

## Nikon 1591

# Nikon Z7 Mirrorless Camera Instruction Manual (Model 1591)

Brand: Nikon | Model: Z7 (1591)

## 1. INTRODUCTION

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The Nikon Z7 is Nikon's first FX-format full-frame mirrorless camera, featuring a 45.7 effective megapixel sensor. It is designed to fully exploit the optical performance of NIKKOR Z lenses, delivering exceptional detail in both stills and videos. Key features include a wide, 493-point hybrid AF system for superb focusing accuracy, and the new EXPEED 6 image-processing engine for sharper images. The 3690k-dot Quad-VGA electronic viewfinder (EVF) provides a clear and comfortable shooting experience. The Z7 supports 10-bit N-Log, 4K UHD video, and 8K time-lapse movie capabilities, catering to demanding video creators. This compact yet robust body is engineered to deliver truly amazing images.

### Key Features:

- New larger Z mount for revolutionary optical performance.
- Nikon-designed 45.7MP backside illuminated image sensor with no optical low pass filter (OLPF).
- 493-Point on-sensor phase detect AF system and up to 9 fps; Detection Range: Minus-1 to Plus-19 EV (Minus-4 to plus-19 EV with low-light AF).
- 4K ultra-HD video; 8K time-lapse; 120/1080P slow motion.
- Compatible with new Z NIKKOR lenses, over 360 F-mount NIKKOR lenses and a variety of Nikon system Accessories.

## 2. WHAT'S IN THE BOX

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Upon unboxing your Nikon Z7, you should find the following components:

- Z7 FX-format Mirrorless Camera Body
- EN-EL15b Rechargeable Li-ion Battery
- MH-25a Battery Charger
- EH-7P Charging AC Adapter
- UC-E24 USB Cable
- HDMI/USB Cable Clip

- BS-1 Accessory Shoe Cap
- AN-DC19 Camera Strap
- BF-N1 Body Cap
- DK-29 Rubber Eyecup

## **3. SETUP**

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### **3.1 Battery Installation**

Insert the EN-EL15b Rechargeable Li-ion Battery into the battery chamber located at the bottom of the camera body. Ensure it clicks into place securely.

### **3.2 Memory Card Insertion**

The Nikon Z7 uses XQD or CF Express memory cards. Open the memory card slot cover and insert a compatible card with the correct orientation. The camera has one memory slot available.

### **3.3 Lens Attachment**

Align the mounting mark on the NIKKOR Z lens with the mounting mark on the camera body, then rotate the lens clockwise until it clicks into place. For F-mount NIKKOR lenses, use the optional FTZ Mount Adapter.



Figure 1: Nikon Z7 camera body with approximate dimensions (Height: 4 in / 100.5 mm, Width: 5.3 in / 134 mm).

### 3.4 Z Mount System Structure & Design

The Z mount system is designed with a 16mm flange back distance and a 55mm inner mount diameter. This allows for maximum light to reach the sensor, enabling the use of extremely fast lenses like f/1.2 and even f/0.95, while maintaining a compact camera body. The larger mount diameter also provides flexibility for advanced optical and lens designs, including space for powerful autofocus actuators.

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Video 1: Nikon Z Mount System Structure & Design, explaining the technical advantages of the Z mount.

## 4. OPERATING THE CAMERA

### 4.1 Basic Controls and Interface

The Z7 features a familiar Nikon user interface, accessible via the 3.2-inch tilting LCD touchscreen or the 3690k-dot Quad-VGA electronic viewfinder. Navigate menus and settings using the multi-selector or by touch. The camera offers P/S/A/M shooting modes for versatile control.

## 4.2 Autofocus and Image Stabilization

The advanced 493-point hybrid AF system (phase detection and contrast detection) ensures quick and accurate focusing. The camera also features 5-axis sensor-shift image stabilization, providing up to 5 stops of compensation for sharper handheld shots.

## 4.3 Still Photography

Capture stunning 45.7MP still images in JPEG, RAW, or TIFF formats. The camera supports continuous shooting at up to 9 frames per second (FPS). Various metering methods (Matrix, Center-weighted, Spot, Highlight) and white balance settings (Auto, Cloudy, Color Temperature, Daylight, Flash, Fluorescent, Incandescent, Shade) are available.

## 4.4 Video Recording

Record high-quality video in 4K UHD (2160p) at up to 30p or Full HD (1080p) at up to 120p for slow-motion effects. The Z7 supports 10-bit N-Log output via HDMI for advanced color grading. An 8K time-lapse mode is also available (requires third-party software for final production).

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Video 2: Music Video Behind the Scenes - Z7 Created by Chris Hershman. Demonstrates the Z7's video capabilities and ease of use in a professional production environment.

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Video 3: Behind the Scenes with the Z7 Created by Dixie Dixon. Showcases the Z7's performance in various shooting conditions for professional photography and video.

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Video 4: 8K Timelapse Video by Mark Kettenhofen and Chris Ogonek. Illustrates the Z7's advanced time-lapse capabilities.

## 5. SPECIFICATIONS

<b>Model Name</b>	Z 7
<b>Model Number</b>	1591
<b>Effective Still Resolution</b>	45.7 MP
<b>Photo Sensor Technology</b>	CMOS
<b>Photo Sensor Size</b>	Full-Frame (FX-format)
<b>Image Stabilization</b>	Sensor-shift (5-axis)
<b>Compatible Mountings</b>	Nikon Z, Nikon F (with FTZ adapter)
<b>Autofocus Points</b>	493
<b>Video Resolution</b>	4K UHD 2160p, FHD 1080p
<b>Continuous Shooting</b>	9 FPS
<b>ISO Range (Expanded)</b>	32 - 102400
<b>Screen Size</b>	3.2 Inches (Tilting LCD Touchscreen)

<b>Viewfinder</b>	Electronic (3690k-dot Quad-VGA)
<b>Flash Memory Type</b>	XQD, CF Express
<b>Memory Slots Available</b>	1
<b>Connectivity Technology</b>	Bluetooth, Micro HDMI, USB, Wi-Fi
<b>Item Weight</b>	1.29 Pounds

## 6. MAINTENANCE

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To ensure the longevity and optimal performance of your Nikon Z7 camera, follow these maintenance guidelines:

- **Cleaning:** Use a soft, lint-free cloth to clean the camera body. For the lens and sensor, use specialized cleaning kits and follow manufacturer instructions carefully.
- **Storage:** Store the camera in a dry, cool place away from direct sunlight and extreme temperatures. Use a desiccant to prevent moisture buildup, especially in humid environments.
- **Battery Care:** Charge the EN-EL15b battery regularly. If storing for extended periods, charge it to about 50% capacity.
- **Firmware Updates:** Periodically check the Nikon support website for firmware updates to ensure your camera has the latest features and performance enhancements.

## 7. TROUBLESHOOTING

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If you encounter issues with your Nikon Z7, consider the following common troubleshooting steps:

- **Camera Not Powering On:** Ensure the battery is fully charged and correctly inserted. Try using a different charged battery if available.
- **Autofocus Issues:** Check that the lens is securely attached and the AF/MF switch on the lens (if applicable) is set to AF. Ensure there is sufficient light for the AF system to operate effectively.
- **Memory Card Errors:** Reformat the memory card (this will erase all data, so back up first). Try a different compatible memory card.
- **Image Quality Problems:** Check your ISO settings, aperture, and shutter speed. Ensure the lens is clean and free from smudges.
- **General Malfunctions:** Turn the camera off, remove the battery and memory card, wait a few minutes, then reinsert them and power on.

For more complex issues, refer to the comprehensive user manual available on the Nikon support website or contact customer support.

## 8. WARRANTY AND SUPPORT

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The Nikon Z7 comes with a **one-year limited warranty**. Please retain your proof of purchase for warranty claims.

For technical support, service, or warranty inquiries, please visit the official Nikon support website or contact Nikon customer service directly. You can also find additional resources, FAQs, and firmware updates on their website.