Teens-In-Flight

www.teensinflight.org

"Teaching the Excitement of Flight"

386-345-2FLY

Teens-In-Flight

Operations and Procedures Manual

Containing Rules, Procedures and Operational Limitations for Flying in Teens-In-Flight Aircraft

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Teens in Flight

Rev. 5 – 03/2026

Contents

Flight Safety Program

SAFETY CULTURE

All Teens-In-Flight students, pilots, instructors, and other employees must commit to operating Teens-In-Flight aircraft in a manner consistent with the highest possible level of safety. This commitment encompasses individual as well as observed operations conducted by all persons regardless of experience. Safety needs to be at the forefront of every operation. Safety at Teens-In-Flight will be approached proactively, rather than reactively. All personnel involved with Teens-In-Flight should continually strive to eliminate all accidents, incidents, and occurrences. This is our standard.

Core Values:

The following are the core values of Teens-In-Flight. They are to be observed at all times by all personnel associated with Teens-In-Flight, including students, pilots, instructors, and staff.

Safety
Honesty
Professional Behavior
Accountability
Respect for Others
Lifelong Learning
Rewarding Exceptional Performance

Safety Commitment:

Teens-In-Flight will strive for a "zero failure" commitment towards its operations. Each individual must accept responsibility for their own safety and the safety of others around them. To ensure the highest possible safety level, there will be an open safety culture at Teens-In-Flight. All persons are encouraged to communicate openly about safety-related incidents and should share any lessons learned with others. Should someone observe an unsafe situation, communicate immediately before an accident or incident occurs. All persons associated with Teens-In-Flight must be aware of all safety rules and procedures as well as their personal responsibility to follow them.

All Teens-In-Flight rules and procedures are developed to enhance safety. Compliance with, and complete knowledge and understanding of, all the rules and procedures, unless otherwise stated, is MANDATORY. Failure to follow the rules and procedures contained herein may results

in immediate suspension of flight privileges. All pilots must comply with the instructions of Teens-In-Flight staff, unless the instructions would create an unsafe situation, or cause a violation of the law. If a student or pilot is unable to comply with a Teens-In-Flight rule or procedure, they must report deviation as soon as possible to the Chief Flight Instructor and the President/CEO. If a person cannot comply with employee instruction, they must report it immediately to the employee that made such an instruction.

STAFF TRAINING PROGRAM

All Teens-In-Flight employees will receive initial training related to their duties and responsibilities. This will include:

ALL STAFF:

- Teens-In-Flight Employee Responsibilities
- Review of Teens-In-Flight Policies and Procedures
- Review of Teens-In-Flight Security Protocol
- Completion of Transportation Security Administration (TSA) required security awareness training
- Emergency and Security Reporting Procedures
- Review of Teens-In-Flight Operations and Procedures Manual

INSTRUCTORS:

- Initial aircraft checkout/differences training
- Local airport and airspace policies
- Instructor responsibilities
- Teens-In-Flight record keeping and student flight syllabus
- Recurrent and flight proficiency training

OCCURRENCE REPORTING AND DOCUMENTATION

To reduce and eliminate accidents, report any unusual or unsafe occurrence(s) to the Teens-In-Flight President/CEO immediately. The student pilot and/or instructor will collect all relevant details, and discuss this with management to ensure appropriate steps are taken to prevent a similar situation. A safety reporting form is available on the Teens-In-Flight website. Anonymous reports are accepted. It is the pilot's responsibility to report any incident or accident as defined by the National Transportation Safety Board (NTSB) in Part 830, or to make any reports required by Air Traffic Control (ATC) or the Federal Aviation Administration (FAA). Completion of a NASA Aviation Safety Reporting System Report is highly recommended.

Categories of occurrences are as follows:

- An accident as defined by the NTSB
- An incident, other than aircraft damage
- Illegal operation, such as flying past an inspection interval or Airworthiness Directive (AD)
- Runway / Taxiway incursions
- Communications errors or failure to follow an ATC instruction
- Error in judgment or decision making
- Failure to follow security protocol
- Failure to follow Teens-In-Flight safety rules or policies

ACCIDENT/INCIDENT RESPONSE PLAN

Teens-In-Flight is committed to providing the safest flight training experience possible. However, there is an unavoidable possibility that an accident or incident may occur. To reduce confusion in a crisis, fulfill obligations and responsibilities and provide compassion for affected individuals.

To ensure only accurate information is disseminated, contact with the media will only be accomplished by the Teens-In-Flight President/CEO or whomever he designates.

1. If necessary for safety, to prevent fire, or to provide medical services, contact 911 and request the appropriate fire and medical response.
2. If an accident, as defined by the NTSB, has occurred, contact the state police.
3. Contact the Teens-In-Flight President/CEO, Chief Flight Instructor, Chief of Maintenance, or any available Certified Flight Instructor (CFI).

<u>Any additional notifications or actions will be taken by the President/CEO, or his representative, only.</u>

AIRCRAFT RELOCATION PLAN

In the event a situation arises that necessitates relocation of the aircraft such as a natural disaster, approaching severe weather, or airspace/airport closure, the President/CEO or his representative will make arrangements to move Teens-In-Flight aircraft or other resources to safety. As each situation will dictate different actions be taken, it is impossible to write a plan for every event. Pilots and staff should use their best judgement if faced with an emergent situation and cannot contact the President/CEO, or his designee.

EMERGENCY CONTACT LIST

Fire/Rescue/EMS	911
Florida State Police	(301) 568-8101
Teens-In-Flight President/CEO **Jack Howell**	(386) 569-5685
Teens-In-Flight Chief Flight Instructor **Ed Whalen**	(571) 355-6771
Teens-In-Flight Chief of Maintenance **Ralph Bruner**	(386) 804-3236
FAA Flight Standards District Office (FSDO)	(386) 226-3950
National Transportation Safety Board	(571) 223-3930
AOPA GA Secure	1 (800) 427-3287
Flagler Executive Airport Manager	(386) 313-4220

Rules and Regulations

STUDENT/PILOT EXPECTATIONS

- All pilots are expected to attend all scheduled flights, ground, or simulator sessions. Failure to do so can result in fines, loss of scholarships, or loss of flight privileges. All pilots must notify Teens-In-Flight personnel, or their instructor, as soon as possible if they will be unable to attend a scheduled session. This will allow the aircraft or simulator and the instructor to be available for other students.
- Pilots should notify Teens-In-Flight as soon as possible if they have to cancel due to weather. Students should make this decision, along with their instructor, to adjust schedules accordingly. Weather-related cancellations should be transitioned to simulator training whenever practical.
- Students are expected to arrive no later than 30 minutes prior to scheduled sessions and will show up aware of the weather (METAR and TAF) for their flying time. For milestone flights (stage checks, mocks, checkrides) students will arrive with a completed Preflight Planning Worksheet (Attachment 1).
- All pilots are expected to return to Flagler Executive Airport 15 minutes before the end of their scheduled session. This allows time for post flight fueling, parking, inspection, and debriefing before the aircraft or instructor will be needed for the next session.
- Students may only use personal electronic devices as Electronic Flight Bags and may not use them for photos or text messaging. Phones, if not being used accordingly, must be off and stored out of immediate reach.
- All pilots are expected to use proper aircraft handling and servicing as specified in the aircraft's Pilot Operating Handbook (i.e., fuel, oil, windshield cleaning, preflight inspections).
- Checklists should be used for all operations.
- All pilots are expected to observe noise abatement procedures for any airport they choose to operate at.
- All pilots are encouraged to monitor 121.5 MHz, when able.
- Pilots can access copies of aircraft manuals and weight and balance information on the Teens-In-Flight website. Remember that the manuals in the aircraft take precedence.
- Students and their instructor are expected to coordinate scheduling stage checks with the Chief Flight Instructor, or his/her designee.

DRUG AND ALCOHOL POLICY

A pilot's physical skills and thinking ability are essential to the safe operation of an aircraft. The pilot in command has an enormous amount of responsibility, not only to themselves and their passengers, but to people on the ground and the general aviation industry as a whole. Teens-In-Flight treats substance abuse very seriously, therefore there will be zero tolerance for violation of this policy. This applies to all staff, instructors, pilots, and students.

Use, or possession, of illegal drugs will result in an immediate suspension of flight privileges and possible removal from the Teens-In-Flight program. Criminal action will be taken if appropriate. A minimum of 12 hours must elapse from the last consumption of any beverage containing alcohol for all students, instructors, or pilots flying any Teens-In-Flight aircraft. Each person must be free from the effects of any alcohol, including hangovers. Violation will result in immediate suspension of flight privileges. All staff must always be free from alcohol and drugs while at the airport regardless of their duty status. Alcohol will not be consumed by Teens-In-Flight staff at the airport, except during pre-approved social events.

It is every pilot's responsibility to determine his or her own fitness to fly. It is highly recommended that each pilot review the IMSAFE Checklist before each flight to ensure they are medically fit to fly, above and beyond the simple possession of a valid medical certificate.

Illness	Flying while ill is a bad idea. A simple toothache or sinus infection can become disabling due to the pressure changes of flight.
Medication	Medication, even over the counter medications, may impair your ability to fly safely. Do not fly unless you know how a given medications affects you.
Stress	Some people fly to relieve stress. However, flying with your mind on something else can leave you distracted. A simple distraction error can lead to an accident.
Alcohol	You cannot fly if you have consumed alcohol within the pervious 12 hours or are still under its effects.
Fatigue	Just like driving, flying while too tired to be alert and attentive may lead to disaster.
Emotion	Just like stress, if you cannot devote your attention to flying, you may not be safe to fly.

When in doubt of your ability to safely operate an aircraft, DON'T!

AIRCRAFT PRIORITY POLICY

The following list establishes, in order of priority, use of Teens-In-Flight aircraft.

1. Rescue Flights
2. Flights for Certification
3. Standardization Flights with the Chief Flight Instructor
4. Maintenance Recovery or Relocation Flights
5. Phase Checks
6. Scheduled Dual Instruction Flights for Teens-In-Flight Students
7. Other Scheduled Flights by Teens-In-Flight Students
8. Staff Proficiency Flights
9. Discovery Flights
10. Unscheduled Flights (flights not on the schedule as of that morning)

11. Overnight Flights or Extended Cross Country Flights
12. Other flights, as approved

Should a conflict arise, such as a scheduling error, removal of an aircraft from the schedule for maintenance or an overdue flight etc., flights higher on the list will have priority over flights that are lower on the list. If a conflict arises between two flights of the same category, the flight that had been scheduled the longest has priority. Teens-In-Flight will make every reasonable effort to accommodate all those wishing to fly. All students and pilots are encouraged to enter details about their intended flight in the appropriate spaces when making reservations to assist in the proper application of this policy. All conflicts will be resolved by the President/CEO or Chief Flight Instructor.

Aircraft will be considered available, if after 15 minutes into a scheduled flight slot, the scheduled pilot has failed to arrive or notify Teens-In-Flight of his or her intentions.

SOLO FLIGHTS

This section applies to student pilot solos only (initial flight training). Regulations for certified pilots are specified elsewhere in this manual.

- ❖ All solo flights must be specifically approved in person by the instructor to whom the student is normally assigned, or if that instructor is unavailable, another on duty instructor, immediately prior to the proposed flight.
- ❖ Authorization may be given by telephone or other means, only when no instructor is available in person. Only a Teens-In-Flight employee may grant students access to the aircraft keys.
- ❖ Students may not solo unless they have flown with a Teens-In-Flight instructor within the preceding 90 days in the same make and model to be soloed. It is highly recommended they do not fly more than 3 or 4 times solo between each dual flight. This is to prevent the learning of bad habits and to more effectively direct the student's solo practice efforts.
- ❖ The minimum runway length for solo flight is 3000 feet.
- ❖ Students will use only hard surface runways.
- ❖ Except for emergencies or weather deviations, solo flights will only land at an airport for which the student has received specific training and the appropriate logbook endorsement as required by Federal Aviation Regulation (FAR).
- ❖ All students must carry their student or pilot certificate, current medical certificate, government issued photo identification, and logbook on all flights.

- Students may not carry anyone in the aircraft, other than a FAA designated pilot examiner, FSDO inspector, or Teens-In-Flight instructor
- All students will monitor 121.5 MHz in addition to any required ATC frequency.
- On all flights. Students must add the phrase "student pilot" on initial contact with ATC or at an uncontrolled field's Common Traffic Advisory Frequency (CTAF). If at an uncontrolled field and another aircraft joins the pattern, repeat "student pilot" as many times as is required.
- Students may not accept land and hold short clearances.
- Students must always maintain visual reference with the surface. Students may not operate "Visual Flight Rules (VFR) on top" or under Special VFR.
- No solo flights may be conducted at night.
- All solo cross-country flights must be scheduled to be back on the ground at Flagler at least one hour prior to sunset.
- Student pilots may not participate in formation flying.

APPROVING STUDENT SOLO CROSS-COUNTRY FLIGHTS

The student should come prepared with all necessary weather information, completed flight log(s), airport information, NOTAMS and aircraft performance calculations. The endorsement of cross-country flight planning for a Teens-In-Flight student must come from a Teens-In-Flight instructor but need not be the student's primary instructor. The endorsement must be given in-person. Students should be aware that an instructor scheduled with another student may not be able to check their planning. It is the student's responsibility to ensure someone will be available to check their planning prior to the proposed flight. Below are the procedures the instructor will use to ensure the student's planning is correct and the procedures he or she intends to use are adequate.

- The instructor and student must ensure the student has their student license on their person, and that his/her logbook is properly endorsed for the cross-country flight.
- The instructor will ensure the student has enough time to complete the flight and return to Flagler comfortably and no later than one hour prior to sunset.
- The instructor will next review the weather and ensure the flight can be completed within Teens-In-Flight and FAA weather minimums.
- The instructor will review the student's fuel planning, including any necessary fuel stops, to ensure an adequate reserve.
- The instructor will review the student's flight log and check:
  - The student has enough time to return comfortably before the aircraft is scheduled for the next person.

- The route stays clear of any special use airspace, or that the student has a plan for dealing with any airspace encounters.
- The student has appropriately marked the route on their sectional charts and that all their charts are current. Once the initial cross-country is satisfactorily completed, electronic flight bags may be used and checked.
- The proposal route meets FAA experience requirements for the rating the student is seeking.
- The airports of intended use comply with Teens-In-Flight solo policy and any restrictions placed upon the student by their primary instructor.

❖ The instructor should quiz the student on the route and have the student show how they calculated a leg. The student should easily be able to confirm their measurements and demonstrate how they developed any information on their flight log.
❖ The instructor should quiz the student on use of the performance charts used to develop the flight log.
❖ The instructor should discuss alternative airfields the student may use if the proposed flight cannot be completed.
❖ All student solo cross-country flights will be completed with Flight Following and it is the instructor's responsibility to make sure the student has been instructed as to how to do so.
❖ All student solo cross-country flights will be conducted under a VFR flight plan filed with the Flight Service Station (FSS). Instructors will ensure the student knows how to file, open, and close flight plans.
❖ Once the instructor is satisfied, he/she shall endorse the student's logbook for the proposed flight.

GENERAL OPERATIONAL LIMITATIONS (APPLIES TO ALL FLIGHT OPS)

❖ All pilots are expected to observe current Federal Aviation Regulations, as well as state and local laws. Pilots are reminded that as pilot in command, they accept and bear the final and full responsibility for operation of the aircraft. All aircraft must be operated in accordance with the operating limitations set by applicable placards, the Pilots Operating Handbook or this manual, except where contrary to established law.
❖ Formation flying is prohibited without approval from the Chief Flight Instructor.
❖ No Instrument Flight Rules (IFR) flight may be conducted in Instrument Meteorological Conditions (IMC) when, given all available information, it is reasonable to expect icing conditions exist.
❖ Pilots wishing to fly IFR must show evidence that they are both legal and proficient to fly IFR.

- Each pilot is responsible for the preflight planning and inspection of the aircraft including proper loading, fuel and oil requirements, and takeoff and landing performance data.
- Teens-In-Flight aircraft may not be operated on turf runways, except with case-by-case approval from the Chief Flight Instructor or President/CEO.
- Instruction in Teens-In-Flight aircraft may be provided only by Teens-In-Flight instructors.
- Animals may only be carried aboard the aircraft in approved containers. The pilot is responsible for the condition of the aircraft upon its return.
- Smoking, vaping, and/or chewing tobacco is prohibited in Teens-In-Flight aircraft and facilities.
- Teens-In-Flight aircraft are not to be towed or pushed except by qualified personnel.
- Flights outside the United States, or to any island airports beyond engine-out glide range, require written approval from the Teens-In-Flight President/CEO.
- The pilot-in-command is responsible for paying any landing, parking, or ground handling fees incurred while they are operating the aircraft at airports other than Flagler Executive Airport.
- Nothing may be attached to any part of the aircraft using adhesive.
- Teens-In-Flight aircraft may not be operated above 10,000 feet Mean Sea Level (MSL) without approval from the President/CEO or Chief Flight Instructor.

WEATHER LIMITATIONS

Flight into areas where icing may exist, given all available information, is prohibited. Flight into or within the vicinity of thunderstorms (within 20NM) is prohibited.

Wind Limitations for All Training:

The table below prescribes the maximum surface wind limitations and indicated crosswind peak gust in knots. The reported wind at Flagler and forecasted wind at other airports of intended use must be below the indicated crosswind component before departure. At no time will any aircraft be operated beyond its Maximum Demonstrated Crosswind Component as defined by the manufacturer.

Type of Flight	Headwind	Crosswind
Dual	25 Knots	15 Knots
Solo	20 Knots*	10 Knots*

*Or as individually approved by the authorizing instructor and noted in logbook

Weather Limitations for VFR Training:

The table below prescribes the weather limitations for student pilot solos and VFR training flights in all Teens-In-Flight aircraft.

Type of Flight	Minimum Ceiling	Minimum Visibility
Dual/Local Pattern	1500 ft	3SM
Dual Cross Country	2000 ft	5SM
Dual Night	2500 ft	5SM
Solo Local/Pattern	2000 ft	5SM
Solo Cross Country*	3000 ft	5SM

*Additionally, for solo cross countries, no precipitation, fog or thunderstorms may be forecasted along the proposed route within two hours of the proposed time of operation.

Temperature Limitations:

Type of Flight	Minimum	Maximum
Dual	-10°F (-23°C)	110°F (43°C)
Solo	10°F (-12°C)	100°F (38°C)

TEENS-IN-FLIGHT LOCAL AREA

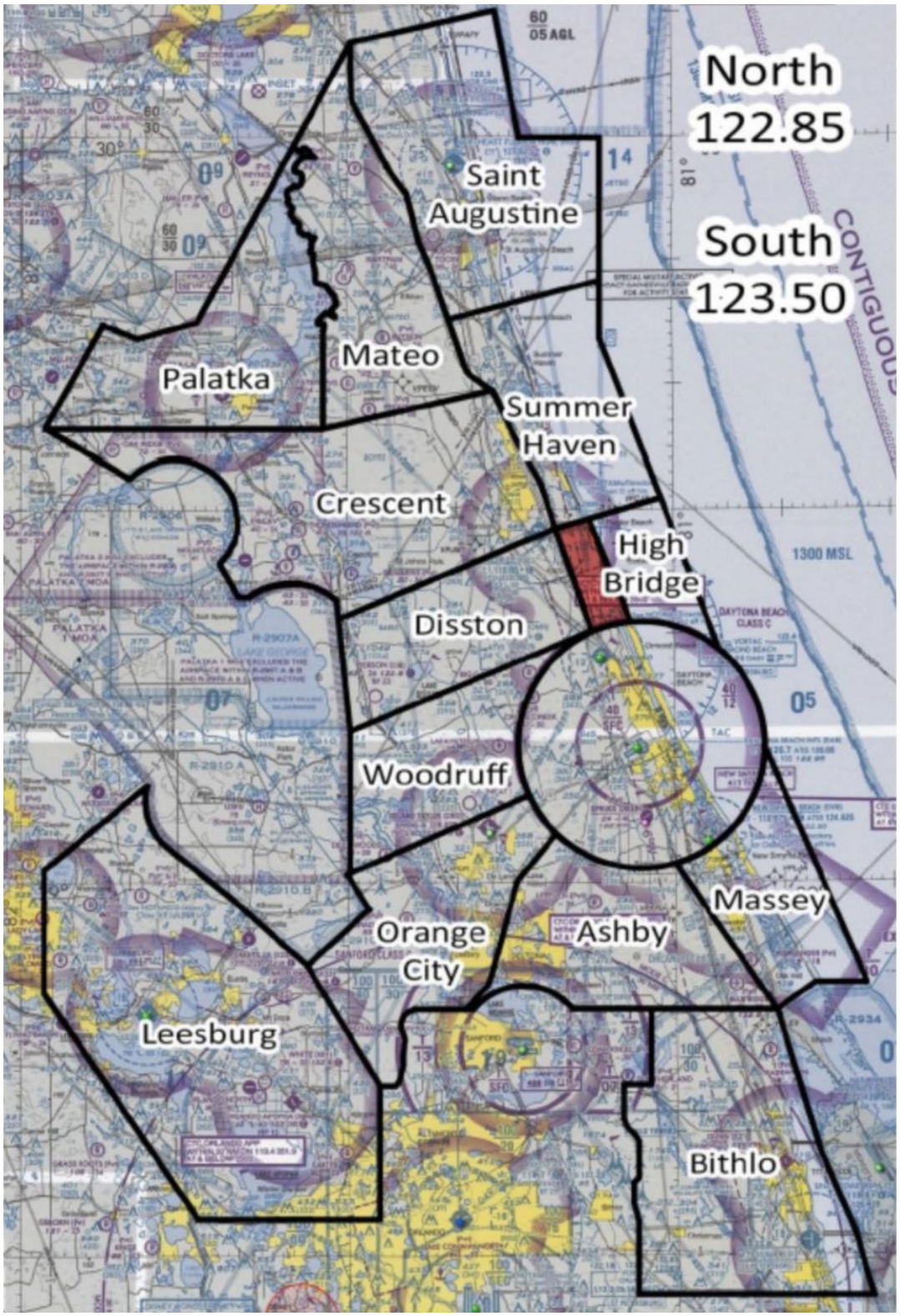
Teens-In-Flight shares its local practice areas with many other aircraft; in fact, the airspace between Jacksonville and Orlando is some of the busiest in the world. You must use all on-board (your eyes and Garmin display) and off-board (ATC) assets to locate and avoid other airborne traffic. The practice areas near Flagler and our local airport traffic patterns are potential collision hot spots.

The following map shows the practice area borders and frequencies used by Embry-Riddle Aeronautical University, the largest airspace user of Northeast Florida. Teens-In-Flight aircraft normally remain North of the Diston and High Bridge practice areas, primarily operating in Summer Haven, Mateo, and Crescent. Upon leaving Flagler's airspace, tune 122.85 and monitor for other traffic. Periodically make position calls with intentions. This should include the current practice area or operation, the aircraft call sign, altitude, location and maneuver intentions. Example: "Crescent practice area, Skyhawk 6463G, over the North end of Lake Crescent, 3000', practicing stalls."

Local Area for Solo Students: Teens-In-Flight local solos must operate within 25NM of Flagler Executive Airport (KFIN), in Crescent, Mateo, and Summer Haven practice areas. NOTE: This designated area does not include Palatka (28J), St. Augustine (KSGJ), or Ormond Beach

Municipal (KOMN) airfields. A specific endorsement is required from the designated instructor before operating at these fields.

Teens-In-Flight Practice Areas



INSURANCE REQUIREMENTS

Student pilots and pilots are responsible for any aircraft damage resulting from their negligence during the use of Teens-In-Flight aircraft. (Teens-In-Flight maintains $100,000 in liability coverage for incidents, accidents, or damage involving its aircraft when Teens-In-Flight is determined to be at fault).

Teens-In-Flight requires all students to maintain a renter's insurance policy with a minimum of $20,000 in hull damage coverage as an added precaution against personal liability and property damage. Proof of insurance must be provided to Teens-In-Flight and kept on file prior to operating any Teens-In-Flight aircraft.

UNSCHEDULED MAINTENANCE

Teens-In-Flight does all it can to ensure that it provides modern, well-equipped, efficient, clean, and well-maintained aircraft to its customers. It is unavoidable however, that mechanical/electronic devices sometimes break. A proper preflight and post-flight inspection, along with regular maintenance, and interval inspections will help prevent breakdowns from occurring.

The pilot can correct a minor maintenance discrepancy (low oil, low tire pressure, etc.) if discovered on preflight. More serious maintenance/condition issues should be discussed with an instructor or member of the maintenance team. A maintenance issue discovered during flight or post flight should be reported upon check-in using the "squawk" section of Flight Schedule Pro.

14 CFR 91.205 contains a list of items required for flight in different conditions. Regardless, if the pilot or instructor considers an inoperative item essential, do not fly. The Pilot-In-Command has the final authority and takes full responsibility for conducting a flight with inoperative equipment, if they choose. All inoperative equipment will be deactivated and placarded "INOPERATIVE" in accordance with 14 CFR 91.213. This action will be completed with assistance from an instructor or mechanic.

Should a maintenance problem be discovered at an airport other than Flagler, the pilot may be left to decide on their own whether it is safe to fly. Consultation by telephone with Teens-In-Flight is required for an item not clearly spelled out in CFR 91.205. A customer may not perform repairs (other than simple maintenance such as adding oil, etc.) or cause repairs to be performed (including estimates) without consultation with Teens-In-Flight.

If maintenance is performed locally by an authorized Airframe and Powerplant Mechanic (A&P), the A&P will make appropriate entries in the maintenance and repair logs accordingly.

In the event the aircraft cannot be flown safely, the customer must contact Teens-In-Flight so that a plan for recovery of the customer and repair of the aircraft can be devised. Unless repairs are due to negligence, Teens-In-Flight will be responsible for all aircraft related costs such as extended parking fees, costs to repair the aircraft, etc. If repairs are due to negligence, the pilot will be responsible for all associated costs. Teens-In-Flight will not be responsible for any loss to the customer resulting from the inability to complete a flight, such as hotel or rental car fees, food, or any other loss.

Aircraft Operations

FUEL MANAGEMENT

One of the leading causes of general aviation accidents has been failure to properly manage fuel. It is imperative that the pilot-in-command is constantly aware of how much fuel is remaining aboard the aircraft.

The Cessna fuel system greatly simplifies fuel management, as fuel is typically drawn from both fuel tanks. Proper flight instruction will include fuel management procedures. Use of checklists will help accomplish these procedures.

Teens-In-Flight Fuel Management Policy:

- For night, instrument, and cross-country flights, all aircraft must depart with full tanks, weight and balance permitting.
- All flights must land with a minimum of one hour of fuel aboard, considering normal cruise fuel consumption.
- All pilots will ensure that fuel tanks are filled within one inch of the bottom of the wing fuel filler neck upon completion of flights. Each aircraft contains a dip stick to properly check fuel quantity with less than full tanks.
- Each pilot must check the fuel as part of their preflight procedure. If the aircraft was fueled improperly by the previous pilot, notify a Teens-In-Flight employee immediately.
- Teens-In-Flight has no control over the quality of fuels offered at Flagler or any other airport. It is mandatory that pilots test all fuels for contamination and proper grade as part of their preflight procedure.
- If a fuel tank is accidentally overfilled, return the aircraft to the front of the hangar and use the hand-held battery-operated pump to transfer the excess fuel into an approved fuel container. After flight, return the fuel to the aircraft by pouring it back into the tank.

FUEL CONSERVATION AND MIXTURE LEANING PROCEDURES

The price of aviation fuel continues to represent a sizeable portion of the flight costs for Teens-In-Flight, and by extension, for all pilots. Teens-In-Flight requires the use of these procedures to minimize fuel usage and save money.

Leaning of the mixture should always be accomplished on the ground. Leaning in the air should be accomplished in accordance with POH guidelines and always above 3,000ft MSL.

Leaning Procedure: Cautiously turn the mixture knob out until the engine RPM peaks, then turn the knob back in the opposite direction three more complete turns (i.e., in the rich direction).

Normally aspirated aircraft fly most efficiently at approximately 8,000 feet. Above 8,000 feet, engine performance begins to drop due to reduced air density. Below 8,000 feet, true airspeed begins to drop due to increased drag resulting from increased air density. Pilots are encouraged to select a cruise altitude that allows them to benefit from the aircraft's performance as well as any available tailwinds.

AIRCRAFT SCHEDULING AND DISPATCH PROCEDURES

As we continue to grow, it's important that we efficiently schedule planes, CFI's and all other resources. All Teens-In-Flight aircraft and instructors will be reserved using the online scheduling website Flight Schedule Pro (FSP) [flightschedulepro.com]. Pilots and students will set up an account from the invitation email sent by FSP. Once creating an account, pilots will be able to schedule appointments with their instructor and view the Teens-In-Flight calendar. Flight Schedule Pro is able to send SMS text alerts or emails if a reservation is changed for any reason (such as instructor to airplane unavailability). All students must configure their account to take advantage of this feature. Students are required to keep a minimum of $300 in their flight account to be able to schedule a plane, once all required documents have been provided and uploaded into FSP (Driver's License, Medical, Emergency Contact, etc.). Pilots will be responsible for submitting the most up-to-date version of these documents.

A 30-minute pre-brief and post brief are mandatory for each flight lesson. Therefore, a gap is required between instructor duties. (i.e., do not schedule back-to-back activities). The minimum time between an instructor's duties should be 30 minutes.

For dual flights (or private student's solos), students may schedule aircraft after confirming their instructor's availability for that time block. Post-private students may schedule solos at their convenience, remembering they will have to coordinate entry in the Teens-In-Flight facility with a Teens-In-Flight employee. Everyone should schedule aircraft only for the time they expect to fly that aircraft. Do not schedule a six-hour block when you only intend to fly for two hours.

Schedule changes are to be expected but should be kept to a minimum. We also know that there are times when Teens-In-Flight availability will change for various reasons. However, if a plane and CFI have been reserved, and by default, kept from anyone else using them, a possible one-hour charge may be implemented if a flight is canceled less than 24 hours in advance. Anyone who continually cancels or changes reservations may be grounded until a resolution is made.

At the appointed time of the reservation, the plane must be Checked Out and Checked In properly on FSP with fuel and oil noted. Any Hobbs or Tach mismatches will require an explanation and/or correction with administration.

MOVEMENT FROM THE HANGAR

Teens-In-Flight aircraft are currently parked in the hangar. Wingtip, tail, and propellor clearances are all very tight. If the hangar door is closed, proceed with great caution to the door switches so you do not injure yourself on aircraft or equipment. If you need more light, turn on the large ceiling lights using the light switches on the opposite wall. (Turn these lights off before you depart the hangar.) Open the personnel door to ensure free swing of the hangar door (i.e., no cars or aircraft within reach of the door). Next, ensure the door pins along the bottom of the hangar door are properly retracted and stowed. Open the hangar door high enough to ensure the aircraft tail is well clear of the bottom of the hangar door. It may be necessary to move other aircraft out of the way before freely pulling out your plane. Exercise extreme caution while moving the aircraft. In some cases, wingtip clearance could be inches. Therefore, the CFI should maneuver the aircraft with the tow bar, while the student or other pilot walks the tightest wingtip. Keep the hangar door open if Teens-In-Flight is manned, if not, lock the interior door to Teens-In-Flight offices before departing. Upon starting the engine, be aware of your prop wash and exhaust relative to the hangars.

FIRE PRECAUTIONS

During fueling operations, the aircraft involved will be unoccupied. Fire Extinguishers will be present when fueling is in progress. In the event of aircraft fire during engine start or taxiing, follow the emergency procedures in the aircraft Pilot's Operation Handbook (POH). If there is any doubt about whether the emergency procedures are working to extinguish the fire, evacuate the aircraft immediately.

AIRCRAFT AVOIDANCE

No person may operate an aircraft so close to another aircraft, as to create a collision hazard either on the ground or in the air. The Pilot-In-Command will be responsible for "See and Avoid" procedures as described in the Aeronautical Information Manual (AIM), Chapter 7, Section 5 and comply with the Right of Way Rules specified in 14 CFR Section 91.113.

MINIMUM ALTITUDES

Minimum altitude for all maneuvers (except for landing practice at airports) is 500 feet AGL, unless a higher altitude is specified in 14 CFR, Section 91.119. All simulated off-airport emergency landings will be terminated to go no lower than 500 feet AGL. Minimum altitudes for IFR operations will be in accordance with 14 CFR, Sections 91.175 and 91.177.

SECURITY PROCEDURES

TSA employees have been known to come to the airport and talk with people at the airport, without identifying themselves, in attempts to get the person to reveal confidential information. Refer any requests for confidential information to the President/CEO or the Chief Flight Instructor.

Teens-In-Flight security plan:

- Mandatory use of aircraft door locks is required anytime the aircraft is unattended away from Teens-In-Flight.
- Keys are obtained only after an in-person appearance, before a Teens-In-Flight employee.
- Compliance with TSA-required security training program for all employees and pilots.
- All students, pilots and employees must always carry a government-issued photo ID while operating Teens-In-Flight aircraft.

WINTER OPERATIONS

Even though Teens-In-Flight is located in Florida, you should be familiar with Winter Operations in case cold weather arises or you come across cold weather on a cross-country.

To operate safely in a cold or winter environment, it is essential to be prepared. Engine starting, particularly if preheat is not used, may be difficult in cold weather. There is more friction among engine parts, engine batteries are less efficient, and fuel vaporizes poorly. Due to the reduction of the ability of fuel to vaporize, additional primer fuel will be necessary. All students and pilots should receive additional training from a Teens-In-Flight instructor on cold weather engine operations if they have any difficulty starting or operating the engine. It is vitally important for engine longevity and reliability that all people operate the engine correctly.

An important part of operating in a winter environment is removing snow, ice, or more often, frost from the aircraft. General aviation aircraft cannot tolerate surface contamination. The problem is not from the extra added weight; it is the disturbance of airflow. Therefore, all snow, ice, frost or other contamination must be removed before flight. For light frost, simply parking the aircraft in the sun on the ramp may melt it, but deicing fluid may be required. Only a 50% alcohol/50% water mix is approved for use on Teens-In-Flight aircraft. Use of a commercial aircraft deicing fluid is permissible if approved for use by the aircraft manufacture but only at airports with the appropriate facilities for professional deicing. Teens-In-Flight does not provide deicing fluid.

During all operation, it is good pilot technique to avoid rapid power changes. It is particularly important during cold weather. Also, to avoid shock cooling, it is necessary to reduce power

slowly, particularly following cruise flight. When taxiing, be alert to the height of snowbanks. It may be possible to hit them with the wing tips. Also, avoid setting the parking brake after taxiing through slush or water that may freeze.

Consider the possibility, although remote, of an off-airport landing. All occupants of Teens-In-Flight aircraft are required to possess suitable clothing for the weather, in case there is a need for an emergency or precautionary landing off airport. In cold situations, this should include a heavy coat, long pants, gloves, a hat and appropriate footwear.

GROUND AND DEPARTURE PROCEDURES

Preflight:
Clean the windscreen ONLY with clean microfiber rags and plastic transparency spray available in the aircraft. Use paper towels for oil and/or fuel cleanup. Each plane has a tire pressure gauge in their designated clipboard. The desired tire pressure is 30-35 psi. An electric pump is available if pressure is low.

Seat Position:
Correctly positioning the seat the same for each flight improves landing performance and safety. The seat height should be adjusted so the pilot can see the top of the cowling for the best sight picture during landing. Fore-aft adjustment is correct when the heels are on the floor with the balls of the feet on the rudder pedals, not on the brakes.

Start:
Follow checklist procedures for start. Lean the mixture for all ground operations except engine runup. Once the engine is started at a steady state, retract the flaps, turn on the avionics, taxi away from the Teens-In-Flight ramp, and test the brakes on each side. Taxi to the parking ramp and complete the pre-taxi checklist. Engine run-ups shall be completed in the designated run-up area corresponding to the departure runway. Aircraft departing Runway 6 shall use the Runway 6 run-up area. Aircraft departing Runway 24 or Runway 29 shall use the Runway 24 run-up area. For departures on Runway 11, the engine run-up shall be completed on the parking ramp prior to taxi. Pilots should ensure all run-up checks are completed before entering the movement area for departure.

Ready to taxi (Ramp or Badlands):

> Ground call example:
> "Flagler Ground, Skyhawk 6463G, at the Badlands, requesting taxi to the active, with information Alpha, VFR departure to the North."

Ground will give you clearance and appropriate taxi route. Repeat back the FULL clearance and taxi route. As you begin your taxi and as you begin a turn, test the turn coordinator and the three heading indicators: two on the G5s and the magnetic compass.

> "Needle's left, ball's right, one, two, three decreasing." (Opposite for a right turn)

Taxi:

Taxi on yellow taxi routes and at a slow and reasonable speed (max of 15kts ground speed). Normal taxi should never need power above 1,000 RPM. Do NOT ride the brakes. Spacing between aircraft on taxi (and parked behind an aircraft with motor running) will be a minimum of two ship lengths. Never taxi with Carburetor Heat ON, the unfiltered air can damage the engine. During the day, keep the position, strobe and beacon lights on from start to shutdown. Adjust this setting at night to preclude your or other pilots' spatial disorientation. To minimize the chance of runway incursion, read back all taxi instructions, particularly hold short, line up and wait, runway crossings, and takeoff clearances. When obtaining complex taxi clearances at unfamiliar airports, write down the clearance, have an airport diagram available, and request progressive taxi if needed. Upon crossing any runways, turns on ALL lights and slightly expedite taxi speed. Along your taxi route, it is crucial to set you flight controls for wind. "Turn into, dive away."

Fueling Procedures:

Upon completion of a flight, the aircraft must be refueled at the Self-Serve pump. Fill each tank up to one inch below the fuel neck. Keep the fuel hose on your shoulder to avoid leaving marks or scratches on the aircraft wing. After fueling, do a final walk-around to ensure nothing was left behind on the wing or cowling before restarting the aircraft.

Tie-Down and Parking Procedures:

Each pilot must secure the aircraft in its appropriate parking spot using any tie-downs and installing any control wheel locks, cowl plugs, and pitot-tube cover. A full securement is mandatory unless the pilot flying the aircraft next is physically present and agrees to accept responsibility for parking and securing the aircraft. If this is not performed correctly, the pilot responsible for the aircraft will be billed for ½ hour of time to accomplish the above procedure.

Under no circumstance may a pre-solo student taxi or park the aircraft without an instructor on board the aircraft. Student pilots may not park the aircraft at night without an instructor on board.

- Once in the parking spot, shut the aircraft down according to the checklist procedure and remove the key.
- Record the current Hobbs and Tach time on the aircraft time sheet and note any squawks observed during the flight. Enter the same data into Flight Schedule Pro to check-in the airplane.
- Remove any trash from the aircraft. Do not leave any personal items, headsets, charts, etc. in the aircraft.

- If you are not parked in our hangar, you must be tied down securely, using all available tie downs.
- Do not leave the parking brake on.
- Always install any gust locks, pitot-tube covers, and cowl plugs – even if parked in the hangar.
- Install the aircraft cover if parked outdoors.
- Lock all doors and ensure all windows and vents are closed.
- All pilots are expected to perform a post flight inspection of the aircraft after parking. If any damage is found by the next pilot during preflight, it is assumed to be the responsibility of the previous pilot.
- Return the keys with the appropriate binder.
- Ensure any squawks encountered during flight are noted accordingly in Flight Schedule Pro.
- All pilots will ensure their logbook and training records are completed by their instructor.
- Instructors will complete grade slips by the end of the day that the flight took place.

Takeoff Procedures

1. Taxi to the Hold Short Line, visually verify clear of traffic, and call tower.

   Tower call example:

   "Flagler Tower, Skyhawk 6463G, holding short runway XX on Alpha, ready for departure."

   Tower will clear you for takeoff or have you hold short of the runway. Make sure to always mention the active runway in your "cleared for takeoff" radio call.
2. Line up on the runway centerline.
3. Confirm proper runway heading. Announce "Runway Verified"
4. Increase throttle to full power. Verbalize RPM setting.
   "2300 RPM"
5. Verify the oil pressure and temperature.
   "Two in the green"
6. Note the increase in airspeed.
   "Airspeed alive"

If any of these conditions are not present, abort the takeoff

Normal Takeoff (Flaps 0)

1. Perform the takeoff procedure.
2. Start slow rotation at 55 KIAS.

3. Accelerate to 76 KIAS (Vy).
4. Verbalize the climb checklist at 1000 feet AGL and transition to cruise climb of 85 KIAS.

Short-Field Takeoff (Flaps 10)

1. Use full runway length.
2. Perform the *takeoff procedure* with full brakes.
3. Once engine is stabilized, release brakes.
4. Start slow rotation at 47-55 KIAS (calculated based off takeoff weight and performance charts).
5. With obstacle, maintain 56 KIAS climb, without obstacle maintain 76 KIAS (Vy) climb.
6. Once clear of obstacle (or at 200'), accelerate to 76 KIAS.
7. Announce: "Clear of obstacle, flaps up"
8. Verbalize the climb checklist at 1000 feet AGL and transition to cruise climb of 85 KIAS.

Soft-Field Takeoff (Flaps 10)

1. Roll onto the runway with yoke full aft, use minimum braking, do not make sharp turns, do not make a complete stop.
2. Perform the *takeoff procedure.*
3. Lift off at lowest possible airspeed.
    a. As nose lifts off, ease back pressure to remain in ground effect
4. In ground effect, accelerate to 56 KIAS.
5. With obstacle, maintain 56 KIAS climb, without obstacle maintain 76 KIAS (Vy) climb.
6. Once clear of obstacle (or at 200'), accelerate to 76 KIAS.
7. Announce: "Clear of obstacle, flaps up"
8. Verbalize the climb checklist at 1000 feet AGL and transition to cruise climb of 85 KIAS.

ARRIVAL AND LANDING PROCEDURES

Airport Approach: Retrieving ATIS/AWOS and completing an approach briefing should be completed no later than 15NM from the destination airport. Accomplishing these tasks as early as possible allows for more time to focus on aircraft control and collision avoidance amongst busy airport environments. After getting the ATIS/AWOS and adjusting the altimeter, accordingly, call tower.

Tower call example:

"Flagler Tower, Skyhawk 6463G, 10 miles to the North, requesting closed traffic, with information Alpha."

Pay close attention to tower's reply. For example:

"Skyhawk 6463G, Flagler Tower, report 4 miles North for a left downwind, runway 11."

Repeat this back, including all information provided.

Approach Briefing Considerations – Verbalize the plan:

- Active Runway
- Traffic Pattern Altitude
- Traffic Pattern Entry
- Flap Setting
- Type of landing (normal, soft-field, short-field)
- Winds – left or right crosswinds
- Final Approach Speed
- Aiming Point
- Touchdown Point

Example Approach Briefing:

"This will be a short-field landing on runway 11 at Flagler. I will use full flaps. Pattern altitude is 1000 feet and I will enter on a 45° left downwind. There is a slight right crosswind on final. Final approach speed is 61 KIAS, aiming at the numbers, touching down on the top of the numbers. Any questions?"

Straight-In Pattern Entry:

At uncontrolled fields, the standard pattern entry is to join a 45° left downwind. Extreme caution should be used if conditions necessitate a straight-in approach at an uncontrolled field due to higher collision potential.

At controlled fields, ATC may instruct you to enter straight-in for traffic sequencing. At KFIN, tower will usually provide a desired mileage that they would like you to report, prior to entering the traffic pattern.

KFIN tower call example:

"Skyhawk 6463G, report 4 miles for a straight-in, runway XX."

Repeat back all instructions verbatim and maneuver yourself on a straight-in approach, vigilantly clearing for traffic.

Straight-In Approach:

4 mile final: Altitude 1,600 feet AGL – make 4-mile radio call

2.5 mile final: Altitude 1,000 feet AGL – Landing configuration: 1500 RPM, "Below 110 KIAS, Flaps 10," pitch for 75 KIAS, 500 fpm descent

2 mile final: Altitude 800 feet AGL, "Below 85 KIAS, Flaps 20," pitch for 70 KIAS, 500 fpm descent

1 mile final: Altitude 400 feet AGL, "Below 85 KIAS, Flaps full," pitch for 65 KIAS, 500 fpm descent

For ALL Landings:

USE RUDDER TO ALIGN YOUR LONGITUDINAL AXIS (FUSELAGE) WITH THE CENTERLINE. DO NOT LAND IN A CRAB!

Standard Full-Flap Approach and Landing:

1. Devote full attention to aircraft control and traffic avoidance.
2. Slow to 90 KIAS prior to entering the traffic pattern.
3. Enter the traffic pattern at published Traffic Pattern Altitude (Typically 1000 feet AGL).
4. Complete the "Pre-Landing Checklist" when established on downwind, but no later than when abeam your aiming point (Or no later than 2.5 mile final for straight-in approach).
    a. Fuel Selector – Confirm on BOTH
    b. Carb heat ON – pull out
    c. Throttle ~ 1500 RPM
    d. Mixture – confirmed full rich (pushed in)
    e. "Below 110 KIAS, Flaps 10"
    f. Begin Descent from Traffic Pattern Altitude at 75 KIAS.
5. On base leg:
    a. "Below 85 KIAS, Flaps 20"
    b. Descend at 70 KIAS
6. On final:
    a. "Below 85 KIAS, Flaps Full (30)"
    b. Descent at 65 KIAS

C172 Traffic Pattern Procedures

Final:

Throttle – 1500 RPM

Flaps – 30°

Speed - 65 KIAS (61 KIAS short and soft field)

Altitude ± 400 ft AGL

Go-Around

Power – Full

Carb Heat – Off (In)

Flaps – Up 10° from final position

Climb – Vy (76 KIAS)

Flaps – Retract incrementally back to 0°

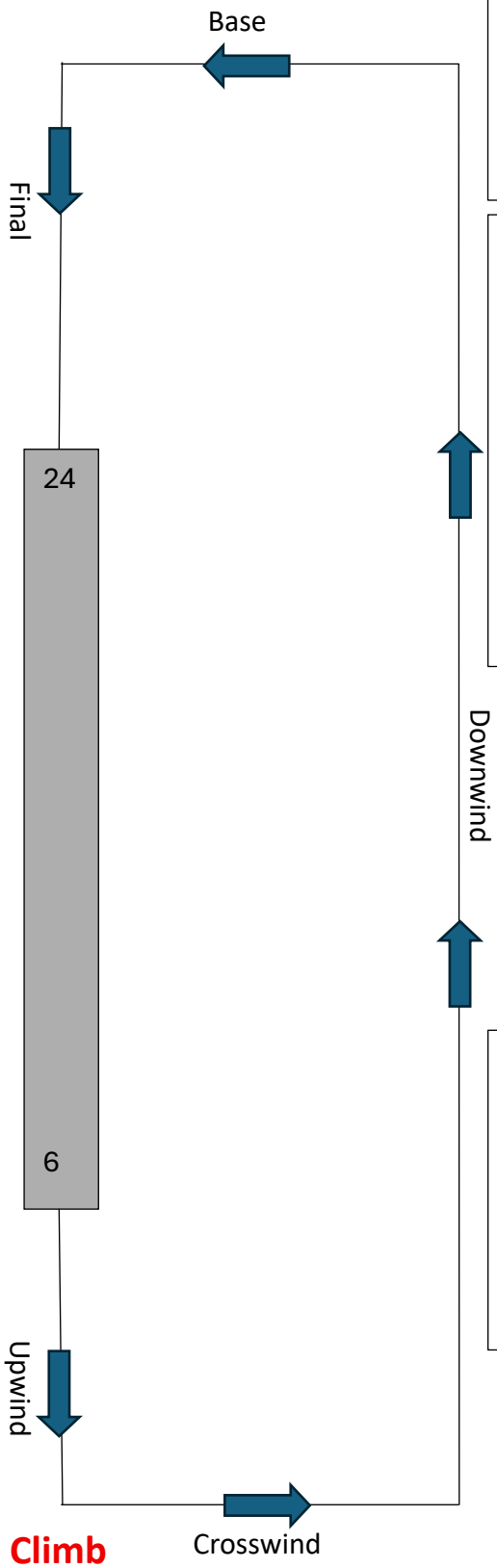
Pitch for airspeed, power for altitude

Upwind:

Climb – Vy (76 KIAS)

Turn Crosswind – 700 ft AGL

"Final's Clear"



Climb Checklist

Base:

Turn – 45° from touchdown point

Throttle – 1500 RPM

Flaps – 20°

Speed – 70 KIAS

Altitude ± 700 ft AGL

Downwind Descent:

Abeam touchdown point

Carb Heat – On (out)

Throttle – 1500 RPM

Flaps – 10°

Speed – 75 KIAS

Descent – 500 FPM

Make Midfield Downwind Call

Downwind:

Level off – Traffic Pattern Altitude

Throttle – 1900 RPM

Speed – 90 KIAS

Short-Field Approach and Landing:

Steps 1-6 are identical to the Standard Full-Flap Approach and Landing

7. Select flaps full (30) and slow to 61 KIAS on final
8. Retract flaps after touchdown
9. Apply back pressure without scraping the tail
10. Announce “Simulated Max Breaking” – Do not fully use maximum foot braking

Soft-Field Approach and Landing:

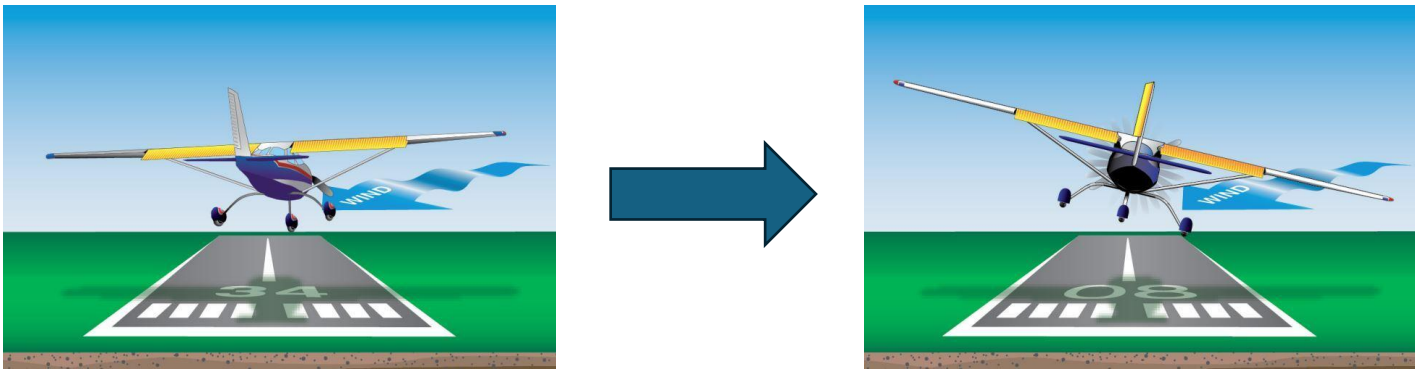
Steps 1-6 are identical to the Standard Full-Flap Approach and Landing

7. Select flaps full (30) and slow to 61 KIAS on final
8. Add a small amount of power (100-200 RPM) just prior to touching down
9. Touch down with a nose-high pitch attitude, slightly power-on
10. Delay/Ease the touch down of the nose gear, by increasing elevator back-pressure
11. Exit the runway while maintaining full elevator back-pressure

Crosswind Approach and Landing:

The Cessna 172 POH recommends the Wing-Low method for best control during crosswind landings. This technique involves establishing a crab angle to maintain the proper ground track on final. Upon reaching 200 feet AGL, transition to the wing-low sideslip configuration by applying rudder to align the longitudinal axis with the runway centerline and applying opposite aileron to maintain the aircrafts ground track over the centerline (i.e., aileron into the wind). This method prevents the airplane from touching down sidewards and imposing damaging side loads on the landing gear.

Wing-Low Sideslip Method (Airplane Flying Handbook 9-15 and 9-16)



After landing, increase aileron input into the wind as the airplane slows. This will prevent the upwind wing from rising, reduce any side-loading tendencies on the landing gear, and minimize the risk of a roll-over accident.

Stabilized Approach Definition: A stabilized approach is one in which the pilot established and maintains a constant angle glide path towards a predetermined point on the landing runway. It is based on the pilot's judgment of certain visual clues and depends on the maintenance of a constant final descent airspeed and configuration.

Go-Around Philosophy: A go-around must be executed any time you experience an un-stabilized approach. There are no exceptions for this rule. The decision to execute a timely go-around is both prudent and encouraged anytime the outcome of an approach or landing become uncertain.

Further examples of unsatisfactory approach and landing conditions requiring a go-around include but is not limited to:

- The possibility of a collision conflict with another aircraft
- Unexpected hazards on the runway or on final
- Instruction issued by ATC or CFI to go-around
- Anything that jeopardizes a safe approach and landing

If the thought "Should I go-around?" crosses your mind – GO AROUND!

Go-Around Procedure:

1. Apply Full Power
2. Turn Carb Heat Off
3. Immediately flaps up to 20 degrees
4. Climb at Vx
5. Incrementally retract flaps to 0
6. Verbalize the “Climb Checklist” out of 1,000 feet AGL (only if departing the traffic pattern)

Aiming Point Definition: The point on the ground at which, if the airplane maintains a constant glide path, and is not flared for landing, it will contact the ground.

Teens-In-Flight requires all landings to occur within the first third of the landing runway. When flying a visual approach, the aiming point is often an earlier point on the runway (approximately 300-400 feet before the touchdown point) to account for the flare and float. The distance from the aiming point to touchdown point varies depending on the pilot’s final approach speed (faster speed = longer flare/float).

Gust factor:

Slightly higher final approach speeds should be used under turbulent and/or gusty wind conditions. Add ½ of the gust factor to the normal, final approach speed.

> Example:
>
> Winds are 240° at 12 knots, gusting 22 knots. The gust factor is 10 knots. Add ½ of the gust factor, 5 knots in this example, to the normal approach speed (65 knots).

Pattern Departure:

When departing the traffic pattern, leave the pattern straight out from the upwind/departure leg or on a 45° angle on the pattern side (left 45° for left traffic, right 45° for right traffic). Communicate your departure on CTAF at uncontrolled fields.

LOST PROCEDURES

The following is a guideline of considerations that shall be made in the event the pilot is lost:

- Always maintain positive aircraft control.
- Remain calm.
- Conserve fuel by leaning the engine for best economy operation. Reduce power as much as practical.
- Regain situational awareness by use of a sectional chart and Navigational Aids (NAVAIDS).
- Sectional Chart:
  - Check/Set the G5 Heading Situation Indicator and magnetic compass.
  - Turn the sectional chart to match your heading.
  - Search for any prominent landmarks.
  - Correlate the landmarks to their position on the sectional chart.
- NAVAIDS:
  - Check/Set the G5 Heading Situation Indicator and magnetic compass.
  - Tune and identify an available Very High Frequency Omnidirectional Range (VOR) station.
  - Locate the aircraft position using radials/bearings.
  - Plot a course to proceed direct to the destination or to intercept the planned course, as appropriate.
  - Use the GTN 650 Direct To button to locate the nearest airport or VOR or use the moving map.
- Obtain assistance from ATC (nearest radar agency such as an approach control) or a Flight Service Station.
- If unable to contact anyone, squawk 7700 and transmit “in the blind” on 121.50 MHz to obtain assistance.
- Carefully monitor the fuel quantity available and make a precautionary landing at an airport (or off-airport as necessary) BEFORE exhausting your fuel supply.

LOSS OF COMMUNICATIONS

Immediate action items:

- Fly the airplane
- Remain calm
- Verify proper frequency
- Check your headset jacks, radio volume controls, audio panel settings and circuit breakers

- Check for a stuck microphone (indicated by a "TX" that stays in the upper right corner of the frequency display)

Lost Communication Scenarios:

- **Communications failure in the practice area** – A landing should be made at an appropriate uncontrolled airport, and the Teens-In-Flight President/CEO should be called for assistance. If already in contact with ATC and the failure occurs during arrival for landing, squawk 7600 on the transponder, and look for light gun signals.
- **Communications failure during a VFR cross-country** – A landing should be made at an appropriate uncontrolled airport, and the Teens-In-Flight President/CEO should be called for assistance. Pilots are reminded to update their flight plan with Flight Service.
- **Communications failure during IFR flight** – The procedure set forth in 14 CFR Part 91.185 and the AIM should be followed, and the appropriate transponder code should be set.
- **Communications failure upon entering Class D airspace** – The following No Radio (NORDO) procedure should be used to safely enter an airport located in Class D airspace.
  - Squawk 7600
  - Fly over the airport above the Class D airspace to determine the active runway/winds.
  - Maneuver for a 90° entry to the active runway at 500 feet above traffic pattern altitude and fly towards the control tower. Use extreme caution for traffic at all altitudes.
  - Flash the landing light while vigorously rocking the aircraft wings.
  - After crossing overhead the tower, maneuver for a 2-mile 45° entry of the active runway. Descend to traffic pattern altitude.
  - Transmit position and intentions via radio – including "in the blind."
  - Sequence into the traffic pattern using extreme caution as other aircraft may not be aware of your position.
  - Watch the control tower for light gun signals.
  - Acknowledge signals by rocking the wings, flashing the NAV lights at night, or by flashing the landing light if pointed at the tower.
  - Descend for landing when the proper light gun signal has been received.
  - If no light gun signals are received, remain at traffic pattern altitude and stay in the pattern.
  - Land before fuel exhaustion occurs.
- **Communications failure during ground operations** – At controlled airports, ATC's attention may be obtained by flashing the landing light. An attempt should be made to remain clear of movement areas while waiting for a light gun signal response. The flight is normally directed to return to the ramp area. Communications failure at uncontrolled airports require that the flight be terminated at that airport. Contact the Teens-In-Flight President/CEO for a NORDO return and coordination with ATC.

Flows

A flow is a memorized procedure that prepares the aircraft for a certain aspect of a flight. A flow is ALWAYS followed by a checklist to confirm that all items were accomplished (Do-Verify). A flow consists of a list of operational tasks or checks, which are designed in an organized pattern to make the flow easier to learn, reduce head-down time, and avoid jumping/skipping. All flows should be verbalized and performed out loud.

How to learn flows:
Flows should be committed to memory, so they are performed effortlessly. It is important to learn the procedure and to correct any mistakes when learning the flow. Flows can be practiced by repeatedly writing down the steps, reciting the steps out loud, using a cockpit poster, or by sitting in the aircraft practicing the flows. Before trying your flows during a lesson, it's a good idea to practice in the aircraft (not in flight) or simulator to verify you've learned the flows completely and correctly.

Teens-In-Flight required flows:
- ❖ Engine Run-Up Flow
- ❖ Before Takeoff Flow
- ❖ Pre-Maneuver Flow
- ❖ Engine Out, Emergency Landing Flow (ABCDEF)
- ❖ After Landing Flow

Engine Run-Up Flow:
After performing the first 7-8 items on the Run-Up checklist, perform the run-up flow in a counterclockwise sweep. The staring position is left hand on the ignition key, and right hand on the throttle. The maximum RPM drop is 175 RPM. The maximum difference between the left and right magneto drop is 50 RPM.

1. Throttle: Set 1700 RPM
2. Ignition Key: Turn one click to the left. Verify and verbalize RPM drop. Then turn ignition back to BOTH.
    a. "Right mag, drop of 100 RPM"*
3. Ignition Key: Turn two clicks to the left. Verify and verbalize RPM drop and the difference between the drop prior.
    a. "Left mag, drop of 75 RPM, Delta less than 50 RPM"*

4. Alternator: Turn off the left side of the split Master Switch. Confirm an alternator jump/discharge. Turn switch back on.
5. Engine Instruments: Starting at the oil gauges, sweep counterclockwise up the instrument panel and confirm all the gauges are correct.
6. Carb Heat: Pull out (ON), confirm a drop in RPM, push in (OFF), confirm a rise in RPM. Pull out and idle the throttle. Confirm the engine does not shut down.
7. Push Carb Heat back in (OFF) and settle the throttle to 1000 RPM.

*These are example callouts, not limitations

Before Takeoff Flow: "Lights, Camera, Action, Time"

The before takeoff flow should be performed when the aircraft is #1, holding short of the runway, and ready for takeoff.

1. Lights:
    a. Day: Turn on the landing light (to make you visible to other aircraft)
    b. Night: As appropriate for situation
2. Camera: Verify appropriate transponder code and ensure transponder is in ALT (altitude) mode.
3. Action: Verify the mixture is set to full rich (pushed in), Carb Heat is pushed in (OFF), and the fuel selector is set to BOTH
4. Time: Record the departure time and/or begin the flight timer

Pre-Maneuver Flow: A^2 B^2 C^2

1. Airspeed
2. Altitude
3. Bug reference point heading
4. Brief maneuver procedure
5. Clearing turns
    a. One 180° turn or two 90° turns
6. Call
    a. Practice Area Radio Call – including location, altitude, maneuver

Engine Out Emergency Landing Flow: ABCDEF

The emergency landing flow is used to ensure all important items are accomplished during an engine failure. You need to complete all items IN ORDER to be safe and successful.

If the engine quits for no apparent reason, IMMEDIATELY TURN ON CARB HEAT. If Carb ice caused the engine to quit, you only have a short period of time available to melt the ice.

A. Airspeed:
    i. Hold altitude
    ii. Slow to best glide speed (Vg = 65 KIAS)
    iii. Use full Trim
B. Best place to land:
    i. Check your altitude and mentally compute your no-wind glide distance
        i. 1.5 NM per 1000 feet
            1. TIP: Take the first digits of your altitude, halve it, and add them together.
            2. Example: At 8000' ft, you will glide 12 NM (8+4=12)
    ii. Use the GTN 650 to determine if you are within range of an airport
        i. Direct To button
        ii. Nearest Airport
    iii. Set the heading bug to represent the wind direction and your best landing direction
        i. Use smoke or weather prediction to determine wind direction
    iv. If you cannot make it to an airport, pick a field, beach, or road as your best place to land – verbalize your choice
        i. Be aware of obstacles, people, vehicles, animals etc.
        ii. Ex: If landing on the beach, it is better to land in the surf than to harm people on the beach.
    v. Fly along a downwind (wind bug should be at the bottom of the HSI). This will be your **HIGH-KEY** point when at 1000 feet AGL. Plan to be 500 feet AGL halfway through the base turn (**LOW-KEY**).
    vi. Use flaps as required. Full flaps are desired prior to touch down. They will help to reduce your landing ground speed.
C. Checklist:
    i. "Restart Floor-To-Door"
        i. Fuel selector: BOTH
        ii. Mixture: Full Rich (pushed in)
        iii. Throttle: Open
        iv. Carb Heat: ON (pulled out)
        v. Ignition Key: Crank (Start)
        vi. Master: Keep ON until radio calls are made and flaps extended, then shut OFF
        vii. Primer: In and locked
        viii. If time permits, pull out checklist and verify complete

ii. "Shutdown Floor-To-Door" - If engine restart is not possible (Ex: due to engine fire)
    i. Fuel Selector: OFF
    ii. Mixture: Full out
    iii. Throttle: Closed
    iv. Carb Heat: OFF (pushed in)
    v. Ignition Key: OFF
    vi. Master: Keep ON until radio calls are made and flaps extended, then shut OFF
    vii. If time permits, pull out checklist and verify complete

D. Declare
    i. If on an ATC frequency, make the emergency call there.
    ii. If not on an ATC frequency, select GUARD (121.5). Press and hold the GTN650 volume button.
        i. Mayday call example: "Mayday, Mayday, Mayday, Skyhawk 6463G, Engine Failure, going down in a field 5 miles East of Crescent Lake, 2 souls on board, Mayday, Mayday, Mayday."
    iii. Squawk 7700.

E. Exit Plan
    i. Prepare all passengers for an emergency landing.
        i. Confirm all seat belts and shoulder harnesses are on and tight.
        ii. Inform the person in the copilot's seat that they may move their seat back to avoid impact with the dash.
        iii. Brief all exit procedures and to meet 150 feet behind the aircraft.
        iv. Secure the first aid kit.
        v. Unlatch the doors inflight and keep open with a bag.

F. Fly the Plane to the Ground
    i. In order to survive the landing, you want to touchdown at the slowest possible airspeed.
    ii. If the field you are landing on has plowed furrows, land with the furrows to prevent flipping the plane.
    iii. If you have no choice but to fly into trees or bushes, continue to fly the plane through these obstacles until coming to a complete stop.

After Landing Flow: “Reverse Lights, Camera, Action, Time”

The After Landing Flow should be performed once the aircraft is clear of the runway and the entire aircraft has passed over the hold short line. Upon completion of the After Landing Flow, perform the “After Landing Checklist.”

1. Lights:
    a. Day: Turn off the Landing Light
    b. Night: Turn off the strobes, as required
2. Camera: Reset transponder to VFR (1200) and ALT mode
3. Action: Lean the mixture out (1.5 inch)
4. Time: Note landing time

In-Flight Maneuvers

SLOW FLIGHT

1. Throttle: 1900 RPM (Pitch up to maintain altitude)
2. Establish configuration: Clean or 30° flaps
    a. Increase forward pressure to prevent ballooning during flap extension
3. Hold airspeed: 5-10 KIAS above the speed at which the stall warning horn activates
4. Trim: As required
5. Utilize pitch and power to maintain airspeed and altitude

MANUEVERING DURING SLOW FLIGHT: PITCH FOR AIRSPEED, POWER FOR ALTITUDE

- Descents: 1500 RPM and Carb Heat ON
- Climbs: Full Power and Carb Heat OFF
- Level flight: ~1900 RPM
- Turns: Max of 10° bank, add 100-200 RPM when necessary

RECOVERY

1. Throttle: Cruise Power (2300 RPM)
2. Pitch: Adjust to maintain level flight
3. If in landing configuration:
    a. Retract Flaps to 20° immediately
    b. Retract Flaps to 10° upon reaching 55 KIAS
    c. Retract flaps to 0° upon reaching 60 KIAS
4. “Cruise checklist”

Private ACS Standards	**Commercial ACS Standards**
Airspeed: +10 KIAS, -0 KIAS	Airspeed: +5 KIAS, -0 KIAS
Altitude: ± 100 ft	Altitude: ± 50 ft
Heading: ±10°	Heading: ±10°
Bank: ±10° during turns	Bank: ±5° during turns

POWER-OFF STALL

The power-off stall simulates an approach descent in which the pilot attempts to "stretch" and reach the runway without proper attention to airspeed.

1. Establish landing configuration: Flaps 30° and mixture full rich
2. Throttle: 1500 RPM and Carb Heat ON (pitch up to maintain altitude)
3. Slow to 65 KIAS and establish a descent (500 fpm)
    a. Descend 100 – 200 ft
4. Slowly reduce throttle to idle
5. Increase back pressure to hold and maintain altitude to induce stall
6. Verbalize stall warning indication
    a. "Stall Warning, Buffet/Burble, Stall"

RECOVERY

1. Reduce Angle of Attack (AOA) – pitch down
2. Bring aircraft to level sight picture – don't let the nose drop
3. Throttle: Full power and carb heat OFF
4. Retract Flaps to 20° immediately
5. Retract Flaps to 10° upon reaching 55 KIAS
6. Increase pitch to begin climb (Vx)
7. Retract flaps to 0° upon establishing a positive rate
8. Level off at designated altitude
9. "Cruise Checklist"

Private ACS Standards

Heading: ±10°

If in a turn: ±10° of bank (Cannot exceed 20°)

Acknowledge cues of impending stall (horn, buffer)

Commercial ACS Standards

Heading: ±10°

If in a turn: ±5° of bank (Cannot exceed 20°)

Acknowledge cues of impending stall (horn, buffer)

*Examiner may request recovery upon reaching first stall warning indication

Power-On Stall

The Power-On Stall simulates you are taking off and lose track of your airspeed as you raise the nose too high.

1. Establish takeoff configuration: Clean and mixture full rich
2. Throttle: 1500 RPM and Carb Heat ON (pitch up to maintain altitude)
3. Slow to 55 KIAS (Vr)
4. Apply full power and Carb heat OFF
5. Slowly increase pitch attitude (approx. 15°-20° nose up)
6. Rudder: Increase pressure as airspeed decreases to maintain aircraft coordination

RECOVERY

1. Reduce Angle of Attack (AOA) – Pitch Down
2. Throttle: Confirm full power and Carb Heat OFF
3. Bring aircraft to level sight picture – don't let the nose drop
4. Increase pitch to begin climb (Vx)
5. "Cruise Checklist"

Private ACS Standards

Heading: ±10°

If in a turn: ±10° of bank (Cannot exceed 20°)

Acknowledge cues of impending stall (horn, buffer)

Commercial ACS Standards

Heading: ±10°

If in a turn: ±10° of bank (Cannot exceed 20°)

Acknowledge cues of impending stall (horn, buffer)

*Examiner may request recovery upon reaching first stall warning indication

STEEP TURNS

Complete a coordinated 360° turn, followed by another coordinated 360° in the opposite direction.

1. Cruise configuration
2. 95 KIAS (~2300 RPM)
3. Pick a reference point off the aircraft nose and bug appropriate heading
4. Roll into a 45° (50° for CAX) bank
    a. Once the aircraft reaches 30° of bank, back pressure and a touch of RPM (100-200 RPM) will be necessary to maintain airspeed and altitude. Add trim, as necessary.
5. Begin rolling wings level around 20° prior to reaching your desired heading/reference point.
    a. Add forward pressure to prevent gaining altitude
6. Visually clear for traffic and perform steps 1-5 in the opposite direction

More bank = More lift required = More elevator back pressure required

Private ACS Standards:	**Commercial ACS Standards:**
Airspeed: ± 10 KIAS	Airspeed**:** ±10 KIAS
Altitude: ± 100 ft	Altitude: ±100 ft
Bank: 45°, ± 5°	Bank: 50°, ±5°
Roll out on heading: ±10°	Roll out on heading: ±10

Emergency Descent

In order to appropriately perform an emergency descent, the pilot must be able to recognize situations requiring an emergency descent, such as cockpit smoke, engine fire, or hypoxic passenger. Situational awareness, division of attention, and positive load factor should be maintained during this maneuver. If an emergency descent is necessary due to an engine fire on one side of the engine, bank away from the flames and slip the aircraft to extinguish the fire. ("Step on the flames")

1. Throttle: Idle and Carb Heat ON
2. Initiate an aggressive turning descent, without exceed 45° of bank.
3. Continuously clear for traffic
4. Pitch down to maintain ~120 KIAS, do not exceed 127 KIAS (Vno)
5. If descent was caused by a fire, perform the "Shutdown Floor-To-Door Flow"
6. Level off after reaching 90° turn, or once the fire is extinguished
7. "Cruise Checklist" or "Emergency Landing Checklist"

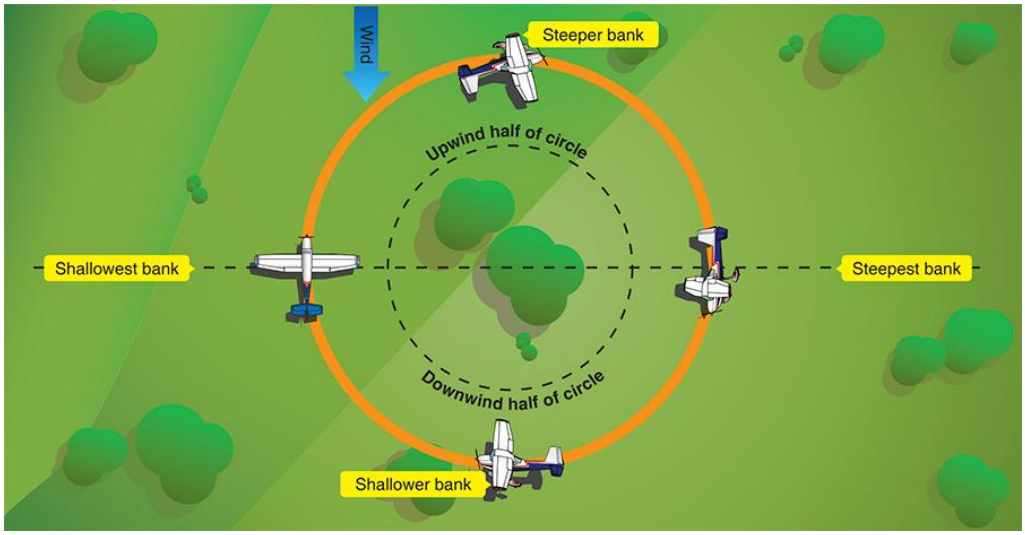
Private ACS Standards	**Commercial ACS Standards**
Airspeed: +0 KIAS, -10 KIAS	Airspeed: +0 KIAS, -10 KIAS
Altitude: Level off ±100 ft of specified altitude	Altitude: Level off ±100 ft of specified altitude

Turns Around a Point

This maneuver is a 360° constant radius turn around a single ground-based reference point. The goal is to adjust the bank angle for changes in groundspeed in order to maintain a constant radius turn. Pilots must be able to divide their attention between the flightpath, ground-based reference point, manipulation of flight controls and scanning for outside hazards.

Higher Ground Speed = Steeper Bank

Lower Ground Speed = Shallower Bank



1. Cruise Configuration
2. 95 KIAS (~2300 RPM)
3. Select a stationary reference point and maintain 1,000 feet AGL
4. Establish a downwind entry (0.5-1 NM from reference point) and bug entry heading
5. Once abeam the reference point, begin maneuver with the steepest bank – Note Ground Speed
6. At 90° point and as ground speed decrease, ease bank (moderate)
7. At 180° point and as ground speed reaches lowest point, ease bank (shallow)
8. At 270° point and as ground speed begins to increase, increase bank (moderate)
9. When approaching the initial downwind heading, bank should be steepest
10. Exit the maneuver on downwind heading

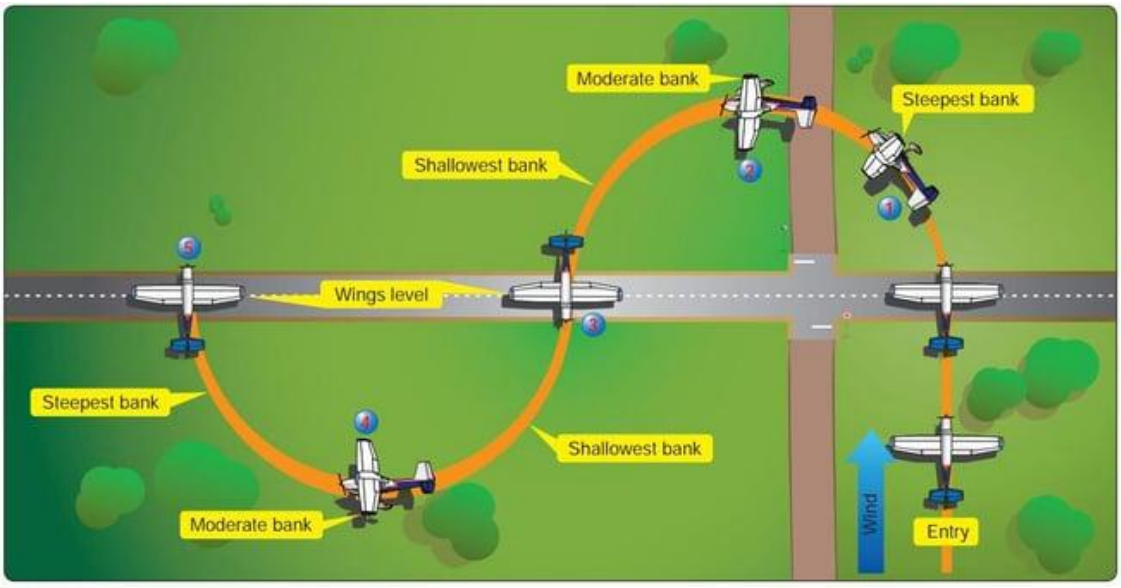
Private ACS Standards

Airspeed: ±10 KIAS

Altitude: ± 100 feet

S-Turns

This maneuver is two half circle, equal turns on each side of a selected ground-based, straight-line reference.



1. Cruise Configuration
2. 95 KIAS (~2300 RPM)
3. Select a straight-line reference point and maintain 1,000 feet AGL
4. Establish a perpendicular, downwind entry and bug entry heading
5. Once abeam your reference line, begin maneuver with the steepest bank
6. At 90° point, ease bank (moderate)
7. Once turning upwind and perpendicular to reference line, continuously shallow the bank to reach wings level upon reaching the reference line.
8. After passing over the reference line, initiate a shallow bank in the opposite direction
9. At second 90° point, ease bank (moderate)
10. Once turning downwind and perpendicular to reference line, continuously increase the bank to reach wings level upon reaching the reference line.
11. Exit the maneuver on bugged, downwind heading

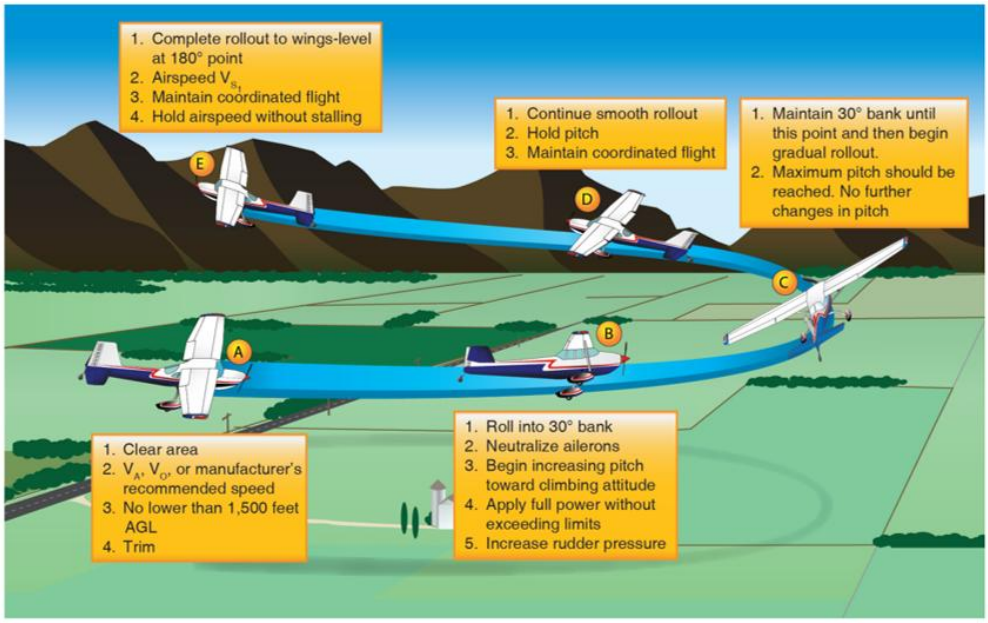
Private ACS Standards

Airspeed: ±10 KIAS

Altitude: ± 100 feet

Chandelles (Commercial Only)

Chandelles are to be accomplished at an entry altitude that will allow for completion no lower than 1,500 feet AGL. This maneuver consists of one maximum performance climbing turn beginning from straight-and-level flight and ending 180° from initial heading in a wings-level, nose high attitude and at the slowest controllable airspeed.



1. Cruise Configuration
2. 105 KIAS (~2400 RPM)
3. Select a 90° reference point off the wingtip in direct of turn
4. Throttle: Full power
5. Establish and maintain a 30° bank
6. Increase pitch to reach 18°-20° nose up at 90° reference point

a. First 90° turn: Bank = Constant 30°, Pitch = Increase to 18°-20°

7. Increase back pressure to hold established pitch
8. Decrease bank to reach level flight at 180° point

a. Second 90° turn: Bank = Decrease to level flight, Pitch = Constant 18°-20°

9. At 180° point, wings should be level and maintaining minimum controllable airspeed
10. Level off and accelerate to cruise
11. “Cruise Checklist”

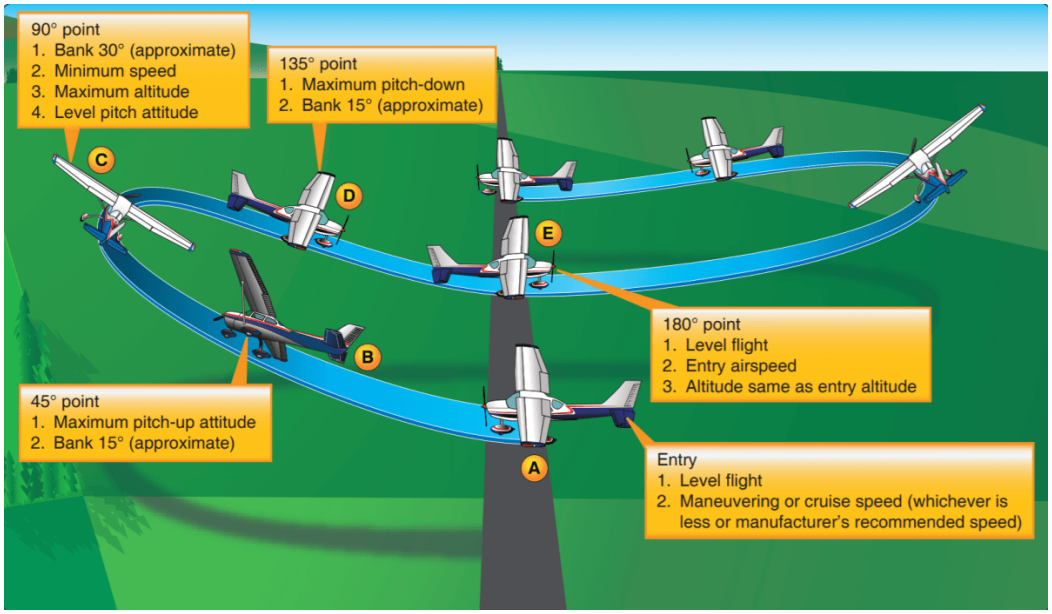
Commercial ACS Standards

Airspeed: At 180° point, minimum controllable airspeed (stall warning)

Roll out on heading: ±10°

Lazy Eights (Commercial Only)

Lazy Eights are to be accomplished at an entry altitude that will allow the maneuver to be completed no lower than 1,500 feet AGL. The pilot must maintain coordinated flight throughout the maneuver and continuously change pitch and roll rate.



1. Cruise Configuration
2. 105 KIAS (~2400 RPM)
3. Select a 45°, 90°, and 135° reference point
4. Bug entry heading
5. Simultaneously increase pitch and bank ("Pitch, pitch, bank")
6. At the 45° point:
   a. 15° pitch up
   b. 15° bank
7. Simultaneously reduce pitch and increase bank
8. At the 90° point:
   a. Level pitch
   b. 30° bank
   c. Minimum controllable airspeed
9. Simultaneously reduce pitch and bank
10. At the 135° point:
    a. 15° pitch down
    b. 15° bank
11. Simultaneously increase pitch and decrease bank
12. At the 180° point:
    a. Level flight
    b. Entry altitude and airspeed
13. Repeat in opposite direction
14. "Cruise Checklist"

Commercial ACS Standards

At the 180° point:

Airspeed: ±10 KIAS

Altitude: ±100 feet

Roll out on heading: ±10°

Steep Spirals (Commercial Only)

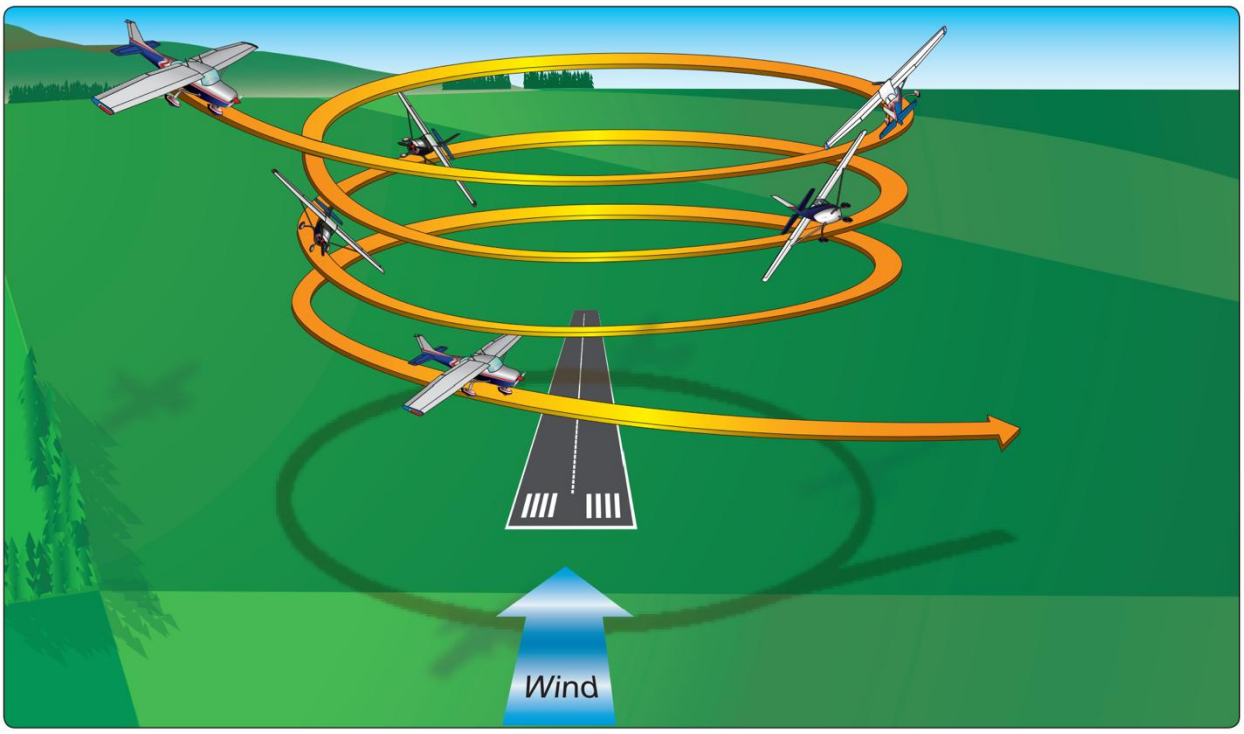


Figure 9-2. *Steep spiral.*

1. Clean Configuration
2. Altitude ≥ 3,000 feet AGL
3. Select a 90° visual reference point off the landing gear
4. Bug entry heading
5. Throttle: Slowly reduce to idle, Carb Heat ON
6. Pitch for 80 KIAS
7. Track at least three constant radius circles around the reference point
8. Adjust bank for winds (not to exceed 60°)
9. Clear the engine once during each 360° turn (passing through entry heading)
10. Roll out on entry heading
11. “Cruise Checklist”

Commercial ACS Standards

Airspeed: ±10 KIAS

Roll out on heading: ±10°

Accelerated Stall (Commercial Only)

Accelerated stalls shall be accomplished at an altitude that allows for completion no lower than 3,000 feet AGL. From cruise, smoothly enter a 45° bank and maintain coordinated turning flight while steadily increasing back pressure until the stall occurs.

1. Clean Configuration
2. Slow to 80 KIAS (~2200 RPM)
3. Establish a coordinated 45° turn
4. Slowly reduce power to idle, Carb Heat ON
5. Increase elevator back pressure to maintain altitude
6. Recover at first stall indication (horn, buffeting)
    a. Simultaneously reduce Angle of Attack (AOA)
    b. Throttle: Full power and Carb Heat OFF
    c. Level wings
7. “Cruise Checklist”

Eights On Pylons (Commercial Only)

Eights On Pylons are to be accomplished at the appropriate pivotal altitude (groundspeed^2/11.3). The pilot is required to maintain coordinated flight while flying a figure eight pattern which holds the selected pylons using the appropriate pivotal altitude. At the steepest point, the angle of bank should be no greater than 40°.

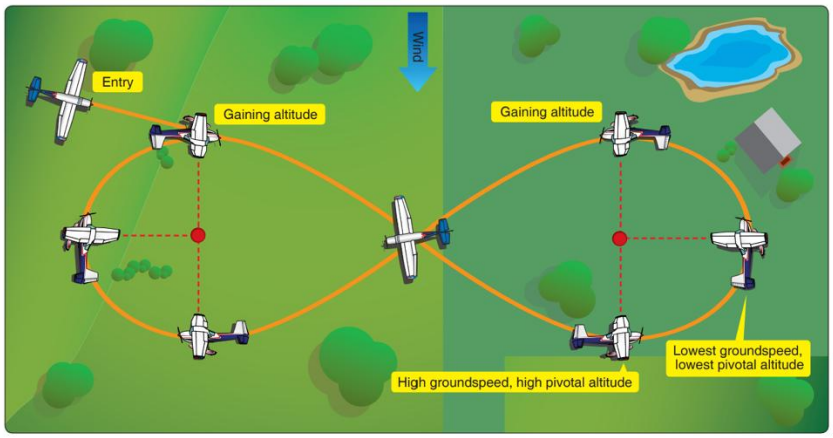
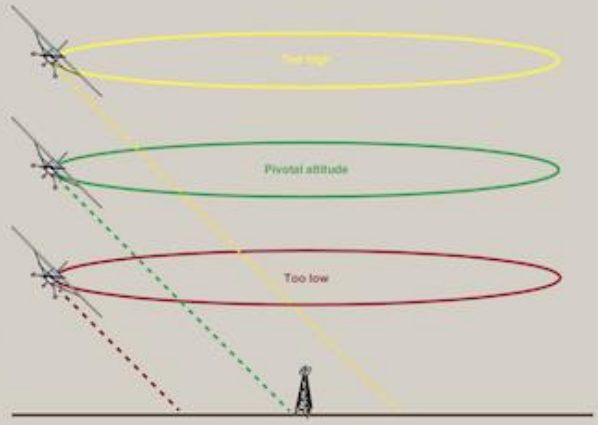


Figure 6-10. *Eights on pylons.*

Finding Pivotal Altitude

Groundspeed		Approximate Pivotal Altitude (feet agl)
MPH	KNOTS	
100	87	670
105	91	735
110	96	810
115	100	885
120	104	960
125	109	1050
130	113	1130

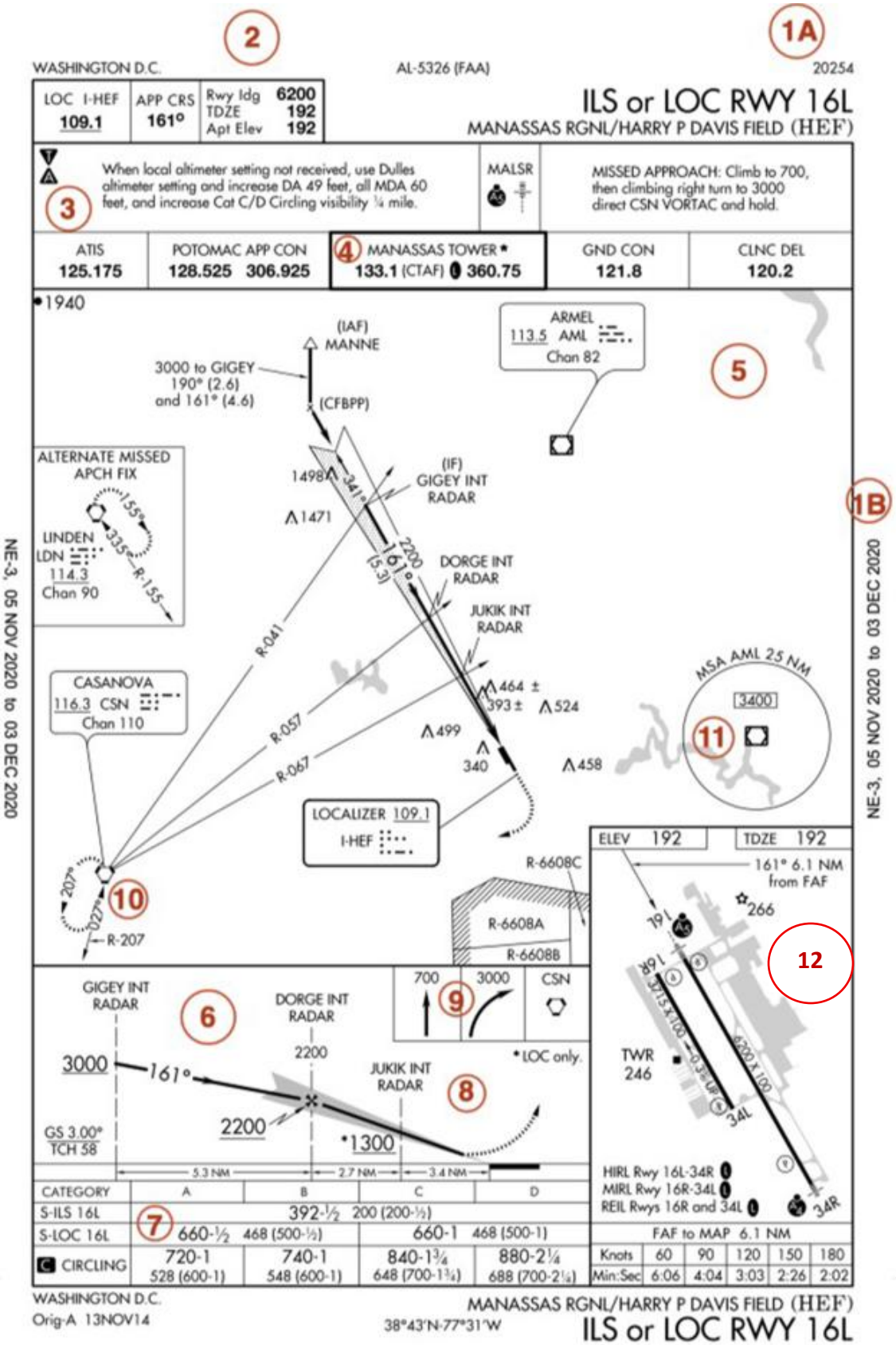


1. Cruise Configuration
2. 100 KIAS (~2300 RPM)
3. Select two pylons perpendicular to the downwind. The pylons should be far enough apart to allow for a smooth, continuous turn spending minimal time wings level between each pylon
4. Enter on a 45° midpoint downwind between the pylons, bug entry heading
5. Apply the appropriate pitch corrections to compensate for changes in groundspeed
    a. Higher Groundspeed = Higher Pivotal Altitude

    b. Lower Groundspeed = Lower Pivotal Altitude
6. To maintain line-of-sight with each pylon:
    a. Pitch forward as the pylon moves toward the nose
    b. Pitch back as the pylon moves toward the tail
7. Rollout at an appropriate heading to proceed diagonally between the pylons to begin the second turn at a 45° angle
8. Repeat in opposite direction
9. Exit maneuver on the entry heading

APPROACH BRIEFING

An approach briefing is a key procedural component in assuring that all aircraft systems and procedures related to an IFR arrival are properly set. An approach briefing also assures that the pilot (and copilot, if applicable) are fully aware of the key components of the approach. This includes but is not limited to: the applicable Decision Altitude (DA) or Minimum Descent Altitude (MDA), final and initial approach fixes, missed approach procedure, and any other critical notes. Conducting a quick, but thorough approach briefing assures the pilot maintains constant situational awareness and increases the level of safety and efficiency in conducting an IFR approach.


2
1A
WASHINGTON D.C.
AL-5326 (FAA)
20254
ILS or LOC RWY 16L
MANASSAS RGNL/HARRY P DAVIS FIELD (HEF)
LOC I-HEF 109.1
APP CRS 161°
Rwy Idg 6200
TDZE 192
Apt Elev 192
3
When local altimeter setting not received, use Dulles altimeter setting and increase DA 49 feet, all MDA 60 feet, and increase Cat C/D Circling visibility ¼ mile.
MALSR
MISSED APPROACH: Climb to 700, then climbing right turn to 3000 direct CSN VORTAC and hold.
ATIS 125.175
POTOMAC APP CON 128.525 306.925
4
MANASSAS TOWER * 133.1 (CTAF) 360.75
GND CON 121.8
CLNC DEL 120.2
1940
(IAF) MANNE
3000 to GIGEY 190° (2.6) and 161° (4.6)
(CFBPP)
ARMEL 113.5 AML Chan 82
5
ALTERNATE MISSED APCH FIX
LINDEN LDN 114.3 Chan 90
155°
335°
R-155
1498
341°
(IF) GIGEY INT RADAR
1471
161° (5.3)
2200
DORGE INT RADAR
JUKIK INT RADAR
R-041
R-057
R-067
CASANOVA 116.3 CSN Chan 110
464 ±
393 ±
524
499
340
458
MSA AML 25 NM
3400
11
LOCALIZER 109.1 I-HEF
R-6608C
R-6608A
R-6608B
10
207°
027°
R-207
ELEV 192
TDZE 192
161° 6.1 NM from FAF
266
191
168
12
TWR 246
3715 X 100
6200 X 100
34L
34R
HIRL Rwy 16L-34R
MIRL Rwy 16R-34L
REIL Rwys 16R and 34L
GIGEY INT RADAR
6
DORGE INT RADAR
2200
3000
161°
JUKIK INT RADAR
8
2200
*1300
GS 3.00°
TCH 58
5.3 NM
2.7 NM
3.4 NM
700
9
3000
CSN
*LOC only.
CATEGORY A B C D
S-ILS 16L 392-½ 200 (200-½)
S-LOC 16L 7 660-½ 468 (500-½) 660-1 468 (500-1)
CIRCLING 720-1 528 (600-1) 740-1 548 (600-1) 840-1¾ 648 (700-1¾) 880-2¼ 688 (700-2¼)
FAF to MAP 6.1 NM
Knots 60 90 120 150 180
Min:Sec 6:06 4:04 3:03 2:26 2:02
NE-3, 05 NOV 2020 to 03 DEC 2020
1B
NE-3, 05 NOV 2020 to 03 DEC 2020
WASHINGTON D.C.
Orig-A 13NOV14
MANASSAS RGNL/HARRY P DAVIS FIELD (HEF)
38°43'N-77°31'W
ILS or LOC RWY 16L

Approach Briefing Components

1. (A/B) Verbally confirm that the approach plate is current and the one that is intended to be flown.
    a. Verify that the approach is loaded correctly in the GPS
2. Verbally confirm the runway lengths, the touchdown zone elevation, the airport elevation, the final approach course and the NAV frequency.
    a. Verify that the approach course is tuned on the CDI and that the applicable NAV frequency is tuned and identified on NAV 1.
3. Verbally confirm any applicable notes. If no notes apply, include that in your briefing. Verbalize any available approach lighting.
4. Verbally confirm all applicable frequencies are tuned
    a. Tune Tower, CTAF, or UNICOM frequency in the STBY COM 1 slot. Tune Ground or ATIS/AWOS frequency on COM 2. This will ensure very limited time is spent switching frequencies once established on the approach.
5. Plan View: Verbally confirm where you are coming from and what you will be doing.
    a. Ex: “We are approaching from the North, can expect vectors to Final at DORGE.”
6. Profile View: Verbally confirm how you’ll identify the Final Approach Fix (FAF), if there are any intermediate stepdown fixes, your minimum descent altitude and final approach course.
    a. Ex: “Once I am cleared and established, I will cross DORGE at 2,200 ft, then step down to 1,300 ft at JUNIK.”
7. Approach Minima: Verbally confirm any approach minima. Include the DA/MDA and any backup DA/MDA if your planned approach is not available.
    a. Ex: Brief the ILS and LOC minima, in case the glideslope is inoperative
8. Verbally confirm the missed approach point
9. Verbally confirm the missed approach procedure
    a. If the missed approach requires tracking a secondary NAV source, tune the appropriate frequency in NAV 2
10. Verbally confirm the missed approach hold (if applicable). Include the expected entry and headings.
11. Verbally confirm the Minimum Safe Altitude (MSA) and what point it is referenced from.
12. Brief the runway environment and expected approach lighting. The final approach arrow shows where you will be approaching from.

Note: It is critical to develop a format that makes the most sense and that works best for you. However, you must be sure to use that format consistently. Approach briefings should not take more than 1 minute, allowing pilots to focus primarily on flying the airplane in IMC conditions.

Example Approach Briefing

"I'll be conducting the ILS Runway 16L into Manassas. Runway length 6,200 feet, touchdown zone elevation and airport elevation are 192 feet. The approach course is 161. The localizer frequency is 109.1, which is tuned and identified. No notes apply to us today. Approach lights are MALSRs. Right now, we are talking to approach, Manassas Tower is 133.1 which is set in the standby. Ground is 121.8 on COM 2. We will be coming from the Northeast, expecting vectors to final at DORGE. Once we are clear and established on the approach, I can descent to 2,200 feet at DORGE, where I will intercept the glideslope. I will then descend to my DA of 392 feet as 90 knots. If I don't see the runway by 392 feet, I will go missed. For the missed, I will climb straight ahead to 700 feet, then make a climbing right turn to 3000, direct to the Casanova VOR. Casanova VOR is set in NAV 2, 116.3. We can expect a teardrop entry, heading 237 for a minute then left turn to 027 to enter. One-minute legs, left turns. Our Minimum Safe Altitude is 3,000 feet. We will approach the runway straight in and will expect to see the MALSRs, HIRLs, and runway 16R on our right side. Any questions?"

IFR APPROACH CONFIGURATIONS:

Non-Precision Approach (At the FAF): 1700 RPM

Flaps 10°

90 KIAS

Precision Approach (At glideslope intercept): 2000 RPM

Flaps 10°

90 KIAS

HOLDS

The 5 Ts: Should be performed when entering a hold

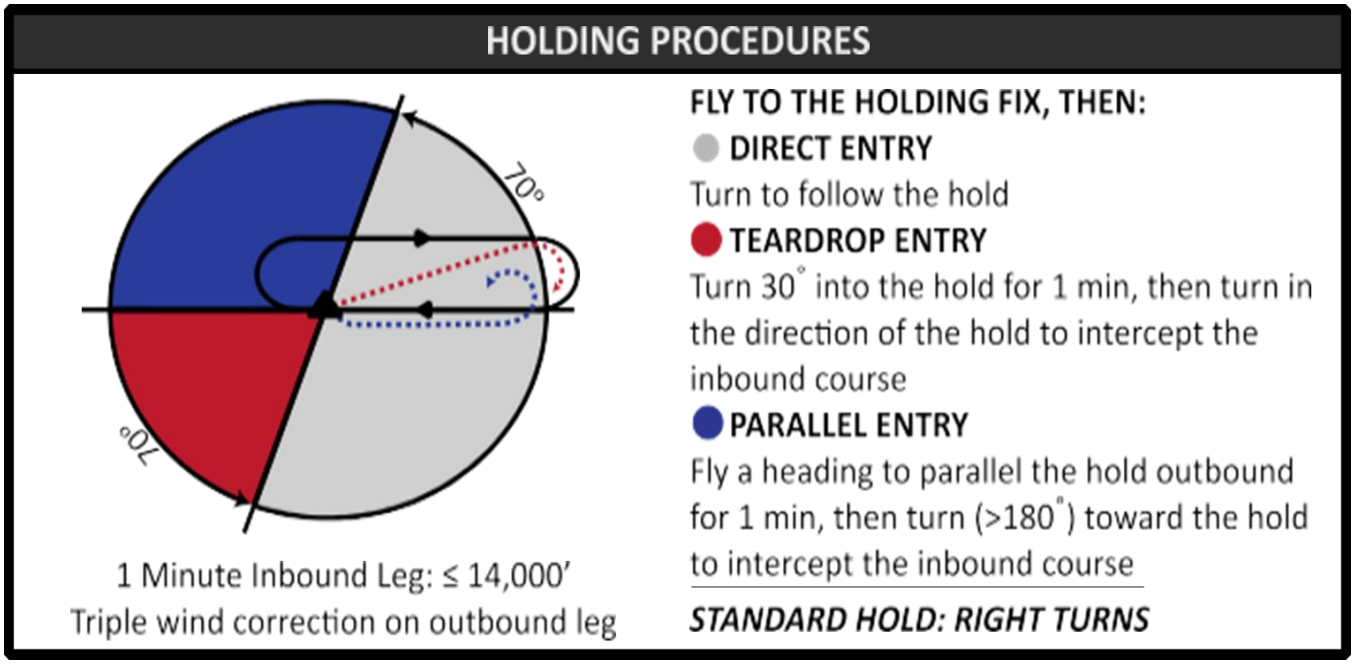
Turn: Fly towards the desired track

Time: Begin timer

Twist: Set the CDI to the appropriate course and select the appropriate navigation source (GPS or VLOC)

Throttle: Adjust power to maintain the most fuel-efficient airspeed or reduce the throttle to commence a descent

Talk: Advise ATC when "Established in the hold at X,XXX feet."

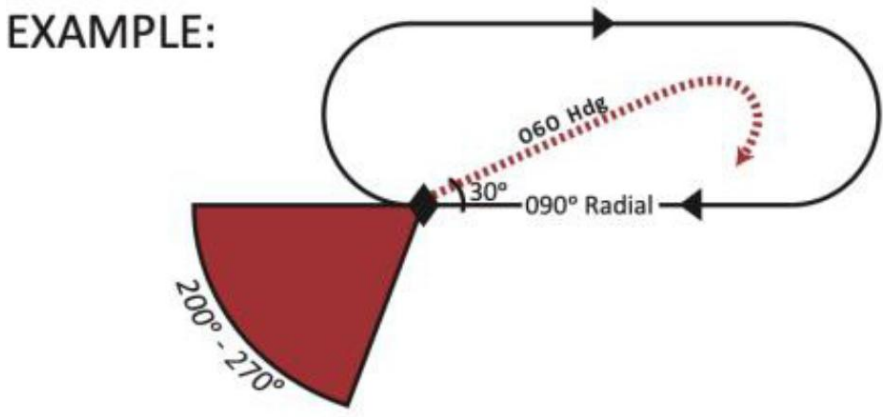


Direct Entry:

When approaching the holding fix from anywhere in the grey sector, the direct entry procedure would be the most appropriate to enter the hold. Fly directly to the fix, turn outbound, and then follow the holding pattern.

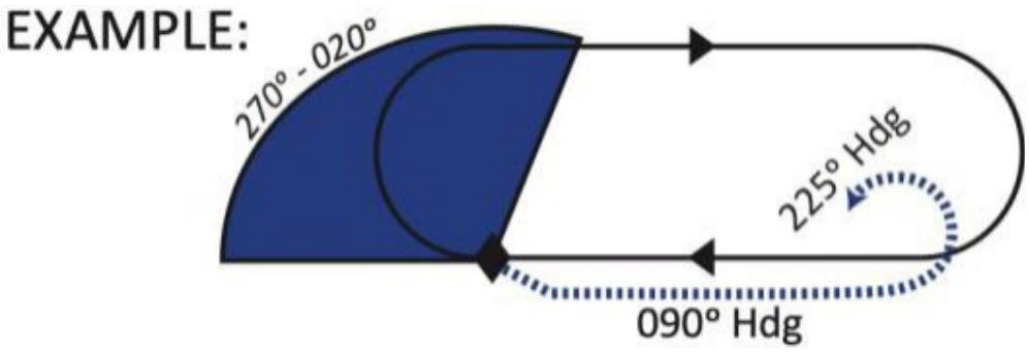
Teardrop Entry:

When approaching the holding fix from anywhere in the red sector, the teardrop entry procedure is applicable. Fly directly to the holding fix then turn to the outbound course ±30°. (Left turns, Add or Right turns, Subtract (LARS)) Fly the calculated heading for one minute, then turn to intercept the inbound course



Parallel Entry:

When approaching the holding fix from anywhere in the blue sector, the parallel entry procedure is applicable. Fly directly to the holding fix then turn to the outbound course. Fly the outbound course heading for one minute, then turn (in the opposite direction of the hold) to intercept the inbound course.



Attachment 1:

Aircraft ID:

Student Name:	Date:	Takeoff Time (Z):

Note: This is the prinatable, blank form. For pre-filled basic values, utilize one of the other 3 forms. Failure to use the correct form could lead to innacurate information and incorrect weight and balance

Weather			
METAR Time (Z):			
Winds:	Direction:		
	Speed:		
Visibility			
Sky condition			
Altimeter Setting			
Temperature			
Dewpoint			
NOTAMS Affecting Flight:		None	☐

Risk Management

How to fill: Check each box under the number corresponding to the severity of each line, 1 being insignificant and 5 being severe or very high risk. Any lines with a 4 require instructor signature (solo flights only). Any items with a 5 are automatically grounds for cancellation of flight. Add up the total score. Scores higher than 18 should warrant caution for safety of flight. If the score is exceeding 21, you should cancel the flight due to high risk.

	1	2	3	4	5
Illness	☐	☐	☐	☐	☐
Medication	☐	☐	☐	☐	☐
Stress	☐	☐	☐	☐	☐
Alcohol	☐	☐	☐	☐	☐
Fatigue	☐	☐	☐	☐	☐
Emotion/Eating	☐	☐	☐	☐	☐

Weight & Balance

	Weight	CG Arm	Moment (Lb-in./1000)
Basic Empty Weight			
Front Seats			
Rear Seats			
Baggage 1			
Baggage 2			
Zero Fuel Weight (ZFW)			
Fuel			
Ramp Weight (RW)			
Fuel Burn (Start, Taxi, T/O)			
T/O Weight (TOW)			
Est. Fuel Burn			
Est. Landing Weight (LDGW