Teens-In-Flight
www.teensinflight.org
"Teaching the Excitement of Flight"
386-345-2FLY

Teens-In-Flight
Operations & Procedures Manual

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

Ric Lehman, Executive Director
Approved – June 2024

Contents

Flight Safety Program

2. 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 the industry 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 is foremost
Professional behavior
Accountability
Respect other people
Lifelong learning
Rewarding exceptional ground and flight safety performance

SAFETY COMMITMENT

Teens-In-Flight will hold all individuals accountable for their safety performance. Teens-In-Flight will strive towards a "zero fail" 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, it should immediately be communicated, 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 observe 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 rules and procedures contained herein may result in immediate suspension of flight privileges. All students and pilots must comply with the instructions of Teens-In-Flight staff, unless the instructions would create an unsafe situation, or require 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 Teens-In-Flight management. If a person cannot comply with an employee instruction, they must report it immediately to the employee that made such an instruction.

SAFETY CULTURE

Aviation safety at Teens-In-Flight is a culture and an attitude that must permeate the entire organization. Safety is the responsibility of every individual associated with Teens-In-Flight. "Safety" is an overall philosophy that is a proactive approach to reducing or eliminating accidents or incidents. It is not a reaction to an incident or accident but a means of preventing them. Teens-In-Flight strives to eliminate all accidents and incidents.

3. 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 TSA required security awareness training
- Emergency and security reporting procedures
- Review of Teens-In-Flight Operations & 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

4: Occurrence Reporting and Documentation

It is essential, in order to reduce and eliminate accidents and incidents, that any unusual

occurrence is reported and documented. Any occurrence will be reported to Teens-In-Flight Executive Director immediately or President if Executive Director is otherwise unavailable. The student pilot and or Instructor will collect any relevant details and report to Executive Director or President to ensure appropriate documentation is completed and any 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, however, to report any incident or accident as defined by the NTSB in part 830, or to make any reports required by ATC or the FAA. Completion of a NASA Aviation Safety Reporting System Report is highly recommended, but is the pilot's ultimate responsibility

Categories of occurrences are as follows:

An accident as defined by the NTSB

- An incident, other than aircraft damage
- Illegal operation, such as departing past an inspection interval or AD
- Runway / Taxiway incursions
- Communications errors or failure to follow an ATC instruction
- Error in judgment or decision making
- Failure to follow security protocol or
- Failure to follow Teens-In-Flight safety rules or policies

5: 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. In order to reduce confusion in a crisis, fulfill obligations and responsibilities and provide compassion for affected individuals, this accident / incident response plan has been developed.

All people involved with Teens-In-Flight, particularly staff should be familiar with all aspects of this plan.

In order to ensure only accurate information is disseminated, contact with the media will only be accomplished by the Teens-In-Flight Executive Director or his designee.

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 NTSB has occurred, contact the State Police
3. Contact the Teens-In-Flight on duty / on call representative if not already accomplished, this person will make additional notifications as appropriate.
4. Contact the Teens-In-Flight Executive Director

5. Contact the Chief Flight Instructor

Any additional notifications or actions will be taken by the Executive Director or his representative only.

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 or airport closure, the EXECUTIVE DIRECTOR, PRESIDENT or their 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 judgment if faced with an emergent situation and they cannot contact the EXECUTIVE DIRECTOR, PRESIDENT or their designee.

6: Teens-In-Flight Emergency Contact List

Fire / Rescue / EMS	911
Florida State Police	301-568-8101
Teens-In-Flight EXECUTIVE DIRECTOR Ric Lehman	904-814-3803
Teens-In-Flight Chief Flight Instructor Ed Whalen	571-355-6771
Teens-In-Flight PRESIDENT Jack Howell	386-569-5685
FAA FSDO	386-226-3950
National Transportation Safety Board	571-223-3930
AOPA GA Secure	1-866-427-3287
Flagler Executive Airport Manager	386-313-4220

Rules and Regulations

7: Student / Pilot Expectations

Students are expected to attend all scheduled flight, ground or simulator sessions. Failure to do so can result in fines or loss of scholarships or even loss of flight privileges. Students / Pilots must notify Teens-In-Flight or their instructor as soon as possible if they will be unable to attend their 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 desire to cancel due to weather. Students should make this decision along with their instructor and adjust schedules accordingly.

1. Students are expected to arrive early for their scheduled sessions, and will show up with a completed Preflight Planning Worksheet..
2. Students are expected to return to Flagler Airport 15 minutes before the end of their scheduled session. This allows time for post flight fueling, (all planes are to be topped off after flight), parking, post flight inspection and debriefing before the aircraft or instructor will be needed for the next session.
3. All pilots must follow FAA regulations and Teens-In-Flight Operating Procedures contained in this manual.
4. All pilots are expected to use proper aircraft handling and servicing as specified in the aircraft Pilot Operating Handbook (fuel, oil, windshield cleaning, preflight, tie down and covers, etc.)
5. All pilots are expected to sign out the aircraft only for the time they expect to fly the aircraft. Do not sign out a 6-hour block when you only intend to fly 2 hours, just because you don't know when you are going to fly.
6. Pilots are responsible for the condition of the aircraft upon its return. Do not leave trash in the aircraft, or leave the aircraft dirty. Each aircraft has windscreen cleaner & micro fiber cloths for windscreen and paper towels for oil clean up. Teens-In-Flight can provide cleaning equipment for bigger jobs.
7. All pilots are expected to perform a post flight inspection of the aircraft after parking. **If any flight damage is found by the next pilot during preflight, it is assumed to be the responsibility of the previous pilot.**
8. Checklists should be used for all operations.
9. All pilots are expected to observe noise abatement procedures for any airports they choose to operate at, if they exist.
10. All pilots are encouraged to monitor 121.5 MHz when able.
11. All student pilots are required know how to access aircraft manuals and weight and balance info on the Teens-In-Flight website.
12. Student pilots may only use personal electronic devices as Electronic Flight Bags (EFB) and may not use them for photos or text messaging. Phones, if not in use as an EFB, must be off and stored out of immediate reach.
13. Students and their instructor are expected to coordinate scheduling Stage Checks with the Chief Flight Instructor or his/her designee.

8: Drug and Alcohol Policy

A pilot's physical skills and thinking ability are absolutely 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 as a very serious issue, therefore there will be zero tolerance for violation of this policy. This applies to all staff, instructors, pilots, and students.

Use of, or possession of illegal drugs will result in an immediate suspension of flight privileges and possibly removal from the Teens-In-Flight program, as well as criminal action.
A minimum of 12 hours must elapse from the last consumption of any beverage containing alcohol for a student, instructor, or pilot flying any Teens-In-Flight flight. Each person must also be free from the effects of any alcohol, including hangovers. Violation will result in immediate suspension of flight privileges.
All staff must be free from alcohol and drugs at all times 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 celebratory or social events during which they will not be flying within the following 12 hours.

It is every pilot's responsibility to determine his or her own fitness to fly. It is highly recommended each pilot review the following before each flight to ensure they are medically fit to fly, above and beyond 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, may impair your ability to fly safely. Do not fly unless you know how a given medication affects you.
Stress	Some people fly to relieve stress. However, flying with your mind on something else can leave you distracted. A simple distracted error can lead to an accident.
Alcohol	As mentioned above, you cannot fly if you have consumed alcohol within the previous 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 are not able to 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! *

9: Aircraft Priority Policy

The following list establishes, in order of priority, the aircraft priority policy:

1. Rescue Flights
2. Flights for certification
3. Standardization flights by the Chief Fight Instructor
4. Maintenance recovery or relocation flights
5. Phase Checks
6. Scheduled dual instruction flights by Teens-In-Flight students
7. Other scheduled flights by Teens-In-Flight students
8. Proficiency flights of the staff
9. Discovery flights
10. Unscheduled flights (flights not on the schedule as of the open of business)
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 Executive Director or Chief Flight Instructor

Aircraft are 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.

10: Solo Flights

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

1. 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.
2. 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.
3. 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.

4. The minimum runway length for solo is 3000 feet.
5. Students will use only hard surface runways.
6. 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 FARs.
7. All students must carry their student or pilot certificate, current medical certificate, government issued photo ID, and logbook on all flights.
8. Students may not carry anyone in the aircraft, other than a FAA designated pilot examiner, FSDO inspector, or Teens-In-Flight instructor.
9. All students will monitor 121.5 MHz in addition to any required ATC frequency.
10. **On all flights, students must add the phrase "Student Pilot" on initial contact with ATC or at an uncontrolled field's CTAF. If at an uncontrolled field and another aircraft joins the pattern, repeat "Student Pilot" as many times as is required.**
11. Students may not accept land and hold short clearances.
12. Students must maintain visual reference with the surface at all times Students may not operate "VFR over the top," or under special VFR.
13. No solo flights may be conducted at night.
14. All solo cross-country flights must be scheduled to be back on the ground at Flagler at least 1 hour prior to sunset.
15. Student pilots may not participate in formation flying.

11: General Operational Limitations

This section applies to all flight operations.

1. 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 as set by applicable placards, the Pilots Operating Handbook or this manual, except where contrary to established law.
2. Formation flying is prohibited without the approval of the Chief Flight Instructor.
3. No flying may be conducted below 500 ft agl, except where required for takeoff and landing. See Minimum Altitudes section in the Procedures chapter for further information.
4. No IFR flights may be conducted in IMC when, given all available information, it is reasonable to expect icing conditions may exist.
5. Pilots wishing to fly IFR must show evidence that he or she is both legal and proficient to fly IFR.

6. Each pilot is responsible for the preflight inspection of the aircraft including proper loading, fuel and oil requirements, and takeoff and landing performance data.
7. All flights must land with a minimum of 1 hour of fuel aboard, considering normal cruise fuel consumption.
8. Teens-In-Flight aircraft may not be operated on turf runways without case by case approval of the Chief Flight Instructor, or Executive Director.
9. Instruction in Teens-In-Flight aircraft may be provided only by Teens-In-Flight instructors.
10. Animals may only be carried aboard the aircraft in approved containers. The pilot is responsible for the condition of the aircraft upon its return.
11. Smoking and/or chewing tobacco are prohibited in Teens-In-Flight aircraft.
12. Each pilot must refuel the aircraft, secure the aircraft in its parking spot, tie down the aircraft properly (as appropriate), install control lock, lock the aircraft, and install the covers and plugs, unless the pilot using the aircraft next is physically present and agrees to accept responsibility for parking and securing the aircraft. If this is not accomplished correctly, **the pilot responsible will be billed for ½ hr. of time to accomplish the above procedure.**
13. Each pilot is required to perform a post flight inspection for damage before they are released from responsibility for the aircraft. **If any flight damage is found by the next pilot during preflight, it is assumed to be the responsibility of the previous pilot.**
14. Teens-in-Flight aircraft are not to be towed or pushed except by qualified personnel.
15. Flights outside the United States, or to any island airports beyond engine-out glide range, require the written approval of the Teens-In-Flight EXECUTIVE DIRECTOR.
16. The pilot in command is responsible for paying any landing, parking, or ground handling fees incurred while they are operating the aircraft. The proper ground handling, parking and tie down or storage of the aircraft is their responsibility when at airports other than Flagler Executive Airport.
17. Nothing may be attached to any part of the aircraft using adhesive.
18. Teens-In-Flight aircraft may not be operated above 10,000 feet MSL without approval from the EXECUTIVE DIRECTOR.

12: Weather Limitations

Weather Limits:

Flight into areas where icing may exist, given all available information, is prohibited.

Flight into or in the vicinity of thunderstorms is prohibited.

Wind Limits for All Training:

The table below prescribes the maximum surface wind limit and indicated crosswind peak gust in knots. The reported wind at Flagler and forecast 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 kts	15 kts
Solo	20 kts*	10 kts*

*** or as individually approved by authorized Instructor and noted in logbook.**

Weather Limits for VFR Training:

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

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

***Additionally, for solo cross country, no precipitation, fog or thunderstorms may be forecast for the proposed route within two hours before or after the proposed time of operation within the forecast area.**

Temperature Limits:

All Aircraft – Dual >-10° deg F or <+110°F
Solo >+10° deg F or <+100°F

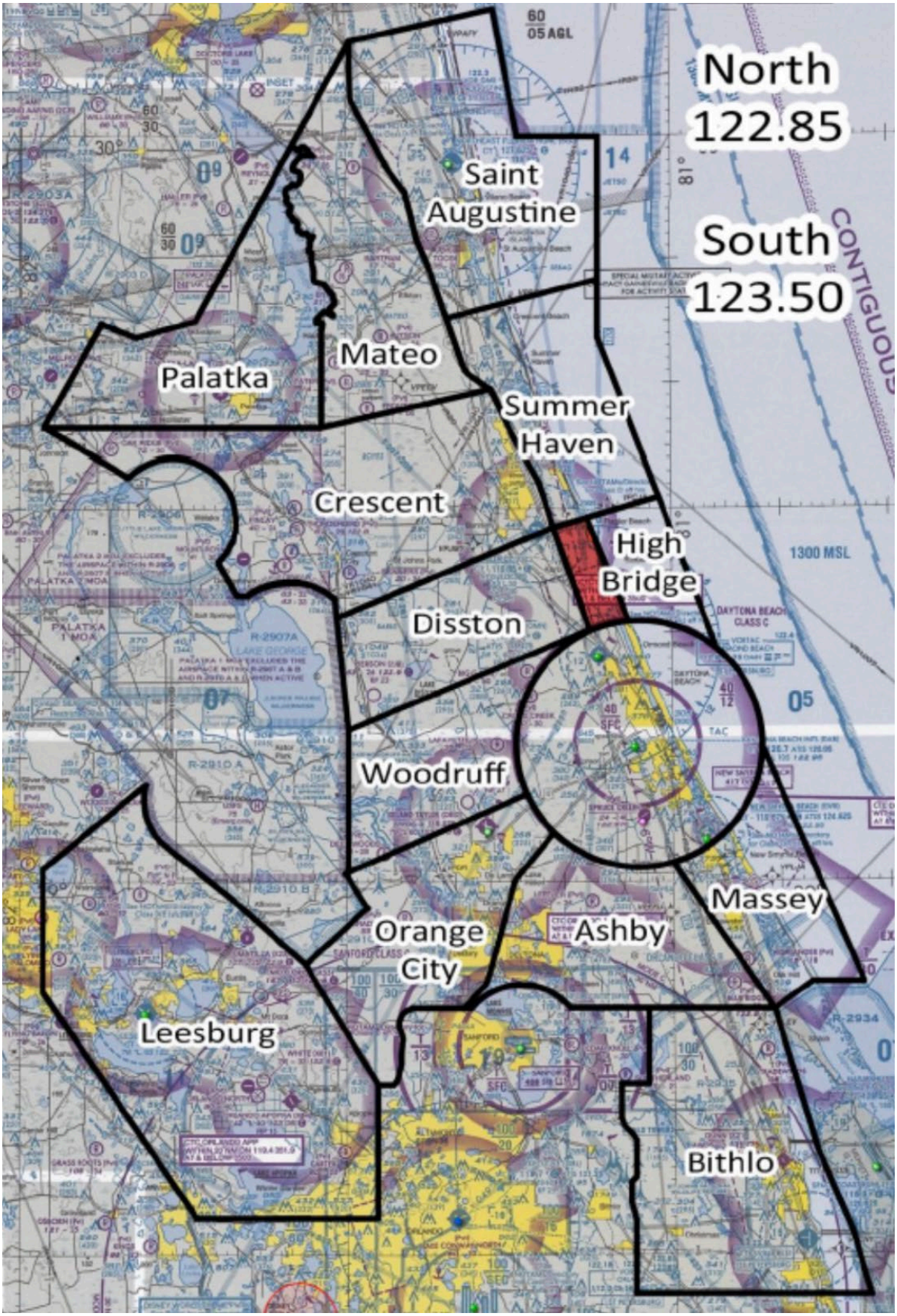
Teens-in-Flight Local Area

TIF shares its local area with many other aircraft; in fact the air space from Jacksonville down to Orlando is some of the busiest in the world. You must use all on-board (eyeballs and Garmin traffic display) and off-board (ATC) assets to find and avoid other airborne traffic. The practice areas near Flagler as well as traffic patterns at local areas are special potential collision hot spots.

The map on the following page shows the practice areas, borders, and frequencies

used by Embry Riddle, the largest airspace user in Northeastern Florida. TIF aircraft will normally remain North of the Diston & High Bridge areas and practice mainly in Summer Haven, Mateo, and Crescent. When you enter the area come up 122.85 and listen first for other traffic. Then make your position and intention report: stating the area name, call sign, location, altitude, and maneuver intentions. "Crescent practice area, Skyhawk 6463G, over the north end of lake Crescent, 3,000', stalls ". Make a new call if you've moved location or altitude.

Local Area for Solo Students: the local area for TIF solos is within 25NM of Flagler (KFIN) in Crescent, Mateo, and Summer Haven practice areas. Note this solo area does Not include Palatka (28J), St Augustine (KSGJ), or Ormand Beach (KOMN) airfields unless you have a specific endorsement from you instructor that allows you to fly at these fields.


North
122.85
South
123.50
Saint
Augustine
Mateo
Palatka
Summer
Haven
Crescent
High
Bridge
Disston
Woodruff
Massey
Orange
City
Ashby
Leesburg
Bithlo

13: Insurance Requirements

Student pilots and pilots will be responsible for all damage to the aircraft that results from their negligence that may have occurred during their use of TIF aircraft. Teens-In-Flight provides $100,000 liability coverage for any incident, accident, or damage incurred upon by any Teens-In-Flight aircraft in which Teens-In-Flight is proven at fault. No student is covered by this policy if the incident, accident, or damage to any Teens-In-Flight aircraft is found to be the fault of the student.

Teens-In-Flight requires students carry a "Renter's Insurance" policy in the amount of $50,000 (minimum) hull damage as an additional precaution against personal liability and property damage exposure. Evidence of such insurance must be presented to and maintained with Teens-In-Flight prior to flying Teens-In-Flight aircraft.

14: 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/electronics devices sometimes break. A proper preflight and post flight inspection along with regular maintenance and inspection intervals will help prevent breakdowns from occurring. Any maintenance discrepancy must be documented and reported to Teens-In-Flight so that it may be corrected and tracked.

In the event a maintenance discrepancy occurs it should immediately be reported to the Executive Director, as well as logged in the discrepancy section of Flight Schedule Pro. The Instructor or other staff member can then help the pilot make a decision regarding the urgency of the discrepancy. Minor discrepancies, such as low oil or low tire pressure should be corrected by the pilot or with assistance of a Teens-In-Flight employee. A more complicated discrepancy may require more serious maintenance. Consultation with the pilot and an instructor is required to determine if the planned flight may continue.

Note: If the pilot or instructor considers the item essential, regardless of other factors, do not fly. The pilot in command is the ultimate final authority and takes responsibility for conducting a flight with inoperative equipment.

1) Check if FAR 91.205 or the aircraft manufacturer AFM (if applicable) require the item to be operative for the intended flight
2) If FARs or the aircraft manufacturer does not require the item and the pilot and instructor believe the flight may safely be continued with the discrepancy, it should be documented in the aircraft schedule log. Pilot will also text the Executive Director with

any and all discrepancy details.
3) If required by FARs, the instructor will assist the pilot with deactivating the defective equipment and placarding it “INOPERATIVE” in accordance with 14 CFR 91.213.

Should a maintenance problem be discovered at an airport other than Flagler, the pilot may be left to decide on their own whether or not it is safe to fly. Consultation by telephone with Teens-In-Flight is recommended if at all possible. A customer may not perform repairs (other than simple preventative 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 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 any and 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.

Fees incurred due to the actions of the customer such as landing fees, normal parking fees, preheating or deicing fees (preheating if required is at the customers expense), tug fees, or environmental fees and associated taxes remain the responsibility of the customer and are not considered maintenance items

Aircraft Operations

15: Fuel Management

Over the years, 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, and in which tanks it remains.

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 flights, instrument flights and cross-country flights, it is required that all aircraft depart with full tanks, weight and balance permitting.
All pilots will ensure that fuel tanks are filled upon completion of flights.

Each pilot must check the fuel as part of their preflight procedure. If the aircraft was fueled improperly by the previous pilot, notify an on-duty Teens-In-Flight representative immediately.

Teens-In-Flight has no control over the quality of fuels offered at Flagler or other airports. It is mandatory that pilots test all fuels for contamination and proper grade as part of their preflight procedure.

16: Fuel Conservation and Mixture Leaning Procedures

The price of aviation fuel, as it always has, continues to represent a sizable portion of the flight costs for all pilots. At Teens-In-Flight, you will only pay for the fuel you actually use. It is in your best interest to use procedures to minimize your fuel usage and to maximize your flying enjoyment.

Leaning should be accomplished in accordance with the appropriate aircraft's pilot operating handbook and only upon proper instruction and training.

Although research indicates operating lean of peak results in increased engine life and decreased fuel burn, operation lean of peak can only be accomplished safely with specific training, matched fuel injectors and a multi-cylinder engine monitor. Teens-In-Flight aircraft are not presently equipped for this type of operation and as such, all aircraft must be operated rich of peak, as specified in the POH.

Pilots are encouraged to select lower power cruise settings. The aircraft can be flown more efficiently at 65% power than 75% power. A slight reduction in cruise speed can result in a large fuel savings for a small-time cost.

A dirty aircraft will fly slower than a clean one. Teens-In-Flight strives to provide clean and

reliable aircraft; however, we can always use help washing the aircraft.

Normally aspirated aircraft fly most efficiently at approximately 8000 feet. Above this altitude engine performance begins to drop off due to reduced air density. Below this altitude, 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.

17: Aircraft Scheduling and Dispatch Procedures

As we continue to grow, proper scheduling of planes, CFI's and all other resources becomes a priority. All Teens-In-Flight aircraft and instructors will utilize the online schedule in **Flight Schedule Pro (FSP)** available at flightschedulepro.com. Pilots and students will set up a logon from the invitation email they receive to allow them to view the schedule and to make appointments with instructors or to reserve aircraft. The system is able send a SMS text alert or email if a reservation is changed for any reason (such as instructor unavailability or an aircraft change). It is highly recommended that all pilots and students configure their account to take advantage of this feature. Please note, as of this writing, students are required to keep a minimum of $300 in their account to be able to schedule or check out a plane. Also, that all required documents, like Licenses, ID's Medicals, Citizenship have been provided, kept current and associated checkouts recorded prior to any solo flights. Further note, all reservations must be made a minimum of 24 hours in advance, otherwise you will need assistance to set up the flight. Please remember, poor planning on your part is not an emergency on ours.

Changes are to be expected, but should be kept at a minimum. We expect that there will be weather issues from time to time, safety is our 1st priority. We also know that there are times when our availability will change for various reasons. However, inasmuch as a plane and CFI have been reserved, and by default, kept from anyone else using them, any flights cancelled with less than 48 hours' notice may be subject to a 1-hour charge for whatever was scheduled. Anyone who continually cancels or changes reservations may be grounded until the issues can be resolved.

At the appointed time of the reservation, the plane must be Checked Out and Checked In properly in FSP and fuel and oil noted. Your CFI will teach you how to do this. Any "mis-match" will need explaining or will be corrected by Admin.

Please note, your pre-flight briefing is to take place prior to the time of the reservation so you can be flying and return the plane in plenty of time for the next reservation.

All users are required to enter and maintain
current contact information and
emergency contact information in their user profile

18: Movement from the Hangar

TIF aircraft are currently parked in our hangar. Wingtip, tail, and propeller clearance are all very tight. If the hangar door is closed proceed with great caution to the door switches so you don't injure yourself on aircraft or equipment. First confirm that the door pins along the bottom of the door are properly retracted and stowed. Then open the door high enough to ensure the aircraft tail is well clear of the bottom of the open door. If you need more light turn on the large ceiling lights on the opposite wall. Turn these lights off before you depart the hangar. It will be necessary to move the Eastern-most aircraft out of the way then freely pull out the Western one. EXERCISE EXTREME CAUTION MOVING YOUR AIRCRAFT. In some cases wingtip clearance is inches. **The CFI should maneuver the aircraft with the tow bar**, the other person should walk the tightest wingtip. Keep the door open if your flight is less than three hours, if not close the door. Be aware of your prop wash and exhaust relative to our neighboring hangars. Taxi to the ramp if necessary to keep your propwash from blowing into another open hangar.

19. Taxiing Procedures

Taxi on yellow depicted taxi routes and at a slow and reasonable speed (use 10 miles per hour as a guide). Spacing between aircraft on taxi routes will be a minimum of two ship lengths. During the day, operate the anti-collision lights while taxiing. Use position lights and the landing light at night. To minimize the chance of runway incursion, read back taxi instructions, particularly hold short, line up and wait, runway crossing 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.

20. 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 POH. If there is any doubt about whether emergency procedures are working to extinguish the fire, evacuate the aircraft immediately.

21: 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. At all times, the Pilot-in-Command will be responsible for, and actively use "See and Avoid" procedures as described in the AIM, Chapter 7, Section 5 and comply with the right of way rules specified in 14 CFR Section 91.113.

22: Minimum Altitudes

Minimum altitude for all maneuvers with the exception of landing practice is 500' AGL or higher

if the minimum altitude applicable in 14 CFR, Section 91.119 is higher. All simulated emergency landings will be terminated at 500' AGL minimum. Minimum altitudes for IFR operations will be in accordance with 14 CFR, Sections 91.175 and 91.177

23: Tie down and Parking Procedures

Upon completing a flight, the aircraft must be refueled to the bottom of the fuel neck. Keep the refueling hose on your shoulder as to not mar the aircraft wing during refueling. After the refueling operation do one more walk around to insure nothing was left on the wings or cowling before restarting and taxiing.

Pre-solo student pilots will not taxi or park the aircraft without an instructor on board the aircraft under any circumstances. Student pilots will not park the aircraft at night without an instructor aboard.

1. Never taxi with alternate air open or carb heat on.
2. Once in the parking spot, shut the aircraft down according to the procedures in the checklist and remove the key. Record the current time on the aircraft time sheet and note any squawks observed during the flight. Enter this data in FSP as your Check In.
3. Remove any trash from the aircraft and ensure the windscreen is clean. Remember you are held responsible for the condition of the aircraft after you use it. Do not leave any personal items, headsets, charts, etc. in the aircraft.
4. The aircraft must be tied down securely, using all available tie down rings, if you are not chocked in our hangar. Do not leave the parking brake on.
5. Always install the gust lock, pitot cover and cowl plugs, even if in the hangar.
6. Install the aircraft cover if parked in the open
7. Lock all doors and ensure all windows and vents are closed.
8. All pilots are expected to perform a post flight inspection of the aircraft after parking. If any flight damage is found by the next pilot during their preflight, it is assumed to be the responsibility of the previous pilot.
9. Return the keys. Ensure any new squawks encountered during flight are noted.
10. Students will ensure their logbook, and training records are completed by their instructor in FSP prior to leaving the airport.

24: 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. Any requests for confidential information or operating procedures are to be referred to the Executive Director.

The Teens-In-Flight Security Plan

1. Mandatory Use of aircraft door locks anytime the aircraft is unattended.
2. Key control for all aircraft.
3. Keys are obtained only after an appearance in person before a Teens-In-Flight employee
4. Compliance with TSA required security training program for all employees during their initial training and then recurrent yearly training.
5. Clear identification of Teens-In-Flight employees.
6. All students, pilots and employees must carry a government issued photo ID at all times while operating Teens-In-Flight aircraft.

25: Winter Operations

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, starters and 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 pilots and students 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. GA aircraft cannot tolerate surface contamination. The problem is not from the extra 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, otherwise, use of 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 operations, 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 taxing, be alert to the height of snow banks. It may be possible to hit them with the wing tips. Also, avoid setting the parking brake after taxing through slush or water that may freeze.

Pilots may not operate in IMC in an area where it is reasonable to believe icing conditions exist or may exist.

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. This should include a heavy coat, long pants, gloves, a hat and appropriate footwear.

26: Procedures for Approving Solo Cross-Country Flights

The student should come prepared with all necessary weather information, completed flight log, 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 in person, but need not be the student's primary instructor. 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.

1. The instructor and student must ensure the student has had their student license on their person, and logbook properly endorsed for cross country flight.
2. The instructor should ensure the student has enough time to complete the flight and return to Flagler comfortably no later than 1 hour prior to sunset.
3. The instructor should next review the weather and ensure the flight can be completed within Teens-In-Flight and FAA weather minimums.
4. The instructor should review the students fuel planning, including any necessary fuel stops and insure an adequate reserve, including time for a lost/recovery procedure will be maintained at all times.
5. The instructor will review the student's flight log. The instructor should check:
6. The student has enough time to return comfortably before the aircraft is scheduled for the next person.
7. The route stays clear of any special use airspace, or the student has a plan for dealing with any airspace encounters (i.e. Remaining below a restricted area, cross through Class C, etc.)
8. The student has appropriately marked the route on their charts and all charts are current.
9. The proposed route meets FAA experience requirements for the rating the student is seeking.
10. The airports the student is intending to use comply with Teens-In-Flight solo policy and any restrictions placed upon the student by their primary instructor.
11. The instructor should quiz the student on the route, have the student show how he or she calculated a leg. The student should easily be able to confirm their measurements and demonstrate how they developed any information on their flight log.
12. The instructor should quiz the student on use of the performance charts used to develop the flight log.
13. The instructor should discuss alternative airfields the student may use if the proposed

flight cannot be completed.

14. The instructor may quiz the student on anything else the instructor desires, or check or discuss any aspect of the proposed flight the instructor desires
15. It is recommended that all Solo flights 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.
16. The flight should be conducted under a VFR flight plan filed with the FSS. Instructor will endure student knows how to file, open, and close flight plan.

When the instructor is satisfied, he or she shall endorse the student's logbook for the proposed flight.

PROCEDURES GUIDE

GROUND & DEPARTURE PROCEDURES

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 curvature 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 mixture (~ 1.5" out) for all ground operations except engine runup.

At the Badlands, Ready to taxi to the active:
Call Ground eg: "Flagler Ground, Skyhawk 6463G, at the Badlands, Request taxi to the active, with information Alpha (if ATIS operational) or with the numbers (Only AWOS), VFR departure to the Northwest." Ground will give you taxi clearance and taxi route. Repeat back taxi clearance and route word for word. Leaving parking test brakes on both sides, as well as turn and slip and heading operation, eg: "Needles left, balls right, one, two, three decreasing." (Opposite for right turn). You are testing turn & slip on round dial and G5, and headings on G5s and mag compass.

Taxing and Brake Use.
Taxi at a safe speed, comparable to "fast walk." Use the brakes very sparingly, consistent with safe operations, and normally keep your heels on the floor and off the brakes. The fastest you should taxi should be with a power setting equal to idle (~1000 RPM). Once you establish your taxi set your flight controls for winds, "Turn into, dive away."

For all takeoffs:
Taxi to the Hold Short Line, clear for traffic, and call tower: "Flagler Tower, Skyhawk 6463G, ready for departure Runway XX." Tower will either clear you to Hold Short or give you takeoff clearance (eg): "Skyhawk 6463G, Flagler Tower, cleared for takeoff runway XX, frequency change approved upon leaving the Delta, cleared to turn on course." Repeat back the entire transmission word for word.

1. Line up on the runway centerline, confirm proper runway (Match heading bug to Rwy)
2. Increase throttle to full power. Verbalize RPM eg: "2300 RPM"
3. Check oil pressure & oil temperature, verbalize "Two in the Green."
4. Note increase on AS indicator and announce
5. "Airspeed Alive"

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

Normal Takeoff (Flaps 0)
1. Start slow rotation at 55 KIAS
2. Accelerate to 76 KIAS (Vy)
3. "Climb Checklist" out of 1,000' AGL

Short-Field Takeoff (Flaps 10)
1. Start slow rotation at 55 KIAS
2. Accelerate to speed specified in POH (56 KIAs for 63g, and 59 KIAS for 13F/3TT) until clear of obstacle.
3. When clear of obstacle (or at 200'), accelerate to 76 KIAS (Vy)
4. Announce: "Clear of obstacles, Flaps up."
5. "Climb Checklist" out of 1,000' AGL

Soft-Field Takeoff (Flaps 10)
1. Roll onto runway with full aft yoke – minimum braking, no sharp turns – do not stop. Confirm runway (Match heading bug to Rwy)
2. Smoothly apply full power. Verbalize RPM eg "2300 RPM."
3. Check oil pressure & oil temperature, verbalize "Two in the Green."
4. Note increase on AS indicator and announce: "AIrspeed alive."
5. As nose lifts off, ease back pressure (nose wheel must remain off the ground)
6. Lift off at lowest possible airspeed – remain in ground effect
7. In ground effect – accelerate to 60 KIAS (Vx) – begin climb
8. When clear of obstacles, accelerate to 76 KIAS (Vy)
9. Announce: "Clear of obstacles, Flaps up."
10. "Climb Checklist" out of 1,000' AGL

ARRIVAL PROCEDURES

Airport Approach. Getting ATIS/AWOS and the Approach Briefing should be completed no later than 15 miles from the airport. Accomplishing these tasks as early as possible creates more time to focus on aircraft control and collision avoidance in the busy airport environment. After getting the ATIS/AWOS, and setting the altimeter, call tower eg: "Flagler Tower, Skyhawk 6463G, 10 miles to the West, request patterns, with information Alpha (ATIS)/with the numbers (AWOS)." Pay close attention to tower's instructions: "Skyhawk 6463G, Flagler Tower, report 3 miles for a Right downwind for runway 24." Repeat this back verbatim. Tower assigns right or left downwind, or a straight in, based on traffic and your position.

Approach Briefing – Verbalize the Plan

Approach Briefing Considerations:

1. Landing Runway
2. Traffic Pattern Altitude
3. Traffic Pattern Entry
4. Flap Settings
5. Type of approach (Normal, Short-Field, Soft-Field)
6. Winds (Left or right crosswind? Tailwind on downwind or base?)
7. Final Approach Speed
8. Aiming Point
9. Touchdown Point

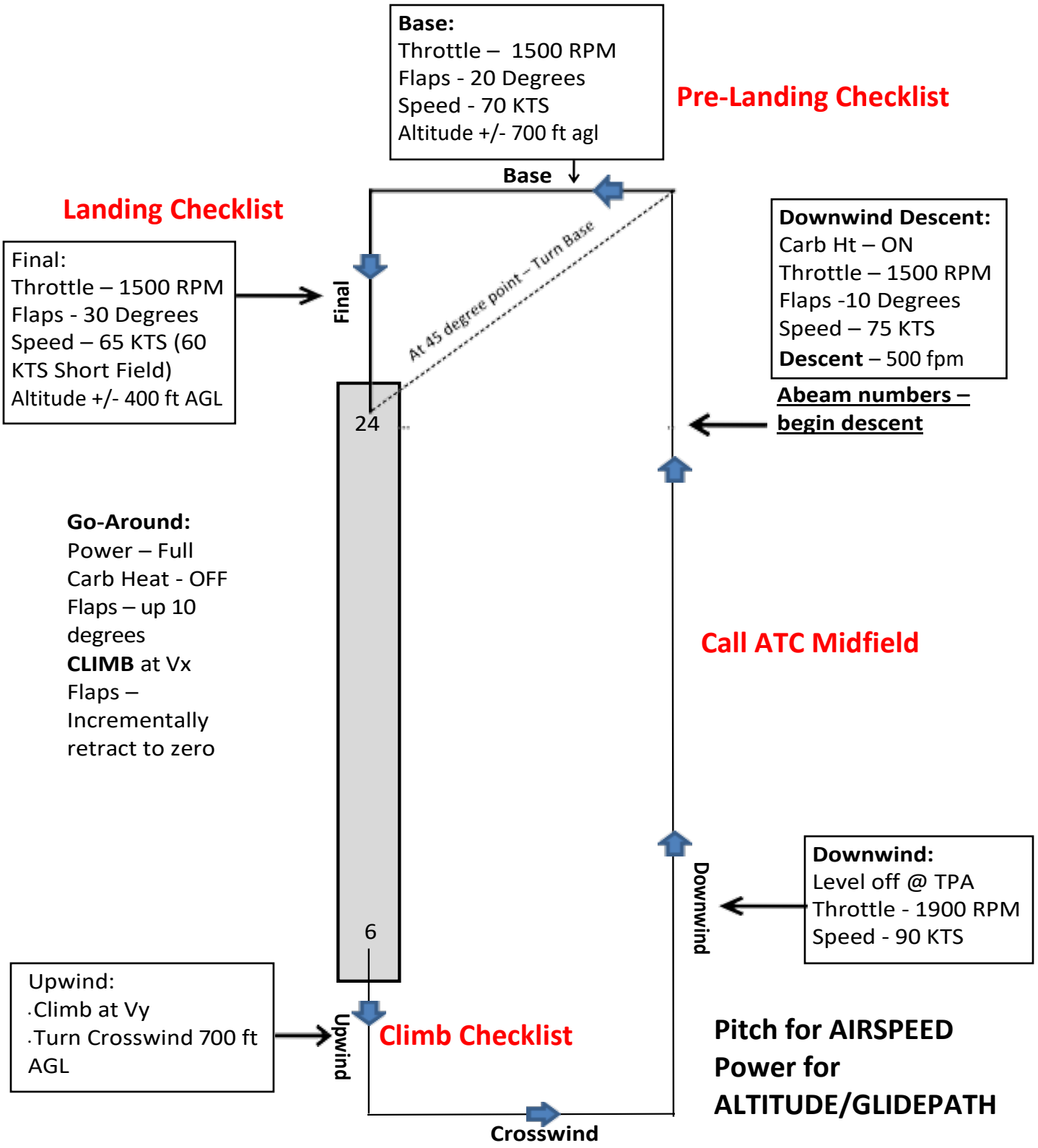
Example Landing Briefing:
"This will be a flaps-30, short-field landing on runway 24 at Flagler. I'll be making right traffic at pattern altitude of 1,000', entering on the 45-degree right downwind. Slight crosswind from the right. Final approach speed will be 60 KIAS, aiming at the numbers, touching down on the second centerline stripe. Any questions?"

Straight-In Pattern. At uncontrolled fields, normally enter from a 45 to downwind of a rectangular pattern. 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 from a straight-in for traffic sequencing. At KFIN, you will be instructed: "Skyhawk 6463G, report 4 miles for a straight-in Runway XX." Repeat back this instruction ver batim. Position your aircraft on a straight-in clearing vigilantly for other traffic, especially other aircraft turning from left or right base.
4 miles: Altitude 1,600' AGL, make 4 mile radio call
3 miles: Altitude 1,200' AGL, begin configuring for landing: 1500RPM, <110 KIAS Flaps 10, 75 KIAS, descend 500fpm
2 miles: Altitude 800' AGL, <85 KIAS Flaps 20, 70 KIAS, descend 500fpm
1 mile: Altitude 400' AGL, <85 KIAS Flaps full, 65 KIAS, descend 500fpm

For All Landings:
USE RUDDER TO ALIGN YOUR LONGITIDINAL AXIS (FUSELAGE) WITH THE CENTERLINE. DON'T LAND IN A CRAB!

1. Standardized Flaps 30 Approach & Landing
2. Devote full attention to aircraft control and traffic avoidance
3. Slow to 90 KIAS prior to entering traffic pattern.
4. Enter the traffic pattern at published Traffic Pattern
5. Altitude (typically 1,000' AGL)
6. Complete "Before Landing Checklist" when established on the downwind but NLT abeam the numbers (or ~2.5nm from rwy on straight in):
7. "My shoulder harness & Seat belt are secure, how are yours?"
8. Fuel Selector – confirmed both
9. Carb heat – out (on)
10. Throttle – 1500
11. Mixture – confirmed full rich (in)
12. "Flaps 10 below 110" knots
13. Descend out of Traffic Pattern Altitude on the downwind at 75 KIAS
14. On base leg, announce "Below 85, Flaps 20," select flaps 20 and slow to 70 KIAS
15. On final, select flaps 30 and slow down to 65 KIAS

C172 Traffic Pattern Procedures



* See Airplane Flying Handbook (FAA-H-8083-3B) Chapter 7 for info on traffic pattern

Short Field Approach & Landing

Steps 1-7 are identical to the "Standardized Flaps 30 Approach & Landing" procedure.

8. Select Flaps FULL and slow to 61 KIAS on final.
9. Retract flaps after touchdown, apply back pressure without scraping the tail
10. Simulate and announce "Max Braking" for training and check ride purposes.

Soft Field Approach & Landing

Steps 1-7 are identical to the "Standardized Flaps 30

9. Select Flaps FULL and slow to 61 KIAS on final.
10. Add a small amount of power (100-200RPM) just prior to touching down.
11. Touch down with a nose-high pitch attitude, slightly power-on
12. Maintain the nose wheel off the ground as airplane slows by increasing elevator pressure
13. Prevent nose wheel from rapidly falling by maintaining aft elevator pressure.
14. Exit the runway while maintaining full aft elevator pressure.

Crosswind Approach and Landing

The C172 POH/AFM recommends the Wing-Low method for best control during crosswind landings. Control technique involves establishing a crab angle to maintain the proper ground track on final, then transitioning to the wing-low sideslip technique no later than 200' AGL and below. The wing-low sideslip technique involves applying rudder to align the longitudinal axis with the centerline and applying opposite aileron simultaneously to maintain the aircraft's ground track over the centerline. This method prevents the airplane from touching down in a sideward motion and imposing damaging side loads on the landing gear.

Wing-Low Sideslip Method (Airplane Flying Handbook 8-4)

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

Stabilized Approach:
Definition: A stabilized approach is one in which the pilot establishes and maintains a constant angle glide path towards a predetermined point on the landing runway. This depends on maintaining a constant final descent airspeed and configuration (FAA-H-8083-3A, p.8-7)

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 becomes uncertain.

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

- Possibility of a collision conflict with a departing or arriving 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 even momentarily: GO AROUND!

Go-Around Procedure

1. Apply Full Power
2. Turn Carb Heat Off
3. Flaps – Up 10 degrees
4. Climb at Vx
5. Incrementally retract flaps to zero
6. "Climb Checklist" out of 1,000' AGL if departing the traffic pattern.

Aiming Point
The Airplane Flying Handbook defines aiming point as "the point on the ground at which, if the airplane maintains a constant glide path, and was not flared for landing, it would contact the ground.

Teens-in-Flight requires all landings to occur within the first 1/3 of the landing runway. When flying a visual approach, the aiming point is often an earlier point on the runway (approximately 300-400 before touchdown point) to account for the flare. The distance from the aiming point to touchdown point varies depending on the pilot's final approach speed (faster speed = longer flare).

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 240 @ 12 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.

Pattern Departure: When departing the traffic pattern leave the pattern straight out from the upwind/departure leg, or on a 45 degree angle on the pattern side (left 45 for left traffic, right 45 for right traffic). Communicate your departure on CTAF at an uncontrolled field.

Lost Procedures

The following are basic guidelines to consider in the event of becoming lost:

1. Maintain positive aircraft control at all times.
2. Remain calm.
3. Conserve fuel by leaning the engine for a best economy operation and reducing power as much as practical.
4. Regain situational awareness by use of a sectional chart as well as NAVAIDs.
5. Sectional Chart:
6. Check/set the G5 Heading Situation Indicator and magnetic compass.
7. Turn the sectional chart to match your heading.
8. Watch for prominent landmarks.
9. Match the landmarks to the sectional chart.
10. NAVAIDs:
11. Check/set the G5 Heading Situation Indicator and magnetic compass.
12. Tune and identify an available VOR station.
13. Locate the aircraft position using radials/bearings.
14. Plot a course to proceed direct to the destination or to intercept the planned course, as appropriate.
15. Use the GTN650 Direct To button to locate the nearest airport or VOR, or use the moving map.
16. Obtain Assistance from ATC (nearest radar agency such as an approach control) or FSS.
17. If unable to contact anyone, squawk 7700 and transmit “in the blind” on 121.50 MHz to obtain assistance.
18. Carefully monitor the amount of fuel and make a precautionary landing at an airport BEFORE exhausting the fuel supply.

Loss of Communications

IMMEDIATE ACTION ITEMS

- Fly the Airplane
- Remain Calm
- Check your headset jacks, Radio Volume Controls and Audio-Panel Setting
- Check for a Stuck Microphone (indicated by a "TX" that stays in the upper right corner of the frequency display)
- Check Circuit Breakers and Electrical System Gauges.

COMMUNICATIONS FAILURE IN THE PRACTICE AREA - A landing should be made at an appropriate uncontrolled airport, and the TIF Executive Director 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 VFR CROSS-COUNTRIES - A landing should be made at an appropriate uncontrolled airport, and the TIF Executive Director 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 set.

COMMUNICATIONS FAILURE - ENTERING CLASS D AIRPACE - The following No Radio (NORDO) procedure should be used to safely enter an airport located in Class D airspace:

1. Squawk 7600
2. Fly over the airport above Class D airspace to determine active runway/winds.
3. Maneuver for a 90° entry to the active runway at 500 feet above traffic pattern altitude and fly toward the control tower. Use extreme caution for traffic at all altitudes.
4. Flash landing light while vigorously rocking the wings.
5. After crossing overhead the tower, maneuver for a 2-mile 45° entry to the active runway. Descend to traffic pattern altitude.
6. Transmit position and intentions via radio "in the blind".
7. Sequence into the traffic pattern using extreme caution as other aircraft may not be aware of your position.
8. Watch control tower for light gun signals.
9. Acknowledge signals by rocking the wings, flashing the NAV lights at night, or by flashing the landing light if pointed at the tower.
10. Descend for landing when the proper light signal has been received.
11. If no signals are received, remain at pattern altitude, and remain in the pattern.
12. 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 requires that the flight be terminated at that airport, the TIF Executive Director be contacted for a NORDO return and coordination with ATC.

IN-FLIGHT MANEUVERS

Before any maneuver:

1) Perform Pre-Maneuver checklist

PRE-MANEUVER CHECKLIST .

MANEUVERING AREA……Clearing Turn (90/90 or 180)
REFERENCE POINTS…….(Landmarks, Altitude, Heading Bug, Airspeed) selected
MIXTURE.....as required

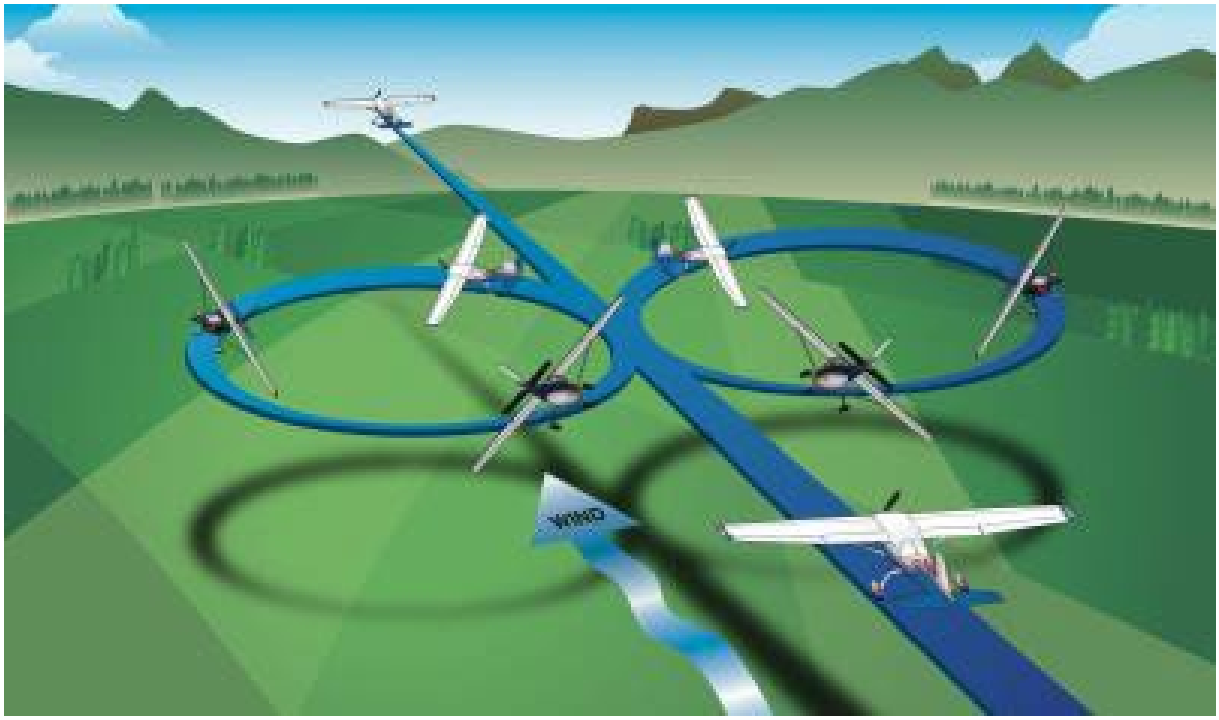
2) Verify maneuver is to be completed at a safe altitude

3) Verify aircraft is in the correct configuration

Clean Configuration Cruise Configuration Landing Configuration
- Carb Heat: Cold
- Throttle: 65% BHP (2300 RPM)
- Carb Heat: On
- Mixture: Rich
- Flaps: Up

Steep Turns (PVT)

Roll into one coordinated 360 degree turn, then follow with another coordinated 360 degree turn in the opposite direction.



1. Cruise configuration
2. 95 KIAS (2300RPM appx)
3. Pick a reference point off the nose and note heading.
    a. Roll into a 45° bank (once bank reaches 30°, add back pressure and add about 100-200 RPM to maintain airspeed and altitude. Add trim as desired.)
    b. Begin rolling wings level around 20° before reference point (half the bank angle). Add forward pressure to prevent gaining altitude.
    c. Visually clear for traffic and perform a 360° turn with 45° of bank in the opposite direction.

More bank = More lift required = More elevator back pressure

Private ACS Standards:

- Airspeed +/- 10 KIAS
- Altitude +/- 100’
- Bank 45°, +/- 5°
- Heading +/- 10°

Slow Flight (PVT)

1. Throttle: 1900 RPM (pitch back to maintain altitude and bleed off airspeed)
2. Use “Before Landing” flow to establish configuration
3. Increase forward pressure to prevent ballooning during flap extension
4. Hold 5-10 knots above the stall warning horn (about 50-55 knots)
5. Trim off control pressures.
6. Utilize pitch and power to maintain airspeed and altitude

Descend: *@ 1500RPM (pitch for airspeed)*
Climb: *Full Power (pitch for airspeed)*
Level flight: *@ 50-55 KIAS: ~1900RPM*
Turns: *10 deg of bank max, add ~100-200 RPM to compensate for loss of the vertical component of lift*

Recovery:

7. Throttle: Cruise Power (2300 RPM)
8. Pitch: Adjust forward to maintain altitude.
9. Flaps: Incrementally retract
10. “Cruise Checklist”

Private ACS Standards:

- Airspeed +10/-0 KIAS
- Altitude +/- 100’
- Heading +/- 10°
- Bank +/- 10°

Power-Off Stall (PVT)

The power-off stall simulates flying down final and you attempt to "stretch" to reach the runway without proper attention to airspeed**.**

Entry:

1. Use "Before Landing" flow to establish configuration.
2. Establish a stabilized descent at approach speed (65 KIAS)
3. Throttle idle (slowly)
4. Pull nose slightly up and hold nose at that attitude to induce stall
5. Verbalize "stall horn, buffett/burble, stall"

Recovery (At stall/buffet):

1. Reduce AOA by decreasing elevator back pressure
2. Bring aircraft to "level flight picture" and don't let nose dump
3. Throttle: Full Power & Carb Heat Cold
4. Retract flaps to 20° (immediately)
5. Retract flaps to 10° when airspeed is greater than 55 KIAS
6. Increase pitch to arrest descent, verbalize "Positive rate of climb"
7. Establish Vx
8. Retract flaps to 0° when accelerating through Vx
9. Level Off
10. "Cruise Checklist"

Private ACS Standards:

- Heading +/- 10°
- If in a turn: +/- 10°of Bank (Not to exceed 20°)

Power-On Stall (PVT)

The power-on-stall simulates you are taking off and lose track of your airspeed as you raise the nose too high.

Entry:

1. Throttle: 1500 RPM (pitch back to maintain altitude and bleed off airspeed)
2. Clean configuration flow
3. Establish liftoff speed (55 knots) and liftoff pitch (approx. 10 degrees nose up) and apply full power
4. Slowly increase pitch attitude (approx. 15-20°) and hold attitude
5. Rudder: Increase as speed decreases to maintain aircraft coordination

Recovery (At stall/buffet):

1. Reduce AOA by decreasing elevator back pressure (maintain coordination)
2. Throttle: Full power
3. Bring aircraft to “Level flight picture” and don’t let nose dump
4. Pitch for a climb at Vx
5. “Cruise Checklist”

Private ACS Standards:

- Heading +/- 10°
- If in a turn: +/- 10°of Bank (Not to exceed 20°)

Emergency Descent

During a simulated emergency descent, the pilot must be able to recognize situations requiring an emergency descent, such as a cockpit smoke and/or fire. Situational awareness, appropriate division of attention, and positive load factors should be maintained during the maneuver and descent. If the descent is due to flames coming out of one side of the engine, bank away from the flames and slip the aircraft ("step on the flames" with rudder) to extinguish.

1. Throttle: Idle & Carb Heat ON
2. Initiate turning descent (less than 45 degrees of bank), while clearing for traffic
3. Attain and maintain ~120 KIAS, but less that Vno (127KIAS)
4. Level off after 90 degrees of turn or fire extinguished
5. "Cruise Checklist" or "Emergency Landing Checklist" (As
    a. appropriate)

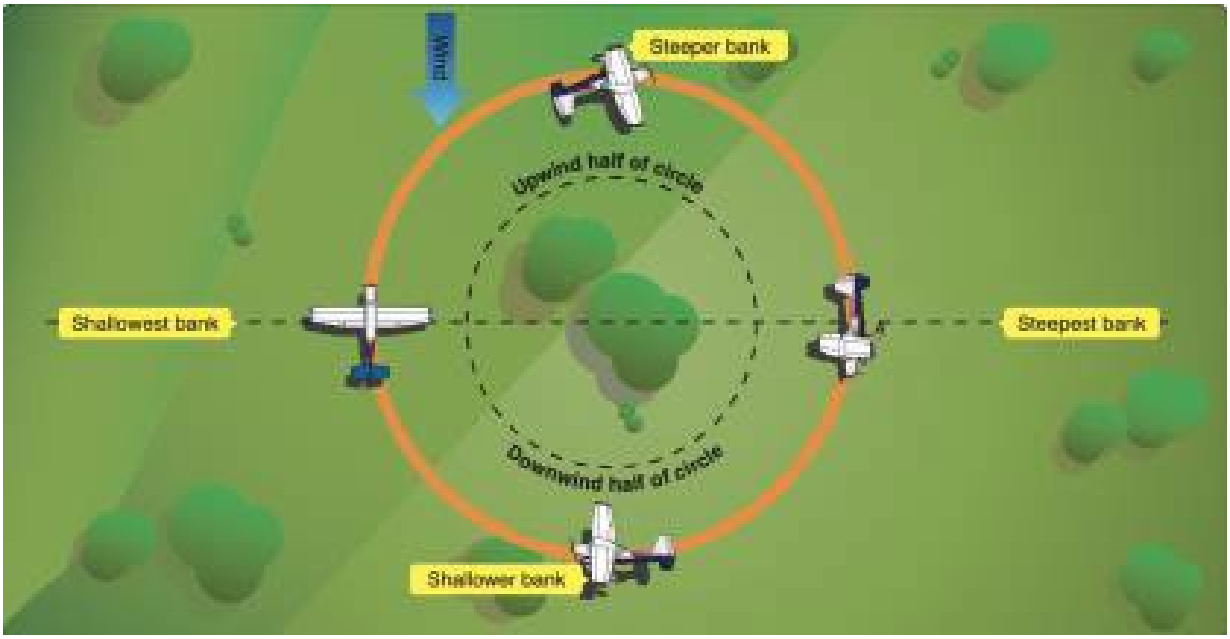
ACS Standards:

- +0/-10 KIAS
- Level off at specified altitude +/- 100'

Turns Around a Point / S-Turns (PVT)

Higher Ground Speed = Steeper Bank Lower Ground Speed = Shallower Bank

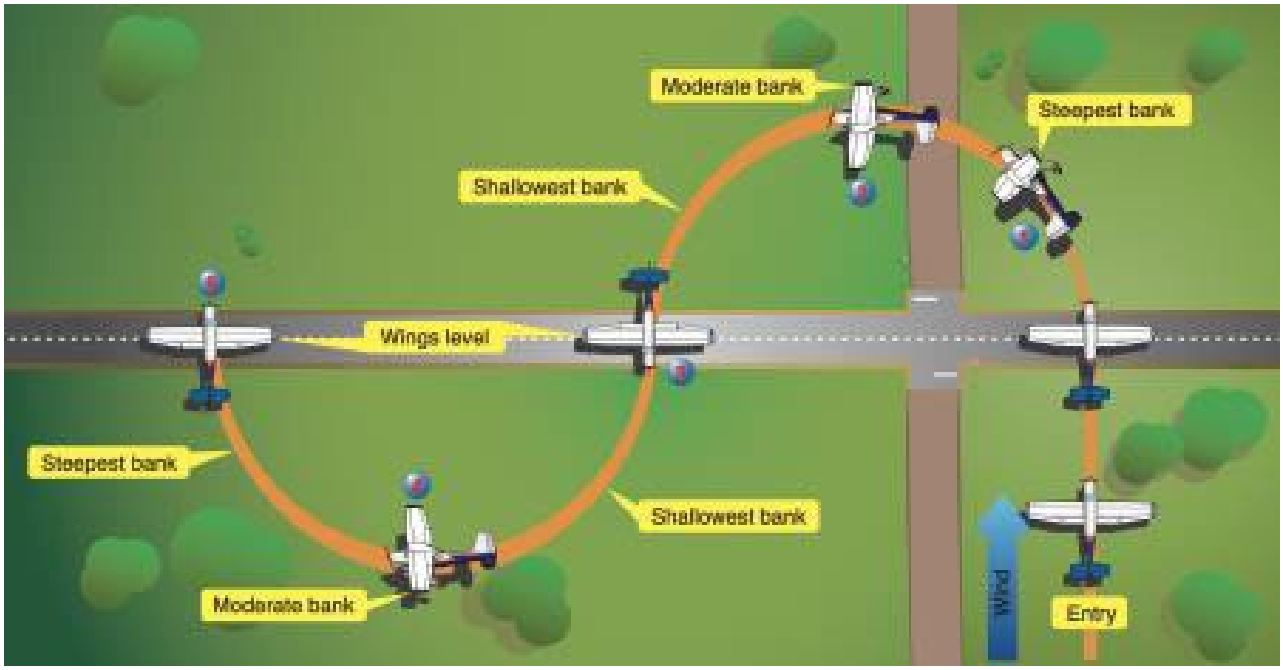
Turns Around a Point: This maneuver is a 360° constant radius turn around a single ground- based reference point. The goal is to adjust the bank angle during turns to correct for groundspeed changes and maintain a constant radius turn; steeper bank angles for higher ground speeds, shallow bank angles for slower groundspeeds while dividing attention between the flightpath, ground- based



references, manipulating of the flight controls, and scanning for outside hazards and instrument indications.

1. Establish 95KIAS (~2300 RPM)
2. Pick a reference point, and enter downwind, 1,000 feet AGL at an appropriate distance (same as in the traffic pattern, 0.5-1.0NM from point, point halfway up strut)
3. When abeam your point, begin maneuver with the steepest bank.
4. At 90° point, keep bank moderate.
5. At 180° point, keep bank shallow.
6. At 270° point, keep bank moderate.
7. When flying downwind, keep the bank at its steepest.
8. Exit maneuver on downwind
9. Once student has exhibited proficiency at 1,000’ AGL, train proficiency at lower altitudes down to 600’ AGL.

S-Turns: S-turns is a ground reference maneuver in which the airplane's ground track resembles two opposite but equal half-circles on each side of a selected



ground-based straight-line reference.

10. Enter perpendicular (at a 90° angle) to the selected reference line, on the downwind, 95KIAS, 1,000 feet AGL
11. When abeam your reference line, begin maneuver with the steepest bank.
12. At 90° point, keep bank moderate.
13. Once turning upwind, shallow bank to reach wings level exactly over the selected reference line fully perpendicular
14. Once over selected reference line, immediately start turn towards opposite direction (keep bank shallow on the upwind)
15. At 90° point, keep bank moderate
16. Once turning downwind, steepen bank to reach wings level exactly over the selected reference line fully perpendicular.
17. Exit maneuver on downwind.
18. Once student has exhibited proficiency at 1,000' AGL, train proficiency at lower altitudes down to 600' AGL.

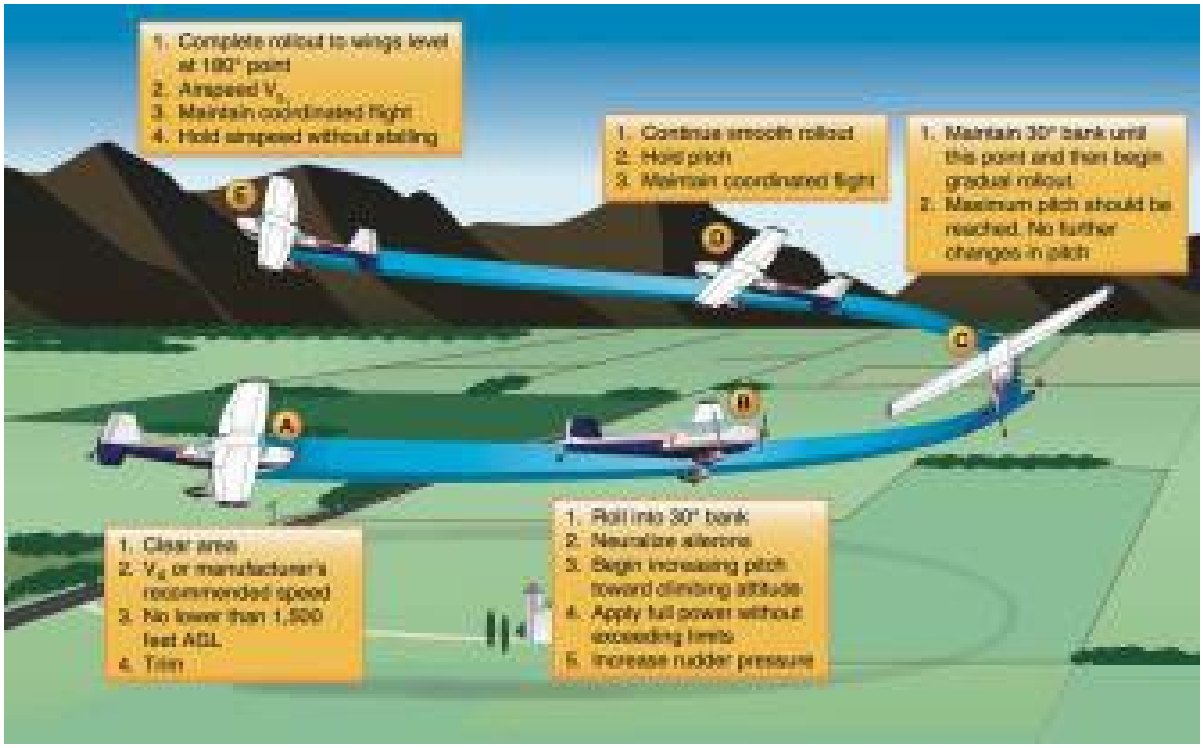
Note: Always select a location that is clear of obstacles, not over populated areas, and has a good emergency landing site.

ACS Standards:

- Altitude: +/- 100'
- Airspeed: +/- 10 KIAS

Chandelles (Commercial Only)

Chandelles are to be accomplished at an entry altitude that will allow completion no lower than 1,500' AGL, and consist of one maximum performance climbing turn beginning from straight-and-level flight, and ending at the completion of a precise 180 degree turn in a
wings-level, nose-high attitude at the minimum controllable airspeed.



1. 100 KIAS (2300RPM appx.) maintain altitude
2. Clean configuration flow
3. Choose a reference point off wing (90° point)
4. Establish & maintain 30-degree bank
5. Full Throttle – Increase pitch to attain approx. 12-15° pitch up at the 90° point

1st 90° turn, Bank = Constant, Pitch = Increasing to 12-15°pitch up

6. 90° Point – maintain pitch – reduce bank angle to attain level flight at 180° point

2nd 90° turn, Pitch = Constant 12-15° pitch up, Bank = decreasing to level flight

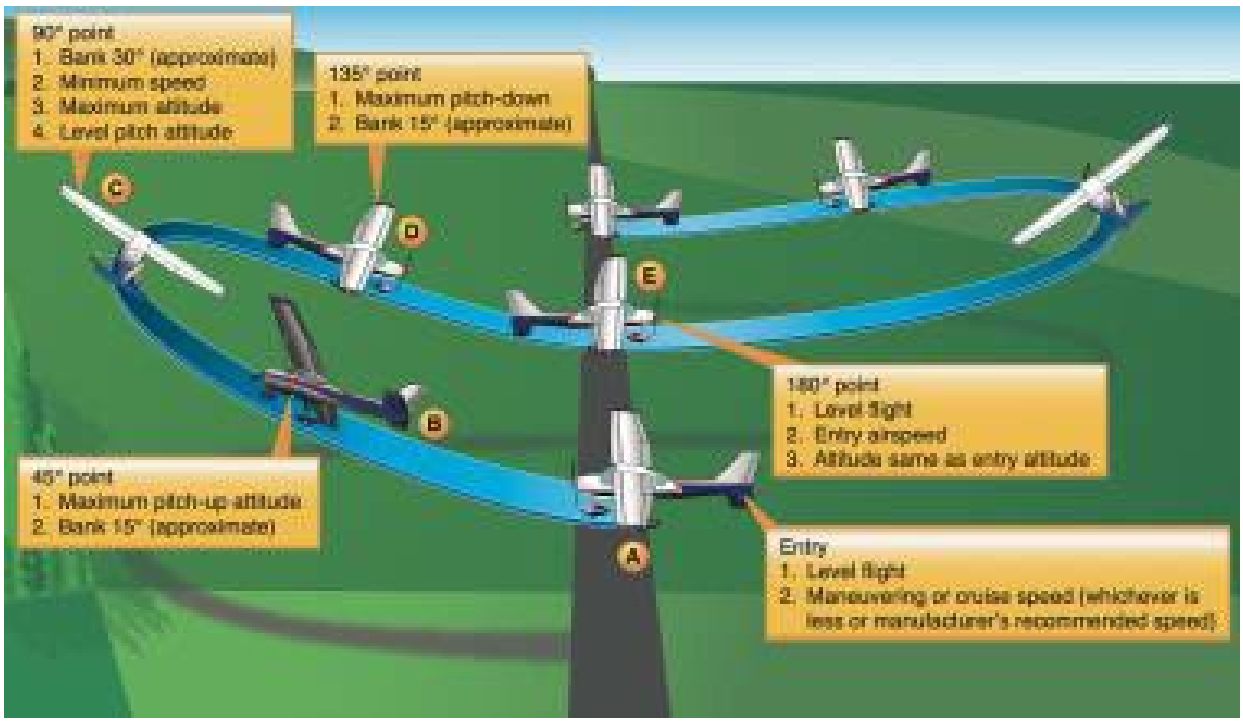
7. 180° point – wings level – minimum controllable airspeed
8. Level off and accelerate while maintaining level flight
9. "Cruise Checklist"

Commercial ACS Standards:

- Airspeed: Just above stall
- Heading: Rollout at 180-degree point +/- 10 Degrees

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' AGL. The pilot is required to maintain coordinated flight throughout the maneuver, with a constant change of



pitch and roll rate.

1. 100 KIAS (2300RPM appx.) maintain altitude
2. Cruise Configuration
3. Choose a reference point off the wing
4. Simultaneously increase pitch and bank (slowly)
5. 45-degree point – 15-degree pitch up and 15-degree bank
6. Reduce pitch / increase bank
    a. 90-degree point – level pitch – 30-degree bank – min speed (5-10 knots above stall)
7. Continue reducing pitch and reduce bank
8. 135-degree point – 15-degrees pitch down – 15-degree bank
9. 180-degree point – level flight – entry airspeed and altitude
10. Repeat in opposite direction
11. "Cruise Checklist"

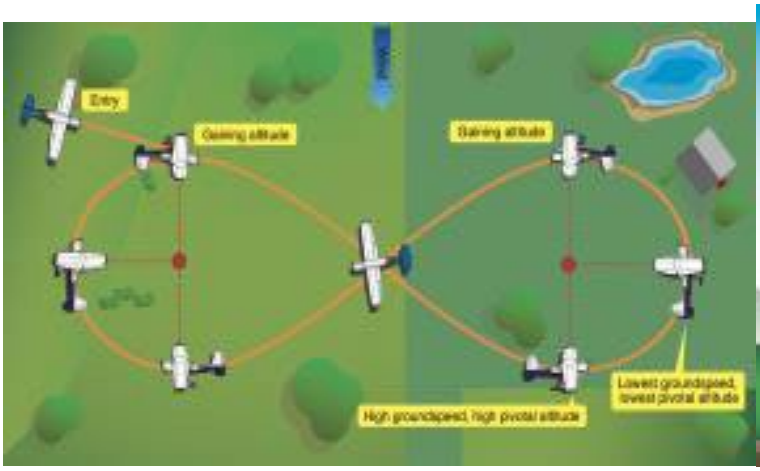
Commercial ACS Standards:

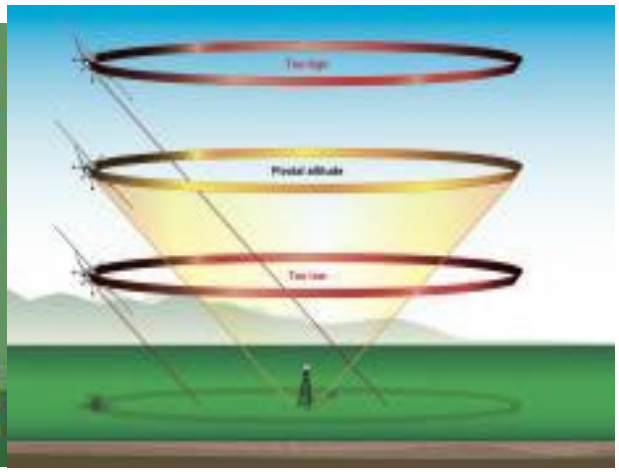
- At 180-degree point:

- Airspeed: +/- 10 KIAS
- Altitude: +/- 100’
- Heading: +/- 10-degrees

Eights On Pylons (Commercial Only)

Eights on Pylons are to be accomplished at the appropriate pivotal altitude (groundspeed²/11.3), governed by the aircraft's groundspeed. 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

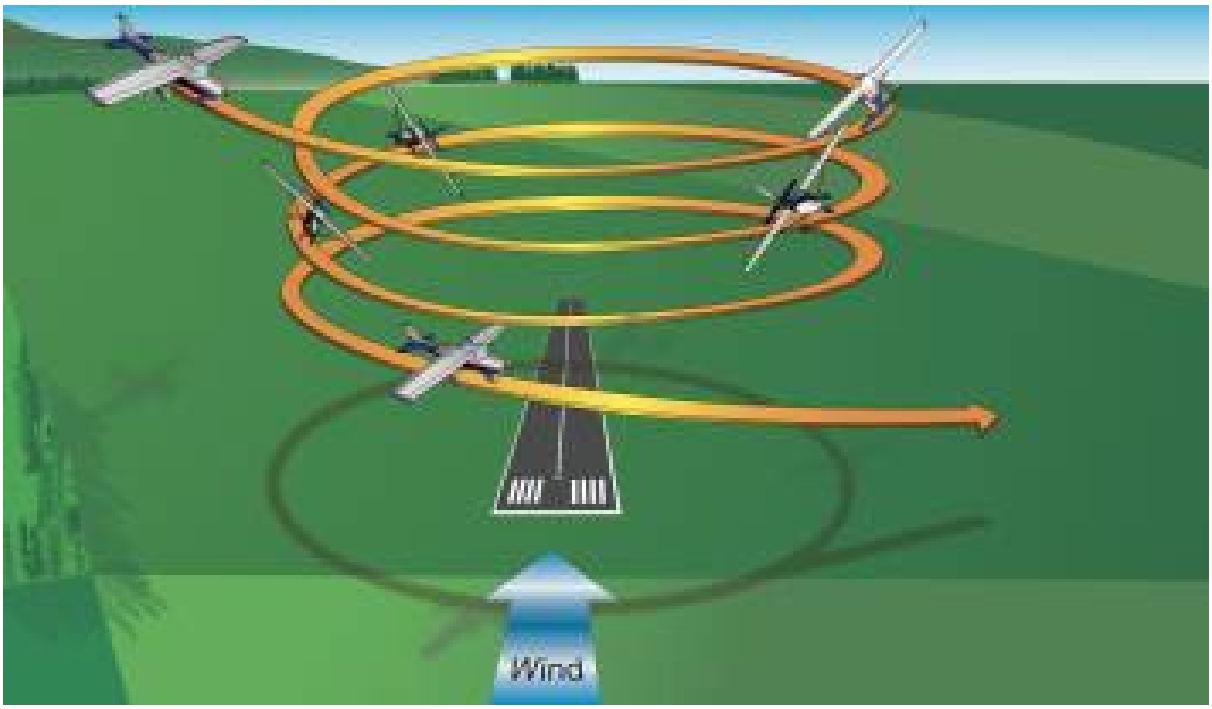




steepest point, the angle of bank should be no greater than 40-degrees.

1. Enter at pivotal altitude at 100 KIAS (2300RPM)
2. Clean Configuration flow
    a. Select two pylons parallel to the downwind to allow for minimal time spent wings level between the two
3. Enter maneuver on a 45-degree midpoint downwind
    a. Apply appropriate pitch corrections to compensate for changes in groundspeed (higher groundspeed = higher pivotal altitude, lower groundspeed = lower pivotal altitude) and;
    b. To maintain line of sight reference with the pylon (pitch forward if point moves toward nose and pitch back if point moves toward tail)
    c. Begin rollout to allow the airplane to proceed diagonally between the pylons at a 45-degree angle
4. Begin second turn in the opposite direction of the first
5. Exit maneuver on entry heading

Steep Spirals (Commercial Only)



1. Altitude: at least 3000’ AGL
2. Clean Configuration Flow
3. Chose visual reference point at 90-degree point
4. Reduce Throttle to Idle
5. Airspeed: 80 KIAS
6. Track at least three constant radius circles around reference point
7. Bank: Adjust for winds (not to exceed 60-degrees)
8. Clear engine once every 360-degree turn
    a. Recover – roll out on specified heading (visual reference at same place where started)
9. “Cruise Checklist”

ACS Standards:

- Airspeed: +/- 10 KIAS
- Heading: Roll out towards specified heading or point +/- 10-degrees

Accelerated Stall (Commercial Only)

Accelerated stalls are accomplished at an altitude that allows completion no lower than 3,000’ AGL. A smooth transition should be made from cruise attitude to a bank angle of 45-degree, maintaining coordinated turning flight, while increasing elevator back pressure steadily to induce stall.

1. Slow to approximately 80 KIAS
2. Clean configuration flow
3. Established a coordinated 45-degree turn
4. Slowly reduce power to idle
5. Increase back pressure on elevator to maintain altitude (which will induce stall)
6. Recover at the first indication of stall (horn, buffeting)
7. Simultaneously reduce AOA, max power, and level wings
8. “Cruise Checklist”

IFR Configurations

Approach Briefing (IFR)

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 co-pilot, if applicable) are fully aware of the key components of the approach including, but not limited to: the applicable DA/MDA's, Final/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 thus increasing the level of safety and efficiency in conducting an IFR approach.

WASHINGTON D.C. AL-5326 (FAA) 20254

ILS or LOC RWY 16L

MANASSAS RGNL/HARRY P DAVIS FIELD (HEF)

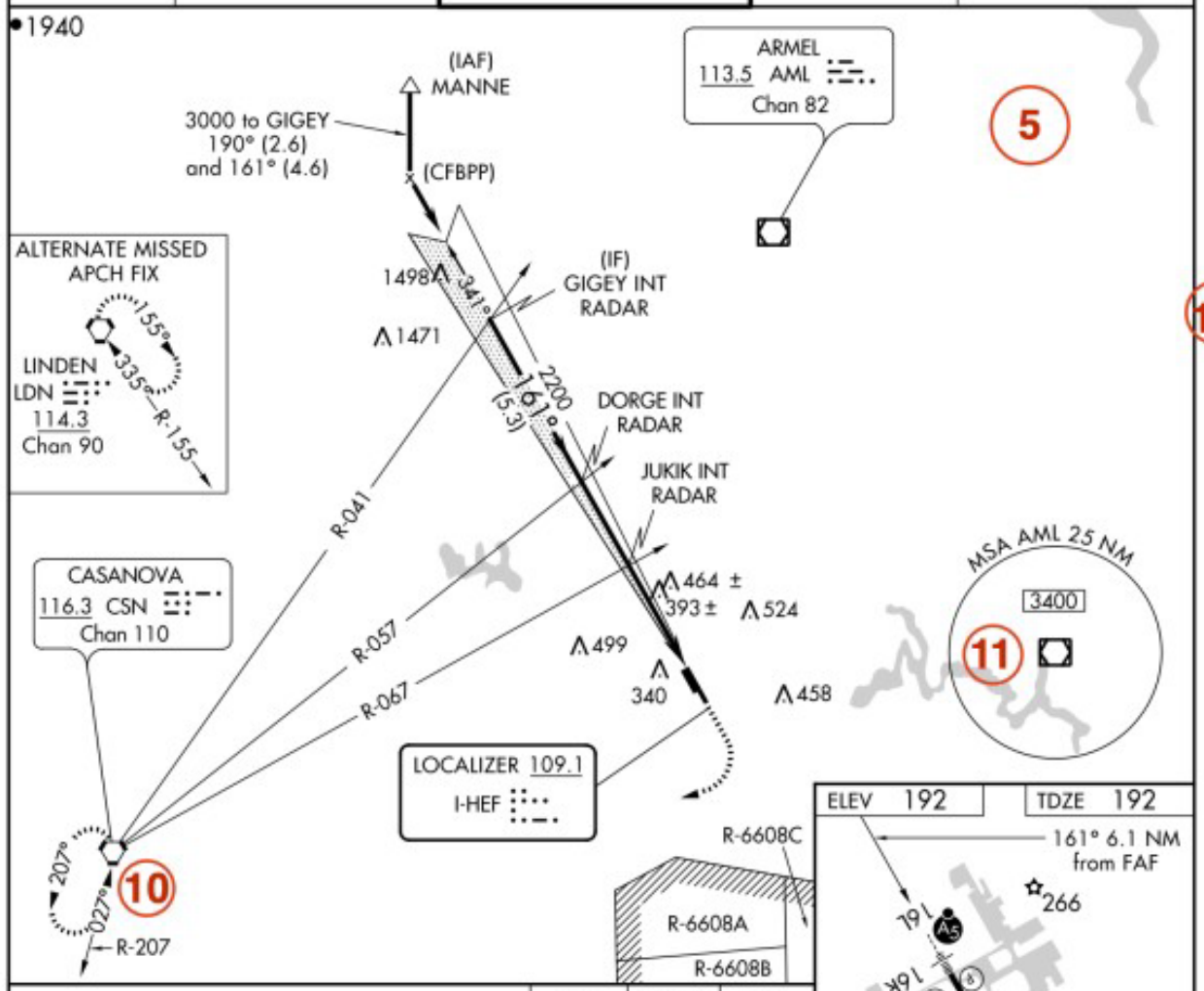
LOC I-HEF	APP CRS	Rwy Idg	6200
109.1	161°	TDZE	192
		Apt Elev	192

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	POTOMAC APP CON	MANASSAS TOWER *	GND CON	CLNC DEL
125.175	128.525 306.925	133.1 (CTAF) 360.75	121.8	120.2



CATEGORY	A	B	C	D
S-ILS 16L	392-½ 200 (200-½)			
S-LOC 16L	660-½ 468 (500-½)		660-1 468 (500-1)	
C 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

WASHINGTON D.C.
Orig-A 13NOV14

MANASSAS RGNL/HARRY P DAVIS FIELD (HEF)
38°43'N-77°31'W
ILS or LOC RWY 16L

NE-3, 05 NOV 2020 to 03 DEC 2020

NE-3, 05 NOV 2020 to 03 DEC 2020

Approach Briefing Components:

1A/B. Verbally confirm that the approach plate is accurate to what is being flown as well as current.
- Do Item: Physically verify that the approach is loaded correctly on the GPS (for situational awareness)

2. Verbally confirm the runway lengths, TDZE, Apt Elevation, Final Approach Course, and Nav frequency.
- Do Item: Physically 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 not, announce *"No notes apply today"*. Note approach lighting available.

4. Verbally confirm all applicable frequencies are tuned
- Do Item: Physically tune Tower, CTAF, or UNICOM frequency on the STDBY COM 1 slot, as well as ground or ATIS/AWOS frequencies on COM 2 (if applicable). 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. Example: "*We are approaching from the north, expecting Vectors to Final at DORGE"*

6. Profile View: Verbally confirm your minimum descent altitudes and final approach fix. Example: "One I'm cleared and established, I will cross DRDGE at 2,200', then step down to 1,300' at JUKIK.

7. Approach Minima: Verbally confirm approach minima including DA/MDA

8. Verbally confirm missed approach point (or DA if applicable)

9. Verbally confirm missed approach procedure
- Do Item: If missed approach requires tracking a secondary NAV source, tune frequency on NAV 2

10. Verbally confirm missed approach hold (if applicable), including entries (teardrop, parallel, or direct), and headings.

11. Verbally confirm the Minimum Safe Altitude (MSA) and what point it is referenced on

Note: It is critical to develop a format that make the most sense and works best

for you. However, one must make sure that such format is used in a *consistent* way. Approach briefings should not take more than 1 minute, allowing pilot to focus as much as possible on flying the airplane in IMC conditions.

Example Approach Briefing:

"I'll be conducting the ILS Runway 16L at Manassas. Runway Length 6200, Touchdown Zone Elevation 192, Airport Elevation is 192. Approach course is 161, which is set.
Localizer frequency is 109.1, which is tuned and identified. No notes apply to us today. Approach lights are MALSRs. We are talking to approach, Manassas Tower on 133.1 set on the standby, Ground on 121.8 on Com 2. Coming from the northeast, expecting vectors to final at DORGE. Once clear and established, I can go down to 2,200' at DORGE, where ill intercept the glideslope and descent at 90KIAS down to my DA of 392. If I don't see the runway by then, I will go missed. Climb straight ahead to 700, then a right turn to 3000 direct to the Casanova VOR. Casanova VOR is set on NAV 2 frequency 116.3. It will be a teardrop entry, heading 237 for a minute then left turn 027 to enter. Left turns, one minute legs. Minimum Safe Altitude is 3,000'. Any questions?"

IFR Approach Configurations:

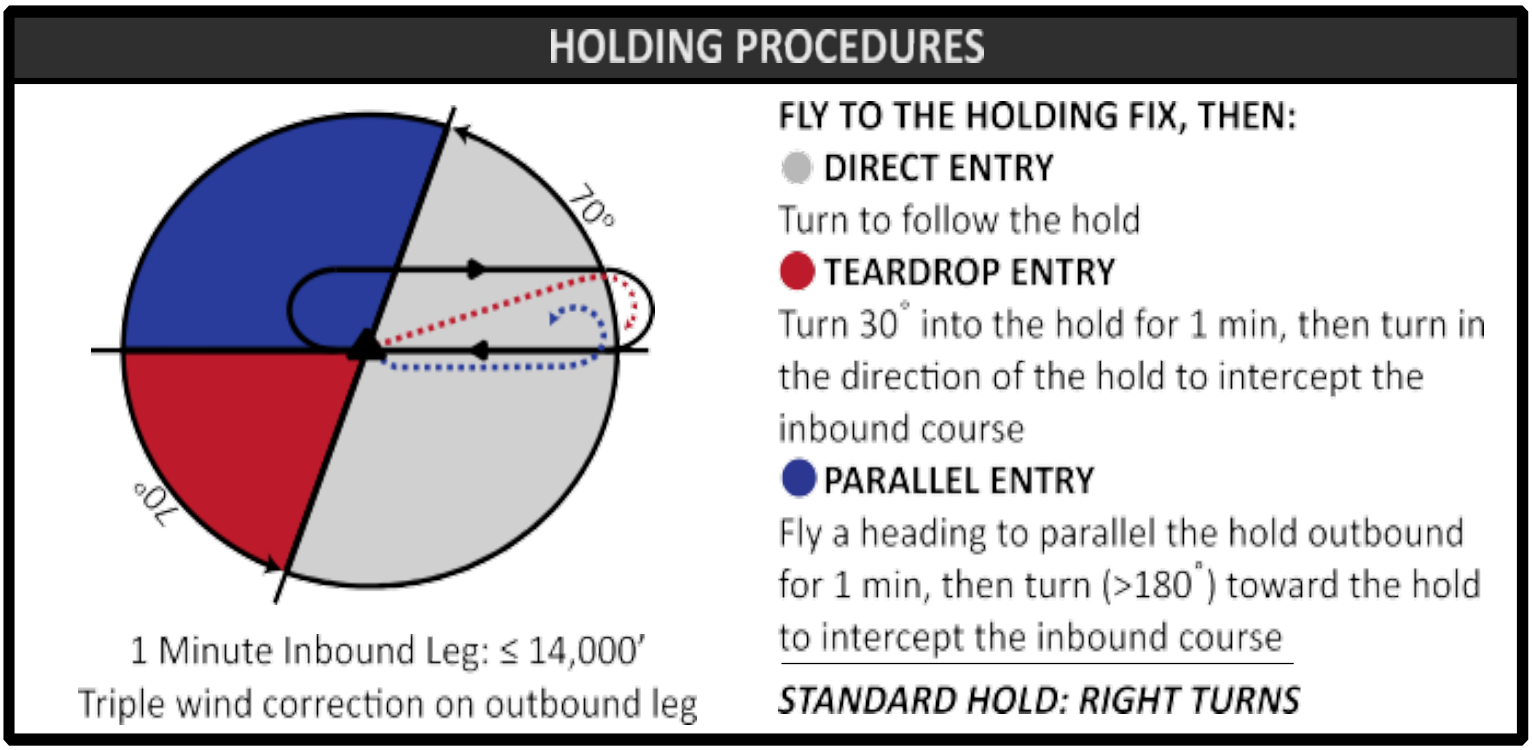
NON-PRECISION APPROACH (At the Final Approach Fix): 1500 RPM
FLAPS 10
90 KT
(700-1000 FPM Descent Appx.)

PRECISION APPROACH (At glideslope intercept)**:** 1900 RPM
FLAPS 10
90 KT
(400-500 FPM Descent Appx.)

IFR Hold Entries

Pilots should always perform the 5 T's when entering a hold.

Turn: Fly towards desired track
Time: Begin timer
Twist: Set the CDI to the appropriate course / select the appropriate navigation source (GPS or VLOC)
Throttle: Adjust power to maintain most fuel-efficient airspeed **or** reduce throttle to commence descend.
Talk: Advise ATC when "Established in the hold at X,xxx feet".

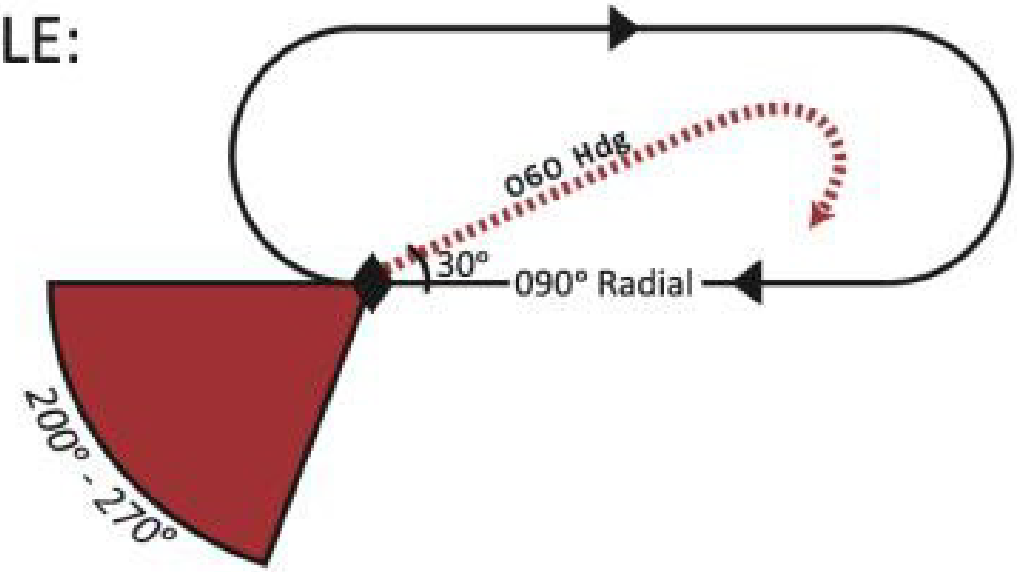


Direct Entry:
When approaching the holding fix from anywhere in the grey sector, the direct entry procedure would be to fly directly to the fix, turn outbound and follow the holding pattern.

Teardrop Entry:
When approaching the holding fix from anywhere in the red sector, the teardrop entry is applicable. The teardrop entry procedure would be to:

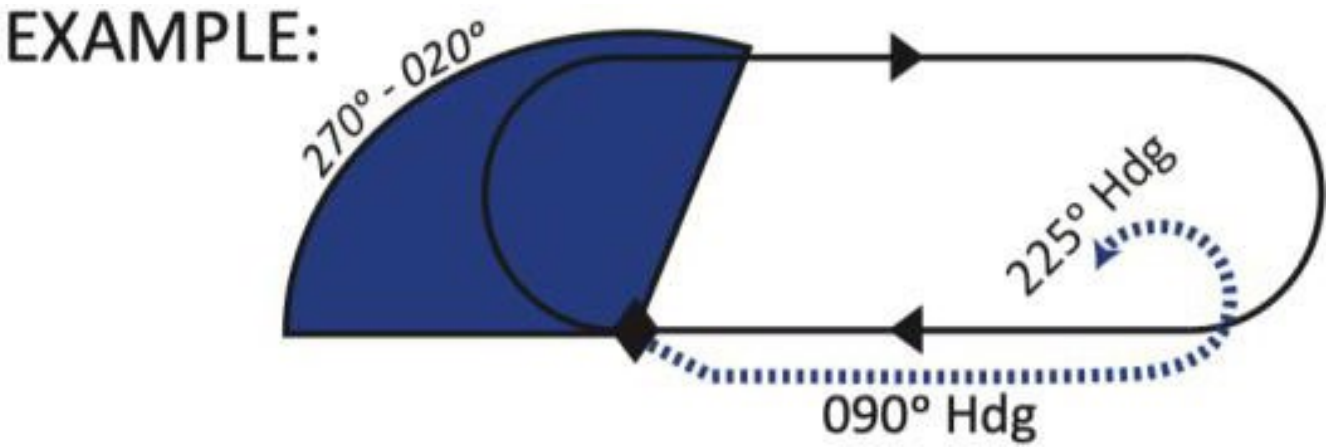
1) Turn to outbound course +/- 30°
2) Time for 1 minute
3) Turn to and *intercept* the inbound course

EXAMPLE:



Parallel Entry:
When approaching the holding fix from anywhere in the blue sector, the parallel entry is applicable. The parallel entry procedure would be to:

1) Turn to outbound course
2) Time for 1 minute
3) Turn to inbound course +/- 45° to *intercept* inbound course (For easier math, using 50° is acceptable).



FLOWS

Introduction

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 double-check that all items were accomplished. 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 heads down time, and avoid jumping/skipping.

How to Learn Flows

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

Flows Overview

There are four flows we have provided for the Cessna 172. The flow should be performed out loud prior to performing the checklist. Once complete with the flow, you **must** verify your actions by **performing the checklist** also out loud.

The 4 flows are:

1. Engine run-up checks
2. Final Items
3. Engine Out Emergency Landing
4. After Landing

Engine Run-up Flow

After performing the first seven items of the Run-Up checklist, perform the run-up itself in a counter-clockwise flow. Starting position is one hand on throttle and one on ignition key.

Throttle: 1700
Ignition Key: Turn one click to the left. Verify and verbalize RPM drop "Right mag 100 drop." Turn back to both
Ignition Key: Turn two clicks to the left. Verify and verbalize RPM drop and difference "Left mag drops 75, delta less than 50."
Alternator: Turn off Left side of split Master switch, confirm alternator jumps/shows discharge. Turn back on.
Engine instruments: Starting at oil gauges, flow counterclockwise up panel and confirm all gauges correct.
Carb Heat: Pull out, confirm RPM drop, push in, confirm RPM increase. Pull out
Throttle: Slowly decrease to full idle. Confirm engine does not shut down.

Carb Heat: Push in (off)
Throttle: Normal idle 1000RPM. Confirm throttle friction set properly.

Final Before Takeoff Flow: Lights, Camera, Action

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

1) **Lights**: Turn on the Landing Light, Nav, and Strobe Lights. Keep these on until after landing
2) **Camera**: Verify appropriate transponder code and ensure transponder is in ALT (altitude) mode
3) **Action:** Verify Mixture is RICH and Fuel Selector is on BOTH
4) **Time**: Record departure time or begin timer

Engine Out Emergency Landing Flow: ABCDE

The emergency landing flow is used to ensure all important items are accomplished during an engine failure due to fire, mechanical issues, or fuel starvation.

If your engine quits for no apparent reason, immediately select CARB HEAT on. If Carb Ice was the reason for engine quitting, you only have a short period of time available to melt the ice.

1. **A = Airspeed.** Hold altitude and slow to best glide **65KIAS. Trim**
2. **B = Best Field**
    a. Check your altitude and mentally compute your no-wind glide distance, 1.5NM per 1,000'. (Trick: take your altitude, halve it, and add the numbers, so at 8,000' you glide 12NM)
    b. Use the GTN650, select Direct To, Nearest Airport, and see if you are within range of an airfield
    c. Set you heading bug on the anticipated wind. This is your landing direction
    d. If you cannot make an airfield, pick a field, beach, or road to land on, and verbalize your choice. Be aware of people in the landing area; eg it's better to land in the surf right off a beach as opposed to killing people on a beach.
    e. Fly to a downwind High Key point at 1000' AGL opposite your best field "runway." Plan to be at 500' AGL halfway through the base turn. Flaps as required, full flaps desired at prior to landing to reduce landing groundspeed as much as possible.
3. **C = Checklist:**
    a. Use the "Floor to Door" flow to check all switches if you are trying to restart engine, ie fuel selector, mixture, throttle, carb

heat, ignition, primer. If restart not possible (eg due to fire) shut all these items off. Keep master on until radio call made and flaps are used, then shut master off.

b. Pull out checklist and confirm all items accomplished.

4. **D = Declare:**
    a. If on an ATC frequency make the call there.
    b. If not, select GUARD 121.5 by pressing and holding the GTN650 vol button on upper left of panel
    c. Make the Mayday call, eg: “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.”
    d. On transponder squack 7700
5. **E = Exit Plan:**
    a. Prepare passengers for emergency landing. Confirm seat belts and shoulder harness on and tight. Rebrief exit procedures and a reminder to meet 150’ behind aircraft on ground. Secure first aid kit. Open doors inflight, lock when open, and insert bag/purse to keep open.

After Landing Flow: Reverse Lights, Camera, Action

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 markings. Upon completion of the after landing flow, perform the “after landing checklist".

1) **Lights:** Turn off landing light during day. At night, turn off strobes as required.
2) **Camera**: Reset transponder to VFR and ALT
3) **Action:** Lean mixture to +/- 1.5” out
4) **Time:** Note landing time