Olympus IX-81 Basic Instructions

Start up

1. Make sure there is no sample on the stage
2. Turn on mercury lamp⟶ computer and log in⟶ microscope controller (Olympus IX2-UCB) camera controller (HAMAMATSU)⟶ stage controller (ProScan II)⟶ shutter controller (LAMBDA 10-3)
3. Start the SlideBook software
4. Open the Focus window
5. Carefully load sample on stage
6. Switch selector mirror to eyepiece observation
7. Select lens and imaging mode of fluo filter set or transmitted light desired in Focus window
8. Open transmitted light or fluo shutter
9. CAREFULLY approach sample using course focus buttons or focus knob
10. Locate area of interest
11. Switch mirror selector to camera mode
12. Start camera and focus using camera display
13. Set multiple X,Y and Z positions if needed
14. Close shutters, stop camera and switch selector mirror to camera port

Open Capture window

1. Select binning as needed (2x2 recommended for fluo)
2. Select 3D, Time Lapse or Multipoint if needed (parameters should have already been set up in the Focus window)
3. Select BF, Flue or DIC tabs as needed and check the exposure box
4. Enter initial exposure and select Test
5. Observe image and histogram and adjust exposure as needed (the Find Best button can assist in doing this---select Find Best then test until a good histogram is displayed)
6. Do for each selected mode
7. Enter name for experiment and select OK to start (If the data set will be very large it is best to scroll it to the hard drive)
8. When finished save the slide in slidebook format and analyze as needed
9. The files can be exported as movies or tiffs

End

1. When finished lower lenses, carefully remove sample and clean oil off lens if used
2. Center the lens over the stage
3. Exit software and shut down computer
4. Turn off stage, camera and microscope controllers
5. Turn off mercury lamp

General Notes:

The temperature control is always left on set to around 32°C to get 37°C in the chamber. If you need a lower temperature it should be adjusted several hours before your experiment.

This is a fully motorized system and it is possible, nay likely, to damage components if not operated in the proper manner; for example the lenses can be driven into the sample or stage, and the stage can be driven sideways into the lenses. Make sure when starting and before switching lenses that the current lens is centered in and well below the stage opening, especially when using the oil lenses

When finishing a session switch to the 10x lens, focus the lenses all the way down and center the stage.