UNOFFICIAL LAY-FLAT STUDY EDITION | 14 CFR PART 107

# FAA Part 107 Commercial Drone Lay-Flat Study & Airspace Workbook

Remote Pilot (UAG) Exam Prep: Airspace Classification, METAR/TAF Decoding, Weather & Operational Drills

**Imprint:** STILL HUMAN AVIATION PRESS
**Format:** 8.5 x 11 in. 360-Degree Lay-Flat Coil Study & Field Workbook
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**Educational & Examination Notice:** Independent educational study workbook. Not affiliated with, endorsed by, or an official publication of the Federal Aviation Administration (FAA) or U.S. Department of Transportation. Always verify current 14 CFR Part 107 regulations, airspace authorizations (LAANC), and official FAA Airman Certification Standards prior to flight operations.

# Part 107 Quick-Reference Limits & Weather Minimums

| Topic / Rule | Specification / Threshold | Reference |
|---|---|---|
| **Max Groundspeed** | 100 mph (87 knots) | 14 CFR 107.51(a) |
| **Max Altitude** | 400 ft AGL (or within 400 ft of a structure) | 14 CFR 107.51(b) |
| **Min Flight Visibility** | 3 statute miles from control station | 14 CFR 107.51(c) |
| **Min Cloud Clearance** | 500 ft below, 2,000 ft horizontally | 14 CFR 107.51(d) |
| **Max Takeoff Weight** | Less than 55 lbs (including payload) | 14 CFR 107.3 |
| **Max Blood Alcohol** | 0.04% BAC and 8 hours bottle-to-throttle | 14 CFR 107.27 |
| **Accident Reporting** | Within 10 calendar days (serious injury or >$500 property damage) | 14 CFR 107.9 |
| **Recurrent Training** | Every 24 calendar months | 14 CFR 107.65 |

**How to Use This Lay-Flat Workbook:**

1. Fold the plastic coil 360 degrees flat on your desk, kneeboard, or clinical station.
2. Work each Worked Scenario before reading the step-by-step solution.
3. Complete the Module Drill Questions without peeking at the Answer Key & Distractor Rationales.
4. Log missed topics in the Self-Audit Grid at the end of each module and drill them again 48 hours later.

# Module 1: Part 107 Regulations, Pilot Eligibility & Waivers

Module 1 focuses on FAA Part 107 regulations governing commercial drone operations in the United States. Key concepts include Remote PIC authority, drone registration requirements (>0.55 lb), mandatory accident reporting within 10 days, Operations Over People categories (1-4), and compliance with night flight rules requiring anti-collision lighting visible for at least three statute miles.

## Learning Objectives

- Understand Remote PIC authority and responsibilities.
- Apply registration requirements based on drone weight (>0.55 lb).
- Recognize the obligation to report accidents within 10 days.
- Differentiate Operations Over People categories and their compliance requirements.

## High-Yield Reference Matrix

| Concept / Rule | Threshold / Value | Practical Application |
|---|---|---|
| Remote PIC Authority | Designated by operator | Must ensure compliance with Part 107 rules |
| Drone Registration | > 0.55 lb | Register online via FAA DroneZone |
| Accident Reporting | 10 days | Report any accident causing serious injury or property damage |
| Operations Over People Category 1 | Weight ≤ 0.55 lb | No waiver required |
| Operations Over People Category 2 | Weight ≤ 2 lb | Requires waiver |
| Operations Over People Category 3 | Weight ≤ 5 lb | Requires waiver |
| Operations Over People Category 4 | > 5 lb | Requires waiver |
| Night Flight Lighting | Anti-collision lighting visible ≥ 3 SM | Must activate lights during night operations |

## Worked Scenarios & Field Calculations

# Module 1 Practice Drill Questions

**1. Under Part 107 regulations, drones weighing more than how much require registration?**

A. 0.5 lb
B. 0.55 lb
C. 1 lb
D. 2 lb

**2. How soon must accidents involving drones causing serious injury or property damage be reported?**

A. Within 2 days
B. Within 5 days
C. Within 10 days
D. Within 1 month

**3. What visibility requirement applies to anti-collision lighting during night operations?**

A. ≥ 1 statute mile
B. ≥ 2 statute miles
C. ≥ 3 statute miles
D. ≥ 4 statute miles

**4. Which category applies to drones weighing ≤ 0.55 lb flying directly over people?**

A. Category 1
B. Category 2
C. Category 3
D. Category 4

**5. Which category requires authorization for drones weighing ≤ 2 lb flying directly over people?**

A. Category 1
B. Category 2
C. Category 3
D. Category 4

**6. Which category requires authorization for drones weighing ≤ 5 lb flying directly over people?**

A. Category 1
B. Category 2
C. Category 3
D. Category 4

# Module 3: Aviation Weather, METARs, TAFs & Density Altitude

Aviation weather plays a critical role in safe drone operations under FAA Part 107 regulations. Understanding METARs, SPECIs, and TAFs allows pilots to interpret current weather conditions and forecasts accurately. METARs provide current weather observations at airports, SPECIs offer unscheduled updates during significant weather changes, and TAFs forecast weather conditions over the next 24 hours. Temperature-dewpoint spread helps assess potential fog formation and cloud development, while stable/unstable air influences turbulence patterns and flight performance.

## Learning Objectives

- Decode METAR/SPECI/TAF weather strings accurately.
- Interpret temperature-dewpoint spread values.
- Recognize signs of stable vs unstable air.
- Understand performance penalties caused by high density altitude.

## High-Yield Reference Matrix

| Concept / Rule | Threshold / Value | Practical Application |
|---|---|---|
| Temperature-Dewpoint Spread | < 3°C | Potential fog formation |
| Temperature-Dewpoint Spread | > 10°C | Dry air conditions |
| Stable Air | Warm air above cold air | Smooth flying conditions |
| Unstable Air | Cold air above warm air | Turbulence possible |
| Density Altitude | > 2,000 ft | Performance penalties occur |
| Microburst Wind Shear | Sudden wind direction change | Avoid during takeoff/landing |

## Worked Scenarios & Field Calculations

**Scenario 1: METAR Decoding**

**Prompt:** Decode the METAR string: KJFK 151250Z 12012KT 10SM FEW025CB SCT040 BKN050 23/18 A3002 RMK AO2 SLP198 T02331182.

Your Scratchpad / Calculation Work Area:

**Worked Solution:** KJFK = JFK Airport; 15/12/50Z = 12:50 UTC on the 15th day of the month; Wind = 120 degrees at 12 knots; Visibility = 10 statute miles; Few clouds at FL25, Cumulonimbus clouds scattered at FL40, Broken clouds at FL50; Temperature = 23°C Dewpoint = 18°C; Altimeter setting = 30.02 inHg.

**13. What is the minimum distance drones must stay away from people?**

A. 1 foot
B. 5 feet
C. 10 feet
D. No minimum

**14. What does a 'NSC' indication mean?**

A. No significant cloud
B. No significant condition
C. No significant change
D. No significant weather

**15. What airspace classification surrounds a control tower?**

A. Class E
B. Class B
C. Class C
D. Class D

**16. What does a '+' preceding weather phenomena indicate?**

A. Light intensity
B. Moderate intensity
C. Heavy intensity
D. No intensity

**17. What airspace classification surrounds a Class B airspace?**

A. Class E
B. Class C
C. Class D
D. Class G

**18. What does a '-' preceding weather phenomena indicate?**

A. Light intensity
B. Moderate intensity
C. Heavy intensity
D. No intensity

ADDITIONAL WORKSPACE & CLASSROOM NOTES