Zeiss 710 Confocal Condensed User Guide

Turn On Sequence

1. Turn on Computer and wait till Windows boots
2. Turn on Main Switch (A)
3. Wait 5 seconds
4. Turn on Systems/PC (B)
5. Turn on Components (C)
6. Turn Argon key to right (D-laser ON)
7. Flip laser switch UP to Run mode (E)
8. Logon to computer using net ID & password
9. Open Zen software and start system

Ending Session

1. Lower objective by pushing down first button on focus knob (F)
2. Wipe oil or water off objective
3. Flip laser switch Down to Idle mode (E)
4. Transfer images to Fileshare
5. Logoff Windows

Shut down

1. Do 1-4 in ending session.
2. Shut down computer.
3. Turn Argon key (D) to off.
4. Turn off Components (C) and System/PC (B).
5. Wait ~3 minutes, then turn off Main switch (A).
6. Cover scope.
### Objective Specifications

<table>
<thead>
<tr>
<th>Mag</th>
<th>NA</th>
<th>Immersion medium</th>
<th>CS thickness (mm)</th>
<th>WD (mm)</th>
<th>Objective Type</th>
<th>Ring Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>5x</td>
<td>0.25</td>
<td>Air/Dry</td>
<td>0.17</td>
<td>12.5</td>
<td>Fluar</td>
<td>Red</td>
</tr>
<tr>
<td>10x</td>
<td>0.3</td>
<td>Air/Dry</td>
<td>0.17</td>
<td>5.2</td>
<td>EC-Plan Neofluar</td>
<td>Yellow</td>
</tr>
<tr>
<td>10x</td>
<td>0.45</td>
<td>Water</td>
<td>0.17</td>
<td>1.8</td>
<td>C-Apochromat</td>
<td>Yellow</td>
</tr>
<tr>
<td>25x</td>
<td>0.8</td>
<td>Oil/Water*</td>
<td>0 - 0.17</td>
<td>0.55</td>
<td>LCI Plan-Apochromat</td>
<td>Red/Green</td>
</tr>
<tr>
<td>40x</td>
<td>1.2</td>
<td>Water</td>
<td>0.14 - 0.19**</td>
<td>0.28</td>
<td>C-Apochromat</td>
<td>Blue</td>
</tr>
<tr>
<td>63x</td>
<td>1.4</td>
<td>Oil</td>
<td>0.17</td>
<td>0.19</td>
<td>Plan-Apochromat</td>
<td>Black</td>
</tr>
</tbody>
</table>

WD = working distance: how far the objective can focus past the coverslip

*25x: Set to Red mark for oil, Blue mark for water

**for coverslip (CS) thickness #1, set collar to 0.14; for #1.5 coverslip, set collar to 0.17

### Recommended Minimum Pixel Size

<table>
<thead>
<tr>
<th>Magnification</th>
<th>Minimum Pixel Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>5x</td>
<td>0.50 um</td>
</tr>
<tr>
<td>10x</td>
<td>0.30 um</td>
</tr>
<tr>
<td>25x</td>
<td>0.10 um</td>
</tr>
<tr>
<td>40x</td>
<td>0.08 um</td>
</tr>
<tr>
<td>63x</td>
<td>0.07 um</td>
</tr>
</tbody>
</table>

### Filters in Microscope (Axio Observer.Z1)

<table>
<thead>
<tr>
<th>Position</th>
<th>Set No.</th>
<th>Excitation</th>
<th>Beam Splitter</th>
<th>Emission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Empty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>02</td>
<td>G365</td>
<td>FT 395</td>
<td>LP420</td>
</tr>
<tr>
<td>3</td>
<td>09</td>
<td>BP 470/40</td>
<td>FT 510</td>
<td>LP 515</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>BP 546/12</td>
<td>FT 580</td>
<td>LP 590</td>
</tr>
<tr>
<td>5</td>
<td>POL</td>
<td>Polarizer for DIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Mirror for LSM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Additional Notes: Upper Polarizer - Keep Left if not using DIC. For DIC: move to Right for confocal, Left for eyepieces.