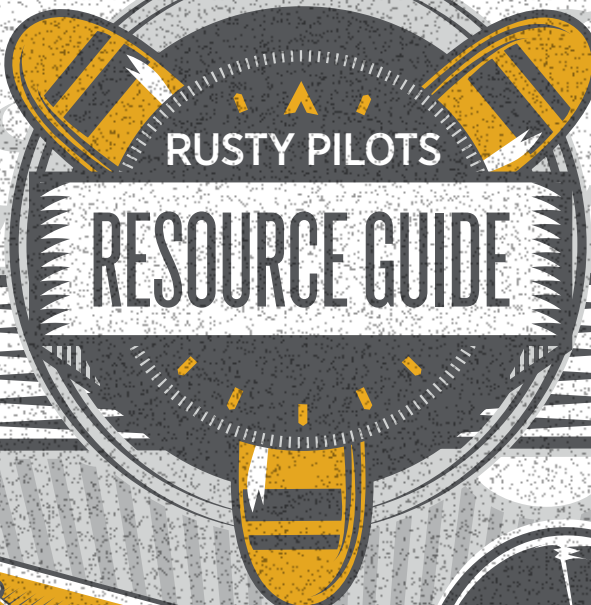


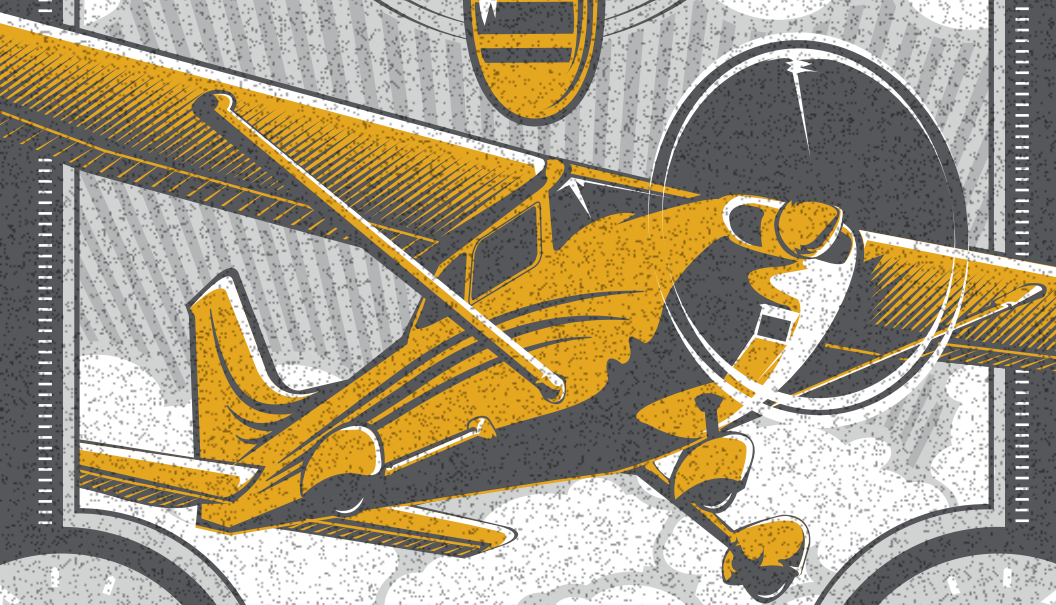


AOPA | YOU CAN FLY  
RUSTY PILOTS



RUSTY PILOTS

# RESOURCE GUIDE



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## WELCOME TO RUSTY PILOTS!

### Your First Step Back into the Left Seat

- We are very excited to see that you are returning to the aviation community. It's a huge step you've taken by joining us today and we're glad to have you back. Our Rusty Pilots motto is "Once a Pilot, Always a Pilot"—so let's get started and get you back in the air!

### Don't Forget that AOPA is Here for You!

- Completed your flight review? We want to know! Plus we'll send you a free Rusty Pilots patch. Just fill out the short online survey that you'll receive by email or contact us at **rustypilots@aopa.org**. Your responses help us to know how we're doing and earn continued support for the program.
- Medical issues or other aviation questions? Be sure to contact our team of aviation medical specialists and CFIs in AOPA's Pilot Information Center. Call **1-800-USA-AOPA**.
- Is your AOPA membership current? We'd love to have you in our family. Plus, you'll be able to enjoy a wealth of aviation resources, award-winning magazines, and more! Give our membership team a call at **1-800-USA-AOPA**.



## REGULATORY REQUIREMENTS

### Pilot Documents

- Plastic Pilot Certificate (14 CFR 61.19(g)) - no more paper certificate
- Government-issued photo ID (14 CFR 61.3)
- Flight review (14 CFR 61.56) - every 24 calendar months
- 90-day landing currency (14 CFR 61.57)
  - Day = 3 takeoffs and 3 landings
  - Night = 3 takeoffs and landings to a full stop (1 hour after sunset until 1 hour before sunrise)
- Medical Certificate (if required)
  - Medical Certificate (14 CFR 61.23) - Third Class Medical
  - Under 40 years old = 60 months
  - 40 years or older = 24 months
- BasicMed (14 CFR 68) (if required)

#### Can I fly under BasicMed now?

Yes, BasicMed became effective on May 1, 2017. Pilots can now visit their personal physician and complete an online course to become qualified under BasicMed. Get started here: [aopa.org/FitToFly](http://aopa.org/FitToFly)

#### How can I qualify for BasicMed?

- Hold a valid U.S. driver's license and comply with any restrictions.
- Have held a valid FAA medical certificate, regular or special issuance, on or after July 15, 2006.
- If you've never held a medical certificate, you will need to get an FAA medical certificate, regular or special issuance, from an AME one time only.
- If your regular or special issuance medical certificate lapsed before July 15, 2006, you will need to get a medical certificate from an AME one time only.



- If you have a medical history or diagnosis of certain cardiac, neurological, or mental health conditions, you will need a one-time only special issuance for each condition.
- If your most recent medical certificate has been suspended at any point in time or revoked, your most recent authorization for special issuance was withdrawn, or your most recent medical application was denied, you will need to obtain a new medical certificate before you can operate under BasicMed.

### **What will I have to do to take advantage of BasicMed?**

- At least every 48 months, visit a state licensed physician where he or she will perform an examination to complete the FAA's BasicMed comprehensive medical examination checklist (CMEC). The completed checklist is retained with your logbook or kept in an electronic format, and only made available to the FAA upon request.
- Every 24 calendar months, take a free, online medical education course, AOPA's online medical education course is available to all individuals, free of charge. When you complete the course, you will receive a certificate to be retained with your logbook or kept in an electronic format.

### **What are the aircraft and operating restrictions under BasicMed?**

You must fly an aircraft with a maximum certificated takeoff weight up to 6,000 pounds that is authorized to carry no more than six occupants; fly with no more than five passengers; conduct flights within the United States (unless authorized by the country in which the flight is conducted); fly at an indicated airspeed of 250 knots or less; and fly at an altitude at or below 18,000 feet mean sea level.

You will not be able to fly for compensation or hire, except in limited situations as permitted by FAR 61.113 such as charitable flying, sharing costs of flights with passengers, and flying in connection with a business only if the flight is incidental to that business and does not carry any passengers or property for compensation or hire.

## PRE-FLIGHT PREPARATION



### **Does BasicMed apply to flight instructors?**

**Yes.** The FAA has stated that “flight instructors meeting the requirements of this rule may act as PIC while giving flight training without holding a medical certificate, regardless of whether the person receiving flight training holds a medical certificate.”

### **What if I want to operate outside the BasicMed limitations?**

If you are BasicMed qualified but also hold a current FAA medical certificate, you may elect to exercise the privileges of your medical certificate as appropriate. However, if a pilot exercises BasicMed privileges while acting as pilot in command during any portion of a flight, then the entire flight must be conducted under BasicMed limitations.

### **What if I still have questions?**

- Check AOPA’s online Fit to Fly Resources for pilots and physicians at [aopa.org/FitToFly](http://aopa.org/FitToFly).
- Call the AOPA Pilot Information Center BasicMed number **888-462-3976**.
- You can also enroll in AOPA’s Pilot Protection Services to access our Legal Services Plan attorneys and medical certification specialists who can evaluate the facts of your individual circumstances to help you determine your eligibility to fly under BasicMed. Enroll today at [aopa.org/pps](http://aopa.org/pps).

### **Physical Condition: I’M SAFE Checklist**

- **Illness** (14 CFR 61.53)—May not operate an aircraft as PIC or required crewmember if unable to meet requirements of medical certificate or...
- **Medication** (14 CFR 61.53)—See the AOPA Medication Database: [www.aopa.org/Pilot-Resources/Medical/Medications-Database](http://www.aopa.org/Pilot-Resources/Medical/Medications-Database)
- **Stress**
- **Alcohol** (14 CFR 91.17)—At least 8 hours from bottle to throttle
- **Fatigue**
- **Emotion**



## AERONAUTICAL DECISION MAKING

### ASI “Do the Right Thing” Course and Safety Advisor

Most accidents that stem from bad decisions include at least one of the following factors:

**Utility:** Attempting to squeeze too much utility out of the airplane.

**Ability:** Pushing the limits of pilot skill or experience.

**Fun:** Trying to have too much fun in the airplane. This shows up in accident reports as buzzing, low-level flight, improper aerobatics, etc.

Good decision making is about avoiding the circumstances that lead to really tough choices.

**Go/No-Go?** It may seem obvious, but some of the best aeronautical decisions are made on the ground. A prudent preflight choice can eliminate the need to make a much more difficult in-flight decision.

**Beyond Go/No-Go:** So you’ve decided to go. Once in the air, you should enter a continuous decision-making cycle. Take the knowledge and information you already have, combine it with the new information you’re gathering as you fly, and actively decide how to proceed.

- **Anticipate:** What could go wrong? Effective decision making begins with anticipation—thinking about what could go wrong before it actually does.
- **Recognize:** Has something gone wrong? Avoid problems in flight by paying attention! The sooner you recognize a problem (or potential problem) and start thinking about how to handle it, the better.
- **Act:** Evaluate your options and choose one. Here’s where many pilots fail. They recognize the problem, but don’t do anything to confront it. Why? It’s inconvenient. Be prepared to act without delay, should the situation warrant it. Pilots sometimes tend to enter a state of denial when faced with a problem. At the risk of oversimplifying, the basic options available when a problem arises are as follows:
  1. Continue the flight as planned, paying very close attention to whatever is causing the problem;
  2. Continue the flight, deviating from the plan as necessary; or
  3. Get the airplane on the ground as soon as practical.
- **Evaluate:** After implementing a solution, evaluate the decision to see if you’re getting the desired results. If not, repeat the process.

# PRE-FLIGHT PREPARATION



## ASI VFR PILOT PERSONAL MINIMUMS CONTRACT

Personal minimums and decision-making criteria are best defined on the ground, free of external pressure and the workload of flying the aircraft. Writing them down makes it much easier to resist the temptation to “mentally negotiate” yourself into a tight spot, allowing your decision making to be clouded in the heat of the moment by emotion and hope.

This document defines the contract you make with yourself, your passengers, and your family.

Remember to update your personal minimums regularly to reflect your current proficiency in the aircraft you'll be flying.

### Instructions

- 1 Review all sections and determine your personal minimums specific to the type of aircraft you fly. If you're a new or rusty pilot, consider asking a CFI for help.
- 2 Fill in the information for each item.
- 3 Keep this contract with your flight bag for quick reference.
- 4 For a more detailed assessment of the potential risks before your next flight, take ASI's Flight Risk Evaluator online at [www.airsafetyinstitute.org/flightrisk](http://www.airsafetyinstitute.org/flightrisk).

### PILOT

MIN. HOURS (LAST 30/90 DAYS) \_\_\_\_\_ / \_\_\_\_\_  
MIN. HOURS IN TYPE (LAST 30/90 DAYS) \_\_\_\_\_ / \_\_\_\_\_  
MIN. LANDINGS (LAST 30/90 DAYS) \_\_\_\_\_ / \_\_\_\_\_  
NIGHT HOURS (LAST 30/90 DAYS) \_\_\_\_\_ / \_\_\_\_\_

VFR INTO IMC TRAINING COMPLETED WITHIN PAST 12 MONTHS

MIN. RECURRENT TRAINING COMPLETED  
(circle one) PAST 6 / 12 / 24 MONTHS

*ASI recommends recurrent training every 12 months with a CFI who's familiar with the aircraft make, model, and equipment.*



# PRE-FLIGHT PREPARATION



AT A MINIMUM, MY OVERALL WELLNESS SHOULD BE

ADEQUATE

OK

WELL

VERY WELL

*ASI recommends considering sleep, medications, alcohol, stress, and other factors that could affect the safety of flight.*

## WEATHER

MAX. WIND VELOCITY AND GUST \_\_\_\_\_

MAX. CROSSWIND \_\_\_\_\_

MIN. CEILING DAY \_\_\_\_\_ NIGHT \_\_\_\_\_

MIN. VISIBILITY DAY \_\_\_\_\_ NIGHT \_\_\_\_\_

## AIRPORT

RUNWAY MIN. LENGTH \_\_\_\_\_

RUNWAY MIN. WIDTH \_\_\_\_\_

*Aircraft performance degrades when density altitude is above 1,000 feet. As a result, ASI recommends adding 50 percent to the POH takeoff or landing distance over a 50-foot obstacle.*

## AIRCRAFT

MIN. FUEL RESERVES (hours : minutes)

DAY \_\_\_\_ : \_\_\_\_

NIGHT \_\_\_\_ : \_\_\_\_

*ASI recommends landing with at least one hour of fuel remaining.*

NIGHT FLIGHT IN A SINGLE-ENGINE AIRCRAFT Y / N

IF YES, LIST LIMITATIONS (e.g., no mountainous terrain, no over-water flights, will reach cruise altitude before sunset).

# PRE-FLIGHT PREPARATION



## I WILL

- Only fly when I am proficient with the aircraft limitations, performance, normal and emergency procedures, systems, and avionics.
- Use precautions when transitioning to different aircraft/ avionics/systems.
- Consider the risks of flying over mountainous terrain.
- Fly with a current GPS database, charts (or EFB), and a backup (as required).
- Consider increasing my personal minimums if friends and family are on board.
- Always get a recorded FAA weather briefing and file/activate a flight plan for flights away from home base.
- Request flight following if services are available.
- Fly with a qualified pilot or CFI (or postpone the flight) if my personal minimums are not met.

Pilot signature \_\_\_\_\_

CFI/witness \_\_\_\_\_

Last updated \_\_\_\_ / \_\_\_\_ / \_\_\_\_

The IFR PILOT PERSONAL MINIMUMS CONTRACT is available online at [airsafetyinstitute.org/ifrcontract](https://airsafetyinstitute.org/ifrcontract).

©AOPA Air Safety Institute



## AIRCRAFT AIRWORTHINESS REQUIREMENTS

### Aircraft Documents (ARROW PC)

- Airworthiness Cert
- Registration Cert (re-registration every 3 years)
- Radio Station License (\*only for international flights)
- Operating Handbook (N# or SN#)
- Weight and Balance
- Placards
- Compass Card

### Required Maintenance & Inspections (AVIATE) Note: IFR inspections marked with\*

- Airworthiness Directives (one time vs. recurring)
- VOR Check (every 30 days)\*
- Inspections (Annual & 100 hour [if used for instruction or hire])
- Altimeter/Static system (every 24 calendar months)\*
- Transponder (every 24 calendar months)
- ELT inspection (12 calendar months; plus half useful life of battery or 1 hour of cumulative use)

### Preventive Maintenance

According to 14 CFR Part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration, the holder of a pilot certificate issued under 14 CFR Part 61 may perform specified preventive maintenance on any aircraft owned or operated by that pilot, as long as the aircraft is not used under 14 CFR Part 121, 127, 129, or 135. See FAA pamphlet (FAA-P-8740-15) for more information.

# PRE-FLIGHT PREPARATION



Here are several important points to understand before you attempt to perform your own preventive maintenance:

- You need to understand that authorized preventive maintenance cannot involve complex assembly operations.
- You should carefully review 14 CFR Part 43, Appendix A, Subpart C (Preventive Maintenance), which provides a list of the authorized preventive maintenance work that an owner pilot may perform.
- You should conduct a self-analysis as to whether you have the ability to perform the work satisfactorily and safely.
- If you do any of the preventive maintenance authorized in 14 CFR Part 43, you will need to make an entry in the appropriate logbook or record system in order to document the work done. The entry must include the following information:

A description of the work performed, or references to data that are acceptable to the Administrator.

The date of completion.

The signature, certificate number, and kind of certificate held by the person performing the work. Note that the signature constitutes approval for return to service only for work performed.

## **14 CFR 91.7 (PIC Responsibility for Airworthiness)**

- No person may operate a civil aircraft unless it is in an airworthy condition.
- The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.



## WEATHER: METAR & TAF DECODER

### Key to TAF and METAR (Front)

**TAF** KPIT 091730Z 0918/1024 15005KT 5SM HZ FEW020 WS010/31022KT  
 FM091930 30015G25KT 3SM SHRA OVC015  
 TEMPO 0920/0922 1/2SM +TSRA OVC008CB  
 FM100100 27008KT 5SM SHRA BKN020 OVC040  
 PROB30 1004/1007 1SM -RA BR  
 FM101015 18005KT 6SM -SHRA OVC020  
 BECMG 1013/1015 P6SM NSW SKC

**NOTE:** Users are cautioned to confirm **DATE** and **TIME** of the TAF. For example FM100000 is 0000Z on the **10th**. Do not confuse with **1000Z!**

**METAR** KPIT 091955Z COR 22015G25KT 3/4SM R28L/2600FT TSRA OVC010CB 18/16 A2992  
 RMK SLP045 T01820159

Forecast	Explanation	Report
<b>TAF</b>	Message type: <b>TAF</b> -routine or <b>TAF AMD</b> -amended forecast, <b>METAR</b> -hourly, <b>SPECI</b> -special or <b>TESTM</b> -non-commissioned ASOS report	<b>METAR</b>
<b>KPIT</b>	ICAO location indicator	<b>KPIT</b>
<b>091730Z</b>	Issuance time: ALL times in UTC "Z", 2-digit date, 4-digit time	<b>091955Z</b>
<b>0918/1024</b>	Valid period, either 24 hours or 30 hours. The first 2 digits of EACH 4-digit number indicate the date of the valid period, the final 2 digits indicate the time (valid from 18Z on the 9th to 24Z on the 10th).	
	In U.S. METAR: <b>CO</b> rected of; or <b>AUTO</b> mated ob for automated report with no human intervention; omitted when observer logs on.	<b>COR</b>
<b>15005KT</b>	Wind: 3 digit true-north direction, nearest 10 degrees (or VaRiaBle); next 2-3 digits for speed and unit, KT (KMH or MPS); as needed, Gust and maximum speed; 00000KT for calm; for METAR, if direction varies 60 degrees or more, Variability appended, e.g., 180V260	<b>22015G25KT</b>
<b>5SM</b>	Prevailing visibility; in U.S., Statute Miles & fractions; above 6 miles in TAF Plus6SM. (Or, 4-digit minimum visibility in meters and as required, lowest value with direction)	<b>3/4SM</b>
	Runway Visual Range: R; 2-digit runway designator Left, Center, or Right as needed; "R", Minus or Plus in U.S., 4-digit value, FeeT in U.S., (usually meters elsewhere); 4-digit value Variability 4-digit value (and tendency Down, Up or No change)	<b>R28L/2600FT</b>
<b>HZ</b>	Significant present, forecast and recent weather: see table (on back)	<b>TSRA</b>
<b>FEW020</b>	Cloud amount, height and type: Sky Clear 0/8, FEW >0/8-2/8, ScaTtered 3/8- 4/8, BroKeN 5/8-7/8, OverCast 8/8; 3-digit height in hundreds of ft; Towering CUmulus or CumulonimBus in <b>METAR</b> ; in <b>TAF</b> , only CB. Vertical Visibility for obscured sky and height "W004". More than 1 layer may be reported or forecast. In automated <b>METAR</b> reports only, CLeaR for "clear below 12,000 feet"	<b>OVC 010CB</b>
	Temperature: degrees Celsius; first 2 digits; temperature "/" last 2 digits, dew- point temperature; Minus for below zero, e.g., M06	<b>18/16</b>
	Altimeter setting: indicator and 4 digits; in U.S., A-inches and hundredths; (Q- hectoPascals, e.g., Q1013)	<b>A2992</b>
<b>WS010/ 31022KT</b>	In U.S. <b>TAF</b> , non-convective low-level (≤2,000 ft) Wind Shear; 3-digit height (hundreds of ft); "/"; 3-digit wind direction and 2-3 digit wind speed above the indicated height, and unit, KT	

# PRE-FLIGHT PREPARATION



## Key to TAF and METAR (Back)

Forecast	Explanation	Report
	In <b>METAR</b> , ReMark indicator & remarks. For example: Sea-Level Pressure in hectoPascals & tenths, as shown: 1004.5 hPa; Temp/dew-point in tenths _C, as shown: temp. 18.2_C, dew-point 15.9_C	<b>RMK SLP045 T01820159</b>
<b>FM091930</b>	From: changes are expected at: 2-digit date, 2-digit hour, and 2-digit minute beginning time; indicates significant change. Each FM starts on a new line, indented 5 spaces	
<b>TEMPO 0920/0922</b>	TEMPOrary: changes expected for <1 hour and in total, < half of the period between the 2-digit date and 2-digit hour beginning, and 2-digit date and 2-digit hour ending time	
<b>PROB30 1004/1007</b>	PROBability and 2-digit percent (30 or 40): probable condition in the period between the 2-digit date & 2-digit hour beginning time, and the 2- digit date and 2-digit hour ending time	
<b>BECMG 1013/1015</b>	BECoMinG: change expected in the period between the 2-digit date and 2-digit hour beginning time, and the 2-digit date and 2-digit hour ending time	

### Table of Significant Present, Forecast and Recent Weather - Grouped in categories and used in the order listed below; or as needed in TAF, No Significant Weather.

#### Qualifiers

##### Intensity or Proximity

“-” = light

No sign = Moderate

“+” = Heavy

“VC” = Vicinity, but not at aerodrome. In the US METAR, 5 to 10 SM from the point of observation. In the US TAF, 5 to 10 SM from the center of the runway complex. Elsewhere, within 8000m.

#### Descriptor

**BC** – Patches

**BL** – Blowing

**DR** – Drifting

**FZ** – Freezing

**MI** – Shallow

**PR** – Partial

**SH** – Showers

**TS** – Thunderstorm

#### Weather Phenomena

##### Precipitation

**DZ** – Drizzle

**GR** – Hail

**GS** – Small Hail/Snow Pellets

**IC** – Ice Crystals

**PL** – Ice Pellets

**RA** – Rain

**SG** – Snow Grains

**SN** – Snow

**UP** – Unknown Precipitation in automated observations

##### Obscuration

**BR** – Mist ( $\geq 5/8SM$ )

**DU** – Widespread Dust

**FG** – Fog ( $\leq 5/8SM$ )

**FU** – Smoke

**HZ** – Haze

**PY** – Spray

**SA** – Sand

**VA** – Volcanic Ash

##### Other

**DS** – Dust Storm

**FC** – Funnel Cloud

**+FC** – Tornado or Waterspout

**PO** – Well developed dust or sand whirls

**SQ** – Squall

**SS** – Sandstorm

Explanations in parentheses “( )” indicate different worldwide practices.

Ceiling is not specified; defined as the lowest broken or overcast layer, or the vertical visibility.

NWS TAFs exclude BECMG groups and temperature forecasts, NWS TAFs do not use PROB in the first 9 hours of a TAF; NWS METARs exclude trend forecasts. US Military TAFs include Turbulence and Icing groups.



## WEATHER INFORMATION:

**This website will record your transaction.**

**1800wxbrief.com**

If using an EFB, the company may record your briefing to FAA satisfaction. Check accordingly.

**This website provides information only.**

**aviationweather.gov**

## WEATHER BRIEFING OVER THE PHONE:

**1-800-WX Brief (1-800-992-7433)**

Information you will need to provide once they answer (just say it all - do not pause in between items for them to respond):

- **Certificate you hold:** Private pilot, Commercial pilot, etc.
- **Type of flight:** VFR or IFR
- **Aircraft number:** N\_\_\_\_\_
- **Type of aircraft:** Make / Model
- **Departure point**
- **Route of flight**
- **Arrival point**
- **Altitude**
- **Estimated time of departure** (specify local or Zulu)
- **Estimated time en route**
- **Type of briefing requested:** Standard Briefing, Outlook Briefing, Abbreviated Briefing

**Example:** *Good morning. I am a private pilot and will be making a VFR flight in N14GA which is a Cessna Skyhawk. I'll be departing out of SRQ direct to ISM at 3500'. Time of departure will be 2:00pm local and time en route will be approximately 45 minutes. I would like a Standard Briefing.*

# PRE-FLIGHT PREPARATION



Just remember, you are talking to a person and not a computer. If you forget something, they will ask about it. At any time, you can ask for additional information as well.

The briefer will respond with the following information:

- Adverse conditions
- VFR not recommended (if applicable)
- Synopsis
- Current conditions
- En route forecast
- Destination forecast
- Forecast winds and temperatures aloft
- Notices to Airmen (NOTAM)
- Other information

Search online for “**FAA Weather Briefing Form**” and you’ll find an easy to use form.

## SUMMARY OF TYPES OF NOTAMS

### FDC NOTAMS

Flight Data Center NOTAMS are NOTAMS that are regulatory in nature, such as changes to an instrument approach procedure or airway. Temporary Flight Restrictions (TFRs) are also issued as FDC NOTAMS.

### NOTAM (D)

A NOTAM (D) is a NOTAM given (in addition to local dissemination) distant dissemination beyond the area of responsibility of the Flight Service Station. This type of NOTAM now includes (U) NOTAMS and (O) NOTAMS. (U) NOTAMS are unverified NOTAMS which are those that are received from a source other than airport management and have not yet been confirmed by management personnel. This is allowed only at those airports where airport management has authorized it by Letter of Agreement. (O) NOTAMS are other aeronautical information which does not meet NOTAM criteria but may be beneficial to aircraft operations.

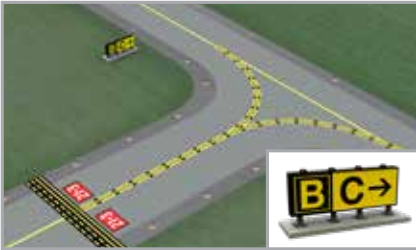




## AIRPORT SIGNAGE

Adapted from *ASI Runway Safety Flash Cards* available online at [nxtbook.com/nxtbooks/aopa/runwaysafetyflashcard/index.php](http://nxtbook.com/nxtbooks/aopa/runwaysafetyflashcard/index.php)

### Taxiway Direction Sign



In many cases, taxiway direction signs are placed next to taxiway location signs. The black sign tells you which taxiway you're on, while the yellow sign identifies an upcoming taxiway.

*Ref. AIM Para. 2-3-9/10*

### Destination Sign



Indicates the direction of a taxi route to a runway(s) or other location.

*Ref. AIM Para. 2-3-11*

### Taxiway Location Sign

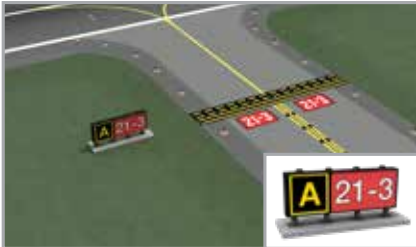


Indicates the taxiway on which the aircraft is located. At larger airports, some taxiways have alphanumeric identifiers (e.g., A3, A4) and some have double-same designators (e.g., AA, BB).

*Ref. AIM Para. 2-3-9-a-1*



## Runway Holding Position Sign (Collocated with Taxiway Location Sign)



Located next to the yellow holding position surface marking on taxiways for taxiway/runway intersections. This sign is often collocated with a taxiway location. In this example, the threshold for Runway 21 is to the left and the threshold for Runway 3 is to the right. Aircraft may not move beyond this sign/markings unless instructed by ATC at towered airports, or by ensuring adequate separation of aircraft at non-towered airports.

Ref. AIM Para. 2-3-8-b-2

## Runway Approach Area Holding Position Sign



Located next to the yellow holding position surface markings. Taxiing past this sign may interfere with arriving or departing aircraft. Hold short of this location when instructed by ATC.

Ref. AIM Para. 2-3-8-b-2; 4-3-18-a-8

## ILS Critical Area Holding Position Sign



Located next to the yellow surface-painted ILS critical area marking. Aircraft taxiing beyond this point may interfere with the ILS signal. Hold short of this location when instructed by ATC.

Ref. AIM Para. 2-3-8-b-3; 4-3-18-a-8



## No Entry Sign



Prohibits an aircraft from entering an area, such as a one-way taxiway or the intersection of a road intended for vehicles.

*Ref. AIM Para. 2-3-8-b-4*

## Runway Location Sign



Identifies the runway on which the aircraft is located.

*Ref. AIM Para. 2-3-9-a-2*

## Runway Distance Remaining Sign



Indicates the distance of runway remaining in thousands of feet. In this example, 3,000 feet remain on the landing runway. These are usually seen at larger airports.

*Ref. AIM Para. 2-3-13*



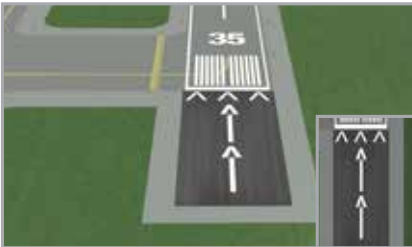
## Runway Markings



Runway markings vary with the size and type of runway, but they are always white.

*Ref. AIM Para. 2-3-3*

## Displaced Threshold

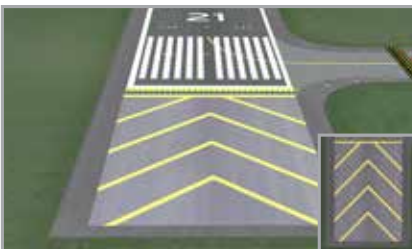


A displaced threshold designates where the runway's landing area starts. White arrows along the centerline of the runway indicate the portion between the beginning of the runway and the displaced threshold. This portion is available for takeoffs in both directions and landings from the opposite direction.

\*Unless declared distances are in effect. Consult the FAA U.S. Chart Supplements (formerly, Airport/Facility Directory (A/FD)) to confirm available landing distances in each direction.

*Ref. AIM Para. 2-3-3-h-2*

## Chevron Markings



Indicate areas of pavement aligned with the runway that are unusable for taxi, takeoff, or landing. Chevrons cover blast pads or stopways, which are constructed to protect areas from erosion caused by jet blast and to provide extra stopping distance for aircraft (stopways).

*Ref. AIM Para. 2-3-3-i-1*



## Non-movement Area Boundary Markings



These markings can be seen at towered airports where hangar or apron areas are located adjacent to a taxiway. The dashed side indicates the movement area, which is under ATC control, and the solid line indicates the nonmovement area (e.g., FBO ramps and hangar areas), which is not under ATC control.

*Ref. AIM Para. 2-3-6-c*

## Runway Holding Position Markings on Taxiways (Runway Perspective)



The dashed lines of the holding position marking are always on the runway side. Aircraft exiting the runway are not considered “clear” until they’re across the entire marking. From the runway perspective, the pavement markings are mirrored by a runway boundary sign with the same symbol as the pavement markings.

*Ref. AIM Para. 2-3-5-a-1*

## Taxiway Markings



Specific marking styles vary somewhat, but taxiway markings are always yellow.

*Ref. AIM Para. 2-3-4*



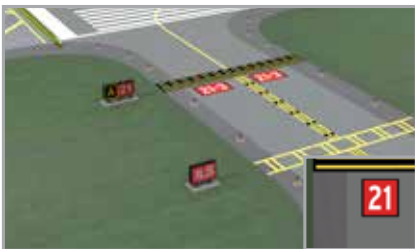
## Enhanced Taxiway Centerline Markings



These markings indicate that the aircraft is approaching a runway. Prior to a runway holding position marking, the taxiway centerline will be “enhanced” to include a set of yellow dashed lines. Installed at more than 500 airports throughout the U.S., these dashed yellow markings extend 150 feet from the runway holding position on either side of taxiway centerlines.

*Ref. AIM Para. 2-3-4-b-2*

## Surface-painted Holding Position Sign



A single surface-painted holding position sign that is centered on the taxiway centerline is used on taxiways that are 35 feet wide or less, one or two signs are used for taxiways wider than 35 feet, and repetitive signs (placed on both sides of the taxiway centerline) are used only on taxiways that are wider than 200 feet.

*Ref. AIM Para. 2-3-5-3-d, AC 150/5340*

## Holding Position Marking for Taxiway/Taxiway Intersections



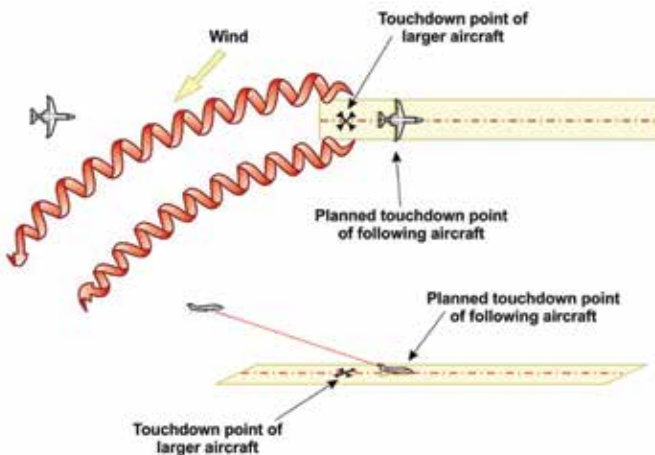
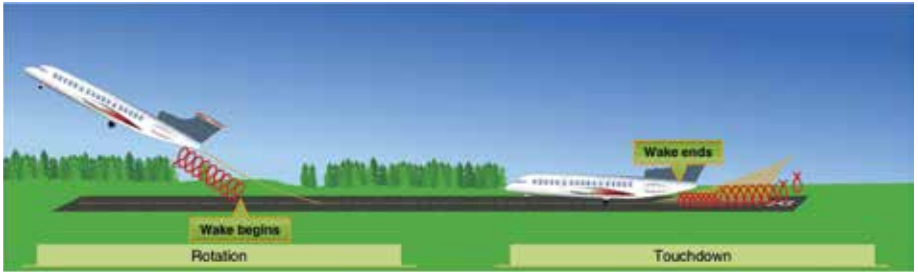
Extending across the width of a taxiway, this yellow dashed line indicates where an aircraft should stop if instructed to do so by ATC. When the marking is not present, stop the aircraft to provide adequate clearance from an aircraft on the intersecting taxiway.

*Ref. AIM Para. 2-3-5-c*



## WAKE TURBULENCE AVOIDANCE

Images adapted from *Pilot's Handbook of Aeronautical Knowledge* (Chapter 13).



### Vortex Avoidance Procedures

- **Landing behind a larger aircraft on the same runway**—stay at or above the larger aircraft's approach flight path and land beyond its touchdown point.
- **Landing behind a larger aircraft on a parallel runway closer than 2,500 feet**—consider the possibility of drift and stay at or above the larger aircraft's final approach flight path and note its touchdown point.
- **Landing behind a larger aircraft on crossing runway**—cross above the larger aircraft's flight path.



- **Landing behind a departing aircraft on the same runway**—land prior to the departing aircraft’s rotating point.
- **Landing behind a larger aircraft on a crossing runway**—note the aircraft’s rotation point and, if that point is past the intersection, continue and land prior to the intersection. If the larger aircraft rotates prior to the intersection, avoid flight below its flight path. Abandon the approach unless a landing is ensured well before reaching the intersection.
- **Departing behind a large aircraft**—rotate prior to the large aircraft’s rotation point and climb above its climb path until turning clear of the wake.
- **For intersection takeoffs on the same runway**—be alert to adjacent larger aircraft operations, particularly upwind of the runway of intended use. If an intersection takeoff clearance is received, avoid headings that cross below the larger aircraft’s path.
- If departing or landing after a large aircraft executing a low approach, missed approach, or touch-and-go landing, it is prudent to wait at least two minutes prior to takeoff or landing. Remember that vortices settle and move laterally near the ground. The vortex hazard may exist along the runway and in the flight path, particularly in a quartering tailwind.
- En route it is advisable to avoid a path below and behind a large aircraft, and if a large aircraft is observed above on the same track, change the aircraft position laterally and preferably upwind.
- See *Pilot’s Handbook of Aeronautical Knowledge* and AC 90-23G for full description.

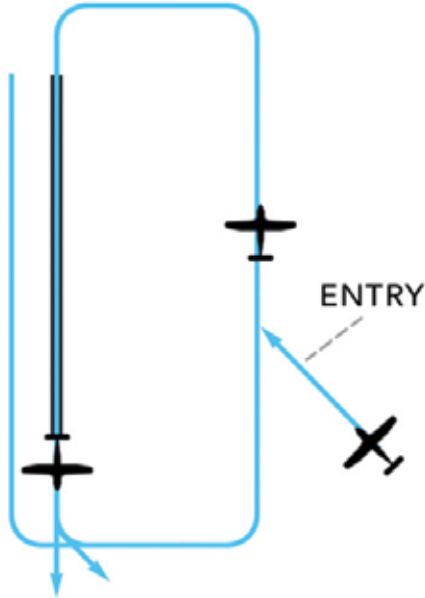
## “Line Up and Wait”

“Line Up and Wait” is the old “Position and Hold”; Query ATC if on the runway for more than 1 minute.





## Recommended Traffic Pattern Procedures



**Example:** Key to traffic pattern operations (from AIM 4-3-3)

1. Enter pattern in level flight, abeam the midpoint of the runway, at pattern altitude. (1,000' AGL is recommended pattern altitude unless established otherwise.)
2. Maintain pattern altitude until abeam approach end of the landing runway on downwind leg.
3. Complete turn to final at least 1/4 mile from the runway.
4. Continue straight ahead until beyond departure end of runway.
5. If remaining in the traffic pattern, commence turn to crosswind leg beyond the departure end of the runway within 300 feet of pattern altitude.
6. If departing the traffic pattern, continue straight out, or exit with a 45-degree turn (to the left when in a left-hand traffic pattern; to the right when in a right-hand traffic pattern) beyond the departure end of the runway, after reaching pattern altitude.



## CLEARANCE COMPONENTS

**Most Air Traffic Control clearances consist of five basic components (“CRAFT”):**

**Clearance limit:** Your destination airport or an intermediate fix.

**Route of flight:** Hopefully the route you filed, unless traffic conditions dictate otherwise.

**Altitude:** If not as requested, typically followed by when to expect climb or descent clearance.

**Frequency:** The radio frequency for departure control.

**Transponder:** Your four-digit squawk code.

## SAMPLE RADIO CALLS

**The following sample communications will help you frame various types of radio calls:**

When in doubt, remember the four Ws:

- **Who** you’re calling
- **Who** you are
- **Where** you are
- **What** you want



## Communications at a Non-Towered Airport

Be Specific. When you transmit, begin by stating:

- the name of the airport,
- followed by the model of your aircraft (Skyhawk, Cherokee, Bonanza, etc.) and the alphanumeric of the aircraft N number,
- state your intentions, and
- end by repeating the name of the airport.

**Example:** *Sebring traffic, Skyhawk 14GA entering left downwind Runway 19 Sebring.*

## Class D Airspace

### Departing: When ready to taxi

**Pilot:** *Kissimmee Ground, Skyhawk 14GA, north ramp, VFR, 4500 to Sebring with [information] Sierra.*

**Ground:** *Skyhawk 14GA, Kissimmee Ground, taxi to Runway 15 via Alpha.*

**Pilot:** *Taxi to Runway 15 via Alpha, Skyhawk 14GA.*

### Departing: When ready for takeoff

**Pilot:** *Kissimmee Tower, Skyhawk 14GA, Runway 15 ready for departure.*

**Tower:** *Skyhawk 14GA, Runway 15, cleared for takeoff.*

**Pilot:** *Cleared for takeoff, Runway 15, Skyhawk 14GA.*

### Arriving:

**Pilot:** *Kissimmee Tower, Skyhawk 14GA, 10 [miles] southwest at 2,500, inbound for landing with [information] Sierra.*

**Tower:** *Skyhawk 14GA, Kissimmee Tower, report entering left downwind Runway 15.*

**Pilot:** *Report entering left downwind Runway 15, Skyhawk 14GA.*

.....

**Pilot:** *Skyhawk 14GA entering left downwind, Runway 15.*

**Tower:** *Skyhawk 14GA, cleared to land, Runway 15.*

**Pilot:** *Cleared to land, Runway 15, Skyhawk 14GA.*







# RADIO COMMUNICATIONS



## Class D Lost Communications Procedure

- Squawk 7600
- Remain outside or above the Class D
- Determine the traffic flow and operation
- Enter the pattern and look for light signals from the tower

### ATC LIGHT GUN SIGNALS

COLOR AND TYPE OF SIGNAL	MEANING		
	AIRCRAFT ON THE GROUND	AIRCRAFT IN FLIGHT	MOVEMENT OF VEHICLES, EQUIPMENT AND PERSONNEL
 <b>STEADY GREEN</b>	Cleared for takeoff	Cleared to land	Cleared to cross; proceed; go
 <b>FLASHING GREEN</b>	Cleared to taxi	Return for landing (followed by steady green)	Not applicable
 <b>STEADY RED</b>	Stop	Give way to other aircraft and continue circling	Stop
 <b>FLASHING RED</b>	Taxi clear of landing area of runway in use	Airport unsafe - do not land	Clear the taxiway/runway
 <b>FLASHING WHITE</b>	Return to starting point on airport	Not applicable	Return to starting point on airport
 <b>ALTERNATING RED AND GREEN</b>	General warning signal - exercise extreme caution	General warning signal - exercise extreme caution	General warning signal - exercise extreme caution



## Class C or TRSA Airspace

### Departing: Getting your clearance:

- Pilot:** *Sarasota Clearance, Skyhawk 14GA.*
- Clearance:** *Skyhawk 14GA, go ahead.*
- Pilot:** *Skyhawk 14GA is a Cessna 172, VFR to Sebring at 5500 with [information] Charlie.*
- Clearance:** *Skyhawk 14GA, on departure, fly 360, maintain VFR at or below 1600, Tampa Departure is 119.65, squawk 0123.*
- Pilot:** *360, VFR at or below 1600, 119.65, squawk 0123, Skyhawk 14GA.*
- Clearance:** *Readback is correct. Contact ground on 121.9 when ready to taxi.*
- Pilot:** *121.9, Skyhawk 14GA.*

### Departing: When ready to taxi

- Pilot:** *Sarasota Ground, Skyhawk 14GA, general aviation ramp, ready to taxi with Charlie.*
- Ground:** *Skyhawk 14GA, Sarasota Ground, taxi to Runway 14 via Alpha.*
- Pilot:** *Taxi to Runway 14 via Alpha, Skyhawk 14GA.*

### Departing: When ready for takeoff

- Pilot:** *Sarasota Tower, Skyhawk 14GA, Runway 14, ready for departure.*
- Tower:** *Skyhawk 14GA, Runway 14 cleared for takeoff.*
- Pilot:** *Cleared for takeoff, Runway 14, Skyhawk 14GA.*

### Arriving

- Pilot:** *Tampa Approach, Skyhawk 14GA, 20 [miles] west at 5,500, landing Sarasota, with [information] Foxtrot.*
- ATC:** *Skyhawk 14GA, Tampa Approach, squawk 2150 and ident.*
- Pilot:** *Squawk 2150, Skyhawk 14GA.*
- ATC:** *Skyhawk 14GA, radar contact, fly heading 320, descend and maintain 4,500, maintain VFR.*
- Pilot:** *Fly heading 320, descend and maintain 4,500, maintain VFR, Skyhawk 14GA.*

# RADIO COMMUNICATIONS



## Class B Airspace

### Departing

Class B departure calls follow the same format as Class C or TRSA airspace. However, you may need to contact Clearance Delivery prior to calling Ground and provide them the four Ws.

### Arriving

**Pilot:** *Orlando Approach, Skyhawk 14GA, 20 [miles] northeast at 7,500, landing Orlando, with [information] Charlie.*

**ATC:** *Skyhawk 14GA, Orlando Approach, squawk 4323 and ident.*

**Pilot:** *Squawk 4323, Skyhawk 14GA.*

**ATC:** *Skyhawk 14GA, radar contact, cleared to enter Class Bravo airspace, fly heading 200, descend and maintain 3,000, maintain VFR.*

**Pilot:** *Cleared to enter Bravo airspace, fly heading 200, descend and maintain 3,000, maintain VFR, Skyhawk 14GA.*

### Transiting

**Pilot:** *Orlando Approach, Skyhawk 14GA, 20 [miles] northeast of Orlando VOR, at 7,500, en route Lakeland, request transit Class Bravo airspace.*

**ATC:** *Skyhawk 14GA, Orlando Approach, squawk 3121 and ident.*

**Pilot:** *Squawk 3121, Skyhawk 14GA.*

**ATC:** *Skyhawk 14GA, radar contact, 18 [miles] northeast of Orlando, altimeter 29.88, cleared through Class Bravo, direct Lakeland, descend and maintain 5,500, maintain VFR.*

**Pilot:** *Cleared through Class Bravo, direct Lakeland, descend and maintain 5,500, maintain VFR, Skyhawk 14GA.*

### Opening a VFR Flight Plan

**Pilot:** *St. Petersburg Radio, SKYHAWK 14GA, on 122.1.*

**Flight Service:** *Skyhawk 14GA, St. Petersburg Radio, go ahead.*

**Pilot:** *St. Petersburg Radio, open flight plan for Skyhawk 14GA from Sarasota to Kissimmee at 1835 Zulu.*

**Flight Service:** *Skyhawk 14GA, flight plan activated at 1835 Zulu, Sarasota altimeter 30.02. We'd appreciate any pilot reports.*



## Requesting/Canceling Flight Following

### Requesting

- Pilot:** *Miami Center, Skyhawk 14GA.*
- ATC:** *Skyhawk 14GA, Miami Center.*
- Pilot:** *Skyhawk 14GA over Lakeland VOR at 6,500, en route Sebring, request flight following.*
- ATC:** *Skyhawk 14GA, squawk 3314.*
- Pilot:** *Squawk 3314, Skyhawk 14GA.*

### Canceling

- Pilot:** *Miami Center, Skyhawk 14GA would like to cancel flight following.*
- ATC:** *Skyhawk 14GA, radar service terminated, squawk VFR, frequency change approved.*
- Pilot:** *Squawk VFR, Skyhawk 14GA.*

## Traffic Advisory Calls (while on VFR Flight Following)

- ATC:** *Skyhawk 14GA, Traffic 1 o'clock, 6 [miles], opposite direction, altitude indicates 4,500.*

ASI's Say It Right course recommends saying either "Traffic in sight" or "Negative contact." "Looking for traffic" is not found in the Pilot/Controller Glossary.

### If traffic not in sight:

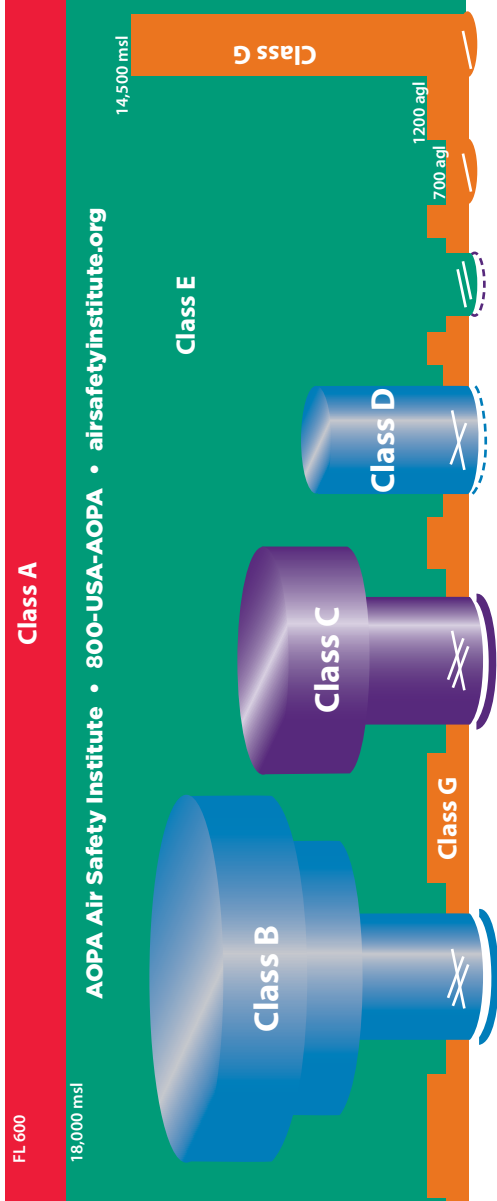
- Pilot:** *Negative contact, 14GA.*

### If traffic in sight:

- Pilot:** *14GA, Traffic in sight.*
- ATC:** *14GA, Roger.*



# Airspace-at-a-Glance







## Communication Requirements and Weather Minimums

Features	Class A	Class B	Class C	Class D	Class E	Class G
Minimum Pilot Qualifications	Instrument Rating	Student*	Student*	Student*	Student*	Student
Entry Requirements	IFR-ATC Clearance VFR Operations Prohibited	ATC Clearance	IFR-ATC Clearance VFR: Two-Way Communication w/ ATC	IFR-ATC Clearance VFR: Two-Way Communication w/ ATC	IFR-ATC Clearance VFR: None	None
Equipment Requirements	IFR Equipped	Two-Way Radio Transponder w/ Mode C	Two-Way Radio Transponder w/ Mode C	Two-Way Radio	No Specific Requirement	No Specific Requirement
VFR Visibility Below 10,000 msl**	N/A	3 Statute Miles	3 Statute Miles	3 Statute Miles	3 Statute Miles	Day: 1 Statute Mile Night: 3 Statute Miles
VFR Cloud Clearance Below 10,000 msl***	N/A	Clear of Clouds	500 Below 1,000 Above 2,000 Horizontal	500 Below 1,000 Above 2,000 Horizontal	500 Below*** 1,000 Above*** 2,000 Horizontal***	500 Below*** 1,000 Above*** 2,000 Horizontal***
VFR Visibility 10,000 msl and Above**	N/A	N/A	N/A	N/A	5 Statute Miles	5 Statute Miles
VFR Cloud Clearance 10,000 msl and Above	N/A	N/A	N/A	N/A	1,000 Below 1,000 Above 1 Statute Mile Horizontal	1,000 Below 1,000 Above 1 Statute Mile Horizontal

\* Prior to operating within Class B, C, or D airspace (or Class E airspace with an operating control tower), student, sport, and recreational pilots must meet the applicable FAR Part 61 training and endorsement requirements. Solo student, sport, and recreational pilot operations are prohibited at those airports listed in FAR Part 91, appendix D, section 4.

\*\* Student pilot operations require at least 3 statute miles during the day and 5 statute miles visibility at night.

\*\*\* Class G VFR cloud clearance at 1,200 agl and below (day); clear of clouds; Refer to 91.155(b) through (e) for additional regulations.

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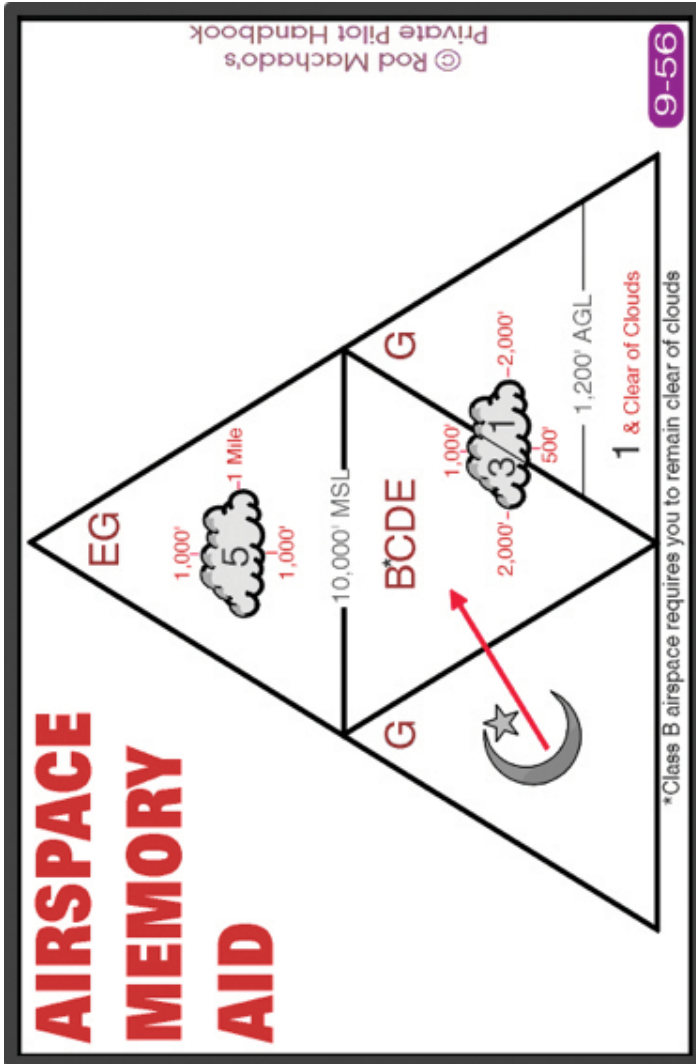


## Airspace Memory Aid

Source: Rod Machado's Private Pilot Handbook

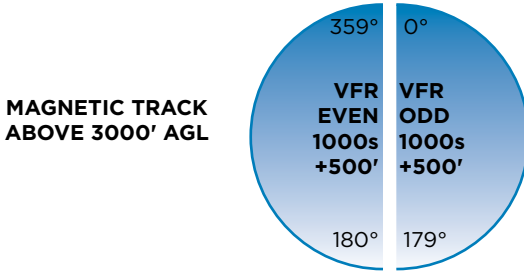
**rodmachado.com**

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## VFR Cruising Altitudes



## Military Training Routes (e.g. VR123 or IR1234)

- VR = Visual operations
- IR = Instrument operations
- Altitudes of operations
  - 3 Digits = higher than 1500' AGL
  - 4 Digits = at or below 1500' AGL
- Best practices to avoid conflicting with military traffic
  - Cross the MTR at a 90° angle
  - Be extra vigilant due to high speeds

## Special Use Airspace (SUA.FAA.gov)

### Military Operations Areas (MOAs)

- Marked by magenta hashed lines and labeled as MOA preceded by the name, these areas separate high-speed military traffic from commercial and general aviation.
- Refer to the side panel of the sectional chart for applicable altitudes, effective times, and contact information for controlling agencies.
- While VFR pilots are not prohibited from entering MOAs, they are cautioned to keep a watchful eye out for military operations such as aerial refueling, air combat training, and formation flying.

# AIRSPACE AND CHARTS



- A pilot may contact a flight service station or ATC center within 100 miles of the MOA to determine if it is active and, if so, may request traffic advisories from the controlling agency prior to entry.

## Restricted Areas

- These are marked by blue hashed lines and are identified on charts with an “R” followed by a number.
- Though not entirely prohibited to flight activity, these are areas in which unauthorized penetration is not only illegal, but also extremely dangerous.
- Altitudes and times differ for each restricted area and can be determined by consulting sectional chart legends.
- Restricted areas generally contain operations that do not mix well with aircraft such as artillery firing, guided missiles, or aerial gunnery.
- Permission to fly in restricted areas can be given by ATC.

## Prohibited Areas

- These are marked by blue hashed lines and are identified on charts with a “P” followed by a number.
- They are established for security reasons or for national welfare.
- Prohibited areas are, for all intents and purposes, permanently off limits.
- An example of a prohibited area is the White House or Camp David.
- Although these areas are charted, it is imperative to check notices to airmen (NOTAMs) before you fly, since some can change in size.



## Temporary Flight Restrictions (TFRs)

### ■ What is a TFR?

A type of Notice to Airmen (NOTAM). A TFR defines an area restricted to air travel due to a hazardous condition, a special event, or a general warning for the entire FAA airspace. The text of the actual TFR contains the fine points of the restriction.

It is an area where the FAA has determined that, in the interest of safety or national security, aircraft should not be flying.

### ■ TFRs are established by NOTAM

For natural or manmade disasters & relief operations, Presidential or other VIPs, space operations, and other events that could draw a lot of public attention for sightseeing (sporting events, amusement parks, etc).

### ■ How do I find out about them?

Pre-flight weather briefing (phone or online)

FAA's TFR site: [tfr.faa.gov](http://tfr.faa.gov)

Inflight talk to ATC or FSS for possible pop-up TFRs

TFR Map: [aopa.org/tfrs](http://aopa.org/tfrs)

### ■ You are responsible for avoiding TFRs!

Remember that TFRs over areas like sporting events are under a published TFR and each individual game is not included in your briefing. You need to be aware of the game schedule or just avoid the area—these TFRs go from the surface to 3000 AGL out to 3 nm radius.

Many of the EFB products will highlight these for the games (check your software to see).

On the Sectional, Terminal Area Chart, and many electronic versions, stadiums are identified with the  symbol.

### ■ “If it’s a TFR, how can you fly through it?”

ATC can authorize you to fly through most TFRs (if written in NOTAM).

## BONUS! Air Safety Institute’s Airspace Online Resources:

- Airspace Flash cards
- “Know Before You Go” online course
- See the Rusty Pilots Safety Spotlight on [aopa.org](http://aopa.org)



## RUSTY PILOTS RESOURCE LIST

- Aircraft Spruce ([aircraftspruce.com](http://aircraftspruce.com))  
Everything your airplane may need. Check out their Flight Training section for review materials.
- ASA ([asa2fly.com](http://asa2fly.com))  
Offers mobile and online courses and has a huge selection of aviation books and training materials.
- ASI Rusty Pilots Safety Spotlight  
[aopa.org/safetyspotlights/rustypilots](http://aopa.org/safetyspotlights/rustypilots)
- FAA Safety Team ([faasafety.gov](http://faasafety.gov))  
Tons of free online courses and resources. Also your HQ for FAA WINGS credit.
- Gleim ([gleim.com](http://gleim.com))  
Has an online flight review refresher course and multiple online ground schools and online courses.
- Jeppesen ([jeppesen.com](http://jeppesen.com))  
Offers a series of e-books, online, and mobile training.
- King Schools ([kingschools.com](http://kingschools.com))  
Check out their “Return to Flying” series with both VFR and IFR reviews.
- MZeroA.com ([m0a.com](http://m0a.com))  
Check out the “Flying Again” video and book made about rusty pilots. Offers online ground schools and great instructional videos.
- PilotWorkshop.com ([pilotworkshop.com](http://pilotworkshop.com))  
Sign up for their free Tip of the Week series. A weekly quick review of some great flying tips. Check out their “Real World” VFR and IFR series of videos.
- Rod Machado’s Aviation Learning Center ([rodmachado.com](http://rodmachado.com))  
Excellent learning materials with a fun sense of humor. Features some of the best aviation education graphics in the industry
- SiriusXM Aviation ([siriusxm.com/daretocompare](http://siriusxm.com/daretocompare))  
There are differences between SiriusXM and ADS-B weather. Watch the Air Safety Institute video on Datalink Weather Choices & Capabilities at [aopa.org/safetyvideos/dlweather](http://aopa.org/safetyvideos/dlweather) to decide which is right for you.
- Sporty’s ([sportys.com](http://sportys.com))  
Stocks everything you need for the cockpit. Offers mobile and online ground school and training courses.



## **AOPA Air Safety Institute**

The AOPA Air Safety Institute (ASI) offers free online safety education to help pilots of all skill levels increase their knowledge and proficiency. From online videos and safety quizzes to seminars and flight instructor refresher courses (FIRC)s, ASI keeps pilots thinking and actively engaged. Visit [airsafetyinstitute.org](http://airsafetyinstitute.org) for a complete listing of online programs and a schedule of in-person courses.

## **AOPA Foundation**

AOPA's Air Safety Institute and You Can Fly program, including the Rusty Pilots initiative, are entirely funded by charitable donations to the AOPA Foundation, a 501(c)(3) organization. These programs are making general aviation more accessible, more affordable, and safer. To join the community of pilots dedicated to being a part of the solution, visit [aopafoundation.org/donate](http://aopafoundation.org/donate).

## **AOPA Pilot Information Center**

From insights on flight training, advice on buying and maintaining aircraft, flying internationally, to medical certification, digital product support and more, our staff of experienced pilots and CFIs are only a phone call away; standing by Monday through Friday 8:30 a.m. - 6:00 p.m. (ET). Call our toll-free hotline at **800.USA.AOPA (872.2672)** today.

## **Affordable Flying**

Looking for economical flying options after you get back into flying? Then join—or form—a flying club! Flying clubs not only make flying affordable and accessible, but they offer social activities that will keep you active, engaged, and part of the aviation community. Visit the Flying Clubs website at [aopa.org/flyingclubs](http://aopa.org/flyingclubs).

## RESOURCES



### **AOPA Flight Planner – Powered by Jeppesen**

As you get back in the left seat, take control of your flight with our exclusive, web-based flight planner that allows you to plan, save and file flight plans at your convenience. Unique features include: graphical route briefings, predictive fuel warnings, fuel along route with airport filters, predictive route weather, a range estimating tool, and the ability to send flight plans to most of the popular EFB apps. Find out more at [aopa.org/aboutflightplanner](http://aopa.org/aboutflightplanner).

### **Renter Insurance**

Insurance is the last thing you want to think about while getting back into the left seat. Protect yourself and your family with a renter insurance policy from AssuredPartners Aerospace, AOPA's preferred provider of aviation insurance. This insurance covers you when the owner's primary policy does not. Learn more at [ap-aerospace.com](http://ap-aerospace.com).

### **Pilot Protection Services**

Getting your pilot and medical certificates back means everything. AOPA's Pilot Protection Services' trusted legal counselors and medical certification specialists can help safeguard your certificates at an affordable price, especially if facing an FAA action or investigation. We assist thousands of members each year with certificate-related legal and medical issues. This exclusive members-only coverage is preventive maintenance in case an incident, accident, or a medical situation occurs. Learn more at [aopa.org/pps](http://aopa.org/pps).

### **Aircraft Finance**

If you're thinking about purchasing an airplane for business or personal travel, AOPA Aviation Finance is available to help you find the right financing for new or used general aviation aircraft. We offer a variety of loan structures including attractive fixed-rates, 5-20 year terms, and convenient auto-pay options. Learn more at [finance.aopa.org](http://finance.aopa.org).





## AOPA Fly-Ins

Join us in 2020 for our two-day, fully interactive fly-ins where you'll find educational workshops and seminars, social events, fly-outs, excursions, exhibits, aircraft displays, volunteer opportunities and more. Locations include San Marcos, Texas (KHYI) May 29-30, Casper, Wyoming (KCPR) June 19-20, and Rochester, New York (KROC) September 11-12. Visit [aopa.org/flyins](https://aopa.org/flyins) for more information.

## AOPA Pilot Gear

Look good and do good! Whether you wear it, use it, display it, or give it as a gift, AOPA branded gear does more than show your passion for GA—it supports AOPA's mission to protect your freedom to fly. Visit AOPA Pilot Gear at [aopapilotgear.com](https://aopapilotgear.com).

# NOTES



FLY MORE. PAY LESS.

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- Meet people who share your enthusiasm for flying
- Find new places to go and pursue new ratings

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