

Panasonic

Operating Instructions INTERCHANGEABLE LENS FOR DIGITAL CAMERA

Manuel d'utilisation OBJETIF INTERCHANGEABLE POUR APPAREIL PHOTO NUMERIQUE

Bedienungsanleitung WECHSELOBJEKTIV FÜR DIGITAL-KAMERA

Instrucciones de funcionamiento ÓPTICA INTERCAMBIABLE PARA CÁMARA DIGITAL

Istruzioni per l'uso LENTI INTERCAMBIABILI PER FOTOCAMERA DIGITALE

使用説明書 數位相機用可替換鏡頭

C Names and Functions of Components

- 1 Lens surface
- 2 Focus ring
- 3 MF switch
Switches between AF (Auto Focus) and MF (Manual Focus).
When the digital camera is set to MF, the operation will be MF irrespective of the setting on the AF/MF switch.
- 4 Focusing distance range selector switch
You can select the focusing distance range for AF.
[FULL]: 0.254 m (0.869 feet) to ∞
[0.5m-1]: 0.5 m (1.64 feet) to ∞
[0.20-0.5m]: 0.204 m (0.669 ft) to 0.5 m (1.64 feet)
The focusing speed of AF increases when you limit the focusing distance range for AF.
- 5 Contact points
- 6 Lens mount rubber
- 7 Lens fitting mark

Note

- While shooting video, in some situations, AF operation of the lens may be heard. In such situations changing to MF will improve this situation.

D Attaching the Lens

- For information on how to attach the lens, refer to the operating instructions for your digital camera.
- Attach the lens after turning off the digital camera.
- Attach the lens after removing the lens rear cap. (See Illustration 1.)
- After removing the lens from the digital camera, be sure to attach the lens rear cap to prevent dust and other particles from accumulating on or entering the lens.

Attaching the lens hood (See illustration 2)

- 1 Align mark (□) on the lens hood with the mark on the top of the lens.
- 2 Rotate the lens hood in the direction of the arrow to align mark (□) on the lens hood with the mark on the top of the lens.
- 3 Removing the lens hood (See illustration 3)

Note

- When carrying, the lens hood can be attached in the reverse direction. (See illustration 4.)
- Align mark (□) on the lens hood with the mark on the top of the lens.
- It is recommended to remove the lens hood during flash photography as the lens hood can block the light from the flash.
- Do not prevent dropping of lens. You should never carry the lens by just holding the lens hood.
- It is possible to attach the lens cap or the lens hood with the filter already attached.
- There may be some vignetting in recorded images if multiple filters are attached simultaneously.
- It is not possible to attach an external lens other than filters such as a conversion lens or adaptor to the front of the lens and use in combination with this lens. Lens damage may result if such items are attached.

About Macro Recording

- The lens is designed to allow you to focus anywhere from the macro range (close-up distance) to infinity. For this reason, its focus lens moves a greater distance than a normal one, often causing auto focus operation to take longer. Please also note that the size of the area that can be brought into focus becomes much smaller in the macro range.
- When you have trouble bringing close-up subjects into focus, use a tripod or check the digital camera's focus settings.
- We recommend that you take pictures with either of the following settings when using a Panasonic digital camera:
- Use manual focus (MF) to focus.
- For details, refer to the operating instructions for the digital camera.

Notes on filter use

- The difference between the normal F value (aperture value displayed on the camera) and the effective F value (actual aperture value) will be greater when taking pictures using the macro function, which allows you to take pictures of close-up subjects extremely close. When using commercially available stand-alone exposure meter, it is necessary to correct the value displayed on the magnification and distance from the subject. Refer to following table for the exposure correction (exposure factor).
- It is not necessary to correct the difference between the normal F value and the effective F value with the automatic exposure of the camera, since it will determine the exposure by measuring the light passing through the lens.

Guide for exposure correction when using a stand-alone exposure meter

① 1/m	1/8.2	1/5.8	1/4.8	1/3.4	1/1.7	1/1.3	1/1.0
②	×	0.88	0.46	0.33	0.26	0.21	0.204 m
F2.8	F2.8	F3.2	F3.5	F4.0	F4.5	F5.0	F5.6
③	+	+1/3	+1/3	+	+1/3	+1/3	+2
④	Magnification	⑤ Effective value	⑥ Exposure factor	⑦ Effective value	⑧ Exposure factor	⑨ Effective value	⑩ Exposure factor
① Distance is the actual distance between the recording plane (□) marked on the body of the digital camera to the subject.	② Magnification	③ Effective value	④ Exposure factor	⑤ Effective value	⑥ Exposure factor	⑦ Effective value	⑧ Exposure factor
⑨ Distance is the actual distance between the recording plane (□) marked on the body of the digital camera to the subject.	⑩ Magnification	⑪ Effective value	⑫ Exposure factor	⑬ Effective value	⑭ Exposure factor	⑮ Effective value	⑯ Exposure factor

Dust and splash resistant

- Do not use the lens in places where dust or sand is blowing, or in places where there is a lot of dust or sand.
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Cautions for Use

- Do not spray the lens with insecticides or volatile chemicals.
If such substances get onto the lens they may damage the exterior case or cause the paint to peel.
- Do not point the lens at the sun or other strong light sources.
Do not use the lens to collect an excessive amount of light, resulting in fire and malfunction.
- Do not use while directly touching the lens at low temperatures for a long period of time.
If cold places (environments below 0 °C (32 °F), such as ski slopes), prolonged direct contact with the lens may cause skin injury. Use gloves or similar when using the lens for long periods.
- When cleaning, wipe lightly using a soft dry cloth that does not produce dust.
Do not use solvents such as benzene, thinners, alcohol, kitchen cleansers, etc., as this can cause problems such as deformation of the casing or peeling of the coating.
Do not use wet products made of rubber, PVC or similar materials in contact with the lens for a long period of time.
When the lens is not going to be used for a prolonged period, we recommend storing with a desiccant (silica gel).
Check at the parts before recording when you have not used the lens for a long period of time.
Avoid using or storing the lens in any of the following locations as this may cause problems in operation or malfunctioning:
- In direct sunlight or on a beach in summer
- In locations with high temperatures and humidity levels or severe changes in temperature and humidity
- In sandy or dusty locations
- Where there is fire
- Near heaters, air conditioners or humidifiers
- Where water may make the lens wet
- Where there is vibration
- Refer also to the operating instructions for the digital camera.

Troubleshooting

- A rattling sound, etc. is heard when the digital camera is turned on or off or the lens is shaken.
- This is a true sound of the internal lenses moving or the aperture operating. It is not a malfunction.

Specifications

- The specifications are subject to change for performance enhancement.

INTERCHANGEABLE LENS FOR DIGITAL CAMERA

LUMIX S 10mm F2.8 MACRO*

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