

INSTRUCTIONS

U-AW

MOTORIZED ATTENUATOR WHEEL

To ensure the safety, obtain optimum performance and to familiarize yourself fully with the use of this product, we recommend that you study this manual thoroughly before operating this product, and always keep this manual reachable when operating this product.

Optical Microscope Accessory

This product is a part of the system product which complies with the CE marking.
Please refer to the instruction manual of your system product for the safety instructions related to the CE marking.



In accordance with European Directive on Waste Electrical and Electronic Equipment, this symbol indicates that the product must not be disposed of as unsorted municipal waste, but should be collected separately.

Refer to your local distributor in EU for return and/or collection systems available in your country.

For Korea only

A급 기기 (업무용 방송통신기자재)

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IMPORTANT

The motorized attenuator wheel can be installed in either a reflected light or transmitted light illumination system. It can adjust the illumination brightness in six steps (transmittances: 100%, 25%, 12.5%, 6%, 1.5% and 0%) with motorized operation.

If the device is used in a manner not specified by this manual, the safety of the user may be imperiled. In addition, the device may also be damaged. Always use the device as outlined in this instruction manual.

The following symbols are used to set off text in this instruction manual.

CAUTION : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or damage to the equipment or other property. It may also be used to alert against unsafe practices.

© : Indicates commentary (for ease of operation and maintenance).

SAFETY PRECAUTIONS

1. Before connecting the motorized attenuator wheel, be sure to set the main switch of the control box (BX3-CBH, U-CBM, IX3-CBH, IX3-CBM) to "O" (OFF) or unplug its power cord.
2. Be careful not to insert your finger or let a foreign object enter inside the area in which the motorized attenuator wheel is installed.
3. If this product is used in combination with laser products classified above CLASS 1, this instruction manual is not effective. Follow the instruction manuals of the laser products.

Safety Symbols

The following symbols are found on the microscope. Study the meaning of the symbols and always use the equipment in the safest possible manner.

Symbol	Explanation
	Indicates that the surface becomes hot, and should not be touched with bare hands.

Caution labels

Caution labels are placed at parts where special precaution is required when handling and using the system. Always pay attentions to the caution labels.

Positions of caution labels	<ul style="list-style-type: none"> • Motorized attenuator wheel (U-AW) <div style="text-align: right; padding-top: 5px;"> [Caution against high temperature] </div>
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If the caution label becomes dirty or is peeled off, contact us for replacement.

1

Handling Precautions

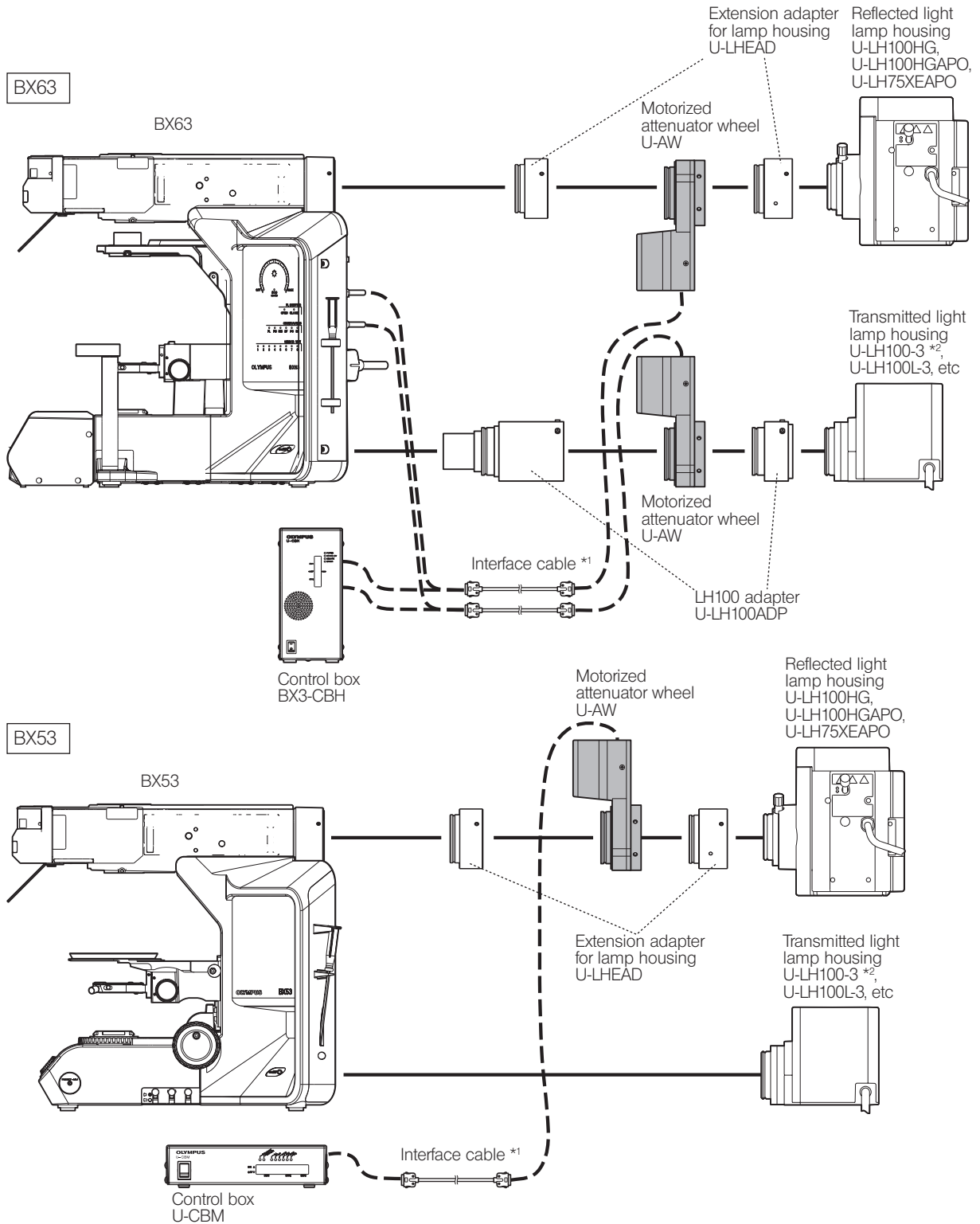
1. This device is a precision instrument. Handle it with care and avoid subjecting it to sudden or severe impact.
2. Do not disassemble this system. Doing so could cause failure of the system.
3. Do not use the system where it is subjected to direct sunlight, high temperature and humidity, dust or vibrations.
4. When this instrument is used, the image peripheries may be obscured when a high-power objective is used in superwidefield observation (FN 26.5).

2

Maintenance and Storage

1. Do not use organic solvents, which cause painted and plastic parts to deteriorate. Do not use organic solvents to clean device components other than the glass components. To clean them, use a lint-free, soft cloth slightly moistened with a diluted neutral detergent.
2. Before disposing of this product, be sure to follow the regulations and rules of your local government.

1 SYSTEM CHART

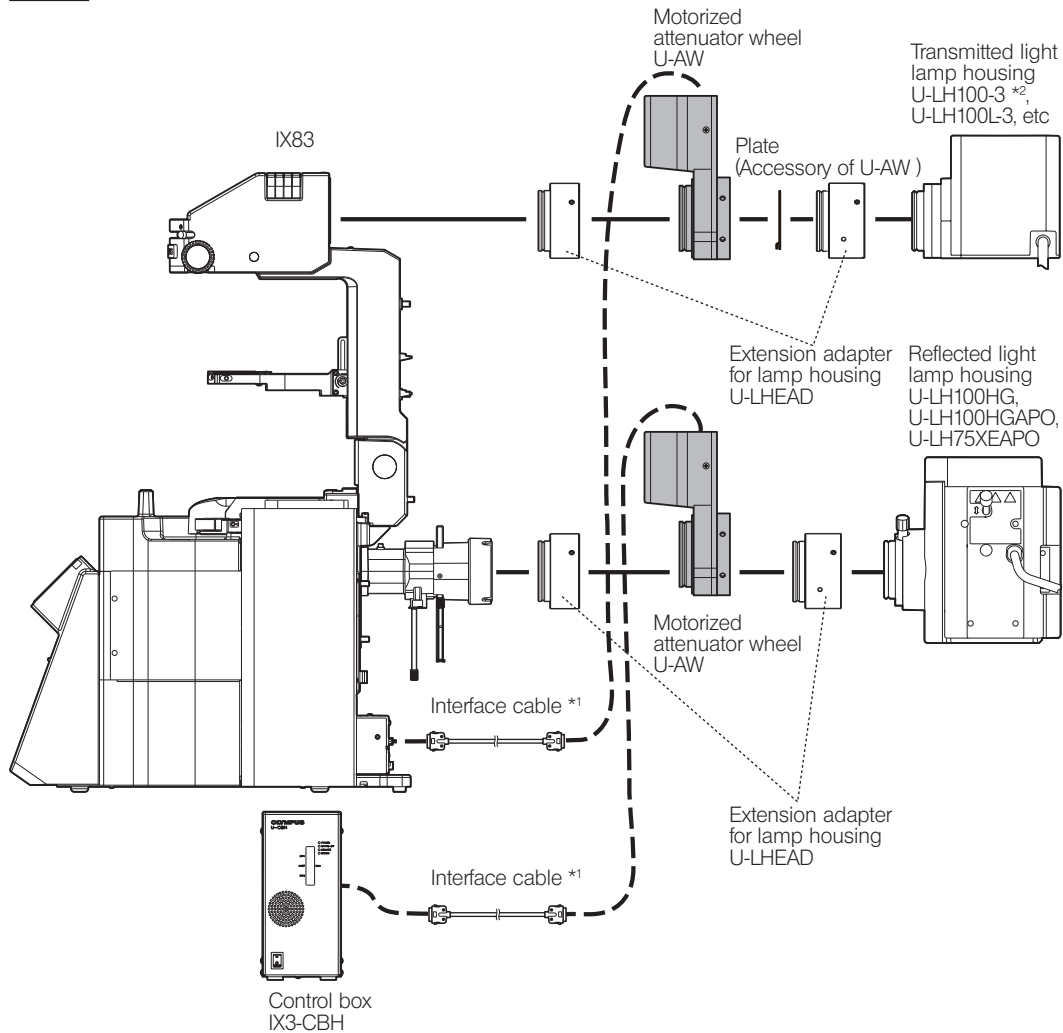


*1 The interface cable should be U-IFCBL15 (15 cm) or U-IFCBL200 (2 m) depending on the connected module.

*2 If the cable of the U-LH100-3 is too short, use the optional U-RMT extension cord.

CAUTION If the interface cable contacts the lamp housing or its surroundings, the cable may melt and cause an electric shock hazard. Distribute cables at enough distances from the lamp housing.

IX83



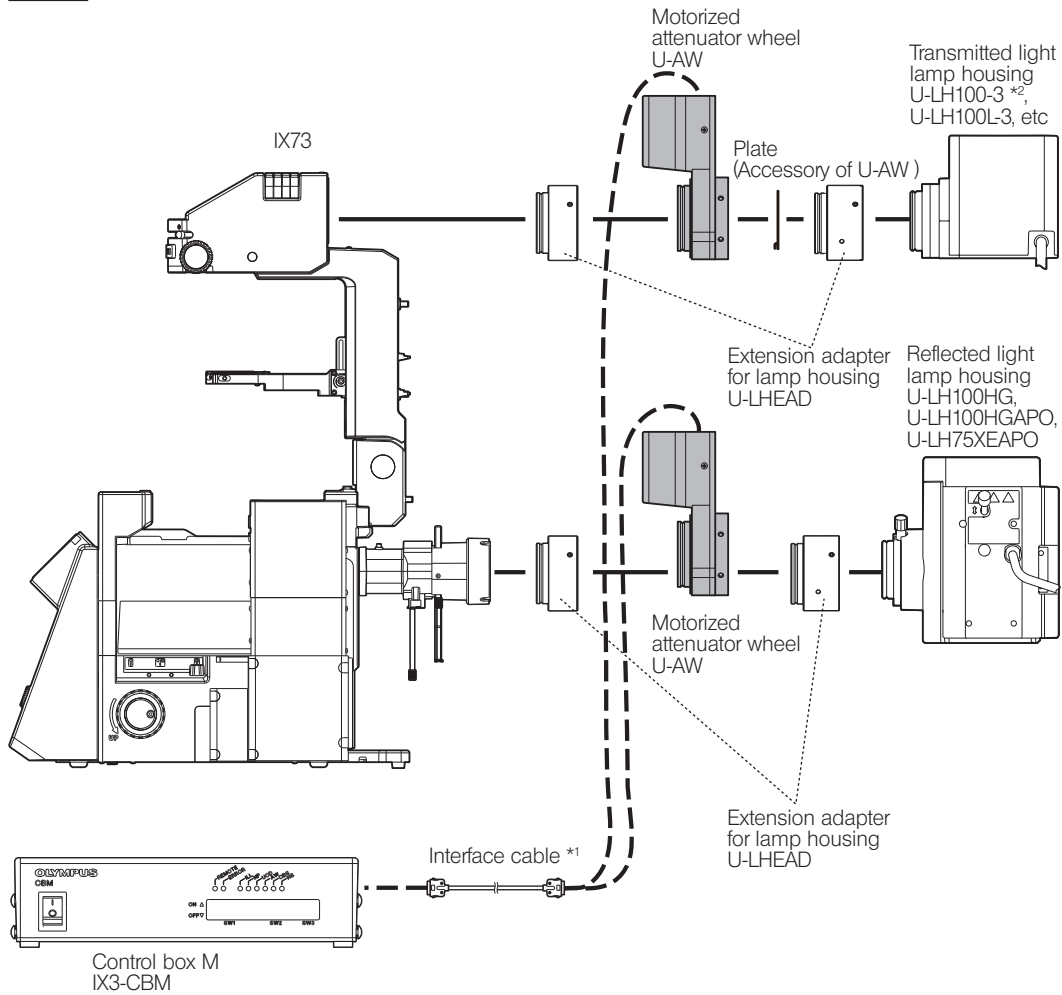
*1 The interface cable should be U-IFCBL100 (1 m).

*2 If the cable of the U-LH100-3 is too short, use the optional U-RMT extension cord.

CAUTION

If the interface cable contacts the lamp housing or its surroundings, the cable may melt and cause an electric shock hazard. Distribute cables at enough distances from the lamp housing.

IX73



*1 The interface cable should be U-IFCBL200 (2 m).

*2 If the cable of the U-LH100-3 is too short, use the optional U-RMT extension cord.

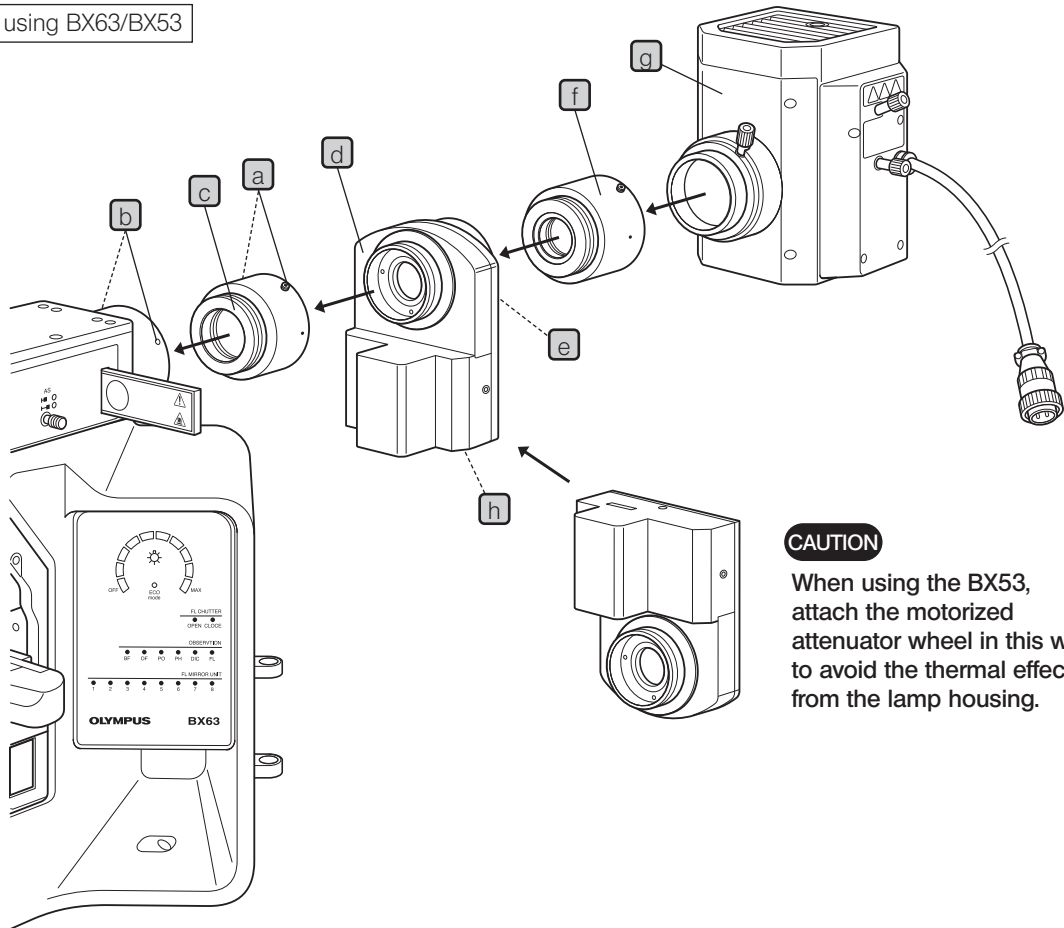
CAUTION If the interface cable contacts the lamp housing or its surroundings, the cable may melt and cause an electric shock hazard. Distribute cables at enough distances from the lamp housing.

2 ASSEMBLY

© The only tool required for the assembly is the Allen screwdriver provided with the microscope frame.

1 Installation in a Reflected Light Illumination System

When using BX63/BX53

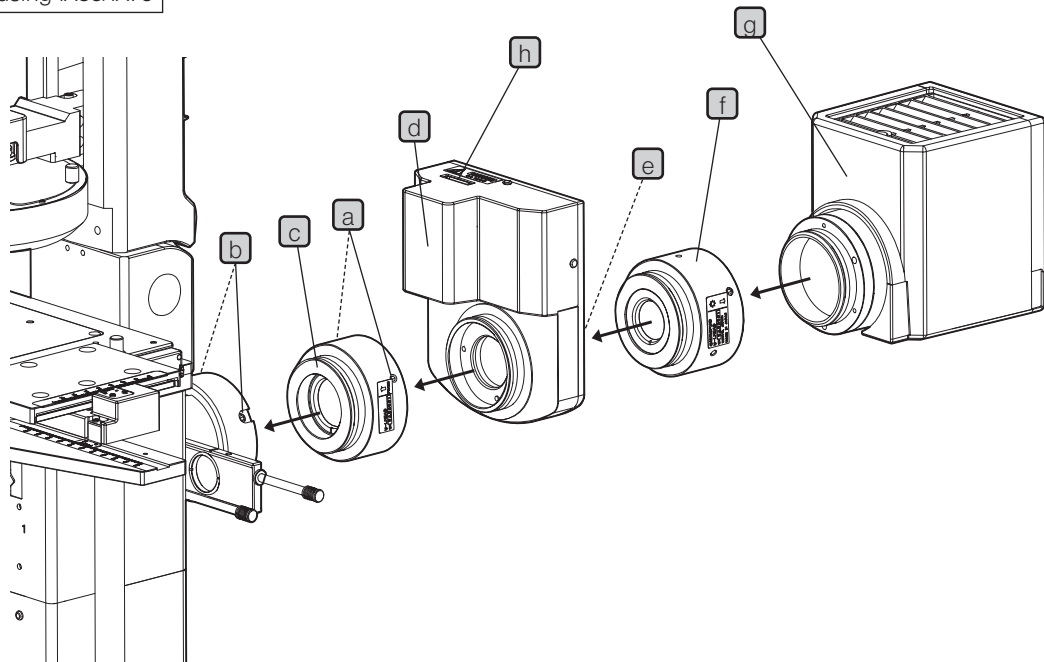



- 1 Loosen the U-HEAD clamping screws **a**, and separate the U-HEAD to 2 units: one for the frame and the other for the lamp housing. One for the frame displays [FRAME] and the other for the lamp housing displays [⚙️].
- 2 Loosen the lamp housing clamping screws **b** (2 pcs.) on the fluorescence illuminator sufficiently using the Allen screwdriver, fit the mount dovetail **c** of the U-HEAD (frame side) and tighten the clamping screws **b**.
- 3 Attach the U-AW **d** to the U-HEAD (frame side), and tighten the clamping screws **a**.
- 4 Loosen the clamping screws **e** (4 pcs.) of the U-AW, fit the U-HEAD (lamp housing side) **f** and tighten the clamping screws **e** (upper 2 pcs. only).
- 5 Attach the lamp housing **g** to the U-HEAD (lamp housing side) **f** in the same way as above.
- 6 Insert one end of the interface cable into the connector **h** and insert the other end into the BX63F microscope frame or control box (see "SYSTEM CHART").

CAUTION

When using the BX53, attach the motorized attenuator wheel in this way to avoid the thermal effect from the lamp housing.

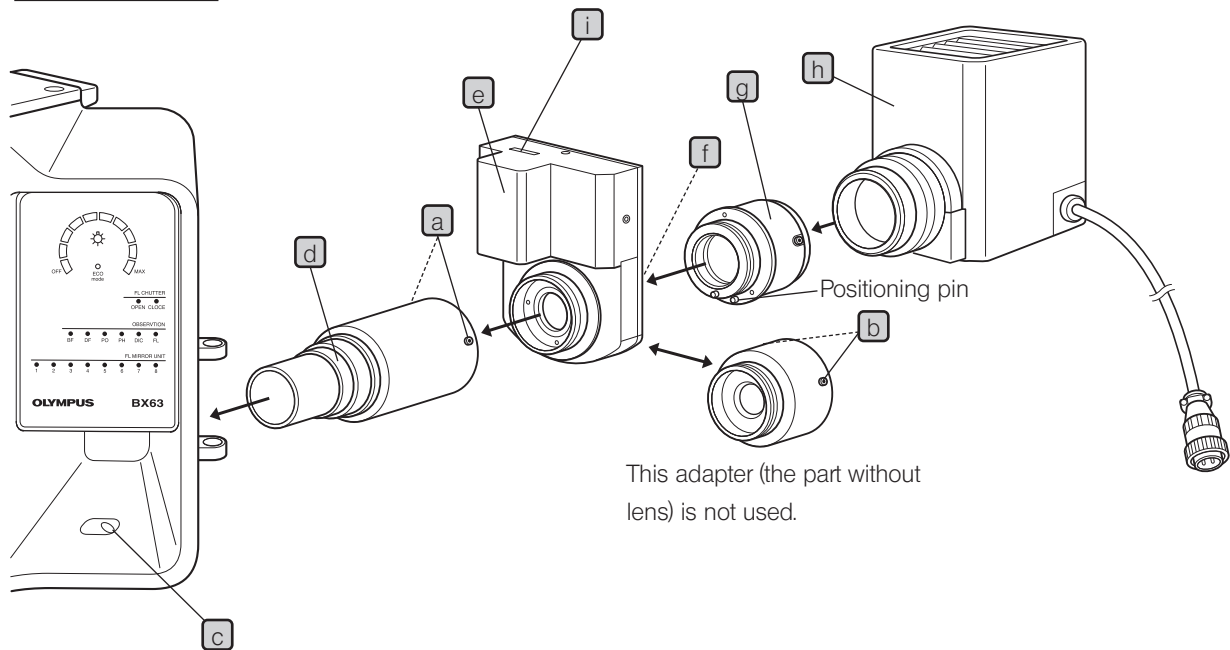
When using IX83/IX73



- 1** Loosen the U-LHEAD clamping screws **a**, and separate the U-LHEAD to 2 units: one for the frame and the other for the lamp housing. One for the frame displays [FRAME] and the other for the lamp housing displays [].
- 2** Loosen the lamp housing clamping screws **b** (2 pcs.) on the fluorescence illuminator sufficiently using the Allen screwdriver, fit the mount dovetail **c** of the U-LHEAD (frame side) and tighten the clamping screws **b**.
- 3** Attach the U-AW **d** to the U-LHEAD (frame side), and tighten the clamping screws **a**.
- 4** Loosen the clamping screws **e** (4 pcs.) of the U-AW, fit the U-LHEAD (lamp housing side) **f** and tighten the clamping screws **e** (upper 2 pcs. only).
- 5** Attach the lamp housing **g** to the U-LHEAD (lamp housing side) **f** in the same way as above.
- 6** Insert one end of the interface cable into the connector **h** and insert the other end into the control box IX3-CBH or control box IX3-CBM (see "SYSTEM CHART").

2 Installation in a Transmitted Light Illumination System

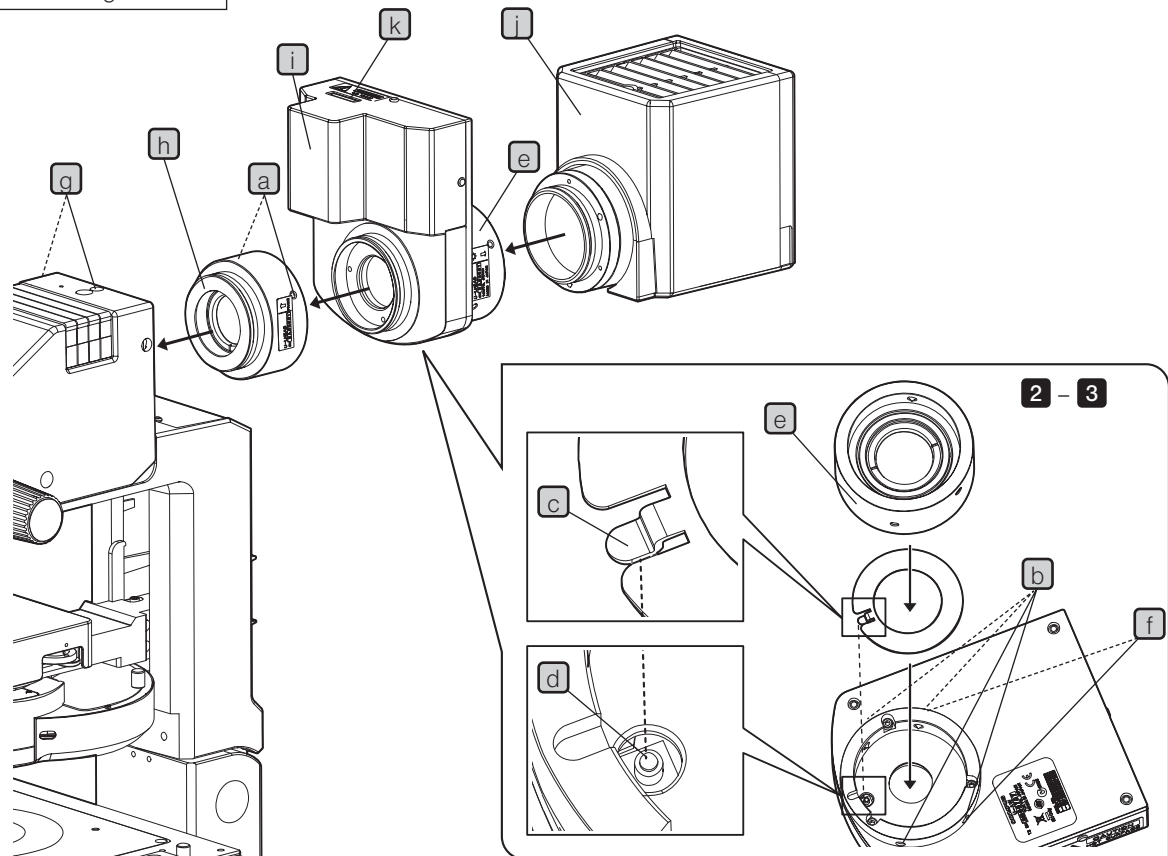
When using BX63



- 1 Loosen the U-LH100ADP clamping screws **a** and **b**, and separate the U-LH100ADP to 3 units: [Front], [Middle] and [Rear]. (The [Middle] unit is not used)
- 2 Loosen the lamp housing clamping screw **c** of the microscope frame using the Allen screwdriver, fit the mount dovetail **d** of the U-LH100ADP [Front] and tighten the clamping screw **c**.
- 3 Attach the U-AW **e** to the U-LH100ADP [Front] and tighten the clamping screws **a**.
- 4 Loosen the clamping screws **f** (4 pcs.) of the U-AW, fit the U-LH100ADP [Rear] **g** by aligning the positioning pin, and tighten the clamping screws **f** (upper 2 pcs. only).
- 5 Attach the lamp housing **h** to the U-LH100ADP [Rear] **g** in the same way as above.
- 6 Insert one end of the interface cable into the connector **i** and insert the other end into the BX63F microscope frame or control box (see "SYSTEM CHART").

CAUTION When U-AW is not mounted properly, U-AW may not be recognized in some cases. If it is not recognized, mount U-AW properly.

When using IX83/IX73



- 1 Loosen the U-LHEAD clamping screws **a**, and separate the U-LHEAD to 2 units: one for the frame and the other for the lamp housing. One for the frame displays [FRAME] and the other for the lamp housing displays [⚙️].
- 2 Loosen the lamp housing clamping screw **b** (4 pcs.) of the U-AW and insert the plate provided with U-AW into the adapter mounting area. Be sure to insert the plate by fitting its position so that the nail **c** of the plate enters in the dent **d** of the microswitch.
- 3 Insert the U-LHEAD (lamp housing side) **e** into the adapter mounting area of the U-AW, and tighten the clamping screw **f** (upper 2 pcs. only)
- 4 Loosen the illumination column clamping screws **g** (2 pcs.) using Allen screwdriver, insert the mount dovetail **h** of the U-LHEAD (frame side) into the illumination column, and tighten the clamping screws **g**.
- 5 Attach the U-AW **i** to the U-LHEAD (frame side), and tighten the clamping screws **a**.
- 6 Secure the lamp housing **i** to the U-LHEAD (lamp housing side) **e** in the same way as above.
- 7 Insert one end of the interface cable into the connector **k** and insert the other end into IX83P2ZF/IX83P1ZF or the control box IX3-CBM (see "SYSTEM CHART").

CAUTION When U-AW is not mounted properly, U-AW may not be recognized in some cases. If it is not recognized, mount U-AW properly.

3 OPERATION

The transmittance of the motorized attenuator wheel can be switched from the following modules.

System Using the Control Box BX3-CBH

- Touch-panel controller (provided with the BX63)
- Controller U-MCZ

System Using the Control Box U-CBM

- Hand switch U-HSCBM for CBM

System Using the Control Box IX3-CBH

- Touch-panel controller (provided with the IX83P1ZF or IX83P2ZF)
- Controller U-MCZ

System Using the Control Box M IX3-CBM

- Hand switch U-HSCBM for CBM

For detailed operating procedures, refer to the instruction manuals of the system modules.

This product is manufactured by **EVIDENT CORPORATION** effective as of Apr. 1, 2022.
Please contact our "Service Center" through the following website for any inquiries or issues related to this product.

EVIDENT CORPORATION

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(Life science solutions)

Service Center

<https://www.olympus-lifescience.com/support/service/>



(Life science solutions)

Our Website

<https://www.olympus-lifescience.com>



(Industrial solutions)

Service Center

<https://www.olympus-ims.com/service-and-support/service-centers/>



(Industrial solutions)

Our Website

<https://www.olympus-ims.com>

