DRONEZILLA
PASS SHEETS™

FAA PART 107 RULES

FAA PART 107 / PASS SHEETS

START HERE

FAA PART 107 RULES

WHAT IS THIS?

The legal rules for operating drones under FAA Part 107. This sheet simplifies the core rules you need to fly safely, legally, and with confidence.

MEMORIZE THIS

- 400 ft AGL; structure exception
- VLOS required
- Right-of-way to all aircraft
- Over people: exceptions / categories
- From / over vehicles: separate rules
- VLOS required unless waived
- Report serious injury, unconsciousness or other-property damage >$500 within 10 days.

⚠ TEST TRAP

Part 107 is about safe operations and minimizing risk to people and property. When in doubt, don't fly.

QUICK ANSWER

INCIDENTS: Serious injury, unconsciousness or other-property damage >$500; report within 10 calendar days.

PILOT REQUIREMENTS

1. **16+ YEARS OLD**
2. **ENGLISH PROFICIENCY**
   Read, speak, write and understand English; medical exception.
3. **INITIAL TEST OR ELIGIBLE PART 61 PATH**
   Maintain knowledge recency every 24 calendar months.
4. **TSA BACKGROUND CHECK**
   Complete TSA background check.

Also: physically and mentally able to operate safely.
Eligible current Part 61 pilots have an alternate training pathway.

FLIGHT RULES

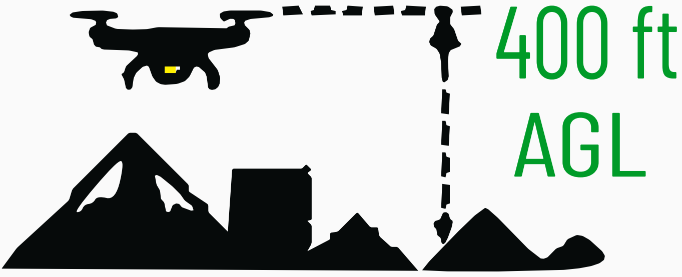
MAX ALTITUDE	400 FT AGL; STRUCTURE EXCEPTION
FLYING OVER PEOPLE	EXCEPTIONS / CATEGORIES / WAIVER
VLOS Visual Line of Sight	REQUIRED UNLESS WAIVED
RIGHT-OF-WAY	YIELD TO ALL AIRCRAFT
MOVING VEHICLE	FROM: sparsely populated; no transport of another person's property for compensation / hire. OVER: category + vehicle conditions.

FLIGHT RULE DETAILS

MAX ALTITUDE

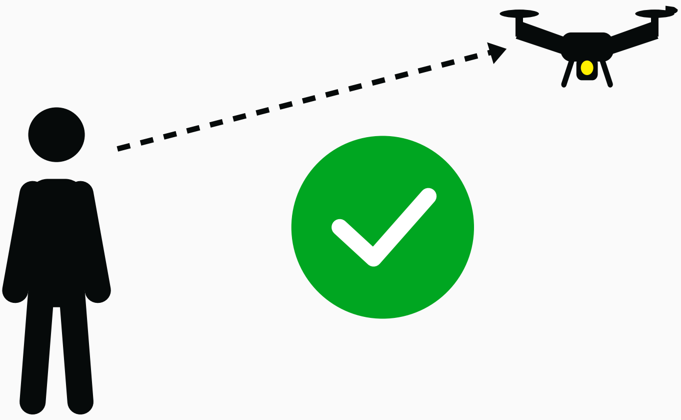
400 ft AGL; near a structure:
within 400 ft horizontally,
up to 400 ft above its top.

AGL = Above Ground Level



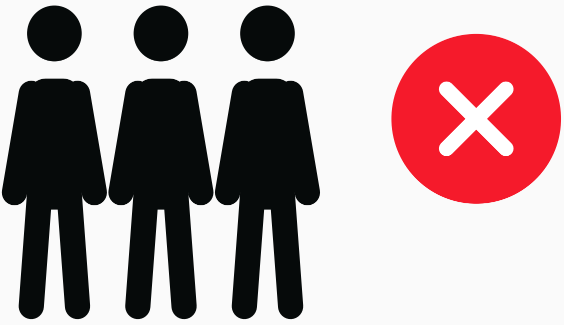
VLOS

Maintain visual line of sight
without aids other than
corrective lenses.



OVER PEOPLE

Direct participants;
protected people;
eligible Category 1-4 operation
or an applicable waiver.



MOVING VEHICLES

FROM a vehicle: conditions apply.

OVER moving vehicles:
meet the applicable conditions.

Rural location alone does not permit flight over people.

RIGHT-OF-WAY

Yield to all aircraft and airborne vehicles.

See and avoid.

REPORTING RULE

REPORT WITHIN 10 CALENDAR DAYS:
SERIOUS INJURY / LOSS OF CONSCIOUSNESS;
OTHER PROPERTY: REPAIRS >$500, OR
TOTAL-LOSS FAIR-MARKET VALUE >$500.

Know who qualifies, what is prohibited,
and when incident reporting is required.

KEY RULE SUMMARY

MAX ALTITUDE	400 FT + EXCEPTION
VLOS	VLOS / WAIVER
OVER PEOPLE	EXCEPTIONS / CATEGORIES
MOVING VEHICLES	From / over: separate rules
RIGHT-OF-WAY	YIELD TO AIRCRAFT

Direct participants / protected persons / categories / waiver.

1

What is the maximum legal altitude for routine Part 107 operations?

Ⓐ 300 ft AGL
Ⓑ 400 ft AGL
Ⓒ 500 ft AGL

1 **Correct Answer: B**

Why: Routine limit is 400 ft AGL;
A structure exception also applies.

2

Which statement is true about visual line of sight (VLOS)?

Ⓐ It is optional if the drone has GPS
Ⓑ It is required under normal Part 107 operations
Ⓒ It only applies at towered airports

2 **Correct Answer: B**

Why: The remote pilot must maintain visual line of sight during normal operations.

3

A remote pilot wants to fly from a moving car in a populated city area. Is this allowed under Part 107?

Ⓐ Yes, anytime
Ⓑ Yes, if the drone stays under 400 ft
Ⓒ No, unless waived. Standard rule: sparsely populated area; no carriage of another’s property for compensation / hire.

3 **Correct Answer: C**

Why: Sparsely populated area; no transport of another’s property for compensation / hire.

4

When must a Part 107 pilot report an incident to the FAA?

Ⓐ Within 24 hours for any hard landing
Ⓑ Within 10 calendar days for serious injury, unconsciousness or other-property damage >$500
Ⓒ Only if another pilot complains

4 **Correct Answer: B**

Why: Part 107 requires reporting certain incidents within 10 days.

REMEMBER

- Fly safe.
- Follow the rules.
- Respect the airspace.
- When in doubt, don’t fly.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Recognize the core requirements for planning a Part 107 flight.

ACTIVE RECALL

Which altitude exception is shown? Who has right-of-way?

APPLY THE CONCEPT

Explain the difference between pilot eligibility, operating rules, and incident reporting.

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PERSONAL STUDY REFERENCE

REFERENCE KEY

Pilot eligibility / knowledge recency

14 CFR 107.61, 107.63, 107.65

Flight responsibility / VLOS / right-of-way

14 CFR 107.19, 107.31, 107.37

Altitude / structure exception

14 CFR 107.51

Operations over people

14 CFR 107.39; Part 107 Subpart D

From / over moving vehicles

14 CFR 107.25, 107.145

FAA safety reporting

14 CFR 107.9

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PASS SHEETS™

DRONE WEIGHT + REGISTRATION

FAA PART 107 / PASS SHEETS

START HERE

DRONE WEIGHT + REGISTRATION

WHAT IS THIS?

Explains when drone registration is required, where to register and what information you need.

MEMORIZE THIS

Register every Part 107 aircraft, regardless of weight.

Recreational exception: 0.55 lb or less at takeoff under the eligible recreational exception.

Indoor-only flight needs no registration.

$5 per Part 107 drone.

Registration valid 3 years.

TEST TIP

Include everything attached in takeoff weight. Part 107 has no lightweight exemption.

QUICK ANSWER

Part 107: each aircraft.
Recreation: over 0.55 lb.

A WHEN TO REGISTER

0.55 LBS

Eligible recreational use: MORE THAN 0.55 lb at takeoff = register.

Every Part 107 aircraft, even 0.55 lb or less.

B WHEN REGISTRATION IS NOT REQUIRED

0.55 lb or less at takeoff, including everything attached, and flown exclusively under the eligible recreational exception.

Indoor-only flight.

C WHERE TO REGISTER

FAA DRONEZONE

faadronezone-access.faa.gov

$5 per Part 107 drone • Valid 3 years.

D REQUIREMENTS

Contact details; carry registration certificate when operating.

Make, model and required Remote ID serial number.

FA12345678 Mark registration number externally.

Standard Remote ID, broadcast module + VLOS, or FRIA with aircraft and pilot inside + VLOS.

E FAILURE TO REGISTER WHEN REQUIRED

CIVIL PENALTIES
FINES MAY APPLY

CRIMINAL PENALTIES
FINES AND/OR
IMPRISONMENT
MAY APPLY

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1

Above what weight must an eligible recreational drone be registered?

Ⓐ 0.25 lb

Ⓑ 0.55 lb

Ⓒ 1.0 lb

✓ **Correct Answer: B**

Why: The recreational exemption is 0.55 lb or less. Every Part 107 aircraft must be registered.

2

A 0.4 lb drone is used for paid real estate work. Must it be registered?

Ⓐ No, under 0.55 lb

Ⓑ Yes, Part 107 requires registration

Ⓒ Only outdoors at night

✓ **Correct Answer: B**

Why: Part 107 has no lightweight exemption.

3

Which does NOT require registration?

Ⓐ 0.49 lb drone flown exclusively under eligible recreational exception

Ⓑ 0.60 lb recreational drone

Ⓒ 0.40 lb commercial drone

✓ **Correct Answer: A**

Why: Eligible recreation at 0.55 lb or less; include all attachments.

4

One consequence of failing to register when required?

Ⓐ Loss of visual line of sight privileges only

Ⓑ Civil penalties / fines

Ⓒ Automatic permanent license suspension

✓ **Correct Answer: B**

Why: Civil or criminal penalties may apply.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | **Regulations** | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Distinguish the weight and registration concepts shown on this sheet.

ACTIVE RECALL

Where is registration completed? What must the operator keep current?

APPLY THE CONCEPT

Explain how aircraft weight connects to the registration requirements on the sheet.

REFERENCE KEY

Registration / external marking
14 CFR Part 48

Remote ID / FRIA operations
14 CFR Part 89

Eligible recreational exception
49 USC 44809

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SECTIONAL AERONAUTICAL CHART

FAA PART 107 / PASS SHEETS

START HERE

SECTIONAL AERONAUTICAL CHART

WHAT IS THIS?

A sectional chart depicts airports, airspace, terrain, obstructions and navigation aids for VFR flight.

MEMORIZE THIS

- Read boundary color and line style.
- Check MSL versus AGL.
- Decode the airport data block.

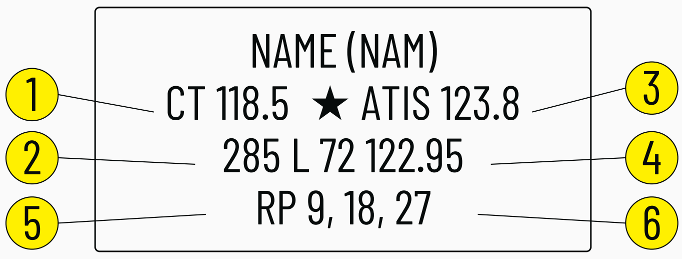
TEST TIP

Match each symbol to its description. Check current NOTAMs and Chart Supplement.

QUICK ANSWER

Boundary + altitude + symbol + data.

AIRPORT DATA



NAME (NAM)
CT 118.5 ★ ATIS 123.8
285 L 72 122.95
RP 9, 18, 27

① CT = Control Tower frequency.

② 285 = Airport elevation (feet MSL).

③ ATIS = Automatic Terminal Information Service.

④ L = Lighting available; 72 = Longest runway 7,200 ft.

⑤ RP = Right traffic runway numbers.

⑥ 122.95 = UNICOM (common traffic advisory).

FSS = Flight Service Station.

NO SVFR = Fixed-wing special VFR flight is prohibited.

★ = Part-time operation (see frequency notes).

Check current Chart Supplement for airport services, frequencies and details.

121.5 = Emergency frequency.

AIRPORT SYMBOLS

●	Other than hard-surfaced runways.
⊗	Hard-surfaced runways 1,500 ft. to 8,069 ft. in length.
▭	Hard-surfaced runways greater than 8,069 ft., or some multiple runways less than 8,069 ft.
⊙	Open dot in a runway symbol = approximate location of a VOR, VOR-DME or VORTAC on the airport.
R	Private airport (PVT). Use with caution.
H	Heliport.
U	Unverified landing area.
⊗	Abandoned airport.
F	Ultralight flight park.

AIRSPACE

━━━	Class B Airspace
━━━	Class C Airspace.
- - - - - -	Class D Airspace.
40	Class D ceiling: 4,000 ft MSL. A minus sign excludes the ceiling altitude.
- - - - - -	Class E surface-area boundary (dashed magenta).
▬	Class E Airspace with floor 700 ft. AGL.
▬	Class E Airspace with floor 1,200 ft. AGL or greater above surface (as charted).
2400 MSL	An explicitly labeled floor is in MSL.

4500 MSL	Class E floors vary: commonly 700 or 1,200 ft AGL. Use vignette direction, labels and chart notes. An MSL floor is expressly labeled MSL.

132° ← V 69 → 132°

Victor airway: blue centerline; V69 is the identifier. Use published route and altitude information.

COMMUNICATION BOXES

EXAMPLE VOR XYZ 113.0	Example navaid box. Underlined frequency: no voice capability.
122.1R MIAMI	122.1R: FSS receives here; listen on the associated navaid.
CHICAGO CHI	Heavy border indicates FSS name. Frequencies, services and hours may be listed in the box.

Verify services, frequencies and availability in the Chart Supplement.

SPECIAL AREAS

▥	Prohibited, restricted and warning areas (blue hatched).
▥	Military Operations Areas (MOA) (magenta hatched).
▨	Special air traffic rules / airport traffic patterns.
⁘	Air Defense Identification Zone (ADIZ).
━	Mode C veil (solid magenta).
━	Terminal Radar Service Area (TRSA).
─	Military Training Route (MTR).

ACTIVITY SYMBOLS

- - - - -	Isogonic Line (2019 VALUE) (Not current value).
◇U	Ultralight activity.
◇H	Hang glider activity.
◇	Glider operations.
◇UA	Unmanned aircraft activity.
⌓	Parachute jumping area (See Chart Supplement).
●	Marine light.
▲	Missile (HAZ/TZ).
✦	VFR waypoint (See Chart Supplement for latitude / longitude)

NAVAIDS

⬡	VOR
⬢	VORTAC
⊡	VOR-DME
◎	Non-Directional Radio Beacon (NDB)
⊡	NDB-DME
●	Other facilities, i.e., FSS Outlet, RCO, etc.

OBSTRUCTIONS

⅄	1,000 ft. and higher AGL.
⅄	Below 1,000 ft. AGL.
⅄⅄	Group obstruction.
⅄	Obstruction with high-intensity lights may operate part-time.
2049' (1149')	Top of obstruction 2,049 ft. MSL (height 1,149 ft. AGL).
UC	Under construction.

Guy wires may extend outward from structure.

QUICK REFERENCE

MSL	Mean Sea Level
AGL	Above Ground Level
FL	Flight Level (18,000 ft. MSL +)
RP	Right Traffic Pattern
CT	Control Tower
CTAF	Common Traffic Advisory Frequency
FSS	Flight Service Station
ATIS	Automatic Terminal Information Service
CS	Chart Supplement
RCO	Remote Communications Outlet
VFR	Visual Flight Rules

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

FAA Chart User's Guide • Study legend — not for navigation.

LEARNING OBJECTIVE

Recognize common sectional chart symbols and their meanings.

ACTIVE RECALL

What do the colors mean? Which lines define airspace boundaries?

APPLY THE CONCEPT

Identify three chart symbols and explain the information each communicates.

REFERENCE KEY

Chart symbols / airport and navaid data
FAA Aeronautical Chart Users' Guide

Mode C / transponder rules
14 CFR 91.215

Special air traffic rules / traffic patterns
14 CFR Part 93

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AIRSPACE CLASSIFICATION

FAA PART 107 / PASS SHEETS

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AIRSPACE CLASSIFICATION

MEMORIZE THIS

- Controlled airspace: A, B, C, D, E
- Uncontrolled airspace: G
- Class A: outside standard Part 107
- B / C / D / airport-designated surface E: authorization required
- G: no airspace authorization
- Standard Part 107 minimums, including Class G: 3 SM flight visibility; 500 ft below / 2,000 ft horizontally from clouds

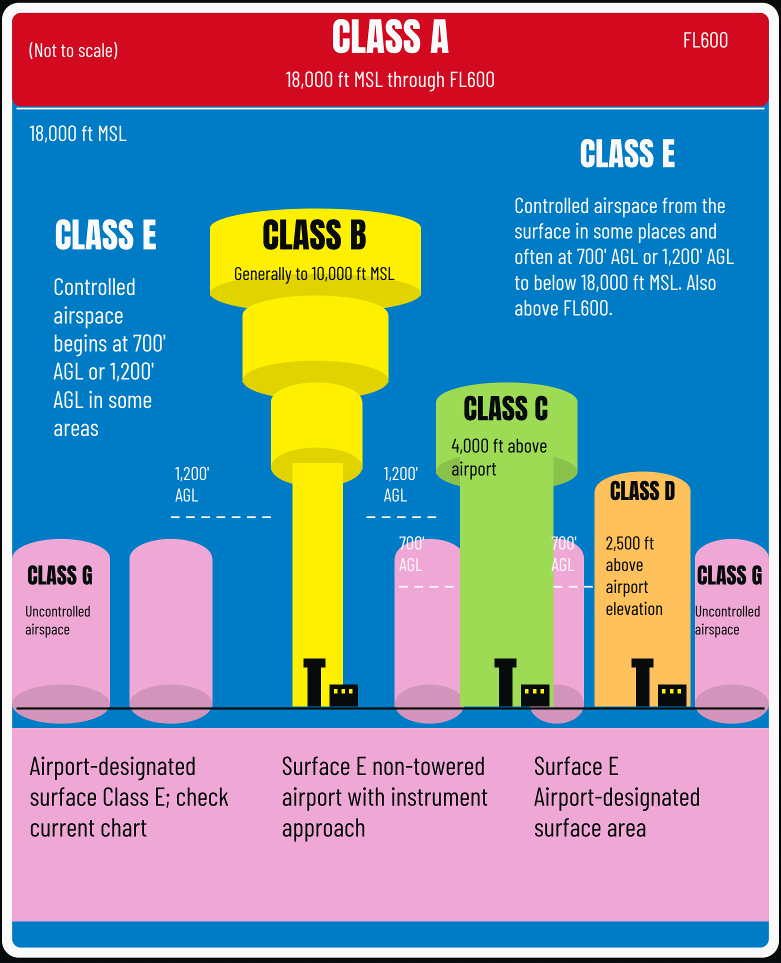
LEGEND

MSL = Mean Sea Level
AGL = Above Ground Level
FL = Flight Level
SVFR = Special VFR
SM = Statute Miles

TEST TRAP

Under Part 107, what weather minimums apply in Class G?

3 SM + 500 ft below / 2,000 ft horizontal



Controlled airspace begins at 700' AGL or 1,200' AGL in some areas

Controlled airspace from the surface in some places and often at 700' AGL or 1,200' AGL to below 18,000 ft MSL. Also above FL600.

Airport-designated surface Class E; check current chart

Surface E non-towered airport with instrument approach

Surface E Airport-designated surface area

CLASS A

FLOOR / CEILING

18,000 ft MSL to FL600

PART 107 ENTRY

Outside standard Part 107

RADIO REQUIRED?

N/A

VISIBILITY

N/A

CLOUD CLEARANCE

N/A

SPECIAL NOTE

Outside standard Part 107

CLASS B

FLOOR / CEILING

Generally surface to 10,000 ft MSL

PART 107 ENTRY

Prior ATC authorization

RADIO REQUIRED?

No routine Part 107 radio

VISIBILITY

3 SM

CLOUD CLEARANCE

500 ft below / 2,000 ft horizontal

SPECIAL NOTE

Major airports / authorization required

CLASS C

FLOOR / CEILING

Generally 4,000 ft above airport; charted in MSL

PART 107 ENTRY

Prior ATC authorization

RADIO REQUIRED?

No routine Part 107 radio

VISIBILITY

3 SM

CLOUD CLEARANCE

500 ft below / 2,000 ft horizontal

SPECIAL NOTE

Radar + tower airport

CLASS D

FLOOR / CEILING

Generally 2,500 ft above airport; charted in MSL

PART 107 ENTRY

Prior ATC authorization

RADIO REQUIRED?

No routine Part 107 radio

VISIBILITY

3 SM

CLOUD CLEARANCE

500 ft below / 2,000 ft horizontal

SPECIAL NOTE

Towered airport

CLASS E

FLOOR / CEILING

Common floors: surface, 700 or 1,200 ft AGL; below 18,000 ft MSL; also above FL600

PART 107 ENTRY

Airport-designated surface E: ATC authorization. Other Class E:
no routine airspace authorization.

RADIO REQUIRED?

No routine Part 107 radio

VISIBILITY

3 SM

CLOUD CLEARANCE

500 ft below / 2,000 ft horizontal

SPECIAL NOTE

Controlled; includes surface E and transition areas

CLASS G

FLOOR / CEILING

Surface to Class E floor

PART 107 ENTRY

No ATC airspace authorization

RADIO REQUIRED?

No routine Part 107 radio

VISIBILITY

3 SM

CLOUD CLEARANCE

500 ft below / 2,000 ft horizontal

SPECIAL NOTE

Uncontrolled airspace

Part 107: prior ATC authorization in B, C, D and airport-designated surface E. Radio contact is not a substitute.

Standard minimums: 3 SM flight visibility from the control station; 500 ft below and 2,000 ft horizontally from clouds, including Class G.

Unless waived; other restrictions and authorization conditions still apply.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Distinguish airspace classes using the visual cues on this sheet.

ACTIVE RECALL

Which class is shown? What visual clues support your answer?

APPLY THE CONCEPT

Explain a class boundary using both the diagram and the chart markings.

REFERENCE KEY

Airspace classification / boundaries
FAA AIM Chapter 3; Chart Users' Guide

Controlled-airspace authorization
14 CFR 107.41

Visibility / cloud clearance
14 CFR 107.51

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RADIO COMMS + AIRPORT OPS

FAA PART 107 / PASS SHEETS

START HERE

RADIO COMMS + AIRPORT OPS

WHAT IS THIS?

This sheet teaches the basics of CTAF, UNICOM, and airport communication so students can answer Part 107 questions more confidently.

MEMORIZE THIS

CTAF = self-announce when no tower operates

UNICOM = airport advisory service

Runways = magnetic heading numbers

Taxiways = lettered A, B, C...

Windsock = wind direction

TEST TRAP

Runway number 22 means about 220° magnetic heading.

QUICK ANSWER

CTAF = self-announce

RADIO BASICS

CTAF

Common Traffic Advisory Frequency
Self-announce when no tower is operating

- Aircraft announce position / intentions
- No routine Part 107 radio requirement
- May use a UNICOM frequency

- Listen before you transmit

Includes airports with a closed control tower.

UNICOM

Airport advisory service

- Provides airport information and advisories
- Not air traffic control
- Listen before you transmit

SAMPLE RADIO CALL

Crewed-aircraft example

"Example traffic, Cessna N12345, 2 miles west, 2,000 feet MSL, landing Runway 22. Example."

Airport: Example

Aircraft: Cessna N12345

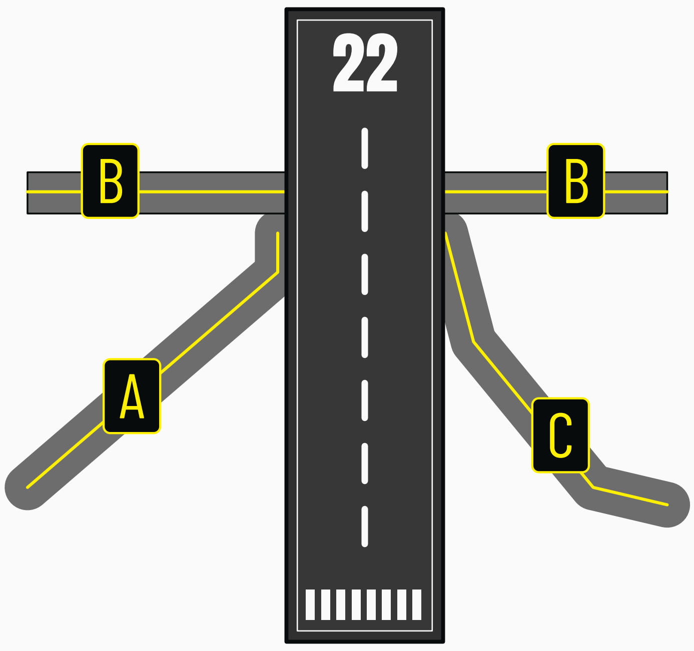
Position: 2 miles west / Altitude: 2,000 ft MSL

Intentions: landing Runway 22

Airport name repeated: Example

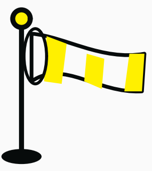
AIRPORT OPS BREAKDOWN

Schematic — not to scale



Runway 22

Approximate magnetic heading: 220°



Wind blows this way

Large opening faces INTO the wind.

Runways = magnetic heading numbers (e.g., 22: about 220°)

A Taxiways = lettered (A, B, C...)

Windsock = wind direction

FAA PART 107 STYLE QUESTION

Q Which frequency is used to self-announce position and intentions at an airport without an operating control tower?

Ⓐ **UNICOM**
Ⓑ **CTAF**
Ⓒ **ATIS**

✓ **Correct Answer: B CTAF**

CTAF is used by pilots to self-announce when no control tower is operating so other traffic can hear and avoid conflicts.

Airspace	Weather	Clearance	Comms	Emergencies	Limits	Sectionals	Radar

METAR/TAF	Regulations	Night	Physiology	ADM	Performance	Waivers

LEARNING OBJECTIVE

Interpret the airport and radio concepts presented on this sheet.

ACTIVE RECALL

How do airport markings and radio information work together?

APPLY THE CONCEPT

Explain the sample radio or airport question without relying on the answer box.

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PERSONAL STUDY REFERENCE

REFERENCE KEY

CTAF / UNICOM / airport operations
FAA AIM 4-1; Aeronautical Chart Users' Guide

Operations near airports
14 CFR 107.43

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LATITUDE + LONGITUDE SHEET

FAA PART 107 / PASS SHEETS

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LATITUDE + LONGITUDE SHEET

WHAT IS THIS?

This sheet shows how to find the latitude and longitude of an airport on a sectional chart. Part 107 exams use chart excerpts to test airport coordinate reading.

MEMORIZE THIS

1. Latitude lines run east-west and measure north/south.
2. Longitude lines run north-south and measure east/west.
3. Read LATITUDE first, then LONGITUDE.
4. Coordinates are written in degrees (°) and minutes (′).
5. 1 minute of LATITUDE is about 1 NM.
6. Latitude numbers are on the left / right chart borders.
7. Longitude numbers are on the top/bottom chart borders.

⚠ TEST TRAP

- Use the airport symbol's exact position — not the text label placement.
- Estimate between tick marks if the airport falls between whole minutes.
- Do not reverse latitude and longitude.

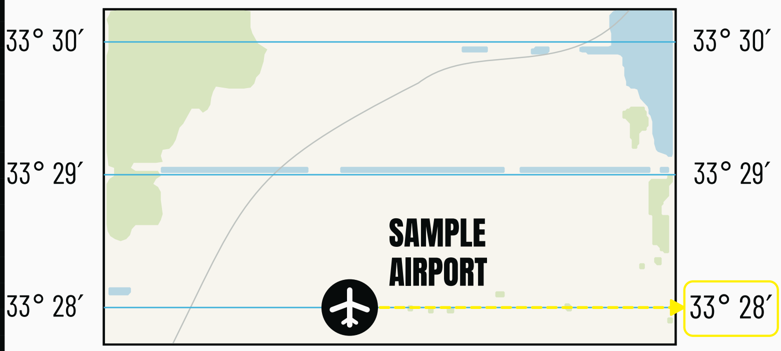
QUICK ANSWER

33° 28′ N / 111° 43′ W

HOW TO READ IT

A LATITUDE

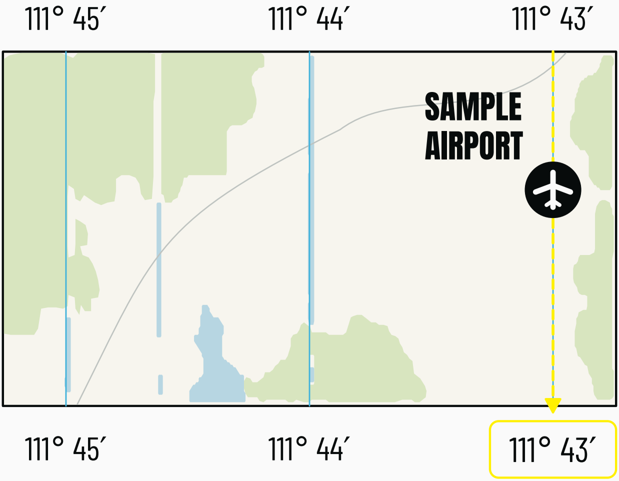
Latitude = read from the left or right chart border.



Horizontal lines / north-south measurement

B LONGITUDE

Longitude = read from the top or bottom chart border.

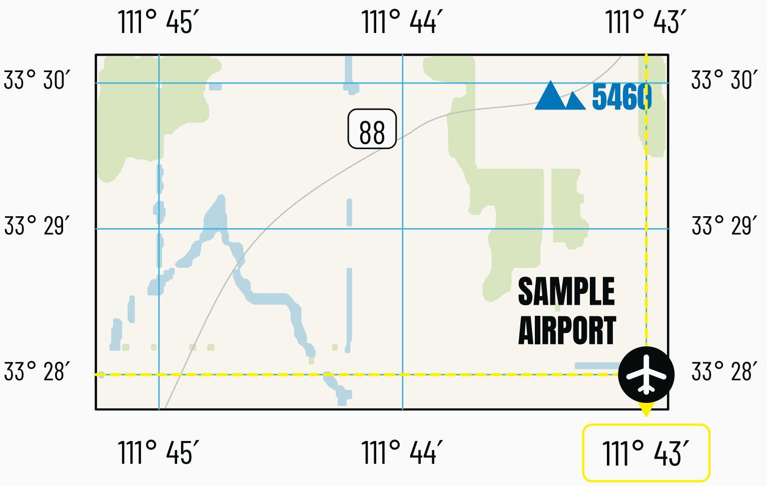


Vertical lines / east-west measurement

STEP-BY-STEP

1. Find the airport symbol on the map.
2. Trace horizontally to the side border to read latitude.
3. Trace vertically to the top or bottom border to read longitude.
4. Estimate the minutes if the airport is between tick marks.

PRACTICE MAP



Schematic — not for navigation

QUESTION:

What are the coordinates of Sample Airport?

ANSWER:

33° 28′ N / 111° 43′ W

Record LATITUDE first, then LONGITUDE.

NEED TO KNOW

COORDINATE FORMAT

Latitude example:

33° 28′ N

Longitude example:

111° 43′ W

KEY TERMS

- Degree (°) = major unit
- Minute (′) = subdivision of a degree
- 1° = 60′
- 1 minute latitude is about 1 NM

BORDER READING TIPS

- Latitude values are on the left or right chart borders (horizontal lines).
- Longitude values are on the top or bottom chart borders (vertical lines).
- On actual charts, use the labeled graticule and minute ticks.

FAA PART 107 STYLE QUESTION

? You are asked to determine the coordinates of an airport shown on a sectional chart. After locating the airport symbol, which should you record first?

A Longitude from the top or bottom border

B Latitude from the left or right border

C Elevation from the airport data block

D Magnetic variation from the chart legend

✓ CORRECT ANSWER: B

EXPLANATION:

Always record latitude first, then longitude. Latitude is taken from the left or right border. Longitude is taken from the top or bottom border.

Airspace	Weather	Clearance	Comms	Emergencies	Limits	Sectionals	Radar

METAR/TAF	Regulations	Night	Physiology	ADM	Performance	Waivers

LEARNING OBJECTIVE

Read and interpret latitude and longitude using the examples.

ACTIVE RECALL

Read the example aloud. What does each part of the coordinate mean?

APPLY THE CONCEPT

Use the illustrated steps to explain how you would locate a new coordinate pair.

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PERSONAL STUDY REFERENCE

REFERENCE KEY

Latitude / longitude / chart graticule

FAA Aeronautical Chart Users' Guide

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SECTIONAL STUDY MAP

FAA PART 107 / PASS SHEETS

START HERE

SECTIONAL STUDY MAP

WHAT IS THIS?

An illustrative practice map for practicing chart patterns. Geography and data are modified; never use it for navigation.

MEMORIZE THIS

- ✓ Study chart patterns—there may be many map questions.
- ✓ Read the airport data blocks.
- ✓ Check airspace rings first.
- ✓ Identify special use airspace.
- ✓ Match symbols to the key.

TEST TIP

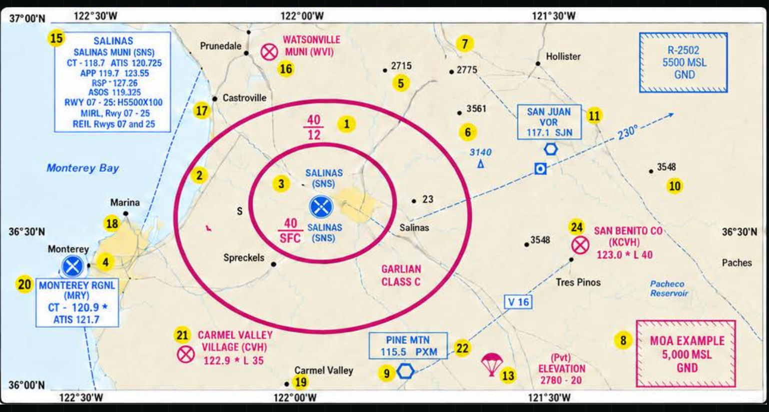
Identify the airspace, symbol, or airport detail you are looking at. Slow down and decode the chart.

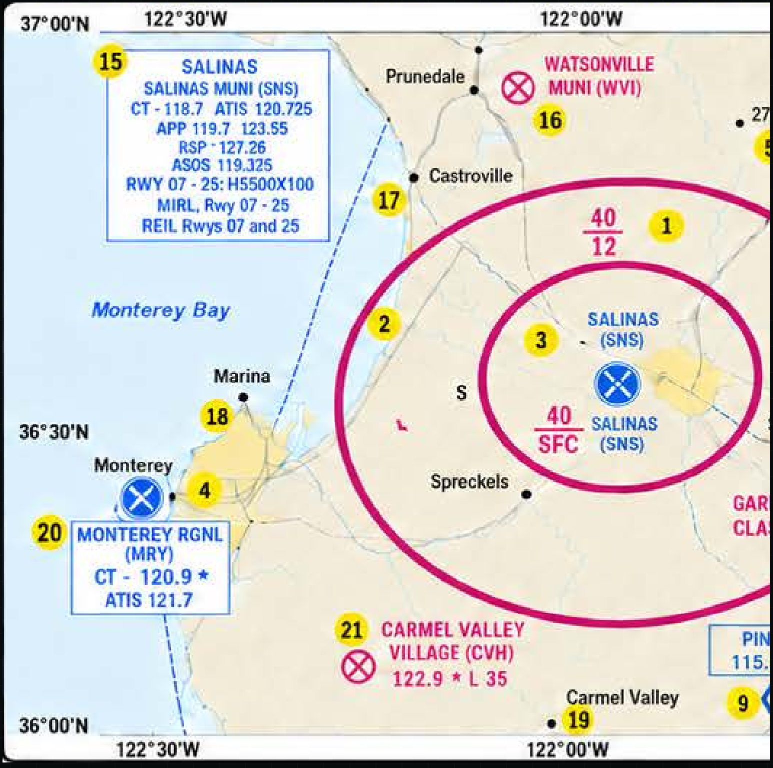
QUICK ANSWER

Symbol + boundary + altitude + data block.

ILLUSTRATIVE PRACTICE MAP

MODIFIED DATA • NOT FOR NAVIGATION


37°00'N
122°30'W
122°00'W
121°30'W
15
SALINAS
SALINAS MUNI (SNS)
CT - 118.7 ATIS 120.725
APP 119.7 123.55
RSP - 127.26
ASOS 119.325
RWY 07 - 25: H5500X100
MIRL, Rwy 07 - 25
REIL Rwys 07 and 25
Prunedale
WATSONVILLE
MUNI (WVI)
16
2715
5
2775
7
Hollister
R-2502
5500 MSL
GND
Castroville
17
40
12
1
3561
6
SAN JUAN
VOR
117.1 SJN
11
230°
3140
Monterey Bay
2
3
SALINAS
(SNS)
23
3548
10
Marina
18
S
40
SFC
SALINAS
(SNS)
Salinas
36°30'N
Monterey
4
Spreckels
24
SAN BENITO CO
(KCVH)
123.0 * L 40
3548
36°30'N
Paches
20
MONTEREY RGNL
(MRY)
CT - 120.9 *
ATIS 121.7
GARLIAN
CLASS C
Tres Pinos
Pacheco
Reservoir
V 16
21
CARMEL VALLEY
VILLAGE (CVH)
122.9 * L 35
PINE MTN
115.5 PXM
22
8
MOA EXAMPLE
5,000 MSL
GND
(Pvt)
ELEVATION
2780 - 20
13
9
Carmel Valley
19
36°00'N
122°30'W
122°00'W
121°30'W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ATIS 121.7
21
CARMEL VALLEY
VILLAGE (CVH)
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Carmel Valley
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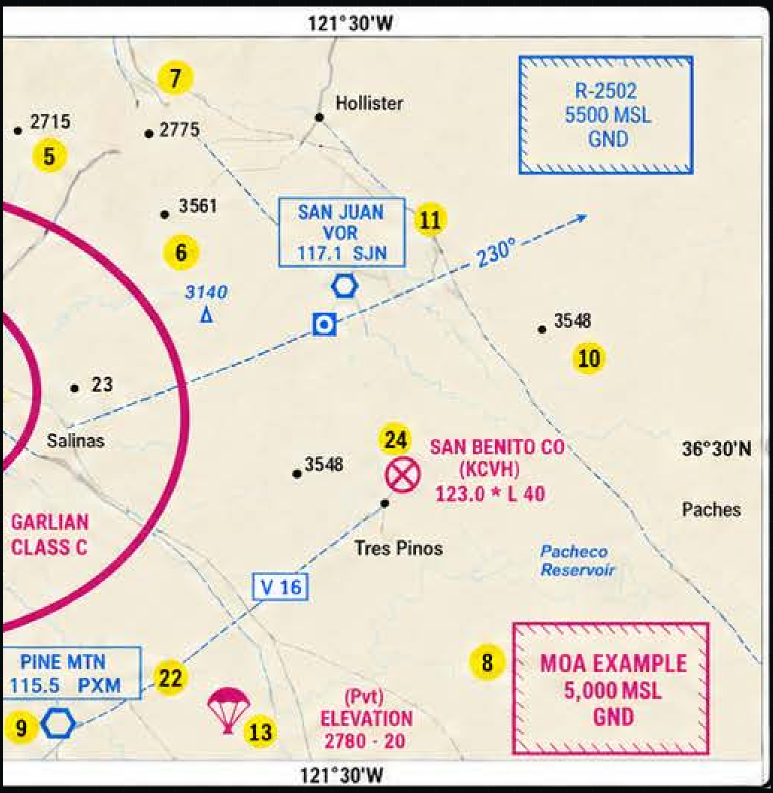
36°00'N
122°30'W
122°00'W


121°30'W
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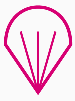
MOA EXAMPLE
5,000 MSL
GND
PINE MTN
115.5 PXM
22
9
13
(Pvt)
ELEVATION
2780 - 20
121°30'W

MAP KEY

1	40 12	Outer C shelf: 4,000 / 1,200 MSL
2	◠	Solid magenta: Class C boundary
3	40 SFC	Inner C: 4,000 MSL / surface
4	◌	Dashed blue: Class D boundary
5	• 2715	Terrain dot: 2,715 ft MSL
6	• 3561	Terrain dot: 3,561 ft MSL
7	• 2775	Terrain dot: 2,775 ft MSL
8	▨	MOA boundary: magenta hatching
9	⬡	VOR navigation aid symbol

10	• 3548	Terrain dot: 3,548 ft MSL
11	SAN JUAN 117.1 SJN	Navaid name / frequency box
12	5000 MSL GND	MOA: no automatic permission rule
13		Parachute jumping activity
14	R-2502 5500 MSL GND	Restricted area: permission / status
15	SALINAS CT / ATIS	Airport frequencies / services box
16	⊗	Magenta airport: nontowered
17	●	City / town location
18	●	City / town location (Marina)
19	●	City / town location (Carmel Valley)
20	MONTEREY CT / ATIS	Airport data: tower / ATIS
21	⊗	Magenta airport: nontowered
22	PINE MTN 115.5 PXM	Navaid frequency / identifier
23	• 23	Terrain dot: 23 ft MSL
24	⊗	Magenta airport: nontowered

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 What does the magenta ring around Salinas indicate?

Ⓐ Class D airspace

Ⓑ Class C airspace

Ⓒ MOA

Ⓓ Restricted area

✓ **Correct Answer: B**

Why: A solid magenta ring indicates Class C airspace.

2 What does the solid magenta inner ring around the study airport indicate?

Ⓐ Class C surface area

Ⓑ Special use airspace

Ⓒ Class D airspace

Ⓓ Prohibited area

✓ **Correct Answer: A**

Why: Solid magenta outlines Class C. Dashed blue outlines Class D.

3 What do the study labels ‘40 / 12’ and ‘40 / SFC’ mean?

Ⓐ Radio frequencies

Ⓑ Ceiling / floor in hundreds of feet MSL; SFC means the surface

Ⓒ Elevation of the airport

Ⓓ Runway lengths

✓ **Correct Answer: B**

Why: 40 / 12 = 4,000 / 1,200 ft MSL. 40 / SFC = 4,000 ft MSL to the surface.

4 If a question asks for airport information like CTAF, ATIS, or runway data, where should you look first?

Ⓐ Special use airspace box

Ⓑ Victor airway label

Ⓒ Airport data block

Ⓓ Terrain tint

✓ **Correct Answer: C**

Why: The airport data block contains key airport frequencies and runway information.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Combine chart symbols and location clues to interpret a sectional.

ACTIVE RECALL

What is the feature? Where is it? Which chart clue identifies it?

APPLY THE CONCEPT

Explain a practice answer by pointing to the map evidence that supports it.

REFERENCE KEY

Chart boundaries / symbols / airport data
FAA Aeronautical Chart Users' Guide

Restricted-area permission
14 CFR 107.45

Practice-map status
Illustrative modified data; not for navigation

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PASS SHEETS™

METAR / TAF SHEET

FAA PART 107 / PASS SHEETS

START HERE

METAR / TAF

WHAT IS THIS?

Decode observed and forecast aviation weather: wind, visibility, clouds, temperature, and pressure.

★ REMEMBER THIS

- ✓ CLOUD ORDER: FEW → SCT → BKN → OVC
- ✓ VISIBILITY RULE: P6SM = greater than 6 statute miles
- ✓ WIND: KT = knots; direction is TRUE
- ✓ ZULU TIP: Z = UTC (Zulu time)
- ✓ CLOUD HEIGHTS: Hundreds of feet AGL; ceiling = lowest BKN/OVC or vertical visibility
- ✓ METAR VS TAF: METAR = observed; TAF = forecast

⚠ TEST TIP

FEW030 = few clouds at 3,000 ft AGL. Multiply the three-digit height by 100.

QUICK ANSWER

METAR = observed | TAF = forecast

METAR REPORT BREAKDOWN

1 • Report Type • METAR

Routine aviation weather report (observed).

2 • Station Identifier • KPHX

Phoenix Sky Harbor (airport).

3 • Date & Time • 121751Z

12th at 17:51 UTC (Zulu).

4 • Wind • 21015G25KT

Direction 210° (true), 15 knots, gusts 25 knots (kt).

5 • Visibility • 10SM

10 statute miles (automated reports: 10 SM or more).

6 • Few Clouds • FEW030

Few clouds at 3,000 ft AGL.

7 • Scattered Clouds • SCT040

Scattered clouds at 4,000 ft AGL.

8 • Broken Clouds • BKN120

Broken clouds at 12,000 ft AGL.

9 • Temperature / Dew Point • 30/18

Temperature 30°C / Dew point 18°C.

10 • Altimeter • A2992

Altimeter 29.92 inHg.

11 • Remarks • RMK A02

Automated station with a precipitation discriminator (letter O, not zero).

Complete METAR Report:

METAR KPHX 121751Z 21015G25KT 10SM FEW030 SCT040 BKN120 30/18 A2992 RMK A02

TAF REPORT BREAKDOWN

1 • Report Type • TAF

Terminal Aerodrome Forecast (forecast).

2 • Station Identifier • KPHX

Phoenix Sky Harbor (airport).

3 • Issue Date & Time • 121720Z

Issued 12th at 17:20 UTC (Zulu).

4 • Valid Period • 1218/1318

Valid 12th at 18:00 UTC to 13th at 18:00 UTC (24 hours).

5 • Wind • 21015KT

Direction 210° (true) at 15 knots (kt).

6 • Visibility • P6SM

Visibility greater than 6 statute miles (> 6 SM).

7 • Clouds • FEW050

Few clouds at 5,000 ft AGL.

Complete TAF Report:

TAF KPHX 121720Z 1218/1318 21015KT P6SM FEW050

NEED TO KNOW

WIND & TIME

Direction is TRUE (not magnetic).
KT = knots (wind speed).
G## = gusting winds (## knots).
Z = Zulu time (UTC).

VISIBILITY & CLOUDS

SM = statute miles (visibility unit).
FEW = few clouds (>0–2/8).
SCT = scattered clouds (3–4/8).
BKN = broken clouds (5–7/8).
OVC = overcast (8/8).
Cloud heights are in hundreds of feet AGL (e.g., 030 = 3,000 ft).
Ceiling = lowest BKN/OVC layer or vertical visibility into obscuration.

CONDITIONS & METRICS

P6SM = visibility greater than 6 SM.
A2992 = altimeter 29.92 inHg.

REMARKS / SYSTEMS

RMK = remarks section (extra info).
AO2 = precipitation discriminator.
AO1 = no precipitation discriminator.

METAR

OBSERVED AT REPORT TIME.

TAF

FORECAST FOR VALID PERIOD.

METAR DECODER

KPHX

STATION = PHOENIX SKY HARBOR

121751Z

12TH DAY @ 17:51 ZULU (UTC)

21015G25KT

WIND: FROM 210° @ 15KT, GUST 25KT

10SM

VISIBILITY: 10 SM (automated: 10 SM or more)

FEW030

FEW CLOUDS AT 3,000′ AGL

SCT040

SCATTERED CLOUDS AT 4,000′ AGL

BKN120

BROKEN CLOUDS AT 12,000′ AGL

30/18

TEMP/DEW POINT: 30°C / 18°C

A2992

ALTIMETER: 29.92 INHG

RMK

REMARKS — additional, non-standard info follows

A02

AUTOMATED STATION WITH A PRECIPITATION DISCRIMINATOR

TAF DECODER

121720Z

ISSUED 12TH DAY AT 17:20 ZULU

1218/1318

VALID: 12TH @ 1800Z TO 13TH @ 1800Z

21015KT

WIND FROM 210° @ 15 KNOTS

P6SM

VISIBILITY: >6 SM

FEW050

FEW CLOUDS AT 5,000′ AGL

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Decode the weather report and forecast examples on this sheet.

ACTIVE RECALL

What is observed? What is forecast? What time period applies?

APPLY THE CONCEPT

Cover the decoded example and translate the report one group at a time.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

METAR / TAF decoding

FAA Aviation Weather Handbook; FAA AIM 7-1

DRONEZILLA
PASS SHEETS™

LIFT, DRAG & WEATHER EFFECTS

FAA PART 107 / PASS SHEETS

START HERE

LIFT, DRAG & WEATHER EFFECTS

WHAT IS THIS?

This sheet explains the 4 forces of flight and how weather affects drone performance. It helps you answer FAA Part 107 questions about lift, drag, thrust, weight, and environmental conditions that change aircraft performance.

MEMORIZE THIS

- ✓ Lift / rotor thrust = supports weight
- ✓ Weight = downward pull of gravity
- ✓ Thrust = force produced by propellers
- ✓ Drag = resistance from air pushing against motion
- ✓ Favorable air density: cool, dry, low altitude, high pressure.

TEST TIP

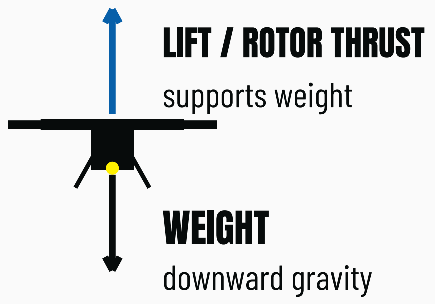
FAA questions often ask which weather conditions improve or reduce performance.

QUICK ANSWER

Dense air favors performance; cold can limit battery endurance.

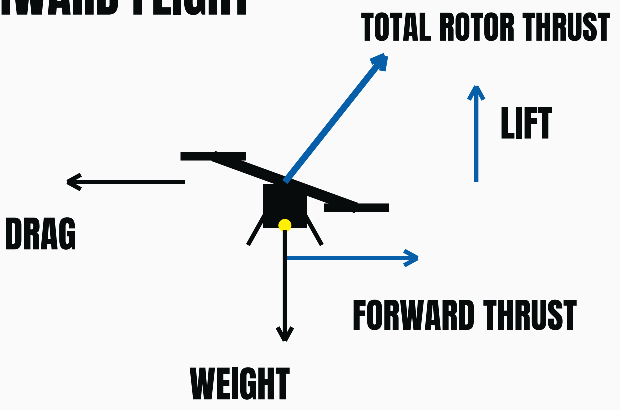
THE 4 FORCES OF FLIGHT

HOVER - STILL AIR



In a steady hover, upward rotor thrust balances weight.

FORWARD FLIGHT



LIFT	upward rotor thrust in hover
WEIGHT	downward pull of gravity
DRAG	resistance from air pushing against motion
THRUST	Upward in hover; tilting directs some thrust forward.

NEED TO KNOW

A • PERFORMANCE BASICS

At the same settings/configuration:
Dense air = greater lift/thrust capability
Thin air = reduced lift/thrust capability
Weather changes aircraft performance

B • BEST CONDITIONS

Cool air
Dry air
Sea level / low density altitude
High pressure

WEATHER EFFECTS ON FLIGHT

DENSITY ALTITUDE

Hot, humid, high = less dense air = less lift

HUMIDITY

More moisture = less dense air = less lift

WIND

Gusts can destabilize; headwinds increase energy needed to return

TEMPERATURE

Heat reduces air density; cold can reduce battery capacity and endurance

BAROMETRIC PRESSURE

Higher pressure = denser air = greater lift/thrust capability (all else equal).

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Which force opposes the drone’s motion through the air?

Ⓐ Lift
Ⓑ Drag
Ⓒ Weight

✓ **Correct Answer: B**

Why: Drag is the air resistance that pushes against motion.

2 Which conditions produce the best drone performance?

Ⓐ Hot, humid, high-elevation air
Ⓑ Cool, dry, sea-level air with high pressure
Ⓒ Warm air with low pressure.

✓ **Correct Answer: B**

Why: Cool, dry, dense air improves lift and aircraft performance.

3 What is the effect of high humidity on drone performance?

Ⓐ More lift because the air is heavier
Ⓑ Less lift because moist air is less dense
Ⓒ No effect on lift

✓ **Correct Answer: B**

Why: Humid air is less dense, which reduces lift.

4 What is a common effect of cold weather on drone operations?

Ⓐ Batteries last longer

Ⓑ More drag in calm air

Ⓒ Reduced battery performance

✓ **Correct Answer: C**

Why: Cold can reduce usable battery capacity, voltage and endurance.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar

METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Relate flight forces and weather effects to aircraft performance.

ACTIVE RECALL

Which forces oppose one another? Which weather factors affect performance?

APPLY THE CONCEPT

Explain one weather-to-performance relationship using the diagram or callouts.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

Air density / weather and performance
FAA Remote Pilot - Small UAS Study Guide

Rotor thrust / hover / forward flight
FAA Helicopter Flying Handbook, Chapter 2

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EMERGENCIES + FLIGHT LIMITS

FAA PART 107 / PASS SHEETS

START HERE

EMERGENCIES + FLIGHT LIMITS

WHAT IS THIS?

Handle emergencies safely and recognize key Part 107 limits.

MEMORIZE THIS

- ✓ Lost link: configured failsafe.
- ✓ Do not launch an unsafe aircraft.
- ✓ 400 ft AGL; structure exception.
- ✓ < 55 lb including payload.
- ✓ 100 mph / 87 knots maximum.

⚠ TEST TIP

GPS loss and lost link are different. Follow aircraft-specific procedures.

QUICK ANSWER

Regain control or land safely. Deviate only as necessary.

EMERGENCY SCENARIOS

LOST SIGNAL

Follow configured failsafe; regain control if safe.

GPS SIGNAL LOST

Follow aircraft-specific GPS-loss procedure.

FLYAWAY

Land if possible; report if reporting criteria are met.

LOW BATTERY

Land as soon as safely possible.

PREFLIGHT SYSTEM FAIL

Do not launch until assessed, resolved, and safe.

SUDDEN WIND/WEATHER

Land as soon as safely possible; maintain VLOS.

REPORTING

Qualifying accident:
report within 10 calendar days.
Emergency deviation:
written report if FAA requests.

PART 107 FLIGHT LIMITS

ALTITUDE

400 ft AGL; within 400 ft of a structure up to 400 ft above the top, subject to airspace limits.

TAKEOFF WEIGHT

Less than 55 lb including everything attached.

GROUNDSPEED

100 mph (87 knots).

NIGHT OPERATIONS

Anti-collision lighting visible 3 SM with sufficient flash rate to avoid collision.

VLOS

Required unless waived.

VISIBILITY

Minimum 3 SM from control station.

CLOUDS

500 ft below and 2,000 ft horizontal.

VEHICLE OPERATIONS

Operations from and over moving vehicles have separate conditions.

EMERGENCY RULE

Deviate only as necessary for an in-flight emergency requiring immediate action.

RIGHT-OF-WAY

Yield to all aircraft, airships, and launch/reentry vehicles.

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 You lose connection to the controller. Best immediate action?

Ⓐ Wait for GPS and finish using the camera.

Ⓑ Switch to ATTI mode and descend to 200 ft AGL.

Ⓒ Follow configured lost-link procedure; regain control if safe.

✓ **Correct Answer: C**

Why: Response depends on the aircraft and configured failsafe.

2 Preflight shows a sensor error. What should you do?

Ⓐ Launch with caution.

Ⓑ Calibrate the sensor, then launch without further checks.

Ⓒ Assess and resolve the issue; launch only when safe.

✓ **Correct Answer: C**

Why: Powering on does not prove flightworthiness.

3 A 52 lb drone plus payload weighs 57 lb. Legal under Part 107?

Ⓐ Yes, because the payload is removable.

Ⓑ No, total takeoff weight exceeds 55 lb.

Ⓒ Yes, if the drone's performance is not affected.

✓ **Correct Answer: B**

Why: Aircraft must weigh less THAN 55 lb at takeoff including payload.

4 A 1,000-ft tower; drone within 50 ft horizontally. Airspace permits. Maximum altitude by structure exception?

Ⓐ 400 ft AGL

Ⓑ 1,000 ft AGL

Ⓒ 1,400 ft AGL

✓ **Correct Answer: C**

Why: Within 400 ft of a structure, up to 400 ft above the top; airspace limits apply.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar

METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Recognize the limits and emergency concepts presented here.

ACTIVE RECALL

What failed? What is the immediate concern? Which limit applies?

APPLY THE CONCEPT

Explain your response to a scenario and identify the information you would check.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

Safety-event reporting
14 CFR 107.9

In-flight emergency deviations
14 CFR 107.21

Night / twilight lighting
14 CFR 107.29

Altitude / groundspeed / weather limits
14 CFR 107.51

Aircraft takeoff-weight definition
14 CFR 107.3

From / over moving vehicles
14 CFR 107.25, 107.145

Visual line of sight / right-of-way
14 CFR 107.31, 107.37

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PASS SHEETS™

LOST LINK & SYSTEM FAILURES

FAA PART 107 / PASS SHEETS

START HERE

LOST LINK & SYSTEM FAILURES

WHAT IS THIS?

Lost link is an interruption of the control signal. The aircraft may still be flying. Know its configured response and manufacturer procedures.

MEMORIZE THIS

- ✓ Control-link loss ≠ GPS loss
- ✓ RTH is not guaranteed
- ✓ Navigation and settings affect response
- ✓ Follow aircraft-specific procedures
- ✓ Protect people and property
- ✓ Inspect and troubleshoot before flying again

⚠ TEST TIP

Choose the aircraft’s configured response—not an assumed automatic return.

QUICK ANSWER

Know the failsafe. Follow the plan.

LOST LINK DEFINED

The control signal is interrupted. This does not necessarily mean motor failure or loss of navigation.

SYSTEM LOGIC

Response depends on aircraft, settings, navigation status and conditions.

Configured responses may include return, hover or landing.

Never assume Return-to-Home will work.

PILOT ACTIONS

Before launch:

configure a safe failsafe response and return altitude, if applicable.

During loss:

remain calm, maintain visual awareness and follow manufacturer reconnection/emergency procedures.

After landing:

inspect and troubleshoot before another flight.

WHEN FAA REPORTING IS REQUIRED

Within 10 calendar days

FAA reporting rule

Serious injury or any loss of consciousness

Other-property damage:

repair cost >$500, or total-loss fair market value >$500.

Damage only to the drone is excluded from this property threshold. A lost link alone is not automatically reportable.

EMERGENCY DEVIATION:

Deviate only as necessary for an in-flight emergency requiring immediate action. Submit a written deviation report if the FAA requests it.

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 What is lost link?

Ⓐ Low battery
Ⓑ GPS loss
Ⓒ Interrupted control signal
Ⓓ Motor failure

✓ **Correct Answer: C**

Why: The aircraft may still be flying.

2 Return is configured and navigation is available. What may the aircraft attempt?

Ⓐ Immediate landing
Ⓑ Fly away
Ⓒ Return-to-Home
Ⓓ Shut off motors

✓ **Correct Answer: C**

Why: RTH is one possible configured response.

3 Navigation is unavailable. What determines the failsafe action?

Ⓐ Manufacturer procedures and configuration
Ⓑ Always circle the pilot
Ⓒ Always shut off motors
Ⓓ Always hover forever

✓ **Correct Answer: A**

Why: Response is aircraft-specific.

4 What should follow a lost-link event?

Ⓐ Ignore it

Ⓑ Inspect/troubleshoot and report if reporting criteria apply

Ⓒ Buy a new drone

Ⓓ Fly again immediately

✓ **Correct Answer: B**

Why: Correct the issue and assess reporting criteria.

Airspace | Weather | Clearance | Comms | **Emergencies** | Limits | Sectionals | Radar

METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Distinguish system failure scenarios and their safety implications.

ACTIVE RECALL

What does the system do? What should the pilot plan or verify?

APPLY THE CONCEPT

Describe the difference between signal loss, navigation problems, and pilot response.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

Qualifying safety-event reporting
14 CFR 107.9

In-flight emergency deviations
14 CFR 107.21

Safe condition / preflight planning
14 CFR 107.15, 107.49

Aircraft-specific failsafe behavior
Aircraft manufacturer operating instructions

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MAINTENANCE & PREFLIGHT INSPECTIONS

FAA PART 107 / PASS SHEETS

START HERE

MAINTENANCE & PREFLIGHT

WHAT IS THIS?

Check the aircraft, crew and operating environment before takeoff. The remote PIC determines whether the system is safe to fly.

MEMORIZE THIS

- ✓ Enough power for the planned flight.
- ✓ Inspect propellers and secure attachments.
- ✓ Verify control links and system status.
- ✓ Review weather, airspace and ground hazards.
- ✓ Brief the crew; follow manufacturer guidance.
- ✓ Remote PIC checks safety before every flight.

⚠ TEST TIP

A cracked propeller means no takeoff. Replace it and recheck the aircraft.

QUICK ANSWER

Inspect first. Fly only when safe.

PREFLIGHT INSPECTION CHECKLIST

1 • BATTERY

Check condition, charge and secure mounting. Enough power for the intended flight.

2 • PROPELLERS

Inspect for cracks, chips or warping. Secure propellers and attached equipment.

3 • GPS / COMPASS

Check system status. Calibrate only as directed by the manufacturer.

4 • CONTROLLER

Verify control links, controls, display and controller battery.

5 • WEATHER & AIRSPACE

Review weather, restrictions, people, property and ground hazards.

CREW BRIEF:

conditions, emergency and contingency procedures, roles, responsibilities and hazards. For flight over people, verify the applicable category requirements.

MAINTENANCE PRACTICES & RECORDS

1 • FOLLOW THE MANUAL

Use manufacturer guidance for inspection, care and servicing.

2 • CORRECT DEFECTS

Repair or replace unsafe parts using appropriate procedures and compatible parts.

3 • KEEP REQUIRED RECORDS

Category 4 has specific maintenance and recordkeeping requirements. Follow applicable waiver or exemption conditions; routine logs are good practice.

REMOTE PIC RESPONSIBILITY

✓ Before every flight, determine the system is safe to operate. Do not continue flight if it becomes unsafe.

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Who checks that the system is safe before every flight?

Ⓐ Manufacturer
Ⓑ Remote PIC
Ⓒ ATC

✓ **Correct Answer: B**

Why: The remote PIC determines safe condition.

2 A propeller is cracked. What should you do?

Ⓐ Fly only in calm weather
Ⓑ Ignore a small crack
Ⓒ Replace it before flight.

✓ **Correct Answer: C**

Why: Correct the unsafe condition before takeoff.

3 What must the preflight environment assessment include?

Ⓐ Local weather and airspace
Ⓑ Social media alerts
Ⓒ Cabin pressure.

✓ **Correct Answer: A**

Why: Also assess people, property and ground hazards.

4 Where are specific maintenance records required?

Ⓐ Every hobby flight

Ⓑ Category 4 and applicable waiver or exemption conditions

Ⓒ Only after a crash.

✓ **Correct Answer: B**

Why: Category 4 has specific recordkeeping rules.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Connect maintenance and preflight checks with flight readiness.

ACTIVE RECALL

Which checks concern the aircraft? Which concern the operating environment?

APPLY THE CONCEPT

Explain the purpose of three preflight checks and the issue each could reveal.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES
PERSONAL STUDY REFERENCE

REFERENCE KEY

Condition for safe operation
14 CFR 107.15

Preflight assessment / crew briefing
14 CFR 107.49

Category 4 maintenance / records
14 CFR 107.140

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PASS SHEETS™

NIGHT OPERATIONS & LIGHTING REQUIREMENTS

FAA PART 107 / PASS SHEETS

START HERE

NIGHT OPERATIONS & LIGHTING

WHAT IS THIS?

Night flights require qualifying pilot knowledge or training, anti-collision lighting and compliance with all other operating rules.

REMEMBER THIS

- Anti-collision lights: visible for at least 3 statute miles.
- Flash rate sufficient to avoid collision.
- Remote PIC: qualifying test or training after April 6, 2021.
- Maintain visual line of sight.
- Civil twilight also requires anti-collision lights.
- Reduce intensity for safety; never extinguish required lights.

TEST TIP

Three statute miles describes the light’s visibility—not permission to fly the drone three miles away.

QUICK ANSWER

Qualified pilot + compliant lighting + safe operation.

WHAT NIGHT FLIGHT REQUIRES

1 • ANTI-COLLISION LIGHTING

Visible for at least 3 statute miles.

2 • FLASH RATE

Flashes fast enough to avoid a collision. Intensity may be reduced for safety, but lights may not be extinguished.

3 • VISUAL LINE OF SIGHT

See the aircraft well enough to determine location, attitude, altitude and direction, and detect hazards.

PILOT QUALIFICATION & NIGHT VISION

4 • QUALIFYING TEST OR TRAINING

Remote PIC must complete the required knowledge test or training after April 6, 2021. No night waiver needed when all requirements are met.

5 • CHECK LIGHTS BEFORE FLIGHT

Verify operation, mounting and battery endurance. Airspace authorization may still be required.

6 • REDUCED NIGHT VISION

Less detail, color and depth perception. Scan carefully, use off-center viewing for dim objects and protect dark adaptation.

CIVIL TWILIGHT

30 minutes before sunrise and 30 minutes after sunset, except Alaska (Air Almanac). Anti-collision lighting is required.

NIGHT-FLIGHT RULES

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Minimum anti-collision light visibility?

Ⓐ 1 statute mile

Ⓑ 3 statute miles

Ⓒ 5 statute miles

✓ **Correct Answer: B**

Why: At least 3 statute miles.

2 Night waiver needed when all night requirements are met?

Ⓐ Always

Ⓑ For commercial flights

Ⓒ No

✓ **Correct Answer: C**

Why: Qualifying pilot and compliant operation allow night flight.

3 What can make judging distance harder at night?

Ⓐ Improved peripheral vision

Ⓑ Faster reactions

Ⓒ Stronger contrast

Ⓓ Reduced depth perception

✓ **Correct Answer: D**

Why: Night vision reduces depth perception.

4 Required anti-collision light characteristic?

Ⓐ Steady only

Ⓑ Visible from 1 mile

Ⓒ Flash rate sufficient to avoid a collision

Ⓓ No lights needed

✓ **Correct Answer: C**

Why: A sufficient flash rate is required.

LEARNING OBJECTIVE

Recognize the night flight and lighting concepts presented here.

ACTIVE RECALL

What lighting is discussed? What preparation does night flight require?

APPLY THE CONCEPT

Explain the night-flight example using both the lighting and human-factor notes.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

Night / twilight lighting and operation
14 CFR 107.29

Qualifying knowledge test / training
14 CFR 107.65

Visual line of sight
14 CFR 107.31

Night vision / dark adaptation
FAA Remote Pilot - Small UAS Study Guide

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PHYSIOLOGICAL EFFECTS, DRUGS & ALCOHOL

FAA PART 107 / PASS SHEETS

START HERE

PHYSIOLOGY, DRUGS & ALCOHOL

WHAT IS THIS?

Alcohol limits, medication risks, and physical or mental conditions that can make flying unsafe.

★ REMEMBER THIS

- ✓ Wait at least 8 hours after the last drink.
- ✓ BAC 0.04% or greater = no flight duties.
- ✓ No duties while under the influence.
- ✓ No impairing drugs or medications.
- ✓ Fatigue, dehydration, stress and illness reduce performance.

⚠ TEST TIP

Eight hours alone does not make you fit to fly. You must also be below 0.04% and free of impairment.

QUICK ANSWER

Impaired or unfit? Do not fly.

ALCOHOL RESTRICTIONS

8 HOURS

Minimum wait after the last alcoholic drink.

0.04% BAC

No flight duties at or above this concentration.

No duties under the influence—even after 8 hours or below 0.04%.

Applies to remote PIC, control operator and visual observer.

DRUGS & MEDICATIONS

Do not perform flight duties while using any drug that impairs safe performance.

Prescription and over-the-counter medicines can cause drowsiness or slowed reactions.

Alcohol/drug testing and test-result disclosure may be required under FAA rules.

FITNESS TO FLY CHECK

- ✓ **Clear-minded**
- ✓ **Physically well**
- ✓ **Well-rested**
- ✓ **Not impaired**
- ✓ **Safe to operate**

PHYSIOLOGICAL FACTORS

FATIGUE

Slower reactions and poor decisions.

DEHYDRATION

Reduced focus and physical performance.

STRESS

Narrowed attention and reduced situational awareness.

ILLNESS

Impaired coordination, judgment

and safe operation

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Minimum wait after the last alcoholic drink?

Ⓐ 2 hours
Ⓑ 4 hours
Ⓒ 8 hours

✓ **Correct Answer: C**

Why: You must wait at least 8 hours after the last drink.

2 At what BAC are flight duties prohibited?

Ⓐ 0.02%
Ⓑ 0.04%
Ⓒ 0.08%

✓ **Correct Answer: B**

Why: Flight duties are prohibited at a BAC of 0.04% or greater.

3 Which condition can reduce focus and physical performance?

Ⓐ Dehydration
Ⓑ High pressure
Ⓒ Cool weather

✓ **Correct Answer: A**

Why: Dehydration reduces focus and performance.

4 Medication causes drowsiness. Safest action?

Ⓐ Fly in good weather
Ⓑ Shorten the flight
Ⓒ Do not fly.

✓ **Correct Answer: C**

Why: Impairing medication makes flight unsafe.

LEARNING OBJECTIVE

Recognize physiological and impairment factors relevant to flight.

ACTIVE RECALL

Which symptoms or substances can affect judgment and performance?

APPLY THE CONCEPT

Explain why personal readiness requires more than checking a single rule.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

Medical / fitness limitations
14 CFR 107.17

Alcohol / drugs / impairment
14 CFR 107.27; 91.17

Testing / test-result disclosure
14 CFR 91.17; 107.59

Human factors / physiological effects
FAA Remote Pilot - Small UAS Study Guide

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AERONAUTICAL DECISION MAKING & EGO AWARENESS

FAA PART 107 / PASS SHEETS

START HERE

ADM & EGO AWARENESS

WHAT IS THIS?

ADM is a systematic way to assess risk and choose the safest action. Recognize how attitudes and pressure affect your decisions.

★ REMEMBER THIS

- ✓ Good decisions start with self-awareness.
- ✓ Recognize hazardous attitudes; apply their antidotes.
- ✓ Use a structured decision process.
- ✓ Reassess risks as conditions change.
- ✓ Do not let ego or outside pressure drive the flight.

⚠ TEST TIP

Identify the hazardous thought first, then choose its matching antidote.

QUICK ANSWER

Recognize risk. Think first. Choose safety.

HAZARDOUS ATTITUDES & ANTIDOTES

ANTI-AUTHORITY

“Don’t tell me.”
↓
Follow the rules.

IMPULSIVITY

“Do it quickly.”
↓
Slow down. Think first.

INVULNERABILITY

"It won't happen to me."
↓
It could happen to me.

MACHO

"I can do it."
↓
Taking chances is foolish.

RESIGNATION

"What's the use?"
↓
I can make a difference.

DECIDE MODEL — ONE TOOL FOR ADM

1 • DETECT

A change needing attention

2 • ESTIMATE

The need to react

3 • CHOOSE

The desired outcome

4 • IDENTIFY

Actions to achieve it

5 • DO

The necessary actions

6 • EVALUATE

The outcome

REPEAT AS CONDITIONS CHANGE

WHY IT MATTERS

Safe decisions protect people and property.

Recognizing your own behavior helps reduce risk.

PUT ADM TO WORK

- ✓ **Think before acting**
- ✓ **Manage risk**
- ✓ **Reassess conditions**
- ✓ **Resist outside pressure**

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Which attitude says "It won't happen to me"?

Ⓐ Anti-authority
Ⓑ Impulsivity
Ⓒ Invulnerability
Ⓓ Resignation

✓ **Correct Answer: C**

Why: It underestimates personal risk.

2 In DECIDE, what follows Estimate?

Ⓐ Detect
Ⓑ Choose
Ⓒ Do
Ⓓ Evaluate

✓ **Correct Answer: B**

Why: Choose the desired outcome.

3 What is ADM's purpose?

Ⓐ Fly faster
Ⓑ Avoid maintenance
Ⓒ Make safe, informed decisions
Ⓓ Impress others

✓ **Correct Answer: C**

Why: Assess risk and choose safe actions.

4 Which attitude says “What’s the use”?

Ⓐ Macho

Ⓑ Resignation

Ⓒ Impulsivity

Ⓓ Anti-authority

✓ **Correct Answer: B**

Why: Giving up instead of taking useful action.

Hazardous attitudes are one part of ADM. Also assess risks, conditions and external pressures.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Recognize how attitudes and judgment can influence flight decisions.

ACTIVE RECALL

What changed? What decision is needed? How would you evaluate the result?

APPLY THE CONCEPT

Apply the decision model to a scenario and explain how you would manage pressure.

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PERSONAL STUDY REFERENCE

REFERENCE KEY

Hazardous attitudes / DECIDE / ADM

FAA AC 60-22; FAA Risk Management Handbook

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VISUAL OBSERVER + RPIC

FAA PART 107 / PASS SHEETS

START HERE

VISUAL OBSERVER + RPIC

WHAT IS THIS?

This sheet explains who is responsible for the flight, what a Remote Pilot in Command (RPIC) does, what a Visual Observer (VO) can and cannot do, and when a VO is needed on a Part 107 operation.

MEMORIZE THIS

- ✓ RPIC = ultimately responsible for the flight
- ✓ RPIC must be certified under Part 107
- ✓ VO helps maintain visual line of sight
- ✓ VO role does not itself authorize flight control
- ✓ Effective communication with RPIC and controls
- ✓ RPIC checks safe condition, weather, and airspace
- ✓ RPIC yields right of way to all aircraft

⚠ TEST TIP

The FAA may ask: “Who is ultimately responsible for the flight?”
Answer: The Remote Pilot in Command.

QUICK ANSWER

RPIC = responsible | VO = assists with VLOS

A. WHO IS THE RPIC?

The person responsible for the operation and safety of the flight.

Must be certified under Part 107.

When supervising the person at the controls, must be able to immediately take direct control of the aircraft.

B. VISUAL OBSERVER (VO)

Assists the RPIC in maintaining visual line of sight (VLOS). Unaided sight; corrective lenses allowed.

VO ROLE DOES NOT AUTHORIZE CONTROL.

Effective communication with the RPIC and person at controls (verbal, radio, or signal).

C. RPIC RESPONSIBILITIES

1. Conducting a preflight inspection
2. Ensuring the aircraft is in a condition for safe operation
3. Checking weather conditions and airspace restrictions
4. Abiding by all FAA regulations and waivers in use
5. Yielding right of way to all aircraft / airborne vehicles

D. WHEN A VO MAY BE USED

Optional under standard Part 107; useful for scanning traffic.

A waiver may impose VO requirements; read its conditions.

RPIC, person at controls and VO (if used) must be able to see the aircraft through flight. RPIC + operator, or VO, exercises observation.

E. RPIC vs VO

RPIC

Responsible for the flight
Certified under Part 107
Can control the aircraft
Makes flight decisions

VO

Assists the RPIC
Maintains visual line of sight
Communicates with RPIC
No control authority from VO role

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Who is ultimately responsible for the safe operation of a Part 107 flight?

Ⓐ The client

Ⓑ The Visual Observer

Ⓒ The Remote Pilot in Command

✓ **Correct Answer: C**

Why: The RPIC is legally responsible for the operation and safety of the flight.

② Which statement about a Visual Observer is true?

Ⓐ The VO may take over the controls if needed

Ⓑ The VO helps the RPIC maintain visual line of sight and must stay in communication

Ⓒ The VO replaces the need for an RPIC certificate

✓ **Correct Answer: B**

Why: The VO helps see and avoid and communicates with the RPIC. Flight control requires separate qualification or direct supervision.

③ Which is an RPIC responsibility before and during flight?

Ⓐ Ensuring the aircraft is safe to operate

Ⓑ Letting the VO make all airspace decisions

Ⓒ Ignoring weather if the mission is short

✓ **Correct Answer: A**

Why: The RPIC is responsible for preflight inspection, safe condition, weather, and airspace checks.

④ When may a VO be useful under standard Part 107?

Ⓐ To help scan for traffic in a complex environment while VLOS is maintained

Ⓑ Only at towered airports

Ⓒ Only for indoor operations

✓ **Correct Answer: A**

Why: A VO may help scan for hazards. Standard Part 107 does not require one; a VO does not authorize BVLOS.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | **Regulations** | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Distinguish the remote pilot in command from the visual observer.

ACTIVE RECALL

Explain the RPIC and VO roles without looking at the sheet.

APPLY THE CONCEPT

Describe how the RPIC and VO would communicate during a flight.

REFERENCE KEY

Pilot qualification / supervised controls
14 CFR 107.12

Remote PIC responsibility
14 CFR 107.19

VLOS / visual observer communication
14 CFR 107.31, 107.33

Safe condition / preflight / right-of-way
14 CFR 107.15, 107.49, 107.37

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SAFETY PROCEDURES & WAIVERS OVERVIEW

FAA PART 107 / PASS SHEETS

START HERE

SAFETY & WAIVERS

WHAT IS THIS?

Protect people, property and airspace. Know when standard rules allow an operation and when FAA approval is needed.

MEMORIZE THIS

- ✓ Over people: exception, eligible category or waiver.
- ✓ BVLOS generally requires a waiver under Part 107.
- ✓ Compliant night flight needs no night waiver.
- ✓ Yield to all other aircraft.
- ✓ Waiver approval is not airspace authorization.
- ✓ Assign roles and communicate.

⚠ TEST TIP

Night flight is allowed without a waiver when pilot qualification, lighting and other rules are met.

QUICK ANSWER

Meet the rules—or obtain approval before flight.

PEOPLE & PROPERTY

Over people:

An applicable exception, eligible Category 1–4 operation, or applicable waiver.

Over moving vehicles:

Category 1–3 need a closed/restricted site with occupant notice, OR no sustained flight over moving vehicles. Category 4 follows approved limitations.

Maintain safe separation

and yield to all aircraft, airborne vehicles, and launch/reentry vehicles.

WAIVER EXAMPLES

BVLOS

Night or twilight without required anti-collision lighting

Over people or moving vehicles outside standard allowances

Operating from a moving vehicle in populated areas

Examples—not an exhaustive list. FAA approval and waiver terms govern.

HOW TO APPLY

New operational waiver applications:

FAA Aviation Safety Hub.

Describe the operation, hazards, mitigations and safety justification.

FAA targets review within 90 days; timing varies.

CREW RESOURCE MANAGEMENT (CRM)

Assign roles; coordinate and communicate; use checklists.

Airspace authorization:

LAANC / FAA DroneZone. Separate from an operational waiver.

CATEGORY 1–4: OPERATIONS OVER PEOPLE

CATEGORY 1

0.55 lb or less throughout flight, including attachments. No exposed rotating parts that can lacerate skin on impact.

CATEGORY 2

Injury severity below an 11 ft-lb rigid-object impact. No lacerating exposed rotating parts or safety defects. FAA-accepted declaration and category label.

CATEGORY 3

Injury severity below a 25 ft-lb rigid-object impact; other aircraft eligibility requirements apply. No open-air assemblies. Closed/restricted site + notice, OR no sustained flight over unprotected nonparticipants.

CATEGORY 4

Part 21 airworthiness certificate. Follow approved operating limitations and required maintenance/records.

OPEN-AIR ASSEMBLIES

Category 3 prohibited. Sustained flight under Categories 1, 2 or 4 requires compliant Remote ID broadcasting and all applicable conditions. A FRIA alone is not sufficient.

PRACTICE QUESTIONS (FAA PART 107 STYLE)

1 Night flight without required anti-collision lighting needs what?

Ⓐ No approval
Ⓑ Applicable waiver
Ⓒ Only a crew briefing

✓ **Correct Answer: B**

Why: Standard lighting requirements must be met unless waived.

2 Over uninvolved, unprotected people outside standard exceptions requires what?

Ⓐ Any drone under 55 lb
Ⓑ Eligible category operation or waiver
Ⓒ VLOS alone

✓ **Correct Answer: B**

Why: Aircraft and operation must qualify.

3 Where are new Part 107 operational waiver applications submitted?

Ⓐ Insurance provider
Ⓑ FAA Aviation Safety Hub
Ⓒ Local police

✓ **Correct Answer: B**

Why: Use the current FAA waiver portal.

4 A key Crew Resource Management practice?

Ⓐ Avoid communication

Ⓑ Fly faster

Ⓒ Coordinate and communicate

✓ **Correct Answer: C**

Why: Clear roles and communication reduce errors.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Distinguish the safety procedure and waiver concepts shown here.

ACTIVE RECALL

Which procedure applies? Which category or waiver condition is relevant?

APPLY THE CONCEPT

Explain a practice scenario by separating routine procedures from waiver conditions.

REFERENCE KEY

People / categories / moving vehicles
14 CFR 107.39, 107.110-107.145

Operational waivers / waivable rules
14 CFR 107.200, 107.205

Night lighting / VLOS / moving platform
14 CFR 107.29, 107.31, 107.25

Remote ID over open-air assemblies
14 CFR 89.110; 89.115(a)

New operational waiver applications
FAA Aviation Safety Hub / Part 107 Waivers

Airspace authorization
14 CFR 107.41; FAA LAANC / DroneZone

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TEST-DAY CHECKLIST & FAST FACTS

FAA PART 107 / PASS SHEETS

START HERE

TEST-DAY CHECKLIST & FAST FACTS

WHAT IS THIS?

Your final review before entering the testing center.

MEMORIZE THIS

- ✓ Current ID that meets provider requirements.
- ✓ 2-hour time limit.
- ✓ 70% passing score.

⚠ TEST TIP

Practice sectional charts. Read every question carefully.

QUICK ANSWER

Prepare. Bring your ID. Stay calm.

NIGHT-BEFORE CHECKLIST

- Review key PASS SHEETS one more time.
- Skim important formulas, altitudes, and airspace.
- ✓ Check travel conditions for test day.
- Get a good night's sleep and stay hydrated.
- Trust your preparation. You've got this!

EXAM FACTS

60 scored questions

2-hour limit

70% to pass.

BRING TO TEST

- Current government-issued ID that meets provider requirements.
- Test confirmation email / code.
- FAA Tracking Number (FTN).
- Check provider ID and permitted-item rules.

NO ID = NO TEST.

Make sure your ID is current and meets provider requirements.

LAST-MINUTE TIPS

- Revisit airspace classes and requirements.
- Practice reading one sectional chart.
- Review emergency procedures and METAR basics.

STAY CALM. READ CAREFULLY. TRUST YOUR PREPARATION.

Airspace | Weather | Clearance | Comms | Emergencies | Limits | Sectionals | Radar
METAR/TAF | Regulations | Night | Physiology | ADM | Performance | Waivers

LEARNING OBJECTIVE

Organize test preparation and identify topics for further review.

ACTIVE RECALL

Can you recall the listed exam facts and preparation steps?

APPLY THE CONCEPT

Use the checklist to make a short plan for your remaining preparation.

DRONEZILLA PASS SHEETS / VISUAL STUDY SERIES

PERSONAL STUDY REFERENCE

REFERENCE KEY

UAG exam facts / identification

FAA Airman Knowledge Testing Matrix - UAG