

OLYMPUS®

U-5RES-ESD

U-D5BDRES-ESD

U-D7RES

BX3-RFAS

U-HSEXP

U-CBS

INSTRUCTIONS

CODED FUNCTION SYSTEM

This instruction manual is for the Olympus Coded Function System. To ensure the safety, obtain optimum performance and to familiarize yourself fully with the use of this system, we recommend that you study this manual and the manuals of units used in combination with this system thoroughly before operating the system.

Retain this instruction manual in an easily accessible place near the work desk for future reference.



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This device complies with the requirements of both directive 2004/108/EC concerning electromagnetic compatibility and directive 2006/95/EC concerning low voltage. The CE marking indicates compliance with the above directives.



In accordance with European Directive 2002/96/EC 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 Olympus distributor in EU for return and/or collection systems available in your country.

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* When using Industrial Microscope Frames such as BX41M-LED, BX51/51M, GX51/71 or STM6, refer to manual “U-5RES-ESD/U-D5BDRES-ESD” for detailed installation instructions.	
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IMPORTANT

This system enables to read coded information from the Coded Fluorescence Illuminator (BX3-RFAS) and the Coded Revolving Nosepiece (U-D7RES, U-5RES-ESD, U-D5BD5RES-ESD), and to transmit the information externally. To ensure the safety, refer to this manual and the manuals of units used in combination with this system thoroughly before operating the system.



SAFETY PRECAUTIONS

1. Before connecting the cables, make sure that the POWER switch of the U-CBS control box is set to OFF (out position).
2. For safety, always use the provided AC adapter to power the system.
3. Keep the cables away from the lamp housing and the surroundings. Otherwise, the cables may melt and cause an electric shock hazard.
4. Application of excessive force to the cables such as by pulling may cause damage. So never apply such force to the cables.

Safety Symbol

The following symbol is found on the system. Study the meaning of the symbol and always use the equipment in the safest possible manner.

Symbol	Explanation
	Indicates a non-specific general hazard. Follow the description given after this symbol or in instruction manual.
I	Indicates that the main switch is ON.
O	Indicates that the main switch is OFF.

1 Getting Ready

1. This system is composed of precision instruments. Handle it with care and connect cables gently to avoid subjecting it to sudden or severe impact. Besides, this system is not waterproof.
2. Do not use the system where it is subjected to direct sunlight, high temperature and humidity, dust or vibrations.
3. To avoid malfunction, never connect or disconnect a cable while the POWER switch of the control box is set to ON (depressed position). Otherwise, malfunction may result.
4. To avoid malfunction, never attempt to open, disassemble or modify any part of the system.
5. Before disposing of this product, be sure to follow the regulations and rules of your local government.

2 Caution

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

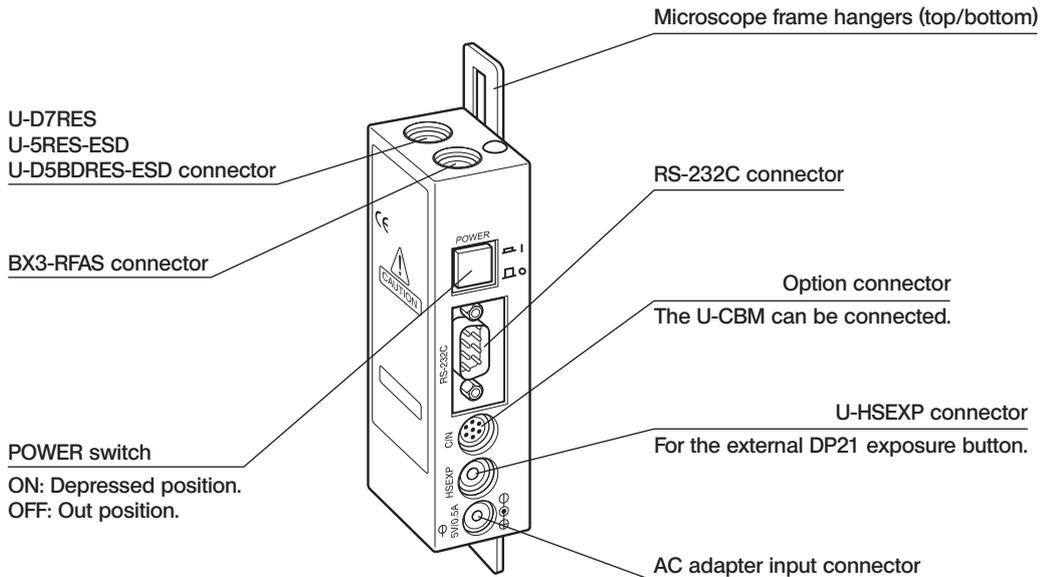
The following symbols are used to set off text in this instruction manual.

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).

1 CONNECTOR NOMENCLATURE

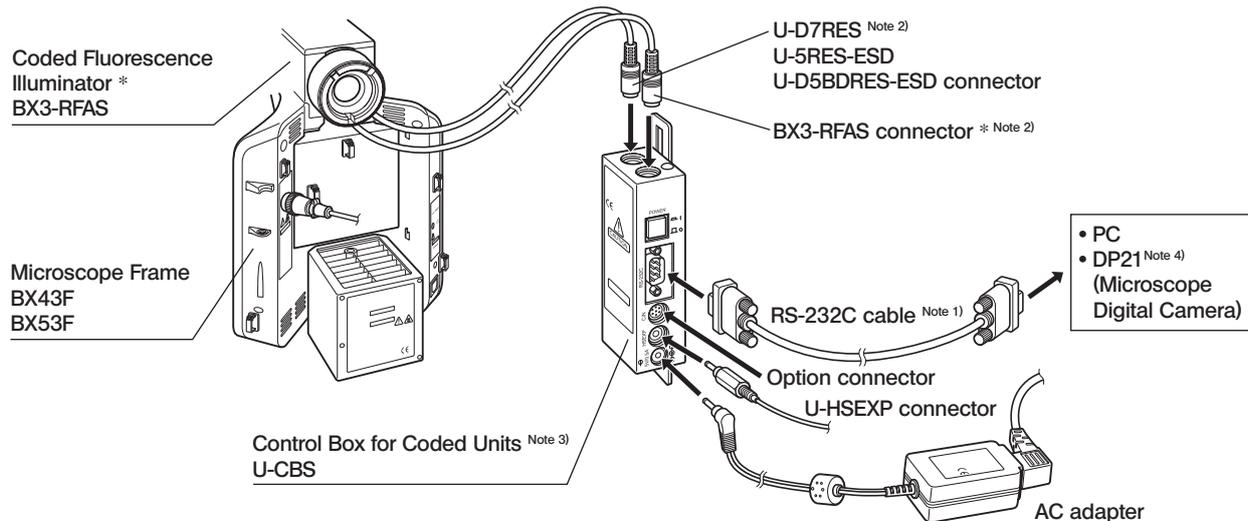
Control Box for Coded Function U-CBS



2 SYSTEM CHART

CAUTION

- Entrust the assembly and adjustments of the modules marked* to Olympus.
The connectors of the U-CBS are sealed with dust covers. Remove the dust covers only from the connectors you want to connect cables.
- Be sure to connect the module designated by Olympus to each connector. If a non-designated module is connected, the performance of the entire system cannot be guaranteed.
- Before connecting the cables, make sure that the POWER switch of the U-CBS control box is set to OFF (out position).
Hold each connector in the appropriate orientation and insert it all the way into the connector. If a connector is provided with clamping screws, be sure to tighten them.
- Do not insert a non-designated connector. Otherwise, the connector may be damaged.



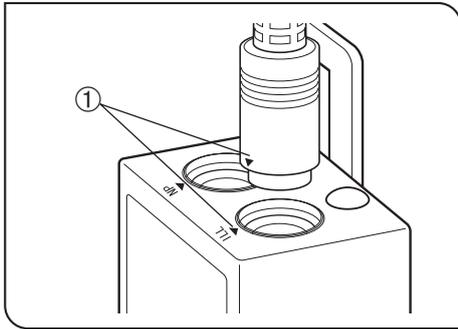


Fig. 1

Note 1)

RS-232C cable specifications

D-sub 9-pin (female) — D-sub 9-pin (female)

Note 2)

When connecting a cable to the BX3-RFAS, U-D7RES, U-5RES-ESD or U-D5BDRES-ESD connector, align the ▼ markings ① on the connectors of the cable and the U-CBS (Fig. 1).

Note 3)

Hang the U-CBS control box ② on the hangers ③ on the rear of the microscope frame (Fig. 2).

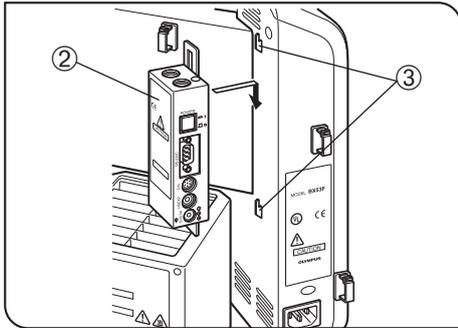


Fig. 2

Ⓞ When using coded revolving nosepiece (U-5RES-ESD, U-D5BDRES-ESD), place U-CBS on the table. Refer to manual of coded revolving nosepiece.

Note 4)

When this system is used with the DP21 microscope digital camera, set the power switches to ON in the order of: ① U-CBS and ② DP21-CB. Otherwise, the DP21 will not recognize the U-CBS. Also if the U-D7RES, U-5RES-ESD or U-D5BDRES-ESD are not connected to the U-CBS, the DP21 will not recognize it either. So be careful.

3 *CABLE DISTRIBUTIONS*

©The cables can be laid properly by attaching the cable holders provided with each module on the rear panel of the microscope frame.

U-CBS control box x6

U-D7RES coded revolving nosepiece x2

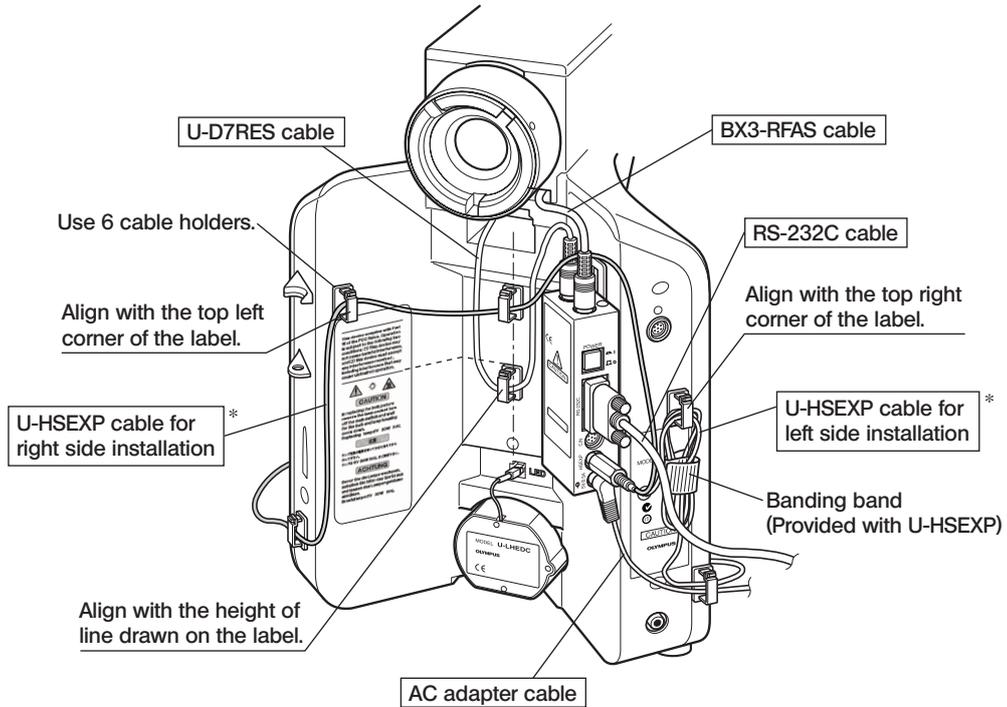
U-5RES-ESD coded revolving nosepiece x4

U-D5BDRES-ESD coded revolving nosepiece x4

U-LS30AD adapter x1

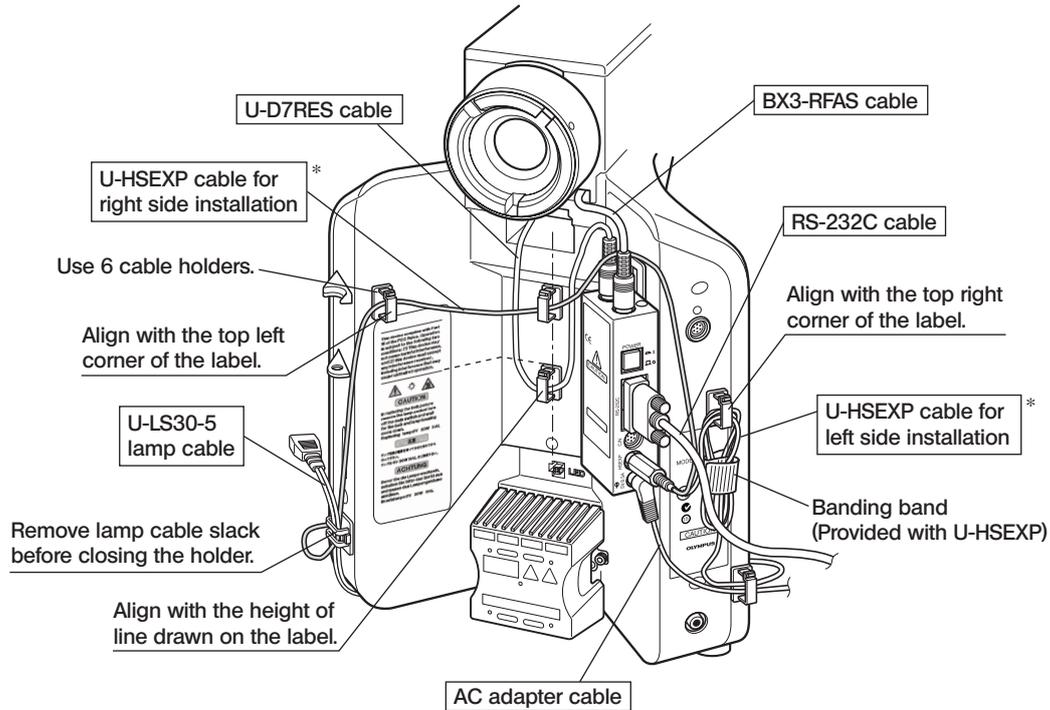
- In the subsequent pages, the positions for attaching the cable holders and the method of cable distribution will be described for each microscope system.
- The number of the cable holders used vary depending on the modules used in the system.
- If the cable holders are attached in widely deviated positions, the cable may become unable to reach the connector. Be sure to attach the cable holders while confirming that their positions allow the cable to reach the connector
- Be sure to remove cable slacks before closing the cable holders.

1 BX43 (System with LED Lamp Housing U-LHLEDC)



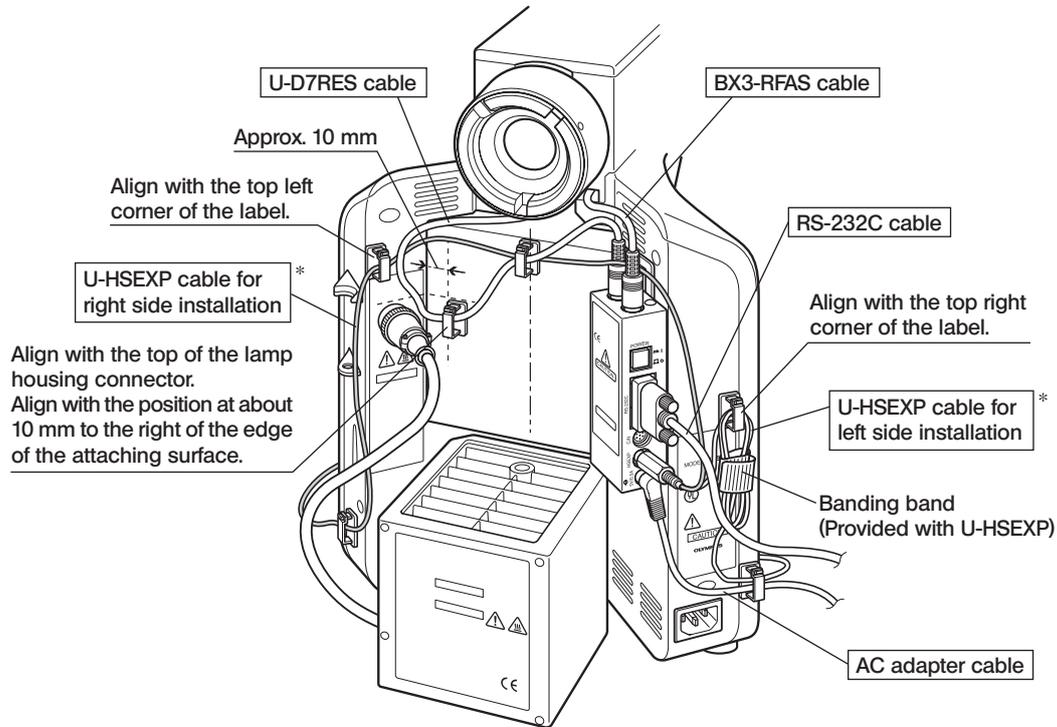
* Only either cable should be used.

2 BX43 (System with Halogen Lamp Socket U-LSADP + U-LS30-5)



* Only either cable should be used.

3 BX53 System



* Only either cable should be used.

4 *READOUT/EXTERNAL TRANSMISSION OF CODED INFORMATION*

© This system makes it possible to acquire the information on the objective positions of the coded revolving nosepiece (U-D7RES, U-5RES-ESD, U-D5BDRES-ESD) and that on the mirror unit positions of the coded fluorescence illuminator (BX3-RFAS).

The acquired information can be transmitted to the DP21 microscope digital camera or PC through the RS-232C cable.

- This system enables the functions interlocked with the objective and mirror unit in use (except for the DP21), such as increase in the exposure time control speed, addition of magnification information to the shot images and automatic scale change according to objective.
- It also enables automatic switching of the motorized illuminator and motorized condenser according to the objective selection of a manual revolving nosepiece (the U-CBM control box is required for this operation).
- When the U-HSEXP hand switch is connected, the EXPOSE button of the DP21 can be controlled at the focused position (see next page).

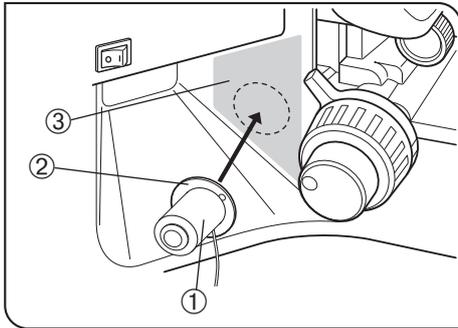


Fig. 3

Attaching the U-HSEXP (Fig. 3)

Ⓞ The U-HSEXP is composed of the U-HSEXP switch (fixed by magnet) and circular iron plates (adhesive). Two circular plates are provided, with one of them intended for use as the spare.

1. Attach the switch ① on the center of the circular plate ② by means of magnet.

Do not remove the backing sheet of the circular plate until the final fixing position is decided.

2. Decide the final fixing position that is most convenient for controlling the switch from the area ③ (indicated by in the figure) near the coarse adjustment knob on the left or right.

3. Clean the final fixing position with absolute alcohol, remove the backing sheet from the round plate and apply it securely on the final fixing position.

CAUTION

If there is an article with magnetic field near the U-HSEXP, equipment failure or malfunction may result. So do not let such an article as listed below come close to the U-HSEXP.

- PC
- Mobile phone
- Clock/watch
- Credit card
- Bank card
- Floppy disk, etc.

Ⓞ Unless the coded revolving nosepiece (U-D7RES, U-5RES-ESD, U-D5BDRES-ESD) is connected to the U-CBS, the U-HSEXP does not function. So be careful.

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