

## New function/feature from the Upgrade BX61 System

1. New LED FL light source and New Startup Shutdown
  - a. No extra care like that for Mercury/Metal-Halide lamp
  - b. No waiting or holding time
  - c. Minimum phototoxicity (bleaching, damaging)
  - d. Simple A, B, C. One minute waiting from B&C to start cellSens.
2. Both Camera FOVs are bigger than Eyepiece FOVs.
  - a. UC90 camera, Gain dB selection, 8/14 bit selection, sRGB or Adobe RGB selection, auto WB.
  - b. BF condenser: Maximum Field, matching Aperture to objective.
  - c. Hamamatsu Flash4.0 V3 monochromic camera, 8/12/16 bit selection, "vertical" setup
  - d. FL: Maximum Field and Aperture for simplicity.
3. New Filter wheel DAPI, GFP/FITC/488, YFP, PE, TRITC/Cy3, mCherry/TexRed/Alexa 594, Cy5
  - a. DM1: for DAPI/FITC-GFP-488/TRITC-Cy3/Cy5-633-647.
  - b. Use Cy3, TRITC, Alexa 532, 545, 561, not 594, TexRed.
  - c. Even Alexa 594 or TexRed, try to use TRITC to save switching Filter set carousel.
  - d. DM2: for YFP, RFP
4. Dual Red and green emission viewing and imaging using UC90 color camera.
5. Synchronize FL lighting and live view imaging, adjustable frame rate.
6. Manually fix BF Intensity adjustment at 9V.
7. Manually select Intensity adjustments for each LED, recommended at 100%.
8. Control Mouse Rolling to focus (change Z).
9. Control H for Hi-Lo intensity display.
10. cellSens 3.2 polygon definition of MIA tiling.
11. Z first before channels.