

Panasonic H-X09

Panasonic LUMIX Leica DG SUMMILUX 9mm F1.7 ASPH Lens

Model: H-X09

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1. INTRODUCTION

This manual provides instructions for the Panasonic LUMIX Leica DG SUMMILUX 9mm F1.7 ASPH lens (Model H-X09). This ultra-wide-angle prime lens is designed for Micro Four Thirds cameras, offering a large F1.7 aperture for excellent low-light performance and shallow depth of field. It is suitable for both still photography and video recording, featuring advanced optical design and robust construction.



Figure 1: Panasonic LUMIX Leica DG SUMMILUX 9mm F1.7 ASPH Lens (Model H-X09).

2. SETUP

2.1 Attaching the Lens

1. Ensure both the camera and the lens are powered off.
2. Remove the rear lens cap from the lens and the body cap from the camera.
3. Align the mounting index (red dot) on the lens with the mounting index on the camera body.
4. Insert the lens into the camera's lens mount and turn it clockwise until it clicks into place. Do not force the lens.



Figure 2: The H-X09 lens mounted on a Micro Four Thirds camera body.

2.2 Detaching the Lens

1. Ensure the camera is powered off.
2. While pressing the lens release button on the camera body, turn the lens counter-clockwise until it stops.
3. Carefully remove the lens from the camera body.
4. Attach the rear lens cap to the lens and the body cap to the camera to protect the sensors and optics.

2.3 Attaching the Lens Hood

The lens hood helps to block unwanted light and protect the front element of the lens. Align the lens hood with the front of the lens and turn it until it locks into place. Ensure it is securely attached.

3. OPERATION

3.1 Focusing

The H-X09 lens supports both autofocus (AF) and manual focus (MF). The focus mode is typically controlled via your camera body settings.

- **Autofocus:** The lens is designed for smooth, silent operation with the camera's high-speed, high-precision contrast AF system.
- **Manual Focus:** For precise control, switch your camera to manual focus mode. The focus ring on the lens allows for direct adjustment. For non-linear settings, focus shifts variably with rotation speed. For linear settings, focus shifts with a designated amount per rotational quantum.



Figure 3: Side view of the H-X09 lens, highlighting the focus ring and markings.

3.2 Aperture Control

The lens features a large F1.7 maximum aperture, allowing for excellent performance in low-light conditions and the creation of beautiful bokeh (background blur). Aperture control is managed through your camera body. The 7-blade circular aperture diaphragm contributes to smooth, pleasing out-of-focus areas.

3.3 Video Recording Performance

This lens excels in video recording with features designed to enhance video quality:

- **Minimal Focus Breathing:** A mechanism suppresses focus breathing, ensuring stable framing when adjusting focus during video capture.
- **Smooth Aperture Control:** Micro-step aperture control allows for seamless exposure changes, preventing abrupt shifts in brightness during recording.

3.4 Understanding Focal Length

The H-X09 is a 9mm prime lens. On a Micro Four Thirds system, this provides an equivalent focal length of 18mm in 35mm format, making it an ultra-wide-angle lens. This is ideal for landscapes, architecture, street photography, and vlogging where a wide field of view is desired.

4. MAINTENANCE

4.1 Cleaning the Lens

- Use a lens blower brush to remove dust and loose particles from the lens surface.
- For smudges or fingerprints, use a clean, soft microfiber cloth specifically designed for optics, along with a small amount of lens cleaning solution. Apply the solution to the cloth, not directly to the lens.
- Wipe gently in a circular motion from the center outwards.
- Avoid touching the lens surface with your fingers.

4.2 Dust/Splash-Resistant Design

The LEICA DG SUMMILUX 9mm F1.7 features a rugged dust/splash-resistant design, allowing for use in challenging conditions, including temperatures down to -10 degrees Celsius. However, *dust and splash resistance does not guarantee that damage will not occur if this lens is subjected to direct contact with dust and water.* Always exercise caution when using the lens in adverse weather conditions.



Figure 4: Illustration of the lens's dust, splash, and freeze-resistant construction.

4.3 Storage

When not in use, store the lens with both front and rear caps attached in a dry, cool place away from direct sunlight and extreme temperatures. Consider using a dehumidifying cabinet if you live in a humid environment.

5. TROUBLESHOOTING

Problem	Possible Cause	Solution
Lens not recognized by camera.	Improperly mounted lens, dirty electrical contacts.	Ensure the lens is securely attached. Clean the electrical contacts on both the lens and camera with a clean, dry cloth.
Autofocus is slow or inaccurate.	Low light conditions, subject lacks contrast, camera settings.	Ensure adequate lighting. Focus on areas with clear contrast. Check camera's AF mode and settings.
Images are blurry.	Incorrect focus, camera shake, dirty lens element.	Verify focus. Use a faster shutter speed or tripod to prevent camera shake. Clean the lens elements.
Lens hood does not attach securely.	Misalignment, debris in mounting groove.	Ensure correct alignment. Check for and remove any debris from the mounting groove.

6. SPECIFICATIONS

Feature	Detail
Brand	Panasonic
Model Name	H-X09
Focal Length	9mm (18mm equivalent on 35mm format)
Maximum Aperture	F1.7

Feature	Detail
Minimum Aperture	F16
Lens Type	Wide Angle Prime Lens
Compatible Mountings	Micro Four Thirds
Lens Construction	12 elements in 9 groups (2 Aspherical, 2 ED, 1 UHR)
Number of Diaphragm Blades	7 (circular aperture diaphragm)
Minimum Focusing Distance	0.095m (0.31ft)
Maximum Magnification	0.25x (35mm camera equivalent: 0.5x)
Filter Size	55 mm
Item Weight	Approximately 130g (0.29 lbs)
Dust/Splash/Freeze-Resistant	Yes (down to -10°C)
Focus Type	Auto Focus
Lens Coating Description	Fluorine Coating

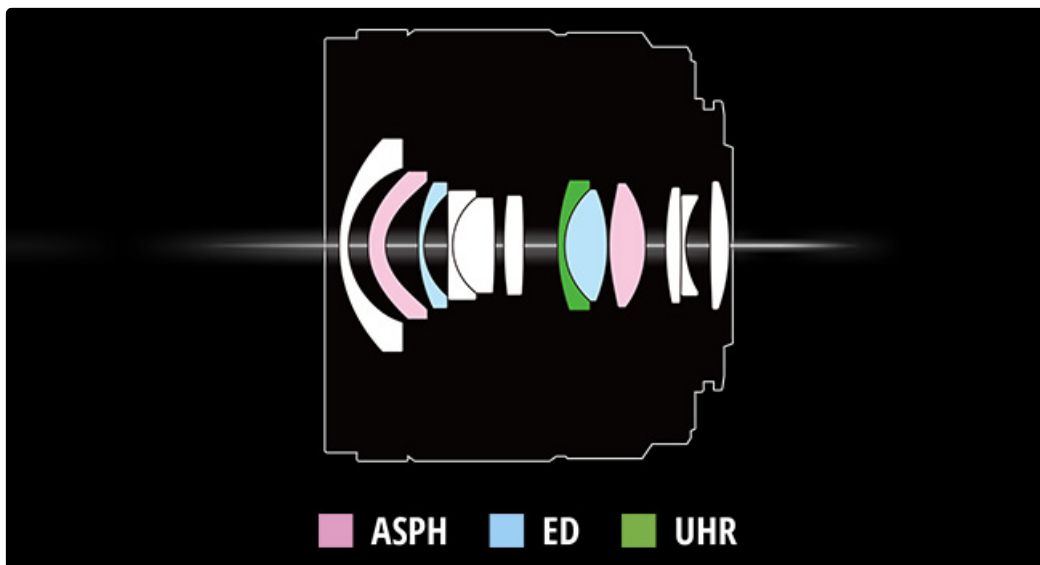


Figure 5: H-X09 Lens Construction Diagram.

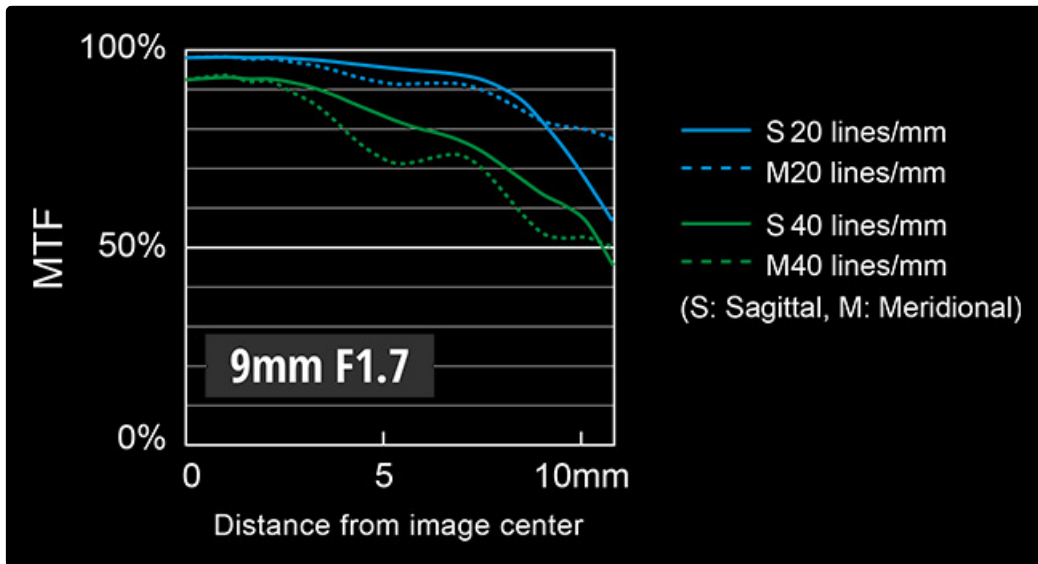


Figure 6: H-X09 MTF Chart (9mm F1.7).

7. WARRANTY & SUPPORT

7.1 Warranty Information

This Panasonic LUMIX Leica DG SUMMILUX 9mm F1.7 ASPH lens (Model H-X09) comes with a **1-year manufacturer's warranty**. Please retain your proof of purchase for warranty claims. For detailed terms and conditions, refer to the warranty card included with your product or visit the official Panasonic support website.

7.2 Customer Support

For further assistance, technical support, or service inquiries, please contact Panasonic customer support. You can find contact information and additional resources on the official Panasonic website: www.panasonic.com/us/support.