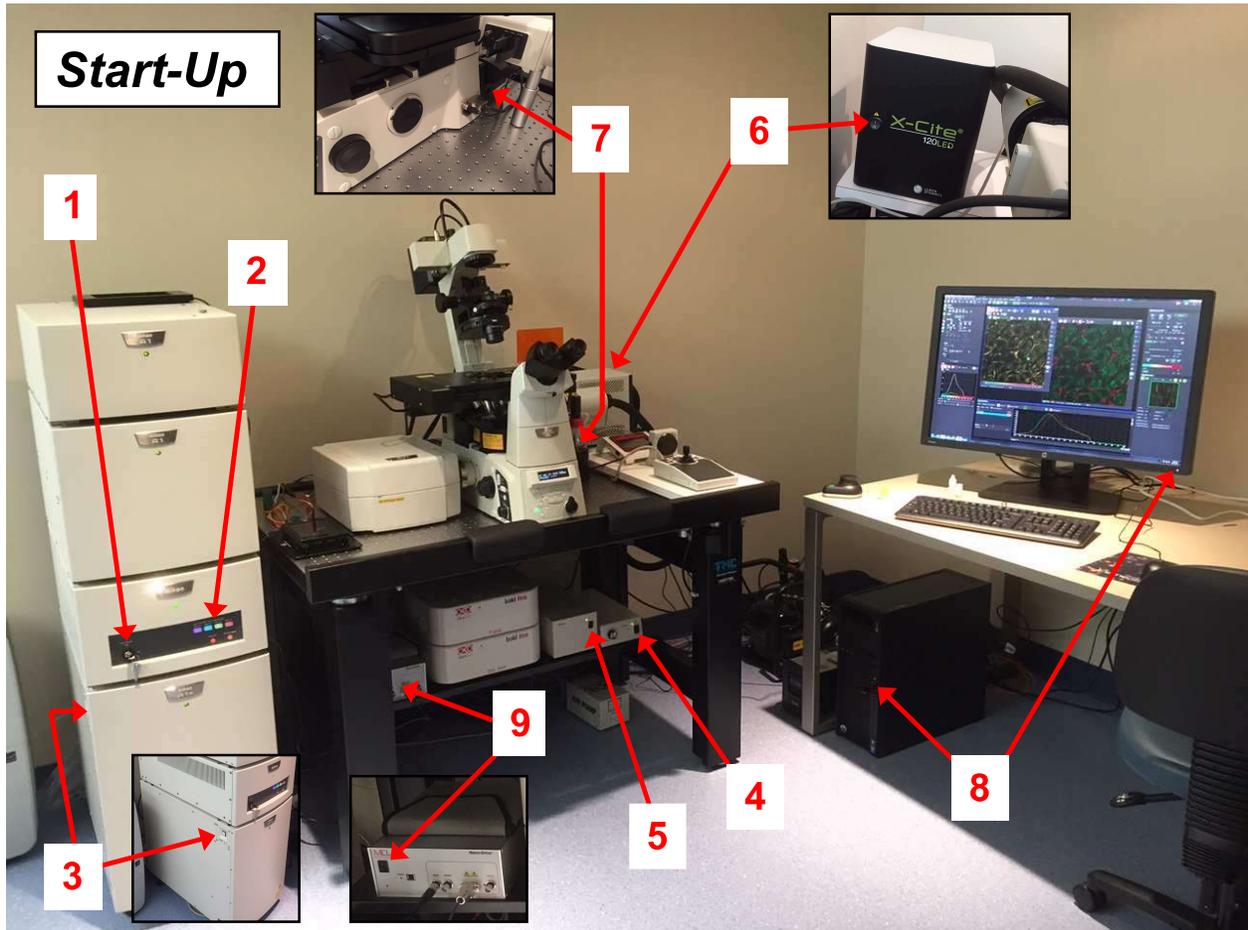


A1R/A1

Start-Up & Shut-Down Procedures

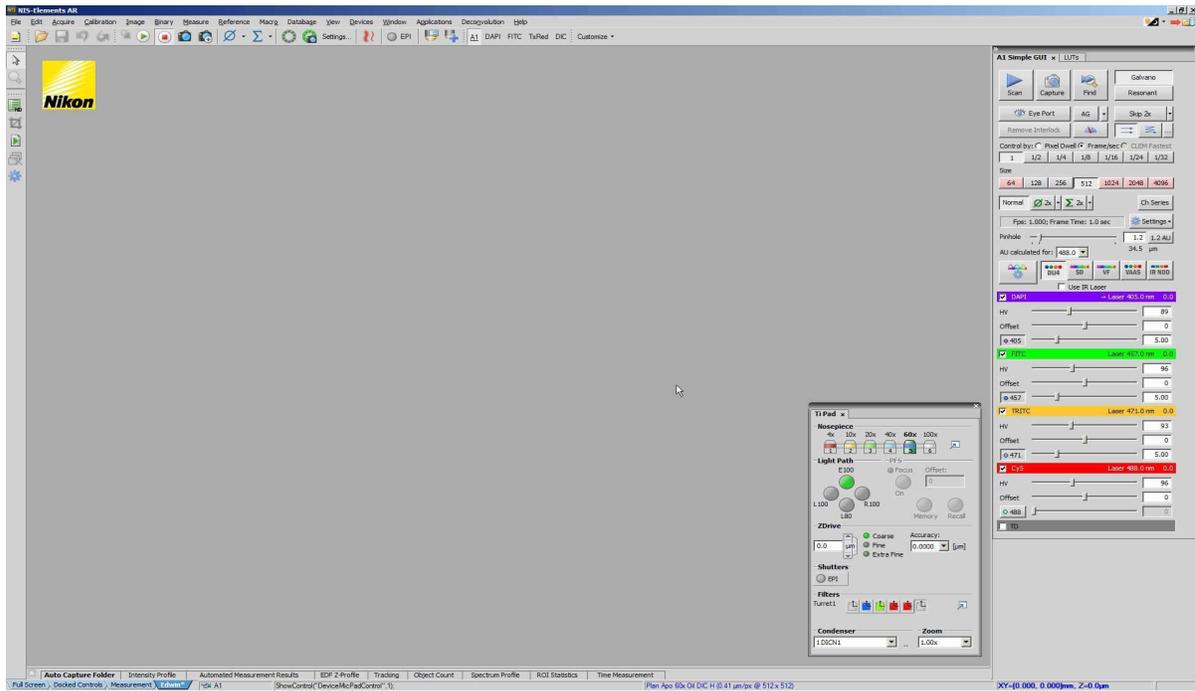


1. Turn on LUN4 laser launch by turning key ¼ turn clockwise. Note that the main power switch at rear of unit can be left on at all times.
2. Individual lasers may be turned on/off by pushing the corresponding indicator buttons.
3. Turn on the A1R main power supply (recessed push button on left side).
4. Turn on the microscope halogen light power supply.
5. Turn on the motorized stage power supply.
6. Turn on the X-Cite 120LED widefield fluorescence light source.
7. Turn on the Ti-E microscope (rocker switch at rear/right).
8. Turn on the PC and monitor.
9. Turn on the Piezo-Z power supply (if needed).
10. Turn on Live Cell Incubation System (if needed; not shown - on top of A1R DUG detector).

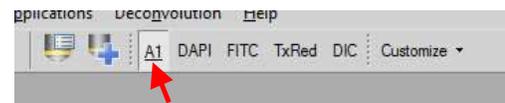
11. When the PC has booted up, start NIS-Elements software by double-clicking the "NIS-Elements A1" short-cut icon on the desktop.



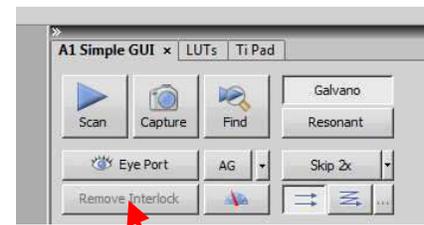
12. You will need the "A1 Simple GUI" window to control the A1. If it is not displayed upon start-up, right-click on the grey desktop, and select "A1 Simple GUI" from the Acquisition Controls. Also convenient are "Ti Pad" to control the microscope functions, "A1 Scan Area" to adjust scan area size, position, and rotation, and "ND Acquisition" for multi-dimensional acquisition.



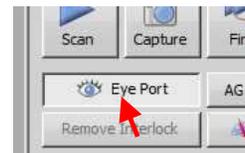
13. Click on the "A1" Optical Configuration (OC) button in the top tool bar. This will automatically direct the microscope light path to the left camera port and moves the fluorescence turret to an open position.



14. Click on the "Remove Interlock" button in the A1 Simple GUI. It is likely colored red initially, and may take a second or two before turning grey. Once the interlock is removed, the system is ready for confocal scanning. You can press the "Scan" button or make adjustments to the A1 Settings.



15. The easiest way to switch between confocal scanning and ocular viewing is by using the "Eye Port" button, located just above the "Remove Interlock" button. In order to observe the sample through the eyepieces, click on "Eye Port".

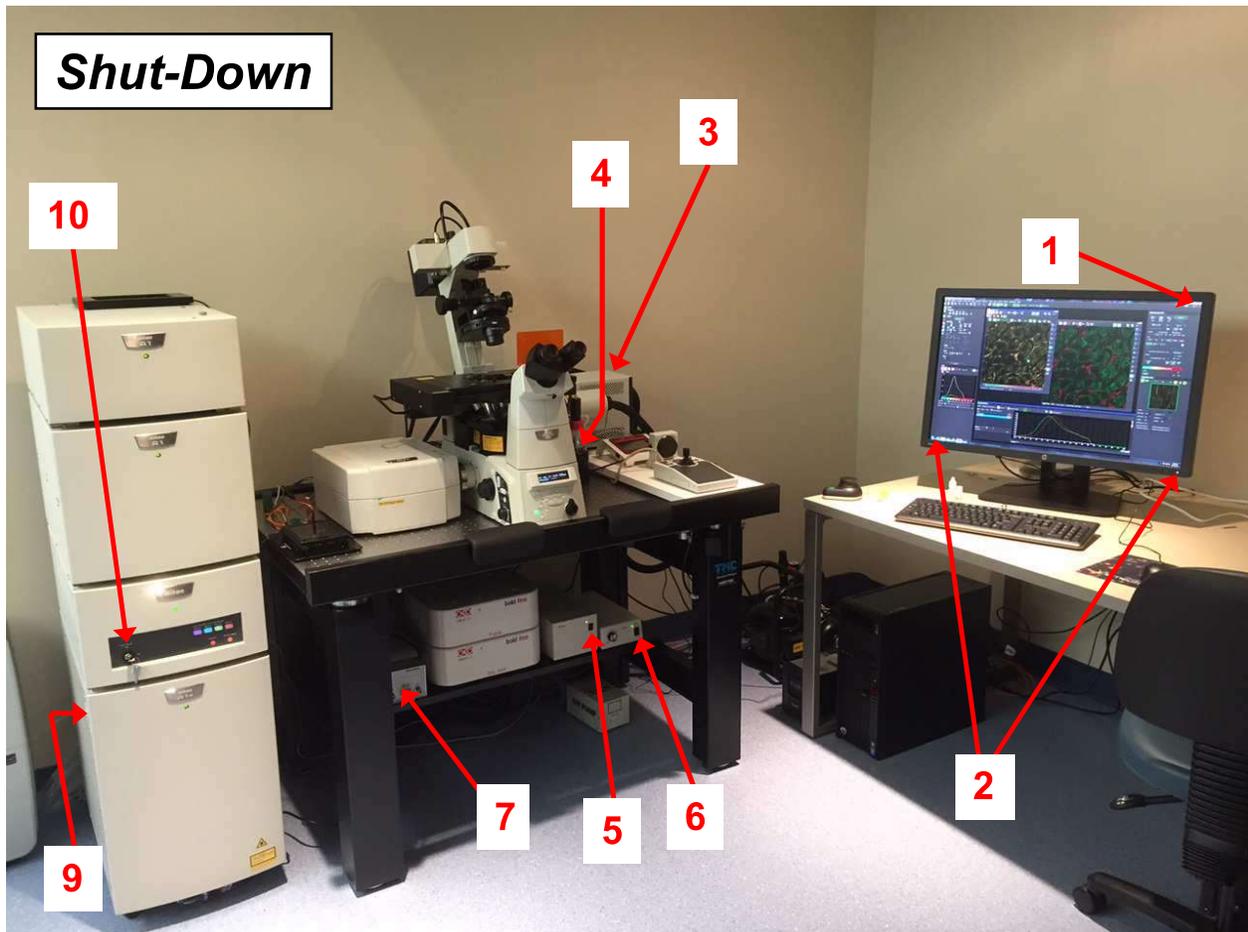


16. Click on the desired eyepiece viewing OC (DAPI, FITC, TxRed or DIC). You can switch between different eyepiece viewing modes by clicking different OC buttons. When you select one of the widefield fluorescence modes, you also need to manually open/close the 120LED shutter (by pushing the remote control knob) and adjust the illumination intensity (by rotating the knob).



When you select one of the widefield fluorescence modes, you also need to manually open/close the 120LED shutter (by pushing the remote control knob) and adjust the illumination intensity (by rotating the knob).

17. At this point, the "Eye Port" button has been programmed to act as a simple, one-click toggle function between confocal (A1) scanning mode and eyepiece viewing mode. When you want to return to confocal imaging, simply click on "Eye Port" again. This will switch the system back to "A1 mode" and automatically removes the interlock. If you click the "Eye Port" button again, the system will return to the last eyepiece viewing mode that was used.



1. Exit out of NIS-Elements software.
2. Shut down the PC and monitor.
3. Turn off the X-Cite 120LED widefield fluorescence light source.
4. Turn off the Ti-E microscope (rocker switch at rear/right).
5. Turn off the motorized stage power supply.
6. Turn off the microscope halogen light power supply.
7. Turn off Piezo-Z power supply (if needed).
8. Turn off Live Cell Incubation System (if needed; not shown).
9. Turn off the A1R main power supply (recessed push button on left side).
10. Turn off the LUN4 laser launch by turning key $\frac{1}{4}$ turn counter-clockwise. Note that, when the LUN4 is turned back on, only those lasers which were turned on during the last power-down sequence will automatically turn on. Note that main power switch at rear of unit may be left on at all times.