

Manuals.plus /

› VILTROX /

› Viltrox PFU RBMH 20mm f/1.8 ASPH Lens for Nikon Z Mount User Manual

VILTROX PFU RBMH 20mm f/1.8 ASPH

Viltrox PFU RBMH 20mm f/1.8 ASPH Lens

INSTRUCTION MANUAL

[Introduction](#) [Setup](#) [Operation](#) [Maintenance](#) [Troubleshooting](#) [Specifications](#) [Warranty & Support](#)

1. Introduction

This manual provides instructions for the Viltrox PFU RBMH 20mm f/1.8 ASPH manual focus lens. This ultra-wide prime lens is designed for Nikon Z-mount mirrorless cameras, including models such as Z5, Z50, Z6, Z6 II, Z7, Z7 II, Z9, and Zfc. It offers a broad field of view and a bright f/1.8 maximum aperture, making it suitable for astrophotography, landscape, interior, and architectural photography.

The lens features an optical design with aspherical and low dispersion elements to reduce aberrations and an HD Nano multi-layer coating to minimize flare and ghosting. It is constructed from brass for durability and smooth operation.

Important Safety Information:

- Do not expose the lens to direct sunlight for extended periods, as this may damage the camera sensor or lens elements.
- Avoid dropping or subjecting the lens to strong impacts.
- Keep the lens away from water and moisture.
- Do not attempt to disassemble or repair the lens yourself. Contact authorized service personnel for assistance.

2. Setup

2.1 Package Contents

Verify that all items are present in the package:

- Viltrox PFU RBMH 20mm f/1.8 ASPH Lens
- Front Lens Cap

- Rear Lens Cap
- Lens Hood
- Lens Pouch
- 82mm Filter Adapter Ring
- Instruction Manual (this document)



Figure 2.1: Included accessories with the Viltrox 20mm f/1.8 lens.

2.2 Identifying Lens Parts

Familiarize yourself with the different parts of your Viltrox 20mm f/1.8 lens:



Figure 2.2: Key components of the Viltrox PFU RBMH 20mm f/1.8 ASPH lens.

- **Lens Hood Position:** Where the lens hood attaches.
- **Lens Hood Index:** Alignment mark for attaching the lens hood.

- **Aperture Ring:** Used to manually set the lens aperture (f-stop).
- **Focusing Ring:** Used to manually adjust the focus.
- **Depth of Field Rules:** Markings indicating the depth of field at various apertures and focus distances.
- **Mounting Index:** Alignment mark for attaching the lens to the camera body.

2.3 Attaching the Lens to Your Camera

1. Ensure your camera is turned off.
2. Remove the rear lens cap from the lens and the body cap from your camera.
3. Align the mounting index mark on the lens with the corresponding mark on your camera's lens mount.
4. Gently insert the lens into the camera mount and rotate it clockwise until it clicks into place. Do not force the lens.
5. To remove the lens, press the lens release button on your camera body and rotate the lens counter-clockwise until it detaches.



Figure 2.3: Viltrox 20mm f/1.8 lens properly mounted on a Nikon Z camera.

3. Operation

3.1 Manual Focusing

This is a manual focus lens. To achieve sharp focus:

1. Set your camera to manual focus (MF) mode.
2. Look through the viewfinder or use the camera's LCD screen.
3. Rotate the focusing ring on the lens until your subject appears sharp. Utilize your camera's focus peaking or magnification assist features for precise focusing.

4. The lens has a 148.5° focus throw, allowing for fine adjustments.
5. The minimum focusing distance is 9.8 inches (0.25 meters).



Figure 3.1: The focusing ring and aperture ring on the Viltrox 20mm f/1.8 lens.

The engraved focus distance and depth of field scales on the lens barrel can assist with pre-focusing and hyperfocal distance techniques, especially useful for landscape and astrophotography.

Excellent close-up ability

F1.8-F16	0.25m[9.84"]-∞	199*299mm[7.83*11.77"]
Aperture	Shooting Distance	Close Range Coverage

Figure 3.2: The lens offers excellent close-up ability with a minimum shooting distance of 0.25m (9.84 inches).

3.2 Setting the Aperture

The lens features an aperture ring for manual control of the f-stop. Rotate the aperture ring to select your desired aperture value, ranging from f/1.8 to f/16. The bright f/1.8 maximum aperture is ideal for low-light conditions and creating shallow depth of field with pleasing bokeh, thanks to its 14-blade diaphragm.

3.3 Using the Lens Hood

The included lens hood helps to block stray light from entering the lens, reducing flare and ghosting, and provides some physical protection to the front element. To attach the lens hood, align its index mark with the lens hood index on the lens and rotate until it locks into place. To remove, reverse the process.



Figure 3.3: Lens with attached hood for flare reduction and protection.

3.4 Attaching Filters

The lens has an 82mm filter thread. An 82mm filter adapter ring is included to facilitate the attachment of screw-in filters. Screw the filter adapter ring onto the front of the lens, then attach your 82mm filter to the adapter ring.

4. Maintenance

4.1 Cleaning the Lens

- **Lens Elements:** Use a soft lens brush or a blower to remove dust. For smudges or fingerprints, use a clean microfiber lens cloth with a small amount of lens cleaning solution. Wipe gently in a circular motion from the center outwards. The HD Nano coating is water-resistant, but avoid excessive moisture.
- **Lens Body:** Wipe the lens barrel with a soft, dry cloth. Do not use organic solvents like paint thinner or benzene.
- Always keep the front and rear lens caps on when the lens is not in use to protect the elements from dust and scratches.

4.2 Storage

- Store the lens in a cool, dry, and well-ventilated place, away from direct sunlight and high humidity.
- If storing for an extended period, place it in a sealed container with desiccant packets to prevent mold and mildew growth.
- Avoid storing the lens with mothballs or chemicals that may emit volatile gases.

5. Troubleshooting

Problem	Possible Cause	Solution
Cannot attach lens to camera.	Incorrect alignment or obstruction.	Ensure the mounting index marks are aligned. Check for any debris on the lens mount or camera body. Do not force the lens.
Images are blurry/out of focus.	Incorrect manual focus adjustment.	Ensure camera is in MF mode. Carefully adjust the focusing ring. Use camera's focus peaking or magnification assist.
Excessive flare or ghosting in images.	Strong light source hitting the front element.	Attach the lens hood. Reposition to avoid direct light sources.
Dust or smudges on lens elements.	Exposure to environment, improper handling.	Clean lens elements as described in Section 4.1.

6. Specifications

Feature	Description
Brand	VILTROX
Model Name	PFU RBMH 20mm f/1.8 ASPH
Focal Length	20mm (30mm equivalent on DX-format cameras)
Maximum Aperture	f/1.8
Minimum Aperture	f/16
Lens Mount	Nikon Z
Focus Type	Manual Focus
Minimum Focus Distance	0.25m (9.8 inches)
Optical Design	12 elements in 9 groups (including 4 ED elements, 1 double-sided aspherical element, and 1 highly transparent element)
Diaphragm Blades	14 (rounded)
Filter Size	82mm
Coating	HD Nano multi-layer coating (water-resistant)
Angle of View	94 degrees
Construction Material	Brass lens barrel

7. Warranty and Support

For detailed warranty information and customer support, please refer to the official VILTROX website or contact your local VILTROX distributor. Keep your purchase receipt as proof of purchase for warranty claims.

Official VILTROX Store: [VILTROX Official Store on Amazon](#)