

# SO-111 SERIES

## Ophthalmic Microscope



# USER MANUAL

**SCAN OPTICS**

**USER  
MANUAL**

**SO-111T  
SO-111TZ**

**LED OPHTHALMIC  
MICROSCOPE**

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## INTRODUCTION

Please read the following information carefully before installing and using the Scan Optics ophthalmic microscope. Scan Optics is responsible for the safety, reliability and performance of the equipment only if it is used in accordance with these instructions.

This microscope is designed for use by a certified practitioner, for magnified observation of patients, and for use in an operating theatre as an observation aid during surgery. Environmental storage and packing conditions of 60-95% relative humidity and 10-40 °C, are recommended for this product.

No parts or accessories supplied with this microscope are supplied in a sterile condition.

Apart from those identified in the instructions within this manual, there are no user-serviceable parts in this microscope. Scan Optics will retain the discretion to advise whether any repairs may be taken out by external qualified technical personnel, or whether part(s) of the microscope must be returned to the manufacturer's premises for service or repairs to be carried out under warranty or otherwise. Where appropriately qualified technical personnel are identified by a user, and ratified by Scan Optics, then Scan Optics will make available on request any information which may assist in maintaining or repairing this equipment.

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**Figure 1:** SO-111T

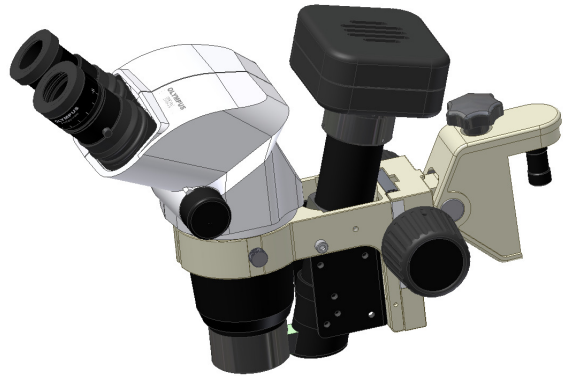
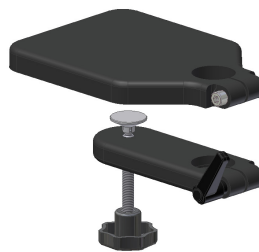
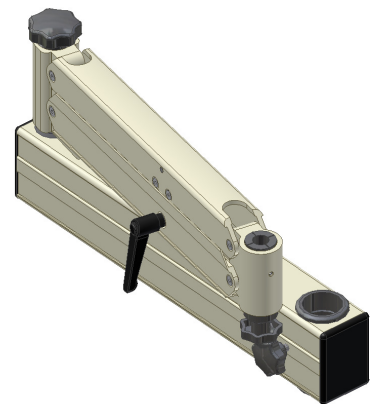


**Figure 2:** SO-111 TZ



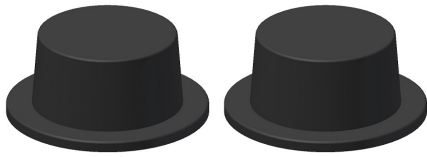
**Figure 3:** SO-111SZ

## PART LIST

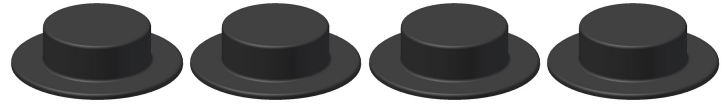
**Main Assemblies****Figure 4:** SO-111T Head and Bonder Arm**Figure 5:** SO-111 TZ/SZ Head and Bonder Arm**Figure 6:** Power Supply and Pillar**Figure 7:** Clamp**Figure 8:** Pantograph Arm



## Accessories



**Figure 9:** Sterilisable Focus Covers

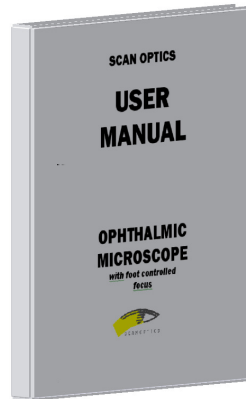


**Figure 10:** Sterilisable Zoom Covers (TZ/SZ)

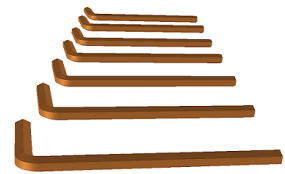


**Figure 11:** Eyepieces  
(SZ/TZ are supplied with two adjustable eyepieces)

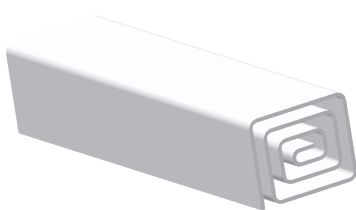
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**Figure 12:** User Manual



**Figure 13:** Hex Driver  
(7x)



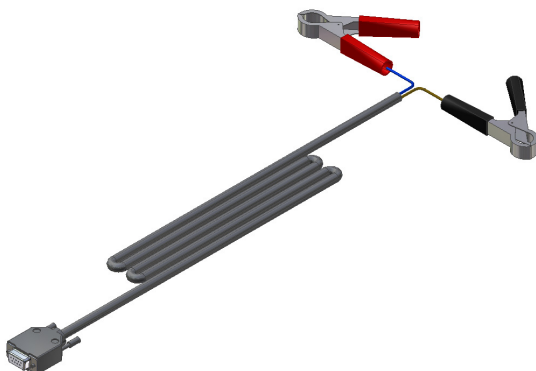
**Figure 14:** Dust Cover



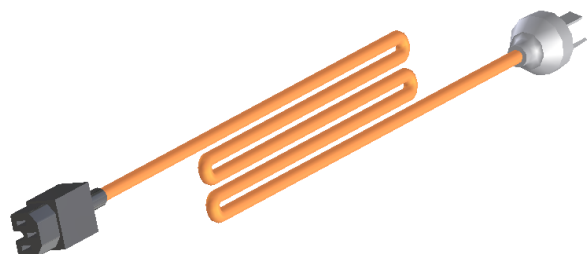
**Figure 15:** Lens  
Cleaning Cloth



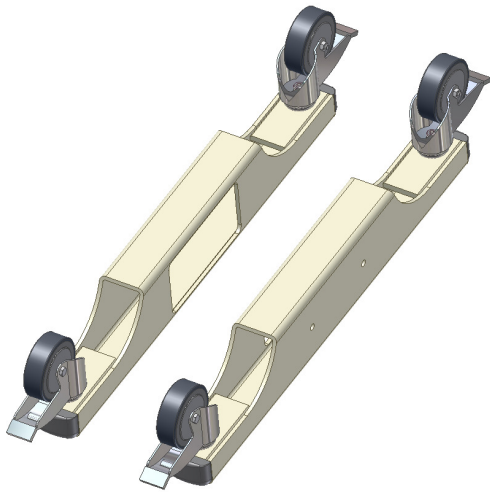
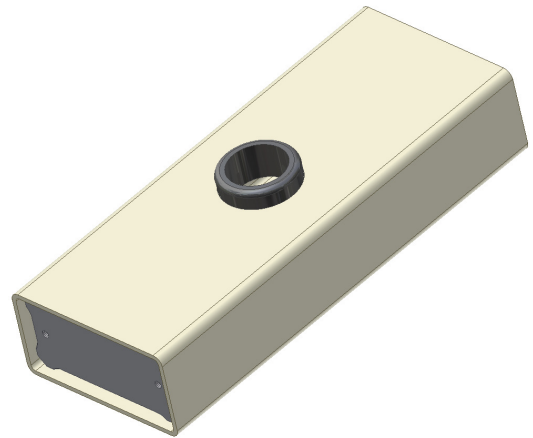
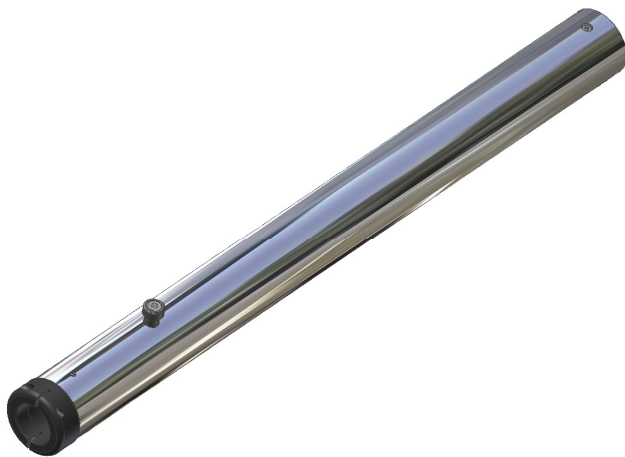
**Figure 16:** Pillar Cable



**Figure 17:** Battery Cable



**Figure 18:** Power Cable

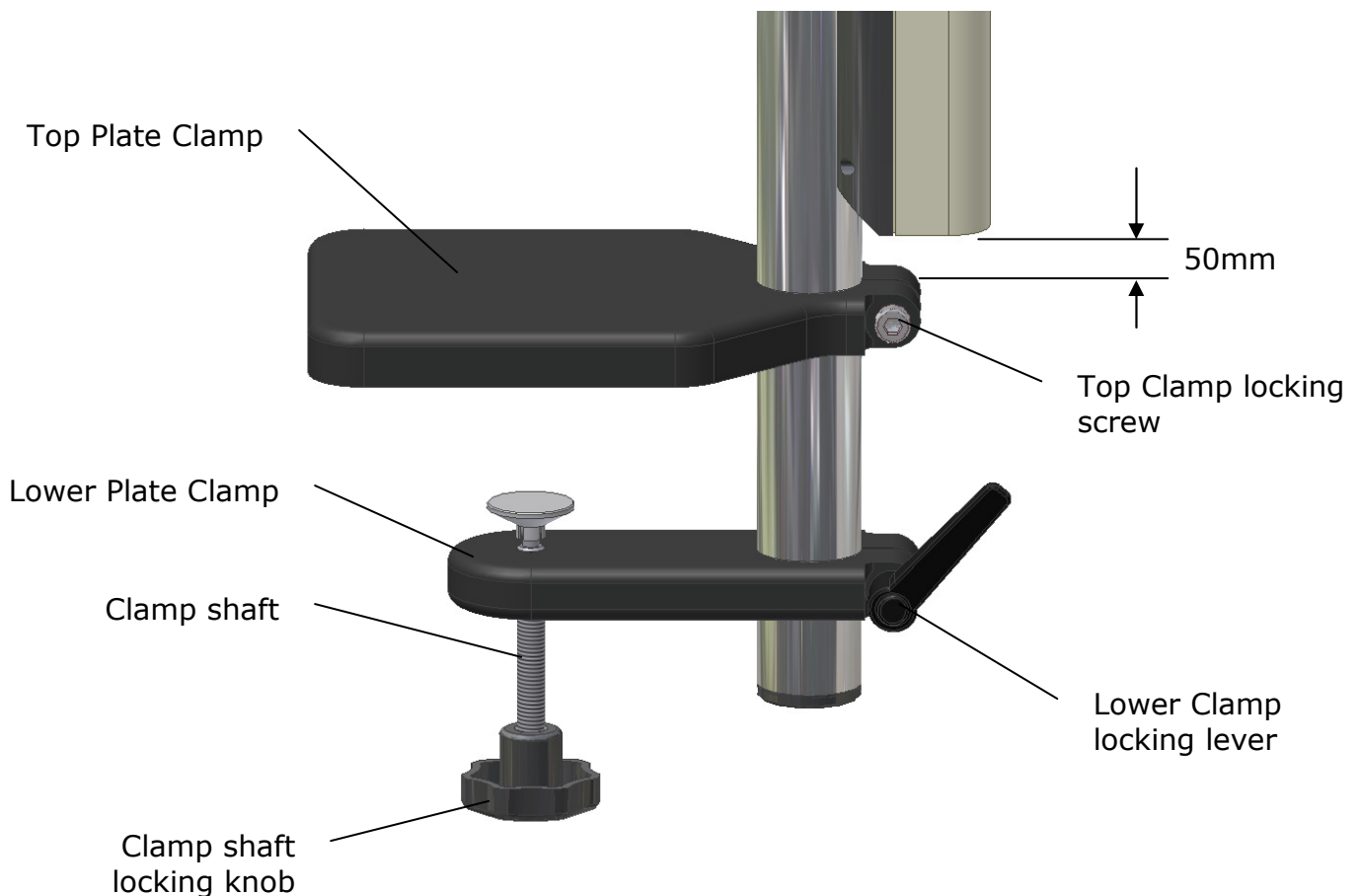
***Floorstand (SO-111SZ)*****Figure 19:** Floor stand legs**Figure 20:** Floor stand cross beam**Figure 21:** Floor stand post**Figure 22:** M10 Button Head Screws (x5)

## ASSEMBLY INSTRUCTIONS

### *Fixing the clamp*

#### **Table (SO-111T, SO-111TZ)**

1. Insert the top plate clamp onto the bottom of the pillar. Allow 50mm between the top plate and power supply.
2. Lock the clamp securely with screw and socket keys.
3. Insert the lower clamp plate onto the pillar.
4. Position the lower clamp to approximately the width of the surface being clamped to.
5. Lock the lower clamp with the clamp locking lever.
6. Secure the clamp by rotating the clamp shaft knob.



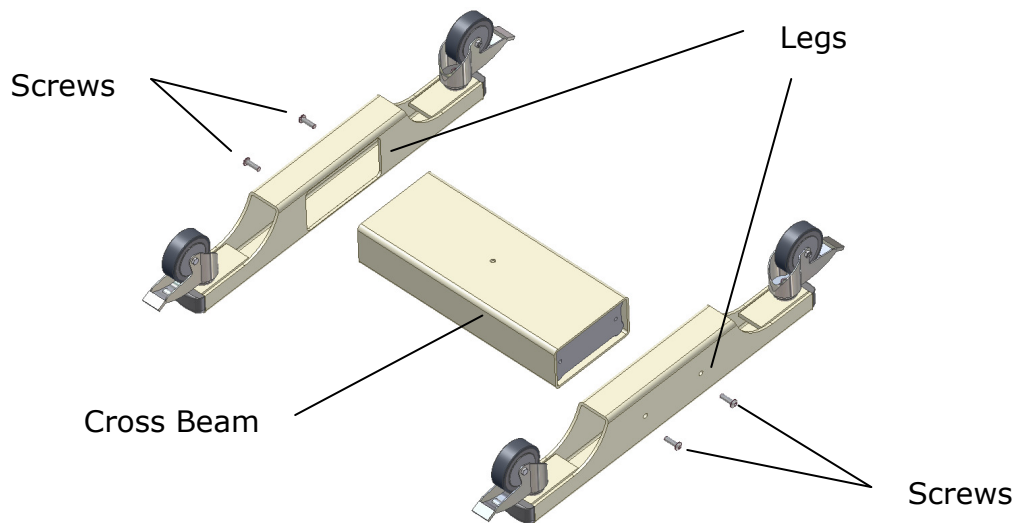
**Figure 23:** Table Clamping

## ***Floor Stand (SO-111SZ)***

### **Assembly of the Floor stand**

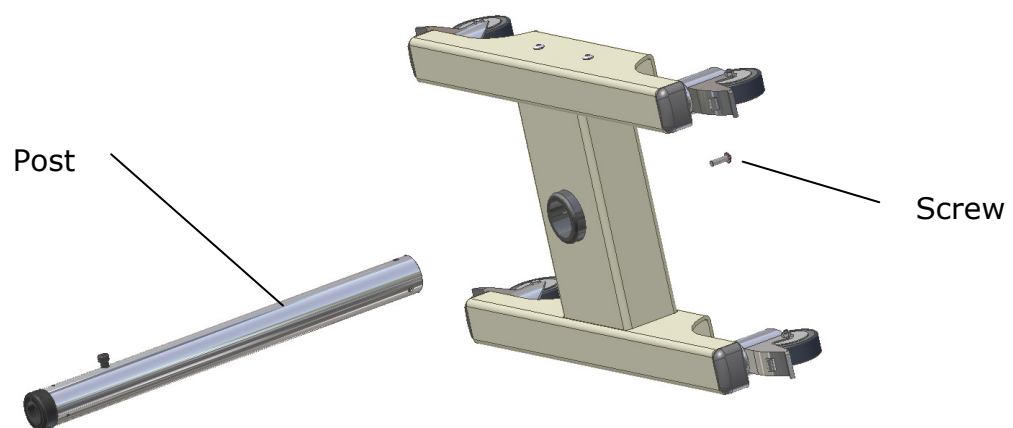
The Floor Stand will need to be assembled in two parts.

1. Lay the Floor Stand legs upside down on a flat surface.
2. Locate the Cross Beam part into the cut-out on the legs.
3. Use the provided M10 screws to lock the legs in.



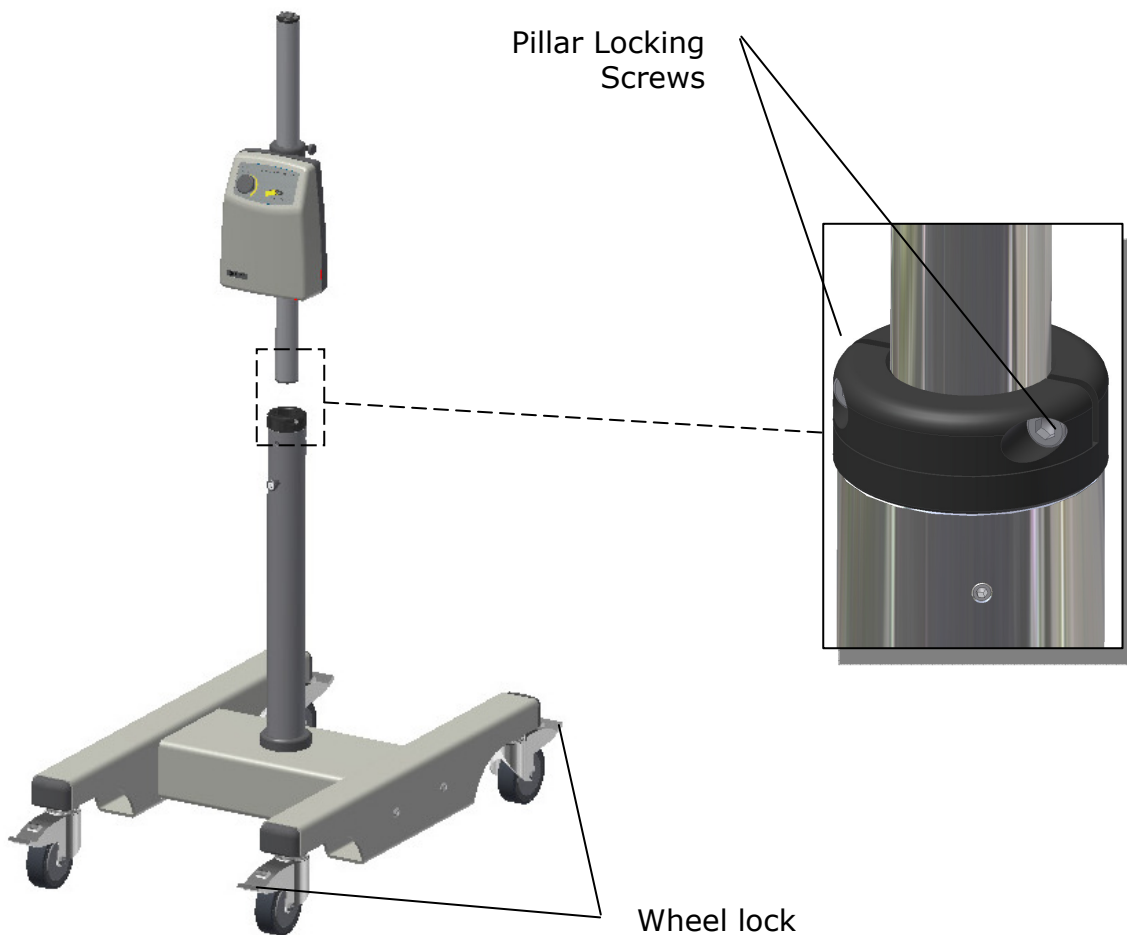
**Figure 24:** Floor stand base assembly

4. Lean the assembled Floor Stand base on it's side and insert the post.
5. Insert the post locking screw from the underside and lock the post securely.



**Figure 25:** Floor Stand post assembly

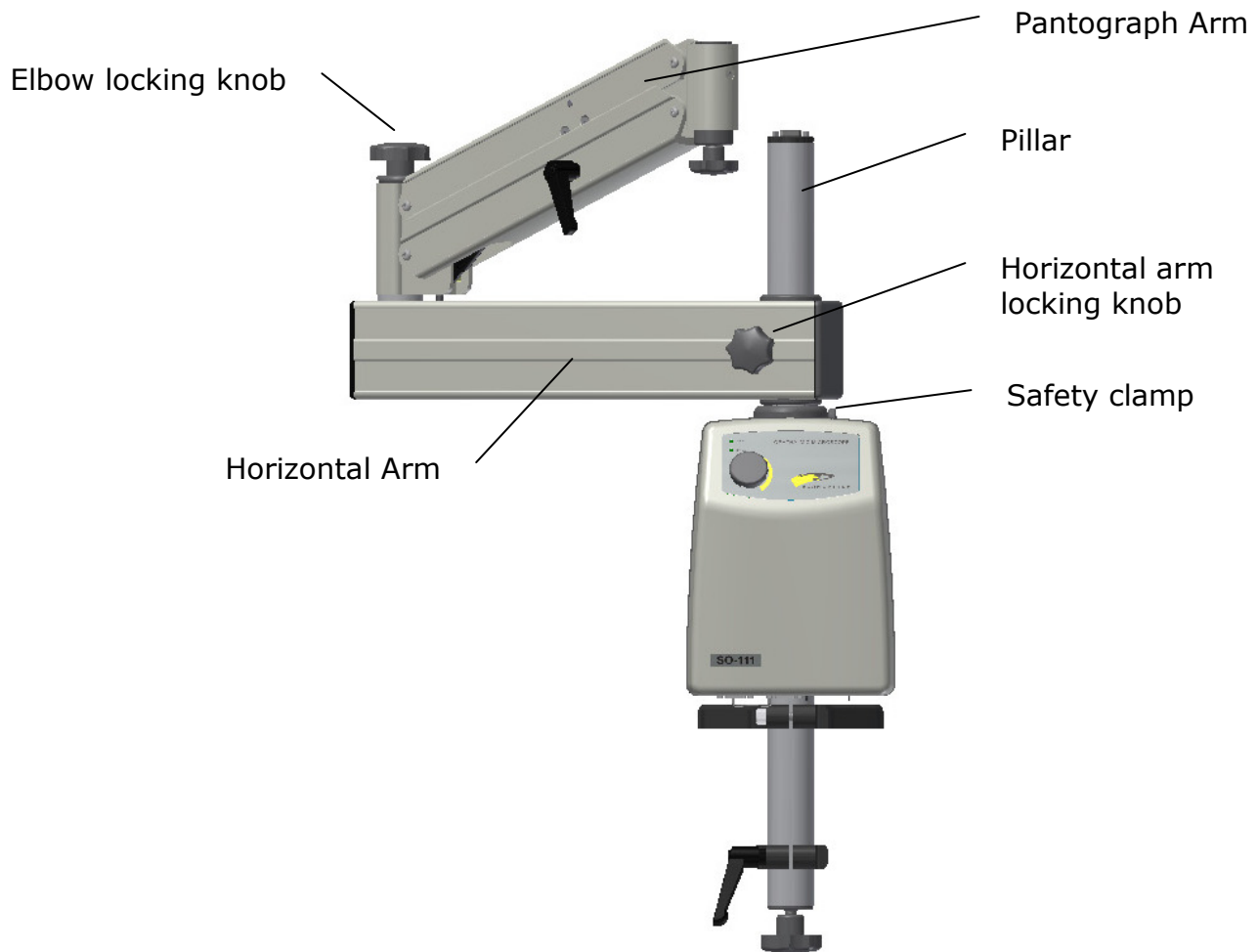
6. Right the Floor Stand up on it's four wheels and lock the wheel using the wheel lock.
7. Insert the Pillar and Power Supply assembly into the Floor Stand Post.
8. Secure the Pillar by tightening the Pillar locking screws.



**Figure 26:** Floor Stand and Pillar assembly

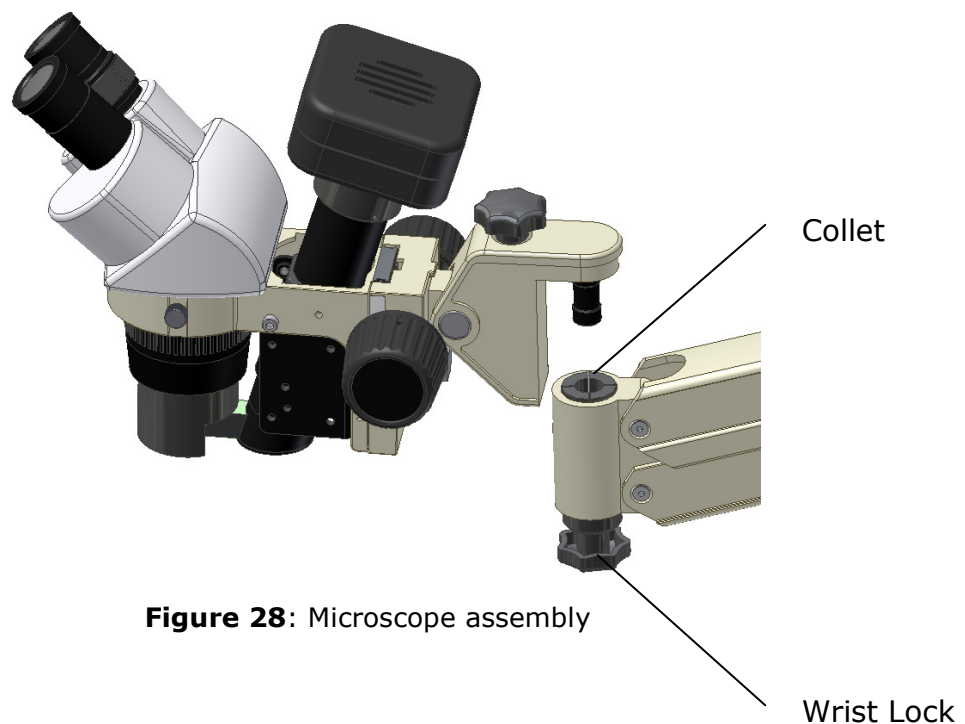
## ***Assembling the Arm and Head***

1. Locate the pillar safety clamp and place it on the pillar if it is not there already. Tighten the pillar safety clamp at a point on the pillar.
2. Place the arm assembly on the pillar. Make sure that the arm assembly rests against the pillar safety clamp. Loosen the elbow knob to allow the pantograph arm to rotate about the elbow joint.



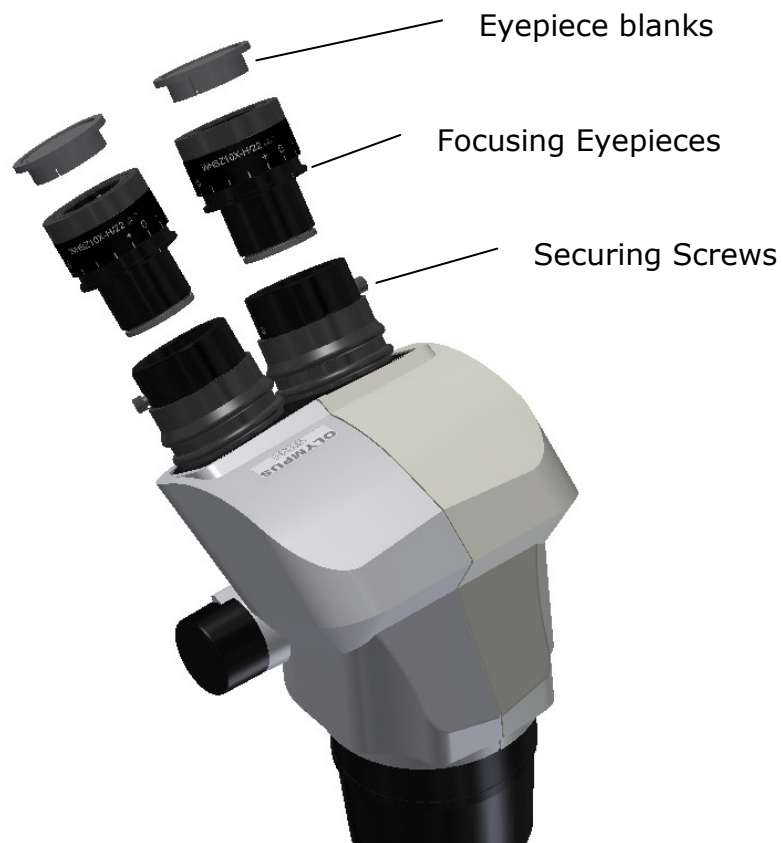
**Figure 27:** Arm Assembly

3. Locate the microscope head assembly in the end of the arm assembly. Make sure the microscope assembly is seated all the way down in the collet. Tighten the wrist knob underneath the end of the arm assembly to secure the microscope in the collet.
4. Connect the pillar cable plug to the socket on the top of the Pillar. Lock the Plug into place with the screw locks on the connector.
5. Connect the other end of the pillar cable to the underside of the Lamphouse. The connector is polarised, so do not force connector in if it does not fit correctly. TIP: The arrow on the plug should face outwards.



**Figure 28:** Microscope assembly

6. Remove the eyepiece blanks and insert the eyepieces. Insert the focusing eyepieces and rotate so that the scale marker is easily visible. Tighten the securing screws. Retain the eyepiece caps in a safe place for when storing the microscope.



**Figure 29:** Inserting Eyepiece (SO-111TZ/SZ depicted)

**Also see page 27, “Focussing the microscope” for more details**

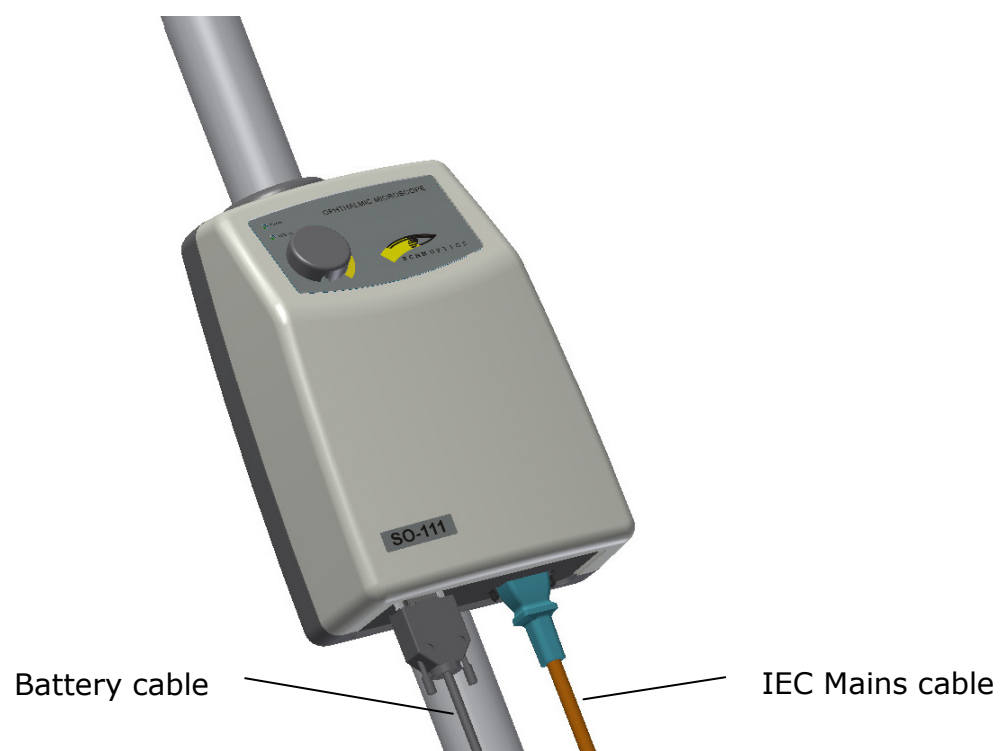


## ***Connecting to a power source***

The Scan Optics Ophthalmic Microscope may be connected to either an earthed mains (110-240V) ac supply, or a 12V dc supply.

If you require continuous power during operation, then it's advisable to use a UPS (Uninterruptible Power Supply).

The ability to use Battery is only an alternative if no Mains power is available.



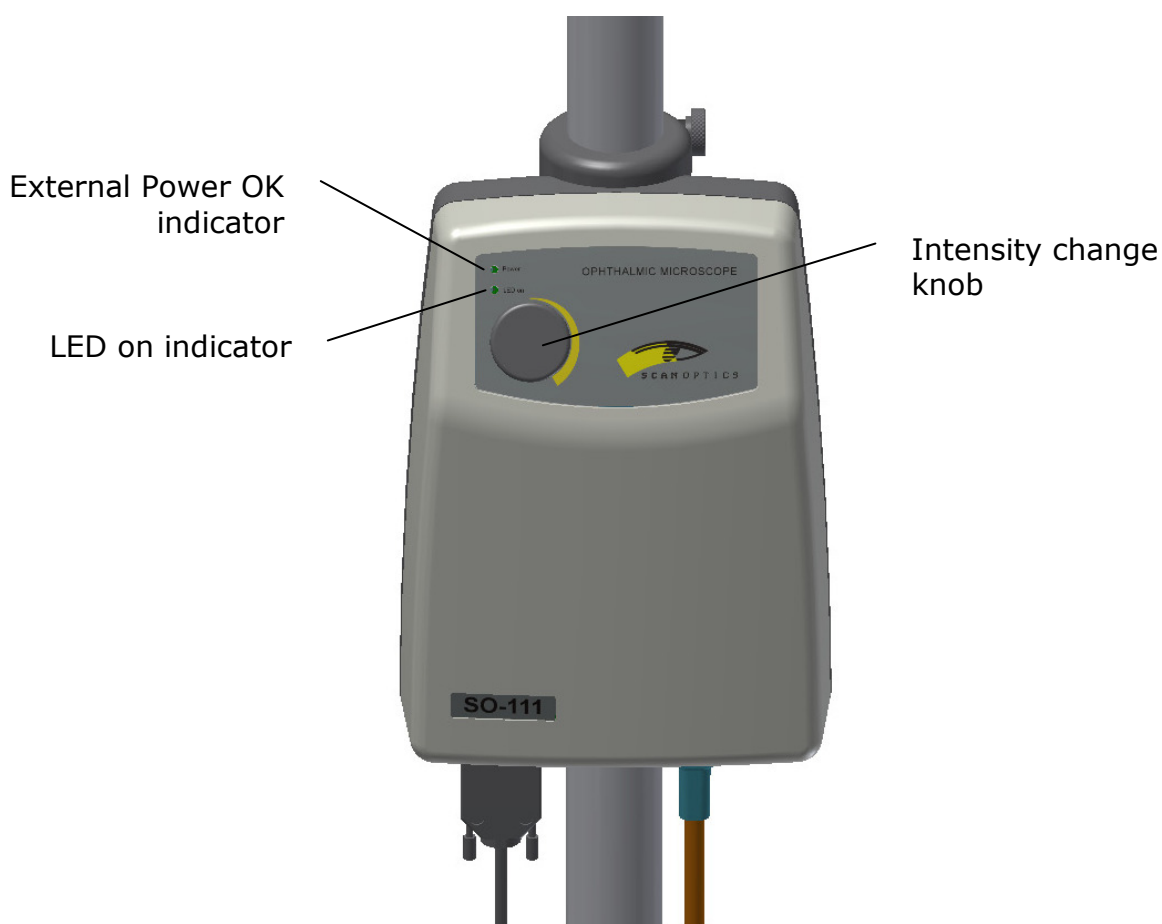
**Figure 30:** Power Supply Cables

## ***Changing the light intensity (Powering ON)***

To turn the microscope on, rotate the intensity knob on the right hand side until it clicks.

To increase intensity, continue to rotate the knob until desired illumination is acceptable.

To turn microscope off, rotate the intensity knob back until it clicks off.



**Figure 31:** Power Supply Panel

## Battery operation, maintenance and safety

Scan Optics recommend the use of gel cell or sealed rechargeable lead-acid 12V batteries. These batteries are maintenance-free and can be operated, charged or stored in any position without leakage.

1. If the power supply is to be connected to a 12-volt dc supply, connect the battery cable to the connector on the bottom panel on the power supply.
2. Connect the red battery clip to the positive battery terminal, and the black clip to the negative battery terminal. The power supply will not operate if the terminals are reversed.
  - The 12 volt supply must be direct current. The power supply will not operate with 12 volts alternating current.
  - Ensure batteries have adequate airflow around them before charging.
  - Avoid short-circuiting batteries.
  - Old lead-acid batteries of any type must be disposed of correctly. It is recommended that they are recycled by an appropriate establishment who recycle car batteries. Lead acid batteries should not be disposed of with ordinary waste, as lead poisoning or acid trauma may result.

**Where battery backup is used, Scan Optics recommends a periodical check of the battery to ensure it is charged and functional.**

## Arm assembly adjustments

The arm assembly includes a number of features which enable the microscope to be adjusted in almost any position. The best combination of settings will depend on the individual user and the particular surgical environment.

The *pillar knob* allows the arm assembly to be locked in position about the pillar. The *elbow knob* allows the shape of the arm to be locked in position; that is the position of the pantograph section relative to the horizontal section of the arm assembly.

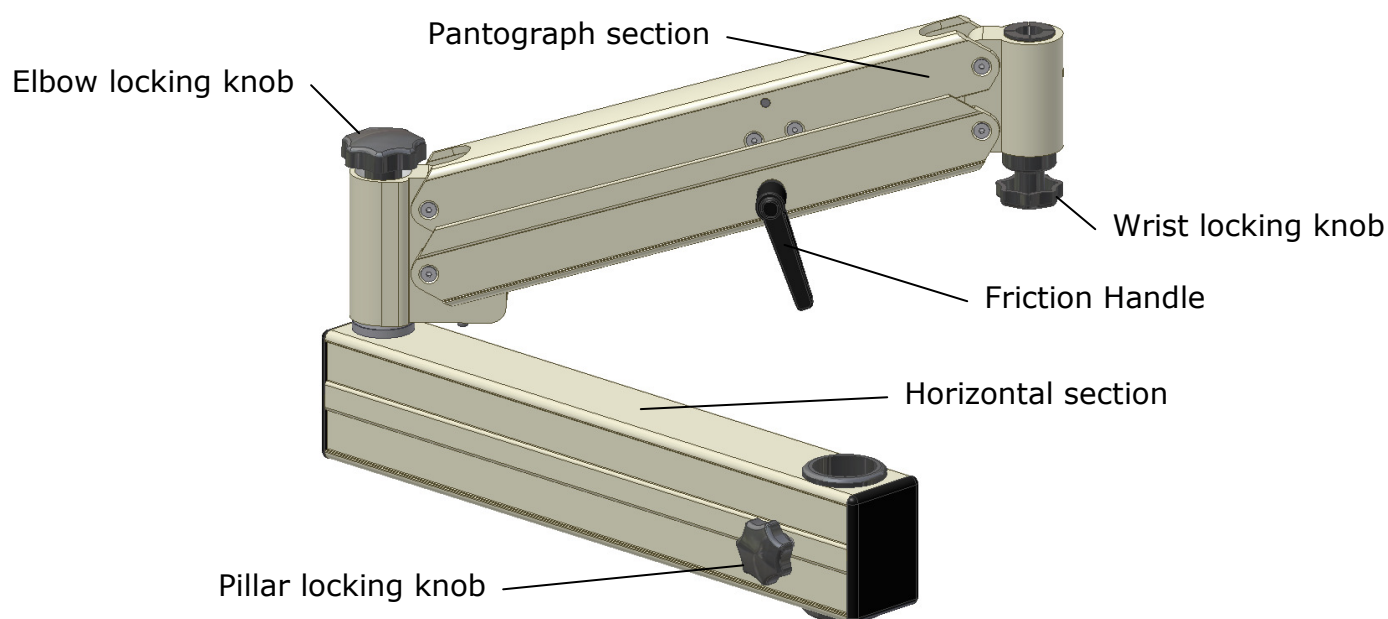
The *friction handle* allows the vertical movement of the pantograph section of the arm assembly to be restricted or locked in position.

The *wrist knob* allows the head assembly to be locked in position relative to the pantograph section of the arm assembly. This knob should not be unlocked after the head assembly has been adjusted. This will prevent accidental dislodgement of the head assembly when attempting vertical positioning manoeuvres.

In a typical configuration; the pillar knob would be left slightly loose but the elbow and wrist knobs would be locked.

**Note that the safety clamp must be in position directly under the horizontal section of the arm assembly for safe operation of the microscope; this will prevent the arm assembly sliding down the pillar.**

The friction handle could be set such that when vertical adjustments of the pantograph arm are made, the arm will stay in position after being moved. This will allow the microscope to be swung out of the way about the pillar after surgery while the patient is moved. When the next patient is ready, the microscope can be swung in again and it will already be in a good approximate position.



**Figure 32:** Pantograph Arm

## Gas spring adjustment

The microscope arm is fitted with an adjustable gas spring. By adjusting the position of one end of the gas spring, the amount of upward force can be changed. Thus if accessories are added to or removed from the microscope, the force setting can be adjusted to compensate for the change in weight, thereby maintaining the same desired 'feel' of the arm movement.

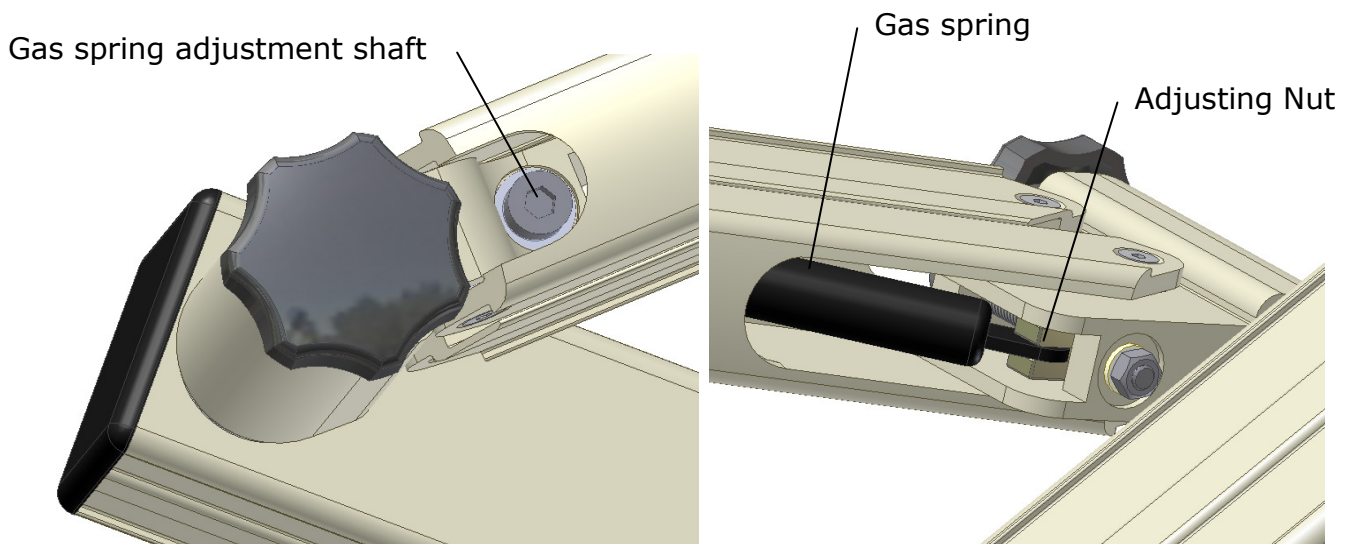
To adjust the gas spring:

With one hand, push the pantograph arm down until it is in the horizontal position. This will expose the socket in the adjusting screw.

Using the 5mm socket key provided in the tool box, rotate the screw clockwise to move the adjusting nut up and decrease the arm force. Alternatively rotate the screw anti-clockwise to move the nut down and increase the arm force.

### CAUTION:

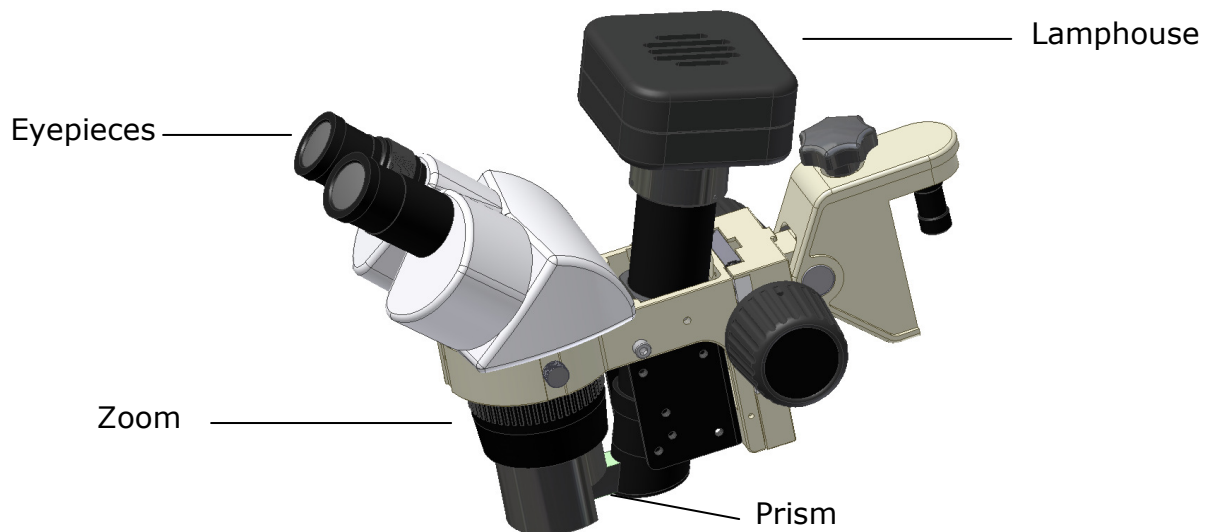
**Always check the arm movement over the entire up/down stroke of the arm. If the microscope is heavily loaded with accessories and the arm force is set too low, the arm may drop suddenly if it is not adequately restrained with the friction lock.**



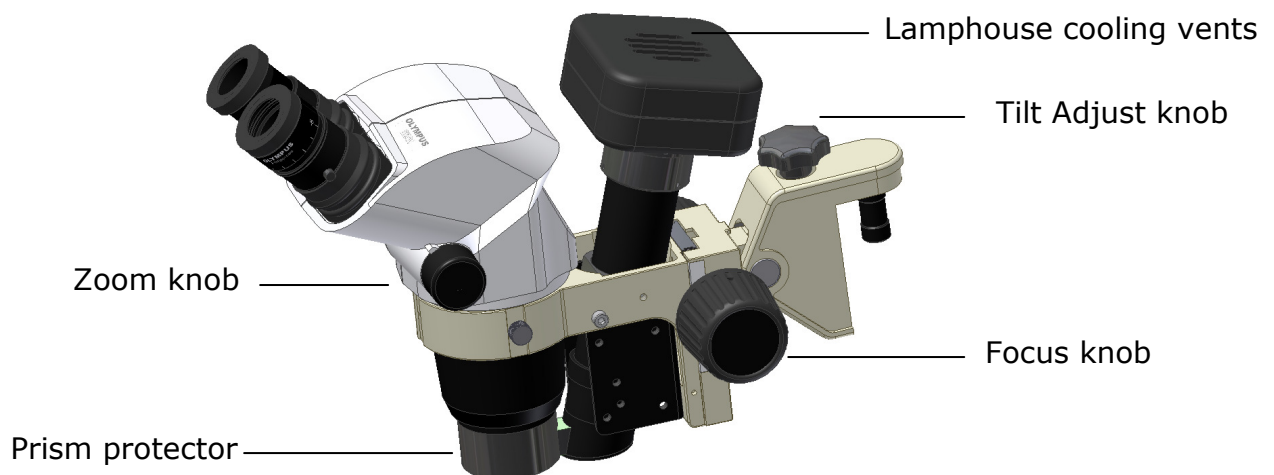
**Figure 33:** Gas Spring Adjustment

## ***Microscope head assembly***

A good working knowledge of the microscope head assembly will be of great assistance in achieving and maintaining optimum optical and mechanical performance.



**Figure 34:** SO-111T Head Assembly

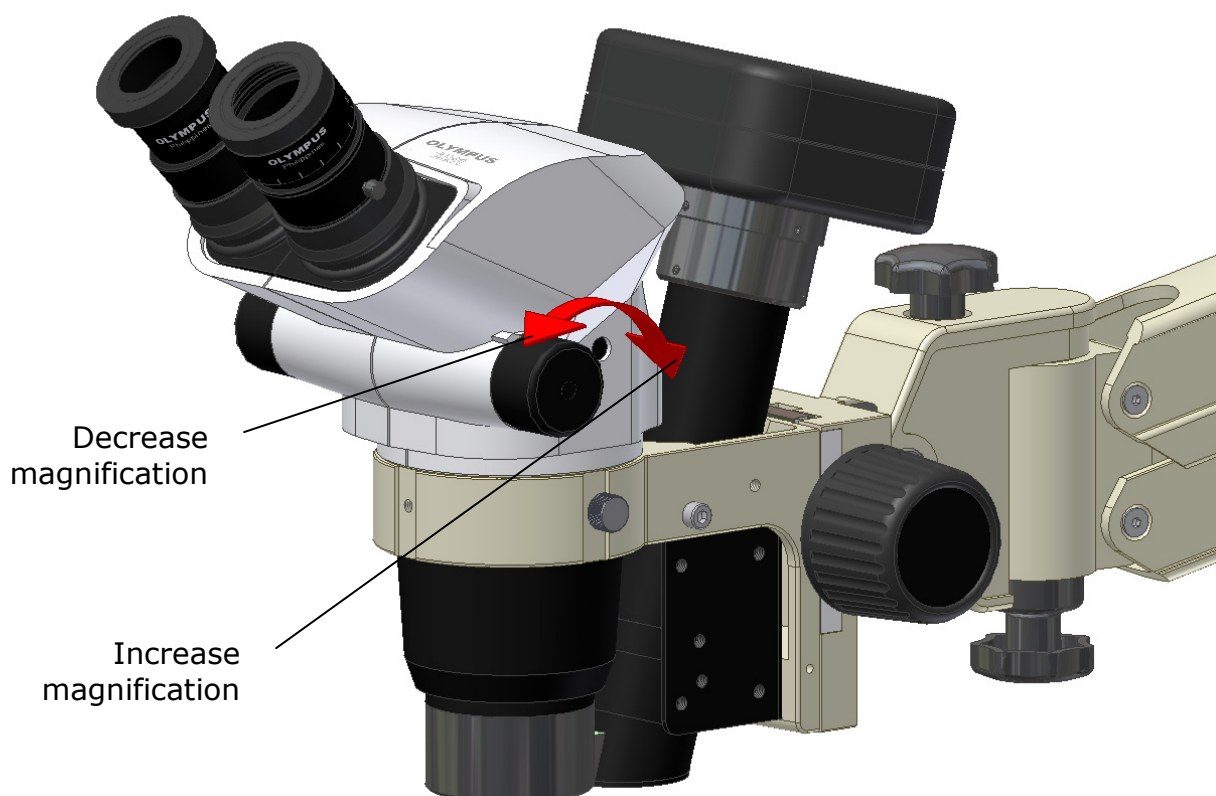


**Figure 35:** SO-111TZ/SZ Head Assembly

## USING THE MICROSCOPE

### ***Changing the magnification (SO-111TZ, SO-111SZ)***

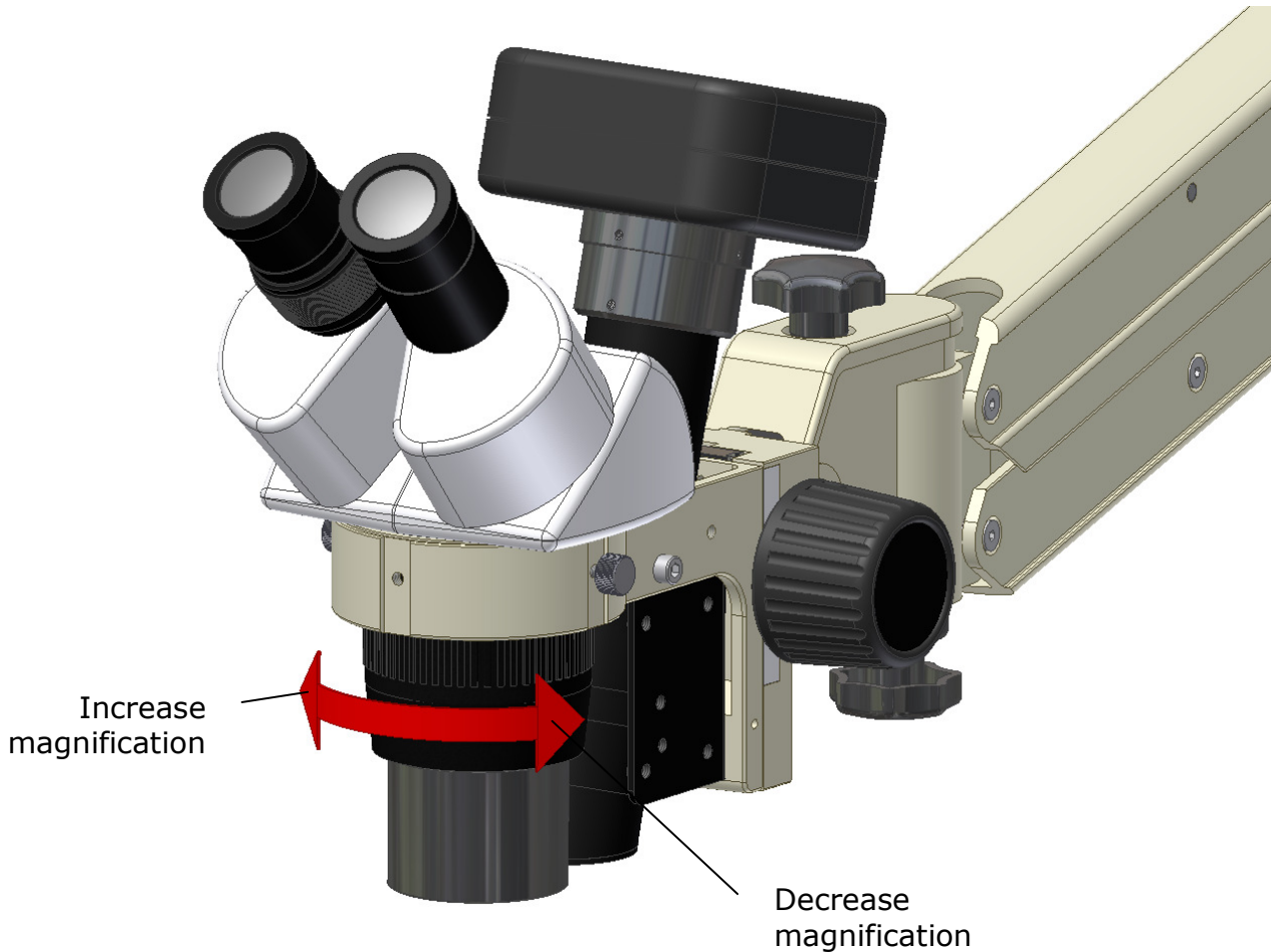
The SO-111TZ/SZ model has variable continuous magnification settings. Rotate the zoom adjust knob forward to increase magnification. Rotate the zoom adjust knob backwards to decrease magnification.



**Figure 36:** Changing magnification on SO-111TZ/SZ

### ***Changing the magnification (SO-111T)***

The SO-111T is a 2 step fixed magnification microscope. To increase the magnification, rotate the magnification change barrel left until the '2x' label is facing you. To decrease magnification, rotate the barrel right until the '1x' label is facing you.



**Figure 37:** Changing magnification on SO-111T



## Tilt function

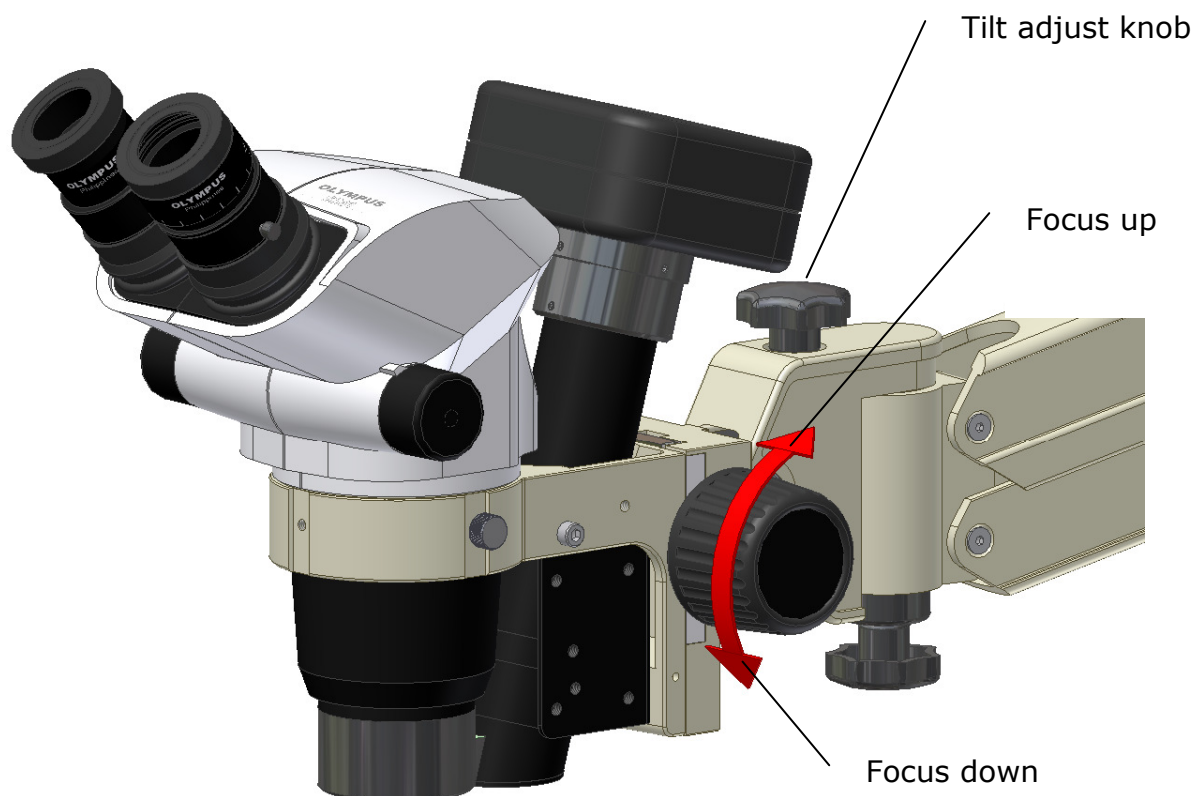
To tilt the head assembly up or down, simply rotate the tilt knob anti-clockwise or clockwise accordingly. Note that the entire head assembly will tilt, not just the eyepieces. To ease this operation, support the weight of the microscope head with one hand while using the other hand to rotate the knob.

## Zoom function

To zoom the image in or out, rotate the zoom knob(s). The total zoom range is between 4x and 25x magnification. Sterilisable covers are provided for fitting over the zoom knobs when sterile use is required.

## Focus function

To focus the microscope up or down, turn the focus control knob(s) as shown below. The total focus range is 50mm. For optimum microscope use, leave the microscope head in such a position to allow approximately 25mm of focus range in each direction. Sterilisable covers are provided for fitting over the manual focus knobs when sterile use is required.



**Figure 38:** Focusing (SO-111SZ/TZ depicted)

## ***Sterilisation***

Scan Optics microscopes are supplied with two sets of sterilisable covers – one set may be used while the other set is undergoing sterilisation. Additional sterilisable covers may be purchased from Scan Optics in the event of loss or damage. Simply slip the covers on to the zoom or focus knobs when required.

The covers may be sterilised by:

- boiling
- autoclaving
- chemical sterilisation
- gas sterilisation

Note that national authorities may require the use of specific sterilisation or disinfection methods.

## ***Moving the head into position***

Note that sterilised covers should be applied to the manual focus and zoom knobs and the guide handle (if used) before these parts of the microscope are touched by a sterile operator.

Move the head into approximate position using the arm assembly articulations.

Move the microscope focus up to the half-way position. This should leave approximately 25mm of movement up or down from the central position.

Use the pantograph arm articulation to move the head up or down while looking through the eyepieces to roughly focus the microscope.

If the microscope eyepieces are higher than the most comfortable position for the operator and it is not possible or practical to adjust the operator's seat, rotate the tilt knob clockwise to tilt the head of the microscope down. The range of tilt adjustment is from 45° downward to 5° above the horizontal.

## ***Focussing the microscope***

1. Focussing the microscope in the correct sequence is an important step in setting up for use.
2. Set the refractive error scale to zero on both eyepieces.
3. Choose a high magnification zoom setting or one which is typically used in surgery.
4. Close the left eye and look through the right eyepiece of the microscope with the right eye only.
5. Focus the microscope slowly until the image is sharply in focus.
6. Close the right eye and look through the left eyepiece of the microscope with the left eye only.
7. Rotate the refractive error adjustment ring on the left eyepiece until the left eye is in focus. The reading on the ring will give an approximate measure of the relative refractive error between the left and right eyes.
8. Look through both eyepieces normally and check that the image is focussed and that stereopsis is achieved.

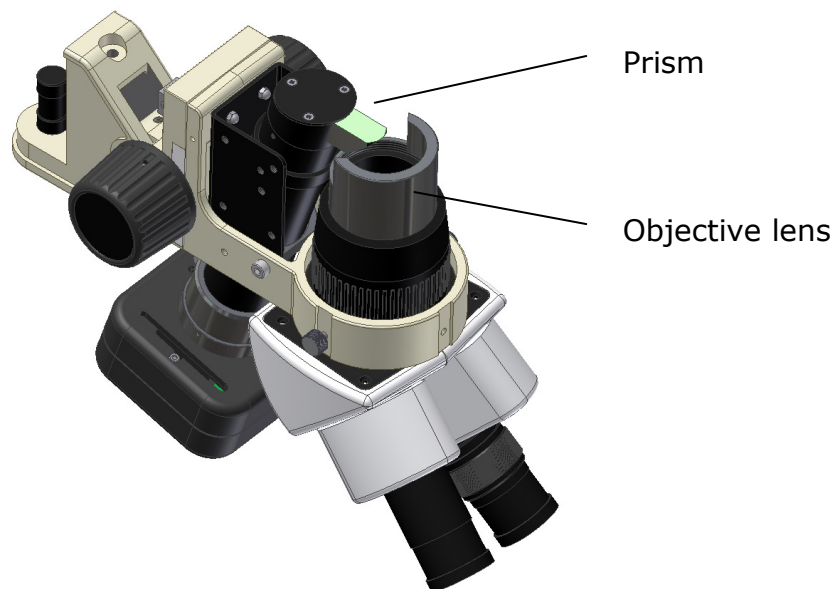
## ROUTINE CARE AND MAINTENANCE

### *Optical Head*

#### **Cleaning the optical components**

The eyepieces, objective lens and lamphouse prism should be checked for cleanliness each time the instrument is used. Surface dust should be removed with a clean, soft brush. Fingerprints, irrigation solution residue and grease may be removed by lightly wiping with a cotton cloth or lens tissue moistened with a mixture of 70% ether and 30% absolute alcohol (either ethanol or methanol). Use pure alcohol if no ether is available.

**Do not use acetone as it may damage the surface coatings of the lenses.**



**Figure 39:** Underside view

#### **Cleaning the plastic parts and paintwork**

Use water based cleaners only.

Do not use any organic solvent such as alcohol, ether or xylene.

#### **Do not dismantle**

Apart from instructions specifically mentioned within this manual, no parts inside the optical head of the instrument can be serviced by the user. Attempts to dismantle the optical head or prism cover will make any warranty void.

## **Protection against mould**

In hot and humid climates it is common for mould to grow on optical surfaces. Cleaning and repairing the damage can be expensive and inconvenient. To minimise the risk of mould forming, do not leave the instrument without either eyepieces or eyepiece blanks inserted and always store the optical head in a sealed bag containing silica gel desiccant. Scan Optics SO-111 microscopes are fitted with anti-mould protection. In tropical climates, routine checking for the presence of mould is recommended.

## **LIGHTING SYSTEM**

### ***Lamp life***

The LED is rated for an operational life of about 10 years of normal use. No servicing is required but users should be aware that small degradation of light intensity will be noticeable over the life of the LED.

## ADVANCED INSTRUCTIONS

### ***Replacing mould protection***

The microscope is fitted with anti-mould protection which is effective for approximately three years. However, the effective life of this protection will depend on environmental factors such as the temperature and humidity of the place where the microscope is stored. Regular inspection of the microscope will help early identification of mould and alert the user of the need to replace the anti-mould protection.

To replace the anti-mould pellet:

1. Zoom the microscope to the lowest magnification setting
2. Loosen the retaining screws on the side of the microscope head.
3. Lift the microscope out of the mounting ring
4. Remove the prism protector from the auxiliary objective assembly by prying it apart
5. Unscrew the cover from the bottom of the microscope head. The location of the existing anti-mould pellet will be revealed from the front of the microscope head.
6. Remove the old anti-mould pellet.
7. Peel the adhesive backing from the new anti-mould pellet and place it in the same location.
8. Zoom the microscope in and out all the way to make sure the zoom optics does not dislodge the pellet.
9. Screw the cover back on.
10. Replace the prism protector on the auxiliary objective assembly, making sure that the slot lines up with the location of the lamphouse prism.
11. Replace the microscope head back in the mounting ring and re-tighten the retaining screws.
12. Update the anti-mould label on the microscope head, or replace it with a new label.



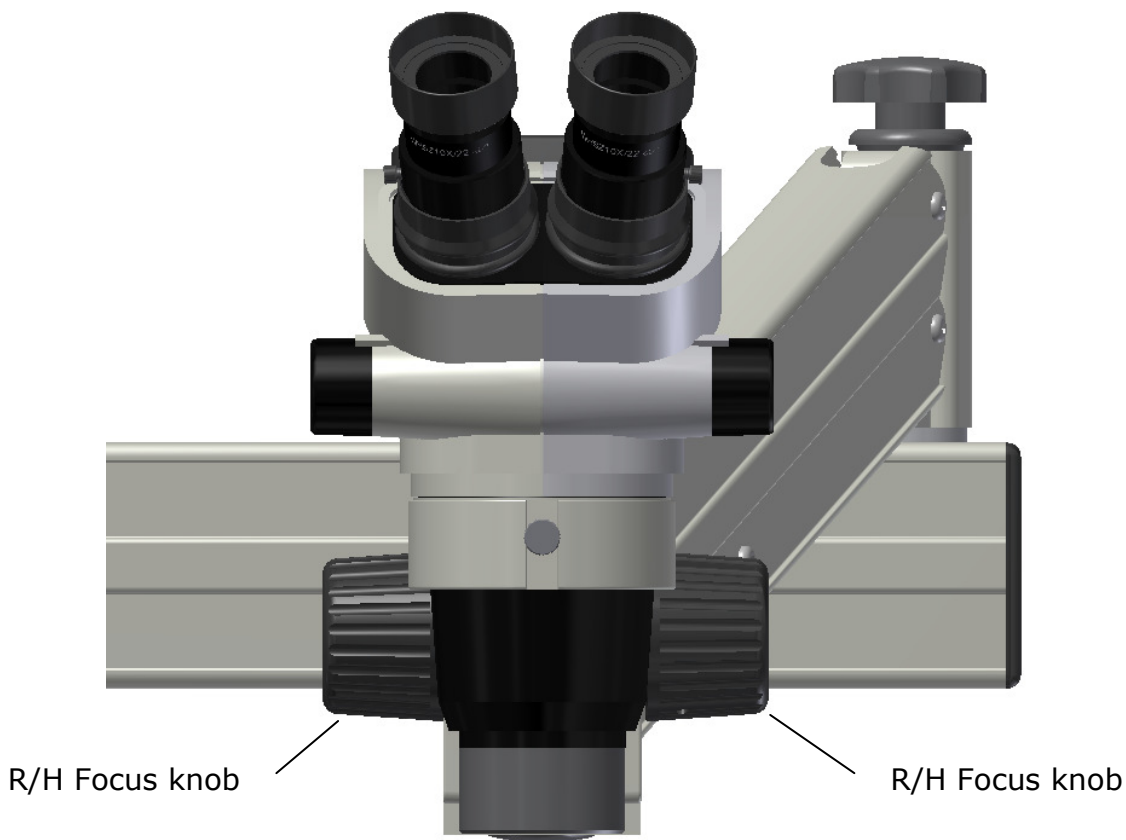
## ***Adjusting focus friction***

Over time, depending on the frequency of use, the focus friction may loosen, so that the microscope head starts to fall under its own weight. Conversely the focus knobs can be inadvertently tightened, so that they are difficult to turn.

To adjust the focus friction to a suitable level:

While viewing the microscope from the front, mounted on the pantograph arm;

1. Hold the left hand side focus knob firmly
2. Rotate the right hand side focus knob clockwise to tighten the focus friction
3. Rotate the right hand side focus knob anti-clockwise to loosen the focus friction
4. Release the LHS knob and test the 'feel' of the focus system by rotating either the LHS or RHS knob on its own. The system should allow the microscope head to be focussed up or down easily without falling under its own weight.





## TROUBLESHOOTING

| SYMPTOM         |  | POSSIBLE REASON   | REMEDY   |
|-----------------|--|---|--|
| VIEWING SYSTEM  | The image is blurry                            | If the microscope or object has moved, it may no longer be in focus.      | Refocus the microscope.  |
|                 |  | A different user may require adjustment for their refractive error.       | Adjust the eyepieces for refractive error – refer Focussing the microscope.  |
|                 |  | The eyepieces may not be clean.   | Carefully remove and clean the eyepieces if they are dirty, then replace them.   |
|                 |  | The objective lens may not be clean.                                      | Carefully clean the objective lens, taking care not to damage the lamphouse prism.   |
|                 | No image is seen                               | The eyepieces have not been inserted.                                     | Insert the eyepieces.  |
|                 |  | Possible obstruction in the viewing path.                                 | Remove the obstruction.  |
| MOUNTING SYSTEM | The Microscope is falling under its own weight | Gas spring failed – no resistance felt when the Friction handle is loose. | If it does not then the gas spring may have failed. Contact your distributor or Scan Optics.                               |
|                 |  | Gas spring adjustment incorrectly set.                                    | Adjust the gas spring to compensate for additional load on the end of the microscope arm - refer Gas spring adjustment.    |
|                 | The Microscope is not stable                   | Unstable mounting surface.  | Change the mounting surface to a more appropriate one.   |
|                 |  |   | Use the optional Scan Optics SO-291 table plate to stiffen a thin mounting surface such as a sheet-metal table or trolley. |
|                 |  | Friction knobs not tight.   | Refer Arm assembly adjustments.  |
|                 |  | Microscope head not fully seated in Wrist joint.                          | Refer Assembling the arm and head.   |
| FOCUS SYSTEM    | The Focus is very hard to adjust               | Loosen the focus friction.  | Refer Adjusting focus friction.  |
|                 | The Microscope head falls                      | Tighten the focus friction.   | Refer Adjusting focus friction.  |

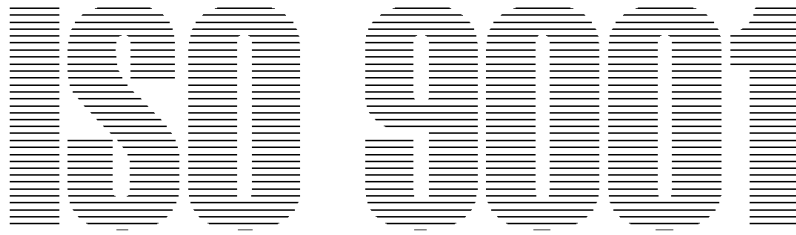
| SYMPTOM         |                       | POSSIBLE REASON  | REMEDY  |
|-----------------|-----------------------|--|---|
| LIGHTING SYSTEM | The light is too dim. | Check the intensity setting on the front panel. The intensity may be set low.                    | Increase the lamp intensity using the adjusting knob.   |
|                 | There is no light.    | Check if there is mains power available (green LED on the front panel).                          | Switch to battery power if no mains power is available. |
|                 |                       | Check the intensity setting on the front panel. The intensity may be set to zero.                | Increase the lamp intensity using the adjusting knob.   |
|                 |                       | Check if the black pillar cable is connected to the socket on the top panel of the power supply. | Connect it.   |
|                 |                       | Check cable and connections for damage.  | Replace. Contact your distributor or Scan Optics.       |
|                 |                       | Check the power supply.  | See below.  |
| POWER SUPPLY    | There is no power.    | Check the mains power supply.  | Use battery power if no mains power is available.       |

## SPECIFICATIONS (SO-111T)

|                                 |  |
|---------------------------------|--|
| <b>OPTICAL HEAD</b>             |  |
| VIEWING SYSTEM                  | Binocular, stereoscopic (convergence angle 12°)<br>Eyepiece tube inclination 45° |
| MAGNIFICATION                   | Two step, 5X and 10X   |
| WORKING DISTANCE                | Lamp house prism to object distance 165 mm                                       |
| FIELD OF VIEW                   | 40mm at 5X   |
| REFRACTIVE ERROR                | Adjustment +5D to -5D L/H and R/H eyepiece                                       |
| FOCUSING                        | Range $\pm 25$ mm<br>Control knobs removable for sterilisation                   |
| <b>ILLUMINATION</b>             |  |
| ALIGNMENT                       | Coaxial with viewing system, high intensity                                      |
| LAMP                            | 20W LED  |
| FILTERS                         | Internal ultraviolet   |
| LAMP LIFE                       | Minimum 10 years   |
| ILLUMINATION                    | 50,000 Lux min'  |
| <b>POWER SUPPLY</b>             |  |
| MAINS POWER                     | 110-240V.  |
| OUTPUT                          | Regulated output with soft start   |
| INTENSITY CONTROL               | Continuous   |
| EARTHING                        | Via earth lead of mains power cable (green/yellow)                               |
| DIRECT CURRENT                  | 12 V dc source optional  |
| CIRCUIT BREAKER                 | Internal   |
| CABLE: Mains                    | Length 5 metres  |
| CABLE: Battery                  | Length 3 metres  |
| <b>MOUNTING SYSTEM</b>          |  |
| CLAMP                           | Throat 70 mm   |
| HEAD TILT                       | +5° to -45°  |
| VERTICAL TENSION                | Adjustable gas spring to set lifting force                                       |
| DIMENSIONS                      | Vertical pillar to head optical axis maximum 940 mm (37")                        |
|                                 | Pantograph arm vertical range 320 mm (13")                                       |
| MATERIALS                       | No ferrous metals, preventing corrosion.   |
| <b>CASE</b>                     |  |
| DIMENSIONS: Aluminium case      | 790 x 560 x 340 mm (31 x 22 x 13.5")<br>(Including packing carton)               |
| DIMENSIONS: Cardboard packaging | 730 x 520 x 280 mm (32" x 20.5" x 11.5")   |
| WEIGHT: In aluminium case       | 30 kg (66 lbs) (Including packing carton)  |
| WEIGHT: In standard packaging   | 22 kg (49 lbs)   |

## SPECIFICATIONS (SO-111TZ/SZ)

|                                 |  |
|---------------------------------|--|
| <b>OPTICAL HEAD</b>             |  |
| VIEWING SYSTEM                  | Binocular, stereoscopic (convergence angle 10o)<br>Eyepiece tube inclination 45o |
| MAGNIFICATION                   | Zoom magnification, range 4.2 x - 25x  |
| WORKING DISTANCE                | Auxiliary objective to object distance 160 mm                                    |
| FIELD OF VIEW                   | 15 - 65mm, depending on magnification  |
| REFRACTIVE ERROR                | +/- 5D left eyepiece-both eyepieces  |
| FOCUSING                        | Range $\pm$ 25mm   |
| <b>ILLUMINATION</b>             |  |
| ALIGNMENT                       | Coaxial with viewing system, high intensity                                      |
| LAMP                            | 20W LED  |
| FILTERS                         | Internal ultraviolet   |
| LAMP LIFE                       | Minimum 10 years   |
| ILLUMINATION                    | 50,000 Lux min'  |
| <b>POWER SUPPLY</b>             |  |
| MAINS POWER                     | 110-240V.  |
| OUTPUT                          | Regulated output   |
| INTENSITY CONTROL               | Continuous   |
| EARTHING                        | Via earth lead of mains power cable (green/yellow)                               |
| DIRECT CURRENT                  | 12 V dc source optional  |
| CIRCUIT BREAKER                 | Internal   |
| CABLE: Mains                    | Length 5 metres  |
| CABLE: Battery                  | Length 3 metres  |
| <b>MOUNTING SYSTEM</b>          |  |
| CLAMP                           | Throat 70 mm   |
| HEAD TILT                       | +5° to -45°  |
| VERTICAL TENSION                | Adjustable gas spring to set lifting force                                       |
| DIMENSIONS                      | Vertical pillar to head optical axis maximum 940mm (37")                         |
|                                 | Pantograph arm vertical range 360 mm (14")                                       |
| MATERIALS                       | No ferrous metals, preventing corrosion.   |
| <b>CASE</b>                     |  |
| DIMENSIONS: Aluminium case      | 790 x 560 x 340 mm (31 x 22 x 13.5") (Including packing carton)                  |
| DIMENSIONS: Cardboard packaging | 730 x 520 x 290 mm (32" x 20.5" x 11.5")   |
| WEIGHT: In aluminium case       | 30 kg (66 lbs) (Including packing carton)  |
| WEIGHT: In standard packaging   | 22 kg (49 lbs)   |



Scan Optics is a Quality Endorsed Company, certified to the International Organisation for Standardisation (ISO) standard ISO 9001, *Quality Systems - Model for quality assurance in design, development, production, installation and servicing*. This certification recognises the importance placed by Scan Optics on providing the highest levels of quality in all aspects of business.

The rules for accreditation of a Quality Endorsed Company are laid down in the international standards ISO/IEC Guide 48 and EN 45012. They require a complete auditing of all company systems and procedures by an independent accredited certification body every three years. The QAS (Australia) accreditation is recognised by most of the world's major quality certification bodies including BSI(UK), UL(USA), QMI(Canada), and JQA(Japan). In addition, EQNet Quality Certification which is recognised by some twenty countries, and specific registration with any one of more than sixty national certification bodies, can be provided if required.

To achieve ISO 9001 accreditation requires quality in product design, in manufacture, in customer service and in all internal company systems.



# WARRANTY

All Scan Optics equipment has been designed and manufactured to provide reliable service and is warranted to be free from defects of material and construction at the time of purchase.

Should the instrument require repair or service due to faulty parts or labour during the period of two years from the date of purchase, this repair will be carried out by Scan Optics or its agents free of charge.

## Terms and Conditions

This warranty will not apply if a defect is caused:

- during shipping or transit
- by humidity or dampness
- by operation on a supply voltage other than as specified in the instructions
- by incorrect connection to a power supply
- by alteration or repair by anyone other than a person authorised by Scan Optics, or
- by any other misuse, accident or neglect.

## Service and Repair

In the case of a warranty claim Scan Optics should be immediately contacted, either directly or through the agent, distributor, donor or supplier of the equipment. You will need to provide copies of the purchase or delivery documents.

Scan Optics will then send instructions regarding the repair, replacement or return of the equipment.

When freight is arranged by Scan Optics or its agent, the cost of the freight will be accepted by Scan Optics; all other freight costs are the responsibility of the purchaser.

**Fill in the following details:**

Customer: \_\_\_\_\_

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Date of Purchase \_\_\_\_\_

**OUR COMMITMENT TO YOU**

We at Scan Optics are committed to the highest quality in our products and in the services we provide.

Our goal is for you to be a satisfied customer of Scan Optics.

**We undertake:**

- to listen carefully to what you tell us
- to be accurate and honest in telling you about our products and services
- to communicate with you professionally and in clear language
- to deal promptly with any complaints or concerns you may have with us.

**WE WELCOME YOUR FEEDBACK**

If you would like to comment on any matter relating to a Scan Optics product or service, you can contact us in the following ways:

- by mail, using the attached pre-addressed card if you wish
- by telephone, on  
61 (8) 8234 9120
- by facsimile, on  
61 (8) 8234 9417
- by e-mail, at  
admin@scanoptics.com.au

At Scan Optics we have a system of continuous product improvement. We welcome suggestions at any time for modifications and improvements.

If you wish to discuss a particular item of equipment, please tell us the model and serial number.

We also welcome customers and users of Scan Optics equipment to visit us. If you are able to do so, please contact us so we can make arrangements.

