

Instructions for the Yokogawa CSU-X1 spinning disk confocal microscope

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Check-in and Start up

There are 3 remote switches and a power strip that supply power to all the components.

1. make sure the power strip for the computer is off, see **caution** in the Check out procedures
In case the power strip is left on
 - i. if computer is still on, shutdown Windows, then turn off the power strip
 - ii. if computer is off, turn off the power strip
2. remote switch labelled MICROSCOPE: power up to turn on the DAQ, microscope, piezo stage, laser interlock box, and the epifluorescence LED
3. If you need the CSU-X1, power up the switch labelled SPINNING DISK to turn on the X1, laser launch, Prime95B camera, and LiveSR. Please wait 1 min for the Prime95B camera to initiate before proceeding to the next step.
4. If you need the Baker Lab additions, power up the switch labelled WIDE-FIELD to turn on the Celesta, Fusion camera, and filter wheel. The Celesta takes about 30 s to fully initialize.
5. turn on the power strip for the computer and monitor
6. log into Windows and then launch Nikon Elements

Check out

1. lower the turret, remove your prep; if applicable, remove oil/immersion fluid on immersion objectives
2. switch to the 10× objective
3. save your experiments and quit Nikon Elements
4. copy your data to external storage media or network file servers, as needed
5. submit your usage using the google form
6. shutdown Windows
7. after the computer has shutdown, switch off the power stripe
Caution: Leaving the computer or the power strip on can cause problem with the spinning disk. When the next user turns on the MICROSCOPE remote switch, the DAQ will bring the computer on if the power strip is on. Now when the user turns on the Prime95B camera via the SPINNING DISK remote switch, windows will not see it because the camera needs to be fully initialized first for windows to load the driver during boot up. The user must then restart the computer to load the camera driver in order to use the spinning disk. It is a known annoyance that we have no means to overcome.
8. power down the remote switches: [SPINNING DISK, WIDE-FIELD], and MICROSCOPE
9. put the cover back on the microscope
10. clean up the work area