THE DRONE PILOT BRIEF · FIELD CHECKLIST

Field hardware verification SOP

SOP = standard operating procedure. RTK = real-time kinematic GPS correction. NUC = non-uniformity correction for thermal sensors. AGL = above ground level.

Verified as of 22 Oct 2026 against the live article

NOT AN FAA DOCUMENT

Job / site: _____ Date: _____ Remote pilot in command: _____

I. GEODETIC & GNSS RTK INTEGRITY

- [ ] **Base link:** UHF/900 MHz base link age < 1.0 s. Cellular NTRIP: age of corrections < 1.5 s.
- [ ] **Checkpoint:** rover on a known benchmark. Horizontal delta < 1.5 cm, vertical < 2.5 cm.
- [ ] **Multipath scan:** PDOP < 1.8; more than 22 satellites tracked across at least three constellations.

II. RADIOMETRIC THERMAL CALIBRATION

- [ ] **NUC reset** after reaching flight altitude and letting detector temperature stabilize for 3 minutes.
- [ ] **Spot size ratio:** keep at least a 3×3 pixel footprint over the smallest expected defect (e.g., max 36 ft AGL for a 30 mm solar diode on a 640 sensor).
- [ ] **Emissivity:** emissivity and reflected temperature entered in the radiometric R-JPEG header before mission start.

III. OPTICAL SHUTTER & AERODYNAMIC SAFETY

- [ ] **Shutter:** photogrammetry with mechanical shutter enabled; rolling shutter, cap forward speed below 7 m/s.
- [ ] **ND filter:** cinema passes under 50 ft AGL, ND16/ND32 to lock 1/48 s; 400 ft sweeps, remove heavy ND to allow 1/120 s.
- [ ] **Headwind RTH buffer:** headwind over 15 knots, raise return-to-home reserve to 50% battery.

Before next mission: shoot a physical ground benchmark before any automated survey grid; redo NUC whenever air temperature shifts by more than 5°C. Green telemetry does not guarantee data truth.

Sources: DPB article “Field Benchmark SOP” (Sept. 21, 2026), REV 2026.4. The article cites no outside sources.
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