

SEILER IQ

Tabletop User's Manual



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We are here to serve you!

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Handling

-Dirt or other contaminants will affect light output and may cause the lamp to overheat and decrease lamp life. Clean any fingerprints, dirt, oil, or lint away from the lamp with alcohol and a lint free cloth or tissue.

-Always turn off the electrical power before inserting, removing, or cleaning the lamp.

-When inserting lamps into lamp holders or sockets, lamps have to be inserted with the proper orientation.

-Electrical connections should be clean and in good condition. Replace lamp holders and sockets when needed. Affix the lamp securely in the socket. Improper installations may cause electrical arcing, overheating, and short life to the lamp and socket.

-Appropriate spacing of electrical parts has to be maintained.

-Never bump, drop, or scratch the lamp. Never apply excessive stress such as twisting or bending when installing the lamp. Do not operate any lamps with any trace of scratches, cracks, or physical damage.

Operation

_ Discharge lamps should only be operated with the compatible ballast and fixture rating. The lamp must be operated under the specific usage conditions such as lamp current, lamp voltage, and specified cooling conditions.

- Discharge lamps should be turned off for a minimum of 15 minutes per week.

-Lamps should never be operated beyond their rated useful life. The risk of a lamp burst increases with lamp age, temperature, improper operation, and improper handling.

-Never operate a lamp above or below its rated current or voltage. This may cause the lamp to leak or burst.

-Only operate the lamp in its designated operating position.

Safety

- Discharge lamps emit ultraviolet radiation that may be harmful to eyes and skin. Lamps should only be used in enclosed and environmentally safe fixtures with ultraviolet absorbing filter glass. Do not operate these lamps if the ultraviolet absorbing filter glass is broken or not installed.

-Do not use lamp in close proximity of paper, cloth, or other combustible material that can cause a fire hazard.

-Avoid looking directly at the operating lamp for any period of time as this may cause serious eye injury.

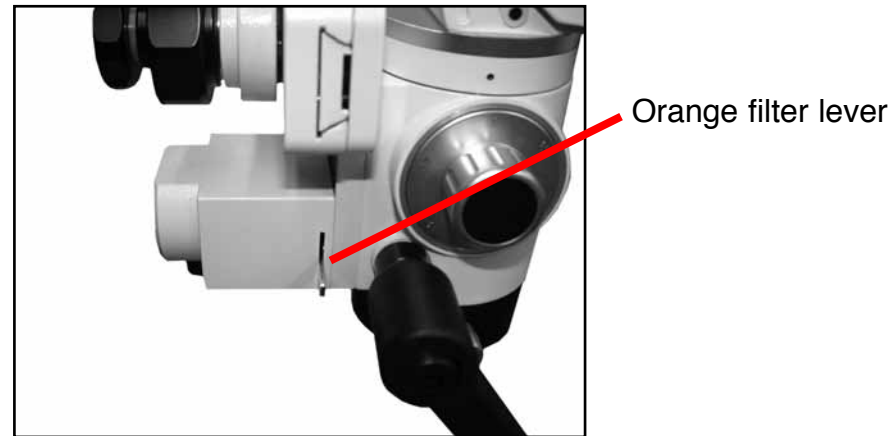
-Never touch the lamp when it is on or soon after it has been turned off, otherwise it may result in serious burns. Lamps should be cooled for a minimum of ten (10) minutes after the lamp is turned off.

Hg- Contains Mercury

Seiler realizes the importance of lamp recycling and we encourage all lamps to be properly disposed of in order to help preserve the environment and our Earth's precious natural resources. Please refer to your local environmental laws regarding disposal and recycling of mercury containing lamps. To learn more about lamp recycling requirements in your area, contact your state environmental authorities or visit www.lamprecycle.org

The Color Filter and Cleaning

There is a lever installed on the side of the microscope body to put in front of the lamp luminous flux an orange filter (Fig. 43).



Cleaning

The objective, placed in front of the field under clinical or surgical treatment, is exposed to blood and topical medicine spots, etc. The spots dim the passage of the light, with loss of brightness in the optical observation.

Alcohol or ether applied with a clean cotton swab can be used to remove all smudges. Use a soft CIRCULAR movement. Use your laboratory's prescribe procedures to remove blood stains or other contaminants from your equipment.

If the objective is blotched too much, change the cotton swab in each circular friction, avoiding spreading again the impurities.

The Objective lens can be protected by use of a accessory model MC-A40 sterilizable protector objective. It is placed under pressure in the external margin of the objective lens and protects it against eventual blows of the surgical tools and against contamination.

The metallic parts (chrome-plated or painted) are cleaned with cotton, alcohol and ether.

Lubrication

After some years of use we recommend lubrication of the "dovetail", the sliding orthogonal rules for X-Y translation. Apply here, with a cotton swab a delicate oil film.

Do not exaggerate the lubrication. It is self-defeating, and if the microscope is operated inclined to the front, for sure the oil excess will come out through the front.

For lubrication use light film of mineral oil.

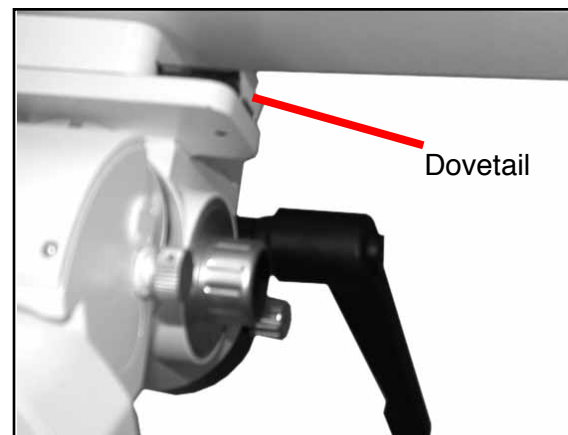


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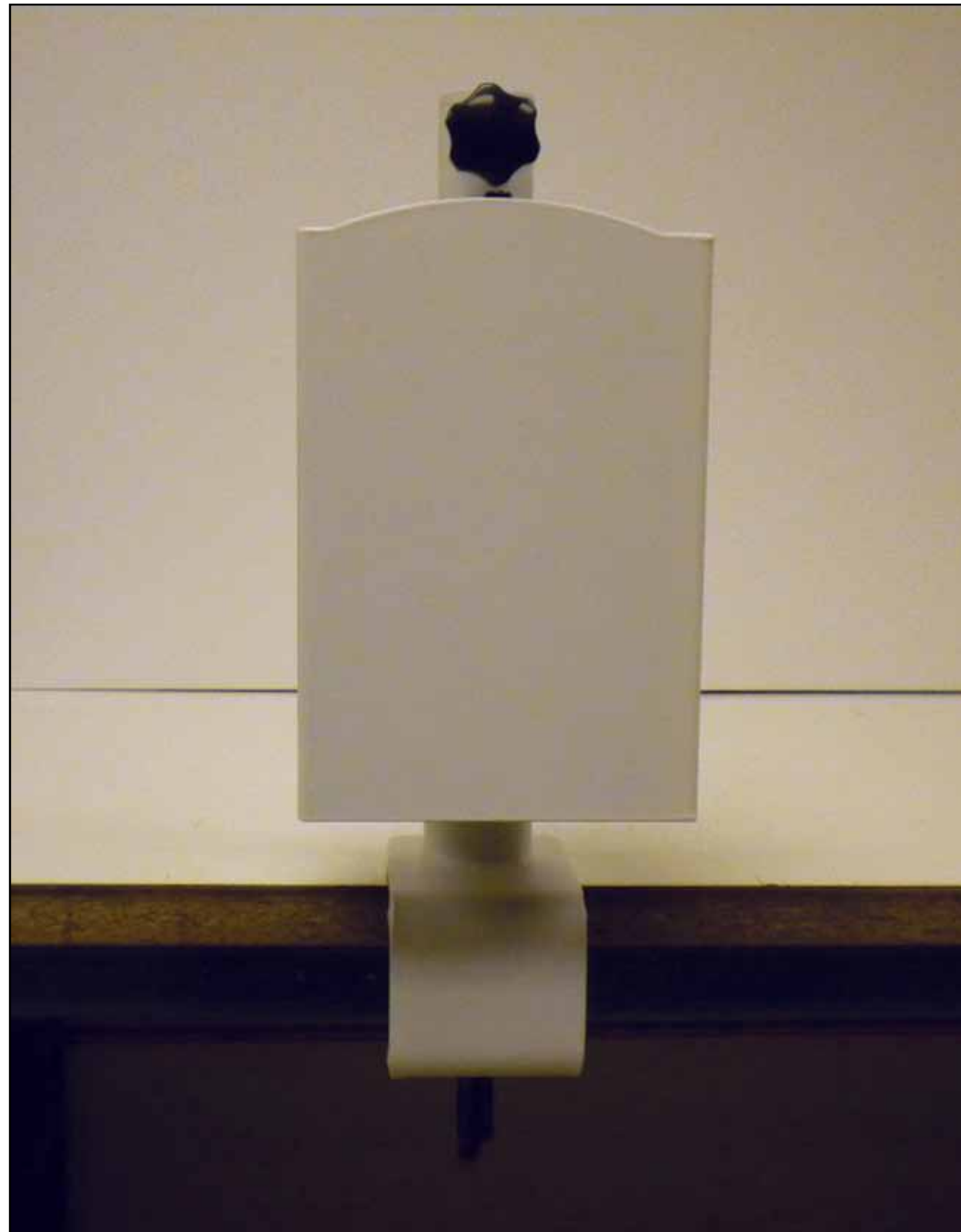


Table mount replaces Floor Stand and Light Housing.

Interpupillary Distance Adjustment

- Looking now with the two eyes through the two eyepieces, adjust the interpupillary distance as showed in the Fig. 48, until they are juxtaposed to the two pupils and the vision of the field appears to the binocular perception in only one disk, clear and stereoscopic.
- Now the binocular vision should be obtained and only eventual readjustments, very small, can still be made in the controls actuated before. It is necessary to reach a neat and stereoscopic vision that the quality of the optical system assures when the focus is well done.
- Also verify the quality of the image in the smaller magnifications. In this revision small focus retouching will be enough, by small displacements in the turn of the knobs of the optical micro-movement.



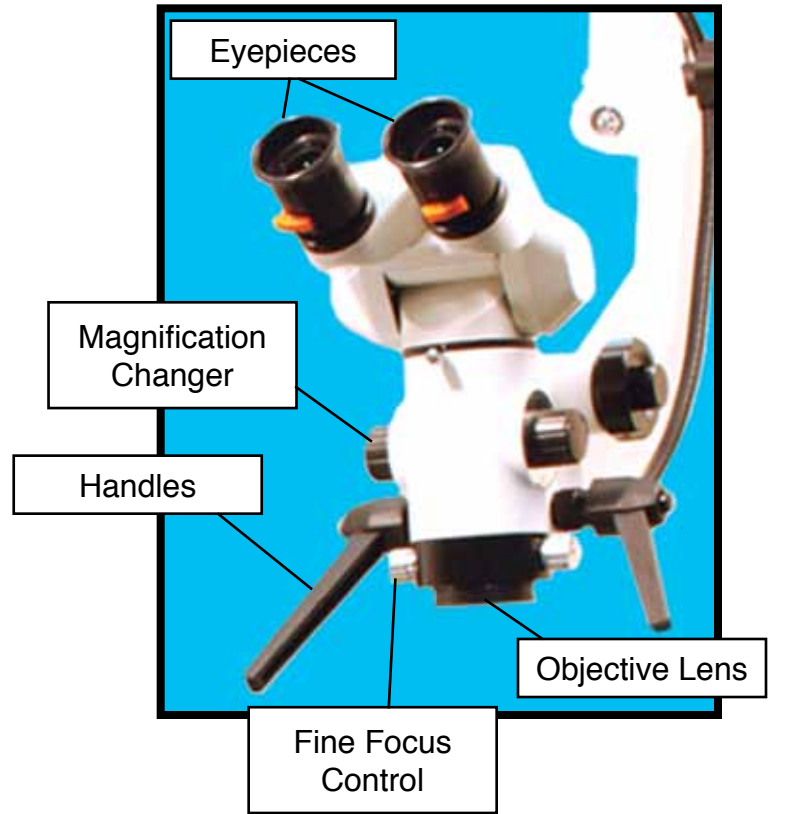
Magnification Table

Objective (mm)	f=350		f=400	
Illumination Area (Diameter)	90mm		104mm	
10x Eyepieces	Magnification 59	Field of View (mm) 35	2.9x	4.6x
12.5x Eyepieces	Magnification 59	Field of View (mm) 35	2.5x	4x
16x Eyepieces	Magnification 52	Field of View (mm) 30	4x	6.4x

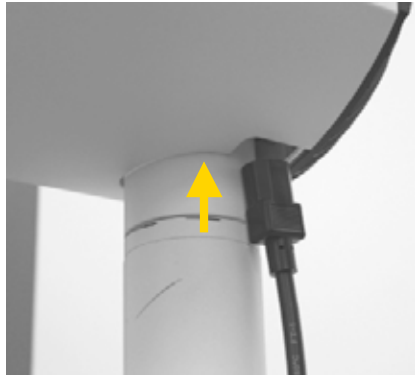
Objective (mm)	f=100		f=175		f=200		f=250		f=300	
Illumination Area (Diameter)	26mm		45mm		52mm		65mm		78mm	
10x Eyepieces	Magnification 13	Field of View (mm) 10	5.8x	9.1x	5x	8x	4.2x	6.7x	3.4x	5.4x
12.5x Eyepieces	Magnification 13	Field of View (mm) 10	30	17.5	20	13	42	25	50	30
16x Eyepieces	Magnification 11.4	Field of View (mm) 8.7	7.2x	11.4x	10x	16x	5x	8x	4.2x	6.7x
			30	17.5	20	13	42	25	50	30
			9.2x	14.6x	12.8x	20x	6.3x	10x	5.4x	8.6x
			26	15.3	17.5	11.4	54	32	44	26
			10.7x	16x	12.7x	16x	10.7x	16x	8.6x	13.7x
			19	11.4	13	13	16	20	19	16.6

Seiler iQ Magnification Table

The Seiler iQ Parts Breakdown



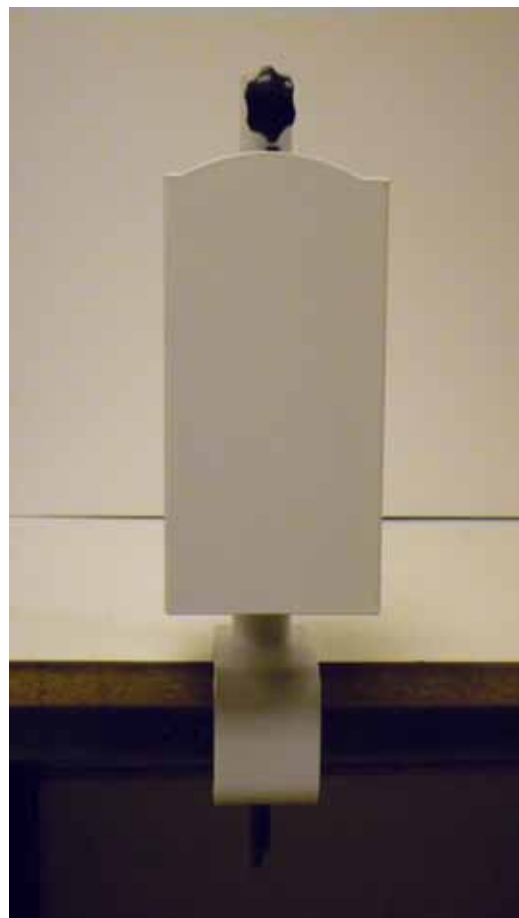
5) Once the light Housing is installed remove the light source and plug in the power supply to the back of the light source. **See Below**



1) Thread the Power Cord through the bottom of the light source and pull through front of the light housing.



2) Plug the power cord into the back of the light source.



Physical

Height	Width	Depth	Weight

Fuse Rating(s)

Type	Voltage Rating	Size	Current Rating

Environmental

Min. Operating Temperature ¹	Max. Operating Temperature	Humidity Range
55 F	85 F	0-80% Non-Condensing

Input Power

Input Voltage	Input Frequency	Input Current (Max.)

Lamp 1 Specifications

Type	Wattage	CCT	CRI
Metal Halide	50		

60 second warm up time.
Hot restrike capable.
Efficacy greater than 80 Lumens / Watt.

Lamp 2 Specifications

Type	Wattage	CCT	CRI
Halogen	100		100

Instantaneous warm up.

¹ Operation outside the stated limits is possible only after verifying that L1 is operating at the correct temperature (contact manufacturer for instructions).

Electrical Technical Data

Auxiliary Power Jack (Camera Power)

Voltage	Polarity	Connector	Rating
12VDC	Center Pin Positive	2.1 MM Female	500 ma

Dimming Control

Manual dual port iris control.

Spectral Filtering

Dual IR / UV blocking filters (spectral data available upon request).

Certifications

CE	ETL	Rohs	EMC
Standard TBD	Standard TBD	TBD	Standard TBD

Thermal Management

Dual DC Ball-Bearing Fans with integral speed control (do not block vents!).

Supplemental Safety Features

Interlock switch removes power when lamp assembly is removed.
 Thermal overload switch removes power when temperature exceeds safe level.
 Dual Fusing

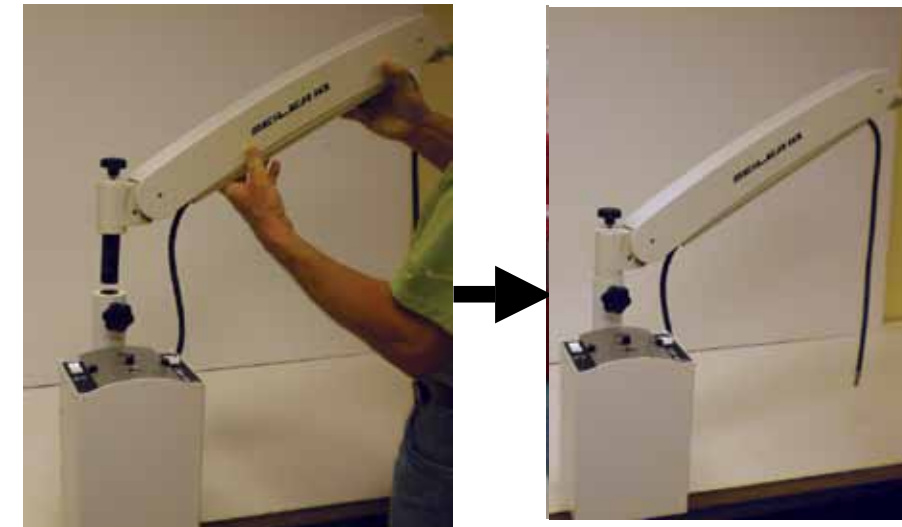
EMC Provision

Medical grade (60601-1-2) certified power supplies and filters.

Lamp Replacement

Front panel assembly with two thumb operated twist lock fasteners – lamps are installed with spring steel clips and connectors for fast replacement (use gloves or cotton when touching new bulbs!).

6) Next Install the Pantographic Arm into the Light Housing as shown.



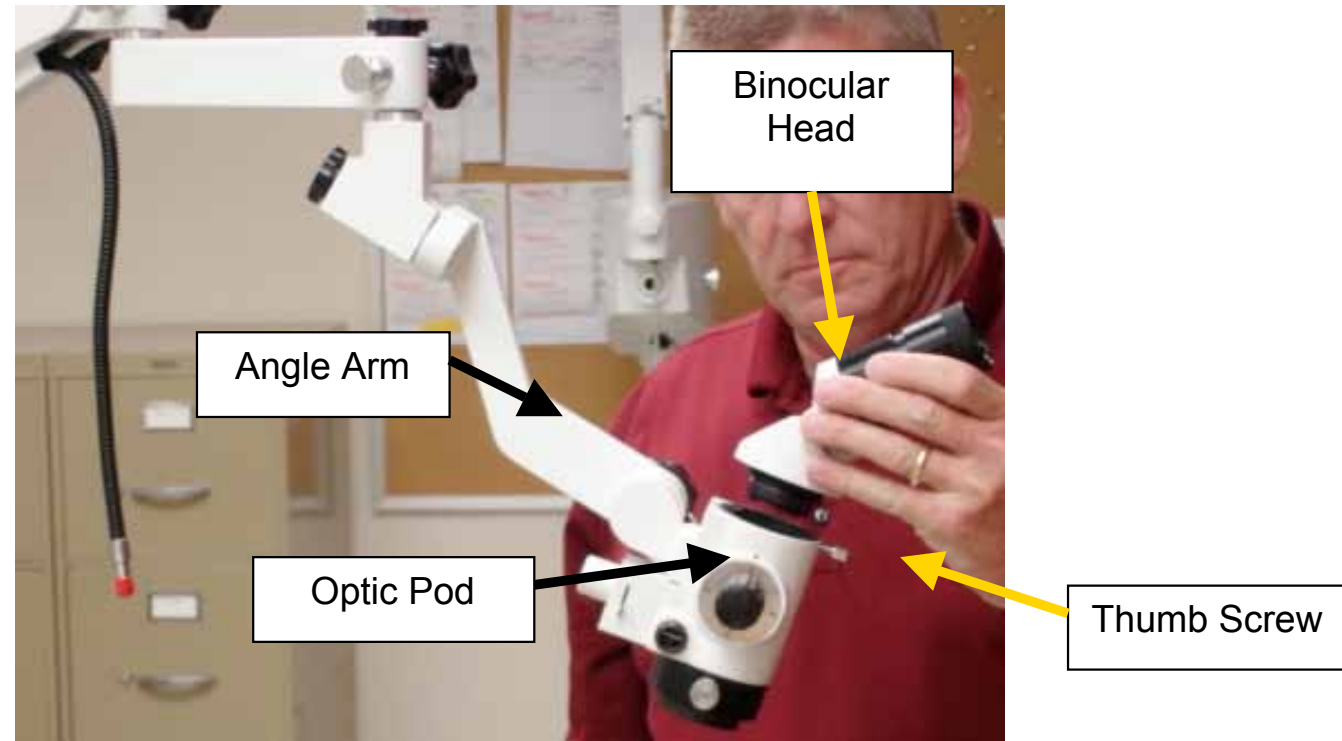
7) Next install the 8" extension arm. Pull out the silver plunger and push the extension arm up from the bottom. Attach black top screw so the arm is flush.



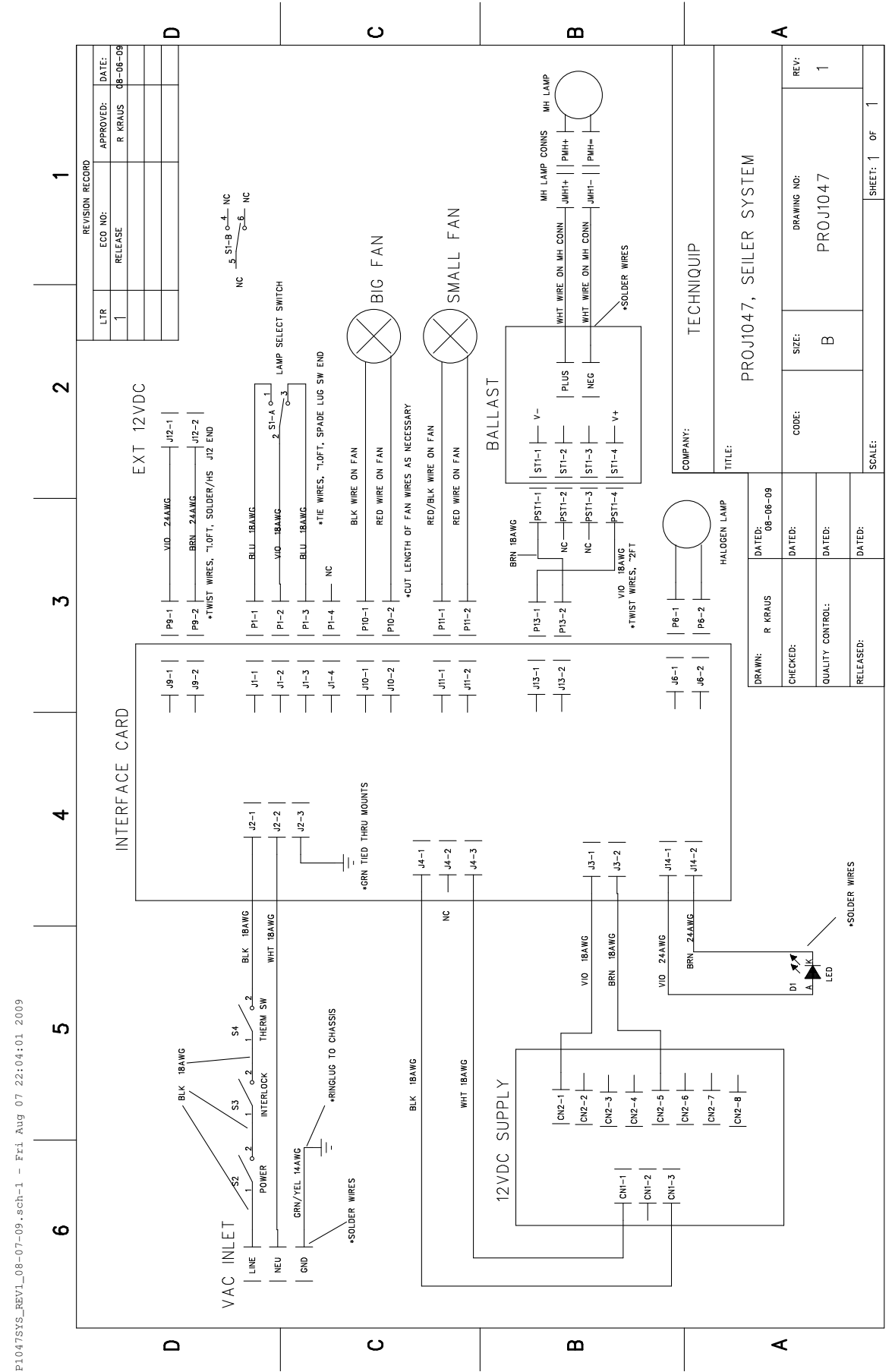
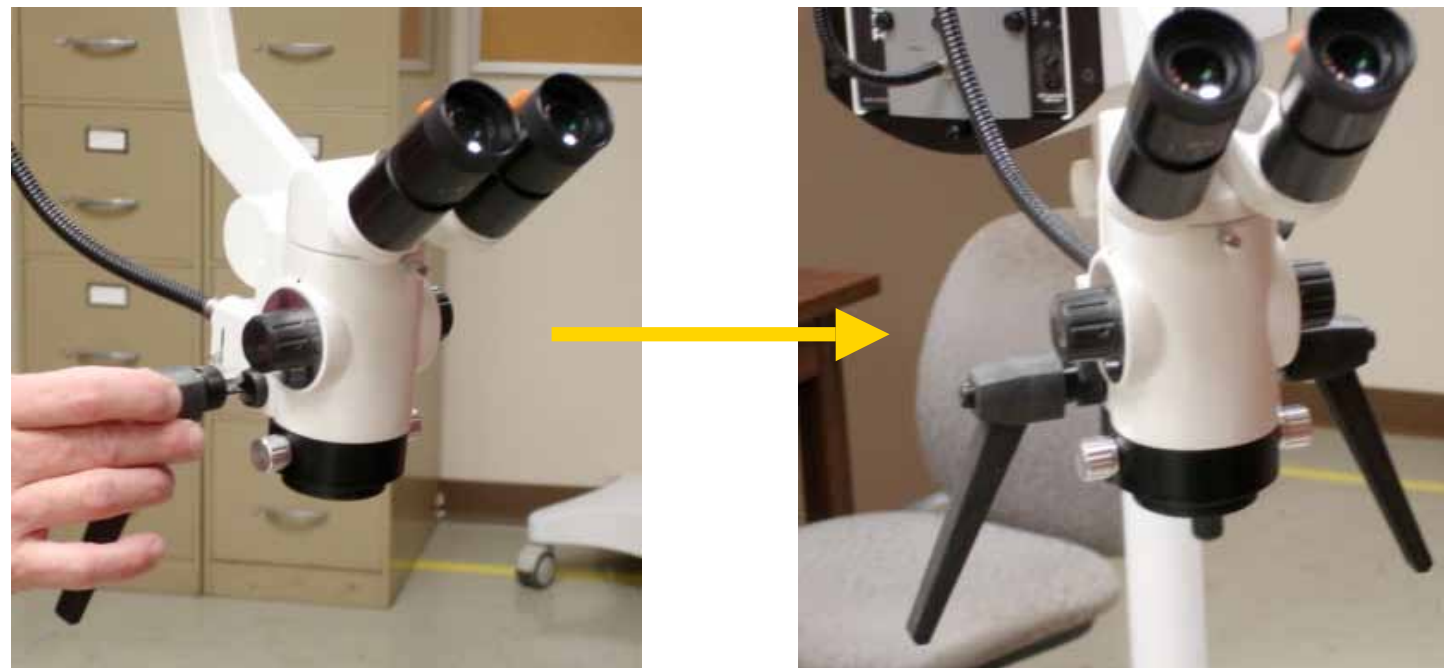
8) Next Install the angle arm and optic pod by pulling the silver plunger out, push the angle arm up through the bottom and secure the arm with the black top screw.



9) Next attach the Binocular head by loosening the thumb screw and placing the binocular head on the optic pod.

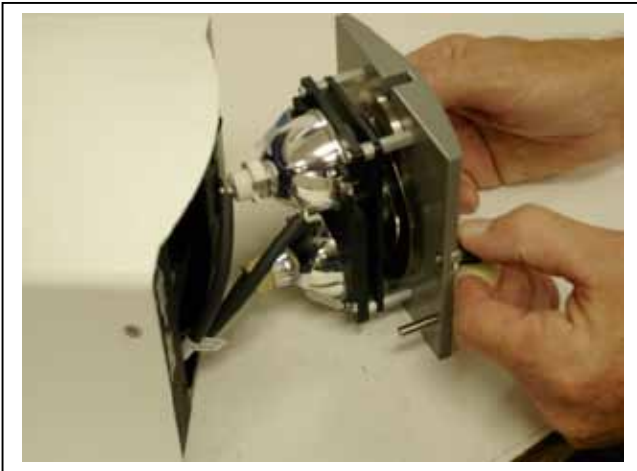


10) Next attach handles to the side of the optic pod by lining the notched metal with the metal bar inside the hole on the optic pod. Once lined up, screw down the handles until they are secure.





6) Slide bulb back into bulb tray
 - Metal Halide bulb tray has a guide for proper seating of the bulb
 - If bulb is not seated correctly in the bulb tray light output will be affected.



7) Replace front panel and lock down thumb locks

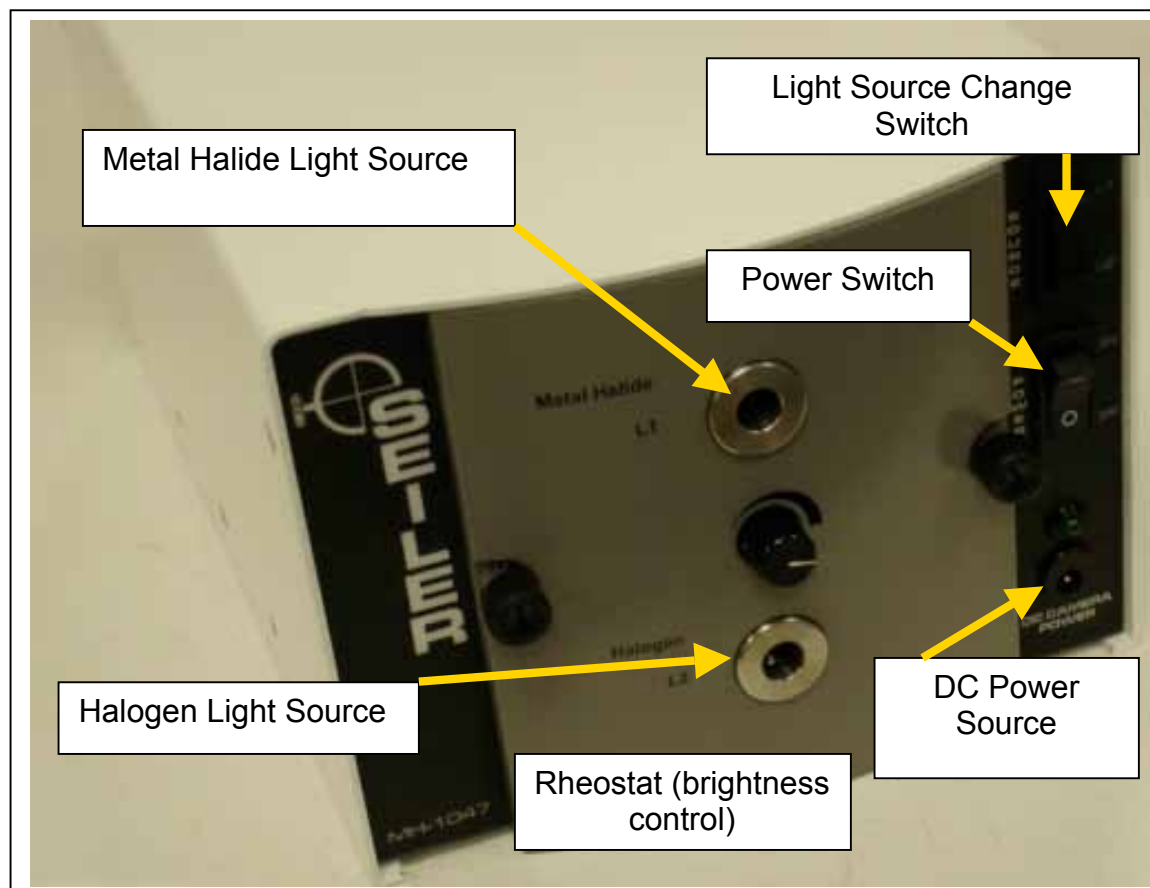
8) Plug in the power cord and/or turn on the power button.

11) Lastly, install the fiber optic cable into the back of the Optic Pod and into the light source.



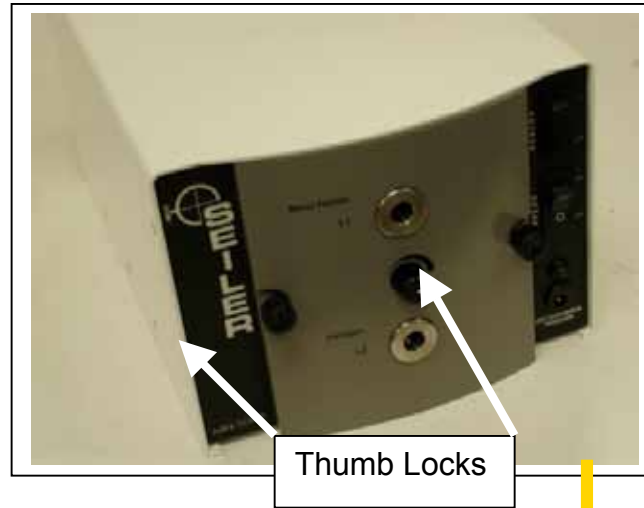
PANTOGRAPHIC ARM BALANCING

NOTE: Pantographic Arm may need tension adjusted (back knob on top, turn counter-clockwise to add tension, clockwise to release tension). This may need to be done if camera/video are added to the scope. This will increase or decrease the tension to desired function for user. The Pantographic Arm may have to be in the horizontal position to make adjustments.



Bulb Change Instructions

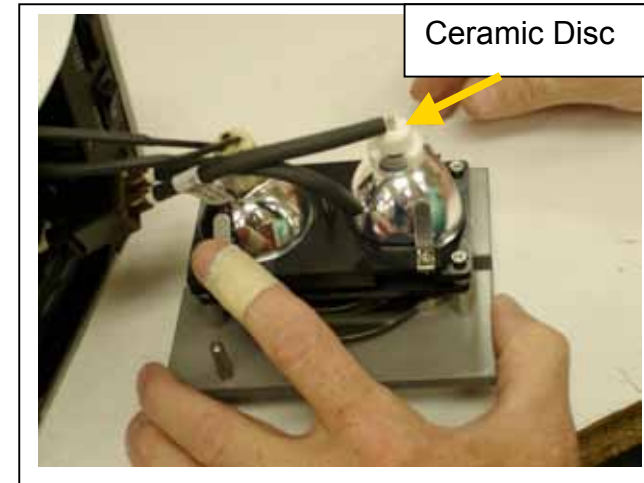
Bulb Change Instructions:



1) TURN OFF POWER TO THE LIGHT SOURCE OR REMOVE THE POWER CORD

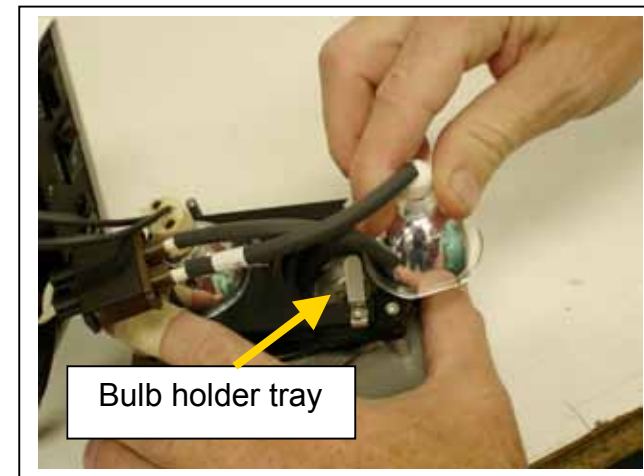
2) Unscrew the two thumb locks on the front of the light source and pull out the light bulb tray.

3) Be Cautious when removing the front light bulb tray. The light bulbs are attached to the electronics within the light source.



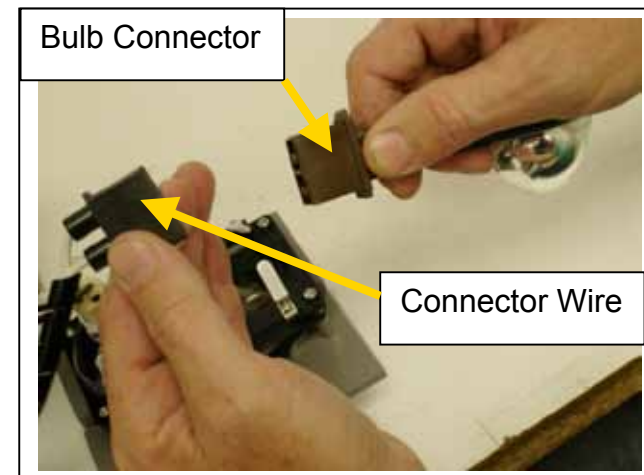
4) Grab the bulb by the ceramic disc and slide out of the bulb holder tray.

BE CAREFUL to make sure that the light bulb is not **HOT**.



5a) For changing the METAL HALIDE bulb:

- Remove the bulb from the tray and separate the bulb with the wire from the connector wire.
- Connect the new bulb into the connector wire



5b) To change the HALOGEN bulb:

- Remove the bulb from the tray and separate the **BULB** from the **Ceramic Disc**
- Add new bulb by inserting new bulb pins into the **Ceramic Disc**