

Quick-Start Guide: Photographing the Aurora

When the sky starts dancing, you don't want to waste time fiddling. Here's the simple, reliable setup I use as my starting point for northern lights photography — the one that gets you a clean, bright, low-noise file without guesswork.

1. Gear & Setup

Fresh memory cards

Tripod: Solid, stable, center column low

Lens: 20mm f/1.8. Why: Wide view + fast aperture = brighter, cleaner files. Note: 50mm is usually too tight unless you want details.

Camera: Full-frame shines here — larger pixels drink more light with less noise.

Accessories:

Flashlight/headlamp

Hat, gloves, thermals

Spare batteries (keep them warm in your pockets)

2. Base Camera Settings

- Exposure mode: Manual
- Aperture: f/1.8 (or smallest f-number for lens)
- Shutter Speed: 10 seconds
- ISO: 1600. If your lens doesn't get f/1.8, you may need ISO 3200 or higher.
- File Type: RAW (or RAW+JPEG), highest bit depth, uncompressed (or least compressed available)
- White Balance: 4000K custom
- Stabilization: Turn off IBIS/VR for the lens and camera
- Shutter Delay: 2–3 seconds (or use a remote)
- **Manual Focus Note:** Use manual focus only for aurora photography — autofocus won't lock in the dark. Aim the lens at a distant horizon or a bright star, switch to live view, and use 100% zoom (on mirrorless cameras) to confirm tack-sharp focus. Take a quick test shot and zoom in on playback to double-check before committing to a full series.

3. On-Location Tips

- Arrive early — set up before it gets fully dark
- Pick a foreground you like (trees, shoreline, barn, etc.)
- Use your flashlight to navigate but turn it off while shooting
- Batteries drain faster in the cold — rotate warm ones from your pocket
- Shield the tripod from wind with your body if needed

4. Fine-Tune Exposure

- After your first test shot, adjust based on movement and brightness.
- If the aurora is bright and fast-moving:
 - Shutter: 1–5 seconds, increase ISO to 3200–6400, higher as needed. (Shorter shutter = crisper aurora shapes.)
- If the aurora is faint or slow:
 - Shutter: 8–15 seconds (Longer shutter = brighter sky.)
 - ISO: 1600, adjust as needed.
- If stars start to trail:
 - Keep shutter ≤ 8 seconds
- If sky is too dark or too bright:
 - Play with shutter speed or ISO to change brightness (higher ISO = brighter; slower shutter = brighter). Leave aperture locked.

5. Last Tip Before You Freeze

Check your histogram, not just the screen. Aurora should sit a bit brighter than midtones without clipping highlights. Nail focus once, lock it, and enjoy the show.

Feature photo: "Burning Bush," Horicon, WI. Nikon Z9, Nikon F 20mm 1.8, 13" sec @ f/1.8, ISO 1600, developed in Lightroom/Nik Color Efex Pro. (C) Joel Nisleit