

Instructions for the Zeiss Axio Zoom.V16 microscope

You can refer to the Manual for more details about the operation of this microscope.

Start up

1. turn on the surge protector
2. HIP Control Unit on the right side of the column: push Power button to turn on the microscope



Basic setup

- 2 objective lenses are mounted on the turret: 1× WD 56 mm and 2.3× WD 10.6 mm
- the blue coarse/fine focus knobs are located on the profile column
- HIP Control Unit: the knurled wheel controls the motorized zoom
- in front of the HIP on the microscope body is a knurled wheel that controls the aperture diaphragm
- the camera is fitted with a 1× adapter

Imaging modes

Fluar Illumination Z mot module has 4 buttons to select the following

1. blue: EX 365/100 DM 395 EM 445/50
2. green: EX 470/40 DM 495 EM 525/50
3. red: EX 545/25 DM 570 EM 605/70
4. white: empty
 - transmitted light base provides BF, BF+, DF, and variable oblique illumination
 - halogen illuminator provides incident light



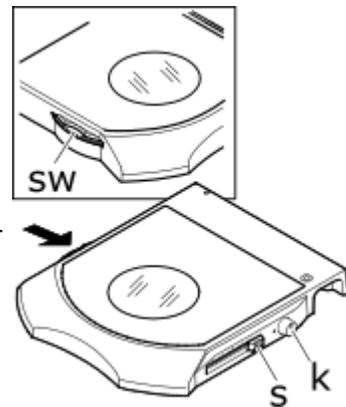
Epifluorescence

1. HXP 200 C metal halide illuminator: turn the power on, the shutter should be on remote with the yellow indicator light off, adjust the intensity knob as needed

Caution: The minimum on time is 5 min and the minimum off time is 10 min.
2. on the Fluar Illumination module, make sure the shutter is on, select either 1, 2, or 3 according to the fluorophore of your preparation
3. press the remote shutter to toggle the illumination on/off

Transmitted light

1. on the Fluor illumination module: press 4 to select the empty slot
2. on the transmitted light base: select BF, BF+, or DF with the setting wheel (sw) on the left side
3. then adjust the knob (k) on the right side of the base to obtain the desirable intensity
4. you can also slide the shutter slider (s) on the right forward to get various level of oblique illumination or draw it close as a shade, e.g., when alternating transmitted light and epifluorescence



Axiocam 506

1. turn on the surge protector, wait for Windows to boot up and then log in
2. launch Zen from the desktop shortcut
3. wait until the hardware initialization are done, you should be in the Camera tab and Axiocam 506 is the Active Camera
4. make sure to check the box "Show All" in the Microscope Control pane and expand this pane so you can select the appropriate settings according to the table below to set the metadata correctly
5. locate the area of interest, zoom, and focus
6. on the Axio Zoom binocular phototube, pull the push-pull rod out to select the light path to the camera
7. in Zen: click Live for a preview
 - on the Axio Zoom HIP display: use the thumb wheel to select a Mag listed in the table below that is closest to your choice
 - in Zen: specify objective, zoom, camera adapter as listed in the tabel below; and Zen will calculate the Total Magnification
8. focus, adjust the exposure time, and then click Snap to take an image
9. save your file (16-bit, czi)

Microscope options in Zen, pixel size at 2752×2208, and field of view

Objective lens and camera adapter combination	Axio Zoom HIP display: Mag	Zen Microscope settings		pixel size (µm)	field of view, width (mm)
		Zoom	Total Magnification		
1× objective and 0.63× adapter	7	0.7	0.441	10.29	28.3
	10	1	0.63	1	19.8
	20	2	1.26	2	9.9
	50	5	3.15	5	4.0
	80	8	5.044	8	2.5
	112	11.2	7.056	0.64	1.8
1× objective and 1× adapter	7	0.7	0.7	6.49	17.8
	10	1	1	4.54	12.5
	20	2	2	2.27	6.2
	50	5	5	0.91	2.5
	80	8	8	0.57	1.6
	112	11.2	11.2	0.41	1.1
2.3× objective and 0.63× adapter	16.2	0.7	1.0143	4.48	12.3
	23	1	1.449	3.13	8.6
	46	2	2.898	1.57	4.3
	115	5	7.245	0.63	1.7
	184	8	11.592	0.39	1.1
	260	11.2	15.2288	0.28	0.8
2.3× objective and 1× adapter	16.2	0.7	1.61	2.82	7.8
	23	1	2.3	1.97	5.4
	46	2	4.6	0.99	2.7
	115	5	11.5	0.39	1.1
	184	8	18.4	0.25	0.7
	260	11.2	25.76	0.18	0.5

Working with czi files

- install Zen lite from our software DVD or obtain the latest version from [Zeiss](#)
- use Bio-Formats plugin ([loci_tools.jar](#)) in [ImageJ](#), or [Fiji](#)

Check out

1. if you use the camera
 - i. save your files and exit Zen
 - ii. transfer your files
 - iii. submit your usage using the google form
 - iv. if the next user is expected in the next 6 hours, log out of windows
 - v. otherwise shutdown Windows and turn off the surge protector
2. turn off the HXP 200 C illuminator if the next user is not expected in the next 6 hours
3. HIP Control Unit: power off the microscope
4. turn off the surge protector
5. replace the cover
6. clean up the work area
7. please remember to submit your usage using the google form