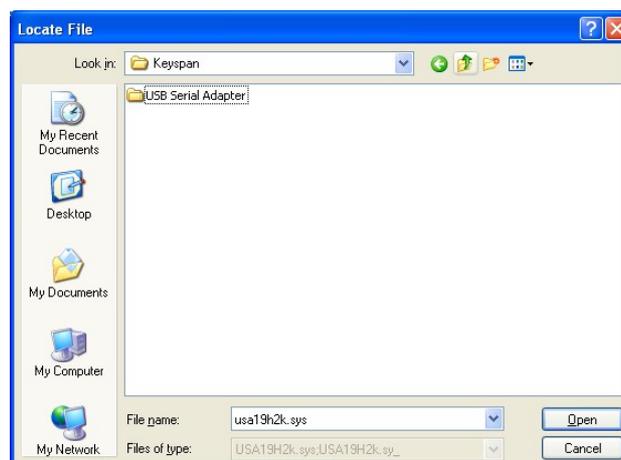
36. When the following message appears, select "Browse".



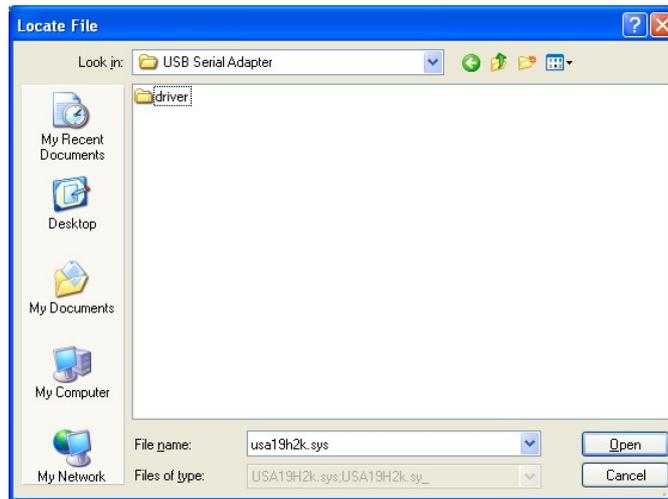
37. Select Program Files



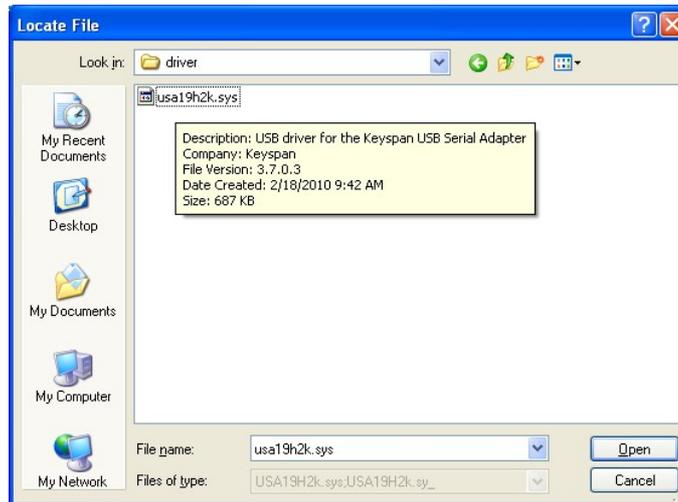
38. Select the Keyspan folder



39. Select the USB Serial Adapter folder



40. Select the **usa19h2k.sys** file



41. The ELSD Serial to USB cable is fully installed