

## Operating Procedures for Scope 3 Zeiss Fluorescence Microscope

**Note:** The fluorescence light bulb needs to remain on for a minimum of 30 minutes. Failure to do so will shorten the bulb life and may cause the bulb to burst.

- 1) Turn on the camera. This is the black box on top of the computer.
- 2) Turn on the computer. User name is SMIF, password is microsmif.
- 3) Turn on microscope (button #28).
- 4) Set eyepieces so that the 0 lines up with the white dot.
- 5) Place sample on stage and focus (knobs 18 & 19).
- 6) If using fluorescences:
  - a) Set Neutral Density Filters (#8) to 100 or blank setting.
  - b) Turn on fluorescent light using the HBO 100 box. See note above.
  - c) Place correct filter in path of fluorescence light.
    - i) Position 1 – BF (bright field for white light)
    - ii) Position 2 – AF 546 (emits green light)
    - iii) Position 3 – AF 633 (emits red light)
- 7) Adjust the brightness of the light with the Light Intensity knob (#14) and the F stop (#7).
- 8) To take an image, pull out the camera path rod (#4).
- 9) Open MetaVue software by clicking on the icon.
- 10) Click on the Configure Acquisition button. This will open an imaging menu.
  - a) The Acquire button acquires an image.
  - b) The Show Live button will give you a live image.
  - c) If image is black or white, the exposure time needs to be adjusted.
    - i) Fluorescent light settings are around 1000ms.
    - ii) White light settings are around 1-2ms.
  - d) To save the image, go to the top menu bar and click on File. Then click on Save as. Please save images to the D drive.
- 11) When finished, turn off camera and computer.
- 12) Turn off microscope (#28).
- 13) Turn off the fluorescence light (if it has been longer than 30mins). If it has been less than 30mins, please come back and turn it off after 30mins.

4 OPERATION

4.1 Axio Imager operation and function controls (manual version)

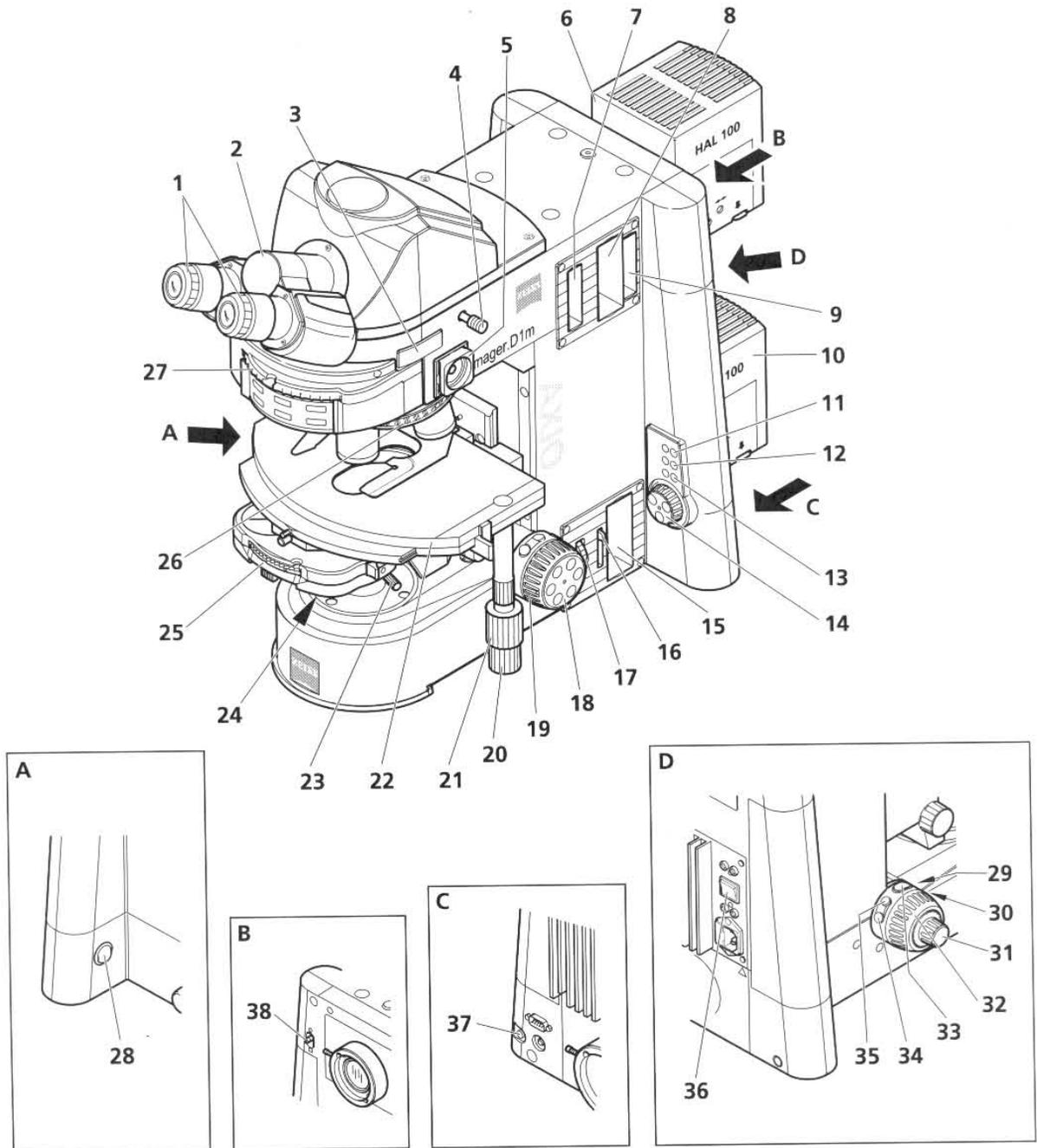


Fig. 4-1 Axio Imager operation and function controls (manual version)

**Legend to Fig. 4-1:**

- 1 Eyepieces
- 2 Binocular tube
- 3 Slot for analyzer slider (usable only, if camera path deflection, left, has not been installed)
- 4 Push-pull rod for camera path deflection, left, with interface 60N
- 5 Adjusting aid for HBO/XBO illuminators
- 6 Illuminator HBO 100 for fluorescence applications
- 7 Slot F for stop slider with centerable luminous-field diaphragm
- 8 Slot for 2-position filter wheels, discrete: The filter wheels are not suitable for fluorescence examinations
- 9 Slot A for FL attenuator, discrete
- 10 Halogen illuminator HAL 100
- 11 RL Button - Reflected-light shutter ON/OFF with indicator LED
- 12 3200K Button - Color temperature of 3200 K ON/OFF with indicator LED
- 13 TL Button - Transmitted-light shutter ON/OFF with indicator LED
- 14 Light intensity control
- 15 Slot for 2-position filter wheels, discrete
- 16 Sliding button for transmitted-light diffusing glass
- 17 Control wheel for luminous-field diaphragm
- 18 Focusing drive - Fine focusing control, right side
- 19 Focusing drive - Coarse focusing control, right side
- 20 Control knob for X travel of mechanical stage
- 21 Control knob for Y travel of mechanical stage
- 22 Mechanical stage
- 23 Condenser carrier (refer also to Fig. 4-2)
- 24 Polarizer for transmitted light
- 25 Condenser
- 26 Objective nosepiece with objectives
- 27 Reflector turret
- 28 ON/OFF switch
- 29 Button for transmitted-light shutter ON/OFF (see also Section 4.8.5.2)
- 30 Button for reflected-light shutter ON/OFF (see also Section 4.8.5.2)
- 31 Focusing drive - Fine focusing control, left side
- 32 Focusing drive - Coarse focusing control, left side
- 33 Button (not used)
- 34 Button for reducing light intensity of Halogen illuminator HAL
- 35 Button for increasing light intensity of Halogen illuminator HAL
- 36 Toggle switch for transmitted/reflected light halogen illuminator
- 37 Button LM-Set (light manager)
- 38 Sliding button for reflected-light diffusing glass