AOPA FOUNDATION

RUSTY PILOTS

RUSTY PILOTS RESOURCE GUIDE

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WELCOME TO AOPA's RUSTY PILOTS!

Your First Step to Rediscovering Your Passion for Flight.

- 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!

The AOPA Foundation Aviation Programs inspire, educate, and support current and future aviators through initiatives that introduce young people to aviation, help aspiring pilots earn their certificates, make flying more accessible and affordable, reconnect lapsed pilots with flying, and provide scholarships that expand access to opportunity. Through these donor-funded programs, the AOPA Foundation is building a stronger, safer, and more vibrant future for general aviation. Visit **aopa.org/aviationprograms** to learn more.

- Completed your flight review? 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.
- Flying Clubs are a great way to experience GA and share the costs with other like-minded folks. We can help you find or start a flying club in your area. Interested? Just email **FlyingClubNetwork@aopa.org** or visit **aopa.org/flyingclubs.**
- Medical issues or other aviation questions? Contact our team of aviation medical specialists and CFIs in AOPA's Pilot Information Center at **1.800.USA.AOPA**.
- Getting current is just the start. Join AOPA and add Pilot Protection Services. You'll have access to legal services, medical support, and safety education, all from an organization that fights for GA every day, so you can fly with confidence from day one. Visit **aopa.org/join**.

REGULATORY REQUIREMENTS

Pilot Documents

- Plastic Pilot Certificate (14 CFR 61.19(g)) (14 CFR 61.3(a)(1))
- Government-issued photo ID (14 CFR 61.3(a)(2))
- 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 3 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 calendar months
  40 years or older = 24 calendar 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: **basicmedicalcourse.aopa.org.**

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 Aviation Medical Examiner (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 calendar 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 of not more than 12,500 pounds that is authorized to carry no more than 7 occupants; fly with no more than 6 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.

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 **basicmedicalcourse.aopa.org**.
- Call the AOPA Pilot Information Center BasicMed number at **888.462.3976** to access our aviation and medical certification specialists who can evaluate the facts of your individual circumstances to help you determine your eligibility to fly under BasicMed.
- You can also enroll in AOPA's Pilot Protection Services to access our Legal Services Plan attorneys. Enroll today at **aopa.org/pps**.

Physical Condition: I'M SAFE Checklist

- **I**llness (14 CFR 61.53) - May not operate an aircraft as PIC or required crewmember during medical deficiency
- **M**edication (14 CFR 61.53) - Are you taking any prescriptions or over-the-counter medications? Are they FAA approved? AOPA members can access the AOPA Medication Database: **aopa.org/go-fly/medical-resources/search-faa-medication-database**
- **S**tress
- **A**lcohol (14 CFR 91.17) - At least 8 hours from bottle to throttle
- **F**atigue
- **E**motion

AERONAUTICAL DECISION MAKING

AOPA Air Safety Institute (ASI) "Do the Right Thing" Course and Safety Spotlight

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.

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 will be flying.

Instructions

1. Review all sections and determine your personal minimums specific to the type of aircraft you fly. If you are 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, download and use the FAA's Flight Risk Assessment Tool at **bit.ly/faaflightrisk**.

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 is familiar with the aircraft make, model, and equipment.

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).

_____
_____
_____

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**.

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AIRCRAFT AIRWORTHINESS REQUIREMENTS

Aircraft Documents (ARROW PC)

Airworthiness Certificate

Registration Certificate (re-registration every seven years)

Radio Station License (only for international flights)

Operating Limitations (*Pilot Operating Handbook* or Aircraft flight manual) (N# or SN#)

Weight and Balance

Placards

Compass Card

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

Airworthiness Directives (one-time vs. recurring)

VOR check (every 30 days)*

Inspections (Annual & 100-hour [if used for instruction or hire])

Altimeter/Pitot-Static system (every 24 calendar months)*

Transponder (every 24 calendar months)

ELT inspection (12 calendar months; plus half the useful life of the 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.

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: the signature constitutes approval for return to service only for work performed.

14 CFR 91.7 (PIC Responsibility for Airworthiness)

As a certificated pilot you can perform preventive maintenance, subject to some limitations. CFR 43.3(g) says so. Before doing so, however, it would be wise to review the bullet points below:

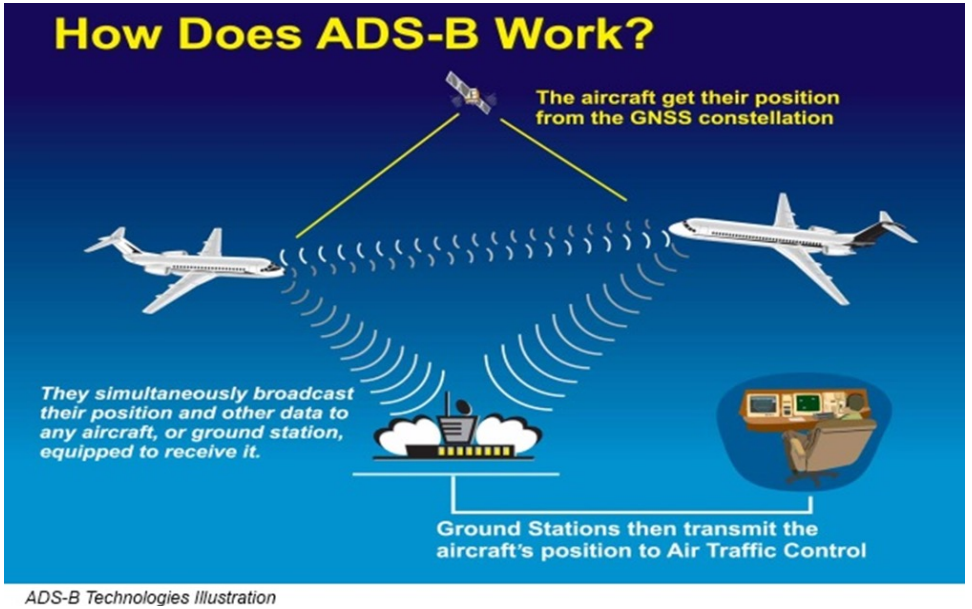
- No person may operate a civil aircraft unless it is in an airworthy condition.
- The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical,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

ADS-B OUT (AUTOMATIC DEPENDENT SURVEILLANCE - BROADCAST)

What is Automatic Dependent Surveillance – Broadcast?

- A primary technology supporting the FAA's Next Generation Air Transportation System (NextGen).
- Shifts aircraft separation and air traffic control from ground-based radar to satellite-derived positions.
- Required in the continental U.S. since January 1, 2020, under FAR 91.225.

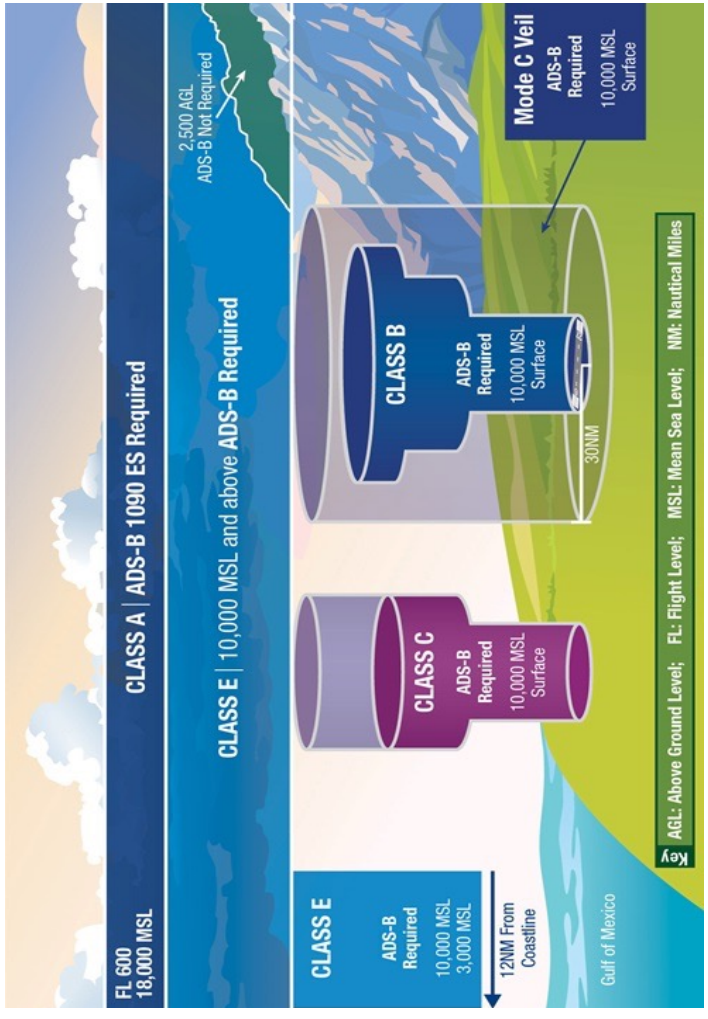
How Does Automatic Dependent Surveillance – Broadcast Work?



ADS-B Technologies Illustration

- Broadcasts an aircraft's WAAS-enhanced GPS position to the ground where it is displayed to air traffic controllers.
- It is also transmitted to aircraft with ADS-B receivers either directly or relayed by ground stations.

Where is Automatic Dependent Surveillance – Broadcast required?



- Class A, B and C airspace.
- Class E at or above 10,000' MSL excluding airspace below 2500' AGL.
- Within 30 nm of a Class B primary airport (the Mode C veil).

- Above the ceiling and within the lateral boundaries of Class B or C airspace up to 10,000' MSL.
- Class E airspace over the Gulf of America, at and above 3,000 feet MSL, within 12 nm of the U.S. coast.
- Except for the airspace over the Gulf, this is the same airspace where a transponder is required today.

What if my airplane does not have ADS-B?

- If you're not equipped with ADS-B Out, you're not necessarily shut out of the airspace—but you'll have some extra work to do. Refer to the FAA FAQs for ADS-B Out linked below.

What are the benefits of flying with ADS-B?

- The ability to fly in ADS-B airspace at any time if the need arises.
- Enhanced safety and additional situational awareness from traffic and free weather information (if you also opt for ADS-B In or have a portable ADS-B receiver).
- Maintain airframe value. Aircraft that are not ADS-B equipped are likely to decline in value.
- More efficient search and rescue. ADS-B's GPS-based surveillance provides more accurate information about an aircraft's last reported position. This is because ADS-B Out avionics transmit data approximately once every second, compared to a ground-based radar's sweep rate of 3-15 seconds.
- More efficient spacing and optimal IFR routing in nonradar environments, including the Gulf of America, mountainous regions of Colorado, and lower altitudes in some parts of Alaska.

Where can I find more information?

- AOPA - What You Need to Know About ADS-B: **aopa.org/go-fly/aircraft-and-ownership/ads-b**
- FAA ADS-B FAQs: **faa.gov/air_traffic/technology/equipadsb/resources/faq**

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, FM**10**0000 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
TAF	Message type: TAF-routine or TAF AMD-amended forecast, METAR-hourly, SPECI-special or TESTM-non-commissioned ASOS report	**METAR**
KPIT	ICAO location indicator	**KPIT**
091730Z	Issuance time: ALL times in UTC "Z", 2-digit date, 4-digit time	**091955Z**
0918/1024	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: CORrected of; or AUTOmated ob for automated report with no human intervention; omitted when observer logs on.	**COR**
15005KT	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	**22015G25KT**
5SM	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)	**3/4SM**
	Runway Visual Range: R; 2-digit runway designator Left, Center, or Right as needed; "/", 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)	**R28L/2600FT**
HZ	Significant present, forecast and recent weather: see table (on back)	**TSRA**
FEW020	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 **METAR**; in **TAF**, only CB. Vertical Visibility for obscured sky and height "VV004". More than 1 layer may be reported or forecast. In automated **METAR** reports only, CLeaR for "clear below 12,000 feet"	**OVC 010CB**
	Temperature: degrees Celsius; first 2 digits, temperature "/" last 2 digits, dew- point temperature; Minus for below zero, e.g., M06	**18/16**
	Altimeter setting: indicator and 4 digits; in U.S., A-inches and hundredths; (Q-hectoPascals, e.g., Q1013)	**A2992**
WS010/ 31022KT	In U.S. **TAF,** 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	

Key to TAF and METAR (Back)

Forecast	Explanation	Report
	In **METAR**, 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	**RMK SLP045 T01820159**
FM091930	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	
TEMPO 0920/0922	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	
PROB30 1004/1007	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	
BECMG 1013/1015	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 (≥5/8SM)	**DU** – Widespread Dust	**FG** – Fog (≤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

1800WXBrief.com and **1-800-WX-Brief**
Whether you log on or call, this service will record your transaction providing proof of your briefing.

AviationWeather.gov
This website is for information purposes only and does not record your transaction.

If you're getting your briefing on an EFB (electronic flight bag), you'll want to check with the provider to learn whether they are recording your transaction or not. You want proof that you received a thorough and complete briefing.

WEATHER BRIEFING OVER THE PHONE

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

Information you will need to provide once they answer:

- **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

When a human comes on the line, say all the information at once. Do not pause in between each item for them to respond.

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.*

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
- Notice to Airmen (NOTAM)
- Other information

Search online for "**FAA Weather Briefing Form**" and you'll find an easy-to-use form. For more information about weather briefings, refer to **Advisory Circular 91-92, *Pilot's Guide to a Preflight Briefing***.

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.

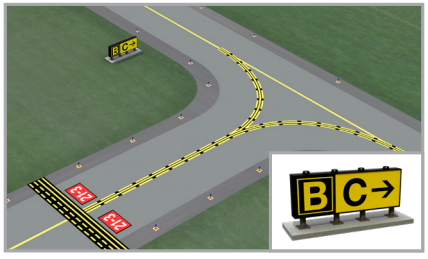
NOTAM (D)

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

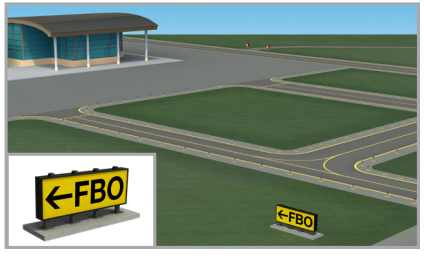
Taxiway Direction Sign



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

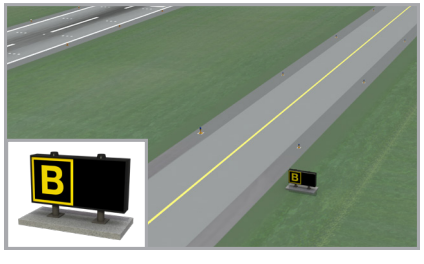
Destination Sign



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

Ref. AIM Para. 2-3-11

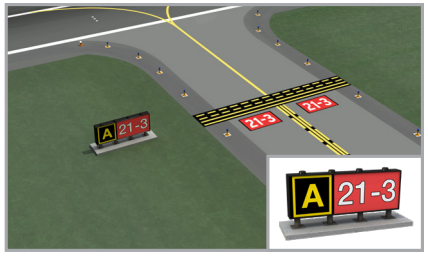
Taxiway Location Sign



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

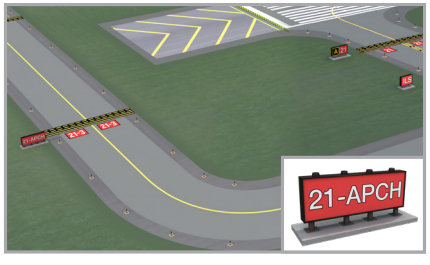
Runway Holding Position Sign (Collocated with Taxiway Location Sign)



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/marking 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

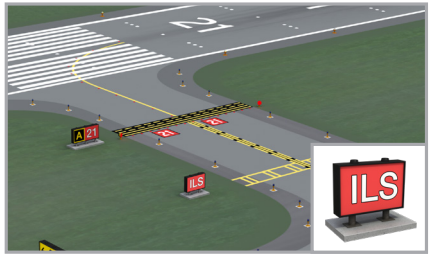
Runway Approach Area Holding Position Sign



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

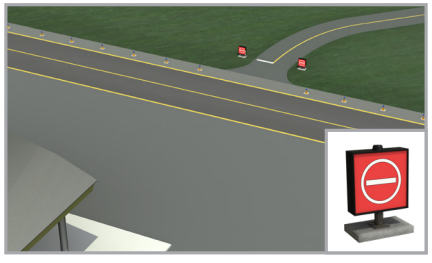
ILS Critical Area Holding Position Sign



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

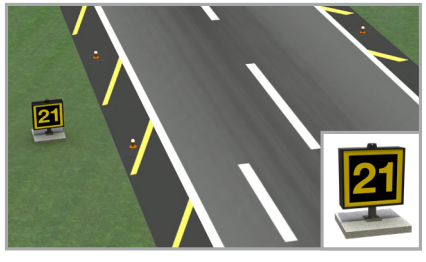
No Entry Sign



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

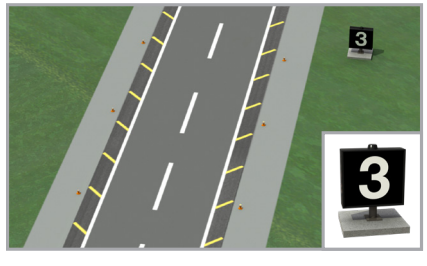
Runway Location Sign



Identifies the runway on which the aircraft is located.

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

Runway Distance Remaining Sign

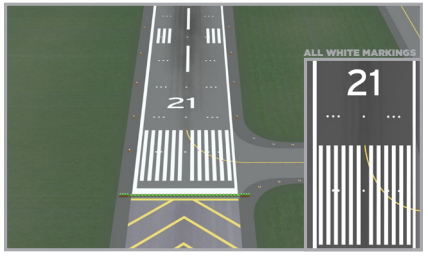


Indicates the distance of runway remaining in thousands of feet. In this example, 3,000 feet remain on the landing runway. These are usually seen at larger airports.

Ref. AIM Para. 2-3-13

AIRPORT OPERATIONS

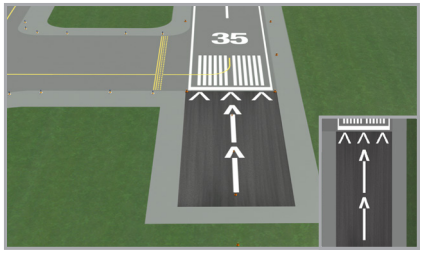
Runway Markings



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

Ref. AIM Para. 2-3-3

Displaced Threshold

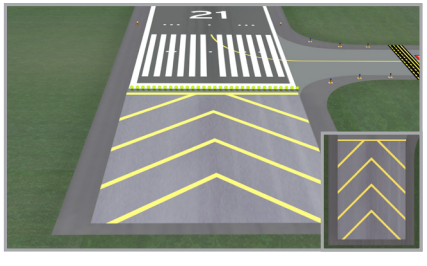


A displaced threshold designates where the runway's landing area starts. White arrows along the centerline of the runway indicate the portion between the beginning of the runway and the displaced threshold. This portion is available for takeoffs in both directions and landings from the opposite direction.

*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

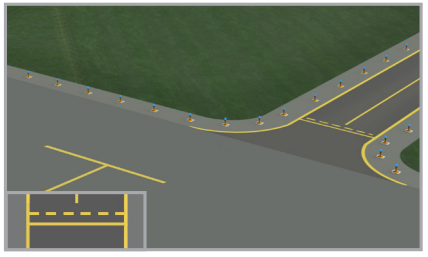
Chevron Markings



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

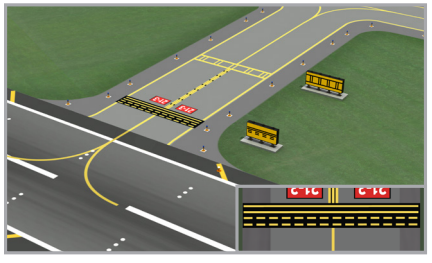
Nonmovement Area Boundary Markings



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 non-movement area (e.g., FBO ramps and hangar areas), which is not under ATC control.

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

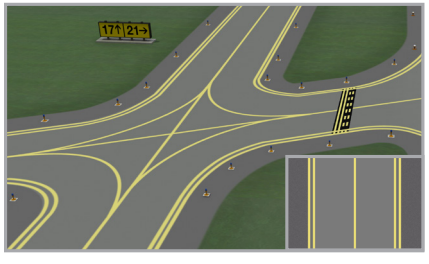
Runway Holding Position Markings on Taxiways (Runway Perspective)



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

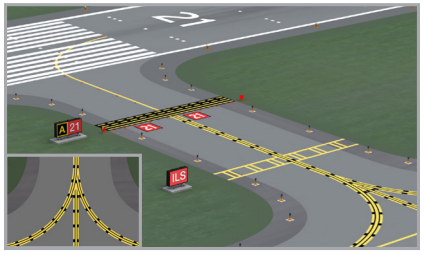
Taxiway Markings



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

Ref. AIM Para. 2-3-4

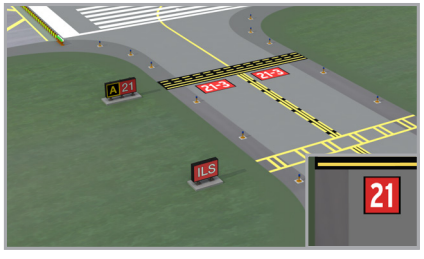
Enhanced Taxiway Centerline Markings



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

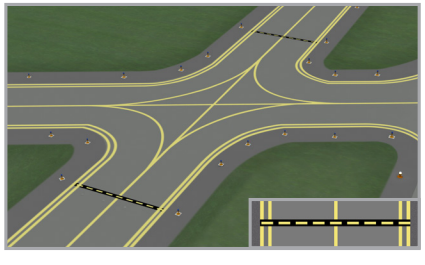
Surface Painted Holding Position Sign



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

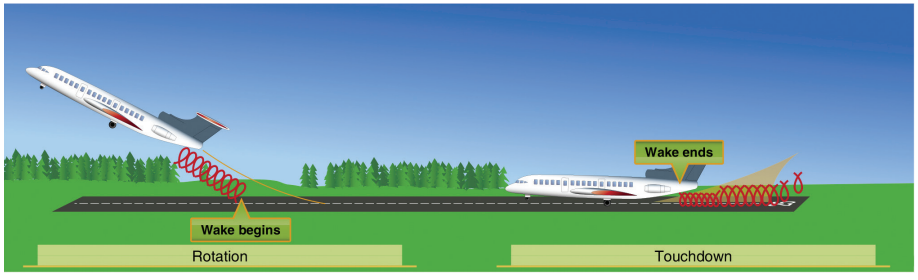


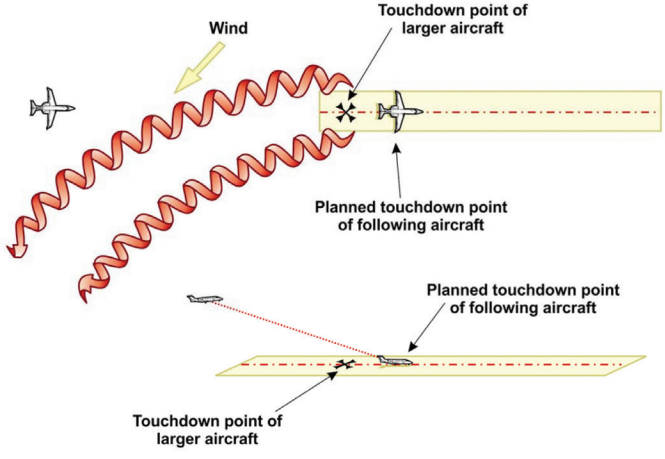
Extending across the width of a taxiway, this yellow dashed line indicates where an aircraft should stop if instructed to do so by ATC. When the marking is not present, stop the aircraft to provide adequate clearance from an aircraft on the intersecting taxiway.

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.

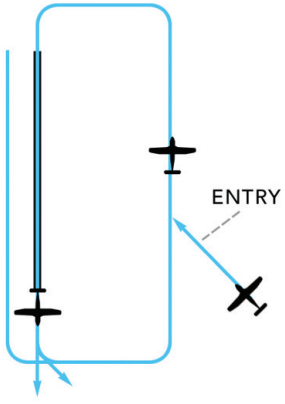
- **Landing behind a departing aircraft on the same runway**—land prior to the departing aircraft's rotating point.
- **Landing behind a larger aircraft on a crossing runway**—note the aircraft's rotation point and, if that point is past the intersection, continue and land prior to the intersection. 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 90-23H** 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

Approach and Landing



1. The recommended pattern entry is to join the downwind leg at a 45-degree angle abeam the midpoint of the runway to be used for landing. Aircraft should enter the pattern at pattern altitude (1,000' AGL unless otherwise noted in the current *Chart Supplement*). The traffic pattern altitude should be maintained until the aircraft is at least abeam the approach end of the landing runway on the downwind leg, when the descent should be started.
2. The base leg turn should commence when the aircraft is at a point approximately 45 degrees relative bearing from the approach end of the runway. The aircrafts altitude at the start of the turn to base depends upon many factors including aircraft performance. Consult your aircrafts Pilot Operating Handbook for recommended procedures.
3. Taking wind into account, plan your turn to final so that you won't feel the need to make a steep turn in order to be aligned with the runway. Remember, you are low and slow, and a go around is always an acceptable option.

Takeoff

1. Once airborne, you should continue straight ahead on the departure leg. The pilot should maintain awareness of other traffic so as not to conflict with those established in the pattern.
2. If departing the traffic pattern, continue until at least ½ mile beyond the departure end of the runway. At that point, you either continue straight out, or exit with a 45-degree turn in the direction of the traffic pattern, after reaching pattern altitude.
3. Aircraft remaining in the traffic pattern should not commence a turn to the crosswind leg until at least ½ mile beyond the departure end of the runway and within 300 feet below traffic pattern altitude.
4. The turn to the downwind leg should be made at traffic pattern altitude and so that the downwind leg is parallel to and between ½ to 1 mile away from the landing runway.

References: *AIM 4-3-3, **Airplane Flying Handbook** Chapter 7 (FAA-H-8083-3C), **Pilot's Handbook of Aeronautical Knowledge**, Chapter 14 (FAA-H-8083-25B), AC 90-66C.*

CLEARANCE COMPONENTS

Most Air Traffic Control clearances consist of five basic components ("CRAFT"):

Clearance limit: Your destination airport or intermediate fix (or even a runway assignment).

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

Communications at a Nontowered Airport

Be Specific. When you transmit, begin by stating:

- the name of the airport, followed by the word “traffic”,
- followed by the model of your aircraft (Skyhawk, Cherokee, Bonanza, etc.) and the alphanumerics 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.*

When to Make Calls at a Nontowered Airport

Inbound:

- 10 miles out stating position relative to airport and your intentions
- Crossing mid-field (if appropriate) with altitude
- Entering downwind
- Turning base
- Turning final
- Exiting the runway

Outbound:

- Prior to taxiing onto the runway (with intentions i.e.: departing to the north, remaining in the pattern, etc.)

All radio calls use the above format noted in the example.

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: 10 miles away from airport

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.*

Arriving: Entering traffic pattern

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

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

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

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
STEADY GREEN	Cleared for takeoff	Cleared to land	Cleared to cross; proceed; go
FLASHING GREEN	Cleared to taxi	Return for landing (followed by steady green)	Not applicable
STEADY RED	Stop	Give way to other aircraft and continue circling	Stop
FLASHING RED	Taxi clear of landing area of runway in use	Airport unsafe - do not land	Clear the taxiway/ runway
FLASHING WHITE	Return to starting point on airport	Not applicable	Return to starting point on airport
ALTERNATING RED AND GREEN	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 and ident, 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.*

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 (see page 29).

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

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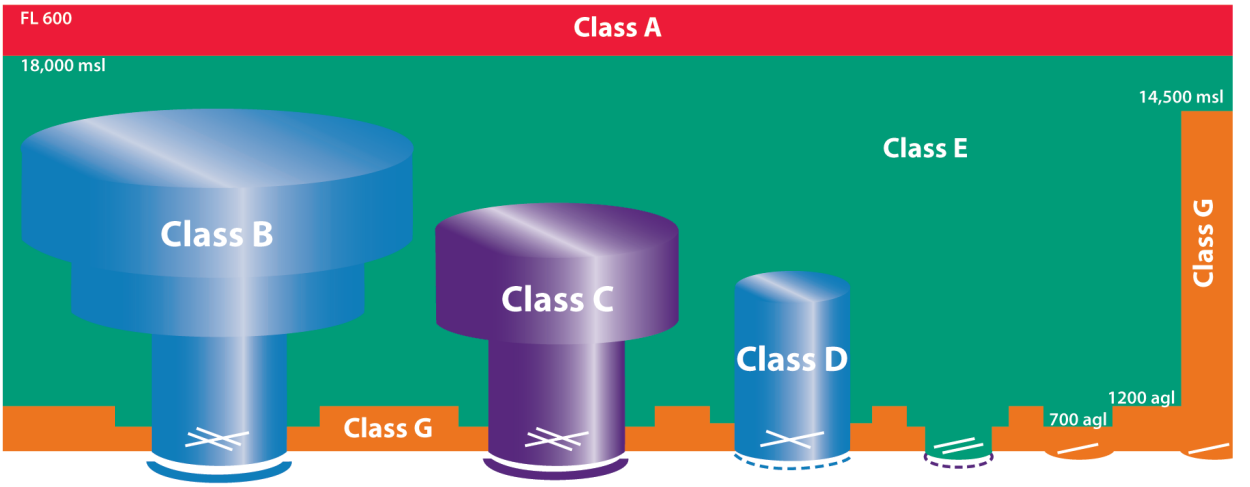

AOPA AIR SAFETY INSTITUTE | Communication Requirements and Weather Minimums

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 ADS-B Out (1090ES)	Two-Way Radio, Transponder w/ Mode C ADS-B Out (1090ES or 978 UAT)	Two-Way Radio, Transponder w/ Mode C ADS-B Out (1090ES or 978 UAT)	Two-Way Radio	Above 10,000 MSL excluding below 2,500 AGL: Transponder w/ Mode C ADS-B Out (1090ES or 978 UAT)	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
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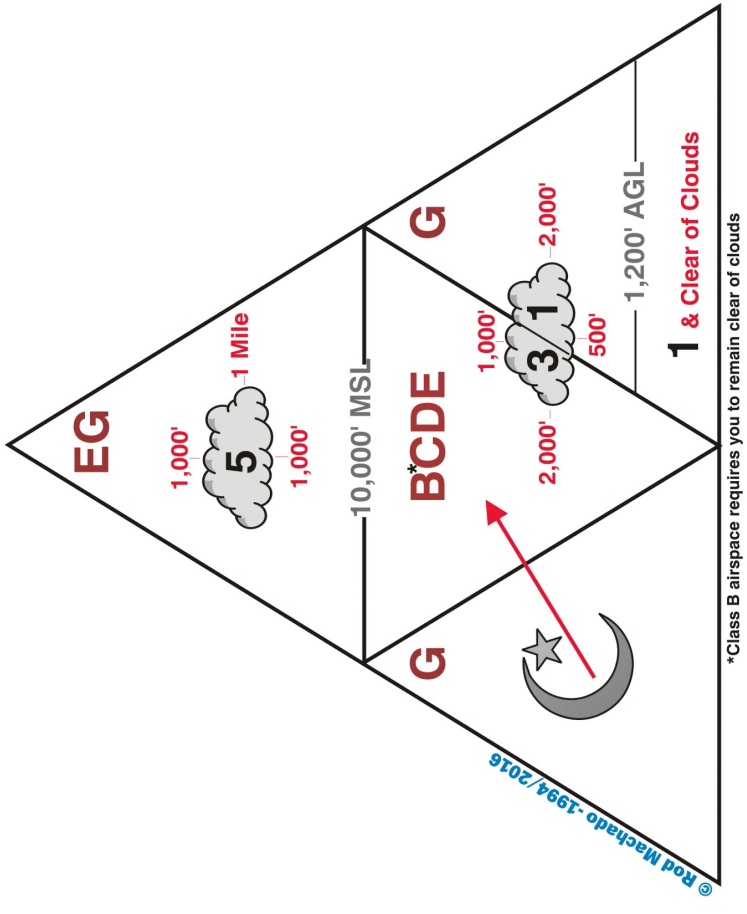
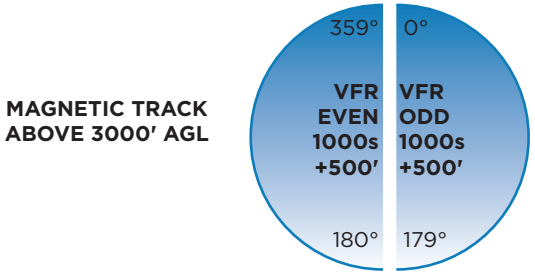


VFR Cruising Altitudes



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

- VR = Visual operations
- IR = Instrument operations
- Best practices to avoid conflicting with military traffic:
  - Cross the MTR at a 90˚angle.
  - Be extra vigilant, especially along ridgelines or valleys. MonitorTCAS/ADS-B. Military traffic should be squawking so they should show up on your devices that show traffic.
  - Use Flight Following.

Note: Military traffic can be high, low, fast, slow, large, or small so avoid these areas when possible.

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.

- 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 Notice to Airmen (NOTAMs) before you fly since some can change in size.

AIRSPACE AND CHARTS

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**
  - Inflight, talk to ATC or FSS for possible pop-up TFRs
  - TFR Map: **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 and have a 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.

BONUS! Air Safety Institute's Airspace Online Resources:

- **Airspace Flashcards**
- **"Know Before You Go" online course**
- **See the Rusty Pilots Safety Resources on aopa.org**

RUSTY PILOTS RESOURCE LIST

- Aircraft Spruce (**aircraftspruce.com**)
  Everything your airplane may need. Check out their Flight Training section for review materials.
- ASA (**asa2fly.com**)
  Offers mobile and online courses and has a huge selection of aviation books and training materials.
- ASI Rusty Pilots Safety Resources (**https://aopa.org/training-and-safety/lapsed-pilots/rusty-pilots/resources-for-rusty-pilots/rusty-pilots-safety-center**)
  Lots of resources to help a rusty pilot get and remain current.
- FAA Safety Team (**faasafety.gov**)
  Tons of free online courses, resources, and your HQ for FAA WINGS credit.
- Gleim Aviation (**gleimaviation.com**)
  Has an online flight review refresher course and multiple online ground schools and courses.
- Jeppesen ForeFlight (**jeppesen.com**)
  Provides pilots with flight planning and navigation tools for safer, more efficient flying.
- King Schools (**kingschools.com**)
  Check out their "Return to Flying" series with both VFR and IFR reviews.
- MZeroA.com (**m0a.com**)
  Check out the "Flying Again" video and book made about rusty pilots. Offers online ground schools and great instructional videos.
- Rod Machado's Aviation Learning Center (**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**)
  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** to decide which is right for you.
- Sporty's (**sportys.com**)
  Stocks everything you need for the cockpit. Offers online educational resources, including their Rusty Pilot Kit, to support flying safely.

AOPA Air Safety Institute

The AOPA Air Safety Institute (ASI) is responsible for guiding and positively influencing pilot behavior, policymakers, manufacturers, and training providers with engaging material, thoughtful research and analysis, and modern, effective outreach. In addition to its best-in-industry online flight instructor refresher course (eFIRC), ASI offers a wide variety of free online safety programs, including videos, podcasts, newsletters, accident analysis reports, and on-demand seminars—all proudly funded by the AOPA Foundation. To learn more, visit **airsafetyinstitute.org**

AOPA Foundation

The AOPA Foundation is the philanthropic arm of AOPA. Donor contributions fund programs that membership dues don't cover, including the life-saving aviation safety education resources produced by the AOPA Air Safety Institute, and the life-changing High School, Flight Training, Flying Clubs, Rusty Pilots, and Scholarship programs. To join the community of pilots dedicated to building a stronger, safer pilot community, visit **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**.

IFLIGHTPLANNER for AOPA

iFlightPlanner for AOPA is a powerful web interface for AOPA members to plan flights using hi-res charts and weather imagery, retrieve weather briefs, file flight plans, and much more! Find out more at **aopa.org/iflightplanner**.

Renter Insurance

Insurance is the last thing you want to think about while you're on your way back to getting current. Protect yourself and your family with a renter insurance policy from Gallagher Aerospace, AOPA's preferred provider of aviation insurance. This insurance covers you when the owner's primary policy does not. Learn more at **ajg.com/rent**.

Pilot Protection Services

Getting your pilot and medical certificates back means everything. AOPA's Pilot Protection Services trusted legal counselors 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**.

Aircraft Finance

If you're considering purchasing an aircraft for business or personal use, AOPA Finance can help you find the financing solution that best fits your needs. We offer financing for new and used general aviation aircraft, with a variety of loan structures, competitive fixed rates, and terms ranging from 5 to 20 years. Financing is also available for flight clubs. Learn more at **finance.aopa.org**.

New AOPA Gear Store Coming Soon!

We're working on a new range of AOPA pilot gear, with a brand new online store coming soon!

Rusty Pilots Checklist

Congratulations on taking the first step to rediscovering your passion for flight. With the completion of Rusty Pilots behind you, the path to currency is short and easily understandable. This simple checklist should help you complete the process of getting current and proficient again.

1. Medical Options

- BasicMed – see pages 4-6
- 3rd Class Medical – if it has been too long since you have held a medical to qualify for BasicMed or you need more flexibility
- No medical certificate is required for gliders and hot air balloons. Sport pilot privileges are permitted with a valid driver's license, provided you have not had a medical certificate denied, revoked, or suspended.

Resources:

- **AOPA.org/BasicMed**
- **AOPA.org/Medical**
- Pilot Information Center: **AOPA.org/PIC** or **1.800.USA.AOPA**

2. Find a Flight Instructor

Book time with a flight instructor who makes you feel comfortable and understands your flight review goals.

- Interview CFIs
- Select a flight instructor you look forward to flying with, which may not be the first flight instructor you meet.
- Flight instructors can be found at flying clubs, flight schools, or they can be independent.
- Schedule a lesson and go fly!

Resources:

- **AOPA.org/FSFinder**
- **AOPA.org/WhereToTrain**

3. Start Reviewing (but don't let this hold you up from scheduling time in an airplane)

- Rusty Pilots online course
- AOPA / Air Safety Institute online videos, courses, quizzes, and materials
- AOPA Air Safety Resources
- Sporty's Pilot Shop – flight training courses
- Other books and online suppliers
- FAA website

For a review of what was in Rusty Pilots, consider taking the self-paced, online version of Rusty Pilots. It's available to AOPA members, 24 hours a day, 7 days a week. It covers just about everything included in the seminar and webinar.

The Air Safety Institute has lots of online courses, videos, quizzes, and materials you may find helpful. Don't forget about the FAA website and the many other online content providers. It's easy to become overwhelmed with the amount of information available these days. Don't let that hold you up from getting back in the airplane though. Start with a simple lesson to get reacquainted with the airplane and some basic flying.

Resources:

- **AOPA.org/RustyPilotsOnline**
- **AOPA.org/ASI/RustyPilots**
- **AOPA.org/ASI**
- **AOPA.org/AircraftFlashards**

4. Find Support and Connect with Pilots

- AOPA
- Local flying club
- State or local pilots association
- Civil Air Patrol or Coast Guard Auxiliary

WHAT'S NEXT?

- Other aviation associations and pilot groups
- Aviation events

Not only can these types of groups help you with your mission to get current, but they can also help keep you flying once you are current. They are also a great way to keep you connected to the aviation community.

Resources:

- AOPA: **AOPA.org**
- AOPA Flying Club Finder: **AOPA.org/FCFinder**
- Aviation Events: **aopa.org/destinations/?t=events**
- Coast Guard Auxiliary: **CGAux.org**
- Experimental Aircraft Association: **EAA.org/EAA**
- Latino Professionals in Aerospace: **lpa-aero.org**
- National Gay Pilots Association: **NGPA.org**
- Organization of Black Aerospace Professionals: **OBAP.org**
- Women in Aviation: **WAI.org**
- 99s: **Ninety-Nines.org**

If you have any questions, email us at **RustyPilots@AOPA.org.**

NOTES

NOTES

FLY MORE. PAY LESS.

HAVE FUN

JOIN A FLYING CLUB!

FLYING CLUBS ARE NOT ONLY FUN AND ECONOMICAL, BUT THEY ALSO OFFER A VARIETY OF OPTIONS TO PILOTS LOOKING FOR NEW EXPERIENCES.

- Better access to a wider range of aircraft
- Meet people who share your enthusiasm for flying
- Find new places to go and pursue new ratings

AOPA FOUNDATION
FLYING CLUBS

LEARN MORE AT:
AOPA.ORG/FLYINGCLUBS
Or contact FlyingClubNetwork@AOPA.org