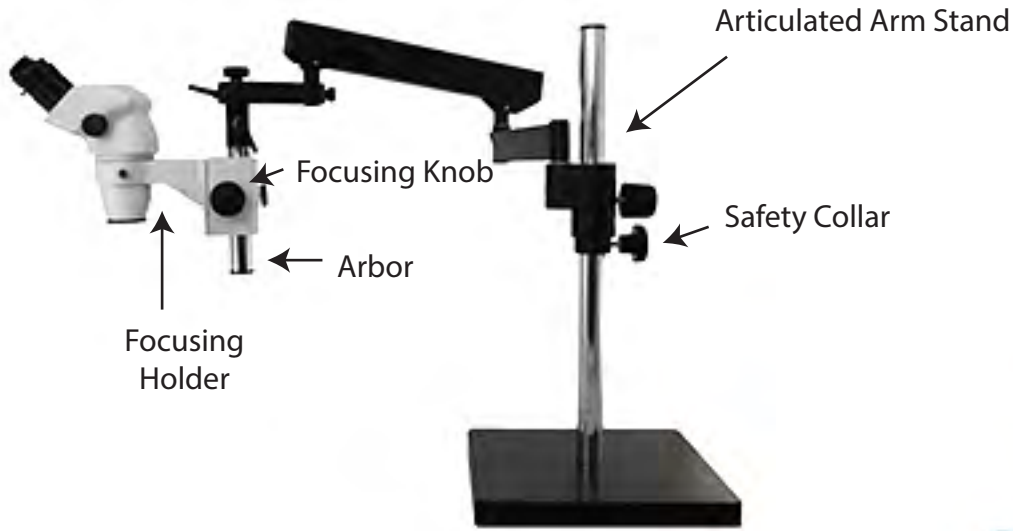


FZ6 Microscope User's Manual

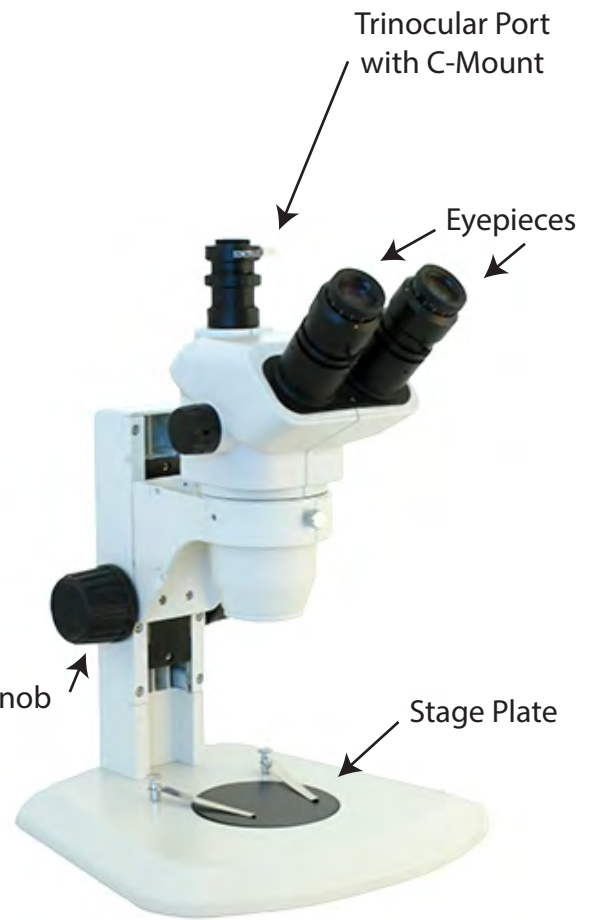
FZ6-AA, FZ6-BB, FZ6-BMSQ, FZ6-RLT, FZ6-TS



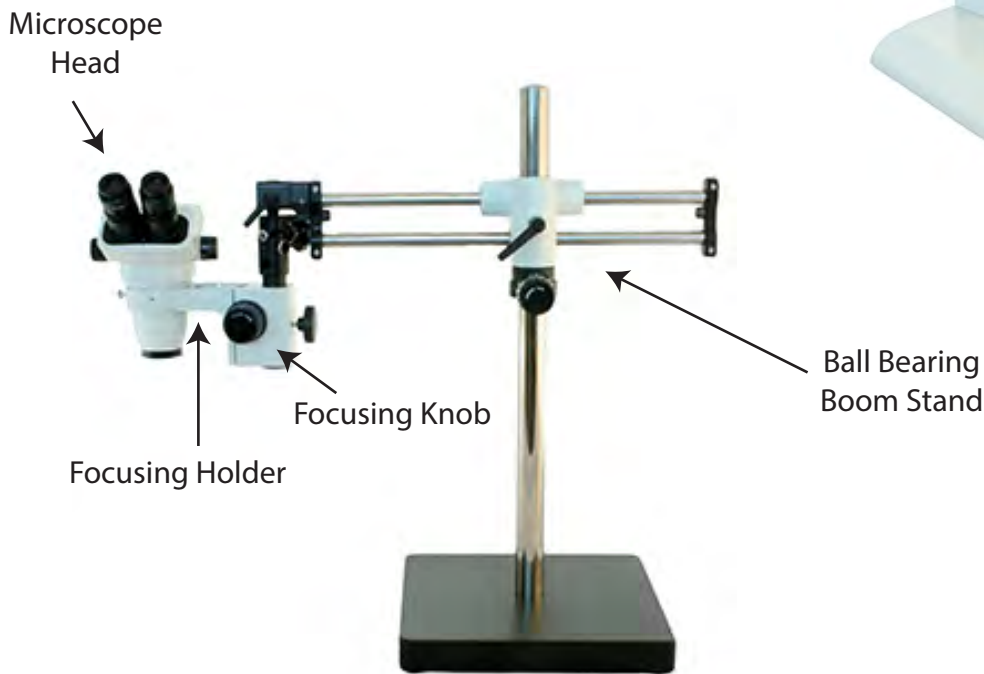
Microscope Components:



FZ6-AASQ
(Articulated Arm Stand)



FZ6T-TS
(Track Stand)



FZ6-BB
(Ball Bearing Boom Stand)

Microscope Components:

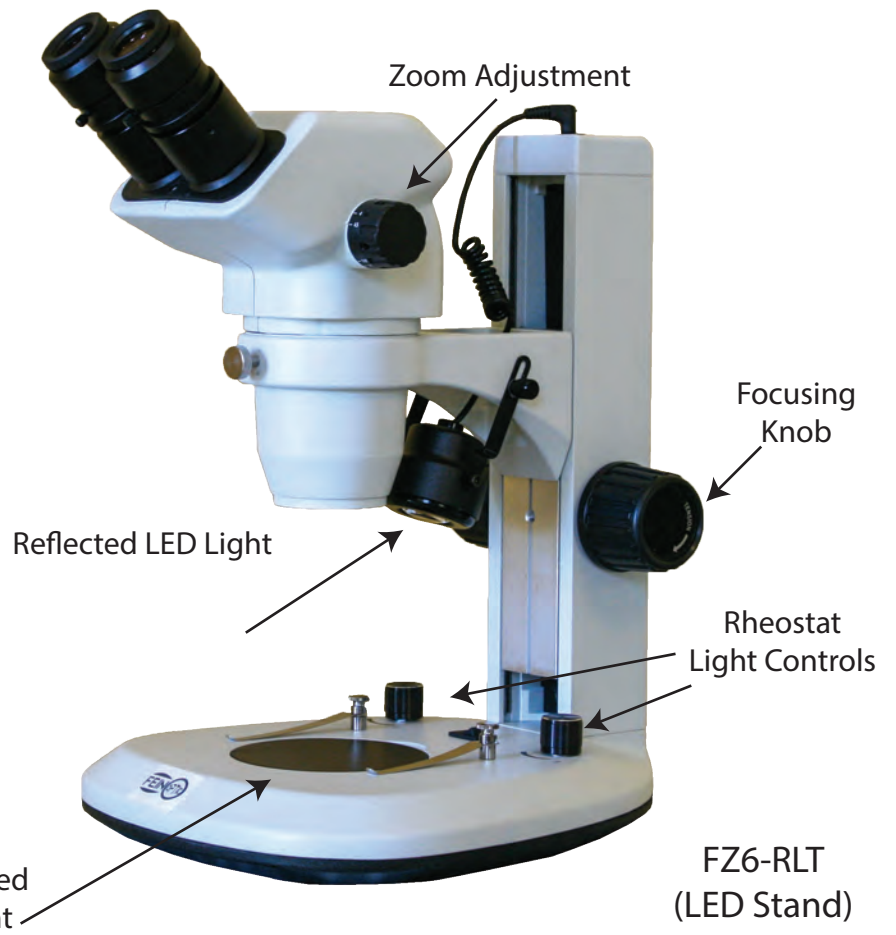
Trinocular Port with C-Mount

Beam Splitter

Boom Stand



FZ6T-BMSQ
(Boom Stand)



Zoom Adjustment

Focusing Knob

Reflected LED Light

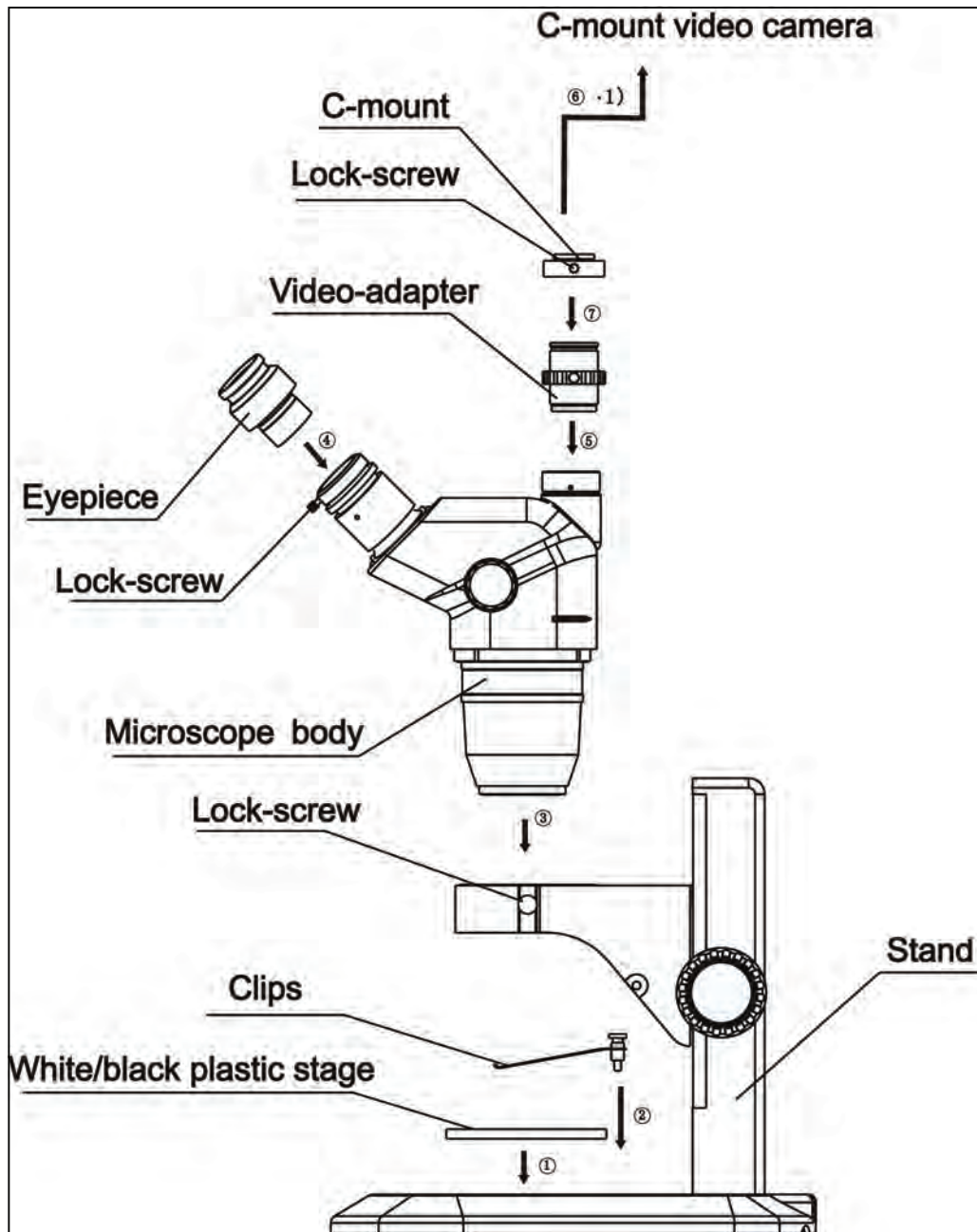
Rheostat Light Controls

Transmitted LED Light

FZ6-RLT
(LED Stand)

Binocular / Trinocular Microscope Assembly:

Assembly sketch of FZ6T-TS with c-mount adapter.



Note: When assembling FZ6 microscopes on articulated arm or boom stand, assembly is similar to the top part of the diagram shown above. Microscope body is fit into focusing holder and focusing holder is attached with arbor to the stand.

Before Use:



Do not shake or drop the microscope.



Do not not expose the microscope to direct sun, high temperatures, dust, or damp environments. Use a flat work surface. Indoor operating temp 32°~104°F (0°~40°C), max relative humidity of 85%.



When moving the microscope use both hands, holding by the base and the back of the microscope.



For a clear image, ensure you do not leave fingerprints on the eyepieces or auxiliary lenses.



Do not adjust the right and left focusing knob in opposite directions simultaneously.



Wipe lenses gently with a soft tissue. Wipe off fingerprints from lens surfaces with lens paper using a small amount of microscope cleaning solution or a 3:7 mixture of alcohol and ether or dimethylbenzene. (Alcohol and ether are flammable, do not place these chemicals near fire and clean in a ventilated area.)



When cleaning other surfaces of the microscope use water only. A basic detergent can be used to clean the surface if necessary, but ensure that all the detergent is removed from the frame with a clean, damp cloth prior to drying the surface.



After use, cover the microscope with a dust cover and power off the light.



FZ6-TS

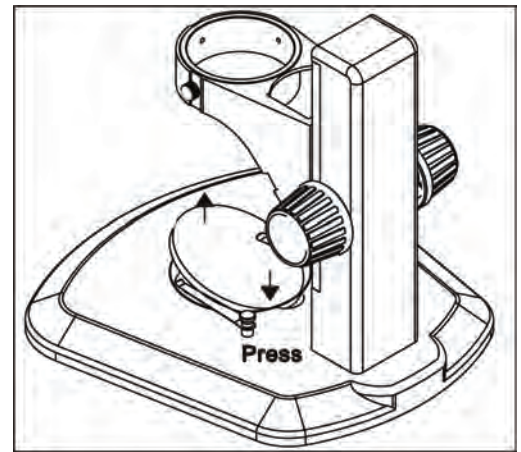
Microscope Operation:



Using Black/White Stage Plate:

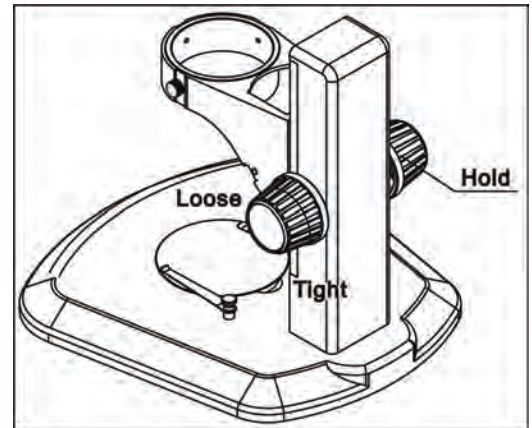
For the FZ6-TS or the FZ6-ILST a black/white stage plate may be used. Typically the white side of the stage plate faces upward. If the sample is a white or a bright color, place the black side up.

To remove the stage plate press the supporting point shown at right.



Adjusting Focus Tension:

Hold one side of the focus knob and turn the other side to adjust the focus tension. One direction will tighten the tension and the other will loosen it. Tension should only be tightened if the focusing holder is drifting or falling during observation.



Adjusting Diopters:

Turn the zoom knob to maximum magnification.

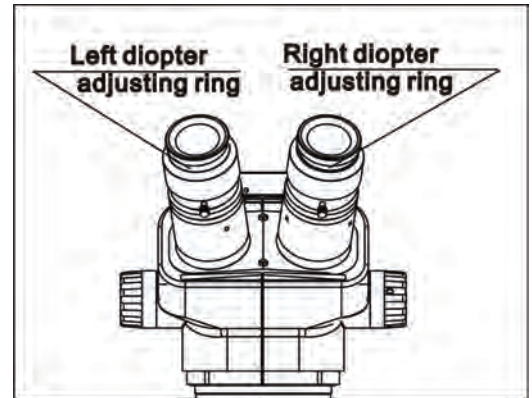
Adjust both diopter adjustment rings to zero.

Look through the right eyepiece. If the image is not clear, turn the focusing knob until it is clear.

Turn the zoom knob to minimum magnification.

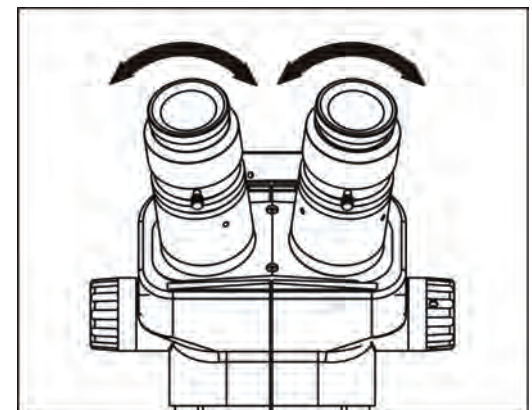
Look through the right eyepiece. If the image is not clear, turn the eyepiece diopter adjustment until it is clear.

Look through the left eyepiece. If the image is not clear adjust the left diopter adjustment to get a clear image.



Adjusting Interpupillary Distance:

Hold both eyepiece tubes and slide in direction as shown at right.



Microscope Operation:



Inserting Eyepiece Reticle:

The FZ6 eyepieces accept a 24mm diameter reticle. Unscrew the reticle retaining ring from the bottom of the eyepiece. Drop the reticle into the eyepiece with the inscription facing the eyepiece lens. Screw the retaining ring back into place, securing the reticle.



Using an Auxiliary Lens:

The auxiliary lens screws onto the bottom of the body of the FZ6 and will change both magnification and working distance.



Using the C-Mount Adapter:

Screw the video tube (1) into the trinocular port.

Loosen the set screw (2) on the tube to remove the c-mount threads (3).

Attach the c-mount camera to the c-mount threads. Reattach the microscopy camera to the adapter and tighten the set screw (2).



Adjusting Beam Splitter:

To direct the light only to the eyetubes, adjust the beam splitter to "OUT" (1).

To direct light to both the eyetubes and the trinocular port, set the beam splitter to "IN".

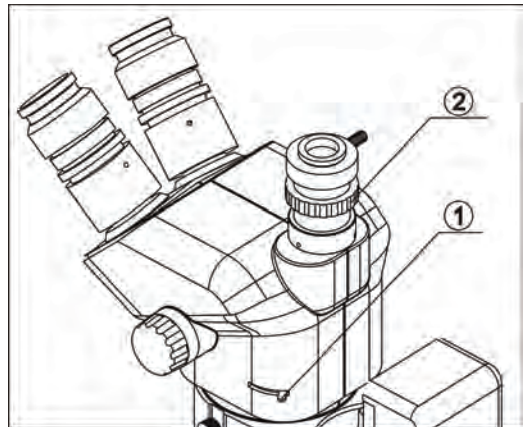
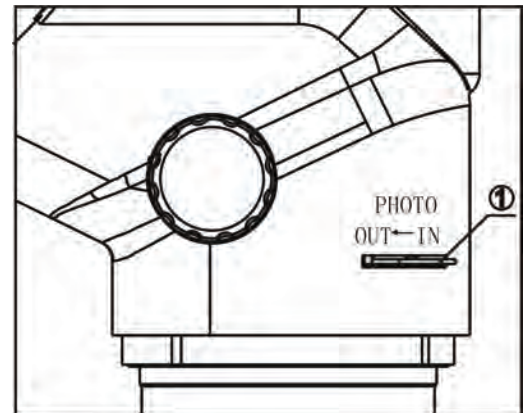
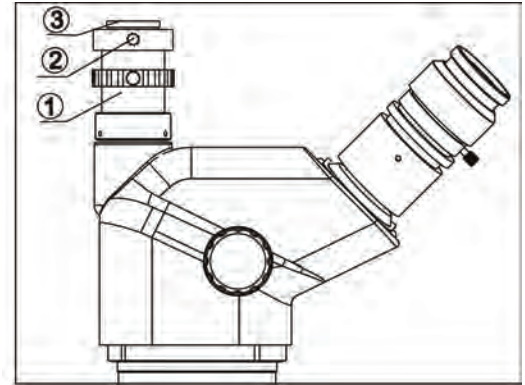
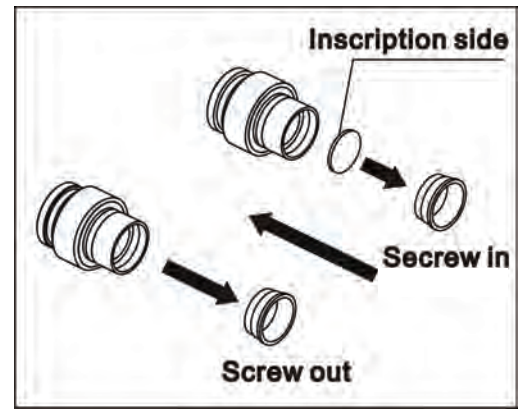


Adjusting the C-Mount:

Set the beam splitter to "IN" (1).

Turn the zoom knob to maximum magnification and adjust the focusing knob for a clear image.

Turn the zoom knob to the minimum magnification. If the image is not clear, adjust the adjustment ring (2) on the c-mount to make it clear.



Microscope RLТ Stand Operation:



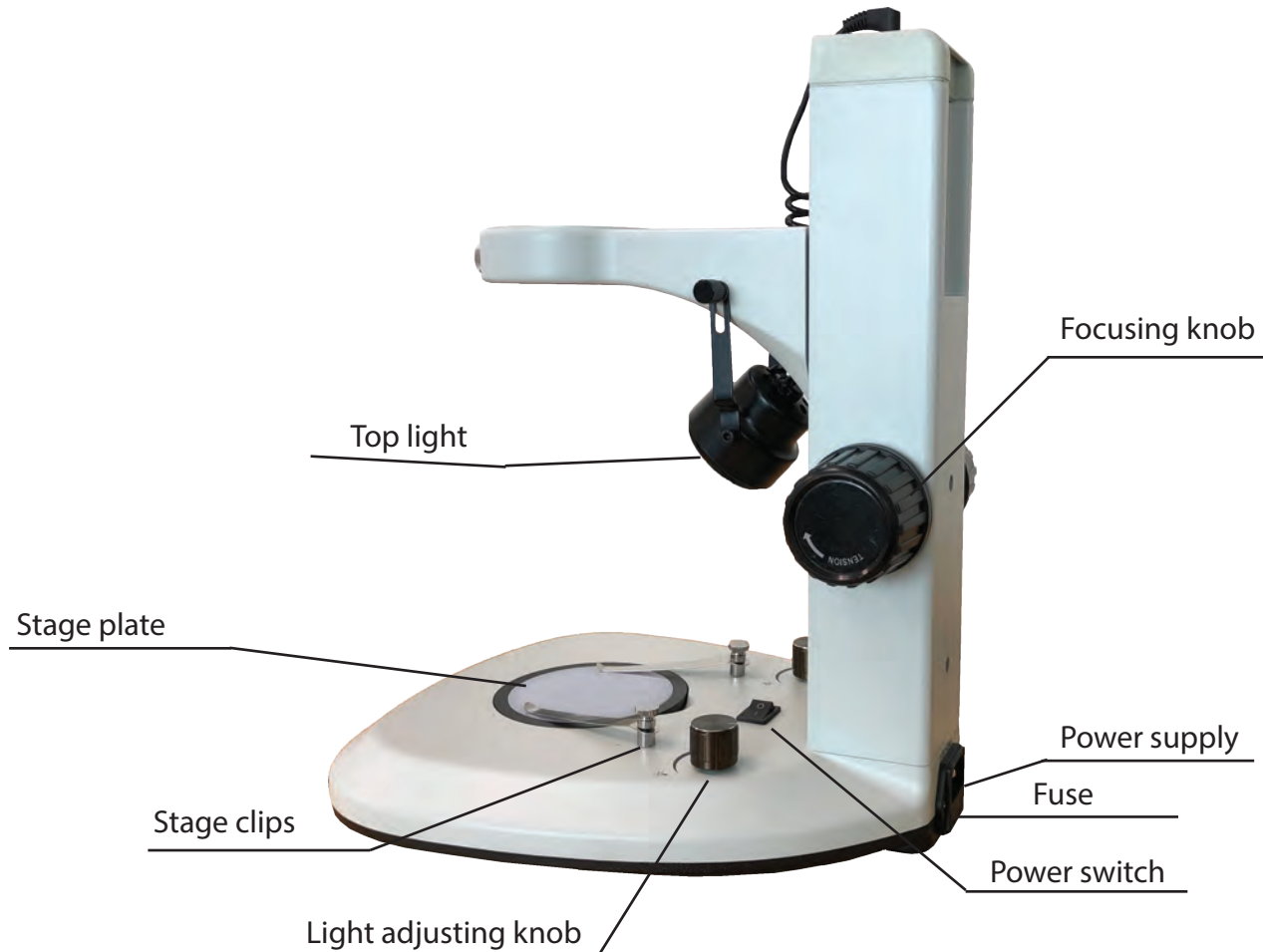
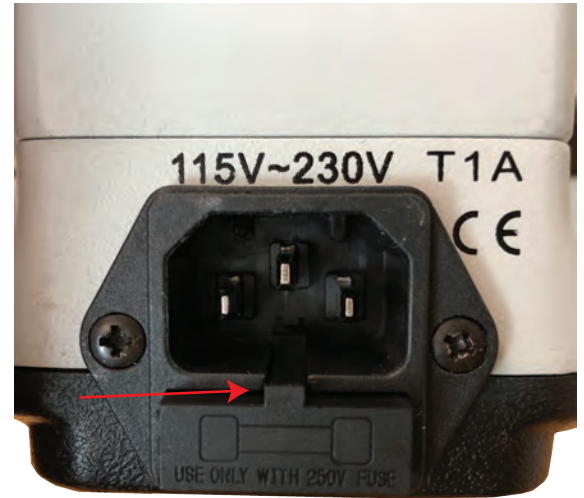
Replacing the Fuse:

- Unplug the power supply.
- Use a flat head screwdriver to press down on the tab located on the top of the fuse to release the fuse.
- Remove the old fuse.
- Replace fuse and screw fuse set back into place.



Glass Stage Plate:

- The microscope includes 95mm glass and 95mm black and white stage plate. Replacement glass stage plate can be purchased, part # 95mmGSTG.
- Replacement black and white stage plate can be purchased, part # 95mmBWSTG.



FZ6 Microscope Magnification Options:

Auxiliary Lens	Working Distance	10x Eyepieces		15x Eyepieces		20x Eyepieces	
		Zoom Mag	Field Size	Zoom Mag	Field Size	Zoom Mag	Field Size
1x (None)	100mm	6.7x - 45x	32.8mm - 4.9mm	10.1x - 67.5x	23.9mm - 3.6mm	13.4x - 90x	17.9mm - 2.7mm
0.5x	177mm	3.4x - 22.5x	65.7mm - 9.8mm	5x - 33.8x	47.8mm - 7.1mm	6.7x - 45x	35.8mm - 5.3mm
1.5x	47mm	10.1x - 67.5x	21.9mm - 3.3mm	15.1x - 101.3x	15.9mm - 2.4mm	20.1x - 135x	11.9mm - 1.8mm
2.0x	26mm	13.4x - 90x	16.4mm - 2.4mm	20.1x - 135x	11.9mm - 1.8mm	26.8x - 180x	9mm - 1.3mm

FZ6 Microscope Parts:

Part #	Description
WF10x-F	Widefield 10x, high eyepoint focusable eyepieces (paired), FN22, reticle retaining ring
WF15x-F	Widefield 15x, high eyepoint focusable eyepieces (paired), FN16, reticle retaining ring
WF20x-F	Widefield 20x, high eyepoint focusable eyepieces (paired), FN12, reticle retaining ring
FZ-AL5	0.5x Auxiliary Lens, WD 177mm
FZ-AL1-5	1.5x Auxiliary Lens, WD 47mm
FZ-AL2	2.0x Auxiliary Lens, WD 26mm
FZ-POL	Polarizing filter, attaches to bottom of microscope body.
FZ-RLA	Ring Light Adapter
FZH-F	Focusing holder, coarse focus
FZH-FC	Focusing holder, coarse and fine focus
FZ-TS	Track stand with ergonomic, low-profile base; 76mm focusing holder; black/white stage plate.
FZ-RLT	Track stand with transmitted/reflected LED light; 76mm focusing holder; glass plate.
FZ-CMT0.5X	0.5x C-Mount Adapter
FZ-CMT0.35X	0.35x C-Mount Adapter



Optical Troubleshooting

Problem	Cause	Solution
LED light is too bright or too dark.	Rheostat control is not set properly.	Adjust rheostat control.
Spots in field of view.	Dirt or dust on sample.	Clean sample.
	Dirt or dust on eyepiece.	Clean eyepiece.
	Dirt or dust on objective lens.	Clean objective.
	Dirt or dust on stage.	Clean stage.
Double image.	Interpupillary distance not set properly.	Adjust interpupillary distance.
	Dioptr is not set properly.	Adjust the diopter.
	Different magnification eyepieces.	Use same magnification eyepieces.
Image is not clear.	Dirt on eyepieces or objectives.	Clean eyepieces & objectives.
Image is blurry when focusing.	Dioptr is not set properly.	Adjust the diopter.
	Microscope is not focused.	Focus again.
Only half an image appears through eyepiece or camera.	Beam splitter is not fully in position.	Adjust beam splitter and ensure it is fully in position.
Image is not clear on monitor when focusing microscope.	C-Mount adapter is not focused.	Focus c-mount adapter.



Electrical & Focusing Troubleshooting

Problem	Cause	Solution
Bulb does not work.	Rheostat is turned all the way down.	Adjust rheostat control.
	Bulb is burned out.	Replace bulb.
	Fuse is burned out.	Replace fuse.
	Dirt on the stage is blocking light path.	Clean stage.
Bulb burns out frequently.	Power supply voltage is too high.	Use transformer to reduce voltage.
	Bulb is the incorrect bulb.	Replace bulb with correct bulb.
Fuse burns out frequently.	Power supply voltage is too high.	Use transformer to reduce voltage.
Light flickers.	Bulb is about to burn out.	Replace the bulb.
	Microscope is not plugged in fully.	Adjust plug.
Focusing knobs are stiff and hard to move.	Focusing knobs are too tight.	Loosen focusing knob.
Microscope body falls once focused and image falls out of focus.	Focusing knobs are too loose.	Tighten focusing knob.