

# OME-V200 Quick Reference Guide

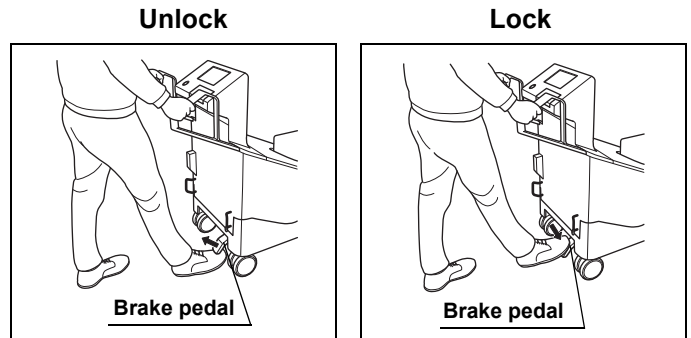
This guide is for quick reference only, especially for inspection and troubleshooting. Please refer to the instructions provided with the device for detailed instructions.

## 1 Installation and Connection

### 1.1 Movement and lock of the equipment

Holding the movement handles of this instrument firmly. Check the position of the brake pedal, push up it with a foot to unlock the casters.

After stopping this instrument, check the position of the brake pedal, push it until it hits the back, apply the brake, and confirm that this instrument is locked to the floor.



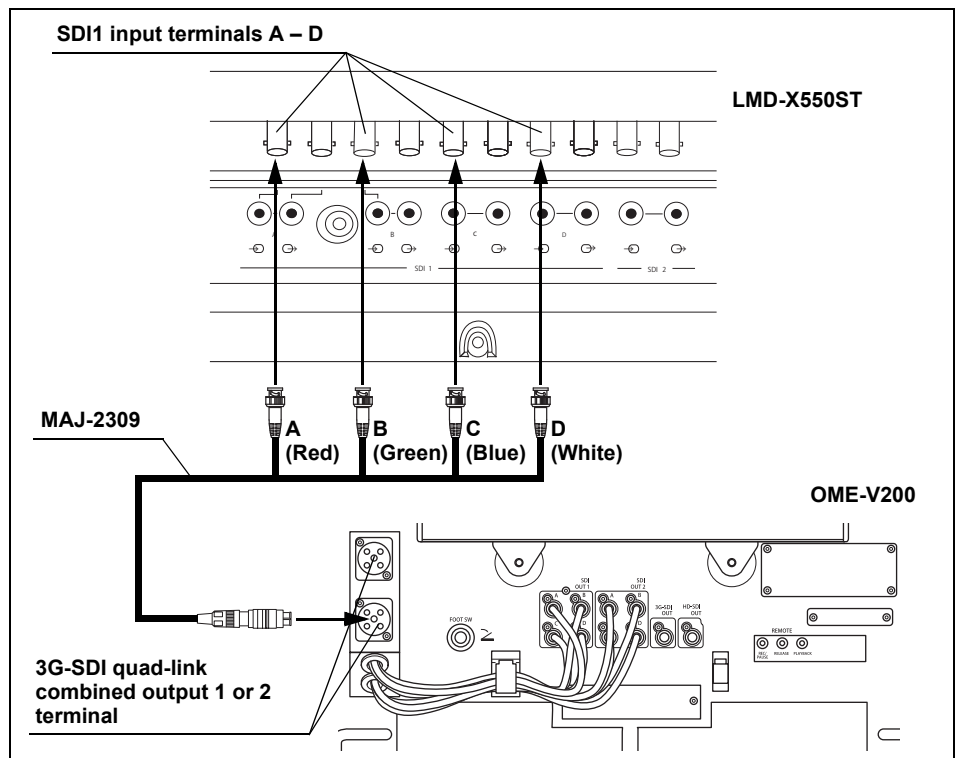
### 1.2 Connection of the power cord

Connect the power plug of the power cord directly into the hospital grade wall mains outlet.

### 1.3 Connection of the monitor

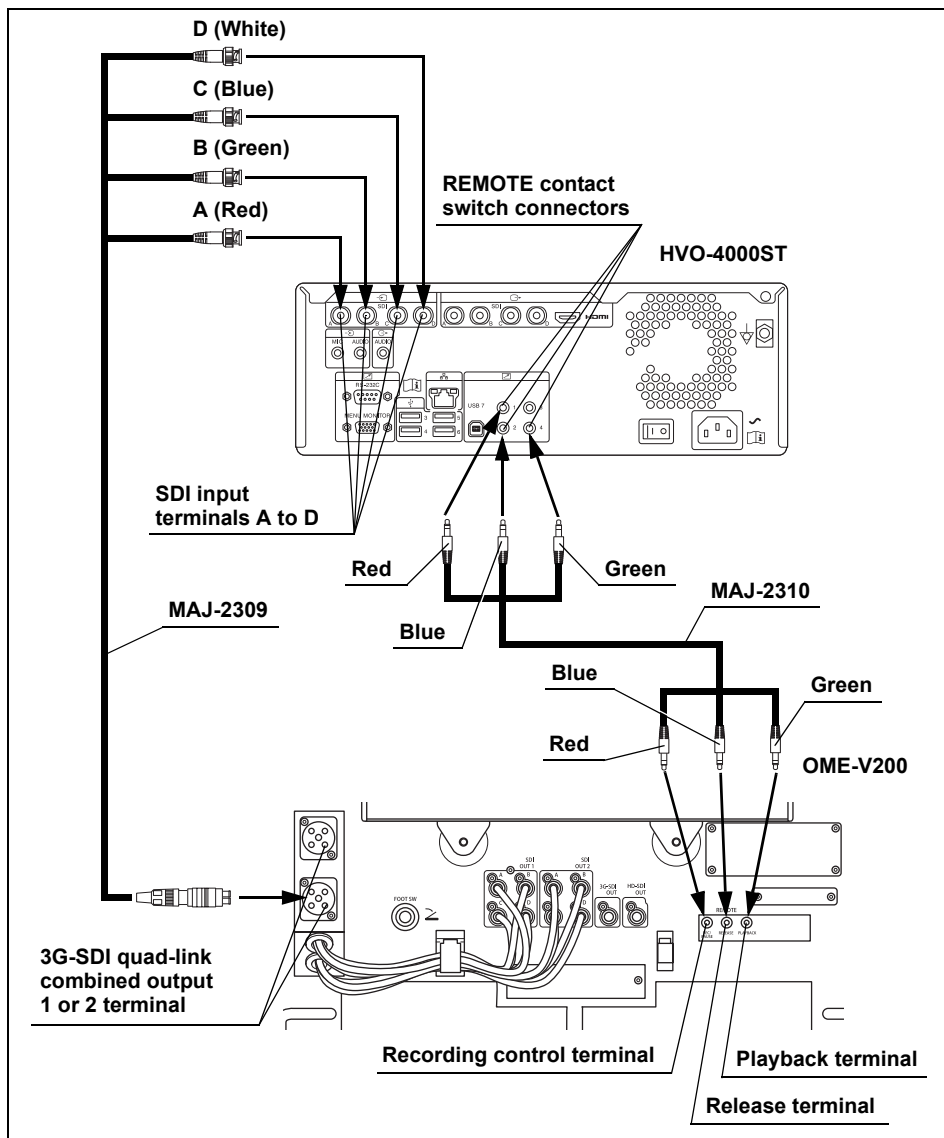
#### ■ Connection of LMD-X550ST, LMD-X310ST, LMD-X550S, or LMD-X310S

The methods of connection of this instrument to the LMD-X550ST, LMD-X310ST, LMD-X550S, and LMD-X310S are completely identical. The following instructions take the connection of the LMD-X550ST as an example.



## 1.4 Connection of the video recorder

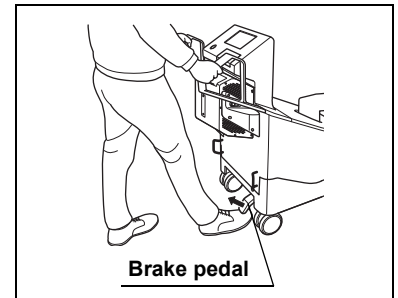
### ■ Connection of HVO-4000ST



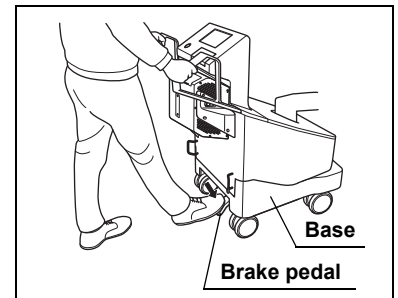
## 2 Inspection

### 2.1 Inspection of the brake

- 1 Holding the movement handles of this instrument firmly. Check the position of the brake pedal, push up it with a foot to unlock the casters.

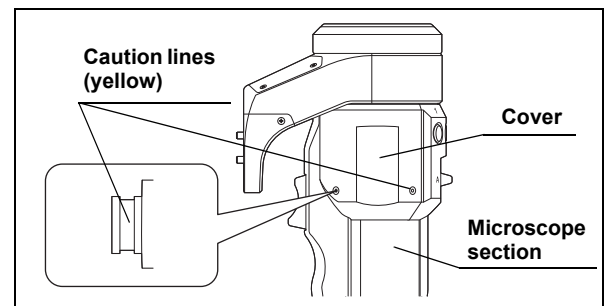


- 2 After stopping this instrument, check the position of the brake pedal, push it until it hits the back, apply the brake, and confirm that this instrument is locked to the floor.



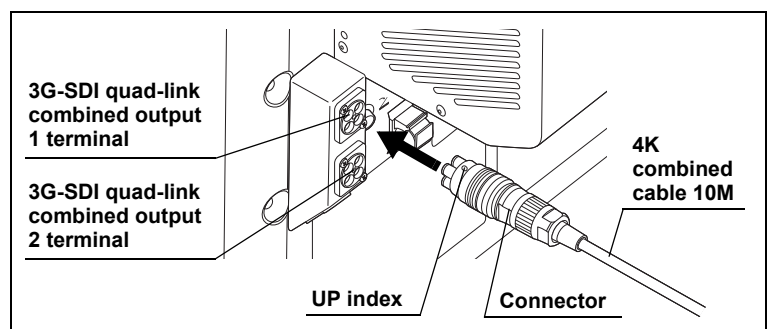
### 2.2 Inspection of the caution line (yellow)

Confirm that the caution lines (yellow) on the cover of the microscope section are invisible. If a caution line (yellow) is visible, do not use this instrument and contact Olympus.



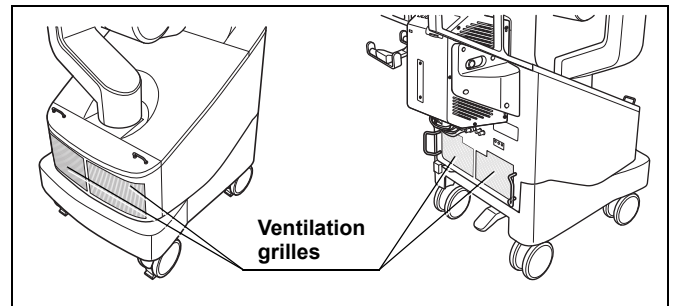
### 2.3 Connection of cables

- 1 Confirm that this instrument and the ancillary equipment to be used are turned OFF.
- 2 Confirm that the electrical contacts of the connector of the 4K combined cable 10M connected to the observation monitor are free of irregularities such as bending or crushing.
- 3 Hold the connector of the 4K combined cable 10M so that the UP index comes on the top and insert it into the 3G-SDI quad-link combined output 1 or 2 terminal all the way until it clicks.

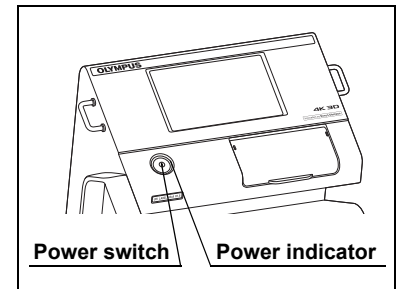


## 2.4 Inspection of the power ON

- 1 Check that the ventilation grilles on the front and rear of the base of this instrument are not stopped by dust, a foreign object, or cloth.

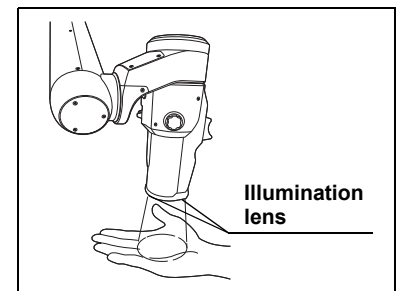


- 2 Confirm that the power switch of the LED light source is set to “☉ (ON)” as described in the instruction manual for the LED light source.
- 3 Press the power switch of this instrument to turn it ON. The power indicator lights green and the illumination lamp of the LED light source lights up.



## 2.5 Inspection of the illumination light

Confirm that the illumination light is output from the illumination lens of the microscope section.

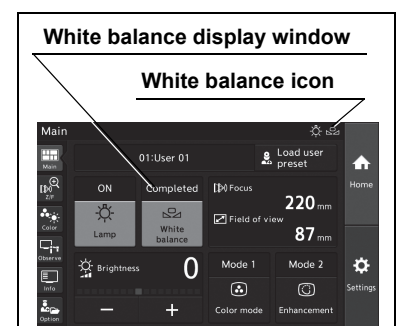
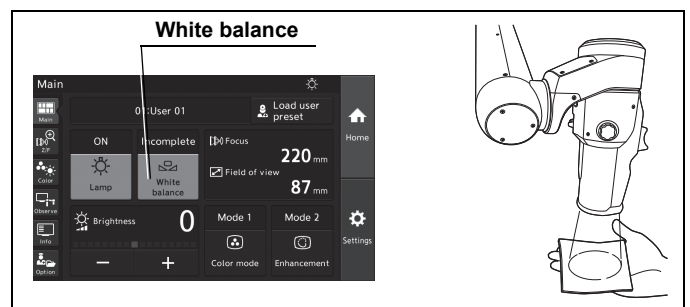


## 2.6 Inspection of the observation monitor

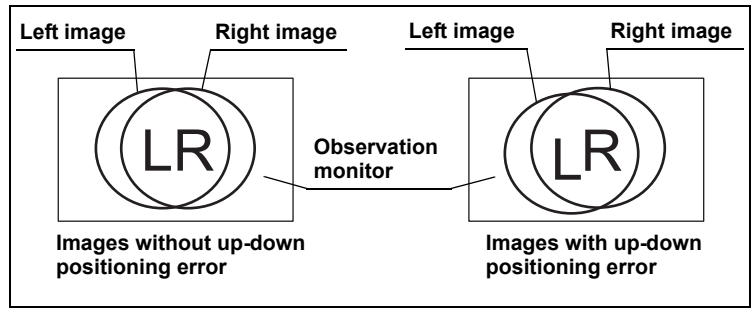
Operate the observation monitor by following its instruction manual and confirm that it can display images.

## 2.7 Inspection of the image

- 1 Using a white object such as a piece of gauze as the subject, bring the focus on it and set so that no clipped white area is observed on the entire image.
- 2 Keeping this instrument unmovable, tap and hold the “White balance” button on the touch panel or the custom switch to which the white balance function is assigned for about 1 second.
- 3 The white balance display window shows “Completed”, the message is displayed on the observation monitor and the white balance icon appears on the touch panel.



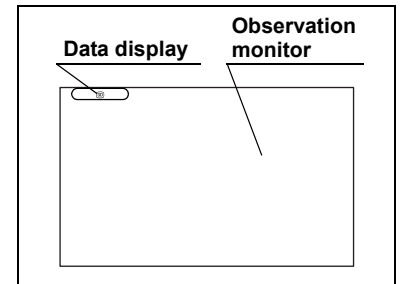
4 Place an object having an easy-to judge vertical direction view so that it is focused on the center of the image displayed on the observation monitor. Observe the observation monitor images without wearing the 3D eyeglasses and confirm that there is no positioning error in the up-down direction between the left and right images.



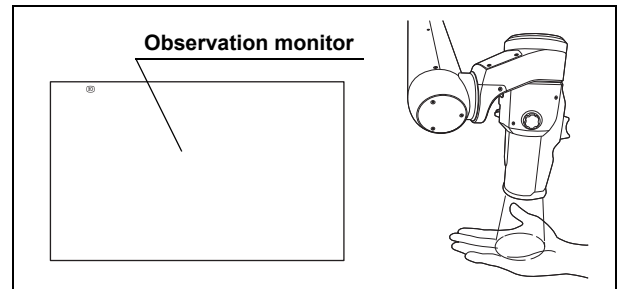
5 Observe the images by wearing the 3D eyeglasses, close the left and right eyes alternately, and confirm that there is no difference in color or brightness between the left and right images.

6 While observing the 3D images, contact the observed object with forceps or a similar tool and confirm that there is no peculiarity in the feeling of depth.

7 Confirm that the data display is displayed on the observation monitor.



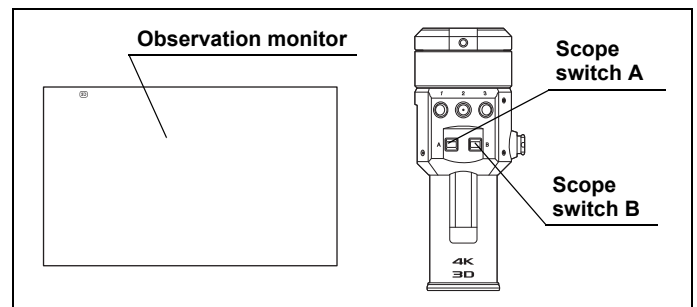
8 Observe your hand and confirm that the image is displayed in normal colors without noise.



## 2.8 Inspection of the focus/zoom functions

1 Tilt the scope switches A and B on the microscope section all the way upward or downward and, by observing the observation monitor, confirm that the focus and zoom functions are activated correctly.

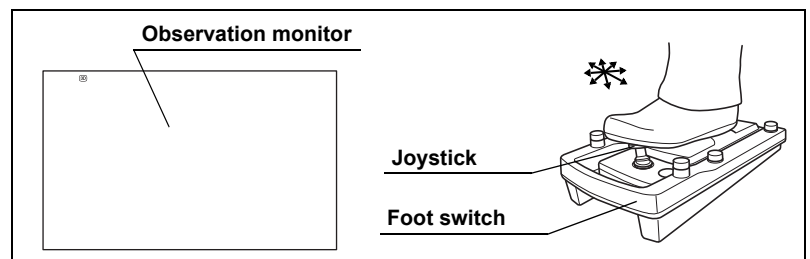
2 If the zoom + of the adaptive AF is set, confirm that the auto focus is activated and focus is adjusted after completion of the zoom + (UP) operation.



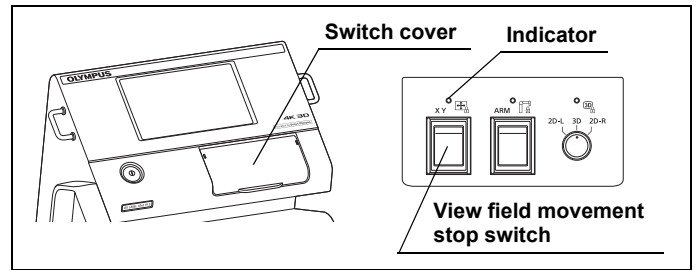
## 2.9 Inspection of the view field movement

1 Tilt the joystick on the foot switch all the way. Observe the observation monitor and confirm that the field moves to direction in which the joystick is tilted.

2 If the view field movement of the adaptive AF is set, confirm that the auto focus is activated after completion of the view field movement operation.

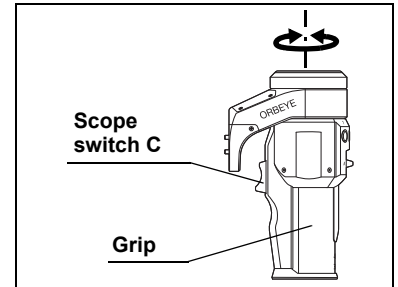


- 3 With the view field movement activated, flip open the switch cover and press the upper segment of the view field movement stop switch and confirm that the indicator above the switch lights orange and the view field movement is stopped. After checking, press the lower segment of the view field movement stop switch and confirm that the indicator is extinguished and the view field movement is activated.

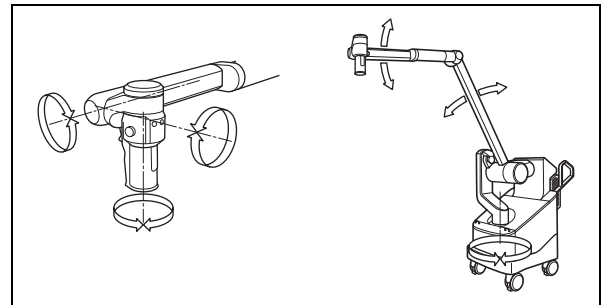


## 2.10 Inspection of the arm locking/unlocking

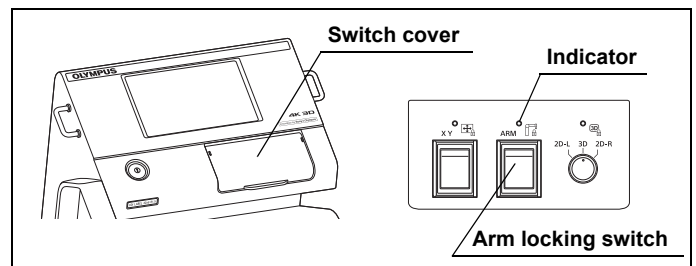
- 1 Hold the grip of the microscope section firmly, push in the scope switch C with a finger, and confirm that the arm is unlocked.



- 2 With the arm in the unlocked condition, confirm that the microscope section and arm can be moved in the necessary range without causing the feeling of being pulled in a specific direction.
- 3 Remove your finger from the scope switch C and confirm that the arm is locked and the microscope section can be fixed at the current position.
- 4 If the arm free of the adaptive AF is set, confirm that the auto focus is activated and focus is adjusted after the arm has been unlocked.

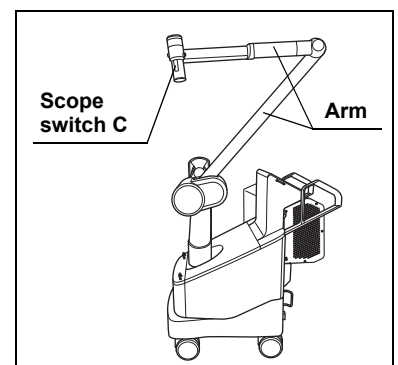


- 5 With the arm set in the unlocked condition by pushing in the scope switch C with a finger, flip open the switch cover, press the upper segment of the arm locking switch and confirm that the indicator above the switch lights orange and the arm is locked. After checking, press the lower segment of the arm locking switch and confirm that the indicator is extinguished and the arm is unlocked.

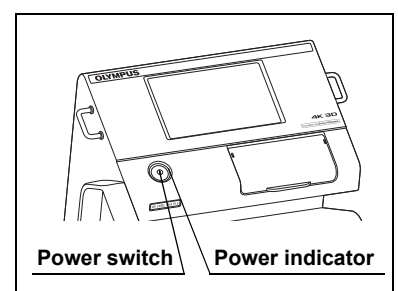


## 2.11 After inspection

- 1 Press the scope switch C and fold the arm in a compact form as shown in Figure.



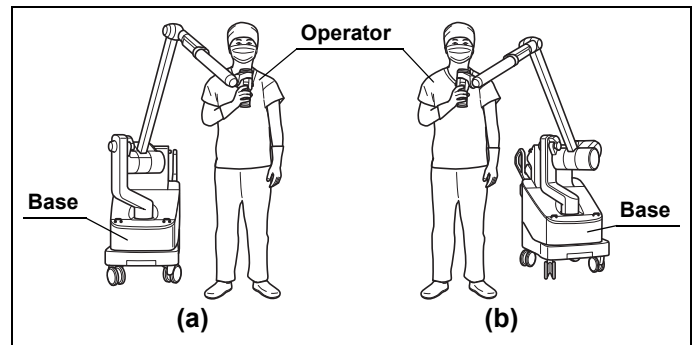
- 2 Press the power switch to turn this instrument OFF. Confirm that the power indicator is extinguished.



## 3 Operation

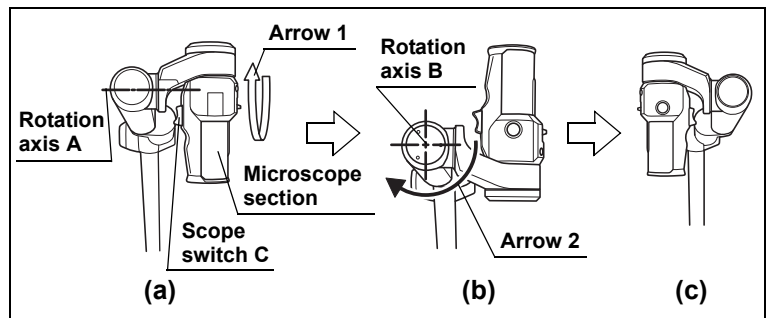
### 3.1 Orient the arm to the direction to be used

- 1 This instrument is designed to allow a wide range of arm positions by enabling “Installation of base on the right of operator (a)” and “Installation of base on the left of operator (b)”. Perform the following operation according to the desired positioning of the arm.



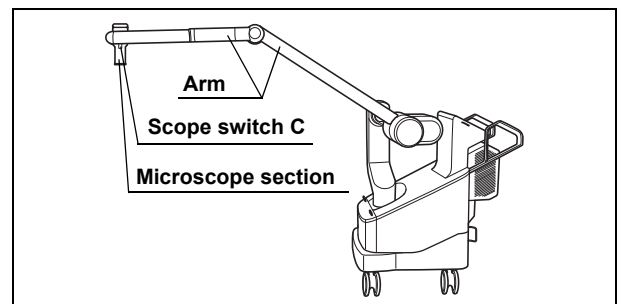
The following steps describe how to change the “Installation of base on the right of operator” to “Installation of base on the left of operator”. If you need the opposite work, reverse the left and right in the following steps.

- 2 Press the scope switch C on the microscope section and rotate the microscope section around rotation axis A shown in (a) by 180° toward the front (in the direction of arrow 1) to the positioning shown in (b). Then rotate the microscope section around rotation axis B in the direction of arrow 2 to change the arm positioning as shown in (c).

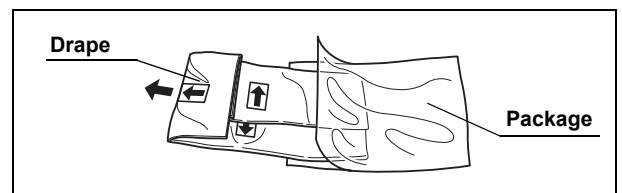


### 3.2 Attaching the drape

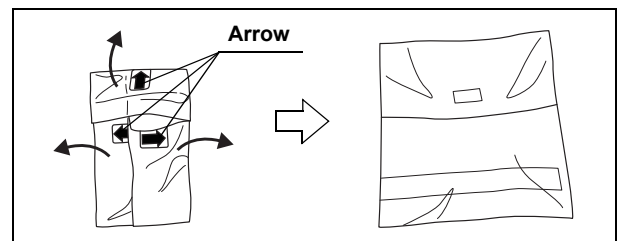
- 1 To facilitate attaching of the drape, press the scope switch C on the microscope section and extend the arm as shown in Figure.



- 2 Take out the drape from the package.

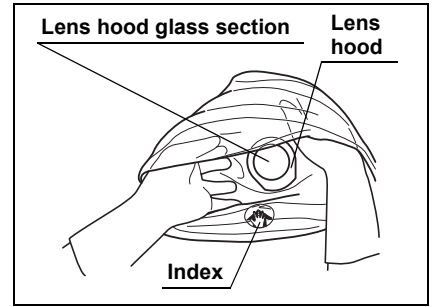


- 3 Open the drape in the direction of the arrow.

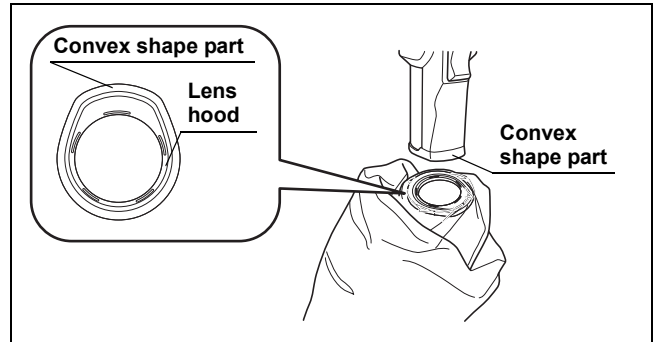


- 4 Check for adhesion of foreign matter to drape, wetting due to water, etc. If there is an abnormality, replace with new drape.

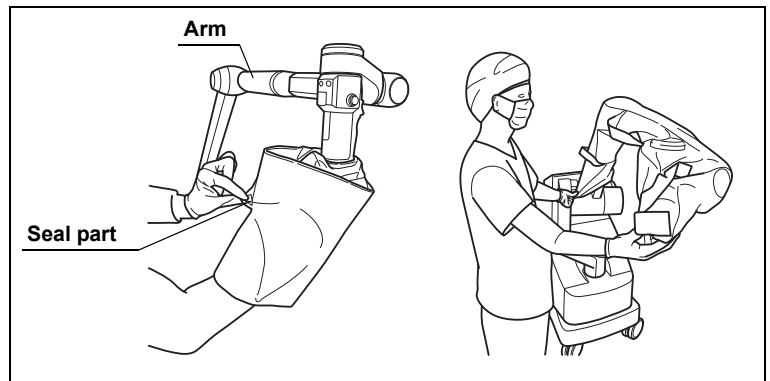
- 5 With the orientation of index visible, put your hands in the folded drape and hold the lens hood.



- 6 Align the convex shape part of the drape attaching bezel of the microscope section with the convex shape part of the lens hood and push firmly until the lens hood hits the drape attaching bezel.



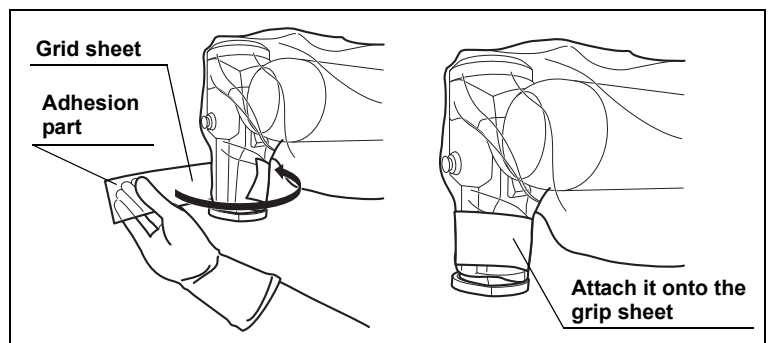
- 7 Hold the lens hood and pinch the seal part, spread the drape along the arm.



- 8 Push firmly until the lens hood hits the drape attaching bezel.



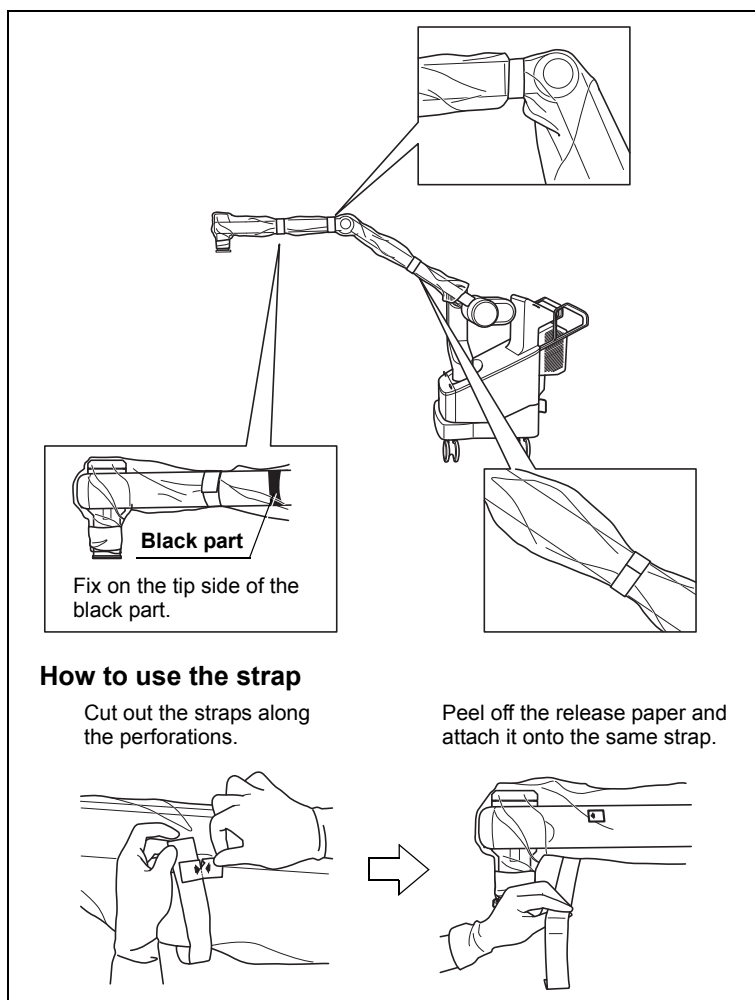
- 9 Wrap the grip sheet around the grip section of the microscope section and hold down the slack of the drape. Peel off the release paper at the end of the grip sheet and firmly press the attaching bezel and attach it onto the grip sheet.



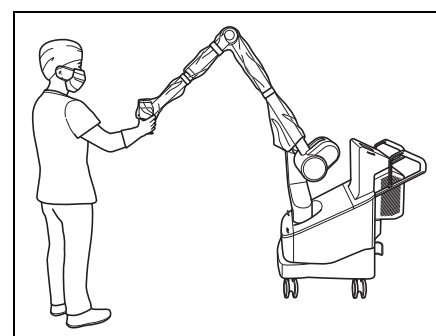
- 10 Operate the scope switch C of the microscope section and the custom switches 1 to 3, and confirm that each switch is not pushed and it can operate each switch without a feeling of getting caught. Feel uncomfortable with the operation of each switch, repeat from Step 9.



- 11** Fix the drape with 3 straps. Beginning from the position closer to the microscope section, attach 3 straps in the same way as above.



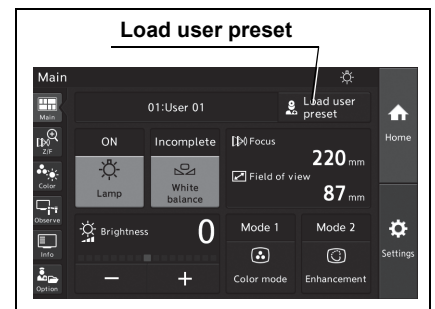
- 12** Press the scope switch C on the microscope section, move the arm, and confirm that its movement is not hindered. Adjust the swelling of the drape near the strap when the arm movement is not smooth or when the switch is unintentionally pushed by the drape. If it still does not resolve please remove the strap and repeat from Step 11.



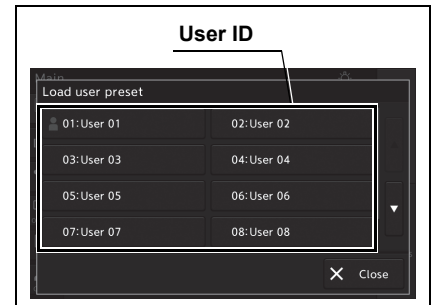
- 13** Check that there is no breakage or adhesion of foreign matter, wetting due to water, etc. If there is an abnormality, replace with new drape.
- 14** Check the image of observation monitor is no abnormality.

### 3.3 Loading the user preset

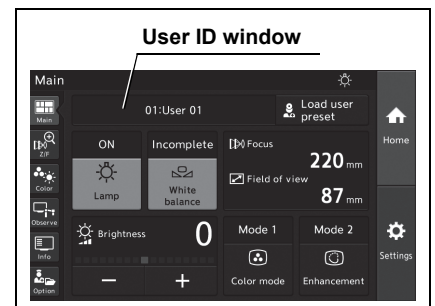
1 Tap the “Load user preset” button.



2 Tap the user ID button to be set.



3 The selected setting will appear on the user ID window on the touch panel.

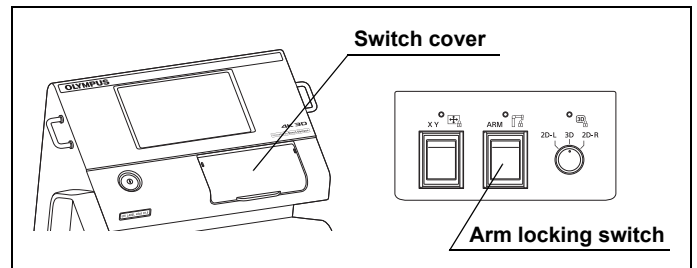


## 4 Remedial actions in case of emergency

As the measures to be taken until the spare equipment is available, this instrument provides the following remedial actions.

### ■ In case the arm cannot be locked

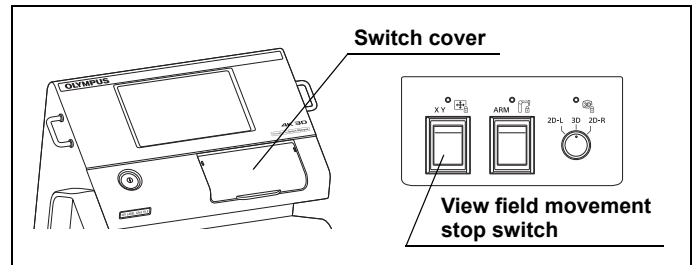
- 1 Flip open the switch cover of this instrument and press the arm locking switch to lock the arm.



- 2 When the view field movement stop switch is pressed, movement of the microscope section by pressing the scope switch C may become heavy.

### ■ In case movement by joystick control cannot be stopped

- 1 Flip open the switch cover of this instrument and press the view field movement stop switch to stop the joystick operation.



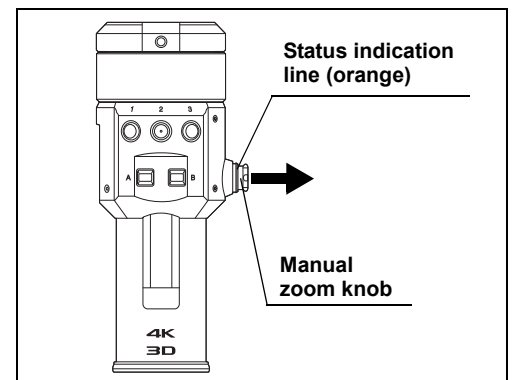
- 2 Press the scope switch C and move the microscope section.

### ■ In case focus does not work

Press the scope switch C and move the microscope section to focus on the observed region.

### ■ In case zoom does not work

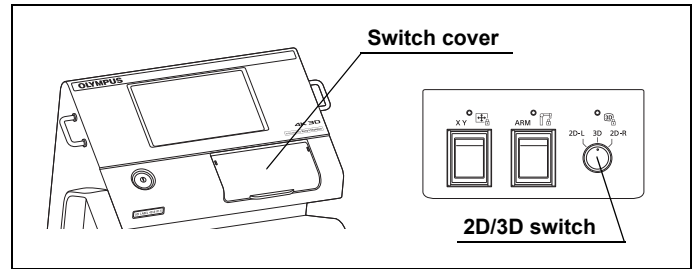
- 1 Pull out the manual zoom knob and confirm that the status indication line (orange) is visible. A message is displayed on the observation monitor indicating that the manual zoom knob has been pulled out.
- 2 Turn the manual zoom knob to control zoom.



■ In case of image irregularity

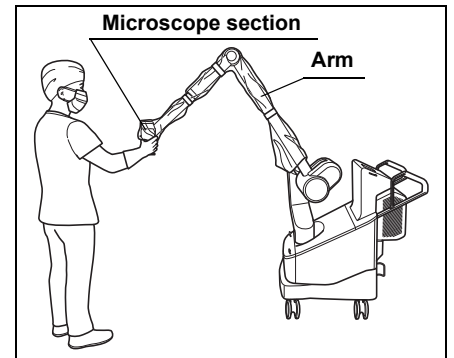
○ Switching to 2D image

Open the switch cover and turn the 2D/3D switch to the left or right, and switch the image of the observation monitor to the 2D image.

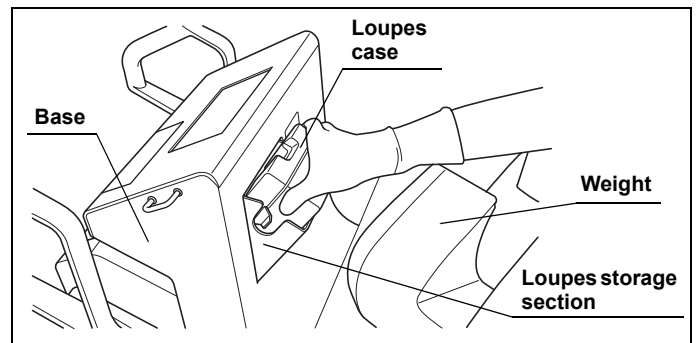


○ Using the loupes

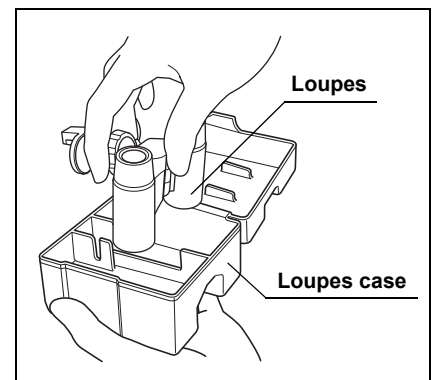
1 Move the arm so that the microscope section escapes from above the patient.



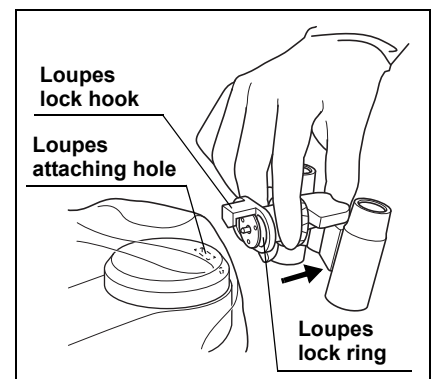
2 Open the loupes storage section of the base and take out the loupes case.



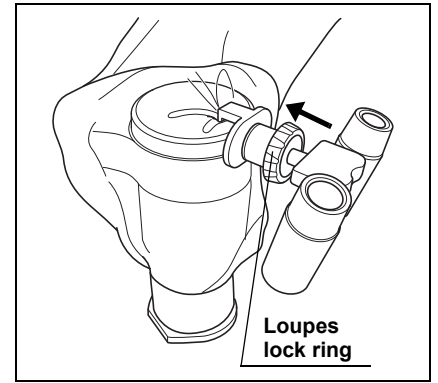
3 Take the loupes out of the loupes case.



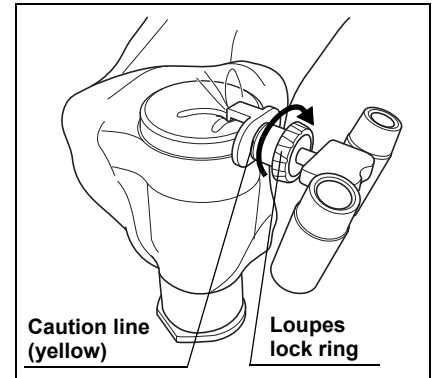
4 While pulling the loupes lock ring in the direction of the arrow, insert the loupes lock hook from above the drape into the loupes attaching hole on the top of the microscope section.



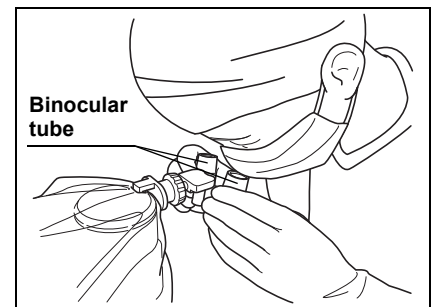
- 5 Return slowly the loupes lock ring in the direction of the arrow and confirm that the loupes do not come off the microscope section.



- 6 Turn the loupes lock ring clockwise to secure the loupes on the microscope section. Confirm that the caution line (yellow) is invisible.



- 7 Hold the loupes, adjust the width to facilitate observation with both eyes.



## OME-V200 Inspection Check List (Copy and use)

OME-V200 Serial No. (S/N)	/	/	/	/	/	/	/	/	/	/
Date	:	:	:	:	:	:	:	:	:	:
Time	:	:	:	:	:	:	:	:	:	:
Inspector										
Inspection of the brake										
Inspection of the caution line (yellow)										
Connection of cables										
Inspection of the power ON										
Inspection of the illumination light										
Inspection of the observation monitor										
Inspection of the image										
Inspection of the focus/zoom functions										
Inspection of the motorized field movement										
Inspection of the arm locking/unlocking										
After inspection (Store and Power OFF)										

If any irregularity is suspected during the inspection or maintenance, please take proper measures by referring to Instruction manual, the Chapter 10, "Troubleshooting".  
 If the problem still persists, never use this instrument and please contact Olympus.