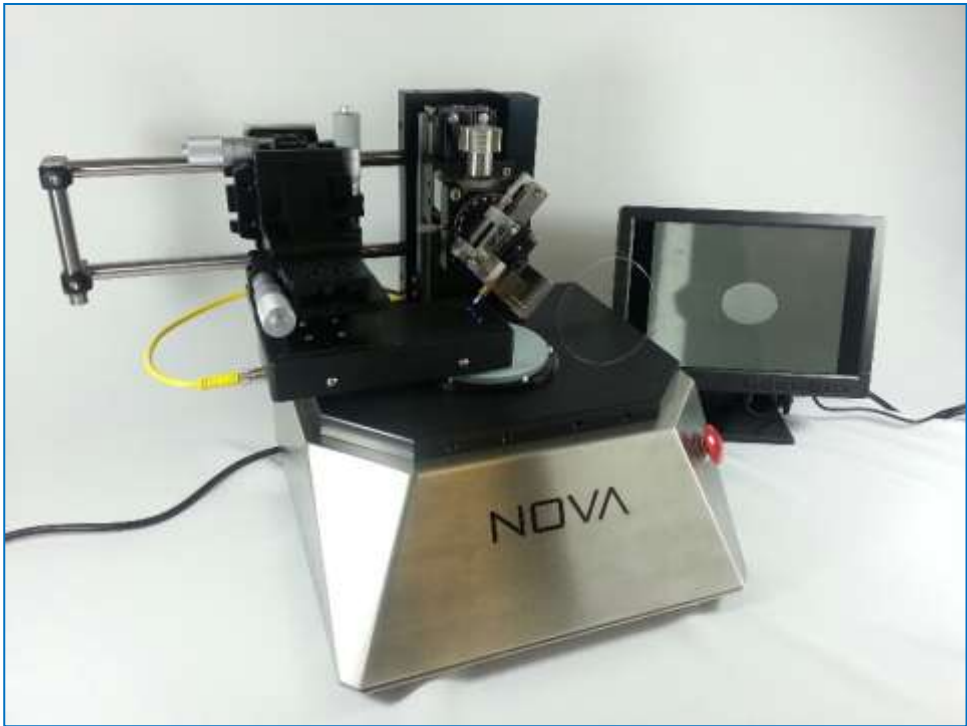
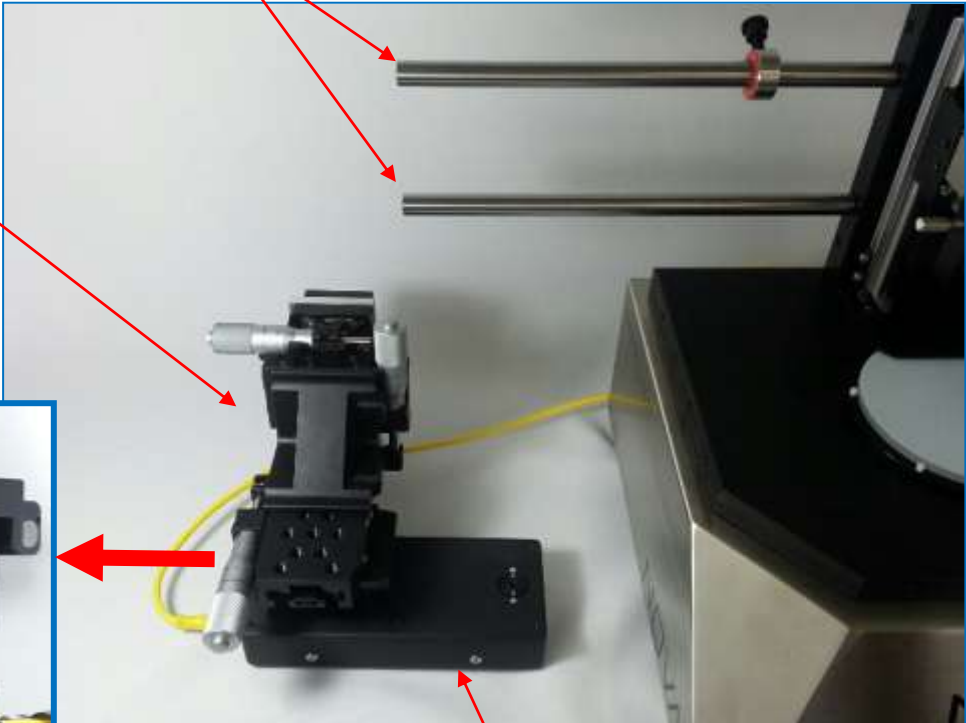


System Overview



Guide rods

Videoscope module

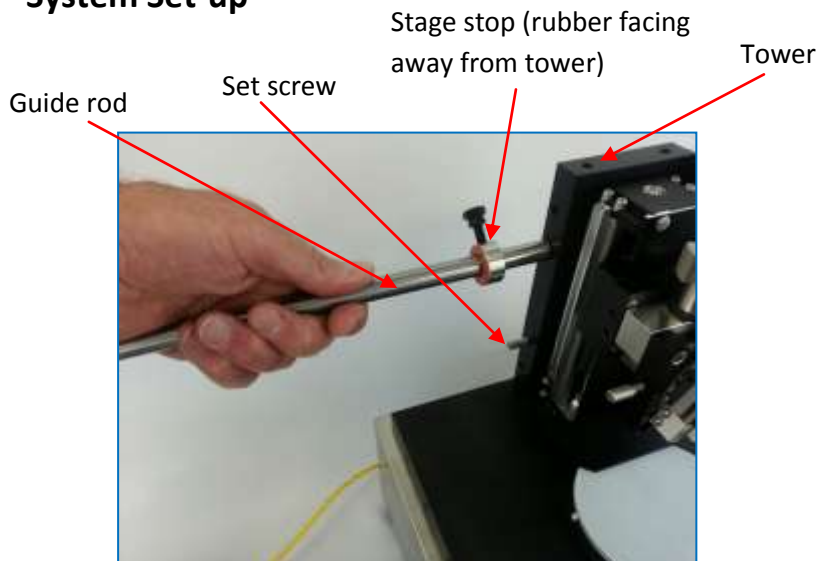


Loosen (but do not remove), the set screws located on each of the 3 translation stages (Note: one is not illustrated)



Videoscope

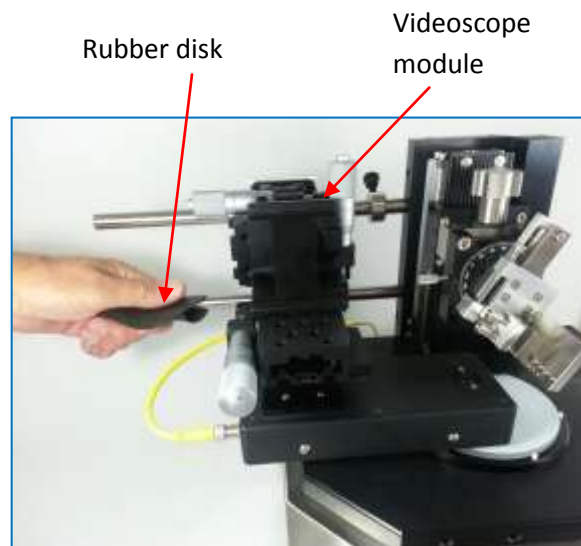
System Set-up



1. Secure both guide rods using the two set screws located on the side of the NOVA linear stage tower. Do not over tighten. Each rod is marked (1) and (2) on one end. Place (1) on the lower position, and (2) on top.

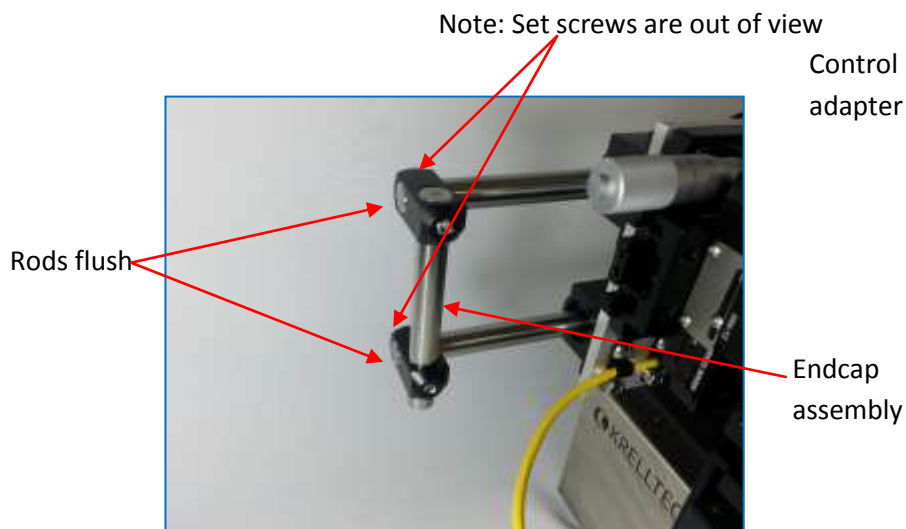
Slide the stage stop onto the upper guide rod with rubber side facing the end of rod.

Wiping rods with a light lubricant (i.e. WD4) will help to provide smoother motion along rods.

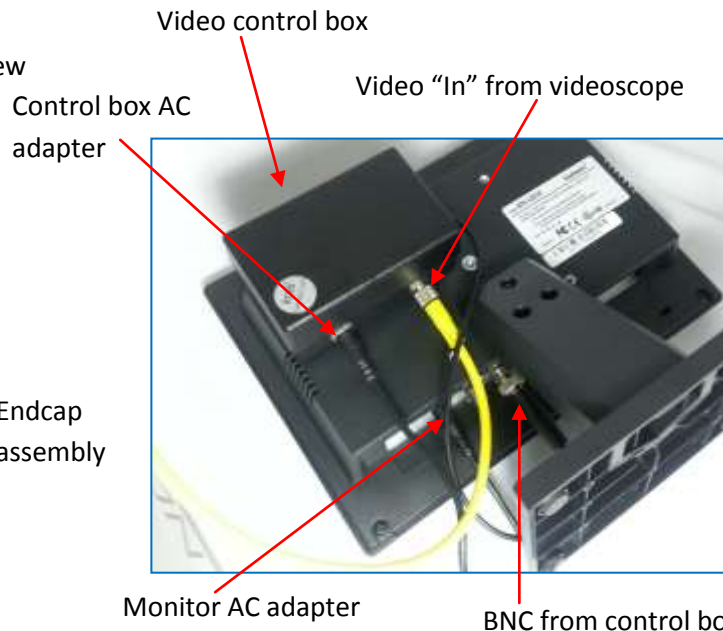


2. Slide the videoscope module onto the guide rods and push towards polishing tower.

Using the supplied rubber disk, hand-tighten each rod securely. Do not use any tools to tighten the rods. Tools may damage the rods, hindering motion.



3. Slide the endcap assembly onto the two rods. Position such that the rods are flush with endcap as illustrated. Tighten set screws to secure.



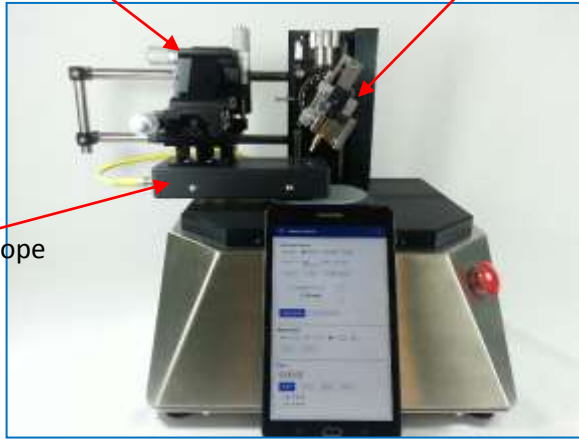
4. Make video connections to monitor as illustrated above. NOTE: Use Velcro™ strip on back of monitor to secure the video control box.

System Operation

Positioning stage

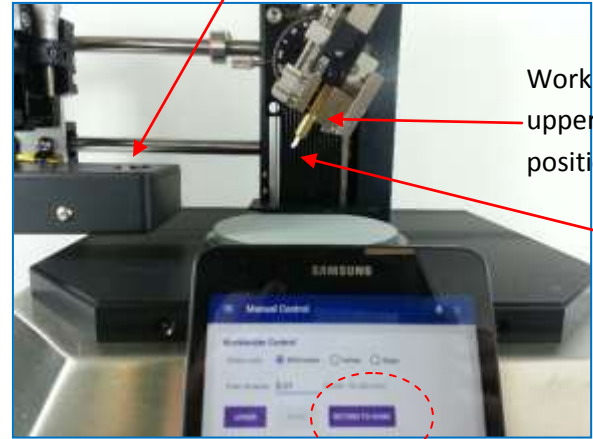
Workholder

Videoscope



System components

Videoscope Lens

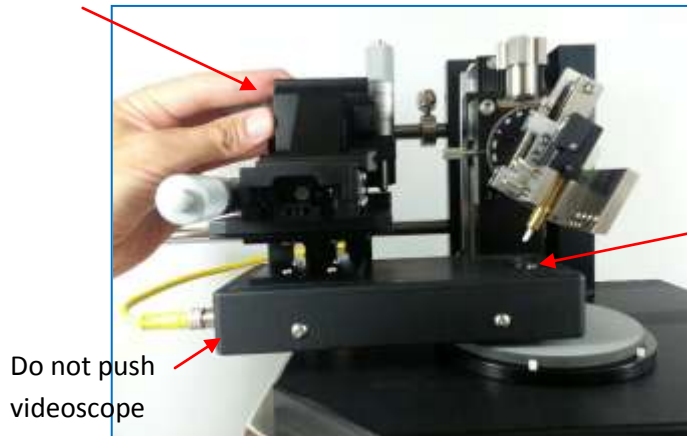


Workholder in upper "HOME" position

Specimen under inspection

1. After completing the polishing cycle, select "Return to Home". This raises the workholder to allow clearance for the videoscope.

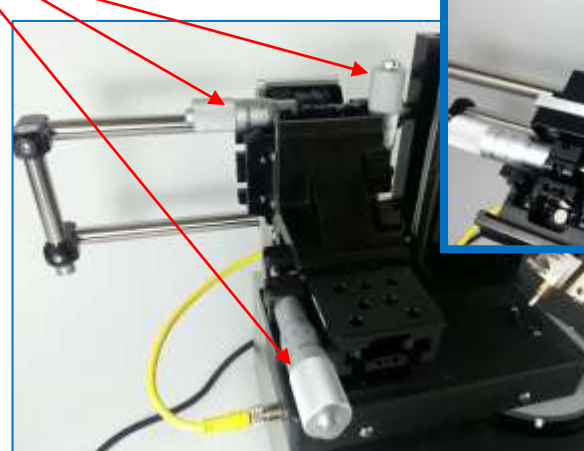
Only move video module by grasping positioning stage



Lens

Do not push videoscope

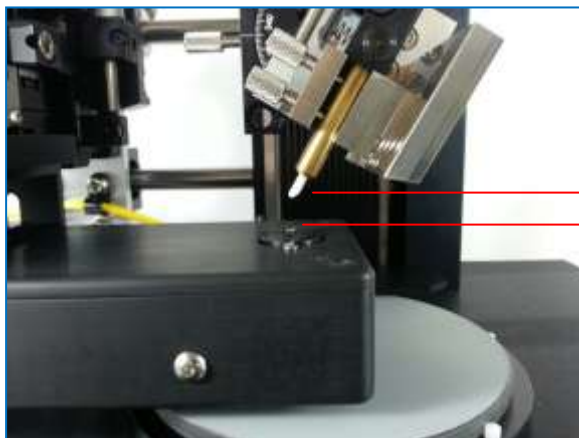
Y / X / Z translation stages



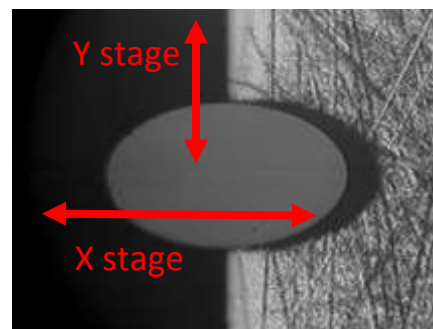
Stage stop

2. Grasping the positioning stage assembly, slide the videoscope beneath the workholder. Locate the lens below the specimen.

3. Use the translation micrometers to center the lens about the specimen. These translation stages can also be used to scan the surface of larger specimen (i.e. waveguides). Set stage stop against positioning stage. This allows for quick return to the inspection position with minimal re-adjustment.



Focal plane:
~9-10mm



Z stage: focus

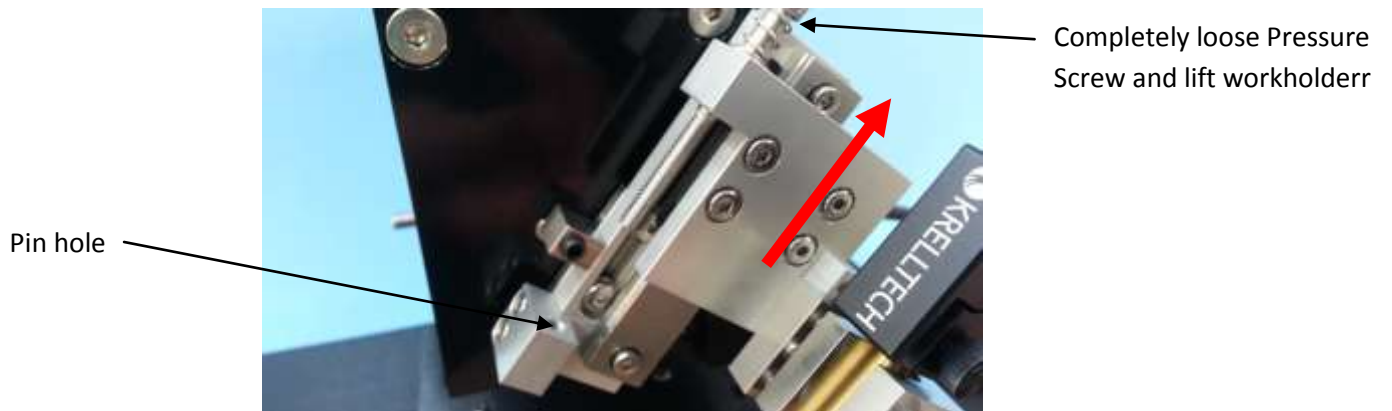
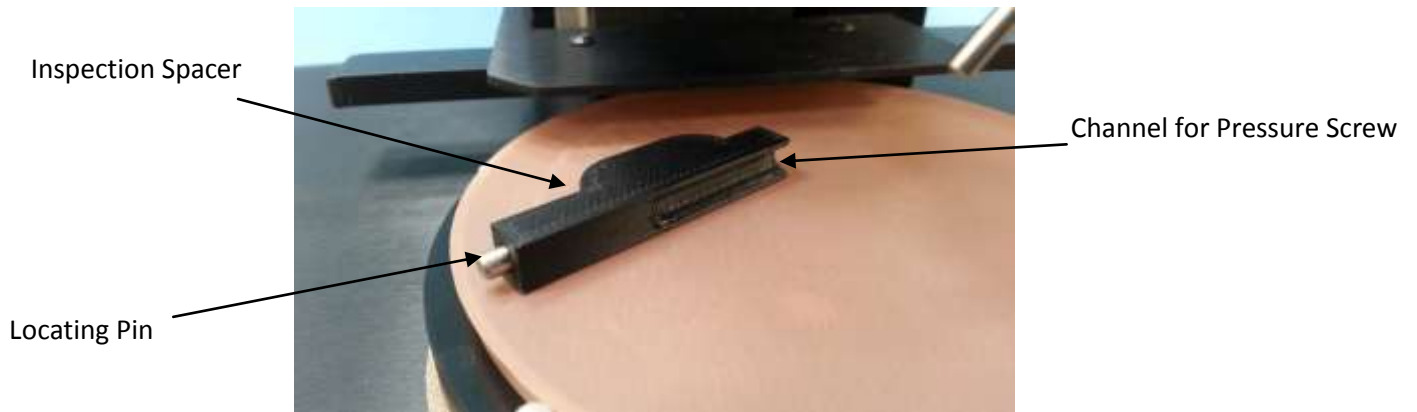


As an option to compressed air, a light touch of a CleanTouch stick helps to remove debris

4. Adjust the Z translation stage for focusing. The specimen should be located approximately 9-10mm above the lens to be in focus.

Extreme Polish Angle Inspection Technique

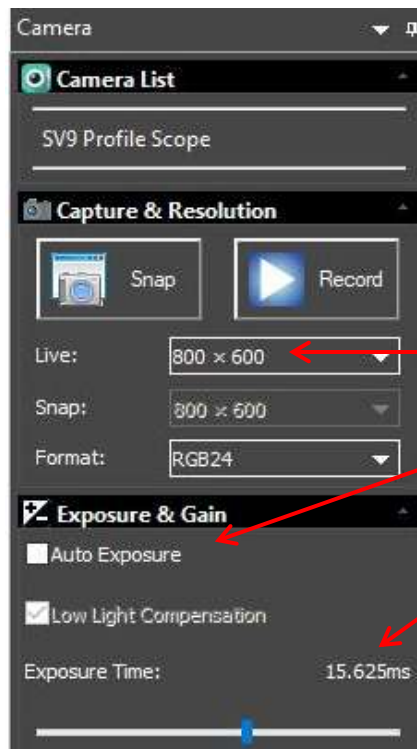
When using the automated version of the variable angle workholder (bare fiber, waveguide, and ORBIT™ configurations), it may be necessary to use a “spacer” to position the specimen in the correct focal plane for inspection. Depending upon the specimen being polished, this may be require for angles $>\sim 30$ degrees.



Place Space Channel over Pressure Screw and release workholder



NOTE: After inspection remove Spacer before next polishing step.



Suggested video settings:

Resolution "Live": 800 x 600

Auto Exposure: "OFF"